

# [pro]master [ Automatic Macro Extension Tube Set ]

Welcome to the world of macro photography! This extension tube set is an exceptionally useful tool that enables you to convert almost any lens into a macro / close-up lens, while maintaining excellent optical quality.

ProMaster Automatic Macro Extension Tubes are mounted between the camera body and lens. Moving the lens farther away from the camera allows it to focus much closer. The greater the length of the extension tube, the closer the lens will focus.

ProMaster Automatic Extension Tubes are designed to work with your camera's electronics. Your camera will properly calculate exposure with available light. However, automatic flash exposure may not function properly with an extension tube in place.

## **OPERATING INSTRUCTIONS**

### **Attaching and Removing Extension Tubes**

Always be sure your camera is turned OFF before mounting or removing your lens or extension tubes.

Each extension tube attaches to your camera in the same manner as your lens. Match the indicator mark on the tube to the indicator mark on your camera and rotate until it locks. Once you have one or more extension tubes mounted to your camera, mount the lens to the extension tube in the same manner while using the indicator mark on the lens and tube as guides.

Use the lens release button on the tube to dismount the lens in the same way you would remove it from your camera. Once the lens is removed use the release button on your camera to dismount the extension tube(s).

*Note: To ensure proper light metering, always mount the tube(s) on your camera first then mount the lens onto the tube(s). When using multiple extension tubes, attach them in any order before mounting to your camera body. Then mount your lens to the tubes last.*

### **Lens Compatibility**

Best results are obtained when extension tubes are used with standard (normal focal length) to semi-telephoto focal length lenses. Extension tubes also work well with macro lenses to help them focus even closer. Wide-angle lenses may be used, but the distance between the front of the lens and the subject (known as working distance) may become extremely close. This can cause unwanted shadows and even prevent proper focusing. Test various extension tubes with each of your lenses to see which work best for your photography.

### **Metering and Exposure**

Each extension tube couples with your camera's light metering system and its lens aperture control. Exposure under ambient light will be calculated automatically by your camera so long as you are using a lens which is TTL compatible with your camera.

If you are metering light using a method other than TTL (through the lens), such as with a hand-held light meter, exposure compensation should be applied to account for the additional exposure factor created by the tube. Otherwise your photos will be underexposed.

### **Using the Extension Tube with a Speedlight or LED light**

An on-camera speedlight (flash) or LED light may produce harsh, unwanted shadows in macro photography. Therefore, it is recommended you use an off-camera speedlight (ideally with a diffuser), off-camera LED light, or dedicated macro photography light for close-up photography of this nature.

## **Helpful Hints**

1. Extension tubes reduce the amount of light coming through your lens and reaching the camera. This may darken your viewfinder. You may compensate for the loss of light making it easier for you to see your subject by checking your camera's settings to be sure the LCD and/or EVF (electronic viewfinder) are set to auto adjust their own brightness and compensate for the light loss.
2. As focusing becomes closer in macro photography, depth of field is greatly reduced. You can stop down your lens (make the aperture smaller) to increase the depth of field. However, you will further reduce the amount of light reaching your camera. Compensate by using a longer shutter speed and/or increasing the camera's ISO setting. Check to see if your camera has a depth-of-field preview mode. It is a great tool for helping you see what will be in and out of focus in the final photograph.
3. As the image magnification ratio increases, your camera becomes more susceptible to shake, which can lead to unsharp images. Use a tripod and remote release to reduce camera shake. A monopod is also a great tool for reducing camera shake when taking macro photographs. A monopod will allow you to shoot more quickly and achieve unusual shooting angles.
4. Moving the camera back and forth, closer and further from the subject, can help with fine focusing in macro photography. Consider using a macro focusing rail, such as the ProMaster MR1, along with a tripod for this purpose.

## **Important notes**

1. Your lens will not focus to infinity while an extension tube is mounted. The focusing range will be limited to a close distance.
2. There is a reduction of transmitted light when using any extension tube, which increases as multiple extension tubes are used together. This light loss can affect the camera's ability to auto focus. Manual focusing is recommended should the lens begin to "hunt" (not lock onto the subject).
3. Store your extension tubes with the caps attached and in the included neoprene storage pouch to protect them from damage and to keep dirt from entering the tube(s).

## **One Year Unconditional Warranty**

If for any reason, this ProMaster product fails within ONE YEAR of the date of purchase, return this product to your ProMaster dealer and it will be exchanged for you at no charge. ProMaster products are guaranteed for ONE FULL YEAR against defects in workmanship and materials. If at any time after one year, your ProMaster product fails under normal use, we invite you to return it to ProMaster for evaluation.

**MADE IN CHINA**

**WWW.PROMASTER.COM | FAIRFIELD, CT 06825**

**CODE 8805 | SONY E**

**CODE 8812 | PANASONIC & OLYMPUS MICRO 4/3**

**CODE 8651 | FUJI X**