

# RadioTrap 'CLUB' SERIES RADIO RELEASE

- Rugged Remote Control
- Leading Edge FM Radio Design
- Simple Switch Tx and Rx Pairing
- 'One Transmitter' can control 'Many Receivers'
- Complies with ETSI300-220
- 1 or 3 Switched versions Available
- 'Rain' proof to IP65
- Protective Outer 'rubber boot'
- Rubberised IP67 Switches
- Uses Std PP3 type 9V battery (supplied)
- External Foot /Audio Switch inputs Available



## Description

A Rugged Radio Release system is designed for continuous operation 365 days of the year. This design IP rated enclosures with 'resin dipped' circuit boards for protection against water ingress. The circuit employs a high selectivity Crystal controlled FM Radio Circuitry for reliable long life operation. Supplied ready to operate, the only connections required are to the receiver/decoder. All connections are via screw terminals.

Additional transmitters or receivers may be added to achieve your system requirements.

The Club systems are available as either 200m range or 1km range systems. The 1km range system has the ability to penetrate interference/obstacles in harsh environments and operates where standard radio systems fail!

## 1,000m Part Numbers

| Part Number  | Description                                                  |
|--------------|--------------------------------------------------------------|
| CLUB1000-S1  | 1000m Radio System, 1 Switch (transmitter and receiver Unit) |
| CLUB1000-S3  | 1000m Radio System, 3 Switch (transmitter and receiver Unit) |
| CLUB1000-TX1 | 1,000m Transmitter, 1 Switch                                 |
| CLUB1000-TX3 | 1,000m Transmitter, 3 Switch                                 |

## 200m Part Numbers

| Part Number | Description                                                 |
|-------------|-------------------------------------------------------------|
| CLUB200-S1  | 200m Radio System, 1 Switch (transmitter and receiver Unit) |
| CLUB200-S3  | 200m Radio System, 3 Switch (transmitter and receiver Unit) |
| CLUB200-TX1 | 200m Transmitter, 1 Switch                                  |
| CLUB200-TX3 | 200m Transmitter, 3 Switch                                  |

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## Installation Notes

Firmly fix the receiver unit approx. 2 metres from the ground, ideally in direct sight of the transmitter. Obstacles between transmitter and receiver will reduce range! Once paired together each switch on the transmitter operates one of the relays on the receiver unit.

## Pairing Transmitter to Receiver

Each transmitter and receiver contains an address Switch. This is used to set the identity of the unit. In order for a receiver to respond to a transmitter, the addressees must match,. This enables the user to set individual transmitter and receivers to operate or not operate with each other. It also enables multiple systems to operate within the same vicinity.

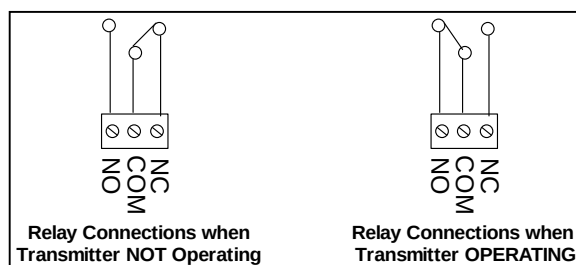
Each system is supplied ready configured, and does not need to be altered.

However, if you require a different address (e.g. if you have two systems in close proximity or wish to have several receivers to one transmitter etc);

- ☐ There are 8 address 'Switches' which the transmitter and receiver use to identify themselves.
- ☐ The Receiver and Transmitter units must have the same Address 'Switches' in order to recognise each others signal.
- ☐ The Transmitter switches are labelled 'SW1'
- ☐ The Receiver switches are labelled 'LK1'

## Relay Output Connections

Upto 4 relays are provided on the receiver output. The relay output provides a 'switch' output which operates when the transmitter switch is pressed. Each relay has the connections as below.



Relay output '1' provides a longer momentary output (approx ½ second) this may be removed (see below). For solenoid driven traps.

The outputs are driven from a Microcontroller and can be customised to specific requirements.

## Relay Output Configuration

The two option links OPT1, OPT2 (to the left of the antenna connector on the Rx PCB) set the action of the relay outputs according to the following table. Please note that these can be customised on request.

| OPT1 | OPT 2 | Relay 4         | Relay 3         | Relay 2         | Relay 1   |
|------|-------|-----------------|-----------------|-----------------|-----------|
| out  | out   | ½ Sec Momentary | ½ Sec Momentary | ½ Sec Momentary | Momentary |
| in   | out   | Momentary       | Momentary       | Momentary       | Momentary |
| out  | in    | Latching        | Latching        | Latching        | Latching  |
| in   | in    | Test Mode       |                 |                 |           |

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## Notes for use when Connecting the Remote Control System to a Clay Trap Release

This system is supplied complete with cable in order to connect to the Clay Trap Release.

**Warning : Not all Clay Traps have the same wiring convention!**

The system is pre-wired (as diagram below) to operate with most trap releases, before connecting, CHECK YOUR CONNECTIONS. (using a voltmeter) if you are in any doubt, DO NOT CONNECT THE SYSTEM, consult a qualified Electrician. Although the system operates on 12/24V damage may occur to the receiver unit if wrong connections are made.

### Installation Notes

**1. Connect Power to the Receiver unit.**

The receiver unit requires the following connections to operate

12V supply (Brown wire as supplied)

0V Supply (Yell/GRN wire as supplied)

These may not match the wire colours on your Trap!

**2. When the Receiver unit has power connected the Power LED will illuminate. This must be 'on' for the system to operate.**

**3. Check operation of the Remote Control**

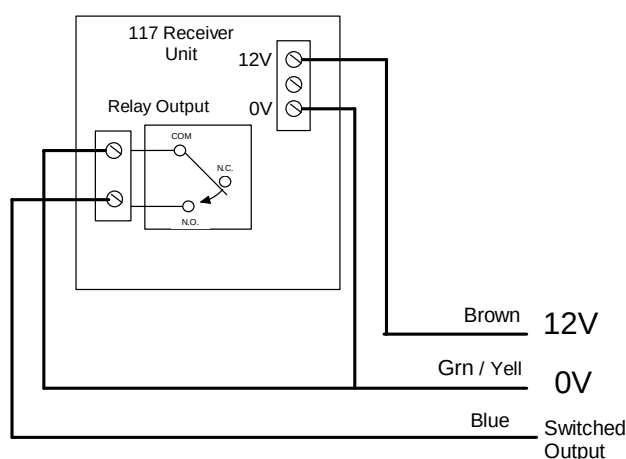
**4. When the power LED is 'on' the Remote Control System may be operated, Check operation by firing the transmitter and check that;**

- The LED on the transmitter illuminates
- The Rx Data LED on the Receiver unit (next to the power LED) illuminates.

If this does not work then check your Switch addresses on the transmitter and receiver.

**5. Check the Wiring to the Trap**

**6. The receiver has been pre-wired to the following Circuit**



**7. When operated, the receiver provides an output (Blue Wire) which momentarily connects to 0V.**

**8. Alternative Wiring :** The switched output may be connected in several ways, please see the 'Relay Output Connections' section. If in doubt consult a qualified electrician.

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## Technical Specifications

| Dimensions (mm) | Transmitter Unit    | Booted Transmitter Unit | Decoder Unit            |
|-----------------|---------------------|-------------------------|-------------------------|
| Length          | (not including ANT) | (not including ANT)     | 110 (not including ANT) |
| Width           |                     | 66                      | 85                      |
| Height          |                     | 36                      | 35                      |

## Transmitter Unit

Storage Temperature: -10 to +70° Celsius. Operating Temperature: 0 to +55° Celsius.

| Electrical Characteristics              | Min | Typical | Max | Dimension |
|-----------------------------------------|-----|---------|-----|-----------|
| Supply Voltage (1 x PP3 Battery)        |     | 9       |     | V         |
| Supply Current                          |     | 10      |     | mA        |
| Frequency                               |     | 434.075 |     | MHz       |
| RF Output Power (ERP)                   | -   |         | 10  | mW        |
| Frequency Accuracy over Full Temp Range |     |         | ±27 | KHz       |

## Receiver Unit

Storage Temperature: -10 to +70° Celsius. Operating Temperature: 0 to +55° Celsius.

| Electrical Characteristics               | Min | Typical | Max | Dimension |
|------------------------------------------|-----|---------|-----|-----------|
| Supply Voltage for +12v                  |     | 12.0    |     | Vdc       |
| Supply Voltage for +24v                  |     | 24.0    |     | Vdc       |
| Supply Current :                         |     |         |     |           |
| FM Quiescent                             |     | 19      |     | mA        |
| FM all relays operating                  |     | 260     | 275 | mA        |
| Relay Rating (Rlys 1-4) (@ 12Vdc)        |     |         |     |           |
| @12V                                     |     |         | 2   | A         |
| @50V                                     |     |         | 1   | A         |
| Relay Rating (RLY Alternative) (@ 50Vdc) |     |         |     |           |
| @ 230Vac*                                |     |         | 1   | A         |

\*The relay contacts in this unit are for functional use only and must not be used for isolation purposes

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