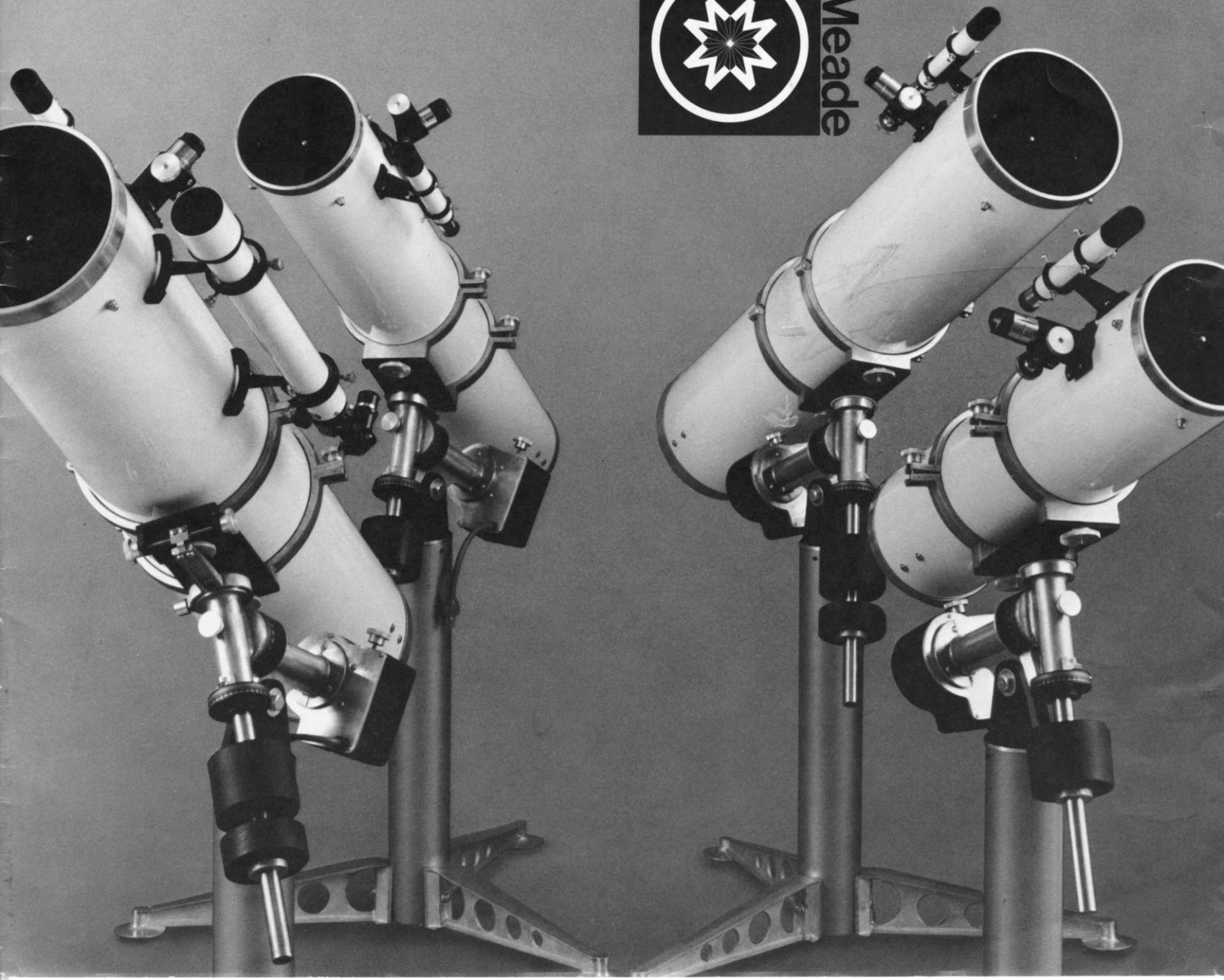


# Bulletin 68

Meade 6" & 8" Reflecting  
Telescopes and Auxiliary  
Telescope Systems.



Meade



# INTRODUCTION

Meade 6" and 8" reflecting telescopes give large-aperture performance to the serious amateur at very reasonable cost. These totally integrated systems permit detailed visual study of the Solar System and Deep-Space, while simultaneously allowing the observer to grow into more advanced subjects, such as long-exposure color astrophotography.

No other telescopes in their price range permit such a diversity of applications, and no other telescopes — of any optical design — in their aperture range exceed such a professional level of performance. Meade 6" and 8" reflectors are manufactured at our Costa Mesa facility, incorporating original Meade designs and production techniques — and they are the only telescopes available which use exclusively the quality Meade components known throughout the astronomical world.

## Optical Specifications

**Mirror Systems:** The primary and secondary mirrors of all Meade reflecting telescope models are manufactured of low-expansion, fine-annealed Pyrex glass. Each mirror is ground, polished, and figured to surface accuracies within the professional standard 1/10-wavelength of mercury green light. There are no finer optical systems obtainable.

**Focal Ratios:** The focal ratio (or "f/number") of an optical system is defined as the system's focal length divided by its aperture. For example, a 6" diameter telescope with 48" focal length implies a focal ratio of f/8. The f/ratios of Meade reflecting telescopes have been carefully chosen to yield excellent deep-space photographic capability, while at the same time permitting superb planetary and lunar resolution.

**Magnifying Power:** Related to f/ratio is the subject of magnification, or "power," perhaps the most widely misunderstood telescope characteristic among beginning amateur astronomers. In an astronomical telescope the power of the instrument is variable, depending upon the eyepiece used. Power is computed by dividing the eyepiece focal length into the focal length of the primary mirror (or objective lens, in the case of a refracting telescope). Thus a 6" f/8 telescope, with a focal length of 48", or 1219mm, operates at a power of 135X when used with a 9mm eyepiece. An 8" f/6 telescope also carries

a focal length of 48", and thus also yields 135X when used with a 9mm eyepiece. But the 8" telescope at 135X shows far more detail than the 6" telescope at 135X, since the larger aperture results in more light (in fact, 78% more light) entering the telescope. The key to the observation of fine detail is, therefore, not "power," but light-gathering capability, and the larger the telescope, the more light enters the system. Within practical limits higher powers are useful: Meade 6" telescopes have an effective power range from 30X to (under the best observing conditions) about 350X; Meade 8" models operate effectively in a range from 30X to about 600X.

Used in conjunction with an eyepiece, the **Barlow Lens** (cf. Meade 2X Teleneegative Amplifier, page 9) is a convenient method of increasing telescope power. When inserted into the telescope focuser, the Barlow doubles the power that a given eyepiece yields when used alone. Thus, the 9mm eyepiece in the example above gives 270X, instead of 135X, in conjunction with a Barlow. A quality Barlow Lens does not diminish image clarity or resolution, and there are several high-performance Barlows, including the Meade 2X Teleneegative-Amplifier, available today. There are, however, a good many inferior units also offered (including several high-priced ones) and the beginner is cautioned to use discretion.

Meade 6" & 8" Reflecting Telescopes: Magnifying and Resolving Powers

Magnifying Power* when used with an eyepiece focal length of:	6" f/8 Models 628, 618	6" f/5 Models 645, 635	8" f/6 Models 826, 816, 856
4mm	305X (610X)†	190X (380X)†	305X (610X)
6mm	203X (406X)†	127X (254X)	203X (406X)
7mm	174X (348X)	109X (218X)	174X (348X)
9mm	135X (270X)	85X (170X)	135X (270X)
12.5mm	98X (196X)	61X (122X)	98X (196X)
18mm	68X (136X)	42X (84X)	68X (136X)
25mm	49X (98X)	30X (60X)	49X (98X)
40mm	30X (60X)	19X (38X)	30X (60X)
Resolving Power (arc secs.)	0.74	0.74	0.56

\*Numbers in parenthesis indicate Magnifying Powers when specified eyepiece is used in conjunction with a 2X Barlow Lens.

† Indicates power in parenthesis is beyond the practical limiting magnification.

**Resolving Power:** An important corollary characteristic to light-gathering capability is the concept of resolving power: the ability of a telescope to separate clearly 2 points of light in close proximity. The larger the primary mirror, the finer the resolving power of the telescope. Meade 6" telescopes resolve starpoints as close as 0.74 arc seconds apart, the theoretical limit for a 6" telescope; Meade 8" reflectors resolve to 0.56 arc secs., again the theoretical limit. The purchaser of a Meade reflector may readily test his telescope on any number of catalogued double-stars, to assure that his optics are performing fully to specifications.

## Mechanical Specifications

**The Equatorial Mounting:** All telescopes designed for serious astronomical purposes utilize an equatorial mounting, since this type of mounting greatly facilitates the tracking of celestial objects. The equatorial mounting is a necessity if the telescope is to be equipped with an automatic tracking mechanism, or Motor Drive.

The equatorial mounts included with all Meade 6" and 8" reflectors are of machined aluminum, and provide a lightweight, rock-solid platform for the optical tube systems. Polar and Declination shafts are of 1" diameter solid steel, ground, turned, and polished. The Polar Axis of each mount incorporates a precision-ground ball bearing at the critical thrust point, easily permitting the addition of heavy cameras, guide telescopes, and other auxiliary systems. Even with additional weight carried by the mounting, the telescope glides through the heavens with consummate ease. The machining tolerance of all mount components is .001", eliminating the annoying backlash and internal vibrations so detrimental to serious observing.

**Motor Drive Systems:** The Meade Motor Drive System is included as standard equipment on 6" Models 628 and 645 and on 8" Models 826 and 856; on other models, it may be purchased separately at a later date, if desired. The Motor Drive System operates from any standard 115 volt A.C. outlet (220 volt/50Hz drive systems are available for foreign operation — see price list for details) and accurately tracks celestial objects by means of a synchronous timing motor, actuated through a precision reduction gear system. With the Motor Drive the observer need not touch the telescope to follow the stars, planets, Moon, or Deep-Space objects: the drive system enables the instrument to track these objects automatically, compensating fully for the effects of the earth's rotation. Also included is an automatic clutch mechanism so that, even when the motor

**Eyepieces:** It is the eyepiece focal length which determines the power at which a telescope is operating. The type of eyepiece (Kellner, Orthoscopic, Erfle, etc.) has no bearing on power, but does affect such characteristics as field of view, field corrections, and overall image resolution. All Meade reflecting telescopes include 2 high-performance multi-coated Modified Achromatic eyepieces as standard equipment; as listed on page 9, many other eyepieces are available. Sophisticated observers will appreciate the extra resolution and field corrections offered by the Orthoscopic and Erfle designs.

drive is in operation, the telescope tube may be moved manually at will in any direction. When the observer releases manual contact with the telescope, the drive automatically resumes tracking.

**Auxiliary R.A. Control:** This optional control knob in Right Ascension is available with the Motor Drive, at small additional cost, to permit manual centering of the telescopic image. Shown in the accompanying photographs, the auxiliary R.A. control is located just above the dust cover of the drive system.

**Setting Circles:** Two finely-indexed celestial circles, one each in Right Ascension and Declination, are provided on all Meade 6" and 8" telescopes. These setting circles facilitate the location of faint objects from catalogued celestial coordinates. Use of the circles is explained in the operating instructions accompanying each telescope.

**Parts and Components:** The high quality of all parts, components and accessories on Meade reflectors is consistent with the performance standards required of all Meade products. Listed below are some of the more important of these components.

**Viewfinder:** The standard 6-power viewfinder includes a coated, achromatic lens of 30mm aperture, with crosshair eyepiece. The viewfinder is a significant aid in the quick, accurate location of celestial objects, for their detailed study in the main telescope.

**Focuser:** The Meade Model 67 precision rack-and-pinion focuser permits smooth, rapid focusing of the image without backlash. Focuser tension is fully adjustable.

**Tube:** The excellent Fiberlite™ tubes used on Meade reflecting telescopes are of a strong, fibrous material with fine insulating character-

ELECTRONIC CONTROL SYSTEMS □ EQUATORIAL MOUNTS

8 inch  $f/6$  WITH AUXILIARY SYSTEMS □ ACCESSORIES AND OPTIONAL SYSTEMS

6 inch  $f/5$  WIDE-FIELD □ 8 inch  $f/6$

MECHANICAL SPECIFICATIONS (CONTINUED) □ 6 inch  $f/8$

## Mechanical Specifications (continued)

istics, so that thermal tube currents are reduced to an absolute minimum. Each tube is finished in a gleaming white ultrahard epoxy coating for lasting beauty and durability and is supplied with polished aluminum trim rings at each end.

**Mirror Cells and Secondary-Mirror Supports:** Internal mechanisms used to hold the optical system, and to maintain optical alignment, are par-

ticularly important in reflecting telescopes. The mirror cells on all Meade reflectors are of virgin cast aluminum, machined for a precise fit to the telescope tube. The 4-vane secondary-mirror supports, or "spiders," are of spring steel: once set, the secondary mirror retains indefinitely its optical collimation with respect to the primary and will not sag or lose centration.

## Applications of the Telescope

Meade 6" and 8" reflectors open up the skies for a breathtaking array of visual and photographic observations. Galaxies, nebulae, star clusters — in all their variations of form, color, and extent — as well as the Moon, planets, comets and other objects within the Solar System, may be studied in detail. Visually in Meade 6" telescopes, Saturn's ring system is a magnificent object, and the Cassini Division is routinely visible. In the 8" models minor ring divisions may be resolved and detail in Saturn's surface structure is discernable. In the realm of Deep-Space the Andromeda galaxy displays a brilliant nucleus, surrounded by glowing nebulosity; in Meade 8" reflectors this nebulosity is visible in wider extension, filling the telescopic field of view even at low powers. Beyond this brief listing, standard star catalogs enumerate literally thousands of objects within the visual grasp of Meade reflectors. The motivated amateur astronomer will find it impossible to exhaust the potential of his Meade 6" or 8" telescope.

**Astrophotography:** All Meade 6" and 8" telescopes permit a wide range of photographic applications with both color and back-and-white films. On models not equipped with Motor Drive, excellent photographs of the Moon and planets may be obtained; for longer exposures of Deep-Space objects, the Motor Drive is essential. Amateurs who wish to take astrophotographs of long duration will find Meade VariGuide Drive Correctors a very significant aid in precise guiding. Details on these drive correctors are found on page 10.

All 6" and 8" models include pre-positioned focal point settings for both first (prime) focus and eyepiece-projection photography, and adapters for virtually all 35mm cameras are available at nominal cost (page 9).

**Optional Systems:** Meade optional accessories permit the widest possible opportunity for advanced applications, and each accessory, as part of an integrated system, attaches easily and accurately to any Meade reflector described herein. Optional accessories which may be ordered either with the telescope or at a later date are listed on pages 9 and 10.

**Portability:** Meade 6" and 8" reflectors readily break down into 3 subassemblies for quick and

easy transport in the field. Setup time is about 5 minutes.

**Adjustments:** Meade reflecting telescopes are shipped as a completely finished product. For safety and compactness in shipment some components of the optical tube are packed separately; these components are readily re-attached to the optical tube without difficulty. Adjustments of the mounting and optics are made at our factory prior to shipment, and are seldom needed thereafter, except for simple fine-tuning of the optics (a 2-minute operation) during the very first use of the telescope.

**Operating Instructions:** A thorough operating manual accompanies each telescope, describing specific telescope applications. Topics discussed include: telescope operation, effective methods of visual observation, and an introduction to astrophotography (choice of film, exposure methods, use of filters).

**Delivery Time:** As one of the world's largest manufacturer/distributors of astronomical telescopes and telescope accessories, we ship promptly worldwide. All of our standard telescope models are normally available for shipment within 24 hours.

# 6" $f/8$

Through the years the 6"  $f/8$  optical system has been the most popular aperture specification among serious amateurs. Meade 6"  $f/8$  models combine large-aperture optics with a general-purpose focal ratio, ideal for both visual and photographic observations. These popular instruments provide more than ample capability for the majority of amateur applications, and are well-suited for educational observing programs.

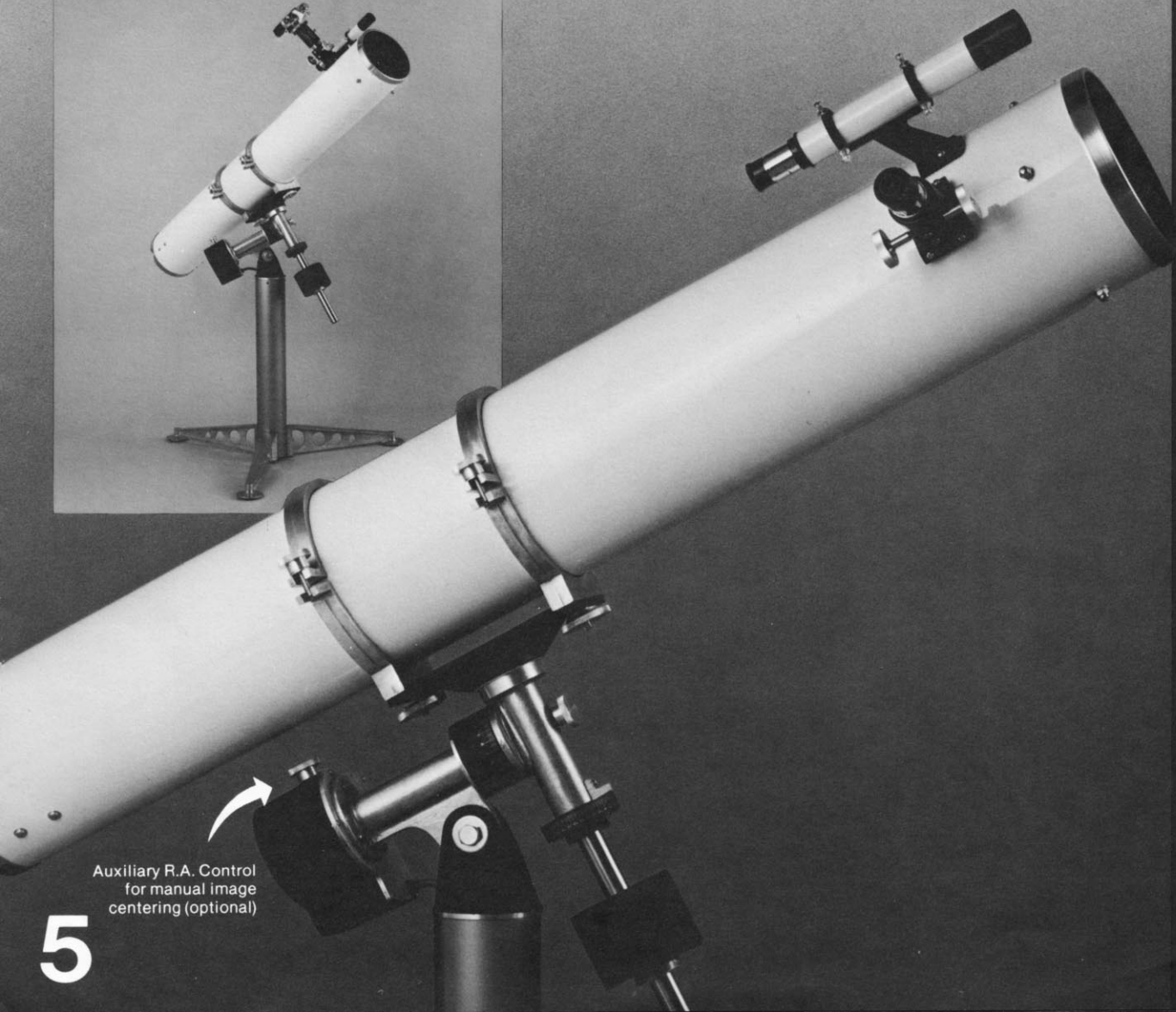
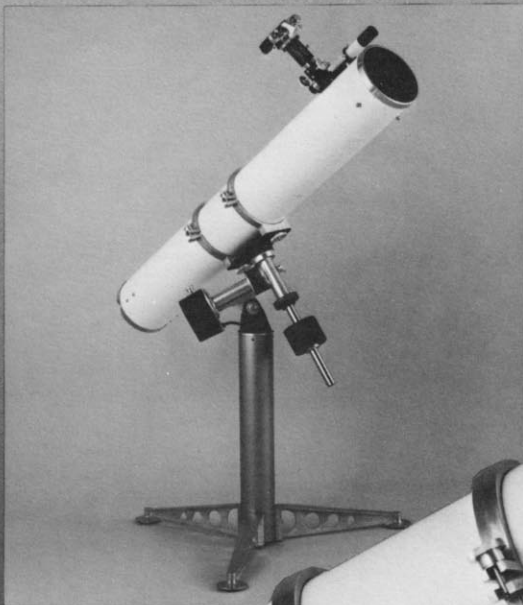
## Specifications

**Model 628: 6"  $f/8$  Reflecting Telescope with Motor Drive**—Complete with equatorial mount, pier and tripod legs; setting circles on both axes; #67 rack-and-pinion focuser with 1 1/4" eyepiece holder; 6 x 30mm achromatic viewfinder with crosshairs. Motor Drive System (115 volts A.C./60Hz): with timing motor, reduction gear system, automatic clutch, and dust cover. Optical system: 6"  $f/8$  parabolic primary mirror and matching elliptical flat secondary mirror. Eyepieces: Series 2 Modified Achromatic 9mm (135X) and 25mm (49X), multi-coated and threaded for photo-visual color filters. Fiberlite tube (7.38" O.D. x 50" long) with polished aluminum end rings. Complete operating instructions.

**Optional Accessories:** See page 9.

**Model 618: 6"  $f/8$  Reflecting Telescope**—Identical in all specifications to Model 628, but without Motor Drive System, which may be added at a later date at the user's option.

**Model 628F: 6"  $f/8$  Reflecting Telescope with Motor Drive for Foreign Operation**—Identical in all specifications to Model 628, but with 220 volt/50Hz Motor Drive System in place of 115 volt/60Hz.



Auxiliary R.A. Control  
for manual image  
centering (optional)

5

ELECTRONIC CONTROL SYSTEMS  EQUATORIAL MOUNTS  
8 inch  $f/6$  WITH AUXILIARY SYSTEMS  ACCESSORIES AND OPTIONAL SYSTEMS  
6 inch  $f/5$  WIDE-FIELD  8 inch  $f/6$   
MECHANICAL SPECIFICATIONS (CONTINUED)  6 inch  $f/8$

# 6" $f/5$ Wide-Field

Designed specifically for the Deep-Space observer and astrophotographer, Meade 6"  $f/5$  models offer magnificent, wide photo-visual fields with excellent field corrections. The fast  $f/5$  photographic speed enables Deep-Space photography in a minimum of exposure time, a characteristic of particular value with the use of color films. Visually, Meade 6"  $f/5$  reflectors yield the wide fields of view and high levels of image brightness desirable in the observation of nebulae, galaxies and other Deep-Space phenomena. When used with the 2X Telenegative-Amplifier (page 9) for an effective focal ratio of  $f/10$ , the 6"  $f/5$  models also provide breathtaking high-power views of the moon and planets — and with a superportable tube length of only 30".

## Specifications

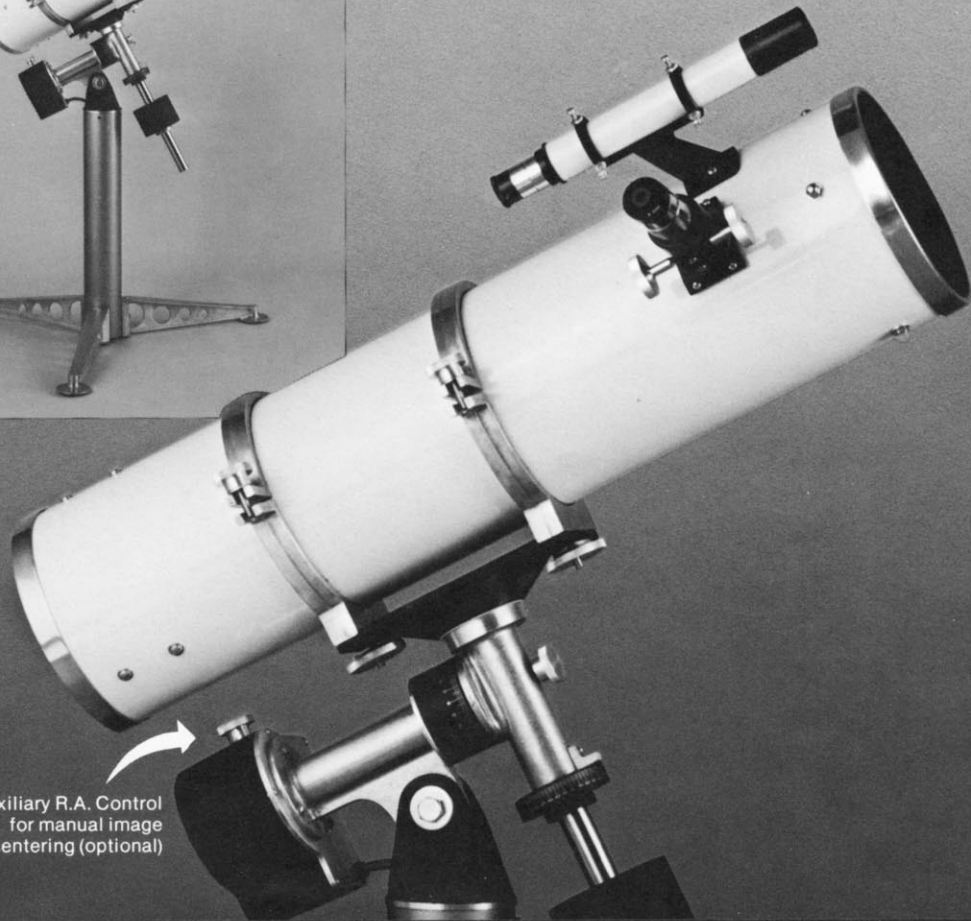
**Model 645: 6"  $f/5$  Wide-Field Reflecting Telescope with Motor Drive**—Complete with equatorial mount, pier, and tripod legs; setting circles on both axes; #67 rack-and-pinion focuser with 1 1/4" eyepiece-holder; 6 x 30mm achromatic viewfinder with crosshairs; Motor Drive System (115 volts A.C./60 Hz): with timing motor, reduction gear system, automatic clutch, and dust cover. Optical system: 6"  $f/5$  parabolic primary mirror and matching elliptical flat secondary mirror. Eyepieces: Series 2 Modified Achromatic 9mm (85X) and 25mm (30X), multi-coated and threaded for photo-visual color filters. Fiber-lite tube (7.38" O.D. x 30" long) with polished

aluminum end rings. Complete operating instructions.

**Optional Accessories:** See page 9.

**Model 635: 6"  $f/5$  Wide-Field Reflecting Telescope**—Identical in all specifications to Model 645, but without Motor Drive System, which may be added at a later date at the user's option.

**Model 645F: 6"  $f/5$  Wide-Field Reflecting Telescope with Motor Drive for Foreign Operation**—Identical in all specifications to Model 645, but with 220 volt/50Hz Motor Drive System in place of 115 volt/60Hz.



Auxiliary R.A. Control  
for manual image  
centering (optional)

# 8" f/6

The large aperture of Meade 8" telescope systems enables the serious amateur to study the Solar System and Deep-Space in tremendous detail. Quantitatively, in the 8" models, almost 78% more light enters the telescope than in the 6" telescopes, yielding greater resolving power, brighter images, and the more effective utilization of higher magnifications. The f/6 focal ratio allows the use of fine-grained color or black-and-white films, and excellent astrophotographs of such objects as the Orion Nebula, the Andromeda Galaxy, and hundreds of other deep-sky phenomena, may be obtained with only a minimum of experience. Despite its large aperture, the Meade 8" reflector is a simple, fail-safe instrument to operate, and with a tube length of only 50", the telescope is easily transported for use in the field.

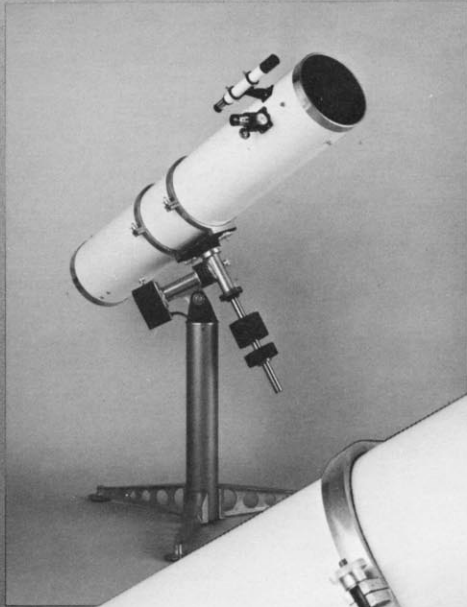
## Specifications

**Model 826: 8" f/6 Reflecting Telescope with Motor Drive**—Complete with equatorial mount, pier, and tripod legs; setting circles on both axes; #67 rack-and-pinion focuser with 1¼" eyepiece-holder; 6 x 30mm achromatic viewfinder with crosshairs. Motor Drive System (115 volts A.C./60Hz): with timing motor, reduction gear system, automatic clutch, and dust cover. Optical system: 8" f/6 parabolic primary mirror and matching elliptical flat secondary mirror. Eyepieces: Series 2 Modified Achromatic 9mm (135X) and 25mm (49X), multi-coated and threaded for photo-visual color filters. Fiberlite tube (9½" O.D. x 50" long) with polished aluminum end rings. Complete operating instructions.

**Optional Accessories:** See page 9.

**Model 816: 8" f/6 Reflecting Telescope**—Identical in all specifications to Model 826, but without Motor Drive System, which may be added at a later date at the user's option.

**Model 826F: 8" f/6 Reflecting Telescope with Motor Drive for Foreign Operation**—Identical in all specifications to Model 826, but with 220 volt/50Hz Motor Drive System in place of 115 volt/60Hz.



Auxiliary R.A. Control for manual image centering (optional)

7

ELECTRONIC CONTROL SYSTEMS □ EQUATORIAL MOUNTS  
8 inch f/6 WITH AUXILIARY SYSTEMS □ ACCESSORIES AND OPTIONAL SYSTEMS  
6 inch f/5 WIDE-FIELD □ 8 inch f/6

# 8" $f/6$ with Auxiliary Systems


Never before has such a complete photo-visual instrument — truly a portable astronomical laboratory — been available to the amateur astronomer at such reasonable cost. With the Model 856 long-exposure photographs rivaling professional standards come within reach of the amateur — the instrument is essentially limited in capability only by the motivation of the observer. Model 856 includes the VariGuide Dual-Axis Corrector System (page 10) as standard equipment, as well as the Meade 2" Photo-Guide Telescope with 67X crosshair eyepiece.

With any standard 35mm camera attached to the focuser of the main telescope, the observer tracks through the guide telescope the progress of a photographic exposure, and makes any necessary fine corrections with the universal joystick of the Dual-Axis Control Unit. During visual observations through the main 8" telescope, dual-axis control permits precise electronic adjustments of the telescope's position for easy image centration in the telescopic field.

## Specifications

**Model 856: 8"  $f/6$  Reflecting Telescope with Motor Drive, Dual-Axis Corrector System, Photo-Guide Telescope, and Accessory Shelf** — Complete with equatorial mount, pier, and tripod legs; setting circles on both axes; #67 rack-and-pinion focuser with 1 1/4" eyepiece holder; 6 x 30mm achromatic viewfinder with crosshairs. Motor Drive System (115 volts A.C./60Hz): with timing motor, reduction gear system, automatic clutch, and dust cover. VariGuide Dual-Axis Corrector System #47M (115 volts A.C./60Hz — 12 volts D.C.): with universal joystick controller for simultaneous corrections on both telescope axes. Optical system: 8"  $f/6$  parabolic primary mirror and matching elliptical flat secondary mirror. Eyepieces: Series 2 Modified Achromatic 9mm (135X) and 25mm (49X), multi-coated and threaded for photo-visual color filters. 2" Photo-Guide Telescope #210PG: with diagonal prism, 67X crosshair eyepiece, and mounting brackets. Accessory Shelf. Fiberlite tube (9 1/2" O.D. x 50" long) with polished aluminum end rings. Complete operating instructions.

**Model 856F — 8"  $f/6$  Reflecting Telescope with Motor Drive, Dual-Axis Corrector System, Photo-Guide Telescope, and Accessory Shelf, for Foreign Operation** — Identical in all specifications to Model 856, but with 220 volt/50 Hz Motor Drive System in place of 115 volt/60Hz, and with VariGuide Dual-Axis Corrector System #47MF (220 volts/50Hz) in place of #47M.



Auxiliary R.A. Control for manual image centering (optional)



# Accessories and Optional Systems

For Meade 6" and 8" Reflectors (See the Meade General Catalog for further details on many of these accessories.)

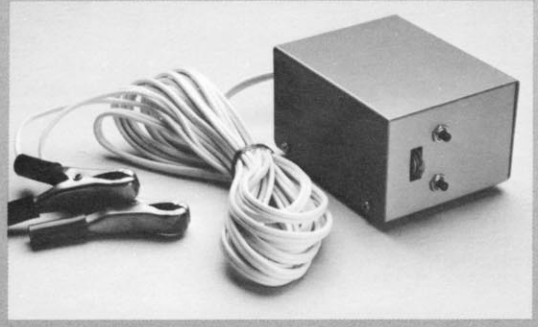
1. **MULTI-COATED EYEPIECES:** See table of eyepiece powers on page 2. All eyepieces are threaded for Meade filters.
  - A. **Series 2 Modified Achromatic Eyepieces (1 1/4" O.D.)** — Highly corrected, multi-coated. The best in moderately-priced eyepieces. Focal lengths: 6, 9, 12, 25, 40mm.
  - B. **Series 2 MA 40mm Extra-Wide-Field (1 1/4" O.D.)** — Yields widest field of view obtainable with 1 1/4" O.D. eyepiece. Multi-coated.
  - C. **Series 2 Orthoscopic Eyepieces (1 1/4" O.D.)** — Excellent 4-element high resolution optics, multi-coated, parfocal. Focal lengths: 4, 6, 9, 12.5, 18, 25mm.
  - D. **Research-Grade Orthoscopic Eyepieces (1 1/4" O.D.)** — For advanced observers, the very finest eyepieces obtainable. 7-layer multi-coated, parfocal optics. Focal lengths: 4, 7, 10.5, 16.8, 28mm.
  - E. **Research-Grade Erfle 20mm (1 1/4" O.D.)** — For superb wide-angle viewing, 7-layer multi-coated, parfocal optics.
2. **2X TELENEGATIVE-AMPLIFIER (1 1/4" O.D.)** — The finest in high-resolution, large-aperture Barlow lenses. Multi-coated. Doubles the power of individual eyepieces. Also available with 3X amplification factor.
3. **VINYL DUST COVERS** — Press-fit snugly over the ends of Meade Fiberlite tubes.
4. **PHOTO-VISUAL COLOR FILTERS** — Thread into all Meade 1 1/4" O.D. eyepieces, for increased resolution of lunar and planetary detail. Wratten Nos. and Colors: #8 (Light Yellow); #11 (Yellow-Green); #12 (Yellow); #21 (Orange); #23A (Light Red); #25A (Red); #47 (Violet); #58 (Green); #80A (Blue); Polarizer (30% transmission).
5. **ACCESSORY CASES** — Rugged polyethylene. For dust-free protection of eyepieces, Barlows, filters.
6. **2" PHOTO-GUIDE TELESCOPE #210PG** — Excellent achromatic objective lens, fully coated. Rack and pinion focuser. Supplied with diagonal prism and 67X crosshair eyepiece. (As shown on Model 856, page 8). Brackets 2-3/8" I.D. mount easily on Meade 6" and 8" telescopes.
7. **DELUXE FOCUSERS** — Heavy-duty focusers with extra travel length. (Note: While a deluxe focuser may be added at a later date to any Meade telescope, we recommend that any request for one of these units be made at the time of purchase of the telescope, so that our technicians can assure correctness of the optical path length.)
  - A. **#640 Focuser** — 3" travel length, for 1 1/4" eyepieces.
  - B. **#680 Focuser** — 3" travel length, with eyepiece-holders for both 1 1/4" and 2" eyepieces.
8. **ACCESSORY SHELF** — All-metal construction, fits over main pier, as shown on Model 856 (page 8). For eyepieces, drive correctors, etc.
9. **VIEWFINDERS** — May be ordered in place of the standard 6 x 30mm viewfinder, as noted on the Price List.
  - A. **#633: 6 x 30mm Right Angle** — with 90° diagonal prism.
  - B. **#516: 8 x 50mm Right-Angle** — with 90° diagonal prism.
  - C. **#520: 8 x 50mm Viewfinder** — Large 50mm aperture yields increased image brightness and wide 5° field.
10. **MANUAL SLOW-MOTION DECLINATION CONTROL** — Model 55: Attaches easily and directly to all the Meade 6" and 8" reflectors described in this Bulletin. Permits micrometric fine adjustments in Declination.
11. **CAMERA ADAPTERS** — Adapt your 35mm camera for through-the-telescope photography, both eyepiece-projection and prime-focus. When ordering, specify 1 1/4" O.D. for Meade reflectors and your camera brand.
12. **AUXILIARY R.A. CONTROL** — Model 57: As shown on pages 5-8, permits manual image centering in Right Ascension. Available only on motor-drive-equipped Meade reflectors (Models 628, 645, 826, etc.).



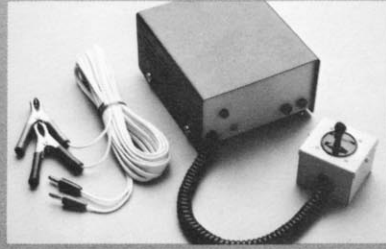
## Electronic Control Systems for Meade Reflectors

For visual observations the Motor Drive System accurately compensates for the apparent celestial motion caused by the earth's rotation. Photographically, however, very small corrections must be made during the period of an exposure, in order that the telescope remain precisely pointed. An R.A. (Right Ascension) drive corrector increases or decreases the tracking rate of the main motor drive, for corrections in celestial longitude. R.A. drive correctors have the convenient side effect of permitting field use of the telescope motor drive, away from an A.C. current source, by operation from an automobile battery. Long photographic exposures generally also require a control in celestial latitude, or Declination. The Meade dual-axis control unit, described below, permits precise electronic corrections on both telescope axes, simultaneously.

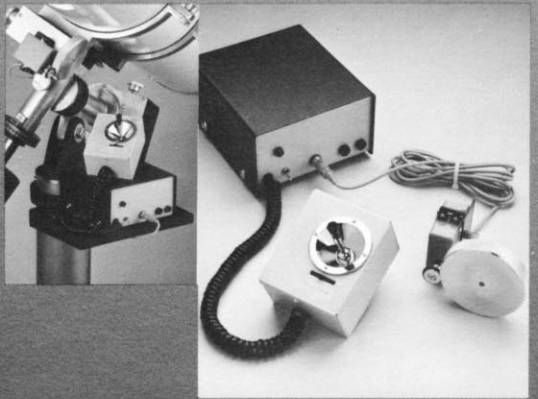
**VariPak R.A. Drive Corrector: Model 43** — An excellent inexpensive alternative to our more sophisticated drive correctors, the VariPak operates from 12 volts D.C. and permits accurate guiding corrections in R.A. Two push-buttons located on the main power box actuate "FAST" or "SLOW" R.A. driving rate corrections. A variable control is included for setting to solar, lunar, planetary, or sidereal tracking rates. The entire VariPak unit measures only 2" x 3" x 4" for easy portability. Complete operating instructions included.



**VariGuide R.A. Drive Corrector: Model 41** — Operates from either 115 volts/60Hz or 12 volts D.C., with precise R.A. control actuated through a remote control box. Single-axis joystick control permits variable correction rates. A variable control is included for setting to solar, lunar, planetary, or sidereal tracking rates. Complete operating instructions included. (For foreign use Model 41F operates from 220 volts/50Hz.)



**VariGuide Dual-Axis Corrector System: Model 47M** — Integrates an Electric Declination Control with the Model 41 R.A. Drive Corrector, for dual-axis, one-hand control of all the Meade 6" and 8" telescopes described in this Bulletin. Aircraft-type universal joystick remote controller allows simultaneous control of both telescope axes, with infinitely-many possible combinations of R.A./Declination corrections. The Dual-Axis Corrector System is designed for the advanced astrophotographer and provides full capability for the highest levels of amateur astrophotography. Operates from 115 volts/60Hz or 12 volts D.C. (For foreign use Model 47MF operates from 220 volts/50Hz.)



## Equatorial Mounts

These equatorial mounts are the same precision units supplied as standard equipment with complete Meade reflecting telescopes. Available separately, Meade equatorial mounts provide a stable, lightweight platform for homemade reflectors to 8" aperture, for refractors to 6" aperture, or for special-purpose optical systems such as astrographic cameras. Polar and Declination shafts are 1" diameter solid steel, ground, turned, and polished. The machining tolerance of all mount components is .001".

All Meade equatorial mounts include the following features: ball-bearing equatorial head, saddle plate, setting circles on both axes, 2 ft. pier, tripod legs. 6" mounts include one 10 lb. counterweight; 8" mounts include one 10 lb. and one 5 lb. counterweight. Mounts are available with or without the Motor Drive System and with or without cradle rings, as noted below. The cradle rings for 6" mounts accept tubes to 7-3/8" outside diameter; cradle rings for 8" mounts accept tubes to 9-5/8" outside diameter.

The high (4 ft.) pier for refractors or Cassegrain reflectors may be specified at nominal additional cost. See Price List for details.

The entire range of Meade auxiliary systems and accessories may be ordered separately for attachment to any 6" or 8" mount described here. See pages 9 and 10 for additional information.

## Specifications

**Model 650:** 6" Equatorial Mount *without* Motor Drive System and *without* cradle rings.

**Model 651:** 6" Equatorial Mount *without* Motor Drive System but *with* cradle rings for tubes to 7-3/8" diameter.

**Model 652:** 6" Equatorial Mount *with* Motor Drive System (115 volts/60Hz) but *without* cradle rings.

**Model 653:** 6" Equatorial Mount *with* Motor Drive System (115 volts/60Hz) and *with* cradle rings for tubes to 7-3/8" diameter.

**Model 850:** 8" Equatorial Mount *without* Motor Drive System and *without* cradle rings.

**Model 851:** 8" Equatorial Mount *without* Motor Drive System but *with* cradle rings for tubes to 9-5/8" diameter.

**Model 852:** 8" Equatorial Mount *with* Motor Drive System (115 volts/60Hz) but *without* cradle rings.

**Model 853:** 8" Equatorial Mount *with* Motor Drive System (115 volts/60Hz) and *with* cradle rings for tubes to 9-5/8" diameter.

**Models 652F, 653F, 852F, 853F** — Identical in all specifications to the respective models above, but with 220 volt/50Hz Motor Drive System in place of 115 volt/60Hz, for foreign operation.

## Optional Mount Systems

**Motor Drive System #787 (115v/60Hz)** — Attaches directly to Mount Models 650, 651, 850, 851.

**Motor Drive System #787R (115v/60Hz)** — Per Model #787, but in addition with Auxiliary R.A. Override Control.

**Motor Drive System #787F (220v/50Hz)** — For foreign operation. Attaches to Mount Models 650, 651, 850, 851.

**Motor Drive System #787FR (220v/50Hz)** — Per Model #787F, but in addition with Auxiliary R.A. Override Control.

**Auxiliary Counterweights** — 5 lb. and 10 lb.

**Other Systems** — See pages 9 and 10.



**Model 853**  
8" equatorial  
mount with  
motor drive and  
cradle rings.



**Model 652**  
with optional  
high pier —  
6" equatorial  
mount with  
motor drive and  
4 ft. pier.

## How to Order Meade Telescope Systems

**To place an order:** Use our standard order form, or write a letter stating your requirements.

**Payment:** May be made by personal or bank check, money order, or bank card (Master Charge or BankAmericard/VISA).

**C.O.D. orders:** Send 20% deposit with order. C.O.D. charges (about \$1.00) will be added to the balance due on delivery.

**Telephone orders:** Are also accepted, with payment either C.O.D. or by bank card. Our telephone number is (714) 646-9281. We do not accept collect calls.

**Foreign orders:** (including Canada) Please see special instructions on our order form.

**Guarantee:** All products listed in this catalog are unconditionally warranted to reflect fully every claim for quality and performance specified herein. You may order with complete confidence.

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