

# P62

## QUAD-SWITCH



Quadswitch can be used as a 4-way latching switcher from one channel of a R/C installation. In operation, the switches are activated by "jabbing" the transmitter stick and then letting it spring back to neutral. One "jab" will switch on Relay No 1; two "jabs" will switch on Relay No 2 etc etc. To switch the circuits OFF, you simply jab the stick the appropriate number of times in the opposite direction. It's more difficult to describe than it is to do!

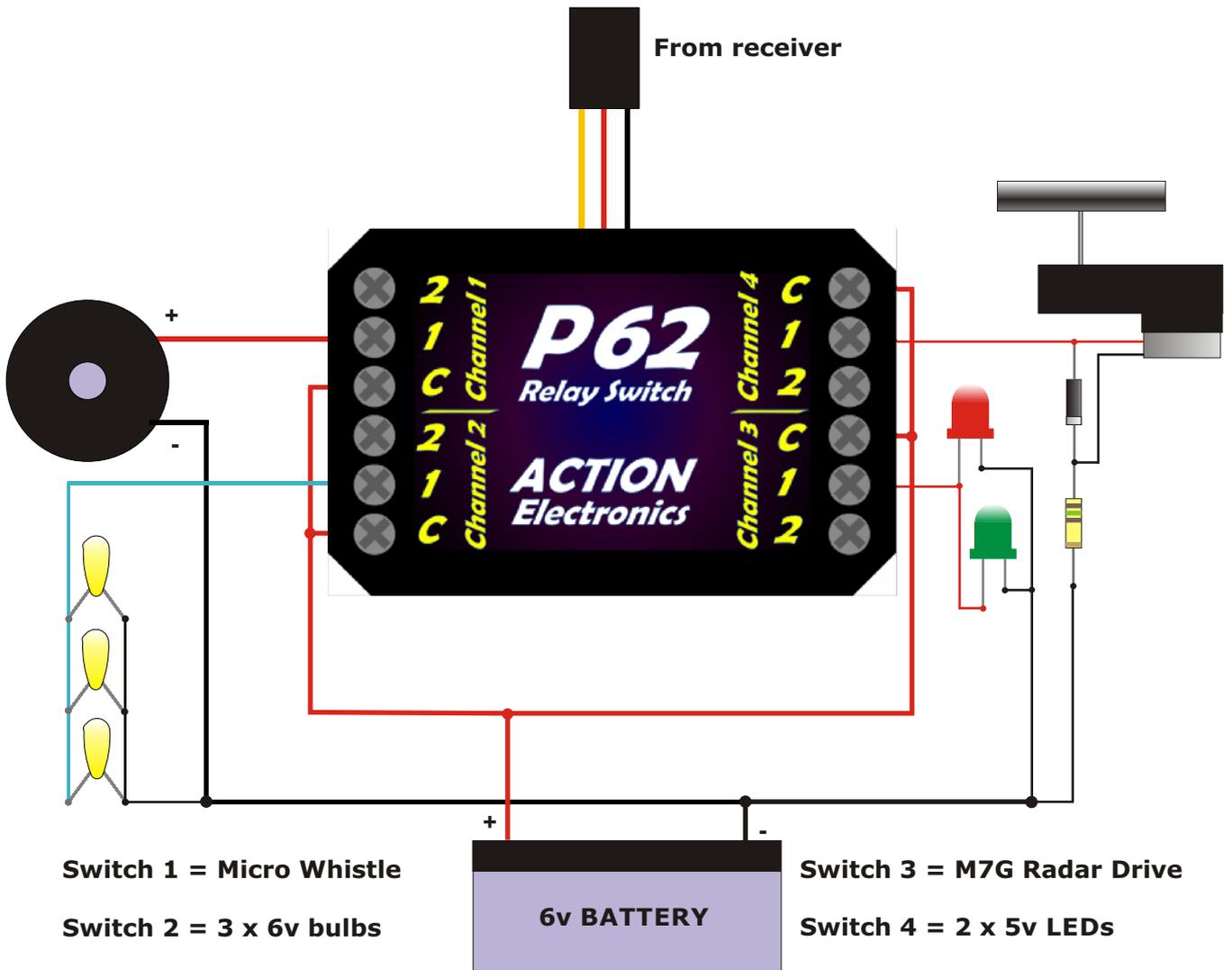
Please note that the P62 will NOT operate on a channel which is controlled by a two-way ON/OFF toggle switch on the transmitter (often labelled "Retract" or "Flaps").

### MICROCOMPUTER, CMOS IC & MOSFET DESIGN

- Number of switch functions
- Radio control channels required
- Latching outputs
- Switching points
- Receiver voltage
- Maximum load current
- Output connections
- Servo connection

- 4 (plus "straight-through" servo)
- 1
- All 4 switches
- Fixed, no adjustment
- 4.8 volts to 12 volts\*
- 3 amps per relay
- Screw connectors
- Plug in

\*Unlike earlier versions of the P62, this unit will happily work from a wide range of receiver voltages.



NOTE: Up to FOUR different voltages can be handled at the same time by this unit i.e. one per relay.

**P62**

## QUAD-SWITCH



This Quadswitch switcher can be used as a 4-way latching switcher for a multichannel R/C installation. It requires a 1 to 2 millisecond positive input. As this is pretty much industry-standard it will work well with most modern R/C sets. It should be connected into a channel which is operated by either a spring-centred stick on the transmitter or a 3-way (On/Off/On) switch. It will NOT work with channels which are controlled by a simple 2-way (On/Off) switch.

Number of switch functions	4
Radio control channels required	1
Latching outputs	All 4 switches
Receiver supply voltage	4.8 volts to 12 volts MAXIMUM*
Switching points	Fixed, no adjustment
Maximum load current	3 amp per relay
Output connections	Screw connectors
Servo connection	Plug in
Case size (external)	64.2mm x 43.8mm x 18.2mm

**\*Unlike earlier versions of the P62, this version will happily operate on a wide range of receiver voltages.**

### CONNECTION IS SHOWN ON THE DRAWING OVERLEAF

### OPERATING THE QUAD SWITCHER (This is harder to describe than to do)

Each switch output is what is termed a single pole double-throw contact (SPDT). When a relay is off, the (COM) Common connection is connected to the (NC) Normally Closed connection. When the relay is on, the (COM) common is connected to the (NO) Normally Open. The COM and NO contacts then become a simple switch and can be wired as such. Wiring to switch various different types of load is shown in the drawing overleaf. What is eventually wired to your switcher will, of course, depend on what you want to operate. Probably the best test load would be a bulb on each output for testing. If you do use bulbs, ensure that the battery voltage and the bulb voltage are the same.

Connect the servo lead on the input of the Quadswitch to your radio receiver.

Make sure that your transmitter and receiver batteries are fully charged before testing and your receiver and transmitter are switched on prior to test.

There is no need to connect anything up to the relays for testing purposes - you will be able to hear the relays "click" quite clearly as they are switched on and off.

The transmitter stick for the channel you have selected to operate P62 will turn on the relays when moved in one direction, and turn them off again when moved in the opposite direction. The switch is programmed to wait for one second after it "hears" a signal before it turns on the appropriate relay. If it hears another signal within that time then the 1 second delay timer starts again, and so on up to the last relay.

Thus if you want to turn on relay #1 you push the Tx stick to its limit in the correct direction and let go smartly. After one second the relay will click on. If you want to operate relay #2 then you need to push the stick across and release it twice, with a delay of no more than a second between each "jab" of the stick. The relay will turn on one second after it "hears" the second signal. Relays 3 and 4 require three and four "jabs" of the stick respectively. If you are too slow then the switch will turn on the relay which relates to the last signal it received. A little practice will enable you to select the right relay quite quickly.

Turning off the relays is exactly the same procedure as turning them on except that you will push the stick in the opposite direction to "on". Note that you don't have to run through the relays in order i.e. you can turn on relay #2 without first turning on #1 etc.

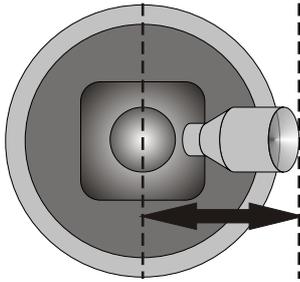
Note 1: A noisy R/C environment may cause spurious operation of switches, due to the rapid response of the time measurement in the microcomputer. For this reason you should ensure that all servo wiring is kept well away from power leads; that the receiver aerial wire is kept away from all other leads, and that you fit suppressor capacitors to your motor(s). ACTION can supply a RFI suppressor kit see our lists for details.

Note 2: The maximum load current is 3 amps per relay.

### TURNING ON THE RELAYS

Relays 1-4 - 'Jab' stick to full throw in one direction and release quickly. Leave no more than one second between "jabs"

- Relay 1 = Jab>Release (x1)
- Relay 2 = Jab>Release>Jab>Release (x2)
- Relay 3 = Jab>Release>Jab>Release>Jab>Release (x3)
- Relay 4 = Jab>Release>Jab>Release>Jab>Release>Jab>Release (x4)

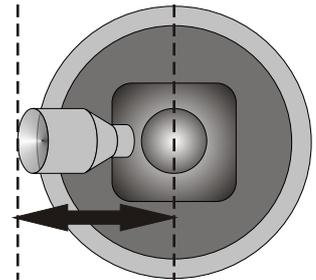


**Transmitter Stick**

### TURNING OFF THE RELAYS

Relays 1-4 - 'Jab' stick to full throw in opposite direction and release quickly. Leave no more than one second between "jabs"

- Relay 1 = Jab>Release (x1)
- Relay 2 = Jab>Release>Jab>Release (x2)
- Relay 3 = Jab>Release>Jab>Release>Jab>Release (x3)
- Relay 4 = Jab>Release>Jab>Release>Jab>Release>Jab>Release (x4)



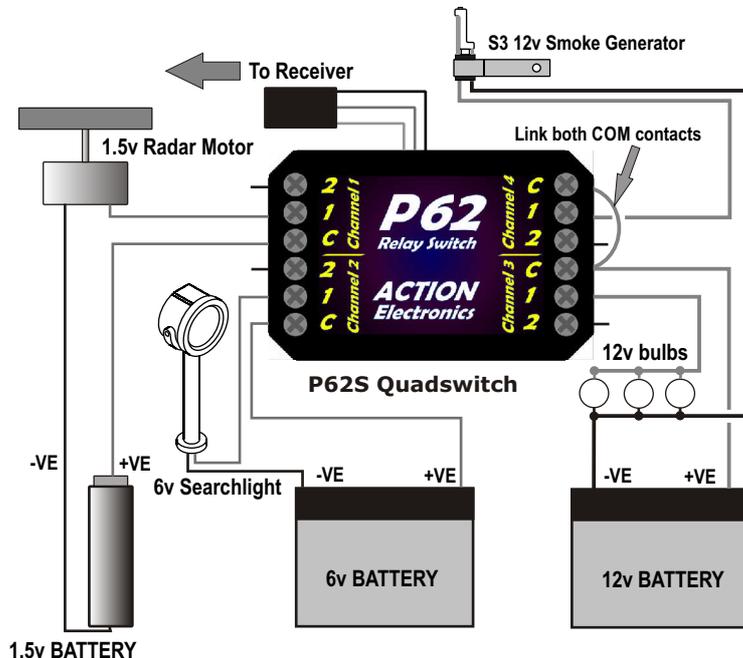
**Transmitter Stick**

### RECOVERY SERVICE

A recovery or repairs service ensures that you will not be left with a dead unit for any reason. The Service Charge for this kit is £16.00 including parts (including return shipping cost in the UK).

Returns should include full Credit Card details (Name & Address of cardholder, Card Number, Expiry Date, Card Security Number)

**Component Shop.co.uk. Ltd, 1 Llwyn Bleddyn, Llanllechid, Bangor LL57 3EF**



**Many units are polarity-critical! Take care to connect the battery correctly!**

The small print.....

ACTION R/C Electronics guarantee all products to be free from manufacturing defects for 12 months from date of purchase. This does not cover suitability for specific applications; components worn or damaged by use, tampering or incorrect connection; alteration to original components; damage to batteries or other equipment through use; misuse, or shipping damage. Where goods are found to be faulty, the customer shall return them to ACTION R/C Electronics in their original condition and with their original instructions, packaging etc. Our liability is limited to repairing or replacing goods to their original specification and will not exceed the cost of the goods. By using the product the user accepts all liability. Where a fixed repair charge is applicable, ACTION R/C Electronics shall undertake repairs to the extent that they are judged economically viable. Where such is not the case then the customer will be offered the option of crediting the repair charge towards the cost of a new unit or having the faulty unit returned and the charge refunded (less the cost of return carriage). We reserve the right to modify this guarantee without notice.