



SHUTTER Manual

IR remote controller for still cameras



The zoom (above) and shutter (below)

Servo Operation

Connect the 3pin connector to a standard RC Receiver Servo output:

+ve Red
-ve Black
servo Yellow/white

Locate the LED close to the camera IR receiver, and enable the IR receiver on the camera (see the camera manual).

Movement of the RC Transmitter stick from one extreme to the other will trigger the camera (see section on joy-switch on the following page). After each activation there is a 1 second wait before operation continues. If the stick is held in the 'on' position photos will be taken every 5-6 secs.

Switch Operation

Alternately (or additionally – as both will work together) you can short the blue wire to the black wire on the servo connector to trigger the camera. In this mode the servo connector should be used to supply between 3 and 5.5V to the unit. The blue wire can thus be connected to the trigger source(s) of your choice.

Timer Operation

The unit can also be used to trigger the camera every 25 seconds, this can be used to prevent some cameras going into "sleep" mode. To enable this make sure the blue wire is shorted to the black wire at power up. After power-up you can leave this connected for Servo Operation, or break the connection and then use the Switch Operation as described above.

Joy-switch

RC systems vary widely so for maximum reliability it is recommended that the joystick on the transmitter be replaced with the circuit shown. This can be built or bought ready-made as an option to the **gentled**. If the shutter triggers when the button is released, rather than pressed, then simply reverse the connector.



Specification

Supply Voltage	3 to 5.5V. Range will reduce below 4V. (absolute maximum voltage, 6.5V)
Supply Current	Maximum 30mA pulses when LED activated.
Operating Range	500mm, with unit facing camera receiver, range decreases if located obliquely to receiver.
Servo Pulses	Pulse threshold between 1.5 and 1.7mS, nominally 1.1mS is off, 1.9mS is on. Pulses should be less than Supply V + 0.7V.
Timer Operation	Between 24 and 27 second repeat shutter.
Weight	4 grams including 200mm 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.

Use a switch between the black and blue wires rather than the servo input, as this will distinguish between servo and IR problems. Use the joy-switch rather than a joy-stick to maximise the servo operation and decrease it's susceptibility to noise.

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