

## K82. 2 CHANNEL UHF RELAY SWITCH

This kit allows a 2 button key-ring UHF transmitter to toggle two relays on/off on a receiver board up to 40 meters away. The frequency of transmission is preset at about 318mhz but it can be easily adjusted anywhere between 300mhz to 375mhz.

### ASSEMBLY

Check the components in the kit against the listing.

**Transmitter in Case.** This comes already assembled & tested with its own 12V battery included. When you press either one of the buttons the red LED should light-up. Later you may need to open the case to adjust the frequency for maximum distance or to solder in some jumpers to set a code. The unit comes with no jumpers set.

**Receiver Module.** The prebuilt module solders directly into the receiver PCB. Note that the decoder IC does not fit on this module. The decoder IC goes on the main receiver board.

**Receiver PCB.** Solder the lowest height components first. Identify the zener diode ZD, and the other 5 diodes. The bar on the diode must correspond with the bar on the overlay when it is soldered onto the board. Note that the two 3-pole terminal blocks slide fit together. Do this before you solder them into place. Note that there are two links to add to the board. C4, C6 & C8 are 0.47uF capacitors. They look the same as the 0.1uF C5 & C7. Do not mix them up. C5 goes underneath IC2.

There are two pairs of PADS. They are provided in case you want to disable one relay then reconnect it at a later date. They are already connected on the copper layer by a track. To disconnect a relay just cut the copper track with a cutter. When you first assemble the board leave them unconnected and the track uncut.

Power supply to the board is 12V - 15V. The top pad is positive. (The overlay indicating this was forgotten.) The bottom pad is ground. The 3mm red LED should turn on when power is connected. Pressing the transmitter buttons should toggle the relays on/off.

**Calibration.** Undo the aerial on the receiver module. Test what distance you get. For the most range we found it best to adjust the trimcap in the transmitter as you walk further away from it. We could get over 30 meters.

### CIRCUIT DESCRIPTION

**Transmitter.** When either switch is closed power is applied to the encoder IC, A5884, to the LED and to an oscillator coil. The A5884 has 10 address bits and two data bits. The 12 bits of trinary information are serially transmitted on pin 17 when either data pin is taken low by pressing the switch. The ten address lines can be tied high, low or left floating. As supplied all are left floating. It is easy to tie some or all of A0 to A9 to ground since a ground track has been provided on the transmitter PCB

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