



ZOOM Manual

IR remote control for cameras



The zoom (above) and shutter (below)

Operation

The **gentled ZOOM** looks just like the standard shutter device except **the blue wire is omitted**.

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).

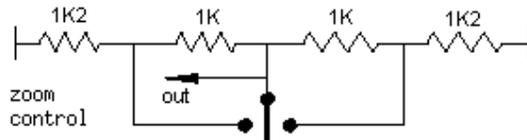
Movement of the RC Transmitter stick from the centre to either extreme will trigger the camera (see section on joy-switch on the following page). Hold the stick in that position until the desired zoom position is reached.

For maximum reliability experiment with the joy stick and the “trims” on the transmitter to make sure that the trigger points for zoom in and zoom out are equidistant from the idle or neutral position of the joystick.

Shutter and Zoom control can be achieved by connecting a **gentled SHUTTER** and a **gentled ZOOM** to two different channels on the RC receiver. Note however that the zoom and shutter cannot both be activated at the same time.

Joy-zoom-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 camera zooms in when you expected it to zoom out (and vice versa), then simply reverse the connector. **NOTE:** The Pentax **gentled ZOOM** doesn't zoom in and out, but moves through (normally 3) preset zoom positions.

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 thresholds between 1.2 - 1.3mS, and 1.7-1.8mS, Nominally 1mS is zoom out, 1.5mS is off, and 2mS is zoom-in. Pulses should be less than Supply V + 0.7V.
Repeat	As long as the input pulse is maintained the unit will continue to send the zoom in or out signal.
Weight	3 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.

Check camera operation with a standard manufacturer remote control or a standard **gentled SHUTTER** or **gentled videoREC**.

Use the joy-zoom-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 digicams can detect IR - check it with any remote control). The **gentled** will be visible (if a little fainter than a remote) through the camera LCD display.