µ-Trigger

External trigger for your photo camera and flash

trigger your creativity

v1.0

Introduction

The μ-Trigger is designed as an external shutter trigger for most cameras and flash units on the market. It is a very carefully designed small device that will satisfy the needs of amateur and professional photographers.

The small and robust case makes it easy to handle, or mount using the hot shoe bracket.

It features a bright display that is perfectly visible in all light conditions and viewing angles.

Just one button makes software manipulation easy. Never worry about pressing the wrong button. The software has been written to remove all unwanted clutter in the menu.

There is a Lithium battery built into the unit. It can be recharged for hundreds of cycles. Typical battery duration is up to 40 hours for normal use; simply use a PC USB port for charging. For power economy, a screensaver option was integrated. If the button is not pressed for 20 seconds, the display blanks and a green LED light turns ON. To exit the screensaver mode just click the button in any direction.

For camera connection a standard 2.5 mm jack port is used, for flash connection, a standard 3.5 mm jack port is available. There is an additional 3.5 mm jack port for a versatile DIY (Do It Yourself) function.

Key features

- 7 modes of operation: Sound, Lightning, Timelapse, HDR/BKT (High Dynamic Range/Bracketing), Laser, DIY (Do It Yourself) and Manual.
- Wide support – suitable for most cameras on the market.
- Plug & play.
- User friendly menu – easy to use.
- Small outline: 40 mm x 62 mm x 22 mm.
- Completely new design approach.
- Sunshine readable color display.
- Simple manipulation with just one button.
- Internal battery charger.
- Internal battery ensures up to 40 hours of autonomy.

Specifications

Unit Dimensions	40 mm x 62 mm x 22 mm / 1.57 " x 2.44 " x 0.87 "
Weight	75 g / 2.64 oz
Temperature Range	-10 °C ~ +60 °C
Onboard Battery	1 cell LiPo 3.7 V 1500mAh
Battery Duration	Up to 40h
Camera/Flash/DIY port	2.5 jack/3.5 jack/3.5 jack

Physical overview

1 – Camera cable port
2 – Flash cable port
3 – Screensaver / trigger LED
4 – Multidirectional switch
   with Center push button
5 – Charging LED
6 – USB mini B port

7 – Fits to hot shoe
8 – DIY port
9 – On/Off switch
10 – Microphone
11 – Light sensor

USB mini B port

The battery can be recharged with the internal charger via the USB mini B port. For charging, connect the device to a PC with a USB-A to USB-mini B cable. Charging time is typically 3 hours. A battery level indicator is visible on all menus. Future firmware updates are possible via this USB port.

Menu

On the main menu page all 7 modes of operation can be selected:

- Sound
- Lightning
- Timelapse
- HDR/BKT (High Dynamic Range / Bracketing)
- Laser
- DIY (Do It Yourself)
- Manual

Additional functions are Setup and Info.

```
OPTIONS
  SOUND
LIGHTNING
TIMELAPSE
 HDR/BKT
  LASER
```

```
OPTIONS
  LASER
   DIY
 MANUAL
 SETUP
  INFO
```

Sound

The Sound function is used when you want to trigger the camera in case of a sound event.

Sensitivity: adjust the sensitivity to a sound event. Range is from 0 to 100 (low to high sensitivity). The green bar displays the currently detected sound level and the red line is our set trigger level. The unit will set the sensitivity automatically when you press Center button.

Delay: adjust delay time. Range is from 0 to 999 milliseconds. When the sound trigger sensitivity level is reached or exceeded, this will tell the device when to send a signal to the shutter (example: a delay of 200 ms will trigger shutter 200 ms after the trigger level was reached).

Mode:
SINGLE – The Sound function will trigger the camera only once.

CONT – the device will continuously trigger the camera whenever the trigger level is reached.

Start: the device will count down for 3 seconds, go to power saving mode and then start the Sound function.
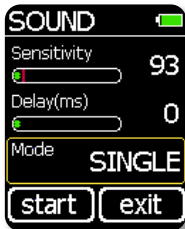
Lightning

The Lightning function is used when you want to trigger the shutter during a light or flashing event.

***Sensitivity*:** adjust the sensitivity to a light event. Range is from 0 to 100 (low to high sensitivity). The green bar displays the detected light level and the red line is our set limit. The unit will set the sensitivity automatically when you press Center button.

Amplifier: adjust amplification of lightning sensor. 10x means most sensitive, 1x means normal sensitivity.

Start: the device will count down for 3 seconds, go to power saving and then start the Lightning function.

Timelapse

The Timelapse function is used when you want to set how many times the shutter will be triggered using a preset interval time and predefined exposure time. Please refer to appendix 1 on how to set up your camera for this mode.

***Interval*:** This sets the time between each triggering of the shutter. Range is from 1 second to 59 minutes and 59 seconds.

***Exposure*:** This sets the frame exposure time. Range is from 0 second to 59 minutes and 59 seconds. The camera must be set to 'manual bulb mode' in order to have this function working as intended. If the value is set to 0 and camera is set to automatic exposure mode the unit will generate a short trigger pulse and the camera will make an automatic measured exposure.

***Frames*:** This sets the how many times the camera will be triggered. Range is from 0 to 999, where 0 means continuous.

***Start*:** device will set the display backlight to minimum for power saving and then start the Timelapse function.
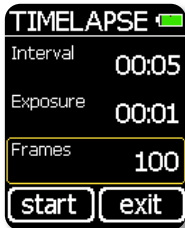
HDR/BKT – High Dynamic Range/Bracketing

The HDR/BKT function is used when you want to trigger the camera to capture the same frame with different time exposures.

Center: This sets the center value for your desired exposure time. Values: 1/2, 1, 2, 4, 8, 16, 32, 64, 128 seconds.

EV(+-): This sets the exposure value between each frame. Choose between 1/3, 1/2, 1.

Frames: This sets the how many frames will be taken. Options are for 3, 5 or 7 frames.

Start: the device will open a new page informing you about the progress and then start the HDR function.

For more info about HDR and how to use µ-Trigger in this mode, please refer to "Understanding HDR and EV" document that you can find on our web page www.u-trigger.com
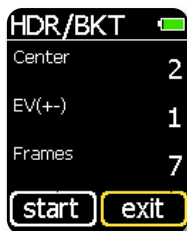
Laser

The Laser function is used if you want to trigger the stutter when the laser beam is interrupted. First you need to mount the laser and align the laser beam with the light sensor in front of the unit. The unit will set the threshold automatically when you press Center button.

Threshold: adjust the sensitivity to a laser beam. Range is from 0 to 100 (small to high sensitivity). Green bar displays the detected laser beam intensity and red line is our set limit.

Delay: adjust delay time. Range is from 0 to 999 milliseconds. When the threshold limit is reached, this delay will tell the device when to send a signal to the camera (example: a delay of 200 ms will trigger the camera 200 ms after the threshold limit was reached).

Frames: set how many times the camera will be triggered. Range is from 1 to 999.

Start: the device will count down for 3 seconds, go to power saving and then start the Laser function.
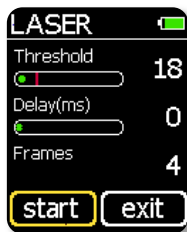
DIY – Do It Yourself

The DIY function is used when you want user-generated input to trigger the camera or flash. The DIY input port is used for this. User-generated input is any type of external signal in the range from 0 V to 3.3 V.

Threshold: adjust threshold of user-generated input. Range is from 0 to 100 (0 to 3.3 V). Green bar displays detected input strength and red line is our set limit. The unit will set the threshold automatically when you press Center button

Delay: adjust the delay time. Range is from 0 to 999 milliseconds. When the threshold limit is reached, this will tell the device when to send a signal to the camera.

Mode: choose between Rising, Falling or Change. *Rising* will trigger the shutter if the input changes from low to high and *Falling* will trigger the shutter if the input changes from high to low level. *Change* will trigger the shutter if the input signal will either rise or fall.

Start: the device will count down for 3 seconds; go to power saving and then start the DIY function.

Please refer to Appendix 2 on how to connect your DIY project to the µ-Trigger DIY 3.5 jack port.
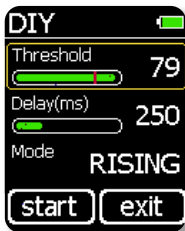
Manual

The Manual function is used when we want to manually trigger our camera. Click on start to instantaneously trigger the camera shutter or flash unit.

MANUAL

Press start button to manually trigger your camera and flash.

start exit

Setup

Backlight: adjust display backlight level. Range is from 1 to 100 (low to high power level). Lower values increase battery duration.

Init: restore the device to the factory default settings. Use with caution! Once selected, the previous settings cannot be restored but will have to be entered manually again.

SETUP

Backlight 100

Init default

exit
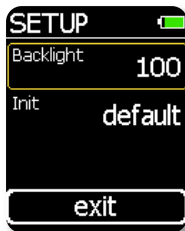
Info

Information page is meant to give user information about the installed version of firmware, serial number of the unit and hardware version.

INFO	
Firmware	1.2
Serial nr.	0
Hardware	1.0
exit	

Appendix 1

About the camera settings

The μ-Trigger takes over the control of the camera's shutter button. It closes the shutter contact in response to events (using intervals, delays and exposure times depending on the mode that is used). The μ-Trigger has no knowledge of whether the camera is ready to shoot, for instance of whether the autofocus has completed, and does not know what shutter release mode has been set for the camera. For this to work correctly the camera should preferably be set to the following positions:

Manual bulb mode for those cases where the exposure time will be long and/or where the exposure must be determined by the μ-Trigger (in Timelapse and HDR/BKT modes).

Manual focus is best for all cases because it prevents camera delay while attempting to focus. Make sure the camera is focused before using the μ-Trigger to take the shot(s).

For automatic exposure shots, set the camera to auto Program, Shutter priority or Aperture priority mode and select manual focus.

While in the automatic exposure setting of the camera, the preferred shutter release mode on the camera is **single release**, rather than continuous release. The reason is, if the exposure time as measured by the camera is shorter than the exposure time set in the μ-Trigger, the camera will shoot again if it finds the shutter contact still closed.

Appendix 2

The DIY input is intended for advanced users with basic knowledge in electronics. Any wrong manipulation via this port can damage the μ-Trigger so use it with care.

Internally, this port has a built-in pull-up resistor of 10 kOhm, so it will measure a 100% signal level when nothing is connected to it. You can design your own electronics that will close the tip (signal) and sleeve (GND) on the plug, causing the signal to go to 0% (long manual triggering cable with a button at the end). Or you can make your own microprocessor-based board with any kind of sensor (pressure, shock, humidity, RF signal…) with a voltage controlled output to trigger your camera at a predefined measured value and predefined sense of voltage change (falling, raising or change).

GND   Signal

Disclaimer

We are not responsible for any kind of damage caused by the use of the μ-Trigger.

The μ-Trigger is not waterproof. It should be treated and handled with the care. It should not be dropped and/or exposed to extreme heat or moisture.

If the μ-Trigger is disassembled or has been misused, the warranty will be void. Using a disassembled μ-Trigger can damage your camera and other equipment.