Specifications and Features: Meade 8" LX90; 7", 8", and 10" LX200GPS Telescopes

TELESCOPE:	8" LX90	7" LX200GPS	8" and 10" LX200GPS
Optical Design	Schmidt-Cassegrain	Maksutov-Cassegrain	Schmidt-Cassegrain
Clear Aperture	203mm (8")	178mm (7")	203mm (8"); 254mm (10")
Primary Mirror Diameter	209.6mm (8.25")	209.6mm (8.25")	209.6mm (8.25"); 263.5mm (10.38")
Focal Length; Focal Ratio	2000mm f/10	2670mm f/15	2000mm f/10 (8"); 2500mm f/10 (10")
Near Focus *(approx.)*	25 ft.	50 ft.	25 ft. (8"); 50 ft. (10")
Resolving Power (arc secs.)	0.56	0.64	0.56 (8"); 0.45 (10")
Optical Coatings	MgF_2 on correcting plate (2-sides); standard aluminum on primary & secondary mirrors	MgF_2 on correcting lens (2-sides); standard aluminum on primary & secondary mirrors	MgF_2 on correcting plate (2-sides); standard aluminum on primary & secondary mirrors
Ultra-High Transmission Coatings *(p. 26)*	optional at time of purchase	optional at time of purchase	optional at time of purchase
Limiting Visual Magnitude *(approx.)*	14.0	13.5	14.0 (8"); 14.5 (10")
Limiting Photographic Magnitude *(approx.)*	16.5	16.0	16.5 (8"); 17.0 (10")
Image Scale (degs./inch)	0.72	0.54	0.72 (8" f/10); 0.57 (10" f/10)
Maximum Practical Visual Power	600X	550X	600X (8"); 650X (10")
35mm Angular Film Coverage	0.68° x 0.97°	0.52° x 0.74°	0.68° x 0.97° (8"); 0.54° x 0.78° (10")
Optical Tube Dimensions (dia. x length)	9.1" x 16.75"	9.1" x 20.5"	9.1" x 16.75" (8"); 11.75" x 22" (10")
Secondary Mirror Obstruction (dia.; %)	3.0"–14.1%	1.9"–7.4%	3.0"–14.1% (8"); 3.7"–13.7% (10")
Telescope Mounting	fork-type; double tine	heavy-duty fork type; double tine	heavy-duty fork-type; double tine
Setting Circle Diameters	Dec: 5"; RA: 8"	Dec: 5"; RA: 8.75"	Dec: 5"; RA: 8.75"
RA Motor Drive System	9-speed, microprocessor-controlled, 12v DC servo motor; 4.9" LX worm gear	185-speed, microprocessor-controlled, 12v DC servo motor; 5.75" LX worm gear with Smart Drive software	185-speed, microprocessor-controlled, 12v DC servo motor; 5.75" LX worm gear with Smart Drive software
Hemispheres of Operation	North and South, switchable	North and South, automatically selected by GPS input or by user override	North and South, automatically selected by GPS input or by user override
Declination Control System	9-speed, microprocessor-controlled, 12v DC servo motor; 4.9" LX worm gear	185-speed, microprocessor-controlled, 12v DC servo motor; 5.75" LX worm gear with Smart Drive software	185-speed, microprocessor-controlled, 12v DC servo motor; 5.75" LX worm gear with Smart Drive software
Primary Mirror Lock	no	included (progressive tension)	included (progressive tension)
Zero-Image Shift Electric Focuser	optional	included (4-speed)	included (4-speed)
GPS Alignment	no	included (16-channel GPS receiver, electronic sensors for true-level and North, with magnetic declination compensation)	included (16-channel GPS receiver, electronic sensors for true-level and North, with magnetic declination compensation)
GO TO Pointing Precision	5-arc mins.	2-arc mins.	2-arc mins.
Pointing Precision, High-Precision Mode	3-arc mins.	1-arc min.	1-arc min.
Slow-Motion Controls	electric, RA and Dec	manual and electric, RA and Dec.	manual and electric, RA and Dec.
Bearings	Dec: 1 x 1.85" dia. ball bearing in each fork; RA: 1 x 2.25" dia. and 1 x 2" dia. ball bearings	Dec: 3 x 1.83" dia. ball bearings; RA: 1 x 4" dia. and 1 x 2.25" dia. ball bearings	Dec: 3 x 1.83" dia. ball bearings; RA: 1 x 4" dia. and 1 x 2.25" dia. ball bearings
Autostar Hand Controller	PIC 16C57 microcontroller; 2 line x 16 alphanumeric character display; 20-button keypad, red LED backlit	Atmel 89C451 & PIC16C57 microcontrollers; 2 line x 16 alphanumeric character display; 20-button keypad, red LED backlit	Atmel 89C451 & PIC16C57 microcontrollers; 2 line x 16 alphanumeric character display; 20-button keypad, red LED backlit
Main Telescope Controller	Motorola 68HC11 microprocessor; 1-Megabyte flash memory (field reprogrammable); 32K RAM	distributed intelligence architecture using 8 networked microcontrollers (Motorola 68HC11, Atmel 89C451, 3 x PIC16C62, 2 x PIC16C54, Sony digital signal processor); 3.5-Megabyte flash memory (field reprogrammable), 32K RAM	distributed intelligence architecture using 8 networked microcontrollers (Motorola 68HC11, Atmel 89C451, 3 x PIC16C62, 2 x PIC16C54, Sony digital signal processor); 3.5-Megabyte flash memory (field reprogrammable), 32K RAM
Batteries *(user-supplied)* [Note 1]	8 x C-cells	8 x C-cells	8 x C-cells
Battery Life *(approx.)*	60 hrs.	20 hrs.	20 hrs.
Onboard Celestial Object Database	30,223 objects	147,541 objects	147,541 objects
Slew Speeds	RA and Dec: 1x, 2x, 8x, 16x, 64x, 128x sidereal and 1.5°/sec., 3°/sec., 6.5°/sec.	RA and Dec: 0.01x to 1.0x sidereal, variable in 0.01x increments; 2x, 8x, 16x, 64x, 128x sidereal; 1°/sec. to 8°/sec., variable in 0.1° increments	RA and Dec: 0.01x to 1.0x sidereal, variable in 0.01x increments; 2x, 8x, 16x, 64x, 128x sidereal; 1°/sec. to 8°/sec., variable in 0.1° increments
Tracking Rates	sidereal, lunar, or custom-selected from 2000 incremental rates	sidereal, lunar, or custom-selected from 2000 incremental rates	sidereal, lunar, or custom-selected from 2000 incremental rates
Materials: Tube Body	aluminum	aluminum	aluminum
Mount Castings	aluminum	aluminum	aluminum
Primary, Secondary Mirrors [Note 2]	Pyrex® glass	Pyrex® glass	Pyrex® glass
Correcting Plate/Lens	clear float glass	BK7 optical glass	clear float glass
Telescope Dimensions, swung down	9.25" x 17" x 24.75"	9.25" x 17" x 34"	9.25" x 17" x 24.75" (8"); 12" x 20" x 31" (10")
Shipping Carton Dimensions	21" x 30" x 14"	38" x 22" x 14"	31" x 22" x 14" (8"); 38" x 26" x 18" (10")
Total Net Telescope Weight	53 lbs.	84 lbs.	73 lbs (8"); 90 lbs.(10")
Heaviest Sub-Section for Field Assembly	33 lbs.	56 lbs.	45 lbs. (8"); 62 lbs. (10")
Total Shipping Weight *(approx.)*	73 lbs.	109 lbs.	94 lbs. (8"); 122 lbs. (10")
#1220 Field De-rotater	—	*optional*	*optional*
Equatorial Wedge Latitude Range	23° to 64°	23° to 64°	23° to 64° (8"); 24° to 65° Superwedge (10")
Field Tripod Height [Note 3]	30" to 44" variable	30" to 44" variable	30" to 44" variable

[1] LX90 and LX200GPS models may alternatively be powered from an automobile cigarette lighter plug, using the #607 Power Cord. From a 115v AC home outlet the LX90 may be powered by using the #541 AC adapter, or the LX200GPS by using the #547 AC adapter. The #607, #541, and #547 include 25 ft. cords. [2] All Pyrex glass used in Meade Schmidt-Cassegrains and Maksutov-Cassegrains is of Grade-A quality, fine-annealed. [3] The standard equatorial wedge adds approx. 9", and the Superwedge approx. 12", to the stated tripod heights. Wedges are supplied optionally with the 8" LX90 and with 7", 8", and 10" LX200GPS models.