# Professional Remote Control Systems

ELITE Series

## **Applications**

- Garden Lighting
- Pond pumps
- Remote outdoor Switching
- Access control
- Industrial control



## **Features**

- 4 switched channels 1000W rated
- Systems with 250m or 1000m range
- 230Vac supply
- Completely waterproof ABS enclosure (IP68)
- All outputs momentary, latching or timed
- Any switch maps to any relay or multiple relays
- 868MHz Reliable FM Technology
- EMC Compliant for Europe
- 10 Cable entry points for easy installation.



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

The **ELITE remote control system** has been designed with the requirements of electricians in mind and therefore it can be used to switch all lighting types as well as other applications such as Water Features, Electric gates and Garage Doors.

Each receiver has 4 switched outputs. Using our one touch 'easy-learn' process each relay can be controlled from any switch on any compatible transmitter.

Thanks to the latest technology each of the 4 outputs on the **ELITE remote control system** can be set to operate in a **timed**, **momentary or latching** mode for complete flexibility.





## System Part Numbering

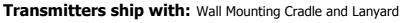


| Part Number | Description                               | Receiver<br>Power Supply | Range**<br>(Metres) |
|-------------|---|--------------------------|---------------------|
| ELITE-S4    | System 4 outputs<br>With ELITE-T8         | 230Vac                   | 250                 |
| ELITE-XS4   | System 4 outputs<br>With <b>ELITE-XT6</b> | 230Vac                   | 1000m               |
| ELITE-RX    | Receiver 4 output                         | 230Vac                   | -                   |

\*\*Range stated is optimum - Line of Sight. Range and be hugely reduced by obstacles or other interference.

## **Additional Transmitters**









#### **ELITE-X Series 1000m Range Transmitters**

| Part Number      | Description                             |  |  |
|------------------|---|--|--|
| ELITE-XT1        | Transmitter 1 switch                    |  |  |
| ELITE-XT2        | Transmitter 2 switch                    |  |  |
| ELITE-XT4        | Transmitter 4 switch                    |  |  |
| ELITE-XT6        | Transmitter 4 Switch + All ON/OFF       |  |  |
| ELITE-XT8        | Transmitter 8 switch                    |  |  |
| ELITE-XT16       | Transmitter 16 switch (8Sw + Shift Key) |  |  |
| FIREFLY-TX-IPKIT | 'O' Ring, Seals Transmitter to IP68     |  |  |

Transmitter dimensions and details on page 7



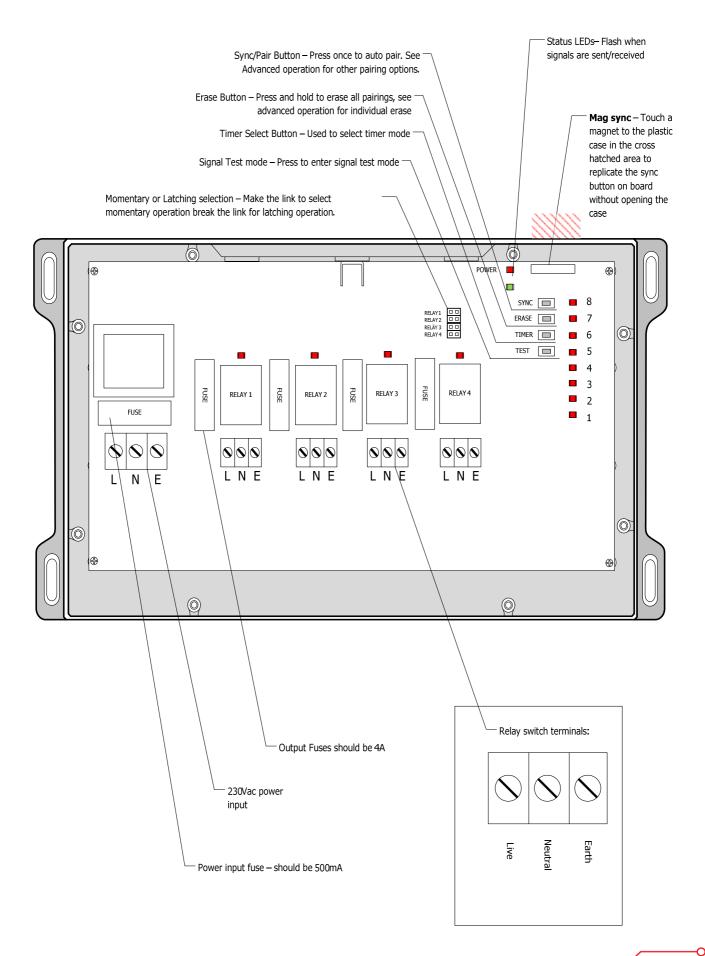
#### **ELITE Series 250m Range Transmitters**

| Part Number | Description                       |
|-------------|-----------------------------------|
| ELITE-T8    | Transmitter 8 Switch + All ON/OFF |

Transmitter dimensions and details on page 7







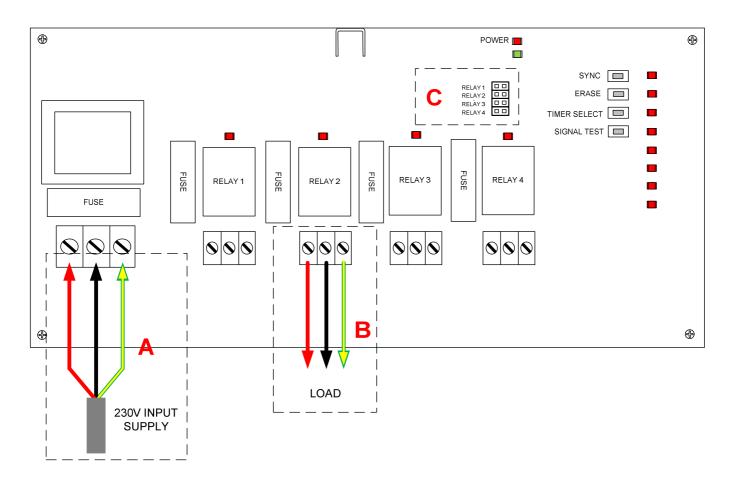
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## Quick Installation Guide (systems only)

The Elite system provides 4 switches each capable of switching up to 1KW (4A @ 230V). Each channel is independent and separately fused. The ELITE Remote control system provides 230V mains switched outputs via each terminal.

- 1. First mount the ELITE system receiver box in the wall in your desired location (see Page 7 for wall mounting dimensions and information).
- 2. Open the enclosure by removing fixing screws from the enclosure front and then removing the front from the enclosure.
- 3. Wire the LIVE Neutral and Earth connections to the power supply screw terminal as shown below **(shown as A).**
- 4. Wire your load(s) as required (shown as B)
- 5. Once all required wiring is complete, use the handheld ELITE transmitter to switch the outputs on and off.
- 6. As supplied the handheld will operate the outputs Button 1 to output 1, Button 2 to output 2 etc.
- 7. All buttons will operate in a latching mode Press for on, press again for off. It is possible to change the operation to momentary mode by fitting the links **(shown as C)**
- 8. For advanced operation such as adding extra transmitters different button mapping options see advanced operation section.



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## Advanced operation

## The ELITE system comes with one transmitter, this is already SYNC'ed and will operate the system out of the box.

#### To AUTO-SNYC a new transmitter

- 1. To SYNC a new ELITE handheld transmitter to the receiver box simply press the SNYC button on the ELITE receiver board. (see page 3 for button locations)
- 2. The ELITE receiver will flash all of its relay output LEDs at a high rate to show that it is ready for AUTO-SYNC.
- 3. Press ANY button on the transmitter handheld that you wish to SNYC to the receiver.
- 4. All flashing LEDs will go out, LED 8 will flash quickly for 2 seconds then go out.
- 5. The ELITE receiver will then exit SYNC mode and return to normal operating mode you may now use the transmitter to switch the outputs.

### MANUAL-SYNC individual transmitter buttons (advanced)

- 1. To SYNC a specific ELITE handheld transmitter button to a specific output on the ELITE receiver box press the SNYC button on the ELITE receiver board. (see page 3 for button locations).
- 2. The ELITE receiver will flash all its relay output LEDs at a high rate to show that it is ready for SYNC.
- 3. Press the SYNC button again the ELITE receiver will flash output LED 1 only this is showing that output 1 is selected. Pressing the SYNC button again will select output 2 and so on to output 4.
- 4. Once you have selected the required output (that output LED only is flashing) press the SPECIFIC button on the transmitter handheld that you wish to SNYC to the receiver.
- 5. The flashing LEDs will go out, LED 8 will flash quickly for 1 second then go out.

**NOTE:** After a successful pairing the Elite-RX will exit SYNC mode automatically. You cannot perform a SYNC ALL and a MANUAL SYNC on a single transmitter.

#### **Erasing ALL transmitters:**

- 1. Open the case and apply power
- 2. Press and hold the ERASE button for 10 seconds
- 3. All relay LEDs flash together and then go out
- 4. Erase complete, you can now follow the pairing process to pair your transmitters to the receiver.

## **ERASE Individual Transmitters:**

- 1. Open the case and apply power
- 2. Press and release the ERASE button
- 3. The LED next to ERASE should remain lit and all relay LEDs will be flashing
- 4. Press any button on the transmitter to be erased
- 5. All output LEDs will go out to show that the transmitter has been erased
- 6. The ELITE will exit to normal operating mode

## **Erasing ALL Timers:**

- 1. Open the case and apply power
- 2. Press and hold the TIMER button for 10 seconds,
- 3. A single relay LED will be flashing
- 4. When all Relay LED flash together and then go out the timer erase process is complete.
- 5. All relays will operate as per their jumper settings.

#### NOTE: Setting a timer OVERIDES all momentary or Latching on board link settings.

Continued overleaf...





## Advanced operation continued...

## **Installation TEST MODE**

The ELITE comes with an in-built test mode which allows a user to check the signal strength of any compatible handheld:

- 1. Press the SIGNAL TEST button on the PCB
- 2. Press any button/activate the transmitter which you want to test
- 3. LEDs 1-8 will show a bar graph of the signal strength the more LEDs on the better the signal

**TIP:** Try the transmitter in the location where it will be used to make sure it will work once installation is complete.

**Note**: When in test mode and paired transmitter will still activate its relay.

For reliable communications please ensure at least 3 LED's are lit.

## Installation TIMER SELECT MODE

NOTE: As default all timers are set to 0 seconds.

The ELITE has a timer option which can be set individually on each output. Meaning that you can set any output to de-activate after a different amount of time should you wish

- 1. To enter timer select mode Press the TIMER SELECT button
- 2. Select your chosen output by pressing the TIMER SELECT button to scroll through each relay in turn
- 3. When the LED for the required output is flashing wait until it becomes solidly LIT
- 4. Press the TIMER SELECT button again to increase the timer delay in line with the table below
- 5. When you have selected the required delay, wait 3 seconds. All Red LEDs will flash to show that the setting is saved

#### NOTE: Timers re-start on every button press.

| 0 LED | 1 LED | 2 LED | 3 LED | 4 LED | 5 LED | 6 LED | 7 LED | 8 LED |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Os    | ½ s   | 5s    | 10s   | 30s   | 1m    | 10m   | 30m   | 1hr   |

#### Note: Settings are saved even after power is removed.

When zero LED's are lit the relays will operate as per the jumper links. Momentary or latching.

## Setting MOMENTARY / LATCHING links

NOTE: As default all relay switches are latching.

It is possible to set the relay switches on the SABRE receiver to either momentary or latching operation (Latching - one press for on, one press for off, Momentary - On while button is held only)

- 1. Remove all power from the receiver and then open the ELITE-RX receiver enclosure by unscrewing the 8 screws on the front panel.
- 2. The Momentary/Latching Setting links are in the position shown as **(D)** page 4.
- 3. To set a relay switch to momentary choose the associated link cap:
  - Link fitted MOMENTARY
  - Link Removed LATCHING
- 4. Re-apply the power to the ELITE-RX.

**NOTE:** The link setting can be changed without removing the power but it is not recommended to touch the PCB with the power applied.





## **Technical Specifications**

### Transmitters: ELITE-T8

Enclosure Rating: Not waterproofed

Battery Type: CR2032 (supplied)

Battery Life: 3 years @ approx 50 1/2second presses p/day

Dimensions: 86 x 54 x 7 mm

**Changing the Battery:** Carefully squeeze in the battery lock tab on the base of the transmitter, and then pull out the battery tray

| Electrical Characteristics         | Min | Typical | Max | Units |
|------------------------------------|-----|---------|-----|-------|
| Supply Voltage                     |     | 3V      |     | V     |
| Frequency:                         |     | 869.500 |     | MHz   |
| RF Output Power (ERP) @ 869.50 MHz | -   | 3       |     | mW    |

### Transmitters: ELITE-XTn

| Enclosure Rating: | Standard IPx8                                |
|-------------------|--|
| Battery Type:     | 3 x AAA (supplied)                           |
| Battery Life:     | 5 years @ approx. 50 1/2second presses p/day |
| Dimensions:       | 90 x 54 x 27 mm                              |

**Changing the Battery:** Remove the six fixing screws. Remove 2 battery compartment screws and replace batteries, taking care of cables and battery polarity

| Electrical Characteristics         | Min | Typical | Max | Units |  |
|------------------------------------|-----|---------|-----|-------|--|
| Supply Voltage                     |     | 4.5V    |     | V     |  |
| Frequency:                         |     | 869.500 |     | MHz   |  |
| RF Output Power (ERP) @ 869.50 MHz | -   | 100nW   |     | mW    |  |

## Receiver Decoder: ELITE-RX

| Enclosure Rating:      | IP68                                      |
|------------------------|---|
| Dimensions:            | 267 x 148 x 78 mm (not including antenna) |
| Storage Temperature:   | -10 to +70° Celsius.                      |
| Operating Temperature: | -10 to $+50^{\circ}$ Celsius.             |

| ELECTRICAL CHARACTERISTICS                          | MIN | TYPICAL   | MAX | DIMENSION |
|---|-----|-----------|-----|-----------|
| Supply Voltage for +230 VAC                         |     | 230Vac    |     | Vac       |
| Relay Rating* (230Vac) RLY1-4                       |     | 4rms      |     | А         |
| Supply Current : Quiescent<br>All relays operating* |     | 40<br>140 |     | mA        |
| Time delay from Tx on Switch to Rx Relay operation  |     | 30        |     | mS        |
| Time delay from Tx sw relax to Rx Relay release     |     | 30        |     | mS        |

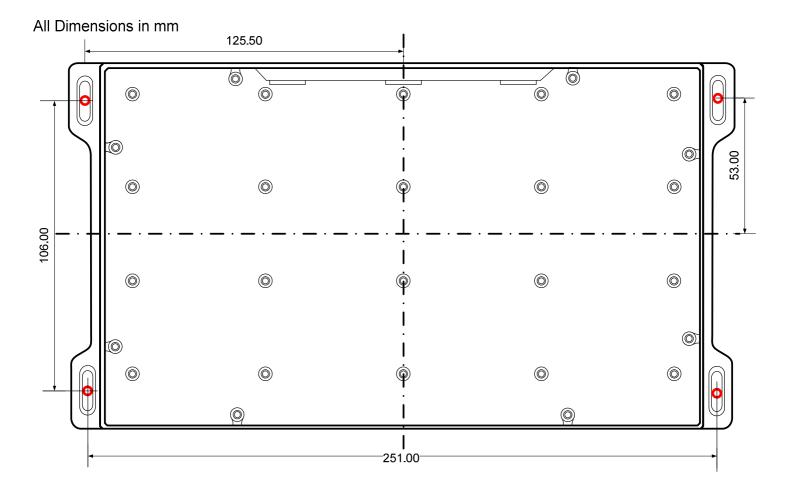
#### \*The relay contacts in this unit are for functional use only and must not be used for isolation purposes

#### **Approvals Information:**

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



## Wall Mounting template (not to scale)



#### **RF Solutions Ltd. Recycling Notice**

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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RF Solutions Ltd Unit 21 Cliffe Industrial Estate, Lewes, East Sussex, United Kingdom, BN8 6JL Tel. Sales: +44 (0)1273 898 000 • Tech. Support: +44 (0)1273 898 007