

Instruction Manual

60mm Goto Refractor Telescope

FEATURES

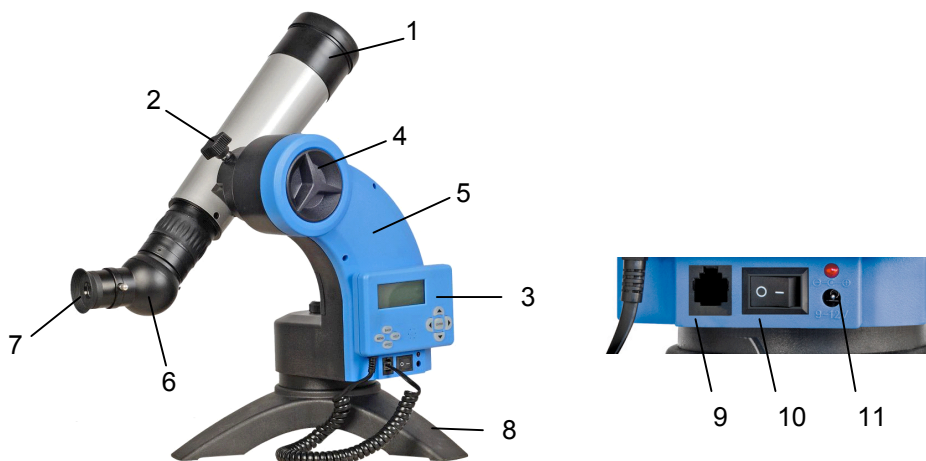
- Alt-Azimuth Mount with computer control technology
- Real-time GOTO and tracking features
- 4,000+ object database with 256 user-definable objects.
- 4 line, 20-character LCD hand controller with backlit LED buttons for easy operation
- Dual-axis servomotor with optical encoders
- Drive motor with 5-speed setting for precise tracking
- Tabletop base
- 60mm achromatic refractor telescope for land and celestial objects observation
- Also attaches to photo tripods with 6.35 mm ($\frac{1}{4}$ ") camera screw

PACKAGE CONTENTS

- Telescope mount
- 60mm Refractor telescope
- Tabletop base
- Hand Controller
- 45° diagonal mirror
- 31.7mm (1.25") H20mm eyepiece
- Plastic carrying case

Assembly Terms

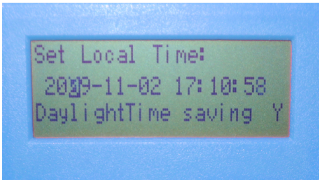
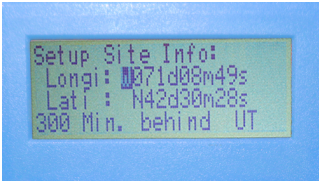
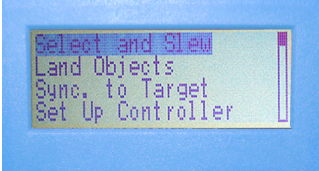
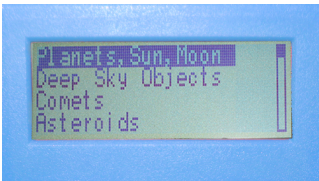
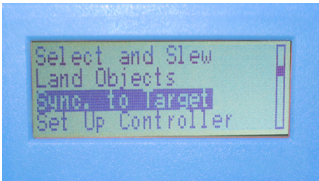
1. Telescope Tube
2. Dovetail Lock
3. Hand Controller
4. Altitude Lock
5. Mount
6. Diagonal
7. Eyepiece
8. Tabletop Base
9. HBX Port (Hand controller)
10. On/Off switch
11. DC Power connection



NEVER USE A TELESCOPE TO LOOK AT THE SUN DIRECTLY!
Looking at or near the Sun will cause instant and irreversible damage to your eye.
Children should always have adult supervision while observing.

Quick Start Guide for AstroBoy® Computerized Telescopes

	<p>Step 1. (two options)</p> <p>A. Attach to tabletop base. Take the mount and the tabletop base out of the carrying box. Attach mount to base by securing the 6.35 mm (1/4") screw onto the base.</p> <p>B. Attach to tripod. Attach mount to tripod by hand tightening onto the tripod. Tripod can be purchased separately.</p>
	<p>Step 2.</p> <p>Lift the battery cover. Carefully pull out the battery holder from the compartment. Be sure not to accidentally disconnect the wires.</p>
	<p>Step 2a.</p> <p>Insert 6 AA batteries (not included) in the holder. Refer to the diagram on the holder to orient the batteries properly. Replace the holder back into the battery compartment and replace the lid.</p> <p>Use only fresh batteries. Using old or low batteries may cause error messages.</p>
	<p>Step 3.</p> <p>Slide the telescope into the dovetail slot on mount and secure the telescope using dovetail lock knob (#2). Note that the dovetail is tapered and slides in one direction only (see arrow in photo).</p>
	<p>Step 4.</p> <p>Plug hand controller into the HBX port on the mount. The hand controller can attach magnetically to the mount arm.</p>
	<p>Step 5. Set telescope to PARK POSITION <i>If you are using the telescope for land object observing, skip to Step 6.</i></p> <p>(1) Loosen the altitude clutch; point the telescope tube directly up at the zenith. Tighten the clutch.</p> <p>(2) Position the mount so that the "N-S" mark is aligned with the earth's magnetic north and south poles (<i>a compass may be helpful</i>).</p> <p>(3) Level the mount using the bubble on the mount by adjusting the height of the mount base or tripod legs.</p>

 <p><i>Editing date: YYYY-MM-DD</i></p>	<p>Step 6. Press the I/O power switch to turn the mount on (controller will light up).</p> <p>Now “Set Local Time:” is displayed at the top. A blinking cursor is on the second line.</p> <p>Use ▲/▼ keys to change the numbers. Use ◀/▶ keys to scroll through the fields.</p> <p>The last field of this screen is for setting “DaylightTime saving”. Use ▲/▼ keys to switch between “Y” (yes) and “N” (no). Press ENTER when finished.</p>
	<p>Step 7. Now “Setup Site Info:” is displayed at the top. A blinking cursor is on the second line. (“Longi” means longitude; “Lat” means latitude.)</p> <p>Use ▲/▼ keys to change the numbers and letters. Use ◀/▶ keys to scroll through the fields. <i>You can check the internet to find your city or town’s latitude and longitude. Remember to convert decimals to degrees, minutes, and seconds.</i></p> <p>The last line of this screen is for setting time zone information (<i>add or subtract 60 minutes (Mins.) per time zone</i>).</p> <p>Examples: minutes “behind” UT or “ahead” of UT</p> <p>London: 0 Min. “behind” oder “ahead” UT Paris, Rom, Berlin: 60 Min. “ahead” UT Istanbul: 120 Min. “ahead” UT</p> <p>Press ENTER when finished.</p> <p><i>The mount is now ready to observe</i></p> <p>Use the 4 Arrow keys (▲▼◀▶) to rotate the scope Up, Down, Left, and Right. Use the SPEED key to change the slew rate from the slowest (2X) to the fastest (MAX).</p>
	<p>Step 8. Find (GOTO) and track objects.</p> <p>Press Menu button.</p> <p>Scroll with the arrow keys ▲/▼ to “Select and Slew”</p> <p>Press ENTER.</p>
	<p>Step 9. Select a category (ex. “Planets, Sun, Moon”) by scrolling with the arrow keys (▲▼◀▶). Press ENTER.</p> <p>Then select an object (ex. “Moon”) by scrolling with the arrow keys (▲▼◀▶). Press ENTER.</p> <p>The telescope will automatically slew to the object and lock on. It will automatically begin to track once it locks on to the object.</p>
	<p>Step 10. Sync to Target (<i>Use this to center and synchronize the object selected in Step 9</i>).</p> <p>Press MENU. Scroll with the arrow keys ▲/▼ to “Sync. To Target”. Press ENTER. Next use the arrow keys (▲▼◀▶) to center the object in the eyepiece. Then press ENTER again to synchronize the object with the memory.</p> <p>To slew to other objects simply repeat steps 8 and 9. You do not need to repeat step 10.</p>



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