You and I are living in the golden age of amateur astronomy, especially when it comes to telescopes. Never before have hobbyists had such a wide variety of instruments from which to choose.

In fact, there are so many top-quality models available that sorting through them and choosing just one can be tough. To help guide you along the way, I’ve compiled a list of 25 of today’s best telescopes. I based my choices on design, versatility, quality, price, and availability.

Some of the instruments listed here are readily available through retail dealers, while others are special-order items that may take the manufacturer some time to build. And although there is no one perfect telescope for everyone, these 25 all provide one important trait: owner satisfaction.

**Refractors**

**Celestron C6-RGT**
The 6-inch f/8 C6-RGT is one of the largest achromatic refractors sold off the shelf today. A telescope like this is great for planet and double-star enthusiasts who dabble in deep-sky observing. The heart of this scope, a two-element achromatic objective lens, is large enough to resolve sub-arcminute doubles and pull in stars as faint as 14th magnitude. Perched atop Celestron’s highly acclaimed CG-5 computerized German equatorial mount, the C6-RGT can steer itself to thousands of targets within its range. $1,099

**Coronado Personal Solar Telescope (PST)**
This little 1.6-inch f/10 Hydrogen-alpha solar refractor allows anyone to observe prominences and the chromosphere. The quality construction, including an aluminum tube, fine-adjustment focuser, and integrated finder scope, belies the PST’s amazingly low price. A 20mm Kellner eyepiece comes with the telescope, but no mount. However, the PST is light enough that most camera tripods can support it. $499

**Orion SkyView Pro EON 80ED**
Orion was first to introduce budget apochromatic refractors. That tradition continues with Orion’s latest generation of economically affordable apos, called EONs. The 3.1-inch f/6.25 EON 80ED includes a fully multicoated objective lens made of extra-low dispersion (ED) glass housed in a sleek black tube. Throw in a nicely machined dual-speed Crayford focuser that accepts both 1¼” and 2” eyepieces, a retractable dew cap, and a 2” enhanced mirror star diagonal, and you have a portable instrument that’s ready to take you to the stars. $699.95

**Takahashi TSA-102S**
Takahashi’s 4-inch f/8 TSA-102S is the first of a line of Triplet Super Apochromatic refractors that use a three-element objective to eliminate false color and spherical aberration. Whether used for lunar, planetary, or deep-sky observing, the TSA-102S produces amazing images.

Interested in a little photography? The TSA’s oversized focuser is strong enough to support even the heaviest CCD cameras. And with a tube that collapses to only 23 inches (58.4cm) long, the TSA-102S is ideal for airline travel. $2,695
The 4-inch f/5.4 Tele Vue NP-101is houses a two-element full-aperture objective. Teamed with a two-element sub-aperture doublet at the back of the tube, this scope produces textbook-perfect stars across the full field of view. Add to the mix incomparable mechanics, including a precision focuser designed to meet the needs of today’s digital imagers, and you get a top-notch visual telescope and a versatile imaging system all in one package. $3,985

**Tele Vue NP-101is**

The 4.5-inch f/7.7 ED115S is the largest of four two-element ED apochromatic refractors sold by Vixen. As always, Vixen’s optics and mechanics are world-class. The images through the ED115S are sharp and free of aberrations, while all mechanical parts work to perfection. The ED115S is available on several different Vixen mounts, from the economical Great Polaris-E (GP-E) to the heavier duty Great Polaris-D2 mount. $2,599

**Vixen ED115S**

Reflectors

**Astro-Tech 6RC**

While Ritchey-Chrétien telescopes are common in professional observatories, the design used to be prohibitively expensive for most backyard stargazers. That is, until Astronomy Technologies introduced the affordably priced 6-inch f/9 6RC. Its fully baffled tube and enhanced optical coatings combine to yield razor-sharp views of planets and deep-sky objects. The 6RC also comes with a dual-speed 2” Crayford focuser and a Vixen-style dovetail rail for attaching the 13-pound (5.9 kg) scope to many of today’s most popular equatorial mounts. $795

**Tele Vue TV-102iis**

The TV-102iis, based on the 4-inch f/8.6 TV-102 apochromatic optical system, is one of the most adaptable telescopes sold today. While it’s great as a traditional visual telescope, the TV-102iis can accommodate a binocular viewer without an auxiliary transfer lens. But the real beauty of the scope is its optimized design for deep-space imaging, thanks to the large number of available adapter tubes and optical accessories. Indeed, the TV-102iis is a telescope for all seasons. $2,985

**Tele Vue TV-102iis**

**Phil Harrington** is a contributing editor of *Astronomy* and a full-fledged telescope junkie.
Celestron C8-NGT
Celestron’s lineup of Newtonian reflectors includes the 8-inch f/5 C8-NGT on the CG-5GT computerized mount. Readers may recall that I tested this telescope/mount combination for the August 2004 issue of *Astronomy*. That scope had some of the finest optics I have ever seen in a Newtonian reflector. The C8-NGC comes with Celestron’s fine 9x50 finder scope, a 2” focuser, and NexStar computer control technology with a 40,000-object database.

$1,019

Mag One 8 PortaBall
Looking for something a little different in a Newtonian reflector? Consider the Mag One Instruments 8-inch f/5.5 PortaBall. Rather than just copying conventional design, Mag One built the PortaBall 8 around a hollow fiberglass sphere that houses the primary mirror. A pair of black-anodized metal rings and a short tube segment of a composite material make up the telescope’s upper cage assembly, while six aluminum truss tubes join it to the primary’s mirror ball. Many owners find that the PortaBall’s axisless design makes it easier to track the sky by hand at higher magnifications than with conventional Dobsonians.

$2,995

Meade LightBridge 16
Looking for a large reflector that you can take out to dark country skies in your small car? Meade’s LightBridge family of telescopes is ideal if both room and budget are tight. Each scope’s open truss design is easy to set up and tear down quickly without tools. Even the 16-inch f/4.5 can fit into most small cars. Best of all, LightBridge optics are exceptional, delivering classic images even at high magnifications. Smooth altitude- and azimuth-movement and a 2” focuser make each LightBridge a joy to use.

$1,849

Obsession Ultra Compact 18
If you’re looking for a large-aperture instrument that breaks down into the smallest possible package for transportation, an Obsession Ultra Compact (UC) reflector might fit the bill. When fully collapsed, the 18-inch f/4.2 UC’s “Virtual Mirror Box” — containing the primary mirror, altitude bearings, mirror cell, and associated hardware — measures only 24” by 24” by 13.5” (61cm by 61cm by 34cm). The upper tube assembly, designed to nestle into the mirror box for transport, adds only another 6 inches (15cm) to the stored height. But when set up, these instruments give the same world-class performance that Obsession has been famous for since owner Dave Kriege introduced the Obsession 1 in 1989.

$6,895
Orion StarBlast 6

The StarBlast 6 is perfect for an astronomy-on-the-go lifestyle. Like its smaller sibling, the StarBlast 4.5, the StarBlast 6 is small enough to carry in one hand — mount and all — while clutching charts and references in the other hand. The larger 6-inch f/5 aperture is about 10 pounds (4.5 kg) heavier than the 4.5-inch, but it also serves up fainter deep-sky objects that escape unnoticed through the smaller instrument. Simply park the scope on a sturdy support, and it’s ready to use.

$249.95

Orion XT10 IntelliScope

Sometimes, it’s nice to have a helping hand when aiming toward sky targets. Orion’s 10-inch f/5 XT10 IntelliScope comes equipped with a pair of built-in encoders that connect to an optional object locator to help point the way. After selecting a celestial object from the computerized locator’s memory, directional arrows guide you toward your target. Push the telescope around until the numbers next to the arrows read 0.0, and the target will be in view.

$499.95

Orion Skyquest XX12

Orion’s 12-inch f/4.9 Skyquest XX12 telescope packs the high-quality optics we’ve come to expect from Orion into a nicely designed truss-tube Newtonian. This scope is much easier to pack into the back of a car than conventional solid-tube instruments. You won’t need tools to assemble the XX12, thanks to captive hardware secured to all four pairs of truss tubes. Once up and running, the XX12’s 2” dual-speed Crayford focuser, smooth altitude and azimuth bearings, and the included IntelliScope object locator make viewing faint fuzzies a pleasure.

$1,299.95

Sky-Watcher 10-inch Dob

Sky-Watcher’s Dobsonians, including the 10-inch f/5 scope, are “telescoping telescopes.” Rather than using triangular trusses, Sky-Watcher employs three parallel strut supports to bridge the gap between the primary mirror and focuser tube assemblies. Loosen the thumb knobs, and both halves of the telescope collapse together for transport. When you arrive at your observing site, pull the halves apart, retighten the thumb knobs, and the scope is ready to use. It’s a simple, yet elegant, design that works well.

$595
Nowadays, we all enjoy out-of-the-box stargazing. Buy the telescope, set it up, and observe. Thirty years ago, most amateurs made their own telescopes. Amateur telescope maker Steve Dodson (Stargazer Steve) fondly remembers those days. He offers pre-fabricated telescope kits that take the angst out of building one from scratch while still offering the same feeling of accomplishment. Six aluminum poles attach between the mirror box at the telescope’s base and the instrument’s focuser assembly. A collapsible wooden tripod raises the entire instrument off the ground. Count on everything to fit together perfectly because Dodson personally assembles each instrument before shipment. $599

Starmaster Hybrid Truss 11
Starmaster Newtonians are famous for exceptional optical and mechanical quality. One of their most popular instruments, the 11-inch f/4.3 Hybrid Truss, combines a respectable aperture in a package that breaks down for easy transport. The Hybrid’s eight truss poles come preassembled in four trapezoidal pairings that make setup quick. In fact, you can leave the truss poles attached to the upper cage assembly and lift the entire unit onto the mirror box to make things go even faster. $3,995

Vixen R200SS
The 7.9-inch f/4 R200SS reflector makes a great instrument for either wide-field viewing or imaging. As with all Vixen scopes, optical quality is outstanding. The R200SS comes on one of two German equatorial mounts. Choose from the solid GP-D2 or the state-of-the-art Sphinx go-to mount. The Sphinx comes with Vixen’s Starbook go-to controller. The Starbook features a self-contained computerized planetarium program that graphically displays where the telescope is aimed — no charts required. $1,599

Zhumell 10-inch Dob
If your telescope needs are basic, then the 10-inch f/5 Dobsonian-mounted Newtonian reflector marketed by Zhumell may be your best choice. The Zhumell 10 echoes John Dobson’s original philosophy: Keep it simple. Zhumell doesn’t use fancy materials. Instead, it has a straightforward telescope with great optics. Each comes with a 2” Crayford focuser with a 1¼” adapter, 32mm and 9mm eyepieces, and a Zhumell laser collimator. $499

Celestron NexStar 6SE
One of the lightest, most compact instruments sold today is Celestron’s 6-inch f/10 NexStar 6SE Schmidt-Cassegrain telescope. The XLT enhanced optics in the N6SE produce sharp images of everything in view, whether you’re observing a planet, the Moon, a double star, or a faint deep-sky object. Aiming
the scope is a breeze, thanks to Celestron’s NexStar go-to computer system built into the one-armed mount. Once initialized, it will accurately steer from target to target, even after a cross-sky slew.

Celestron CPC925 GPS

Celestron’s 9.25-inch f/10 Schmidt-Cassegrain is an exceptional telescope optically. Stars appear tack-sharp with outstanding contrast that really brings out subtle planetary detail. This excellence is due in part to the 9.25’s f/2.5 primary. Other SCTs use primary mirrors with focal ratios around f/2. That slight difference results in a flatter field that many consider more aesthetically pleasing. The GPS-enabled CPC mount is remarkably sturdy, making it an ideal platform for both visual and photographic pursuits.

Celestron CPC925 GPS

Meade ETX-125PE

Meade’s ETX-125 Premiere Edition Maksutov has superb optical quality. Big brother to the famous ETX-90PE, the 5-inch f/15 ETX-125PE is just right for anyone looking for a compact telescope. The ETX-125PE comes emplaced on a miniature fork mount that includes Meade’s acclaimed Autostar computerized go-to system. While the ETX-125 is small and light enough to place on a table for viewing, Meade’s #884 Deluxe Field Tripod offers a sturdy support.

Meade ETX-125PE

Orion Atlas 190 EQ-G

If you’re looking for a versatile telescope that’s just as appropriate for photographing wide-field deep-sky objects as it is for viewing the Moon and planets, then Orion’s 7.5-inch f/5.3 Maksutov-Newtonian, the Atlas 190, should be on your list of possibilities. While some similarly sized Mak-Newts sell for more than $3,000, Orion’s Atlas 190 costs less than that. Don’t interpret the lower price as meaning a compromise in quality, however. The Atlas 190’s well-corrected optics yield sharp star images, whether seen through a super-wide eyepiece or recorded with a digital camera.

Orion Atlas 190 EQ-G

Meade 10-inch LX200ACF GPS

This telescope may look like a Schmidt-Cassegrain on the outside, but it’s a differ-
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