

Re: First use of Intelliscope

Source: <http://sci.tech-archive.net/Archive/sci.astro.amateur/2005-12/msg02018.html>

- *From:* Phil Wheeler <w6tuh-ng7@xxxxxxxxxx>
 - *Date:* Fri, 23 Dec 2005 03:48:03 GMT
-

Joe S. wrote:

Set up my new XT-12 tonight and plugged in the Intelliscope -- worked exactly as advertised after one problem, which was attributable to assembler error (I screwed up when I assembled the Dob base).

The Orion Intelliscope has two encoders, altitude and azimuth, that are driven by wheels that are turned by the action of the base as it rotates in azimuth and by the OTA as it moves in altitude.

Alignment is simple.

```
-- Plug in and turn on the handheld controller. It tells you
to point the scope vertical.
-- Point the OTA vertical then hit ENTER. ( In the assembly
process you insert a vertical stop knob and adjust it by
laying a carpenter's level across the top of the tube then
adjust the vertical stop knob until the OTA is vertical when
it's against the knob. )
-- Controller then tells you to pick the first alignment star.
Scroll through a list of stars and find one -- do not hit
ENTER -- instead, move the scope so the star is centered in
the eyepiece, then hit ENTER.
-- Controller tells you to pick the second alignment star.
Scroll through a list of stars and find one -- do not hit
ENTER -- instead, move the scope so the star is centered in
the eyepiece, then hit ENTER.
-- Controller then runs a calculation and tells you how close
your alignment is -- mine was 0.2, which is supposed to be
very good. The controller manual explains the algorithm -- I'm
too impatient to read it.
-- Select an object in the controller and hit ENTER. The
controller then displays the name of the selected object and
two numbers -- altitude and azimuth -- with an arrow next to
each number indicating which direction the OTA needs to move.
-- Move the OTA in the direction of the arrows -- left, right,
```

Re: First use of Intelliscope

up, down -- until both alt and az numbers are at 0.0, look through the eyepiece, and there it is.

On my first try, it didn't work -- azimuth numbers did not change, telling me the encoder was not functioning. The troubleshooting guide said first thing to do is check the bolt that holds the top baseplate to the bottom baseplate -- if it's not tight enough, encoder will not engage. It wasn't tight enough -- cranked down on it with the wrench, went through the alignment process again, and it worked fine.

Alignment stars are supposed to be 60 degrees apart -- I picked Aldebaran and Rigel, not exactly 60 degrees apart -- and my first target was M31 -- which was in a far part of the sky from the alignment stars -- Orion warns you that if you align in one part of the sky then go far away the alignment may slip a bit. When the numbers on the controller went to 0.0 for alt and az, M31 was in the edge of the finder scope, not in the eyepiece, but that was close enough.

I then went to M43, which was in the same part of the sky as the alignment stars. After pushing the scope to the 0.0 point, M43 was in the FOV of a 10mm Radian (150X). Went to M45, dead center.

Thanks for the run-down, Joe. I've speculated on how the I'scope worked, but never seen such a good description.

Sounds like you have a winner on your hands!

Phil

.