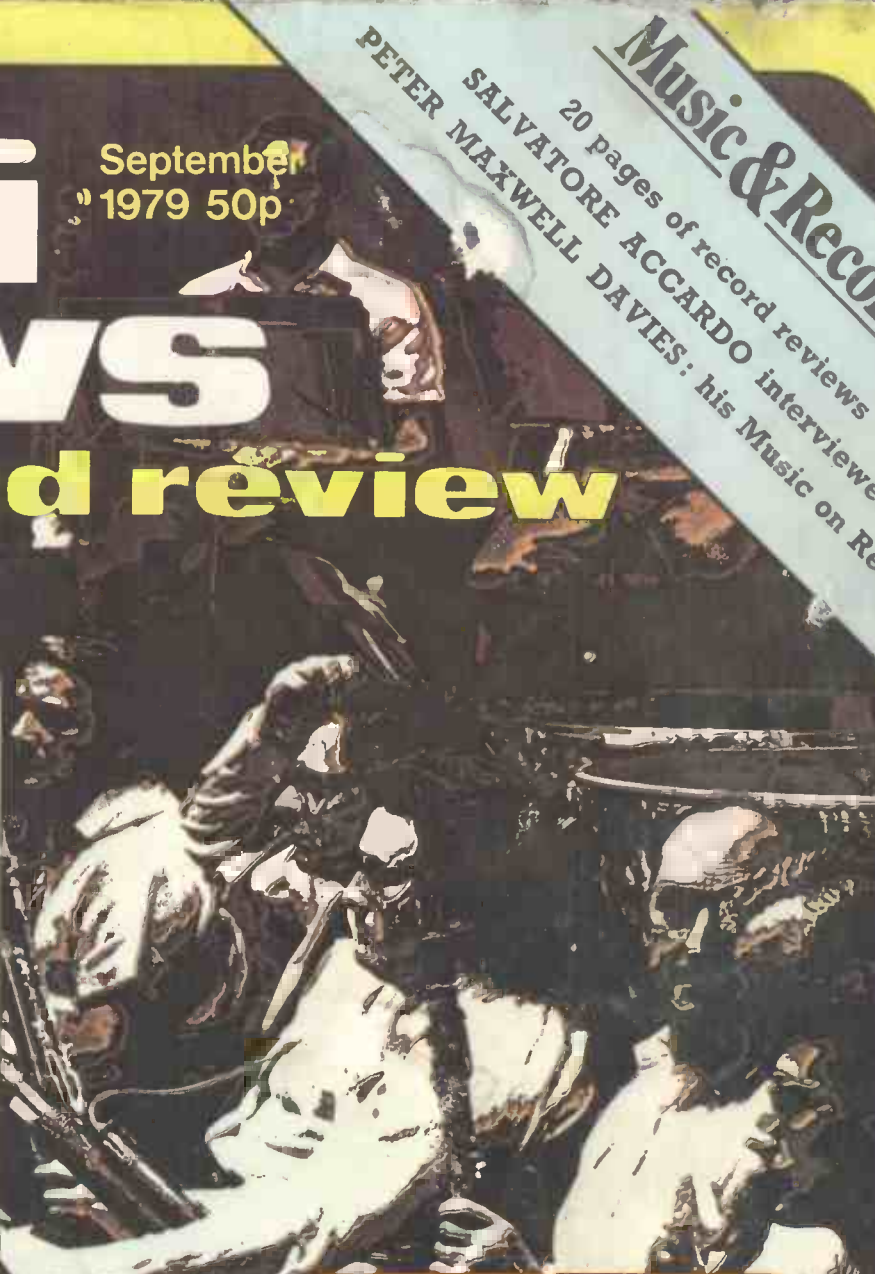


Music & Records

20 pages of record reviews
SALVATORE ACCARDO interviewed
PETER MAXWELL DAVIES: his Music on Record

hi-fi news & record review

September
1979 50p



**Claudio Abbado
Interviewed**
Scratch Eliminator
Three Tuners Tested

Sophisticated Receivers



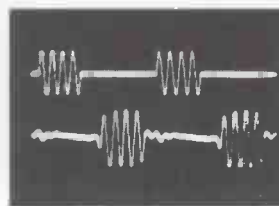
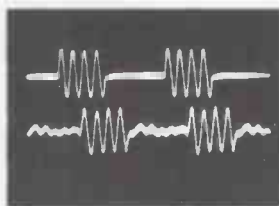
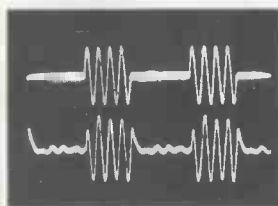
Audio Pro
TA 150



Nakamichi
730

Stereo Review® has just uncovered our second most closely guarded secret.*

The exceptional tone-burst response of the Gale GS401A is illustrated at (left to right) 100, 1,000 and 10,000 Hz. The upper trace is the input signal.



In tone-burst tests, the Gale GS401A displayed some surprising properties. For one thing, the tone bursts were virtually perfect at every frequency, with little or no sign of the interference effects that usually make it necessary to find specific frequencies and microphone positions in order to obtain a reasonable-looking output from a multidriver speaker system. Wherever we moved the microphone, from a few inches to a few feet from the speaker, and whatever frequency we

used, the bursts had almost ideal shapes, with no ringing, slow start-up, or other faults.

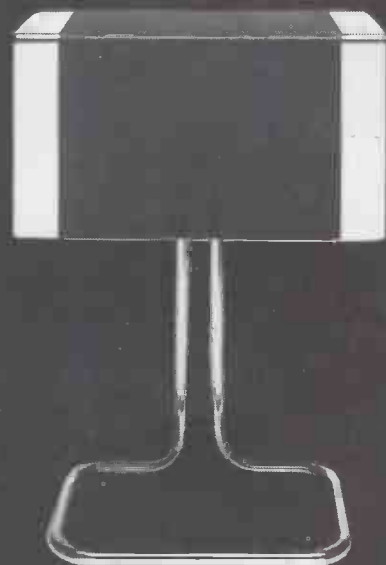
At this point, we began to wonder whether this implied some special degree of phase coherence (although Gale makes no mention of that subject in their literature, and nothing in the appearance of the speaker suggests any unusual physical arrangement of the drivers). We then drove the speaker with a 500-Hz square wave. To our surprise, the acoustic-output waveform was recognizable as that of

a square wave. We do not know what significance this has, but it is certainly worthy of special mention, if only because this is the first conventional speaker we have measured that has been able to produce a recognizable square wave in a "live"-room measurement. Incidentally, several so-called "phase-coherent" systems that we have tested have failed completely in this test.

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Stereo Review April 1979.

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***Although we have never mentioned the fact in our advertising, Gale has been producing a phase coherent loudspeaker since 1973.**



Gale

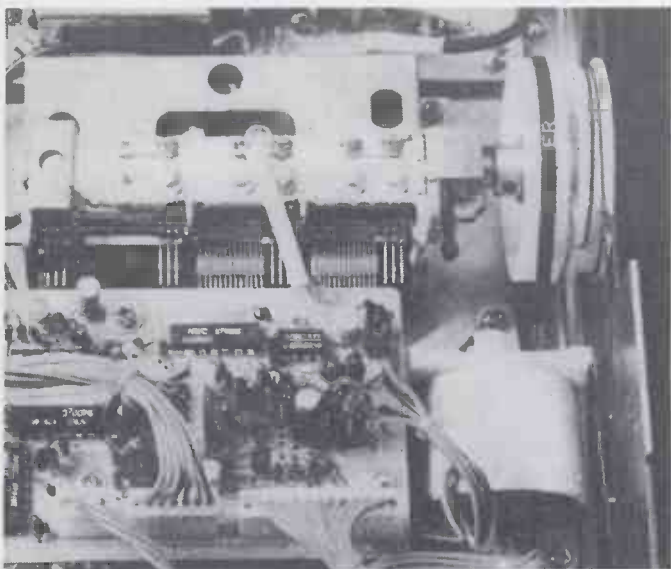
GALE ELECTRONICS : 19 AND 23 BRUTON PLACE : LONDON W1X 7AB : TEL: 01-499 9966.

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Interior of Nakamichi's 730 receiver (reviewed p. 141) In which an electric motor drives the tuning capacitors—purists note that it's belt-drive, not direct-drive!

Britain's largest circulation journal devoted equally to records and hi-fi, with an audited average net circulation of 50,336 copies per issue at the last count (January-December 1978). Technical articles of full page length or over appearing in *Hi-Fi News & Record Review* are detailed in the British Technology Index.



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COVER PICTURE

Not very much to say this month, unless one of the musicians involved could tell us which orchestra provides our backcloth, and where or what they were playing. But an orchestra it is, to provide a link between conductor (Claudio Abbado, who now takes up his new position with the LSO and is interviewed on page 85), and some of the sophisticated electronic devices (reviewed on page 137) which handle hi-fi signals on their way back to music via loudspeakers.

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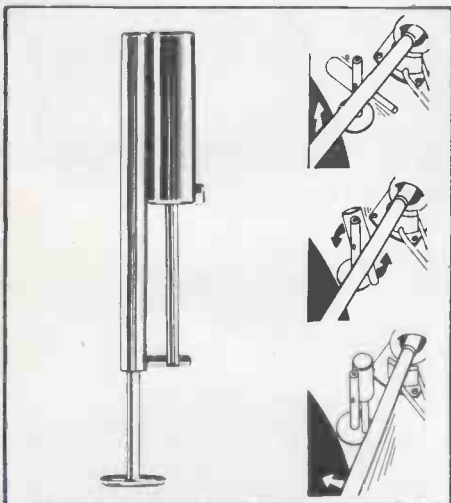
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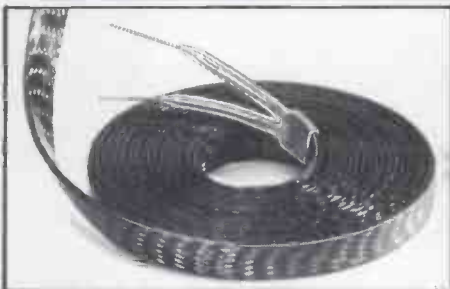
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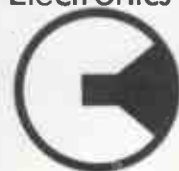
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C45	£ 0.59
C60	£ 0.67
C90	£ 0.89
C120	£ 1.22
C180	£ 2.97

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C60	£ —
C90	£ 1.32
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C90	£ 1.69

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C60	£ 0.61
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ULTRA DYNAMIC

C60	£ 0.99
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C60	£ 1.35
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C60	£ 1.35
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C60	£ 1.18
C90	£ 1.33
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UDXL I

C60	£ 1.45
C90	£ 1.83

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C60	£ 1.45
C90	£ 1.83

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C60	£ 0.59
C90	£ 0.75

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C60	£ 0.74
C90	£ 1.02
C120	£ 1.12

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C60	£ 1.32
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LC90 SLH	£ 3.68
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EUROPEAN POSTAGE and INSURANCE RATES

Number of Cassettes	COST
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11-20	£ 3.43
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Cassettes are supplied Free of UK tax, currently at 15%. An additional amount to cover postage and insurance is required, varying according to weight. Quotation can be obtained from Top Tape, Watford for specific requirements.

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L 370	90	£ 7.53
L 500	130	£ 8.70
L 750	195	£11.34

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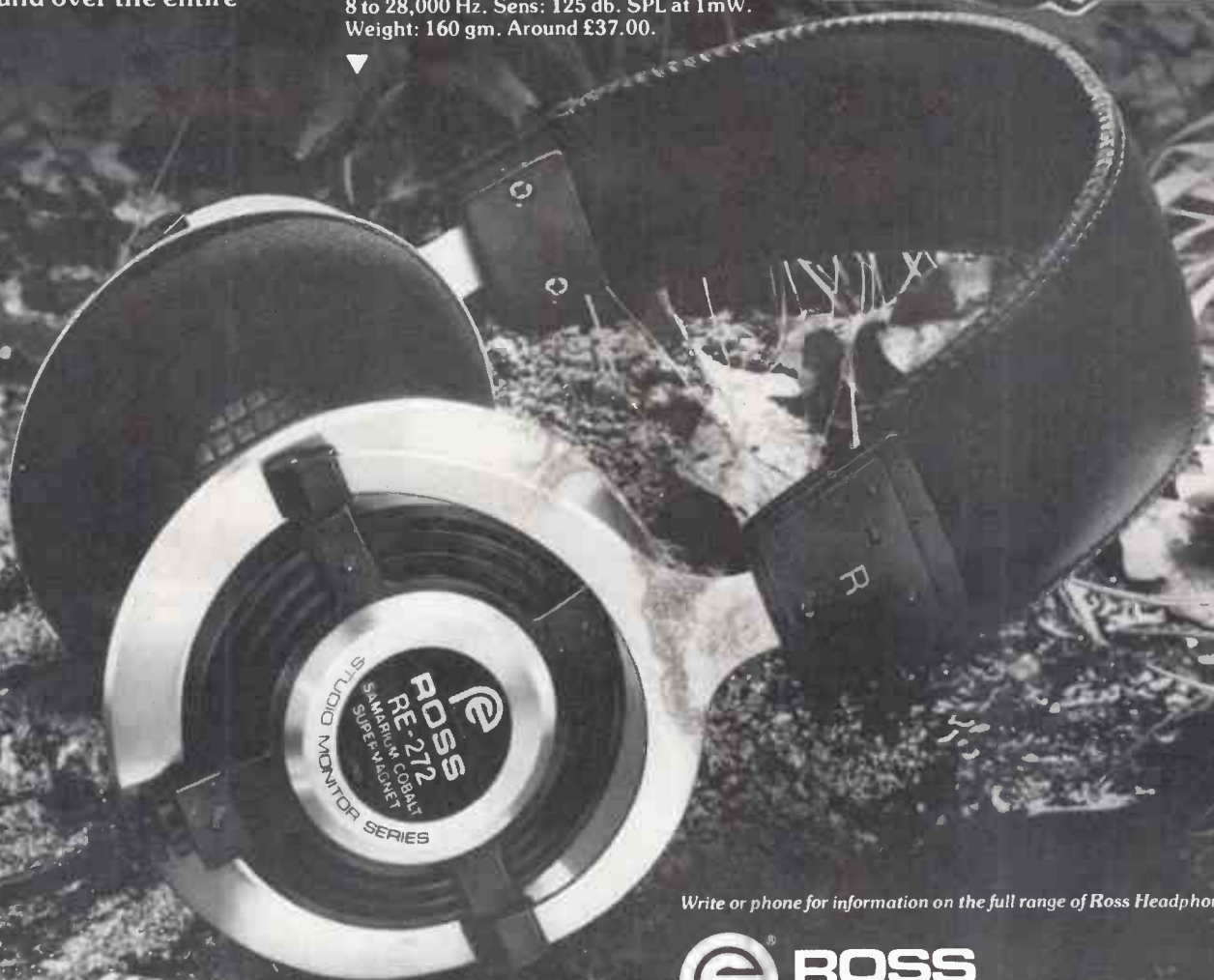
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▼ **RE-272** — Studio monitor Samarium Cobalt supermagnet headphones. Matching Imp: 8 to 1000 ohms. Response: 8 to 28,000 Hz. Sens: 125 db. SPL at 1 mW. Weight: 160 gm. Around £37.00.



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spendor BCI

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See Speaker Review Conclusions, June issue, Hi Fi News for independent comment.

Spondor Audio Systems Limited
 Station Road Industrial Estate
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SETTING NEW STANDARDS !!!

DESIGN CRITERIA

In the development of our range of loudspeakers, we have abandoned the more traditional specifications as it seems to us that two loudspeaker systems using the same drive units and producing similar measured specifications can sound totally different. This seems to us the equivalent of asking the master chefs of the world to adopt a recipe book from which it would be possible for the same recipe to produce spaghetti bolognese or roast beef and Yorkshire pudding.

We have instead concentrated upon the immeasurable subjects, such as, colouration, stereo imagery, depth of field, perceived transient response and speed (attack). It was also felt that it was more important that sounds perceived by the listener were well balanced.

The technical approach can minimise to the end degree fluctuation in the response curve with no regard whatsoever to the effect or the other parameters mentioned above. E.g. a response curve with a number of peaks and/or troughs can be eliminated by adding extra circuitry to the crossover and bringing about a response correction, but the resultant effect upon the aforementioned parameters can be a dramatic increase in colouration, the total removal of subtle detail, a compression of dynamic range and the rounding off of attack. This approach we liken to trying to make a silk purse out of a sow's ear. We feel that so long as the response curve of the loudspeaker is reasonably flat or only wavers gently up and down, that no such correction gives better results. If there are wild variation in the response than major surgery should be adopted, e.g. changing the enclosure design or substituting a different drive unit!

Some investigation into the signal path through the loudspeakers also revealed careful choice of internal components such as internal wiring could make substantial improvements in perceived sound quality.

Model 1 is wired throughout with QED 79 stand cable. Model 2 is wired throughout with three phase 30 amp. flexible cable and again here the simple crossover network design of 2 elements (Model 1), 4 elements (Model 2) allows the incoming signal to be passed to the drive units with the minimum of interference and colouration.

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Suggested Retail Price £4.99.



Sound Guard Record Preservation Kit

Before Sound Guard record preservative, you destroyed the records you loved, a little at a time every time you played them. Friction was the culprit. It's what happens when a hard diamond stylus tracks in soft vinyl grooves. But now you have the protection your records need. The regular use of Sound Guard record preservative. A by-product of dry lubricants developed for aerospace technology. Its unique lubricating properties significantly reduce friction and wear. It's so thin, less than 0.000003in., that the most delicate modulations aren't disturbed. What's more, Sound Guard preservative can be applied repeatedly without buildup, because it's self-limiting. The fact is, when you use Sound Guard preservative as directed, your record keeps its full fidelity and maintains the same absence of surface noise and harmonic distortion as it did the first time it was played. Application is easy. Simply spray it on and buff it in.

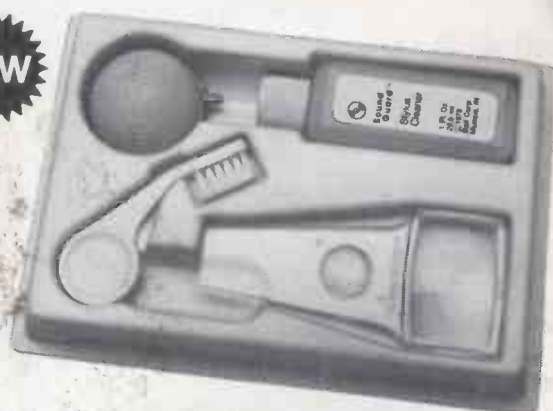
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Even though you might not see it, the build up of dirt on your records is inevitable. But now there's a solution. Sound Guard record cleaner. To remove oily deposits and dirt that have worked their way down into the grooves, just spray Sound Guard cleaner directly on your record and let it sit for about 30 seconds. It literally lifts the dirt and oily deposits from the grooves. Then with our moistened non-abrasive sponge you remove the contaminants with a light wiping. Finally any remaining contaminants and cleaning fluid are removed from the grooves with the cleaning pad.

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Sound Guard Stylus Care Kit

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Total Record Care Pack comprising Record Cleaner Kit and Record Preservative Kit £9.48. (Suggested Retail Price).

Sound Guard

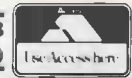


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AIWA

More new models are now available (all of which we have in stock) including the fabulous AT-9700 tuner and the new 3 head cassette AD6900 is sure a block buster setting new cassette standards and at our intro price of £369.50 a bargain too!

BOSE

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CELESTION

Damn good value, well made, guaranteed 5 years, great performers and at our prices cheap, what more can we say?

J.V.C.

Great new models from a go-ahead company. If you want details of all the extra facilities the JVC range offers, pop in, we'll show you, and with our low prices, nuff said!

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Some say KEF products are hard, lifeless, bass heavy, and expensive. All we can say is—put them on the right equipment, set them up right and they're hard to beat at any price! Come and hear.

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LINN TURNTABLES ARE ONLY ONE THING SIMPLY BETTER! COME AND LISTEN TO OUR LP12—HEAR YOURSELF

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WE LIKE LENTEK PRODUCTS! Especially the incredible little S4 loudspeaker which sets a new standard at a more than economical price. Come and listen, you won't need to close your eyes to hear the difference.

MERIDIAN

If you haven't heard any of the superb equipment available from this go-ahead design team, get your skates on and let us give you a dem. For those already familiar with it, we need say no more.

MISSION

Seen the new Mission Amp and Arm? We have both on dem with the rest of the Mission range combining their quality with our economical prices. It's worth a hearing, otherwise you won't know what you're missin'. (P.S. We think the new arm is a definite winner!)

MICHELL

The new Focus One Turntable is aptly named and proving to be an outright winner. It represents superlative value and at Billy Vee the arm of your choice is fitted free!

OPTONICA

The RT3838 represents the ultimate in cassette functions and does everything but make the tea. At Billy Vee we have the whole of the Optonica range on display and although they are a bit expensive we do our best to calm the inflammatory waters!

PIONEER

TERRIFIC VALUE! The new Pioneer range represents even better value for money than before and we have it on dem at the best discount prices—with service.

QUAD

In value for money terms Quad products are absolutely phenomenal. The quality and reliability are second to none—and it's British! Where else can you get a hundred-watt pre/main amp for a fraction over £250.00?

R.A.M.

These speakers are so well made it seems a bonus that they sound good, too! We have the whole range in stock at more than reasonable prices!

S.T.D./HADCOCK

The new 305M two speed version is now available in small quantities. (These Scots don't give much away). Fitted with Hadcock or arm of your choice (fitting free). Hadcock available separately of course with improved bias.

SWALLOW

Each of these units are hand made and individually tested to make sure performance is at its peak, resulting in one of the most outstanding bookshelf systems available at any price let alone ours!

TANGENT

It's difficult to explain how these amazing speakers sound. The depth is startling and they are certainly easy to listen to! Always on dem, so come and have a listen, you won't be disappointed.

THORENS

The TD160 B/C is still our top value recommended deck at £82.50 (less arm—fitting free). But if you fancy the new range, be our guest, we have them in stock—all at good prices

VIDEOTONE

The new GB3 is here and in common with the whole range it represents astounding value. This speaker must figure on your list and at our prices—A steal.

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INFORMATION. If you need any brochure or advice, they will be sent return of post, on receipt of a 9p stamp. Any prices quoted over the telephone include VAT and extra discounts are given for cash on selected items. All prices are subject to fluctuations in these troubled times but some have been known to go down!

See us at the South-East London Hi-Fi Show, The Clarendon Hotel, Blackheath SE3
Exhibition times: SATURDAY, 1st SEPTEMBER, 10—8 pm. SUNDAY, 2nd SEPTEMBER, 10.30—6.30 pm.

Small is Beautiful

In the field of audio, one of the more significant developments of recent years has been the emergence of loudspeakers combining remarkable compactness with a performance on the highest level of excellence. Larger speakers, of course, still have their place, if only to satisfy those who set great store by the organ's lowest pedal notes and others who require exceptional power or the kind of exaggerated bass favoured by some devotees of rock music. But, if truthful reproduction of classical music is your main objective, speakers like the BBC-designed LS3/5A made by Audiomaster or Rogers, the JR 149 or the new KEF 101 provide results which, only five years ago, few would have dreamt possible from such diminutive enclosures. In the home, these speakers solve many awkward problems, and we cordially invite you to visit our studio where you may compare their performance at your leisure. If, on the other hand, you are looking for speakers at a more modest price-level, we can offer some admirable models ranging from £46 to £120 per pair, among which the Audiomaster HBS4 (c. £83) and the KEF Celeste III (c. £108) provide exceptional value, while the Harbeth HL remains our most popular 'full-size' speaker for those wishing to combine an extended bass response with massive power-handling.

WHAT ELSE IS NEW?

JVC's astonishing range of models for the 1979/80 season includes many new designs: turntables like the belt-driven LA-11, the direct-drive LA55 and the quartz-controlled QLASR; receivers with increased power like the RS5L (27W/ch at c.£148) and the RS7 (55W/ch at c.£204); five new cassette decks suitable for metal

tape; matching amplifiers and tuners to suit all pockets and requirements, including a micro integrated amplifier and FM tuner to match; elegant stands to house virtually any combination you may wish to purchase.

For those who prefer the notion of an integrated music centre, Yamaha have just brought out two models combining an appearance of unusual elegance and neatness with the kind of performance one expects from first-rate 'separates': the MS-6 (16W/ch at £295-72) and the MS-8 (28W/ch at £362-16), each suitable for use with a wide range of top-grade loudspeakers. These and many other hand-picked pieces of audio equipment can be seen and heard at our studio, where advice based on unsurpassed knowledge and experience of audio problems, allied to profound musical understanding, is always at your disposal. With it comes our unique service, covering installation of the chosen equipment and after sales maintenance, while we offer substantial reductions on discs and tapes to all who buy equipment from us.

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Every Saturday afternoon, from 2 to 4.30, we present an informal recital drawn from the latest record releases, as we have done for almost a quarter of a century. It is free, you come and go just as you please, and it offers the opportunity of listening to splendid recordings on the best domestic equipment; afterwards you can, if you wish, stay behind and seek advice about records or equipment—in any case, LRR provides a most pleasant way of 'getting to know us'.

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BD1 Kit ..	£20-00	Sansui SR333 ..	£136-00
BD2 Chassis ..	£50-00	Sony PST1 ..	P.O.R.
BD101/SAU4 ..	£91-00	Sony PST20 ..	P.O.R.
BD2/P/C ..	£56-00	Sony ..	P.O.R.
BD2/A ..	£69-00	Technics ..	P.O.R.
Dual ..	P.O.R.	Thorens TD115 ..	£132-00
Garrard ..		Thorens TD110 ..	£114-00
GT20 (M75ED) ..	£67-00	Thorens TD104 ..	£87-00
GT25 (M75ED) ..	£73-00	Thorens TD105 ..	£101-00
GT35 (M75ED) ..	£86-00	Thorens TD126B/C ..	£193
SP25 M75/6 ..	£43-00	Thorens TD160BC ..	£87-00
DD130/75ED ..	£93-00	Transcriptors ..	P.O.R.
JVC JLA20 ..	£56-00	Trio KD1033 ..	£55-00
Marantz ..	P.O.R.	Trio KD2070 ..	£99-00
Micro Seiki ..	P.O.R.	Yamaha YP511 ..	£101-00
Pioneer PL512 ..	£53-00		

CLEARANCE BARGAINS

Limited Quantities

Akai AA1125 ..	£121-00	Thorens TD110 ..	£95-00
Armstrong 525 (S/H) ..	£91-00	Technics RS678 ..	£203-00
Beocentre 1600 (new) ..	£195-00	Tandberg TCD330 ..	£399-00
Marantz 2100 ..	£101-00	Tandberg TR2055 ..	£279-00
Marantz 2238 ..	£189-00	Technics RS676 ..	£189-00
Marantz 5010 ..	£132-00	(S/H) ..	
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Sansui SR333 ..	£118-00	recorder ..	£587-00
Tandberg TR2075 ..	£399-00	B & O Beogram	
Revox B760 ..	£543-00	1902 ..	£107-00
Revox B750 ..	£349-00	Beocentre 2800 ..	
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		Sony ELS ..	£260-00
		Technics RS7500 ..	£250-00

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(P & P 90p)		
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ADC VLM Mk 3 ..	£28-00	P.O.R.
ADC Q36 Mk 3 ..	£18-40	
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Goldring G800E ..	£41-00	£11-71
Goldring G900SE/2 ..	P.O.R.	P.O.R.
JVC XI ..	£49-00	P.O.R.
Ortofon M20E Super ..	£14-20	—
Ortofon FF15E/2 ..	£31-50	—
Ortofon VMS20E/2 ..	£10-20	—
Ortofon FF15XE ..	£20-00	—
Ortofon F15E/2 ..	£19-38	£16-00
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Pickering P/ATE ..	£8-20	£5-86
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Shure V15/IV ..	£48-00	£27-50
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Stanton 500EE ..	£31-00	£20-95
Stanton 680EE ..	£70-50	P.O.R.
Ultimo 20A ..	£92-00	P.O.R.
Ultimo 20B ..	£54-00	P.O.R.

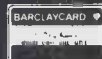
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(P & P £2-20)			
Akai AM2250 ..	£81-00	Rotel RA714 ..	£143-00
Akai AM2350 ..	£181-00	Sony TAF3A ..	P.O.R.
Akai AM2450 ..	£141-00	Sony TAF5A ..	P.O.R.
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Cambridge P80 ..	P.O.R.	Sugden A48/2 ..	P.O.R.
JVC JASIIG ..	£85-00	Sansui 117 ..	£77-00
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Marantz ..	P.O.R.	Sansui 317 ..	£162-00
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Pioneer SA706 ..	£148-00	Technics SU7300 ..	£122-00
Pioneer SA506 ..	£86-00	Technics SU7700 ..	£153-00
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Radford HD250 ..	P.O.R.	Trio KA305 ..	£91-00
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Akai AA1125 ..	£132-00	Rotel RX403 ..	£118-00
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Akai AA1150 ..	£213-00	Sansui G3000 ..	£145-00
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Armstrong 626 ..	£213-00	Sony STA3L ..	P.O.R.
Armstrong 623 ..	£132-00	Sony STRVL ..	P.O.R.
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Harman Kardon ..	P.O.R.	Tandberg ..	P.O.R.
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Marantz 2238 ..	£219-00	Trio KR4070 ..	£174-00
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Pioneer SX790 ..	£203-00	Trio KR3090 ..	£149-00
Pioneer SX690 ..	£167-00	Trio KT5300 ..	£85-00
Pioneer TX606 ..	£95-00	Trio KT313L ..	£85-00
Revox ..	P.O.R.	Yamaha CR420 ..	£182-00
Rogers stockists ..		Yamaha CR620 ..	£192-00

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(P & P £3-50)			
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Aiwa AF3070 ..	£341-00		
Awia AF5300 ..	£341-00		
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Garrard GA155 ..	£254-00		
JVC 45 Dolby ..	£216-00		
Toshiba Systems ..	P.O.R.		
Sanyo ..	P.O.R.		
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Hadcock ..	P.O.R.		



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MODEL CS-6 A very high powered co-axial dual cone speaker with a hefty 10 oz ceramic magnet that will deliver an immense range of sound from an input of up to 20 watts. Due to the co-axial unit low bass and high treble frequencies are clear and precise.



MODEL CS-4 A handsomely styled speaker featuring a 7 oz magnet for stable performance and a power handling capacity of 20 watts. Specially designed wire mesh grille improves sound dispersion.



MODEL CS-2 A super slim high quality single cone speaker that requires only 2.6 cm for in-door flush mounting, yet has a power handling capacity of 10 watts and delivers impressive performance.

AMSTRAD CH-50 In-car Hi-Fi 50 watt Booster Equaliser System

MODEL CH-50 This is a complete system for those who want the ultimate in in-car Hi-Fi. It includes a powerful 50 watt booster with graphic equalising section and two very high quality flush mounting speakers. The booster unit is simply connected between your existing car stereo cassette and/or radio player and the speakers supplied, to produce an outstanding sound reproduction system that offers comparable performance to in-home Hi-Fi. Power output is not only boosted to an amazing 50 watts but finely controlled by seven graphic equalising controls that allow you to alter the sound's tonal qualities to suit the characteristics of your vehicle. The internal circuitry of the booster unit is such that volume and balance remain within the control of the cassette or radio while ten red LED indicators instantaneously register how much power is being delivered to the speakers. The pair of dual cone loudspeakers that are included in the system are designed to perfectly match and enhance the CH-50 booster unit. They will handle sustained levels of power and offer stable and precise performance over a wide frequency spectrum.



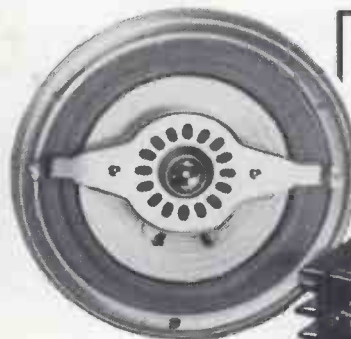
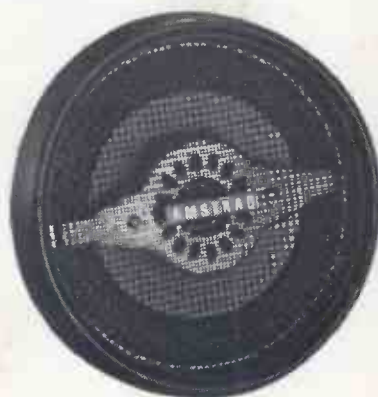
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MODEL CH-30 This is a complete system featuring a compact under-dash booster with matching high quality flush mounting loudspeakers. When simply connected to any in-car stereo cassette and/or radio it upgrades your system to in-car hi-fi – providing a more powerful and pure sound than is yet obtainable with any in-car stereo system. Power output is boosted up to an incredible 30 watts and is delivered through the pair of dual cone loudspeakers provided, which carry 20 oz ferrite magnets and offer superb performance and power handling capacity. Volume and balance remain within the control of the radio or cassette but bass and treble response can be more finely adjusted with the aid of two calibrated slider controls at the front of the booster unit.



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A superior quality BIG POWER performer with advanced circuitry supplemented with a special INTERFERENCE LIMITER on FM. The Radio section comprises a MW/LW Radio and FM (VHF) Radio providing Stereo FM reception plus an Auto-reverse Cassette Player. The high quality has been the criteria behind the design of the Executive 900 and comes with our new 4 ohm two-section Door/Shelf Mounting Speakers.

R.R.P. £115.00
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MODEL 9060 The multi feature IN-DASH CASSETTE CAR STEREO RADIO PLAYER WITH MEDIUM, LONG, FM, FM-STEREO RADIO

New to the Amstrad range, the 9060 has THREE WAVEBANDS covering a wide range of frequencies. The 20 watt Stereo Radio section receives mono programmes PLUS Stereo transmissions on the FM Waveband utilising an in-built Multiplex Stereo Decoder indicated by a green, Light Emitting Diode. Although able to receive both MW/LW and FM radio, only one aerial is necessary.

The Cassette Stereo Player has a fast forward button and push-button cassette ejection PLUS volume, tone and stereo balance controls. Supplied with shelf/door mounting speakers.

R.R.P. £73.18
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£59.95



MODEL 9040 The Supreme IN-DASH MW/LW CAR RADIO, STEREO CASSETTE PLAYER

A MW/LW 2-waveband radio giving excellent sensitivity and channel separation over a wide frequency range employing big 20 watt power amplifier sections. Stereo Cassette Player features volume, tone and Stereo balance controls. Light emitting diodes indicate when Radio or Cassette are playing. Supplied with shelf/door mounting speakers.

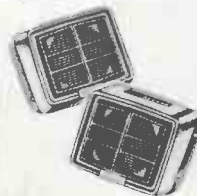
R.R.P. £58.53
INC. VAT
TYPICAL PRICE*
£49.95



MODEL 9010 UNDER-DASH CAR STEREO CASSETTE PLAYER WITH AUTOREVERSE

An AUTOREVERSE stereo cassette player of outstanding quality designed for under-dash mounting and offering a full 20 watts of total music power. Fast forward and rewind buttons are lockable and two green LED arrows indicate tape direction. Other numerous features include channel selector, tone and balance controls and a new and exclusive tape playing mechanism for trouble free performance. A pair of high quality shelf mounting speakers are supplied.

R.R.P. £51.77
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MODEL 9090 UNDER-DASH CAR STEREO CASSETTE PLAYER

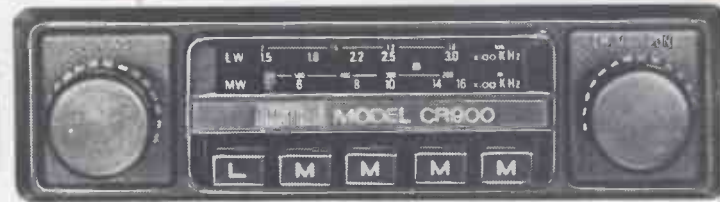
New to the AMSTRAD range this compact under-dash cassette player measures only 4 1/2 inches in width and under 2 inches in height yet offers a full 20 watts of total music power. It features auto-stop, fast forward/eject button, tape running indicator lamp and tone and balance controls and comes complete with a pair of 4 ohm shelf mounting speakers.

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Designed for In-Dash or Under-Dash mounting. A special feature is the polarity switch to instantly adapt to negative or positive earthed batteries. Both medium and long wavebands are catered for with manual tuning PLUS 4 medium wave and 1 long wave pre-select push-buttons for safe station changing while driving. Complete with speaker and baffle mounting kit.

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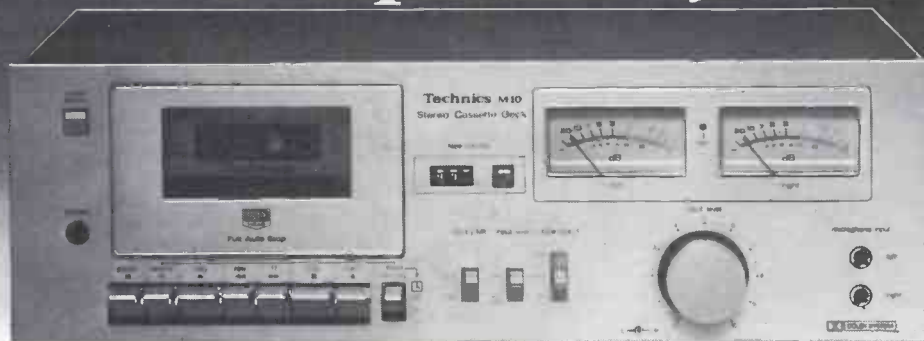
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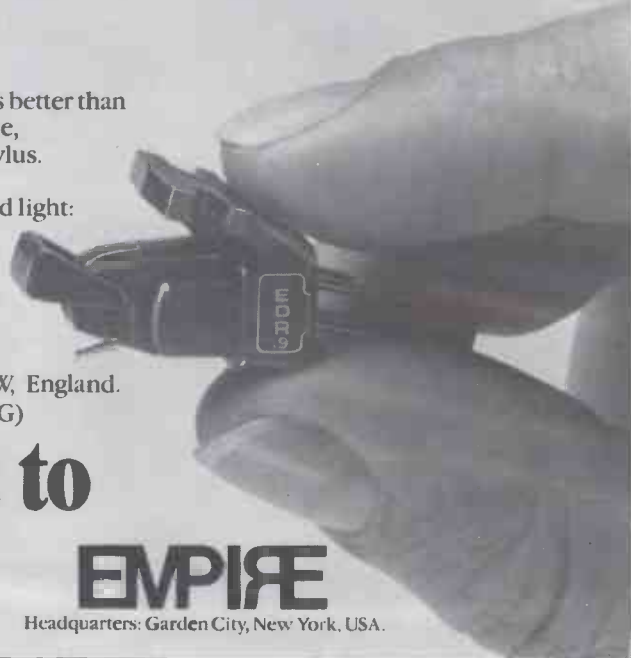
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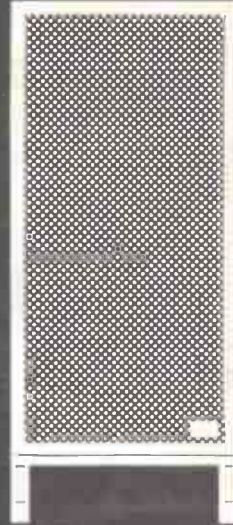
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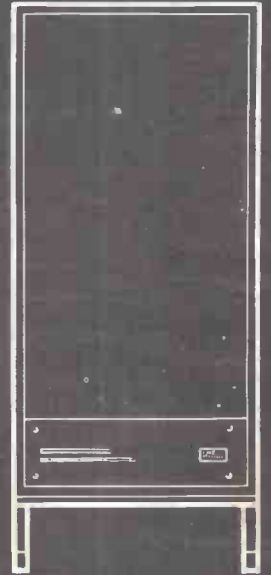
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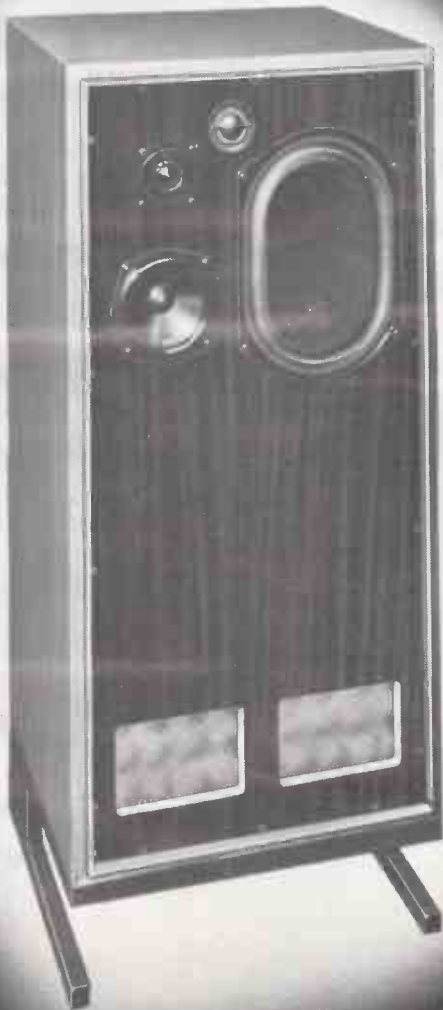
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monitor TLS80 II



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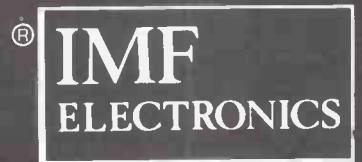


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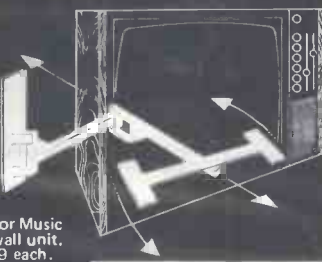
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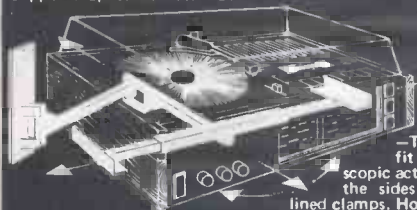
As it is the aim of Broadaker to provide a range of models to support any piece of equipment in a variety of ways, the number of permutations is large. Please check details carefully before ordering and use appropriate code.



This is the basic Pivotelli bracket which can be used for mounting Speakers, TV's, Music Centres and VCR's. Incorporating a swivelling lockable baseplate with screw-in mounting available in the following sizes:—
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new THE LIMPET®

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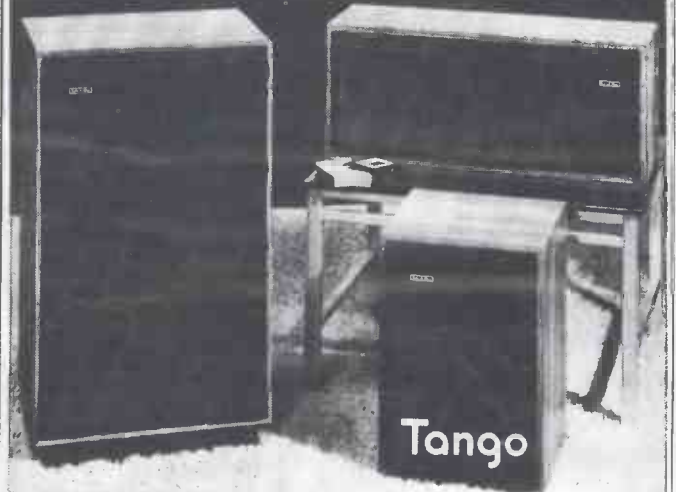
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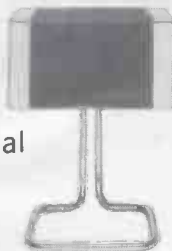
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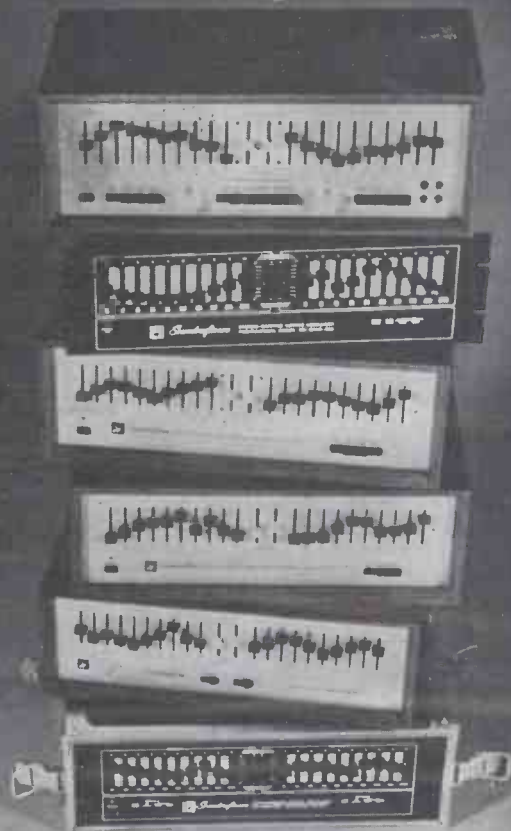
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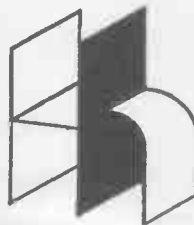
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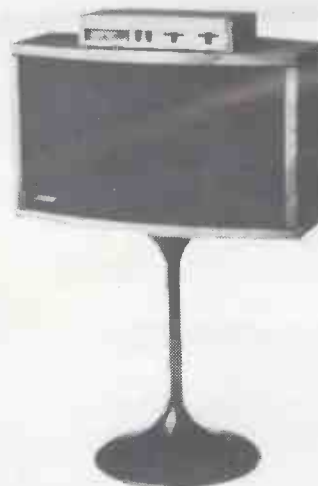
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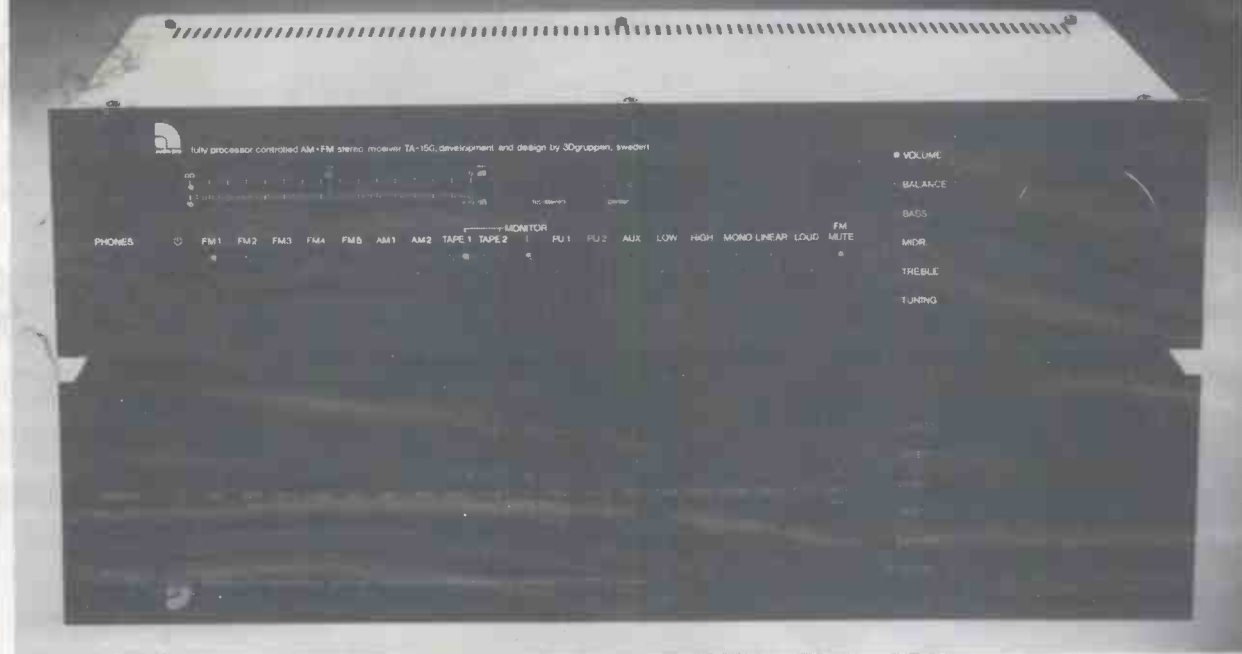
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This is the brainiest receiver in Britain. The Audio Pro TA150 solves the problems of conventional receivers by simply refusing to be conventional. Instead, it uses a microprocessor as its computer, 'brain'— and the results are revolutionary both in sound and use.

For instance, the TA 150 thinks of you and for you. When you switch on, the sound comes in quietly, not in a shattering roar. The receiver adapts to the varying sensitivity of your ears across the entire frequency range— and remembers your hearing characteristics every time you tune in. And its memory stores radio frequencies ready for immediate selection even if you've forgotten them.



Tuning is always computer-precise, thanks to an analogue controlled PLL Tuner.

And a digital display, which shows you the time when the set is off, tells you the frequency when it's on. Diodes 'talk' to you, telling you the volume, balance, bass, treble and mid-range performance.

Conventional controls, which cause phase shift, distortion and frequency limitations are eliminated— together with their shortcomings.

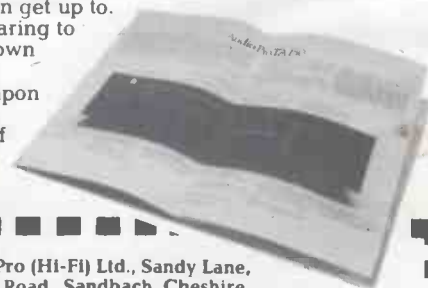
There are many extra functions, like hiss-free tuning between stations. And a 18Hz subsonic filter to eliminate Doppler distortion.

The microprocessor also brings a new meaning to the world 'reliability'.

Many of the old leads, knobs and dials are gone. At the back of the one and only control knob there are no fault-prone mechanical connections: Instead, electronics pulse are flashed to the 'brain'.

It takes an 8 page booklet to tell you all the tricks the TA 150 can get up to. And a live hearing to believe your own ears.

Fill in the coupon and be a mastermind of the hi-fi world.



To: Audio Pro (Hi-Fi) Ltd., Sandy Lane,
Moston Road, Sandbach, Cheshire.

Please send me the brochure on the computer-controlled TA 150 and the name of my nearest stockist.

NAME

ADDRESS HFN 9



Permostat and Pixall

The only safe way to eliminate static completely and have clean, dust free records.

Permostat is a uniquely formulated fluid which, with just ONE application, totally eliminates static electricity for the normal considered record life expectancy of one hundred continuous plays... without any change in either sound quality surface noise or frequency response.

Today's PVC gramophone records are very susceptible to electrostatic charging, particularly by frictional contact which takes place when records are merely removed from their sleeves or with their attempted cleaning.

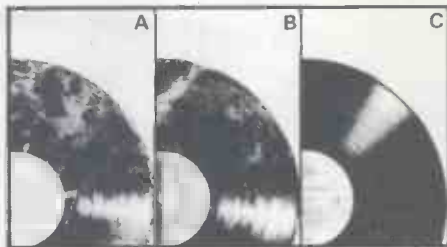
Not unlike a common magnet attracting iron particles, static scavenges, attracts and holds dust to the record, particularly in the grooves, causing premature record and stylus wear... and audible crackles that to-day's sophisticated high fidelity equipment will reproduce with alarming clarity.

To demonstrate Permostat's unique anti-static qualities and prove its effectiveness, a dust chamber was used to perform accelerated dust pick-up tests.



Three records, one untreated, one exposed to claimed anti-static devices and one treated with Permostat were suspended vertically within the dust chamber and simulated dust particles were circulated creating an effective dust storm.

Only the record treated with Permostat showed no dust pick-up and no residual charge.



- A) Untreated record - average static charge reading: 15000 volts. The record readily attracted and scavenged a considerable amount of dust.
 - B) Record treated with claimed anti-static product - static charge reading: 300 volts. Dust attraction reduced, but still a dirty record.
 - C) Record treated with Permostat - static charge reading: 0 volts. No visible evidence of dust pick-up.
- Available either in kit form or refill pack, one bottle of Permostat treats approximately 25 LP's. Easy to use - just spray it on - buff well - and Permostat does the rest.*



Pixall doesn't simply push dirt around and around. It is the first cleaner actually to LIFT dust and dirt from your records.

The key to Pixall's success lies in its specially formulated adhesive tape, designed not merely to remove surface dust but more specifically to LIFT and dispose of damaging microdust particles embedded and held by static deep inside the grooves.

This unique British cleaner so impressed the Jury at the International Stereo Compo in Japan that it was aptly honoured with THE GRAND PRIX AWARD.

Independent tests have shown that a record treated with Pixall visually results in leaving the record in pristine condition, whilst audibly it makes sound, sound better.

If you have difficulty obtaining supplies please complete this coupon.

To: **Milty Products Ltd.,**
New Mansion House,
173/191 Wellington Road South,
Stockport, Cheshire SK1 3UA.
Tel: 061-480 8142/3. Telex: 667700.

State quantity required.

- Pixall Cleaner at £3.74 inc. P & P
 - Pixall Refill at £0.79 inc. P & P
 - Permostat Kit at £5.30 inc. P & P
 - Permostat Refill at £3.59 inc. P & P
- I enclose cheque/P.O. value

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(Please do not send postage stamps.)

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Prices only apply to the U.K. HFN2

Milty - record care technology that works.

So what!!

FACT

A man was treated in a Kuala Lumpur hospital for a strained neck after a trained monkey, sent up a tree to gather coconuts, jumped on his shoulders and began twisting his head.

FACT

The whole attitude and mystique surrounding the upmarket section of the Hi Fi business is altogether too solemn, too arrogant, too elitist and too boring.

FACT

SUBJECTIVE AUDIO—consider that the basis for the whole confusing chase for "better" products, has been totally ignored, ie the music reproduction and the degree of pleasure obtained. Our patience has worn thin trying to make metaphysical differentiations between two equally fine cartridges or tone trms for as it happens, if and when we do note a distinction, our reaction is all too frequently "So what"! Investigation has shown that a good many enthusiasts (audiophiles?) have never attended a live concert and consequently have only a remote notion as to how the "real thing" sounds. We believe that much of the "up market" audio field is a product of neurotic insecurity abetted by something akin to mass suggestibility, rather than true musical discrimination.

FACT

What WE consider to be some of the finest equipment obtainable, is presented in **SUBJECTIVE AUDIO'S** private listening rooms—in fact, they are ordinary living rooms, just like the ones you intend to use in your own home. If a unit does not perform to OUR strict standards, you will NOT find it on our shelves, regardless of whose name is on it. We have no obligations to any supplier—our responsibility is to you. We won't pretend that we are Hi Fi's answer to the "Generation Game" or that any of us here behave like Basil Fawlty, however, we now know that the relaxed way is for us the correct way and we totally ignore the solemn, boring and arrogant attitude so common today. Why not escape from all that is repulsive in Hi Fi and immerse yourself in a unique concept (and attitude ??) at **SUBJECTIVE AUDIO**.

FACT

A man was treated courteously at a Hi Fi dealer and when he got over the shock was relieved to find he only had to spend 60% of his budget to get a sound and service better than he had ever dreamed possible. He left **SUBJECTIVE AUDIO'S** listening rooms and lived happily ever after. All together now ... AHHHHHHHHHHHH

FACT

In order to carry out all this sanctimonious bilge and missionary type work stated above, we have outgrown our current facilities and moved about 300 yds up the road, to similar but larger premises—however, the same attitudes will persist as we firmly believe that small (or in our case, just a little larger) IS beautiful. Please allow us a few days to at least get some semblance of efficiency and we hope to be able to receive distressed, curious or merely friendly visitors, by appointment only, from 18th July.

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A visiting journalist recently suggested that we should not do this. Final adjustment should be done by ear, he said.

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After all we know that if we add a little warmth with a subtle boost in the lower middle and balance this with an ever so gentle hump in the quack region (2-3kHz), we can make most programmes sound superficially more impressive. Come to that, why not change the $3180\mu\text{S}$ to $5000\mu\text{S}$ adding a little more 'heft' that most people will fall for. We could even make a special model for the boom and tizz brigade.

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Hi-fi as good, as innovatory as Tandberg is only available from specialist outlets. At each of these carefully-chosen appointed dealers is a Tandberg-trained specialist to help you. This service extends to: free demonstration at the dealer's premises or in your home; completely free delivery and installation at most dealers, including all leads and plugs; full two-year guarantee (parts and labour); and service and free advice whenever you might want them. Talk to one of our advisors soon.

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Tandberg TCD320, 340A Technics RS615, RS630 Technics RS631, 641, 615 Technics RS678, 686 Yamaha TC511S, TC800GL

TAPE DECKS & RECORDERS

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TUNERS

Akai AT2200, AT2400 Armstrong 623, 624 Hitachi FT340, FT440 JVC JTV10L, JTV11G Lecson FM1 National ST2300, ST2400 Quad FM3 Revox A76, A720, B760 Sansui TU217, TU717 Sony ST212L, ST313L Sony ST515L, STA3L Technics ST7300, ST3500 Technics ST8080, ST9600 Yamaha CT410, CT610 Yamaha CT810, CT1010

RECEIVERS

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SPEAKER SYSTEMS

Acoustic Research AR18, AR17, AR15, AR14 Beovox S25, S35 Beovox S75, M70, M75, M100 Bose 301, 501, 601, 901/III Celestion Ditton 15XR, 11, 22

Celestion Ditton 33, 44, 25, 66 Celestion UL6, UL8, UL10 Chartwell PM100, PM200 IMF Compact II, Super-Compact IMF ALS40, TLL50, TLLS80/II

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MUSIC CENTRES

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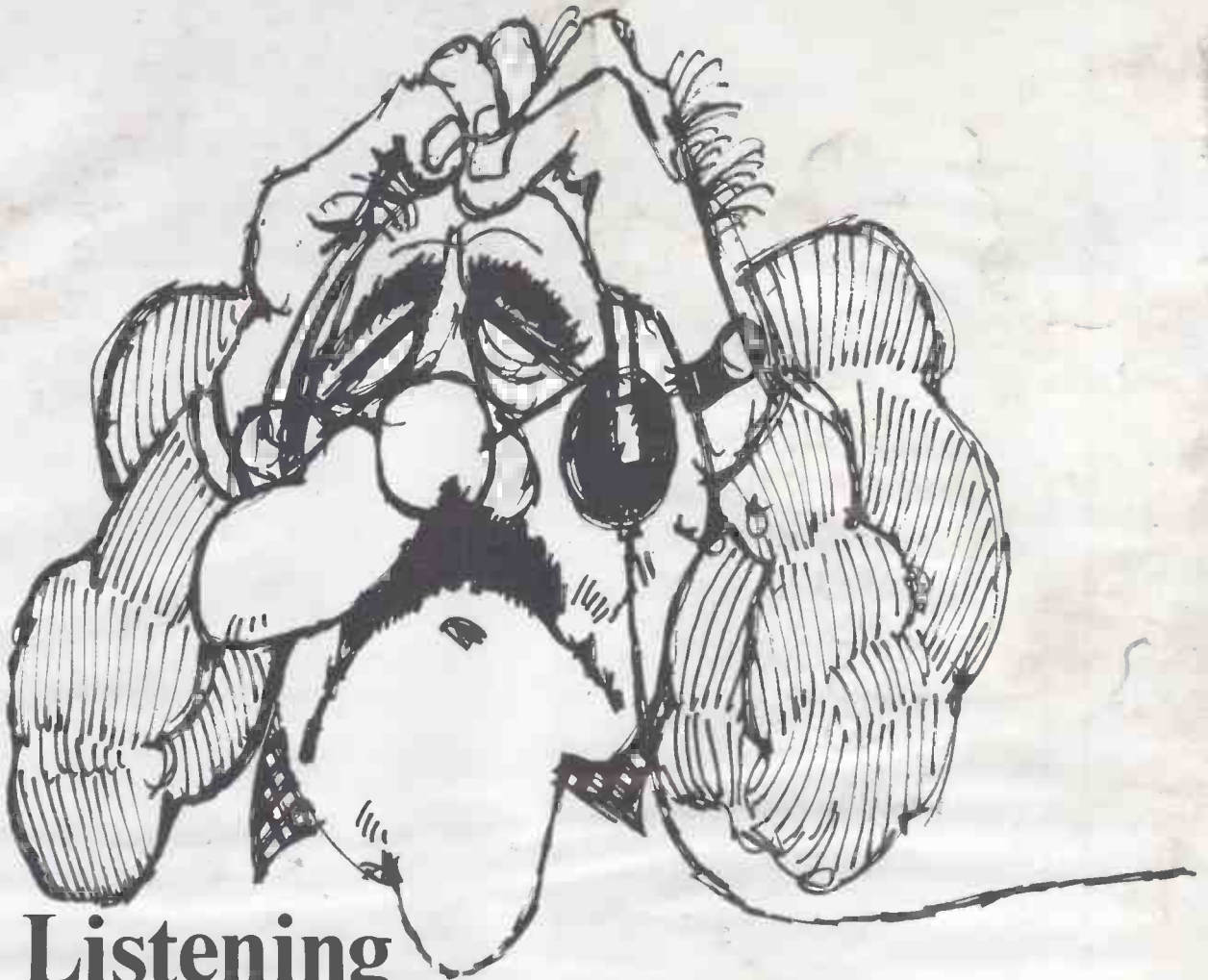
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The writer concluded that "as far as the Glendale is concerned I think that...it sets a standard in £100 loudspeakers which must be very hard to beat."



popular than their distinguished predecessors, not least in the critical eyes of the reviewers.

The Shelton XP2, for example, was described by 'What Hi-Fi' (April 1979) as "outstanding value." The Shelton's dome tweeter, they continued, gives it a "smooth, open and spacious sound," and the overall performance was described as "well integrated and detailed."

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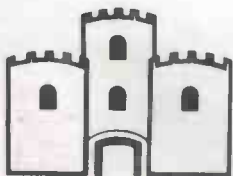
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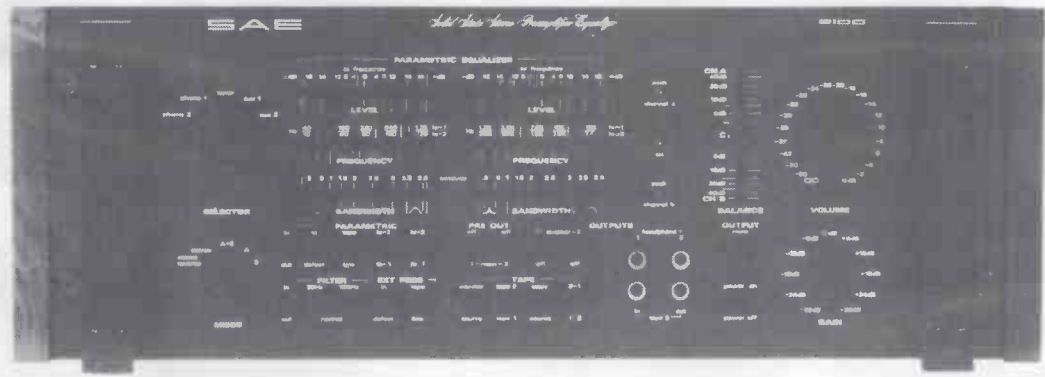
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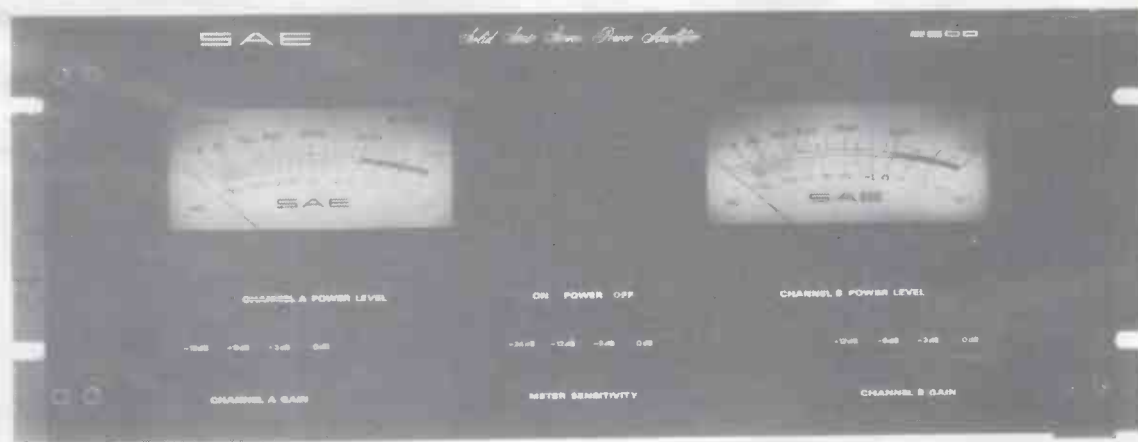
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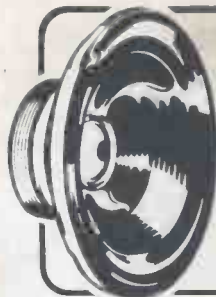
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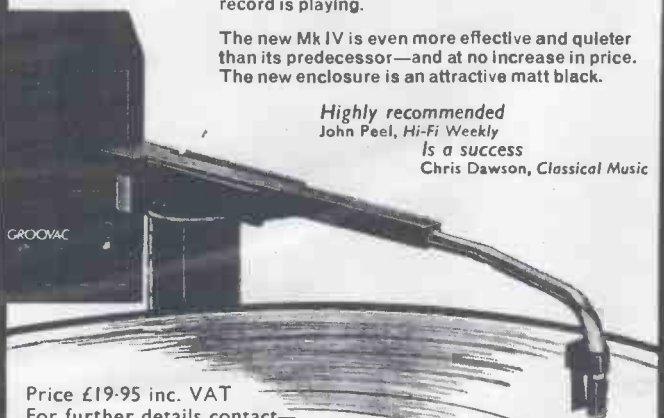
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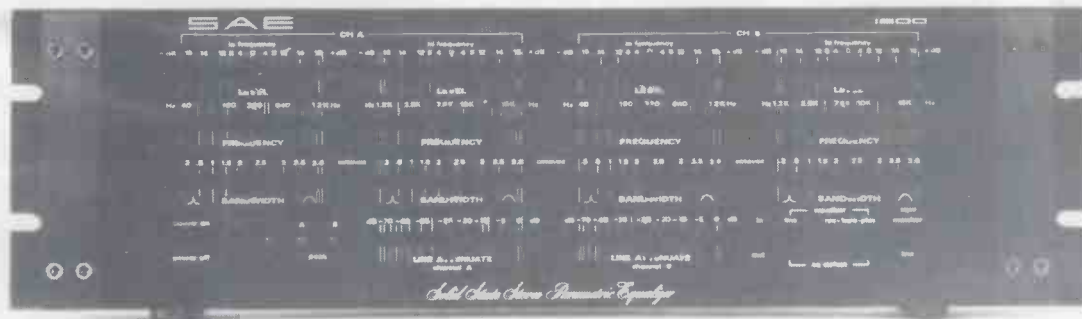
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THE LINK HOUSE GROUP

ADRIAN Hope's second article on reviewing and consultancy in this issue concludes with some suggestions for the consideration of magazine editors, so it is obviously incumbent upon us to state *HFN/RR*'s future policy. Despite the two footnotes appended to his article, our sympathies are generally with Mr. Hope, and from next month onwards we shall require that reviewers always give us details of any involvement with manufacturers or importers concerning items submitted for review.

However, such consultative work can have ramifications with little bearing on the immediate review, while at the other extreme there might be an intimate involvement of the sort which arises when a reviewer discovers a design fault on the sample submitted, advises accordingly, and then re-tests a modified product. When extra work is involved in such a re-test, it is in our view reasonable for the manufacturer to meet any additional costs, while we don't agree that this necessarily prejudices the reviewer. It is quite true, as Mr. Hope has argued, that the changes effected may be a matter of opinion, but so also are some performance features which please or displease on an *unmodified* product. As we see matters, the central requirement is that the reader should be told if anything of this sort has happened. Also, and let this be quite clear, in the case of *HFN/RR* no piece of equipment is, or ever has been, submitted to a particular reviewer at the supplier's request. We say who will prepare a review, and if a reviewer's declaration of interests reveals what we regard as ethically incompatible loyalties, the item will go to an alternative member of the reviewing team.

We hope that readers will trust our judgement of how best to present the facts in each case. When no relevant extra interest is involved, it will be simplest to say nothing; but when there are consultancy ties it may be best in some cases to make a plain editorial declaration of the facts, and in others for the author to explain in the review itself exactly what has happened. The former might be suitable in some cases of simple advisory work regarding the suitability of a product for the UK market, while the latter could be appropriate when review tests reveal an error which is then corrected and paid for. In any event, we undertake to seek out whatever facts may be relevant and see that they are stated in one form or another.

This is all in fairness to the reader, who may join manufacturers in expecting that equipment reviews be conducted with impartial objectivity in the technical as well as the personal sense. This applies especially to composite reports, which have to be set up with remarkable care if the products involved are to receive a completely fair 'hearing'. We make no claim to be paragons in this respect, and expect to go on learning from our own and others' mistakes as previously unsuspected loopholes are revealed. But at least we make a conscious effort to avoid glaring methodological gaffs, and can only wring our hands in despair at a recent review of five turntables in another magazine.

In this, listening judgements were conducted without the precaution of 'blinding' the reviewer(s), while the model employed as a control was the reviewer's personal reference turntable (to which he is strongly addicted) despite the fact that it was one of the five being assessed. Such an arrangement inevitably biases results in favour of the reference. Indeed, anyone who has pondered the constraints and psychology of experimental method could have predicted the outcome, which, notwithstanding a manner of writing which made the whole thing look completely fair and reasonable, favoured the reviewer's *a priori* prejudice. Possibly the 'winner' would still have come out best in a more rigorous test, but equally possibly not. It would seem that consultancy is not the only threat to impartiality in reviewing.



Black Tulip. . .

. . . is the name Philips have chosen for their keenly awaited top end range, the first models of which made their press debut at the end of June. Black Tulip recalls the quest for perfection by horticulturist Cornelius Van Wit in the novel by Alexandre Dumas, and Tulip itself possesses obvious-enough connotations for a Dutch company (although the range is manufactured variously in Austria, Belgium, the Netherlands and Japan). There are some 22 items in all including preamps, power amps, tuners, receivers, cassette and open reel decks, turntable combinations, speakers and a timer. The units are certainly impressively specified and reflect the individuality of Philips' approach, which is apparent too, in the sophisticated, clean lines of the equipment. Full details of the range would occupy far more space than we can allow and simply to publish a list of specifications would make for unduly tedious reading so we will confine ourselves to a small selection of the models so far released.

The AH 180, 280 and 380 comprise a digital tuner, pre- and power amp combination. The tuner is of the frequency synthesiser type and has both AM and FM wavebands with a facility for memorising up to 12 keyed-in station frequencies, switching automatically between AM & FM as required. It can be programmed to search sequentially or can move in 50 or 100 kHz steps, FM, or 1 kHz steps, AM. Fixed and variable outputs are provided and the IHF sensitivity is 0.9 μ V with THD below 0.15% on stereo. Capture ratio is 1.2 dB, S/N ratio 70 dB and frequency response 20 Hz-15 kHz \pm 0.5, -1 dB.

The preamp features detent type volume, treble and bass controls with switchable turnover frequency selection and a defeat switch on the tone controls. Loudness and mute controls (instantaneous -20 dB silencing), scratch and subsonic filters are included with headphone and mike sockets and

facilities for two phono (moving-magnet—Philips remain to be convinced about the longevity of the moving-coil type) and two tape decks (dubbing provided). Quoted harmonic distortion figure is 0.005% with a 'line' frequency response of 10 Hz-200 kHz \pm 0.5, -3 dB. The treble control provides \pm 10 dB at 9 kHz operating from 2.5 kHz, or \pm 9 dB at 15 kHz based on 5 kHz. The bass gives \pm 10 dB at 70 Hz rolling from 250 Hz or \pm 12 dB at 100 Hz from 500 Hz. Three outputs are provided for power amps and/or the Philips



motional feedback speakers.

The power amp yields 2x100 W into 8 ohms with a power bandwidth of 10 Hz-100 kHz. Harmonic distortion 0.03%, intermod 0.02% at 70 W into 8 ohms. Damping factor is 85 at 8 ohms, S/N ratio 100 dB and separation 80 dB at 1 kHz, 60 dB at 10 kHz. Power output meters are provided, calibrated both in electrical watts and dB. Prices for these units are £378.50, £249 and £287 inclusive.

In addition to the AF977 reviewed in this issue there are two other turntable combinations, the AF829 and AF729. All these are direct control, closed loop, belt drive designs with electronics monitoring the platter movement rather than, as previously, the motor itself. Suspended sub-chassis techniques are used throughout the range with automatic set down adjustment related to record size, and photoelectric stop. Wow & flutter are typically 0.05% DIN, rumble -50 dB DIN A. Straight arm tubes are employed in each of the decks. Prices £199.95, £159.50 & £115.50.

The N2552 cassette deck has provision for metal tape, three heads (playback and record heads amalgamated), off-tape monitoring, full solenoid-operated logic control and a direct drive capstan. Both Dolby B and Philips' own DNL noise reduction systems are included and an unusual feature is the 'post-fade' facility which effects controlled fading while the machine is running in the playback mode. VU and LED peak indicators are fitted. Price not yet decided.

The Philips Motional Feedback Speakers are already well known, but there are some new models in the range. The AH585 is a 35 watt two-unit design whose useful frequency range extends from 35 Hz to 20 kHz. The AH588 is a 75 W three-unit model operating down to 28 Hz. Switches fitted to this speaker provide (electronic) correction curves to allow its use against a wall, floor standing or side to wall. These designs use separate amplifiers for each driver with the feedback control exerted only on the bass driver. Prices £149.50 & £229.95.

There is also a very comprehensive programmable timer, the AH080, which can be used with any mains powered equipment and should find favour with many of the more well-heeled recording enthusiasts, although £149 doesn't seem too excessive for what it offers these days.

Philips were showing the Black Tulip range at Harrogate.

Metrocare news

The Anti-Resonance Record Clamp, M108A, £3.99 is a record label-sized acrylic disc with a brass collet which locks on to the centre spindle to couple the record firmly to the mat. Improvements in bass, stereo separation and attack are apparently to be expected (not to mention a considerable increase in the time it takes to turn a record over!).

Billy Vee Shows All

Dealer-organised hi-fi shows seem to be taking over from the big exhibitions in terms of public product exposure; one such was last year's South East London Show organised by Billy Vee Sound Systems which proved very successful. So successful that they are repeating the formula this year, and over 30 manufacturers, including A&R (Cambridge), Bose, JVC, KEF, Linn, Mission, Meridian, Pioneer, Quad, Videotone and

Yamaha, will be showing their latest and greatest. Dates are Saturday and Sunday September 1st and 2nd; place the Clarendon Hotel, Montpelier Row, Blackheath, London and further information can be had from 01-318 5755.

Pick a Pickering

Following the success of the now familiar XSV/3000, Pickering have introduced two further cartridges to their XSV range. For the XSV/4000 they have developed a still smaller Samarium Cobalt magnet resulting, logically, in a reduction of the moving mass with the attendant advantages of faster rise time and improved frequency range—from 10 Hz to 40 kHz. Recommended tracking force is 0.75-1.25 grams. The XSV/5000 is the top-of-the-range model and uses a differently shaped magnet with a tapered cantilever to extend the frequency range to 50 kHz. Both models are fitted with Pickering's Stereohedron diamond stylus. The 5000 also comes complete with two additional

replacement styli—for 78 rpm records and for mono LPs. Tracking force varies between 0.5 and 1.5 grams (plus 1 gram for the infamous, detachable, Dustomatic brush). Channel separation for both cartridges is 35 dB at 1 kHz and the preferred loading conditions are 275 pF \pm 30 pF and 47 k.

Ambisonics

A leaflet providing some useful clarification and general data on the research undertaken by the National Research Development Corporation, BBC and IBA into ambisonic surround-sound techniques has been produced by the NRDC. Special reference is made to the Calrec 'Soundfield' mike and the Universal HJ encoding system, and the basics are explained in simple, largely non-technical terms. Copies are available upon request from IMF Electronics Ltd., Westbourne Street, High Wycombe, Bucks. We will have a comprehensive review of the 'Soundfield' mike in a forthcoming issue.



Celestion

Celestion have developed two new Ditton speaker systems and launched them to coincide with the Harrogate and Berlin Shows. The 121 is a budget priced design using two drivers. Its baffle is a one-piece, high rigidity styrene structure with an integral tweeter-loading cavity and rounded edges to minimise diffraction effects. No grille cover is fitted, but each driver has a protective mesh cover. Frequency range is 60 Hz-18 kHz overall, sensitivity is 2.5 W pink noise for 90 dB/metre on axis and it is suitable for amps of up to 40 watts RMS output. Dimensions 395 x 265 x 227 mm. The 332 is a three-way model owing something to the now familiar 442 in its layout. The bass driver, however,

is a 290 mm fibre-cone unit on a cast housing with an integral expanded polyurethane buffer which prevents damage during overload conditions by cushioning the voice coil at the extremes of its travel. A 14-element crossover is used with fuse protection for the tweeter. Frequency range is 50 Hz-20 kHz (± 3 dB), sensitivity 2.8 W for 90 dB/metre, maximum RMS power rating 100 W. Dimensions 650 x 356 x 285 mm. A review of the 332 will appear in a forthcoming issue. All future Celestion marketing is to be handled under their new 'house' name, Celestion International, a change intended to facilitate their increasingly active export operations.

SAE by Hammond

The range of hi-fi exotica, including sophisticated equalisers, made by American firm SAE is now being distributed by C. E. Hammond & Co., Ltd., 105-109 Oyster Lane, Byfleet, Surrey, KT14 7JH.

Show yourself

The Super Fi and Radio Trent sponsored Hi-Fi and Video '79 Exhibition takes place in Nottingham from September 21st to 23rd. As before the venue is the Albany Hotel and many of the top names

will be there, including Aiwa, Celef, JBE, JVC, Linh, Michell, Pioneer, Radford, RAM, Sansui and Technics. There is a large video showing too, featuring all four major systems. Public opening times are: 4pm-8 on the 21st; 10-8 on the 22nd; 10-6, 23rd with trade only from 10 am on the opening day.



A Nightingale Sang...

The Nightingale NM1 appeared a few years back combining free baffle-mounted mid and HF drivers with a large transmission line bass unit. A larger version, the NM2, briefly surfaced in 1977 and now a smaller new design, the NM point 5, appears. A three-way design of quite a large aspect ratio and having a superficial resemblance

to the NM1, it couples a reflex-loaded woofer with mid and HF units 'asymmetrically mounted in a vertical line', and the HF unit on a small free baffle. The lateral disposition of the units on the earlier designs, like the Dahlquist, produced rather anomalous imaging, but the NM point 5 should be O.K. on this point. Power handling is 25-75 watts; further details from Nightingale Acoustics, 26 Station Road, Bexhill-on-Sea, East Sussex.

EMI Digits

Last month (p 69) we looked in some depth at the Decca digital recording system and lest it should be thought that their traditional rivals EMI are lagging, they have, in fact, just released their first PCM system recorded album, following a jazz single 'Love don't live here any more', in July. Featuring Manuel—alias Geoff Love—apparently without his Music of the Mountains the album, 'Super Natural', (TWOD-2001) is mainly MOR with some classical arrangements (*Barcarolle*, Albinoni *Adagio* etc) and was recorded with an EMI-developed PCM system using instrumentation recorders. Sampling rate is 50 kHz, the signal is encoded in 'the equivalent of 15 bit' words (ie, 12+2 bit) and recorded on 1 in tape at 30 in/s. Each channel is spread across five tape tracks, giving both drop-out protection and the necessary increased information rate, and as 1 in. tape can carry 14 tracks, 10 only are used for stereo. Future progress will involve using wider tape and cutting down both the spread and track width so more channels can be recorded, eventually 24.

The 'Manuel' disc involved recording the backing—strings, drums, direct-injected electric bass and piano—on one machine and then copying the backing onto a second machine while simultaneously mixing in 'live' guitars and vocalists, much as in the days before multi-track tape recorders (remember that copying of PCM signals doesn't introduce any degradation).

EMI have also entered into a licensing arrangement with studio equipment manufacturers MCI for them to manufacture the PCM recorders developed by EMI's Central Research Laboratories. The first model, the MCI JH-220 stereo machine, will be in use in EMI studios by the end of 1980 and MCI will also be making the multi-track and an editing system.



JVC's mini budget

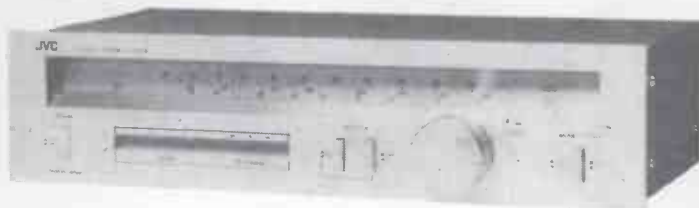
Two new amplifier and matching tuner combinations have been launched by JVC. The A-S5, which replaces the JA-S11G, uses a class-A phono input and fully protected, direct coupled output circuitry providing 30 wpc/8 ohms across 20Hz-20kHz for less than 0.06% THD, with provision for connecting two tape decks (full dubbing facilities). The A-S3 is a 20 wpc amp offering a similar performance but with rather more basic facilities and just three inputs; phono, tuner and tape. Switching for two sets of speakers, the usual 'loudness' button and headphone drive are features common to both amps which sell for £99.50 and £85 inclusive of 15% VAT respectively.

The T-V5L replaces the JT-V22

and JT-V11 tuners and offers three wavebands with a S/N ratio of 82dB mono, 70dB stereo together with LED indication of (centre) tuning and signal strength. The T-V3L is a slimline unit like the A-S3. Both tuners make extensive use of ICs in the FM and AM IF strips, stereo decoder and signal strength monitoring sections. Prices £118 and £89.50 inclusive.

JVC's answer to the mini revolution has begun with an integrated amp and matching

digital FM tuner, the A-M1/T-M1, each retailing for £306 inc. The amp offers 50 wpc/8 ohms for <0.03% THD across 20Hz-20kHz (overall frequency range DC-70 kHz) with a damping factor greater than 30. It is DC coupled throughout. For ease of use, front panel controls are confined to push buttons, with five preset volume settings, while tone, balance, loudness, speaker switching, headphone and overall volume facilities are concealed beneath a flap. The tuner features micro-processor-controlled phase locked loop circuitry and what JVC call PTL (Phase Tracking Loop) which improves S/N ratio (72 dB Stereo, IHF A-network), distortion (0.18% stereo) stability and IF rejection. Five memory presets are employed as well as up/down searching, LED signal meters and a digital frequency/time readout. Dimensions in mm: 93 x 230 x 259 (amp) or 269 (tuner).



Who ever of the Japanese

Imitators yes.

But innovators?

True they make reliable cars, excellent cameras and outstanding hi-fi equipment.

But what genuinely great inventions have they been responsible for?

Modestly, our chairman would have replied, "I am not a great inventor."

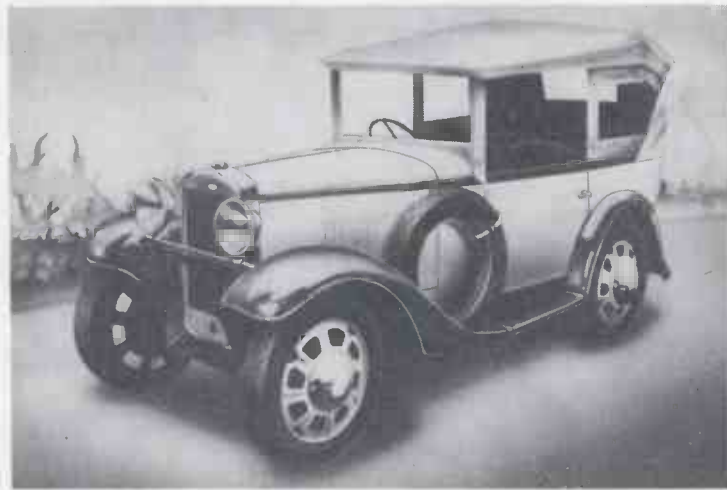
"In my field I have merely made improvements."

His field was high-fidelity tape recorders.

He built the first four-track stereo tape machine with a synchronous main motor. The speed remains constant, even during fluctuations in the power supply.

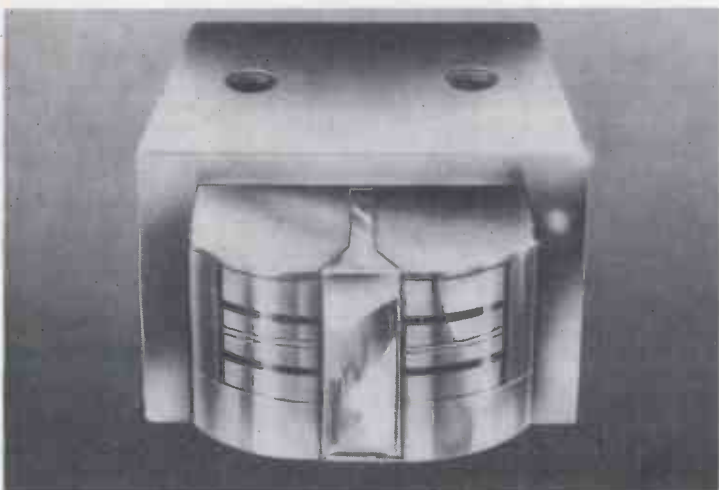
He developed a new kind of oil-retaining metal for the bearings in his motors, eliminating the need for constant servicing.

He was the first to install three separate motors in a



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thought as innovators?



THE FIRST GLASS FERRITE TAPE HEAD: AN ORIGINAL.

cassette deck. Something acknowledged to be ideal, but until then thought to be impossible.

And concerned that his machines should not only reproduce the purest possible sound, but should also last

indefinitely, he finally invented his masterpiece.

He took the ferrite from within platinum. Tempered and polished it to a jewelled finish. And cut it to form a tape head that compared to conventional tape heads lasts a hundred times longer.

He called it quite simply the Akai GX head.

And throughout his philosophy was equally simple.

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AKAI It remains the Akai motto to this day.

'Have responsibility for and pride in what you make.'





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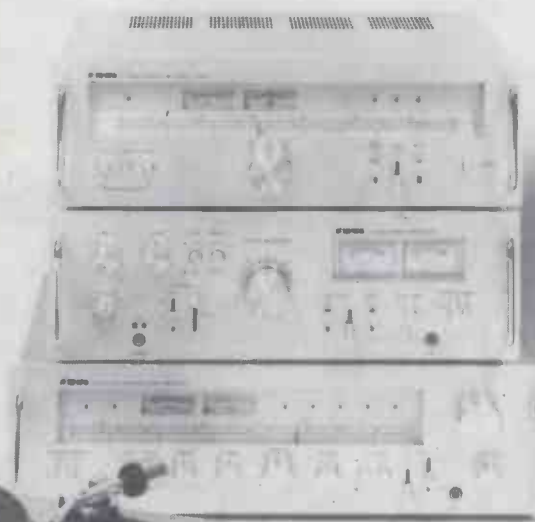
TS-940 3-way 35-watt loudspeaker system. ▶



TT-3045 Top quality hi-fi tuner for FM, MW and LW. Pushbutton selection with LED indication. Separate switches for MPX, mode of operation stereo/mono, mute. ▶

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TR-1030 3-band stereo receiver FM/MW/LW with an output of 23 watts per channel. Separate meters for FM, signal and tuning. Facilities for two tape inputs, mic. input and two separate speaker systems. ▶



▲ **TD-855D** Top quality direct-drive hi-fi turntable. Manual or automatic operation. The player has an AC motor for the operation of the auto mechanism. Torsion stiffened 'S' shaped tone arm with low friction bearing and hydraulic damping. Antiskating device, adjustable stylus pressure. The arm is fitted with a magnetic cartridge and diamond stylus.

In addition to its attractive styling, each piece of equipment is totally compatible with the whole of the Tensai range. Each has been designed to fit precisely into a beautifully styled unit. A neat way to get it all together.



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MFN

an experimental scratch eliminator

by R. A. Penfold
PART ONE



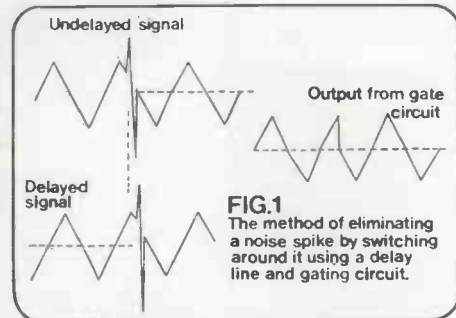
CONVENTIONAL scratch filters are quite effective at reducing the surface noise produced by small scratches, minute particles of dust in the record grooves, and record wear, but they are not very effective at attenuating the noise spikes produced by severe scratches. Scratch filters provide a rapid roll-off of frequencies above about 7 kHz, and as most of the signal content of surface noise is at these frequencies it is greatly attenuated. Bad scratches are relatively wide and produce a large output at comparatively low frequencies, thus rendering such low-pass filtering largely ineffective.

There are much more effective methods of combating large scratches, although these are more complicated and are used far less than ordinary scratch filters. Some operate by simply suppressing the scratch or bypassing it, and others actually remove the pulse produced by the scratch and replace it with a more acceptable signal. [See SAE 5000 review, Aug. '77, 1978 Annual]

One way of bypassing the scratch is first to record the disc onto tape, and then literally cut out every severe 'click' and 'thud' using ordinary tape editing techniques. It is even possible to edit in fragments of recorded material where something important has been obliterated by a scratch. While this method

is very effective, it has obvious drawbacks.

There are purely electronic methods of achieving much the same thing, and digital techniques can be employed in this application. However, such systems tend to be extremely costly and complex. Analogue techniques can also be used, and there is a system which uses a delay line and gating process [see Garrard MRM 101 review, April '78, 1979 Annual]. In general, the signal is fed by way of a delay line and gating circuit to the amplifier so that the signal is delayed by about 1 ms. The undelayed signal is also fed to the gating circuit but is normally blocked from the output. When a scratch is detected, it is allowed to pass at the undelayed input, but before it reaches the delayed input the



gating circuitry changes state and blocks the delayed signal and connects the undelayed signal through to the amplifier (fig. 1). After the scratch has passed completely through the system the gating circuit reverts to its original state so that the unit is ready to operate again. Effectively, the part of the recording containing the scratch is being cut out, and a small part of the recording after the scratch is being repeated so as to fill in the missing 1 ms of recording time, and bring the circuit back to a state of readiness (SAE).

The same basic arrangement can be used to blank the pulse caused by a scratch, but with this system the gating circuit only has to cut out the part of the recording containing the scratch: it does not switch in the undelayed signal (Garrard). Also, the delayed signal is blanked for no longer than is absolutely necessary in order to obliterate the scratch.

Although one might think that neither of the last two systems would work, since one would be clearly able to hear the action of the gating circuit, this is not strictly the case. It must be borne in mind that very short periods of time are involved so that very little signal is lost (less than half a cycle at many audio frequencies), and any section of the recording which is repeated is far too short to be heard as such, except under extreme conditions.

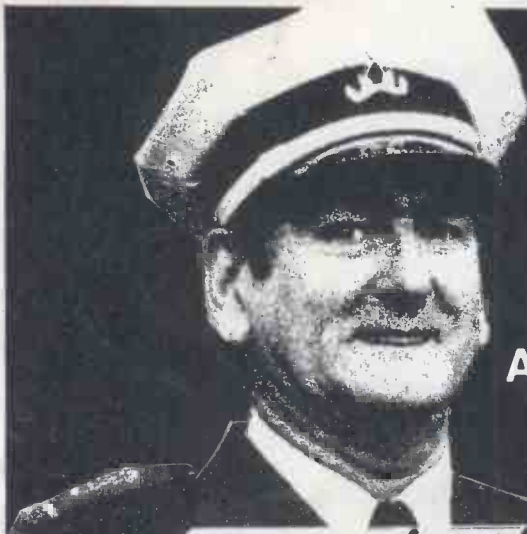
The effectiveness of a system of this type depends to some extent on its level of sophistication, and a simple system will normally produce a slight audible glitch. However, small irregularities in the music are far less noticeable than the pulse caused by a bad scratch, so that even a relatively simple device of this type can be quite effective.

Practical Unit

Until recently, a scratch eliminator using a delay line was not a practical proposition for the amateur electronics enthusiast who wished to experiment with this type of equipment. Although a delay of 1 ms may seem to be quite small, it is large by most electronic standards and until recently a high quality stereo delay line to provide such a delay was a very large, complicated and extremely expensive affair.

With the availability of 'bucket brigade' ICs, or charge-coupled devices as they are more correctly but less often termed, it is possible to obtain the required delay with little loss of quality and using quite simple circuitry. However, it must be admitted that these devices are much more expensive than most other ICs employed in hi-fi applications, although prices will undoubtedly fall as the circuits become more widely used. The unit described here is a relatively simple and inexpensive design and should be reasonably easy to build. However, it is not really a beginners' project, neither is it anything like the ultimate in scratch eliminators.

The system of switching between the delayed and undelayed signal so as to switch around the scratch is the one utilised here. The circuit could easily be adapted to provide a blanking action, and this has been tried, but the problem encountered with this system is that the circuit can be spuriously triggered by particularly ferocious passages of music. With the blanking system the signal is then



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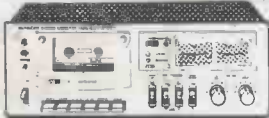
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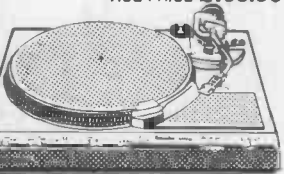
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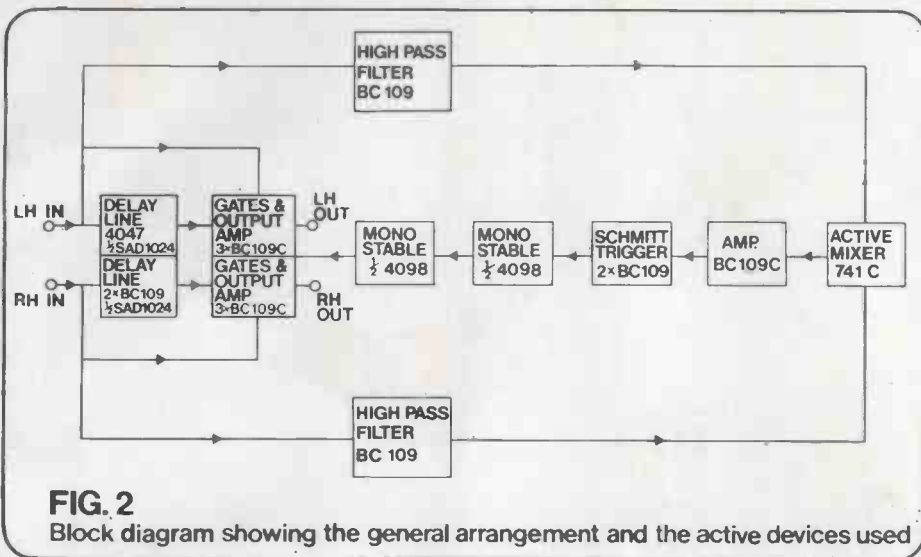


FIG. 2
Block diagram showing the general arrangement and the active devices used

largely eliminated, whereas accidental triggering has a far less drastic audible effect with the switching system as used here.

IC impulse noise blanking devices are now available, and although primarily intended for use in FM car radios, they can be adapted for use in other applications. A circuit using the KB4423 device was tried, but would only work if used in conjunction with the delay line. This type of unit was therefore abandoned as it resulted in a circuit no less complicated than the present design, but having a slightly inferior performance.

The final unit does only provide a limited improvement in the signal as it does produce some audible effects in the course of eliminating the pulse caused by a scratch. How well, or otherwise, it performs, depends to some extent on the nature of the recorded material it is used to process, the severity of the scratch, and the equipment with which the unit is used. It will normally provide a very worthwhile improvement in the signal if it

contains a bad scratch or scratches, and is certainly very much more effective than an ordinary low-pass scratch filter.

Block Diagram (Fig. 2)

The input signal from each channel is split into three parts: one part is taken to the delay line, and from here it is coupled to the gating circuit (this signal is normally fed straight through to the output); part of the input signal is fed direct to the gate circuitry, and this is normally blocked from the output; the third part of the signal is taken to a high-pass filter with a turnover of about 14 kHz. This removes most of the music content on the signal, but leaves the pulse produced by the scratch comparatively unaffected. As it is possible, but very unusual, for a scratch only to affect one channel, the two filtered outputs are mixed together and used to operate control circuitry common to both gates.

An amplifier is used to boost the output from the mixer to a level which is adequate to drive a Schmitt Trigger. This trigger circuit is needed in order to ensure reliable interfacing with the next section of the circuit, a

monostable multivibrator. This produces a short output pulse so that a second monostable is not triggered until the scratch has gone by at the main input, but has not yet reached the output of the delay line. The output pulse from the second monostable is used to switch the gate circuitry into its alternative state with the main input passed through to the output and the delayed signal blocked. The output pulse from the second monostable is sufficiently long to enable the scratch to emerge fully at the output of the delay line before the pulse decays and switches the gate circuitry back to its original state.

Delay Line Circuit (Fig. 3)

Bucket brigade device IC2 forms the basis of the delay lines. For those who are not familiar with this type of device, it is based on a series of capacitors. The IC is fed with a clock signal, and on each clock half-cycle a capacitor is connected across the input, and assumes a charge voltage equal to the input voltage. After the capacitor has been connected across the input it is connected to the next capacitor in the series on the next clock half-cycle, and the charge is thus moved one place down the capacitor chain. On the next clock half-cycle the first capacitor in the chain is reconnected to the input, and the second capacitor passes its charge onto the third capacitor so that it is ready to receive the charge from the first capacitor on the subsequent clock half-cycle. There are 512 capacitors in each chain, and after the appropriate number of clock half-cycles each input charge emerges at the output.

Each delay line has two circuits of this type so that while one is passing the input charge down the capacitor chain, the other can take a new input sample. The two outputs can then be combined to provide a continuous output, otherwise the output would be absent on every other clock half-cycle! This process is analogous to buckets of water being passed down a human chain, hence 'bucket brigade'.

Obviously the output signal is delayed by an amount equal to 512 clock half-cycles, but equally obviously the input and output signals are not the same. An input such as that

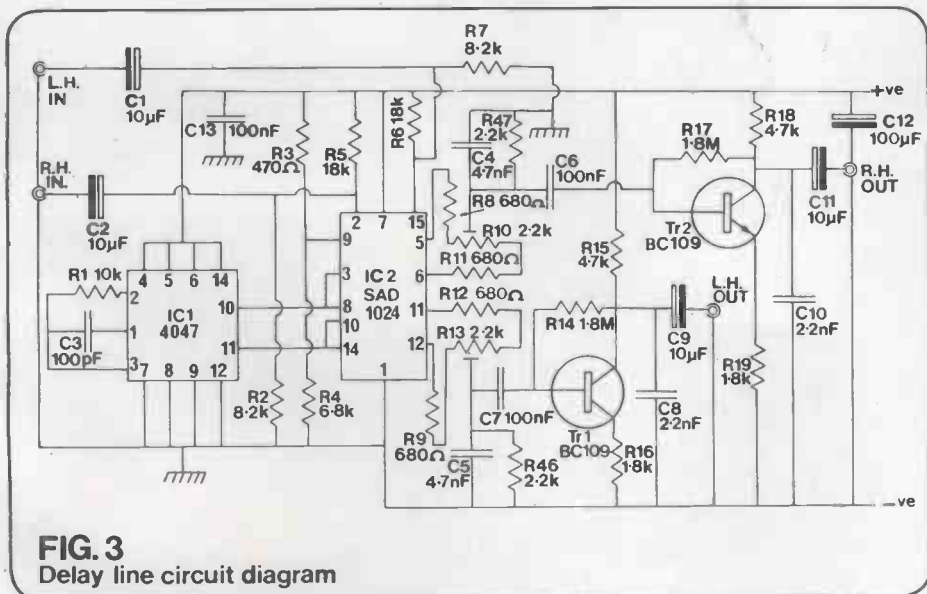
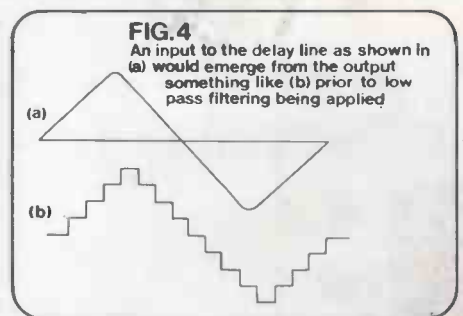


FIG. 3
Delay line circuit diagram



shown in fig. 4a would emerge from the delay line something like that shown in fig. 4b. The output is a series of steps and not a continuously varying signal—effectively the output is modulated with the clock signal. However, if the clock frequency is at least double, and preferably treble the maximum input frequency, the clock signal can be removed from the output signal with a low-pass filter.

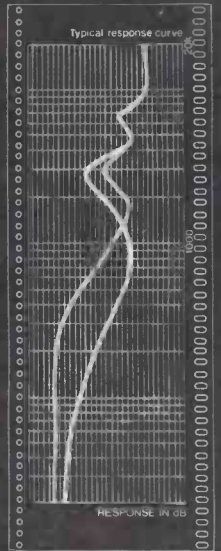
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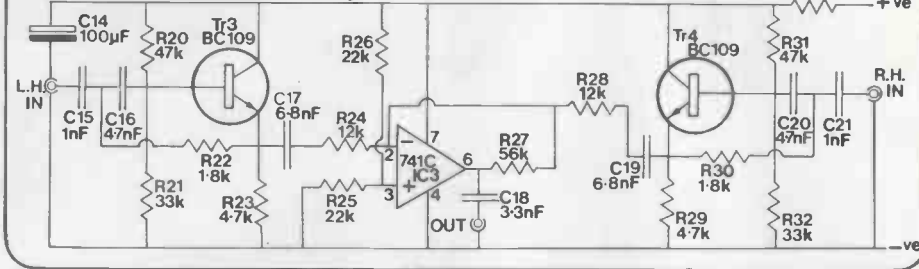
and this requires a two-phase clock signal. This is provided by a CMOS 4047 IC connected as a straightforward astable multivibrator with the Q and \bar{Q} outputs producing the two-phase signal. The circuit theoretically

the type commonly employed in rumble filters. However, the component values have been chosen to produce a much higher roll-off frequency of about 14 kHz. The high-pass filtering is also aided by the use of low value coupling capacitors in subsequent parts of the circuit. The mixer is of conventional

circuit of classic bipolar transistor design. R36 is adjusted to optimise the sensitivity of the circuit.

IC4, 4098 (or equivalent) CMOS IC, forms the basis of both monostables. Monostable 1 in this device is connected as a non-retriggerable leading edge triggered circuit having VR2, R44 and C26 as the timing components. Monostable 2 is connected as a non-retriggerable trailing edge triggered monostable and is driven from the Q output of monostable 1. Thus monostable 1 is triggered when the collector of Tr7 goes positive, and monostable 2 is triggered when the output pulse from monostable 1 ends. Once the first monostable has been triggered, whether Tr7 collector is in the high or low state is irrelevant until the output pulse from monostable 2 has ended. The gate circuitry is driven from both the Q and \bar{Q} outputs of monostable 2. The monostable output pulses equal $RC/2$.

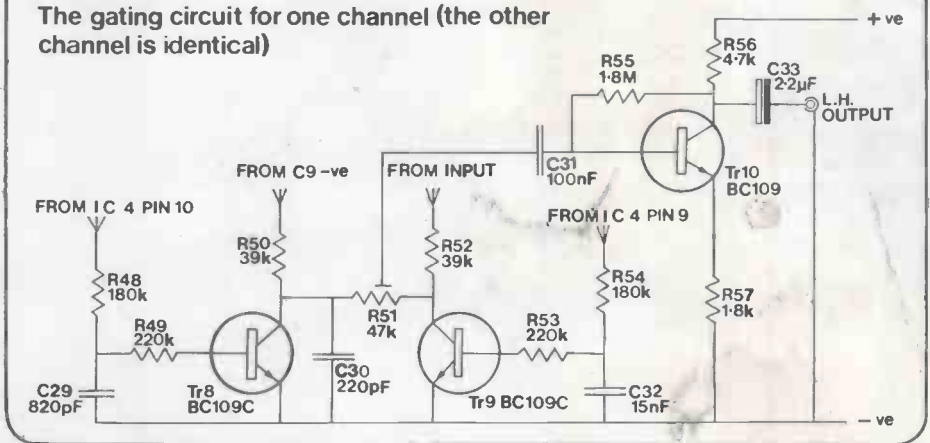
FIG. 5
The filter and mixer circuitry



oscillates at a frequency of $1/4 \cdot 4RC$ Hz, or just over 227 kHz with the specified values. This would give a delay of just under 1 ms, but in practice the circuit is likely to oscillate at a somewhat lower frequency due to stray circuit capacitances and resistances. The prototype clock oscillator operates at a frequency of 176.46 kHz, but this is not important as the precise delay time is not critical.

R2 and R5 provide input biasing for one channel and R6 plus R7 perform the same function in the other channel. The values of R2 and R7 could be adjusted empirically to find the ones which give the greatest signal handling ability, but good results should be obtained using the specified values. R8, R10, and R11 sum the two outputs of one delay line, while R12, R13, and R9 provide summing at the outputs of the other delay line. The two presets are adjusted to balance each

FIG. 7
The gating circuit for one channel (the other channel is identical)



Gate Circuitry (Fig. 7)

One channel only is shown. Apart from the component identification numbers the other channel is identical.

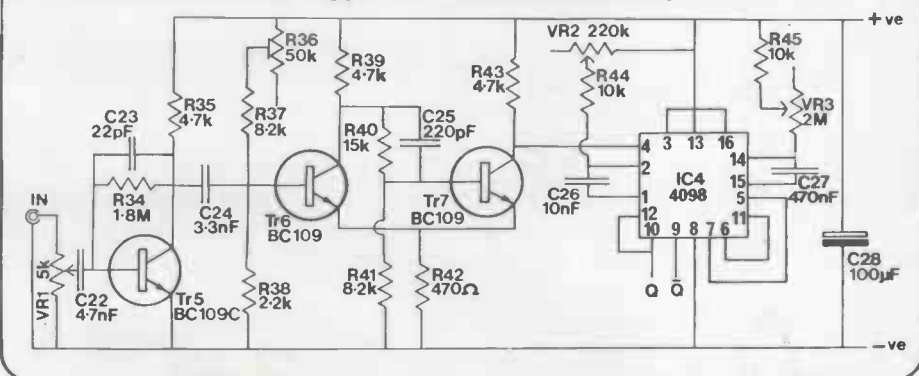
R48 is fed from the Q (normally low) output of monostable 2, and Tr8 is therefore usually switched off. Tr9 is driven by the \bar{Q} (normally high) output of monostable 2, and so Tr9 is usually switched on. Thus the delayed output is allowed to pass through R50 and R51 to the output amplifier, the latter being based on Tr10 and compensating for the losses through the gate circuitry.

When monostable 2 is triggered the states of its two outputs change and Tr8 becomes switched on and Tr9 is switched off. This results in the delayed signal being blocked and the main input being activated.

Speed up capacitors would normally be connected across the base feed resistors of the gating transistors, but in this application it was found to be beneficial to use the shunt capacitors C29 and C32 to slow down the changeover. C30 provides additional filtering of the clock signal on the delayed input and R51 enables the signal levels from the delayed and undelayed sources to be balanced at the output. ●

Next month in Part Two: Veroboard layouts, constructional details, testing and use.

FIG. 6
The amplifier, Schmitt Trigger, and Monostable circuitry



pair of outputs. There is a loss of about 6 dB in each summing circuit, so a low-gain common-emitter amplifier is used at each output in order to compensate for this. C4, C5, C8 and C10 provide low-pass filtering. Pin 9 can simply be connected to the positive supply rail, but results are better if, as here, it is biased about 1 volt lower.

High-Pass Filter and Mixer (Fig. 5)

The two filters are identical and are based on emitter-follower transistors Tr3 and Tr4. These are of conventional design and are of

operational amplifier active mixer design and has a voltage gain of about 15 dB.

Schmitt Trigger and Monostables (Fig. 6)

Tr5 is used as a high-gain common-emitter amplifier with C23 providing a degree of HF roll-off to aid stability. The input is applied to the amplifier via a variable attenuator of the volume control type (VR1). This is necessary as it is advisable to use no more gain than is necessary in the interest of avoiding spurious triggering.

Tr6 and Tr7 are used in a Schmitt Trigger



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Soundings

Donald Aldous

It is always a pleasure to meet old friends, and especially so when we happen to share a professional interest. On reflection, I wonder how many of us in the hi-fi/record/music worlds have real friends who *don't* share our fascination in these areas? However, we must keep those matters for another day, as this month I want to talk about the house of Thorens.

Founded as far back as 1883, in Ste-Croix, Switzerland, by Hermann Thorens, the present President's grandfather, their first products were music boxes—an activity still pursued by grandson Rémy Thorens' brother Jean-Paul. His independent company is called 'Melodies'.

Chronologically, the sound reproduction side began in 1898 with a cylinder gramophone, flower horn gramophone (1912), electrical gramophone (1928) and pickup head (1929.) In the same year a direct-drive motor was patented, and in 1943 the CD30 auto-changer appeared. In 1957 the widely known TD124, produced in various versions until 1972, was launched, with the TD224 dating back to 1962. The TD150, manufactured in two versions until 1972, was a pioneer medium-priced high-grade turntable, and in 1966 the factory was transferred to Germany. In 1968, at Lahr, the TD125 electronically controlled motor was introduced.

In more recent times, the TD160 was produced—the basic unit of the TD145 and TD166—and is still in big demand in its Mk. II version. 1976 was the year when the new Isotrack pickup arm (with its low dynamic mass) and the TD126 Mk. II were launched, and in the same year Thorens marketed the AT410 receiver.

Coming to last year, Thorens now have a new range of turntables, the TD104, 105, and 126 Mk. III, as well as a tape cassette deck (PC650); their moving-coil cartridges TMC63 and 70 (derived from the EMT model), and a pre-preamplifier PPA990.

Thorens, who are now in the same group of companies as EMT, have a factory in Lahr with 450 employees, and the HQ is at Wettingen. EMT Professional shares the factory space and is responsible for about 15% of turnover. The Thorens range is distributed in 75 countries, with 90% of output going to USA, France, Italy, Germany, Switzerland, Benelux, Canada, Sweden and the UK.

The Thorens organisation's Managing Director is Rémy Thorens, its Sales Director is Armin Graf, and the Technical Manager Peter Frey, all of whom met a party of audio journalists when we arrived at Basle airport, en route for Lahr, via the Alsace region of Eastern France. Later we were to meet their R&D Manager Gerhard Metzler. Incidentally, Thorens Franz AG handle the Stanton range of professional cartridges in Switzerland.

Following this background information, let's take a brief look at some technical points. Over the years, as most of us know, three main types of drive mechanism for turntables have emerged: (1) The rubber-wheel system,

where a comparatively fast—, say 1800 to 3600 rpm, rotating motor operates the t/t via a rubber idler wheel, a method useful for transmitting high torques for fast acceleration of heavy platters and for auto-functions on changers. (2) The direct-drive has its motor rotating at the nominal record speed—33½ or 45 rpm—and its rotor is rigidly attached to the t/t platter. Electronic control circuits can be employed, but problem of isolating motor vibrations from the platter remains. Lastly (3) the familiar belt-drive using a rubber belt, whose natural elasticity isolates most of the motor vibrations from the platter, and so, in turn, the pickup stylus. The torque that can be transmitted by this method is limited, needing a slightly longer starting time to get up to a smooth rotational speed. These three mechanisms can be operated by AC or DC motors without modifying their basic performance.



Thorens' engineers have decided to retain their belt-drive system, until a better method comes along they told us. The Thorens turntables use a floating spring suspension system to minimize effects of environmental vibration and acoustic feedback. The drive motors have 16 poles (which give 375 rpm at 50 Hz or 450 rpm at 60 Hz) for smooth running action. Electronic pitch control is also incorporated in the top-line Thorens models, which also have an acceleration clutch to obviate belt slippage during starting, leading to possible vibration and long-term belt wear.

Although the general opinion today is that mats should support as large an area of the disc as possible, Thorens continue to use a rubber mat having two concentric notched rings to support the disc near the label and outer edge. Thus trapped air beneath the record is allowed to escape, which eliminates a possible resonance (around 25 Hz) caused by compressed air as the weight of the stylus or record cleaning device presses on the disc surface. This feature and others are found in the TD126/Mk. II Isotrack series of turntables. This design copes with three speeds, with a fine-speed adjustment of $\pm 5\%$ and an illuminated strobe. The electronic circuit boards fitted include one with a Wien-bridge oscillator for accurate control of motor speed, with a new drive amplifier stabilised by a voltage-regulator circuit to minimise wow and flutter.

Another circuit board with the TD145 offers 'velocity sensing' automatic cueing. This adds no mass or friction to the pickup arm and operates independently of the stylus/arm position on the record.

Apart from wow and flutter performance, for which standards exist, rumble is a menace for the sensitive audiophile, and can be produced by the records as well as the turntable drive. Over the years different methods for measuring and quantifying rumble have been published, including techniques from NAB, DIN and IEC, while in 1966 the late Benjamin Bauer (CBS Labs) developed a weighted test procedure which gave similar test results to those obtained according to DIN. Yet another rumble measurement method is known as ARL (Audible Relative Loudness Level), which employs an additional weighting filter. The preamp equaliser can also influence the LF response in unweighted rumble measurements.

All these methods require the use of a test record which has its own degree of in-built rumble, however small, and until recently there was no known means to bypass the disc's rumble for measurement purposes.

Thorens have now developed a neat device to replace the test record for rumble measuring. Known as a 'Rumpel-Messkoppler', this beautiful piece of engineering—the envy of every model engineer I have shown it to—functions by placing a chromium plated steel pointer on the turntable spindle. This acts as a pivotal bearing system for a device to suspend the pickup stylus. In this way all lateral and vertical vibrations of the t/t platter are transmitted to the stylus so that measurements can be made *without* the intrusion of test record rumble. Of course, to make this device work properly by preventing any additional vibrations, the chrome surfaces of the bearings have to be very highly polished. This device, too, has its own resonant frequency and may only be used below that frequency. However, frequencies below 300 Hz include all rumble components, so this limitation presents no problem.

This device is an expensive item to manufacture, but we understand that it will be available in the UK from Metrosound—although its main application could well be for the specialist dealer wishing to compare turntable rumble figures.

Among the other products we were shown was the latest PC650 (see photo) three-head cassette deck. This has a tachometer-controlled capstan motor and Double-Dolby (that is, record and replay using separate circuits), so that tape monitoring is possible during recording when using Dolby NR. Electronic command drive system with inhibiting logic, a test oscillator, and peak level meter display are also featured. It is also possible to connect remote control unit, timer, etc.

The Thorens Models 410 and 403 receivers have advanced circuitry, and the former unit provides 12 program sources free from switching clicks or noises. An important facility is five preset FM stations and two AM broadcast band stations.

Our thanks to Ian Levene, Sales and Marketing Manager, David Bell, Product Manager, and Mr. Mark Myers (President) of Metrosound Audio Products.



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Philips and the MIC/DIN problem

Angus Mckenzie

I HAVE had to criticise perhaps 80% of all cassette and reel-to-reel recorder input circuits over the last few years for offering a very poor compromise in the performance of their input pre-amplifier circuits.* Manufacturers usually use the same basic pre-amp circuit and switch the input either to the microphone jack sockets or to the DIN socket by using the break/make contacts on the jack sockets. Thus, when a microphone lead is inserted the live connection goes straight through to the pre-amplifier, but when the microphone jack is unplugged the DIN socket circuitry becomes connected to the input, together with a grounded resistor effectively across the DIN input socket. To enable speech to be recorded adequately from an average moving-coil microphone, about 80-120 μ V sensitivity is required. However, if one wishes to record a loud pop music performance with the same microphone levels up to tens of millivolts can be produced.

If the same input stage is to be used for microphone and DIN, it becomes necessary to reduce the DIN source level to be compatible with microphones; thus levels as low as 1 mV would be found in typical Japanese deck input circuits. This is so low that noise is produced when amplified up to a reasonable level at the recorder's record gain control. One solution in the past has been to switch the gain of the pre-amplifier, but this has only rarely been used because of the additional circuit complication. There have been a few attempts to improve input sensitivity and clipping margins in the past; for example, Cambridge Audio in their P40 preamplifier employed variable feedback around their front-end, but for various reasons the circuit was not altogether satisfactory, and in any case was not introduced into a tape recorder. Ferrograph also incorporated variable feedback around their microphone stage, but again this was not very successful because the circuit itself varied a feedback resistor in such a way as to load the output with too low an impedance when the gain was reduced.

In the new Philips N4520 reel-to-reel

recorder a very fascinating circuit has been produced, as shown in fig. 1. As far as I can see this completely overcomes all the old problems that have been noted by audio critics for years. The microphone head preamplifier has a fixed gain and some feedback, and the stage is designed to give very low noise and relatively little amplification (about 22 dB). The basic input pre-amplifier is then switched by means of a front panel control either to the output from the microphone head amplifier stage or straight to the DIN socket, across which is a 22 K ohm resistor (R6) which develops approximately 18 mV from a DIN source when the input impedance of the pre-amplifier is also taken into account. However, an incredible clipping margin and sensitivity is achieved by the fascinating circuit around the main pre-amplifier, involving Tr2 and Tr3. If the volume control (VR1) is wound right down, the slider (which is earthed) approaches the audio output, thus reducing it because of the series resistor R13, whilst at the same time effectively increasing the resistance between the first emitter and earth (via R14), thus increasing negative feedback derived via R11. When the control is near its maximum, a higher resistance is inserted between the output and earth, thus increasing volume or gain, whilst at the same time the same pot action brings the effective emitter resistance of Tr2 closer and closer to the fixed 681 ohm resistor value.

Thus the gain of the preamplifier circuit itself varies from 6 dB to around 36.5 dB, ignoring the output potentiometer action. Input clipping therefore depends entirely on the position of the gain control, producing an incredible performance of around 2.2 V for clipping, yet with 25.5 dB gain in hand with very low noise for a standard DIN input (see fig. 2). Looking at the microphone input, the same circuit produces 80 μ V sensitivity for Dolby level, yet has a remarkable input clipping level of around 220 mV, which is the widest range on any domestic microphone input stage that I have yet encountered—with the proviso that the stage should at least have low noise and good distortion parameters.

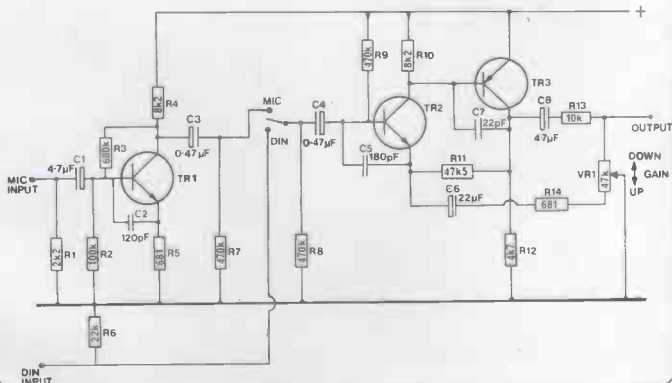
Re-examining this fascinating circuit, it is obvious that in cheaper machines manu-

facturers would want to dispense with the separate microphone input head preamplifier, using the normal jack socket break-point method to switch between microphone and DIN inputs. In this case it would be necessary to reduce R14 in the emitter circuit to, say, 120 ohms, thus working the stage at an even higher gain when the volume control is 'flat out'. This would allow a maximum sensitivity of better than 200 μ V with slightly higher distortion, but the moment the gain control setting were reduced the distortion would to all intents and purposes disappear. The input sensitivity would then reduce rapidly, the circuit then giving a remarkable input clipping point (> 2 V), as it would do with the DIN input.

Another interesting facet of the design is that in my proposed modified version the input impedance would fall when the feedback was greatly reduced, thus providing a reasonable match for low-output microphones. This should also give an acceptable noise performance, whilst not being as good as the basic Philips circuit. It would never be necessary to operate the gain control at anywhere near maximum on the DIN input, so that with around an 18 k ohm input impedance this input would also have very low noise. Note that DC biasing is established from the second collector via the first emitter feedback resistor (R11), and that the first transistor is *n-p-n* whereas the second is *p-n-p*. In my suggested modification the blocking capacitor C6 would have to be increased in value to avoid bass cut at very high gain settings.

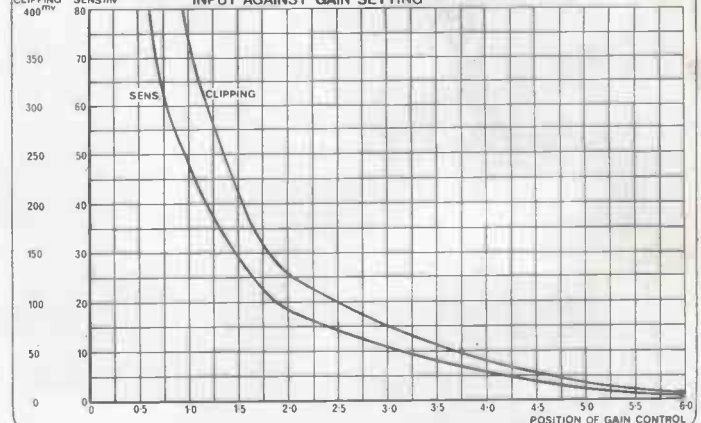
The unconventional part of the circuit is that the slider of the gain control is earthed and provides a double action, as if there were two ganged controls on each channel operating feedback and output level at the same time. By incorporating the two elements in one simple pot per channel, Philips have gained economy of components at the same time as an excellent overall performance, which, as far as I know, has been unequalled in domestic products with its simplicity and effectiveness. We are thus likely to see many manufacturers copying Philips. It is perhaps ironical that many Japanese manufacturers have already decided to remove the DIN socket facility altogether, because of the problem, thereby making matters difficult for them in Germany and other European markets. However, the basic circuit must surely have applications throughout audio, as it is so simple. ●

FIG. 1 N4520 MICROPHONE AMP (Circuit courtesy Philips)



* See 'Noise and the DIN Standard', HFN/IRR Dec. '78, p. 103.

FIG. 2 PHILIPS N4520 SENSITIVITY/CLIPPING OF DIN INPUT AGAINST GAIN SETTING



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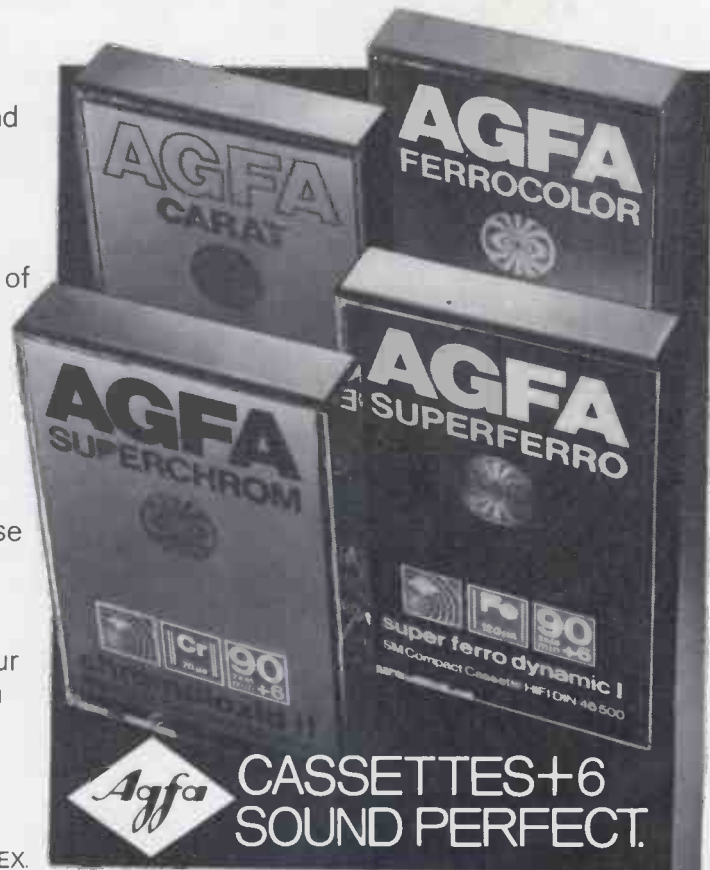
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Letters...

... about marketism and money-grubbing

From: A Disgruntled Engineer, Enfield, Middlesex

Dear Sir, Your July leader about the conflict between market economics and what you call 'excellence' shied away from the deeper issues. The current blind (almost bigotted) faith that 'the market' will eventually solve all problems is leading not only to manufacturers of quality goods abandoning what they believe to be right, but forces the stamp of mediocrity onto practically every object made or service provided.

I work (with increasing frustration) as an engineer in the giant Thorn organisation, and am constantly forced to save pennies on this resistor, that switch, or the other finish in order to keep costs down in the face of the goddess competition, that supposed great saviour of capitalism. Competition may keep prices down, but whether it encourages real efficiency I very much doubt, while there is no question whatever in my mind that it makes for inferior products by a process of penny-pinching at every level. We all meet shoddiness in the goods we buy or the work we have done, and it can usually be traced back to the demands of cut-throat price competition.

Your plea for excellence in hi-fi is welcome, but it is made in a wilderness of money-grubbing commercialism which tends to lower standards (for the sake of a sale) in every sphere of life. Three cheers for those who refuse to join the Gaderene stampede, whether in hi-fi or anything else. I wish I could shout my name with those cheers, but Sir Jules Thorn would surely join the fray and drag me off to a lecture by Sir Keith Joseph on the virtues of 'marketism'. Also, although I'd love to work for Peter Walker or Raymond Cooke, I'm getting on in years and have my pension to consider (we're all caught in this wretched money trap!), so I must sign myself simply—'disgruntled engineer'.

Yours faithfully

... about Radio 3's virtues

From: R. F. Oliver, Lower House Farm, Little Marcle, Ledbury, Herefs. HR8 2JY

Dear Sir, May I 'sound off' subjectively for a moment in reaction to Paul Messenger's July attack on BBC Radio? You see, I enjoy Radio 3 so much that my FM tuner is pretty well rusted onto it. The amount of enjoyable stuff put out every week on that programme never ceases to amaze me, and I'm not a sackcloth and ashes man, really I'm not. I agree that 9 a.m. is not a nice time of day, but Kurt Weill did in my case lend it a bit of point. Incidentally, the BBC are willing to explain why they can't please most of us for very much of the time, see correspondence in the

July *Wireless World*, for instance. So, although Paul Messenger's assault was delivered with his customary intelligence and scrupulousness, it did strike me as too blanket-like. It's lucky I don't run things, of course: if I did, resources would be diverted from other radio (and TV) programmes to Radio 3 on a truly reckless scale.

Yours faithfully

... about the search for realistic illusions

From: James Kerr, 31 Lionel Avenue, Wendover, Bucks. HP22 6LL

Dear Sir, The general concentration on 'hardware' as the means of providing progress in high quality sound recording and reproduction has resulted in a very old problem being overlooked and possibly forgotten. The acid test for sound quality, at least for classical music lovers, lies in the question: 'does it provide a convincing illusion of reality'. Before the answer can ever be an enthusiastic 'yes', this problem will have to be solved and a workable standardised solution achieved.

The problem is most easily highlighted by examples. Everyday sounds such as the 'chink' of cups, the tinkle of a bunch of keys, the splash of water—these rarely sound completely convincing when reproduced from a recording or broadcast. Such sounds are inevitably given a larger-than-life quality. This effect was described in an article published pre-war in *Wireless World* entitled 'The Giant Voiced Announcer', which sought an explanation for the fact that no adjustment of the volume control could ever make the voice of an announcer sound as if he were in the room.

Attempts to achieve this degree of convincing presence include making recordings in an anechoic chamber in the hope that since the only added ambience would be created by the listener's room itself, and could only have that room's characteristics added, the sound would appear to originate there. Alas, these attempts cannot really succeed because the loudspeaker used would have to have the same polar radiation pattern as the original sound-source. This, in the case of musical instruments and most other sources will be largely omni-directional, and in the case of the human voice nearly so. Typical loudspeakers, however, have a polar response such that the total sound energy radiated into the room will fall with increasing frequency, a condition which does not occur naturally with most sources. The reverberation and reflections in typical rooms will, especially after taking the sound absorbing characteristics of furnishings into account, be largely weighted in favour of the lower frequencies. Although on axis the balance of the first-arrival sounds may be correct, the balance of the reflected sound will tell the ear that the sound is coming from an unnaturally directional source. The problem is the old one: should we have a uniform radiated power response into the room or a flat response on axis?

All this would appear to point to the desirability of having omni-directional speak-

ers, but the consensus of opinion is that this approach is unsatisfactory from considerations of stereo placement. *Significantly, this problem does not arise in binaural recording and reproduction*, which may be a major factor in contributing to the enhanced realism afforded by this technique. The writer has also noticed that recordings and broadcasts made in a bright acoustic tend to sound more natural, probably because the brighter balance of reverberant sound compensates for the unnatural balance in normal loudspeaker reproduction.

It should be possible, however, using the correct recording technique and loudspeaker reproduction, to achieve a result which in this respect is in no way inferior to binaural reproduction. Clearly some research is necessary to accomplish this, followed by agreement on the best means of obtaining this result. Some experiments carried out by the writer seem very promising and he would be pleased to hear from any recording organisation interested in investigating this subject constructively.

Yours faithfully

... about old radio in New Zealand

From: Keith Macdonald, 68b Chatsworth Road, Silverstream, New Zealand

Dear Sir, Many thanks to Adrian Hope for his fascinating and rather sad series on FM radio pioneer Edwin Armstrong. The title of the second article, 'The Battle for FM Radio', could well describe the situation in New Zealand, for in 1979 this country still does not have FM broadcasting! All sound radio here is restricted to AM on the MW bands, apart from a very limited SW service which carries internal service programmes. Because of bungling, incompetent, bureaucratic Government involvement in broadcasting, we are unlikely to have FM in the next five years.

The reasons for this incredible situation defy description in a short letter such as this. Sufficient to say that the Government department entrusted with administration and allocations of the frequency spectrum (the New Zealand Post Office) has for some years had the lack of foresight to allocate all but 4 MHz of the international FM Band to two-way radio or radio-telephone use. This has provided a ready-made excuse on many occasions for the Government neither to commence FM broadcasting nor to allow private enterprise to start transmissions. The 4 MHz is more than adequate for a satisfactory 'pilot' service, as the Post Office admitted in 1969.

Most of the AM stations in New Zealand are run by a quasi-Government department. This organisation has not, unfortunately, shown a great deal of technical innovation as far as radio broadcasting is concerned, and also suffers frequently from political interference. Apart from vague references to 'a proposed FM network' (to oppose a private AM license application in 1970), and 'FM within five years' (1975), they have frequently used the circular argument of 'no public demand' for not introducing FM broadcasting. Thus the public not only has to know about FM without

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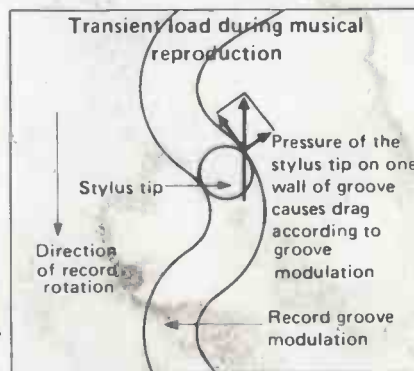
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Audio Patents Adrian Hope

IN the helter skelter of modern technology, where innovations become obsolete virtually overnight and ridiculous claims are made by research departments with neither the time nor inclination to respect the past, it is rewarding once in a while to cast a respectful eye back in time.

Some of the earliest patents on the 'modern wonder' of binaural or dummy-head stereo originated from Chicago inventor W. Bartlett Jones, who lodged his first patent application in April 1927. This was issued as US patent 1 855 149. Jones went on in 1930 to patent more details of his recording system and these appeared in US patent 1855151. Both documents clearly describe a binaural stereo recording and reproduction system with one channel of sound recorded by vertical modulation and the other by horizontal modulation. Reproduction was electrical, with a carbon pickup. In fact Bartlett Jones, probably quite unintentionally, was mosaicing a number of previous proposals. For instance, Clement Ader in 1881 demonstrated binaural phone links in Paris, and in 1920 Samuel Waters of Washington (USA patent 1520378) suggested the mechanical or acoustic reproduction of two orthogonally related modulations of the single groove of a gramophone record.

Prior to that, most attempts at two-channel recording had involved double grooved records of the type that have since been repeatedly trotted out as a new innovation. Recently a pop single with two different tunes, recorded in a double concentric spiral on the same side of the disc, was heralded as the first ever. Previous to that, a Monty Python record was heralded as the first ever double groove, and previous to Monty Python several

race games (with a different race result recorded in each of several grooves) were each in turn heralded as the first ever. Even the double groove patented in 1921 by Harry Wier of Western Electric (USA patent 1508 432) was not the first emergence of the idea. In 1901 Emile Berliner produced a triple groove disc! But Wier proposed using a double groove in a single phonograph cylinder (or alternatively two single grooved cylinders mechanically ganged together) to provide binaural stereo reproduction. He also proposed tracking the double groove with a double stylus mounted in an electromagnetic pickup. Taken in combination, the three ideas (binaural stereo, from a double groove, tracked by an electromagnetic pickup) make Wier's 1921 patent a unique document.

All this work, of course, pre-dates Blumlein's now famous 1931 patent (BP 394325) on stereo recording systems, which contained a host of revolutionary ideas. For example, whereas the various Americans had suggested recording two channels of sound in either a double groove or a single groove modulated vertically and horizontally, Blumlein now suggested cross-modulation of a single groove at 45°. And of course, most important of all, whereas the Americans were achieving stereo by binaural headphone reproduction (or loudspeakers clamped close to the listener's ears in the manner of headphones), Blumlein taught the world how to create an illusion of stereo in an open room with just one pair of loudspeakers. Currently there is a boom in binaural stereo, with workers all round the world claiming to have developed or even invented the technique. The patent numbers and dates cited above

will provide ammunition for anyone who wishes to dispute such a claim.

Similarly, but in the context of modern pickup design, it is rewarding to refer back to USP 1284623 which was filed in 1918 by Henry Egerton, also of Western Electric. In this patent Egerton describes in some detail an electromagnetic pickup for a phonograph record which uses a series of coils and a stylus mounted on an armature of magnetic material. In other words, after 1918 the idea of an induced magnet cartridge was old hat!

While on the subject of invention history, there is an interesting fact that ties together the work of arguably the two most important audio inventors of all time, Blumlein and Armstrong, whose careers have previously been documented in these pages. The only Armstrong invention which failed to succeed commercially was the super-regenerative receiver; it offered high sensitivity but poor selectivity. The super-regenerative circuit, however, proved ideal as a IFF (Identification Friend or Foe) receiver or transponder for use by allied aircraft. The transponder received incoming radar pulses and re-transmitted them in code on the same wavelength to identify the aircraft as friend rather than foe. The super-regenerative circuit was ideal for this purpose, because the reception of an incoming pulse was used to push the oscillator out of stability and into oscillation to transmit the identifying pulse. But there was initial difficulty in achieving high but stable output. This was solved by using an automatic gain control and a cathode-follower in the positive feedback loop. And where did these techniques come from? From the EMI-Marconi team which in the late thirties laid the foundation for all television systems still in use around the world. Blumlein, of course, was arguably the most driving and creative force in that team.

LETTERS

having any transmissions to judge it by, but also has to take the initiative in showing the administrators the advantages of high quality transmission methods!

Although a current reason for not introducing FM has yet to be announced, a serious financial crisis would appear to have caused it to be shelved yet again. The need for FM outlets has become more acute with the present radio corporation's practice of using the one cultural network for sports broadcasts, particularly during the Summer months. When cricket commentaries are rebroadcast (off SW) from Radio Australia, these often pre-empt regular programmes until well into the evening!

Ironically, the Government broadcasters have some stereo studio facilities. They found that overseas broadcasting organisations weren't interested in mono recordings of New Zealand programmes, and in order to send them overseas programmes had to be recorded in stereo. So the taxes that support Government broadcasting are helping overseas organisations, not the New Zealand listeners who contributed them. It has also been variously estimated that there are

already between 20,000 and 300,000 FM receivers in New Zealand (population 3 million). Until there is some commitment to start FM transmissions, these receivers remain 'White Elephants' to their owners!

HFN/RR readers out there in the 20th century who take their high quality, noise-free FM stereo transmissions for granted, spare a thought for those of us in this technological backwater next time you enjoy a concert, broadcast 'live', and in stereo on FM! As it is, I fully expect to be writing to you again around 1990 concerning the lack of FM radio in New Zealand!

Yours faithfully

... about poor record pressings and better imports

From: Alistair Logan, Collsholm Bungalow, Mauchline, Ayrshire

Dear Sir, I have been a regular reader of *Hi-Fi News* for about 10 years, but I've been living in Sweden and have been involved with working and demonstrating hi-fi. However, on returning to Britain I've been totally horrified by the quality of UK record pressings. I know that you did a survey at the beginning

of this year and it was obvious that certain companies fared much better than others. The survey was limited to classical music, but if it had been extended to cover rock, folk and jazz perhaps the results would have been just as interesting.

I wonder how many of your readers are fed-up with returning obviously poor pressings to record shops only to have them replaced by copies which have different, or even possibly the same, faults? And just how much of the record shops' time is taken up with faulty pressings and the inevitable paperwork involved? Maybe the worst fact of all is that the record companies don't even appear to be interested in the quality of the goods they offer to the public.

If there are any readers interested enough in obtaining better quality imported pressings at a price probably a lot lower than they have to pay at the moment, they may contact me at the above address and I'll try to explain how I can help. Maybe there is no way that we can persuade the record companies that they must improve their products, because it has gone on for too long now, but there are alternatives available.

Yours faithfully



If it is your intention to make an investment in a Hi Fi system rather than buy something to sell next year, consider the advantages of the modular system offered by Boothroyd Stuart. Despite future development of digital disc or even plug-in digital music memories, your domestic music system will always need a loudspeaker – we do not foresee large conceptual changes here – and a means to control the signals from whatever source, to drive the loudspeaker. Our recipe in an evolving market is flexibility and this is the safeguard of your investment. The active loudspeaker will accept the output of a preamplifier and make sounds as beautiful as the source allows. Our modular amplifier system is clean, clear, precise, powerful and has lasting beauty.

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Subjective Sounds

Paul Messenger

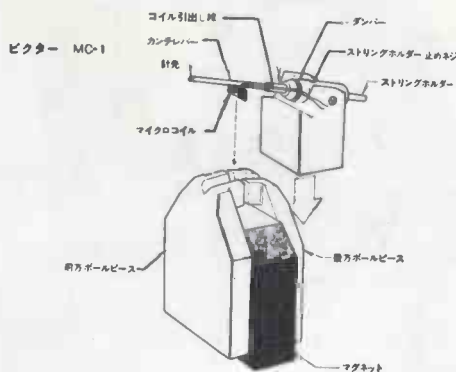
I AM somewhat surprised that correspondence from Outraged of Northolt on the subject of the latest cartridge prices has yet to grace these pages, though perhaps a nervous giggle of anticipation is the most appropriate response. It cannot have escaped people's notice that £200 is fast becoming the par price for 'state of the art' cartridges, though characteristically we Britons prefer to ignore this uncomfortable news in the hope that it will go away. With a stylus consumption of about two per year due to a prodigious disc playing rate, plus a predilection for choosing my own cartridge and paying for it rather than merely slotting in the latest review sample, I am perhaps burying my head deeper in the sand than most, as the budgetary implication of £100+ stylus replacements sinks in. Nevertheless, the fact remains that people are buying even the most expensive examples.

Leading the field by a comfortable margin is the Grado *Signature III* at £475 plus VAT, with replacement styli approaching £300. UK importers Transonic are supplied five a month, and are currently back-ordered by several months, so even at these price levels there is clearly a market. Ortofon had plenty of Aquavit on hand to anaesthetise startled journalists when launching the *MC30* at the Danish Embassy last winter; the £250 price tag includes a test record and a briefcase, though samples of the latter were not handed out, regrettably (try buying a briefcase big enough to take an LP which doesn't look like a suitcase). Although it received a rather lukewarm reception from UK critics, due in part to some early production sample inconsistencies, I understand that the Japanese are queueing up in the Akihabara when the biennial bonus time comes round, while UK sales of ten per month are respectable, nonetheless.

The JVC *MC-1* is another model over the £200 mark, now being brought in despite the original plan to concentrate UK marketing exclusively on the cheaper *MC-2E*, which must go to prove something. I understand that there is now a Supex 1000, and this would cost around £300 if imported. The new Nakamichis in this price region bear a striking resemblance to the Supex-sourced Linn Asak, which itself costs a cool (why cool?) £180. (Although it has only been available for a few months, one prominent specialist London retailer alone reckons they have sold some 15 examples, together with a handful of the slightly cheaper Mission 773s.) Nor is that the end: I await with interest the arrival of the new Denon 303, though happily some neat purchasing in the wake of an oil crisis(?)—embattled yen will keep its price below £200; furthermore the Ultimo *Karat* with the all-diamond cantilever is likely to appear with a price tag around £400, due to the need to purchase comparatively large 'rocks' on the open diamond market.

Clearly, silly-priced cartridges are going to come whether one likes it or not, attributable to 'market forces' or merely people having

more money than sense. I have had little experience of any of these new models yet, so will remain an agnostic while anticipating poverty. Visitors to the Cunard spring show may have shared my opportunity to listen to both the diamond- and (much cheaper at under £100) ruby-cantilevered Ultimo *Karats*. (Interestingly, Dr Tominari chose to demonstrate them for me using a very early fifties LP of solo female operatic vocal.) While the sound with the ruby model was itself impressively sweet and clear, there was no doubt that from the information point of view, in terms of the music's ability to cause the flesh to creep and the eyes to moisten, the diamond was streets ahead. With the English penchant for 'polite' sounds, I suspected that the ruby is likely to be better-accepted, as the diamond had a rather fierce 'edge' in the context of the demonstration system (itself a curious mixture with the 'love-em-or-hate-em' *Klipschorns*.)



Generator system of JVC's *MC-1* and *MC-2E*, using printed circuit coils mounted on cantilever; from 'Stereo Sound' (Japan).



The £250 briefcase, including both a free *MC30* and a test record.

However, perhaps more interesting for us mere mortals are the things going on below £100. For my money the ADCs, and the *VLM III* in particular, remain the likeliest contenders in the moving-magnet maelstrom, the latter

proving difficult to beat below the £50 point, in my estimation. When one reaches such prices the prospect of moving-coils beckons invitingly. The two cheapest models around are Ortofon's *MC10* and Audio Technica's *AT30E*, the former the sweeter and the latter the meatier in my experience, while both are a bit short in tracking ability, so opera-lovers should be careful. Since inflation has driven my personal favourite the Supex 900 up to £140, I have started to try some of the models that sell just below £100, though I still can't help wondering if it is worth 'stopping over' in this price bracket rather than making just one leap. However, there are plenty of interesting models around, some of which I haven't yet had an opportunity to try, and three in particular appeal to me.

The *FR1 III* sells at about £90 and requires a step-up of some kind (many amps have them built in these days). It has much of the open airy quality of the Supex, and an unusually firm bass register, but sacrifices a fair amount of initial transient information and is also marred by significant upper treble over-brightness. Depending on the source material, extra equalisation provided by RTJ's neat little devices can be useful; I preferred to avoid this where possible, but was heartily glad of it on occasion. Because of the treble anomaly I would not advise purchase without audition, but in many respects the balance of qualities seems very well judged to me, and tracking is rather better than with the majority of moving-coils.

The same price tag will be found attached to Denon's *DL103C*, which must be one of the longest-established models available. Developed jointly by Nippon Columbia (Denon) and NHK (Japanese broadcasting), the spherically-tipped 'C' was designed for the rigours of the broadcasting studio, so it is a pity that no one in the BBC appears to have noticed. The great strength of the 'C' is its uncannily flat and transparent midrange, though the bass is a little soft for my taste and the treble can sound a little coarse, partly due to the inevitably limited tracing abilities of the spherical tip. Although it nominally requires some step-up, many amps will offer sufficient gain to get quite close to clipping without such assistance, so it may be possible to postpone acquisition of a step-up device for a while, or even permanently.

The third cartridge is one I would dearly like to write about; the new ruby Ultimo *Karat*, which I have been trying in pre-production form for a month or two. Happily, this is expected to become available on the right side of £100, though step-up will be required. Having been asked not to write about this sample because of its prototypic nature, I shall confine myself to broad hints and generalisations. Those whose pulses quickened when they first heard the high-frequency performance of B&O's *MMC20CL* should be prepared to administer self-medication with this one. Certain aspects of stereo presentation are simply uncanny. This is not an exhortation to buy, merely to listen, and I have foregone criticism because of the nature of my sample: the qualities of the device are so self-evident that I am certain the attributes alone will win many friends. I shall be watching the *Karats* very closely and will report on developments in due course.

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Reviewing & Consultancy

Adrian Hope concludes his survey and considers possible solutions to an ethical conundrum

LAST month's article concluded with a quotation from the late Bert Webb, who was associated with *Hi-Fi News* from its earliest days. Another name for long closely connected with these pages is that of Ralph West. Mr. West now lives in retirement in France, but he is still one of *HFN/RR*'s technical advisers and by his own description is one of the oldest reviewers still extant. He keeps a close watch on the British audio press, and these pages in particular, because he was, as he puts it, 'brought into *Hi-Fi News* right at the start.'

Ralph West says he 'liked Miles Henslow's *credo*—to put before the public the truth, as best we knew it, of the quality of the so-called high fidelity items we examined'. If the current editor will contain his blushes, West continues: 'When Miles sold out to Link House we reviewers were all very concerned and wrote to John Crabbe (unknown to each other, in much the same vein) assuring him of support if he carried on the same policy—which he has done, faithfully'. In the course of time Ralph West inevitably became very friendly with quite a number of loudspeaker manufacturers and has 'often given advice gratuitously, out of sheer interest; but', he continues, 'on the few occasions when I have been consulted professionally I have had nothing to do with any subsequent review, and saw it only later when published.'

Douglas Brown, now a regular contributor to these pages, started the old *Tape Recording* magazine twenty-odd years ago. He also has very firm views on the inter-relationship of reviewing and consultancy. 'Even in those days, as an editor I would never knowingly have employed someone to write about equipment from a manufacturer whom he was serving as a consultant. For me, the touchstone is open information—about the writer. If he or she is regularly employed by a firm in the industry, that fact should be known to a reader who is offered his or her comments on the products of the industry. If an individual is loathe to make known such an association, that seems to me *prima facie* a case for not publishing his editorial offerings.' 'However', Brown adds 'I think common-sense can be applied empirically, which is better than making rigid rules. Because a journalist has been employed on the odd occasion in the

past as a consultant, it should not bar him for ever from commenting on matters in the same field; but he should not be consultant and commentator at more or less the same time on the same products. If I were a manufacturer and one of my products was reviewed by someone whom I came to know acted as a consultant to one of my rivals, I would kick up hell'.

John Wright, of IMF Electronics the loudspeaker manufacturers, and a well-known reviewer of disc reproducing equipment, explains his own and company philosophy: 'No product, and especially a loudspeaker, can be designed without regard to the input source; hence our involvement with the NRDC-BBC Ambisonic surround-sound technology. I therefore find myself in an enviable position: I only report on products which fascinate me and with which I have no conflict of interests.'

John Gardner, who won the first BASF audio writer's award, has a very clear position over consultancy: 'I don't do any'. He believes that it is 'not ethical to become financially involved with an equipment manufacturer as a consultant whilst criticising the products of his competitors'. This is why Gardner, who is tied to Decca, never reviews records.

Trevor Attewell, a regular contributor to *HFN/RR*, has the clear view that 'no reviewer should act as consultant to any firm if he is likely to be involved in the review of any of their products, whether he has worked on those products or not'. Touching on a point to which we will return later, Attewell adds that 'any exceptions that cannot reasonably be avoided (eg, for historical reasons) should be so declared in the review'. It is perhaps appropriate here to mention as an aside a point which Attewell was himself doubtless too modest to mention, but which I learned from a third party. He recently turned down a commission to write the sleeve note for a record on the grounds that he might subsequently be asked to review it.*

* Although it can certainly look odd if one buys a record in response to a favourable review and then discovers that the sleeve note was written by the critic in question, the connection is in fact innocent. Sleeve notes are commissioned and paid for at a fixed fee and therefore produce no royalties; the reviewer thus has no financial interest in sales.—Ed.

Martin Colloms, another regular contributor to these pages, will not review equipment on which he has undertaken consultancy 'without the written disclosure of the connection; furthermore, clients are warned of this in advance of my undertaking any consultancy work for them'. Colloms makes the further interesting point that 'as regards product design, I charge a one-off fee; no royalties or licence fees are subsequently involved, as I feel this could well prejudice my position when reviewing other items of a similar nature'.

Chris Rogers considers himself 'a reviewer first and foremost', but echoes the common view that 'it is virtually impossible for anyone to equip a laboratory fully on reviewing alone'. He thus also takes on some consultancy. But Rogers is quite specific that he would 'certainly never have anything to do with the reviewing of a product in which I was concerned in the design', believing that 'the public would not like to find that a consultant had reviewed a product in which he had been thus involved'. But Chris Rogers refutes the suggestion (not, I should add, mine) that it is unacceptable for anyone involved in consultancy on one product (eg, loudspeakers) to be involved in the reviewing of the same type of product, because such a policy would achieve the wholly unacceptable result of a reviewer reviewing just those products about which he knows least. Noel Keywood is delightfully outspoken: 'I am an independent reviewer', says Keywood, 'consultancy work seriously threatens my impartiality and in general I refuse it. You know as well as I do that the big companies just don't need to use a reviewer to assess their products when they possess a sophisticated and expensively equipped R and D department... if consultancy fees are to exceed those currently available from the magazines, I can assure you that only the big companies will be able to afford them—and they are the ones who least need to use such people... such work can then be seen (at worst) as thinly disguised payola or hush money.' In keeping with this philosophy, Keywood accepts consultancy work only from a few special cases, eg, 'the small one- or two-man attempts to produce a new product—Britain's badly needed founding hi-fi industry'. Noel Keywood refuses to review such products afterwards (although he is willing to supply measurements to a magazine for another journalist to use, if requested by the magazine). I was particularly refreshed, in the light of major obstacles created by a minority of consueers, to receive Keywood's letter, which concluded: 'Should you want more information on my own situation, please ask, since I also feel the reading public have the right to know a lot more about what goes on than is currently the case. And it is certainly time the subject of consultancy was brought out into the open.'

Roger Driscoll also had frank comments. Dr. Driscoll, with a lectureship at the North London Polytechnic, does not find it necessary to do anything extra to earn a living, and when he first became a writer, about eight or nine years ago, 'had no thought to undertake company consultancy work'. But after four or five years he was approached, and accepted

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some company work. 'As I undertook more of this I felt it necessary to establish a code such that the work would not impinge on my press involvement. My decision was to stipulate to any prospective client that I would not make any press comment on any of their products for a sensible period—two years or so—after completion of the consultancy assignment'. 'As time has passed' continues Driscoll 'I have been approached to undertake commercial consultancy work in a much bigger way—eg, my recent and continuing association with Philips... So I have now given up all press work completely (as from the earlier part of 1978). Of course I don't feel that I shall never be free to return to the press at some future time'.

Driscoll is well aware of the criticisms levelled at anyone, like himself, who is able to call on measuring equipment owned by an educational establishment. 'In all cases where a significant amount of work is done I require some donation, in money or equipment, to be made to our acoustics laboratory in addition to any fee that I receive' he confirms.

Clement Brown reminds us that 'only a very few people in the hi-fi writing business are qualified to undertake such consultancy', and makes an interesting additional point on magazine rates. 'Some reviewers have applied their test findings in several magazines, simultaneously in certain instances', comments Brown. 'Obviously this is a way of earning extra income from information that has been expensively gathered. The publishers have themselves to blame: they cannot enjoy exclusivity unless they are prepared to pay for it.'

As previously explained, manufacturers willing to discuss the subject, even deny or confirm their use of consultants, are very thin on the ground. Fortunately, however, several companies have had the guts to stand up and be counted. Yamaha, BASF and Boots (for audio tape) were among those happy to confirm their current disinterest in using outside consultants. Rank will use consultants only where there is no in-house expertise on a specialist subject, and Raymond Cooke of KEF echoes this approach: 'What you call a consultant' said Cooke 'is not the same thing as I recognise as a consultant. In my mind consultants are people like Peter Baxandall, top class scientists in their own right and who are available to give expert advice on particular narrow areas of high technology. The average reviewer certainly could not tackle that sort of job, and nor would any of the reviewers I know in the UK or the USA be of the slightest bit of use as marketing consultants.'

'Having cleared up that confusion' continues Cooke 'I am strongly opposed to reviewing and designing being mixed together. We do know that certain people who are on the fringe of the industry, being neither full-time journalists nor full-time development engineers, are occasionally invited to design products by naïve and misguided manufacturers. The result is usually a camel'. But most important of all is Cooke's appraisal of the conflict of interest issue: 'I feel that reviewers should avoid any relationship whatever with particular manufacturers and declare their position when discussing any

topic where their opinion is likely to have been influenced by the relationship'.

James Sugden believes it would be 'much safer to employ reviewers without such consultancy to any manufacturer of a competing line', but adds the rider that 'one could argue that it is better to employ the services of a technically competent professional person' than 'self-opinionated magazine employees'.

Peter Walker of Quad was happy to confirm that 'the nearest we get... is that prior to release we hand out a dozen samples of a new model to intelligent friends in the profession for field trial. It is all voluntary and no money changes hands'. Walker makes the interesting additional observation that the problem of review-consultancy conflict is 'a very real one and can only be cured in one way: pay the reviewers and hi-fi commentators a proper fee—at least twice the present going rate. Raise the extra money by increasing the advertising rates. You would get better reviewing with more time to investigate design aspects of the product. Any magazine which adopted this policy would stand out head and shoulders as the authoritative magazine'.

Armstrong Audio also have clear views on the conflict: 'A reviewer should never review a product on which he has been consulted, however slightly or however distantly'. Armstrong also voice what is surely the obvious answer to comparative review conflicts: 'A reviewer who is involved in examining a whole multiplicity of products and who would obviously find it difficult to exclude a product which he should otherwise include, should always declare the interest that he has. This should be done prominently and boldly so that it is clearly brought to the attention of the reader'.

This last comment by Armstrong hammers home more than any other what is surely the most common-sense, but most widely ignored point of all. The prospective purchaser pays good money for a magazine which he looks on as a source of independent and impartial 'consultancy' advice on competitive products. No reputable consultant would dare accept a commission from a manufacturer without declaring his prior involvement with other manufacturers in the same field. Why should the reader of a published review not be afforded the same privilege? And, for the record, no manufacturer would be satisfied with the half-hearted, garbled and elusive apologies for a declaration of conflicting interest that have been buried as a sop in some recently published, and ostensibly independent, reviews.

No discussion of consultancy and reviewing could now be complete without some mention of APARC, the Association of Professional Audio and Radio Consultants. My original round-robin enquiry was sent out at the beginning of July last year, and on July 25th, 1978. Hugh Ford, Denys Killick, Gordon King, Angus McKenzie and James Moir agreed among themselves to form 'an association of professional consultants dealing with matters including audio, radio and associated work.' The idea, they said, had first been discussed two years earlier but 'the increasing importance of establishing a code of professional ethics has accelerated

our discussions'. It was promised that a press statement would be issued 'in the near future, outlining the complete code of ethics, aims and objects of the Association'. But the only press release so far issued by APARC is singularly vague on almost every point other than its implicit criticism of those outside the association, ie, the Association 'recognised that the work of unqualified consultants sometimes fell below desirable standards and the membership requirements of the Association ensure that a high level of professional and technical competence is maintained'. But what exactly are the membership requirements, other than self election? A member of APARC, the release states, should have 'no significant financial interest in the product of the service'. But what is 'significant' financial interest? Is it one share in a company whose product the APARC member is reviewing, or is it a thousand shares? And who judges what is and is not a significant interest? Bear in mind, incidentally, that although in theory any member of the public can establish from public records the nature of any citizen's share interest in a company, in practice, to establish such an interest through Companies House is an extremely frustrating, time-consuming and thus expensive exercise. APARC as a body has been conspicuously silent on the issue of conflict of interest between reviewing and consultancy. By definition, however, this would seem a central and crucial issue for an Association composed entirely of consultants who also review. What is more, APARC is publicly and unambiguously committed to some clarification on this very point. In the summer of 1978 *Hi-Fi For Pleasure* published an extensive comparative review of tapes in which the reviewer and APARC chairman Angus McKenzie acknowledged that 'our company is consultant to the majority of manufacturers whose products are marketed or own-branded in this survey'. A similar acknowledgement is to be found towards the end of the similar review incorporated in *Hi-Fi Choice* No. 11 while the title page of this latter publication declares that the author is 'chairman and one of the founder members of the Association of Professional Audio and Radio Consultants. This book has been written completely within the ethics of the Association, bearing in mind considerations concerning consultancy and reviewing. Details of the Association are being announced in the hi-fi press'. Likewise in the January 1979 issue of *Hi-Fi For Pleasure*, a published controversy centres on the credibility of APARC versus the credibility of a non-APARC reviewer.

To cut short what is an extremely long and involved story, non-APARC reviewer Chris Rogers criticised a JVC amplifier in the October 1978 issue of *HFFF*. The company reacted by commissioning the chairman of APARC to re-test the amplifier, on a consultancy basis. After much legal wrangling *HFFF* published a JVC-commissioned consultancy report which 'stresses' it is by the APARC chairman. The editor of the magazine himself wrote in an editorial that: 'The knives are out—reviewers are getting into deep water. It's reaching the point where, if they criticise a product, they cannot only expect trouble from the manufacturer but other



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reviewers may take up cudgels as well'. Inevitably the incident blurred even further the boundary between reviewing and paid consultancy.*

I have raised the issue of reviewing and consulting boundaries and conflicts with every member of APARC individually, and received replies which varied from open and courteous to evasive and downright hostile. At the end of it all I was still no nearer to a clarification of rationalised APARC policy on the point. Indeed, the widely divergent views, involvements and attitudes of individual members may well make any such consolidated clarification impossible. But an increasing number of articles written by APARC members do now manage to refer to the Association by name as if it were the Greenwich Meantime of audio. If APARC is to achieve the widespread respect which it clearly seeks, full hard facts and details of the Association standpoint over mixing reviewing and consultancy would not come amiss. It should now be clear to those readers who wish to know whether or not a review which they are reading is truly independent, that, rightly or wrongly, a very small minority of consiewers currently see nothing wrong with first consulting on a product and then reviewing it. A volt is a volt whoever pays for the measurement, is the most persuasive justification. Whether or not this is reasonable (questions like where you measure the volts, under what load conditions and how important are the results, immediately add subjective colour), it is surely equitable for the consiewer openly to declare any conflict which arises through a commission to measure equipment first for a manufacturer and then for a magazine review. Consiewers already feel themselves obliged to come clean over conflict when rival firms commission them for similar consultancy. In fact the IERE rules of professional conduct *require* that an engineer 'shall disclose all or any profits, benefits or interests he may have in any matter in which he is professionally engaged on behalf of a client or employer'. Curiously, no-one ever seems to interpret this as entitling the review reader, who indirectly employs the reviewer by purchasing the magazine carrying the review, to a similar disclosure.

Some consiewers take their duty to the manufacturers even further. 'I would review products upon which I had consulted subject to the agreement of the manufacturer concerned' confirmed one of the small minority with whom I cannot find common ground. I find such loyalty to the manufacturer touching! A manufacturer who has paid for and noted consultancy comments, had the opportunity to modify the product in the light of these comments, and then gone ahead

* We would refer readers also to Mr. McKenzie's article entitled 'Some Further Listening Test Experiences' published in the February 1979 issue of HFNJRR. This arose from the above controversy and showed to our satisfaction that JVC were perfectly justified in objecting to allegations of audible differences which had no basis in carefully observed fact. We share Mr. Hope's qualms about the ethics of reviewing, consultancy and the APARC, but some published reviews really are indefensible on grounds of methodology alone. However, in this case the manufacturer apparently commissioned the further report without first offering Mr. Rogers the chance to discuss, defend and if necessary apologise for his review, which was most unfortunate —Ed.

with submission of the product for consumer review, is the last person in the world likely to object if that product is subsequently reviewed by the same consultant. Isn't it the review reading *public* who should be asked for their agreement to such a situation?

Of course the public can't be asked. But at least the magazine editor can be asked on their behalf and the public can be put in the picture where appropriate. This is why I believe that an easy remedy to the current unsatisfactory situation lies with the magazine editors. It is clearly impractical and undesirable for every published review to be cluttered with a lengthy catalogue of the reviewer's past consultancy dealings with the manufacturer of the product under review. But it is equally unsatisfactory for the reviewer to decide in advance which of his consultancy dealings are or are not of relevance to the issue of conflict. It is just these self-imposed judgements, which a flexible conscience can so easily tailor to suit the situation, that have produced the current unsatisfactory trend towards undisclosed conflict. The obvious compromise is for the reviewer to submit to the magazine editor, with any review, a clear statement of his past and present paid consultancy dealings with the manufacturer of the reviewed product. Better still, such disclosure would be in advance, when the review is first commissioned. In fact, the previously quoted IERE rules of professional conduct may well already *oblige* just such a declaration by a reviewer—to his *direct employer*—the editor. It is then up to the editor—and the editor alone—to decide whether or not to publish the review and if the decision is in favour of publication it is again up to the editor to decide whether or not the privately declared consultancy interest is of sufficient significance to warrant a public declaration.

The public declaration should be bold and

unambiguous, not vague and buried in the small print amongst a confusion of irrelevant red-herrings. If the editor decides that the consultancy interest is so heavy that an unambiguous declaration would so devalue the published review as to make it worthless in the eyes of an intelligent reader, then surely the review commission would be better given to a more independent reviewer. Likewise, if a reviewer is reluctant to disclose to an editor the full extent of his commercial connections with a manufacturer, there is always an easy way out: he can decline the review commission. Already a trend has begun in this direction. One recently published re-test review contained a clear and bold statement inserted by an editor to the effect that the re-test had been paid for by the manufacturer. I'll bet it is now coming as a surprise to some readers to learn that routine re-tests (a second investigation by the same reviewer after a first unfavourable report on a faulty sample) are sometimes now paid for by the manufacturer. But I'll bet it would come as even more of a surprise to readers if they now started to read the declarations of consultancy interest that have been conspicuous by their absence from some previously published reviews and re-tests.

Inevitably my proposals for more open declaration of interest will offend some reviewers who have close consultancy ties to the industry, as much as they will please others struggling hard to maintain their independence. So what do readers think? One final point: On the principle that *saucé* should be both for the goose and gander, I will willingly disclose for publication any information on my own journalistic activities, in response to any request that the editor of this magazine judges to be in the public interest rather than ulteriorly motivated. ●

* Also, what does the editor think? See page 51

Readers' Problems Examined by Crossover

Information on Collaro

Dear Sir, I have seen an advertisement for an old, but unused, Collaro record deck. Can you tell me whether these units employ their own cartridges for the arm fitted? I cannot trace any suppliers now.

B. F., Newport, Gwent

Collaro decks were handled by the now defunct Highgate Acoustics, and were usually supplied without a cartridge, the dealer then fitting one to the customer's requirements. Collaro never made any stereo cartridges, so if you want to replace the one fitted, take the model to your dealer who should be able to identify it and supply a suitable replacement stylus, or, if not in stock, order one for you.

Pickering cartridges were fitted to some Collaro arms, or if ceramic types they were probably Acos, BSR or Garrard, all of which are readily available. We see from our files that the Collaro heads used three types of stylus for their Studio O, P and T models, the PX transcription, and the type for the TX88,

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Dear Sir, I am anxious to own a first-class open-reel tape machine, and whilst I cannot afford a Revox A700 or an AEG-Telefunken, I have been offered a good second-hand TEAC. Is this a good buy? And is it worth having adjustable bias?

J. L. G., Blackburn

If in good condition, certainly the Japanese TEAC model can be recommended, as these units are built like battleships and will take many years to wear out. In our experience their reliability record is high. Originally distributed in UK by Teledyne Acoustic Research, they are now handled here by Harman (Audio) UK Ltd., from whom service and spares should be available.

Adjustable bias is not essential, and it is not easy for the non- or semi-technical user to set bias correctly. It is probably far better to have switched bias and equalisation. The switched positions cover the majority of tapes available and the machine can always be adjusted by an engineer internally if necessary.

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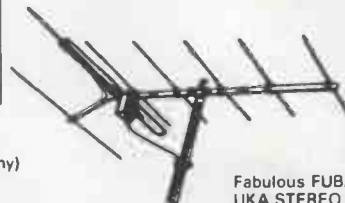
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FM Radio

Angus McKenzie

IS Radio 3 the last refuge for the intellectual? Perhaps this has been so for some years, as programming has been oriented towards generally minority interests, with some major programmes for the average classical music lover. However, the present director of Radio 3 is threatening major changes to turn the programme into one which attracts a larger audience by reducing the amount of classical music, increasing the spoken word, and introducing more popular material. Since Radio 4 includes many light classical music programmes, and Radio 3 has already introduced much popular classical music in its concert relays, it would seem to me that at the moment a *status quo* position would be the wisest. I have frequently made my feelings known about the proportion of ultra-modern music on Radio 3, and while of course it would be unjust to cut it completely, surely composers such as Stockhausen could at least be pushed into less popular time slots.

I am not sure who the instigator is for the intended serious changes, but it might well be Aubrey Singer, the BBC's new Managing Director of Radio, and such policy shifts become even more startling when one considers the future for BBC local radio. Mr. Singer has been faced with an understandable predicament over whether to allocate more money for local radio, thus enabling it to continue as it has been, or to cut back programmes to allow for less strain on local radio staff, allegedly in accordance with the BBC Trade Union recommendations. In the case of BBC Radio London, Manager Alan Holden's policy from some time in September is to stop weekday programmes at 9 p.m., the last hour of which will be excerpts from Parliament which at present are transmitted from midnight to 1 a.m., and to cut back Saturday hours to a 7.30 a.m. start, but finishing as early as 3 p.m. Sunday hours will also be cut, becoming 9 a.m. to 6 p.m.

About four years ago Radio London's allocation was £460,000 per annum, but it has now reached, and will be (allowing for inflation) £800,000 per year. Holden intends to allow for £100,000 per year needle-time and wants to introduce regular play-ins of pop records and refurbish programmes in such a way as to increase greatly his listening figures. He apparently plans to cut various monthly hobby programmes such as *Sounds Good*, *Rail*, *Gardening* and *Guideline* (for the blind), and to have a weekly conglomerate hobby programme from 2-3 p.m. on Saturdays, perhaps incorporating 5-10 mins for each special interest.

I feel duty-bound to give my opinion, since it is deeply felt, also by friends of mine generally in broadcasting, as well as just about every listener with whom I have dis-

cussed the changes. It seems madness to expect listeners to plow through 45 mins of a hobby programme which may be of no interest, in order to get perhaps a 10 minute slot of *Sounds Good* or the *Railway* programme. Is it not better to know that at a particular time once a month an entire programme will be devoted to one's own hobby? Surely, the only people who will listen to the new mixed bag will be those regarding it as 'wallpaper' while in their car—and we all know that wallpaper programmes, whether or not including pop music, attract an unconcentrated audience of whom few actually take in what they have heard.

It would seem that the policy of changing Radio London, and perhaps other BBC station programming, is dictated by an ulterior motive: to gain greater listening figures in the hope that they may remain on the air rather than face the unbelievable possibility of being axed. But attracting wallpaper listeners is not the answer. If cuts are necessary, then perhaps some weekday daytime cut could be made, since relatively few people are listening seriously then, while the wallpaper listeners are provided for quite adequately by the commercial stations and the main BBC networks. If Saturday's broadcasting has to be cut back, then at least let us have 2-3 p.m. for one hobby at a time.

I realise that I am being controversial and many readers will disagree with me; but whatever your feelings, it is democratic and most important for you to let them be known by writing to the BBC Engineering Information Department, which will deal with letters fairly—since Alan Holden has signified his displeasure at the possibility of receiving hundreds of letters! Perhaps the whole concept of local radio has reached a turning point, so we might all consider what it should be. Local radio in London is unique, since it has to cover perhaps 14 million people and is not really 'local'. My own recommendation that London should have at least two BBC stations received complete scorn from Holden, although strongly agreed to by many other broadcasting people. There is already sufficient music while you drive to work on other networks, and Radio London should cater for Londoners and tourists, and also for hobby interests, particularly when listeners are relaxed at home in the evenings and weekends.

If programmes *must* be cut back, then local radio stations should get together more to share resources, so that a hobby programme could be syndicated to other stations which, in turn, would syndicate back their best programmes. Each station could slot these in regularly at an appropriate time for its own area. Such programmes could surely be continued after 9 p.m. on weekdays, or at weekends, with minimum staff present; and in the case of Radio London one extra continuity suite at Broadcasting House could be made available to play tapes into the Radio London transmitter landline. This could include such programmes as the Parliamentary excerpts, which could be recorded on transmission and repeated in the existing time slot, for many listeners like to hear this when they go to bed. I certainly can't see a listening audience for Parliament at an important time in the middle evening, when

most people will be enjoying hi-fi, watching television, or drinking at the pub!

BBC local radio has a job to do, and its job should be *different* from that of commercial radio. It should encourage minorities. Of course it must continue, and in my opinion expand, but we are in danger of reaching a situation which will bore serious listeners endlessly. Of even more concern is the attitude that many programmes existing as an entity now may be cut and introduced into lunchtime periods during weekdays, when the very people they are intended for will be at work. A suggestion that the relevant section could be taped at home is untenable, while a programme for the blind, for example, changed to a weekday, will only be immediately assessed by welfare people rather than the people really intended. So if you want *Sounds Good* to continue as a one hour or 1½ hour programme once a month, and if possible in stereo, I beseech you to make your feelings known to the BBC. Surely a regular programme with dedicated listeners can also be syndicated and become very popular throughout the UK?

On a recent visit to the US I had the horror of hearing what *their* radio is really like, away from the big cities. The technical quality was almost always deplorable, with hum, hiss and unbelievable compression (with attendant noise pumping), resulting in any reasonably sensitive listener not even bothering with it. It was not so much the endless jingles that got on my nerves as the considerable incompetence of many of the operators. Many of their programmes were run along lines that perhaps Radio London wishes to take, but in the case of the US matters are even worse, as there are no continuous national networks.

Since television is also almost as cretinous for most of the time, records are the only refuge for decent entertainment, and a friend of mine came up with a fascinating suggestion, his only existing radio listening being to monitor BBC Overseas Service on his Racal short-wave receiver in Boulder. Could it be conceivable for the BBC to *relay* Radio 3 (and perhaps 4) via satellite to the US, and provide, through agents, parabolic receiving antennas for roof installation with converters to FM, on a hire basis? I put the suggestion to many Americans, all of whom told me they would be prepared to pay a lot of money for the facility. I cannot see that the FCC should have any say in the matter, for the satellite need not even be an American one, and nobody would be telling the Americans what they can or cannot listen to.

The revenue thus gained could be very considerable for the BBC, and allow Radio 3 contributors to receive an additional payment. Already Chicago's WFMT is co-operating via satellite links with other major classical US stations; but the commercialism is undesirable, if understandable. Such a service would be particularly apt for Radio 3 as it now is, but a new Radio 3 with less music would surely be a disaster.

Unfortunately, however, a recent International agreement, particularly forced by the Russians, apparently states that no broadcasts should be directed via satellite to nations whose governments do not completely approve. Is not this rather like the crazy IATA aircraft fare regulations?

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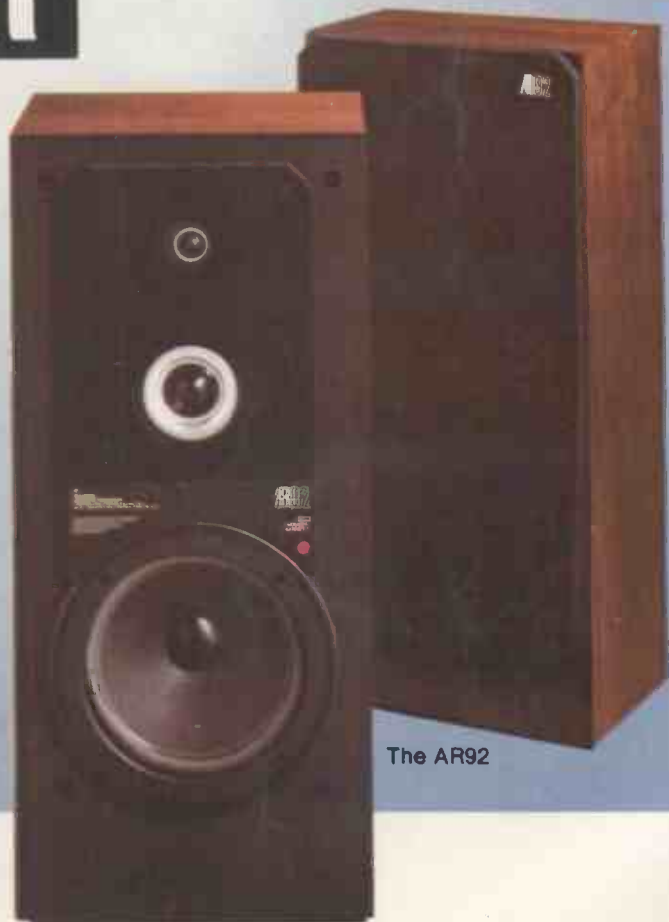
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Stereo Seat Postscript

John Crabbe tidies up a few loose ends

READING through the July article after it had gone to press, it struck me that the brief reference to smaller listening rooms and changed speaker anglings, coupled with an assumption that anyone could easily recalculate the requirements as necessary, was perhaps a little rash. Also, my editorial *alter ego* made complaining noises about an old-fashioned reliance on feet and inches, which my children don't even know about. So here are some further notes designed to tie up the loose ends and provide a final 'package' for experimental consideration by loudspeaker designers—who all work in metres and litres these days!

Firstly, it seems sensible to opt for a speaking angling of 45°, since last month's 47° arose from purely arbitrary room dimensions, while the necessary changes in directivity to accommodate the revised angle are extremely small. The second point concerns my assumptions about room size, which went somewhat beyond typical British domesticity. In postulating a 3.7×6.1 m (12×20 ft) listening space. Thirdly, although it is possible in theory to use angle-dependent amplitude to compensate for precedence-

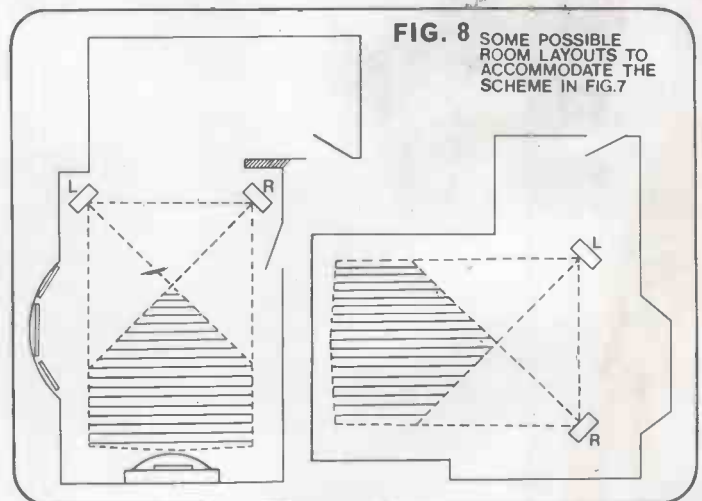
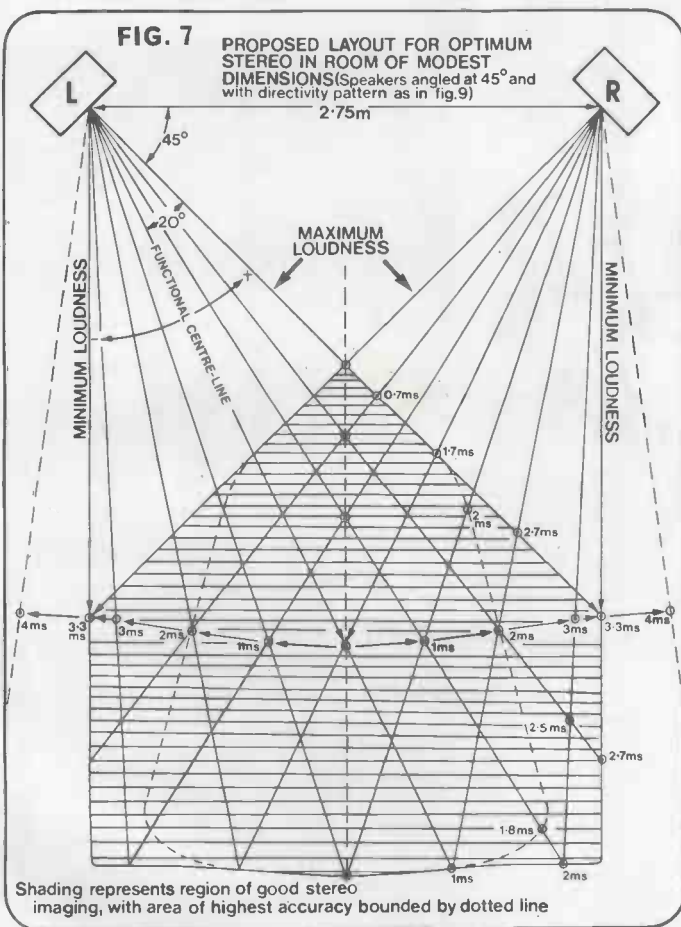
effect in the rear parts of even very large rooms, one can only apply *one* proximity-effect correction. The latter must represent an average listener position and will give accurate compensation only along a line plotted across the room at one particular distance from the loudspeaker plane. Imposing a limit on listening distance will reduce proximity errors by keeping listeners nearer to this line, at the same time avoiding a sound-stage of uselessly small angular width. Finally, while the speakers may be positioned fairly well in from the side walls in many installations, I suspect that furnishings, doors, fireplaces, etc, coupled with the general requirements of living and movement, usually make it impracticable to listen from points out beyond the lateral spacing of the loudspeakers themselves.

So, staying with a speaker spacing of 2.75 m (9 ft, which I still regard as realistic), the revised assumptions are as follows: (1) speakers angled at 45°; (2) listening area 2.75 m wide, centred on the median-line; (3) rear of listening area not to exceed 4.1 m (13½ ft) from loudspeaker plane, to avoid sound-stage angles appreciably less than 40°; and (4) proximity-effect compensation to

be calculated for the mean of fore and aft lateral extremes set by the above geometry. Fig. 7 represents these criteria, dropped into a box corresponding to a room measuring 3.7×5 m (12×16 ft). The speakers are rather nearer to the corners here than is healthy, but the intention is simply to convey some idea of how the proposed pattern would slot into a practical space. Each room-plus-furnishing has its own idiosyncracies, and it could well happen that some very odd shaped spaces would lend themselves to accommodation of the same basic speaker/listener layout (see fig. 8).

The seemingly wasteful 'prohibited areas' down the sides in fig. 7 (created by the decision to limit the listening area to the speaker spacing) are only 46 cm wide (18 in), and it is surprisingly difficult to sit in comfort with the centre of one's head nearer to a side wall than that. Likewise, not many sitting-room chairs would allow one to relax with ears further back than the rear of the shaded area, which is about 30 cm (1 ft) from the rear wall. The points corresponding to loudspeaker time differentials of 4 ms are shown for convenient comparison with fig. 4 (July p. 75), but the practical limit in this revised scheme is only 3.3 ms. This gives a functional centre-line at 20° off-axis, against 25° in the earlier set-up; but when proximity-effect compensation is re-inserted (4.6 dB for point-source speakers) the sound level becomes -12.8 dB at 45°, which is very close to the previous figure at this same angle (see fig. 9). Indeed, the re-calculated curve is not more than 0.3 dB away from the original at any point, so that my rule-of-thumb suggestion that a standard polar pattern for point-source speakers should give approximately -6 dB at 25° off-axis still holds. It's actually 6.4 dB, falling to 5.2 dB for line-source types.

Covering both types of speaker, fig. 9 summarises the directivity requirements for





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Tape Matters

Douglas Brown

THE idea of a special tax on every reel of blank recording tape to cover copyright and performance rights is in the air again. I hear from Germany that positive moves have begun to secure legislation in the Federal Republic to achieve this end. The Ring de Tonbandfreund, which organises amateur recording enthusiasts over there, has submitted its formal objections to the appropriate authorities.

The subject will now be on the agenda for the annual congress of the International Federation of Sound Hunters, taking place in Basle, Switzerland, at the beginning of November, and the organisation is likely to collect information world-wide and prepare a co-ordinated case to present wherever and whenever moves are made to propose this kind of tax.

In this country we have had clear indications that the Mechanical Copyright Protection Society Ltd and the British Phonographic Industry Ltd relish the idea of a tax on blank tape, but very little is said publicly. The greatest need at the moment seems to be to bring the whole subject out into the open and to debate the pros and cons properly.

It is interesting that the first positive steps

to secure a tax are being taken in Germany, for it is in that country that there has long been a tax—such as we do not have here—on tape recorders, collected at the point of purchase, to cover copyright. When the Whitford Committee was set up in Britain to investigate the subject it reported in favour of a similar solution here, suggesting that a tax of not more than 5% would meet the case.

Those recommendations have brought forth no response from government to date and it seems unlikely that the new administration will find time, among all its other preoccupations, to tackle the issue in the next couple of years. But precedents set in other countries in the meantime may have long-term significance here. And the German moves clearly indicate that the owners of copyright no longer consider a tax on recorders to be sufficient.

The subject is complex, and the copyright owners have a legitimate case. Much material is, of course, being pirated in private homes, by recording from radio or from borrowed discs. Most of this activity is, beyond doubt, illegal, but there seems to be no means of policing which would be acceptable in our type of democratic society. Unable to identify and prosecute particular law-breakers, the

owners of rights (or their representatives) have fallen back on a blanket tax which would collect payment from everyone—including those who never infringe any of the rights of any interested parties.

There is obviously an element of injustice in this solution and what we need to debate is where a fair balance can be drawn. Many think that a small tax on tape recorders *might* be a compromise achieving the best that can be hoped for. But the idea of taxing *all* sales of blank tape is a different matter altogether.

Why should the creative tape recordist, making documentary or dramatic programmes, pay any such levy? Why should the wild-life recordist? Or those who use their recorders for 'oral history' recordings and archival material? And what about the vast quantities of cassette tape now used for office, commercial and industrial purposes? Is all this to be taxed for the benefit of the owners of the rights in musical and other creative recordings?

Plainly no such case stands up, and it is necessary to get this widely understood. The time may come here—as it already has come in Germany—when amateur recordists will need to lobby their legislators vigorously to ensure that *they* comprehend the issues.

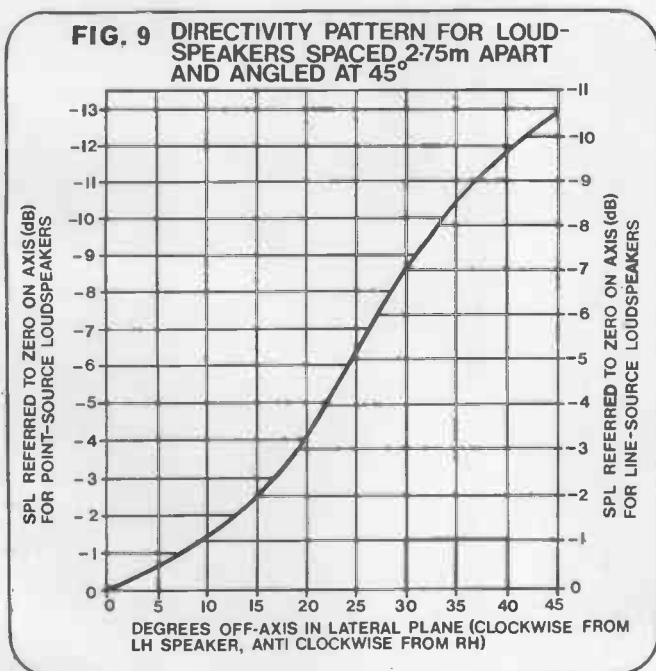
optimising stereo stability within the fig. 7 layout. This presupposes my initial assumption: that a true solution to the stereo seat problem lies in a curve plotted between the proximity-corrected Meyer/Schodder results and the original Brittain/Leakey findings. Fig. 9 also assumes that the direction of

maximum usable output constitutes the axis of a polar diagram, although this is not strictly necessary, as noted last month and worth emphasising here. In some cases, an amplitude/angle relationship satisfying the curve may be found to commence at a position already well away from the conventional axis,

while it might be feasible in an electrostatic design to skew the polar diagram into the desired shape just on *one* side of its 'axis', using mirror-image radiators for the two speakers.

As correction for proximity-effect must perform only work accurately along one lateral listening line, anyone placed at the 3.3 ms limit or in the rear corners of the shaded area in fig. 7 will experience errors of about 1.5 dB (or half this with line-source speakers). Also, the oddities noted in various experiments when loudspeaker time differences exceed 2 ms suggest that it would be wise, ideally, to avoid listening positions giving path differences corresponding to more than this. The dashed line in fig. 7 takes account of both uncertainties by confining listeners within a 2 ms frame, which also reduces the maximum error in proximity correction to about 1 dB.

If my whole thesis is correct, then the stereo seat could be expanded to become a 2.1 m (7 ft) settee at the back of the shaded area, giving a modest 37° sound-stage at its centre, and a 1.5 m (5 ft) settee at a point far enough forward to give a sound-stage in excess of 60°, both for 'accurate' stereo within the 2 ms boundary. Also, if one is content to accept the domestic limitations of that boundary, the reduced outer listening limits impose no restrictions on the polar response beyond 40° off-axis. In addition to placing the practical centre-line of the usable radiation neatly at the angular centre, this eases matters just a little for loudspeaker designers, over to whom I gladly now hand the whole problem. ●



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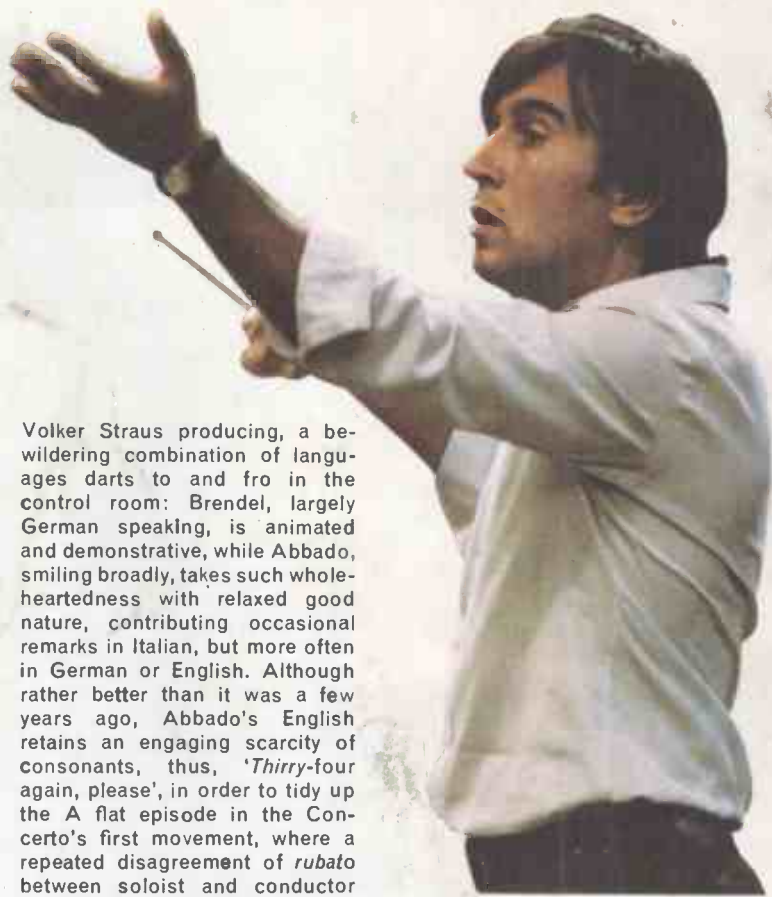
Gramophone

Claudio Abbado

It was during an LSO rehearsal last June for Prokofiev's *Alexander Nevsky* in a sparsely populated Festival Hall that Claudio Abbado suddenly stopped conducting, his arms motionless by his sides. The rapid, heavily-scored music charged on under its own momentum for several bars before coming to a halt: '*Forte-piano* before 56, brass, I ask you before!' This flash of irritation is worth recording simply on account of its rarity; at no other time during a fortnight of rehearsal and sessions did I come across anything remotely similar. Abbado's work with the LSO is characterised by a quiet humour (he takes *sotto voce* for much of the time), a gentle seriousness and a patience which remains intact in the face of any number of repetitions. A particularly awkward piece of sustained trumpet writing in the Prokofiev refused to run smoothly for the DG microphones a day or two later; as far as Abbado was concerned, everyone was there to get it right, and reaction to the problem, whether in the form of a wince or of false bonhomie, had no place. Neither were there any anecdotes or pictorial descriptions from the rostrum; the latter, especially, are anathema to orchestral players who recount stories of such conductors with evident relish, generally to this or that Maestro's enduring discredit. Few other groups of human beings share an orchestra's capacity for quick, devastating self-assertion. 'I think that many conductors talk too much at rehearsals, with the result that even by the time of the concert an orchestra is not sure what he wants!'—we were talking between *Nevsky* sessions at Watford last June. '... and it is important for the orchestra to see what is wanted at the rehearsal from the eyes, the arms, the body, because that is the only way of communication at a concert—I should hope! Toscanini never used a score (he couldn't even see his musicians, his eyes were so bad) but the musicians could see him and the expression in his eyes.' Van Beinum's observation that Toscanini conducted 'with the score in his head' rather than vice-versa might equally be applied to Abbado, whose scores are in

pristine condition with practically no added markings. 'I remember what I want and mark only the special things.'

'He's already got the kind of discipline that other conductors have to work for' is the kind of comment most frequently encountered when LSO players talk about Abbado; in electing him Principal Conductor of the orchestra's vote was unanimous—a unique state of affairs. Their reputation as an orchestra little inclined to suffer fools gladly is not something with which Abbado is familiar... 'Of course, there could always be more discipline—and there will be more...'—this quietly said, unexpectedly, with no hint of an exclamation mark—'... but there is a wonderful humour and hard work... how long have we worked together? Twelve years? I love this orchestra.' Abbado's relationship with the LSO began with his London debut in 1966, and two recordings made soon afterwards (Prokofiev's *Chout* and *Romeo* excerpts—JB 56; Mendelssohn's Third and Fourth Symphonies—SXL 6363) remain as fresh-sounding as ever. Now, some twelve years later, the Abbado discography includes Mahler's Second and Fourth Symphonies (with the Chicago SO and Vienna PO respectively); it was with no. 2 that Abbado made his Salzburg debut at the invitation of Karajan in 1965), *Carmen*—a recording based on the Edinburgh Festival productions, now bound for Paris and Flanders, *La Cenerentola*, *Il Barbiere*, an expanding Stravinsky collection with the LSO, Tchaikovsky's Second, Fourth, Fifth and Sixth Symphonies, an enterprising Berg disc and, with Lazar Berman, a distinguished CBS account of Rachmaninov's Third Piano Concerto (76597). At the time of our conversation last June, Abbado was once again to be found in the role of accompanist; although under exclusive DG contract, he was working this time with Alfred Brendel at Phonogram sessions for the Schumann Concerto—'I'm starting to think that those string parts', remarked Abbado, 'have as many problems as those in the Symphonies.' His working relationship with Brendel is a particularly relaxed, happy one, and with Dutch-speaking German,



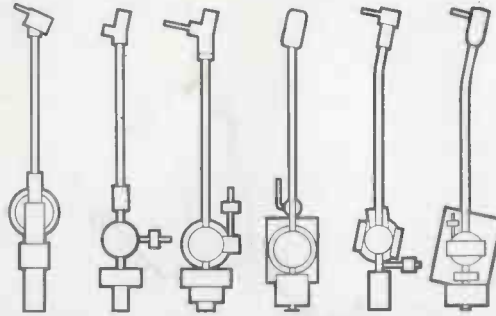
Volker Straus producing, a bewildering combination of languages darts to and fro in the control room: Brendel, largely German speaking, is animated and demonstrative, while Abbado, smiling broadly, takes such wholeheartedness with relaxed good nature, contributing occasional remarks in Italian, but more often in German or English. Although rather better than it was a few years ago, Abbado's English retains an engaging scarcity of consonants, thus, '*Thirry-four* again, please', in order to tidy up the A flat episode in the Concerto's first movement, where a repeated disagreement of *rubato* between soloist and conductor produced some rocky ensemble. Once again, instead of words, Abbado's finger, pointed at himself—'my fault?'—was sufficient, self-effacing acknowledgement of the problem.

A clue to Abbado's artistic open-mindedness is provided by his term with Hans Swarowsky with whom he studied conducting in Vienna prior to winning the 1958 Tanglewood Koussevitzky prize. 'He offered many ways to approach a score and always said that his method was "for idiots", he offered so many alternatives! We were taught a hundred different ways and told that we must take the way that was good for us. He used to ask us to practise conducting with one hand and to play the piano with the other. For him, the instinct and the intellect for conducting were equally necessary ingredients. At twenty-two I was very complicated and introverted and, unlike one or two friends who were even then accomplished conductors, I knew I should have to study my whole life.' External factors no doubt contributed to this attitude. Brought up in Nazi-occupied Italy, Abbado's mother was imprisoned for hiding a Jewish child and his violinist father was accused of collaboration after a broadcast.

If Abbado is hardly the easiest of people to interview, it is emphatically not because of any

hostility or lack of lucidity, but rather on account of a fundamental privacy of character and opinion which yield up their secrets only sparingly. He was rather more forthcoming when we talked about the LSO's *Eroica* the previous evening, and his faith in the orchestra's distinction in this repertoire. If, stylistically, their Beethoven has not invariably delighted the conductors with whom they work—one such recently shook his head sadly, exclaiming 'They are not a Beethoven orchestra!'—Abbado is confident that the orchestra is becoming less and less open to this charge. 'It is a beautiful sound and, being a British orchestra, they are more consistently reliable than, for example, the Vienna Philharmonic, who play like gods when they are inspired and... well... less so when they are bored! The LSO woodwinds are, I think, finer than the Vienna's at the moment—better blend and intonation. With the LSO I feel safe in doubling woodwind for Beethoven, something I always like to do for symphonies three, five, six, seven and nine—and with this orchestra the sound is still well-blended and beautiful as well as making a better balance. If the string sound does not always have as much personality or warmth, well, we are already

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overcoming that with a lot of work. I think now I know what I want and last night with the *Eroica* I felt that the sound was warmer, more *espressivo* than it has sometimes been in the past. You noticed that the horns sat on the right in front of the trumpets and trombones last night? I have never asked for this seating, but as well as getting a better blend and ensemble in the brass, you are not so likely to drown out the violins this way. The string sound I am after is coming gradually, though; with the cellos and basses it is already there, and for the rest, it is only a question of time.' Also a question of time, although part of the more distant future, is Abbado's attitude towards recording Beethoven Symphonies. Apart from an early Seventh with the VPO for Decca—he looked positively desolate when I reminded him that the disc was still available—Beethoven is unrepresented in the Abbado discography—'you have to wait for these things to come to you'. Even so, those who attended a spontaneous, galvanising Seventh with the LSO at Edinburgh during the 1977 Festival will bemoan the absence of any new account.

Last month, Abbado repeated a highly successful 1978 tour with the European Community Youth Orchestra by taking them to Avignon, Venice, Salzburg, Berlin, Copenhagen, Ghent and London. No programming concessions were made to the orchestra's average age of between 14 and 21, and Schoenberg's *A Survivor from Warsaw* with Dietrich Fischer-Dieskau in Berlin was set confidently within more traditional fare of Bach, Beethoven, Bruckner and Stravinsky. At the mention of this remarkable orchestra—a group whose membership is drawn as evenly as possible from each of the nine—Abbado's admiration is boundless. 'You know, the enthusiasm of these kids is incredible. Of course, one of the main differences in the way they prepare a concert—apart from the Union rules!—is the amount of sectional rehearsals, where the music is sent on to the players in each country many months in advance of the whole orchestra coming together. There is no frantic feeling of "this has got to be done by such-and-such-a-date", so when we come together, they know the music by heart—almost! But what I like about these kids is that they believe, they trust in you and the music, and that last point is one of the most precious things you can have'.

Schoenberg's *A Survivor from Warsaw* is one of a large number

of recording projects scheduled for the coming months, along with *Erwartung*, the Chamber Symphonies and the Piano Concerto with Pollini, with whom Abbado has recorded Bartok's First and Second Piano Concertos (with the Chicago Symphony on 2530 901), Brahms' B flat Concerto (with the VPO on 2530 790) and Luigi Nono's *Como una ola de fuerza y luz* (2530 436). Both Nono and Pollini are close friends and respected colleagues, and they provide Abbado with consistent optimism for the future of Italian music. 'Of course, it is possible to use electronic instruments—magnetic tape and so on—as an end in themselves, but these devices should be used in the same way as other instruments, and not given false prominence. You know, I think it is wrong to say that if you are a charlatan you can survive more easily today than in the past. Now there are only a few really great pianists, for example; so often you get people hailing a pianist as being fantastic—especially after competitions—and then two years later you don't hear of this artist any more; it's all very clear. And it's the same for composers: time is more ruthless to them today than it was a hundred years ago. The second-rate is forgotten more quickly. And may I say that there are only a few critics able to discern what is worthwhile or not! Although that has always been the case—look at reviews in Berlioz's or Tchaikovsky's time!'

With the LSO appointment, his Directorship of La Scala, Milan and commitments in Vienna and Chicago (the recorded Mahler cycle is being shared between these two orchestras, choice depending largely on accompanying concert performances), Abbado is finding the administrative demands, the hour-long telephone conversations over singers at La Scala, increasingly wearing. 'I would like to be like Giulini; I think he's completely right when he just refuses to handle such things—although of course, somebody has to do this kind of work. I mean to cut these things down in the future. There is a great danger of overwork, and I admire more and more someone like Carlos Kleiber who does not even conduct very much. It is often difficult to say no, and you realise that you are doing too much only when you are in the middle of it. We were in Paris with La Scala two weeks ago with *Wozzeck*, the Verdi *Requiem* and another Berg programme. We decided that we had to go back for the election, and all this took place within three days! So

the art of fitting everything in is to apportion the time, which is why, when I go with my family to Sardinia we will go by boat, and I can swim, play with my children, go to the theatre; I also like skiing, football, netball, tennis—and table tennis! But I must be realistic and look at my diary!'

A glance in that direction would reveal engagements that extend well into the eighties, with a full complement of recording plans. There is more Stravinsky to come with the LSO to supplement Abbado's recordings of *The Rite of Spring* (2530 635), *Pulcinella* (2531 087) and the *Firebird Suite/Jeu de Cartes* (2530 537). Mahler's Sixth (Chicago) is due for release, with no. Three to be recorded in Vienna. There are also two LSO Mozart projects—the Piano Concertos with Rudolf Serkin, and the late symphonies are under way, all for DG. Additionally, in 1980 there are LSO tours to America, West Germany and Austria to look forward to, as well as an enterprising British tour which includes Bristol, Birmingham, Edinburgh, Manchester and Swansea. A distinguished period for both conductor and orchestra lies ahead.

Andrew Keener



photo Mike Evans/Phonogram

Salvatore Accardo

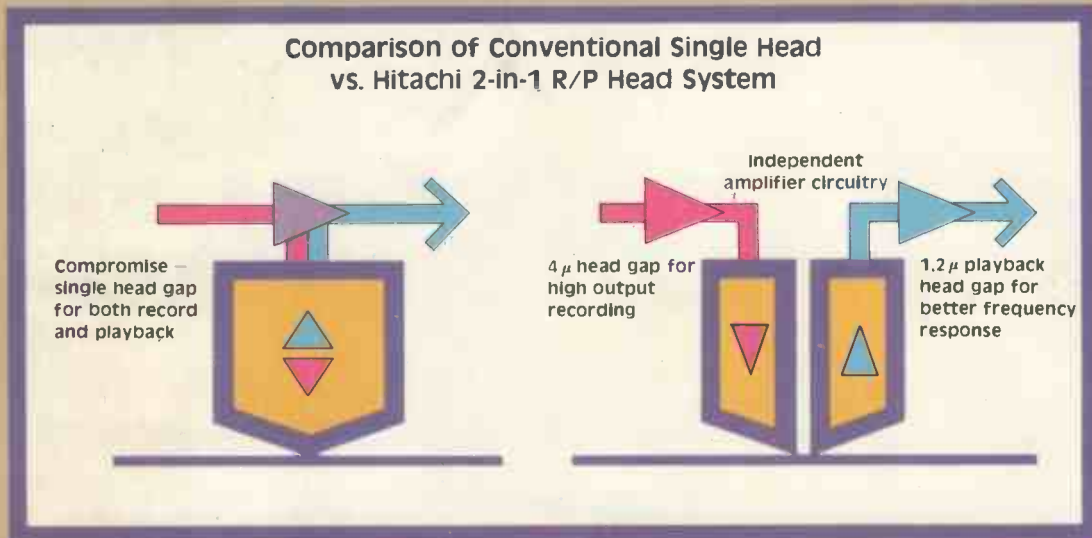
To judge Salvatore Accardo's personality solely on the strength of his sleeve photographs—rather austere, some of them—is to do him less than justice. Of course, the familiar splendid profile, the proud bearing of a fine artist, are both as strikingly evident in person as they are otherwise; only the warmth and genial good humour which are equally a part of Accardo's make-up tend, perplexingly, to be absent from the majority of his photographs. He was particularly relaxed during our conversation last February, which took place neatly between his Festival Hall performance of the Sibelius Concerto with Colin

Davis the previous evening and the first of two Phonogram sessions for the work the following morning. The concert performance had come as a vivid reminder of the rapport that Accardo enjoys with Davis: however passionate his playing, it seems he is incapable of—and is never induced by Davis into producing—an ugly sound. We had been offered a Sibelius Concerto of superb clarity and expansiveness, with double-stopping in the slow movement emerging as flawlessly sustained counterpoint—the mark of a great player of unaccompanied Bach. This refusal to overstate the virtuosic element of the work was especially telling in the codas of the outer movements, which sounded all the more impressive for their complete lack of hysteria. 'Well, in that first movement coda it is very clear in the score what Sibelius wants; really, it's the same music, and therefore the same tempo, as the first big *tutti*. And the technical key to the whole thing are those *spiccato* arpeggios; you really *have* to hear the notes'... which, of course, we did... and not just a frightened mass of sound!—there followed a delightful, brief send-up of a violinist in dire straits, tackling the arpeggios in question at breakneck speed. 'But I feel that Colin was happy to go along with my view; from the first rehearsal we were in complete agreement about these things. We had worked together in Amsterdam with the Concertgebouw on the Stravinsky concerto, and we'll play and record the Dvorak there in November, although the first time we worked together was about two years ago for the Tchaikovsky record—and an understanding with a conductor is especially important when you are making records.'

A common factor in practically all of Accardo's recordings of Romantic music for violin and orchestra is their completeness: all of Bruch's compositions for the medium appear—and are reviewed—this month, the two Mendelssohn concertos are available on a single disc (9500 154), and to buy Accardo's recording of the Tchaikovsky concerto is also to gain the *Serenade Melancolique* and the *Valse-Scherzo* on a disc entitled *Complete Music for Violin and Orchestra* with Colin Davis and the BBC Symphony Orchestra (9500 146). Also, by the end of the week which began with our conversation, the sessions for the Sibelius Concerto would be supplemented by the six Humoresques.

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Bruch collection. Particularly intriguing is the premier recording of the Third Violin Concerto (the very existence of which is surely news to many), along with the Serenade, Three Adagios, and a Konzertstück. 'The third concerto is a magnificent work—nearly fifty minutes long. I think it's even finer than the first concerto. It definitely has the most interesting and accomplished orchestration of the three. Really, the scoring is fascinating; like the Serenade—that's almost fifty minutes as well!—it is published, but at the moment you can only hire it, which is a pity.'

The Tchaikovsky concerto is also one of the three available recordings which is absolutely complete, even to the extent of opening out the traditional cuts in the Finale. 'I do *everything* without cuts. If a composer wrote something, you have to respect his view. Why cut Tchaikovsky? Or Paganini? In the case of Tchaikovsky it was Leopold Auer who suggested the cuts to the composer; like so many of these Romantic concertos, it was not the composer himself.'

As might be expected from one who made his professional debut at 13 with the Paganini Caprices, Accardo feels that there is more musical invention in Paganini than most current assessments allow. He still talks appreciatively of his opportunity to record some Paganini and Lalo (*Symphonie Espagnole*—now on Saga) when he was 18, a year after his success at the Genoa Paganini Competition, and for all the technical horrors with which the music bristles, his DG recordings still—somehow—manage to convey a delight in the music itself. Even allowing for the cynicism which tends nowadays to greet child-wonder publicity, it seems incredible that his knowledge of this music dates from his fifth year—still more so when he maintains that he was not a child prodigy. 'For me, the child prodigy is someone who plays very well without studying very hard. And that is why, with very few exceptions, child prodigies just come to a stop as far as their playing is concerned. A prodigy is a person who plays, perhaps, the Beethoven Violin Concerto at the age of nine, but doesn't know why or how, so when he starts to question, it is too late to understand; the damage is done. He has not explored the very basics of technique. It is very beautiful, incredible, but it cannot last. I simply say that I did very soon what others may have done later. I practised just as hard and in the same way as other musicians—

but much earlier; the nine years between four and thirteen may just as easily have been the years between eleven and twenty!'

Accardo's is a style of playing which has prompted the adjectives 'pure' and 'refined' probably more than any others. 'Isn't it strange that while solo singers years ago used not to employ much *portamento*, they use it a great deal now, and yet with string players the opposite has happened? Our approach—I mean the Italian approach—is, I think, even more pure than in the United States or Russia, for example. This applies to other instrumentalists—and conductors too, I think. For instance, Pollini, Muti, Abbado, Quartetto Italiano, myself and all the Italian musicians of today have this kind of approach to music. And I think that this is right. What we have—and I'm very happy to say this—is humility to the music. I never want the audience to feel "how beautifully he is playing" but instead "how beautiful the music is"—that is how I feel.'

This view also extends to Accardo's sympathy with the Italian performing style of Baroque music. In common with I Musici, with whom he has recorded a large amount of Vivaldi as soloist/conductor, Accardo is wary of excessive ornamentation. 'Tartini wrote some ornamentation into the music itself—and it is magnificent. I also add a little to an *Adagio* line in a Vivaldi Sonata, for instance, but only for the repeat, and even then very little. I think it is very difficult to put your own hand into the work of a master. Tartini's ornamentations were of their time, and today it is very difficult. In the same way, I think that when you play a cadenza in one of the big concertos, it must either be the composer's own or one near the composer's time. To bring, for example, Schnittke's cadenza into the Beethoven Concerto [Accardo plays Joachim's in his own recording—9500 407] is, I think, a mistake, as it uses effects like tapping the belly of the violin in imitation of the timpani motive of the work. Beethoven would never have imagined that. And if you try and do such things to Mozart—or put in too many ornaments—well! It's impossible! One reason that there was so much ornamentation in those days was probably because they had none of our convenient ways of adding expression to music—vibrato, and so on. They—and their instruments—had not the big range of sonority and colour, so they had to help a line with ornamentation. But it is no answer to use old instruments.

Something which always dismays me is how badly they are played today: I cannot believe that Vivaldi or Tartini would have played out of tune, but that is what happens with so many of the 'specialists' today! And I'm sure that the sound was beautiful; today it is so often just...—a vinegar-face and a throaty imitation of harshly-scraped strings conveyed Accardo's meaning vividly enough. 'When somebody is a specialist like that it too often means he is not a good player technically. It is the same with performers who play only contemporary music; very often they do so because they cannot play Beethoven and Brahms. I was speaking with Nono a week ago, and he was saying how upset it makes him to hear only specialists play his music. At the moment I'm studying the Penderecki concerto to play it with him in Europe, and he says the same thing—"At last I hear things I haven't heard before!" And this is why so many people say "ah, contemporary music is no good"—because it is played badly. Great artists like Pollini, for example, approach all music with the same honesty and humility.'

An appropriate maxim indeed with which to approach a repertoire which extends from pre-Bach to post-Berg. Even if, so far, his recordings fall a little short of such an extended range, there is still a formidable distance—in years and style—between Bach and Paganini. Or is there? Accardo was anxious to point out that a knowledge of both composers' unaccompanied literature (all of which he has recorded—Bach: 6703 076; Paganini: 2707 107) can only be mutually beneficial. 'This helps a lot; to play Bach Sonatas is maybe more difficult than to play the Paganini Caprices, from a musical point of view—and sometimes even technically, as Paganini was himself a violinist, and provided you have the basic technique it lies beautifully under the hand. Difficult, but violinistic, let's say. With Bach, some things are just awkward—for instance the C major Fugue is *incredibly* difficult. But the Paganini makes you *think* about technical problems in a way you can then apply to Bach; it can help you overcome in a musical way the problems that Bach, with his flatter bridge, did not have—problems of triple-stopping and smooth counterpoint that Bach the organist was not always aware of. For me, these works are the highest point of a violinist's repertoire—cathedrals in music.'

A large part of Accardo's time

is spent in playing chamber music—something which he feels is as essential as any other field of musicmaking. 'If you don't play chamber music, you cannot play concertos or sonatas. You can so easily lose the way to listen to others.' To this he attributes the success of his Vivaldi records with I Musici, in which he prefers his role of soloist/conductor to that of simply wielding a baton... although I have conducted the smaller Beethoven Symphonies in Turin—with my own orchestra, the Italian Chamber Orchestra... single woodwind: to double would be to put my own hand in Beethoven's work. And Martha Argerich is coming to play the Beethoven C major concerto with us this year; also I will play the two Beethoven Romances and the Triple Concerto with Jacques Klein, and, I hope, Lynn Harrell, but once again I will direct from the violin, not just conduct and leave someone else to play! I have no plans to conduct anything like Beethoven's Ninth for a long time to come—if ever!'

Andrew Keener

Monteverdi and more

The 1972 Glyndebourne production of *Il ritorno d'Ulisse in patria* by Peter Hall, with Raymond Leppard as musical director and editor, had Janet Baker as Penelope and Benjamin Luxon as Ulisse. Likewise in 1973. In that year Frederica von Stade was Cherubino in *The Marriage of Figaro*. In this year's Glyndebourne season she is Penelope in *Ulisse* with Richard Stilwell in the title role. It is a new kind of role for the American mezzo-soprano which she portrays with great sensitivity and effect. If we have any criticism it is simply that it is almost too sad and poignant a role for this charming singer and we miss the opportunity to enjoy her humour and smile. But her singing is superbly controlled and unfailingly beautiful, outstanding amongst an excellent cast with a splendid Minerva in Ann Murray. Patrick Libby revived Hall's ambitious setting with the gods descending from the skies and dangling on their wires like so many night-gowned Peter Pans. Raymond Leppard's direction was brisk and bright in an effort to keep a rather stationary opera on the move—with success.

The whole cast spent the first three weeks of June travelling between Glyndebourne and the Henry Wood Hall (the gods no doubt flying) where CBS were recording the opera with David Mottley as producer. P.G.

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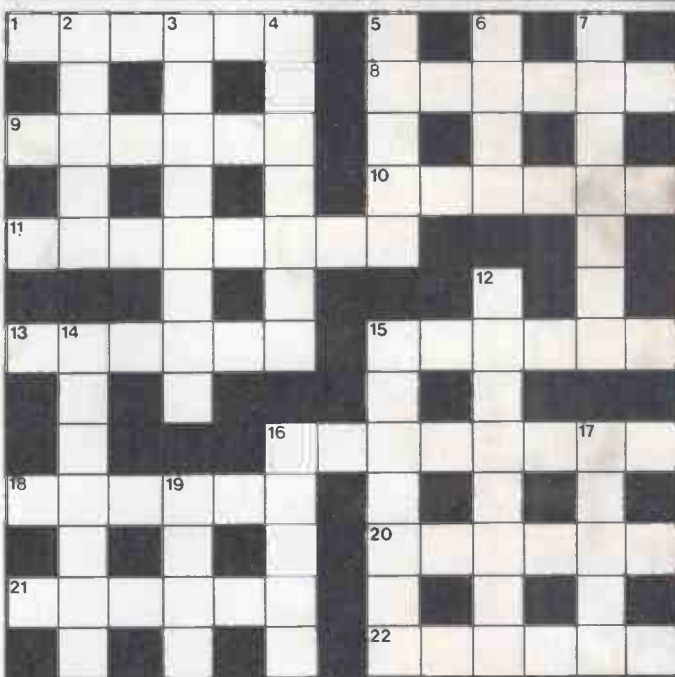
- 1 Tape feature which is special somehow, without the indefinite object. (6)
- 8 Arrangement of Wolf to suit another composer. (6)
- 9 (and 7 down) An immoral agent involved in audio breakdown. (1-5-7)
- 10 (and 19 down) Readily apparent, like the Transcripator's turntable? (4-2-4)
- 11 (See 17 down.)
- 13 Shakespearian king gets in, providing distortionless transfer characteristic. (6)
- 15 Do I rate the Hungarian-born conductor, losing a note? (6)
- 16 Bernstein's part of the metropolis? (4-4)
- 18 Shakespearian opening for popular songstress, Miss N.-J. (6)
- 20 Antediluvian audio component, making a tentative comeback. (1-5)
- 21 Averse about the avant-garde composer. (6)
- 22 Huge units of capacitance announced by distant advertisements. (6)

CLUES DOWN

- 2 (and 6) Tip lot one about in part of stereo radio signal. (5-4)
- 3 Mozartian opera about the King of Crete. (8)
- 4 Try even otherwise to reveal Delian composition. (7)
- 5 (and 16) Scottish traditional song, to the rear when afloat. (5-5)
- 6 (See 2.)
- 7 (See 9 across.)
- 12 Iris gets hair re-set in traditional song. (5-3)
- 14 First-class Latin arrangement of Mendelssohn's No. 4. (7)
- 15 Notably musical conclusion in symbol for spinning female. (7)
- 16 (See 5.)
- 17 (and 11 across) Young British conductor, more somehow traditional, in short, than video. (5-8)
- 19 (See 10 across.)

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Things I Hear

Robert Matthew-Walker

AN interesting by-product of Sir Adrian Boult's 90th birthday in April is the revival of interest in the problem of repeats. I had better explain briefly: in much classical music, composers often marked large sections of a work to be repeated, by means of a second bar line and dots in the spaces of the stave (called 'the double-bar and repeat'). In a broadcast at the time of his birthday, Sir Adrian lent his considerable authority to those for whom repeats are essential, and has followed this up with published correspondence. It is a pity, as he has admitted, that Sir Adrian's recent change of mind did not occur sooner, when he was active in the concert hall and recording studio. His magnificent Beethoven symphonies, recorded over 20 years ago, in stereo, for the Vanguard label, would have been vastly improved by making the first movement repeats in the *Eroica* and the Seventh, for example.

It is good that such a distinguished musician should support those who increasingly demand the observance of composers' intentions. Repeats are *not* optional conventions, at the discretion of the performer: they never were so regarded and I am astonished that even the greatest conductors today do not consider this. Do such conductors think that Beethoven, for example, put repeat marks in for fun? A close study of Beethoven's music soon teaches us that everything in his scores is important, and when

this sublime genius marks a repeat, we should not have the impertinence to ignore it. Peter Stadlen demonstrated many years ago that Beethoven generally marked a first-movement repeat when the development began with material other than first-subject matter. Stadlen's discovery has been published and broadcast and is common knowledge today among Beethoven specialists: why do conductors ignore it?

There are other considerations: the first movement repeat in the *Eroica* for example, *must* be made if the finely-tuned proportions of the movement are not to be marred. Robert Simpson has conclusively proved this point, and there can be no argument in the matter. Beethoven's Fifth symphony ought to be performed according to the original conception (which marks the second repeat of the scherzo) *if* the finale repeat is to be observed: the one cannot be made without the other, and the *Choral* is a classic case. Of the 50 or so recordings Beethoven's Ninth has received, only two (to my knowledge) let us hear the scherzo as written by Beethoven. The vast second repeat is almost invariably ignored, but listen if you will to either Masur's or Solti's recordings—both include it and at last we can hear Beethoven's clear design and tonal structure. I find it astonishing, for example, that over the last 30 years Karajan has never played the scherzo with any clear understanding of its structure. Instead of the fawning prose on the recent DG reissue of his third recording, I would love to read an explanation as to why Karajan omits not only the big second repeat (and thereby the 12 bars Beethoven wrote to accommodate it, affecting the tonality, balance and design) but also the

first repeat, which almost every other conductor observes. Does Karajan seriously think Beethoven's scherzo is 'improved' by reducing its stature in every sense? Instead of airily 'recommending' his travesty for the past 30 years, we critics would have been better employed asking pointed questions.

The question of repeats is not confined to a few Beethoven works—it is an extensive and important matter, and one could cite very many instances in his, and other composers', music. My question is how did the 'convention' of ignoring repeats arise? On what authority is this done? Why cannot musicians conduct the music as set out in front of them, but must presume to 'improve' by shortening the works they are engaged to perform?

A lengthy conversation with the bass guitarist of Public Image, Johnny Rotten's new punk rock band, confirmed my suspicions that Radio 1 is now about as much in touch with young people as the old Light Programme was in 1964—which led to the pirate radio stations. Together with the loss by Capital Radio (London's only commercial music station) of 100,000 listeners and the growing numbers of 'Capital Radio—In Tune With Nothing' hand-made T-shirts, I fear something is up. While Tony Blackburn prepares to become the George Elrick of the 1980s, I fear also the first pronouncements of Ian McIntyre, Radio 3's new Contoller. His previous Contoller'ship—Radio 4—was so successful that most of his important changes had to be done away with. Perhaps we can expect *Housewife's Choice* in place of *Man of Action*, with an Irish traffic-cop doubling as a vampire for link-man—or are we to suffer repeats?



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TEAC

Peter Maxwell Davies

If, as is sometimes suggested, the concert hall has become a musical museum, concerning itself primarily with the display of antique works from the standard repertoire, then it is certainly a remarkably vibrant museum which displays works that are still able to enlighten, move, and give pleasure. Any modern composer must take this body of music into account, even if it is only to reject it. Some have come to terms with this heritage by including the music of others in their own work, either through quotation or through parody. (Here I am using the word 'parody' in its technical sense, meaning the use of pre-existent music as the basis for a new composition.) One of the most important pioneers in this field of composition and, indeed, one of the major composers working in Britain today, is Peter Maxwell Davies. I would like to consider here the career of this colourful and highly-gifted composer and to look at those of his works currently available on record.

Maxwell Davies was born in Salford in 1934 and received a formal education at Manchester University and the Royal Manchester College of Music. It was at this latter institution that he began to develop his individual style of composition and formed the Manchester New Music Group with, among others, Harrison Birtwistle, Alexander Goehr, Elgar Howarth, and John Ogdon. It was for Howarth that Davies wrote his Opus 1, the *Sonata for Trumpet and Piano*, and for Ogdon his Opus 2, the *Five Pieces for Piano* of 1956. John Ogdon's adequate account of this latter, virtuosic set of short pieces on *Piano Music by Twentieth-Century British Composers*, has now been deleted, but you may still be able to find a copy of it (HMV ASD 645) second-hand (if you don't mind putting your stylus at risk!).

Davies then went on to study for a year with Petrassi in Rome on an Italian Government Scholarship, winning the Olivetti prize there in 1959 with his work *Prolation*. During this period he was developing the implications of the post-Webernian serial style that he had adopted at the outset, and the parody elements he had begun to realise in *Alma Redemptoris Mater*, the wind sextet of 1957.

On returning to England, he taught until 1962 at Cirencester Grammar school. This period culminated in the moving *O magnum mysterium*, a work written for the school choir and orchestra, and the three works that owe their conception to the Monteverdi *Vespers of 1610*: the *String Quartet*, the *Leopardi Frag-*



Douglas Hammond discusses the career and recorded repertoire of one of our most overtly gifted 'middle generation' composers.

ments, and the *Sinfonia* for small orchestra.

O magnum mysterium is in two main sections. The first alternates haunting settings of carols for choir with instrumental Sonatas, in which the germinal motif of the whole work is developed in a mood resembling meditation. The work's opening is a setting for soprano solo but the number of parts used is augmented at each repetition during the course of this first section. The second half of the work consists of a virtuosic organ fantasia based on the main theme, the emotional implications of which go far beyond the austere simplicity of the first half. The work is recorded by Argo on ZRG 5327, with the Cirencester Grammar School choir and orchestra conducted by the composer, the organ fantasia being played by Simon Preston. Although the recording quality lacks the ultimate refinement of an up-to-date production, the performance has all the

spontaneity and understanding that the work requires, and belies the age of the junior performers.

The *Leopardi Fragments* is available on another Argo disc, ZRG 758, along with works by Alexander Goehr, Malcolm Williamson, and Richard Rodney Bennett. This work, for soprano, alto, and chamber ensemble, is a setting of lines by the physically deformed and mentally tormented Italian poet, Count Giacomo Leopardi. As in so many of his later works, Davies manages to convey here the deepest thoughts and traumas of another human being. The performance on record is given by Mary Thomas and Rosemary Phillips with the Melos Ensemble conducted by John Carewe. These expert and sympathetic performers succeed in giving a beautifully balanced and polished account of the work.

In 1962 Davies went for two years to Prince-

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ton on a Harkness Fellowship, gained with the help of Aaron Copland and, after a season of lecturing in various countries, became Composer in Residence at Adelaide University in Australia in 1966. This was the period of the two Fantasias based on an *In Nomine* of John Taverner. They are both very much tied up with the opera *Taverner* that Davies was not to complete until 1969. The *Second Fantasia* of 1964 is Davies' most important work up to that time, being a symphonic development of certain ideas used in the opera. It also quotes certain parts of the orchestral texture of the opera note-for-note. The whole, though continuous, shapes itself into three sections conforming roughly to the pattern of a three-movement symphony, with sonata-form first movement, scherzo and trio, and a slow, Mahlerian final movement. A performance of this work is available on Argo ZRG 712, played by the New Philharmonia Orchestra conducted by Sir Charles Groves. Although the performance is not always accurate, the overall shaping of this extremely taxing work is well controlled and the recording quality has the necessary clarity for a work of such complex textures. Also on the record is a beautiful performance of the *Points and Dances from 'Taverner'*, played by The Fires of London, with the composer conducting.

Later in 1966, Davies returned to England, to live in Dorset, and devoted himself to composing and to giving concerts with the newly formed Pierrot Players (later to become The Fires of London). He now produced a remarkable series of works that combined elements of parody with theatre, expressionism, and popular music forms of the 1920s and 1930s—especially the foxtrot. The first of these was *Revelation and Fall* for soprano and chamber ensemble. This piece seems to recreate, in modern terms, the aura of Schoenberg's *Pierrot Lunaire*, although having a more complex texture and using more extreme gestures—for example, at one point the soprano, dressed as a red nun, shouts her words through a megaphone! An excellent recording of this work, made by Davies with The Fires of London, is at present unavailable. May I make a plea here for it to be reissued as soon as possible.

Still available, however, is a record that includes the next three works that Davies was to write. *Antechrist*, the piece that has almost become the signature tune of The Fires of London, embodies most of the typical features of Davies' style. It is written for a small group of strongly contrasting instrumental sounds—piccolo, bass clarinet, violin, cello and percussion—and is based on the 13th-century motet *Deo confitemini—Domino*. The motet is presented at the outset in what is virtually its original form, except for the modern instrumentation, and then serves as a reservoir for the extended serial workings that follow. At key points in this 12-minute work a 'straighter' presentation of the motet material returns, firstly in retrograde and inverted canons and secondly in a double mensural canon. This use of standard medieval and renaissance technical devices is typical of many of Davies' works. Between these three focal points the motet material, now used serially, undergoes a systematic, extensive process of transformation, becoming in-

creasingly remote from its original form. While the compositional technique of all this may appear highly intellectual—which indeed it is—the resultant work is notable for its lightness and fun.

Hymnos for clarinet and piano exploits the amazing technical and musical skill of the clarinetist Alan Hacker. Its hard, abrasive style seems less than typical of Davies' output in general.

Missa Super l'Homme Armé has the sweet irony of being a piece based on a piece which is itself based on yet another piece of music. Davies has said that it 'started as an exercise—a completion of incomplete sections of an anonymous fifteenth-century mass on the popular song "L'homme armé", in fifteenth-century style. As I was working at this, other possibilities suggested themselves.' These 'other possibilities' include a version of the 15th-century original played by the organ on a pre-recorded 78 rpm disc, complete with repeating groove, a suitable tasteless Victorian-style hymn, and a snatch of a foxtrot parody. As in many of his other works, Davies seems to want his listeners to question their preconceived ideas of what is right and proper, the relationship of different layers of time and the foundations of their understanding of reality. The performance of these three works and that of the later *From Stone to Thorn* are exemplary, as one has come to expect from The Fires of London, and the recording quality of this Oiseau Lyre record, DSLO 2, is fittingly exact.

Two of the four major works of 1969, *St Thomas Wake* (Foxtrot for Orchestra on a Pavan by John Bull) and *Worldes Bliss*, have yet to be recorded. The two others, *Eight Songs for a Mad King* and *Vesalii Icones*, were issued by Unicorn but are at present deleted. The *Eight Songs* are to be reissued next year on Unicorn's mid-price label. Both works get fine performances and ought not to be missed.

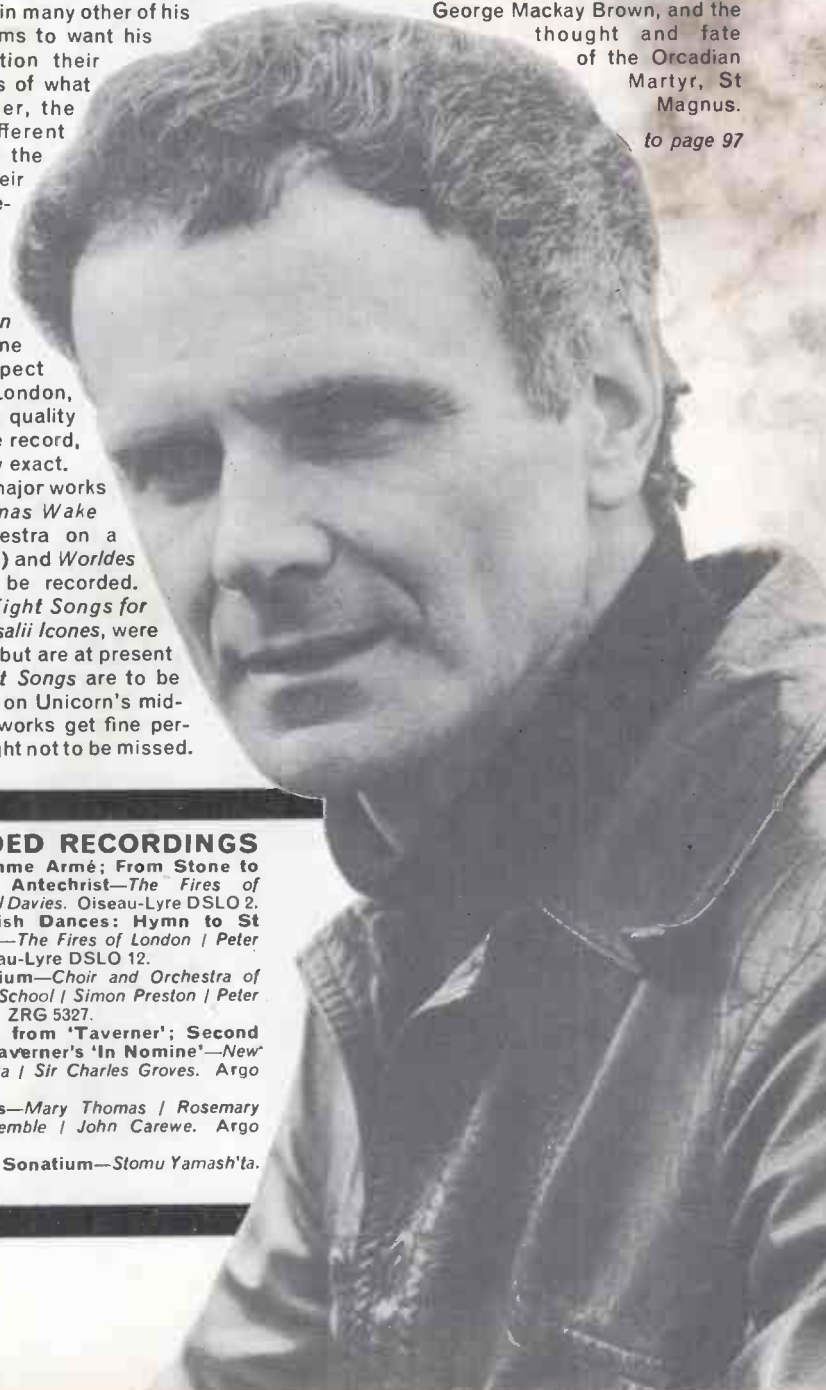
A work that is available at present is *Turris Campanarum Sonatium* (Bell-tower), written in 1970 for the incredible percussionist, Stomu Yamash'ta. Not only does the composer limit himself by using only percussion instruments, plus a tape of the chant of Japanese Buddhist monks (chosen by the performer), but he also restricts himself further by using only bells or other metal instruments. The performance is outstanding and Oiseau Lyre complement it with the quality of the recording on DSLO 1.

In 1971 Maxwell Davies made the first of a series of visits to the Orkney islands. There he found the atmosphere particularly conducive to his composition and he eventually moved into a renovated croft house near Rackwick on the island of Hoy, from whence he now commutes to London and elsewhere to give concerts. His music also followed a new course, influenced by the atmosphere of the islands, the verse of the Orkney poet George Mackay Brown, and the thought and fate of the Orcadian Martyr, St Magnus.

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RECOMMENDED RECORDINGS

- Missa Super L'Homme Armé; From Stone to Thorn; Hymnos; Antechrist—The Fires of London* | Peter Maxwell Davies. Oiseau-Lyre DSLO 2.
- Renaissance Scottish Dances; Hymn to St Magnus; Psalm 124—The Fires of London* | Peter Maxwell Davies. Oiseau-Lyre DSLO 12.
- O magnum mysterium—Choir and Orchestra of Cirencester Grammar School* | Simon Preston | Peter Maxwell Davies. Argo ZRG 5327.
- Points and Dances from 'Taverner'; Second Fantasia on John Taverner's 'In Nomine'—New Philharmonia Orchestra* | Sir Charles Groves. Argo ZRG 712.
- Leopardi Fragments—Mary Thomas* | Rosemary Phillips | Melos Ensemble | John Carewe. Argo ZRG 758.
- Turris Campanarum Sonatium—Stomu Yamash'ta*. Oiseau-Lyre DSLO 1.



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Looking Back

Peter Gammond

ON one occasion, at least, the late Joseph Stalin proved himself a very powerful and influential music critic. That was in 1936 when he attended a performance of *Lady Macbeth of Mtsensk*, somewhere around its hundredth, and was so infuriated by the highbrow 'cacophony' of the piece that he unleashed all the forces of Soviet propaganda to have it banned from the Russian repertoire for 27 years. It thus passed into musical history as one of the names known to everyone and often referred to, but its music never heard. By 1958 Shostakovich was able to revise it under the name of *Katerina Ismailova* and it came back into circulation. Now, at last, in 1979, we have a recording. Its history alone should whet many an appetite to hear what all the cacophony was like. Well, as you might guess, by today's standards, even by Shostakovich's, it is practically non-existent—the expression of a few moments of anger and tension. It is a curious mixture of the composer's satirical and romantic veins, it is blatantly Russian, and it is wonderfully inventive and compelling. And if you knew nothing about the story the orchestral playing on the new recording (HMV SLS157 (3)) is worth hearing for its own sake. Welcome to our hearts again—Katerina!

Opera lovers do tend to grumble a lot at what they consider the shortcomings of record companies in not keeping a constant supply of their favourite rarities on the market. They should, on the contrary, be constantly surprised and pleased that people are prepared to risk so much time and money on their behalf, for the economics of opera production and recording are alarming. Whatever the merits, as discussed by our reviewer in May, it is pleasing and rewarding to have a new recording of Berlioz's opéra-comique *Béatrice et Bénédicte*. It is like having a new car. I took the precaution of *not* listening to the older recording. It is always a dangerous thing to do and not always a wise one. How often, for example, have we gone into a new G & S with a view of some old favourite at the back of the mind, and found it lacking—only then to find the new recording taking on its own historical maturity? Unsullied of mind, I enjoyed every note of the new *Béatrice et Bénédicte* for the sake of its delightful music, a pleasant recording, and performances that would bring forth the usual 'bravos' in any opera house today (Philips 6700 121).

There is so much that one can find in tune with one's tastes, that a lazy summer mood does not in the least encourage me to listen to music that I might *not* like. I don't think I would ever voluntarily listen to Respighi's *Pines or Fountains of Rome*, which is not to say that, in the right mood, I would not enjoy them if I did. It is just that they have an

overwhelming quality that I like neither in people nor in music. But when I find Respighi in his bird-watching mood, or freely transcribing *Ancient Airs and Dances*, I am eager to hear him. The new recording of these transcriptions by Ozawa and the Boston Symphony is as refreshing in every way as an iced lager: lucid playing and music of pleasantly detached gracefulness (DG 2530 891). Kubelik's Mahler cycle has the same spirit of objective affection for the music. These are performances that never try to impose themselves upon you, yet insidiously do by the gentlest of persuasive means. Haitink has much the same approach. It is good to see the Kubeliks appearing at a slightly more accessible price (almost two for the price of one by today's standards) and to enjoy once again his noble and restrained 9th (DG 2726 067(2)).

I reiterate my plea for the Schubertian to enjoy some rare and ingratiating vocal music (Turnabout TVS 37116); and pass on to enjoy some full-blooded rhapsodic music with Dorati and the Detroit Symphony. Especially the Enesco *Rumanian Rhapsody* No. 1 which has always struck me as one of the finest bits of musical vulgarity around. It just gets away with it if played with the right swagger and zest. Since the old Silvestri recording, no-one has managed it better than Dorati on the new release (with Dvořák, Liszt and Ravel) called *Rhapsody!* (I'm not certain what the exclamation mark signifies) (Decca SXL 6896).

Music on Record

This phase of composition began with *From Stone to Thorn* for soprano and chamber orchestra, has included a number of chamber operas, and has seen the completion of the important *Symphony* in 1977.

Decca's recording of the latter with Rattle/Philharmonia is scheduled for release by the end of this year.

From Stone to Thorn uses words by George Mackay Brown in which the Stations of the Cross and the old agricultural rituals are correlated. In the longer *Hymn to St Magnus*, available on Oiseau Lyre DSLO 12, the composer explores more deeply the relationships of men and their environment, and in particular those violent effects of nature, for example those of the sea, and the violence of an act of martyrdom. The inner calm associated with tumult has been a major theme in Davies' work, and in the Orkney pieces he seems to have been able to express even more profoundly than before the character of these seeming contradictions. In this last work, the *Renaissance Scottish Dances*, and *Psalm 124*, all on DSLO 12, The Fires of London again give fine performances and this record, along with DSLO 2, provides an excellent introduction to the work of Maxwell Davies.

At a time when much contemporary music is thought of as being too far in advance of its audience, it is heartening to hear music by a composer who has the ability to create sounds that are immediately acceptable to an open-



Photograph: Clive Barda

minded listener and yet who at no time sacrifices the profundity or the intellectual complexity of his expression for superficial show. Maxwell Davies has an integrity of purpose that enables him to appeal at differ-

ent levels to a wide range of listeners. It is to be hoped that more of his works will be made available on record and that those already available will serve as a catalyst to this process. ●

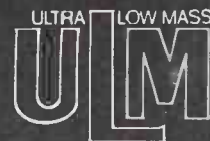
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classical reviews

Hugh Ottaway considers

Two Modern Finnish Operas

KOKKONEN: 'The Last Temptations'
Auvinen | Talvela | Ruohonen | Lehtinen (etc) | Chorus and Orchestra of the Savonlinna Opera Festival | Söderblom
Finlandia/DG 2740 190 (3 records) (£17.25) (Unicorn)

SALLINEN: 'The Horseman'
Valjakka | Vätkki | Salminen | Erkkilä | Wallén (etc) | Chorus and Orchestra of the Savonlinna Opera Festival | Söderblom
Finlandia SFX 41-3 (3 records) (£15.90) (Unicorn)

'There are two modern Finnish opera sets this month. ...' Had it been 1st April, I might well have invited Geoff Jeanes to tell me another! But here they are, and very fine too—eminently starworthy on all counts. Moreover, if there were separate stars for surfaces, awards would be made in that category as well.

First, a brief note on the composers, neither of whom is at all well known to most listeners. In Finland, Joonas Kokkonen (b. 1921) is both a prominent and a central figure; his outlook is essentially serious—structural integrity is a byword with him—and he writes with true precision and certainty of effect. His Third Symphony used to be available on SXL 6432, copies of which are worth seeking out. So, indeed, is the (Swedish) record of the First and Third Symphonies of Aulis Sallinen (b. 1935): BIS LP 4.

Sallinen seems to me outstandingly gifted and unusually capable of growing. After failing for the *avant-garde* wonders of the '50s and '60s, he discovered that, at heart, he was a symphonist, and a sufficiently strong-minded one not to reject a sense of kinship with Sibelius—the Sibelius of *The Oceanides* no less than the symphonies. Kokkonen, too, has had such a kinship ascribed to him. Both of these composers make immediate contact with our basic musical responses; neither is coy or halfhearted, and each, Sallinen especially, has at his command an immense expressive vocabulary, ranging from the

plainest major and minor to the effects of 'sonic art'.

Given a natural dramatic sense, perhaps it was inevitable that such composers would turn to opera, but what they have achieved was by no means inevitable. As first operas, Kokkonen's *The Last Temptations* and Sallinen's *The Horseman* are extraordinarily accomplished both theatrically and musically. More than that, these are fine examples of regional or national art with a universal significance. *The Last Temptations* (libretto by Lauri Kokkonen, the composer's cousin) is based on the stormy life of Paavo Ruotsalainen (1777–1852), 'a backwoods peasant who became one of the most powerful and influential evangelists of his day'. *The Horseman*, too, has a historical setting, 'first in Russia, then in Finland at the time of the union with Sweden'—c. 1700 will do—but its characters are fictional.

It so happens that these two operas have more in common, dramatically, than their regional and period atmosphere. When *The Last Temptations* begins, Paavo Ruotsalainen is on his deathbed, and the subsequent action consists entirely of a succession of dream episodes in which Paavo relives his life with his first wife, Riitta. Because they are dreams, nothing is quite as it was; there is a tension between the past and the present. *The Horseman* is hardly less dream-like, but here it is more as if the audience were dreaming. Paavo Haavikko, 'who since the '50s has held an unchallenged position as Finland's leading poet', has provided a libretto in which poetic imagery and symbolism, to say nothing of elliptical action, are fundamental. In the Prologue we are promised 'a tale that tells of a man and a woman, of war, horses, women, luck, death', but even the writer of the notes in the booklet finds it hard to say straightforwardly what the opera is really about—an observation, not a criticism! An insight into the tone and texture of Haavikko's libretto may be gained from the following (the words of a woman in Act II): 'You do not have time

to listen when a man speaks, only to wait for what he never says. There is no river as swift as life. It is evening when you reach the other side. How could a woman ask, enquire, interrupt? Woman made of sleep, of flesh that is sweet, spun from the dusk, furiously, hastily, hastily.'

Such writing approaches the condition of music, and in Sallinen it finds a response that is elemental. Whatever the problems encountered here, this is not what most of us would call a 'difficult' opera. Musically, the impact is immediate, and this is greatly helped by a splendid performance—the first!—recorded superbly at the Savonlinna Opera Festival in 1975. Not only is the live presence most successfully captured; also it is reconciled with a quite excellent quality of sound, and there are no disadvantages.

The Last Temptations was given at the Savonlinna Opera Festival in 1977, but in this case the recording was made separately over a period of six days. Another outstanding performance, both vocally and orchestrally: Martti Talvela excels himself as Paavo Ruotsalainen, and there are no weak links. Both these performances have about them a sense of total involvement, and special mention must be made of the fine orchestral playing under Ulf Söderblom, the principal conductor of the Finnish National Opera. Despite a feeling that the voices are at times unduly forward—and the fact that the axe thrown by Riitta is not heard to fall—*The Last Temptations* cannot be denied a recording star; for the overall technical quality is of a rare excellence.

If asked to choose one of these two sets, I should find it difficult for myself, impossible for anyone else. At present I am drawn particularly to *The Horseman*, but in the long run *The Last Temptations* might prove the more satisfying. Both sets are provided with very good booklets, which are in four languages throughout. In each case I propose the highest rating. [A*: 1*]

Hugh Ottaway

We apologise for having inserted three early reviews in 'Deja Vu' in August (pp. 121/123), Dvorak/Handel/Vivaldi on Decca 'Jubilee' JB71/80/63. These were not in fact August releases, but are due out in September. Records Ed.

RECORD FAULTS

'Recording' ratings should be taken to refer to recorded quality, but do not take account of individual pressing faults encountered with our test samples. Readers may assume that a certain proportion of such variable faults will occur among commercial pressings.

PRICES

We do our best to ensure that prices given are correct, but we cannot always guarantee accuracy, since price rises are too frequent and often arrive just after we go to Press. Also, record companies do not always inform us of increases.

INFORMATION

STEREO, MONO, QUADRAPHONIC and STEREO TRANSCRIPTION

Any record reviewed in this magazine may be assumed to be stereophonic unless its number is accompanied by:

Ⓜ (monophonic)

Ⓣ (stereo transcription)

Ⓠ (quadraphonic: stereo compatible)

Ⓡ refers to a UK reissue

Compatible Ⓡ records are reviewed as 'stereo'.

Cassettes are Dolby unless otherwise stated.

RECORD RATINGS

Record Ratings are designed to summarise our critics' findings, but should preferably be noted in conjunction with the full reports—and taken as a guide only.

Recording	Performance
A	Very Good 1
B	Good 2
C	Moderate 3
D	Poor 4
H	Historical (pre-LP) H (or 1, 2, 3, 4 as appropriate)

Occasionally a record may be worthy of special mention, taking it beyond the 'very good' bracket. In such superlative cases a star is added to the letter or figure as appropriate: eg, B: 1*, A*: 2 or (exceptionally) A*: 1*. © *Hi-Fi News & Record-Review*.

Best of the month

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D'ANGLEBERT: Harpsichord Pieces
 Kenneth Gilbert (hpd)
 Harmonia Mundi HM 941 (£4.62) (Rediffusion)
 Jean-Henri d'Anglebert (1628-1691) was organist to the Duc d'Orléans and a court musician. Bach admired his work highly, and incorporated many of his ornamentations into a list written out for one of his sons. D'Anglebert's collection of ornaments is the most comprehensive ever compiled. Kenneth Gilbert, in his scholarly sleeve-note, asserts that these ornamentations do not detract from the essentially simple structures of the music; I am not so sure, at any rate for one not so musically literate as K. G.

Be that as it may, there is a great splendour about these suites, which have a deeper seriousness and less superficial charm about them than much music of the period. This quality is well understood and interpreted by the performer, who handles the virtuosic aspects without ever letting them swamp the music.

On the cover of the record is an enviable photograph of a ravishingly beautiful harpsichord by Albert Delin, dating from 1768. What joy it must be to use such a lovely thing; and K. G. actually owns it! Its sound is as beautiful as its structure: there are two registers, tuned in unison, and the whole range of sound enchants. Happily, the recording rises to the standard of the instrument and does not wander, and the tingle of the upper strings is beautifully caught. This is an admirable record from every point of view. [A/A*: 1] Peter Turner

CHARLES AVISON: 12 Concerti Grossi after Domenico Scarlatti
 Iona Brown (vln) | Malcolm Latchem (vln) | Denis Vigay (vlc) | Nicholas Kraemer (hpd) | ASM | Marinier Philips 6769 018 (3 records) (£12.79)

Charles Avison (1709-1770) was born in Newcastle-upon-Tyne, and spent his musical life there, developing a centre of considerable attainment. He revived much 'ancient' music at St. Nicholas' Church (now the Cathedral), and gave concerts in the Bigg Market and the Assembly Rooms. In general, he was conservative in taste, and was a great admirer of his contemporary, Scarlatti. Everybody now knows of him; few have heard of Avison.

Avison produced this remarkable series of *Concerti Grossi* by taking 30 sonatas from the Roseingrave edition, and adding another eight 'movements' from so far unidentified sources. He then made the necessary transpositions and transcriptions, and constructed these 'concerti'. If you were to call in at my house, and I were to play you one of these works, I should be astounded if you could recognise how they were made up: they all really do seem to be *concerti*. Avison chose his material with incredible skill, and he must have known his Scarlatti backwards. What sounds like vandalism turns out to be a thoroughly enjoyable and valid musical exercise which points to a creative mind of great subtlety. In his notes, Arthur Hutchings refers to Avison as 'the underestimated Englishman'. Doubtless these recordings will do much to re-establish him.

Neville Marriner and the Academy have a field day with this music: all Marriner's subtlety of direction is there, as is the response of his players to every nuance. They are also very well recorded, with lovely detail and excellent range. A certain acidity enters the tone of the lead violin when the pace is pressed; and I felt that the harpsichord continuo is somewhat recessed, though always audible. Otherwise, all is pure joy. [A: 1] Peter Turner

C. P. E. BACH: Concertos for organ and strings in G (Wq 34) □ in E♭ (Wq 35) □ Organ Fantasia and Fugue in c (Wq 119/7)
 Marie-Claire Alain (org) | Paillard CO | Paillard RCA 'Erato' STU 71115 (£5.49)

The two concertos were described by the composer as 'for organ or harpsichord', and each is interesting and powerful in its own way; in the slow movements, the Hamburg Bach (then, however, in Berlin) anticipates the classical riches of intense Mozart and early Beethoven, and in the fast movements, his energetic and logical directness is also attractive and (for the mid-1750s) up-to-date. The performances here are rather hard-driven in these outer movements, and the string playing of the Paillard Orchestra is too aggressive and unsensuous for my taste; Marie-Claire Alain tends to anticipate wherever the music halts for 'breath', the strings are not really very well together, and the whole effect gives an impression of hasty preparation and execution.

The recording is clear and realistic, but it favours the organ in balance, and is rather weak in the bass area. The combined effect of these elements, together with an ill-tuned organ, makes concentrated listening very heavy going, and in future I shall avoid hearing more than one of these works at a sitting to avoid aural constipation. [C: 2/3] Stephen Daw

J. S. BACH: The Complete Organ Works Vol. 3
 Peter Hurford (org)
 Argo D150D3 (3 records) (£10.95)

Peter Hurford continues his individual 'recital' discs, covering a wide spectrum of works, and using different instruments that have in common a tactile sympathy with the player, and tonal suitability for the required musical expression. They include New College Oxford, Knox Grammar School, Our Lady of Sorrows (Toronto) and the Dutch organ at Eton. The latter is used only for Concerto No. 6 (BWV 597), taken, it appears, from the tape of ZRG 783. This piece also illustrates the philosophy of including everything that might reasonably be attributed to Bach, and possibly marks the limit of that definition.

Every item is imbued with the detailed thoughtfulness and precision that characterise this player—here Bach is explored, not exploited for mere effect. Hurford conveys his own enthusiasm and involves his hearers in a shared, satisfying musical experience, despite the total physical isolation between performer and listener. Sheer artistry, indeed! These are recitals to which one can return with pleasure—what more need be said?

Argo's engineering is of typically high standard, with a crisp clarity that owes a little to close-ish balance rather than a more typically Baroque resonance—perhaps a more necessary choice when two buildings appear on a single side. This does expose a little mechanical noise on occasion, but is a matter of taste rather than a fault. Highly recommended. [A: 1*] Trevor Attewell

J. S. BACH: Magnificat in D (BWV 243) □ Cantata 187, 'Es wartet alles auf dich'
 Ensemble Vocal de Lausanne | Lausanne CO | Corboz RCA 'Erato' STU 70710 (£5.49)

Corboz's *Magnificat*, after his *St. John Passion* a predictably full-blooded and dramatically pointed account, has much to commend it—good preparation and tidy execution by chorus and instrumentalists, life in the rhythms, beauty in the colours. It is the first recorded performance that I have heard which draws the soloists from the chorus; Bach almost certainly did this, and, as with his perform-

ances, the soloists therefore also join the choir in choral numbers. The *Suscepit* is rendered chorally by the ripieno. The soloists who emerge are mostly very good indeed (I liked especially the *Quia Respexit*), with the women conveying a better sense of style than the men. Altogether a welcome reading; it's high time the idea that Münchinger's recording of this work is the one to have was hit for six—I happily gave mine away recently, as I have four interpretations I prefer—now five.

A special bonus here is the inclusion of a Cantata that is also hardly known, this being its second ever recording. It comes from the rich year 1726, and is especially notable for the powerful majesty of its extended opening chorus; this obviously suits Corboz and his ensemble well. Here and there the forces are under strain in this performance (voices breathless, strings untidy), but a good general impression is given. Both works are well recorded in a suitably warm acoustical setting, so that the whole impression is pleasantly integrated, giving a satisfactory impression of wholeness. [A: 1] Stephen Daw

J. S. BACH: Cantatas 54 'Widerstehe doch der Sünde' □ 169 'Gott soll allein mein Herze haben' / attrib. Bach: 'Cantata 53', 'Schlage doch, gewünschte Stunde'
 Birgit Finnila | Marie-Claire Alain (org) | Paillard CO and vocal ens. | Paillard RCA 'Erato' STU 71161 (£5.49)

However we may dispute details of the interpretation of the artists responsible for the Telefunken Complete Cantata Series, we cannot but be grateful for the effects that their recordings have had upon Bach interpretation internationally; in any case, much of what they have done is excellent in its own right. The record under review comes from a firm long associated with Bach cantatas, but whose results in the past were often disappointing, simply because the performances were themselves untidy, even amateurish, and the scholarship behind them was unrealistic and even mistaken. All that has changed now, as anybody who has heard the Corboz/Lausanne *John Passion* will know.

This is a splendid record for any collector interested in the cantatas for alto solo by Bach (and, in the case of No. 53, his anonymous contemporary—possibly Gottfried Heinrich Stölzel of Gotha). There are other works in the same category, notably Cantatas 35 and 170, and it is to be hoped that Finnila—whose voice is well suited to this warm style of Bach performance—may record these with Paillard (and Marie-Claire Alain) at some future date. My only serious reservation concerns the use of harpsichord continuo in No. 54—something that is obviously not intended in preserved Weimar, as well as Leipzig, cantata sources, together with what strikes me as too fast a tempo in the main Aria of No. 169. Recording is clear, all performers play consistently and musically. The documentation is rambling and misleading. [B: 1] Stephen Daw

J. S. BACH: Cantatas BWV 106 and 140
 Hallin | Rödin | Björkegren | Hagegård | Stockholm Bach Choir and Baroque Ensemble | Öhrwall Meridian E77016 (£3.45) (Selecta)

While neither cantata is exactly typical of the genre—'Gottes Zeit' (106) being a very early work, and 'Wachet auf' a mature but very individual chorale cantata—both deserve high priority for inclusion in any record collection. There have been many earlier recordings of both, though not coupled together. Few, however, have been entirely satisfactory, the best being the Thomanerchor 140 on Archiv 198 407 (with BWV 80—June '68), a South German Madrigal Choir 106 on CSD 3518 (with BWV 78—May '68), and an 'authentic' Leonhardt on Telefunken AS6.41060 (BWV 106 and 182). This newcomer is a delight to the ears. It places us some distance from the performers, in a resonant building. The aural perspective is consistent throughout each cantata (106 being slightly more forward than 140), and the sound has both clarity and an impressive depth, apart from a slight falling off towards the centres, where the choral timbres acquire a slight edge. The performances largely match the recorded quality. The Baroque Ensemble is not an authentic group in the way that the Leonhardt and Harnoncourt ensembles are; it is nonetheless of the right dimensions and its members are first class players. The mixed choir produces a clean, masculine tone. Ladies, not boys, sing the solos, and apart from some sharpish patches from Hallin in both the 140 duos, they acquit themselves well. This is, in short, excellent value. [A: 1] Peter le Huray

J. S. BACH: Brandenburg Concertos BWV 1046-1051

Polish CO | Maksymiuk
HMV SLS 5155 (2 records) (£9.95)

In the notes accompanying this recording, Robert Kinloch Anderson says: 'the present performances, like most others today, were given by an orchestra with six first violins and equivalently smaller numbers of the other strings,' a statement which, alongside his quotations on performance and significances from Schweitzer, prepares us for an early-twentieth-century approach all round. It is, of course, much more common for the Brandenburg Concertos to be heard with smaller orchestras than the Polish Chamber Orchestra today; it is rare for Schweitzer to be cited in these days of the New Bach Edition, the Gottingen and Leipzig Bach institutes, and of the many western chamber orchestras which have adopted solo (rather than 'reduced') instrumentation, baroque slurrings and ornamentations, sometimes 'authentic' timbres, etc. Here, we have no gambas in number 6, but we do hear recorders, in the unlikely hands of our own Philip Pickett and Rachel Beckett, in numbers 2 and 4. Otherwise, we hear an account that is nimble, but not very sensitively delivered, and which fares ill in contrast to the DG Zukerman Los Angeles set and the CBS Abbado La Scala one, to mention but two Western performances which are 'conservatively orthodox', yet seem to reach deeper into the heart of the matter.

The sound quality comes across well: the tone is rich, the acoustical surround richly resonant, the general effect a little opaque. On the whole, if this kind of Bach is to your taste, you should buy the CBS set. [B: 3] *Stephen Daw*

J. S. BACH: Four Suites for orchestra (BWV 1066-1069)

ASM | Marriner
Philips 6769 012 (2 records) (£9.59)

The main interest to me lay in comparing the new account with the older Argo version (on ZRG 687/8), which also involved William Bennett (solo flute in Suite 2), but which was prepared in collaboration with Thurston Dart—then still very much a living force. The main difference is the much lighter, chamber-music, character of the string playing in the new set; in the second Suite, we can hear the flute distinctly throughout (and Bennett does play most of the ripieno material, as well as the solo portions), yet in the larger Suites with brass (Nos. 3 and 4) there is quieter and more controlled playing of the trumpets, so that contrasts are not as exaggerated as we might have feared on hearing the first two Suites.

The old set has a post-Boyd-Neel Handelian swagger about it; this isn't really Handelian at all, or Baroque, or appropriate in any other special way, of course; however, it is very well done in its own way. The new set is only slightly more stylistically close to what I imagine to have been the original conception, and it is less tidy, less in tune and less dignified in its total effect. I should therefore prefer the older set, because it seems to me to succeed better in achieving the intentions of those who planned the performances in the first place. Dart's notes are better—and more up-to-date—than the new ones, by Lothar Hoffmann-Erbrecht, too.

The Philips recording is very clear and direct, if a little opaque; Argo's old recording is vintage Decca '60s sound, which suits its performance better. [A/B: 2] *Stephen Daw*

J. S. BACH: Overture (Suite) 2 in b (BWV 1067) □ Concerto in e (derived from BWV 1059 & 35) □ Sinfonia from BWV 209

Jean-Pierre Rampal (fl) | Paillard CO | Paillard
RCA 'Erato' STU 70693 (£5.49)

The Overture is played very stylishly, with refined pointing and an attractive lyrical bloom on the flute, and a really responsive accompaniment from the orchestra. The balance hardly favours the flute throughout the disc, and I found a quite savage bass cut helped on my equipment. On the second side, the concerto transcription (made for Bretkopf and Haertel of Wiesbaden by Winfried Radeke several years ago) is curiously phrased, resulting in awkwardness for the soloist, and even a virtuoso of Rampal's ability has to struggle to keep the lines alive. Also, the orchestra is less at home in this Concerto, and results are noticeably less tidy. The little Sinfonia to *Non sa che sia dolore* (Cantata 109)

has long been a standard piece of flute repertoire; again, the ensemble sounds ill-prepared, here, and neither the speed nor the string volume helps the soloist—a flautist of real star quality—to sound as good as he can at his best; possibly in this item a reduced orchestra would have improved matters.

As noted above, balance and tone are not ideal, although it sounds as though the orchestral imbalances (bass strings too loud, flute rather too far back in focus) might have been musical, rather than recording, faults. Otherwise the recording has been fairly and sensibly achieved. [B/C: 1 (Suite)/3] *Stephen Daw*

'BACH AT THE QUEEN ELIZABETH HALL' Sinfonia for oboe and orchestra from BWV 249 (Easter Oratorio) □ Brandenburg Concerto 3 (1048) □ Suite 2 in b for flute & strings (1067) □ Ricercar a 6 from 'A Musical Offering' (1079)

London Bach Orchestra | Sidwell
Guild GRSP 7013 (£4.09) (Selecta)

Bach collectors who have been active since the early days of the LP will recall recordings made by the Geraint Jones Orchestra around 1960; that London ensemble recorded for HMV and Archiv, and it still flourishes in live performances today. Geraint Jones is, like Martindale Sidwell, primarily an organist with choral experience, and although the London Bach Orchestra is a completely distinct ensemble, it has very much the same strengths, and, indeed, very much the same kind of sound. This miscellaneous Bach recital presents good soloists—Tess Miller and David Butt—against a lively but warm string band which is numerically similar to those which Bach would have directed in Cöthen and Leipzig. Rhythms are lively, balances carefully judged, tempi are well chosen, and the less authentic aspects of the orchestration (fittings of strings, bores of woodwinds, mouthpieces and lengths of trumpets) are minimised, just as inappropriate emotionalism is eschewed throughout.

I find the recorded sound rather resonant in tone but narrow in spread—possibly good reason to hear the disc with headphones if possible. Guild certainly know how to record well by today's professional standards. This is a good mixed programme, delivered tastefully if not with superlative stylistic finish. [B: 2] *Stephen Daw*

BARTOK: Music for Strings, Percussion and Celesta □ The Miraculous Mandarin

Philadelphia | Ormandy
HMV ASD 3655 (£5.40)

I am beginning to believe that the ideal recording of the *Music for Strings* is a chimera. For a good deal of its length this one seems to get close to revealing Bartok's intricate and delicately balanced ideas, particularly in the first movement with its complex counterpoints and unusual metres, but in the end the strings are still too loud and the celeste and harp, even at times the piano, prove as fugitive as ever. Nevertheless there is much to admire and enjoy in Ormandy's thoughtful but not over-respectful reading. He draws the lines clearly and marks the dance-based second and final movements unequivocally. The mysteriousness of the Adagio and its sinister undertones are less well done, largely because the balance of dynamics is wrong. The strings are too insistent, too foursquare and unsubtle. But this may not be the conductor's fault, for in the *Miraculous Mandarin* he does catch this hushed and menacing quality of which Bartok was an undoubted master. In fact the Suite, dramatic and narrative, is wholly successful and excitingly brilliant. The pace and rhythmic control and the feeling for the continuity of the music are scarcely bettered by any of the other available versions, and caught in a recording that is vivid and well balanced though more revealing than one would expect a live performance to be. There are currently a number of rival performances coupling these two works, but this will stand comparison with the best of them: which is still probably ASM/Mariner on Argo. [A: 1] *Kenneth Dommelt*

BEETHOVEN: Piano Concerto 5 in Eb, Op. 73 'Emperor'

Radu Lupu (pno) | Israel PO | Mehta
Decca SXDL7503 (£5.50) digital

This Mann Auditorium 'Emperor' invites comparisons with the Beethoven Fourth, recorded there by these artists, and with the LAPO/Mehta 'Emperor' with de Larrocha—all three produced for Decca by Ray Minshull. In both Tel Aviv recordings the piano tends to stand forward of the orchestra, in

the digital Fifth extra definition is marked. Detailed comparisons show that digital recording does not solve all problems, *ie*, of balance—the tympani are not always clear, and the descending woodwind phrases in the first movement, from 292 where the soloist's dynamic marking changes from *p dolce* to *forte*, are less audible than in Mehta's Los Angeles version.

Lupu is the better Beethoven stylist, but Larrocha's American accompaniment was more musical than that here. Altogether I consider this a less well integrated performance than the G major concerto (SXL6886). The exposure uncovers some unattractive bassoon timbres (like motor horns whining), and a thin wiry quality in the strings. Lupu is, in a way, a self-effacing musician, and I needed several hearings to grasp the complexities of subtle colouring, the fine rhythmic control, the articulation of his playing—all of this lost to the ear diverted by the very ordinariness of the accompaniment. What a pity his 'Emperor' was not done in Vienna—then the premium for the SXDL label might be justified. [A: 2] *Christopher Breunig*

BEETHOVEN: Lieder

Various artists (recorded 1942-4)
Acanta DE 23.038 (2 records) (£6.32) (Rediffusion)

An interesting collection of historic German recordings, twenty-nine items for solo voice, or duets with piano trio accompaniments, ranging from *An die ferne Geliebte* to 'Die Trommel gerühret' (Egmont). Common to all these is the pianist Michael Rauchs, superb in the Op. 98 cycle—which I find perhaps the most satisfying of current versions, when the Souza/Baldwin remains out of the Philips catalogue. The baritone is Karl Schmitt-Walter, whose Pears-ish manner suggests a curious cultural isolation from the 'realities' of the Hitler period during which this recording was made.

The standard does vary. I thought Peter Anders disappointing in *Adelaide*, and in the early Goethe setting *Marmotte* there is a baritone (on four other tracks), Arno Schellenberg, whose approach is like a very bad imitation of Prey doing Papageno. Its inclusion does serve to show that, in the DG set, Fischer-Dieskau sang only the first of four stanzas—and at a tempo twice as fast as that here! In the midst of these singers, who mostly sing Beethoven as Tauber might have done, there is Hans Hotter, magnificent, and starkly modern.

The voices are clear, often startlingly forward, and with very little distorting 'fuzz' at the edges; the piano is too recessed for modern taste. The double-sleeve carries notes, in English, on the artists, but there are no texts. Faultless Acanta pressings. [H: H] *Christopher Breunig*

BEETHOVEN: Late String Quartets

Aeolian Quartet
Argo D155D4 (4 records) (£12.95)

Josef Stielers's portrait of Beethoven is crudely represented on the box front; the notes are anonymous; the engineers are named, but not the members of the quartet. (From the Aeolian Quartet of 1961, when they recorded Op. 135 for World Records, only the cellist remains.) This cycle of Op. 127-135 was produced at St. John's Smith Square: an unfortunate choice when traffic noises are reproduced, the ambient noise level is high, and cuts off at the bands on the discs. The reverberation is not at all appropriate, and although the separation and positioning of instruments are well defined, the long decay and aggressively forward sound destroy any feeling of intimate address. In any case there is a reluctance to play really softly—as with the LaSalle, but there (DG) you have a far better integrated quartet ensemble. They may make the music less 'approachable' than the Aeolians—better that than intonation flaws, odd notes left out or wrongly sounded, which could have been re-edited.

The untidiness would be excused if at some point these performances were revelatory. Take, as a tiny comparison, the Veghs' in the passage marked *Beklemmt* in the Op. 130 cavatina. Note how the cellist points the change from E flat to D flat in the triplet quavers, the way in which Vegh himself produces a withdrawn tonal quality, his bow scarcely 'breathing' across the strings. The effect is to bring the listener into immediate and close contact with the music. To record Beethoven was an enthusiasm expressed some time ago by the Aeolians, but in the event the true demands of these works are hardly met. [B/C: 3] *Christopher Breunig*

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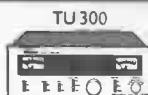
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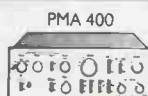
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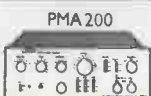
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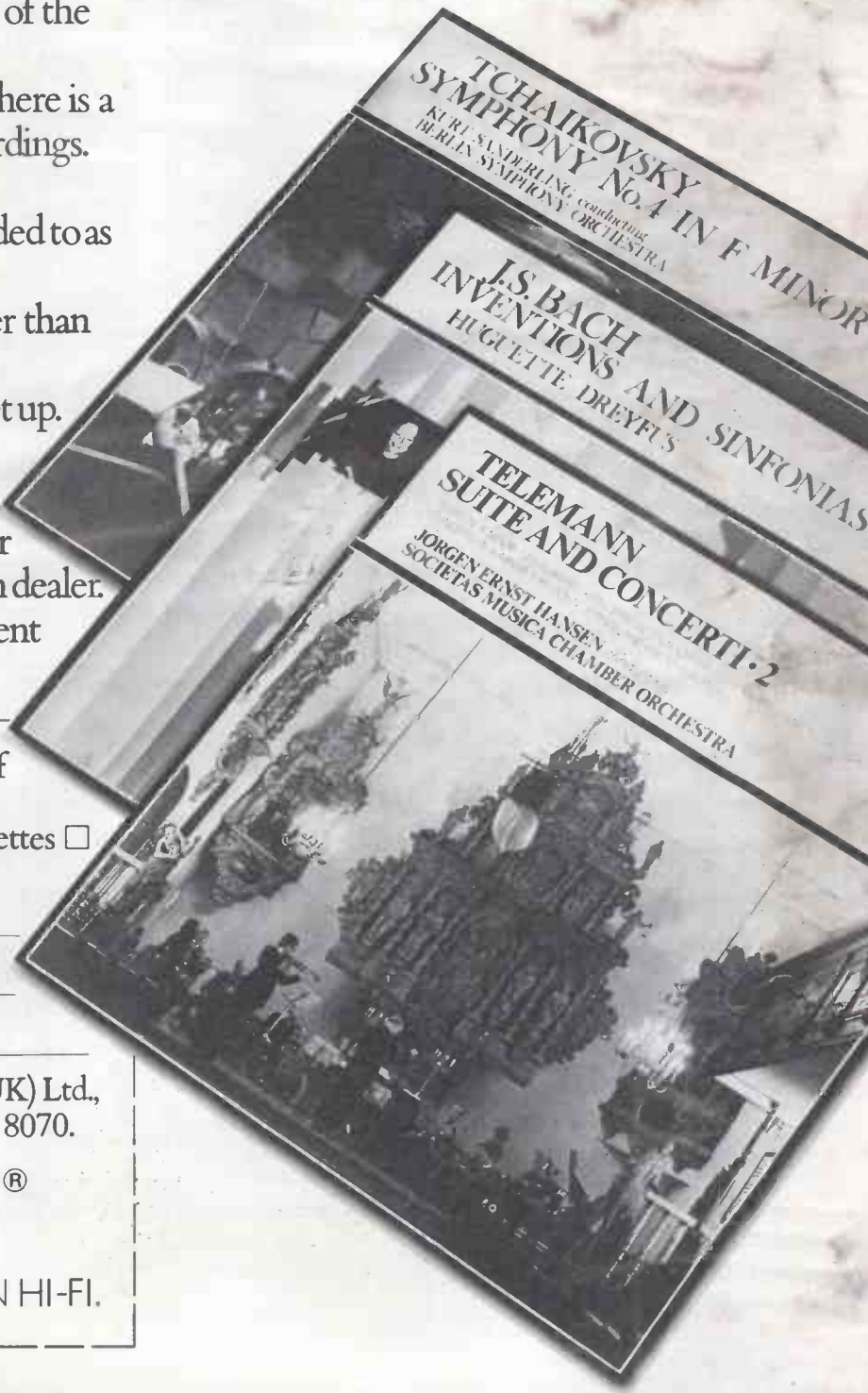
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RCA 'Erato' STU70900/2 (3 records) (£14-97)

With seven complete recordings already available, including very good ones from Abbado and Solti, not to mention the immortal Beecham set, it would have to be a very good recording indeed to come in now and sweep the board. What I would say of this one is that I like it for its own sake, its style and atmosphere. It reminds me of the first *Carmen* that thrilled me on record with Visconti. Like that, this recording is unmistakably French in flavour, which may not be entirely a good thing in an opera which is supposed to capture the spirit of Spain, but it is, however perversely, a flavour that I like. It is not alien to the Spanish spirit, but it reminds me of Paris rather than Madrid. It is an interesting and effective performance all round, full of open-air atmosphere, good recording perspective, almost entirely natural, perhaps even a little old-fashioned in style. The recording is not of any particularly startling quality and it gets its qualifying B because of a much overweighted bass that booms at you a lot of the time and some confusion in ensemble. But it still has the right timbre and suits the opera well. Lombard is probably greatly responsible for the good judgement. Being Crespin, I like her, again almost entirely French, *Carmen*; a mature, interesting character full of worldly wisdom even if not immune to final disaster. So if this is not the ultimate *Carmen* it is a good one for collectors, and especially admirers of Crespin, to have. [A/B: 1]

Peter Gammond



Marriner

BIZET: Carmen Suites 1 & 2 □ **L'Arlésienne, Suites 1 & 2**
 LSO/Marriner
Philips 9500 566 (£5-05)

These are well-played, excellently recorded performances—that is, if you consider £5-05 a reasonable sum to pay for *Carmen* without voices. Once heard, however, Teresa Berganza's proud, agile *Seguidilla* (DG Abbado set) or Callas's smoky, seductive *Habañera* (HMV Prêtre) are not easily forgotten, and memories are certainly not obliterated by hearing, respectively, oboe and violins, however enchantingly played, substituted for the vocal line. Listening to this rather lacklustre account of the *Carmen* Prelude, it is also difficult to credit that here is the same orchestra that finished recording the opera for Abbado just a few months previously. No, if you must have a voiceless *Carmen*, better to have it with Beecham (HMV), who also works his inimitable spell with the *L'Arlésienne* music. Best of all, buy the new excerpts disc from the Abbado *Carmen*. [A: 2/3] Andrew Keener

BOCCHERINI: Two Concertos for 'Cello and Orchestra, Nos. 9 and 10
 Frédéric Lodéon (vcl) | Bournemouth Sinfonietta | Guschlbauer
RCA 'Erato' STU70997 (£5-49)

Boccherini (1743–1805) tends to be remembered more for a certain Minuet than for anything else; how wrongly, this issue amply demonstrates. He was himself a 'cellist, and, to judge from the demands made upon the performer in these two concerti, a considerable virtuoso at that. No. 9 in B flat major was used by Boccherini in several forms; but the other, in D major, seems to me by far the finer work: here a small section of brass and woodwind is added to the strings.

Frédéric Lodéon is a performer of stature: he moves into both these works with a confidence which is fully justified: one needs only to listen to the short *cadenza* in the slow movement of No. 10 to realise that here is an exceptional talent. His playing is expressive, controlled, beautifully articulated and of a wide range of colour. On that score, this is a record to cherish.

What worries me about this issue is that tricky old question of balance; and here we have two performances so differently recorded in that respect as to be striking: in No. 9, the soloist is given a wholly unnatural prominence, with the (string) orchestra pushed back so far that one has to strain to hear what is going on there. This is a vast pity, as not only does it render the whole work less enjoyable than it should be, but it obscures the excellence of the orchestra; and how great that excellence is, is well brought out in the recording of No. 10. The passage before the soloist comes in shows how brilliant the sound really is: outstandingly so, in fact. It may be because of the prominence of other soloists in this work (there is exquisite interplay, for example, between cello and woodwind) that the balance is so much better, if still not perfect; but listening to the second side is a different, and much more stimulating, experience than listening to the first. What a great shame that is! There is so much to like about this issue that its defects seem more important than they really are. [B/C: 1] Peter Turner

BRAHMS: Violin Concerto in D, Op. 77
 Isaac Stern (vln) | NYPO | Mehta
CBS 76836 (£4-99)

Stern's Philadelphia recording appeared just nineteen years ago; the tapes were most faithfully reproduced in the German transfers on CBS 77372 (deleted), and the performance is to remain available at mid-price on 61325. This new version surpasses it in almost every way. Arguably Stern's bowing is less strong nowadays—for instance in the first-movement passage 347-55, and the chord just before the big orchestral attack at 271 is strained—but with a less exaggerated balance here, this may be illusory. Chording is less precise in the Joachim *cadenza*—Stern still makes the same waspish attack at bar 33—but that hardly counts when you have such marvellous repose in the *tranquillo* section leading to the *animato* ending the movement.

The playing of the NYPO is deeply satisfying: more expressive than that of the Philadelphia Orchestra, and with true Brahmsian breadth. Perhaps the flautist is more memorable than the oboist in the *Adagio* (the oboe sound seems rather compressed); the *Finale* has a real, and rare, *Giacoso* feeling. I rate this the best reading available, along with the 1961 Oistrakh/Klemperer—but thankfully Stern does not delay the *sforzando* quaver in the main *finale* theme as Oistrakh did (also in his later Cleveland/Szell version).

The CBS Masterworks recording has a vaguely defined spacioussness that no one should find offensive; there is some compression, and a weakness is that the orchestral violins at times sound like a single instrument. However, Stern is balanced properly with the orchestra, not given the unnatural spot-lighting for long a feature of this violinist's records. [B: 1*] Christopher Breunig

BRUCH: Violin Concerto No. 1 in G, Op. 26 □ **Violin Concerto No. 2 in D, Op. 44** □ **Violin Concerto No. 3 in D, Op. 58** □ **Adagio appassionato, Op. 57** □ **Romanze, Op. 42** □ **Scottish Fantasy, Op. 46** □ **Konzertstück, Op. 84** □ **Serenade, Op. 75** □ **In Memoriam, Op. 65**
 Salvatore Accardo (vln) | Leipzig Gewandhaus | Masur
 Philips 6768 065 (4 records) (£17-05)

A complete set of Bruch's works for violin and orchestra to listen to presents a daunting prospect, but I have enjoyed the experience. I have not, but praise for Salvatore Accardo's technical skills. (Heretical thought: his playing reminded me of Heifetz.) Intonation is impeccable throughout. My only quibble is that ultimately he approaches Bruch with slightly more of a classical than a romantic

style of playing. The Gewandhaus orchestra and Masur accompany superbly.

Only concertos 1 and 2 and the *Scottish Fantasy* are otherwise available on record at present and all the other pieces are well worth hearing. Of the pieces which I had not heard before I was particularly impressed by *In Memoriam* and the *Konzertstück*, but the overall impression is of a lack of music in true brilliant allegro style and of a surfeit of dying falls; and Bruch's manner does not develop over the years encompassed. The sound varies dramatically (often between movements) from a rich forward violin tone and exciting well-spread orchestra (*Konzertstück*) to a tight constricted quality lacking in bass and with a rather harsh violin tone (first movement of 2nd concerto). The quality of the reverberation is also variable. This is a pity since the works are so attractive and well performed. [A*/B: 1*] David Pickett

BRUCH: Violin Concerto 1 in G, Op. 26 | **GLAZUNOV: Violin Concerto in A, Op. 82**
 Pierre Amoyal (vln) | RPO | Scimone
RCA 'Erato' STU71164 (£5-49)

These recordings, made at the end of 1977 in the Henry Wood Hall, confirm the fine intonation and clear musical manner characterising the work of Pierre Amoyal; they also allow us to hear Claudio Scimone (associated with I Solisti Veneti) in standard works, where the flashes that made his Erato Vivaldi Op. 8 set so stimulating are again evidenced. Having said that, I confess that after several hearings and comparisons with alternative versions a 'veil' remains between these performances and my concentration.

In small measures Amoyal's unpretentious, sweet-toned approach alerts the ear, but more is needed to sustain interest over a whole work. Listen to the bargain Heliodor coupling, where in spite of intonation problems Erica Morini's playing springs from the vinyl—or the deleted Marcovici/Stokowski live performance (were her earrings microphones?). And of course Heifetz, on LSB4061. Modern sound, in fact rather set back and opaque in texture, cannot bring this French production into real competition with these. [A/B: 2/3] Christopher Breunig

BRUCKNER: Symphony No. 9 in D
 Cologne RSO | Wand
 Harmonia Mundi 065-99 804 (£4-99) (Redifusion)

Most of the people I meet, both musicians and non-musicians, do not like Bruckner's music. I suppose this can only mean that I have an untypical selection of friends and acquaintances, since the record companies continue to issue recordings of his symphonies. There are no less than fifteen recordings listed of the fourth symphony and this one makes eight currently available versions of the ninth. It may also follow that the Bruckner lovers whom I do not know like their Bruckner performed differently than I do, so I will try not to put them off unnecessarily!

For a long time now my own favourite recording of the ninth has been the 20-year-old Bruno Walter one (currently unavailable) and more recently Giulini's recording. Compared with Bruno Walter, Gunter Wand's performance, despite excellent playing, does not compete on equal terms. This is not a question of timings since in the first movement Wand is slightly slower than Walter and yet appears faster. The difference is that Wand seems to be frightened of any deviation from Bruckner's tempi and keeps things moving all the time. The result is a constant restlessness, which Walter avoids by constant expressive rubato and careful moulding of each phrase without losing sight of the main structure. The *Scherzo* and *Finale* are again rather matter-of-fact and for me the stature of the symphony is not fully revealed by Wand's performance.

The recording has many things to commend it, including good surfaces and freedom from distortion. (The first movement and complete *Scherzo* make side one last 34' 20"). The tone colours are faithfully reproduced and, apart from one or two spots where the trumpets and trombones are too loud, the balance is good. There is a remarkable clarity achieved, I think, by close miking of the woodwind who are too forward at times. String tone is full and rich but with double-bass pizzicati occasionally too loud. The dynamic range is limited and this militates against the 'misterioso' constantly demanded by Bruckner.

If none of these things worry you, I recommend the record wholeheartedly; otherwise go for Giulini (and Bruno Walter, if ever reissued). [B: 2] David Pickett

BUSONI: The Six Sonatas for Piano

Paul Jacobs (pno)
Nonesuch H-71359 (£4-00) (WEA)

The sleeve-note, which, unlike so many of them, is really helpful, places Busoni in his milieu and accurately indicates his relationships with other composers and schools of his time (1866-1924). Professor Jacobs' intention is to rehabilitate Busoni, and to show him for the original composer he undoubtedly was.

Being not only a musicologist but a first-rank performer, Paul Jacobs can do much more than write about his subject. I have no doubt that his studies in the man and his times have enabled him greatly to deepen his interpretation of the music, at least in the sense of relating it to other work, especially of the then *avant-garde*. Busoni was not of that persuasion: he was more of a neo-classicist, but never an unadventurous one, and never hog-tied by preconceptions based upon supposed classical rules. The result, at least as expounded by Paul Jacobs, is music of a freshness and interest which makes its comparative obscurity astonishing—and, one hopes, now temporary. I confess that I cannot take to the sixth sonatina, which is based on themes from *Carmen*; but the fifth—in *signo* *Johannis Sebastiani Magni*—is splendid, as are the other four.

We also have a very nice piano recording. It lacks something of sparkle in the treble, almost as though the cascades had been photographed on a rather dull day; but this is a small point and should deter nobody from pressing on to the music. [A/B: 1]

Peter Turner

GIACOMO CARISSIMI: Eight Cantatas

Martyn Hill (ten) | Trevor Jones (gamba) | Robert Spencer (lute) | Christopher Hogwood (hpd and org)
Oiseau-Lyre DSLO 547 (£5-25)

Pupil of Monteverdi and teacher of Scarlatti and Charpentier, Carissimi was one of the most influential composers of his period (1605-1674). He enjoyed a great reputation during his lifetime, and it is surprising that he has to a large extent disappeared from public interest, overshadowed by his famous pupils. His was the period when opera swept into popularity; and he concentrated on the vocal *cantata*, which is a kind of domestic opera of a more intimate kind, well suited to the salons of the nobility and the wealthy.

He employs a declamatory style derived from Monteverdi but using a closer relationship between the music and the meaning of the words. His cantatas unite speech and singing in a remarkable way, the vocal line following the inflections of the voice, leading from recitative to aria in an artful yet natural way. Performances call for no special settings or large resources, but do demand an advanced, virtuoso vocal technique.

Christopher Hogwood and his colleagues give a scholarly and highly musical account of these scores. Martyn Hill has a fine, pure tone and brings off the trills, shakes and other vocal adornments with style; while his accompanists give a studied, authentic account of the instrumental line. The recording is a very good one, though I felt that the voice is somewhat too separated from the instruments—the lute, in particular, being difficult to follow. This is a small point, and does not mar the interest of a charming and valuable extension of one's musical history. [A/B: 1]

Peter Turner

COPLAND: Symphony No. 3

LPO | Copland
CBS 61869 (£3-39)

Like Roy Harris' Third Symphony, Copland's is something of a landmark in American music, firmly of its time (1946) yet timeless. Copland recorded it with the LSO many years ago, a version long since deleted, and the only one to have been accessible has been Bernstein's vigorous and dedicated performance with the New York Philharmonic. Having now listened to what must be the composer's considered view of the work, I find it seems to have lost something in immediacy, though the broad first movement, at times reminiscent of Shostakovich, as is the scherzo, and of course, the finale with its familiar fanfare, all retain a goodly portion of magic. But this is a studied performance, not really very relaxed, though clearly its creator must have found it satisfactory, and perhaps we and Bernstein have been led up the wrong path in making it more trenchant, more like the Copland of *Appalachian Spring*. And old though it now is, Bernstein's bright, slightly edgy recording is livelier than this new one with its soft focus and dampened acoustic. The second side of my copy is afflicted with a rumble

which lasts all through, making patient listening something of an ordeal, added to which is an entire battery of surface noise. From the point of view of interpretation, clearly this must be the authoritative one, but from almost every other viewpoint I remain with the Bernstein version. [B: 1]

Kenneth Dommett



Copland

THE POPULAR COUPERIN

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Robert Woolley (hpd) | Marianne Herring (hpd duettist*)
Meridian E77012 (£3-45) (Selecta)

For his popular Couperin recital, Robert Woolley has chosen a good Dulcken copy by David Rubio, which has been so tuned as to favour the keys which the pieces are in. The instrument has a pleasant, and, I think, an appropriate, Dulcken sound, and it has been recorded from some distance, and in such a way as to minimise its strongly characteristic bass voicing, probably because that register is likely to be very loud on a Rubio example.

Robert Woolley struck me as talented but slightly inflexible and uninvolved in his Purcell recording (for Saga); the Couperin is hardly uninvolved, but he seems not to be too careful either in the shaping of the music (the present harpsichord sustains well enough to establish that he phrases less than most harpsichordists, and his actual touch (*ie*, attack) tends to be a little uniform, bearing in mind the styles of the music, the responsiveness of his instrument, and the variety of treatment invited by such contrasted works. He also tends very slightly to anticipate the right hand with the left—in chords which I feel he doesn't intend to spread in that way. These, however, are detailed quibbles. The best of this playing is really excellent and the programme is well chosen. [A/B: 1/2]

Stephen Daw

DEBUSSY: La Mer | SCRIBANIN: Poem of Ecstasy

Cleveland | Maazel
Decca SXL 6905 (£5-25)

That the Cleveland Orchestra is one of the most polished, immaculate instruments recording today is in no doubt; neither is Lorin Maazel's quality as an orchestral trainer and conductor of the utmost skill and presence open to question. Why, then, do I find his *La Mer* so unsympathetic? Simply because, I suspect, my thoughts rarely strayed beyond admiring the flawless regularity of those four-against-six rhythms at the opening—you could set your metronome by them—or the fabulously true intonation of the divided cellos a little later on; surely one of the most literal, cosmetically smooth accounts of this buoyant episode on disc. With a greater sense of mystery, even an occasional sign of human fallibility behind the brisk tempi, Maazel's *La Mer* might well

have been a thrilling experience. To my ears, however, the whooping horns before Fig. 32 in *Jeux de Vagues* sound merely brash, and positively unpleasant when joined by *ff* trumpets near the end of the movement. There is a world of difference between the obsessive attention to detail on the new disc and Barenboim's flexible, texturally acute DG account—a distinction summed up by comparing those slurred detached violin quavers in the second half of the third movement's 'big tune' on full orchestra. While Barenboim manages to retain the sweep of this passage, Maazel leaves me conscious only of the care he has lavished on defining each note.

Such desperate, supercharged energy seems much better directed towards the sensual *Poem of Ecstasy*, and the euphoric, feverish writing is projected with an immediacy and power which are tremendously compelling. Maazel's ebb and flow of tension, the clarity of those eerie, racing inner lines and the snapping rhythm soon after the start, are given with superb assurance and excitement, and the recording is very fine indeed—weighty, rich and firm. A shade more definition in the bass would have earned a star. In a nutshell, Maazel's *Poem of Ecstasy* strikes me as a success for precisely those reasons which, for me, make his *La Mer* such an insensitive, sterile piece of musicmaking; others may react more favourably, but with so much competition, I see no alternative to [A: 1/4], extreme as it appears.

Andrew Keener



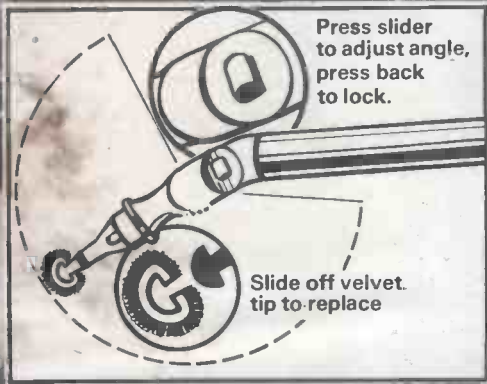
Maazel

DOWLAND: A Miscellany

The Consort of Musicke: John York Skinner (c-ten) | Polly Waterfield (tbl-vol) | Roderick Skeaping (all-vol) | Ian Gammie (ten-vol and lra-vol) | Trevor Jones and Jane Ryan (bass-vol) | Baldrick Veerenberg (ten-rec) | Jacob Lindberg (lute and bandora) | Anthony Rooley and Christopher Wilson (lute) | dir. Anthony Rooley
Oiseau-Lyre DSLO 556 (£5-25)

Few of the works recorded here are in the form, or even by the instrument(s), for which Dowland wrote them—indeed, he complained bitterly about the piracy of his work: rather, it is an account of what his contemporaries did with that music, by adapting it to their own needs and preferences. As such, it is a fascinating glimpse into the private musical world of the time, and certainly does nothing to diminish one's admiration for that extraordinary musical culture.

On this record one can, for example, hear a bandora unobscured by other instruments; one can revel in virtuoso viol-playing on a perhaps previously-unsuspected level; and the recital ends with a counter-tenor solo—regrettably the only one here—of exquisite purity. There are also two solos for tenor recorder, the longer being a piece called 'Comagain', which is a series of variations of great ingenuity. Whether viewed as an essay in musical history or as a collection of musical delights, this is a record to cherish. All the performances are good; some are exceptional, such as those for lra viol and counter-tenor.



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Rooley

Nor is the music let down by the recording, which is a distinguished one. No attempt is made to boost these early instruments to the levels of those of later times: one has the impression that this is how one would have heard them at the turn of the 16th and 17th centuries: one's historical perspective is enlarged while one's senses are charmed. I have enjoyed it enormously. [A: 1/1*] *Peter Turner*

FAURE: Ballade for Piano and Orchestra, Op. 19* / *Fantasia for Piano and Orchestra, Op. 111** / *Pelléas et Mélisande—Suite, Op. 80*
Grant Johannesen (pno)* / *Orchestra of Radio Luxembourg / de Froment*
Turnabout TVS 34587 (£2-99)

Grant Johannesen first recorded the *Fantasia* some years ago, and it is good to have this more recent performance in the catalogue—it was recorded in 1975. Both this and the *Ballade* (aristocratic works of Fauré's maturity and youth respectively) require fine control and delicate understatement, and Johannesen is well-suited to them; the opening of the *Fantasia*, with its chamber music-like dialogues between instruments, is especially well-caught. This work is set firmly among that valedictory group of compositions which began with the Second Violin Sonata and ended with the String Quartet, works which Norman Suckling has lucidly described as distilling 'an atmosphere of peaceful intensity where every vibration is significant without being insistent'. The recording on this side is good average (although at five bars after 'O' in the *Ballade* the piano seems to take a large step backwards), and the orchestral contribution is perfectly adequate.

Nobody has quite matched Ansermet's subtlety, his stillness and flexibility in Koechlin's orchestrations of the *Pelléas* music (ECS 805), although in terms of orchestral reliability there is little to choose between his record and the newcomer, where the recording is unobtrusively good, but undistinguished. If the programme attracts you, then this is a fair enough bargain. Perhaps one day, a front-rank French orchestra will record these pieces—the Paris Orchestra with Barenboim, perhaps? [B/C: 1 (Fantasia/Ballade)/2 (Pelléas)]
Andrew Keener

GALUPPI: Harpsichord Concertos with string orchestra in G, in C, in F and in c
Edoardo Farina (hpd) / *Soloisti Veneti / Scimone*
RCA 'Erato' STU 71050 (£5-49)

Galuppi's concertos strike me as a cross between Arne's and Mozart's; the structural outlines are Italianate after Vivaldi, but there is a rococo elegance here, too, which often recalls Mozart, particularly during the latter's Salzburg years. Of course Galuppi was, like J. C. Bach, Arne, Mozart and many other composers of that time, essentially an operatic composer with a particular relish for the Italian *bel canto* styles.

The new record is to be welcomed both for its programme and for its musical playing. We have become used to hearing Edoardo Farina as continuo player to the Venetian Virtuosi, but he proves admirable as a soloist, and his editing and original cadenza pastiches strike me as appropriate. The string group plays with its customary suavity and zest, and the delicately Italianate slow movements are, in particular, beautifully shaped under Scimone's assured direction. The harpsichord used for the performances is a fine copy of an anonymous Italian eighteenth-century specimen made in 1974 by Bartolomeo Formentelli. Its 'papery' tone seems particularly appropriate here, and it has also been tuned to appropriate unequal temperament. Recording throughout is clear, rich and direct; possibly the performance seems to be rather too closely on top of the listener, but this is partly a matter of preference which shouldn't deter any interested collector from buying this most interesting and enterprising issue. [A: 1] *Stephen Daw*

GLINKA-HUMMEL: 'Memory of Friendship' / GRETCHANINOV: Symphony 4 in C, Op. 102
Moscow Radio SO / *Zuraitis*
HMV 'Melodiya' ASD 3712 (£5-40)

Both these items are examples of music that, but for Melodiya, most of us would know nothing of. The Glinka-Hummel might perhaps be more accurately described as Hummel arranged, or transcribed, by Glinka. Dating from 1854, towards the end of Glinka's life, this is an introduction followed by a theme and variations, apparently derived from Hummel's Op. 99 for wind instruments. It is certainly effective—something of the wind character has been retained—and may well give more lasting pleasure than much of Gretchaninov's Fourth Symphony.

Alexander Gretchaninov (1864-1955), a pupil of Rimsky-Korsakov, is by no means a stranger to the English catalogue—he was represented on 78s—but hardly anything of his large output is familiar, even to admirers of Russian music. Of the same generation as Glazunov, he displays in his Op. 102 very similar powers as a symphonist. At every stage this is a well-made work, there are no loose ends and the balance of the whole is exemplary; but, though confident in manner and thoroughly listenable, it is quite unmemorable. When was it written? I understand that Barbirolli gave a performance in New York in 1942—the composer was resident in the USA from 1939—but presumably this was not the first. The performances are strong, and the recorded sound is big and spacious but not overbearing. [A: 1] *Hugh Oltaway*

HANDEL: Organ Concertos Op. 4 Nos. 1-4, Op. 7 Nos. 9-12
Marie-Claire Alain (org positif) / *Orchestre De Chambre / Paillard*
RCA 'Erato' DUE 20224 (2 records) (£5-32)

Although not previously available in the UK, I would suspect this production to be of fairly mature vintage. Primarily it is the orchestral tone which tends to date the performance, the strings being somewhat fierce and edgy in the upper registers during fortissimo episodes.

Marie-Claire Alain is a fine player who frequently takes advantage of the invitation to extemporise in the allegros. Miss Alain also performs short voluntaries at those points in the score where Handel has directed the soloist to play *Ad Libitum* between movements.

The organ used in this rendition is pleasingly voiced but, alas, no information regarding its specification, age or location has been included in the sleeve note. The recording is a little fuzzy at the close of record 1, side 2 and generally the balance appears to be not completely ideal. Occasionally the orchestral accompaniments become overwhelming and yet the harpsichord continuo remains almost inaudible. Acoustically the set seems to lack sparkle and some pre-echo is also evident.

These records represent reasonable value for money but if one can afford to pay the extra I would venture to suggest that a better investment would be the Argo recording of the complete Op. 4 and 7 (D3D 4) featuring George Malcolm and the ASM (see below). [B/C: 2/3] *Victor McAloon*

HANDEL: Organ Concertos, Op. 4 No. 2 in Bb □ Op. 4 No. 4 in F □ Op. 7 No. 4 in d □ No. 13 (2nd Set) in F
George Malcolm (org) / *ASM / Mairiner*
Argo ZRG 888 (£5-25)

George Malcolm, being an imaginative artist as well as a brilliant musician, does not hesitate to orna-

ment and improvise at those points in the score where Handel has written the direction *Ad Libitum*. The organ used in this performance is not of the type that would have been used by Handel in the Theatre. Nonetheless, it has a pleasing tone which blends well with the modern strings of the Academy Orchestra. The accompaniments are lightweight and sensitively played. Tempi are generally well chosen, the one exception being that of the *Andante* of Op. 4 No. 4 which is altogether too fast, thus destroying the subtle, poised dignity of Handel's delicately etched triplet figuration. The recording is well-focused and lifelike and is set in an acoustically agreeable environment. Some pre-echo tends to spoil the dramatic impact of such pieces as the *A tempo ordinario*, a staccato of the B♭ concerto of Op. 4. In other respects, this is an admirable recording. [A: 1] *Victor McAloon*

HANDEL: 'La Resurrezione'
Edith Gabry (sop) / *Erich Wenk (bass) / Annemarie Toepfer-Marlitz (sop) / Emmy Liskén (alt) / Alfred Fackert (ten) / The Santl Chamber Orchestra and Chorus / Ewerhart*
Turnabout TVS 37114-5 (2 records) (£5-98)

A near-operatic production, *La Resurrezione* received its first performance on Easter Sunday, April 8th 1708, in the Palazzo Bonelli under the direction of Archangelo Corelli. 14 musicians were engaged plus five vocal soloists (two castrati, two non-castrati and one female singer). The score is exotic, containing parts for trumpets, oboes, recorders, flute and viola da gamba (custom has it that a bass trombone stalked the part of *Lucifero* and in the present recording this instrument is included). An interesting feature of the score lies in the fact that two of the recitatives are scored up for instruments other than the customary strings and continuo.

Although this recording is now 18 years old it is perhaps the performance more than the recording which sounds its age. It cannot be denied that Handel's scoring has been carefully preserved. However, strings, trumpets and oboes of the modern type detract from the delicate textures and subtle harmonies of the music. This, coupled with the fact that no ornaments are offered in *da capo* arias save the occasional cadential trill, renders this performance stylistically unacceptable. The soloists, however, are generally good—it is the lack of feeling for the baroque idiom that spoils their respective interpretations.

The accompaniments are competently managed but just occasionally there appears to be a hint of the 'sewing-machine' approach. The string section is too large and tends to swamp the soloists, who frequently seem to be battling against all odds in an endeavour to be heard above the instrumental ensemble. The recording is over-reverberant and appears to have no positive stereo imaging. The balance between soloists and orchestra is not always ideal and no texts or translations are included with the set. The production may be commended to anyone who is interested in hearing what *La Resurrezione* is like in broad outline. Those desirous of a scholarly reading will undoubtedly have some reservations. [B/C: 2/3] *Victor McAloon*

LALO: Piano Concerto in f / PIERNÉ: Piano Concerto in c
Marylène Dosse (pno) / *Stuttgart PO / Kuntzsch*
Turnabout TVS 37125 (£2-99)

The missionary zeal with which Turnabout resuscitates little-known Romantic piano concertos is nothing if not courageous. This is their second recording of the Lalo Concerto (the first originating from elderly Vox tapes), and although the newcomer makes a more pleasant sound than Frugoni's account, the piano is nevertheless rather too close, with some intrusive pedal thumps and one or two clumsy edits. The piece is really rather hard going, with its apparent obsession with the theme music to the film *Lawrence of Arabia* which, despite a transformation into doggedly galumphing compound metre in the Finale (the piece is cyclic), never quite makes it to the second half of the tune. Other, more credible influences are Franck (both his *Symphonic Variations* and Lalo's Concerto were dedicated to the pianist Louis Diémer) and Massenet. The writer of the informative sleeve note also discerns 'pre-echoes' of Rachmaninov in the Pierné Concerto. Well, yes, I suppose it does contain some of the fingerprints, if little of the originality, of the great Russian, with its ardent cello melodies beneath rippling piano figuration, its bravura double octaves and a tendency to 'terrace' short, rapid sequences. Immediately attractive and tuneful with a nicely fleet

Scherzando movement (the composer of *March of the Little Lead Soldiers* is unmistakable), its inexhaustible energy soon, however, begins to ring somewhat hollow; rather like taking leave of a loquacious talker, the listener can remember practically nothing of what was said. Both performances sound thoroughly convinced by the music, and the disc is reasonably-priced enough to serve as an intriguing guessing game! [B: 2]

Andrew Keener

MENDELSSOHN: Piano Trios in D minor Op. 49 □ C minor Op. 66

Anne Queffelec (pno) | Pierre Amoyal (vln) | Frédéric Lodéon (vlc)

RCA 'Erato' STU 71025 (£5-49)

Here are three young musicians who perform together so well that one can only hope that they will remain together to give us many more such enjoyable experiences.

The ridiculous underestimation of Mendelssohn having been overcome in recent years, one can now see the superb quality of his music—particularly, so far as I am concerned, the chamber music. These two trios show him at his most passionate, yet with all the elegance of his style. Each is provided with a slow movement of great beauty, as well as others of characteristic energy suggesting the *scherzo*: delightful stuff.

Of the performances one can only say that they have the dedication and energy one might expect from young artists rejoicing in their command of music; but there is also a much deeper penetration into the spirit of the works, and a success in combining together, which makes them memorable and fully worthy of being committed to disc. Any collector of chamber-music recordings will wish to have this one.

As recordings, these are very near—disappointingly near, one might say—to being in the first flight. They are very good indeed. In particular, the balance between the piano and violin is perfect: the pianist can use all her considerable strength when that is needed without swamping the fiddle, and the tone and timbre of each instrument is beautifully caught. As so often, the problem arises with the cello, which is the greater pity in that, as we learn from Erato STU 70997 (reviewed elsewhere), Frédéric Lodéon is an artist of stature. I suppose that engineers do leave the isolation of their cubicles and listen to how an ensemble actually sounds; but when it comes to balancing a cello they seem to forget it: one really should never be in doubt as to whether the cellist is playing or what. Here we sometimes are; but do not commit the error of disregarding this issue because of that: it is a very fine one. [A/B: 1]

Peter Turner

MOZART: 'Le Nozze di Figaro'

Tomowa-Sintow | Cotrubas | Von Stade | Berbie | Van Dam | Krause | Bastin | Zednik | Keleman | Equiluz etc | VSO | VPO | Karajan

Decca D132D4 (4 records) (£21-00)

I find it very difficult to make up my mind about this performance, it seems so much a curate's egg. There is, of course, much in it that is exciting: how could it be otherwise with this cast, this orchestra and this conductor? The sweep of the second, third and fourth act finales is genuinely symphonic, but symphonic in Karajan's sense rather than Mozart's. It is altogether a weighty affair, the sort of thing the international set revel in in Salzburg, and the recording, which favours the basses and tympani, tends to reinforce the impression of near-Wagnerian intensity. There does not appear to be much effort made to present the work as a drama, and what there is comes mostly from the singers.

And here the variable quality is more noticeable. The men are generally excellent, with Tom Krause's Count and Zoltan Kélemen's Antonio being especially in character. Van Dam's Figaro, and Bastin's Bartolo, run them a close second, failing only to play into their roles as completely as one feels they could. The ladies, even Ileana Cotrubas' generally delectable Susanna, curiously sound too old, and the Countess of Anna Tomowa-Sintow is really much too staid, a quality noticeable in her recent Donna Anna in Böhm's *Don Giovanni*. The disappointment is Frederica von Stade's Cherubino, a very matter-of-fact performance. *Non so piu* lacks the youthful breathlessness of the part, while the cavatina *Voi, che sapete* is delivered with very little sense of those feelings it seeks to express. And I am surprised the producer allowed the empty pause which follows it, and the flat 'bravo' of a Countess seemingly preoccupied with other matters. There is



Karajan

much pleasure to be gained from Jane Berbie's Marcellina, though naturally her duet with Bartolo is cut, and there is a nice contribution from Christiane Barbaux as Barbarina. The veteran Kurt Equiluz provides a restrained comic Don Curzio, which leaves only Heinz Zednik's Basilio, an effective portrait. The secco recitatives threaten to drag at times, again, I suspect, because of a lack of involvement in the dramatic action such as is to be found in Colin Davis' excellent performance on Philips. Karajan's is more vividly recorded than the Davis, though not quite as well balanced, and is much less effectively produced, which is surprising considering the project was in the hands of so notable and experienced a Mozartian as Christopher Raeburn. I would have to recommend the Davis performance in preference to this one of Karajan's, for all its good points. [A: 2]

Kenneth Dommett

MOZART: Eine kleine Nachtmusik, K525 □ Adagio and Fugue in c, K546 □ Divertimenti K136, 137, 138

Scottish Baroque Ensemble | Friedman

Abbey ABY 809 (£3-18)

Subtitled 'The complete works for string orchestra', this collection begs a few questions that it would be pedantic to pursue. It is only necessary to say that whatever Mozart may have had in mind about the number of players involved, it is in their orchestral versions that these pieces are most familiar to us. Indeed, they are so familiar that there is nothing to be said about them beyond acknowledging that the Scottish Baroque Ensemble play them with panache and a creditable attention to detail. Speeds are realistic and there is no spurious attempt to make capital out of what are, for the most part, charming entertainments. The Adagio and Fugue is not quite in this category and it receives a sturdy reading and an acceptably light touch. The recording is all one could wish for; realistic sound, high technical quality and a lively presence. But there is fierce competition here, and excellent though this issue is, I cannot help wondering how it will fare against ensembles more widely known and celebrated. [A: 1]

Kenneth Dommett

MOZART: Divertimento No. 17 in D, K334

Pallard CO | Pallard

RCA 'Erato' STU71069 (£5-49)

The last recording of this remarkable work came from the Vienna Mozart Ensemble in 1975 and I am not certain if it is still available, though if it is not it is likely to come round again in due course. It has the advantage over this version of sounding fresher and more alert, principally, I suspect, because there are more players in the Pallard Chamber Orchestra than in Boskovsky's group. It is a vexed question whether or not this kind of music should be played with more than one instrument to the part: I happen to favour soloists, or at most two players to a desk. This version sounds heavier than that and though the playing is lively and sensitive the music does sound hard-driven at times and out of character.

The recording is close and the dynamic range somewhat restricted, but within its limits faithful enough. It does, however, add to the impression of solidity which belies the nature of the music generally. On balance, I should favour the Decca version. If that has disappeared this is the only other version worth consideration, and it will not disappoint entirely. [B: 1]

Kenneth Dommett

MOZART: Piano Concerto 25 in C, K503 □ Piano Concerto 27 in B, K595

Alicia de Larrocha (pno) | LPO | Solti

Decca SXL 6887 (£5-25)

These are full-blooded performances in what I can only describe as the Schnabel tradition, weighty both orchestrally and pianistically, and this alone may decide one's reaction. This is a tradition still not entirely out of favour though it is less fashionable than it was even 15 years ago, and it is not likely to appeal greatly to those who have come to accept the lighter textures and less grand pianism of the many younger performers of these concertos. Having said that much, there is still a good deal to admire about Alicia de Larrocha's playing. She is a dextrous soloist and is not averse to filling out the barer outlines with tasteful if controlled decoration, but I am surprised that she permitted herself to use Casadesu's cadenza to the first movement of K503, a singularly inappropriate exploration of tonalities in the context of a movement whose outlines are, even by Mozart's standards of clarity, unequivocal and emphatic. This, however, is a 'symphonic' concerto, pointing straight towards Beethoven, and it can stand this kind of treatment without too much loss of character, though surely the Andante is too slow and ponderous? The B♭ concerto is a different kind of work, more fragile and not really able to transcend this rather phlegmatic approach, while Solti's athletic orchestral direction drives the music very hard, and there are occasions in both works where Schnabel's habit of working on the tempo for expressive effect is resurrected to no benefit to the music. The recording is not above reproach either. The piano is well forward, as one would expect in this kind of approach, and not very well balanced between the top and bottom of the register. The orchestral sound is acceptable but less clear than I would consider ideal. Engels, Barenboim or Anda, with Brendel in K595, are more generally acceptable. [B: 2]

Kenneth Dommett

MOZART: Sonatas for Violin and Piano, Vol. 1 (K6-9 and K26-31)

Desmond Wright (f-pno) | Annegret Diedrichsen (vln)

Acanta HA 23.005 (2 records) (£7-22) (Rediffusion)

All these sonatas were composed by the young Mozart, probably with the help of his father, either in London in 1764-65, or in The Hague the following year. They are for keyboard with violin accompaniment, and it would be idle to pretend that they materially add to our knowledge of Mozart as genius though they do throw a little light on the workings of a precocious mind capable of absorbing influences and adapting them, often with originality, to its own ends. Insofar as most of these pieces, if not all, are no longer available in other versions—and for obvious reasons they tend not to attract the attention of the greatest virtuosos—this, the first in a series, is to be welcomed, at least by the avid Mozart collector eager to fill gaps in his library. Otherwise, I fear, the welcome must be qualified. It is arguable that Mozart had the harpsichord in mind when he wrote these pieces, rather than the fortepiano, and it may have been better to have used one here rather than, as Desmond Wright has done, saddle oneself with an antiquarian instrument of dubious tone and suspect mechanical well-being. It creaks and, regrettably, makes the player creak too. It is almost impossible to make a turn or shake with anything like elegance, and in the slow movements these limitations loom large. The violinist, occasionally too reticent, sometimes too overbearing, delivers her not very demanding part with a generally dogged air. The recording is adequate except for balance (which is decidedly variable), but it lacks the brightness, as the playing does, which is necessary to lift these infant essays out of the school-room and put them into the salon. [B: 3]

Kenneth Dommett

MUSSORGSKY: 'Sunless'—song-cycle* / SHOSTAKOVICH: Ballad and Songs of the Fool ('King Lear') □ Five Romances to Words from 'Krokodil' Magazine, Op. 121 □ Preface to the Complete Collection of my Works and Brief Reflections, Op. 123 □ Four Verses of Captain Lebedyadkin, Op. 146

Yevgeny Nesterenko (bass) | *Vladimir Krainev (pno) | Yevgeny Shenderovich
HMV 'Melodiya' ASD 3700 (£5-40)

It is no slight on Mussorgsky, whose *Sunless* cycle was already available in several versions, to say that this is essentially a Shostakovich record, and a major one at that. With the exception of the *Ballad and Songs of the Fool*, extracted by Lev Solin from the incidental music, Op. 58a, for Kozintsev's Leningrad production of *King Lear* in 1941—not to be confused with the music, Op. 137, for the same producer's film of 30 years later—these items are late Shostakovich, and this record is really a companion to SLS 5078, which includes Yevgeny Nesterenko's great performance of the *Suite on Verses of Michelangelo Buonarroti*, Op. 145a. It was with Nesterenko's voice in mind, to say nothing of his histrionic powers, that Shostakovich wrote most of his late song-cycles, and if the *Michelangelo Suite* is the greatest of them, then so far as irony and satire are concerned the *Four Verses of Captain Lebyadkin*, Op. 146—the texts are from Dostoevsky's *The Devils*—and the slightly earlier *Krokodil* settings, Op. 121, might be said to outstrip it. The black humour of 'The Cockroach' from *Captain Lebyadkin* and the blackness of 'Common Sense' from Op. 121 certainly strike as deeply as anything in the *Suite*. The *Preface to the Complete Collection of my Works*, Op. 123, is both comparatively slight and Shostakovich at his most Eulenspiegel-like. The songs from *King Lear* go very well in this company, and the last of them actually foreshadows the late style. Nesterenko's performances are magnificent dramatic projections, and the more lyrical demands of *Sunless* are equally well met. My only complaint about the recording is of the internal echo and pre-echo—mainly the former, I think—heard on the first side; otherwise, the quality is very high. A record not to be missed. [A: 1*] *Hugh Ottaway*

NIELSEN: Flute Concerto | NORBY: 'Illuminations'

Jean-Pierre Rampal (fl) | Sealand SO | Frandsen
RCA 'Erato' STU 71273 (£5-49)

This recording is the debut, as far as British audiences are concerned, of the Sealand Symphony Orchestra, one of Denmark's most successful provincial orchestras. It has no permanent conductor, but John Frandsen is apparently not an infrequent guest conductor, and on this evidence a proficient one. Rampal, of course, needs no introduction to us, his skill as a flautist being evident from the many recordings he has made, and in these two works he shows that his skills are unabated. The recording was sponsored by the Leonie Sonning Music Foundation who, in 1978, awarded their international prize to Rampal who, in turn, commissioned Erik Norby (b. 1936) to write *Illuminations*, which he played at the award ceremony. It turns out to have been a rewarding occasion, for unlike so many commissioned works, it is securely based on firm musical foundations, and is full of interest and intriguing sonorities without being merely 'novel'. It makes an appropriate companion to Nielsen's charming little masterpiece. Rampal possibly extracts as much charm as the piece can stand; he is certainly smoother than the work's dedicatee, Gilbert Jespersen, whose recording is presumably still available on Eclipse. Considering the *ad hoc* nature of the proceedings, the performances are very secure, the concert presumably offering a dry run for the recording. The sound, a product of the Danish studios, is very satisfactory, spacious and well focused. As there are few alternatives for the Nielsen, this will make an admirable introduction to the work, as well as to Norby's pleasant and inventive score. [A: 1] *Kenneth Dommett*

PROKOFIEV: Piano Concerto 3 in C, Op. 26 | SHOSTAKOVICH: Piano Concerto 1 in c, Op. 35*

Vladimir Krainev (pno) | *Alexander Karolev (tpt) | Mosco PO | *Moscow Radio SO | Kitaenko | *Maxim Shostakovich
HMV 'Melodiya' ASD 3713 (£5-40)

These two concertos do not appear to be coupled anywhere else in the present catalogue, but the idea is such a good one that there must surely be a precedent. Anyway, despite the difference in scale, and the fact that the Shostakovich was written 12 years after the Prokofiev, in their blend of witty, incisive, toccata-like piano writing and an appealing lyricism the two have much in common and invite comparative listening. However, in the event, I found this record not a little frustrating. For there is a lot of fine playing, but also much that is showy and

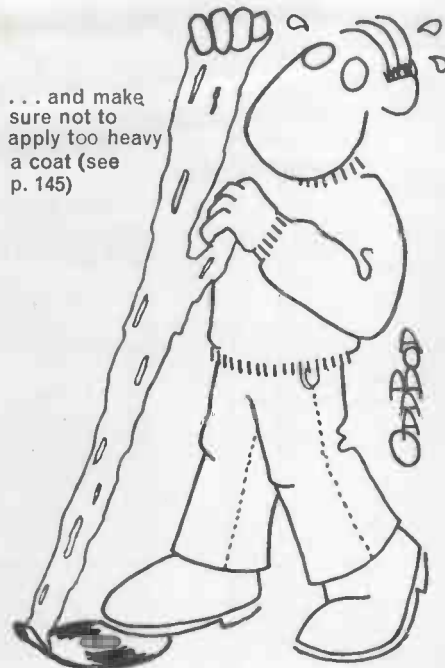
exaggerated. In music that is rhythmically so active, how mistaken it is to add *molto* to every *allegro* and to insist on the greatest possible 'brilliance'. Something like that has happened here; in the two first movements, for instance, there is much that sounds scrambled. Vladimir Krainev is clearly a pianist of remarkable dexterity, and is capable of a beguiling delicacy, but both these performances are marred by extravagance, in attack as well as in pace. Such aggressiveness as the first entry of the piano in the finale of the Prokofiev is undoubtedly emphasised by the harsh, close recording style, which leaves a good deal to be desired. My choice for the Shostakovich would still be Ortiz/Bournemouth SO/Berglund (ASD 3081), and for the Prokofiev, Ashkenazy/LSO/Previn (SXL 6768). [B: 1/2] *Hugh Ottaway*

PUCCINI: 'Suor Angelica'
 Ricciarelli | Cossotto | Allegrì | Stasio | Lippi | Benetti | Matsumoto | Nat. Acad. Santa Cecilia | Polyphonic Chorus of Rome | Bartoletti
RCA RL 12712 (£5-49)

Suor Angelica, originally intended as the centre piece of Puccini's *Il Trilico*, can stand perfectly well on its own and shows Puccini at his most lyrical. The present recording has Ricciarelli as an excellent *Suor Angelica* and the other principal role, that of the Princess, is well suited to the talents of Cossotto. The smaller parts, some of which are duplicated, are all well taken and the overall production is quite satisfactory. Ricciarelli rises well to the technical demands and the emotional heights of the famous aria 'Senza Mamma' and in fact gives a deeply committed performance, and Cossotto suggests the callous aloofness of the unforgiving Princess who is indifferent to the sufferings of her niece. The recording is reasonably good, but lacks the clarity of texture which would make it really outstanding, and the stereo image is rather limited. I have compared this recording with the version in which Victoria de los Angeles and Fedora Barbieri take the principal parts with Tullio Serafin conducting and have a slight preference for that (WRC ST 934) as a performance, although the quality of its sound in mock-stereo is a trifle dated. A leaflet giving the libretto accompanies this record. [B: 1]

John Freestone

... and make sure not to apply too heavy a coat (see p. 145)



REIMANN: 'Lear'
 Fischer-Dieskau | Knutson | Gotz | Dernes | Lorand | Varady | Bavarian State Opera Chorus & Orch. | Albrecht
DG 2709 089 (3 records) (£15-17)

It was at the suggestion of Dietrich Fischer-Dieskau that Aribert Reimann (b. 1936) took on the task of setting the King Lear story as an opera. Claus Henneberg compressed Shakespeare's play skilfully

(eg, running Scene 2 concurrently with Scenes 3 and 4 in Part II) and Reimann gave up all other activity to concentrate on its composition. The successful premiere was given in Munich in 1978 and this recording is edited from live performances. It is offered (complete with the beautifully produced libretto and notes) 'not so much [as] a commercial proposition for a recording company as a cultural and moral obligation'. Part I occupies two thirds of the work and takes it to Lear's madness. The music (4 scenes and 3 interludes) is varied and expansive: rising to powerful, screaming-brass utterance in the storm scene or offering a quiet, shimmering backcloth for virtual speech. Part II (7 scenes; 3 interludes) moves much more quickly. Only in its closing scene does the music grow deep and lyrical, powerful and solemn—the finest passages of the work.

The vocal parts are mostly syllabic settings—only Goneril and (more extravagantly) Regan have melismatic parts and Lear acquires some ornament when mad. Helga Dernes (Goneril) and Colette Lorand (Regan) acquit themselves very well in their difficult parts. Julia Varady sings Cordelia well: though her part is slender at first it rises in stature, emotion and strength in the later stages of the work when she shows her true character and care for her broken father. But central to the opera is Lear. All Fischer-Dieskau's qualities conspire to goodness here. His meticulous verbal clarity, his vocal richness and refinement—even his self-conscious precision and intelligence of characterisation (which mar his Falstaff, for instance) are here superbly located. Gerd Albrecht conducts a fluid, idiomatic rendering of a sometimes spiky score. The recording is good, with few auditorium intrusions. The balance is clear and open, and free from the coloration which sometimes spoils operatic recordings taken live. [B: 1] *Benedict Sarnaker*

RIMSKY-KORSAKOV: Orchestral excerpts from 'The Golden Cockerel', 'Tsar Sultan', 'Mlada', 'The Invisible City of Kitezh', 'May Night'

USSR SO | *Bolshoi Theatre Orchestra | Svetlanov
HMV 'Melodiya' ASD 3710 (£5-40)

For anyone seeking some lesser-known Rimsky-Korsakov, this is an excellent selection. Apart from the items from *The Golden Cockerel* (1907)—the introduction to Act I and the Procession, Act III—there is little that is really familiar to the general listener, despite the fact that other recordings are available. The concert suite from the opera *Tsar Sultan* (1900) contains some outstanding Rimsky, as does the prelude (*Eulogy to the Wilderness*) to *The Invisible City of Kitezh* (1905)—and, indeed, the overture to the earlier *May Night* (1879). The remaining items are the entr'acte, *The Battle of Kerzhenets*, from Act III of *The Invisible City of Kitezh*, and the *Procession of the Nobles* from *Mlada* (1872). The performances are vital and vivid, unmarred by Svetlanov's more extravagant tendencies, and the composer's great gift for colour and texture is impressively revealed. Particularly striking are the many fine solo contributions. The recording is bright and reverberant, Melodiya style, but with a small adjustment the quality I obtained was well worth an A, falling to B at one or two climaxes. The last item dates from 1964 and has, I think, appeared before; everything else is dated 1978. [A/B: 1] *Hugh Ottaway*

RODRIGO: Concierto de Aranjuez □ Concierto Andaluz

Pepe Romero (gtr) | Los Romeros (gtrs) | ASM | Marriner
Philips 9500 563 (£5-05)

When a record arrives which has the enthusiastic, unqualified endorsement of the composer, the critic had better beware. In this case, if I may say so, Rodrigo is right: all *aficionados* must add this version to their collections, and those who start with it will find it hard to live with any other. The *Aranjuez* is directed by Marriner with an exquisite control of dynamics and shading, and is presented as an ethereal work of a subtlety I have never heard before. The *Andaluz* is taken more boisterously: it is a charming piece, full of echoes of the more famous one, and with the same shape of two outer movements of spirit and an inner, contemplative one. It is a concerto for four guitars, and Rodrigo comments upon the well-nigh incredible unanimity with which the Romeros are able to play it.

Pepe Romero unquestionably grows in stature, adding musicianship to his always-unerring tech-



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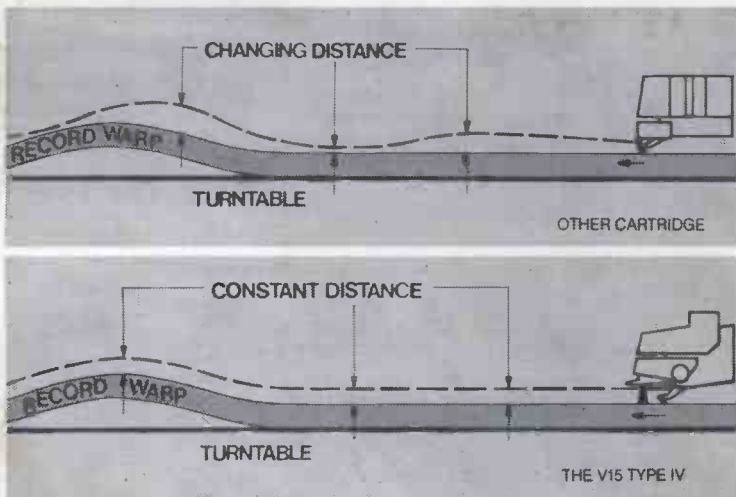
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nique. Rodrigo says that 'his technique is perfect, as is his complete understanding of the work'. It would be difficult to challenge that: this is the most subtle, delicate and considered performance I have ever heard from him. His rendering of the cadenzas is masterly; while the partnership with Marriner is a triumph: even the trumpet sounds 'Spanish'.

The bold decision was taken to go for a very natural balance of guitar(s) against the orchestra—which is not a vast one for these works. This has placed a great responsibility upon the engineers, and well they have shouldered it. While the soloist is never overwhelmed, we can hear every detail of the orchestra, which responds to Marriner's minute directions with real inspiration. I can say no more than that I now take the *Aranjuez* much more seriously than I did before. [A*: 1*] *Peter Turner*

ROSSINI: 'L'Italiana in Algieri'

Valentini-Terrani | Benelli | Bruscartini | Mariotti | Dresden State Opera Chorus | Dresden State Orchestra | Bertini

Acanta JB22308 (3 records) (£10.83) (Rediffusion)

The only recording of this enjoyable opera for many years since it first appeared has been the 1964 Decca issue (SET 262/4) conducted by Varviso with Teresa Berganza as the Italian Girl and Alva, Corena, Panerai and Montarolo as supporting males. We have had no need to grumble; this was a sparkling performance with Berganza a beguiling lead and some incredibly good singing in the 'florid' manner by the men. The recording is still remarkably good, more or less in the A* category, with wonderful spaciousness and reality about it; we might almost be on the stage. So this imported version does not come along as an automatic modern replacement; although in its way also very good. The recording here is of the incredibly smooth and efficient, though ultimately less natural kind, much favoured by German recording engineers. Glossy is almost the word: certainly much more of a studio production, a warmly rounded sound which suits some of the florid singing very well. Valentini-Terrani has a heavier voice than Berganza and does not infuse quite the same sparkle. My one preference in the new set is the tenor role of the young Italian Lindoro. Ugo Benelli is much lighter of voice, indeed sounds youthfully adolescent and sings with a smooth flowing touch almost like a mezzo. Perhaps, on balance, he does not hold his own so well in the ensembles as the sharper toned Luigi Alva in the Decca set, but he offers much to enjoy. The other male roles are on comparable level. Varviso gives a much more pointed reading than Bertini, who opts for a warm, polished Italian style rather like Gui's *Il Barbiere* which was re-issued recently. The Decca set gives a libretto, the new one does not—only a synopsis. The final verdict therefore is that here is a pleasant and worthy recording; but if you have the Decca classic you need not fear that you are staying with an outmoded model. [A: 1]

Peter Gammond

ROSSINI: 'Otello'

Carreras | Von Stade | Pastine | Flichella | Condó | Ramey | Lewis | Leoz | Ambrosian Opera Chorus | Philharmonia | Jesús López-Cobos

Philips 6769 023 (3 records) (£12.79)

It would be good to think that Philips, having tidied-up Verdi, were now about to embark on the same duty in respect of Rossini. But perhaps that would be too much to hope for! Anyway an *Otello* is very welcome. Having for years had a piano score of the overture which, like most Rossini overtures, has no particular relevance to the highly dramatic story that should follow, being the usual tuneful romp, I always wondered what the opera would be like. Byron, who heard it in Venice in 1818, found it the greatest nonsense with Shakespeare unmercifully hacked about—even the handkerchief missing—but he thought the music very good. I suspect that will be a lasting opinion. Personally, I find *Otello* such a stupid play and *Otello* such a stupid man, that I am perfectly ready to let Rossini enliven it with some good music; which he duly does. There is much that is beautiful and moving and the twenty-four year old Rossini handles the Desdemona tragedy well although the opera allows no romantic tenderness between her and Otello. There is also much lighter music threaded through the story, some of which was used to compile the 'Cat Duet' by Berthold. There is no great aria, not much Shakespeare, but a lot of good Rossini to be enjoyed and savoured. *Otello* is

usually written as a tenor although to me he suggests much more of a baritone, even a bass character; but Verdi thought the same as Rossini. José Carreras handles this part well and makes it as convincing as possible. Frederica von Stade, who seems to be looking for melancholy roles lately to obscure her natural gaiety, is a moving and tender Desdemona and, as usual, sings with wonderful control and sense. Pastine's Iago, also a tenor, and easily confused with Otello, is good and it is hardly his fault that he is not made nasty enough. The cast as a whole, and wisely, do not attempt a Shakespearean dramatisation of the story but rather a good straightforward, stylish rendering of an Italian *opera seria* of the early 19th century with the inbuilt conventions of the period. Like many of the Rossini operas that have been and will be revived it has shown its workability—if listened to with ears attuned to 1818. Cobos produces a stylish, theatrical performance using (though it is a minor point as we have little area for comparison) Rossini's autograph score which is about to be published in facsimile. The recording, with Dutch pressings, is not of the very highest standard given to some of the Verdi operas, mainly in that it has the kind of over-resonance that mists the potential clarity. Voices are clearly caught but tend to wander about rather disconcertingly—it may be meaningful to the actors but not to one listening to a record. It is very much a studio recording, very rich but with little stage perspective. [A: 1]

Peter Gammond

RUBINSTEIN: Piano Concerto 4 in d, Op. 70 / SCRIABIN: Piano Concerto in f#, Op. 20*

Victor Bunin (pno) | Moscow Radio SO | Serov |
Igor Zhukov (pno) | Estonian State SO | Jarvi

HMV 'Melodiya' ASD 3707 (£5.40)

According to an anonymous and seemingly unknown contributor to *Grove 5*, the compositions of Anton Rubinstein (1830-94) 'may be considered as the legitimate outcome of Mendelssohn'. What an extraordinary thing to write! Anyway, the D minor Piano Concerto has little that harks back to Mendelssohn, legitimately or otherwise, but in the outer movements much that points to Schumann as background figure. The sentimental ordinariness of the slow movement is a major weakness; apart from that, this concerto is by no means without vitality. But it is the vitality of an intelligent and gifted musician content to exercise his creativity in well-oiled grooves. However, the opening movement in particular has a decisiveness, even a grandeur, that shows very well why Rubinstein was acclaimed so widely in his lifetime.

To turn to Scriabin's Concerto in F sharp minor is to experience a quite different temperament, for here every note, it seems, no matter how flamboyant the bravura, has been placed with emotional intent. It follows that Scriabin would not have been capable of the kind of let-down that is Rubinstein's slow movement. As a full-blooded Romantic concerto, this early Scriabin (1897) has kept at least a toe-hold in the repertoire, which it surely deserves.

Two very good performances, sensitive as well as technically commanding, and but for some internal post- and pre-echo the recording is thoroughly satisfactory. Well worth considering. [A/B: 1]

Hugh Ottaway

DOMENICO SCARLATTI: Sonatas for Harpsichord: Vol. 9

Gilbert Rowland (hpd)

Keyboard KGR 1009 (£3.75) (Selecta)

This is another record of the series in which Gilbert Rowland is performing all of Scarlatti's sonatas. As there are 555 of these, according to the Kirkpatrick Catalogue, this is a monumental task. It also means that there will be included those which, inevitably, are not so good as others: even a genius cannot sustain the highest level all the time: not even Bach is always great. From this it follows that such a series is designed primarily for the Scarlatti student rather than for the general music-lover; but fortunately all of those on this disc are of a high standard.

Kirkpatrick has shown that some four hundred of the sonatas were intended to be played as pairs, and a few in groups of three. Avison went further than that, as another record reviewed in this issue (see page 100) shows. Scarlatti certainly has the ability to inspire devotion!

Gilbert Rowland is a persuasive and informed advocate: his technique is admirable and his

phrasing immaculate. I sometimes thought that a greater rhythmic flexibility and variety of tone-colour would have been welcome; but with regard to the latter, we are told nothing of the instrument used except that it is a copy by Michael Robertson after Pascal Taskin. The performances overall are thoroughly enjoyable.

We are also given a very nice recording. The instrument is apparently not very rich in the bass, and the whole seems slightly closely miked; but the upper end of the instrument is beautifully caught, and the sound is natural, with a very stable image. If the whole of the series is up to this standard (and I am sure one may assume that it will be) it will be well worth collecting. [A/B: 2] *Peter Turner*



Mehta

SCHUBERT: Symphony No. 6 in C, D589 □ 'Die Zauberharfe', D644—Overture □ 'Rosamunde von Cypern', D797—excerpts

Israel PO | Mehta

Decca SXL6891 (£5.25)

Schubert's 6th is the awkward child of the family. It gets the least attention and the fewest recordings, and even Beecham was not wholly successful with it. It is a work full of disjointed attractions, somehow tentative in its thoughts after the polished assurance of the 5th, and is not altogether Viennese, reflecting Schubert's enthusiasm for Rossini and the Italian style. Mehta is commendably successful with the work, giving it as good a showing as any in his rather variable cycle of recordings which is completed by this issue. His clear, unfussy approach suits the work and gets the usually assertive Israel Philharmonic strings to adopt a calmer, smoother approach which is well matched by a smooth and warm recording whose only fault is the common one of slightly congested sound when the strings play hard together. Almost perversely, when faced with the blatant charms of the *Rosamunde* music (including the commonly used *Zauberharfe* overture) he takes a slightly brusquer attitude as if ashamed of showing too much indulgent grace and beauty. This is by no means the most seductive performance of the *Rosamunde* music I have heard. And the recording gets even more congested here because of the declamatory playing. Incidentally, the brief, three-language sleeve-notes should not make a habit of revealing their deficiencies with such phrases as 'no need to point out the details', 'by a series of accidents, which cannot be detailed here', 'the music needs no analysis'—continually telling the reader what he isn't going to get for his considerable outlay. [A/B: 1/2] *Peter Gammond*

SCHUBERT: String Quartet No. 14 in d, D810 'Death and the Maiden' □ String Quartet No. 12 in c, D703 'Quartettssatz'

Allegri Quartet
Argo ZK77 (£3-50)

From the performance point of view, I have nothing but praise for the Allegri Quartet's interpretation. They play with complete togetherness of thought and feeling and give an impression of intensity without it ever becoming overbearing, because they phrase so beautifully and balance their four lines so well. One is acutely aware of the contribution of each player and the sense of knowing where they are going possessed by the whole quartet. These are as alert, lively and sympathetic readings of these two well-known Schubert chamber works as you are likely to hear. But, and there nearly always seems to be a big but in the way nowadays, I do not, on the whole, like the recorded sound or the technique employed. When the group is playing quietly one is aware of echoing distances (it was recorded in the Church of St. George the Martyr) but when they grow vigorous in bowing and mood it is as if the echoes come rolling back to join in and we get a harsh confusion of sound which is unlike any quartet you have heard in the flesh. Strings rasp and the art of Stradivarius and his friends goes for nothing. Why is it apparently so difficult to convey the rich warmth of strings and a good string quartet on record? [B/C: 1*/1] *Peter Gammond*

SCHUBERT: Liebesbotschaft, D957:1 □ **Der Zwerg, D771** □ **Du bist die Ruh', D776** □ **Die Sterne, D939** □ **Die Forelle, D550** □ **Heimliches Lieben, D922** □ **Der Musensohn, D764** □ **Totenräbers Heine, D842** □ **Frühlingsglaube, D686** □ **Geheimes, D719** □ **Nachtviole, D752** □ **Ständchen, D957** □ **An mein Clavier, D342** □ **Auf dem Wasser zu singen, D774**
Francis Loring (bar) | Paul Hamburger (pno)
Meridian E77015 (£3-45) (Selecta)

A fairly popular selection of Schubert's songs is very clearly recorded with Hamburger's Bösendorfer and the voice nicely balanced, well separated and clear. In fact the recording is almost too clear, for it is rather cruelly revealing of every nuance, frog-in-the-throat, or uncertainty of voice. It reveals that Francis Loring's technique and control is not really up to Schubert, particularly when we have to compare him with such highly professional craftsmen as Fischer-Dieskau and the like. Personally I think that Francis Loring has a very pleasant and friendly voice but it is too near to a conversational voice to sustain such a demanding recital; one is aware of someone who has not got technique comfortably tucked away behind him so that he can concentrate on interpretation—of which there is very little. He has the kind of projection that would be ideally suited to Viennese *heurligen* songs, German cabaret, certainly something of a lighter nature like the drawing-room ballad. Perhaps this is why he was so much more successful in the near-cabaret songs of Reynaldo Hahn (Meridian E77005), a record I enjoyed and recommended in spite of his imperfect French accent. I must admit I enjoyed this record as well to some extent, although it was heard in a state of insecurity as one listened to a very close recording revealing Mr. Loring's rather loose grasp of his pitch, line and phrasing. There was also an impression that Paul Hamburger was keeping things going rather than following an assured singer. [A: 2/3] *Peter Gammond*

SCHUBERT: Ständchen □ **Frühlingsgesang** □ **Naturgenuss** □ **Sehnsucht** □ **Im Gegenwärtigen Vergangenes** □ **Der Gondelfahrer** □ **Widerspruch** □ **Zur guten Nacht** □ **Grab und Mond** □ **Nachthelle**

Doris Soffel (con) | Werner Hollweg (ten) | South German Radio Male Voice Choir | Roland Keller (pno) | Voorberg
Acanta DG23.054 (£4-62) (Rediffusion)

There are two very good recordings of Schubert part-songs on the domestic market—the superb recording by the Elizabethan Singers under Halsey (Argo SDD377) and the almost equally good one by the Baccholian Singers of London (Pearl SHE549) which did not seriously overlap in repertoire. There was also a Berlin Motet recording some time ago. Collectors will want to know how this present issue supplements the two British issues. Of its ten items, five are not on the other two recordings. So it is well worth getting in this respect and one of the new items is a very jolly *Frühlingsgesang* which is great fun. It is also an excellent record. The singing here is noticeably in the German student singing

tradition, an exuberant classical barber-shop style that is now popular throughout the world through the efforts of the King's Singers and others. Not so sensitive as the Argo and more like the Pearl issue in general approach as one can sample in items common to all three, the well-known *Ständchen* and *Der Gondelfahrer*. The recording is clear and well-balanced, generally smooth in quality. This is a useful addition to the Schubert collection. Almost half the part-songs are now on record and I hope the others will follow, for they are almost entirely enjoyable. [A: 1] *Peter Gammond*

SCHUBERT, arr. LISZT: Die Taubenpost □ **Der Müller und der Bach** □ **Rastlose Liebe** □ **Des Mädchens Klage** □ **Der Lindenbaum** □ **Erkönig** □ **Die Forelle** □ **Der Doppelgänger** □ **Morgenständchen** □ **Das Sterbeglöcklein**
John Bingham (pno)
Meridian E 77019 (£3-45) (Selecta)

Liszt's transcriptions of Schubert's songs were mostly made about 1837-40, only ten years or so after Schubert's death; Liszt's purpose was to familiarise audiences with the music of a composer who was hardly known outside his native Vienna at that time. Liszt played the transcriptions in his recitals and also had them published, so that his propaganda work for Schubert was highly successful. Some of the transcriptions are quite straight, like *Der Doppelgänger*; others are more elaborate and almost become original pieces by Liszt—though the transcriber always tried to bring out the poetical meaning of the texts of the songs in making his piano versions of them. As such the transcriptions are welcome, even though they may have been replaced for modern audiences by gramophone records of the original versions of the songs; and this record gives us a very fair selection of them, with many contrasts of moods. Though a British pianist by birth, John Bingham plays little in this country, and this is his first British recording. He plays most sensitively, with a fine sense of atmosphere; he makes light of the technical difficulties, especially in passages where the voice part has to be played in the middle between figures on both sides of it, and my only criticism is that he sometimes puts in ritardandi which are not marked in the score. But this is the only modern recording of these pieces which I have been able to trace, and the recording itself is excellent, clear and full throughout. John Bingham also contributes perceptive programme notes to the sleeve. [A: 1] *Humphrey Searle*

SCHUMANN: Symphony 3 in E♭, Op. 97
'Rhenish' □ **The Bride of Messina, Op. 100**
Philharmonia | Mutl
HMV ASD3696' (C) (£5-40)

Both performance and recording of Mutl's 'Rhenish' have been pretty severely criticised elsewhere, but I found the reading strongly appealing in its youthful, keen way. I especially liked the tempo for the second movement, which underlines the Ländler basis, and there is much grandeur in the Cologne Cathedral depiction. As to the sound, this struck me as solid and clear, with good depth—certainly no problem with the Asak/Grace/Linn.

My comparisons took in the two Berlin versions on DG, by Karajan and Kubelik; the latter is perhaps the most warmly personal of modern recordings, where Karajan sounds cold. The Dresden/Sawallisch cycle on EMI is still listed as a boxed set. [A: 1] *Christopher Breunig*

ROBERT SCHUMANN; LIEDER ALBUM VOLUME 3. Settings of poems by Byron, Eichendorff, Goethe, Heine, Lenau, Mörike, Shelley, Von Schiller etc.
Dietrich Fischer-Dieskau (bar) | Christoph Eschenbach (pno)
DG 2740 200 (3 records) (£11-00)

Most of this album is devoted to the later works of Schumann, when he returned with renewed interest to the Lied, and vocal composition became his main preoccupation, whereas he had previously shown greater interest in piano music and orchestral works. He wished to compose on a larger scale and to write operas and large choral works, and at the same time his intense interest in the relationship between words and music made him keener to develop the Lied in a way which was to foreshadow the works of Hugo Wolf. Miniatures like 'Der schwere Abend'

(The oppressive evening) show a tremendous advance in style from his earlier works, and reveal a feeling for words which may surprise those who are only familiar with his previous compositions. At the same time the piano accompaniments are much less formal and point the words with great significance.

He also turned his attention to writing ballads, and the most famous example that he wrote in this particular genre is probably 'Der Handschuh', a setting of a poem by Von Schiller, based on a story by Ronsard which also formed the subject of English poems by Leigh Hunt and Browning.

The indefatigable Dietrich Fischer-Dieskau was in magnificent voice when this album was recorded and the accompaniments are superbly played by Christoph Eschenbach, who is in every way a worthy partner. The recording is particularly good with the right balance between voice and piano, and a wide dynamic range is achieved without the slightest suggestion of over-modulation at any point. The silent surfaces are in the best tradition of Deutsche Grammophon, and altogether I have no hesitation in giving this album a double star. [A*: 1*] *John Freestone*

SIBELIUS: Symphony 1 in e, Op. 39 □ **'Rakastava', Op. 14**
Moscow Radio SO | Rozhdestvensky
HMV 'Melodiya' ASD 3672 (£5-40)

Despite keen competition, especially from Boston SO/Davis (9500 140) and Bournemouth SO/Berglund (ASD 3216), this performance of Sibelius' First Symphony is well worth considering. At once full-blooded and convincingly shaped, it strikes a persuasive balance between emotional indulgence, which in this work can easily get out of hand, and symphonic virtue. The latter is strongest, quite rightly, in the opening movement: did any of the Romantic nationalists achieve a finer sonata form? Rozhdestvensky gives full value to *ma non troppo* in the *Andante* introduction and finds just the right pace for the *Allegro energico*—the right current, too. The dangerous tempo change for the second subject in the finale is successfully accommodated by avoiding extravagance. *Rakastava* is also played impressively, only here I was distracted by some internal post- and pre-echo and by one or two touches of conspicuous engineering. In general, though, the recording is very acceptable, reverberant and atmospheric rather than clinical, but with all essentials clearly presented. A big, spacious sound, but seldom overbearing. [A/B: 1] *Hugh Ottaway*

SIBELIUS: Symphony 4 in a, Op. 63 □ **'Belshazzar's Feast', Op. 51***—concert suite □ **Romanze in C, Op. 42***
Moscow Radio SO | Leningrad PO | Rozhdestvensky
HMV 'Melodiya' ASD 3699 (£5-40)

This is an interesting performance of the Fourth Symphony, but few will find it as convincing as that of the First reviewed above. I have never encountered so extravert a view of the Fourth before, and in the finale an 'unbuttoned' Rozhdestvensky engages in some rather careless exuberance of a kind that results in crudities, however laudable the vitality. In short, there is a certain want of poetry and inwardness—poetry, as distinct from the almost fulsome string tone experienced here. It is difficult to tell how far this string quality is due to the recording (1975). I was often aware of a boosting of the strings, especially the violins, sometimes in a way that falsified dynamics as well as the intended balance. There is a good deal of rather obvious engineering, which further precludes a positive recommendation.

The 1966 recording of *Belshazzar's Feast* is far superior: somewhat close, perhaps, but beautifully clean and clear with excellent colouring and a very good presence. The performance, too, is in a different class, as is that of the *Romanze in C*. The latter is marred by some internal pre-echo. Try to hear before buying. [A/B: 1/2] *Hugh Ottaway*

SIBELIUS: Pelléas et Mélisande—Incidental Music, Op. 49 □ **The Tempest—Overture & Suite No. 1, Op. 109: 1/2**
OSR | Stein
Decca SXL6912 (£5-25)

The reputation of Decca orchestral recordings was largely built on their work at the Victoria Hall Geneva: a stream of recordings by the Suisse Romande during Ansermet's conductorship. Even today, it

strikes one as odd to see Weller, Sawallisch or, as here, Horst Stein named on an OSR sleeve. But as these Summer 1978 recordings show, superb sound remains a constant—as in Sibelius' *mlni-Tapiola*, his music for a Shakespeare presentation in 1926, at Copenhagen's Royal Theatre. Or in the densely orchestrated 'At the castle gate' from Op. 49. Stein's robust performances are admirable, and the items are successfully reproduced for the medium. [A*: 1] *Christopher Breunig*

J. STRAUSS: 'Eine Nacht in Venedig'

Bini | Dönch | Steiner | Scovotti | Brendel | Stricker | Schary | Trebitsch | Hungarian Radio Chorus and State Orchestra | Märzendorfer

Acanta EB 22.527 (2 records) (£6.32) (Rediffusion)

The musical interest of this recording of Strauss's 9th operetta, written 1882/3, is that it goes back, with the guidance of the German Johann Strauss Society and Hans-Ullrich Barth, to the original score—as Strauss would have known and conceived it and not as heard via innumerable editions since. As usual, with the perspective of time, the faults that impelled the tamperings seemed to have been minimised and the original appears as the freshest of all versions. This is one of those zestful, high-spirited performances that the mid-Europeans give to their operettas, high-trotting, excitable, eagerly vivacious, as if to convince that the champagne has not lost its sparkle. Toned down a little, made more human, it would be even better. There is less of the subtlety of character that is to be found in the old Ackermann performance with Schwarzkopf (SXDW3043); otherwise it is a very efficient and lively rendering. The performance is matched by, again, a typically German recording, almost in pop style, close-miked, crisp, clean and at first hearing immensely impressive and hi-fi. But, artistically, it has little sense of reality, nothing of the stage about it. Voices and orchestra are as clear as could be and fairly leap from the speakers, but it is all on one level. One feels that all that was needed was for the principals to step back two paces and the rest six and it would have been a high-class production. That said, it is good, highly competent and gives a very clear picture of the score. [B: 1] *Peter Gammond*

RICHARD STRAUSS CONDUCTS RICHARD STRAUSS: Don Juan, Op. 20 □ Tod und Verklärung Op. 24 □ Till Eulenspiegels lustige Streiche, Op. 28 □ Also sprach Zarathustra, Op. 30

Orchester des Reichssenders Berlin | Berliner Funk-Orchester | R. Strauss

Acanta DE 23.055 (2 records) (£6.32) (Rediffusion)

Although Richard Strauss is now chiefly remembered as a great composer, it should be emphasised that during his lifetime he was equally famous as a conductor, and as such toured Europe and America with conspicuous success. He was engaged at Bayreuth as early as 1889 and conducted performances there of *Parsifal* and *Tannhäuser*. Stravinsky, who was very critical of Strauss as a person, wrote 'I watched him at rehearsal and admired the way he conducted... His ear and musical feeling were incorruptible'. Fortunately for posterity Strauss recorded a number of his own works, and these historical discs, made in 1932 and 1939, have now been well transferred to produce an album of the greatest interest to musicians. The recording is of course dated, but one can hear the phrasing and the tempi which Strauss adopted and, although restricted by the technical limitations of the day, something of the wide dynamic range which he required can also be heard. Altogether this is a fascinating memento of one of the great musical figures of his generation. [H: 1*] *John Freestone*

SULLIVAN: Part-Songs

The Coda Singers | Colin Howard

Rare Recorded Editions SRRE179 (£2.90)

The increasing number of people who are aware of and concerned with the lack of recordings of our leading composers of the past, especially of Sullivan (who now has a Society dedicated to his revival beyond the Savoy Opera area), will welcome this recording of his unaccompanied part-songs. Very few have been in the catalogue before beyond the well-loved *The long day closes*, which opens this programme. The front of the sleeve proclaims that these are the 'complete' part-songs (17 altogether),

I will not argue the point, though various sources do list several more—most of them carols and the like. The music has considerable variety to offer and yet a degree of predictability. Apart from one or two items like *The long day closes* there is little inspired Sullivan. But it is all excellently written and rewarding to sing and hear. The Coda Singers, an amateur group from Croydon formed in 1972, are well disciplined and a high standard of performance is maintained that compares well with professional outfits. The recording, apart from faint echoes and a tendency to distort at louder moments, is generally of a good and pleasing quality. So, for the Sullivan admirer, this is a rewarding and valuable issue to add to his meagre LP collection. [B/C: 1/2] *Peter Gammond*

SULLIVAN: 'The Chieftain'

Sawston Light Opera Group | David E. H. Adams

Rare Recorded Editions SRRE181/2 (2 records) (£5.80)

Further to our remarks above, here is another Sullivan rarity which the dedicated enthusiast will be eager to hear. *The Chieftain* of 1894 was a revised version of the early *The Contrabandista* of 1867, which Sullivan wrote with F. C. Burnand and which was produced by the German Reed Company. The revision combined the existing first and second acts and added a new second act which was rather weak. A new version has now been prepared by David Eden, who has strengthened the text and restored all the music Sullivan wrote for it, including some dropped items. Although a failure by G & S standards (97 performances) it is a lively little work with pleasant and amusing moments. The enthusiast will want to hear it. The recording was made by BBC engineers during a performance at Sawston in November 1978. They capture, revealingly, a typical amateur performance with all its faults, shortcomings and incidental noises; including the inevitable out-of-tune strings. Which is not to say that it does not have its moments of togetherness and insight. Simply be warned that this is not a professional production but if you are keen to hear *The Chieftain* it may well be worth having. I will not attempt a normal rating. *Peter Gammond*

FRANCISCO TARREGA: Guitar Music

Alice Artzt (gtr)

Meridian E77026 (£3.45) (Selecta)

Miss Artzt's previous recording for Meridian (E77006) of music by Sor gave me great pleasure, and was also praised by other critics. This one is in a sense very different: when Fernando Tarrega began his crusade to rehabilitate the guitar in public esteem, it had fallen to a very low ebb. There were fine players and composers, but the rise of romantic pianism tended to obscure them. Tarrega toured round, proving that the guitar could hold its own in any company, making use for this purpose of all the devices of romantic expression. This way of playing has been carefully researched by going back to the earliest texts and seeking out ancient recordings. Miss Artzt has also acquired a guitar by Don Antonio de Torres, made in 1858; and it happens that Tarrega played an instrument by the same maker. Miss Artzt has even had special strings made to increase authenticity, and explains how the sound and feel of the instrument taught her about the way it 'asked' to be played. The sound is indeed different from that of the modern guitar: Miss Artzt speaks of its 'very fluid mellow tone', and that is exact. It is also less rich in the bass than modern instruments.

Hence, we get a highly romantic approach, not only to Tarrega's music, but also to the second side, on which we are given transcriptions from Haydn, Handel, Schubert and Mendelssohn—indeed, you might sample first the last item—a *Canzonetta* from Mendelssohn's String Quartet in E minor, Op. 44 No. 2—in order to experience Miss Artzt's delicate and flexible technique. She describes herself as 'having fun' making this record, and perhaps that is the best spirit in which to approach it: these are short pieces, full of scoops and *portamenti*: a reconstruction of a period, and a vastly entertaining one.

Mme Maria Luisa Anido has described Miss Artzt as 'the best woman playing the guitar in the world', and I second that—adding that she need fear no male competition, either. A pleasantly simple recording via one stereo AKG mike and a Nagra nicely complements an interesting achievement. [A: 1] *Peter Turner*

TCHAIKOVSKY: Swan Lake—Suite, Op. 20 □

The Sleeping Beauty—Suite, Op. 66a

BPO | Rostropovich

DG 2531 111 (£5.06)

Like Karajan's own 'Schwanensee—Dornröschen' coupling for DG, the sleeve to this companion disc to Rostropovich's *Nutcracker/Capriccio italiano* recording has the added allure of a metallic silver base. Hint of something extra-special? The *Lilac Fairy* introduction to Op. 66a explodes into the room, in this superlative new version produced by Cord Garben, after which the earlier Berlin Philharmonic coupling seems hollow and dated in technical quality.

Karajan's pacing of 'Danse des cygnes' feels only half that of Rostropovich's, notwithstanding timings of 1' 43"/1' 24". A fascinatingly mannered approach. Yet on the whole the Russian's performances must be preferred, not just for exciting sound, but for vitality, freshness, and bold colouring. Excellent cello and violin solos by first-desk players. The recording invites high replay levels, and my only reservation is that the West German pressing supplied had a slight background. Such magnificent versions of hackneyed scores set a new standard. [A*: 1*] *Christopher Breunig*

TELEMANN: Ouverture in G □ Solo (Suite) in C from 'Essercizi Music' □ Ouverture in E flat □

Solo (Suite) in F from 'Essercizi...'

Bradford Tracey (hpd)

Harmonia Mundi 065-99 788 (£4.99) (Rediffusion)

Despite the slightly patronising style of the cover-notes, we find that Telemann is able to convey depth and substance through the solo harpsichord, just as he is through chamber-music; it is right that he should be represented by *Ouvertüren* as well as solo suites, too, for these were his two principle keyboard forms.

Bradford Tracey is skilful technically, and his touch makes the best of a rather heavily-voiced authentic Hamburg instrument (Christian Zell, 1728). However, his sense of line and of movement lacks the elegance and the fluidity of line that is to be associated with excellence in harpsichord-playing, and as a result, much of the beauty of the music fails to come across. The *Allemanda* of the C Major Solo sounds plodding and boring, where, with a little more poetic vision and sympathetic treatment, it could have sounded refined and sensuous.

Recording is good, clear, proportioned and tidily edited, if just a little detached and remote. Documentation is not very thorough on the actual works, but Telemann is still difficult ground for the scholar. [B: 2/3] *Stephen Daw*

TELEMANN: 12 Fantasias for solo flute

Jean-Pierre Rampal (flt)

RCA 'Erato' STU 71030 (£5.49)

There is no complete recording of Telemann's Fantasias for solo flute in the catalogue and so this release is especially welcome. Although not in the same league as Bach's music for solo violin or cello, these short fantasias nevertheless also present a good case for a melodic line being complete in itself, with all the harmonic and even some of the rhythmic interest being implied. A less-than superior player, however, does have difficulty in balancing successfully on the tightrope and communicating the form of the works amidst the leaps, scales, broken chords and tempo changes. Rampal, fortunately, is a master and the music is laid bare, although his muscular tone and aggressive approach may not appeal to all. Repeats are suitably ornamented, tempi appropriately chosen, and only occasionally does one feel that the melodic flow is obscured by a particularly florid piece of decoration.

The clean miking places Rampal in the centre of rather a resonant acoustic at a reasonable distance from the listener. However, the imagery is somewhat anomalous, different notes consistently appearing to come from slightly different points in space, for instance. There is also some (very faint) background noise, like distant traffic or air conditioning or something. The recording has an interesting pedigree. Originating from Nippon Columbia (Denon) in Japan, it was engineered by one Masao Hayashi (Hideaki Hayashi was one of the originators of the Denon PCM recording system) and therefore there could be a faint possibility that it has been recorded digitally (although this Erato disc may well have been mastered from an analogue copy). Perhaps someone at RCA could elaborate on these background details? [A: 1*] *John Atkinson*

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VAUGHAN WILLIAMS: Concerto Grosso □
Concerto for Oboe and Strings / **WARLOCK: Capriol Suite** □ **Serenade for Strings**
 ASM | Marriner | Celia Nicklin (obo)
 Argo ZRG 881 (£5-25)

I have yet to hear a recording from Neville Marriner and his Academy which is not worth the hearing; and this one is no exception. To take the Oboe Concerto first: this is a heavenly piece, a distillation of VW's musical essence. Lady Barbirolli made it very much her own; but here is a new and different account from Celia Nicklin, with a sometimes lighter and more ethereal touch, which I found most enjoyable. Indeed, all the works here have been given an individuality of performance without which things so well known as the 'Capriol Suite' would hardly be worth recording again. This is the hallmark of a Marriner version: one never gets a rehash of others' versions, and there is always that subtlety of direction and feeling of communication between conductor and players. There is something special about the Academy.

The programme ends with Warlock's brief 'Serenade for Strings' in a version which has made me, for one, think more highly of it than I did before; and when that happens I am grateful. I could say the same of the 'Capriol Suite', which is in some danger of becoming hackneyed from over-exposure.

The recording is a distinguished one: a pleasantly natural balance in the concerto, and a realistic spread and detail in all the works. In the 'Concerto Grosso' I detected a certain roughness in the upper register of the violins, and it is always difficult to know whether such things arise from the engineering or from the instruments themselves. In any case the fault is trivial. The sound is unexaggerated and clean: one can ignore the recording and concentrate on the music. [A: 1] Peter Turner



Davis

VERDI: 'Un Ballo in Maschera'
 Carreras | Wixell | Caballé | Payne | Ghazarian | Summers | ROH Orchestra and Chorus | Davis
 Philips 6769 020 (3 records) (£12-79)

In *Un Ballo in Maschera* Verdi, reacting perhaps to the lukewarm reception of *Simon Boccanegra*, set a rather dated drama of situation: King Gustav III of Sweden is killed at a masked ball (historically true) by his friend who suspects an affair between his wife and the King (false). Regicide was too touchy a subject so the King became an English Earl, Governor of Boston, Massachusetts in the 17th century etc, etc: bad old melodrama. Yet the work was (rightly) a great success, for Verdi fused an ambiguous text of explosive feelings and a powerful clash of Darkness and Light with music of superb orchestral richness (bred of a new-found polyphony)

as well as his sweeping, supercharged melodic lines. These qualities have fared well in the theatre and on record.

This recording benefits from the live performance-bred contributions of the Covent Garden chorus and orchestra. The soloists are the (now typical) amalgam of international stars. All sing well—at times excellently—and yet the whole does not catch fire. José Carreras' Earl 'Riccardo' comes nearest the spark of true excitement in 'Non sai tu che se l'anima mia' and in the work's centrally important love duet (the most passionate Verdi ever wrote). The part of Amelia (Renato's wife and loved by Riccardo) with its remarkable swing towards Darkness in its unorthodox minor key arias, is sung by Montserrat Caballé. Her *mezza voce* is still exquisite, but the voice hardens when pushed both high and loud and her portrayal lacks specific character. Sadly the same must be said of Ingvor Wixell as Renato, the faithful friend turned assassin by jealousy. In his rendering the crucial, frightening 'Eri tu' is very well sung, but far too carefully to horrify. Colin Davis draws out all the score's sensual beauty and weight, though some slower tempi deprive the underlying pulse of drive and make the singers' task difficult. Philips sustain their recording reputation with a spacious, warm sound in an ample ambience and with refined, clear detail—and those beautifully silent surfaces we all desire. [A: 2]

Benedict Sarnaker

VICTORIA: Responsories for Tenebrae
 Pro Cantione Antiqua, London: Kevin Smith and Timothy Penrose (c-ten) | James Griffett and Ian Partridge (ten) | Brian Etheridge and David Thomas (bass) | Bruno Turner (dir)
 Harmonia Mundi 065-99 800 (£4-99) (Redifusion)

The office of Matins and Lauds for the three days before Easter (*Triduo ante Pascha*) were, until recent years, transferred to the late evening of the previous days, in order to facilitate attendance by the congregation. In Matins there are three Nocturns, each with three lessons followed by a Responsory—making 27 Responsories in all. Those from the First Nocturn, however, were sung to a special tone, so that Victoria, a strict liturgist, set only the remaining 18.

These Responsories produced some of the greatest masterpieces of Gregorian chant; and they similarly inspired the polyphonists who followed them. All are concerned with the suffering and dereliction of Christ in His betrayal and crucifixion, and hence are set to music of deep mourning—with, in the office for Holy Saturday, just a hint of the coming triumph of Easter. Victoria managed to include a vast tenderness with no hint of sentimentality in his settings: they constitute a sustained display of musical virtuosity, yet with a character totally suited to the lofty subject with which they deal: this series, as such and as individual items, is a masterpiece worthy to take its place in an era when much of the greatest polyphonic music was composed for the Church. It is austere in its purity, with no individualistic display: at times unbearably beautiful.

One is more accustomed to hearing this music performed by a full choir; but here is a recording to prove that it need not be. Indeed, the restriction of forces seems to induce a greater concentration on the texture and exquisite appropriateness of the music—at least when performed as it is here. As the recording illuminates that texture, this record is a treasure. [A: 1] Peter Turner

VIVALDI: Concertos Op. 3 Nos. 1, 4, 9, 10 □
Concerto P 367 for four violins
 Gérard Jarry, GINETTE Carles, Huguelle Déat, Jean-Noël Molard, Monique Vallet (vlns) | Paillard CO | Paillard
 RCA 'Erato' STU 70641 (£5-49)

Although the concertos of Op. 3 *L'Estro Armonico* are well represented in the catalogue, record-hunters coming fresh to the music of Vivaldi could do worse than select the present recording. The performances are enormously rich and vital with tempi imaginatively chosen and dynamics capably managed. The Orchestre de Chambre, under the direction of Jean-François Paillard, offer sumptuous, if modern-sounding string tone, and the overall impression is one of magnificence and grandeur. The recording is lifelike and nicely balanced. It is set in a splendidly resonant environment. The concerto RV 553, P 367 in B flat (Turin), which completes this programme of concertos for

four violins, may be regarded as an added bonus. Warmly recommended. [A: 1] Victor McAloon

VIVALDI: 5 Concertos for Organ. RV 541, RV 542, RV 554, RV 766, RV 767
 Marie-Claire Alain (org) | Piero Toso (vln) | Alessandro Bonelli (obo) | I Solisti Veneti | Scimone
 RCA 'Erato' STU 71060 (£5-49)

The playing here is accomplished and often exhilarating. The music does not consistently show Vivaldi at the peak of perfection but on the whole the invention is sufficiently vital to sustain the listener's attention. The intricately wrought triple concerto RV 554 is by far the most attractive of the five works, exhibiting much delightful dialogue between the soloists. Several of the concertos for organ and violin are adaptations of double violin concertos, thus explaining the violinistic figuration for the keyboard instrument. Handel used a similar technique when adapting some of his Opus 6 Concerti Grossi to form concertos for organ and orchestra.

No information about the organ used in this performance is given in the sleeve notes, but judging from the sumptuous sounds that emanate from this pleasing instrument I would say that it was of the chamber variety and wholly suited to music of this genre. The recording engineers have achieved a remarkable balance between the soloists but just occasionally the orchestral forces tend to drown the soloists in *tutti* episodes. Nevertheless, this production is an invaluable addition to the repertoire of Vivaldi concerto recordings and as such will be of enormous interest to musicologist and music-lover alike. [A: 1] Victor McAloon

VIVALDI: Flute Concerto Op. 10
 Jean-Pierre Rampal (fl) | I Solisti Veneti | Scimone
 RCA 'Erato' STU 70303 (£5-49)

Our 'Basic Classical Library' in the *HFN/RR Annual* lists two Op. 10 ('original instruments') recordings, by Stephen Preston/AAM/Hogwood and Jean-Claude Veilhan/Grande Ecurie/Malgoire, but both are rather idiosyncratic, Preston playing a one-keyed flute, Veilhan a recorder. For a 'modern instruments' recommendation, Severino Gazzelloni with I Musici on Philips (1969) has always been a safe bet but now comes a slightly earlier offering (1966) from Rampal and the 'other' Italian Group (of the same vintage as Rampal's Turnabout recording, which, unfortunately, I have not heard). Though both soloists are lyrical and sure-footed, Rampal is far more adventurous—though a little inconsistent—than Gazzelloni when it comes to decoration and this Erato recording is ahead on that count. However, the Philips is slightly better recorded, having a richer string sound and more space around the instruments. You pay your money and make your choice—my choice, though, is still Stephen Preston on Oiseau-Lyre DSLO 519. [B: 1] John Atkinson

MALCOLM WILLIAMSON: Procession of Psalms □ **Agnus Dei** □ **Morning of the Day of Days** □ **World at the Manger**

Worcester Cathedral Choir | Worcester Festival Choral Society | Donald Hunt (dir) | Hazel Holt (sop) | Alastair Thompson (ten) | Christopher Keyte (bass) | Paul Trepte (org)
 Abbey LPB 805 (£3-72)

Many composers—often the greatest among them—have felt the need to re-set liturgical texts: it has been done notably in our times, by Vaughan Williams, Benjamin Britten and others. Here the Master of the Queen's Music presents some of his contributions; and it would be nice to be able to say that they are worthy of their theme; but whether one finds them so depends upon one's taste for the pop-style, trendy, demi-semi-jazz rhythms which many find it desirable to introduce these days—in response, one supposes, to what they regard as popular needs and demand. (I am avowedly not of that number.)

The 'Procession of Psalms' contains no psalms, unless a quotation from the *Benedictus* can be so called: it is otherwise made up of hymns. The *Agnus Dei* is brief and staccato. 'The Morning of the Day of Days' is an Easter cantata, with recitations from the Scriptures and hymns; 'The World at the Manger' is a Christmas cantata, which includes a setting of the *Magnificat* for solo soprano, more hymns—the final two by the composer—and during the hymn 'Behold, the great Creator makes' there is a setting of the 'Hail Mary'. The *Magnificat*

is referred to as 'Mary's Aria', and there is also an aria for Joseph—bass solo. You will love it or hate it, I suspect.

Whatever your view, you will find it immensely well done: there is some very fine solo and choral singing here, the latter deploying considerable forces, which never fail to appeal when controlled and well-rehearsed. Therefore, if you like the music, you will vote this record tops—almost, one might say, of the pops. And the recording is a good one, too: no shade of overload even in the big climaxes, and the soloists rendered naturally and tastefully. I therefore rate it highly, and leave the decision to you. [A: 1] *Peter Turner*

classical collections

Vocal

100 YEARS OF BAYREUTH (1876-1976): The Great Voices—The Celebrated Conductors (1931-1944)

Frida Leider, Maria Müller (sops) / Margarete Klose (alt) / Max Lorenz, Franz Völker (tens) / Jaro Prohaska (bar) / cond. Elmendorff / Furtwängler / Knappertsbusch / Muck / Rother / R. Strauss / Tietjen etc
Acanta HB 22.863 (4 records) Ⓜ (£12-64) (Redifusion)

This is a fine selection of Wagnerian excerpts sung by the greatest Bayreuth singers and conducted by the most distinguished Bayreuth conductors of the period 1931-1944. There are passages from all the major works of Wagner, from *Der fliegende Holländer* to *Parsifal*.

All the artists sing with the greatest authority, and with the conductors of the stature of Furtwängler and Richard Strauss fine performances are assured. Many of the recordings were made during the years of the Second World War, and are little-known in the British Isles for this reason. There is a sizeable excerpt from *Götterdämmerung* recorded at a live performance at Covent Garden in 1938 with Frida Leider singing Brünnhilde in her last appearance at the famous opera house, and this is particularly interesting as it shows the great dramatic soprano in action on the stage rather than singing in the less congenial surroundings of the recording studios of those days. Richard Strauss conducts Max Lorenz in the final scene from *Parsifal* and this too has great significance, showing Strauss as a very fine conductor of Wagner's music and underlining his long association with Bayreuth, which started before the turn of the century. The dubbings have been well done, reducing surface noise to a reasonably tolerable amount without sacrificing too much of the treble. Naturally the orchestral sound is dated and cannot compare with modern stereo recordings, but the voices sound well, and provide interesting souvenirs of the Bayreuth performers of the thirties and early forties. A leaflet is enclosed giving biographical details of the principal singers and conductors in English, French and German. [H: 1/2] *John Freestone*

CZECH CLASSIC CANTATAS

SMETANA: Czech Song / DVORAK: Hymns / FOERSTER: May*

Soloists / Czech Phil Chorus / Prague SO / Kosler Supraphon 1 12 1437 (£3-50) (Redifusion)*

The first two of these three cantatas are basically nationalist pieces, each in its way celebrating the Czech spirit. The third, Foerster's *May*, is the most interesting, perhaps because it departs from this celebratory vein and concerns itself with a romantic subject which it deals with in a way that occasionally reminds one of Janacek's *Amarus*. The Smetana is predictably exhortatory and beside it, Dvorak's work, a fairly early one, sounds unexpectedly subdued. The recordings were made in 1972 and 1973 but, despite this, are lacking brilliance and defini-

tion, particularly in the orchestra. Again, it is the Foerster which comes off best, though even that is relatively poorly when compared with the best modern recordings. This lacklustre sound deprives the performances of their real impact, though it is not all the fault of the recording. The Dvorak, in fact, is rather limp and suffers from a break at the end of side one. Newer, sharper performances and better recording would be welcome since none of this music is otherwise to be had, and in the case of Foerster is well worth getting to know. [C: 2]

Kenneth Dommelt

KATHLEEN FERRIER

J. S. BACH: Have mercy, Lord, on me (St. Matthew Passion) □ Ah, tarry yet my dearest Saviour (Cantata No. 11) / BRAHMS: Four Serious Songs (Op. 121) (arr. Sargent) / GRUBER: Silent Night, Holy Night (arr. Fagan) / O Come all ye faithful (arr. Fagan)

Kathleen Ferrier (con) / Various Orchestras and conductors

Decca LXT 6934 Ⓜ (£5-25)

The Bach arias and the two carols are re-recordings from the original 78s and they sound very well, having been meticulously transferred. The *Four Serious Songs* of Brahms were recorded by Kathleen Ferrier with piano accompaniments by John Newmark and were included in Decca album set AKF 1-7, but here the great singer is accompanied by the BBC Symphony Orchestra conducted by Sir Malcolm Sargent, who was responsible for the orchestral arrangement. They were given at a concert held in the Royal Albert Hall on January 12th 1949 and are issued by arrangement with BBC Records. The singing throughout this disc is superlative, and although the purist might question the orchestral accompaniment in place of the piano for which Brahms wrote, there is an added tension in this live performance which makes me prefer it to the more perfect studio recordings sometimes heard, despite the fact that there is a good deal of surface noise, and the usual coughs etc, inevitable when a large audience is present. Like all true artists Kathleen Ferrier derived great inspiration from an audience and the recording in the Royal Albert Hall is tremendously exciting and deeply moving. I recommend this disc wholeheartedly to the many music lovers who will, I am sure, be happy to accept the shortcomings of the recordings in view of the greatness of the performances. The British Broadcasting Corporation and the executors of Kathleen Ferrier's and Sir Malcolm Sargent's estates have kindly agreed to donate the royalties due to them from this recording to the Malcolm Sargent Cancer Fund for Children. [H: 1*] *John Freestone*

COUNT JOHN McCORMACK: 'The Years of Triumph'

John McCormack (ten) / Various accompanists, supporting artists and orchestras

Parlo GEMM 155-60 Ⓜ (6 records) (£17-94)

This is a fine selection of the best of the McCormack recordings. The great tenor made some wonderful discs which are worthy of a place in the collections of all connoisseurs of vocal art, and 122 of these have been well transferred to make up this album. A note on the back of the box states that every effort was made to ensure correct replay pitch, but despite this there are a few bands which are almost certainly incorrect. It is generally accepted that the tenor followed the example of many other artists in singing 'Che gelida manina' a semitone down, and it is almost certain that he did the same with 'Salve dimora' from *Faust*. The 'Flower Song' from *Carmen* is also apparently pitched correctly a semitone lower, since the other records in the same matrix series are certainly sung in the original key, and the 'Flower Song', if played at the same speed as the others, emerges as definitely transposed. The voice also sounds right at the lower pitch. Another example is 'Lolita', which is at least a semitone sharp as reproduced here. However, the great majority of the bands are correct, and there are many superb performances, such as the peerless 'O sleep! Why dost thou leave me?', with its miraculously breath control.

The notes are unfortunately inaccurate. It is incorrect to say that the early G & Ts ever appeared with a light blue Zonophone label. A few were issued under the name of John O'Reilly as green label Zonophones. It is also ridiculous for even

the most passionate devotee of McCormack to describe him as 'the most famous of all singers'. However, the main thing is that the album contains countless examples of really fine singing which will prove a revelation to those unfamiliar with the singer's early operatic work, and for this reason I recommend it to all lovers of vocal art. [H: 1/2]

John Freestone

THE LADY MUSICK

Works by Edwards, Campion, Dowland, Danyel, Morley, Pilkington, Jones, Bartlett
Emma Kirkby (sop) / Anthony Rooley (lute)
Oiseau-Lyre DSLO 559 (£5-25)

The arts have long been represented by feminine figures. Music, with Geometry, Arithmetic and Astronomy, was one of the Four Ways to enlightenment which, with Grammar, Rhetoric and Dialectic, made up the liberal arts upon which education was based. The universe proceeded in perfect harmony; hence music was a participation on earth in the divine activity of creation, and a means to attain spiritual vision. Even we sometimes refer to a musical work or performance as 'heavenly'!

That is no bad word for most of the music here: take Dowland's exquisite 'I saw my lady weep', or Morley's treatment of the same theme in 'I saw my lady weeping'. There is a marvellous unity of words, melody and accompaniment which truly does transport through music to aspiration; and the sympathetic rendering of the songs here encourages that approach. Contemporary decorations are used with discretion, and the interpretations are based upon what is known of the fashion of those times: little or no vibrato in the voice; minimal or no *diminuendo* at the end of the phrases. Miss Kirkby's excellent diction makes for admirable text clarity.

The voice is perhaps a shade too much reinforced against the lute, but that is my only criticism—a trivial one—of the recording; unless one feels that the two performers are excessively separated in space. This is a lovely record. [A: 1] *Peter Turner*

THE ART OF REGINA RESNIK

Excerpts from Carmen, Falstaff, † Die Fledermaus, Die Walkure, Elektra,** Il Trovatore, Don Carlo*
*Regina Resnik (con) / Royal Opera House Orchestra / †New Symphony Orchestra / †Fernando Corena / Edward Downes / *Waldemar Kmentt / *VPO / *Karajan / **Birgit Nilsson / **VPO / **Solti*
Decca SXL6805 (£5-25)

I do wish that record companies, including Decca, could bring themselves to be painstaking or honest enough to give the proper details on records. This one is simply marked © 1979 and © 1978, but I cannot believe that they brought the Vienna Philharmonic and Kmentt, Nilsson, Karajan and Solti together again to do an occasional track when recordings made in 1962 and 1967 were available; and, I assume, are used here. These are then mixed in with a session or two (perhaps incomplete) with Edward Downes and the Covent Garden Orchestra to make up a very respectable, thoroughly excellent LP that indeed shows the art of a very great singer to perfection. Why then the secrecy; even if my assumptions are wrong why not some information about sessions involving so many interesting people? This is, after all is said and done, a splendid and enjoyable record. Resnik sings with a wonderful control and deep insight into each role she plays, a thorough professional, a very great artist. Her *Carmen* (which she also recorded in 1963 under Schippers) is as good as any around; her *Die Fledermaus* is sparkling (she was a fine Orlofsky); her deeper Strauss and Wagner roles are thrilling. Good quality throughout and a well varied programme. [A: 1] *Peter Gammond*

Not Vocal

MAURICE ANDRÉ

Six Baroque Concertos by Albinoni (2), Stoezel, Tartini & Vivaldi (2)

André (tp) / Orchestre de Chambre Jean-François Paillard / Paillard / Orchestre de Chambre de la Radio-diffusion Sarraise / Ristenpart
RCA 'Errato' STU70290

Works for Trumpet & Organ by Albinoni (2), Bach (2), Gervaise (2) & Viviani
André (tp) | Marie-Claire Alain (org)
RCA 'Erato' STU70299
 Trumpet Concertos by Hamal, Loelliet, Valentini & Vivaldi

André (tp) | Les Soloists de Liège | Lemaire
RCA 'Erato' STU70450
 Works for Trumpet & Organ by Krebs, Loelliet, Telemann & Vivaldi
André (tp) | Hedwig Bilgram (org)
RCA 'Erato' STU70488

Suites in B & D minor, BWV1060 & BWV1067 by J. S. Bach
André (tp) | Fernandez (vln) | Orchestre de Chambre Jean-François Paillard
RCA 'Erato' STU70511

Works for Trumpet & Organ by Albinoni, Bach, Martini (2) & Walther
André (tp) | Marie-Claire Alain (org)
RCA 'Erato' STU70539
 Works for Trumpet & Organ by Albinoni, Corelli & Handel (2)

André (tp) | Marie-Claire Alain (org)
RCA 'Erato' STU70594
 Trumpet Concertos by Aroutounian & Hummel
André (tp) | Orchestre de l'Association des Concerts Lamoureux | Mari | Orchestre Philharmonique de l'O.R.T.F. | Suzan
RCA 'Erato' STU70915

Works for Trumpet & Organ by Boismortier, Handel, Telemann & Valentin
André (tp) | Hedwig Bilgram (org)
RCA 'Erato' STU71021 (£5.49 each)

Autumn is the André season. For admirers of he who is rightly billed on some of these records as 'le Grand Trompettiste de Notre Temps', RCA offer a second or first chance to acquire a number of superb discs featuring André with various ensembles and organists. Unfortunately space does not allow us to give a full review nor even to trace all the previous issues but the discs are dated between 1965 and 1977 (listed numerically above). The technical quality throughout is excellent with smooth surfaces and nothing I sampled fell below A, and the occasional star is deserved. The performances are often astonishing; the high-flights of André's playing apparently unconcerned with the usual limitations of technique. The obvious record to sample, for the non-specialist, is the Hummel Concerto which he plays splendidly; and couples with an interesting and likeable modern work by Aroutounian (b. 1920) which has close associations with Hummel in spirit and style, considerably up-dated. The baroque enthusiast is left to plan his own field-day with so much to choose from and the organ enthusiast will also find considerable pleasures abounding. The pleasure that André gives is through his ability to please the connoisseur by his technical expertise and sense of period; with enough of the common touch and sheer musicality (like that of Galway) to reach out to wider audiences who might be put off by so much Bach and Vivaldi. Look out for a composer called Valentini among the lesser-knowns. A magnificent collection. [A/A*: 1*/1]. *Peter Gammond*

BAROQUE VIOLIN CONCERTOS

LECLAIR: Concerto in C / NARDINI: Concerto in e / VIVALDI: Concerto in c ('Il Sospetto') □
Concerto in a Op. 3 No. 6
 Pinchas Zukerman | LA Philharmonic Ensemble
CBS 76678 (£4.99)

I have always had a soft spot for Pinchas Zukerman's playing: it sounds so essentially musical and scrupulous, but it also has that extravert, spirited quality which has been associated with the virtuoso soloist since the time of Leclair. Yet stylistically, this recording leaves a great deal to be desired. First, the whole approach to tone-production, by both soloist and string accompanists, is totally foreign to the periods of the music; it belongs rather to post-Kreisler twentieth-century schools of playing—schools which have never impressed me in music by Vivaldi, or, indeed, anybody else before Beethoven and Mendelssohn. Second, if Zukerman himself is not here at his most technically secure, the same can also be said of his orchestra, and the fault here is not the soloist-director's own, but that of the individual players. Third, the substantial differences of personality between all three composers are ironed out altogether, so that the essential contrasts between them are barely apparent.

Some listeners will not care too much about any of this, no doubt, and to them the record may be recommended for its bland classicism of approach and for the inclusion of the Nardini—an interesting piece which anticipates the Beethoven and Mendelssohn concertos in some respects, and which suits Zukerman's interpretative style best. Not a patch on Concerto Amsterdam's recent Vivaldi Concertos record (AW 6.42355), however, and there is plenty of spirit there, as well. Fair recording, rather too resonant. [B: 2] *Stephen Daw*

FRENCH COLLECTION 1

CHAUSSON: Poème, Op. 25/RAVEL: Tzigane/SAINTE-SAËNS: Havanaise, Op. 83 □ **Introduction and Rondo Capriccioso, Op. 28**
 Kyung-wha Chung (vln) | RPO | Dutoit
Decca SXL 6851 (£5.25)

The only puzzlement surrounding this record is why it has taken so long to appear; the sessions took place in April 1977. The first side (Chausson and Saint-Saëns Introduction) brings direct competition with Zukerman on CBS, and if Kyung-wha Chung characterises the opening solo more delicately and reflectively than the Israeli player, choice between her firm, light tone and Zukerman's darker, guttier sound must be personal, for both artists are among the greatest. Listen to the way that Chung adapts her tone when doubling the trills with clarinet and flute towards the end of the Chausson; the finely-blended sound is that of a great artist listening to what is going on around her. Yet there is passion too—her attack in the Saint-Saëns Introduction and Rondo Capriccioso, if not quite matched by Dutoit's respectable accompaniment, is formidable, although there is never any hint of swooping vulgarity either here, in the magically 'floated' line at the start of the Havanaise, or in these harmonics later on which are intoned with a ravishingly half-lit quality. The recording is vivid and naturally balanced (the solo image is at just the right distance and beautifully pinpointed laterally; in the Ravel it is brought a little closer), although the general quality might be a shade richer. A rather undistinguished piece of programme-planning, perhaps, and not a disc to play through at one sitting; the musicmaking itself is, however, very distinguished indeed. [A: 1] *Andrew Keener*

FRENCH COLLECTION 2

GOUNOD: Fantasy on the Russian National Anthem / MASSENET: Piano Concerto / SAINTE-SAËNS: 'Africa' Fantasy
 Marylene Dosse (pno) | Westphalian SO | Landau
Turnabout TVS 37127 (£2.99)

More rediscovered nineteenth-century piano and orchestra literature from Turnabout, to which much the same applies as to their disc of Lalo and Pierné, reviewed on page 107. The piano is balanced, in a rather dead acoustic, at considerably closer quarters than the widely-ranged orchestra, whose cellos and basses loom intimidatingly large, and there is really too little breathing-space between the movements of Massenet's Concerto. A late work with more than a passing nod towards Hummel, this possesses a certain charm and is workmanlike enough, although the Finale is a Hungarian Dance of unbelievably dogged tedium; the composer who wrote *bien chanté* at the head of the slow movement was revealing his true artistic personality in the opera house. Unlike the Lalo and Pierné disc, the performances here sound no more than adequate: orchestral intonation is not for the squeamish, and ensemble between soloist and orchestra rocks precariously in one or two places in the Saint-Saëns and the Concerto slow movement.

The Gounod is a dreadful *potpourri* of Tchaikovsky (who also used this Anthem in 1812), Liszt and Saint-Saëns, each at his most trite and bombastic; the threat of a fugue before the coda is mercifully unfulfilled. The fact that recordings now exist of these pieces is, I suppose, of some documentary value, but, sadly, I find it hard to believe that all but the most determined collectors will want to hear this music more than once. [B/C: 2/3] *Andrew Keener*

FRENCH COLLECTION 3

BERLIOZ: 'La Damnation de Faust'—Hungarian March; Dance of the Sylphs; Minuet of the Will o' the Wisp / CHABRIER: España □
Marche joyeuse / DUKAS: The Sorcerer's

Apprentice / RAVEL: Bolero
 Hallé Orchestra | James Loughran
Classics for Pleasure CFP40312 (£1.59)

Collections such as this periodically occur because someone in a record company notices that they haven't had such a compendium for some time or the existing ones are getting old. They also happen, one supposes, because there is an endless public for Ravel's *Bolero* suitably coupled with other French favourites like *The Sorcerer's Apprentice*. There are probably several such volumes in production at the moment. From the viewpoint of one who hears many such albums the only thing that will raise real enthusiasm is a quite remarkably exciting set of performances. These are not really exciting. They give the impression of an orchestra also wondering why they are doing all these again. It is not that there is anything drastically wrong. *Bolero* builds up to a good steady climax but in between there is a certain amount of uninterest, for example a saxophone solo that says nothing. There is no real sense of tension in the build-up; the basic rhythm is not crisp enough or impulsive enough. *España* also reaches a hectic climax but the rhythms are not crisp and crackling; there is no real swagger. And so on. Judged as a one-off effort this is acceptable enough; the recorded sound is of good, bold quality, the climaxes well handled. The general standard is high; the price is low. It will be bought and enjoyed by many; but, looking at it through the perspective of many such collections, it is not the best and not particularly outstanding. [B: 2] *Peter Gammond*

NEW YORK CAMERATA

CLEMENTI: Sonata no. 1 in D for Flute, Cello and Piano, op. 22 / HAYDN: Trio in F for Flute, Cello and Piano, Hob. XV, 17 / HUMMEL: Adagio, Variations and Rondo on 'Schöne Minka', op. 78

New York Camerata
 Turnabout TVS 34575 (£2.99)

The pieces by Clementi and Hummel will be particularly welcome to lovers of chamber music of the late 18th and early 19th centuries. The Haydn Trio, composed in 1790 and a striking piece in just two movements, will already have a place in many collections, either in the Beaux Arts series of the Haydn piano trios, or in the alternative scoring used here (whereby the flute rather than the violin takes the top line), which has also been recorded by the Vienna Flute Trio for Decca (February 1978). The Clementi sonata is a welcome addition to the modest discography of this important pianist, composer, pianist and piano-maker; quite a number of his solo sonatas have been recorded, but rather few of the chamber works. The present piece, published by Broderip of London in 1788 as a keyboard sonata with accompaniment for violin and bass, is very attractive—a clean, purposeful Allegro, a tiny slower movement, and a sparkling finale. The Hummel is again pleasing; its Russian theme, also used by Beethoven for variations, is preceded by a striking slow introduction, and the variations neatly contrast bold gestures with delicate figuration. The performances are fresh and perceptive and the recording acceptable; I regret only that the Hummel (15' 30") was left in solitary state on side two. [B: 2] *Peter Branscombe*

OBOE CONCERTOS

Music by Cimarosa, Bellini, Wolf-Ferrari, Pedrollo
 Pierre Pierlot (obo) | Solisti Veneti | Claudio Scimone
RCA 'Erato' STU 70268 (£5.49)

The sleeve-note (in French only, unfortunately) to this record remarks that all these works could be described as written by 'opera composers on holiday'. Italian music had for long been given over almost exclusively to opera and *bel-canto*; but for the past fifty years composers from Respighi to Maderna have changed all that. Of this selection of instrumental works, the Cimarosa was arranged by Arthur Benjamin at the instance of Evelyn Rothwell, and was originally four sonatas. It goes very well in its revised form, and has been frequently performed.

The Bellini, on the other hand, has not; but it would be surprising if a composer of his genius could not write with skill and charm in a medium other than opera. Pedrollo and Wolf-Ferrari come almost a century later. The latter was, and still is, a famous composer; and Pedrollo wrote 10 operas

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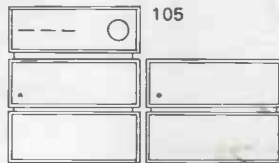
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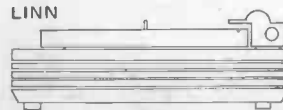
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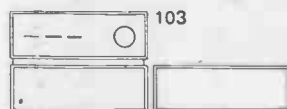
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and an amount of other music, including a symphony and some chamber music. His 'Concertino for Oboe and Strings', performed here, is a short but delightful piece.

In all, we get elegance and vivacity from these concerti rather than profundity. Pierre Pierlot is an artist of great distinction, and moves with equal ease in both periods, producing a very enjoyable concert for those many moments when one feels the need for music, but not for exploring the heights and depths of human experience.

I Solisti Veneti are well known as a stylish, polished group whose sound is always beautiful and ensemble faultless. So it is here; and Claudio Scimone directs with fluid sympathy. The whole is nicely recorded: clear, natural and detailed, if in no way outstanding. [A/B: 1] *Peter Turner*

PIECES OF MY CHILDHOOD

Works by Naderman, Brahms, Bach, Handel, Hasselmans, Bochs, Dussek
Marisa Robles (hrp)
Argo ZK 61 (£3-50)

Marisa Robles became a student of the harp in her infancy, and progressed through early acclaim and competition successes to the status of a world performer and Professor of her instrument. Hers is one of those rare talents through which the instrument becomes almost like another voice or limb: it can be made to do precisely what the performer wishes, with no apparent difficulty whatsoever. Everything Mme. Robles plays is a pleasure to hear, and on this record she has chosen a selection of pieces which she has known and performed since childhood, and which she describes in a very personal sleeve-note—apologising quite unnecessarily for her 'poor' English.

Inevitably, these pieces tend to be musically somewhat lightweight—some of this doubtless arising from technical considerations in training a child. Sometimes (as in Brahms' *Lullaby*) I felt that Mme. Robles plays in too much of a nostalgic haze, with a touch of sentimentality. It matters little: on a record like this, one is there to listen to the performer rather than to the music, and one is not disappointed: here is a great artist playing with supreme authority and ease for her own enjoyment, and one who cannot relish such an hour is missing a great deal. Mme. Robles could make 'Three Blind Mice' sound like great music!

The recording adds to the pleasure. A concert harp has a vast frequency-range, and here we seem to get it all. The imaging is exact, the tone natural; the constant transients spring at one. This is a very smooth recording of a masterfully smooth performance: of its kind, a satisfying musical experience. [A: 1] *Peter Turner*

RUSSIAN COLLECTION

BALAKIREV: 'Islamey'—oriental fantasy □
'Russia'—symphonic poem □ Overture on Three Russian Themes / GLINKA: Overture, 'Ivan Susanin' □ Magic Dances ('Russian and Ludmilla') / SCRIBIN: 'Day Dreams', Op. 24
USSR SO / Svetlanov
HMV 'Melodiya' ASD 3709 (£5-40)

This is an interesting selection of largely unfamiliar music, but in performances that tend to be rather high-powered. Perhaps the best-known item is Balakirev's *Islamey*, though not in this orchestral dress, which is presumably the one provided by Casella in 1907. The quick sections sound decidedly scrambled and represent Svetlanov's pushing, flamboyant manner at its most disconcerting. At the other extreme, interpretatively speaking, is Scriabin's *Day Dreams*, a short Romantic tone poem written before the First Symphony and made here, to sound a better piece than it really is. From Glinka comes an overture of substance and some enjoyable ballet music, apart from its overture—more than ten versions currently listed—*Russian and Ludmilla* still remains an unknown quantity, and the non-Russian character of much of these dances may well explain why. The other items by Balakirev show once again how good a national artist he was. I nearly wrote 'how good a composer', but that would be a little misleading, for Balakirev's powers had a great deal to do with what we loosely call atmosphere, his truly compositional strength somewhat lagging behind. The recording is basic Melodiya, which means inclined to be brash and overbearing. I noted one or two very odd balances, and there is pre-echo among

the opening chords of the Glinka overture. But those who are keen to explore this music will find the technical quality quite acceptable. The quieter passages are warmly atmospheric. [B: 1/2]

Hugh Ottaway

TRUMPET CONCERTOS

HAYDN: Concerto in E flat / TELEMANN: Concerto (transcription) in f / ALBINONI: Concerto (transcription) in d / MARCELLO: Concerto (transcription) in c
Maurice André (tp) / LPO / López-Cobos
HMV ASD 3760 (C) (£5-40)

What a splendid account of the Haydn we have here, with both André and the LPO on top form! John Willan and Stuart Eltham have also managed to produce a recording that is easy on the ear, well proportioned, tidy and of ideal resonance. Congratulations are due all round.

The other three concerto transcriptions all started life as Baroque oboe concertos; while it would have been impossible to play them on the eighteenth-century trumpets known to their composers, there is no serious reason why they shouldn't be played on a modern trumpet—which is itself not much further in sound from the original instrument than a modern oboe. Besides, one is persuaded to accept everything about these transcriptions because the result is itself so well played and planned in each case; transcriptions are to be judged not by cause, but by result. André and the orchestra remain at their best, and if one regrets the stylistic ironing out of the very real differences between Albinoni, Telemann, Alessandro Marcello and Handel (who is not represented here) in performances of this type, one must also marvel at the tasteful use of volume, timing, and accentuation throughout the whole recording. If this is partly the result of López-Cobos' conducting, I hope that we shall be hearing more of him in this country.

A must for André's many admirers, this. A splendid record anyway: enthusiastically recommended. [A*: 1*] *Stephen Daw*

THE VIRTUOSO RECORDER

Works by Marcello, Bononcini, Barsanti, Mattels, Corelli and Anon (disguised as Vivaldi).
Philip Pickett (rec) / Anthony Pleeth (vlc) / David Roblou (hpd)
Saga 5465 (£2-75)

Philip Pickett started his musical career studying the trumpet at the Guildhall but then switched to the recorder. He became professor of recorder and early wind instruments at the Guildhall in 1972 and formed the New London Consort around Guildhall musicians, including both Roblou and Pleeth. All three are now mainstays of the UK Early Music scene—Pleeth, especially, leading the cellos in whatever ensemble you see—and it is somewhat surprising that this represents the first major recording with Pickett as soloist.

The works are either genuine sonatas for recorder and continuo ('Vivaldi' *Il Pastor Fido* No. 6, Marcello, Barsanti) or for violin (Bononcini, Mattels, Corelli) and are performed at a low pitch. Pickett has superbly precise fingering, not a semi-quaver out of place, even in the presto-ish *allegro ma non presto* of the 'Vivaldi', but many might feel that his almost total abandonment of breath vibrato is too austere, especially on long held notes, as in the Marcello *largo*. Apart from this, his decoration, including fingered vibrato, is tasteful and unobtrusive and although one is left in no doubt that every note has been carefully shaped, the music still flows unimpeded. He is given beautiful cooperation from the continuo, who have a superb ensemble, even in the breakneck *conspirito* of the Bononcini.

Pickett once commented (*HFN/RR* Jan '77) that some recordings 'have the cello and harpsichord very much in the background and the recorder far too prominent'. This recording does have a beautiful balance between the instruments; cello and recorder left and right forming an almost equal partnership, with the harpsichord behind them providing the essential harmonic filling out. Although the continuo instruments don't blend quite as well as they can do in the concert hall—the wiry edge of the cello tone is occasionally over-emphasised—overall, the acoustic has been realistically captured. However, so also has some traffic as the sound is often spoiled by very obtrusive rumble, even on speakers without

much bass extension. A recording star has to be very much qualified although the record is still a bargain at the price. [A*/C: 1*] *John Atkinson*

Organ

NICHOLAS DANBY PLAYS ST. ANDREWS UNIVERSITY ORGAN

Music by Böhm, Hindemith, Mendelssohn, Pachelbel, Walther, Wehrle
Nicholas Danby (org)
Abbey LPB 806 (£3-72)

The important new Hradetzky organ at St. Andrews is the second built in Britain by this famous Austrian firm. It is basically of North German style, but with the addition of some essential tone colours from other schools to extend its versatility without resort to eclecticism. The specification is omitted from the sleeve (black mark!), but a description of the instrument can be found in the July 1979 issue of *Musical Times*.

Given the significance of the organ, it is a pity that it was not better recorded. There is too much background hiss in quiet passages, and the bass appears to have been rolled-off more than was necessary for mastering. Far worse than these faults (at least to my ears) are the too-frequent and inept edits, of which no less than three in the comparatively short work by Wehrle are particularly shattering to any illusion of reality. The performance, though lacking, on the whole, the evenness of touch that represents the player at his best, also deserves a better vehicle. [C/D: 2] *Trevor Attewell*

PIET KEE AT ST. BAVO, HAARLEM

Music by Bach, Bruhns, Buxtehude, Kee, Kodaly, Mendelssohn
Piet Kee (org)
Guild GRSP 7014 (£4-09) (Selecta)

The Christiaan Muller organ at St. Bavo is justly famous for the magnificence of its sound, and shows the contemporary emphasis on increasing power, with its doubled principals, more forceful reeds and increased wind pressures, though never at the expense of colour and blend. The richness of this masterpiece has possibly never been captured better than it is on this disc, where it is allowed to breathe in the warmth of the large building. Clarity has not been sacrificed—player and producer have seen to that—and the frequency extension and dynamic range are impressive and praiseworthy. Inevitably, one hears the building ambience in quiet passages, an effect produced in any large enclosure within a city, even at night, and more obtrusive on a record than in real life.

The organ is owned by the town, and Piet Kee is the municipal organist, among numerous other distinctions. His impeccable readings are a pleasure to hear for their spacious warmth and their obvious care for technical and artistic detail, not forgetting speeds suited to the environment while never killing the momentum. This demonstration of the organ in terms of its musical potential is strongly recommended. [A/A*: 1*] *Trevor Attewell*

ORGAN MUSIC FROM FOUR LONDON CHURCHES

Music by Bossi, Kuhnau, Parry, Reger, Richter, Walther.
Christopher Bowers-Broadbent / Brian Martin / Peter Lee Cox / Janet Willday (orgs)
Vista VPS 1061 (£3-72)

It may or may not be intentional that a number of these works have links (if tenuous ones) with Bach. For example, Kuhnau was his Leipzig predecessor, and there is a strong rhythmic and thematic similarity between section 2 of Kuhnau's first *Biblical Sonata* and Bach's '*Erbarm dich mein*'—perhaps the former makes use of the same 1524 hymn tune. This is one of the six sonatas produced by Vista for a 2-record Pearl set (SHE 818/9, not in the latest catalogue). The remaining works are standard repertoire. The organs are at St. John's (Islington), Third Church of Christ Scientist (Curzon Street), St. Jude's (Hampstead) and St. Mary Abbots (Campden Hill).

A problem in semi-samplers of this kind is the likely diversity of performance standards, organ tonal incompatibilities, and even variations in recording quality. In the space allowed, one can only say that performances range from excellent

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in all respects to competent, with hard-fought passages. The recording has a little wow in one band, and some grumbling background is occasionally audible. The Curzon Street organ has a certain thickness that could derive from the instrument rather than the recording. But, as always, Vista offer a very believable sound, with a good balance in the building, excellent pedal extension, a firm image, and plenty of dynamic range. [A/B: 1/2/3]

Trevor Attewell

THE SCHULZE ORGAN AT ARMLEY

Music by Berkeley, Boellman, Franck, Karg-Elert

Lynne Davis (org) / Arnold Mehon (org)
Stereo Record MW 916 (£3-75) (Gamut)
St. Bartholomew at Armley contains the only example remaining in Britain of a complete organ by Edmund Schulze. Only one rank and ten other pipes have been changed, and Schulze's work has escaped revoicing, though the original part-tracker, part-Barker action was changed to tubular pneumatic in 1905.

Side 1 of this mainly French programme is played by Lynne Davis, 1975 St. Albans prizewinner and Titulaire of a church near Paris. She is a brilliant young American recitalist with a promising future, as shown clearly in this assured and well-rounded performance. She is ably (and literally) backed on

side 2 by Arnold Mahon, the incumbent at Armley, who includes Karg-Elert and Lennox Berkeley. The programme demonstrates the instrument's ability to cope well with the French idiom—indeed, it can do justice to a wide range of organ repertoire. It is about to be restored, and all profits from this disc will be used to that end.

The engineering is very good, with a fairly high cutting level that swamps a little background hiss, though it does produce a mite of hardness at side ends. Imaging is excellent, and the bass extension is exemplary. The sleeve gives the specification plus outline registration. An enjoyable disc as well as a useful aural document. [A/B: 1/2]

Trevor Attewell

DÉJÀ VU

A reissue roundup by John Atkinson, Christopher Breunig, Peter Gammond, Ivor Humphreys, Geoff Jeanes, David Pickett

Orchestral/Concertos

VITAL and affectionate, 1963 LSO/Monteux Brahms Sym. 2/Academic Festival Overture is warmly recommended although Monteux's speed-changes are quite marked in the opening movement of the symphony—repeat observed here. More detailed transfer, this time on Philips' 'Festivo' label (6570 108, £2-99). To avoid possible confusion with this conductor's VPO recording on 'Eclipse', the new sleeve shows him conducting Concertgebouw first desk players. [B: 1]

Four Handel organ concertos, including 'The Cuckoo and the Nightingale', reappear on DG 'Privilege' 2535 264 (£2-93). Originally released in 1968, these are powerful but not particularly 'authentic' performances by Eduard Müller with the Schola Cantorum Basiliensis under August Wenzinger. Müller plays a small organ of Handel's type, apart from the somewhat more grandiose Op. 7 No. 1 where he uses the organ of Basel Tituskirche, and the low pitch original instruments orchestra is suitably small, although modern articulation and techniques seem to be employed. Recording is forward but very rich. [A: 1]

Philips have boxed up the latest eight Haydn 'named' symphonies from ASM/Marriner as Volume Two (6768 066, 4 recs, £17-05). All were released earlier this year and included are Nos. 31 'Horn Signal', 45 'Farewell', 73 'La Chasse', 82 'The Bear', 83 'La Poule', 92 'Oxford', 101 'Clock' and 104 'London'. A superbly recorded set (Kingsway Hall, we believe) in Philips' best rich tradition, resonant and detailed, and Marriner's players turn in performances of real fire and brilliance so that, despite an occasional slight misjudgement of pace and slight congestion, the listener becomes totally absorbed. Not to be missed. [A: 1*/1]

1973 Holst 'Planets', NYPO / Bernstein, was a 'surround sound' production. Unfortunately the first stereo mix came out with reversed channels—now corrected on CBS 61932 (£3-39): [B: 1/2]. Flawed (eg, tape noise levels), the SQ original had some attractive qualities and, on headphones, presence and spatial information are rather diminished on this reissue, which has a recessed image, less separated in depth. On room speakers the two transfers are almost indistinguishable. (This phenomenon was noted by Benjamin Bauer.) Bernstein's

reading is imaginative, always stimulating, though the execution is below our Boult-standard. Regrettably, recent 'Classics' pressings are so thin that warp rumble is distracting.

A popular Kodaly coupling on CBS 61930 (£3-39) has 1965 Hary Janos and 1967 Galanta/Marosszek Dances, all with Philadelphia/Ormandy. All fairly forward and bright in mid-60s CBS style, but minimal tape hiss and those nowadays so-rare clean surfaces make for comfortable listening. Strings a bit searing in places and muddy vintage CBS sound here and there, but the lightly-scored parts are pleasantly clear and balanced. Recommended as a bargain version of these assured and controlled performances. (Nice firm bass.) [B/C: 2]

Collegium Aureum's 1972 recordings of Mozart Symphonies 33 In Bb and 40 in G have now appeared here on Harmonia Mundi (065-99 766, £4-99). The playing is of the usual extremely high standard while the approach—modern style, period instruments—is something you either accept gratefully or refute utterly; it's a matter of opinion. The Kirchheim recording is not quite as poised as some—it is a little too reverberant—but nevertheless provides excellent detail and balance. [A: 1]

A collection of Rossini Overtures by Lamberto Gardelli and the New Philharmonia Orchestra, first published in 1973 on the 'Ace of Diamonds' label (SDD392), now reappears in the considerably cheaper 'World Of' series (Decca SPA538, £2-65). Conducted by an experienced opera conductor, they have the right sort of feel about them that suggests the drama to come, nicely balanced, generally unhurried and well-phrased. The recording, done in Decca's Hampstead studios, is clear and warm and sounds less restricted than it did on the original issue. [A/B: 1]

1963 Philadelphia/Ormandy (with Power Biggs) Saint-Saëns symphony 3 on CBS 'Maestro' 61914 (£3-39) proves well worth hearing: [B: 1/2]. Virtuoso playing, incisive and lively, mostly convincing in style, makes this as strongly compelling as either Frémaux (HMV 'Greensleeve') or Barenboim (DG). However, the sound here is almost wholly unrealistic. In spite of excellent detail, and ample dynamic range, the scale is unnatural (eg, 'size' of orchestra versus organ), the acoustic rather dead, and the tape background is noticeable. Having said this, we must admit to three enthusiastic consecutive hearings of

side 2! So don't be put off.

Ex-BASF (1973) Shostakovich Violin Concerto Op. 77 on Harmonia Mundi 25 21640-3 (£4-99) is finely played by Arve Tellefsen (vln)/Swedish RSO/Bertini, with a wide dynamic range. Much of this quirky/thoughtful work is very quiet, with long side 2 solo, so we were grateful for HM's German surfaces. Well-balanced solo/orch in a smallish but pleasantly open acoustic. Very nice. [A: 1]

The 'Festivo' transfer of 1964 Sibelius Symphony 2, conducted by George Szell (6570 084, £2-99): [B: 1/*] needs a high level for its Concertgebouw acoustic to spring to life; inevitably this brings up tape noise. At this price level, Szell's taut, classical conception faces the expansive RPO/Barbirolli (RCA)—a richer recorded sound, if inclined to coarseness. There the performance has warmth of feeling, but some untidiness. Midway between these extremes is Colin Davis' probing view on full-priced Philips, worth the extra cost, though DG have secured better sound at the Boston Symphony Hall.

One of only two recordings made with the NYPO, Daniel Barenboim's 1971 Tchaikovsky Fourth was first released packaged with a free score. No such frills with the CBS reissue (61929, £3-39), but cleaner sound than before—woodwind perspective anomalies remain, of course, and in the trio the oboe is signalled by a new pre-echo (print-through?). Very much a first stab at the piece, Barenboim's is a reading which, presumably intending improvisatory freshness, suffers from jarring speed changes, 'enlivening' of details that seem impulsively snatched. But we must applaud his fidelity to the quaver rest at Finale 148-9, where other conductors, Furtwängler included, extend the pause and relax the tempo. To set against some future, more considered Fourth, this is perhaps of value to the interested collector. (Pity about the pressing rumble though!) [A/B: 1/3]

A two-record set (DG 2707 090) of Verdi Overtures and Preludes has been recommended since its issue in 1976 as an excellent recording of outstanding performances full of all that one would ideally expect in Verdi—vivacious spirit, virtuosity balanced by sensitivity and an awareness of the drama. A single disc is now issued (DG 2531 145, £5-06) which skims off the cream, as it were, by taking all the best-known items. This can be recommended for its own sake to those who want to hear the old familiar curtain-raisers played to perfection. [A: 1*]

Chamber/Solo

EMIL GILELS plays Beethoven's *Appassionata* and *Waldstein* Sonatas

on DG 2531 143 (£5-06). This is a recouping of recordings dating from 1972 and 1974 respectively. The recorded tone is shallow, particularly in the *Appassionata*. There is no pre-echo, very little action noise and the acoustic is nice. Gilels' virtuosity is stunning even if he does force the tone at times; but he does not have the hallmark of the greatest Beethoven interpreters: that of letting the music breathe. In the slow movement of the *Waldstein*, with no technical problems, Gilels sounds uncomfortable and makes nothing of its profundities. At this price there are better alternatives for each work, but few similarly coupled. [B: 2]

The Bulgarian Quartet plus Nikolai Sidarov play Mozart's complete string quintets on Harmonia Mundi HM 146/8 (3 records, £7-50, Rediffusion). The playing is vigorous and powerful but possibly more suitable for Haydn than Mozart. The recording has a limited dynamic range, a wide spread and two distinct types of acoustic. In one the players are close with the sound of the room remote; in the second the players are further back. If the price is right for you be comforted by the fact that none of the alternative recordings is ideal. [B: 2]

An excellent 1974 disc from RCA Erato (STU 70861, £5-49) comprises Ravel's Trio for Violin, Cello and Piano, and Sonata for Violin and Cello with Kantorow, Müller and Rouvier. Good, well-considered playing throughout and a recording which provides fairly close images and a finely detailed balance. At this price, though, it does face some strong competition from Previn, Kim & Kirshbauer on HMV in the Trio, but there is no alternative version of the Sonata listed in the current catalogue. [A: 1]

Transcribed from 78s and now reissued is a recital of Bach transcriptions by Andrés Segovia (Saga 5248, £2-75). Segovia still sounds very special: not because his technique is any better—in fact it is less immaculate than some we hear today—but because of the terrific feeling of personality and involvement in his playing. The works transcribe well; the Gavotte from Cello Suite 6, the great Chaconne from the solo violin Partita 2, the Courante from Cello Suite 3 and several lute pieces. The recordings are very variable; some hard, some misty, but they have been transferred as well as the originals allow and one forgets the sound in the magic of the performances. [H: 1*]

Vocal/Operatic

ALTERNATELY charming then battering the ear with monotonous repetitions, Orff's *Carmina Burana*, in 1976 'Phase Four' production with RPO etc/Dorati, is transferred to



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Decca 'Jubilee' JB78 (£3-50): [A/A*: 1/2]. Dorati's Hungarian background perhaps comes out in this invigorating, primary-coloured reading, with its Bartokian pungency. Excellent playing and choral singing—Brighton and Southend Boys—but the soloists are less satisfactory; in particular the sepulchral tones of Shirley-Quirk add 'unfun' to the proceedings. And the voices are imposed in a disconnected 'ambience'. Long sides, high levels, and good details. Text-sheet included. Prime recommendations: Jochum (DG), Frühbeck (HMV).

A 1975 Acanta (DC22.409, £4-62, Rediffusion) has the Schubert *German Mass* with Tölzer Knabenchor/15 soloists/Schmidt-Gaden. Our copy was rather filled with 'velcro noise', but this didn't prevent enjoyment of the clear (although very slow) singing and good playing of this rather pedestrian music. Perhaps the impression of dearthness is Schubert's fault. Anyway, hoping for acceptable pressings (which ours wasn't): [A: 2/3]

The reappearance of two recordings from Saga in their revised catalogue will have a strong appeal to Janet Baker devotees, since they feature recitals made in 1965 and 1973 in remixed, Teldec pressings. The earlier disc (SAGA 5277, £2-75) comprises her first recording of Schumann's *Frauenliebe und Leben* with, on side 2, a selection of songs by Brahms and Schubert, and the other (SAGA 5213) is 'An Anthology of English Song' with items by, among others, Finzi, Gurney, Howells, Ireland, Warlock and VW. The singing is elegant and poised

throughout and Martin Isepp again proves a more than able accompanist. The recordings are curious, though. The earlier, Schumann, disc was produced at St. George's Hall, Sudbury and is generally clear with good voice detail and a balanced piano tone [B: 1], but the Anthology, made in the Saga studios, is really rather an amateur-sounding affair with a woolly, indifferent piano sound miked as though it were in a separate room: [D: 1]. First-rate pressings unfortunately serve to emphasise the effect.

A very pleasant programme of music by the Choir of King's College, Cambridge, is made up of Choral Favourites (HMV SXLP30308, £3-45) taken from their various recordings of full works and recitals recorded between 1968 and 1977, mainly conducted by David Willcocks or Philip Ledger. There are excerpts from *Messiah*, *The Creation*, *Fauré's Requiem*, Britten's *Saint Nicolas* and pieces by Purcell, Schubert, Elgar, Delius and others. These interestingly reflect the EMI approach to recording the Choir with a soft, full, warm quality, which sometimes has the danger of muffling the sound but is generally very natural in quality, particularly with regard to the voices: [A/B: 1]. This can be compared with the Argo-style recordings on Festival of King's (Argo D148D4, 4 records, £9-95), which is more exaggeratedly clear and spacious (the danger here being emphasised sibilants) but less natural, gaining in clarity of words. The Argo recordings date between 1959 and 1977 and

present a very substantial and rewarding programme most of the sides containing longer works like the Allegri *Miserere*, Palestrina *Stabat Mater*, Byrd *Mass in Four Parts*, Vivaldi *Magnificat*, Handel *The King Shall Rejoice*, Handel *The Lord is my Light*, with a last side of shorter items and carols. Performances are either very good or excellent and will be a treat for lovers of fine choral singing and the King's College style in particular. [A*/A: 1*/1]

Lovely medieval sounds on a 1961 Harmonia Mundi 'Music in Notre Dame about 1200', with Deller Consort (Inc. Wilfred Brown)/Collegium Aureum (065-99 634, £4-99) consist of 3 pieces by Petrotinus and 3 by Anon. Superb vocals and instrumentals set fairly centrally and surrounded by the huge Notre Dame de Paris acoustic. Splendid on Hafler. [A: 1]

The Decca 'Jubilee' series takes in a recital of Operatic Arias by Sir Geraint Evans that was first issued in 1966 with Bryan Balkwill conducting the Suisse Romande orchestra (Decca 'Jubilee' JB60, £3-50). The many admirers who enjoy the singer's wholesome, open, uncomplicated style, will enjoy this record. It is a pleasure in itself to replace the nasal sobs of the typical Italian with the manly exuberance of our well-loved baritone with his rolling Welsh consonants and clear diction. The programme includes Handel, Mozart, Beethoven, Donizetti, Verdi and Britten; representing roles which Sir Geraint knows well and sings with intelligent zest. [A/B: 1]

Flawless surfaces complement a

hugely spacious 1973 Acanta recording (DC21.841, £4-62, Rediffusion) of the Choir of the *Sistine Chapel*. A little too reverberation-swamped, especially with Hafler, which gives a fairly realistic impression of listening at one end of a rather lively tunnel—closer miking would have helped. Palestrina (8 items), Marenzio (1), Anon. (2) and Bartolucci, b. 1917 (1) are sung well by the unaccompanied choir. [B/C: 1]

On Harmonia Mundi 065-99 744 (£4-99) appears the 1971 *Mass for 8 Voices* by Hans Leo Hassler (1564-1612). Aachen Cathedral Choir/Collegium Aureum/Hamburg Wind group sound splendid in the big acoustic of Aachen Cathedral (especially with Hafler rear speakers) and yet are recorded close enough for a fine stereo spread rich with inner detail. Lovely. [A*: 1]

Saga's current policy of deletion and selective reissue of their best recording, (at a higher price on Teldec pressings) fortunately includes a really excellent recital of *Spanish Songs* by Jill Gomez (Saga 5409, £2-75) first put out in 1976. The songs are in four sections: Granados *Colección de Tonadillas*, Turina *Poema en forma de canciones*, and Falla *Trois mélodies* and *Siete canciones populares españolas*. It is a lovely record with Jill Gomez interpreting with a natural understanding of the idiom and John Constable providing an excellent accompaniment that gives the piano definite guitar characteristics. The new German pressings are first-rate, supporting a very natural piano sound and clear vocal timbres. [A: 1*]

cassettes

reviewed by Peter Gammond

Although this section uses the same technical rating system as our disc record sections, readers should be aware that mass production techniques can degrade cassette sound quality between samples, and that the 'recording' ratings given here apply only to our review copies. KEY: P—Performance; R—Recording; D—Original review of disc version, when discoverable.

BOXED SETS

J. S. BACH: Suites for Orchestra 1-4, BWV1066-9—Marriner—Philips 7699 087 (2 cassettes) (£9-59)
R: Bold and vivid. P: Sparkling and detailed. [A*: 1*]

ALBRECHTSBERGER: Organ Concerto in Bb / C. P. E. BACH: Organ Concerto in Eb / J. HAYDN: Organ Concerto in C / M. HAYDN: Organ Concerto in G—Jane Parker-Smith / Prague CO / Bedford—HMV TC-SLS5164 (2 cassettes) (£8-75)
R: Rich and resonant. P: Propulsive. [A*/A: 1]

SINGLE CASSETTES

J. S. BACH: Concerto for Violin & Oboe in d / HANDEL: Oboe Concertos 1-3 / VIVALDI: Concerto in b, Op. 3:10—Menuhin / etc / Goossens / Bath Festival CO / Menuhin—HMV TC-SXLP30294
D: 1962, DV July '79. R: Still good. P: Affectionately inspired. [B: 1*/1]

BARTOK: Music for Strings, Percussion and Celesta / The Miraculous Mandarin—suite—Phillardelphia / Ormandy—HMV TC-ASD3655
R: Brilliant but hard. P: Good. [A/B: 1]

BEETHOVEN: Symphony No. 6 'Pastoral'—LPO/Haitink—Philips 7300 544
D: Oct '77. R: Clear and fresh. P: Soundingly pastoral. [A: 1]

BEETHOVEN: Piano Sonatas 8 'Pathétique' / 12 'Funeral March' / 14 'Moonlight'—Eschenbach—HMV TC-ASD3695
D: July '79. R: Hard-toned, close.

P: Personal, challenging. [B/C: 1*]
BEETHOVEN: Piano Sonatas 2 / 15 'Pastoral'—Brendel—Philips 7300 680
D: Nov '78. R: Pleasant. P: Poetically involved. [A: 1]

BEETHOVEN: Piano Sonatas 12 / 16—Brendel—Philips 7300 682
D: Nov '78. R: Good. P: Thoughtful and controlled. [B: 1]

BRAHMS: Symphony No. 1—LPO / Jochum—HMV TC-ASD3670
D: Oct '77. R: A little coarse. P: Sometimes good. [B/C: 2]

BRAHMS: Violin Concerto—Stern / NYPO / Mehta—CBS 40-76836
R: Well-balanced. P: Noble; well-controlled. [A: 1]

BRAHMS: Handel Variations / 4 Ballades—Arrau—Philips 7300 652
D: Aug '79. R: Variable but good. P: Profoundly deliberate. [B: 1]

CHOPIN: Piano Sonata 3 / Berceuse / Barcarolle / Polonaise Fantasy—Fou Ts'ong—CBS 40-61866
D: Aug '79. R: Clear but occasional wavers. P: Crisp and meaningful. [B: 1*]

DOWLAND: Dances—Bream—RCA RK42760
D: June '79. R: Lutinous. P: Imprecable. [A: 1*]

ELGAR: Falstaff / Enigma Variations—SNO / Gibson—RCA RK25206
D: July '79. R: Concert-hall diffusion. P: Good British. [A/B: 1]

ELGAR: Songs—Brian Rayner Cook—RCA GK25205
D: DV July '79. R: Over-resonant. P: Straightforward. [B: 2]

GRAINGER: In a nutshell / Molly

on the shore / Irish tune / Danish Folk-Music / The Immovable 'Do'—English Sinfonietta / Dilkes—HMV TC-ASD3651

D: May '79. R: Full but clear. P: Fresh and lively. [A: 1]

HAYDN: Symphonies 45 'Farewell' / 101 'Clock'—ASM / Marriner—Philips 7300 676

D: June '79. R: Good balance and presence. P: Well detailed. [A: 1]

HAYDN: Symphonies 31 'Horn Signal' / 73 'The Hunt'—ASM / Marriner—Philips 7300 674

D: July '79. R: Good quality. P: Eloquent. [B: 1*]

HOLST: The Planets—LPO / Boult—HMV TC-ASD3649

D: Apr '79. R: Good, well-spread. P: Disciplined. [B: 1]

MAHLER: Symphony 1 'Titan'—Boston SO / Leinsdorf—RCA GK12941

D: 1963, DV June '79. R: Good for its age. P: Steady and strong. [B/C: 2]

MENDELSSOHN: Symphony 4 'Italian' / Ruy Blas / PROKOFIEV: Symphony 1 'Classical'—LSO / Previn—RCA GK12703

D: 1974, DV June '79. R: Overdone. P: Full of spirit. [B/C: 1]

MILHAUD: La Création du Monde / Suite Provençale / POULENC: Organ Concerto—Boston SO / Munch—RCA GK12445

D: 1966, DV June '79. R: Thickish. P: Good. [B/C: 1]

MOZART: Piano Concertos 20 & 21—Anda / VSO—RCA GK25189

1974, DV June '79. R: Reasonable. P: Articulate. [B: 1]

MOZART: Violin Concertos 2 & 5—Spivakov / ECO—HMV TC-ASD3639

D: July '79. R: Richly assertive. P: Clean and supple. [A: 1]

PROKOFIEV: 'Romeo and Juliet' excerpts—Boston SO / Leinsdorf—RCA GK42699

1967, DV June '79. R: Contrived. P: Lively but unsubtle. [B/C: 2]

ROSSINI: Overtures—LSO / Abbado—RCA RK31379

D: July '79. R: Too much echo. P: Superb. [A/B: 1*]

A. SCARLATTI: Sinfonias 6-11—Cantilena / Shepherd—RCA GK5197

D: DV Aug '79. R: Good but resonant. P: Good. [B: 1]

SCHUMANN: Symphony 3 'Rhenish' / The Bride of Messina—Philharmonia / Muti—HMV TC-ASD3696

R: Impressive. P: Exciting. [A*: 1*]

R. STRAUSS: Four Last Songs / Songs—Kiri Te Kanawa / LSO / Davis—CBS 40-76794

D: May '79. R: Lacks separation. P: Unpointed. [B: 2]

TCHAIKOVSKY: Symphony 5—Philharmonia / Muti—HMV TC-ASD 3717

D: July '79. R: Very natural. P: Beautifully balanced. [A: 1*]

TCHAIKOVSKY: Symphony 2 'Little Russian' / 'The Storm'—Concertgebouw / Haitink—Philips 7300 650

D: June '79. R: Well-balanced. P: Pointed but direct. [A: 1]

TCHAIKOVSKY: Opera Ballet Music—ROH / Davis—Philips 7300 650

D: Aug '79. R: A little unrefined. P: Jolly. [B: 2]

COLLECTIONS

THE CLASSIC GUITAR—Music by Diabelli, Giuliani, Mozart, Sor—Bream—RCA RK42761

D: 1967, June '79. R: Close but excellent. P: Great. [A*: 1*]

SWEET STAY AWHILE—Elizabethan Lute Songs & Britten: Songs—Pears / Bream—RCA GK42752

D: 1969, DV Jun '79. R: Close. P: Subtle and unified. [B: 1*]

VICTORIA DE LOS ANGELES IN CONCERT—Music by Brahms, Falla, Handel, Monteverdi, etc—De Los Angeles / Moore—HMV TC-ASD3656

D: July '79. R: Good 'live'. P: Radiant as ever. [B: 1]

FORWARD MARCH! Music by Bliss, Coates, Elgar, Holst, Walford Davies & Walton—RLPO / Groves—HMV TC-ESD7075

D: 1968/77. R: Hard. P: Satisfactory. [B/C: 2]

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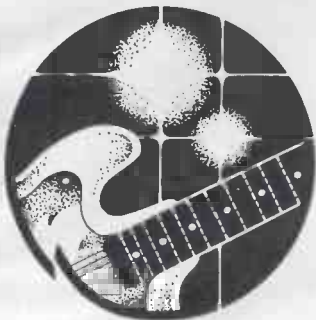
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ARISTA

ROCK



Fred Bellar

THE SCOTTISH Zoom label would seem to have the right sort of pedigree for success. Formed by Bruce Findlay, a very aware record shop owner and low-level entrepreneur, Zoom has generally signed up the right sort of acts and moved, if you'll excuse the pun—a little Stiffly. *Simple Minds' A Life In The Day* (ZULP 1) is, as the catalogue number denotes, the label's first incursion into the album field and, like those televised cakes, tastes exceedingly good. Produced by John Leckie, who lists Magazine and BeBop De Luxe among his former employers, *A Life In The Day* is full of strong hooks, strategic musical switches and sounds that have been hauled out of the more recent end of the rock museum and refurbished for use in the '80s. Leckie often renders Jim Kerr's vocals anonymous by utilising a deliberately muddy mix, playing the total sound game—all layers and players—but when they do emerge, they come Bowie and Ferry flavoured, hiccupped and looping, in best theatrical style. But, even more so than with Magazine, the band sound is the whole enchilada, the thing that will establish them not only as headbang heroes but also a subject suitable for dissection by upper school rock pathologists. *Chelsea Girl*, which forms part of the album, has already provided Simple Minds with chart success. And, as it seems they have struck on exactly the right format for forward foraging in the months ahead, I would stick my neck out and predict that Simple Minds could pull off a singles chart hat-trick, possibly with tracks culled from *A Life In The Day*. We shall see, we shall see. [B: 1*]

My passing reference to Stiff reminds me that Lew Lewis Reformer's *Save The Wail* (Stiff SEEZ 16) has now been let loose, thus raising a cheer from those who believe in the sanctity—if not the sanity—of R&B. Many British blues-bands don't really hang together, or they suffer due to paucity of material. But Reformer, who hit home at best Feelgood

level, would appear to have everything they really need, dipping into the James Brown, J. Geils, Little Walter, Status Quo and Tom Petty songbooks whenever Lewis' own aptitude for tune-hatching seizes up. Also a purveyor of extremely hot harmonica, Lewis should do wonders for Höhner's forthcoming sales figures. [A/B: 1]

Having touted Dr. Feelgood as one of Britain's premier R&B outfits, it is with some chagrin that I have to admit that *As It Happens* (UA UAK 30239) is hardly likely to bring the band any increase in camp followers. Aimed at the already converted, it's a so-so recording, produced by the band and Vic Maile, that features live versions of The Feelgood's best-known numbers. Cut at gigs in Hemel Hempstead and Rayleigh, it suggests that Lee Brilleaux and Co performed with some forcefulness on those dates, the rhythm section pushing hard in a heads-down manner. But somehow the music lacks width, the sound emerging as a sometimes stodgy block. It seems crazy that the Feelgoods should be unable to produce a good album in such a situation—after all, the band has long been considered as one of Britain's best bets in the live performance stakes. But *As It Happens* does little to prove the point and it's to be hoped that the Feelgoods grab producer Richard Gottelher as quickly as possible and head back into the studio in order to regain the high achieved with *Private Practice*. [B/C: 2]

Always a sucker for good lyrics, I find much that is appealing about Gerard Kenny's *Made It Thru The Rain* (RCA PL 25218), a set of songs fashioned by singer-songwriter Kenny and capable wordsmith Drey Shepperd. Kenny, the son of vaudeville star Vincet Kenny, hits a level higher than that of Manilow but slightly below that of Billy Joel. His *New York/Pavement Princess* wide-screen production works well, as does the autobiographical *Son Of A Song And Dance Man*. And the throw-away but catchy *Nickel And Dimes* is also worth hanging onto, thanks to such couplets as 'Nickels and dimes for your entertainment/Nickels and dimes for his self respect/Beautiful rhymes in a sad refrain meant/Nickels and dimes for another Brecht'. Even the late, great Johnny Mercer would have approved! [A*: 1]

While on the subject of singer-songwriters, I guess it's worth mentioning that *A Little On The Windy Side* (Portrait PRT 83197), Paul Williams' first album for CBS, is currently around. Though it's hardly one of his strongest efforts, it's still rewarding to hear Williams' vinegar-flavoured voice edge its way through the lyrics of love-land once more. Williams I've always slotted in alongside Randy Newman and the best of Harry Nilsson. Maybe he lacks the

satirical bite of the former but he still has the ability to keep his listeners hanging on. In short, he has charisma. Perhaps it's all part of being a hobbit—the same stroke of ill fortune/good luck that helped turn 'little fat Reg' of Bluesology into Elton John, songwriter extraordinaire. When you're no Steve McQueen, you've got to push that little bit harder to make things work—especially when it comes to romance. Which is probably why Williams is able to endow gooeey, Valentine-card type phrases with a sincerity that turns them into stone-cert heartbreakers. 'Sundown, you're a rundown/Alone without a friend', he sings—and you feel it's all to do with personal experience. So while *Windy Side* contains no *Ordinary Fool*, *Nice To Be Around* or *You And Me Against The World*, it's worth a hearing. And doubtless, somewhere along the line, the Streisands and Carpenters of this world will find something they can hang their hats on. [A: 2]

Moving on, it's my happy duty to report that even if Diana Ross isn't quite *The Boss* (Motown STML 12118) her album title suggests, then she's at least got herself back on the right track once more. This time around, Motown have placed her in the capable hands of Nik Ashford and Valerie Simpson, who provided all the material for *The Boss* and also functioned as production-meisters. Perhaps the best tracks are those featuring Bob Mouncey's horn and string arrangements, such as *No One Gets The Prize*, a *Love Hangover* clone; the romping *I Ain't Been Licked*; and the gently ambling *All For One*—but nothing totally disappoints, so the delectable one (rejecting Las Vegas finery for rice field raunch on the cover shot) would seem set to hold her own against the current crop of disco queens for some time to come. [A: 1]

Just how long The Rubinoos can hold on, I wouldn't like to guess. Personally, I've always loved the band. Young, fresh, and purveyors of pop in the best sense of the term, they initially seemed to have picked up where the best teen idols left off. The Rubes' version of *I Think We're Alone Now*

(originally a Tommy James smash in '67) should have been the summer hit of '77, no doubt about it. A true classic in the tradition of The Raspberries' *Overnight Sensation* or even The Beach Boys' *Wouldn't It Be Nice*, it came hot'n'tasty and college-shirt wrapped. And there's more of the same on *Back To The Drawing Board* (Beserkley BSEK 18), an album which comprises 10 originals plus a cover of *Hold Me*, the P. J. Proby favourite. However, failing to register with that first, fine, album and with Berserkley falling from favour as an 'in' label, The Rubinoos may find themselves with a struggle on their hands. Perhaps a vote of confidence is needed. Can we have a show of hands, please? [A: 1/2]

Jennifer Warnes' *Shot Through The Heart* (Arista SPART 1097) has all the appearance of California bland but, happily, isn't. For Warnes' voice possesses considerable character and when applied to a fine set of originals and borrowed beauties—by the likes of Dylan, Jesse Winchester, Leo Sayer etc.—few complaints are likely to be heard from any quarter. [A: 1]

No complaints either about the fact that Sonet have issued *Hold On* (SNTF 800), their third album by the aptly named Rockin' Dopsie. Another accordion-propelled example of that country/rock/blues/good-time amalgam that's known as zydeco, it differs little from previous releases. But then, I don't know of any Dopsie fans who've demanded any change of ways. Some folk possess a lot of good sense! [A: 1]

Finally, a mention of *The Songs That Lennon And McCartney Gave Away* (EMI NUT 18) a value-for-money, 20-track compilation that includes Peter and Gordon's *Nobody I Know*, The Fourmost's *Hello Little Girl*, Cilla Black's *Step Inside Love*, Billy J. Kramer's *I'll Keep You Satisfied* and others that have brought Messrs L&M boundless royalty cheques. Not all the cuts are classics by any means, but I guess that anyone briefly touched by mop-top mania will deem the album worthy of this month's Golden Chip Butty Award. [B: 1]



Simple Minds

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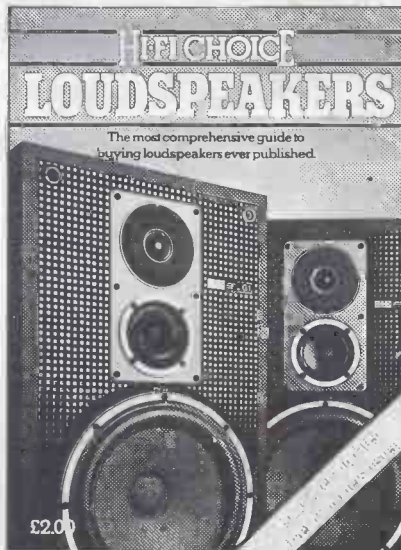
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JAZZ



Ken Hyder

IN THE past 10 years jazz has spread all over the world in a way that's interesting, stimulating and totally to the benefit of music. I'm not thinking of the fact that you can find Dixieland jazz in Prague, but rather that jazz coming out of countries other than the States is emerging with its own identity. And of course, that's the way it should be. Until recently, most foreign jazz musicians were constricted by a copying ethic, supported perhaps by the thought that it would be impossible as non-Americans to contribute anything of their own. At the same time, American musicians like Don Cherry, for example, have been looking to other music cultures for inspiration.

If you're ready for it, then: **Zikir** by Oriental Wind is a fascinating album. Led by Turkish drummer Okay Temiz, this band weaves its way through a selection of pieces full of eastern promise. The Turkish influences and the jazz influences merge entirely naturally, and there's also a range of other factors making up their total sound. For example they use a synthesiser, but only very sparingly and sensitively.

The percussion used is not restricted to Turkish drums—there are Brazilian and African instruments here too—and the overall sound, often featuring the Turkish nay (a kind of flute) is a cosmopolitan one. It's a band I'd love to see live, but in the meantime, they've produced an excellent album to stimulate our appetite. I'd recommend this record heartily to all those with ears big enough to take it. It's on a French label, Sun Records (SEB 11005), and is distributed in this country by The Other Labels, 35 Eton Avenue, London, NW3. This [A:1] album constitutes one of the freshest sets of sounds to come out this year.

There are always a few areas of music that you might personally never take to, although you might appreciate the talent of its performers. One such area for me has been tasteful piano trios. And that has meant overlooking Bill Evans. The reissuing of a Verve double album, **Bill Evans Trio**,

Duo, 2632 054 has made me take a rethink on his music. It's so gentle and... well, 'tasteful' is the best word, that you can easily be lulled into not listening fully to this music. The trio sides, with drummer Paul Motian and bassist Gary Peacock, are a delight of polyrhythmic subtlety. Peacock is a particularly agile player, taking the bass out of its often plodding role. Motian seems to create the maximum amount of movement in the music with the fewest notes. He nudges rather than drives, always seeming to do the right thing at the right time. Similarly Evans, in his placing of chords, for example, consistently chooses to create tension by space rather than clutter. The effect is often of a music that's just floating along effortlessly. The second album in this set has Evans with guitarist Jim Hall. One of my other blind—or deaf—spots is for guitarists of this era, who tend to have a clichéd sound and an annoying mechanical way of phrasing. Jim Hall, however, is an exception. Most of the tracks here are laid-back and dreamy, but there is an effervescently jolly and bouncy jazz samba. Altogether, it's a really fine and rewarding set. [A/B:1]

While we most of us acknowledge the genius of Charlie Parker, does that mean he could do no wrong? If you want to find out, get **Bird With Strings** on CBS 82292. One of Bird's biggest mistakes was to get involved with strings at all. He didn't need anything like that, but he felt a kind of inferiority in what he was doing, and aspired to the respectability that he thought strings would bring him. The style of the string section playing is straight out of 1940s movies. That is, banal. Bird's playing on some pieces—like *Just Friends*—retains the magic. But most of the time the cloying strings just wipe it all out. The only value in this album is a historical one, the conversations between Bird and Symphony Sid serving to give some sort of insight into Bird the man and performer. [H: H]

The Art Ensemble of Chicago don't fall into a bag with a drawstring on top for security. And

they like it that way. Being in a bag means, to many listeners, an expectation of the constant. You have to be awake to listen to this unit—and their **Reese And The Smooth Ones** on Affinity AFF 22. The music doesn't stand still in its form. Indeed, it seems to change direction almost at random as it unfolds. I say seems: there's a lot of theatre in this team and even the anarchy is a planned part of the performance. Without stating the obvious: this band can remind you of all the jazz you've ever heard. And that makes sense, for jazz musicians are steeped in the history of the music. You don't become, for example, a bebop musician while remaining totally ignorant of what's gone down before. What you've got here—and even more when you see them live—is the *avant garde* going showbiz, or showbiz going *avant garde*. There's a conflict among musicians over whether jazz should be art or entertainment. This band has sorted all that out. They're aiming to create and to please. Nobody else does it quite like them, and because they're so much out there on their own, they're forging patterns of performance which are totally their own. Sometimes they bring it off, sometimes they don't. More often on this album they do, and if you haven't caught up with them yet, these 10-year-old tracks will make a good introduction. [A/B:1/2]

Improvisations Are Forever Now on Vinyl VS 113 (available from Projection Records) should appeal to people who listen to contemporary classical music as well as jazz. One of the musicians involved here, bassist Barry Guy, himself bestrides both camps. The others, pianist Howard Riley and violinist Philipp Wachsmann, also play in a way that takes in classical approaches. I use these terms to create a rough reference for readers not acquainted with these musicians' work. It's not really fair to talk in these terms because it's all music in the end. Having said that, the impact of this record is in its clarity and immediacy. The spontaneity of the interaction between the musicians creates in itself a kind of urgent tension which remains

transfixed on disc. The overall impression is that it's actually happening as you listen to it. There's no way you (or they) can know what's going to happen next—so it's surprises all the way. That's what jazz used to be about—and should be about. But there's not enough of it today with the programmed, packaged product spilling out of the major record companies' presses. That's why small labels are actually doing more than their fair share in keeping alive music of integrity—like this. [A:1/2]

Together, with a quintet featuring Don Cherry and Gato Barbieri on another French label, Free Bird FB208, is really a dry run for Don Cherry albums like **Complete Communion** and **Symphony For Improvisers**. This was the time—in the mid to late sixties—when I think Barbieri was playing his best stuff. The music is similar to **Complete Communion**, but while I respect the drumming of Aldo Romano, he's no match for Ed Blackwell. Still, the music hangs together, and after perhaps some hesitancy in the first few tracks, the mood and atmosphere picks up, ending in some feverish playing. The other musicians making up the quintet are the excellent French bassist, Jean-Francois Jenny-Clark and vibist Karl Berger. [B:2]

The man who defined tenor saxophone playing in the 1920s went on to another 40 years of valuable musical contributions in all sorts of modern contexts. **The Real Thing** shows Coleman Hawkins giving years of experience to three sessions recorded in 1958/59/60 with modern musicians of that era like Ray Bryant, Tommy Flanagan, Doug Watkins and Red Garland. Most players who peak early in their careers stick to one style, but this double album proves that it doesn't have to be like that. Listening again to the Hawk on these tracks I was reminded of just how much he influenced people like Lester Young, Dexter Gordon, Sonny Rollins and John Coltrane. It's a lovely set. [B:1]

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folk



Paul Oliver

LIKE the common cold, there's a lot of 'folk' about these days, and much of it is just as infectious. As I haven't been discussing the home product recently, this month I'll try and catch up with some of the music of the clubs and festivals. **A Feast of British Folk** (Broadside SAM 001) is a good introduction, as it has a miscellany of tracks from more than a dozen of the issues on this Wolverhampton label. Some nice instrumentals, like Kempion's *Dancing Tailor Medley* or the reflective guitar version of *The New Mown Hay* by Michael Raven, will appeal to those with quiet tastes. More vigorous is the fine *Bonny Beeswing* by the High Level Ranters, discussed with the original issue of **Sporting Ballads** (BRO 128) some while ago. A set by Jon Raven on BRO 117 provides the sweet-toned *Circles* and there's a couple of dialect pieces by Dolly Allen and Harry Harrison. Somewhat under wraps, this collection is well-played but gentle. [A/B: 2]

One of the most able musicians in the Broadside roster is Bob Stewart, whose **Up Like the Swallow** (BRO 131) is particularly satisfying for those who like both traditional songs and new songs composed in the traditional vein. Stewart, who sings melodiously with a grainy vibrato, plays guitar, cittern, banjo, the uilleann pipes and the '91-stringed psaltery', no less. He is joined on some tracks by melodeon, bouzouki and fiddle, providing a rich variety of sounds for the reel *The crow killt the pussy* or *Pips on the Hob*. His choice is eclectic, so *Pretty Polly* from the United States is played to banjo. His songs are full of references to nature, but his philosophy is best expressed in *Fair of Face*: 'we'll build you thin houses and sell you loud noises, and cure your oppressions with strong yellow pills.' [A: 1/2]

The sweetness continues with

Roll on Dreamer: Johnny Cop-pin (Avada AVA 102). More than a touch of the flower children here with the 'la la la Liberty' refrain to *Liberty*, sung in Dylanesque tones. Such titles as *The Worm forgives the plough*, *Warm Love* and *Angelus* convey quite a lot of the general quality of this sentimental, if well-intentioned, record. *Angelus* is played with some pretty economical piano; most tracks have guitar with filling out by friends on one or two tracks. Soporific, to be frank. [A: 2/3]

To See the Play by the group **Fiddler's Dram** (Dingle's DIN 304) has a little more spirit. The majority of the tunes have the versatile quartet playing fiddle, guitar, bodhran, psaltery and mandola. The vocals are carried by Cathy Lesurf who leads on the nostalgic *Day Trip to Bangor* and sings the Appalachian ballad *The Two Brothers* unaccompanied. Though a bit piping on the high notes, she has a pleasant if undistinguished voice. The group is inclined to strain after effect, with dramatised flourishes to accompany the highwayman narrative *Flash Lad* and some studied arrangement to a group of three instrumentals from Brittany. Agreeable. [A: 2]

Mick Ryan and Jon Burge make their debut, as they say, with **Fair Was the City** (Transatlantic LTRA 506). Swindon-born, they've been known in regional folk clubs, with Ryan singing in a forceful tenor and his partner playing a range of instruments. The repertoire is drawn from a good range of sources—*The Young girl cut down in her prime*, *The cruel ship's carpenter*, and *The Rufford Park poachers*, for instance. The latter has Dave Burland joining in on the vocal; he adds a short note testifying to Mick and Jon's hard work and 'almost aggressive belief in their own music.' That should keep them going, but for the present there's a lack of range, tempo or humour in their performance. [A: 2]

This variety is to be found in **Popular to Contrary Belief** by Robin and Barry Dransfield (Free Reed FRR 018), which has been around for quite a while. The well-known brothers have been working for many years, with an exceptional venture into folk/rock a few years ago. But this is more in the mainstream folk mood, with an unaccompanied duet *My Man John* following some spirited jigs played on fiddle and banjo and preceding a mixed vocal/instrumental piece *The Seeds of Love*, and an entertaining but unstrained novelty *Morris Pank the Ticker Fixer*. The Dransfield brothers now work independently, I understand; the more's the pity. For their record, from a sprightly reel like *Down the Broom* to Barry's vocal/fiddle solo version of the ballad *The Banks of the Sweet Dundee*, is a model of selection, performance and organisation. [A: 1]

LIGHT



Peter Gammond

CONNOISSEURS of the art of light orchestral playing generally go misty-eyed at the name of Marek Weber. Here in an LP of rare transfers from 78s, some not available in England before, is **Marek Weber and his Famous Orchestra** (Rare Recorded Editions RRE180 A), in recordings made during the years 1922 to 1925 when he led the resident orchestra at the Hotel Esplanade in Berlin, all originally issued as Odeon, or Parlophone when issued here. The connoisseur will also value the not altogether familiar repertoire; even where the composer's name is known, the music is generally a rare item. The composers include Stolz, Boldi, Abades, Ewing, Straus, Benatzky, Geiger, Weiss—to mention those on the first side. The playing shows a quality, an involvement, a standard which tended to slip a little in more imitative Palm Court days. There is a sense of caring for the music and wanting to bring out its best qualities, with Marek Weber himself occasionally featured on his violin. Today there is little true light music written and few orchestras to play it; in the 1920s every teashop had its orchestra and seaside towns and spas supported them well; it is a dead or dying art but not beyond revival. This issue, in association with the Vintage Light Music Society, will be valued by many. [H]

As one of the few people, so it seems, who have not read Tolkien, I am naturally suited to review the soundtrack music of the Fantasy Film animated recreation of this modern world of mythology—**The Lord of the Rings** (EMI LOR1, 2 records). At least I can listen to the music with an open mind but I should be interested to hear the views of a Tolkien addict, which may well conflict with my own. The various pictures supplied (the animation was done over live film to give a sense of realism) are of a lot of characters with ugly and unfriendly faces, thick hairy legs

and huge feet, who look as if they would mug you if you met them in a lonely spot. Nobody actually looks nice, not even the relatives of the seven dwarfs, and it all seems a bit sinister—a cross between Wagner and Walt Disney. I suppose it suits the weird tastes of the day. The music is excellently done and fits this image; itself inhabiting that world of witchcraft and trolley that you find on Bare Mountains and in graveyards. The theme music did sound a little like a charge of United States cavalrymen but it has a memorable quality and the recording has contrived to sound as if it was done in a mildewed studio full of toads. I am not being facetious; it all sounds just right, excellently contrived, played and recorded. I am sure it will sell like hot gingerbread. [A: 1]

Negro Spirituals are not a current fashion, being superseded by the less elegant blues dominated music. Because most spirituals came to the white and the West in pre-jazz days they tended to be done in a rather arty-cum-churchy style. The repertoire contains a plentitude of fine music and rich melodies, much of it universally known and loved and much associated with performers like Marion Anderson and Paul Robeson; but perhaps best done with the carefree infectious gaiety of the Golden Gate singers. In the present album (Philips 9500 580) there has been a careful attempt to bring the classical artistry of Jessye Norman, the Ambrosian Singers and Dalton Baldwin to bear on the music without losing the original rhythmic buoyancy and naive charm. In practically every respect this has been done. The one failing is on the part of Jessye Norman, whose voice is superbly controlled and fine to hear but who has the current failing of many opera singers, used to bawling into the recesses of opera houses, an inability to put over words clearly. This is something that most great popular artists do without difficulty; you would never miss a syllable with Paul Robeson. But here it all merges into wordlessness, and effect which even sounds slightly odd in quicker numbers like *Gospel train*. Apart from this defect, which some may not even consider important, it is a very enjoyable and effective recital given an excellent and blameless recording. [A: 1/2]

You will not miss a word of what Joyce Grenfell has to say in her **Second Collection** (EMI Encore ONCR524), for she understands how important the words are to her act. There are more Nursery School, gushing lady hostess items, music by Adinolfi and Coward, the delightful 'Wrong Songs for Wrong Singers'—in short, a delightful mixture of the delightful talents of the delightful Joyce Grenfell, originally recorded between 1958 and 1969. A packet of pleasures for her fans. [A: 1*/1]

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Three Tuners

by Angus McKenzie



TRIO KT917



YAMAHA T2



HITACHI FT80000

IN TESTING tuners perhaps the most important test is an 'on-aerial' check in a difficult environment. Fortunately at my location in Finchley, not only can I receive many very strong network and London local stations, but also several distant ones at very varied signal strengths. My main rotatable Fu... around... Wrotham, Radios 2, 3 and 4, but other stations are receivable down to well below $10\mu\text{V}$, and in some cases, continental stations of 2 or $3\mu\text{V}$ are just about acceptable, although signal strength variation is sometimes marked. A subjective test can reveal RF sensitivity, RF, IM and cross modulation problems in the front-end as well as IF selectivity, capture ratio and limiting characteristics. Audio quality can only be determined to a limited degree unless one compares with a known high quality standard, so in this case I also tested the two best tuners subjectively with digital PCM recorded material via a stereo encoder/transmitter to see what differences were audible with various IF bandwidths. The 'on-aerial' test also allows ergonomics to be well judged, but laboratory tests, too, are necessary since at any parti-

cular time one might not have the right material available 'on air' and many problems that might be audible under some conditions can be easily detected in the laboratory. All my normal tests included front-end evaluation, IF performance and extensive audio checks using various generators including an HP 8640B, a radiometer SMG40 with its own additional transmitter, and various B & K an HP 8640B, a Radiometer SMG40 with its own additional transmitter, and various B & K frequently, measurements with one or two carriers in the laboratory fail to show up some serious problems, and so I regard the 'on air' test as particularly important, this often exposing and emphasising spurious carriers developed as products of three or more strong stations. Fortunately, all three tuners reviewed here were good in this respect.

There is much controversy in technical circles over what RF sensitivity method best typifies subjective performance on weak stations. I have tried the DIN method of quieting, which represents a ratio between a high modulation level and silent carrier for a specified S/N ratio with an appropriate filter, a similar method using a CCIR filter, noise

figure measurements, and IHF ratings using 400 Hz or 1 kHz with different deviations. I finally decided that the method using 400 Hz at full deviation (an IHF method) is probably the most appropriate, and figures are stated for this. One ironical situation produced by testing this way is that when switching to a narrower IF passband, the IHF rating is frequently no better and sometimes worse, since more hash and distortion is generated in the narrow IF passband at full deviation; thus more crackling will be noticed on program with extremely weak signals (although fairly weak ones will be more satisfactory with a narrower IF bandwidth). One must also relate performance to the best quality that can be achieved on a BBC or IBA broadcast, and in the UK typical maximum distortion figures of around 0.2% are transmitted, the quoted figure being the sum of normal distortions throughout the broadcasting chain. CCIR/ARM noise measurements give about 6.5 dB better than the original CCIR 1 kHz unity gain figures that I have often used before, and the BBC can approach a S/N ratio of around 70 dB CCIR/ARM. I have measured crosstalk on Wrotham at around 40 dB at middle frequencies, without much degradation at LF and HF. However, so much crosstalk is generated in the recording environment that inferior figures to this are often no problem, provided the crosstalk is clean in the tuner. The BBC frequency response characteristic extends to about 14.5 kHz; above this an extremely sharp cut filter is used to avoid aliasing in the PCM link.

The provision of different IF selectivities, recommended by me in 'FM Radio' many years ago, now seems commonplace in top tuner designs, and its provision has proved to be worthwhile since many stations can only be received successfully on narrow bandwidth if they are close to very strong stations. However, distortion is usually higher in this situation, so the cleanest sound is always produced with wide bandwidth, but this can itself introduce background burbles from nearby stations, together with some other problems.

TRIO KT 917

This tuner won the highest Japanese award in Tokyo fairly recently for its design excellence, and having heard of this I was delighted to have a review sample submitted. Without doubt, in almost all respects it gives the finest performance of any tuner that I have yet used, and reliably so over a long period, although the best of my previous favourites (including the Accuphase T100 and Yamaha CT7000) were not much inferior. The tuner is housed in a smart black metal case measuring $460 \times 161 \times 463$ mm (W, H, D), and weighing 15 kg, and incorporates some features that I have not experienced before in a Band 2 FM tuner.

The front-end houses nine separate mechanically tuned circuits using a complex ganged variable capacitor. Seven of these circuits are incorporated around the two RF pre-amplifiers, and two of them are provided for the local oscillator injection. The mixer is unusually, but sensibly, a Schottky diode ring mixer feeding into a 10.7 MHz IF equipped with switchable SAF IF filters labelled 'wide',

'normal' and 'narrow'. Since the tuner has a pulse count discriminator, the first IF is frequency changed down to a second one at 1.96 MHz, this being required to obtain optimum performance from the discriminator type. The filters have particularly well controlled group time delay characteristics, and thus distortion levels are kept to a minimum. The pulse count discriminator also produces significantly lower distortion than other types previously used in Band 2 tuners but notwithstanding this, Trio have also incorporated a distortion reduction circuit of surprising novelty. Once a station has been found, and the tuning knob released, the local oscillator becomes modulated by what appears to be a 94.425 kHz FM signal with only 800 Hz deviation. This is picked out from the discriminator output and its distortion measured electronically. A resultant DC feedback voltage alters slightly the local oscillator carrier frequency so that the station is tuned very precisely to the centre of the discriminator passband. Thus, all signals received will have minimum distortion from the IF and discriminator circuits.

The front panel incorporates, in addition to a toggle power switch, a rotary stereo ganged output level control, a 3-position (including 'off') muting control, a 3-position IF bandwidth switch, a large tuning knob with excellent flywheel action and no backlash, a scale illumination dimmer button, switching for two antenna inputs, a switch selecting a meter to read either program deviation or multipath, and a rotary switch selecting mono, auto stereo, or stereo only. The frequency indication is given by a 280 mm long scale engraved linearly each 200 kHz with 2 MHz legends. On the back of the tuner there is a 3-core captive heavy-duty mains lead, and a de-emphasis switch having two positions of 50 and 25 μ Sec. Strangely, Trio have omitted a 75 μ Sec position, essential in the US, but presumably a different version would be available for this where appropriate. Of the two aerial inputs, 'A' is purely 75 ohm on an annoying Japanese-type coax socket, whereas 'B' can be connected with either a similar coax socket or terminals for 75/300 ohm connections. Two pairs of audio phono sockets give fixed or variable outputs, and a further pair are provided for interconnection with the 'x' and 'y' inputs of an external oscilloscope for multipath investigations.

The measured RF sensitivities are all excellent, the best figure of just under 1 μ V being measured on 'wide', an earlier sample being actually 1 dB better. With narrow selectivity, the IHF rating actually degraded by 3 dB, but this is not really a problem in practice since, in any case, aerial noise and signal strength variations would make very weak stations difficult to receive on any tuner. RF IM performance was very good, averaging at just under -82 dB, but the ratio was much worse on the lower side and appreciably better on the high side, this not changing appreciably at different points of the band. We investigated the RF bandpass characteristic, and found that this did vary across the band but, strangely, this did not seem to affect the RF IM performance. Perhaps the very presence of seven tuned circuits makes factory setting up a tremendous problem, and a slight improvement could be made to the

existing good performance with very minor adjustments of the padding components across each section of the tuning capacitor. Image response was unmeasurably good, for we did not want to send a level more than 100 mV into the aerial input socket! One snag, though, with the aerial inputs was that whilst the 'A' input was excellent, the 'B' input was compromised with the provision of alternative sockets and terminals such that it was degraded in sensitivity by about 6.5 dB; so I recommend the 'A' aerial input for DX with a rotatable aerial, and the 'B' input for a fixed aerial for local reception. No significant local oscillator output was noted on the aerial input sockets. The two muting 'on' levels were at 1.5 and 9 μ V.

The capture ratio measured better than 1 dB on 'normal' and 'wide', and 1.1 dB on 'narrow'; really excellent figures. Limiting was reached at well below the IHF rated input sensitivity and output audio signals were at identical levels on all usable RF input levels. No AM interference problems were noted. The RF signal strength meter was quite the best we have measured, the scale being very sensibly logarithmic allowing indications from 0 to 90 dBf in 10 dB steps, the latter measuring at 7 mV pd instead of 7.9 mV. This infuriating new American standard, though, is based on 0 dBf equivalent to 10^{-15} W, ie 0.275 μ V pd on 75 ohm. Why cannot Trio use dB ref. 1 μ V? The IF selectivity measurements show the 'wide' position to be very wide, the 'normal' position having good adjacent channel and excellent alternate channel, whilst the 'narrow' position was as sharp as I have measured, with incredible alternate channel rejection (better than 100 dB!). However, the narrow adjacent channel figures are a little lopsided, but this is not really a problem. The frequency readout accuracy was remarkable, being dead on at low, middle and high points on the scale. If the input signal is above a fairly weak one, the DDL (distortion detected loop system) pulls the signal right into the centre indication on the tuning meter, but very weak stations have to be manually tuned where the DDL circuit is not operative.

Now I make an admission of defeat, for in the measurements on the audio section the distortion was so low on both 'wide' and 'normal' at middle frequencies that I can say that the figures in the table are probably worse than the actual performance ones, since even the latest Radiometer encoder produces around 0.025% distortion at full deviation, the tuner figures actually measuring virtually at around this figure. On narrow IF bandwidth, middle frequency distortion only rose to 0.1% and this is astounding for the sharp selectivity. The very worst figure that I could measure was 0.16% 2nd harmonic on 'normal' when sending stereo right only, but this is not really of any consequence. 9.5/10.5 kHz and 14.5/15.5 kHz IM tests at 80% peak deviation created less than 0.2% 2nd order distortion around 10 kHz, and almost no 3rd. Even on the normal selectivity, the same test produced an actual improvement of 2nd order and a marginal degradation of 3rd order; again remarkable. On 'narrow', the distortion was better throughout than 0.04%, which is again outstanding, resulting in the remarkably clean sound reproduction from the tuner using the digitally recorded material and

comparing the tuner output with the direct output. In fact, hardly any difference was noted subjectively under the most stringent listening tests in the wide position, our comment being 'almost perfect'. The normal position produced only the very slightest degradation at HF, but again remarkable, whilst the narrow position was said to be 'very slightly dulled'. On normal material, though, all three bandwidths produced superb overall reproduction.

The frequency response on all bandwidths and modes showed -1 dB at 7 Hz and around 15 kHz, which is excellent, the response falling only 3 dB at 17 kHz. Despite this, the 19 kHz rejection was -62 dB, which is good, 38 kHz outputs of multiplex tones, etc., being virtually invisible on the analyser. S/N ratios at all levels were very good in mono and stereo, although I have measured marginally better, but in any case the figures are several dB better than they need to be in practice. Crosstalk was excellent throughout at all bandwidths, even the worst figure being as good as -39.5 dB at 10 kHz! The maximum output level for full deviation is 1.45 V (variable) and 720 mV (fixed). The internal deviation meter was peak reading and very accurate, under-reading a 4 ms toneburst by only 1 dB, which is actually faster than a BBC PPM. Trio have developed a particularly complex capacitive holding circuit for the 38 kHz pulses in the decoder and this clearly is one of the contributory factors to the superb decoder performance. I have had much pleasure in using this tuner, which must now become my reference, although its high price, admittedly, is a strain on the pocket—but it is worth it. An outstanding tuner which does credit to Trio's new design team.

YAMAHA T2

This worthy successor to my favourite old CT7000 is actually slightly less expensive, but incorporates some excellent facilities, and generally offers very good performance. Very much a slimline design incorporated into a metal case, with an attractive silver finish (black finish also available), the tuner measures 435x70x349 mm (W, H, D) and weighs 7 kg. The front panel incorporates a series of push-buttons selecting AC power, record calibration (333 Hz at a claimed 50% deviation but measured at 64%), HF blend (for reception of weak stereo signals), mono/auto stereo, muting, IF mode (wide, or narrow/wide dependent on signal strength), and RF mode (max RF sensitivity or selectivity). The tuning knob had no backlash and was smooth in operation. A normal frequency read-out scale (reading 200 kHz high throughput) was actually complemented by a superb digital readout giving frequency to the nearest 50 kHz. The back panel includes a captive 2-core mains lead but a separate earth terminal is provided. It also contains a 75 ohm Belling-Lee type coax aerial socket, together with 75 ohm and 300 ohm terminals. Two pairs of audio outputs are provided on phonos, fixed and variable, and vertical and horizontal outputs for 'scope interconnection are mounted with phonos for multiplex examination.

On the aerial test no problems were noted at all, but one very remarkable event occurred,

which was the reception of Italian FM stations during a rare sporadic E opening, the tuner coping very adequately with the extraordinary number of received stations at the time. The reproduced quality from the digitally recorded program, including piano and orchestral music, was very good, but not quite so open at the HF end as that from the Trio with selectivity on 'wide'. On 'narrow', however, which is only available on fairly weak inputs because of auto switching to 'wide' on strong ones, distortion was more noticeable on average good quality material. In operation, I feel that perhaps Yamaha have chosen the wrong compromise in the auto/local IF selectivity switch in that it should either have had three positions, or alternatively the local position should have been substituted for 'narrow' so that 'wide only' becomes available on fairly to very strong signals.

The IHF sensitivity was excellent, similar figures being measured for narrow and wide IFs with the RF front-end switch on high sensitivity. When this switch was changed to so-called high selectivity, the sensitivity was apparently reduced by around 4.5 dB only, and just a marginal improvement of overall selectivity for both adjacent and alternate channel was noted, which seems hardly worthwhile. RF IM performance was almost identical in both positions of the switch when calculated as a ratio, averaging at 84 dB, although as with the Trio, the low side IM was distinctly worse than the high side figure. Image response was, again, better than 100 dB, but we did not want to blow up the front-end by inserting absurd input levels to try and get an actual measurement. No local oscillator output was noted on the aerial input socket. The muting threshold was at a sensible $3.15 \mu\text{V}$ and this will be found useful since only extremely weak signals will not open up the audio.

The IF selectivity characteristics and several audio measurements on narrow selectivity were extremely difficult to measure because of the auto switching to wide IF occurring at around $25 \mu\text{V}$ but with a considerable hysteresis. This hysteresis effect prevents continual switching on RF signals that are varying somewhat in received level. In wide IF selectivity the adjacent channel performance was acceptable in the circumstances, with a reasonably good alternate channel, whilst in 'narrow', the selectivity was significantly better than the earlier CT7000, even with the latter's newer narrow filter. The alternate channel selectivity on narrow was very good, discriminating well against stations well off channel. Capture ratio measured 1 dB on local, and around this figure on narrow, but again this latter was a difficult measurement. The RF signal strength meter is scaled from 0 to 80, the latter representing a strangely low $200 \mu\text{V}$ signal strength. The centre tuned meter showed a correct indication for minimum distortion and was easy to use. No AM interference problems were noted.

The harmonic distortion figures on the wide IF bandwidth position were generally almost as good as those of the Trio on 'wide' at middle frequencies, although sending left or right only in stereo gave 0.065% 3rd harmonic. The 10 kHz/15 kHz IM tests using 1 kHz spaced tones gave very good measurements

indeed, generally better than 0.07% IM around 10 kHz and 15 kHz. On the DX position with narrow bandwidth, the weaker RF signal required produced 1 kHz harmonic distortion at about 0.19% rms in mono, but sending left or right only in stereo, distortion degraded severely to an average of 0.6%, which is clearly greatly inferior to the Trio's performance. In mono, the HF IM measurements were satisfactory, but sending one channel only of stereo would give significantly inferior figures. The S/N ratios were excellent throughout, and whilst the Trio was marginally better in mono, the Yamaha was actually better in stereo, but perhaps one might say needlessly so. Frequency response was -1 dB at 15 kHz and 17 kHz respectively in mono and stereo, the usual Yamaha pilot-tone cancellation circuit giving a reduction of 19 kHz output to a remarkable -81 dB ! No Multiplex tones were visible on the main audio outputs around 38 kHz, even at full stereo deviations. Crosstalk measurements on 'wide' were all staggering, none of the measurements being worse than -49 dB ! 'Narrow' crosstalks were significantly inferior, but good.

The fixed audio outputs gave 800 mV for full deviation at 1 kHz, whilst the variable outputs gave a maximum of 800 mV, a centre indent being provided at 440 mV.

Although I was impressed with this tuner, the sound quality was not quite up to the Trio on the digital material, but indistinguishable from the Trio's performance on all normal material whether sent from master tapes or received on the aerial test. On the narrow bandwidth position, and on the necessarily weaker signals, slight roughness of HF transients was noticed, particularly in the crosstalk, but this was not too serious subjectively. It seems a pity to me though that one cannot choose narrow selectivity on intermediate strength signals, and if you live very near indeed to powerful transmitters (for example, in the Oxford area!) you might find this annoying. The tuner can certainly be well recommended and is a welcome addition to the latest Yamaha range. Incidentally, Yamaha have fitted feet underneath the slimline chassis which can be pulled down to provide a slight upward tilt of the front, which is rather smart. The output level control is underneath the tuner, but is easily accessible if the feet are raised.

HITACHI FT8000

Undoubtedly, the novel feature about this tuner is the fact that not only does it not have a tuning knob at all, but it also includes six pre-set stations, as well as two methods of tuning, which are unusual, to say the least. Tuning is possible in 50 kHz steps by pressing either of two buttons for up and down respectively, each depression moving the frequency by 50 kHz (manual tuning). A front panel pushbutton can switch in auto tuning, in which case the tuner changes frequency up or down, as selected by the same two tuning buttons until a station is received, whereupon it stops until one of the tuning buttons is again pushed. As with the Yamaha T2, the Hitachi is a slimline model and steel encased (black) with a brushed aluminium front. Frequency readout is digital, indicating the 50 kHz points with up to five digits displayed. The tuning

range extends from 87.55 to 108.00 MHz. Other front panel controls include power switching, multipath indication, mono/stereo combined with mute on the latter, stereo HF blend (for weak signal reception) and record level calibration (equivalent to approximately 60% deviation at 440 Hz). In addition to the six pre-set station buttons, a memory 'write' button allows a selected frequency to be inserted into a pre-set station position, but this has one annoying feature in that no safety 'read-only' switch is provided, so that inadvertent pushing of the button followed by a pre-set being pushed puts a new frequency in. Five LEDs display signal strength steps, and two additional ones light up on FM stereo and 'write' indication. A heavy-duty 3-core captive mains lead is provided on the rear panel, which also includes a battery compartment to provide memory power when the tuner is switched off or even unplugged from the mains. One pair of fixed audio output phono sockets deliver a maximum level of 510 mV per channel. A Belling-Lee type coax socket is provided for 75 ohm aerial connection, and terminals provide 75 ohm and 300 ohm interconnection. An aerial attenuator inserts a 22 dB pad on the input if all normal stations receivable are very strong.

In general use, the pre-set stations were found very easy to set and this provision is extremely convenient. The auto station finding facility is most useful, but the manual one is rather tiresome if you want to find another station at a considerable distance away in frequency. Furthermore, the tuner has an annoying habit of muting for a considerable fraction of a second after the frequency change button is depressed, so if you want to explore the band you can only move 50 kHz per second, allowing listening after each depression. Despite the signal strength indication being somewhat crude, it is probably adequate for most users' requirements, but obviously one cannot expect the same facilities on this relatively much less expensive model, compared with those on the other two tuners reviewed.

The RF sensitivity was well optimised but the general performance of the front-end was not up to that of the other two tuners. The RF IM performance, for example, can be rated as just reasonably good. Again, image response was not so good, but more than adequate unless you live underneath a low aircraft flight path. Some local oscillator output was noted on the aerial socket, but was not of any real significance. Muting level was sensibly chosen to operate at $4.5 \mu\text{V}$, which is probably the most appropriate level of any of the three tuners. The IF selectivity was good for adjacent channel and very good for alternate and no problems were noted on the aerial test; fairly weak stations could be received. Capture ratio was also good and better than many tuners costing more, and no AM interference problems were experienced. The accuracy of the 50 kHz steps was checked with a very accurate external generator, and distortion was at a minimum virtually on the correct frequencies, showing the internal counter to be excellent.

The audio performance, whilst not being exceptional, was more than adequate, mid frequency harmonic distortion in the mono mode of 1 kHz being 0.25% total. In stereo,

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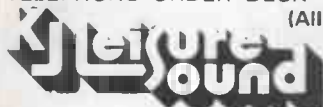
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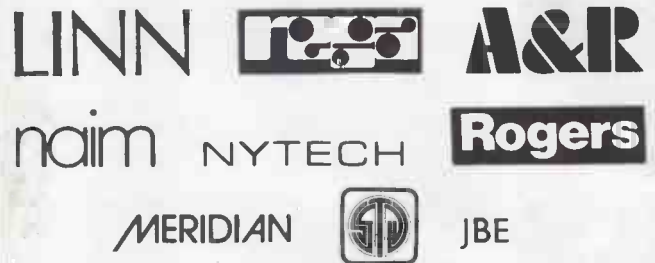
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1 kHz distortion at full deviation gave similar figures, with the worst condition being on right only when the second harmonic measured 0.4%. HF IM tests with two tones around 10 kHz at 80% peak deviation measured quite well, but with worse figures around 15 kHz. The S/N ratios should be considered adequate, and average, only very slight hiss being added to a BBC stereo broadcast of wide dynamic range, the mono figure being completely acceptable. The frequency response was good, measuring -1 dB at 8 Hz and 15 kHz, the response in between being sensibly flat. Crosstalk at 80 Hz, 1 kHz and 10 kHz measured better than 40-75 dB, which is commendable for the tuner's price. 19 kHz rejection, as with the Yamaha, was remarkably good at -80 dB, and no multiplex tones were visible on the analyser around 38 kHz, even with modulation present.

The Hitachi tuner gave good reproduction of all normal program, but the HF sound quality was obviously not as good as that of the more expensive models reviewed. The various parameters were well optimised throughout, though, and undoubtedly its interesting features will help this model become a popular one, and we can well recommend it within its price slot. I must say that it is delightful to find a Japanese tuner incorporating preset stations at last and this may well be a strong selling point. You will almost certainly be very pleased with its overall performance, but if you really want a top-class performance, then you will have to consider one of the other two models.

Conclusions

The Trio KT917 is clearly the best tuner of the lot, but at around £785 including VAT, you will have to decide whether this very high price is worth it. I do feel Trio should have incorporated a record calibration button, and since even the cheaper Hitachi includes a digital readout, perhaps Trio too should have incorporated one for the money. The Trio's amazing selectivity performance and very low distortion is very remarkable, and the manufacturers must be strongly commended for the outstanding design.

The Yamaha T2 is clearly a very fine tuner, but the distortion performance when the narrow filter switches in is perhaps a little high. The excellent appearance and low distortion in the 'local' (wide IF) position is clearly most commendable, and little different from the earlier CT7000. The earlier model, though, scores heavily for its low distortion in the narrower selectivity position, but its price is now very high and it will almost certainly soon cease to become available. Again, recommendable, and a model which will give much satisfaction.

The Hitachi tuner I find most attractive and recommend as a general-purpose medium priced tuner, but please note that, if by any chance you wish to receive a station which has a frequency incorporating a 25 kHz spacing, severe distortion will be noted since the tuner will be 25 kHz off frequency [see also February p. 85, 'The Digital Challenge', Gordon King]. All three tuners can be warmly recommended, and I feel that the facilities and prices are reasonably proportional to their performances; but perhaps Hitachi could be classed by many as the best buy, with the Trio as the outstanding performer ●

	Hitachi FT 8000	Trio KT 917			Yamaha T-2	
		Narrow	Normal	Wide	DX	Local
R.F. Sensitivity 30 dB IHF 75 Ω	1.12 μV	1.4 μV	1.18 μV	0.99 μV	Hi Sens: 0.85 μV Hi Selec: 1.4 μV	
Image Response	82.1 dB	Better than 100 dB			Better than 100 dB	
RF IM (Av Fig)	-68.5 dB	-79.0 dB	-80.3 dB	-81.7 dB	Auto switching does not permit this measurement -83.7 dB	
Adjacent Channel Selectivity	-11 dB	-21.5 dB	-10.0 dB	-7.0 dB	-15.0 dB	-6.75 dB
Alternate Channel Selectivity	-82.75 dB	>100 dB	-81.0 dB	-41.0 dB	-77.0 dB	-54.0 dB
Capture Ratio	1.3 dB	1.1 dB	>1.0 dB	>1.0 dB	See text	1 dB
Muting Level	4.5 μV	3-position: off/1.5 μV/8.9 μV			3.15 μV	
1 kHz T.H.D. Mono Full Deviation	0.23%	0.1%	0.06%	0.022%	0.17%	0.05%
1 kHz T.H.D. Stereo 'L'='R' Full Deviation	0.24%	0.09%	0.06%	0.022%	0.19%	0.05%
1 kHz T.H.D. Stereo 'L' Only Full Deviation	0.4%	0.14%	0.1%	0.07%	0.6%	0.07%
1 kHz T.H.D. Stereo 'R' Only Full Deviation	0.47%	0.16%	0.16%	0.09%	0.55%	0.07%
1 kHz T.H.D. Stereo L=-R 50% Deviation	0.08%	0.02%	0.02%	0.02%	0.05%	0.033%
10 kHz I.M. Distortion 80% Deviation	0.64%	0.2%	0.16%	0.18%	0.024%	0.06%
15 kHz I.M. Distortion 80% Deviation	0.91%	0.4%	0.43%	0.36%	0.036%	0.07%
CCIR/ARM Noise Unity Gain 2 kHz Mono 10 μV	-55.3 dB		-60.5 dB		-61.4 dB	
CCIR/ARM Noise Unity Gain 2 kHz Mono 1 mV	-74.5 dB		-84.0 dB		-81.25 dB	
CCIR/ARM Noise Unity Gain 2 kHz Stereo 100 μV	-54.2 dB		-59.0 dB		-60.75 dB	
CCIR/ARM Noise Unity Gain 2 kHz Stereo 1 mV	-68.3 dB		-73.6 dB		-75.45 dB	
CCIR/ARM Noise Unity Gain 2 kHz Stereo 5 mV	-69.5 dB		-75.25 dB		-76.5 dB	
Crosstalk 1 kHz 'L' on 'R'/'R' on 'L'	-41.5 dB -42.25 dB	-55.5 dB -63.0 dB	-48.75 dB -49.25 dB	-49.0 dB -48.5 dB	-37.0 dB -35.5 dB	-54.0 dB -60.0 dB
Crosstalk 80 Hz 'L' on 'R'/'R' on 'L'	-40.75 dB -41.0 dB	-52.25 dB -53.25 dB	-45.5 dB -45.5 dB	-46.0 dB -45.25 dB	-37.5 dB -36.0 dB	-50.75 dB -60.0 dB
Crosstalk 10 kHz 'L' on 'R'/'R' on 'L'	-44.5 dB -43.25 dB	-40.5 dB -39.5 dB	-45.25 dB -46.25 dB	-43.75 dB -51.5 dB	-37.5 dB -35.75 dB	-48.8 dB -60.25 dB
Maximum Audio Output per Channel	510 mV		1.45 V		800 mV	
Price (inc. VAT)	£229 inc. 15%		£785 inc. 15%		£510.60 inc. 15%	
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Two Sophisticated Receivers

by Gordon King

THESE receivers were evaluated in accordance with our standard procedure; namely, first measured in detail in the lab and then auditioned over several weeks in the listening room. We used IMF monitor speakers, a Signet m-c cartridge with an Ortofon matching transformer, the recent low-mass AT-1100 arm and high quality discs, including direct-cuts and the Decca 'digital' Vienna New Year's Day Concert set. Our reference amplifier was the Hitachi MOSFET HMA-7500.

Many of the lab measurements reflect those explained in the opening text of the Three Receivers Review (*HFN/RR* May '79). However, because the receivers now under scrutiny are somewhat expensive models, one or two extra tests have been included.

For example, in the amplifier section we measured the distortion at disc input as well as at a high-level input at three frequencies at 1 dB below the measured 20 Hz–20 kHz power (both channels driven) and also at 0.5 W output. The 20 kHz disc input test gives a fair indication of the slewing potential of the RIAA preamplifier. It will be observed from the test tabulations that we were obliged to feed in 30 mV at 20 kHz to achieve sufficient drive for the high power output test—which, of course, is normal owing to the RIAA treble de-emphasis.

This apart, our standardised inputs were 10 mV PU and 1 V high-level inputs and our standardised output 1 W into 8 ohms. These levels were adopted also for the S/N ratio measurements, CCIR/ARM weighted.

We checked the damping factor (relative to 8 ohms) at low, middle and high frequencies; but at HF this will not reflect the intrinsic source impedance if an inductive network is used at the output.

The slewing factor refers to the ratio of the highest frequency output, when the input signal is at a level which gives the rated output at 1 kHz, to the frequency of 20 kHz relative to the onset of distortion. Clearly, then, when the output of the control preamplifier is correctly low-pass-filtered with respect to the slewing capability (speed) of the power amplifier, then the slewing factor will be exceedingly high. We measured up to 100 kHz, corresponding to a maximum slewing factor of 5 (eg, 100,000/20,000) which we regard as adequate for the taming of TID, etc. on normal program! Slow output transistors and low-pass filtering of too high f_c (turnover frequency) would, of course, produce a value less than 5. However, nowadays there are few designers who fall into this trap! Looking at the value of the measured slewing factor and the small-signal upper-frequency response (given in the text) a fair assessment of the speed of the output transistors can be gleaned by those interested.

The amplifier section was measured both into resistive and reactive (speaker-type) loads. The IM distortion is presented in this way, the tabulation giving the peak composite voltage of the two equal amplitude (CCIF)

signals across the LS-type load and the spectrogram the distortion at that output. The LS-type load was designed for a modulus of impedance of 5 ohms and a phase-angle of 60° at the test frequencies—a difficult load, indeed! If there is likely to be peak limiting and hence severe distortion owing to premature operation of the output device protection circuits, then this test will certainly show it up by the peak composite voltage across the load being on the lowish side relative to the distortion.

We also tested deviation from RIAA using a 600-ohm source. The effect of cartridge interfacing was also looked into, but as the results with an 'average' 500 mH cartridge essentially reflected the normal, inductive upper-frequency roll-off, compensated for in cartridge design by treble lift engineered into the mechanical parameters of the stylus assembly, we elected in this case not to publish the resulting frequency sweeps to avoid possible confusion. However, readers interested in this aspect of cartridge interfacing are referred to pp. 51–55 of my *Audio Handbook* (Newnes-Butterworths 1975).

All the usual tests were made to the FM section. CCIR/ARM noise weighting was again adopted, along with ± 67.5 kHz FM deviation of the audio signal, giving full ± 75 kHz deviation on stereo with the pilot tone and residual sub-carrier, and 75-ohm aerial matching, measuring the signal across the matched load.

AUDIO PRO TA-150

THIS is a remarkable receiver. Everything is controlled by one large knob in conjunction with press-buttons. The knob is equipped with 'soft' click positions and is continuously rotatable (no end stops!). The press-buttons need only light pressure to operate and the change from one mode to the other is clearly apparent, not only by a definite 'click' feel, but also from an LED, there being one beside each of the 26 buttons.

The designers set out to produce a receiver

of top hi-fi quality devoid, as far as possible, of moving parts or sliding electrical contacts, ie a truly fully electronic receiver of the utmost reliability and (should it become necessary) ease of servicing. The latter requirement is met by the use of printed circuit board modules for each function which plug into a mother board forming the base of the receiver circuits. This technique facilitates not only pre-testing and -tuning, but it also means that in the event of a fault the technician needs merely to verify that the supply voltages are correct, to diagnose the fault area and to replace the ailing block.

The lone control knob works optically with two phototransistors and an LED. These sense black and white segments at the rear of the knob (there being 64 of each). The designers ultimately elected to use 'contact' type push-buttons rather than solidstate touch sensors owing to the more definite feel of their on/off modes.

How the control knob is to function is determined by the operation of a button whose 'on' mode is indicated by the glowing of the associated LED. For the knob to serve as the volume control, for example, a button labelled volume is operated. Because the control is continuously rotatable the setting is revealed by a horizontal row of LEDs working against a scale behind a window at the upper-left of the fascia, these lighting progressively over the scale as the gain is increased.

For tone controls, the bass, treble or mid-range button is operated. The LEDs then scan up or down the scale relative to scale-centre zero, depending on whether one is adjusting for boost or cut. The 'neutral' setting is signified by the glowing of two LEDs, one each side of centre-zero. It is also possible to disable the controls by the operation of a button marked 'linear', this also disabling the low and high filters and the loudness when they are active. A second depression of the button restores the tone controls and filters to their original settings.

The six main modes of knob operation are established by a vertical column of buttons adjacent to the knob marked volume, balance,



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bass, mid-range, treble and tuning. The tuned frequency is displayed digitally (FM and MW/AM) at the right-hand side of the window just mentioned. These same digits also indicate the time of day when the receiver lies in 'standby' mode or when the tuning button is depressed a second time.

A horizontal row of 20 buttons below the window provide station selection (four FM and two AM), input source switching (two tape circuits with one monitor, two pickups, one via RIAA preamplifier and the other available for either the same RIAA preamplifier module or a module for a m-c cartridge, and auxiliary), low and high filter switching, mono/stereo mode switching, 'linear', loudness and FM muting.

For presetting any of the station buttons, one merely depresses the appropriate button along with the tuning button and then tunes the station with the knob. After a few seconds the LED associated with the tuning button extinguishes and the tuning data is then fed into a digital store. The same procedure is repeated for setting the stations of the other buttons, and immediate recall of any station so set is achieved by subsequent depression of the appropriate button.

Although the tuned frequency is displayed digitally in MHz for FM and kHz for AM, the tuning is *not* of the synthesised type. This means that the tuning is continuously variable over the FM and MW bands and is not switched in kHz multiples. Any station, regardless of its exact frequency, can thus be tuned for optimum results.

Two red LEDs at the middle of the window glow equally bright when an FM station is correctly tuned. After a delay of a few seconds any slight tuning error is corrected automatically by the switching in of an AFC circuit. When a stereo FM station is tuned a green LED illuminates.

Owing to the use of rather large value varicaps for AM tuning and the apparent use of a fairly long time-constant in the tuning voltage circuit, a certain amount of hysteresis was detected when tuning MW stations and one needs to adjust the knob fairly slowly.

A hinge-down ferrite rod aerial is fitted at the rear for MW (a pity it cannot be swivelled horizontally for improved orientation!) and two aerial sockets for FM—a standard 75-ohm coaxial socket (very useful for the UK) and an IEC 240/300-ohm balanced feeder socket. An excellent impedance match of low standing wave ratio was provided by the 75-ohm socket which we tested.

All the other signal sockets, including those for the speakers, are of the DIN type. Very convenient it must be agreed, but not the best technically! I would very much prefer 'phono' type sockets for the small signals and robust terminals or spring clamps for the high current speaker signals. DIN speaker sockets are okay when new, but after use the contact resistance can rise and this coupled with oxidation and the small contact area can influence low-level distortion, giving a sort of interface 'diode' effect.

The all-black finish is pleasant to the eye and the fascia has an overhang, which would make it possible to put the receiver into a wooden enclosure. With vital statistics of 495×260×115 mm (W×D×H) and 12 kg, the receiver is not unduly large or massive and

could be well placed in most hi-fi setups.

You will, of course, want some basic idea of how the receiver can work with a single control. The design is based on the now well-advertised microprocessor (a National Semiconductor SC/MP) which provides the overall organisation of the various sections. When the knob is turned or a button operated the μ P notes the data so programmed and then re-routes it for action, but not before applying a two-fold check to ensure that it is not spurious data, such as noise or impulsive signal. In the standby state the μ P unit continuously scans all the input and indicating devices 1000 times each second, noting any change for updating.

The programming is in digital form as selected by the knob and push-buttons. A change in volume, for example, is operated by the volume button and the control such that an advance is read as an upward count of pulses from the photodiode. The μ P senses these and sub-routes the binary data to the appropriate control module and then clears so that any change in data is processed during the next scan, which changes the gain control module accordingly. This, of course, represents only a very basic impression of a complex operation, for each control function has its own module which is binary operated. There are also memory functions operated by digital 'registers' which keep track of what is going on in the active circuits, such as tuned frequency, volume setting, tone control settings and so on. After initial programming the receiver retains this information for future use. Thus when the receiver is next switched on the previously established settings will obtain.

The volume, though, always reverts to a low-level to avoid the possibility of speaker-shattering sound intensities when first switching on for the next listening session. The volume mode is also automatically reverted to after other controls have been programmed, so that while the receiver is in use operating the control will operate the volume without the need to depress the volume button each time. Moreover, when the receiver is first switched on the various functions are scanned one after the other making it possible to see from the various LEDs the programming of the receiver when previously switched off. Automatic audio muting occurs for a short period each time a function is changed to avoid annoying noises; but it was noticed that a slight 'click' would occur when a button was operated, possibly caused by the LED switching.

Lab Results

The lab results reveal a receiver of no mean performance. The full 75 W into 8 ohms could be attained over 20 Hz–20 kHz with one channel only driven. With both channels driven together the single channel power was down a shade. One problem with solidstate switching lies in holding the distortion at very low level; but the designers have certainly combated this one successfully as shown by the distortion results.

The receiver interfaced admirably with our problem LS-type load, yielding a full 33 V peak of the two-tone composite signal for the low distortion products shown by the spectrogram (fig.1a). Fast output transistors allied with

reasonable low-pass filtering (about 100 kHz –3dB) produced a slewing factor of at least 5 (the frequency could have been increased above 100 kHz without distortion owing to the signal roll-off), thereby eliminating the possibility of TID, etc. Fixed high-pass filtering is included (I agree with this) in the design; but this did appear to be affecting the 20 Hz damping factor, though some other cause could have been responsible (a complete circuit of the power amplifier was not at hand at the time of writing).

Low and high filter roll-off rates were not exciting but the turnover frequencies are useful. The loudness response provided bass-boost only, of a value depending on the volume setting; but the curve is at least sanitary! Low phase-shift filters are used in the tone control circuits. The filtering is obtained by algorithm-syntheses. For example, the mid-range filter is synthesised by the subtraction of both the bass and treble signals from the total input signal before the gain control section. It was found during the lab tests that there was very little difference in the distortion results between the 'filtered' and linear modes. Although not shown, the amplifier's squarewave response is also very little affected by the tone controls.

However, as shown by the pen-charts (fig.2a), the tone control responses are, at least, different from convention, and they may take a bit of getting used to in practice. The bass and treble controls are not unkind to the ear; but the middle control at extremes sounds just like a fairly narrow bandpass filter, particularly at full boost. It is, nevertheless, good to be able to get boost and cut by the treble and bass controls at the spectrum extremes without greatly changing the mid-spectrum response.

RIAA accuracy was good and tests proved that a medium inductance cartridge is not affected adversely by the amplifier loading.

On the FM side the receiver was as sensitive as some of the top models I have recently tested. Limiting comes on at an acceptably low signal level, and the immunity against spurious responses was good, including RFIM. I was a trifle disappointed with the 1 mV stereo S/N ratio, which should be several dB higher to compete with the best of receivers and tuners. We had some difficulty in measuring the selectivity owing to the delayed AFC action, which tended to pull the receiver on to the stronger alternate and adjacent channel test signal. I was reluctant to alter the circuit to disable the AFC for the purpose of the test.

We were surprised to find that the harmonic distortion actually *decreased* in stereo relative to the mono mode which, to some extent, reflects the futility of *harmonic* distortion tests in FM tuners! The IM spectrogram gives a more valuable evaluation. Remember here that it is the 2nd-harmonic of the 9 kHz driving signal (at full modulation) which interacts with the 19 kHz pilot tone to produce the IM products. The results are not at all bad but not the best I have measured. Pilot tone residual was well down (–76 dB relative to full 1 kHz output). Ripple components, too, were not troublesome but there seemed to be more odd-order ones than usual (fig.4a).

FM frequency response suffered a mild trough round 12–13 kHz before rising to a

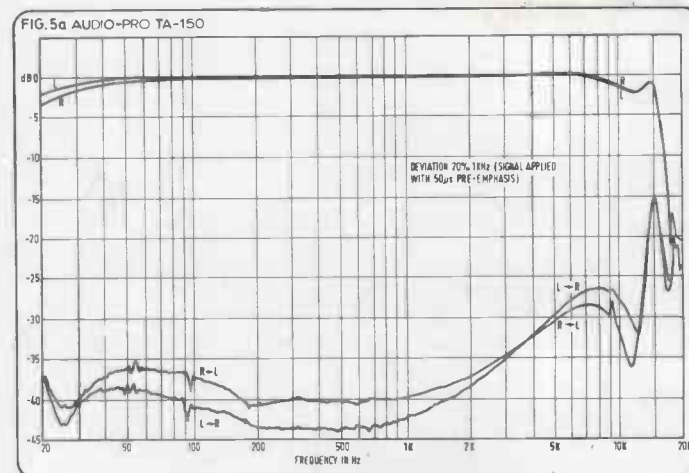
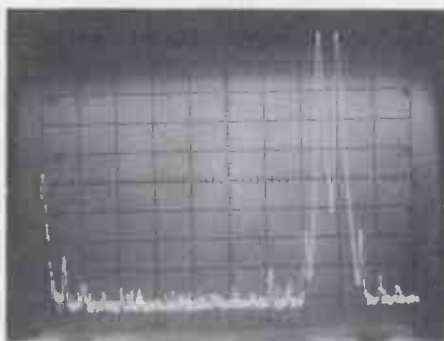
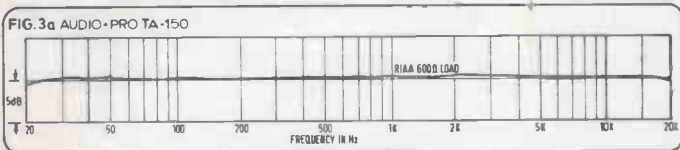
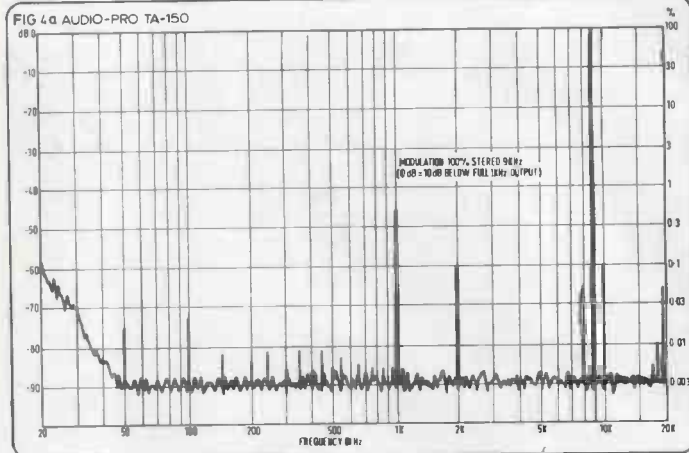
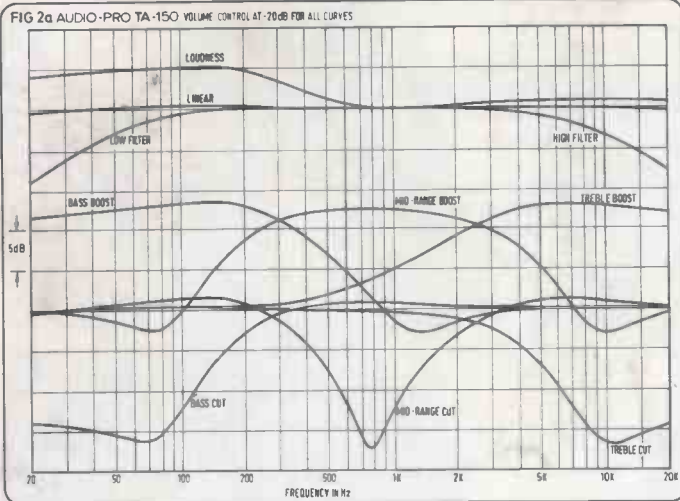


Fig. 1(a). CCIF IM distortion spectrograms 15/16 kHz driving signals into 5-ohm 60 deg. phase-angle LS load. Distortion products shown result from peak composite signal of value given in the table.

Fig. 2(a). Tone control, loudness and filter response curves.

Fig. 3(a). Deviation from RIAA. Upper curve from 600-ohm signal source. Lower curve from magnetic PU cartridge source showing Interface error (see text). Both curves were taken with passive RIAA recording characteristic applied to signal.

Fig. 4(a). Spectrogram of IM products from FM section at 67.5 kHz deviation at 9 kHz, producing 18 kHz second harmonic 1 kHz from 19 kHz pilot tone (see text). Also showing mains hum ripple components.

Fig. 5(a). FM frequency response both channels and stereo separation both channels (deviation approx. 20% at 1 kHz to avoid over-modulation at 20 kHz). Modulation signal subjected to 50 μs pre-emphasis.

peak and then falling to 19 kHz. Separation includes all spurious and harmonics, so is perfectly acceptable around 40 dB and better.

Auditioning Results

The receiver was capable of extremely pleasant sounds on all sources, including the FM section. On very critical balance, however, I could not help feeling that the reference HCA 7500/HMA-7500 was just that shade better on pickup. I am certainly not going to attempt to define the very small subjective

differences. The majority of listeners would, in fact, be very hard pushed to determine conclusively which is the best sound! It can be said that the subjective results are well on par with the best hi-fi gear.

I was not particularly happy with the DIN sockets; when using a deck with a DIN plug (properly terminated) the hum on pickup was far too high. This was cleared by attaching an earth from the arm to the metal frame of the receiver. It is a great pity that an 'earth' terminal is not present at the rear for this application when it is necessary.

The 'computer' (microprocessor) functions were a little difficult to get used to. I kept operating the knob for the tuning without first operating the tuning button and annoyed the family with bursts of sound until I 'programmed' myself to ensure that the right button was depressed each time! I somehow feel that it would be best to have the knob revert to 'neutral' rather than volume. For any function it would then be necessary first to depress a button to get anything to happen on turning the knob.

I do not think that the microprocessor

makes it easier to operate the receiver; more difficult, if anything, for an extra operation is necessary for most functions. I also found it difficult to become accustomed to reading the settings of the volume, tone and balance functions from the row of LEDs rather than from the angular positions of the various knobs of a conventional receiver. I must, though, admit to a personal disadvantage. My spectral response is some 6 dB down at the red end, and as many of the LEDs are red-glowing and not all that bright, I could not discern them all that easily under highish ambient light. For me, anyway, 'brighter'-glowing LEDs of a different colour would be better! The same would apply to the digital frequency readout.

Having said all these things, I must now sincerely congratulate the designers for such an interesting and well-performing receiver. It is a receiver that will be accepted by the hi-fi public—ultimately. Microprocessor control is an up-and-coming art and we are all going to hear much more about it as time goes on. It is thus inevitable for it to be incorporated in a hi-fi receiver. ●



NAKAMICHI 730 RECEIVER

MOST of the measurements and listening tests to which we subjected this remarkable receiver correlate with those detailed in the introduction. We did, however, apply one or two additional tests to the 730, which will be referred to as we go along.

It is certainly an up-market receiver with which you could greatly impress your hi-fi friends. At almost £900 RRP, though possibly selling in the shops for around the £780 mark, it is getting on for 50% more expensive than the TA-150; it is also about twice as powerful.

It is essentially 'touch' operated by sensors along the fascia which respond to finger contact. There are no ordinary switches or control knobs, but small special type of slider controls are used for certain functions. Both tuning and volume are operated separately by internal electric motors which are fairly quiet in operation and have some of the control features of the Nakamichi tape machines. The receiver section is FM-only and tuning is by mechanical capacitor-gang, giving three variable-tuned circuits from aerial input to mixer and the fourth for oscillator. The RF amplifier is styled around a dual-gate FET, the FM front-end then being concluded by a bipolar mixer and separate bipolar oscillator.

FM scale length is approximately 200 mm, which is formed by a narrow windowed-slit along the fascia through which an orange-illuminated cursor is clearly visible. The frequencies are marked in white, along with volume control setting numbers and sensor functions, on the black fascia. The whole receiver is metal encased and finished in black with heat-sink fins at the left side.

The tuning is operated by the motor when a tuning sensor is touched—there being two for up and down directions. This causes the cursor to move along the scale and as soon as a station is detected to halt. During the scanning operation the receiver is placed in inter-station mute mode to avoid disconcerting noise, but this lifts automatically when a station is tuned, depending on its level and the setting of a threshold slider. It is also

possible to operate the mute separately by a touch sensor.

After a station has been located, accuracy of tuning occurs automatically, and this is revealed by two green lights, one each side of the cursor, both glowing when the signal is sufficiently strong. Incorrect tuning is shown by only one of the lights glowing. Up to four different stations can be preset by touching one of four sensors and then turning a small control below it which allows the tuning to be operated manually. After presetting the stations in this way immediate recall of any one is achieved merely by touching the appropriate sensor, which operates the tuning motor so that the tuning stops at the preset station. Accurate pretuning is ensured by getting the two green patches at the sides of the cursor to illuminate together. Activation of a sensor is signified by the switching on of a thin band of green light below it. This applies to all the sensors with the exception of those used for up and down tuning and up and down volume.

The tuning scale slit is extended to the left of the fascia, and this section is marked separately from zero to 10. A series of short vertical green lines show through the window over a distance determined by the setting of the motorised volume control, the setting going upwards when one of the volume sensors is touched and downwards when the other one is touched. For this operation, however, it is necessary to keep a finger resting on a sensor until the required volume setting has been achieved.

There are also sensors for power on/off, audio mute (which decreases the set volume by 14 dB—handy for record changing, etc.), pickup, auxiliary, tape 1, tape 2 and FM source selection, tape monitoring from source and tape circuits 1 and 2, stereo/mono switching, Dolby FM (not applicable to the UK or, indeed, active without an internally installed DB-100 Dolby FM circuit board), hi-blend (which reduces the noise of weak FM stereo signals at the expense of upper-frequency stereo separation) and FM mute.

The multiplicity of sensors is complemented by five small, numbered and illumina-

ated miniature-enclosed slider-type controls along the lower part of the fascia. From left to right, the first applies loudness-contoured compensation while decreasing the volume as it is slid from its centre-detented position to the left and serves as a preset, non-compensated volume control as it is slid to the right of the centre setting. The first operation gives reasonably close loudness tailoring (better than mere loudness switches), while the second is handy to ensure that the volume is not inadvertently advanced by the sensors to 'blow' the speakers! It puts a check on the maximum volume that the sensor-operated control can produce.

Then there are conventional balance control, bass control and treble control, all with centre-detented locations. The fifth slider is a threshold control, calibrated from 40 to 20 dBf (eg, dB reference one femtowatt, which corresponds to 10^{-15} W of aerial signal power—into 75 ohms 20 dBf is about $5.5 \mu\text{V}$ and 40 dBf about $55 \mu\text{V}$). It sets the threshold signal level required for the tuning to halt when searching the band.

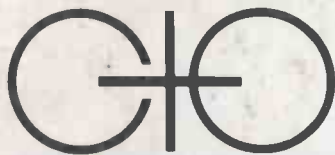
The tuning and volume motorising and the touch sensor control lend themselves to remote control, which is another valuable feature of the 730. The infra-red remote control is in two sections, the receiver part measuring about $140 \times 80 \times 25$ mm which, by a connected lead, is plugged into a DIN-type remote socket at the back of the receiver, and the control part proper which is battery-powered and requires no connections to the receiver. This is a lightweight hand-held unit and measures around $140 \times 55 \times 23$ mm.

The latter unit is equipped with nine strip-type press-switches, one coloured red which switches the receiver on and off, four coloured light grey for station recall of the preselected stations, two of the same colour for up and down tuning, and two dark grey for up and down volume. The receiver part of the remote control system is connected to a fair length of cable for vantage positioning as in operation, it is necessary to point the active end of the hand-held unit to a small, red window at the front of the receiver. Operation was found to be remarkably consistent, the sample working reliably over a path length of at least 6 m. It is also possible to get less consistent operation by bouncing the infra-red from the ceiling. It is a pity that the balance control is not motorised as this would then allow for remote channel balancing, which I would place as greater importance than the other operations of the remote control.

There is quite a power surge when the receiver is switched on and off repeatedly to demonstrate the remote control action to friends (not recommended, though!). Experience in this respect has shown that the 13A plug should have a fuse of greater than 2A value.

There are two front headphone jack sockets but only one pair of rear speaker terminals. I must agree to disliking switch contacts in loudspeaker circuits, as subtle distortion can certainly be introduced by insidious contact resistance. However, quite a few people take advantage of amplifier or receiver loudspeaker switching. This is still possible with the 730 by using an optional speaker selector unit, type RS-730. Convenient spring-loaded, low resistance speaker connectors are fitted

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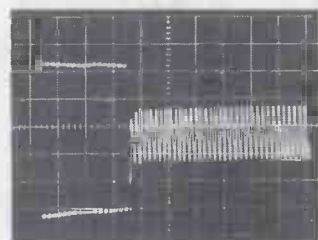
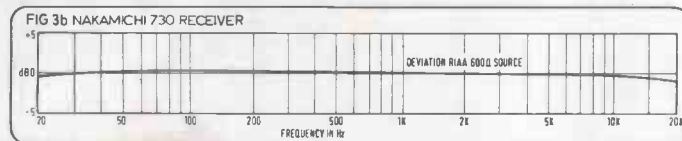
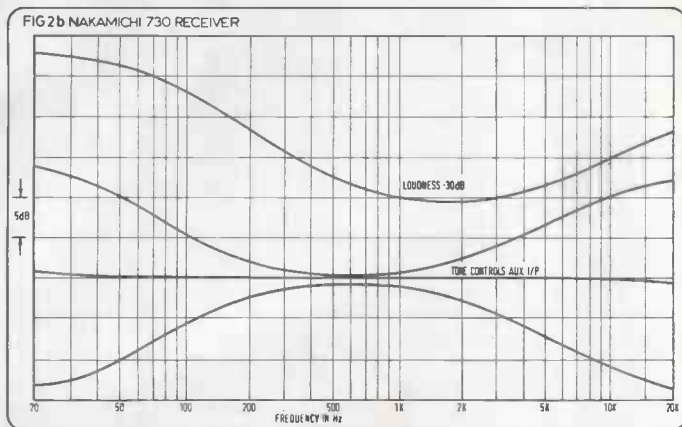
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IHF-A-202 Oscilloscope. 1 kHz sine wave burst +20 dB for 20 ms out of 500 ms, showing recovery from 10 dB overload of power amplifier. Time scale 5 ms per division.

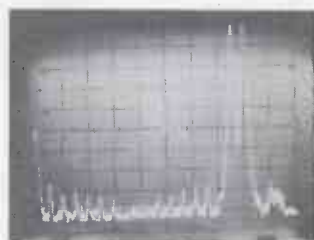


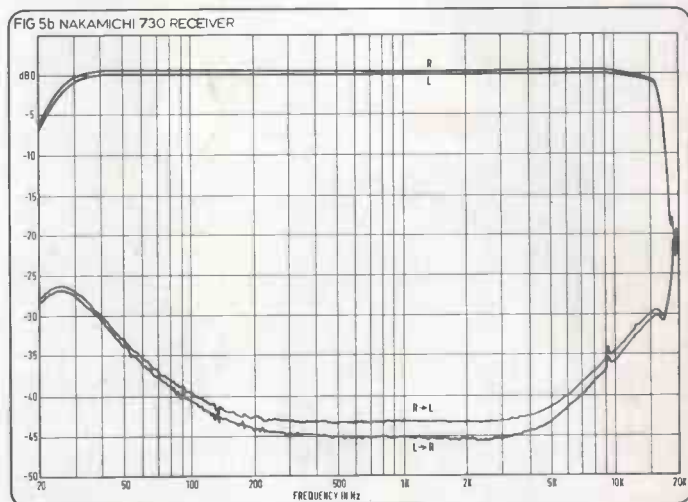
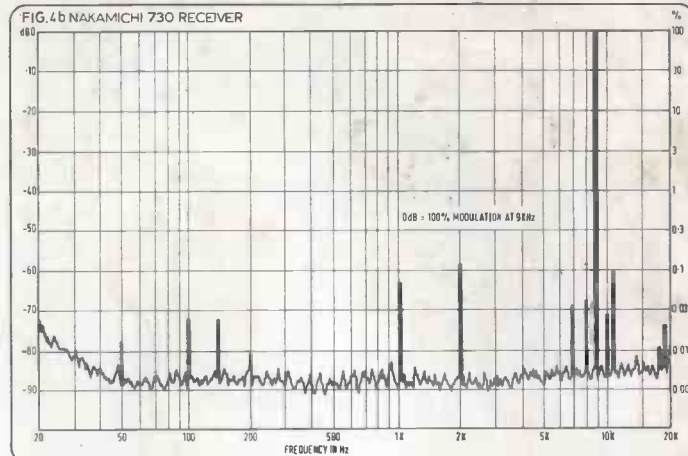
Fig. 1(b). IMD at 44Vp across Z_L load (2 kHz and 10 dB per divisions).

Fig. 2(b). Tone controls and loudness responses, auxiliary input.

Fig. 3(b). Deviation from RIAA, 600 ohms source to pickup input.

Fig. 4(b). FM IM performance using 9 kHz sine wave for 100% modulation. Also showing hum components and residual pilot tone.

Fig. 5(b). FM stereo frequency response and separation both channels.



to both the receiver and to the speaker selector box.

Small-signal ins and outs are connected to rear phono sockets, and it is possible to operate the control and power amplifier sections independently or to introduce a signal processor by extracting a couple of rear links. A shuttered, earthed power supply socket is also present at the rear of the BEAB-tested UK version.

Signals for tape recording are delivered from a buffer amplifier whose level can be adjusted with a rear control. (There is no DIN tape machine socket.) Inputs for 75- and 300-ohm aeriels are provided, the former via a well-matching screw-on connector and the latter via ordinary terminals. A rear slider switch operates 20 dB of aerial attenuation should spurious be experienced in areas of abnormally high signal strength.

Although of 'flat' styling, the length/width dimensions of the receiver are quite large, being 500x370 mm (WxD). Height is only 90 mm, and weight a massive 17.2 kg, much of it due to a massive, low-hum-field toroidal mains transformer and the large heat sinks. I was amazed by the low residual hum and noise yield of the receiver for its power, which amounted to a mere 500 μ V across 8 ohms with the volume control turned right down. Just a slight buzz could be heard from the transformer when the receiver was operating in a quiet room—however, for the price I think there should be no buzz at all!

Lab Results

As revealed by the lab results the amplifier was capable of a healthy 112 + 112 W of sheer heating power over the spectrum 20 Hz–20 kHz, at least into 8-ohm resistive loads. Using the latest IHF-A-202 pulsed 1 kHz sine wave signal the dynamic music power was about 0.9 dB up on this, corresponding almost to 138 + 138 W. With the amplifier running at 10 dB of clipping on the peaks the symmetrical overload recovery time was close to 2.5 ms, as shown by the burst oscillogram, which seems to be acceptable (more data is yet required on this specific test).

Driving into our difficult speaker-simulating load (5 ohms modulus impedance and 60 degrees phase-angle at the test frequencies), I

raised a peak composite signal of no less than 44 V for the intermodulation distortion depicted by the spectrogram—total IM corresponding to about -74 dB, or 0.019% (fig. 1b). This is a remarkable performance, and although the distortion comes on pretty quickly, it is unlikely that anyone would be running the amplifier anywhere near its limit on ordinary domestic speakers!

Reducing the output, the distortion swiftly fell below our -90 dB noise floor. These excellent results are also reflected by the THD measurements at tape input at both high and low power output. The pickup preamplifier is also free from distortion within its dynamic range; but a curio was detected when measuring the pickup overload threshold.

The spec places this at 120 mV at 1 kHz for 0.1% THD. When the signal was taken from the speaker terminals or the output of the control amplifier section it was found that the threshold was more like 70 mV at 1 kHz at pickup input. Although this would be adequate for the vast majority of pickups likely to be used with the receiver, I was surprised to find that the spec was not entirely met when the tests were made that way.

However, the spec was met when the output was taken from the tape recording socket with the rear preset turned down. The threshold, though, diminished as the rear control was advanced. It was also discovered

that the overload thresholds of the other inputs were similarly affected between the two modes of measurement. The effect, then, is not in the RIAA pickup preamplifier as such, but possibly in a subsequent stage. This, however, is being dealt with by the manufacturer.

Apart from this curious effect, the amplifier section acquitted itself in the lab very well indeed. Deviation from RIAA over 20 Hz-20 kHz was within 1 dB on both channels, tone controls were sensibly tailored and S/N ratios at all inputs very good. The action of the loudness control was also favoured over the general run of this sort of compensation. The loudness curve given in the pen-graph was plotted with the slider control at its full contour setting and with the volume control at -30 dB.

The FM section was almost at theoretical maximum sensitivity within the stereo pass-band. As shown by the lab results it required a mere 3 μV mono and 30 μV stereo for 50 dB S/N ratio. Ultimate S/N ratio (1 mV input) was also good, though one or two up-market tuners may yield a CCIR/ARM ratio of 70 dB or a shade more in stereo mode.

The RFIM could possibly have been a little better on one of the 3rd-order IM sidebands; but the average ratio corresponds to around 69 dB, which is not at all bad.

Stereo distortion was commendably low, the spectrogram revealing a total IMD of around 0.18%. The pilot tone is also very well suppressed, and the ripple components at a desirably low level, (indeed, almost 10 dB lower than indicated by the spectrogram when referred to 1 kHz full deviation stereo FM). Stereo frequency response and separation were well up to spec, our pen-graph showing high-pass filtering just below 30 Hz.

Under audition the amplifier section could generate 96 dBA reverberant peaks when driving the IMF 80 II Monitors without any trace of clipping distortion. Reproduction from master tape was very smooth and impressive, the bass well formed, clean and reflecting program ambience accurately, and the overall results closely approached those obtained from the reference HMA-7500 amplifier.

When the master tape was modulated on to the VHF stereo carrier the net quality of reproduction obviously fell, but even so the results were still very impressive. Treble was pure and stridence-free, and 'splutter' from the non-speaking stereo channel could not be evoked even at abnormally high mod level.

As with the Audio-Pro, the overall reproduction was well up to any accepted hi-fi standard. Pickup reproduction tended slightly to down-grade the results, but I feel sure that what most listeners were responding to was the shortfall of the software rather than the receiver electronics!

Excluding the points of criticism, there is no doubt in my mind that the 730 is a competently-engineered receiver whose overall performance lies on par with similar up-market creations exploiting latter-day technology. There will be people who will regard the remote control feature as a gimmick—an optional extra! True though this may be, it is very easy to rig up and operate, and the design really lends itself to this control. It is also very impressive!

Motorised tuning is not new, though, I can recall an ordinary domestic receiver of three (perhaps four!) decades back which used motor tuning. A Philips or, perhaps, an Ekco—it is a trifle hazy now. One possible disadvantage of motor drive as distinct from total electronic control is the inevitable delay between touching a sensor and getting the results. Some engineers still regard capacitor

tuning best for FM, as distinct from varicaps, and motor drive is then the only way that touch control and station pre-setting can be achieved. Some people will undoubtedly regard this as a retrograde step; but this cannot be true of the Nakamichi which very neatly integrates early ideas and space-age electronics. A very interesting receiver indeed ●

Table 1. Amplifier Performance

Parameter	Audio-Pro TA-150	Nakamichi 730
Power o/p 8 ohms 1% dist. factor 20 Hz-20 kHz	66+66 W (75 W 1 ch.)	112+112 W
Harm dist. (factor)	(52+52 W o/p)	(105+105 W o/p)
Tape 1 V i/p	0.07%	0.005%
20 Hz	0.023%	0.004%
1 kHz	0.05%	0.016%
20 kHz	(52+52 W o/p)	(105+105 W o/p)
PU 10 mV i/p	0.13%	0.08% (5 mV i/p preamp overloads at 10 mV)
20 Hz	0.03%	0.013% (10 mV i/p)
1 kHz	0.09% (30 mV i/p)	0.048% (30 mV i/p)
20 kHz	0.065%	0.03%
Tape 1 V i/p 0.5 W o/p	0.05%	0.03%
20 Hz	0.085%	0.03%
1 kHz	33 Vp Fig. 1 (a)	44 Vp Fig. 1b (using Z _L load)
20 kHz	>5 (measured to 100 kHz only)	>5
IM dist. CCIR 15/16 kHz*		
Slewing-factor o/p		
Damping factor 1 W o/p 8 Ω		
20 Hz	40	80
1 kHz	80	80
20 kHz	80	50
Sensitivity i/p for rated power 8 Ω 1 kHz		
High-level i/ps (overload)	160 mV	100 mV (1 V power amp.)
10 V		
PU i/p (overload)	2.8 mV	2 mV (100 kΩ)
180 mV		
PU overload 20 Hz/20 kHz	20 mV/1.7 V	7.2 mV/70 mV (1 kHz)/600 mV
S/N ratios**		
High-level i/ps	79 dB	78.5 dB
Low-level i/p (PU)	75 dB	77.5 dB
Residual hum/noise	1 mV 8 ohms	0.5 mV 8 ohms
DC offset L/R	+11.6 mV/-4.3 mV	+2.8 mV/+21 mV
Stereo separation 1 kHz at PU, Correct loading	60 dB	>70 dB
Tone controls	Fig. 2(a)	Fig. 2b
Filters	Fig. 2(a)	
Loudness	Fig. 2(a)	Fig. 2b
Deviation RIAA PU	Fig. 3(a)	Fig. 3b (600 Ω i/p)
Dynamic Headroom	—	0.9 dB (IHF-A-202 pulsed 1 kHz)
Recovery from 10 dB overload	—	2.5 ms (see text and oscillogram)
Dynamic Power	—	138 W (using IHF pulsed 1 kHz)

*Equal amplitude signals into LS-type load 5 ohms modulus impedance and 60 degrees phase-angle at 16 kHz.

**Ref. 1 W output 8 ohms and 10 mV PU i/p and 1 V high-level inputs, CCIR/ARM weighting.

Table 2. FM Performance

Parameter	Audio-Pro TA-150	Nakamichi 730
RF i/p for 30 dB S/N mono	0.8 μV	1 μV
RF i/p for 50 dB S/N M/S	2 μV/20 μV	3 μV/30 μV
RF i/p for -1 dB limiting	0.8 μV	1 μV
S/N 1 mV i/p M/S	67 dB/64 dB	73 dB/68.8 dB
Capture ratio	≈1.5 dB	≈1.5 dB
3rd-order RFIM	≈5 mV i/p	2.75 mV i/p with 5 mV signal
Selectivity (alt. ch.)	≈60 dB*	≈71 dB
Dist. factor 1 kHz m/s	0.25%/0.1%	0.13%/0.23%
Audio IM distortion and residual hum	Fig. 4(a)	Fig. 4b also showing pilot tone
AM rejection ratio	50 dB	57 dB
Residual 19 kHz pilot tone ref. 1 kHz full modulation	-76 dB	-83 dB
Tape o/p (for recording)	100 mV	1 V 100% modulation level (max.)
Frequency response and stereo separation	Fig. 5(a)	Fig. 5b
Price inc. 15% VAT	£607	£895 (remote control extra)
Distributor	Audio-Pro (Hi-fi) Ltd., Brook House, Crewe Road, Wheelock, nr. Sandbach, Cheshire	Natural Sound Systems Ltd., 10 Byron Road, Wealdstone, Harrow, Middx.

Notes: Measurements refer to pd across 75 ohms aerial input and to full modulation equals 67.5 kHz deviation at 1 kHz (except for frequency response/separation). CCIR/ARM weighting used for S/N measurements.

*Not easy to measure accurately owing to AFC pull-in effect.

Discofilm and Diskmask

reviewed by Reg Williamson

EVER since the introduction of the ubiquitous Dustbug, the record collector has been bombarded with gadgets and potions to improve the quality of his program source; devices to eliminate static and magical liquids which both clean and remove static. It only serves to show how desperate the record buyer can get and, I'm tempted to suggest, how he will buy almost anything that claims to transform a sow's ear into a silk purse. Most are, in my opinion, pretty ineffectual; but as a record collector I haven't been able to resist the temptation to try every one in the vain hope that one day, the Holy Grail of record preservers and re-furbishers will be found. So far, only one has received unqualified approval from me—a fluid for eliminating static (yet another *bête noir* with this music lover).

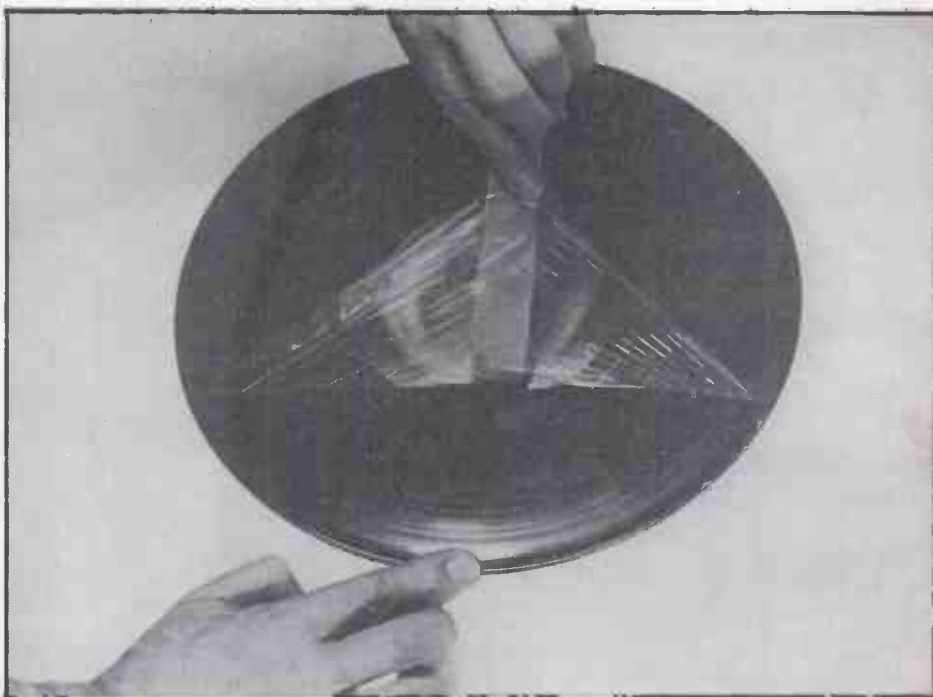
Another has now appeared, which I first met during a visit to the US late in 1978 and which is now being imported by the UK agents for Empire, the cartridge manufacturers, and who kindly gave me a sample to play with. I use the word 'kindly' advisedly, since 500 ml of 'Discofilm' is far from cheap; yet, despite my scepticism, I was impressed with the theory behind it and with the demonstration observed in the US. 'Discofilm' is a record cleaner but not for regular use; rather, for restoring records to their pristine glory where all other methods have failed. And I have plenty of these, some over 20 years old, that I no longer play because of the crackle, hiss and pop of gunge permanently resident in the grooves.

'Discofilm' comes in a plastic bottle with a sponge-faced applicator. The fluid itself is a clear, viscous solution of what seems to be one of the many versatile silicones; after application to the surface of the record, the solvent evaporates and polymerisation results with the characteristic faint smell of acetic acid. I would emphasise that the fluid is completely non-toxic provided one doesn't actually drink it. Any that is spilt may be removed instantly by washing in water, since the fluid and the resultant plastic are soluble in aqueous solutions. One of my industrial spies tells me the fluid was originally developed for the West German police for the removal of fingerprints from contoured objects. Well, it *is* made in Germany so that may well be true.

After the fluid has dried completely and the film formed, it is then removed and brings with it, so it is claimed, all dirt and grease (yes, even finger marks), leaving the surface of the record in immaculate condition.

Sounds marvellous, doesn't it? I could hardly wait to try it.

First, I experimented with an old record that was expendable and immediately met my first problem—that of how much to apply. My first coating was far too thin and simply came off the disc in fragments—some defying all attempts to get them out the grooves. The second attempt resulted in a very thick film



Top: Applying Discofilm

Bottom: Removing Discofilm

that took all night to dry! But this peeled off very nicely and, let me say without hesitation, it worked handsomely. The surface was restored to a miraculous degree and both looked it and sounded like it.

My subsequent efforts became progressively more expert, chiefly in getting the

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Discofilm and Diskmask

coating at just the right thickness. I found that first, one should squeeze a trail of the fluid around the centre of the recorded area—about $\frac{1}{4}$ in. in diameter is about right. Then one uses circular motions of the sponge applicator over the whole of the recorded area, slowly moving around the record surface; the circular motion actually encourages the record to turn helpfully under one's fingers. The coating must be as even as one can get it. Try to avoid tapering off areas, especially near the record label (which should not be coated); aim for a clean edge to the coating and the application should go right to the record edge. The solution should be allowed to dry thoroughly and this will be hastened by leaving the record in a slightly warm, well ventilated spot. The coating with the formation of the film (which looks like thin cellophane) is easily apparent, being matt in appearance. Removal takes a little care. One lays a strip of adhesive tape from the centre out to the edge of the record (I used decorator's masking tape); with a little help from a finger nail, the film is easily persuaded to part from the edge of the disc and, with a steady pull, will come gently away from the surface. At any tendency to tear, stop and help the film away from the record surface with the tip of the finger. If the inevitable happens and a section does refuse to come away, another piece of adhesive tape will usually lift it away with ease. Really stubborn fragments may be removed with a clean cloth soaked in pure

water. The test of how successful one has been will soon be obvious on playing it and a final 'mopping up' operation may be needed in odd spots. If it proves too patchy, then go through the entire process again.

So, record fans—does it work? Indeed it does and I give it a slightly qualified accolade of approval. One of my favourite records, the Guilini recording of Verdi's *Four Sacred Pieces* with the old Philharmonia Orchestra and chorus, has remained in my collection unplayed for over 15 years because of noisy surfaces, with all attempts at improvement failing and not helped either by low cutting levels. For restoring that to me alone, I'm grateful for 'Discofilm', and other 'lost' records in my collection are now getting overdue attention.

But I did say 'qualified' approval. It does demand some skill in application; it is not cheap, far from it; and I think the suggestion that it will do 'up to 70 sides' should not be taken literally, since I feel that to expect 70 sides is a little optimistic. For my part, treatment will be confined to those precious items in my collection that are irreplaceable—deletions, for example—and completely free of other defects such as scratches.

Addendum

Since the preceding review was written, a similar, competitive product has appeared on the British market from Zeepa. Apparently made in this country, one would expect it to be somewhat cheaper, which indeed it is—a little over half the cost for the same quantity,

500 ml. It appears to be very similar, in that it is a slightly opaque solution that is applied to the record, allowed to dry and the remaining film lifted from the surface of the disc in an identical fashion to that recommended for 'Discofilm'. The mode of application is different, however. The recommended quantity is poured from the plastic bottle onto the surface and then spread evenly all over with a brush supplied with the fluid. It proved to be slightly easier to apply and one has greater control over the actual amount used; so I would anticipate greater economy with it. It took about the same time to dry and was just as easy to remove using the same technique. Zeepa claim that their product leaves the refurbished disc in less of a statically charged condition than their competitor's product but I was unable to substantiate this. To retain the disc in the newly restored pristine state, it is still highly desirable to treat it with an antistatic preparation and as quickly as possible. In every other respect, my comments of approval for 'Discofilm' apply equally to Zeepa's 'Diskmask' product, the only grumble being that the brush supplied tended to shed its bristles with continued use. I am informed, however, that Zeepa are now supplying a pure foam applicator. As before, the film is soluble in water so surplus or spilt amounts are easily removed. ●

'Discofilm': Typical price, £12.50+VAT. Distributors: Hayden Laboratories Ltd., Hayden House, Churchfield Road, Chalfont St. Peter SL9 9EW.

'Diskmask': rrp, £6.50 for 500 ml. Distributors: Zeepa Instruments Ltd., 15 Richmond Grove, Surbiton, Surrey.

Book Review

WAGNER: A BIOGRAPHY by Curt von Westernhagen. 2 volumes, 654 pages including Preface, Postscript to Preface, Notes, Four appendices, Chronology, Bibliography, Index, etc. 56 photos. Hardcover. Price: £12.50 each volume. Published by Cambridge University Press, Bentley House, 200 Euston Road, London NW1 2DB.

AMONG reasons for a new Wagner biography the blurb lists the 'recent biographies' which 'have presented the picture of an implausible scoundrel who by chance also wrote some music dramas'. Too much protest, perhaps, although a squalid (*ie*, 'interesting') life story does indeed result from a personal look at this towering genius who had also the irksome necessity of finding how to earn a living, in a world no more disposed to take genius on trust than is our own. Dr. Westernhagen, avoiding such an approach, makes a point of starting from 'the importance and the supreme greatness of Wagner's artistry'. Two aspects also basic to Westernhagen's book are his use of the more recent archive material that has become available (Cosima's diaries, for example) and a conscious building upon the tremendous work of Newman.

On a practical matter: this may best be considered one £25 book rather than two separate volumes, since the 'halves' are inseparable and the Appendices and Index to the whole work appear at the end of Volume 2.

The first volume ends near the same point as the end of Wagner's autobiography, *Mein Leben*, in 1864 at what was to all appearances his final ruin. Vol. 1 might be considered the chronicle of early struggles leading to comprehensive disaster, and Vol. 2, opening with the near-miraculous intervention of King Ludwig (a rescue from the abyss so improbable that a novelist would be scorned for inventing it: perhaps God re-wrote the script), as the Success Story.

While even in Newman, we may sense, by the time of writing his Vol. 3, a certain weariness with Wagner's inability to live in the 'real world' and within his means, the love Westernhagen evinces for Wagner and his works carries us above any unforgiving viewpoint. Towards the end of his Vol. 1, Westernhagen quotes Wagner's famous plea: 'The world owes me what I need! I cannot live the miserable life of a town organist like your master Bach! Is it so shocking, if I think I deserve the little bit of luxury I like? I, who have so much enjoyment to give the world...?' Knowing now what Wagner knew then (but could not prove) about what he was to create, how can one disagree?

What comes across strongly in this book is a sense of connection between Life and Works, so that despite Bülow's sorrowful castigation of a man of sublime art and base

deeds, we can see how both must be included in any real understanding of the phenomenon of Wagner. He suffered greatly at the hands of 'this world... organised and legalised by lies, deceit and hypocrisy' and would perhaps have developed a sweeter character had he not had to battle with the world for the existence of creations which only *he* could bring forth. Dr Westernhagen tends to draw a veil over the worst of Wagner's behaviour in his middle years (such behaviour as other biographies have sometimes pounced on with relish) and over the more rabid outbursts (against the Jews, for example), but of the two approaches this kinder one is perhaps less of a distortion than the anger expressed in Robert Gutman's flawed biography.

By no means a replacement of the still classic Newman, Dr Westernhagen's impressive double volume nevertheless takes its place as a fine supplement to that work of scholarship. The apt placing of Wagner's works in context with the developments in his life is so well done, that on reading I was provoked time and again into listening to passages from the dramas, so evocative of these is Westernhagen's text; leading once more to the conclusion that in *Parsifal* Wagner set the capstone of his supreme achievement, and that, to quote Newman (whom Westernhagen quotes thus, near the end): 'We feel in the presence of it as we do in that of the only other music that inhabits the same sphere—the last quartets of Beethoven—the men who can dream such music must have made up their account with time and are ripe for eternity.'

Geoff Jeanes



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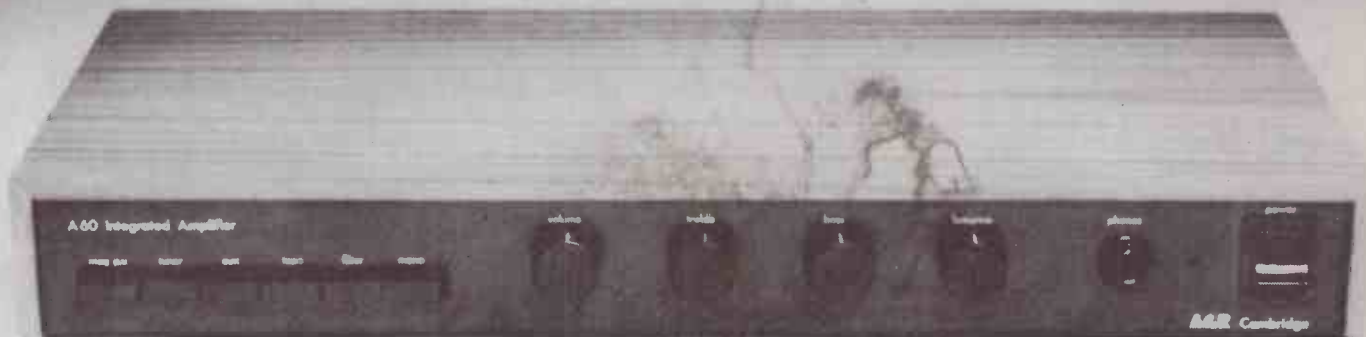
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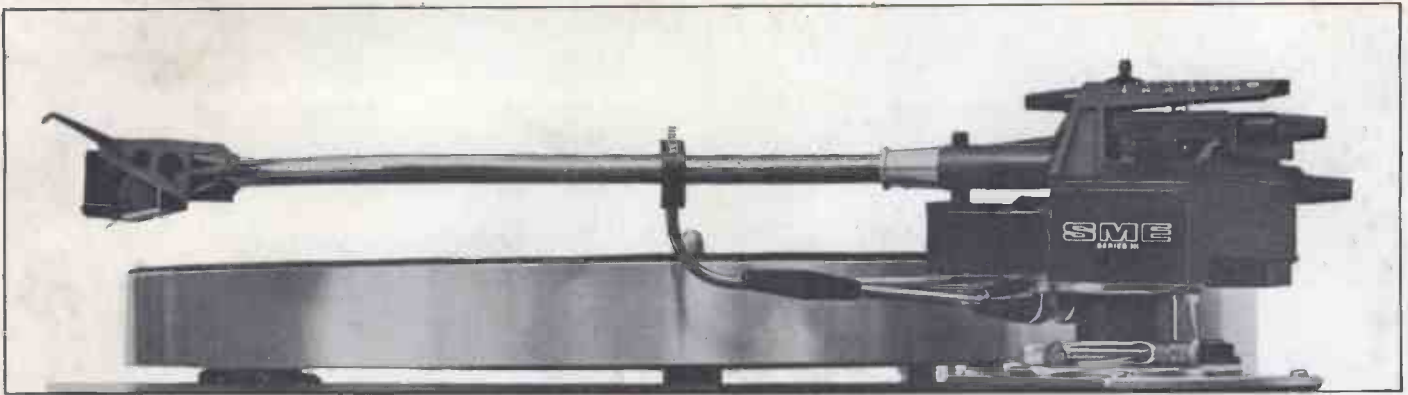
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Of course a universal tone arm like the superb SME series III (top picture) is capable of extracting the best performance from almost any cartridge. It's a must for fragile, high compliance types.

Grado Laboratory Series cartridges employ a low compliance cantilever assembly which makes them eminently suitable for most popular tone arms.

And that means every Grado in a range costing from around £14 to over £70.

A tone arm like the Pioneer shown above is highly recommended for high quality, low compliance cartridges.

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It will also ensure the rest of your system receives a signal of correct tonal balance.

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They are also very light, and of course the less weight the arm and cartridge present to the stylus the better its ability to trace valuable information.

And remember, transient information lost at the first stage of reproduction cannot be retrieved later.

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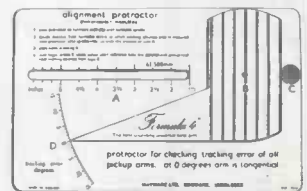


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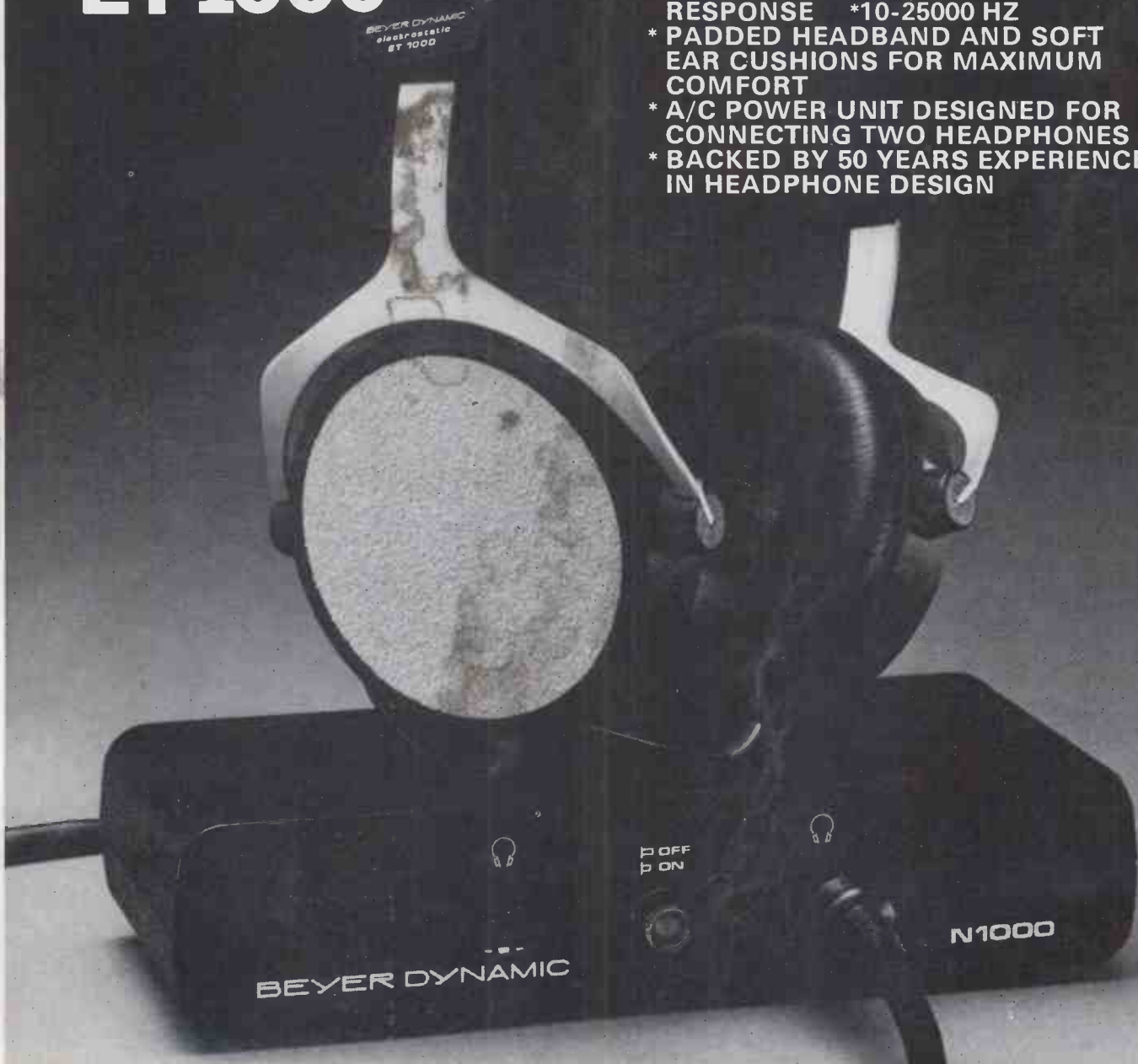


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hi-fi news & record review ANNUAL 79



Equipment tests from the past year, 66 in all, by the Hi-Fi News and Record Review expert technical team * Basic Audio Data – the editor clarifies four areas of ignorance: decibels, time constants, sound wavelengths and mechanical resonance * Recommended classical record library brought up to date * Audio Index – a guide to hi-fi brand names, manufacturers and importers. *Wonderful value at £1.20.*

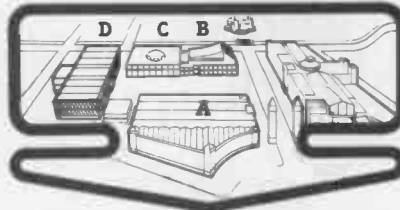
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TO SEE AND HEAR



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- A**  **Palace No. 1 (A)** will house radio and TV manufacturers, who will be showing their new hi-fi ranges, including amplifiers, receivers, tuners and other accessories. Also on show will be the latest developments in sound and video recording equipment.
- B**  **Palace of Congress (B)**, will house the largest photographic exhibition to be held in Spain. The visitor will be able to see equipment ranging from the extremely simple to the most sophisticated including complex professional developing and processing gear. There will also be a comprehensive range of audio-visual equipment.
- C**  **The Fair Palace (C)** is devoted to Sound. Both professional and amateur will be able to find everything relating to hi-fi, public address, sound and video recording, musical instruments and theatrical lighting.
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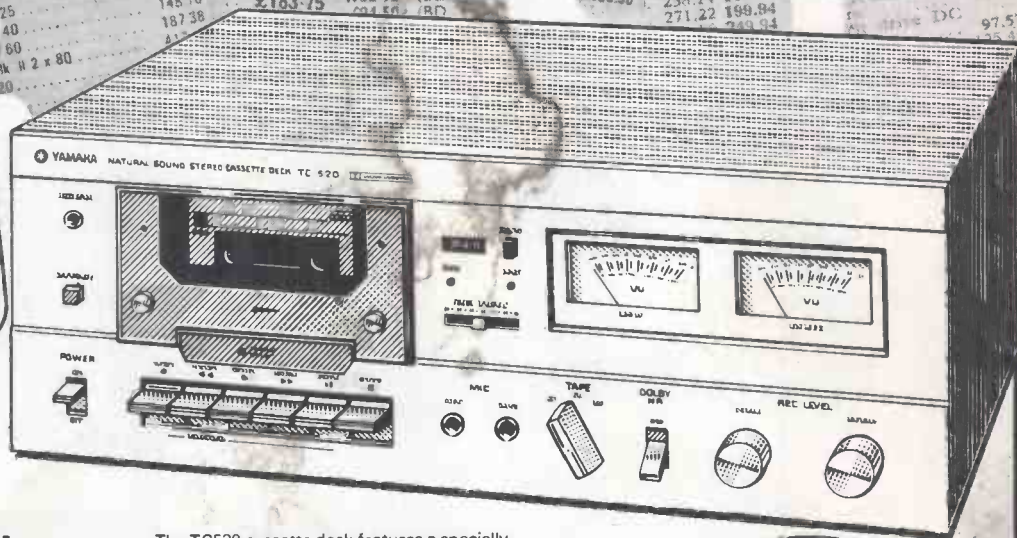
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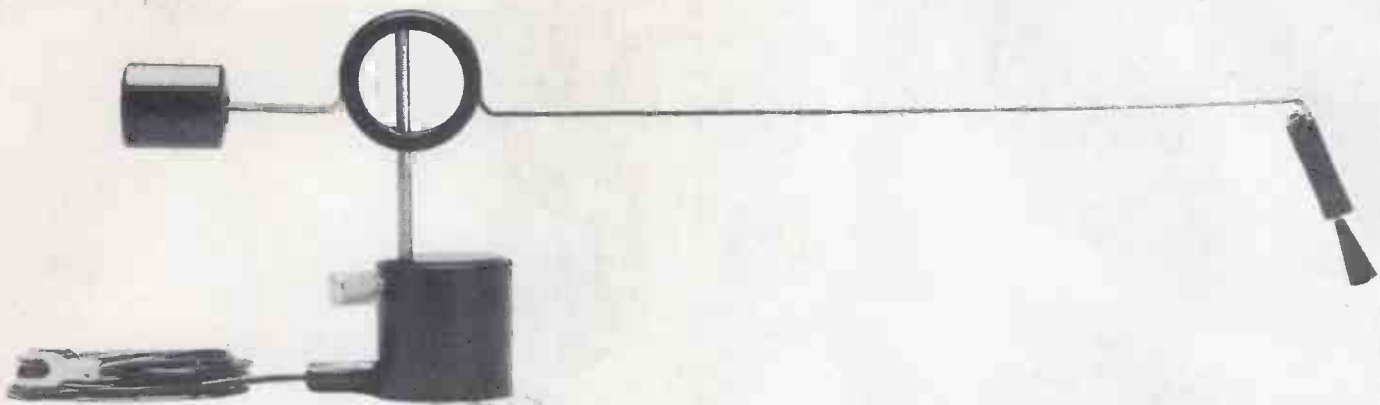
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SALE

EVER

ALL PRICES INCLUDE VAT

JVC	
JAS 11G Amplifier	£77.00
JTV 11G Tuner	£77.00
JRS 81 Tuner/amplifier	£149.00
QL 5 Record deck	£164.00
KD 10 Cassette deck	£114.00
KD 65 Cassette deck	£199.00
RC 636 Stereo cassette/radio	£129.00
LK 10/31/50 Audio rack	£25.00
HR 3300 Video recorder	£560.00

Sharp music centres

SG 320 (complete)	£219.00
SG 450 (complete)	£319.00
SG 500 (with remote control) speakers extra	£549.00

Technics

ST 9600 Tuner	£189.00
ST 8080 Tuner	£126.00
SL 220 Record deck	£68.00
RS 631 Cassette deck	£142.00
SBX 3 speaker pair	£200.00

Sony	
TA 212 Amplifier	£69.00
ST 212L Tuner	£69.00
STR 212L Tuner/amplifier	£99.00
TCK 1A Cassette deck	£87.00
TCK 60 Cassette deck	£235.00
SS 2030 speakers pair	£75.00
HMK 80 music centre (speakers extra)	£349.00
CF 900S Cassette/radio	£109.00
KV 1822 UB Colour television	£329.00
KV 2200 UB Colour television	£395.00

RAM

Mini bookshelf speaker pair	£95.00
150 speaker pair	£175.00

Wharfedale

Shelton XP2 speaker teak pair	£59.00
Linton XP2 speaker teak pair	£73.00

Trio	
KA 5700 Amplifier	£112.00
KT 6500 Tuner	£112.00
KR 3090 Tuner/amplifier	£139.00
KD 2070 Record deck	£89.00
KX 1030 Cassette deck	£235.00

Yamaha

CA 810 Amplifier	£219.00
CT 810 Tuner	£149.00
CR 820 Tuner/amplifier	£269.00
CR 2020 Tuner/amplifier	£399.00
TC 511S Cassette deck	£109.00



Important Notice
All items in this advertisement are offered subject to availability and all prices were correct at time of going to press. (E & OE). Due to world currency fluctuations, prices are subject to change without notice. Although we make every effort to maintain stability please confirm price is unchanged when you call, write or phone.

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Post this coupon to your nearest Gratispool branch today.

- Glasgow** 66 Queen Street G1 3DS Tel 041-221 3740
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- Leeds** 36A Lands Lane LS1 6LB Tel 0532 35714
- Bristol** 83 The Horse Fair Tel 0272 20633
- Kingston Upon Thames** 7 Church Street Tel 01-546 6196
- Edinburgh** 94/96 South Bridge Tel 031-225 9250
- Maidenhead** 82 King Street Tel 0628 25483

Carriage extra
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Please supply

I Enclose Full cash price

I wish to pay by Access/Barclaycard and authorise you to debit my account with the amount shown above.

No.

Name

Address

Signature September



COMET HI-FI

Rec. Retail Comet
Price Price Price
Inc. VAT Inc. VAT

STEREO AMPLIFIERS

	Rec. Price	Comet Price
AIWA		
AA8100 2 x 25	124.41	91.75
AA8300 2 x 45	168.50	132.75
AKAI		
AM 2250 2 x 25	—	79.90
AM 2450 2 x 45	—	137.75
ALBA		
2025 2 x 27	—	72.90
2050 2 x 50	—	104.90
AMSTRAD		
IC2000 2 x 25	—	32.50
EX 220 2 x 25	70.08	49.90
EX 330 2 x 35	85.63	60.00
ARMSTRONG		
621 2 x 40	153.33	122.50
MARANTZ		
1050 2 x 25	135.96	84.90
1072 2 x 36	176.84	109.90
PIONEER		
SA 506 2 x 25	—	85.24
SA 606 2 x 40	—	115.24
SA 706 2 x 60	—	152.24
SA 7800 2 x 65	—	244.90
SA 8800 2 x 80	—	299.90
SA 9800 2 x 100	—	384.90
ROTEL		
RA 300 2 x 20	—	59.90
RE 700 graphic equaliser	—	74.90
RA 314 2 x 25	—	82.50
RA 350 2 x 35	—	84.90
RA 1212 2 x 70	—	102.00
RA 414 2 x 35	—	104.90
RA 913 2 x 60	—	112.25
RA 1412 2 x 110	—	194.00
SANSUI		
AU 117 2 x 15	—	67.90
AU 217 2 x 30	—	102.00
AU 317 2 x 50	—	154.90
D. C. coupled	—	154.90
SOLAVOX		
SA 2020 2 x 20	—	48.75
TRIO		
KA3750 2 x 25	—	74.90
KA 3700 2 x 25	—	81.50
KA 305 2 x 40	—	102.00
GARRARD MRM101 Hi-Fi music recovery module, this unit is able to 'see' a scratch or noise pulse in an audio signal waveform then electronically delete it, giving clean record replay.	133.69	91.75

TUNERS

AIWA		
AT9300 LW/MW/FM	130.04	97.90
AKAI		
2250L MW/LW/FM	—	84.90
ALBA		
2000 MW/LW/FM	—	71.25
AMSTRAD		
3000 Mk. 2	—	29.90
EX 202 MW/LW/FM	67.70	48.50
EX 303 MW/LW/FM	77.66	55.00
ARMSTRONG		
624 FM	132.89	102.00
623 MW/LW/FM	171.73	132.75

Check our prices by phone. They may be even cheaper!

All the prices in this advertisement were prepared approximately 6 weeks ago to meet the necessary publication date. This means that owing to our policy of giving the best possible value for money, some of our prices may be even lower! So please phone your nearest Comet warehouse or shop to check the latest price. You may find that Comet are giving you an even better bargain than before! All offers are subject to availability.

Rec. Retail Comet
Price Price Price
Inc. VAT Inc. VAT

Tuners—continued

MARANTZ		
2050	—	81.50
2020L	—	89.90
2100	163.56	92.90
PIONEER		
TX 606 MW/FM	—	96.94
TX 7800	—	172.50
TX 9800	—	229.90
ROTEL		
RT300 LW/MW/FM	—	59.90
RT426	—	84.90
RT824 MW/FM	—	89.90
RT925	—	102.00
RT1025	—	112.25
RT1024	—	132.75
SANSUI		
TU 217	—	99.90
SOLAVOX		
ST 2002 FM/MW/LW	—	46.75
TRIO		
KT 5550 MW/FM	—	82.90
KT 5500 MW/FM	—	91.75
KT 3131 LW/MW/FM	—	97.00

CASSEIERS

TUNER/AMPLIFIER/CASSETTE COMBINATIONS

AIWA		
AF3070 2 x 25 Dolby cassette	429.17	234.90
AF3090 2 x 40 Dolby cassette	502.98	399.90
AKAI		
AC3500L 2 x 25 Dolby cassette	—	224.90
FERGUSON		
3926 2 x 20 watts RMS 4 waveband with Dolby cassette	—	179.90
GOODMANS		
4000 2 x 28 with Dolby cassette inc. pair Goodmans MC35 loudspeakers	—	289.90

TUNER/AMPLIFIERS

AKAI		
AA1125 2 x 25	—	114.90
ALBA		
UA1500 2 x 10	—	49.90
2125 2 x 27 LW/MW/FM	—	112.25

Rec. Retail Comet
Price Price Price
Inc. VAT Inc. VAT

Tuner/Amplifiers—continued

ALBA		
2150 2 x 50 LW/MW/FM	—	148.00
AMSTRAD		
EX222 2 x 25	97.58	68.25
EX 333 2 x 30	136.41	95.75
ARMSTRONG		
625 FM 2 x 40	242.27	189.00
626 AM/FM 2 x 40	279.07	214.50
GOODMANS		
MOD 130 2 x 50	—	132.75
MARANTZ		
MR215 2 x 15	—	94.90
MR230 2 x 30	—	144.90
MR250 2 x 50	—	174.90
2238BL 2 x 38 FM/MW/LW	405.82	224.74
PIONEER		
SX590 2 x 20	—	124.90
SX690 2 x 30	—	147.90
SX980 2 x 80	—	398.50
SX1080 2 x 120	—	449.50
ROTEL		
RX 203 2 x 20	—	79.90
RX 300 2 x 20	—	97.50
RX 304 2 x 22 LW/MW/FM	—	117.25
RX 404 2 x 30 LW/MW/FM	—	132.75
RX 504 2 x 40	—	158.25
RX 604 2 x 50	—	184.90
RX 1203 2 x 120	—	249.90
RX 1603 2 x 180	—	299.90
SOLAVOX		
SR 2220 2 x 20	—	71.25

TURNTABLES

AIWA		
AP2300 Direct drive inc. magnetic cartridge	—	119.90
AP2400 Direct drive inc. magnetic cartridge	152.31	138.00
AMSTRAD		
TP12D belt drive	—	29.90
BSR		
182 with ADC AC30 magnetic cartridge	—	29.74
P208 belt drive auto. fitted ADC QLM 33 mag. cartridge	—	39.90
Quanta 500 belt drive fitted ADC QLM 32 mag. cartridge	—	49.90

Rec. Retail Comet
Price Price Price
Inc. VAT Inc. VAT

Turntables—continued

Quanta 600 belt drive DC Servo auto. return, fitted ADC QLM 32 mag. cartridge	—	69.90
Quanta 700 direct drive auto. return, fitted ADC QLM 34 mag. cartridge	—	79.90
Quanta 800 direct drive quartz locked, auto. return, fitted ADC XLM mag. cartridge	—	112.50
CONNOISSEUR		
BD1 kit	24.15	19.90
BD2	—	42.50
GARRARD		
SP25 Mk. 6 belt drive with Shure M75/6/SM	69.00	45.50
GT20 belt-drive Shure M75ED	103.50	69.90
GT25 belt-drive auto. stop M75ED	116.44	77.90
DD130 Direct drive Shure or Ortofon cartridge	142.31	94.75
GT35 Servo belt-drive auto stop M75ED	140.16	94.90
DD131 Direct drive semi auto. fitted Ortofon FF15E Mk. 2 cartridge	—	99.90
DD132 Direct drive fully auto. fitted Ortofon FF15E Mk. 2 cartridge	—	109.90
MARANTZ		
6025 belt drive	94.04	59.90
6170 direct drive	144.13	102.25
PIONEER		
PL512 belt drive	—	49.90
SANSUI		
SRB200B belt drive auto. stop inc. cartridge	—	56.90
SR222P	—	61.25
STRATHEARN		
STM4 direct drive with fitted mag. cartridge	—	39.90
SM2000 Direct drive with cartridge	—	79.90
TRIO		
KD1033B belt drive	—	59.90

SPEAKERS

ALL SPEAKERS ARE PRICED AS PAIRS

AMSTRAD		
ACOUSTRA 1000	26.89	19.90
CELESTION		
Hadleigh	62.43	44.90
Ditton 121	88.64	69.90
Ditton 15XR	161.51	109.90
Ditton 22	222.58	154.90
Ditton 33	250.55	199.00
Ditton 332	284.18	239.90
Ditton 442	347.76	289.90
Ditton 551	410.71	339.90

I promise you 12 months service, including parts and labour on all goods - without charge. After the initial free 12 month period you can still rely on us to keep your purchases in working order.

Michael Hollingbar
Chairman

Rec. Retail Price Inc. VAT
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Speakers—continued

GOODMANS			
RB18	—	59.90	
RB20	—	76.50	
RB35	—	111.25	
RB65	—	131.75	
Beta	167.18	140.75	
Kappa	219.76	185.75	
HE2	267.02	227.75	
HE1	303.98	255.25	
Sigma	312.20	260.50	
JR			
149	166.76	137.90	
L.P.A. System with			
30 watt bass amp.			
for use with amps			
15 to 100 watt			
priced singly ..			
150	207.00	159.90	
	258.74	219.90	
MARANTZ			
4G	90.98	58.90	
4G3	113.47	79.90	
HD440	156.40	99.90	
SANSUI			
J11 Mini	—	99.90	
SOLAVOX			
TK15	—	23.25	
PR25 Mk. II	—	39.90	
2 way	—	39.90	
PR35 Mk. II	—	59.90	
3 way	—	59.90	
PR45 Mk. II	—	79.90	
3 way	—	79.90	
WHARFEDALE			
Chevin XP	50.25	35.90	
Denton XP2	75.37	49.90	
Shelton XP2	96.05	59.90	
Linton XP2	116.71	83.90	
Glendale XP2	155.04	109.90	
Teesdale SP2	192.33	136.90	
E30 High power	—	199.90	
E50 High power	302.29	269.90	
E70 High power	372.93	329.90	
E90 High power	—	499.90	

CARTRIDGES

AUDIO			
TECHNICA			
AT11E	12.83	9.75	
TECHNICA			
AT13EA	22.43	14.85	
GOLDRING			
G800	—	5.40	
G800E	—	8.70	
G800 Super E	—	12.20	
G900E	—	20.35	
ORTOFON			
FF10E Mk. II	14.50	10.15	
FF15E Mk. II	19.50	16.25	
VMS 20E Mk. II	39.50	33.65	
SL20E	60.00	51.05	
STM72 Transformer	—	—	
for SL20E	28.00	23.45	
SHURE			
M55E	15.18	9.10	
M75EJ	22.43	13.20	
M75ED	25.53	13.90	
M95ED	34.16	20.35	
V15-Mk. 3	70.73	50.00	
V15-Mk. 4	92.81	61.25	
STANTON			
500A	16.96	11.90	
500 EE	21.85	15.50	
680 EE	32.77	22.90	
681 EEE	53.18	36.90	

Rec. Retail Price Inc. VAT
Comet Price Inc. VAT

STYLI

AUDIO			
TECHNICA AT511E			
(for AT11E)	9.94	6.65	
TECHNICA ATN13			
(for AT13EA)	16.58	10.75	
GOLDRING			
D110 Stylus	—	3.00	
(G800)	—	3.00	
D110E Stylus	—	6.05	
(G800E)	—	6.05	
D110SE Stylus	—	8.45	
(G800 Super E)	—	8.45	
ORTOFON			
N15E Mk. II for	—	—	
FF15E Mk. II	15.50	9.10	
D20E Mk. II for	—	—	
VMS 20E Mk. II	27.50	20.35	
SHURE			
N75/6 Stylus	8.63	5.65	
N75EJ Stylus	13.46	8.70	
N75ED Stylus	19.32	12.20	
N95ED	24.84	15.85	
VN35E Stylus for	—	—	
V15 Type 3	35.54	17.90	
VN45HE Stylus	—	—	
for V15 Type 4	35.53	25.05	
STANTON			
D5107A for 500A	—	8.25	
D5100EE for 500EE	—	10.50	
D680 for 680EE	—	13.90	
D680EEE for	—	—	
681EEE	—	18.90	

HEADPHONES

AKAI			
ASE7	—	10.25	
AMSTRAD			
HPS 6A	15.91	11.90	
GOODMANS			
OHP10	—	17.90	
KOSS			
K6	—	10.90	
K6/LC (with	—	—	
volume control)	—	15.50	
PRO-4AA	—	24.50	
K125	22.94	17.50	
K135	27.31	19.90	
K145	—	27.50	
PIONEER			
SE205	—	13.50	
SE305	—	19.90	
SANSUI			
SS30	—	17.90	
SOLAVOX			
300	—	4.90	

PICK-UP ARMS AND HEADS

CONNOISSEUR			
SAU2	24.15	19.50	
SME			
S2 head shell	7.59	6.50	
CA1 Carry arm	21.85	15.90	
FD200 Damper	25.01	18.90	
3009 Ser. II fixed	—	—	
head shell	82.51	62.90	
3009 Ser. III	150.59	109.90	

Rec. Retail Price Inc. VAT
Comet Price Inc. VAT

HI-FI CASSETTE TAPE RECORDERS

AIWA			
ADM100 Dolby	128.04	99.90	
ADM200 Dolby	—	—	
variable bias	157.91	124.90	
AD6350 Dolby	200.15	149.90	
AD2000 Dolby	200.62	154.90	
AD-L40 Dolby	—	—	
variable bias	—	—	
metal tape	281.11	224.90	
AD6700 Dolby	—	—	
2 head infra red	—	—	
remote control,	—	—	
metal tape	—	—	
facility	403.78	347.25	
AKAI			
CS702D Mk. II	—	88.90	
Dolby	—	88.90	
GXC706 Dolby	—	139.90	
GXC709D Dolby	—	174.90	
ALBA			
2200 Dolby	—	158.25	
AMSTRAD			
EX700 Dolby	—	79.90	
BINATONE			
6764 Dolby	—	79.90	
MARANTZ			
1820 Dolby	150.27	104.90	
5000 Dolby	190.13	109.90	
PHILIPS			
N2533 Dolby	—	81.50	
PIONEER			
CTF 500	—	99.90	
CTF 800	—	229.90	
ROTEL			
RD 300 Dolby	—	87.90	
RD 18F Dolby	—	99.90	
RD 25F Dolby	—	123.90	
SANSUI			
SC1110/SC1120	—	89.94	
Dolby	—	89.94	
SC2110/SC2110G	—	124.94	
Dolby	—	124.94	
SOLAVOX			
SCD 2070 Dolby	—	79.90	
TRIO			
KX503 Dolby	—	109.90	

OPEN REEL TAPE RECORDERS

GRUNDIG			
TS 945 4 motor,	—	—	
3 heads and echo	—	289.90	
TS 1000 Semi-			
professional	—	—	
electronic switching,	—	—	
3 heads 3 motors	—	459.90	
PIONEER			
RT 707 Auto	—	—	
reverse	—	409.90	

BLANK TAPES

BASF LH			
C60	—	0.75	
C90	—	0.95	
C120	—	1.40	
BASF SUPER LH1			
C60	—	1.20	
C90	—	1.60	
C120	—	2.05	

Rec. Retail Price Inc. VAT
Comet Price Inc. VAT

Blank Tapes—continued

BASF CRO2			
C60	—	1.40	
C90	—	1.80	
C120	—	2.65	
TDK RECORDING TAPE			
TDK DYNAMIC Cassettes			
D60	—	0.75	
D90	—	0.90	
D120	—	1.35	
DC90 3 pack	—	2.45	
TDK AD Cassettes			
AD C60	—	1.07	
AD C90	—	1.50	
AD C120	—	1.99	
TDK Super Avilyn Cassettes			
SA C60	—	1.35	
SA C90	—	1.65	
TDK Audua Spool Tape			
L1800	—	4.25	
L3600 on metal	—	—	
NAB reel	—	12.70	
LASER SP PACK			
C90 five pack	—	—	
with rack	—	2.15	
MAXELL			
UL C60	—	0.79	
UL C90	—	0.99	
UL C120	—	1.29	
UDXL1 C60	—	1.65	
UDXL1 C90	—	2.15	
UDXL2 C60	—	1.65	
UDXL2 C90	—	2.15	
UD 35 90 (7"	—	—	
1800')	—	4.80	
UD 50 120	—	—	
(10 1/2" 2500')	—	9.05	
UD 35 180	—	—	
(10 1/2" 3600')	—	10.15	
MEMOREX MRX3			
C60	—	1.15	
C90	—	1.50	
C120	—	1.95	
MEMOREX Chromc			
C60	—	1.25	
C90	—	1.70	

MICROPHONES

AKAI			
ADM20	—	8.70	
AMSTRAD			
DM701 stereo	—	—	
mic. pack (pair)	—	13.20	

HI-FI FURNITURE

AMSTRAD			
301T	—	20.50	
MARANTZ			
MR500	—	33.75	
TRIO			
SRC 75 system rack	—	39.90	
Schreiber self-assembly Hi-Fi	—	—	
housing units in wood finish.	—	—	
14 619	46.32	35.25	
14 620	49.51	37.25	
14 617	74.48	53.25	
14 618	77.20	58.50	
14 622	87.85	64.00	

All offers subject to availability.

COMET

TDK®

Top Tapes ...at rock-bottom prices

TDK cassettes . . . they set standards of performance and reliability by which other tapes are judged. Just as Comet sets equally high standards when it comes to Hi-Fi value for money. Put the two together and you get some of the best tapes in the business for the lowest-possible price. Call in right away. It's an offer that's too good to miss!



D~C90 Cassette

It's superb sound quality all the way with TDK Dynamic (D) cassettes, which provide better high fidelity performance than most competitive premium cassettes. With their better balanced characteristics and precision engineered mechanism they're meeting the demands of many home recordists. Now look at the Comet price for a pack of three D-C90s. It's a very sound buy indeed!

**PACK OF THREE
COMET Price £2.45**

SA~C90 Cassette

The new TDK SA cassette is one of today's top tapes — a product which outperforms most others on a wider range of cassette decks in use today. Virtually all major cassette deck manufacturers continue to use TDK SA as their high bias reference standard, and recommend it for maximum performance in their decks. With its wide dynamic range SA provides unprecedented clarity and vividness of sound — a quality of reproduction formerly associated only with the best open-reel recordings. The TDK SA . . . a top tape for a rock-bottom Comet price.

COMET Price £1.65



ALSO AVAILABLE:

TDK DYNAMIC CASSETTES
D60
D90
D120
DC90 3 pack
TDK AD CASSETTES
AD C60
AD C90

Comet
Price

£0.75
£0.90
£1.35
£2.45
£1.07
£1.50

AD C120 £1.99
TDK SUPER AVILYN CASSETTES
SA C60 £1.35
SA C90 £1.65
TDK AUDUA SPOOL TAPE
L1800 £4.25
L3600 on metal NAB reel £12.70

COMET AKAI

Akai CS 702D MKII cassette deck



Here's an IC equipped front-loading Dolby deck that is literally bristling with Hi-Fi features. Powered by an electronically-controlled DC motor, the CS 702D Mk. 2 includes a large flywheel with a flat belt drive to assure smooth capstan rotation. The impressive specification includes a superhard permalloy recording/playback head, limiter switch, direct function change control, tape selector switch, pause and auto-stop. This deck was a "Recommended Buy" in Hi-Fi Choice Cassette Decks and Tapes, At this new Comet cut-to-the-bone discount price, the CS 702D Mk. 2 has to be incredible value for money!

SPECIFICATIONS

Track System: 4 track, 2 channel stereo. Wow and Flutter (WRMS): <0.08%. Frequency Response (± 3 dB): Chrome 40-15. Distortion (1 kHz OVU): <1.5%. Signal-to-Noise ratio (Dolby on + 10 dB): >50 dB. Heads: (2) Permalloy. Motor: DC Electronically speed controlled. Dimensions: 380(W) X 157(H) X 287(D) mm.

COMET PRICE £88.90 inc. VAT

COMET AIWA®

a
Hi-Fi
compact
with a difference.



AIWA AF3070 STEREO CASSETTE RECEIVER

With an output of 25 watts per channel RMS, FM/MW/LW/SW wavebands and a Dolby cassette deck, the AF 3070 from Aiwa is a Hi-Fi compact with a difference — both in style and performance. Provision is made for connecting two separate pairs of loudspeakers with front panel selection of either, and a loudness button is provided in addition to bass and treble controls. The sensitive tuner incorporates an FM stereo beacon, six FM pre-select buttons and a new type of Aiwa tuning indicator. Amongst the features of the cassette deck section are 3-position tape selector switch, oil-damped operating keys and cassette eject mechanism, precision tape transport cue/review facility, mic/line mixing, and provision for synchronised recording in conjunction with an Aiwa turntable.

SPECIFICATIONS

AMPLIFIER SECTION

Continuous power output (1kHz): 25W + 25W (8 ohms). Total harmonic distortion: 1%. Tone control; Bass: 100 Hz \pm 10 dB, Treble: 10 kHz \pm 10 dB. Loudness control: 100 Hz + 8 dB, 10 kHz + 4 dB. Damping factor (1 kHz): 40 (8 ohms), 20 (4 ohms).

CASSETTE DECK SECTION

Track: 4-track, 2-channel. Tape Speed: 4.8 cm/sec (1 $\frac{1}{2}$ ips). Noise reduction system: Dolby. Frequency response: (DIN) CrO₂ tape: 30 Hz-15 kHz. S/N ratio: 60 dB (CrO₂ tape, Dolby on). Wow and Flutter: 0.07%

WRMS (0.20% DIN). Head: Hardened permalloy. Motor: DC Servo motor.

TUNER SECTION

Frequency range: FM 87.5 — 108 MHz; MW 525 — 1605 kHz; LW 150 — 340 kHz; SW 5.9 — 16 MHz. FM sensitivity (for 50 dB quieting): 1 HF 2.0 μ V (Mono). DIN 1.5 μ V (Mono). FM frequency response: 30-15,000 Hz. FM S/N ratio: 70 dB (Mono), 65 dB (Stereo). FM distortion: 0.2% (Mono), 0.4% (Stereo). FM separation: 40 dB (1 kHz). Dimensions: 481(W) x 162(H) x 321(D) mm.

Rec.Ret.Price £429.17 inc.VAT

Comet Price £234.90 inc VAT

AIWA

COMET

AIWA®

Small Superb... Packed with Power

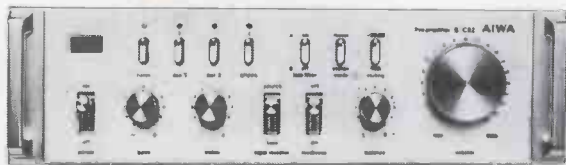
Aiwa Micro 22 Mini Component System

Meet Aiwa's Micro 22... the biggest news yet in miniature Hi-Fi systems. It's small, superb and packed with power. Complete in its own teak-finished rack, the Micro 22 stands little higher than an average LP — yet delivers a big 30 watts per channel of pure high fidelity sound.

What's more, it looks just as good as it sounds.

And now for some more big news about this space-saving system with the large-as-life performance...

Look at the Comet discount price!



AIWA SA-C22 Pre-amplifier

Packed with features almost unbelievable for a unit of this size, the SA-C22 incorporates plus-minus dual power supplies and has facilities for connection of up to 5 audio components. A high performance phono equaliser assures outstanding record reproduction, and analog switching suppresses noise during mode changes. The specification also includes: LED function indicators, low filter, and loudness, muting and tape monitor switches.

SPECIFICATION

S/N Ratio: Phono: 80 dB. Tuner, Aux 1, Aux 2: 85 dB. Tape Input: 97 dB. RIAA Deviation: ± 0.2 dB (20 Hz to 20 kHz). Input Sensitivity/Impedance: Phono: 2.5 mV/47K ohms. Tuner: 150 mV/47K ohms. Aux 1: 150 mV/47K ohms. Aux 2: 150 mV/47K ohms. Phono Maximum Input Voltage: 200 mV (at 1 kHz, THD 0.1%). Output

Voltage/Impedance: Tape: 150 mV/47K ohms. Pre: 0.6V/47K ohms. Tone Control: Bass: ± 8 dB (100 Hz). Treble: ± 8 dB (10 kHz). Low Filter: 30 Hz, 12 dB/oct. Loudness: 100 Hz + 6 dB, 10 kHz + 4 dB (with 40 dB). Muting: -20 dB. Dimensions (including handles): 9 1/2" (240 mm) W x 2 1/16" (71 mm) H x 7 7/8" (200 mm) D.



AIWA SA-P22 Power Amplifier

Only 21 cm (8 1/4") wide, this mighty atom delivers an impressive 30 watts RMS per channel of low distortion power, the wide range DC amplifier reproducing superb high fidelity sound. Other features include: 5 LED logarithmic power output display, protection circuit with newly developed IC relay for suppressing noise when operating power switch, A/B speaker selector and stereo headphone jack.

SPECIFICATION

Power Output: 30W + 30W (8 ohms) Both channels driven 20 Hz-20 kHz (THD 0.06%). Total Harmonic Distortion: 0.04% (at 1 kHz, 30W). Input Sensitivity/Impedance: 0.6V/47K ohms. Power Bandwidth: 5 Hz-30kHz. S/N

Ratio: 95 dB. Damping Factor: More than 45 (8 ohms, 1 kHz). Circuitry: DC amp. Dimensions (including handles): 9 1/2" (240 mm) W x 2 1/8" (72.3 mm) H x 8 1/16" (223.6 mm) D.



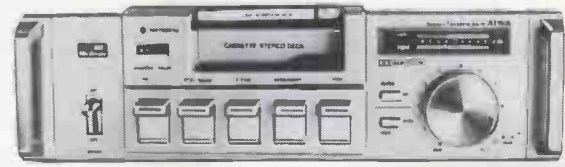
AIWA ST-R22 AM/FM digital tuner

A component tuner with all the features and performance of the large-scale models, the R22 has a quartz-controlled digital frequency readout enabling accurate station selection for both AM and FM, a low-noise MOSFET front end assures excellent sensitivity and stable stereo separation. There's a quadrature detector circuit, phase-locked-loop (PLL) IC MPX, 5-LED signal strength meter, Hi-blend, and combined AFC/muting switch. By any comparison, a superb performer!

SPECIFICATION

FM Section Frequency Range: FM: 87.5MHz - 108 MHz. Usable Sensitivity: Mono: 1.9 uV. 50 dB Quieting Sensitivity: Mono: 18.2 dBf (4.5 uV). Stereo: 37.9 dB (43 uV). S/N Ratio: Mono: 73 dB. Stereo: 70 dB. Capture Ratio: 1.5 dB. Total Harmonic Distortion: Mono: 0.1%. Stereo: 0.25%. Selectivity: 70 dB (400kHz). Frequency Response: 30 Hz -

15,000 Hz (+5 - 1.5 dB). Spurious Rejection Ratio: 80 dB. AM Suppression Ratio: 55 dB. Stereo Separation: 45 dB (at 1 kHz). AM Section Frequency Range: AM: 525 kHz - 1,605 Hz. AM Sensitivity: 20 uV. Dimensions (including handles): 9 1/2" (240 mm) W x 2 1/16" (71 mm) H x 8 1/16" (226 mm) D.



AIWA SD-L22 Mini Dolby Cassette Deck

At last, the kind of convenience the cassette was meant to have! Full recording and playback performance from a Dolby deck only 21 cm wide. The SD-L22 bristles with advanced facilities including: two rows of fastacting peak-reading LEDs instead of normal VU level meters, LH/CrO2 selector switch, line/mic input selector, LED tape running indicator and full auto-stop. It all adds up to sound quality out of all proportion to its size!

SPECIFICATION

Wow and Flutter: 0.09% (WRMS). S/N Ratio: 60 dB (Dolby on). Frequency Response: 25 - 14,000 Hz (LH tape), 25 - 16,000 Hz (CrO2 tape). Head: Hard

Permalloy Head. Motor: DC Servo motor. Dimensions (including handles): 9 1/2" (240 mm) W x 2 1/16" (73 mm) H x 9" (228 mm) D.

COMET Price £398.50 INC.VAT

COMET

Goodmans

GOODMANS HI-FI 4000 CASSEIVER with Dolby



All the convenience of a front-loading cassette recorder combined with AM/FM radio and a high performance stereo amplifier — this is the Goodmans Hi-Fi Casseiver 4000. With a low distortion output of 28 watts RMS per channel, the 4000 offers pin-sharp reception of VHF/LW/MW/SW transmissions and

Dolby noise reduction to give you superb high fidelity recording and playback. The compact, handsomely styled cabinet is designed with ease of operation in mind and incorporates a host of Hi-Fi features. These include: piano key controls on the tape section, twin recording level meters, radio signal strength meter, Dolby and recording indicator lamp, stereo beacon, and buttons for contour, rumble filter, scratch filter, Mono, tape, pick up, AFC, mute and VHF, LW, MW and SW selection. Supplied complete with matching MC 35 loudspeakers in black ash finish, the Goodmans Hi-Fi Casseiver 4000 brings you high quality home entertainment . . . for an incredibly low Comet discount price.

Comet Price £289.90



High Fidelity for a new low price!

QUANTA 500 TURNTABLE

Here's a value for money BSR belt-driven, semi-automatic turntable that is packed with Hi-Fi features. The specification includes S-shaped tonearm, aluminium plug-in headshell, viscous-damped cueing, auto-return and aluminium platter with anti-static mat. A good buy made even better by the inclusion of an ADC QLM 32 magnetic cartridge.

Comet Price £49.90 inc. VAT.



QUANTA 600 TURNTABLE

A low resonance cabinet houses a frequency generator servo-controlled DC motor driving a precision ground belt. There's electronic speed changing with illuminated strobe — and features including statically balanced S-shaped tonearm, aluminium plug-in headshell, viscous-damped cueing and aluminium platter with anti-static mat. Includes an ADC QLM 32 magnetic cartridge!

Comet Price £69.90 inc. VAT.

QUANTA 700 TURNTABLE

Direct-driven by a low speed, electronically controlled DC brushless motor, the stylish 700 incorporates an illuminated strobe and variable speed control over a range of 6%. A cut switch allows smooth record rejection without touching the S-shaped tonearm. Included in the cut-to-the-bone Comet price is a high quality ADC QLM 34 magnetic cartridge to make this one of the most competitively-priced direct drive units around.

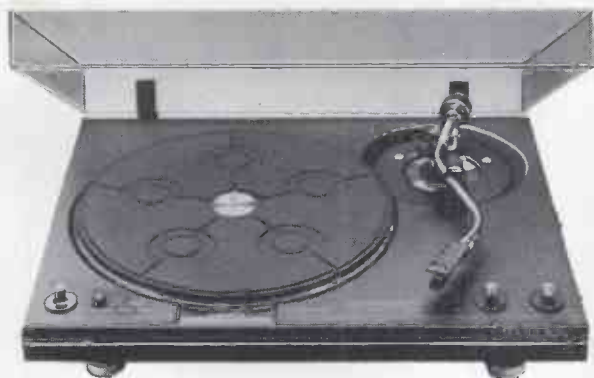
Comet Price £79.90 inc. VAT.



QUANTA 800 TURNTABLE

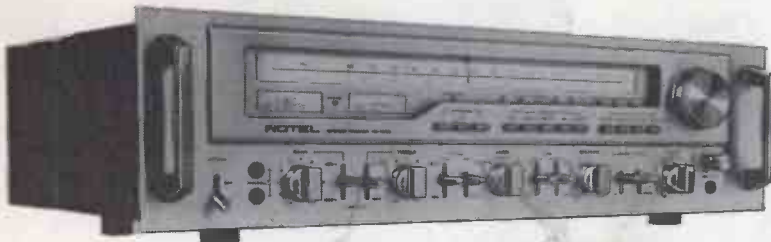
From the accurate quartz phase-locked-loop motor to the superb ADC XLM magnetic cartridge, the 800 represents outstanding direct-drive quality for an incredibly low price. An electronic phase comparator constantly monitors and corrects the speed which is shown by an illuminated digital display, and drift against time, temperature, voltage and load is virtually eliminated. Even when out of the quartz-locked mode, an optical scanning system keeps drift at below 0.2%. A low resonance cabinet, micron polished bearings in the S-shaped tonearm . . . the 800 competes in both price and performance with the best.

Comet Price £112.50 inc. VAT.



COMET ROTEL®

RX-1603 AM/FM STEREO RECEIVER

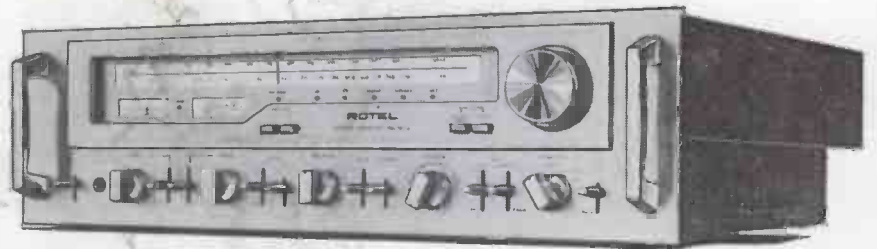


COMET PRICE **£299.90** inc. VAT.

Delivering a tremendous 180 watts RMS per channel with no more than 0.1% total harmonic distortion, the RX-1603 is a stereo receiver with just about everything. Split power supply, 3-stage Darlington direct-coupled OCL parallel push-pull circuitry, precise RIAA equalisation, rollover treble and bass, relay protection circuitry, full tape dubbing and MIC mixing are only some of the features of the amplifier section. With a MOSFET FM front end, FM IF, FM muting, FM Dolby, phase-lock-loop MPX and IC-equipped AM section, the RX-1603 is big in both power and performance.

RX-1203 AM/FM RECEIVER

With an output of 120 watts RMS per channel of low distortion power, the RX-1203 incorporates a direct-coupled phono equaliser and direct-coupled NF tone control section. FM muting, and de-emphasis, split power supply, rollover treble and bass controls are a few of its many features.



COMET PRICE **£249.90** inc. VAT.



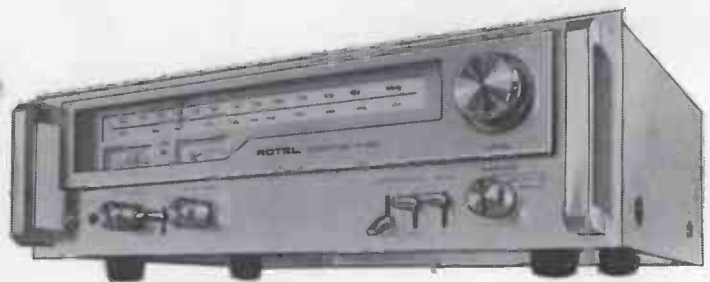
RT-1024 AM/FM STEREO TUNER

A MOSFET FM front end, phase-lock-loop MPX, IC's and ceramic filter in the FM IF circuit, external Dolby circuit and FM Dolby decoder . . . these are some of the Hi-Fi features of this sensitive and versatile tuner. Other facilities include: multipath switch, hi-blend switch and 2-stage mute.

COMET PRICE **£132.75** inc. VAT.

RT-925 AM/FM STEREO TUNER

The ideal complement to the RA-913 amplifier, this superb FM/AM stereo tuner incorporates a host of Hi-Fi facilities. Amongst them are: dual function FM tuning/multipath meter, signal strength meter, hi-blend, multipath, FM muting, FM de-emphasis for Dolby FM reception, and headphone and output level control.



COMET PRICE **£102.00** inc. VAT.

COMET ROTEL®



RA-1212 STEREO AMPLIFIER

The advanced circuitry of the RA-1212 includes a differential direct-coupled OCL complementary power amp, direct-coupled 1-stage class A SEPP equaliser amplifier and split power supply. With an output of 70 watts RMS per channel, this powerful performer has all the facilities you'd expect from an amplifier of this class.

COMET PRICE **£102.00** inc. VAT.

**Fantastic
performers~
incredible
prices!**



RT-824 AM/FM STEREO TUNER

The RT-824 gives professional quality and performance — thanks to a MOSFET FM front end, FM IF with IC's and ceramic filters, and MPX with phase-locked-loop (PLL) circuitry. With signal strength meter, combined FM tuning/multipath meter, hi-blend and FM muting, the RT-824 stands at the top of its class.

COMET PRICE **£89.90** inc. VAT.



RA-1412 INTEGRATED AMPLIFIER

Completely independent left and right power supplies, Class A equaliser, SEPP tone control circuitry, an output of 110 watts RMS per channel — the RA-1412 is built to a formidable specification. Numerous other features make this amp an outstanding example of state-of-the-art electronics.

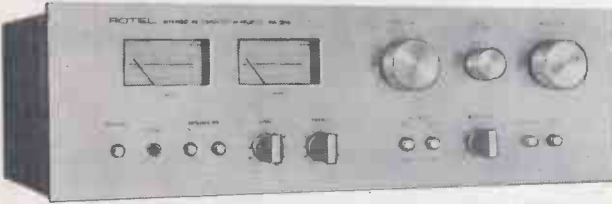
COMET PRICE **£194.00** inc. VAT.

RA-913 INTEGRATED AMPLIFIER

Producing 60 watts RMS per channel over the full bandwidth, the RA-913's comprehensive equipment includes: stepped volume control, full tape dubbing, 3 filter network, tone defeat, audio muting, loudness and split power supply. All this and protection circuitry too.

COMET PRICE **£112.25** inc. VAT.

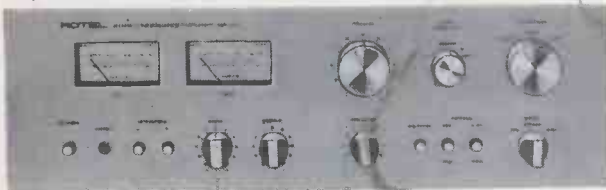
RA314 STEREO AMPLIFIER



Delivering a power output of 25 watts RMS per channel with total harmonic distortion as low as 0.05% at full power, the RA314 is an impressive all-round performer. Circuitry is DC coupled, giving improved bass performance, and an important feature is the inclusion of large, quick-response twin power meters which also serve as 'power-on' indicators. Other features include full tape dubbing in both directions, low and high filters, loudness and mono/stereo buttons, and provision for 2 pairs of speakers.

Comet Price £82.50 inc. VAT

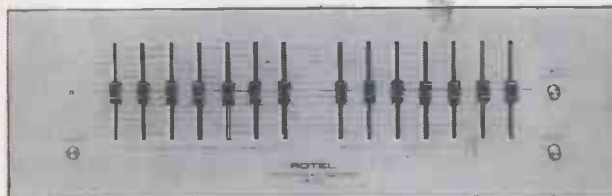
RA414 STEREO AMPLIFIER



Moving up in performance from the RA314 is the 35 watts RMS per channel RA414 — a stereo amplifier sharing the same low distortion qualities and fine specification of the lower power unit. DC coupled circuitry is used with a thick-film power output stage to ensure simplicity of construction and servicing plus a notable bass performance. An additional feature is a control for mono/stereo and reverse stereo.

Comet Price £104.90 inc. VAT

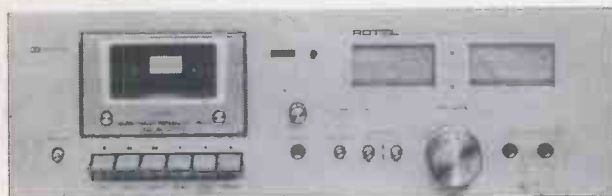
RE700 STEREO GRAPHIC EQUALISER



With the RE700 you are in complete control. Capable of 'shaping' sound, improving and expanding individual frequency ranges with 7 bands per channel (40 Hz to 15,000 Hz) variability. The RE700 includes specially selected low noise/distortion components and features inductorless active discrete resonant circuitry, stabilised current limit power supply, tape monitor switch and defeat switch.

Comet Price £74.90 inc. VAT

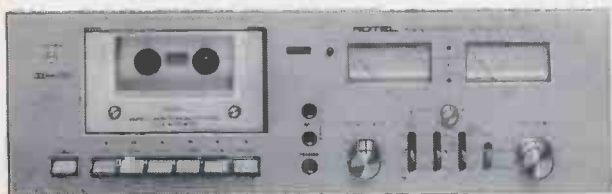
RD18F FRONT LOADING DOLBY CASSETTE DECK



Electronic governor DC motor, super hard permalloy record/playback head, Dolby tape selector for Ferrichrome, chrome and normal tapes with bias variable adjustment control. Oil damped eject cassette door. 2 large VU meters, peak indicator. Headphone jack. MIC jack. Dimensions: 430W x 147H x 272D (mm).

Comet Price £99.90 inc. VAT

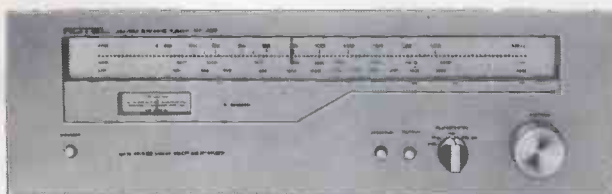
RD25F FRONT LOADING DOLBY STEREO CASSETTE



A cassette deck for the serious Hi-Fi enthusiast! Electronically controlled DC motor, super hard permalloy record/playback head, tape selector for Ferrichrome, chrome and normal tapes with bias adjustment control. Dolby noise reduction 2 large VU meters. LED peak level indicator. Input selector (LINE, MIC/DIN), MPX filter. Headphone jack. MIC jacks. Damped ejection. The Comet price belies its capabilities.

Comet Price £123.90 inc. VAT

RT 426 AM/FM TUNER



The RT 426 is packed with features to ensure excellent AM/FM reception. And impressive specification includes Negative feedback phase lock loop MPX to pull in marginal programme signals and to give long term stability of stereo separation, low drift and low distortion. A signal meter serves for both FM tuning and signal strength — and buttons for hi-blend and interstation muting are also provided.

Comet Price £84.90 inc. VAT

RA300 STEREO AMPLIFIER

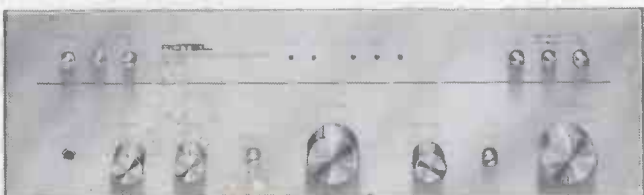


With ample power to 'fill' the average listening room, the RA300 delivers 20 watts RMS per channel from 20 to 20,000 Hz with no more than 0.5% total harmonic distortion. Features include Darlington direct-coupled OCL complimentary output circuitry to assure stable power at wide dynamic range with low distortion, plus — minus split power supply, direct-coupled Negative feedback phono equaliser, direct-coupled Negative feedback tone control, tape monitor and loudness switches. Facility for two pairs of speakers. LED function indicators.

Dimensions: 410W × 130H × 263D (mm).

Comet Price £59.90 inc. VAT

RA350 STEREO AMPLIFIER

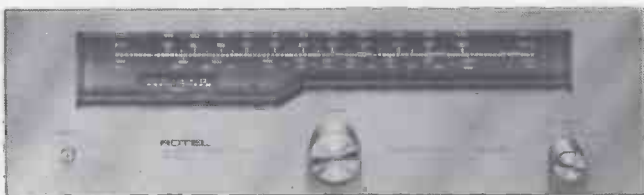


With the added feature of full tape dubbing (1-2, 2-1), 35 watts RMS per channel, both channels driven in to 8 ohms, RA350 offers outstanding value for money at Comet. Consider: Darlington direct-coupled OCL complimentary output circuitry, plus-minus split power supply, Darlington direct-coupled Negative feedback phono equaliser and tone control amplifier. LED function indicators. Loudness switch.

Dimensions: 410W × 131H × 270D (mm).

Comet Price £84.90 inc. VAT

RT300 LW/MW/FM STEREO TUNER

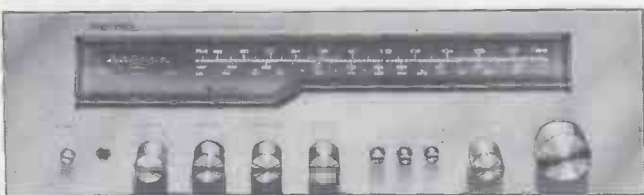


Matched in style and performance with the RA300 Stereo Amplifier the RT300 with smooth flywheel tuning knob features FM FET front end for high sensitivity and outstanding rejection characteristics, FM phase lock loop MPX circuit to assure high stereo separation beside wide range response at low distortion, LED stereo beacon and connection for 300 ohms and 75 ohms antenna. And LW waveband.

Dimensions: 410W × 130H × 263D (mm).

Comet Price £59.90 inc. VAT

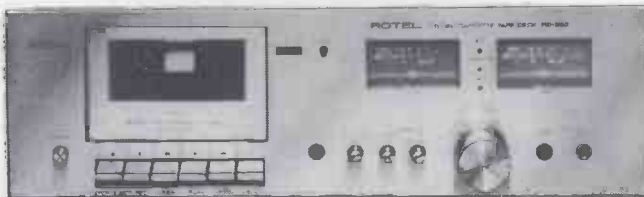
RX300 LW/MW/FM STEREO RECEIVER



20 watts per channel RMS both channels driven in to 8 ohms from 20-20,000 Hz with no more than 0.5% total harmonic distortion. Darlington direct-coupled Negative feedback phono equaliser and tone control amplifier. FM IF section with IC, ceramic filters. Signal strength tuning meter, LED stereo indicator. Facilities for two pairs of loudspeakers. LW waveband.

Comet Price £97.50 inc. VAT

RD300 FRONT LOADING DOLBY STEREO CASSETTE DECK



This Dolby front loader incorporates all the features you need for true Hi-fidelity recording and playback: Super hard permalloy record/playback head, tape selector for Ferrichrome, chrome and normal tape, 2 large VU meters. Dolby noise reduction, peak indicators and also oil damped eject cassette door, headphone jack, mic jacks, full auto shut off.

Comet Price £87.90 inc. VAT

The TRS 3 system



KA-3750 STEREO AMPLIFIER

Delivering an output of 25 watts RMS per channel of low distortion power, the KA-3750 is superbly engineered to deliver excellent tonal quality with crisp, clear efficiency at every audible frequency. This no-nonsense amp has an advanced specification which includes direct-coupled low noise phono equaliser, click-stop tone controls and low-boost loudness control.

COMET PRICE £74.90 inc. VAT



KT-5550 AM/FM STEREO TUNER

Here is an AM/FM tuner which fully reflects Trio's uncompromising attitude to tonal quality and stereo performance. Even the weakest of FM stations are received very clearly without interference and noise, and an advanced PLL (phase-lock-loop) IC maintains a wide stereo separation. Junction FETs give a high stability, and 65dB of selectivity enables you to choose from stations that are crowded together without overlap distortion.

COMET PRICE £82.90 inc. VAT



KX-503 STEREO CASSETTE DECK

This Dolby front-loader has been designed to match the KA-3750 and KT-5550 in terms of size and performance, and is impressively styled in the same handsome black finish. A servo-controlled motor system provides maximum stability, and other features include: bias and equalisation selection, large VU meters and auto shut-off.

COMET PRICE £109.90 inc. VAT



KD-1033B/C TURNTABLE

Belt-driven from a synchronous motor, this attractively styled turntable has a resonance-free tonearm, is statically counter-balanced, with viscous-damped cueing, and the special Trio suspension system in the stylish plinth guards against acoustic feedback and transmitted vibrations.

COMET PRICE £59.90 inc. VAT

GOLDRING G800 magnetic cartridge recommended for use with above: **COMET PRICE £5.40 inc. VAT**

...stacks beautifully
in its specially
designed rack!

SRC-75 SYSTEM RACK

This beautifully designed rack brings your system together into an eye-catching and space-saving unit that will enhance your listening room. There's ample storage space too.



COMET PRICE £39.90 inc. VAT

Total price (bought individually) £372.90
Special Comet package price

(speakers extra) **£359.90 inc. VAT**

COMET Sansui

AU117 STEREO AMPLIFIER

The smallest in the new AU range from Sansui, the AU117 includes advanced power amps, Darlington-arranged power output and has a healthy power output of 15 watts per channel, min. RMS, with no more than 0.17% total harmonic distortion. A unit that is high on value and performance.



Comet Price £67.90 inc. VAT.

SPECIFICATION

Power Output: Min. RMS both channels driven from 20 to 20,000 Hz, with no more than 0.17% total harmonic distortion. 15 watts per channel into 8 Ohms. Total Harmonic Distortion: Less than 0.17% at or below rated min. RMS power output. Frequency Response (at 1 watt): Overall (from AUX) 10 to 40,000 Hz + 0.5 dB, -2 dB. Channel Separation (at 1,000 Hz): Phono 65 dB, Aux 68 dB. Dimensions: 430(W) X 110(H) X 340(D) mm.

AU217 STEREO AMPLIFIER

The AU217 delivers 30 watts per channel, min. RMS, both channels driven into 8 ohms with no more than 0.06% total harmonic distortion, it has a low output impedance and features low distortion thanks to a Darlington-arranged power output. There's a precise phono equalizer and accurate RIAA equalization that allows you to enjoy 'unclipped' record reproduction even at full power operation.



Comet Price £102.00 inc. VAT.

SPECIFICATION

Power Output: Min. RMS both channels driven from 20 to 20,000 Hz, with no more than 0.06% total harmonic distortion. 30 watts per channel into 8 Ohms. Total Harmonic Distortion: Less than 0.06% at or below rated min. RMS power output. Frequency Response (at 1 watt): Overall (from AUX) 10 to 50,000 Hz + 0.5 dB, -1.5 dB. Channel Separation (at 1,000 Hz): Phono 65 dB, Aux 73 dB. Dimensions: 430(W) X 110(H) X 340(D) mm.

AU317 STEREO AMPLIFIER

Sansui's new design results in a low-distortion DC coupled high calibre amp that certainly holds its own against many of its much higher priced competitors. Delivering a respectable 50 watts per channel RMS, both channels driven into 8 ohms the AU317 is certainly an amplifier in the highest class.



Comet Price £154.90 inc. VAT.

SPECIFICATION

Power Output: Min. RMS both channels driven, from 20 to 20,000 Hz, with no more than 0.03% total harmonic distortion. 50 watts per channel into 8 Ohms. Total Harmonic Distortion: Less than 0.03% at or below rated min. RMS power output. Frequency Response (at 1 watt): Overall (from AUX) 5 to 70,000 Hz + 0 dB, -1.8 dB. Power amp in DC to 200,000 Hz + 0 dB, -2.5 dB. Channel Separation (at 1,000 Hz): Phono 65 dB, Aux 73 dB. Dimensions: 430(W) X 110(H) X 340(D) mm.

TU217 FM/AM STEREO TUNER

The TU217 is top notch Sansui technology at a down to earth Comet price. Features include wide channel separation in FM stereo due to a super-stable phase locked loop multiplex decoder in IC form, ultra low distortion from all stations thanks to the linear-phase IF section, IC quadrature detectors and other perfected circuits widen dynamic range. Altogether Sansui have made Radio Reception smooth, sure and simple.



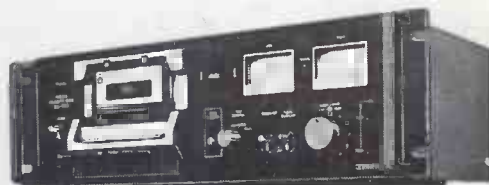
Comet Price £99.90 inc. VAT.

SPECIFICATION

FM SECTION. Sensitivity: Mono 10.6 dBf (IHF T-100 1.85 uV), Stereo 20 dBf. Signal-to-Noise Ratio (at 65 dBf): Mono 71 dB, Stereo 70 dB. Frequency Response: Stereo 30 to 15,000 Hz + 1 dB, -1dB. Stereo Separation: 40 dB at 1,000 Hz. AM SECTION. Selectivity (± 10 kHz): 35 dB. Signal-to-Noise Ratio: 48 dB. Dimensions: 430(W) X 110(H) X 307(D) mm.

SC1110/SC1120 "DIRECT-O-MATIC" CASSETTE DECK

This new "Direct-O-Matic" deck from Sansui puts your tape right up front, not deep inside the chassis, which means better tape handling, more stable transport and easier access for maintenance, and it aids performance too by providing greater stability as the cassette shell is held firmly in place, a hinged cover protects the heads when not in use. Other features include Dolby, Auto Stop, Tape Selector, illuminated tape counter, quick-change mode facility, super-hard permalloy head and large illuminated VU meters.



Comet Price £89.94 inc. VAT.

SPECIFICATION

Heads: REC/PB (Super Hard Permalloy) ERASE (Ferrite). Motor: Electronically Speed Controlled DC Motor. Wow and Flutter: within 0.08% (WRMS). Frequency Response (Record/Playback) Chromium Tape: 30 - 16,000 Hz. Signal-to-Noise Ratio (Record/Playback) Chromium: 64 dB (with DOLBY) (Above 5 kHz). Bias Frequency: 85 kHz. Dimensions: 430(W) X 160(H) X 302(D) mm.

**ALSO AVAILABLE SANSUI SC2110 STEREO CASSETTE DECK.
COMET PRICE £124.94**

RECOMMENDED SYSTEM

6025 TURNTABLE

This semi-automatic, belt-drive unit features the revolutionary tonearm design used on every Marantz turntable. Tracking error distortion has been lowered by 30% below that of a conventional tonearm. Other features of this perfectly engineered turntable include: AC synchronous motor, bias control and calibrated counterweight, and automatic return/shut-off.



Rec. Ret. Price £94.04 inc. VAT

COMET Price £59.90 inc. VAT

Audio Technica AT11E magnetic cartridge recommended for use with above.

Rec. Ret. Price £12.83 inc. VAT

COMET PRICE £9.75 inc. VAT



4G SPEAKERS

Superbly styled, these compact bookshelf speakers have an all-round performance to match their elegant looks, Marantz 4G loudspeakers are yet another outstanding example of Marantz Hi-Fi technology.

Rec. Ret. Price £90.98 inc. VAT.

COMET Price £58.90 inc. VAT

5000 CASSETTE DECK

This new front-loading Dolby deck is designed to mix and match with all of the separate components in the Marantz range. The impressive specification includes: super hard permalloy head, separate bias and EQ switches for normal, CrO2 and FeCr tapes, defeatable peak limiter, separate left and right record level controls, professional extended VU meters and total shut-off.



Rec. Ret. Price £190.13 inc. VAT.

COMET Price £109.90 inc. VAT

1050 AMPLIFIER

Delivering 25 watts RMS per channel into 8 ohms, with no more than 0.1% total harmonic distortion, the 1050 provides power to spare for the average-sized listening room. Features include: full complementary direct coupled output stage (DC), loudness and mono switches, low filter, 41 stepped detented volume control, detented graphic bass and treble tone controls, tape monitor, stereo headphone jack and provision for operating 2 pairs of speaker systems.

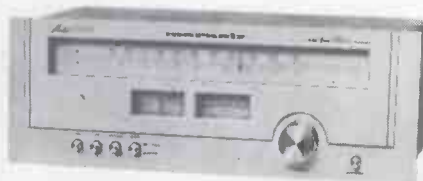


Rec. Ret. Price £135.96 inc. VAT.

COMET Price £84.90 inc. VAT

2050 AM/FM TUNER

With a specification that includes dual gate MOSFET FM front end circuitry based on ceramic IF filters, and phase locked loop (PLL) demodulator which gives exceptional selectivity as well as optimum FM stereo channel separation, the 2050 is the ideal match for the 1050 amplifier. Other features include: 3 gang FM tuning capacitor, signal strength and centre tuning meters, and mono and FM muting switches.



COMET Price £81.50 inc. VAT

Complete System £404.85 inc. VAT

COMET marantz



MR215 AM/FM RECEIVER

Rated at 15 watts RMS per channel into 8 ohms, the MR 215 is engineered to give high quality, low distortion performance combined with needle-sharp AM/FM reception but now at a price which represents incredible value for money. The power amplifier has direct coupled complementary output circuits (DC), and controls include loudness switch, FM muting, speaker selection and tape monitor. In the tuner section Marantz have incorporated ceramic filters and MOSFET components in the RF stage, together with a phase locked loop (PLL) FM demodulator. Other features include 41 detented volume control, 11 detented ganged bass and treble tone controls, speaker protection circuit, and signal strength and FM centre tuning meters.

SPECIFICATION

POWER AMPLIFICATION SECTION.

Power Output per Channel DIN 8 Ohms (1kHz): 26W. Total Harmonic Distortion at Rated Power Output: 0.15%. PRE-AMPLIFICATION SECTION. Frequency Response Phono (RIAA): ± 10 dB. Signal-to-Noise Ratio Phono: 72 dB. Aux: 80 dB. Input Sensitivity/Impedance Phono: 2.8mV/47k Ohms. Aux: 180 mV/20k Ohms. FM TUNER SECTION (87.5 - 108 MHz). Usable Sensitivity

(40kHz Dev. 98 MHz) Stereo (S/N 46 dB): 50 dB. Alternate Channel Selectivity (98 MHz \pm 300 kHz): 65 dB. Signal-to-Noise Ratio (98 MHz) Weighted Mono: 66 dB. Weighted Stereo: 60 dB. AM/MW TUNER SECTION (525 - 1605 kHz). Usable Sensitivity (26dB S/N 30% Mod. 1 MHz): 30 μ V. Selectivity (1 MHz \pm 9 kHz): 20 dB. GENERAL. Dimensions: 440 (W) x 137 (H) x 358 (D) mm.

Comet Price £94.90 inc. VAT



MR 230 AM/FM RECEIVER

Delivering 30 watts RMS per channel into 8 ohms, the larger MR230 has all the features that make the MR215 such a high quality receiver and brings Marantz into your receiver budget. Despite its bigger punch, distortion is low — thanks to the direct coupled complementary output circuits (DC) in the power amplifier — and the phase locked loop FM multiplex demodulator guarantees perfect stereo detection. Easy adjustments, accurate controls... the Marantz MR 230 has them all.

SPECIFICATION

POWER AMPLIFICATION SECTION.

Power Output per Channel DIN 8 Ohms (1 kHz): 48W. Total Harmonic Distortion at Rated Power Output: 0.15%. Damping Factor: 30. PRE-AMPLIFICATION SECTION. Frequency Response Phono (RIAA): ± 1 dB. Signal-to-Noise Ratio Phono: 72 dB. Aux: 80 dB. Input Sensitivity/Impedance Phono: 2.8mV/47k Ohms. Aux: 180mV/20k Ohms. FM TUNER SECTION

(87.5 - 108 MHz). Usable sensitivity (40 kHz Dev. 98 MHz) Stereo (S/N 46 dB): 50 dB. Alternate Channel Selectivity (98 MHz \pm 300 kHz): 65 dB. Signal-to-Noise Ratio (98 MHz) Weighted Mono: 66 dB. Weighted Stereo: 60 dB. AM/MW TUNER SECTION (525 - 1605 kHz). Usable Sensitivity (26 dB S/N 30% Mod. 1 MHz): 30 μ V. Selectivity (1 MHz \pm 9 kHz): 20 dB. GENERAL. Dimensions: 440 (W) x 137 (H) x 358 (D) mm.

Comet Price £144.90 inc. VAT



1820 CASSETTE DECK

With the attractively-styled 1820, Marantz have produced the ideal front-loading cassette deck for the home Hi-Fi installation. Driven by a DC servo-controlled motor, this Dolby deck has a host of Hi-Fi features including: superhard permalloy recording/playback head, tape selector switch and big VU meters. A fine example of Marantz engineering at a price which makes this a BEST BUY.

SPECIFICATION

Tape Drive System: Single Capstan Drive, Track System: Compatible Stereo 4-track, 2 channel. Tape Speed: 1 1/2 ips (4.75 cm/sec). Head: Rec. Play Superhard Permalloy, Erase: Ferrite. Motor: DC Servo Controlled Motor x 1. Recording

System: AC Bias. Erasing System: AC Erase. Overall Frequency Response: (Oily off) ± 0.2 Tape 28Hz to 15kHz ± 2.5 dB - 3.5 dB. Total Harmonic Distortion: ± 0.2 Tape 2.5%. Wow and Flutter (DIN WTD): 0.17%. Dimensions: 416(W) x 146(H) x 244(D) mm.

Rec. Ret. Price £150.27 inc. VAT Comet Price £104.90 inc. VAT



MR 250 AM/FM RECEIVER

With a formidable output of 50 watts RMS per channel into 8 ohms, the MR 250 achieves this extra performance without any increase in total harmonic distortion. Marantz sophisticated electronics give excellent performance and superb AM/FM listening, ease of operation and accurate tuning through the Marantz exclusive 'Gyro Touch' flywheel. Tape monitoring circuitry for two tape decks is also included in the impressive specification. Marantz hi-quality at a new break through price.

SPECIFICATION

POWER AMPLIFICATION SECTION.

Power Output per Channel DIN 8 Ohms (1kHz): 64 W. Total Harmonic Distortion at Rated Power Output: 0.15%. Damping Factor: 40. PRE-AMPLIFICATION SECTION. Frequency Response Phono (RIAA): ± 1 dB. Signal-to-Noise Ratio Phono: 72 dB. Aux: 80 dB. Input Sensitivity/Impedance Phono: 2.8 mV/47k Ohms. Aux: 180mV/20k Ohms. FM TUNER SECTION

(87.5 - 108 MHz). Usable Sensitivity (40 kHz Dev. 98 MHz) Stereo (S/N 46 dB): 50 dB. Alternate Channel Selectivity (98 MHz \pm 300 kHz): 65 dB. Signal-to-Noise Ratio (98 MHz) Weighted Mono: 66 dB. Weighted Stereo: 60 dB. AM/MW TUNER SECTION (525 - 1605 kHz). Usable Sensitivity (26 dB S/N 30% Mod. 1 MHz): 30 μ V. Selectivity (1 MHz \pm 9 kHz): 20 dB. GENERAL. Dimensions: 440 (W) x 137 (H) x 358 (D) mm.

Comet Price £174.90 inc. VAT

2020L AM/FM TUNER

A high performance tuner capable of meeting the high standards of FM broadcasts — this is the Marantz 2020L. The MOSFET components in the FM front end, plus the phase locked loop (PLL) demodulator, give exceptional selectivity as well as optimum FM stereo channel separation. The circuitry is based on ceramic IF filters, and other features include: 3 gang FM tuning capacitor, mono and FM muting switches, signal strength and centre tuning meters.

SPECIFICATION

FM TUNER SECTION (87.5 - 108 MHz). Usable Sensitivity Stereo S/N 46 dB: 50 μ V. Alternate Channel Selectivity: 65 dB. Signal-to-Noise Ratio (DIN). Weighted Stereo: 60 dB. Total Harmonic Distortion. Stereo: 0.4%. Frequency Response (30 Hz - 15 kHz): ± 0.2 / -2.0 dB. Stereo Separation: 42 dB. Channel Balance:

0.5 dB. AM/LW TUNER SECTION (150 - 350 kHz). Usable Sensitivity (26 dB S/N 30% Mod. 250 kHz): 200 μ V. Selectivity (260 kHz \pm 9 kHz): 24 dB. Image Rejection (250 kHz): 36 dB. I.F. Rejection (250 kHz): 26 dB. Signal-to-Noise Ratio (250 kHz): 48 dB. Total Harmonic Distortion (250 kHz): 0.5 dB. Dimensions: 416(W) x 146(H) x 240(D) mm.

Comet Price £89 90 inc. VAT

The Wharfedale E's...

The high efficiency of the Wharfedale E50 and E70 loudspeakers has already established them among the market leaders in acoustic technology. They make smaller amplifiers sound larger, reduce distortion and provide true high fidelity sound throughout the entire spectrum. And now the smaller E30 joins the range — a loudspeaker sharing the same superb bass response, smooth mid-range and light and sweet treble characteristics of the E50 and E70. With walnut veneered cabinets and see-through fishnet grilles, the Wharfedale E's look just as good as they sound. See them at Comet . . . at discount prices that bring the best within reach of your pocket.



WHARFEDALE E70 LOUDSPEAKER

Suitable for amplifiers from 3 to 120 watts RMS per channel. One watt produces 94 dB S.P.L. at 1 metre.

SPECIFICATIONS

Power Handling (to DIN 45573): 100 watts.
Sensitivity: 1 watt produces 94 dB S.P.L. at 1 metre.
Nominal impedance: 8 ohms.
Typical frequency response: Drive unit complement: 1 X 250mm (10") low inertia moving coil bass driver, 2 X 100mm (4") high flux moving coil mid-range driver, 1 X 25mm (1") compression drive horn loaded treble unit.
Controls: Upper contour control (Range 2 kHz to 20 kHz) five positions up to maximum of 5 dB attenuation. Lower contour control (Range 200 Hz to 2 kHz) five positions up to maximum of 5 dB attenuation.
Bass Loading: Optimised reflex. Maximally flat fourth order Butterworth.
Crossover type: 6 and 12 dB per octave, 6 element network with 13 element contour control. Vibration resistant mounted.
Crossover points: 800 Hz and 7 kHz.
Nominal Internal Volume: 70 litres.
Internal cabinet damping: High hysteresis expanded urethane foam.
Cabinet materials: Natural Walnut Veneer on high composition board.
External Dimensions: Height 815 mm (32"), Width 342 mm (13½"). Depth 360 mm (14").
Weight: 32 kg (70 lb), packed: 33 kg (72 lb).

Rec. Ret. Price £372.93 inc. VAT.
COMET PRICE £329.90 inc. VAT



WHARFEDALE E50 LOUDSPEAKER

Suitable for amplifiers from 3 to 80 watts RMS per channel. One watt produces 94 dB at 1 metre.

SPECIFICATIONS

Power Handling (to DIN 45573): 70 watts.
Sensitivity: 1 watt produces 94 dB at 1 metre.
Nominal impedance: 8 ohms.
Drive unit complement: 1 X 250mm (10") low inertia moving coil bass driver, 1 X 100mm (4") high flux moving coil mid-range driver, 1 X 25mm (1") compression drive horn loaded treble unit.
Controls: Upper contour control (Range 2 kHz to 20 kHz) five positions up to maximum of 5 dB attenuation. Lower contour control (Range 200 Hz to 2 kHz) five positions up to maximum of 5 dB attenuation.
Bass Loading: Optimised reflex. Maximally flat fourth order Butterworth.
Crossover type: 6 and 12 dB per octave, 5 element network with 13 element contour control. Vibration resistant mounted.
Crossover points: 800 Hz and 7 kHz.
Nominal Internal Volume: 50 litres.
Internal cabinet damping: High hysteresis expanded urethane foam.
Cabinet materials: Natural Walnut Veneer on high composition board.
External Dimensions: Height 665 mm (26"), Width 342 mm (13½"). Depth 342 mm (13½").
Weight: 19 kg (42 lb), packed: 20 kg (44 lb).

Rec. Ret. Price £302.29 inc. VAT.
COMET PRICE £269.90 inc. VAT



WHARFEDALE E30 LOUDSPEAKER

Suitable for amplifiers from 15 to 75 watts RMS per channel. One watt produces 94 dB at 1 metre.

SPECIFICATIONS

Suitable for amplifiers (RMS per channel): 15-75 watts.
Sensitivity (1 watt at 1 metre): 94 dB S.P.L.
Nominal Impedance: 8 ohms.
Typical Frequency Response (±3 dB): 63 Hz to 18 kHz.
Drive Units: 2 X 170 mm moving coil mid-range driver, 1 X 25 mm (1") horn loaded tweeter.
Crossover Type: 6 and 12 dB per octave 9 element network. Vibration resistant mounted.
Crossover point: 4 kHz.
Controls: Treble level control -4 dB to +2 dB (range 3 kHz to 20 kHz) variable.
Cabinet Materials: Natural Walnut veneer on high density particle board.
External Dimensions: H 580 mm, W 335 mm, D 261 mm.

COMET PRICE £199.90 inc. VAT

for the full range of
WHARFEDALE SPEAKERS
see the
COMET price list pages

SX-590 Stereo Receiver

Delivering a useful 20 watts RMS per channel, the SX-590 AM/FM stereo receiver's many advanced features include power output using hybrid ICs, Pioneer exclusive tuner ICs and dual-gate MOS FET FM front end. Despite its practical price, there's even a function switch backed by a muting circuit as in more expensive models to eliminate power on/off and switching noise. Other value-for-money features include direct readout watt meters, tuning meter and phase-locked-loop MPX with automatic pilot signal canceller.

SPECIFICATION

Audio Section:
Continuous power both channels driven at 8 ohms 2 x 20 W.
Total Harmonic Distortion: <0.3%.
S/N (IHF) Phono: 73 dB.
FM Section (87.5 — 108 MHz):

Sensitivity (IHF): 10.8 dBf (1.9uV).
Selectivity (\pm 400 kHz): 60 dB.
Stereo Separation (1 kHz): 40 dB.
AM Section (525 — 1,605 kHz):
Sensitivity (IHF) (ext. ant.): 15uV.
Selectivity: 26dB.
Dimensions: 435(W)x144.5(H)x314(D) mm.

COMET PRICE £124.90 inc. VAT



SX-690 Stereo Receiver

Incorporating 2 hybrid ICs power amp output containing bias, driver and output stages in quasi-complementary circuits, the SX-690 produces a low-distortion power output of 30 watts RMS per channel. The specification is impressive... with such Pioneer Hi-Fi features as phase-locked-loop MPX IC and CR-type tone control network with a negative feedback loop circuited in the power output amplifier itself. The Comet discount price will impress you too.

SPECIFICATION

Audio Section:
Continuous power both channels driven at 8 ohms: 2 x 30 W.
Total Harmonic Distortion: <0.1%.
S/N (IHF) Phono: 75 dB.
FM Section (87.5 — 108 MHz):

Sensitivity (IHF): 10.8 dBf (1.9uV).
Selectivity (\pm 400 kHz): 60 dB.
Stereo Separation (1 kHz): 40 dB.
AM Section (525 — 1,605 kHz):
Sensitivity (IHF) (ext. ant.): 15uV.
Selectivity: 26 dB.
Dimensions: 435(W)x144.5(H)x314(D) mm.

COMET PRICE £147.90 inc. VAT



SX-980 Stereo Receiver

Pioneer have really packed in the power and the features with the SX-980 AM/FM stereo receiver. The stylish cabinet houses a constant current loaded 2-stage differential amp and a direct-coupled 2-stage Darlington single push-pull DC configuration power amp. Output is a low-distortion 80 watts RMS per channel — a performance that ensures outstanding sound quality from the superbly equipped tuner section. Pioneer turnover tone controls, high and low filters, and outputs for two pairs of speakers are amongst this receiver's host of Hi-Fi facilities.

SPECIFICATION

Audio Section:
Continuous power both channels driven at 8 ohms 2 x 80 W.
Total Harmonic Distortion: <0.05%.
S/N (IHF) Phono: 76 dB.
FM Section (87.5 — 108 MHz):

Sensitivity (IHF): 9.8 dBf (1.7uV).
Selectivity (\pm 400 kHz): 80 dB.
Stereo Separation (1 kHz): 50 dB.
AM Section (525 — 1,605 kHz):
Sensitivity (IHF) (ext. ant.): 15uV.
Selectivity: 26dB.
Dimensions: 526(W)x176(H)x440(D) mm.

COMET PRICE £398.50 inc. VAT



SX-1080 Stereo Receiver

With a formidable output of 120 watts RMS per channel, the SX-1080 is one of the most impressive and well-equipped receivers in its class. This is Pioneer engineering at its best — with features including direct-coupled DC power amp, outputs for two speaker pairs, turnover tone controls and high and low filters. There are two large watt meters, meters for tuning and signal, and easy-to-read tuning scale. The specification also includes current mirror loaded Class-A SEPP in phono equaliser with one-stage differential amplifier and new voltage-proof IC equivalent to 15 discrete transistors.

SPECIFICATION

Audio Section:
Continuous power both channels driven at 8 ohms: 2 x 120 W.
Total Harmonic Distortion: <0.05%.
S/N (IHF) Phono: 76 dB.
FM Section (87.5 — 108 MHz):

Sensitivity (IHF): 9.8 dBf (1.7uV).
Selectivity (\pm 400 kHz): 80 dB.
Stereo Separation (1 kHz): 50 dB.
AM Section (525 — 1,605 kHz):
Sensitivity (IHF) (ext. ant.): 15uV.
Selectivity: 26 dB.
Dimensions: 526(W)x176(H)x440(D) mm.

COMET PRICE £449.50 inc. VAT

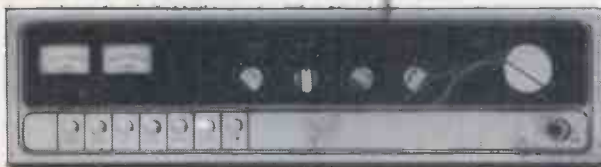




2125 TUNER/AMPLIFIER

Delivering a useful 27 watts RMS per channel of low-distortion power, Alba's Model 2125 receiver shares the same advanced styling and specification as its more powerful stablemate. FM and AM reception is loud and clear, and the all-round performance combined with the low Comet price makes the 2125 one of the best value-for-money buys in its class.

COMET Price £112.25 inc. VAT



2025 AMPLIFIER

A cut-to-the-bone Comet discount price brings this 27 watts RMS per channel amplifier within the reach of most pockets. Features include bass and treble tone controls, balance, loudness and level controls, and twin power meters. Easy-to-operate front control keys are provided for phono, tuner, tape, mono, speakers A and B and two pairs of speaker sockets.

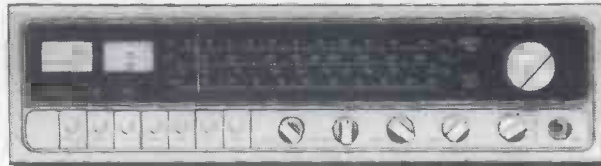
COMET Price £72.90 inc. VAT



2000 TUNER

The perfect complement for the two new Alba amps, this 3 band tuner offers high fidelity listening at a dramatically low Comet price. Features include: switched AFC, variable interstation mute, signal strength and FM tuning meters, phase locked loop (PLL) stereo decoder, mono/stereo switch, low ultrasonic output switch, stereo noise filter (high blend), MOS FET equipped FM front end and AM bandpass circuits.

COMET Price £71.25 inc. VAT



2150 TUNER/AMPLIFIER

Superbly styled and producing a low distortion 50 watts RMS per channel, this 3 frequency band receiver includes amplifier overload indicator, and amplifier and speaker protection in its impressive specification. The tuner section features AFC, variable interstation mute, signal strength and FM tuning meters, phase locked loop (PLL) stereo decoder, mono/stereo switch and a MOS FET equipped FM front end. An outstanding unit.

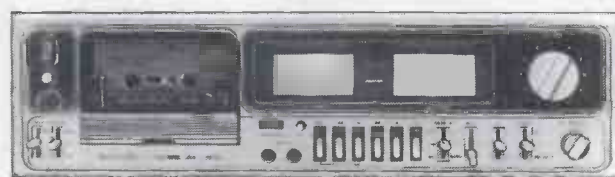
COMET Price £148.00 inc. VAT



2050 AMPLIFIER

A low-distortion output of 50 watts RMS per channel enables the stylish 2050 to provide power and to spare for the average-sized listening room. The specification includes high and low filters, bass and treble tone controls, balance control, a volume control that can also be switched to a loudness control, twin power meters, overload indicator, two tape inputs and two pairs of speaker sockets. Full amplifier and speaker protection is provided.

COMET Price £104.90 inc. VAT



2200 CASSETTE DECK

Here's an impressive front-loader with the distinctive new styling — a cassette deck with a performance in keeping with its elegant good looks. There's Dolby, of course, and features such as 3-step bias and equalisation selectors for spot-on tape matching. There's a memory rewind facility, solenoid-assisted buttons for controlling tape movement, large VU meters, record balance control, and a 40-step recording level control. With full auto-stop on all modes.

COMET Price £158.25 inc. VAT

All branches are open daily to the public

Monday-Friday 9 a.m.-8 p.m. Saturday 9 a.m.-5.30 p.m. Scottish Branches also open Sundays 10 a.m.-5.30 p.m. (with the exception of branches marked †)

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GLOUCESTER Morrow House, Station Road Tel: 0452 411233
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SWANSEA 218 High Street Tel: 0792 41094
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Postage and Packing (per item): Cartridges 30p; Headphones £1; Pick-ups Arms £1; Headshells 30p; Blank tapes - per order, irrespective of quantity; Spool tapes 50p; Cassettes 30p; Microphones 75p.

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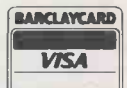


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AMPLIFIERS



Our Price £62.95
Hitachi HA-250 Superb Hi-Fi Stereo amplifier giving 20W output per channel, OCL circuitry, Mic. mixing low filter that reduces hum and accommodation for two sets of tape decks on speakers.



Our price £56.95
Amstrad EX330 High quality executive stereo amplifier giving powerful 40 watt output per section and low distortion figures. Tremendous Value

AMPLIFIERS

Akai AM 2350/2450/2250	POA
Aiwa AA8700	259.95
Amstrad EX220	47.95
Eagle A7600	109.95
Hitachi 330	93.95
JVC A55	POA
Pioneer SA 506	POA
Pioneer SA606	POA
Sansui A117	69.95
Sony TA313	POA
Teac AS30	99.95
Technics SR420/SB620	POA
Technics SU801/8022	POA
Yamaha CA410/710/510	POA
range from JVC JAS 116/JAS 22 & JAS 44 JAS 55/JAS 77	

RECEIVERS



Our Price £112.95
Marantz 1515 AM/FM Stereo Receiver giving 25W per channel, low filter, FM muting, signal strength and FM tuning meters. 2 sets of speakers facility, tape monitor.

Our Price £65.95



Amstrad EX 222 25 W power output AM/FM stereo receiver with rumble filter, signal tuning meter, built-in AM aerial for excellent M/L wave results, normal speaker sockets plus additional ones.

RECEIVERS

Akai 1125	126.95
Aiwa AX7400	164.95
Amstrad 222	65.95
Eagle 7200	76.95
Hitachi 703	89.95
ITT 8031	149.95
Marantz 1515L	147.95
Marantz 2226 BL	112.95
Pioneer SX690	179.95
JVC JRS 61/81/201/301	POA
Sansui G2000	119.95
Sony STR 212/STR343L	POA
Technics Complete Range	POA
Toshiba SA735	151.95
Yamaha CR820/420/620	POA

THIS MONTHS STAR BUY Hitachi HA5300 £134-95

THIS MONTHS STAR BUY JVC JRS81 £154-95

SPEAKERS



Our Price £71.95
Wharfedale Linton XP2 Successor to the famous Linton 3XP, this unit has an improved Hi-Frequency unit, a power rating of 35W and suitable for amplifiers



Our Price £72.95
Also RB 65 127.95
RB 35 109.95
RB 18 58.95
Goodmans RB20 Superb true Hi-Fi speakers to suit amplifiers rated at 10-50W undistorted music power

SPEAKERS

AR 18/17/15	POA
Castle Richmond 11	79.95
Celestion Ditton 22	POA
Celestion Ditton 15XR	POA
JVC SK 500/SK 700	POA
JBL 19/40/50	POA
KEF Complete range	POA
Marantz 4G	56.95
Monitor Audio Mini Monitor	86.95
Monitor Audio MA 6	131.95
Mordaunt Short Range	POA
Tannoy/KLH Complete range	POA
Technics Sg12/2/3	POA
Wharfedale ES50/ES70/ES30	POA
Wharfedale SP2	POA

TURNTABLES



Our Price £59.95
Pioneer PL512 New 2 speed belt-drive manual turn table with W&F of only 0.055%, static-balance S shaped tonearm.



Our Price £84.95
ADC 16000 Semi-automatic direct drive turntable with ultra low-mass straight tonearm, viscous damped cueing controls, pitch control, illuminated stroboscope and anti-skate device. Complete with ADC QLM 36 Cartridge.

TURNTABLES

ADC 1500	64.95
ADC 1700	104.95
Akai AP 206	POA
Aiwa AP2200	POA
Garard SP25 VI	43.95
Garard GT35	87.95
Hitachi HT 550/QL353 QL	POA
JVC QLA2/QL5/QLF4/QL7	POA
Marantz 6170	96.95
Pioneer S16	POA
Pioneer PL 514	POA
Sony PST 212/20	POA
Technics SL200	63.95
Technics SL220/230/3200/3300	POA
Technics S200/S300	POA
Toshiba SR255	79.95
Trio KO 1033	54.95

THIS MONTHS STAR BUY Sansui ESP301 £49-95

THIS MONTHS STAR BUY Pioneer PL514 with FF15E £69-95

DOLBY DECKS POSSIBLY THE LARGEST SELECTION IN BRITAIN - COME AND TEST THEM ON OUR COMPARATORS.



Our Price £179.95
Sharp RT-3151E Hear the sounds of the '80's with this NEW Microprocessor Dolby Cassette Deck featuring auto programme, locating device, LCD quartz clock/timer, memory counter, second display counter, full auto stop & many other features.



Our Price £139.95
Aiwa AD-6350K New front loading Dolby cassette deck with bias fine control. 2 point peak indicators, rec. mute switch, cue/review, auto stop, a W&F of only 0.08%.



Our Price £89.95
Sharp RT 1144 Superior front loading Dolby Cassette Deck with Auto Programme Search System.

STEREO TUNERS

Akai AT 2250L	POA
Amstrad EX303	51.95
Amstrad EX202	45.95
Hitachi ET340	POA
JVC JTV22/77	POA

Marantz 2100	126.95
Pioneer TX606	93.95
Sony ST212	POA
Sony ST515	POA

Technics ST8080-7300	POA
Toshiba ST420	POA
Toshiba ST220	POA
Trio 5500	84.95
Yamaha CT 410/710-510	POA

THIS MONTHS STAR BUY Hitachi FT340 £69-95



Our Price £72.95
Amstrad EX700 Front loading hi-fi Stereo Dolby Cassette deck with line in/out controls, record level meters, Auto-stop, bias/equals, W&F of only 0.085%.



Our Price £84.95
Hitachi D220 Front Loading Dolby Cassette Deck with full auto-stop, bias equalisation, Highly recommended model.

Under £100	POA
Akai 7030	72.95
Amstrad EX700	88.95
Philips N2533	POA
Pioneer CT 506	POA
Sony TC U2	POA
Sony TC K1A	POA
Technics RSM10	89.95
Under £150	POA
Akai 704D	129.95
Akai 706D	129.95
Aiwa 2000	129.95
Hitachi D550	112.95
Hitachi O555	POA
Hitachi O560	POA
JVC KO 10S/25	POA
Marantz 5010	139.95
Philips N 2534	129.95
Teac A103	115.95
Toshiba PC230D	106.95



Our Price £66.95
Sanyo RD 402B Beautifully designed "wedge" shape Dolby Stereo Cassette deck featuring record level controls with index markers, C02/F0E1/normal tape facility, bias/equals switches, tape counter and auto stop. Marvellous value.



Our Price £119.95
Hitachi D-555 Dolby Stereo Cassette deck with auto reverse, twin VU meters, full auto stop, bias/equals switch, pause, recording level controls, reverse select switch, a W&F of only 0.2%.



Our Price £116.95
Ferguson 3925 New concept in stereo - a cassette combining Medium & Stereo VHF front, front loading cassette deck, 20W output.

Cavendish Sales

317 WHITECHAPEL RD., LONDON E1
HI-FI CENTRE
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POST & PACKING add the following for P&P Amps, Tuner Amps, Stereo Tuners, Turntables, Cassette Players, Dolby Decks in Car add £1.50. Music Centres & speakers add £4 Securicard £4. Cartridge add 50p.

The prices in these advertisements were finished on 21-6-79. Please check prices and availability at time of purchase.

Compare our prices and stock Ring HOT LINE 01 247 1154 for prices and availability.

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MUSIC CENTRES

Our Price £369.95 **FREE Music Stand worth £9.95**

AIWA AF-5300K
 New model high quality 4 band MusicCentre with facility for 6 FM stations to be pre-set. Also Dolby cassette deck with normal/Cr02/FeCr tape facility and belt drive auto, turntable. Complete with speakers.

Complete with Goodmans speakers
Our Price £389.95 **FREE Music Stand worth £9.95**

Goodmans MCD 100 Mark II with improved turntable. High performance stereo FM/AM/L/M/S waveband music centre featuring a 35w per channel amp, stereo FM tuner with live preset selectors, Dolby cassette deck and belt drive turntable fitted with S shaped tone arm

FREE Music Stand worth £9.95
Our Price £274.95

Sharp SG 400 A top quality model with LW/MW/SW/FM/FM, M.P.K. Stereo receiver with 5 F.M.I. pre set buttons; stereo Dolby cassette deck with auto Cr02/normal tape selections, mech. pause & auto stop; belt drive turntable. 25w per channel.

Cavendish introduce you to four of over 40 different Hi-Fi rack systems in stock - Come along and test them in our modern showroom.

CAVENDISH SYSTEM RS1 CAVENDISH SYSTEM RS42

Our Price £324.95

Complete with all leads and cartridge Securicor delivery £8

Our Price £499.95

JVC JAS 22 Stereo amplifier
 JVC JLV 11 Stereo Tuner
 JVC JLA11 Turn Turntable
 JVC KD10 Dolby Deck
 Celestion Ditton 15 x L speakers complete with 114 Rack, and all leads.
 Securicor Delivery £10.

Our Price £349.95

Hitachi 1785 True Hi-Fi Music Centre with SW/MW/LW/FM stereo receiver with 6 pre-tuned controls and AFC. Turntable with auto return and stroboscope. Dolby cassette deck with ferric/chrome/normal tape facility

Aiwa 5300	369.95
Aiwa 5600	449.95
Ferguson 3971	174.95
Ferguson 3922	299.95
Hitachi STO 170	POA
Hitachi SOT 300	POA
Hitachi SDT/400	POA
ITT MC 22	£239.95
JVC MF47	POA
JVC MF33	POA
JVC MF 55II	POA
National 5070	POA
National 5090	POA
National 6070	POA

National SG 3000	POA
Sharp 450	339.95
Sharp SG500	499.95
Sanyo 3001	208.95
Sanyo 4001	259.95
Sony HMK 80	POA
Toshiba 3350/3650	POA
Toshiba SM3600/3750	POA
Sharp 460	£379.95
Sony HMK 33	POA

CAVENDISH SYSTEM RS41

Our Price £369.95

A superb way to buy Hi-Fi today - all in a matching rack. The fabulous unit comprises of the Hitachi HT 350 direct drive turntable, Hitachi D220 Dolby Stereo Cassette Deck, Hitachi FT340 Stereo Tuner, Hitachi HA 250 Stereo Amplifier plus EX350 Stereo Speakers. Complete with and all leads. Securicor delivery £10

CAVENDISH SYSTEM RS5

Our Price £449.95

Pioneer PL 514X Turntable
 Pioneer SA 506 Amplifier
 Pioneer TX 606 Tuner
 Pioneer CT 506 Cassette Deck
 Pioneer CS 323 Speakers
 Complete with Pioneer X50H Console and all leads.
 Securicor delivery £10.

RADIO CASSETTES

Our Price £39.95

Hitachi TRK 5400 True Hi-Fi Music Centre with SW/MW/LW/FM stereo receiver with 6 pre-tuned controls and AFC. Turntable with auto return and stroboscope. Dolby cassette deck with ferric/chrome/normal tape facility

Our Price £103.95

Philips AR774 Stereo radio recorder that receives LW/MW/SW/FM, brilliant sound reproduction from two large speakers, full stereo recording and playback facilities with extended stereo sound.

Our Price £179.95

Aiwa TPR 950K A beautiful 5 band stereo radio/cassette recorder with 2 SW/LW/MF stereo, 5W per channel. Auto/manual recording with 4 way VU meters, and a W/F of 0.07%, also cue/review system, auto tape switching, oil damped cassette eject

Our Price £79.95

Grundig C5500 Fabulous 4 Band radio/cassette recorder with VHF (FM)/L/M/S radio, Fe/FeCr/Cr tape facility, battery/mains, tape counter, battery meter. Telescopic aerial.

Our Price £179.95

Sharp 9191E Magnificent Battery/mains Stereo cassette recorder with FM/FM stereo/SW/MW/LW, Auto Programme search System, twin VU meters, cue/review, FW/SW aerial.

Our Price £69.95

Hitachi TRK8000 Excellent value for money 4 wave band Stereo radio/cassette recorder. FM/LW/MW/SW radio, AC/DC/car battery usage 2W per channel cue/review and auto stop.

Battery Mains/Radios		
Akai 370	POA	
Ferguson 3T11	44.95	
Ferguson 3283	42.95	
Grundig C5500	79.95	
Hitachi 5300	34.95	
ITT RC2500	55.95	
ITT 'Tiny'	39.95	
JVC RC 222	43.95	
JVC 324	69.95	
Marantz 1053	36.95	
National 554/553	POA	
National 533/301	POA	

National 539	POA
Nordmende Globecorder:	145.95
Philips AR664	79.95
Sanyo 2560 LG	39.95
Sanyo 2441	62.95
Sharp 1754	36.95
Sharp 2800	54.95
Sony 210	65.95
ITT Recorders/ Battery Mains	
ITT 120	59.95
JVC 1635	POA
Sony TC 525	69.95
Sony TC 158	156.95
Technics 646	POA

Battery Mains		
Aiwa 772	21.95	
Ferguson 3T07	POA	
Hitachi 247/295	POA	
Hitachi 36 'Mini'	POA	
Hitachi TRQ 299	36.95	
National 309	POA	
Philips N 2233	23.95	
Sharp 610	22.95	
Sony TC 63	29.95	
Sony TC 65	32.95	
Mini Cassettes		
JVC MK100	POA	
Sanyo 1000	46.95	
Sanyo 3000	44.95	
Sony TC 44	59.95	

Stereo Radio Cassette Recorders

Aiwa 903	99.95
Aiwa 950	POA
Akai AJ480	156.95
Crown CSC626	112.95
Hitachi 8050	POA
Hitachi 8015/8050/8080	POA
JVC 838	POA
JVC 626/838	POA
National 4350	119.95
Normande 881	103.95
Philips AR774	103.95
Sanyo 9970	125.95
Sharp 8585	149.95
Sharp 9090	136.95
Sony 520	POA
Sony CF 570	159.95
Ferguson 3T09	64.95
Toshiba 8700/8510	POA

CARTRIDGES

ADC XLMHII	36.95	Ortofon MC 20	50.95
ADC VLMHII	24.50	Ortofon M20E	41.95
ADC 21M	15.95	Ortofon F15E	17.50
ADC OLM3611	16.95	Ortofon FF15E	12.50
Shure 75E0	13.50	Audio Technica	POA
Shure 75EJ	12.50	AT 12	18.75
Shure 95E0	18.95	AT 14	26.95
Shure V15 IV	64.95	AT 15	38.95
Shure M55E	8.50	AT 20	43.95
Shure V15	46.95	Stanton 500A	14.95
Ortofon M20FL	47.95	Stanton 500EE	20.75
Ortofon VMS20E	27.45	Stanton 680EE	32.95
Ortofon MC 10	33.95	Stanton 681EE	47.95

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Our Price £599.95

Our Price £599.95

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60	£7.50	LVC 90	£12.95	L 370	£8.00
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BASF Fe. Chrome 2.00 **Sony CR2** 1.75

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McOnomy hi-fi

MARANTZ 1050

Stereo Amplifier.
25 watts RMS per channel.



Rec. Ret. Price
£135.96 **£84.90**

MARANTZ 1072

Stereo Amplifier.
36 watts RMS per channel.



Rec. Ret. Price
£176.84 **£109.90**

MARANTZ 6025

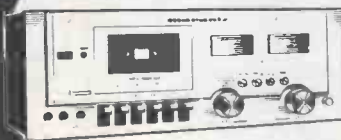
Belt Drive Turntable.

Rec. Ret. Price
£94.04

£59.90



MARANTZ 5000



Front Loading
Dolby Stereo
Cassette Deck.

Rec. Ret. Price
£190.13 **£109.90**

MARANTZ 4G

2-Way Bookshelf Loudspeakers.

Rec. Ret. Price
£90.98

£58.90



STEREO AMPLIFIERS

	REC. PRICE	OUR PRICE
AIWA AA 8100 2 x 25	124.41	91.75
AIWA AA 8300 2 x 45	168.50	132.75
AKAI AM 2250 2 x 25	—	79.90
AKAI AM 2450 2 x 45	—	137.75
ALBA 2025 2 x 27	—	72.90
ALBA 2050 2 x 50	—	104.90
AMSTRAO IC 2000 2 x 25	—	32.50
AMSTRAO EX 220 2 x 25	70.08	49.90
AMSTRAO EX 330 2 x 35	85.63	60.00
ARMSTRONG 621 2 x 40	153.33	122.50
MARANTZ 1050 2 x 25	135.96	84.90
MARANTZ 1072 2 x 36	176.84	109.90
PIONEER SA 506 2 x 25	—	85.24
PIONEER SA 606 2 x 40	—	115.24
PIONEER SA 706 2 x 60	—	152.24
PIONEER SA 7800 2 x 65	—	244.90
PIONEER SA 8800 2 x 80	—	299.90
PIONEER SA 9800 2 x 100	—	384.90
ROTEL RA 300 2 x 20	—	59.90
ROTEL RE 700 graphic equaliser	—	74.90
ROTEL RA 314 2 x 25	—	82.50
ROTEL RA 350 2 x 35	—	84.90
ROTEL RA 1212 2 x 70	—	102.00
ROTEL RA 414 2 x 35	—	104.90
ROTEL RA 913 2 x 60	—	112.25
ROTEL RA 1412 2 x 110	—	194.00
SANSUI AU 117 2 x 15	—	67.90
SANSUI AU 217 2 x 30	—	102.00
SANSUI AU 317 2 x 50 OC coupled	—	154.90
SOLAVOX SA2020 2 x 20	—	48.75
TRIO KA 3750 2 x 25	—	74.90
TRIO KA 3700 2 x 25	—	81.50
TRIO KA 305 2 x 40	—	102.00
GARRARO MRM101 Hi-Fi Music recovery module, this unit is able to 'see' a scratch or noise pulse in an audio signal waveform then electronically delete it giving clean record replay	133.69	91.75

TUNER/AMPLIFIERS

AKAI AA1125 2 x 25	—	114.90
ALBA UA1500 2 x 10	—	49.90
ALBA 2125 2 x 27 LW/MW/FM	—	112.25
ALBA 2150 2 x 50 LW/MW/FM	—	148.00
AMSTRAO EX222 2 x 25	97.58	68.25
AMSTRAO EX333 2 x 30	136.41	95.75
ARMSTRONG 625 FM 2 x 40	242.27	189.00
ARMSTRONG 628 AM/FM 2 x 40	279.07	214.50
GOODMANS M00 130 2 x 50	—	132.75
MARANTZ MR 215 2 x 15	—	94.90
MARANTZ MR 230 2 x 30	—	144.90
MARANTZ MR 250 2 x 50	—	174.90
MARANTZ 2238BL 2 x 38 FM/MW/LW	405.82	224.74
PIONEER SX 590 2 x 20	—	124.90
PIONEER SX 690 2 x 30	—	147.90
PIONEER SX 980 2 x 80	—	398.50
PIONEER SX 1080 2 x 120	—	449.50

Tuner/Amplifiers - cont.

	REC. PRICE	OUR PRICE
ROTEL RX 203 2 x 20	—	79.90
ROTEL RX 300 2 x 20	—	97.50
ROTEL RX 304 2 x 22 LW/MW/FM	—	117.25
ROTEL RX 404 2 x 30 LW/MW/FM	—	132.75
ROTEL RX 504 2 x 40	—	158.25
ROTEL RX 604 2 x 50	—	184.90
ROTEL RX 1203 2 x 120	—	249.90
ROTEL RX 1603 2 x 180	—	299.90
SOLAVOX SR 2220 2 x 20	—	71.25

CASSEIVERS

Tuner/Amplifier/Cassette Combinations

AIWA AF3070 2 x 25 Dolby cassette	429.17	234.90
AIWA AF3090 2 x 40 Dolby cassette	502.98	399.90
AKAI AC 3500L 2 x 25 Dolby cassette	—	224.90
FERGUSON 3926 2 x 20 watts RMS, 4 waveband with Dolby cassette	—	179.90
GOODMANS 4000 2 x 28 with Dolby cassette inc. pair Goodmans MC35 loudspeakers	—	289.90

TUNERS

AIWA AT 9300 LW/MW/FM	130.04	97.90
AKAI 2250L MW/LW/FM	—	84.90
ALBA 2000 MW/LW/FM	—	71.25
AMSTRAO 3000 Mk II	—	29.90
AMSTRAO EX 202 MW/LW/FM	67.70	48.50
AMSTRAO EX 303 MW/LW/FM	—	77.66
ARMSTRONG 624 FM	—	132.89
ARMSTRONG 623 MW/LW/FM	—	171.73
MARANTZ 2050	—	81.50
MARANTZ 2020L	—	89.90
MARANTZ 2100	163.56	92.90
PIONEER TX 606 MW/FM	—	96.94
PIONEER TX 7800	—	172.50
PIONEER TX 9800	—	229.90
ROTEL RT300 LW/MW/FM	—	59.90
ROTEL RT426	—	84.90
ROTEL RT824 MW/FM	—	89.90
ROTEL RT925	—	102.00
ROTEL RT1025	—	112.25
ROTEL RT1024	—	132.75
SANSUI TU 217	—	99.90
SOLAVOX ST 2002 FM/MW/LW	—	46.75
TRIO KT 5550 MW/FM	—	82.90
TRIO KT5500 MW/FM	—	91.75
TRIO KT 3131 LW/MW/FM	—	97.00

TURNTABLES

AIWA AP2300 Direct drive inc. magnetic cartridge	—	119.90
AIWA AP2400 Direct drive inc. magnetic cartridge	152.31	138.00
AMSTRAO TP120 belt drive	—	29.90
BSR 182 with AOC AC30 Mag. Cart.	—	29.74
BSR P208 belt drive auto, fitted AOC QLM 33 magnetic cartridge	—	39.90
BSR Quanta 500 belt drive, fitted AOC QLM 32 magnetic cartridge	—	49.90

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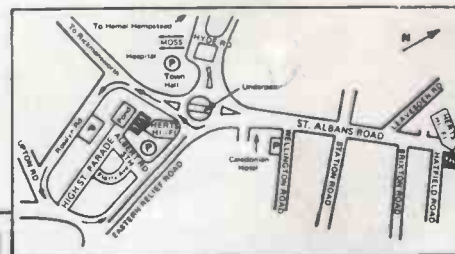
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Pioneer CT6850 .. £233.90
Pioneer CT6950 .. £333.90
Pioneer CTF1250 .. £458.90
Pioneer CTF500 .. £99.50
Pioneer CTF700 .. £207.00
Pioneer CTF1000 .. £399.00
Pioneer CTF900 .. £302.00
Pye 9154 DNL (Sp. off.) .. £51.50
Pye 9148A DNL (Sp. off.) .. £94.50
Sansui SC1100 (Silver) .. £117.00
Sansui SC1110 (Black) (Sp. off.) .. £97.00
Sansui SC1120 .. £105.00
Sansui SC2000 .. £145.00
Sansui SG5100 .. £299.00
Sharp RT3151 Timer .. £179.50
Teac A103 (Sp. off.) .. £121.50
Teac A106, A107 .. £159.00
Toshiba PC530D (Sp. off.) .. £115.00
Toshiba PC230D .. £115.00
Toshiba PC3110 (Sp. off.) .. £59.50
Toshiba PC530 .. £157.00
Toshiba PC3060 (Sp. off.) .. £84.00
Toshiba PC4030 (Sp. off.) .. £99.00

● **MICS, ACCESSORIES (P/P £1-25)**
ADC SLM2 (P/P £2-50) .. £41.00
ADC S51 Sound Shaper (P/P £2-50) .. £61.00
ADC S52 Mk 2 (P/P £2-50) .. £142.00
Alwa CM2000A Stereo .. £23.50
Akai ADM20 (Sp. off.) .. £6.60
Akai ADM40 .. £8.50
Akai ADM80 .. £10.50
Akai ACM100 Electret Cardioid
(Sp. off.) .. £23.50
Akai ACM50 Electret Cardioid
(Sp. off.) .. £9.10
Beyer M818LM .. £63.00
Disc 22 Mat .. £15.80
Ferroglyph Demagnetiser D2 .. £11.25
Harman Kardon TS4 Stand (pair) .. £19.00
Harman Kardon HS1, HS2, HS3
Stands (pair) .. £18.50

Micro H50S Headshell .. £7.90
Monitor Audio C3F Cable 5m (each) .. £7.50
Monitor Audio Stylift .. £5.50
Monitor Audio Sound Cable 5m (each) .. £7.70
Monitor Audio Sound Cable 10m
(each) round .. £14.00
Neal 101 Resolver Mk 2 .. £17.90
Rotel RMCI (Sp. off.) .. £27.50
Sansui AX Mixer .. £157.50
Sennheiser MD722LM and MZA12
Spectramat .. £17.25
Toshiba EM410 Stereo (pair) .. £19.90
Toshiba EM120 Electret .. £11.90
Zerostat Pistol (add £1.00 P/P) .. £6.50

● **KITS, LOUDSPEAKERS, DRIVE
UNITS (P/P on application)**
Celestion HF1300 8- and 15-ohm .. £8.20
Celestion HF2000 .. £9.50
Coles 401G .. £6.50
Decca London Ribbon Tweeter .. £41.00
KEF 104 AB Kit (add £5 P/P) .. £130.00
KEF Cantata Kit (add £5 P/P) .. £209.00
KEF B139, DN12, B110, T27
P/P Free* Per pair) .. £112.00
KEF B110 SPI003 .. £11.00
KEF B139 SPI044 .. £25.25
KEF B200 SPI014 .. £12.00
KEF DN12 SPI004 .. £7.10
KEF DN13 SPI106 .. £4.90
KEF DN13 SPI017 .. £5.00
KEF DN22 pair (104AB Crossover) .. £35.50
KEF T27 SPI032 .. £8.60
Micro Seiki Shock Absorbers MSB1 .. £10.00
Wharfedale Linton 3XP Kit (pair) .. £42.00
Wharfedale Denton XP2 Kit .. £29.90
Wharfedale Shelton XP2 Kit .. £38.90
Wharfedale Linton XP2 Kit .. £53.90
Wharfedale Glendale XP2 Kit .. £66.90

● **TUNERS (P/P £3-50)**
Aiwa AT9700 .. £240.00
Akai AT2200 (Sp. off.) .. £57.50
Akai AT2250L .. £78.00
Akai AT2450L .. £132.00
Armstrong 623 .. £134.00
Armstrong 624 .. £104.00
Harrison ST210 (Sp. off.) .. £196.50
Hitachi FT300 (Sp. off.) .. £65.00
Hitachi FT340 (Sp. off.) .. £87.50
JTV6 .. £99.00
Marantz 2100 (Sp. off.) .. £89.00
Marantz 2120 .. £196.00
Marantz 2050 .. £79.90
Pioneer TX408L .. £69.90
Pioneer TX608L .. £93.90
Pioneer TX7800/2 .. £169.90
Pioneer TX8500/2 .. £182.90
Pioneer TX606 .. £93.50
Quad FM3 .. £112.00
Rogers T75 (Series 2) Teak/Wal. From Stock
Rotel RT426 (Sp. off.) .. £79.90
Rotel RT226 .. £59.50
Sansui TU217 .. £109.00
Sansui TU317 .. £110.00
Sansui TU517 .. £181.00
Teac ATX30 .. £99.00
Toshiba ST220 .. £76.00
Toshiba ST420 (Sp. off.) .. £99.90

● **STEREO AMPLIFIERS (P/P £3-50)**
Akai AM2600 (Sp. off.) .. £199.00
Akai AM2250 .. £75.00
Akai AM2450 .. £129.50
Akai AM2350 .. £124.00
Akai AM2650 .. £195.00
Akai AM2800 .. £220.00
Aiwa AA8700 .. £267.00
Armstrong 621 (teak) .. £120.00
HHV FET .. P.O.A.
Harrison S200 (Sp. off.) .. £185.00
Hitachi HA250 (Sp. off.) .. £79.90
Hitachi HA330 (Sp. off.) .. £99.40
Hitachi HA5300 (Sp. off.) .. £129.90
Hitachi HMA7500 Mosfet .. £356.00
JVC JAS510, JAS22, JAS81
P.O.A.
Marantz 1030 (Sp. off.) .. £68.50
Marantz 1050 .. £86.50
Marantz 1072 .. £112.50
Marantz 1090 .. £134.00
Pioneer SA506 .. £83.50
Pioneer SA606 .. £115.50
Pioneer SA706 .. £149.90
Pioneer SA408 .. £69.90
Pioneer SA508 .. £93.90
Pioneer SA608 .. £129.90
Pioneer SA708 .. £171.90
Pioneer SA7800 Magniwide .. £243.90
Pioneer SA8800 Magniwide .. £298.90
Pioneer SA9800 Magniwide .. £383.90
Quad 44 .. P.O.A.
Quad 33/303 .. £234.50
Quad 33/405 .. £299.00
Rogers A75 (Series 2) .. P.O.A.
Rotel RA214 .. £63.00
Rotel RA312 (Sp. off.) .. £62.50
Rotel RA412 (Sp. off.) .. £79.90
Rotel RA414 (Sp. off.) .. £89.00
Rotel RA714 .. £119.90
Rotel RA810 (Sp. off.) .. £100.00
Rotel RA413 (Sp. off.) .. £89.90

Sansui AU117 (Sp. off.) .. £72.90
Sansui AU217 (Sp. off.) .. £110.00
Sansui AU317 (Sp. off.) .. £159.00
Sansui ASU17 .. £265.00
Sansui AU717 .. £312.00
Teac ASM30 .. £99.00
Teac ASM50 .. £159.00
Toshiba SB420 (Sp. off.) .. £129.90
Toshiba SB620 (Sp. off.) .. £159.90
Toshiba SB820 (Sp. off.) .. £248.00

● **RECEIVERS (P/P £3-50)**
Aiwa AX7400 .. £163.00
Aiwa AX7600 .. £209.00
Akai AA1175 .. £375.00
Akai AA1200 .. £475.00
Akai AA1125 (Sp. off.) .. £107.50
Akai AA1135 .. £130.00
Akai AA1150 (Sp. off.) .. £160.00
Armstrong 625 .. £185.00
Armstrong 626 Long wave .. £218.00
Harman Kardon 330C .. £99.95
Harman Kardon HK230E (Sp. off.) .. £79.00
Harman Kardon HK430 .. £155.00
Hitachi ST703 (Sp. off.) .. £155.00
Hitachi SR903 (Sp. off.) .. £210.00
Hitachi SR302 (Sp. off.) .. £95.00
Hitachi SR303L Long wave .. £127.50
Hitachi SR502 (Sp. off.) .. £119.00
Hitachi SR503 Long wave .. £135.00
JVC JRS201L .. £225.00
Marantz 2226B .. £169.90
Marantz 2216B .. £122.00
Marantz 2238BL (Sp. off.) .. £259.00
Marantz Superscope R1220 .. £56.75
Marantz Superscope R1262 .. £114.00
Marantz Superscope R1270 .. £105.00
Pioneer LX690 .. £165.90
Pioneer SX590 .. £126.90
Pioneer SX690 .. £151.90
Pioneer SX980 .. £397.90
Pioneer SX790 .. £202.90
Pioneer SX890 .. £264.90
Rotel RX7707 (Sp. off.) Long wave .. £162.50
Rotel RX203 (Sp. off.) .. £79.90
Rotel RX303 .. £99.90
Rotel RX403L .. £112.00
Rotel RX203L .. £85.00
Rotel RX403 (Sp. off.) .. £108.00
Rotel RX503 (Sp. off.) .. £129.90
Rotel RX603 (Sp. off.) .. £185.00
Sansui 9090 (P.P.T.B.A.) (Sp. off.) .. £359.00
Sansui G301 (Sp. off.) .. £115.00
Sansui G401 .. £175.00
Teac AG5700 .. £216.00
Toshiba SA220L Long wave (Sp. off.) .. £79.90
Toshiba SA320L Long wave (Sp. off.) .. £109.00
Toshiba SA420 (Sp. off.) .. £112.00
Toshiba SA620 (Sp. off.) .. £188.00
Toshiba SA750 .. £206.50
Toshiba SA735 .. £170.50

● **STEREO SYSTEMS & PACKAGES
(P/P on appl.) (Some exclude spkrs.)**
Alwa AF3060 ex. speakers .. £232.00
Aiwa AF5300 + speakers .. £348.00
Aiwa AF5600 ex. speakers .. £465.00
Akai AC3500, limited stock .. £279.00
Akai AC3750L .. £299.00
Ecco ZU4L, ZUSJ, ZU7 (Sp. off.) .. £135.00
Garrard GA150 + speakers (Sp. off.) .. £199.00
Goodmans MCD100 Mk 2 ex.
speakers .. £299.00
Goodmans MCD100 Mk 2 + MC35
(Sp. off.) .. £380.00
Goodmans 4000 Casseiver plus
MC35 .. £285.00
Hitachi SDT300 .. £373.00
Hitachi SDT400 Casseiver .. £254.00
Hitachi SDT7820 .. £245.50
Hitachi SDT7840 (Sp. off.) .. £231.00
Hitachi SDT7765 (Sp. off.) .. £278.00
Hitachi SDT7680R (Sp. off.) .. £386.50
Hitachi SDT7785 (Sp. off.) .. £352.50
Hitachi HA330/FT340/D220/HT353/
CVW4 Rack .. £390.00
Marantz DC9/2L System .. £310.00
Marantz I515L Rack System .. £374.90
Panasonic SA80L Rack System
(Sp. off.) .. £299.50
Panasonic SG5090 ex. speakers .. £449.90
Panasonic SG5070L + SB208 .. £390.00
Panasonic SG6070L ex. speakers .. £599.00
Panasonic SG70 Casseiver .. £220.00
Panasonic SG2080LD (Sp. off.) .. £335.90
Panasonic SG2080L (Sp. off.) .. £299.90
Panasonic SG3060L (Sp. off.) .. £269.90
Panasonic SG3090 (Sp. off.) .. £349.90
Pioneer X33 .. £339.90
Pioneer X55H .. £449.90
Pioneer X55V .. £466.90
Pioneer X77H .. £508.90
Pioneer X77V .. £519.90
Pioneer X99H .. £618.90
Pioneer X99V .. £629.90
Pioneer 424-1 (SX590) .. £334.90
Pioneer 424-2 (SX690) .. £359.90
Pioneer Mini System .. £568.00
Sansui G301 Rack System A* .. £399.00
Sansui AU217 Rack System B* .. £496.00
Sharp SG400 excl. speakers .. £242.00

Sharp SG450 excl. speakers .. £295.00
Sharp SG500 .. P.O.A.
Teac CR1500 Casseiver .. £185.00
Teac Rack System ASM30, A1055,
ATX30, TF515, w/wh KEF Celeste
III Speakers .. £399.00
Toshiba SM2700 .. £175.00
Toshiba SM3750 .. £395.00
Toshiba SM3350 .. £296.00
Toshiba SM2950 .. £265.00
Toshiba SM3650 .. £389.00
Toshiba 220* Rack System (excl.
speakers) .. £450.00
Toshiba 225* Rack System .. £490.00
Toshiba 335* Rack System (excl.
speakers) .. £485.00

● **LOUDSPEAKER SYSTEMS
All prices per pair (P/P on application)**
Armstrong 602 (12 stand-extra) .. £175.00
Audio Pro B2.50 Sub Woofer .. £495.00
B & W DM2A, DMS .. P.O.A.
Castle Richmond (teak) Mk 2 .. £74.00
Castle Kendal Mk 2 (teak) .. £108.00
Celestion 442* .. £290.00
Celestion 551* .. £345.00
Celestion 662* .. £499.00
Celestion Ditton II* 15 x R .. £110.00
Celestion Ditton 25* .. £280.00
Celestion Ditton 33* .. £195.00
Celestion Ditton 44* .. £245.00
Celestion Ditton 66* .. £225.00
Celestion UL6* .. £135.00
Celestion UL8 .. £170.00
Chartwell LS3/5A, PM110, PM210 .. P.O.A.
Dalesford D (Sp. off.) .. £99.90
Goodmans RB18 .. £57.50
Goodmans RB20 .. £73.50
Goodmans HE1* .. £249.90
Goodmans HE2* .. £222.90
Goodmans RB35 .. £105.00
Goodmans RB65 .. £126.00
Goodmans MC35 .. £85.00
Goodmans Mini .. £49.90
Goodmans Achromat Beta* .. £139.90
Goodmans Achromat Kappa* .. £184.90
Goodmans Achromat Sigma* .. £259.90
IMF .. P.O.A.
JR 149 (various finishes to order) .. £124.50
KEF Cantata* .. £390.00
KEF Calindat* .. £218.00
KEF Corellit* .. £140.00
KEF Reference 104* (Sp. off.) .. £215.00
KEF Reference 104AB* .. £261.00
KEF Reference 1051* .. £645.00
KEF Celeste II* .. £89.00
KEF Concorde 3* .. £159.90
KEF 104AB Black (Sp. off.) .. £215.00
Leak 3020f (Sp. off.) (teak) .. £68.00
Leak 3090 (Sp. off.) .. £445.00
Marantz 4G (Sp. off.) .. £56.00
Monitor Audio MA3 Mk 2f .. £350.00
Monitor Audio MA4* .. £175.00
Monitor Audio MA5 Mk 2f* (Sp.
off.) .. £125.00
Monitor Audio MA6* .. £130.00
Monitor Audio MA7* .. £79.95
Monitor Audio MA8* .. £110.00
Monitor Audio Mini Monitor* (Sp.
off.) .. £79.90
Mordaunt Short Carnival, Festival,
Pageant Series 2, Signifer (teak/
walnut) .. P.O.A.
Quad Electrostatic .. P.O.A.
Rogers Export Monitor and stands .. P.O.A.
Rogers LS3/5A (teak and walnut) .. P.O.A.
Rogers Compact Monitor .. P.O.A.
Sansui ES203 .. £54.00
Sansui ES207 .. £145.00
Sansui ES209 .. £167.00
Spendor BC1 Mk 2, BC2, BC3 and
Mini Monitor SA1, various finishes .. P.O.A.
Tannoy Arden Mk 2 .. £399.00
Tannoy Berkeley Mk 2 .. £355.00
Tannoy Cheviot (Sp. off.) .. £250.00
Tannoy Devon .. £240.00
Tannoy Eaton .. £210.00
Tannoy Oxford, Chester, Ascot,
Dorset, Mayfair .. P.O.A.
Videotone Minimax 2 (add P/P £3-50) .. £46.00
Wharfedale E30f* .. £195.00
Wharfedale E50f* .. £268.90
Wharfedale E70f* .. £331.00
Wharfedale Chevin XP2 .. £31.50
Wharfedale Teesdale SP2 .. £127.95
Wharfedale Doveedale SP2 .. £178.00
Wharfedale Denton XP2 .. £49.50
Wharfedale Shelton XP2 .. £59.50
Wharfedale Linton XP2 .. £74.50
Wharfedale Glendale XP2* .. £99.90

● **STEREO HEADPHONES (P/P £1-50)**
Aiwa HP30 (Sp. off.) .. £15.00
Akai ASE7 .. £8.70
Akai ASE11 .. £12.75
Akai ASE22 + Volume control .. £14.50
AKG K240 (Sp. off.) .. £43.90
AKG K140 .. £23.50
AKG K160/4 .. £30.50
Beyer ET1000 .. £114.00
Beyer DT202/K100-7 .. £35.75

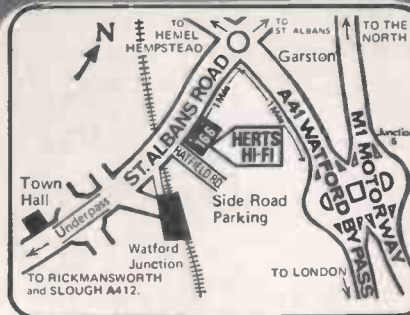
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Koss HV2 (Sp. off.)	£15.50
Koss K6A	£16.00
Koss K6ALC	£19.00
Koss K6LC (Sp. off.)	£15.00
Koss K6LCQ Quadraphone	£50.00
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Koss KI35	£19.75
Koss KI45	£26.00
Koss Phase 2	£37.50
Koss Phase 2 +2 excl. record for Mail Orders	£87.00
Koss Pro Triple A	£39.75
Koss Technician 2	£36.25
Koss Technician VFR	£40.50
Pioneer Monitor 10	£35.00
Pioneer SE205	£11.50
Pioneer SE305	£18.00
Pioneer SE500	£37.00
Pioneer SE505	£32.00
Pioneer SE700	£38.25
Pioneer SEQ404 Quadraphonic	£24.00
Sansui SS30	£16.50
Sansui SS60	£28.00
Sennheiser HD224X	£35.75
Sennheiser HD400	£11.25
Sennheiser HD414X	£17.00
Sennheiser HD424X	£26.50
Sennheiser HD430	£23.50
Sennheiser HD420	£30.50
Sennheiser Unipolar 2000	£102.00
Stax SR5/SRD65B Electrostatic	£91.50
Stax SR44 Electret	£70.00
Stax SRX3/SRD65B	£143.00
Stax Sigma X SRD65B	£221.00
Wharfedale Isodynamic 2	£26.00

Garrard DD131 with M75 EDT2	£98.00
Garrard DD132 with M75 EDT2	£105.00
Garrard PS25 M6 Module & Cart.	£43.50
Garrard GT20 and M75 EDT2	£59.00
Garrard GT25 & M75EDT2 (Sp. off.)	£67.00
Garrard GT35 & M75EDT2 (Sp. off.)	£79.90
Harman Kardon ST7 (Sp. off.)	£255.00
Hitachi PS38 Direct Drive (Sp. off.)	£79.90
Hitachi PS48 Direct Drive (Sp. off.)	£99.90
Hitachi PS58 Direct Drive (Sp. off.)	£125.00
Hitachi HT350 Direct Drive (Sp. off.)	£87.00
Hitachi HT353 Quartz (Sp. off.)	£99.90
Hitachi HT463 Quartz (Sp. off.)	£126.50
Hitachi HT550 Quartz (Sp. off.)	£129.90
JVC QLA2	£24.00
Marantz 6100W (Sp. off.)	£57.50
Marantz 6025	£28.00
Marantz 6170	£92.00
Marantz 6070Q	£135.00
Micro Seiki MB10 and FF15E Mk 2	£85.00
Micro Seiki MB10 Monitor Audio ET500 excl. arm	£71.00
National Panasonic SL19 + cart.	£141.00
Philips GA312 (Sp. off.)	£62.50
Pioneer PL200	£76.50
Pioneer PL300	£88.90
Pioneer PL400	£111.00
Pioneer PL600	£129.90
Sansui SRB200 + Cart.	£199.90
Pioneer PL512	£57.50
Pioneer PL514 & Ortofon FF15E/2	£71.95
Pioneer PL514	£52.90
Pioneer PL117D (Sp. off.)	£79.90
Pioneer PL55X Direct Drive (Sp. off.)	£120.00
Rotel RP900 (Sp. off.)	£49.90
Rotel RP3000 with arm (Sp. off.)	£110.00
Rotel RP5300 Direct Drive (Sp. off.)	£89.90
Sansui SR222 Mk 2	£57.50
Sansui SR525 Direct Drive (Sp. off.)	£94.50
Sansui FR1080P (Sp. off.)	£59.00
Sansui SR333E Direct Drive (Sp. off.)	£99.90
Sansui SR838E	£218.50
Sugden BD101 and SAU2	£64.00
Sugden BD101 and SAU4	£82.00
Sugden BD101 excl. arm	£48.00
Sugden BD2 and arm, black	£38.00
Sugden 2 P&C & SAU5	£51.50
Sugden BD103 and arm	£94.00
Sugden BD103 excl. arm	£80.50
Sugden BD103 & SAU4	£119.00
Sugden BD2A P&C and SAU2	£62.00
STD 305D	£258.00
STD 305M	£195.00
STD 305D x GH228D	£350.00
STD 305M x GH228D	£287.00
Teac TSF15 + AT11	£66.00
Teac TSF30 + AT11	£78.00
Thorens TD104	£85.00
Thorens TD105	£102.00
Thorens TD110 (manual)	£110.00
Thorens TD115 (automatic)	£127.00
Thorens TD126 Mk 3/BC	£188.00
Thorens TD126 Mk 3/C	£229.00
Thorens TD125/2AB (Sp. off.)	£135.00
Thorens TD126C Mk 2 (Sp. off.)	£169.00
Garrard 865B Mk 2 (Sp. off.)	£85.00
Thorens TD160B/C Mk 2	£85.00
Garrard DD130 & M75ED2	£318.00

Toshiba SR220, SR225, SR335, SR370, SRA230, SR330, SR430	P.O.A.
Toshiba SRF225D	£85.00
Toshiba FRS325 + cart.	£85.00
Toshiba FRS530 Direct Drive + cart.	£99.90

● CARTRIDGES (P/P £1-50)

ADC XLM Mk 3	£37.00
ADC XLM Super, Case and Headshell	£33.75
ADC VLM Mk 3	£25.00
ADC ZLM	£61.00
ADC QLM30/3	£9.25
ADC QLM32/3	£10.25
ADC QLM34/3	£11.25
ADC QLM36/3	£18.50
AKG P6E	£17.50
AKG P7E	£26.00
AKG P8E	£46.50
AKG P8ES	£57.00
Decca Deram Con. L. Blue	£6.25
Decca London Mk 5 Export	£38.00
Decca London Export Gold	£55.00
Decca London Maroon	£42.00
Decca London Blue	£33.00
Empire 999RFX	£6.00
Empire 2001E	£6.90
Empire 2000E IV	£13.90
Empire 2000X	£26.00
Empire EDR9	£69.25
Goldring G900E	£17.25
Goldring G800	£4.90
Goldring G800E	£7.90
Goldring G900SE Mk 2	£37.25
Goldring D110 Stylus	£3.10
Goldring D110E Stylus	£5.90
Lentek Pre-amp Din or Phone	£57.00
Lentek Entre	£99.90
Ortofon FF10E (Sp. off.)	£8.90
Ortofon MC10	£43.20
Ortofon F15E Mk 2	£23.00
Ortofon F15E Mk 2	£16.50
Ortofon M20E Super	£49.50
Ortofon M20FL Super	£56.00
Ortofon VMS20E/2 CAP210 (Sp. off.)	£33.50
Ortofon MC20 and STM72	£75.50
Ortofon MC10 and STM72	£61.50
Ortofon MCA10	£13.25
Ortofon FF15	£38.00
Satin M17G (Sp. off.)	£58.90
Satin M117G	£38.90
Shure M44E	£8.00
Shure M55E	£8.90
Shure M75-65	£7.90
Shure M75B Type 2	£11.00
Shure M75ED Type 2	£16.00
Shure M75EJ Type 2	£13.50

Shure M95ED	£20.50
Shure M95EJ	£14.00
Shure V15 Type 3	£49.00
Shure V15 Type 4	£66.00
Shure M95HE	£25.00
Signet TK3E (Sp. off.)	£14.90
Stanton 500E	£13.95
Stanton 500A	£14.25
Stanton 500EE	£20.50
Stanton 680EE	£30.50
Stanton 681EEE	£46.00
Stanton 881S	£79.50
Stanton 681EES	£52.00
Ultimo 20A	£75.50
Ultimo 10X	£49.50
UAD Pre-amp	£37.50

● PORTABLE RADIOS AND RADIO CASSETTES (P/P Free)

Aiwa TPR903	£109.00
Aiwa TPR940	£143.00
Aiwa TPR950	£189.00
Aiwa TPR905	£125.00
Akai AJ480	£140.00
Hacker SP80 Stereo	£114.00
Marantz CR1053L	£39.95
Marantz CR1203L	£49.95
Marantz CRS2024	£89.95
Panasonic DR26+	£170.90
Panasonic DR28+	£197.90
Panasonic DR49+	£349.90
Roberts RT22	£36.00
Roberts R606MB	£54.00
Roberts RM20	£28.50
Roberts RM30	£44.00
Roberts RM50	£65.50
Roberts Rambler	£24.75
Sharp GF8585	£159.90
Sharp GF9191	£182.00
Sharp GF9090	£149.50

● VHS VIDEO TAPE (P/P 65p)

Akai VHST60 (1 hour)	£7.90
Akai VHST120 (2 hours)	£11.10
Akai VHST180 (3 hours)	£13.50
TDK VHSE60	£7.90

TDK VHS E120	£10.50
TDK VHS E180	£13.00

● IN CAR HI-FI (P/P £3-50)

Philips AC860	£156.00
Philips AC890	£195.00
Pioneer TS168 3-way pr.	£77.00
Pioneer TS695 3-way pr.	£78.00
Pioneer TS160 20 watt pr.	£22.00
Pioneer AD30 Amp/ equalizer	£108.00
Pioneer GM40 16 W Amp	£43.00
Pioneer KP66G	£81.00
Pioneer KP88G	£108.00

SPECIAL OFFERS IN TOSHIBA

QR2000 Portable Clock/ Radio	£43.00
Radio Cassettes	
RT6410	£66.00
RT7410	£79.00
RT8600S Stereo	£113.00
Cassette Deck	
PC6030	£239.00
Tuner Amplifiers	
SA420	£117.00
SA520	£147.00
SA620	£195.00
Stereo Amplifiers	
SB620	£172.50
SB820	£248.00
Tuner	
ST420	£103.50
Latest New Models:	
Quartz Clocks	
TCQ128	£38.00
TCQ153	£44.50
Music Centres	
SM2750	£157.00
SM-D30	£449.00
SM4750	£598.00
Cassette Decks	
PC-X10	£89.50
PC-X20 (Metal Tape)	£125.00

* CARRIAGE FREE

● TURNTABLES (P/P £3-50) AND ARMS (P/P £1-50)

ADC LMF1	£61.00
ADC LMF2	£67.50
ADC LMG-1 Headshell	£5.00
ADC LMH-2 Shell	£6.75
Audio Technica AT1005 Mk 2 (Sp. off.)	£25.50
BSR BDS95 Chassis	£28.00
Decca International Arm	£55.00
Garrard SB25 Mk 6 Chassis	£28.00
Hadcock GH228 and Unilift p/p free Reference Fluid Arm	£61.00
SME S2 Headshell	£5.75
SME 3009 S/2 Det. Head	£66.00
SME 3009 Fixed Head	£61.00
SME Series 3	£112.00
SME Damper FD200 (P/P £1)	£19.00
SME CA1 Series 3 Spare Arm/Shell	£16.25
Sugden BD1 Chassis Kit	£17.90
Sugden BD1 Module Kit	£44.00
Sugden BD1 Chassis	£20.90
Sugden BD2 & SAU2 Chassis (Sp. off.)	£36.00
Sugden BD2A and SAU2 Chassis	£46.00
Sugden SAU2	£18.00
Sugden SAU4	£41.25

● TURNTABLE PACKAGES (P/P £5-00)

ADC Accutrac 4000 (Sp. off.)	£225.00
ADC I500FG & QLM34/3	£69.50
ADC I600DD & QLM36/3	£89.00
ADC I7000D Quartz & XLM/3	£112.00
Aiwa AP2200 and cartridge	£99.90
Aiwa AP2300	£115.00
Aiwa AP2400	£125.00
Aiwa AP2500	£158.50
Aiwa AP2600	£189.00
Akai AP100 (Sp. off.)	£59.90
Akai AP101 (Sp. off.)	£69.90
Akai AP206 (Sp. off.)	£85.00
Akai AP306 (Sp. off.)	£118.00
Akai AP006 (Sp. off.)	£105.00
BSR BDS80 Mod. ext. Cart. (Sp. off.)	£29.90
BSR BDS95 Module ext. Cart.	£35.00
Garrard 865B Mk 2 (Sp. off.)	£62.00
Garrard DD75 M75EDT2 (Sp. off.)	£69.90
Garrard DD130 & M75ED2	£87.00

● CARTRIDGES (P/P £1-50)

ADC XLM Mk 3	£37.00
ADC XLM Super, Case and Headshell	£33.75
ADC VLM Mk 3	£25.00
ADC ZLM	£61.00
ADC QLM30/3	£9.25
ADC QLM32/3	£10.25
ADC QLM34/3	£11.25
ADC QLM36/3	£18.50
AKG P6E	£17.50
AKG P7E	£26.00
AKG P8E	£46.50
AKG P8ES	£57.00
Decca Deram Con. L. Blue	£6.25
Decca London Mk 5 Export	£38.00
Decca London Export Gold	£55.00
Decca London Maroon	£42.00
Decca London Blue	£33.00
Empire 999RFX	£6.00
Empire 2001E	£6.90
Empire 2000E IV	£13.90
Empire 2000X	£26.00
Empire EDR9	£69.25
Goldring G900E	£17.25
Goldring G800	£4.90
Goldring G800E	£7.90
Goldring G900SE Mk 2	£37.25
Goldring D110 Stylus	£3.10
Goldring D110E Stylus	£5.90
Lentek Pre-amp Din or Phone	£57.00
Lentek Entre	£99.90
Ortofon FF10E (Sp. off.)	£8.90
Ortofon MC10	£43.20
Ortofon F15E Mk 2	£23.00
Ortofon F15E Mk 2	£16.50
Ortofon M20E Super	£49.50
Ortofon M20FL Super	£56.00
Ortofon VMS20E/2 CAP210 (Sp. off.)	£33.50
Ortofon MC20 and STM72	£75.50
Ortofon MC10 and STM72	£61.50
Ortofon MCA10	£13.25
Ortofon FF15	£38.00
Satin M17G (Sp. off.)	£58.90
Satin M117G	£38.90
Shure M44E	£8.00
Shure M55E	£8.90
Shure M75-65	£7.90
Shure M75B Type 2	£11.00
Shure M75ED Type 2	£16.00
Shure M75EJ Type 2	£13.50

● PORTABLE RADIOS AND RADIO CASSETTES (P/P Free)

Aiwa TPR903	£109.00
Aiwa TPR940	£143.00
Aiwa TPR950	£189.00
Aiwa TPR905	£125.00
Akai AJ480	£140.00
Hacker SP80 Stereo	£114.00
Marantz CR1053L	£39.95
Marantz CR1203L	£49.95
Marantz CRS2024	£89.95
Panasonic DR26+	£170.90
Panasonic DR28+	£197.90
Panasonic DR49+	£349.90
Roberts RT22	£36.00
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Roberts RM30	£44.00
Roberts RM50	£65.50
Roberts Rambler	£24.75
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Sharp GF9090	£149.50

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Akai VHST180 (3 hours)	£13.50
TDK VHSE60	£7.90

AIWA AF3060 SYSTEM

Aiwa AF3060 Cassette Receiver
Pair Celestion Ditton 15XR Speakers

Special offer £320

Aiwa AP2200 Turntable + Cartridge £95 extra

AIWA AF3090 SYSTEM

Aiwa AF3090 Cassette Receiver
Pair Celestion Ditton 22 Speakers

Special offer £459

Or with Aiwa AP2200 Turntable Cartridge for £95 extra

TOSHIBA SA320L SYSTEM

Toshiba SA320L Receiver
Sansui SR222 Mk 2 Turntable
Ortofon FF15E Mk 2 Cartridge
Pair Wharfedale Shelton XP2 Speakers

Special offer £230

HITACHI SR503L SYSTEM

Hitachi SR503L Receiver
Hitachi D220 Cassette Deck
Hitachi HT350 Turntable + Cartridge
Pair KEF Celeste III Speakers

Special offer £380

HARMAN KARDON 330C SYSTEM

Harman Kardon 330C Receiver
Micro Seiki MB10 Turntable inc. Magnetic Cartridge
Pair Tannoy T125 Oxford Speakers

SPECIAL OFFER £299.90

AIWA AX7600 SYSTEM

Aiwa AX7600 Receiver
Aiwa AP2500 Turntable
Stanton 680EE Cartridge
Pair Mordaunt Short Pageant 2 Speakers

Special offer £499

Or with Aiwa AD6300 Cassette Deck for £129 extra

SANSUI G301 RACK SYSTEM

Sansui G301 Receiver
Sansui SC1120 Cassette Deck
Sansui SR232 Turntable - Cart.
Sansui GX100 Rack
Pair Celeste III Speakers

Special offer £438

All these Systems sent Carriage FREE on UK Mainland
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ALL PRICES INCLUDE VAT AT 15% + P&P FREE UK MAINLAND ONLY



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RECEIVERS/TUNER AMPS

Akai		
AA1125	..	£109-00
AA1134BL	..	£145-00
AA1135	..	£129-00
AA1115BL	..	£104-00
Aiwa	..	P.O.A.
JVC	..	P.O.A.
Marantz		
2238BL	..	£230-00
2226BL	..	£194-00
1515L	..	£110-00
1530L	..	£152-95
1550L	..	£207-95
2252B	..	£327-00
Pioneer		
SX590	..	£117-00
SX690	..	£141-00
Sansui		
TA300	..	£151-00
G401	..	£145-00
G301	..	£130-00
TA500	..	£186-00
G6000	..	£373-00
G7000	..	£387-95
Sony	..	P.O.A.
Technics	..	P.O.A.
Yamaha	..	P.O.A.

AMPLIFIERS

Akai		
AM2250	..	£74-95
AM2350	..	£109-95
AM2450	..	£127-95
JVC		
AS3	..	P.O.A.
AS5	..	£86-00
JAS22	..	£106-00
JAS44	..	£172-00
JAS55	..	£195-00
Marantz		
1050	..	£85-95
1072	..	£113-95
1090	..	£135-95
1122DC	..	£243-95
1152DC	..	£302-50
Nakamichi	..	P.O.A.
Pioneer		
SA606	..	£105-00
SA706	..	£145-00
SA408	..	£65-00
SA508	..	£87-00
SA608	..	£121-00
SA708	..	£159-00
Rotel		
RA214	..	£60-95
RA314	..	£74-50
RA414	..	£98-00
RA714	..	£130-95
Sansui		
AU117 Mk 2	..	£79-00
AU217 Mk 2	..	£104-00
AU317 Mk 2	..	£159-00
AU517	..	£225-00
AU717	..	£278-00
AU919	..	£427-00
AX7	..	£154-00
Sony	..	P.O.A.
Toshiba	..	P.O.A.
Technics		
SU8011	..	P.O.A.
SU8022	..	P.O.A.
SU8044	..	P.O.A.
SU8055	..	P.O.A.
SU8077K	..	P.O.A.
SU8088	..	P.O.A.
SU9011	..	P.O.A.
SE9021	..	P.O.A.

Yamaha	..	P.O.A.
Denon	..	P.O.A.

TUNERS

Akai		
AT2205L	..	£76-95
AT2450L	..	£129-95
AT2650	..	£173-95
JVC		
JTV11G	..	£69-95
JTV22	..	£118-00
TV5L	..	£98-00
Marantz		
2100	..	£93-00
2100L	..	£136-00
2050L	..	£98-00
2110L	..	£191-00
2120	..	£192-00
Nakamichi		
Pioneer		
TX606	..	£93-00
TX408L	..	£65-00
TX608	..	£87-00
TX7800	..	£159-00
TX9800	..	£212-00
Rotel		
RT226	..	£60-00
RT226LW	..	£70-00
Sansui		
TU217	..	£101-00
TU317	..	£105-00
TU417	..	£132-00
TU517	..	£165-00
TU717	..	£197-00
Yamaha	..	P.O.A.
Denon	..	P.O.A.
Sony	..	P.O.A.
Technics	..	P.O.A.

TURNTABLES

Akai	..	P.O.A.
Aiwa	..	P.O.A.
AR 77XB	..	£68-00
Sony	..	P.O.A.
Technics		
SL150 II	..	P.O.A.
SL5300	..	P.O.A.
SL1500/10 II	..	£250-00
SL1400/10 II	..	£275-00
SL1300/10 II	..	£306-00
SLB2	..	P.O.A.
SLB3	..	P.O.A.
SLD2	..	P.O.A.
SLD3	..	P.O.A.
SLQ 2	..	P.O.A.
SLQ 3	..	P.O.A.
JVC	..	P.O.A.
Marantz		
6025	..	£56-00
6170	..	£96-00
6270Q	..	£138-00
Micro Seiki	..	P.O.A.
Pioneer		
PL512	..	£48-00
PL200	..	P.O.A.
PL300	..	P.O.A.
PL400	..	P.O.A.
PL600	..	P.O.A.
PL1000	..	P.O.A.
Sansui		
SR222/11	..	£56-00
SR232	..	£61-00
SR636	..	£170-00
SR838	..	£198-00
Sony	..	P.O.A.

Thorens		
TD104	..	£82-00
TD105	..	£99-00
TD110C	..	£99-00
TD160BC/II	..	£83-00
TD115	..	£127-00
TD126/III/C	..	£233-00
TD126/III/BC	..	£191-00
Yamaha	..	P.O.A.
Denon	..	P.O.A.

ARMS & CARTRIDGES

SME		
3009/IIIS	..	£76-50
3009/III	..	£109-00
3009 Mk 2	..	£64-00
3009 non DT	..	£59-00
Shell S2	..	£6-00
FD200	..	£20-00
Ortofon		
FF15E/II	..	£15-00
F10EMK2	..	£9-95
F15E/II	..	£20-00
VMS20E/II	..	£30-00
M20FL Super	..	£52-00
MC20	..	£54-00
MC10	..	£35-00
Denon		
DL103	..	£72-00
Shure	..	P.O.A.

SPEAKERS (PAIRS)

A.R.		
AR9	..	£790-00
AR90	..	£602-00
AR18	..	£76-00
AR14	..	£209-00
AR12	..	£295-00
AR25	..	P.O.A.
AR91	..	P.O.A.
AR92	..	P.O.A.
Celestion		
D15XR	..	£111-00
D22	..	£144-00
D33	..	£200-00
D442	..	£279-00
D25	..	£286-00
UL6, 8	..	P.O.A.
JBL	..	P.O.A.
JR		
JR149	..	£122-00
Woofers	..	£150-00
JR150	..	£195-00
Dalesford		
D	..	£90-00
KLH		
300	..	P.O.A.
331	..	P.O.A.
317	..	P.O.A.
Monitor Audio	P.O.A.	
MA16 Mini Monitor	..	£93-00
MA8	..	£109-00
MA6	..	£135-00
MA5MK2	..	£138-00
MA4MK2	..	£184-00
MA3MK2	..	£363-00
MA2	..	£265-00
MA1MK2	..	£261-00
Marantz		
4 Mk II	..	£68-00
5 Mk II	..	£111-00
6 Mk II	..	£140-00
7 Mk II	..	£178-00
HD440	..	£102-00
HD550	..	£178-00
4G	..	£59-00
4G/3	..	£73-00

Tannoy		
Oxford	..	£163-00
Ascot	..	£245-00
Chester	..	£245-00
Dorset	..	£286-00
Mayfair	..	£327-00
Technics	..	P.O.A.

Wharfedale		
Chevin XP2	..	£34-00
Denton XP2	..	£51-00
Shelton XP2	..	£66-00
Linton XP2	..	£79-00
Glen XP2	..	£105-00
Dove SP2	..	£179-00
Teesdale SP2	..	£131-00
E30	..	£188-00
E50	..	£254-00
E70	..	£315-00
E90	..	P.O.A.

Yamaha Full range

CASSETTE DECKS

Akai		
CS703D	..	£83-00
CS704D	..	£113-00
GXC706D	..	£128-00
GXC709D	..	£163-00
GXC715D	..	£215-00
GXC725D	..	£250-00
GXC730D	..	£200-00
GXC732D	..	£200-00
GXC735D	..	£265-00
GXC750D	..	£370-00
Aiwa		
AD1250	..	£136-00
AD6400	..	£180-00
AD6550	..	£198-95
AD6350	..	£145-00
AD6900	..	£359-00
AD6600	..	£255-00
AD2000	..	£146-00
ADL40	..	£204-00
ADM100	..	£93-00
ADM200	..	£115-00
AD6700	..	£300-00
JVC	..	P.O.A.
Marantz	..	P.O.A.
Nakamichi	..	P.O.A.
Pioneer		
CTF500	..	£94-00
CTF600	..	£113-00
CTF650	..	£159-00
CTF750	..	£198-00
CTF850	..	£215-00
CTF950	..	£304-00
CTF1250	..	£397-00
Sansui		
SC1100/1110	..	£106-00
SC2100/2110	..	£181-00
SC3100/3110	..	£219-00
SC5100/5110	..	£327-00
Sony	..	P.O.A.
Technics	..	P.O.A.

REEL TO REEL DECKS

Akai		
GX4000D	..	£196-00
GX4000DB	..	£229-00
1722L/II	..	£213-00
Sony	..	P.O.A.
Technics	..	P.O.A.
Pioneer RT707	..	£420-00

MUSIC CENTRES

Aiwa	..	P.O.A.
Akai	..	P.O.A.

JVC	..	P.O.A.
National	..	P.O.A.
Hitachi	..	P.O.A.
Sanyo	..	P.O.A.
Sony	..	P.O.A.
Toshiba	..	P.O.A.
Marantz	..	P.O.A.

VIDEO CASSETTE RECORDERS

Sanyo, Sovy, National, Akai
 Please call for enquiries
 American Express
 Access · Barclaycard
 Credit facilities available

CLEARANCE BARGAINS Limited Stocks!

Akai		
AA1010	..	£89-95
Audiotechnica		
1005 Mk 2	..	£38-95
AR15 + Stands	..	£140-00
Aiwa		
AD1600	..	£130-00
Amstrad		
8000 Mk 3	..	£25-50
3000 Mk 2	..	£28-95
EX333	..	£90-00
Celestion		
UL10	..	£190-00
Eumig		
Concert Centre	..	£724-00
Harman Kardon		
ST7	..	£169-95
Citation II	..	£130-00
Citation 15	..	£180-00
330C	..	£91-95
JBL		
L110	..	£483-95
JVC		
JTV6	..	£59-95
S10	..	£55-00
JTV10	..	£55-00
T3030 tuner	..	£330-00
P3030 pre amp	..	£235-00
M3030 power amp	..	£350-00
Leak		
3020 speakers	..	£77-00
3030	..	£99-00
Marantz		
HD77	..	£250-00
Micro Seiki		
DD40	..	£210-00
Rotel		
RA413	..	£69-95
RX403	..	£109-95
RX603	..	£225-95
RX1603	..	£450-00
RT1024	..	£170-00
Sansui		
QRX9001	..	£690-00
BA2000	..	£320-00
CA2000	..	£240-00
Sony		
STR5800 receiver	..	£199-00
ST3950 tuner	..	£99-00
EL5 cass. deck	..	£250-00
EL7 cass. deck	..	£350-00
TC510/2 reel to reel portable deck	..	£430-00
Sanyo		
RD5600	..	£150-00
Technics		
SU7100	..	£88-50
RS1500	..	£720-00
Yamaha		
CR2020	..	£420-00
CR1020	..	£395-00
NS1000 Mahogany finish	..	£750-00

Classified Advertisements

Advertisements for this section must be pre-paid. The rate is 15p per word (private), minimum £3.00. Box Nos. 50p extra. Trade rates 18p per word, minimum £3.60. Copy and remittance for advertisements in **OCTOBER** issue must reach these offices by **31st August** addressed to: The Advertisement Manager, Hi-Fi News & Record Review, Link House, Dingwall Avenue, Croydon CR9 2TA. **NOTE:** Advertisement copy must be clearly printed in block capitals or typewritten.

Replies to Box Nos. should be addressed to the Advertisement Manager, Hi-Fi News & Record Review, Link House, Dingwall Avenue, Croydon CR9 2TA, and the Box No. quoted on the outside of the envelope. The district after Box No. indicates its locality.

Sex Discrimination Act 1975. No job advertisement which indicates or can reasonably be understood as indicating an intention to discriminate on grounds of sex (e.g. by inviting applications only from males or only from females) may be accepted, unless

- (1) the job is for the purpose of a private householder or
- (2) it is in a business employing less than six persons or

(3) it is otherwise excepted from the requirements of the Sex Discrimination Act.

A statement must be made at the time the advertisement is placed saying which of the exceptions in the Act is considered to apply.

The attention of advertisers is drawn to "The Business Advertisements (Disclosure) Order 1977", which requires that, from 1st January 1978, all advertisements by persons who seek to sell goods in the course of business must make that fact clear. From the above date, consumers therefore should know whether an advertisement relates to a sale by a trader or a private seller.

FOR SALE—private

Quad 22 Pre-amplifier, two Quad II power amplifiers, Quad FM3 stereo tuner (hardly used), two Wharfedale W2 speakers. £160. Tel.: 061-437 1071. J.

Yamaha B2/C2 Pre-main Amplifier, £500. Yamaha NS1000M loudspeakers, £500. SME series 3 arm with Stanton 681EEE, £25. SME series 3 arm with Audio Technica AT20S, £25. Tel.: 0209 215074, evenings. J.

TUNER—FM/MW—Nikko FAM-400, good condition, £40. Tel.: Colchester 210552. J.

BBC L55/IAE Speakers, rare and superb units in perfect condition, £900 o.n.o. Tel.: 01-242 5763, late evenings or weekends. J.

Cambridge Audio R50 transmission line speakers; teak, mint, £190. Sharples, 18 Winmarleigh Street, Warrington. Tel.: 0925 31574, after 6 pm. J.

Philips AH384 Integrated Stereo Amplifier, 40 watts CSW, new and unused, £120 o.n.o. Tel.: Wolverhampton 762000. J.

RARE EARLY SHEFFIELD DIRECT-CUT RECORDS

Few only S9 and S10, mint, sealed and guaranteed genuine. Lincoln Mayorga and Distinguished Colleagues Vol. 1 and Vol. 2 (The Missing Linc).

One-time offer, first come first served.

Tel.: RYE 3240 (After 6 p.m.)

Neal 102, Pioneer CTF9191 and Marantz 5420 cassette decks, Technics SL1900 and Philips GA437 record decks, Tandberg 200 receiver, Goodmans bass reflex and Sigma Transmission line speakers. Tel.: Southport 40671 or 33177. J.

Late pair of KEF Cadenza's £80. KEF Correlies, £80. Armstrong 625 latest version, £130. Will deliver. Tel.: 0246 75479, after 6pm. J.

FOR SALE PRIVATE—Cont.

B & O 4000 Tuner Amp and 4000 gram, £350. Tel.: 01-531 2279, after 6 pm. J.

Thorens TD124/II Turntable, with teak base, Perspex lid and mounting board for SME. Excellent condition. £75 o.n.o. Tel.: Thurleston 054-857 654. J.

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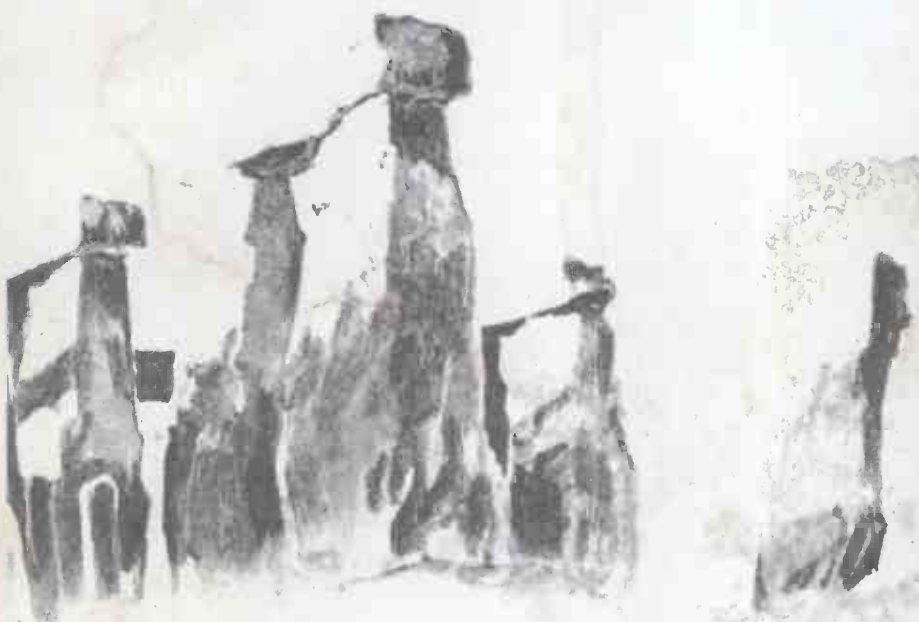
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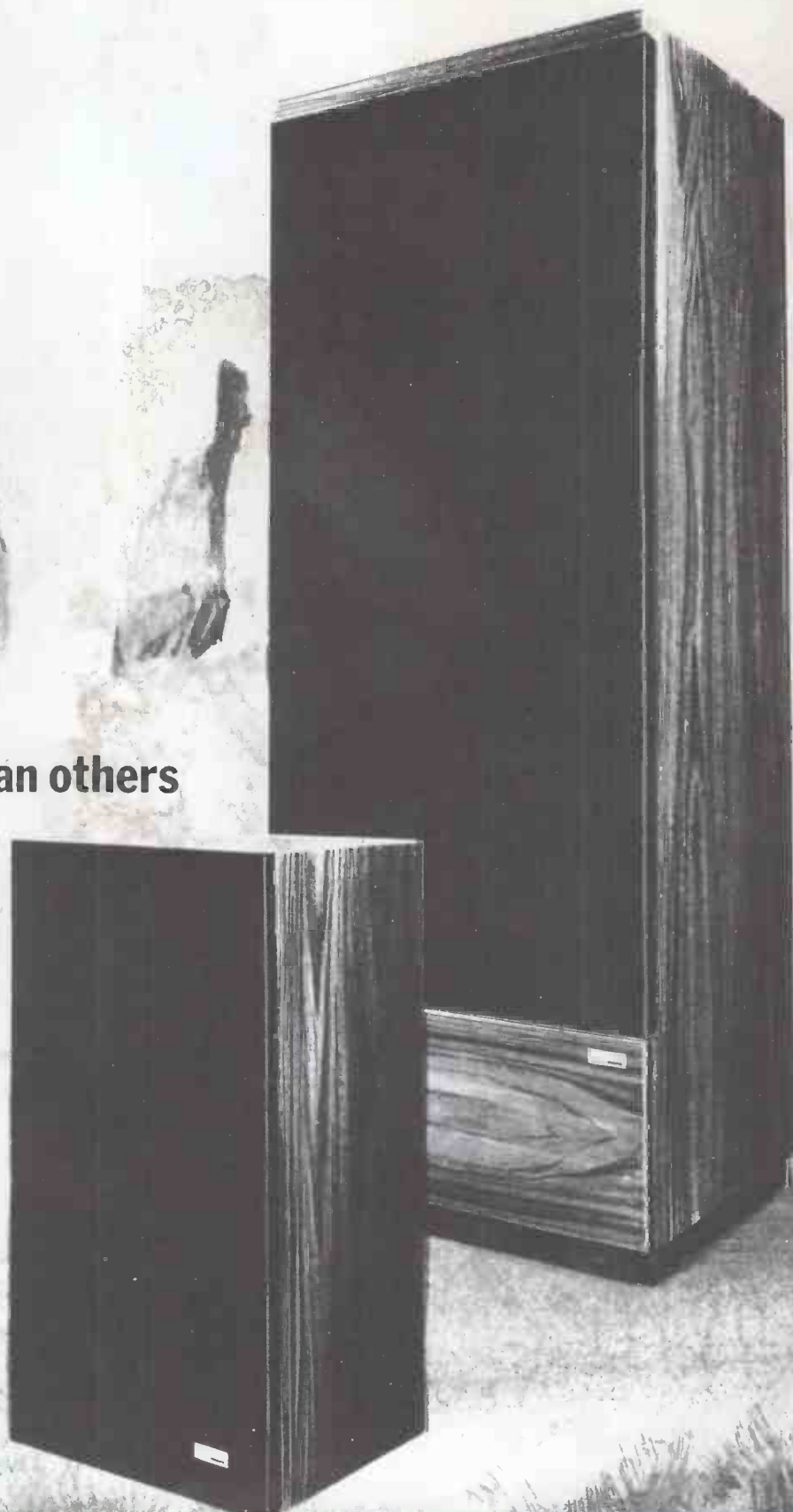
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