# CARSON<sup>®</sup> UNIVERSAL SMARTPHONE OPTICS ADAPTER

# Instructions for use

Visit www.carson.com/universal to view our IS-100 tutorial video.



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CARSON



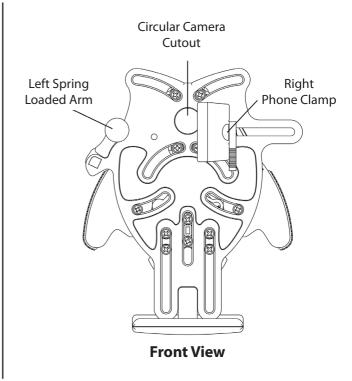
IS-100

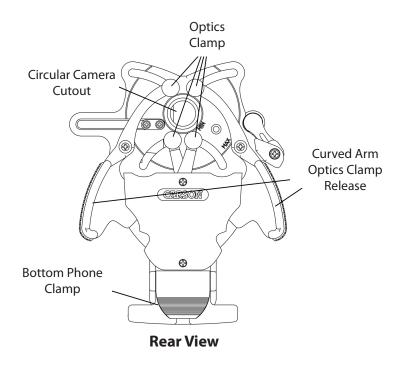
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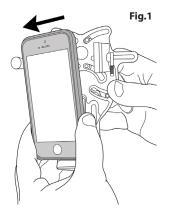
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#### **Inserting Phone**



Place phone into device as shown in Fig. 1, using left side of phone to push against left spring loaded arm.

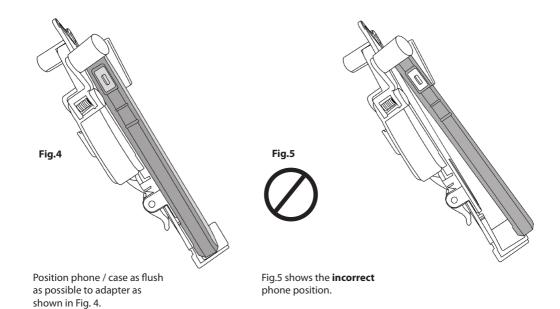


Side and bottom of phone should be flush and parallel to side/bottom clamps.

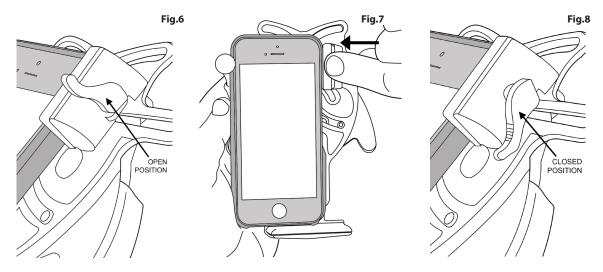


Fig. 3 shows the **incorrect** phone position.

### **Inserting Phone (cont.)**



# Align & Lock

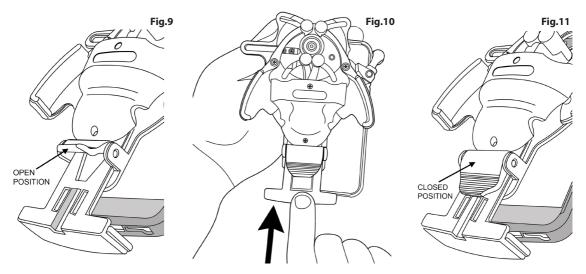


Pull side clamp up to unlock and adjust.

Center the camera with the center of the circular cutout on the back of the adapter.

Push clamp down to lock into place.

# Align & Lock (cont.)

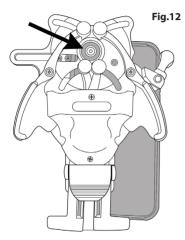


Pull bottom clamp up to unlock and adjust.

Center the camera in the circular cutout on the adapter.

Push clamp down to lock into place.

# Align & Lock (cont.)



Make slight adjustments until camera is centered in the circular cutout on the adapter (as shown in Fig. 12).

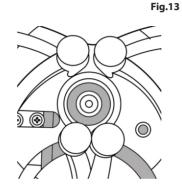
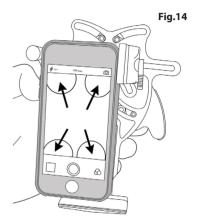
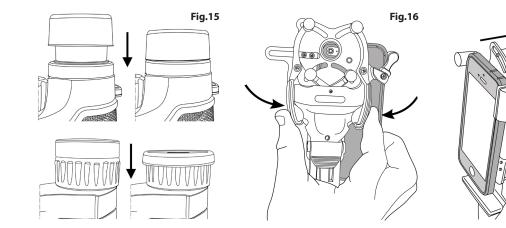


Figure 13 shows a properly aligned camera.



To make sure camera is centered properly, turn on the camera app. You should see four green circles in the outer four corners of your image as shown in Fig. 14.

# **Attaching to Optic**

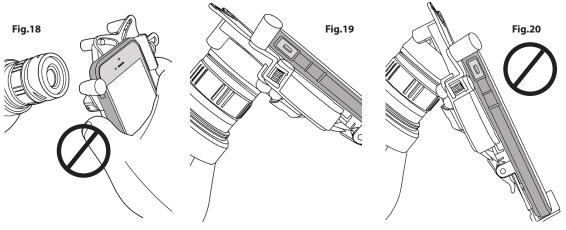


Before attaching to optic, make sure eyepiece is twisted down to lowest position. If your optic has roll down eyecups, remove eyecup completely (if possible) or roll down the eyecup before attaching adapter. Press curved arms together to open grip as shown in Fig. 16.

Once opened, insert eyepiece of optic into center of grips flush to adapter and release (see Fig. 17). The grips will hold the phone securely to the optic and centered to the camera. Make sure adapter is pushed flush to the eyepiece of your optic.

Fig.17

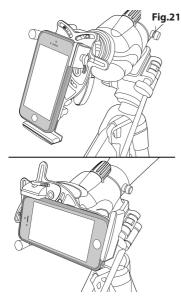
# Attaching to Optic (cont.)

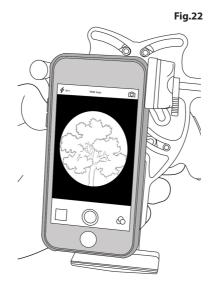


If your hand is around the phone while pressing the curved arms you may inadvertently push the camera out of alignment (see Fig. 18). Make sure adapter is flush to the eyepiece of your optic (as shown in Fig. 19).

Fig. 20 shows an adapter that is NOT flush to the eyepiece.

# Attaching to Optic (cont.)

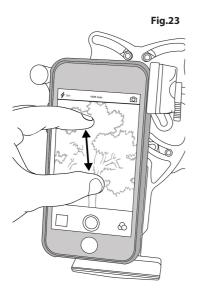




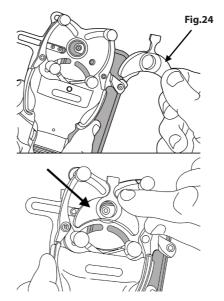
Phone can be positioned in either portrait or landscape mode as shown in Fig. 21.

Once the optic is attached and the camera is turned on, the image may not take up the entire screen (see Fig. 22). This is normal and can be corrected by enlarging the image on the screen digitally or by inserting the included lens spacer into the adapter.

## Attaching to Optic (cont.)



To zoom in your image digitally, pinch and enlarge the phone screen (as shown in Fig. 23) until the image fills up your entire screen. For best image switch your phone to video mode.



If your optic has long eye relief it may be necessary to increase the distance between the camera and the optic to maximize the image size on your screen. To do so, insert the included lens spacer into the adapter, snap into place (as shown in Fig. 24) and reattach to optic.

# Troubleshooting

PROBLEM	POSSIBLE CAUSE	POSSIBLE SOLUTIONS
<ul> <li>IS-100 adapter is depressing side</li> </ul>	<ul> <li>Side clamp is coming in to contact</li> </ul>	<ul> <li>Use a phone case where side buttons are recessed.</li> </ul>
buttons on your phone.	with side buttons.	<ul> <li>Adjust side button settings (if possible).</li> </ul>
<ul> <li>Image on your screen is obscured</li> </ul>	<ul> <li>Optic may not be flush to adapter.</li> </ul>	<ul> <li>Make sure optic is flush to adapter.</li> </ul>
by dark crescent shape.	<ul> <li>Adapter is not properly aligned to phone.</li> </ul>	<ul> <li>Follow instructions to properly align adapter to phone.</li> </ul>
placed in landscape mode on • Eyepi optic.	<ul> <li>Rotating eyepiece on optic is extended.</li> <li>Eyepiece is not fixed to tube of optic.</li> </ul>	<ul> <li>Retract eyepiece and use included lens spacer if needed.</li> <li>Try to locate a set screw to lock down eyepiece. If not available, use a piece of tape to secure the eyepiece to the item body to prevent it from moving.</li> <li>Rotate the phone 180° to position it in reverse landscape</li> </ul>
		mode. You may need to rotate your phone or video using editing software on your computer.
Phone doesn't fit in adapter.	<ul> <li>Phone or case is larger than 3.8" wide and 5.5" long.</li> <li>Position of camera cannot align with adapter.</li> <li>You have a phablet.</li> </ul>	<ul> <li>If phone is too long, remove case and try again. If that does not work, you may unscrew and remove the bottom clamp and try again.</li> <li>If your phone is too short, place the phone in a case and try again. If this doesn't work, try placing the phone in the case without using the bottom clamp.</li> <li>If you still have an issue, please contact our customer support by email or phone and let us know what phone model you have.</li> <li>The IS-100 is not compatible with phablet phones (ex Samsung Galaxy Note).</li> </ul>
<ul> <li>The IS-100 adapter does not fit on the eyepiece of your optic.</li> </ul>	<ul> <li>The depth of your eyepiece is less than 20mm.</li> <li>Your eyepiece is tapered or irregular in shape.</li> </ul>	<ul> <li>For eyepieces between 14mm and 20mm in depth, try inserting the lens spacer before use. This item cannot securely attach to eyepieces less than 14mm in depth.</li> <li>Although the rubber gripping tips are designed to contour to the shape of most eyepieces it is recommended that you test the adapter first to make sure the grips attach securely before attempting to use it.</li> </ul>
<ul> <li>There are reflections or bright spots in your photos and videos.</li> </ul>	<ul> <li>The flash on your phone is on.</li> </ul>	Turn off the flash function on your camera.

# Helpful Usage Tips

#### Phone Tips:

- When attaching adapter to optic, hold adapter from the back by the curved arms only. If your hand is around the phone while pressing the curved arms you may inadvertently push the camera out of alignment.
- If the eyepiece of your optic has a rubber flap, fold the flap down over the eyepiece or remove if possible.
- If your optic has a twist-up eyepiece, twist the eyepiece down before attaching the adapter.
- Adapter fits many sizes of cases, including some very thick cases and charging cases.
- · Long viewing sessions may drain your phone battery. Try a charging case to extend your battery life.

#### Photography Tips:

- Tap your phone screen on your object of interest to manually force the auto-focus function.
- For videos, you may want to set and lock your focus on your viewing object. For iPhone users, tap and hold the screen where you want to focus and "AE/AF lock" will be shown on the top of your screen.
- There are many great Apps that will enhance the photographic capabilities of your phone through optics. Apps that allow you to set exposure and focus manually can expand the potential of the adapter. This is especially helpful for telescopes to set longer exposure times to get the best images of sky objects.
- Bright light conditions make it hard to see your screen. If your optic has two eyepieces you can put the adapter on one eyepiece and use the other eyepiece as a viewfinder to see your subject better.
- In low light conditions, such as imaging through a telescope or night vision scope, the rubber parts glow in the dark making it easier to use the adapter. To preserve your own night vision, and maximize the glow in the dark effect, turn your phone screen brightness to its lowest level.
- External vibrations might cause your screen image to shake. For best results mount your optic to a tripod or place on a stable surface.
- Many phones have image stabilization features. Check your phone and turn on this feature if available. If not, there are camera Apps with stabilization features.
- If tapping your screen is causing vibration, you can use a remote shutter to take the photo. For Apple phones, if you attach headphones with a volume control, you can use the volume buttons on the headphones to operate the camera shutter.

# Storage/Cleaning Information:

- To avoid damage, always store adapter in protective case when not in use.
- · For longest life of springs/plastic, store in dry area at room temperature.
- Do not leave item permanently attached to optical device as this may weaken the springs over time.
- Adapter should be cleaned with soft, damp cloth only. Do not use any chemicals or abrasives.

# **Other Uses:**

#### Use as a Digital Viewfinder:

As a digital viewfinder for your optic. For remote sharing of your video via FaceTime or an equivalent program. Turn a magnifier or loupe into a digital magnifier.

# **Specifications**

#### Phones:

- Fits all popular iPhone and Samsung smart phones. Does not fit phablet type phones (ex. Samsung Galaxy Note). Please go to *www.carson.com/universal* to view the most recent compatibility list.
- Designed to work best with most phone cases. You do not need to remove your phone from its case.
- Holds most phones up to 3.8" wide and up to 5.5" long (full compatibility depends on camera location of phone model).
- Fits on other similarly sized devices with cameras such as iPods.

#### **Optics:**

- Fits optics with outer eyepiece diameter of 20 58mm. Eyepieces must be at least 14mm in depth.
- Fits on spotting scopes, binoculars, microscopes, telescopes, night vision devices, borescopes, endoscopes, magnifiers, loupes, lenses, etc.
- Does not work with riflescopes (due to their long eye relief).

### **Customer Service:**

We will be happy to help you with any problems you may experience with your Universal Smartphone Optics Adapter. Email us at info@carson.com or call toll-free at 1-800-967-8427.

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