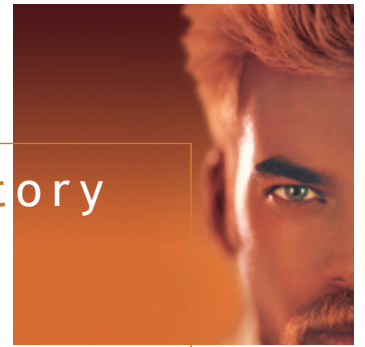


History



Founded in early 1980, in Saint-Etienne, France, Focal-JMlab opened shop within a small area of a precision machining firm. At the time of inception, there were only two employees, one of which is the current CEO, Jacques Mahul, an engineer specializing in loudspeaker design.

The innovative products developed in this small shop rapidly garnered international praise. The company started with two product lines: loudspeaker components marketed under the Focal name were sold for use by the best loudspeaker designers and high end kit builders, while fully assembled loudspeaker systems were marketed using the JMlab name.



Jacques Mahul, president of Focal-JMlab

JMlab quickly became famous for original thinking: its first creation, the now famous dual voice coil DB13 bookshelf system was capable of providing bass extension and playback levels comparable to much larger floor standing systems.

An active development principle emphasizing rapid response to market requirements, coupled with a dynamic and refined musicality, quickly enabled JMlab to become the leader in the French loudspeaker system trade: in 1999, JMlab's sales represented 15% of France's

total sales volume (currency based) for loudspeaker systems.

During the same period, product exportation has progressively grown stronger in Europe, North America and Southeast Asia. This last zone has generated particularly healthy sales due to the great brand name recognition that has evolved for Focal and JMlab, fostered by numerous high profile awards: in particular, the JMlab Vega system was selected as "Component of the Year" in Japan for 1992. This was the first french audio product to ever receive this award.

In 1996, the Grande Utopia was widely praised by the international audio press and is currently considered to be among the five best loudspeakers in the world.

In 1997, a smaller version called the Utopia was enthusiastically received at the major Audio shows across the world... And a Ford ThunderBird equipped solely with Focal Audiomobile speaker components won two Grand Prizes in the Expert Sound Quality competition of the prestigious IASCA competition held in November 1997 in Greenville, NC, USA.

The export market currently accounts for nearly 53% of the company's total sales.



Line drawing of Grande Utopia

The business sectors of Focal-JMlab



Manufacturing for the world



Home
Hi-fi and home cinema loudspeakers



Car
Onboard systems



New in 2002

Pro
Systems designed for professionals within the sound industry



We also distribute in France...



Audison
In-car amplifiers
(Made in Italy)

Focal-JMlab products



Focal-JMlab only specialises in top-of-the-range high fidelity and in particular the acoustic part.

The products offered by the company fall into three distinct areas: drive units marketed under the Focal brand, loudspeakers under the JMlab brand and systems for professionals.

In 2001, the total production of drive units totalled almost 500,000 units, while the total for loudspeakers was over 120,000 items and that for in-car systems over 100,000 units. A large proportion of the drive units are naturally destined for finished household products.

The products offered to our customers are divided into three separate sales divisions:

■ **Car** (38% of turnover) which includes ready-to-fit drive units and Focal systems, for onboard listening. This is a fast-growing sector in all markets.

Focal has quickly become a leading player in the top-of-the-range segment.

■ **Home** (62% of turnover) is a segment which includes all of the JMlab loudspeakers. This brand is currently designed only for domestic use, but is not restricted purely to hi-fi. There is also a wide range of home cinema systems in addition to in-wall models.



The Grande Utopia - a globally renowned model

The 2001 range includes 37 models (87 when you consider the various finish options) broken down into 5 separate lines:

- Chorus for the economy market
- Cobalt for the mid-range market
- Electra for the top-of-the-range market
- Utopia for the luxury top-of-the-range market
- Caché for the "in-wall" models.

This range, unique of its kind in the world, includes units from €228 up to €5327 per pair. JMlab has the perfect solution for every market segment.

The Home division also includes drive unit components sold separately to manufacturers of hi-fi loudspeakers and also to enthusiasts via specialised stores.

■ A **Pro** department will be launched in 2002. It will include all of the loudspeakers and drive units for professionals within the sound industry.



Utopia 33 WX

Kit Polykevlar 165 K3

Cobalt 806

Focal-JMlab technologies



Much of the company's success achieved through the Focal and JMlab brands, is based upon a technology which is distinctive from that offered by the competition, with unique skills in the field of drive units. Where speakers are concerned, it should be noted that the majority of brands do not manufacture their own drive units. This is a major advantage for JMlab.

Since it was founded, Focal-JMlab has constantly innovated, producing several new concepts:

- The dual voice coil midbass drive units offer a remarkable response to bass reproduction for small speakers.
- The rigid inverted dome tweeter offers excellent dynamic performance, which distinguishes us from the competition.
- The Polykevlar® sandwich structure comprising two sheets of Kevlar® on both sides of a core comprised of tiny hollow beads is a unique solution in the production of membranes, featuring an optimal weight – rigidity – dampening balance. (Patent No 2731579).
- The multi-ferrite magnet structure is an enhanced Focal characteristic for high-performance woofers, offering high energy and cooling through ventilation of the moving coil.
- The Polyglass® deposited in a fine layer of silica beads on the cellulose pulp membranes offers an effective technical solution at a particularly attractive cost.

- The Tioxid tweeter membranes with a fine layer of titanium dioxide on a titanium dome.
- “W” membranes, the latest development in the sandwich concept uses a glass–glass structure based around a structural foam core. (Patent No 2615345).
- Magnetic circuits produced from Telar 57 allows for a high degree of magnetic induction without saturation while at the same time reducing the bulk of the tweeters.
- The Focus Time principle places the bass, mid-range and treble drive units in a semicircle ensuring that their output reaches the listener's ear at exactly the same moment. The sound image is therefore reproduced three-dimensionally.
- The OPC (Optimum Phase Crossover) filter structure, for which the phase difference is zero at the junction between the mid-range and the tweeter offering holographic precision of the sound image.
- The gamma (γ) structured housing, designed as an ultra-rigid frame with a high level of inertia offers maximum acceleration of the bass, and combats the sources of spurious vibrations.
- The “wall boost control” offers a highly linear response for “in-wall” applications.

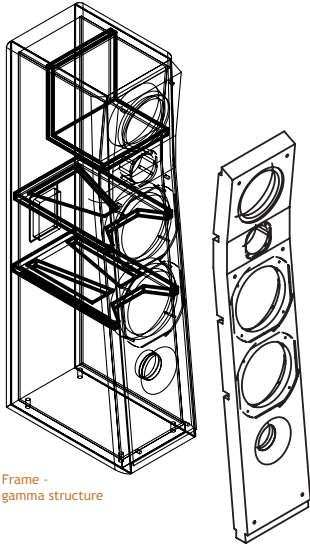


Inverted dome tweeter



Breakdown view of Utopia subwoofer

R & D resources



Frame -
gamma structure

All development work is carried out internally by a team of 12 technicians and engineers. These are involved in:

- Research into various models of drive units.
- Research into in-car systems, in a laboratory including a vehicle in which the development work is carried out in situ.
- Research into loudspeakers, with an anechoic chamber and two fine tuning studios making it very easy to carry out listening measurement work.
- The design work involves the use of state-of-the-art 3D CAD software in order to incorporate basic style elements right from the design stage, for mass-market products.

Management team:

- Jacques Mahul ————— Chairman and CEO
- Gérard Chrétien ————— General manager
- Jacques Hubert Constant ————— Manager of the Pau site
- Thierry Guggenheim ————— Administrative and financial manager

The Focal Audio International group:

- Focal-JMlab : development, production and distribution
- Focal-JMlab UK : distribution
- Focal Audio International : holding company, administration, finance and human resources.

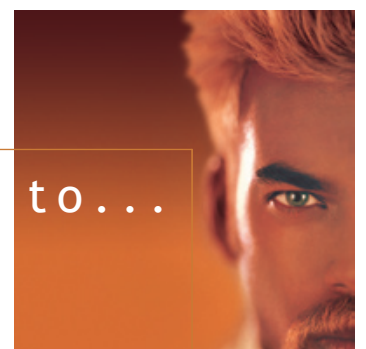


The main studio



The anechoic chamber, a key feature of the Research Centre

Made in France thanks to...



One of the key strengths of Focal-JMlab is its total control over the production of its own components including drive units, cabinetwork and filters.

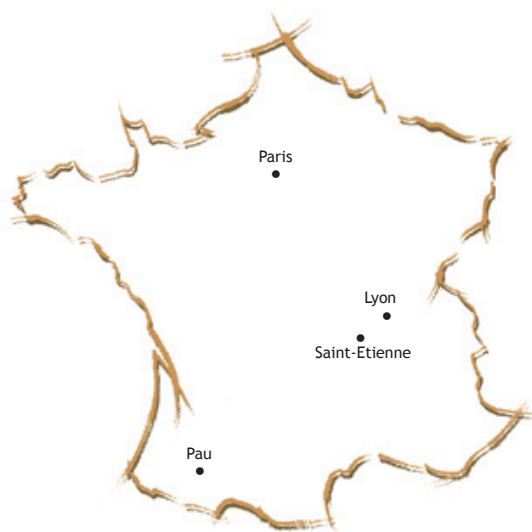
Based for the first ten years of its life on its former 2,600 m² site in Saint Etienne, the business has constantly grown:

- Late 1990: creation of a new site which would be home to the head office and production unit for loudspeakers on 2,000m².
- 1992: creation of a new drive unit production unit of 1,000m² on the same site at Saint Etienne.
- 1994: modernisation of the Pau site, producing cabinetwork on 3,000m².
- 1996: extension on the new Molina site (5,500m²) just outside Saint Etienne, including all of the production for finished products as well as the laboratories.

The Molina site in Saint-Etienne



- 1999: creation of a 600m² research centre, equipped with an anechoic chamber of 550m³, a vehicle laboratory and two studios. This year also saw the creation of a logistics and storage centre for all finished products.
- 2001: creation of a subsidiary in Great Britain: Focal-JMlab UK.
- In 2002: all of the production for drive units, car kits and loudspeaker assembly as well as the head office, the administrative departments and logistics services will be brought together on the Molina site. This extension of over 5,000m² takes the usable surface area of the Saint Etienne site up to 11,000m², with a workforce of almost 250 people for the whole Focal Audio International group.



Cabinetwork production in Pau

...Tightly controlled industrial processes



The production carried out at Saint Etienne features a relatively low level of automation, but involves real professional know-how and genuine qualifications, particularly for the drive units. The technology specific to Focal-JMlab requires a high level of production integration. Consequently, the membranes are produced internally. We avoid the use of subcontractors or the outsourcing of certain processes. **At Focal-JMlab, we believe that innovation cannot take place without total control over the related processes, allowing for optimal industrial application of the technology.**

In contrast, the production unit for cabinetwork in Pau is highly automated, with three digital machining units developed specially for our needs.

Structural changes during recent years have made enormous progress possible in the fields of workflow management and quality.

In addition to this, tighter computerised integration between the Computer Aided Management and Manufacturing system, sales administration and accounting, plus the introduction of modern communication tools (company messaging service, intranet, web site, etc) have made it possible to transfer information rapidly both internally and to our international distributors.

An integrated publishing department adds flexibility and graphical creativity to our written and multimedia marketing activities, essential to enhancing the company image.



Producing drive unit prototypes



Rigorous inspection of all speakers before shipping

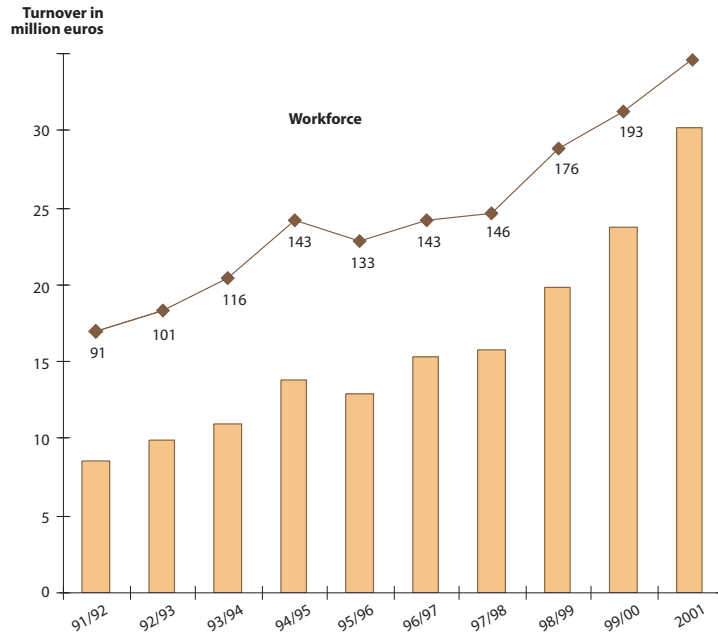


The Audiomobile warehouse

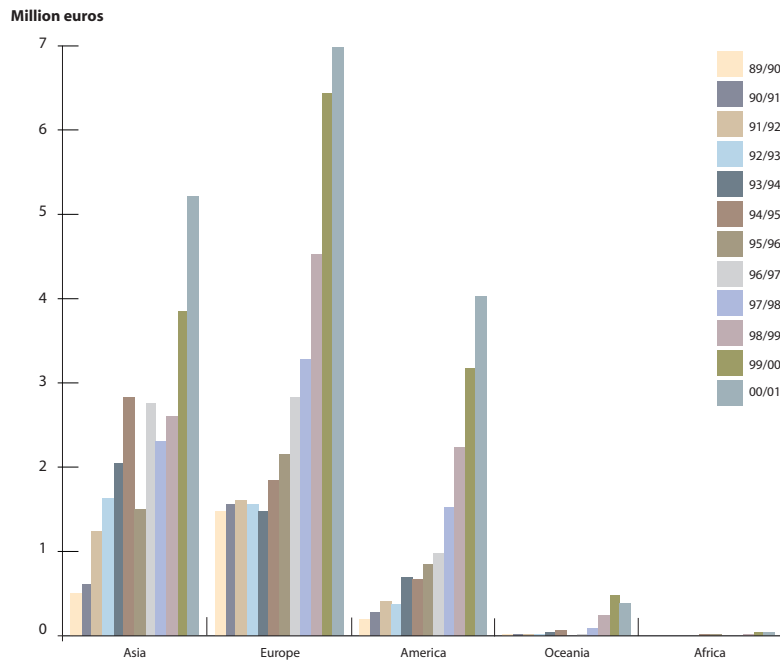
Company data...



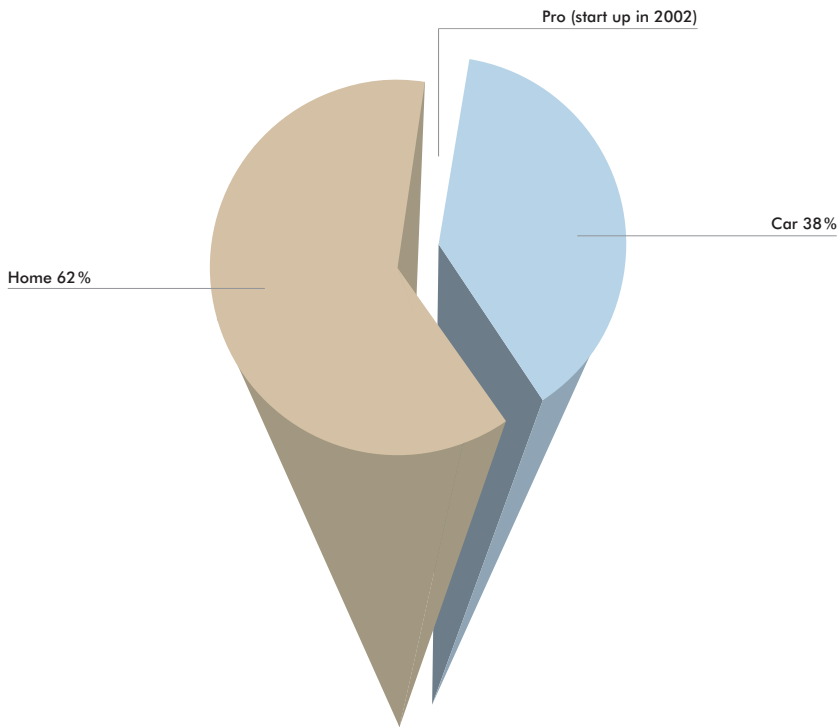
Annual change in turnover (bars) and in workforce (curve)
Focal-JMlab



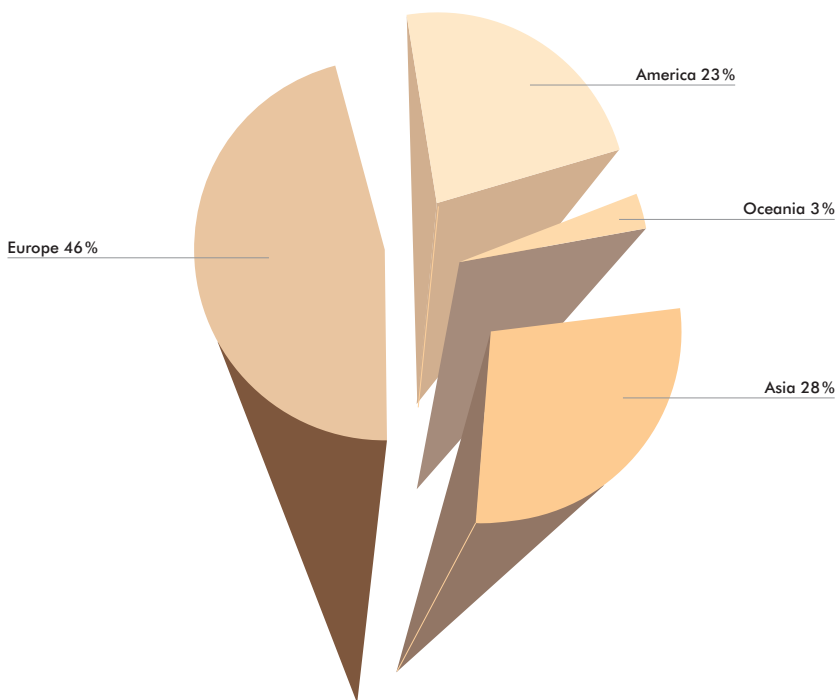
Annual change in export sales for each continent



Company data...



Breakdown of turnover by product line
(based on the 2000 financial year)



Breakdown of turnover by continent
(based on the 2000 financial year)