

How to Choose Your First Telescope



I'm writing this article assuming you have little or no knowledge of telescopes and need a place to start. So, let's start with some basic rules: Never buy a telescope in a department store. Similarly, don't buy telescopes from "discount" catalogues, stores that specialize in high-tech toys, etc. Every year, thousands of cheap, useless telescopes flood the toy stores and department stores. These instruments look like telescopes, and are offered at what look like bargain prices. And they're junk. Stay away from these. They are a waste of money, and will do nothing but destroy your interest in astronomy

Binoculars are a good place to start and really can show quite a number of interesting sights in the night sky. Most experienced amateur astronomers agree that "jumping in" with a fancy expensive telescope without first learning the basics is not the best way to get involved. If you eagerly spend \$1000 on a fancy telescope and then later find you're not really into it, you will have wasted a considerable amount of money. Binoculars *can* be a good first step, but they won't show any detail on the planets (and limited detail on the Moon).

You need to consider your own individual needs including cost, versatility, portability usability, appearance etc. Start simple. Telescopes with all the bells and whistles, computer controls etc, as good as they are, will hinder or limit the beginner in truly appreciating and understanding their way around the night sky. Besides they're much more expensive to purchase. Another thing, don't choose a telescope by its advertised magnification. The way to compare similar telescope is by aperture; that is, the size of the glass lens or mirror. Cheap and nasty telescopes will serve to dim your interest as their poor quality and performance will immediately show up. (Pic right: Nice, new, shiny 150mm Dobsonian)



On the other hand a good quality smaller telescope is a lot more compact, portable and easier to use, and will be used much more often. You can quickly grab it, take it outside and start using it with less acclimatization time. It is also easier to take with you when you wish to observe from a darker site. Smaller telescopes are generally also less expensive to purchase, so you have less money gathering dust if further along in time you find that you are using your telescope less frequently.

So hopefully you are now considering that your first telescope should be of a smaller size. But what size?, what type? Ideally you would like to choose a telescope that shows good clear images of many of the brighter and more interesting objects in the night sky. If you're on a budget then consider purchasing no less than a good quality 90mm 'Refractor' (see pic below) or 114mm 'Newtonian Reflector' (Pic above).

If your budget is a little more relaxed then a good quality 80mm to 90mm Refractor or a 150mm Reflector (see pic above) is strongly recommended, with 1.25" eyepieces, sturdy mount and a good finder scope. I can help you do that. I'm an astronomy educator, not a salesman. See my website: www.davidreneke.com



Refractor telescopes are generally more suited to observations of the Moon and planets. Newtonian reflecting telescopes on a dollar per dollar basis are generally more suited to fainter objects such as nebulae, galaxies and star clusters as their larger diameter have more light gathering power. If you want to spend a little more a good 'Dobsonian' telescope is a very good place to start. They are point and shoot, a little hefty and durable so they don't shake every time you breathe near it, and they are easy for kids to use. If you've done this and you have a thirst for more, you are ready to move up to a telescope. In my opinion, around \$500 is probably a good amount to spend to get a truly decent starter scope and the necessary accessories you'll need to round out the package.

Most astronomers will tell you to buy the biggest scope you can afford, and I generally agree with this statement. There's no substitute for aperture. All things being equal, size counts and larger is sometimes better. But there's a caution that goes with this. A small scope with excellent optics can see more than a large scope with mediocre optics and the smaller the scope, the more often it gets used.

When all else fails: If, after reading all this stuff, if you are still confused and say to yourself, "Heck, I just want to buy a good quality, basic telescope for a casual poke around the sky and maybe a bit of whale watching too," then head to my website and buy a 90mm reflecting telescope without all the useless stuff you won't use but will pay for elsewhere. See my beginners section in 'Telescopes' on the top toolbar. You'll pay very little though us for these scopes, they come complete including tripod and eyepieces, and they're a great telescope with very good optics. I use one. Go to www.davidreneke.com and tell me what you want.

David Reneke has over 40 years experience in astronomy. He's a feature writer for major Australian publications and a science correspondent for ABC and commercial radio. For more advice, examples of recommended telescopes for beginners/advanced or for advice and almost everything you need to know to enjoy your telescope visit Dave's safe website: www.davidreneke.com and click on the top toolbar telescope links. Email Dave: davereneke@gmail.com