



The Omegon® Smartphone Adapter

Congratulations on the purchase of the new Omegon® Smartphone Adapter. This adapter was designed for afocal astrophotography using a telescope's eyepiece. It is compatible with most standard 1.25" eyepieces and the vast majority of modern smartphones (from 47mm up to 75mm width). For a detailed list of compatible smartphones please check online. The supplied eyepiece adapter bracket is compatible with eyepieces with a 34mm to 37mm body diameter. Most standard 1.25" eyepieces are compatible with this eyepiece bracket.

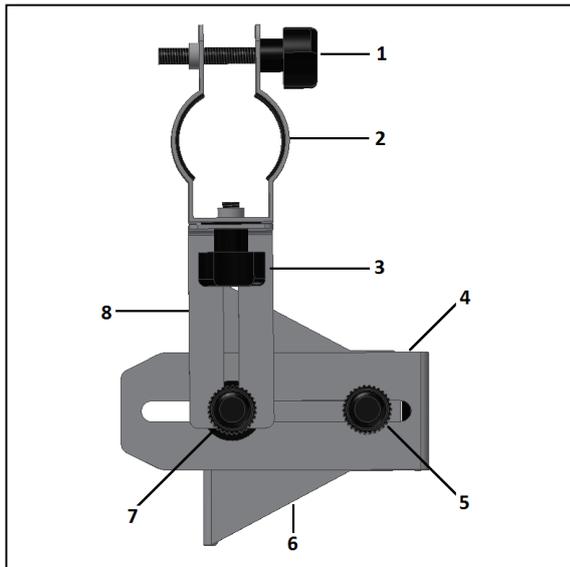


Figure 1. Part list.

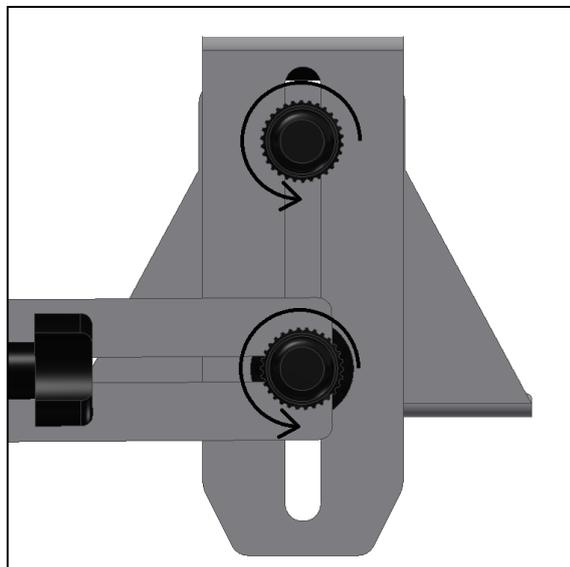


Figure 3. Release the two fixing thumbscrews.

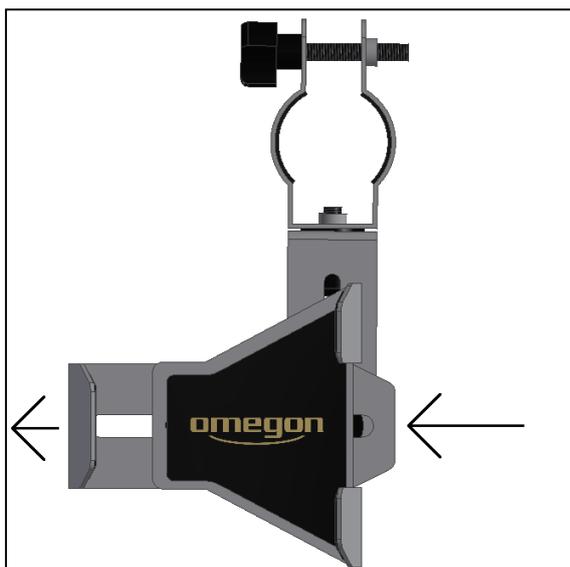


Figure 2. Release the slider.

1. How does afocal photography work? The telescope's eyepiece outputs a magnified image circle from the object. The image can be photographed when the smartphone's camera is precisely centred with the image's circle. The Omegon Universal Smartphone Adapter is used not only to fix the smartphone to the telescope's eyepiece, but also to centre the smartphone's camera with the eyepiece. Thus, use the smartphone as a capture device or as a big display to show the planets or the Moon to family and friends.

2. Parts description

- | | |
|--|--------------------------|
| 1 - Eyepiece bracket fixing thumbscrew; | 2 - Eyepiece bracket; |
| 3 - Eyepiece bracket fixing thumbscrew; | 4 - Smartphone's slider; |
| 5 - Smartphone's slider fixing thumbscrew; | 6 - Smartphone's base; |
| 7 - L-bracket fixing thumbscrew; | 8 - L-bracket. |

3. Getting started.

3.1. How to install the smartphone device?

Release the Smartphone's and L-bracket fixing thumbscrew (#5 and #7) – figure 2. Slide the Smartphone slider - #4 out, so there is enough space to place the Smartphone on the Smartphone's base – figure 3. Make sure that the back of the smartphone is in contact with the Omegon's branded rubber – figure 4 – and that the smartphone's height is adjusted on the base (centred). The smartphone's slider should not touch the device's lateral buttons (please refer to the appendix). Push the slider – figure 5. Put pressure on both sides of the slider – figure 6 - and the smartphone base with one hand and at the same time retighten the smartphone's slider fixing thumbscrew (#5) – figure 7. The device should now be well tightened and centred and should not move in relation to the smartphone's base.

3.2. How to fix the eyepiece? Choose a standard eyepiece (not supplied) with a medium to long focal length



Figure 4. Install the device on the base.

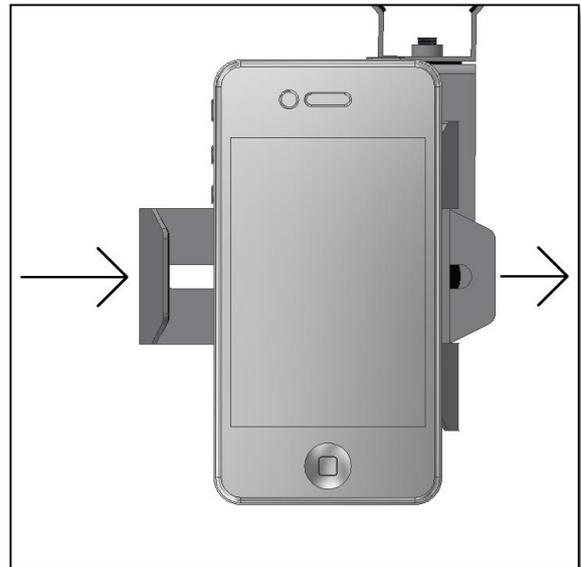


Figure 5. Slide the smartphone's slider.

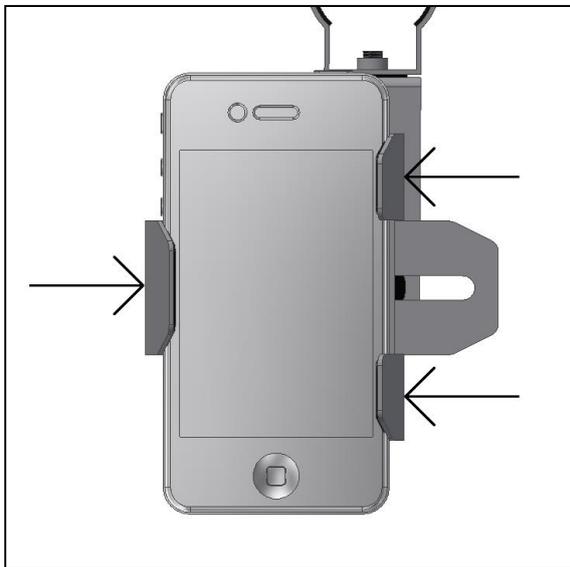


Figure 6. Apply pressure to both sides and hold.

(20mm to 40mm) and remove the eyepiece's rubber guard if there is any. Make sure the eyepiece's body diameter does not exceed the required specifications (see the beginning of this document). Release the eyepiece's bracket fixing thumbscrew - #1 - and insert the eyepiece - figure 8 - so that the lens side faces the device's camera. Centre the eyepiece's body on the bracket in order to give maximum grip to the eyepiece – figure 9 – move the eyepiece up and down, if necessary, and fasten thumbscrew. The eyepiece's lens should match the smartphone's camera and should be centred with it – figure 10 – look at the device's screen. The background will be dark and a lighted disc will show up on the screen. Centre this circle in the screen as shown in figure 13. This is of the utmost importance to get optimal performance. Make sure now to secure the eyepiece in position, adjust brackets if needed - figure 11 and 12 - and tighten the thumbscrews.

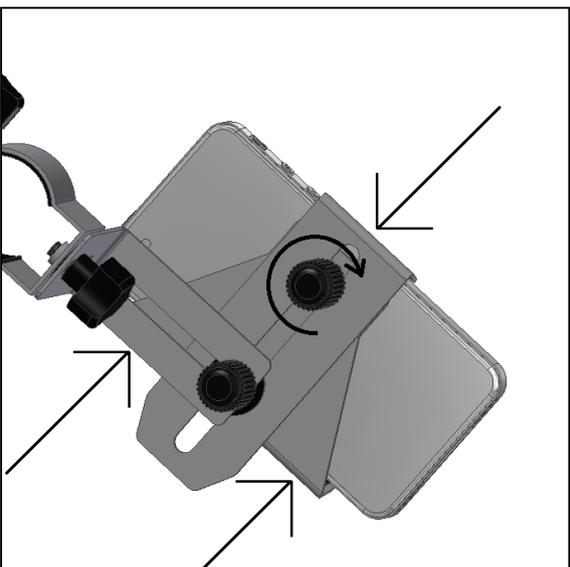


Figure 7. While applying pressure, fix the thumbscrew.



Figure 8. Release thumbscrews to insert eyepiece.



Figure 9. Centre eyepiece body and fasten thumbscrew.

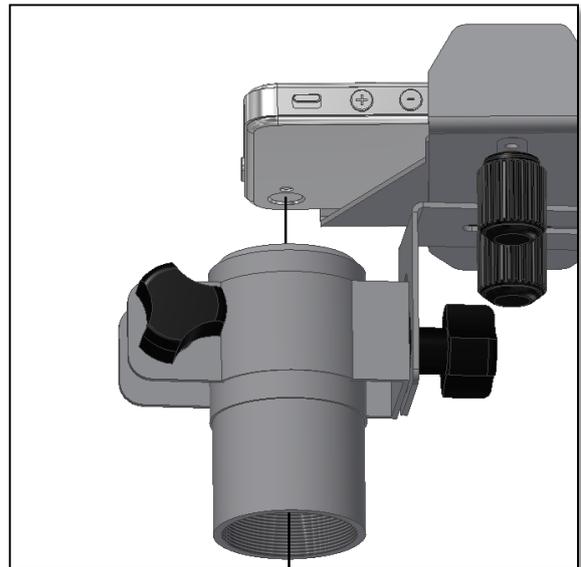


Figure 10. Align device's camera and eyepiece.



Figure 11. Rotate and slide bracket to centre eyepiece.

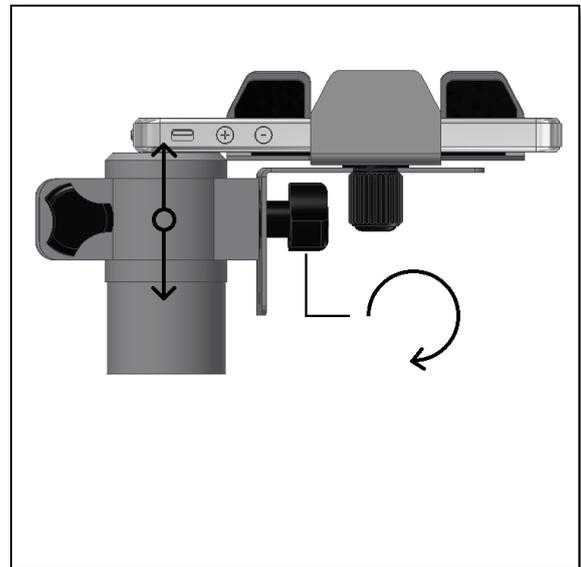


Figure 12. Move bracket up and down to position the eyepiece. Fasten thumbscrew to hold in position.



Figure 13. Switch on device and centre the image circle.

3.3. How to start taking photos? Now that the smartphone device is fixed to the Omegon's smartphone adapter and the telescope's eyepiece is centred with the camera, you are ready to start capturing the first pictures. Attach the setup to the telescope (insert the eyepiece in the diagonal or the focuser – figure 14). Make sure to securely tighten the screws, so that the smartphone adapter and the smartphone do not fall – figure 15. Use the telescope's focus knob to adjust the focus – do this during daytime to familiarize yourself with the capture procedure – point to a distant tree or a church tower, for example. A sharp object's image will start to appear on the device's screen. You are now ready to press the device's shoot button.

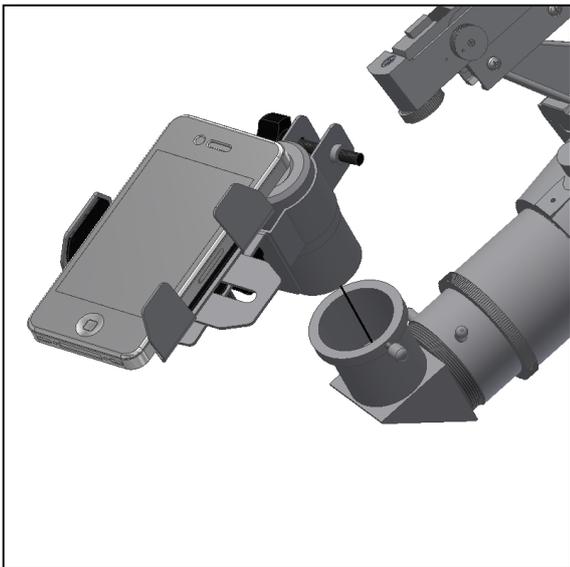


Figure 14. Insert eyepiece in the telescope focuser.

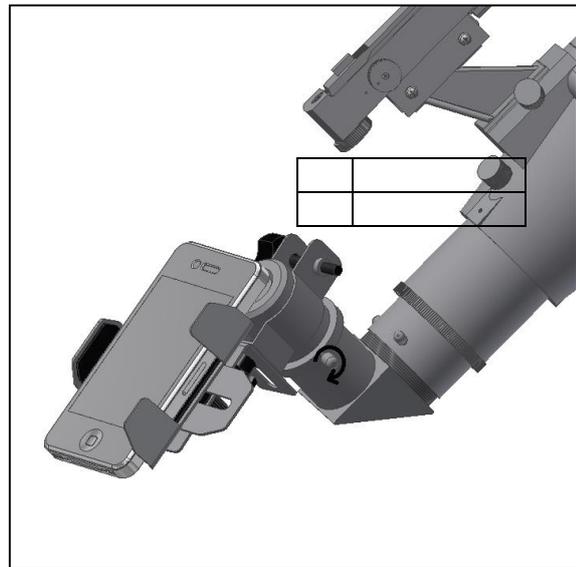


Figure 15. Tighten all fixing screws well.



Figure 16. Point to object and focus.



Figure 17. Rotate bracket, if necessary.

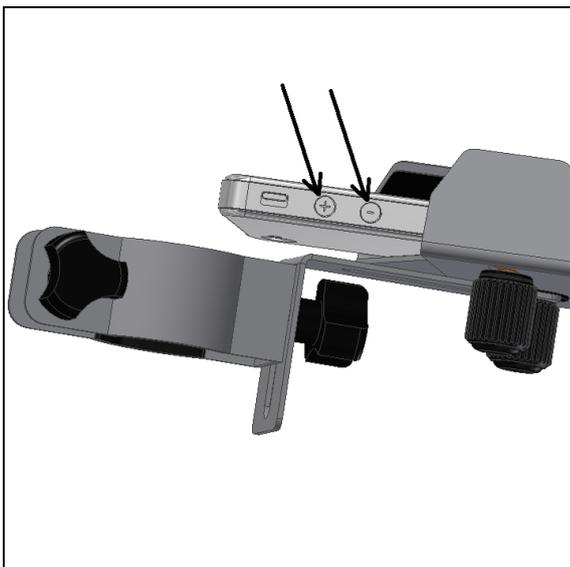


Figure 18. Avoid compressing side buttons. Rotate bracket to avoid this.

Technical Appendix

- A.** If necessary, rotate the smartphone adapter bracket in order to avoid squeezing the device's side buttons – figure 17 and figure 18 - when installing the smartphone to the adapter.
- B.** If you want to use 2" eyepieces, there is a special adapter available. Please contact our customer service.
- C.** To avoid shaky images, we recommend getting a photo app for Android or iOS. These apps allow to get several functions not originally available with most smartphones. They include burst, delay and even long exposure functions. These functions are a plus when capturing images with a smartphone device. For example: delay avoids blurred images while burst allows to capture several images in a sequence without touching the smartphone.