



MEADE INSTRUMENTS

Innovative products for curious minds

since 1972



LX800™
THE PICTURE PERFECT PLATFORM
FOR EFFORTLESS
ASTROPHOTOGRAPHY.

With the combination of the finest optics, robust mount and revolutionary new StarLock™, the LX800 from Meade Instruments is the most complete astro-imaging solution available.

LX800™

OPTICAL TUBES AVAILABLE WITH THE LX800

Series 6000 ED Triplet APO Refractor

14 inch

LX800 f/8 Advanced Coma-Free

12 inch

10 inch

130mm



Meade Instruments introduces the latest in a long line of advanced astronomical products: the LX800™. Using revolutionary new technology, every aspect of this system has been designed to deliver the new standard in astrophotographic and visual performance.

FASTER, SHARPER OPTICAL SYSTEM

Building on Meade's award-winning Advanced Coma-Free™ (ACF™) optics, the LX800 employs a fast f/8 optical system with high-contrast baffling that assures crisp, pinpoint imaging to the very edge of the field. The all-new OTAs feature an internal Crayford-style, zero image-shift focusing system with a two-speed, 7:1 control that rigidly holds the primary mirror, eliminating the need for a mirror lock. In addition, with the LX800's optional large-format, three-element f/5 focal reducer/field flattener, you gain even wider fields, faster exposures and a flat field even on larger sensors. Also available is Meade's new Series 6000 3 element air-spaced f/7 apochromatic refractor. This finely machined and finish OTA features superior optical performance, a 3" Crayford-style 10:1 focuser and an optional 3" field flattener.

PRECISION MACHINED, SOLID GERMAN EQUATORIAL MOUNT

Constructed of machined stainless steel and aircraft grade 6061-T6 aluminum, the LX800 mount presents a rock-solid platform with precision roller bearings on both axes and a 1.75 inch stainless steel R.A. shaft. Its .68 inch diameter brass worms and 5.8 inch diameter, 225-tooth aluminum gears deliver smooth,

precise movement with up to a 90 pound instrument load. Add to this internal cabling and the AutoStar II fully-computerized GoTo system with GPS, with a database of over 144,000 objects. All this sets atop a new ultra-stable tripod.

STARLOCK — FULL-TIME AUTOMATIC GUIDING

StarLock — the heart of the LX800 — is the revolutionary new technology that makes target acquisition on your imaging sensor and accurate guiding during exposures completely automatic. With Meade's exclusive LightSwitch technology at its core, StarLock uses a 80mm f/5 optic and a super wide-angle lens in a two camera system that automatically finds your target in high-precision, immediately captures a field star as dim as 11th magnitude and then guides to an incredible accuracy of one arcsecond. StarLock achieves this amazing accuracy because, unlike add-on guiders, StarLock is integrated into the telescope control system and communicates directly with the motor controllers in real time with a maximum precision of 0.01 arcseconds. There's no need for a separate guider or computer and the StarLock requires no calibration, no user focusing or guide star selection. StarLock even automatically programs periodic error correction and then corrects for any other errors down to virtually zero. StarLock also provides computer-assisted polar alignment using the drift method for extreme precision. No expensive shaft encoders or add-on guiding systems can provide this level of performance.

LX800 SERIES FEATURES

Meade Instruments all new LX800 Series of imaging/visual telescopes uses exciting advanced technologies in optics, electronics and mechanics to bring you a superior system for imaging and visual observations. Here are some of the exciting features of the LX800 line.

① NEW Fast f/8 Advanced Coma-Free (ACF) optical systems on the 10", 12" and 14" OTAs.

These optics produce wider, flatter fields with no coma for pinpoint stars out to the edge of larger imaging sensors or extreme wide angle eyepieces. Optional custom-designed LX800 f/5 large-format focal reducer/field flattener also available.

OR:

NEW 130mm 3-element, air-spaced apochromatic f/7 refractor with 3" Crayford-style 10:1 focuser. Beautifully machined and finished with case. Optional 3" field flattener available.

② NEW StarLock full-time automatic integrated guider assists with ultra precise drift polar alignment, finds and centers targets and then automatically locks onto a field star as faint as 11th magnitude for one arcsecond guiding. No separate computer, no guide star selection, no user focus. Just setup your camera and image.

③ NEW Internal Crayford-style primary mirror focusing system with a dual speed 7:1 focus control, that eliminates image shift and mirror flop. Precise focus is a snap.

④ German Equatorial Mount made from machined aluminum and stainless steel with large bearing surfaces and roller bearings in both axes for an extremely solid and stable platform.

⑤ NEW Precision machined 5.8" main gears with 225 teeth in both R.A. and DEC. with .68" worms for very accurate movements and tracking.

⑥ 1.75" diameter threaded stainless steel counterweight shaft with 18 lb. threaded stainless steel counterweights for easy and safe adjustments to telescope balance.

⑦ NEW Sophisticated built-in computer for the most accurate control of the StarLock and other telescope systems.

⑧ AutoStar II hand control with over 144,000 object database to take you to almost any object imaginable at the push of the GoTo button. AutoStar II allows the user to setup and operate the LX800 in just the way you want.

⑨ Precise altitude and azimuth controls for mount polar alignment.

⑩ NEW Ultra-stable adjustable height tripod. Three inch diameter legs fold up for easy transport.

⑪ Internal cabling to prevent snags and tangles

⑫ Accessories include 8x50 viewfinder, Series 5000 2" enhanced 99% reflective diagonal and a 25mm HD-60 premium eyepiece.



	10 inch Advanced Coma-Free	12 inch Advanced Coma-Free	14 inch Advanced Coma-Free	130mm APO
Product number	1008-80-01	1208-80-01	1408-80-01	0130-80-01
UPC	7 09942 60010 0	7 09942 60015 5	7 09942 60020 9	7 09942 60025 4
Optical design	Advanced Coma-Free			Achromatic Refractor
Clear aperture	10 inches	12 inches	14 inches	130mm
Focal length focal ratio	2032mm, f/8	2438mm, f/8	2845mm, f/8	910mm, f/7
Optical coatings	UHTC			Fully Multi-Coated
Resolving power (Dawes limit)	.46 arcseconds	.38 arcseconds	.325 arcseconds	.89 arcseconds
Secondary obstruction (%)	20.95	16.86	TBD	NA
Viewfinder	8x50 refractor with cross hairs			
Eyepiece	HD-60 25mm long eye relief premium eyepiece			
Diagonal	Series 5000 2 inch with enhanced 99% reflectivity			
Focal reducer/field flattener (optional)	2 inch diameter, 3 element, fully multi-coated, f/5 (designed specifically for LX800 f/8 ACF optical systems)			3 inch diameter, 2 element, fully multi-coated field flattener
Optimal back focus distance at f/8	TBD	TBD	TBD	NA
Optimal back focus distance at f/5	3.5 inches			NA
Focus system	Internal Crayford-style, zero image-shift primary mirror focus with dual speed 7:1 control			Crayford-style 3 inch zero image shift focuser with dual speed 10:1 control
Primary mirror lock	Not required due to internal Crayford-style primary mirror focusing system			NA
OTA mounting	Losmandy®-style mounting plate			Vixen®-style mounting plate
Zero image-shift microfocuser	Optional			NA
Auxiliary equipment mounting system	Series 5000 Auxiliary Equipment Mounting System (optional)			NA
Materials				
Primary mirror	Low-expansion borosilicate glass			NA
Secondary mirror	Individually figured with primary mirror for maximum correction. Low-expansion borosilicate glass			NA
Correcting plate/lens	Aspheric high-spectral transmission Borofloat glass from Schott AG Germany			NA
Optical tube	Aluminum			
Weights and dimensions				
Total net OTA weight	33 lb	TBD	TBD	25 lb
OTA shipping weight (approx.)	44 lb	TBD	TBD	40 lb
U.S. retail with mount and OTA	\$7,999	\$8,999	\$9,999	\$8,999

German Equatorial Mount	
Product number	37-0800-00
UPC	7 09942 60000 1
Mount body	Machined from solid 6061-T6 Aircraft grade Aluminium and stainless steel
Finish	Anodized Aluminium and stainless steel
Main gear - R.A. & Dec.	5.8 inch under cut 225 tooth aluminum
Worm gear - R.A. & Dec.	.68 inch diameter precision machined brass
Counterweight shaft	1.75 inch diameter, 12 inch long threaded stainless steel
Counterweights	18 lb. threaded stainless steel. Quantity: 10 inch - 2, 12 inch - 2, 14 inch - 4, 130mm APO - 1, Mount only - 1
Drive motors	DC servo motors with encoders, both axes
Mechanical alignment	Fine adjustment altitude and azimuth controls
Tracking distance past meridian	20 degrees
OTA mounting system	Losmandy®-style dovetail
Instrument payload capacity	90.0 lbs (40.80 kg)
Latitude range	TBD
Tripod	Giant folding adjustable height tripod with 3 inch diameter stainless steel legs. Height from 29 inches to 45 inches.
Mount body weight	55 lb.
Counterweight shaft and cap weight	17.8 lb
Counterweights	18 lb.
Tripod weight	36 lb
Control panel	12v DC in, 12v DC out, Power, Focuser, Reticle, Handbox port, 1 computer connection port (RS232), 1 StarLock port, 1 Aux guide port
Computer control	AutoStar II GoTo system
Database	Over 144,000 Objects, Catalogs included: Index catalog (5,386); NGC catalog (7,840); Partial Caldwell catalog (109); Messier catalog (110); Earth orbiting satellites (26); Planets (9); Uppsala galaxy catalog (12,940); Morphological catalog of galaxies (12,939); General catalog of variable stars (29,364); SAO and Hipparcos star catalogs (42,277); Draper star catalog (21,160); Yale bright star catalog (8,977); Large Bright Quasars Survey (1,055); Named objects (4,313); Herschel catalog (400); Abell catalog of galaxy clusters (2,712); Arp catalog of irregular galaxies (635); Lunar features (1,754); Asteroids and comets (120); Constellations (88); Solar/Lunar eclipses, meteor showers (492).
Computer hand control	Double line, 16 character Liquid Crystal Display; 20 backlit LED buttons.
GPS	Yes
Home sensors	Both RA and Dec axes
Internal clock	Yes
Internal cabling	Yes
Slew speed	3 degrees/second
Tracking rates	.01x to 1x, 2x, 8x, 16x, 1/4°, 1/2°, 1°, 3°.
Tracking modes	EQ North and EQ South
Alignment procedures	2-Star Align, 1 Star Polar Align, StarLock assisted drift align
StarLock	
Wide-field camera	25mm x 26mm f/1.04 optic with 1/2 inch format CMOS sensor gives field of 14.72 x 11.78 degrees.
Narrow-field camera	80mm x 400mm f/5 optic with 1/2 inch format CMOS sensor gives field of 57.2 x 45.8 arcminutes (2.68 arcseconds/pixel)
High-precision pointing	+/- 1 arcminute
High-precision guiding	+/- 1 arcsecond RMS (with good seeing, 1-4 second correction update rate depending on star magnitude. Faintest guide star 11th mag.
High-precision alignment	Semi-automatic drift align procedure for ultra-precise polar alignment
Weight	6 lbs (2.72 kg)
Power supply	12v DC 5A using supplied Meade Universal Power Supply
U.S. retail	\$5,999 (mount only)

Meade Instruments

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Manufactured in Mexico. 20-11036



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