

Hot Product for 2013



Each year since 1998, S&T's editors have surveyed the astronomical marketplace and selected what they consider the year's most interesting new products. From telescopes and eyepieces to books and globes, our 2013 roundup is one of the most varied in recent memory. And with costs ranging from a \$2 weather app to a \$13,000+ telescope mount, it spans the price gamut as well. As always, we hope you enjoy reading about the new products that intrigued us the most for 2013.

▲ WEATHER APP

Egg Moon Studio From the iTunes store
U.S. price: \$1.99

There's no shortage of weather-related apps for the iPhone, but there's only one specifically made for amateur astronomers. *Scope Nights* gives a 5-day "snapshot" summary of nighttime conditions in the United States and United Kingdom. Our resident weather maven, who uses more than a half dozen apps and websites to prepare similar predictions, gives *Scope Nights* two thumbs up for its consistent accuracy.

▼ REDBEAM USB LED KEYBOARD LIGHT

Orion Telescopes & Binoculars oriontelescopes.com
U.S. price: \$29.99

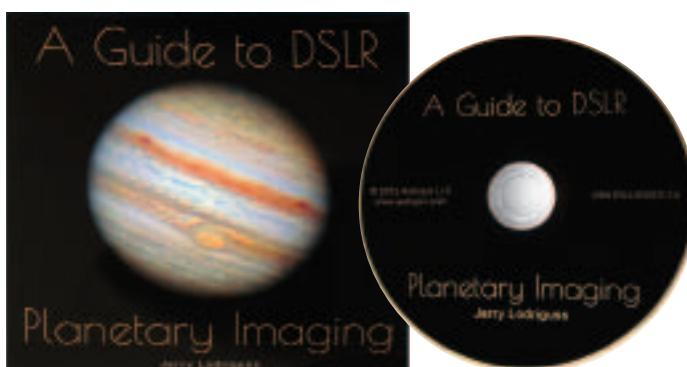
Here's a nifty alternative for those of us who are tired of clenching a flashlight between our teeth while using a computer in the dark. Powered by a computer's USB port, Orion's Keyboard Light offers multiple brightnesses and a flexible neck for easy positioning of the red LED illumination to where it's needed.

▼ A GUIDE TO DSLR PLANETARY IMAGING

Astropix astropix.com

U.S. price: \$39.95

This CD-ROM book by veteran astrophotographer Jerry Lodriguss tells all you need to know about capturing and processing stunning images of the Sun, Moon, and planets using the live video feed from modern DSLR cameras. You can check out Jerry's overview of this topic in our May 2012 issue, page 72.



▼ TEMP-EST

Deep Space Products
deepspaceproducts.com

U.S. price: from \$135

The TEMP-est cooling system for Celestron EdgeHD telescopes is different from other cooling systems. Small, custom-fitted fan assemblies replace the telescope's standard cooling vents. They are designed to run while the scope is in use, helping maintain the scope's optics at ambient temperature during the night. Another fan, which temporarily mounts in place of the scope's removable secondary mirror, assists with initial cool down of the optical tube assembly.



▲ PENTAX LENS ADAPTER

Quantum Scientific Imaging qsimaging.com

U.S. price: \$289

Cooled, astronomical CCD cameras fitted with conventional camera lenses can capture dramatic wide-field views of the heavens. QSI has adapters for Canon and Nikon lenses that fit some of its cameras, but they don't work with the company's WSG models, which require added back focus for the off-axis guider port. That changes with the new lens adapter made for Pentax 67 (medium-format) lenses. Fitted to any WSG camera body, the adapter allows all Pentax 67 lenses to reach focus. An added bonus is that Pentax 67 lenses are renowned for their astronomical performance, especially in light of their reasonable price tags.



▲ LX600 TELESCOPES

Meade meade.com

U.S. price: from \$4,499

Fork-mounted Cassegrain telescopes have been amateur astronomy's undisputed workhorse instruments for a quarter century. Meade's new LX600 series represents a major update to the design, bringing the company's latest optical, mechanical, and electronic innovations to the genre. Among the most noteworthy enhancements is Meade's new StarLock technology, which automatically begins precision guiding the scope each time it is pointed at a new target.





▲ MOON GLOBES

Sky & Telescope shopatsky.com

U.S. price: Moon Globe, \$99.95; Topographic Moon Globe, \$109.95

We would have picked these 12-inch globes even if they weren't our own products! Based on 15,000 images from the Lunar Reconnaissance Orbiter (LRO), the Moon Globe is the first to portray the entire lunar surface with true photographic detail. The Topographic Moon Globe goes a step further, adding color-coded altimetry data from LRO. This highlights dramatic variations in lunar elevations, revealing features such as huge impact basins that are all but invisible on other Moon globes.



▲ SV50A ED APO REFRACTOR

Stellarvue stellarvue.com

U.S. price: \$499

This little apo refractor created quite a buzz among amateur astronomers when it was introduced at last year's Northeast Astronomy Forum in New York (see our August 2012 issue, page 38). The 50-mm f/6.6 doublet objective has one element made from extra-low dispersion glass for superb color performance. The SV50A comes with a dual-speed, 2-inch, rack-and-pinion focuser. A package deal that includes the scope plus a 2-inch star diagonal, clamshell mounting ring with a Vixen-style dovetail bar, and padded carrying case costs \$599.

▼ 1600GTO MOUNT

Astro-Physics astro-physics.com

U.S. price: \$11,700

After more than 30 years of experience building some of the industry's finest telescope mounts, Astro-Physics has unveiled a replacement for its highly acclaimed 1200GTO German equatorial mount. The new heavy-duty 1600GTO features more than a dozen major mechanical improvements, including larger gears, more powerful motors, and the option to install high-resolution shaft encoders that can deliver virtually error-free tracking. The encoders can be ordered with the mount or added at a later date. The 1600GTO has a rated load capacity of about 220 pounds (100 kg).



◀ POLAR SCOPE

Astro-Physics astro-physics.com

U.S. price: \$390

This right-angle polar-alignment scope has a 6° field of view, high-quality optics, and an illuminated reticle. To achieve precision polar alignment you simply move your telescope mount until Polaris (Northern Hemisphere) or Sigma Octanis (Southern Hemisphere) is properly positioned on the scope's unique reticle. This position is graphically displayed by Astro-Physics's software, including an iPhone app (an Android app is in the works). While the polar-alignment scope is designed for Astro-Physics mounts, do-it-yourselfers could adapt it to others.



▲ AUTOGUIDING FILTER WHEEL

SBIG sbig.com

U.S. price: \$1,995

By placing the off-axis autoguiding system in front of the filters in their new 8-position filter wheel, the folks at SBIG have solved a long-standing problem. With starlight used for autoguiding no longer dimmed by the filters, it's much easier to find a suitable guide star. The autoguider's focus is adjustable as is the pick-off mirror's radial distance from the optical axis. Made for the STT line of SBIG cameras, the filter wheel accepts 1¼-inch and 31-mm filters. It also places filters in precisely the same location each time they are returned to the imaging position, thus ensuring that any dust specks appearing in light and flat-field images will properly align during image calibration.



► NIGHTSCAPE 8300

Celestron celestron.com

U.S. price: \$1,699

What do you get when you combine one of astrophotography's most popular CCD chips with a camera system that received high praise in a recent S&T review (May 2012 issue, page 64)? In our view, you get a Hot Product. One of this camera's biggest features is its supplied software, which transforms the typically complex routines involved with taking and processing astronomical images to a series of simple steps with default selections that create stunning results.

► EOS 60Da CAMERA

Canon usa.canon.com

U.S. price: \$1,499

For only the second time in history, a major camera company has introduced a DSLR camera modified specifically for astrophotography. Like its discontinued EOS 20Da predecessor, the new Canon EOS 60Da employs a special filter in front of its CMOS sensor, which transmits a greater percentage of deep red hydrogen-alpha light than the filters used in conventional cameras. As our in-depth review of the 60Da explained (September 2012 issue, page 38), this makes the camera much better for recording bright emission nebulae.





▲ DELOS EYEPIECES

Tele Vue Optics televue.com

U.S. street price: \$335 each

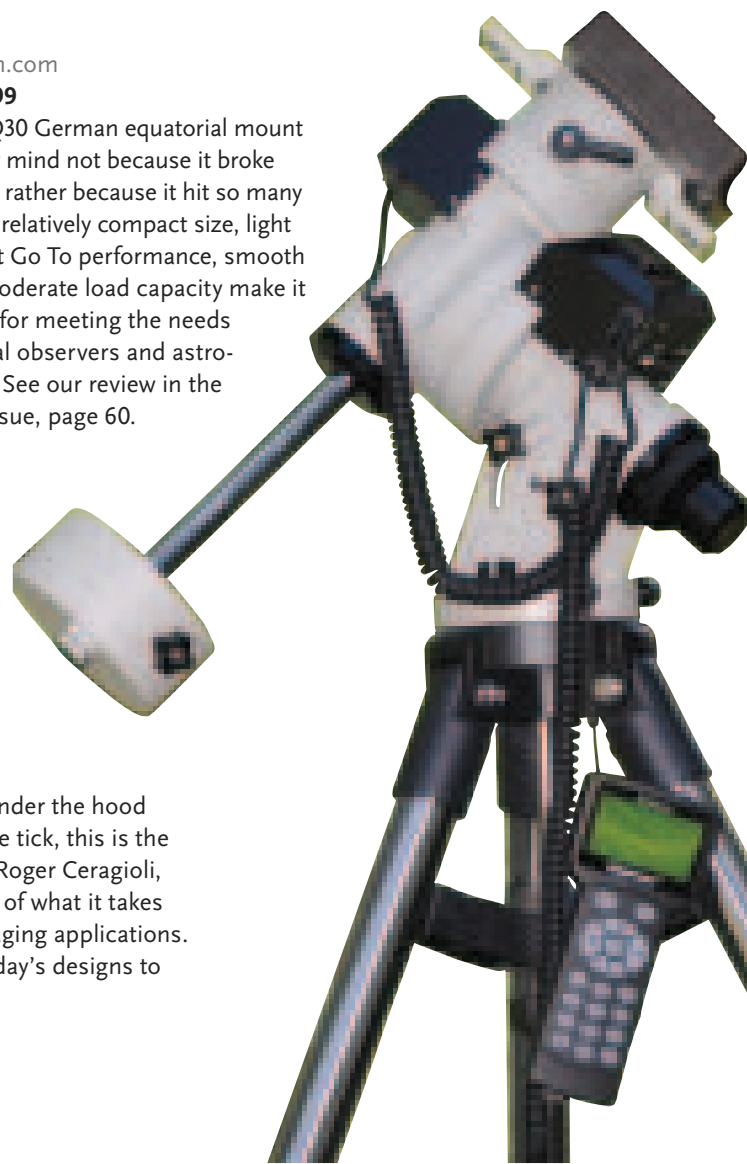
When Tele Vue introduced its 6- and 10-mm Delos eyepieces in 2011, the design, at least on paper, didn't push the optical envelop in the same way that many of the company's previous introductions had. What didn't show on paper, however, was the remarkably pleasurable observing experience that came with each look into the new eyepieces. Accolades quickly began rolling from observers around the world, and Tele Vue responded by expanding the Delos line. There are now eight models ranging in focal length from 3.5 to 17.3 mm. All include the same 72° apparent field of view, 20 mm eye relief, and large eye lens as the originals.

► iEQ30

iOptron ioptron.com

U.S. price: \$1,299

The iOptron iEQ30 German equatorial mount stood out in our mind not because it broke any records, but rather because it hit so many sweet spots. Its relatively compact size, light weight, excellent Go To performance, smooth tracking, and moderate load capacity make it an ideal mount for meeting the needs of today's typical observers and astro-photographers. See our review in the October 2012 issue, page 60.

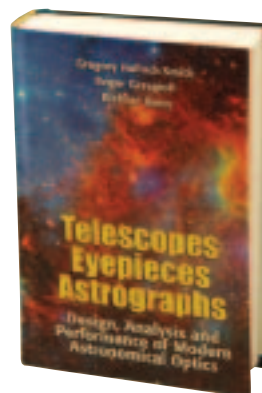


◀ TELESCOPES, EYEPIECES, AND ASTROGRAPHS

Willmann-Bell willbell.com

U.S. price: \$39.95

If you've ever gotten the urge to look under the hood and find out what makes your telescope tick, this is the book for you. Authors Gregory Smith, Roger Ceragioli, and Richard Berry provide an overview of what it takes to make good optics for visual and imaging applications. They then go on to analyze many of today's designs to see how they perform.



► NANO TRACKER

Sightron [available in U.S. from hutech.com](http://available.in.us.from.hutech.com)

U.S. price: \$299

Small motorized mounts for wide-field astrophotography with DSLR cameras are becoming increasingly popular. Just attach a camera to the tracker (a ball head mount helps with framing photos), place the tracker on a camera tripod for quick polar alignment, and you're ready to shoot short exposures of the night sky. The fist-size Nano Tracker is the smallest and least expensive model we've seen so far. In addition to its sidereal tracking rate, there's a half-speed rate that balances motion blur between the foreground and sky.



◀ ETX-90

Meade meade.com

U.S. price: \$399

The Autostar version of the ETX-90 telescope revolutionized observing when it was introduced in late 1999. Priced at \$750, it was the first telescope to offer Go To pointing for less than several thousand dollars. The retooled ETX-90 unveiled last year goes further; its \$399 price is well below half the cost of the original in today's dollars. While the new scope still features the same high-quality 90-mm f/13.8 Maksutov-Cassegrain optics as the original, it adds a host of internal improvements, both mechanical and electronic. The supplied tripod makes it a ready-to-use scope without additional accessories.



▼ FOCAL REDUCER

Celestron celestron.com

U.S. price: \$599

Celestron made major advances in the imaging capability of its venerable Schmidt-Cassegrain telescopes when it introduced its EdgeHD models (see our detailed review of the 14-inch EdgeHD scope in the February 2011 issue, page 52). The new 5-element, custom-designed EdgeHD 0.7x Focal Reducers for the 11- and 14-inch scopes take those advances yet another step forward, making the scopes a full photographic stop faster without sacrificing image quality.



▼ MINI MOUNT

iOptron ioptron.com

U.S. price: \$399

A relative newcomer to the astronomical market, iOptron has grown to become a major supplier of telescope mounts. Its latest release, the SmartEQ, is the most portable Go To German equatorial mount we've yet seen. It features a retractable counterweight shaft, self-contained battery power, and a Vixen-style dovetail saddle. The 6¼-pound equatorial head couples with an included 5¾-pound tripod to form an extremely portable package suitable for cameras and small telescopes. Our review appears in the October 2012 issue, page 60.



▲ MAXI MOUNT

Software Bisque bisque.com

U.S. price: \$13,500

The recognized industry leader in robotic telescope mounts, Software Bisque has totally redesigned its flagship German equatorial mount. The Paramount ME2 builds on the success of the company's smaller Paramount MX (reviewed in our July 2012 issue, page 64). The ME2 is engineered to accept optional high-resolution shaft encoders that will enhance the Paramount's already legendary tracking performance.



► WIRELESS LINK

Celestron celestron.com

U.S. price: \$99.95

Celestron takes control of its latest Go To telescopes to the next level with the wireless SkyQ Link module. Just plug it into the scope to create a WiFi connection that allows operating the mount with the company's SkyQ app running on an iPhone or iPad, or with its *NexRemote* software running on a PC. You can generate custom sky tours with the software or tap on any object displayed on the app's sky maps to automatically point the scope to the target. See the company's website for a list of currently supported telescopes.

▼ LOW-PROFILE FOCUSER

Orion Telescopes & Binoculars

oriontelescopes.com

U.S. price: \$249.99

This low-profile, dual-speed, 2-inch focuser (it's only 58 mm tall when fully racked in) boasts numerous features, including the smooth operation of the Crayford design coupled with a lockable rack-and-pinion drive with helical gears that prevents slipping. The drawtube rides on eight roller bearings and the fine-focus knob offers an 11:1 speed reduction for precise focus control. Supplied with a 1¼-inch adapter, the focuser is rated for a load of more than 17 pounds (8 kg).

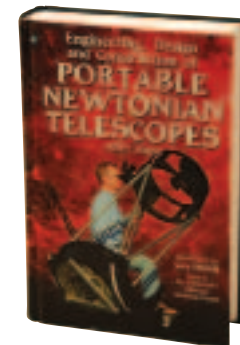


► STT CAMERAS

SBIG sbig.com

U.S. price: from \$3,695

For nearly 25 years SBIG has built CCD cameras specifically for amateur astrophotographers. Its new STT line "represents the culmination of everything that the amateur has asked for in an imaging system," including Ethernet connectivity for remote access over the internet without having a computer directly connected to the camera.



◀ PORTABLE NEWTONIAN TELESCOPES

Willmann-Bell willbell.com

U.S. price: \$39.95

Willmann-Bell's dedication to publishing material for telescope makers maintains a tradition begun a century ago when Russell W. Porter penned articles that launched the telescope-making movement in North America. Its latest release will help telescope builders design and construct instruments that are perfect for their needs. Included computer software lets you explore how various design parameters affect performance.

▼ GO TO DOBSONIAN

Orion Telescopes & Binoculars

oriontelescopes.com

U.S. price: \$3,599.99

Orion's line of SkyQuest GoTo Truss Tube Dobsonian telescopes grew literally and figuratively with the introduction of this 16-inch f/4.4 model. Although the assembled scope weighs nearly 200 pounds (about 90 kg), it breaks down into manageable pieces for easy transportation to observing sites. The Go To system requires 12-volt DC power from batteries or an AC adapter, which are optionally available. Our review of the 8-inch SkyQuest Go To Dobsonian is in the May 2011 issue, page 52. ♦

