

A Telescope to Consider #1

Refractor on alt-az mount:

- Orion Observer 70mm Alt-Azimuth Refractor Telescope
- \$139.95

Advantages:

- CHEAP!
- Simple to operate
- Altitude micro motion control
- Built in dew/light shield
- Light weight (6.5 lbs fully assembled)

Disadvantages:

- F/10 limits views to narrow fields of views. Eliminates seeing entire Pleiades and Andromeda Galaxy in one view.
- 70mm limits light intake to viewing only bright objects: Moon, planets, stars, bright nebulae
- No micro motion control for azimuth movement
- Red dot finder scope (no standard shoe for replacing with optical finder)
- So lightweight that it probably vibrates after any touch or breeze



A Telescope to Consider #2

Dobsonian:

- Orion SkyQuest XT4.5 Classic Dobsonian Telescope
- \$229.95

Advantages:

- Simple to operate
- Affordable
- Light weight: 17.6 lbs. fully assembled

Disadvantages:

- Owner needs to learn collimation techniques
- User must learn enough about sky to find objects for maximum usefulness
- Spherical primary mirror (not parabolic)
 - Objects in center of field look OK
 - Objects at edges of field may be out of focus w/ >20mm eyepieces
- Finder scope is only 6x26 (but can be replaced/upgraded easily)



A Telescope to Consider #3

Newtonian on Equatorial mount:

- Orion AstroView 6 Equatorial Reflector Telescope
- \$419.95

Advantages:

- Quality OTA (Parabolic primary mirror)
- Relatively affordable
- Relatively light weight (39 lbs. fully assembled) but reasonably solid
- F/5 allows for wide views
- 6 inch diameter takes in enough light for many DSOs and permits up to 300x under excellent conditions
- Allows for easier tracking than Dobsonian once on target, allowing for more practical use of higher magnifications than on Dobsonian
- Comes with polar axis finder scope and collimation cap
- Clock drive for right ascension (sold separately) allows for automatic tracking

Disadvantages:

- Owner needs to learn collimation techniques
- User must learn enough about sky to find objects for maximum usefulness
- User must understand how an equatorial mount works. (This is probably the biggest drawback.)
- Finder scope is only 6x30 (but is probably barely adequate). Has standard shoe for upgrade to 8x40, if desired.
- EQ-3 tripod is aluminum; will probably vibrate more than steel



A Telescope to Consider #4

Refractor on go-to mount:

- Celestron NexStar 102SLT Computerized Telescope
- \$499.95

Advantages:

- Relatively affordable for go-to telescope
- Reliable NexStar go-to system. Firmware is flash upgradeable
- Quality OTA. Objective is multi-coated. F/6.5 allows for relatively wide views
- 102mm large enough to see bright DSOs
- Will run from external power supply as well as 8-AA alkaline batteries. This is a big advantage over many entry-level Meade go-to telescopes which use only batteries (which may result in poor performance in cold weather).
- Built in dew/light shield
- With latest firmware version can use Celestron SkyScout GPS for time and location with SkyScout Connect. (Not cost-effective unless one wants to own the Sky Scout for its own sake.)

Disadvantages:

- Light weight tripod subject to vibration – which occurs when focusing or in wind. However, installation of Orion AccuFocus Electronic Telescope Focuser cures focusing vibration problem
- Finder scope is red dot type. (Standard shoe on OTA allows for upgrade to optical finder, e.g. 6x30 Orion Achromatic Finder Scope)
- Star diagonal and eyepieces are functional but mediocre. Should be upgraded eventually for best optical performance (e.g., Orion Enhanced Mirror Star Diagonal and Plossl eyepieces).
- Go-to is usually limited to 70 degrees altitude to avoid collision between tripod and telescope (Can be modified to avoid this.)



A Telescope to Consider #5

Maksutov-Cassegrain on go-to mount:

- Meade ETX90-AT Telescope
- \$599.00 (without special UHTC optical coatings)

Advantages:

- Relatively affordable for go-to telescope.
- Uses well-established Autostar go-to system.
- Will run from external power supply as well as AA batteries. This is a big advantage over many entry-level Meade go-to telescopes which use only batteries (which may result in poor performance in cold weather).

Disadvantages:

- F/13.8 limits views to narrow angle of view. Eliminates seeing entire Pleiades and Andromeda Galaxy in one view.
- Finder scope is red dot type.
- 90mm diameter (with light loss due to center obstruction in MAK design) is the absolute minimum for seeing much. Any DSOs will require dark, ideal conditions. That alone makes the 125mm ETX a better choice, but it costs \$200.00 more.
- Requires purchase of accessory dew/light shield for best performance.



If you want to go high end:



- **CGEM - 1100 - General Features**
 - 11" Schmidt-Cassegrain telescope
 - CGEM Computerized Equatorial Mount
 - Premium StarBright XLT coatings
 - Large 9x50 finder scope
 - Ultra sturdy steel mount
- **CGEM - 1100 - Computerized Mount Features**
 - 40,000 object database
 - Proven NexStar computer control technology
 - "All-star" Polar alignment uses any bright star for a quick and accurate Polar alignment
 - Flash upgradeable hand control software and motor control units for downloading product updates over the Internet
- Custom database lists of all the most famous deep-sky objects by name and catalog number: double, triple and quadruple stars; variable stars; solar system objects and asterisms
- Includes NexRemote telescope control software for control of telescope by computer
- Secure power plug ensures that the mount's power source is not accidentally disconnected
- GPS compatible with optional CN16 GPS accessory

- **Price: \$2699**

Remember, Christmas is coming ...