Galileo®

SMART PHONE ADAPTER

#G-SPA









Cosmo Brands Inc.

www.cosmosoptics.com

How to use your G-SPA Smartphone Adapter

The G-SPA can be used with your Telescope,Binoculars, Microscope Spotting Scope, etc.,to take pictures or video using your smartphone's camera, or to enable your smartphone for telescope navigation.*

1. Parts and Functions

Knob A: This knob opens and closes the clamp that secures the G-SPA to your eyepiece (for photography and video) or to the focuser base of your telescope(for navigation).

Knob B: This knob opens and closes the clamp that secures your smart phone to the G-SPA

Knob C: In Photography mode, this knob allows centering the smartphone to your eyepiece's field of view or adjust angle of view in Navigation mode

FIG. 1.

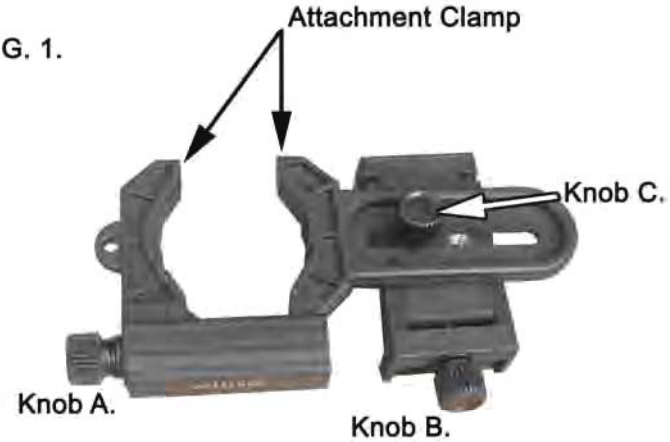
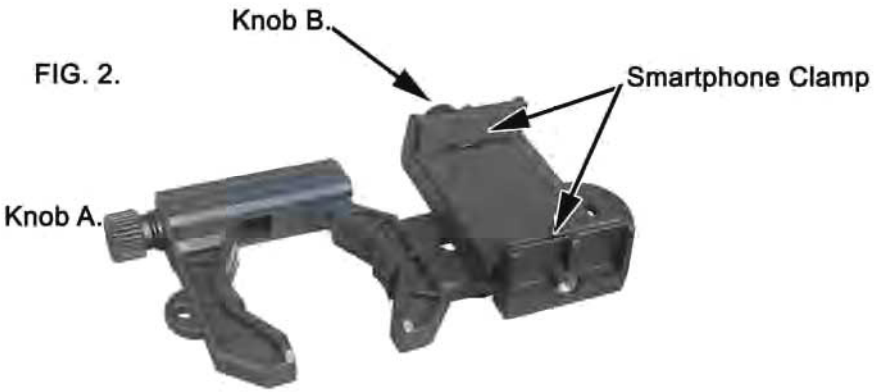


FIG. 2.



*Navigation configuration requires installation on your smartphone of a 3rd party Astronomy App, Not Included. See Page 12 for suggestions.

Attaching the G-SPA Smartphone Adapter to your Eyepiece (Telescope, Binoculars, Microscope, Spotting Scope, etc.).

Photography/Video Configuration

Step 1. - See FIG. 3.

Before starting, ensure your eyepiece is secured to the focuser and if there an eyepiece retaining thumbscrew, tighten firmly (1). Clamp the G-SPA to your eyepiece, using Knob A. to adjust the width of the Attachment Clamp to fit around the inserted eyepiece (2). Secure the G-SPA to the eyepiece by tightening Knob A. (3). Clamp firmly enough to secure the G-SPA to the eyepiece but do not over-tighten. You will be adjusting the position of the G-SPA on the eyepiece to optimize eye relief in Step 3.

NOTE: The images in this section will show the G-SPA on a telescope but the same instructions apply when using any optical device with an eyepiece that you wish to attach the G-SPA to and use your smartphone to take photos or video.

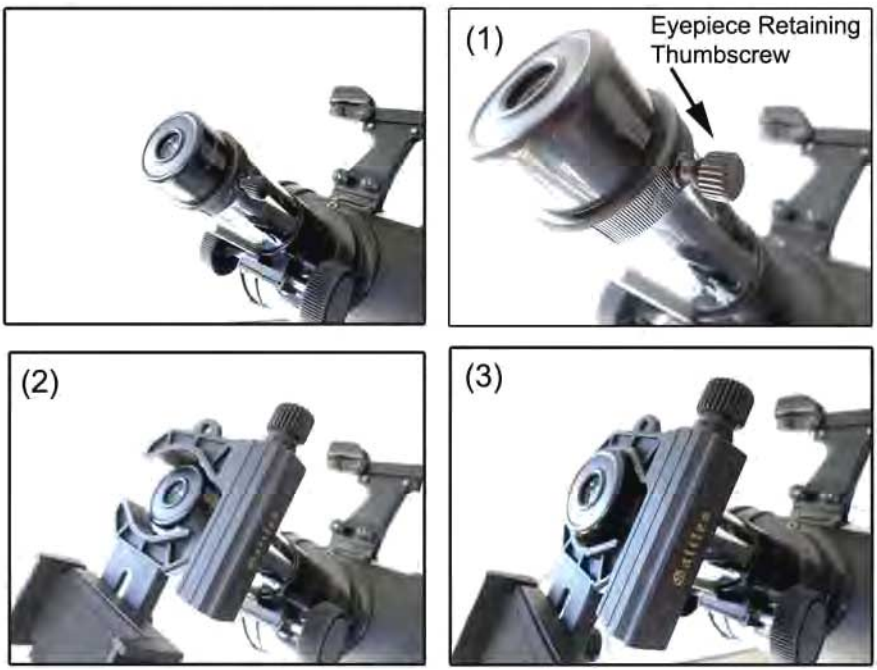


FIG. 3.

Clamping your Smartphone onto the G-SPA Adapter

Photography/Video Configuration continued

Step 2. - See FIG. 4.

The G-SPA Smartphone Adapter attached to your eyepiece should look like this **(1)**.

Position your smartphone in the cradle with the screen facing outwards to you **(2)** and using **Knob B,**open or close the the smartphone clamp cradle to accommodate your smartphone while making sure the smartphone camera lens is roughly aligned with the eyepiece, then lock Knob B tightly to prevent the smartphone from slipping and falling out.

Make sure your smartphone is securely attached and cannot slip out of the adapter. Cosmo Brands Inc. assumes no liability for damages caused by a dropped or improperly attached smartphone.

When the smartphone is secure in the cradle, enable the camera on your phone (3) then use **Knob C**. to position your smartphone so that the camera lens and the eyepiece are aligned.
Use the view on your smartphone screen as a guide (3).
To position the camera lens and the eyepiece in alignment you may need to tilt and raise/lower the smartphone cradle (4).

Clamping your Smartphone onto the G-SPA Adapter

Photography/Video Configuration continued

Step 2. - FIG. 4.

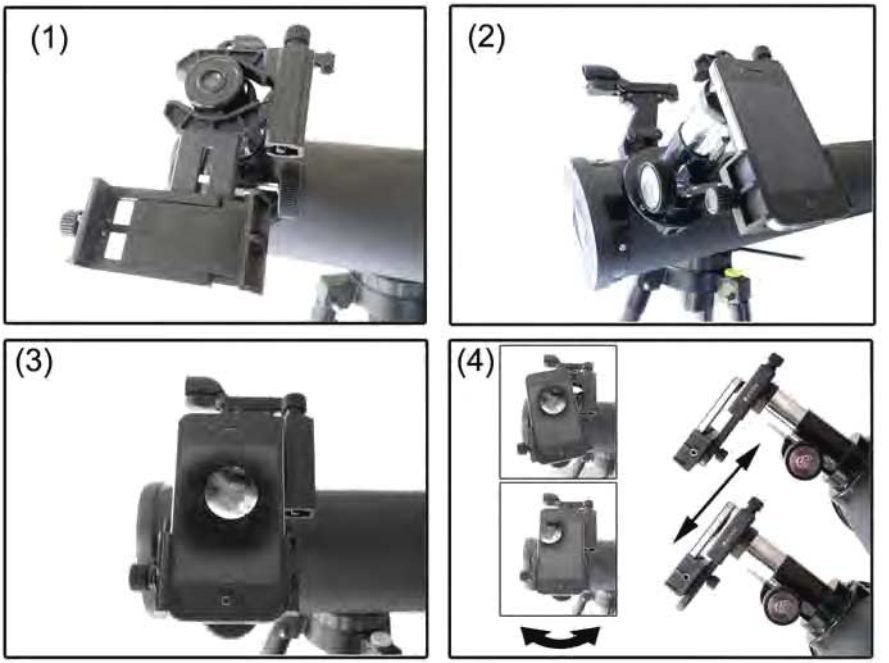


FIG. 4.

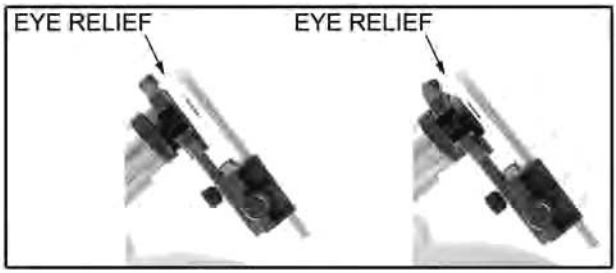
Using your Smartphone with the G-SPA Adapter

Photography/Video Configuration continued

Step 3. - See FIG. 5.

While referencing view on the smartphone, slightly loosen KNOB A and slide the G-SPA forward or back on the eyepiece, bringing your lens closer or farther from the eyepiece until the view fills your smartphone screen as much as possible. See FIG. 5. Then clamp down the G-SPA to the eyepiece by tightening KNOB A. Light shading at the edge of your image is is normal..

FIG. 5.



This may take some practice and how large an image you get on the smartphone screen is dependent on the settings on your smartphone camera (zoom, resolution, etc.) as well as the focal length and eye relief of the eyepiece in the focuser. Eye relief is the distance from the eyepiece lens to the observer's eye, or in this case, the smartphone camera lens. The distance of your target object,as well as other factors such as field of view, will also determine the size of the image on your smartphone screen.
For Telescope use, we recommend using a longer focal length eyepiece to start (20mm or 25mm for example) as you would for normal observing, then begin using a shorter focal length eyepiece (6mm or 10mm for example) as you become accustomed to using the G-SPA with your smartphone camera.

Attaching the G-SPA Smartphone Adapter to your Telescope.

Smartphone Navigation Configuration REFLECTOR TELESCOPE

Step 1. - See FIG. 6.

This section is for REFLECTOR telescopes. If you have a REFRACTOR telescope, please refer to Page 9.

By installing one of the many free astronomy apps available you can use your smartphone as a navigation guide when making astronomical observations. See Page 9 for a partial list of available 3rd party apps. We reccomend downloading, installing, configuring and testing the app you choose before using your smartphone in the G-SPA for navigation.
Begin by removing KNOB C. and separating the Smartphone Clamp from the G-SPA body. To reposition the clamp for Navigation, insert Knob C into the smartphone clamp shown in FIG 6(3), then tighten Knob C.

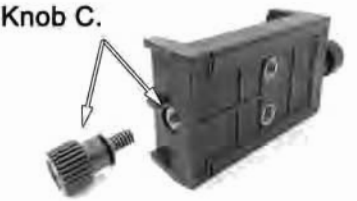


FIG. 6.

Attaching the G-SPA Smartphone Adapter to your Telescope.

Smartphone Navigation Configuration REFLECTOR TELESCOPE

Step 2. - See FIG. 7.

After setting up the G-SPA as in FIG 6., open the Attachment Clamp using **Knob A**. enough to fit over the base of the telescope focuser then slide the G-SPA onto the focuser as shown in FIG 7-1., making sure to orient the G-SPA so that access to the focusing knobs on the telescope is unobstructed (2). Tighten **Knob A.** to clamp down on the base of the focuser and secure the G-SPA. Position your smartphone in the cradle with the screen facing outwards to you **(3)**. Tighten **Knob B** tightly to prevent the smartphone from slipping and falling out. Cosmo Brands Inc. assumes no liability for damages caused by a dropped or improperly attached smartphone.

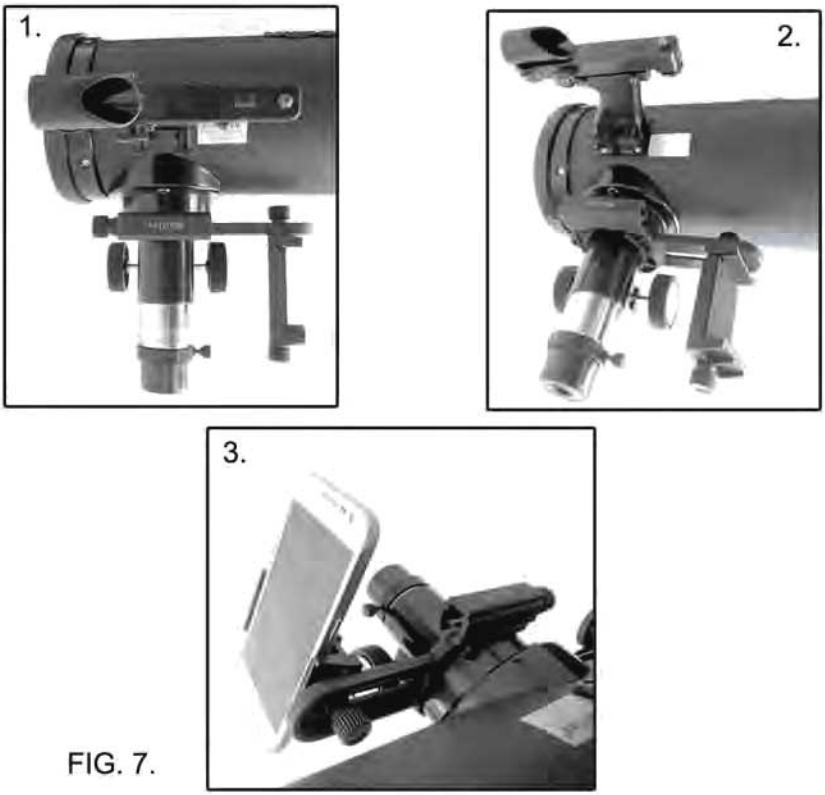


FIG. 7.

Attaching the G-SPA Smartphone Adapter to your Telescope.

Smartphone Navigation Configuration
REFLECTOR TELESCOPE

Step 2. - Continued.

Depending on which astronomy app you use*, you may want to enable your smartphone app before securing it to the G-SPA for navigation.

Now you are ready to use your smartphone display as an interactive star chart to assist in astronomical viewing.

*Navigation configuration requires installation on your smartphone of a 3rd party Astronomy App, Not Included. See Page 12 for suggestions

Attaching the G-SPA Smartphone Adapter to your Telescope.

Smartphone Navigation Configuration REFRACTOR TELESCOPE

Step 1. - See FIG. 8.

This section is for REFRACTOR telescopes. If you have a REFLECTOR telescope, please refer to Page 6.

By installing one of the many free astronomy apps available you can use your smartphone as a navigation guide when making astronomical observations. See Page 12 for a partial list of available 3rd party apps. We reccomend downloading, installing, configuring and testing the app you choose before using your smartphone in the G-SPA for navigation.
Before you start, the G-SPA should look like FIG 8.
When using the G-SPA for navigation on a Refractor telescope, there is no need to re-orient the cradle.

FIG. 8.

Attaching the G-SPA Smartphone Adapter to your Telescope.

Smartphone Navigation Configuration REFRACTOR TELESCOPE

Step 2. - See FIG. 9.

Open the Attachment
Clamp using **Knob A**. enough to fit over the base of the telescope focuser then slide the G-SPA onto the focuser as shown in FIG 9-1., making sure to orient the G-SPA so that access to the focusing knobs on the telescope is unobstructed. Tighten **Knob A.** to clamp down on the base of the focuser and secure the G-SPA. Position your smartphone in the cradle with the screen facing outwards to you **(2)**. Tighten **Knob B** tightly to prevent the smartphone from slipping and falling out. Cosmo Brands Inc. assumes no liability for damages caused by a dropped or improperly attached smartphone.

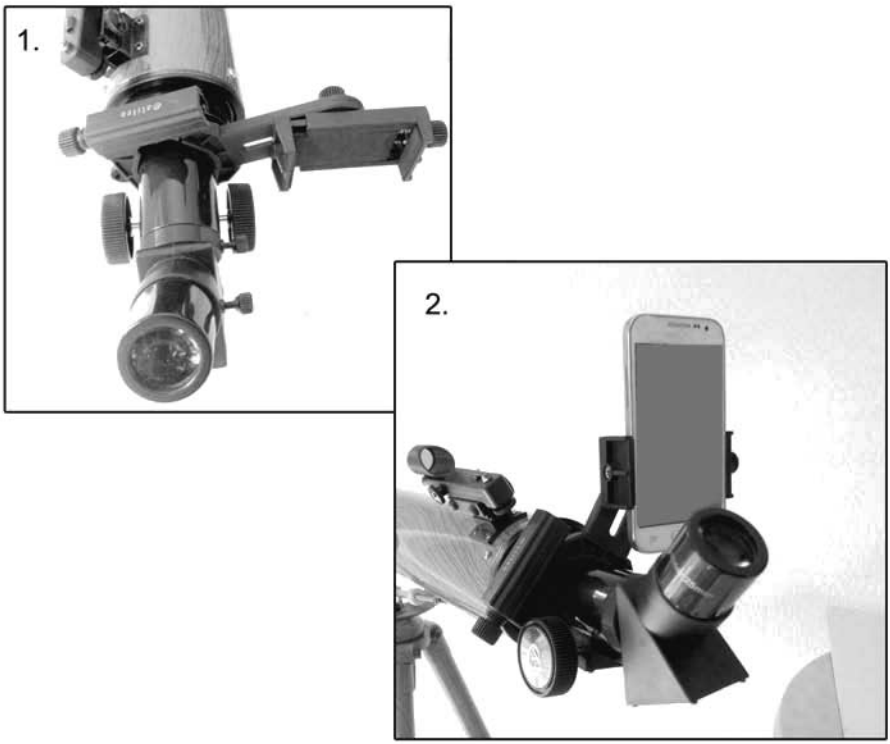


FIG. 9.

Attaching the G-SPA Smartphone Adapter to your Telescope.

Smartphone Navigation Configuration
REFRACTOR TELESCOPE

Step 2. - Continued.

Depending on which astronomy app you use*, you may want to enable your smartphone app before securing it to the G-SPA for navigation.

Now you are ready to use your smartphone display as an interactive star chart to assist in astronomical viewing.

*Navigation configuration requires installation on your smartphone of a 3rd party Astronomy App, Not Included. See Page 12 for suggestions

List of 3rd Party Smartphone Astronomy Apps

ANDROID APPS

Star Chart
https://play.google.com/store/apps/details?id=com.escapistgames.starchart

SkEye
http://lavadip.com/skeye/

Mobile Observatory
http://zima.co/

Google Sky Map
https://play.google.com/store/apps/details?id=com.google.android.stardroid

iPhone APPS

Star Chart
https://itunes.apple.com/us/app/star-chart/id345542655?mt=8

Star Walk
https://itunes.apple.com/us/app/star-walk-5-stars-astronomy/id295430577?mt=8

Star Rover
https://itunes.apple.com/us/app/star-rover-stargazing-night/id386628906?mt=8

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