


## Features

- Complete Remote Control System
- 1 – 3 Channel Remote Control Systems
- 12 or 24Vdc Supply
- High Security  Protocol
- 'Easy Learn' Tx Encoder Feature
- Easy Installation via Screw terminals.
- Up to 50 Transmitters per System
- Up to 3 Relay Outputs 12Apk @ 230Vac
- Momentary or Latching Outputs
- IP65 Rated Enclosure (Wall Mounts Supplied)
- Requires No Radio Licence
- Range up to 100metres



## Description

A Range of 'ready to operate' remote control systems supplied as either AM or FM and contain a transmitter and receiver decoder pair.

Installation simply requires connections to power supply and the output relay screw terminals. The output relays are activated by the key press on the transmitter encoder.

The system utilises the Microchip Keeloq protocol, ensuring high security and reliability.

The decoder has the capacity to learn up to 50 unique transmitters. These are memorised even if the power is removed.

The decoder is supplied in an IP65 rated enclosure with Cable Gland and wall mounting lugs supplied.

## 433MHz Products

### AM Remote Control Systems

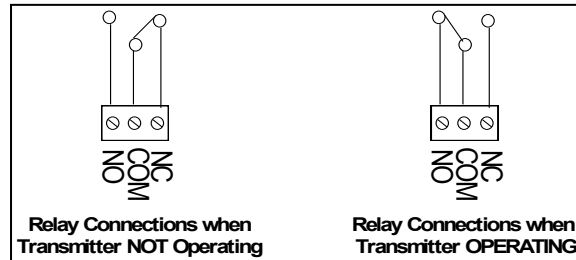
Part Number	Description	Transmitter Type	Freq (MHz)	Range** (Metres)
118C1A	AM RC System 1 ch 12/24Vdc	Pocket Keyfob	433.92	100
118C3A	AM RC System 3 ch 12/24Vdc	Pocket Keyfob	433.92	100

### Additional AM Transmitter Key fobs

Part Number	Description	Freq (MHz)	Range** (Metres)
110C1-433A	Transmitter Keyfob 1 switch	433.92	100
110C2-433A	Transmitter Keyfob 2 switch	433.92	100
110C3-433A	Transmitter Keyfob 3 switch	433.92	100

### Data Outputs

Each output relay provides an isolated switch. Connections are Common (COM), Normally Open (NO) and Normally Closed (NC).



The jumper links (J1, J2) configure the outputs to be momentary or latching. The jumper links are made / removed by a small link 'cap' placed over the pin header.

### 118 Receiver Outputs

Link 1 (LK1)	Link 2 (LK2)	O/P 1	O/P 2	O/P 3
Open	Open	Latch	Latch	Latch
Open	Connected	Mom	Mom	Mom
Connected	Open	Mom	Mom	Latch
Connected	Connected	Latch	Latch	Mom

## Operational Overview

### Transmitters to receivers

Each transmitter has a unique identity, (one of 16 billion possible numbers), the identity number is encrypted and transmitted as a random number that changes on each press of the switch. (the same number is never repeated!).

Each receiver can learn the identity of upto 50 unique transmitters.

Note : the same transmitter may be taught to any number of receivers to create 'master keys'.

### Learning a New Transmitter Keyfob Switch

Press the learn switch (SW1), the accept LED will illuminate.

Press the transmitter once, accept LED will extinguish.

Press the transmitter again, the accept LED will flash.

Wait for the accept LED to stop flashing.

This transmitter will now operate the system.

The system can learn upto 50 unique transmitter keyfobs

### Erasing Existing Transmitters

To completely erase the Tx encoders, press SW1 on the Rx decoder for 10 seconds.

The learn LED will turn off after the 10 seconds to indicate the Tx encoder(s) have been erased

NOTE: You cannot erase individual Tx encoders

## Technical Specifications

'110' Transmitter Key fob

Battery Type GP23AE (supplied)

Electrical Characteristics	Min	Typical	Max	Units
Supply Voltage	8.5	9	16	V
Supply Current : Quiescent		0		mA
Supply Current : Transmitting		8		mA
Operating frequency		433.92		MHz

### 118 Receiver Decoder

Dimensions: 110mm (not including antenna) x 85mm x 35mm

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

ELECTRICAL CHARACTERISTICS	MIN	TYPICAL	MAX	DIMENSION
Supply Voltage for +12 v	10	12.0	16	V
Supply Voltage for +24 v	22	24.0	28	V
Supply Current : Quiescent all relays operating*		19 100		mA
Time delay from Tx on Switch to Rx Relay operation			100	mS
Time delay from Tx sw relax to Rx Relay release			300	MS

## Changing the batteries

Remove the two screws holding the case together. Open the case and change the battery. Ensure you check the orientation



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Meets the following EC Directives:

### DO NOT

Discard with normal waste, please recycle.



ROHS Directive 2002/95/EC

Specifies certain limits for hazardous substances.



WEEE Directive 2002/96/EC

Waste electrical & electronic equipment. This product must be disposed of through a licensed WEEE collection point. RF Solutions Ltd., fulfills its WEEE obligations by membership of an approved compliance scheme.

## Waste Batteries and Accumulators Directive 2006/66/EC

Where batteries are fitted, before recycling the product, the batteries must be removed and disposed of at a licensed collection point.

Environment Agency producer registration number: WEE/JB0104WV.

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