



## Rugged Remote Control Systems

### Applications

- Remote outdoor Switching
- Access control
- Industrial control for
- Pumps, Lights, etc

### Features

- Rugged Transmitter with Integrated Rubber Enclosure
- 4 switched channels 1000W rated
- 2000m range
- 12-32Vdc supply
- waterproof Receiver (IP68)
- momentary, or latching outputs
- Any switch maps to any switch or multiple switches
- Systems supplied 'ready to go'
- 868MHz FM Technology
- EMC Compliant for Europe.



### Description

Whatever your switching application the **SABRE Remote control system** with 4 individual 230V outputs and it's waterproof IP68 enclosure will be a great choice.

The **SABRE remote control system** has been designed as a rugged hand held transmitter, with a range of upto 4km and a battery life of five years (operating 100 times per day) .

Each receiver has 4 switched Relay outputs each capable of switching up to 12A @230V. Using our 'easy-learn' process each relay can be controlled from any switch on the transmitter.

Using the latest technology the receiver automatically responds to the transmitter handset with an acknowledgment signal for increased reliability.

### Part Numbers

Part Number	Description	Frequency (MHz)	Range**
SABRE-S1	System 1 channel	869.5	2Km
SABRE-S3	System 3 channel	869.5	2Km
SABRE-S4	System 4 channel	869.5	2Km
SABRE-RX	Receiver Unit only	869.5	2Km

\*\*Range stated is optimum, direct line of sight. In worst conditions this can be reduced by over 50%



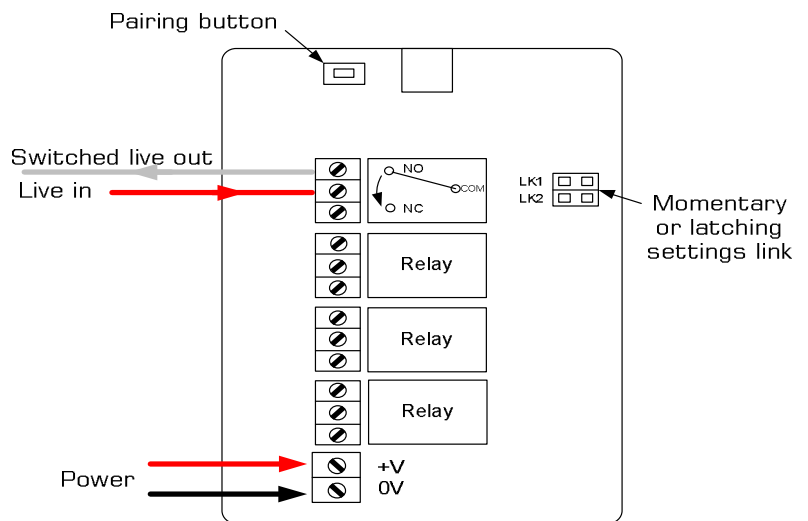
## Additional Transmitters



Part Number	Description
SABRE-T1	Transmitter 1 switch
SABRE-T3	Transmitter 3 switch
SABRE-T4	Transmitter 4 switch
SABRE-T8	Transmitter 8 switch

## Wiring the SABRE Receiver

1. Open the enclosure by removing the Antenna and two fixing screws from the base of the enclosure, the board will then slide out.
2. Wire the power and relay outputs as shown
3. Once powered the System is supplied ready to operate; transmitter button 1 will switch relay 1 (button two to relay two and so on). Each button press will change the state of the relay (i.e. one press for on, one press for off).



SABRE 12 - 32V Systems  
12V Switched Output Example – Only to be used by a competent person

## Configuring Relays

The jumper links set the outputs to be Momentary (operates as long as transmitter is operated) or Latching (Relay changes state each time transmitter is pressed).

The jumper links are made / removed by the small link 'cap' placed over the pin header.

Link Positions		Relay Outputs			
LK1	LK2	RLY 1	RLY 2	RLY 3	RLY 4
Closed	Closed	Mom	Mom	Mom	Mom
Closed	Open	Mom	Mom	Latch	Latch
Open	Closed	Mom	Latch	Latch	Latch
Open	Open	Latch	Latch	Latch	Latch

## Advanced Operation

### To pair a new transmitter switch follow this procedure

Any transmitter button can be configured to operate any of the receiver relays.  
Pair any transmitter switch with a receiver relay by following this procedure:

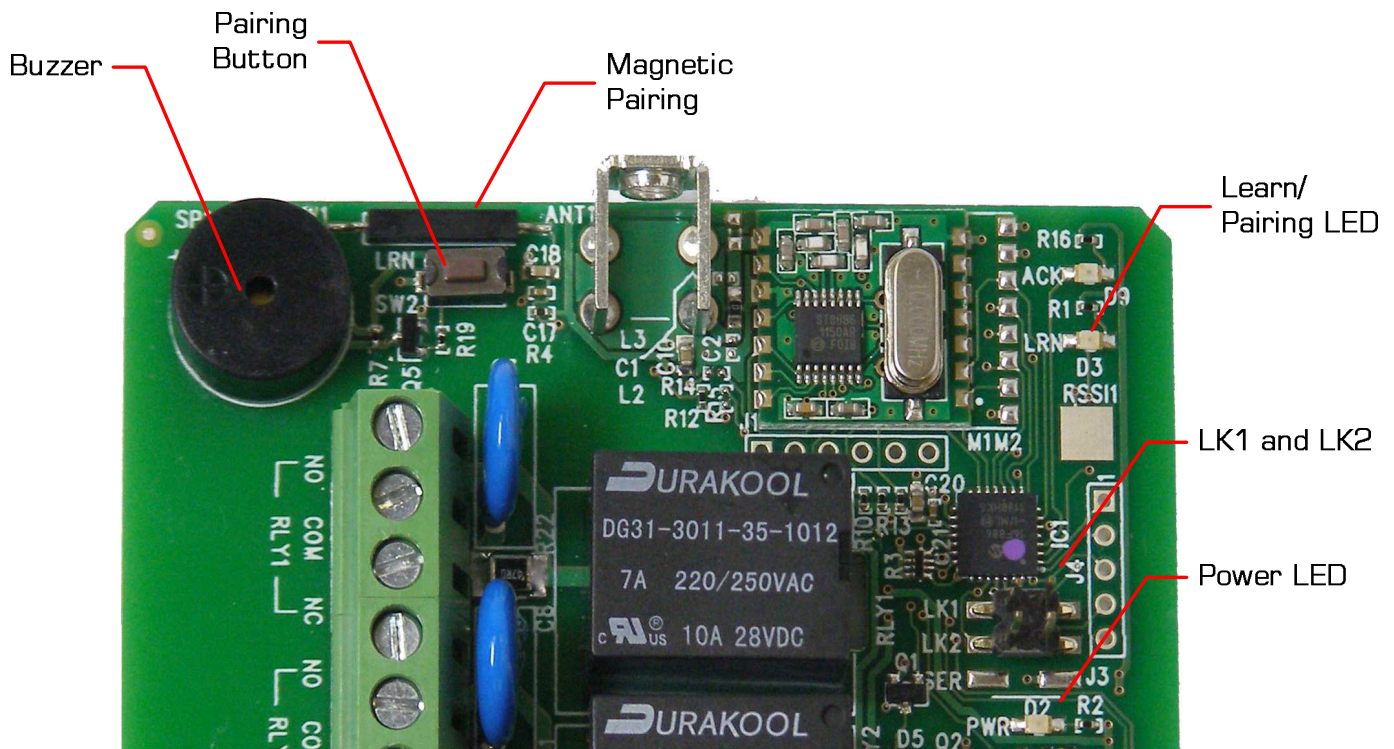
1. Briefly press the receiver pairing switch (SW2)
2. The pairing LED will flash once to indicate output relay 1 is selected
3. After the LED stops flashing, press the switch again to select the next relay channel
4. The pairing LED will flash twice to show channel 2 is selected... and so on
5. Repeat steps 2-5 until the required output relay is selected.
6. With your relay selected press the button on the transmitter that you want to pair with it
7. The learn LED will flash to indicate pairing is complete

**NOTE:** each receiver has a maximum memory for up to 40 pairings, these can be from the same or any number of transmitters.

### Erasing Receivers Memory

1. Press and hold the receiver Learn Switch for approx 10 seconds.
2. When the Learn LED turns ON all memory is erased

**NOTE:** You cannot erase individual Tx encoders



## To pair a new transmitter using a magnet externally

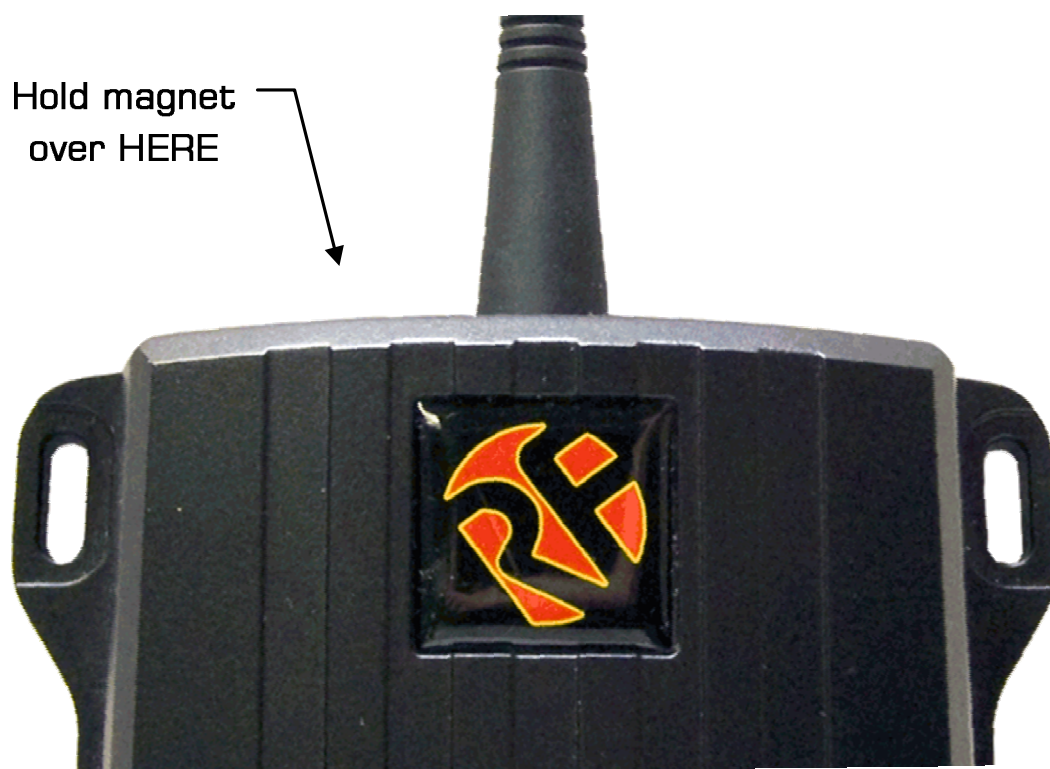
A magnet can be used in place of pressing the pairing/learn switch on the receiver - this means that new transmitters can be paired WITHOUT opening the enclosure.

1. Briefly hold a magnet next in the position shown
2. The buzzer will sound one beep
3. After the buzzer has finished beeping
4. Briefly hold the magnet again this selects the next relay.
5. Repeat steps 2-5 until the required output relay is selected.
6. Press the button on the transmitter which you want to pair
7. The buzzer will sound one beep to confirm pairing
8. Repeat for all transmitters and button that you wish to pair

**NOTE:** each receiver has a maximum memory for up to 40 pairings, these can be from the same or any number of transmitters.

## Erasing receivers memory

1. Hold a magnet in position for 10 seconds.
2. After 10 seconds The buzzer will sound a long beep to confirm erase



## Notes for Clay Pigeon Release Applications

### PLEASE READ BEFORE ATTEMPTING INSTALLATION:

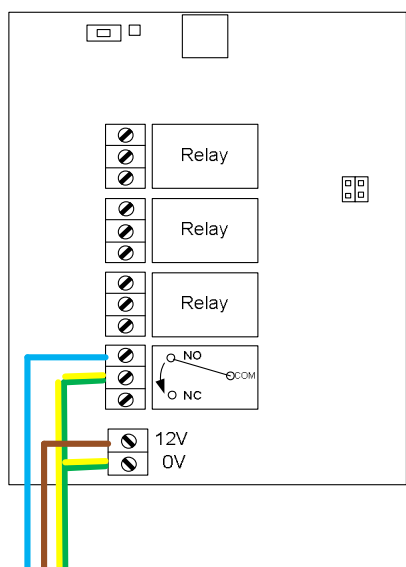
This system is supplied complete with cable in order to connect to the Clay Trap Release.

**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 12-32V DC damage may occur to the receiver unit if wrong connections are made.

### Installation Notes

An ideal installation would be to firmly fix the SABRE-RX approx. 2 metres from the ground, in direct sight of the transmitter. Lowering the height or having obstacles between transmitter and receiver will reduce range!



**SABRE Receiver Wiring**  
This diagram shows the standard wiring configuration and may be adapted to fit Traps requiring other switching types.

### Connecting 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)

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

### Note:

If you are pairing multiple transmitter ie. If you have purchased receivers and transmitters separately. Follow the Pairing procedure to configure your chosen system. SABRE-S1 systems are sold pre-paired.

### Check the Wiring required for your Trap:

The SABRE is capable of switching nearly any trap type, however wiring conventions vary between manufacturers. The relays on the SABRE can switch 24Vdc or 230Vac @ 5A.

### 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.

## Technical Specifications

### Transmitters: SABRE-Tn

Enclosure Rating: Standard IPx8  
 Battery Type: 4 x AAA (supplied)  
 Battery Life: 5 years @ approx 100 1/2second presses p/day  
 Dimensions: 154 x 85 x 48mm

**Changing the Battery:** Remove the six fixing screws, remove battery and replace note polarity

Electrical Characteristics	Min	Typical	Max	Units
Supply Voltage		6V		V
Frequency:		869.500		MHz
RF Output Power (ERP) @ 868 MHz	-		20	dBm

### Receiver Decoder: SABRE-RX


Enclosure Rating IP68  
 Dimensions 130 x 112 x 42 mm (not including antenna)  
 Storage Temperature: -10 to +70° Celsius.  
 Operating Temperature: -10 to +50° Celsius.

ELECTRICAL CHARACTERISTICS	MIN	TYPICAL	MAX	DIMENSION
Supply Voltage for +230 VAC	10	12	32	Vdc
Relay Rating* (230Vac) RLY1-4		5	12	A
Supply Current : Quiescent		40		
All relays operating*		140		mA
Time delay from Tx on Switch to Rx Relay operation		20		mS
Time delay from Tx sw relax to Rx Relay release		20		mS

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

### Approvals Information:

- All RF Solutions products are manufactured in accordance with our ISO:9001 Quality System
- SABRE Systems are manufactured to CE standards
- Further information available on request.

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