

## Quick Start Guide

### SmartStar® Cube II-E Series Systems

(8520, 8522, 8523, and 8524)


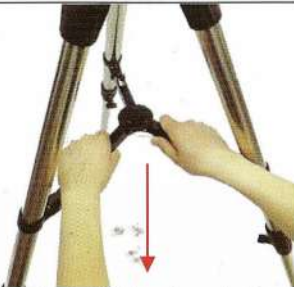
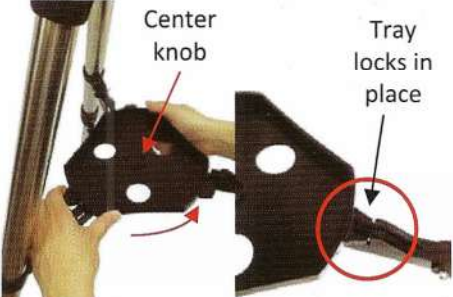

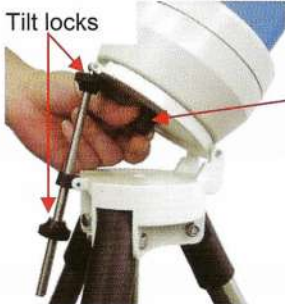


### SmartStar® Cube II-G Series Systems with GPS

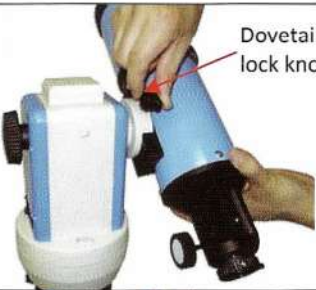
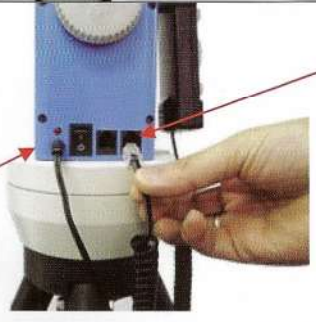
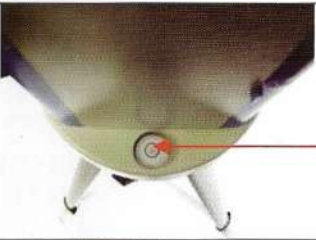
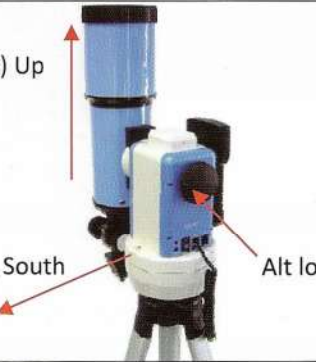


(8820, 8822, 8823, and 8824)

### SmartStar® Cube II-A AA/EQ Series Systems

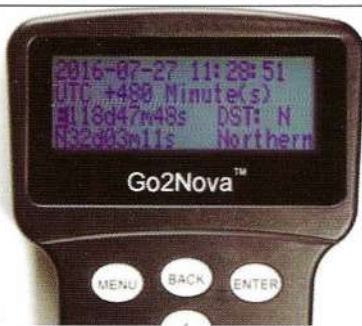
(8620, 8622, 8623, and 8624)



 <p><b>Step 1. Set up tripod</b></p> <ol style="list-style-type: none"><li>1. Extend tripod legs to full extension and lock knobs.</li></ol>	 <p><b>Step 2. Attach the mount</b></p> <ol style="list-style-type: none"><li>2. Stand Tripod upright. Then press down to lock center arms in place.</li></ol>	 <p><b>Step 3. Place tray on center knob and turn tray until it locks in place. (The tray will turn underneath the center knob)</b></p> <p>Center knob</p> <p>Tray locks in place</p> <ol style="list-style-type: none"><li>3. Place tray on center knob and turn tray until it locks in place. (The tray will turn underneath the center knob)</li></ol>
 <p>Attach mount to tripod using Azimuth Lock Screw. (For a Cube-II E or G mount)</p>	 <p>(For a Cube-II A mount)</p> <p><b>OR</b></p> <ol style="list-style-type: none"><li>1. Raise wedge plate on the tripod by turning two tilt locks;</li><li>2. Attach mount to wedge plate using supplied azimuth lock screw;</li><li>3. Lower wedge plate to its lowest position by turning the upper tilt lock upward while lightly push the mount down. Secure the mount by tightening the lower lock.</li></ol>	
	<p><b>Step 3a. Install batteries</b></p> <p>Note: you may use 8 AA batteries (Step 3) or the AC adaptor (Step 5) to operate the mount.</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><b>Step 3b.</b></p> <p>Insert 8 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>For reference: the battery pack fits in with wires on the bottom right (See arrow in photo). Use only fresh batteries. Using old or low batteries may cause error messages.</p>	

 <p>Dovetail lock knob</p>	<p><b>Step 4. Attach telescope</b>          Attach telescope to mount using dovetail lock knob (#2).  <i>(Picture shows 80mm refractor. However all scopes will attach in the same manner.)</i></p>
 <p>Plug in AC adaptor here</p>	<p><b>Step 5. Plug in hand controller and AC adaptor.</b>          Plug hand controller into either one of the two HBX ports on the mount. Next plug in AC adaptor. <i>(Or use batteries—see step 3).</i> Turn on power <i>(the red light should go on).</i></p> <p><i>At this point you can begin observing manually. Use the 4 Arrow keys (▲▼◀▶) to rotate the scope Up, Down, Left, and Right. Use the NUMBER key to change the slew rate: 1 is the slowest (1X) and 9 the fastest (MAX). (Note: The default slew speed is 64X). The next steps show you how to set up the telescope and controller for automatic slewing and tracking.</i></p>
	<p><b>Step 6. Set up telescope for auto-observing.</b></p> <p>Level the mount using the bubble on side of mount by adjusting tripod legs. The bubble should be in the middle of the circle. It is also suggested to use additional levels (such as a torpedo level) to assure precise leveling.</p>
 <p>2) Up</p> <p>1) South</p> <p>Alt lock</p>	<p><b>Step 7. Zero Position of altazimuth (AA) operation</b>          Set telescope to Zero Position.</p> <ol style="list-style-type: none"> <li>1. Position the mount so that the "SOUTH" mark is facing south (A compass may be helpful);</li> <li>2. The telescope tube should be pointed directly up at the zenith. If it is not perfectly straight then loosen the altitude lock to adjust telescope.</li> </ol> <p><b><i>Please refer to the on-line manual for EQ operation of a Cube II-A mount.</i></b></p>
 <p>Go2Nova™</p> <p>MENU BACK ENTER</p>	<p><b>Step 8. Main Screen</b>          For models with GPS: Wait for controller to display "OK" in top right corner—not "ON". GPS provides latitude, longitude, and current time only.</p> <p><i>Continue to step 9.</i></p>
 <p>Go2Nova™</p> <p>MENU BACK ENTER</p>	<p><b>Step 9. Set Time and Site</b>          Press the MENU key once.          Scroll (with the ▲/▼ keys) to "Set Time and Site" menu and press ENTER.</p>





**Step 10. Set Time and Site (Cont.)**

Use the ◀ or ▶ key to move the cursor. Use the number key to change the date and time in first line.

The second line is for setting time zone information (*add or subtract 60 minutes (Min.) per time zone*). For example:

- New York/Boston is UTC - 300 Minutes
- Los Angeles is UTC - 480 Minutes
- Rome is UTC + 060 Minutes
- Sydney is UTC + 600 Minutes

Use ▲/▼ key to adjust the DST (Daylight Saving Time) to “Y” if during the DST. Change to “N” when it is end.

*GPS will provide the longitude and latitude information when satellites are locked (GPS OKed). If GPS is not included (or available), these values can be manually entered here (lines 3 and 4).*



**Step 11. Select and Slew to an object**

Press Menu button.  
 Scroll to “Select and Slew”  
 Press ENTER.



**Step 12.**

Select a category (ex. “Solar System”) by scrolling with the arrow keys.  
 Press ENTER.

Then select an object (ex. “Moon”) by scrolling with the arrow keys. Press ENTER.

The telescope will automatically slew to the object and lock on. It will automatically begin to track once it locks on to the object.



**Step 13. Sync to Target** (*Use this to center and synchronize the object selected in Step 12*).

Press MENU. Scroll to “Sync. To Target”. Select the target you would like to Sync to and press ENTER.

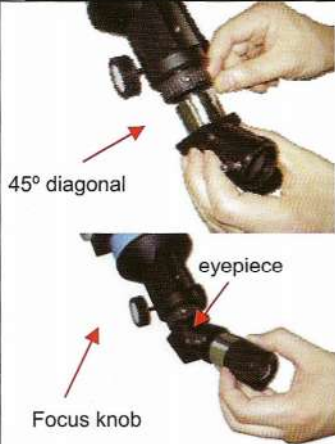
Next use the arrow keys (▲▼◀▶) to center the object in the eyepiece. Then press ENTER again to synchronize the object with the memory.

To slew to other objects simply repeat steps 11 and 12. You do not need to repeat step 13 except for adjustments as needed.

*(Refer to the full online manual for 1-star and 2-star alignments. Sync to Target is similar to 1-star Alignment except that you choose the object to align to.)*

This page shows specific instructions for the 80mm Refractor, 114mm Newtonian, and the 90mm Maksutov (depending on which telescope tube your unit may come with).

### 80mm Refractor (#8502 and #8802)

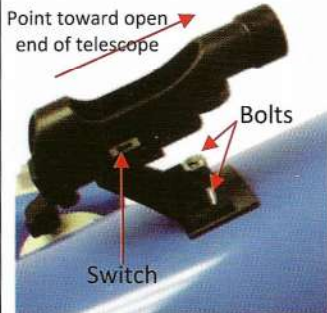


**Insert 45° diagonal:** Insert the diagonal into the eyepiece side of the telescope. Tighten the thumbscrews to a firm feel only.

**Insert the eyepiece:** Slide the eyepiece into the open end of the diagonal. Tighten the thumbscrews to a firm feel only. Remove the dust cover from the other end of optical tube assembly.

**Use the focus knob** to bring objects into focus. You may need to turn the focus knob quite a few turns to focus your telescope for the first time. Always start observing using a low power eyepiece (such as a 25mm eyepiece) to get a nice wide field of view. Later you can change to high power if so desired. Higher powered eyepieces have a much narrower field of view. So it's more difficult to initially locate objects using higher powered eyepieces.

### 114mm Newtonian (#8503 and #8803)



Attach the red dot finder scope to the telescope tube (#1):

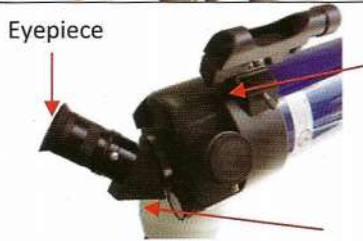
First remove the two washers on the tube. Then place the finder scope onto the two bolts and re-attach the washers securely. The finder scope should face towards the open end of the tube (see arrow in diagram).

Turn on the beam using the switch on the side. (*note: you may need to remove the plastic insulation placed next to the battery underneath*)

### 90mm Maksutov-Cassegrain (#8504 and #8804)



Install **Diagonal** by screwing it onto the back end of the scope. You can adjust the position of the diagonal by loosening the free-spinning threader on the diagonal.



Install the **Finderscope** by sliding the dovetail plate onto the sleeve (see arrow) and tightening the side screw.

The **eyepiece** can be placed on the end of the scope or on the side (see next step). Secure the eyepiece using the side screw.

Use the **focus knob** to adjust the focus.



This picture shows the **eyepiece on the side**. Remove the protective cap to insert the eyepiece. The diagonal is not used for side viewing.

Use the **flip switch** to flip the internal mirror to view from the side or the end of the scope.