



Equipment review

Meade's LightSwitch technology makes observing a snap

This new go-to scope takes the hassle out of setup and offers high-quality optics to boot. **by Phil Harrington**

Meade's 6-inch $f/10$ ETX-LS is one of the most exciting telescopes to come along in recent years thanks to "LightSwitch" technology, which offers hands-off initialization. The telescope is the first to combine GPS technology with a built-in, wide-field digital camera to let the scope synchronize to the sky automatically. It even talks to you as it goes.

Recently, I had a chance to put an ETX-LS through its paces. Our test telescope came with Advanced Coma-Free (ACF) optics, but Meade also offers a less expensive unit with Schmidt-Cassegrain optics. The ACF version uses a matching mirror and a corrector plate to deliver sharper images across the full field of view. Both scopes, however, come stan-

dard with Ultra-High Transmission Coatings (UHTC) for improved image brightness and contrast.

Setup and initialization

The telescope arrived in two boxes. The smaller container housed the adjustable tripod. The larger one included the telescope/mount combination, a 26mm Super Plössl eyepiece, a red-dot finder, and the AutoStar III hand-controller and cable. The box also included the instruction manual, a printed Quick Start Guide, and a CD-ROM containing Meade's *AutoStar Suite*.

To set up the tripod, I slid the plastic spreader tray onto the rod that



At the tube's bottom, you'll find Meade's Electronically Controlled Locate Identify Position System (ECLIPS) wide-field CCD imager. It's crucial in helping the telescope align to the sky.

Meade's 6-inch ETX-LS features the company's LightSwitch technology, which aligns the telescope's drive with the flip of one switch. *Equipment*

photos: Astronomy: James Forbes

Specifications

ETX-LS

Optical design: Advanced Coma-Free (ACF) or Schmidt-Cassegrain (SC)

Aperture: 6 inches

Focal length: 1,524 millimeters

Focal ratio: $f/10$

Tripod: Adjustable height with steel legs

Controller: AutoStar III

Power: 8 C-cell batteries or AC adapter

Price: \$1,399 (ETX-LS ACF); \$1,299 (ETX-LS SC)



extends under the tripod's mounting plate. I threaded on the large thumb knob, but had to be careful not to over-tighten it because too much force could crack the tray.

The top of the tripod's mounting plate has a central protrusion and three thumb knobs for attaching the telescope base. I lifted the telescope using the handle built into the mounting arm and placed it on the tripod. The plate's self-centering design lined up the spring-loaded mounting bolts.

First test: self-alignment

After setup, I flipped on the LightSwitch and let the telescope do its thing. Unlike most other go-to drives, the ETX-LS does not have any axis locks. Instead, friction holds it firmly in place. That eliminates the need to tighten levers, but it also prevents you from using the scope manually if the batteries die.

Although you can power the ETX-LS with eight C-cell batteries, I used a 12-volt rechargeable battery instead. If you use one with this scope, you will need a DC power cord (not included). Meade's #607 cord is suitable, as are various cords from other suppliers.

As the built-in speaker announces, the initial alignment begins with the telescope finding "North and Level" and establishing a GPS connection. To speed things along, you can enter your observing site's location and the time manually.

Once set, the ETX-LS slews to the first alignment star. Meade's Electronically Controlled Locate Identify Position System (ECLIPS) wide-field CCD imager, positioned on the tube bottom, takes an image of the sky and analyzes it for the star's position. The scope then moves to another self-selected alignment star and repeats the process.

If the ETX-LS's ECLIPS detects both stars, the telescope announces that it is ready to use. If not, perhaps because a house or tree obscured one star, it repeats the procedure with other stars until alignment is successful. From my experience, the alignment process takes an average of 9.5 minutes.

Contributing Editor **Phil Harrington** is the author of the equipment guide *Star Ware* (Wiley, 2007).

Second test: observing

My first target was Jupiter. As the telescope dutifully moved in on its target, the onboard narration, voiced by Sandy Wood from McDonald Observatory's long-running radio program *StarDate*, told me about the planet. Peering through the 26mm eyepiece, the planet sat just slightly west of center. Switching to a 10mm eyepiece, the ETX-LS displayed a detailed array of Jupiter's belts.

I then selected open cluster M52 in Cassiopeia, which was rising in the northeast. Although the telescope had to move a quarter of the way around the sky, the cluster was within the 26mm eyepiece's field when it stopped. The cluster's stars appeared sharp across the full field, even through a 5mm eyepiece.

My next target was globular cluster M3 in Canes Venatici, which was low in the northwest. After another 90° slew, the telescope revealed a compact, resolved ball of stardust, while Wood simultaneously explained what globular clusters are. You can mute the narration by pressing the controller's "Media" button.

As I continued to observe, each target I selected lay somewhere in the 26mm eyepiece's field of view. Even when I tried to throw it a curveball, such as selecting Vega (Alpha [α] Lyrae) when the star was at the zenith (the overhead point), the AutoStar performed well.

In addition to helping the telescope initialize, the ECLIPS camera can take wide-field images you can view on an attached monitor or save on a mini-SD card. The digital camera cannot take photos through the scope, however. You'll need a separate camera for that.

The ETX-LS is an exciting telescope. The optics are sharp, the aiming is accurate, and the narrations prove informative. Meade has produced a multimedia instrument that should really open up the universe, especially for newcomers to our hobby. ☺

The ETX-LS comes in two optical configurations. A user can order either Meade's Advanced Coma-Free or Schmidt-Cassegrain design.



The accessory panel of the ETX-LS offers audio and video outputs, a focuser control, and two USB ports.

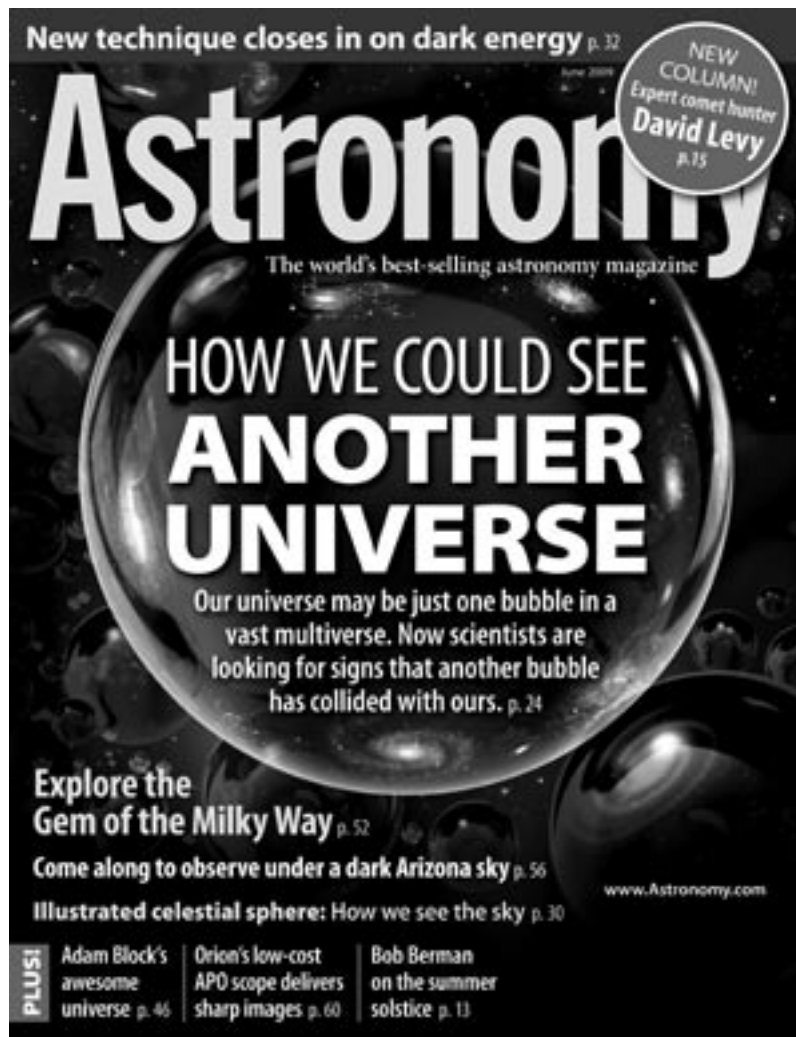
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