INSTRUCTION MANUAL

Orion GoScope™ II 70mm Refractor

#11044

Orion Quick Start Assembly & Operating Guide

Thank you for your purchase of an Orion 70mm GoScope II. Use these quick instructions to get started in a high-powered exploration of the world around you and into the depths of Outer Space! More learning materials, including monthly sky maps, can be found in Orion's Learning Center including articles on observing the planets and locating Deep Sky Objects. Also see the support page for the GoScope II on Orion's website for updates and tips.

SOLAR WARNING: Never Use the GoScope II, or its finderscope, to look at the sun without a proper safe solar filter. Using a telescope or binocular to observe the sun may cause instant eye damage or blindness. Use under appropriate adult supervision.

Components

- Dust Covers
- Objective Lens (70mm diameter and 400mm focal length)
- Focus Knob
- Focus Drawtube
- 45 Degree Diagonal
- Eyepiece (two included: a 20mm and a 10mm); also called an ocular
- Tripod Adaptor Block (on telescope)
- Tripod Adaptor Screw (on tripod)
- Tripod Pan-Tilt Handle & Up-Down (or Tilt) Locking Screw
- Tripod Center Column (adjustable height)
- Tripod Legs (adjustable height)
- Center Column Locking Screw
- Tripod Leg Cam Locks
- Azimuth (Left-Right) Locking Screw
- Backpack

Assembly

Step 1: Unpack Your GoScope

Figure 1: Unpacked; save the lens caps and packaging.

ORION
TELESCOPES & BINOCULARS
AN EMPLOYEE-OWNED COMPANY

Corporate Offices: 89 Hangar Way, Watsonville CA 95076 - USA
Toll Free USA & Canada: (800) 447-1001
International: +1(831) 763-7000
Customer Support: support@telescope.com

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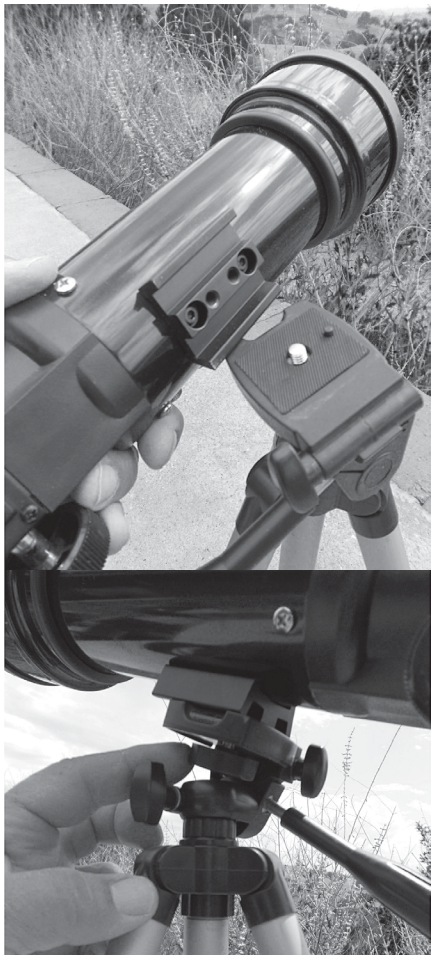
Step 2: Deploy the tripod.

Step 3: Attach the optical tube assembly to the tripod.



Step 4: Attach the finderscope to the optical tube assembly.

Step 5: Insert the 45-degree diagonal.

Step 6: Put the 20mm eyepiece in the diagonal.

Step 7: Remove dust caps – on finder, the main telescope and eyepiece.

Step 8: Point the telescope towards a distant object; while looking through the eyepiece, turn the focus knob to adjust focus.

Step 9: Align the finderscope.

Step 10: Start looking!!!

Operation

Step 1: Set the scope & tripod outdoors and check the alignment of the finderscope (if just assembled)

Step 2: Adjust the tripod to a convenient height

Step 3: Start with low power

Step 4: Aim your GoScope (see below for target selections)

Loosen the tripod controls and look along the side of the tube to point the objective lens toward the direction or objects you want to view. Retighten to keep the target in the field of view.

Step 5: Focus!

Step 6: Change power if needed

The 25mm eyepiece is for wide angle/low power viewing. This eyepiece will give you the brightest view. It delivers 20x power.

The 10mm eyepiece is for close-ups of moon and planets, after you find them with the wide angle eyepiece. The 10mm eyepiece delivers a 40X power view… but things are four times dimmer.

Observing Tips

What Can You See?

The Orion GoScope II is equipped with the optics to give you a "correct-image" view, similar to what you can see with binoculars. Because of this, the GoScope II is an excellent terrestrial telescope for looking at objects on the ground – so try it out first during the daytime to acquaint yourself with its operation!

For astronomy you can see hundreds of craters on the Moon, the four major moons of Jupiter, the major cloud bands on Jupiter and the rings of Saturn. When Mars is in the sky, you'll be able to see its form, but surface details are likely too faint and small to see in this telescope. If you take the GoScope II to a location away from city lights (the darker, the better) a telescope of this size can show you a lot! For example, most of the "M-Objects" or Messier objects can be found with this telescope – you'll need a star map and patience, but this scope can show you Open star clusters (Examples – M7, M6, M11, M45); Globular star clusters (Examples – M13, M22, M5, M3); Gaseous Nebulas (Examples – The Orion Nebula M42, The Lagoon Nebula M8) and other galaxies outside our Milky Way (Examples – The Andromeda Galaxy M31; The Sculptor Galaxy NGC 253; M81 & M82).

Best Targets

Best targets for city users:

- Daytime, terrestrial views
- The Moon
- Venus
- Jupiter
- Saturn

Best targets for rural users (everything above, plus):

- The Great Nebula in Orion – a spectacular glowing cloud of gas in Orion's sword; this is a "stellar maternity ward," a place where new stars are forming.
- The Summer Milky Way – the GoScope is well suited to scanning the Milky Way to "discover" dozens of star clusters.
- The Pleiades (M45) – a bright open star cluster
- The Andromeda Galaxy (M31) – the brightest external galaxy
- The Double Cluster in Perseus
- M11, M6 & M7 – three bright, summer star clusters
- The Beehive Cluster – A big, open star cluster in the spring sky
- The Great Cluster in Hercules M13 – a wonderful globular star cluster, spring & summer
- M22 – another grand globular star cluster in Sagittarius, a summer constellation

How Do I Change the Power?

The power of a telescope is calculated by dividing the focal length of the telescope by the focal length of the eyepiece.

Example: For a GoScope II the focal length of the telescope is 400mm, so a 10mm eyepiece gives you 400/10 or 40 Power.

Where Can I Use My GoScope?

Terrestrial viewing: Anywhere you can take it! The 70mm GoScope II is a powerful "spotting" scope or terrestrial telescope that is more powerful than binoculars to give you real close-ups.

For best results, DO NOT VIEW OUT WINDOWS. The glass in a window is approximately 1000 times less accurate than the optics of your GoScope – so it will soften your views, and things will seem to be slightly out of focus. If you must view through a window, use the lowest power available.

For nighttime, astronomical viewing: Again, use the GoScope anywhere, but if you want to see objects outside our solar system ("Deep Sky Objects") you need to get away from city lights. We know this isn't practical for many people most of the time, but that's why the GoScope is made to be so portable – take it with you on vacation or to a remote "star party."

We cannot stress enough: you can see lots of deep sky objects with a GoScope 70, but you need to use it away from city lights. By away from city lights, we mean, if possible someplace where the summer milky way is visible. At Orion's headquarters in Watsonville, CA, that means an hour drive to a remote location to fully test a telescope.

How Do I Find Objects In The Sky?

You wouldn't be able to find a new city without a map, so how do you find a new object in the sky? Use a star map, usually called by astronomers a "star chart." The software included with the GoScope has plenty of ways to generate maps of all levels of details to find targets in the sky. To find an object, first locate it on the map and note its position to several bright

stars. Then find the bright star with your unaided eye and "hop" from star to star to where the object should be located.

We also recommend you check out Orion's Learning Center for videos and articles on how to find objects in the sky and how to use star charts and planispheres (low resolution sky maps that show the entire sky at once).

Another great way to learn your way around the sky and how to use a telescope is to attend a star party held by local amateur astronomy clubs. If you are serious about getting started on the right foot attend a couple of meetings of your local club, there are usually many people eager to help newcomers learn their way around the sky. Contact local planetariums to find what clubs are located near you.

One-Year Limited Warranty

This Orion product is warranted against defects in materials or workmanship for a period of one year from the date of purchase. This warranty is for the benefit of the original retail purchaser only. During this warranty period Orion Telescopes & Binoculars will repair or replace, at Orion's option, any warranted instrument that proves to be defective, provided it is returned postage paid. Proof of purchase (such as a copy of the original receipt) is required. This warranty is only valid in the country of purchase.

This warranty does not apply if, in Orion's judgment, the instrument has been abused, mishandled, or modified, nor does it apply to normal wear and tear. This warranty gives you specific legal rights. It is not intended to remove or restrict your other legal rights under applicable local consumer law; your state or national statutory consumer rights governing the sale of consumer goods remain fully applicable.

For further warranty information, please visit www.OrionTelescopes.com/warranty.

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Corporate Offices: 89 Hangar Way, Watsonville CA 95076 - USA
Toll Free USA & Canada: (800) 447-1001
International: +1(831) 763-7000
Customer Support: support@telescope.com

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