



PRODUCT REVIEW

by Todd Carlson

FotoSharp: Focusing aid for Canon DSLRs

Precise focus is the most important step in astrophotography



LOOKING SHARP Precise focus on astronomical objects through a telescope using a digital SLR camera has always been an issue for backyard astronomers. But now the FotoSharp accessory is available, which works on virtually all models of Canon DSLRs, the cameras most often used by backyard astro-imagers. The Orion Nebula photo, left, with tight, sharp stars, was taken in mediocre seeing through a TeleVue 76mm apo refractor equipped with FotoSharp.



FINDING FOCUS FotoSharp fits onto the camera the same way a 2x extender accessory does (it's the first ring in front of the camera). It adds no optics to the light path and negligible weight and utilizes the camera batteries for activation. Set up as shown, it was used for the two images seen here.



NATURE PHOTOGRAPHY Today's top-quality astronomical apochromatic refractors in the 70mm-to-100mm range are just as sharp as more expensive telephoto lenses of the same aperture. Until now, though, precise focus has been the problem. Using FotoSharp on his 76mm apo refractor, the author has shot images like this that have appeared on nature magazine covers.

SOONER OR LATER, AFTER THAT exciting first look through a new telescope, the telescope's owner wonders, "Can I use my camera to take pictures through the scope?" While photos of the Moon are relatively easy to shoot through a telescope, other types of astrophotos range from difficult to very frustrating. Usually, the culprit is imperfect focus.

Unlike all modern cameras, telescopes do not have an auto-focus function. And since it is the telescope that does the focusing when it has a camera attached to it, there's nothing except the view through the camera's viewfinder or displayed on its LCD screen to indicate when correct focus has been achieved. Astrophotographers of all skill levels, myself included, have spent

many a night imaging only to discover later, when examining a magnified view of the images on a computer screen, that the telescope's focus was slightly off.

Although today's digital cameras can be attached to a laptop computer to confirm precise focus in the field, this isn't a practical solution for most of us.

To the rescue comes Brady Johnson, owner of KW Telescope in Kitchener, Ontario, with his recently created FotoSharp adapter for Canon digital SLR cameras, the camera most frequently used by astro-imaging enthusiasts. FotoSharp attaches to the camera in the same manner as a T-ring or a regular camera lens. Simply click it into place, and the camera's focusing sensor becomes active.

Because I seldom photograph deep-sky objects with my telescopes, I was able to approach the FotoSharp testing from the perspective of a relative beginner.

FOTOSHARP IN USE

The focus procedure with FotoSharp is simple. Aim the telescope at a bright star, gently press the camera's shutter button, and adjust the telescope's focus until your camera beeps or you can see the red dot through the camera's viewfinder.

I initially found it difficult to make the FotoSharp work when shooting through my TeleVue 76mm apochromatic refractor. However, I soon realized that the problem was user error—*me*. I was not ensuring that the star was located in the middle of the camera's viewfinder and therefore in the centre focusing square, and I was adjusting the focus too quickly. When I corrected my technique, FotoSharp worked as advertised.

Possibly due to the limited aperture of my refractor, the camera's focusing sensors did not respond to moderately bright stars. But first-magnitude stars, such as Rigel, Betelgeuse, Aldebaran, Capella and Regulus, were readily detected by the sensors.

Once focused, the telescope can then be turned to the desired target object. As the night progresses, falling temperatures can affect your telescope's focus, so check the focus every one to two hours.

The increased availability of high-quality apochromatic refractors for astronomy has opened up daytime nature photography as a dual-use option, producing images that rival those taken with the highest-priced auto-focus telephoto camera lenses. As an avid freelance wildlife photographer, I have found that the FotoSharp adapter has aided me in quickly and accurately focusing my TeleVue 76mm while photographing wildlife on our rural property.

If you own a Canon DSLR camera, I highly recommend the FotoSharp for either daytime nature or nighttime astronomical photography through your telescope. ■

The FotoSharp adapter is available from KW Telescope, Kitchener, Ontario (519-745-5757; www.kwtelescope.com/) for \$99.95 plus taxes and shipping.