



Considering a TELESCOPE? Avoid the usual pitfalls!

OR

"How *Not* to Get Stuck with a Useless Telescope"

presented by *The Astronomical Society of Las Cruces*



Here's what you need to know to get the right scope & put it to good use.

Every year, especially near Christmas, scores of folks decide to purchase an entry-level telescope, either for themselves or for an inquisitive youngster. Seems like a simple task, doesn't it? Unfortunately, before long most new telescope owners will become sorely disappointed with the result of this purchase and end up not using it. Why is this? Here are the reasons, in a nutshell – the well-meaning buyer tends to believe the advertising hype (“*450 POWER for \$129!*”) and expects to see sights like those shown on the box, all without much effort. In reality that scope is NOT able to provide those kinds of images, and in addition the operator rarely has the knowledge & skills necessary to use the scope (or any scope) effectively.

So what do you do, short of expending the time & energy necessary to become an astronomy ‘expert’? Contact an astronomer or astronomy club and ask for assistance (ideally *before* you buy a scope) - this help is free and it can save you from major mistakes. Most astronomers are all too familiar with the disappointing pattern mentioned above, since we’re often asked to ‘fix whatever’s wrong’ with the scope and/or its operator. Sometimes the situation can be improved, but the best answer is to avoid that cycle entirely. So heed the following two-part advice:

STEP #1: How to avoid the junk and get a useful telescope!

First, recognize the junk scopes when you see them. That’s fairly easy – most telescopes sold in a local department or wholesale store, nature or science store, or in a general catalog or Internet ad is a ‘trash telescope’. Look for these signs: does it promise magnifications like 300 to 600 power? Does it come ‘fully-equipped’ with all sorts of neat accessories, like for solar/video/digicam viewing? Does it promise to use computers to find objects for you? The truth is that high magnification is NOT important, most of those accessories are worthless, and computer-assisted scopes costing under \$200 rarely function well enough to do the job.

Often ‘trash telescopes’ will sport familiar brand names like Tasco, Bushnell or C-Star. Even some of the lowest-priced models from the mid-range-quality outfits like Meade, Celestron, and Orion fall into the ‘junk’ category. All these come from the same low-budget sources in China. Seldom does any new scope sold for under \$200 truly please its owner, at least not for long. So what can you do if you don’t want to invest major bucks in what might be a passing interest?

Option #1) **Spend just a little more** – that gets you a better scope with lasting value (and resale value). Some decent choices can be bought for under \$275, such as the SkyQuest XT4.5 or XT6 Dobsonian by Orion, Celestron’s Firstscope 80AZ or Firstscope 114 EQ. Orion is a catalog/Web outfit (OrionTelescopes.com), and NM Astronomical in Belen carries most Celestron & Meade scopes (as do on-line telescope vendors like OPT or Astronomics).

Option #2) Spend *less* and **buy a nice set of binoculars** instead! Just about any will work, though 7x50's up to 10x50's are recommended. Used with a good lounge chair or photo-tripod adapter, these can be the perfect way to start into star-gazing and get prepared for a telescope. It's a fact that cheap binoculars are much, much more useful than cheap telescopes.

Option #3) **Build your own!** If you have basic tool skills you could take advantage of our club's next Telescope-Making Workshop (spring of '08) to build a first-rate starter scope for under \$100. You can have a unique experience *and* learn about telescopes. Find out more about this possibility at www.aslc-nm.org/telescope-making-workshop.htm -- it makes a fine project to do with a youngster!

STEP #2: How to put that nice telescope to good use!

Acquiring a quality telescope is just half the battle – it can still end up sitting unused. Most folks don't realize that some effort must be put into understanding both that telescope and the night sky above. Nothing truly worthwhile comes without effort. Above all, don't expect to see views through your scope that look like those wonderful color pictures you see all over (most of which were taken by the Hubble Space Telescope!). So what can you do to turn your telescope investment into a truly satisfying experience with star-gazing?

- 1) Don't assume that the 'operating manual' (if there is one) will tell all that you need to know – it's simply impossible. Best to use a combination of printed resources, Internet sites, and first-person instruction to effectively develop the knowledge and experience that's required. For details check out "So Now You Have a Telescope" at www.aslc-nm.org.
- 2) The greatest need is to learn the basic elements about our night sky -- what's up there, where & when to see it, how to appreciate it. This is where initial sessions with binoculars (or even just your bare eyes) can help so much before you get serious with a telescope. You will be amazed at what can be seen by looking in the right place under the right conditions!
- 3) Don't think that your computerized telescope can do everything for you? At best it only reduces the understanding of the night sky that you will need, *if* it works well and if you're OK with software stuff. In particular you still need to understand the significance of what you're looking at!

Probably the more effective way to fulfill these needs is through guidance from local astronomer hobbyists who like to share their knowledge. Our Society's meetings, 'star parties', and beginner's classes present excellent opportunities for learning how best to use your scope and understand the night sky. Just look through our website, www.aslc-nm.org.

Likewise, if you want to know which telescope type you might prefer, come to some of our observing events and look through our scopes - there's no substitute for personal experience. Want to get help with a technical or optical difficulty you're having, or just want to upgrade? Ask around and find a telescope expert to advise you. Since our community has no specialty stores to provide these kind of services, this is truly valuable.

Those of us with experience in this hobby realize that patience and persistence are inevitably necessary. Quick fixes and instant gratification are rare indeed. But the rewards can be sweet and just as frequent as the challenges. So don't be afraid to jump into stargazing, get that scope and tackle the job of learning to use it well – the Universe is waiting to show you some really neat stuff! And now *you* know the keys to successful star-gazing.