

# MERCURY SHUTTER ACTUATOR OPERATING INSTRUCTIONS

## INTRODUCTION

The Mercury Shutter Actuator can attach to any manual shutter or camera that accepts a standard remote release cable. It is an electronic device that will electronically trip your shutter whenever you trigger it.

It consists of two parts: the Control Box and the Shutter Actuator.

## CONTROL BOX

The Control Box houses two 9V batteries and the electronics needed to power and control the Shutter Actuator. It uses a large capacitance system (similar to a camera flash) to send high amperage pulses to power the Shutter Actuator.

### **Opening the Control Box**

To open the Control Box simply unscrew the two black screws on top and lift off the top cover.

Important: When closing the box, *never* over-tighten the two black screws. They should only be loosely tightened, until you feel some resistance. This ensures that they can be easily unscrewed without tools, and prevents breakage. Metal thread inserts can be easily pulled out of place, and components of the box can break.

### **Powering with Batteries**

The standard way to power the system is with two 9V batteries. Clip them firmly into their connectors, adjust the connector wires so they don't interfere with the case lid, and close the lid.

Alkaline or Lithium batteries can be used. Lithium are recommended if you will be leaving the batteries in the case for extended periods of time (which is probably the case).

Rechargeable batteries are not recommended. They provide less amperage for the Shutter Actuator, and increase wear and tear by needing to be removed frequently.



## ***Powering with an AC Adapter***

Any 18V or 19V AC adapter can be used to power the Control Box. The adapter needs to terminate in a 2.1 x 5.5mm barrel, center positive. To use, first ensure that the master switch is set to “Off/AC” and then plug the adapter into the DC port on the side of the Control Box.

For maximum power a 19V 6A power supply is recommended.

The Actuator system is now fully functional. Never switch the master switch to “On/Batt” while an AC adapter is plugged in.



## ***Master Switch***

The master switch is used to switch between AC adapter and battery use, and also to switch off power when using batteries.

When switched to “On/Batt” the batteries will be very slowly drained by the capacitor. When not using the system, switching to “Off” prevents any battery drain. Note, however, that even after switching “Off” your capacitor will be charged for a few minutes, and it is still possible to activate a connected Actuator.



## ***Mounting and Connecting***

The Control Box can be mounted on any standard cold/hot shoe.

Connect the Shutter Actuator directly to the 3.5mm port on the front of the Control Box.

Connect a trigger to the 2.5mm port on the right side of the Control Box. This can be a simple manual remote, a programmable remote (any compatible with the Canon Rebel series of cameras will work), or a wireless trigger system such as PocketWizard (see below). Custom or specialized triggers (lightning detector, etc.) can also be used as long as they terminate in a 2.5mm plug.

The top cover of the Control Box contains a cold shoe if you wish to add another accessory on top. It is not meant to hold large or heavy items such as flashes.

## SHUTTER ACTUATOR

Screw the Shutter Actuator into the shutter/camera's cable release socket, then connect the Actuator's 3.5mm cable to the "Shutter Actuator" port on the front of the Control Box.



The Shutter Actuator is designed to be used with shutters that have been properly CLA'd. Sticky or gummy mechanisms may not actuate properly. If excessive force is required to fire the shutter, the Shutter Actuator probably won't work to do so. Large shutters such as Copal 3 and Ilex 4 often don't work. Additionally, some shutters have deeply inset trigger mechanisms that the Shutter Actuator cannot reach.

If you need additional actuation power, we make a special Heavy Duty actuator that is plug-and-play compatible with our standard actuator. You will only see a small advantage when powered via batteries, but a more substantial one when using a 6A 19V laptop power supply.

## TRIGGERING YOUR ACTUATOR

Pressing the button or otherwise activating your trigger will instantly activate your Shutter Actuator.

The longer you hold down the trigger, the longer the Actuator will remain activated. However, heat will build up in the Actuator while it is activated. For this reason, short presses are recommended.

*Never activate your Actuator for longer than 4 seconds at a time.*

### **Wireless Triggers**

One powerful use of the Mercury Shutter Actuator is to make manual cameras/lenses wirelessly triggerable. To do this, attach the receiving unit of a wireless trigger such as PocketWizard to a cold shoe (you can use the cold shoe on top of the Control Box if another isn't available). Then connect the receiver to the Trigger port on your Control box via a cable that terminates in a 2.5mm plug.

Important: Your wireless trigger must be rated for at least 20V to prevent damage or wear to the receiver.

## **ADDITIONAL OPTIONS**

For a basic AC adapter, look for a 19V model with at least 3A, such as [this one](#).

For a high powered AC adapter, look for a 19V 6A laptop charger that terminates in a 2.1 x 5.5mm jack (or has one as an option).

For a more power Shutter Actuator (the HD version), contact Mercury Works at [mercurycameraworks@gmail.com](mailto:mercurycameraworks@gmail.com)

For a compatible wireless trigger, a good option is the [PocketWizard PlusX Transceiver \(Pack of 2\)](#).