

# INSTRUCTION MANUAL

## Orion CC18 Counterweight Carrier

#10146



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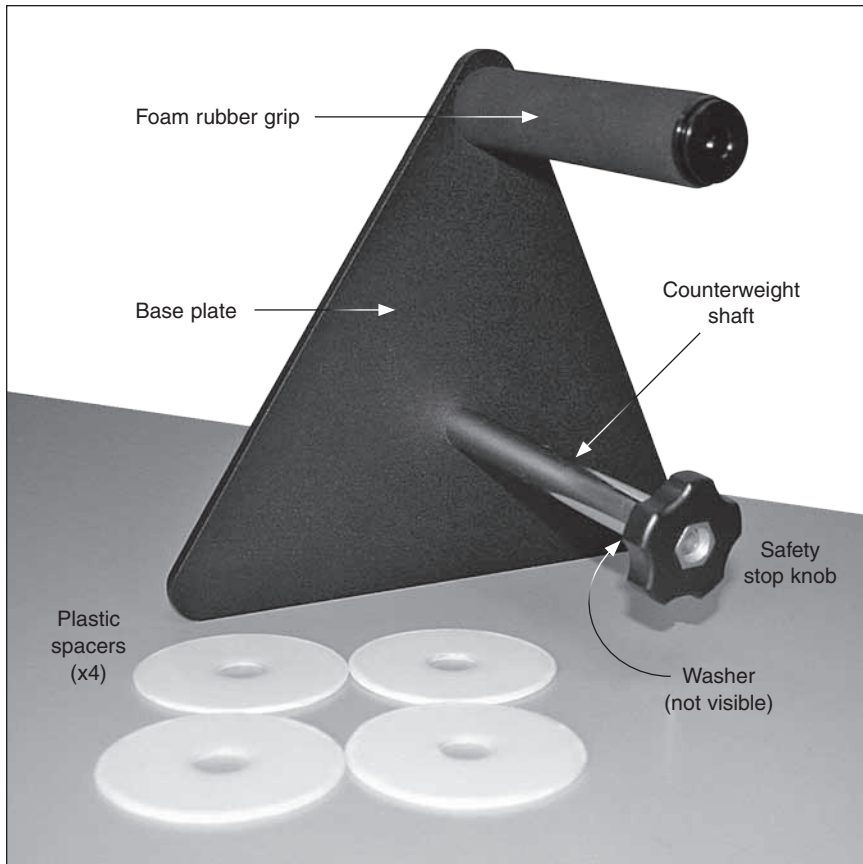
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**Figure 1.** Parts of the CC18 Counterweight Carrier

The Orion CC18 Counterweight Carrier is designed to make it easy to carry multiple telescope counterweights to and from your observing or imaging location, and to provide neat, organized storage of them between sessions. The CC18 Counterweight Carrier has an 18mm-diameter counterweight shaft designed to hold up to three Orion 11-lb. counterweights for Atlas, Atlas Pro, or Sirius mounts. It can also hold most any other size or brand of counterweight having an 18.5mm - 26mm center bore.\*

\* This assumes that for counterweight bores larger than 18mm, the lock bolt can protrude far enough into the bore to tighten against the Carrier's 18mm-diameter shaft.

## Parts of the CC18 Counterweight Carrier

Make sure all parts in **Figure 1** are present. If something is missing, call Orion Technical Support at 800-676-1343, or send an email to support@telescope.com.

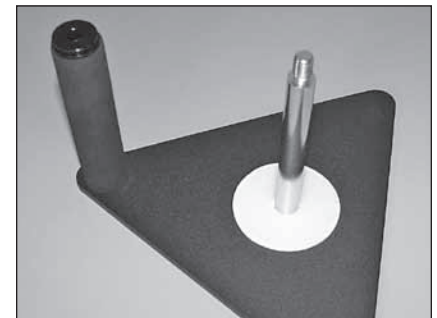
## Using the CC18 Counterweight Carrier

The Counterweight Carrier is pretty simple to use. Here's the rundown:

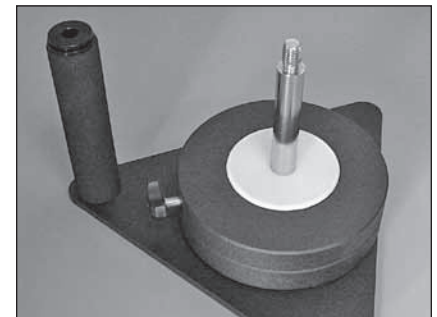
1. Set the Counterweight Carrier on the ground as shown in **Figure 2**.
2. Remove the safety stop knob.
3. Slide a plastic spacer onto the shaft as far as it will go (**Figure 3**). (Or, if all four spacers are already on the shaft, remove all but one of them.)
4. Slide a counterweight onto the shaft until it contacts the plastic spacer. Orient the counterweight so its lock knob is positioned no more than 120 degrees rotationally from the Carrier's handle (**Figure 4**). This will ensure that the knobs will not contact the ground, and potentially break, should the loaded Carrier be set on the ground in the horizontal orientation. (See Step 9 for how to properly set the Carrier on the ground!)
5. Tighten the counterweight's lock knob so that the counterweight cannot rotate freely. If it can rotate freely the knob may swing downward when the Carrier is



**Figure 2.** Loading counterweights onto, and removing counterweights from, the Counterweight Carrier is best done with the Carrier in this orientation.



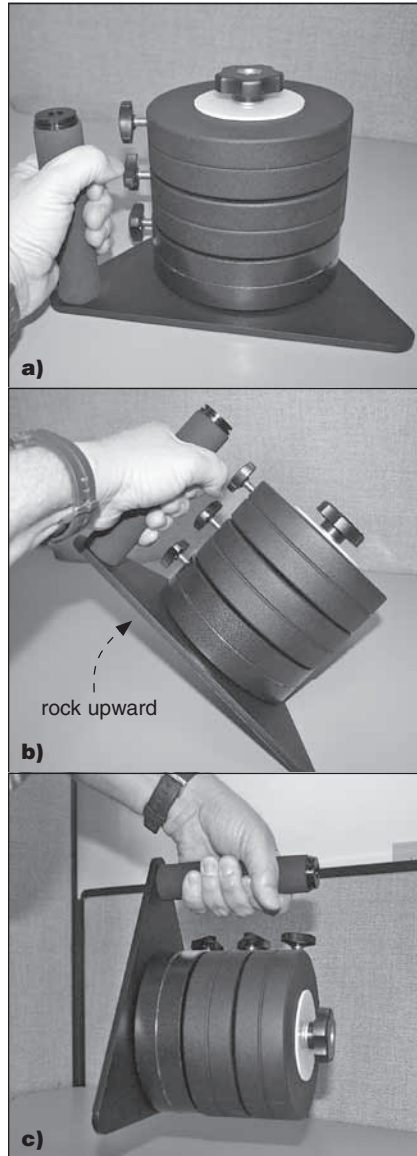
**Figure 3.** Place a plastic spacer on the shaft to keep the first counterweight from rubbing against the base of the Carrier. Place a spacer between each counterweight to prevent them from direct contact with each other.



**Figure 4.** Tighten each counterweight's lock knob onto the Carrier's shaft to prevent the knob from swinging downward when the Carrier is lifted and carried.

lifted, and could then be damaged under the weight of the loaded Carrier if it is placed on the ground in the horizontal position.

6. If using more than one counterweight, slide another plastic spacer on followed by the counterweight. When all the counterweights are installed, there should be a plastic spacer separating the first counterweight from the triangular base plate, and spacers between each of the installed counterweights. This ensures that there will be no metal-to-metal contact that could mar the surface finish of your counterweights.
7. Place any remaining plastic spacers on the shaft, then (very important!) screw on the safety stop knob.
8. To lift the Counterweight Carrier, grasp the padded handle (**Figure 5a**) and rock the carrier upward on the edge of the triangular base plate (**5b**). When the base plate is nearly – but not quite! – vertical, lift the Carrier off the ground into the horizontal carrying position (**5c**). In this way the counterweights will not actually touch the ground.
9. To set the counterweight-loaded Carrier on the ground, or on the floor of a car for transport, simply reverse the motion of Step 8 by placing the bottom edge of the triangular base plate on the ground at an angle so that the counterweights do not touch the ground. Then rotate the plate so it rests flat on the ground, with the counterweight shaft pointing up.



**Figure 5.** To lift the Counterweight Carrier, **a**) grasp the padded handle and **b**) rock the base plate upward until nearly vertical, then **c**) lift the Carrier off the ground to the horizontal carrying position in a continuous motion. Shown with three Orion 11-lb. counterweights.

**CAUTION:** When transporting the loaded Counterweight Carrier in a vehicle, we recommend setting it in the vehicle with the triangular base plate down, as in Figure 5a. But be aware that the Carrier could slide laterally in transit, so be sure to isolate it from other equipment to prevent possible damage from inadvertent contact.

## Specifications

Dimensions:	9-3/8"H x 10-1/2"W x 6-1/2"D
Base plate material:	Steel with black powder coat, 6mm
Handle:	Steel, welded to base plate, foam padding
Counterweight shaft:	Steel, welded to base plate, chrome finish; 136mm length
Carrying capacity:	>50 lbs.
Plastic spacers (x4):	80mm diameter, 2mm thickness
Weight:	4.8 lbs.

**WARNING:** Never look directly at the Sun with the naked eye or with a telescope – unless you have a proper solar filter installed over the front of the telescope! Otherwise, permanent, irreversible eye damage may result.

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## **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](http://www.OrionTelescopes.com/warranty).



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