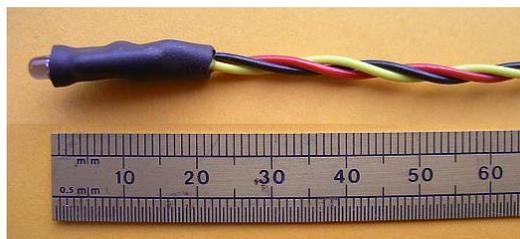




# shutterPLUS Manual

enhanced IR commander for canon & sony



**gentLED-shutterPLUS** is designed for some Canon (e.g. 5D, 7D, 700D / T5i etc) & some Sony Alpha cameras to control image and video start/stop from a single RC receiver channel.

Connect the 3pin connector to a standard RC Receiver channel:

- +ve            **Red**
- ve            Black
- servo         Yellow/white

### Operation

**gentLED-shutterPLUS** connects to a single RC channel with a centre biased stick or switch. Locate the LED close to the camera IR receiver, enable the IR receiver (see the camera manual) and for Canon cameras enter Live View or video mode.

Moving the stick in one direction takes a still image. If held over in this position a simple "continuous" mode is enabled and images continue to be captured every 5 seconds. Moving the stick progressively to the extreme reduces the repeat rate to 0.5 seconds – note that some camera models / set-up / storage card combinations won't record at 0.5 seconds and may "catch" every second signal, thus achieving 1 second.

Moving the stick on the opposite direction starts and stops video/movie recording. Unlike the still image which it taken immediately the stick needs to be held over for around 0.75 seconds before the signal is sent - this provides maximum protection against false triggers should there be noise in the radio control system. We recommend the stick is returned to "off" or "centre" after operation.

So for this device "speed of operation" is primary for the shutter release and "security of operation" is primary for video/movie mode.

On Canon cameras any resolution of still image can be captured whether the camera is recording video or not, and without affecting the video capture. With Sony you can *either* take images *or* record movies.

### Joy-stick

Although a joy-stick is mentioned above, many RC systems have aux. switches; these can be used if they provide a centre biased operation.

### Specification

Supply Voltage	3 to 5.5V. Range will reduce below 4V. (Absolute maximum voltage, 6.5V)
Supply Current	Maximum 20mA pulses when LED activated, at other times less than 1mA.
Operating Range	500mm, with unit facing camera receiver, range decreases if located obliquely to receiver.
Servo Pulses	Pulse thresholds: video <1.25, shutter >1.65 mS. Pulses should be less than Supply V + 0.7V.
Continuous Triggering	As long as the shutter input pulse is maintained >1.65mS the repeat rate is 5 seconds, and decreases to 0.5 seconds between 1.75 & 2.0mS.
Video trigger	Servo pulse must be on for >750mS to trigger
Weight	3 grams including 250mm wires & connector.

### Diagnostics

Make sure that the camera IR is activated. This is often controlled via the shutter or timer control – read the camera manual. For video capture in Canon cameras the camera needs to be set up in Live View mode.

Check the channel being used is actually changing with a "real" servo. It should stay in the idle position and move to each end for a shutter and video trigger.

If all else fails, use a digital camera as an IR detector (yes, most digicams detect IR - check it with any remote control). The **gentLED-shutterPLUS** will be visible (if fainter than the remote) through the camera LCD display.