

Professional Remote Control Systems

Applications

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



Features

- 4 switched channels
1000W rated
- Systems with 150 range
- 110Vac supply
- Completely waterproof ABS enclosure (IP68)
- All outputs momentary, latching or timed
- Any switch maps to any relay or multiple relays
- 433MHz Reliable FM Technology
- EMC Compliant for Europe
- 10 Cable entry points for easy installation.

Description

Whatever your switching application the **ESPRIT Remote control system** with 4 individual 110V outputs and a completely waterproof IP68 enclosure will be a great choice.

The **ESPRIT 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 110Vac 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 **ESPRIT remote control system** can be set to operate in a **timed, momentary or latching** mode for complete flexibility.

ESPRIT Remote Control System



System Part Numbering



Part Number	Description	Receiver Power Supply	Range** (Metres)
ESPRIT-4S4	System 4 outputs With FOBBER-4T4	110Vac	150m
ESPRIT-4R4	Mains receiver 4 outputs	110Vac	-
ESPRIT-4RL4	Low voltage Receiver 4	12-32/110Vac	-

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

Additional Transmitters

Transmitters ship with: Wall Mounting Cradle and Lanyard



ESPRIT-X Series 200m Range Transmitters

Part Number	Description
QUANTA-TX1	Transmitter 1 switch
QUANTA-TX2	Transmitter 2 switch
QUANTA-TX4	Transmitter 4 switch
QUANTA-TX6	Transmitter 4 Switch + All ON/OFF
QUANTA-TX8	Transmitter 8 switch
QUANTA-TX16	Transmitter 16 switch (8Sw + Shift Key)
FIREFLY-TX-IPKIT	'O' Ring, Seals Transmitter to IP68

Transmitter dimensions and details on page 7.

FOBBER Series 433MHz 150m Range Transmitters

Part Number	Description
FOBBER-4T1	Transmitter 1 Switch
FOBBER-4T2	Transmitter 2 Switch
FOBBER-4T3	Transmitter 3 Switch
FOBBER-4T4	Transmitter 4 Switch
FOBBER-4T6	Transmitter 4 Switch + All ON/OFF
FOBBER-4T8	Transmitter 8 Switch

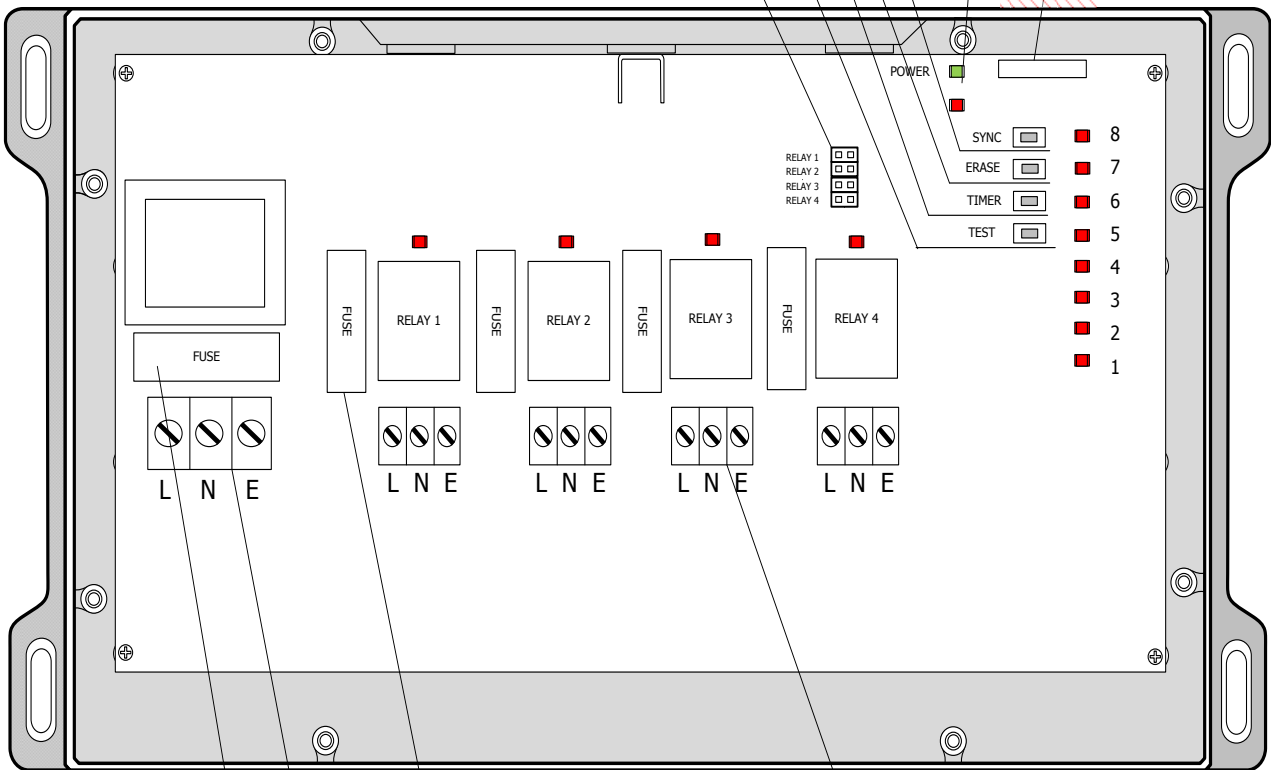


Transmitter dimensions and details on page 7.

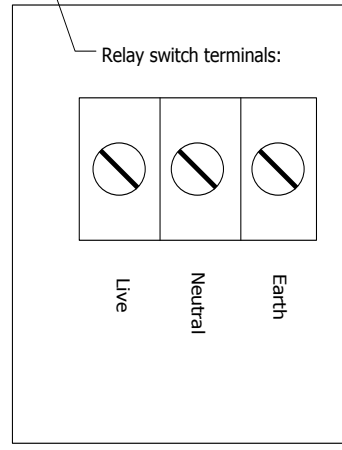
ESPRIT Remote Control System



- Sync/Pair Button – Press once to auto pair. See Advanced operation for other pairing options.
- Erase Button – Press and hold to erase all pairings, see advanced operation for individual erase
- Timer Select Button – Used to select timer mode
- Signal Test mode – Press to enter signal test mode
- Momentary/Latching selection – Make the link to select momentary operation break the link for latching operation. (Default is latching)
- Status LEDs– Flash when signals are sent/received
- Mag sync** – Touch a magnet to the plastic case in the cross hatched area to replicate the sync button on board without opening the case



- Output Fuses must be 8A (Slow blow fuses recommended)
- 110Vac power input
- Power input fuse – must be 500mA (Fast blow fuse recommended)

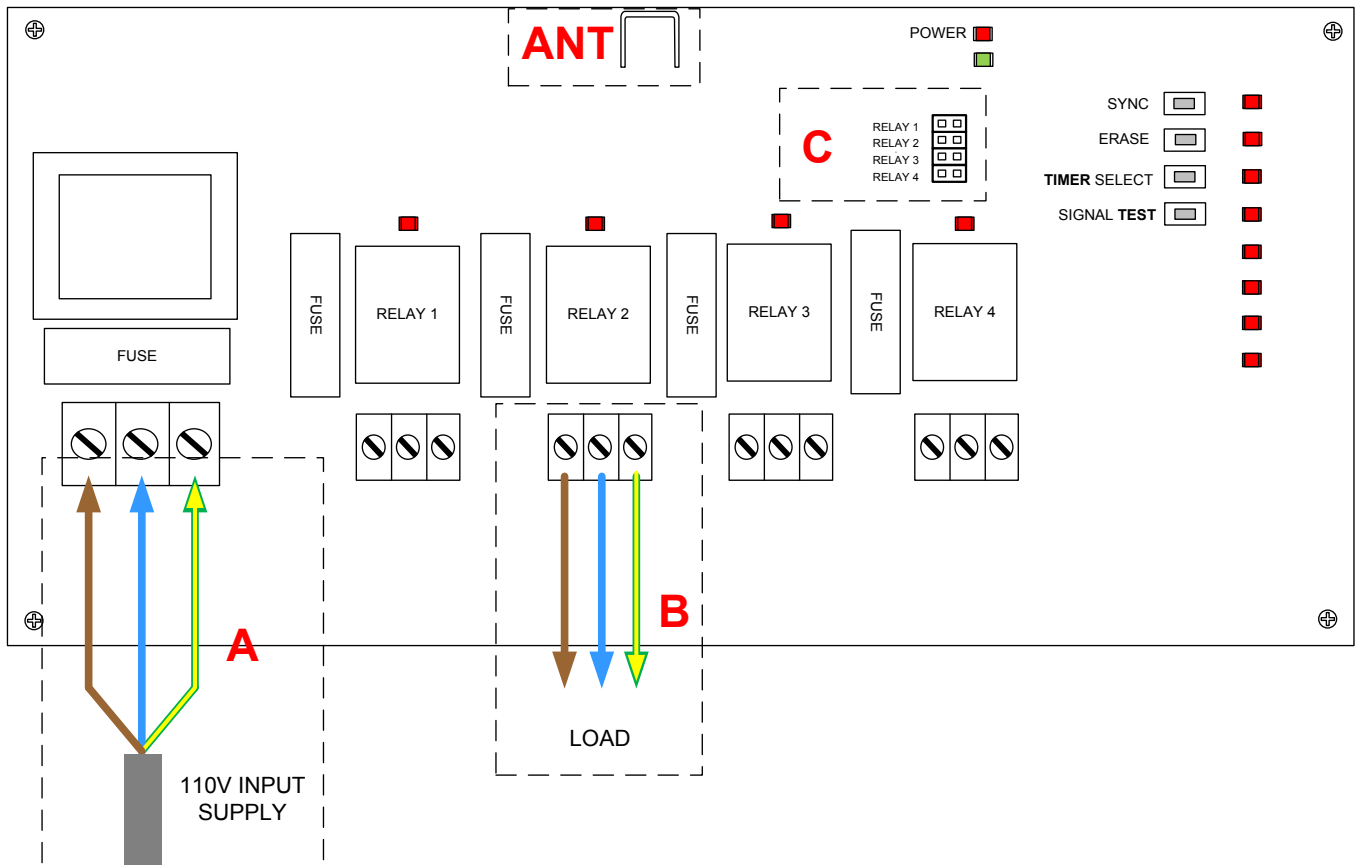


Quick Installation Guide (systems only)

The ESPRIT system provides 4 switches each capable of switching up to 1KW (8A @ 110V). Each channel is independent and separately fused. The ESPRIT Remote control system provides 110V mains switched outputs via each terminal.

To install the ESPRIT System:

1. Screw the antenna into the terminal (**shown as ANT**) through the top of the enclosure. Tighten the antenna to ensure a good seal - "finger tight" is sufficient, no tools should be used.
2. Mount the ESPRIT system receiver box in the wall in your desired location (see Page 8 for wall mounting dimensions and information).
3. Open the enclosure by removing fixing screws from the enclosure front and then removing the front from the enclosure.
4. Wire the Live, Neutral and Earth connections to the power supply screw terminal as shown below (**shown as A**).
5. Wire your load(s) as required (**shown as B**)
6. Once all required wiring is complete, use the handheld ESPRIT transmitter to switch the outputs on and off.
7. As supplied the handheld will operate the outputs - Button 1 to output 1, Button 2 to output 2 etc.
8. 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**) over both pins.
9. For advanced operation such as adding extra transmitters different button mapping options see advanced operation section.



Advanced operation

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

To AUTO-SYNC a new transmitter

1. To SYNC a new ESPRIT handheld transmitter to the receiver box - simply press the SYNC button on the ESPRIT receiver board. (see page 3 for button locations)
2. The ESPRIT 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 SYNC to the receiver.
4. All flashing LEDs will go out, the SYNC LED will flash quickly for 2 seconds then go out.
5. The ESPRIT receiver will then exit SYNC mode and return to normal operating mode - you may now use the transmitter to switch the outputs.

NOTE: Maximum 31 handhelds can be auto sync'ed.

MANUAL-SYNC individual transmitter buttons (advanced)

1. To SYNC a specific ESPRIT handheld transmitter button to a specific output on the ESPRIT receiver box - press the SYNC button on the ESPRIT receiver board. (see page 3 for button locations).
2. The ESPRIT 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 ESPRIT 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, through 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 SYNC to the receiver.
5. The flashing LEDs will go out, the SYNC LED will flash quickly for 2 seconds then go out.

NOTE: After a successful pairing the ESPRIT-RX will exit SYNC mode automatically.
You cannot perform a SYNC ALL and a MANUAL SYNC on a single transmitter.
Maximum of 31 BUTTONS can be auto sync'ed

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 flash 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 ESPRIT will exit to normal operating mode

Setting MOMENTARY / LATCHING links

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

1. The Momentary/Latching Setting links are in the position, shown as **(C) on page 4.**
2. 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 ESPRIT-RX.

Continued overleaf...

Advanced operation continued...

TEST MODE

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

1. Press the TEST button on the PCB (see page 3 for button locations)
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 flashing, the better the signal.
4. To exit test mode - press test again.

NOTES:

- When in test mode the receiver still operates relays as normal.
- For reliable communications please ensure at least 3 LED's are lit.
- Try the transmitter in the location where it will be used to make sure it will work once installation complete.

TIMER SELECT MODE

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

The ESPRIT 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 to.

1. To enter timer select mode - Press the TIMER button
2. Select your chosen output by pressing the TIMER button to scroll through each relay in turn
3. As soon as the LED for the required output stops flashing tap the TIMER button again
4. Each tap of the timer button will increase the timer delay in line with the table below
5. When you have selected the required delay stop tapping and, wait 3 seconds.
6. The Red TIMER LED will flash to show that the setting is saved

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

NOTE: Settings are saved even after power is removed.

NOTE: When zero LED's are lit the relays will operate as per the Momentary/latching links.

TIMERS and MOMENTARY/LATCHING setting links

1. When the momentary/latching setting link for a relay is set to MOMENTARY the timer will restart its count down every time a button is pressed.
2. When the momentary/latching setting link for a relay is set to LATCHING, the relay will turn ON/OFF with each button press. If the relay is left ON it will turn off after the timer period expires.

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.

ESPRIT Remote Control System



Technical Specifications

Transmitters: FOBBER-4Tn

Enclosure Rating: IP68
Battery Type: CR2032 (supplied)
Battery Life: 3 years @ approx 50 1/2second presses p/day
Dimensions: 59 x 33 x 8mm

Changing the Battery: Remove Screws on rear battery hatch and remove to reveal battery.

Electrical Characteristics	Min	Typical	Max	Units
Supply Voltage		3		V
Frequency:		433.92		MHz
RF Output Power (ERP) @ 869.50 MHz	-	3		mW

Transmitters: QUANTA-TXn

Enclosure Rating: Standard IP56 with optional FIREFLY-IP-KIT IP68
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 Batteries: Remove the six fixing screws. Remove the 2 battery compartment screws, remove the battery compartment and replace batteries inside it, taking care not to damage cables and ensuring correct battery polarity

Electrical Characteristics	Min	Typical	Max	Units
Supply Voltage		4.5		V
Frequency:		433.92		MHz
RF Output Power (ERP) @ 869.50 MHz	-	100		mW

Receiver Decoder: ESPRIT-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° Celsius.

ELECTRICAL CHARACTERISTICS	MIN	TYPICAL	MAX	DIMENSION
Supply Voltage for +110 VAC		110Vac		Vac
Relay Rating* (110Vac) RLY1-4		8		A (rms)
Supply Current : Quiescent		25		
All relays operating*		30		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

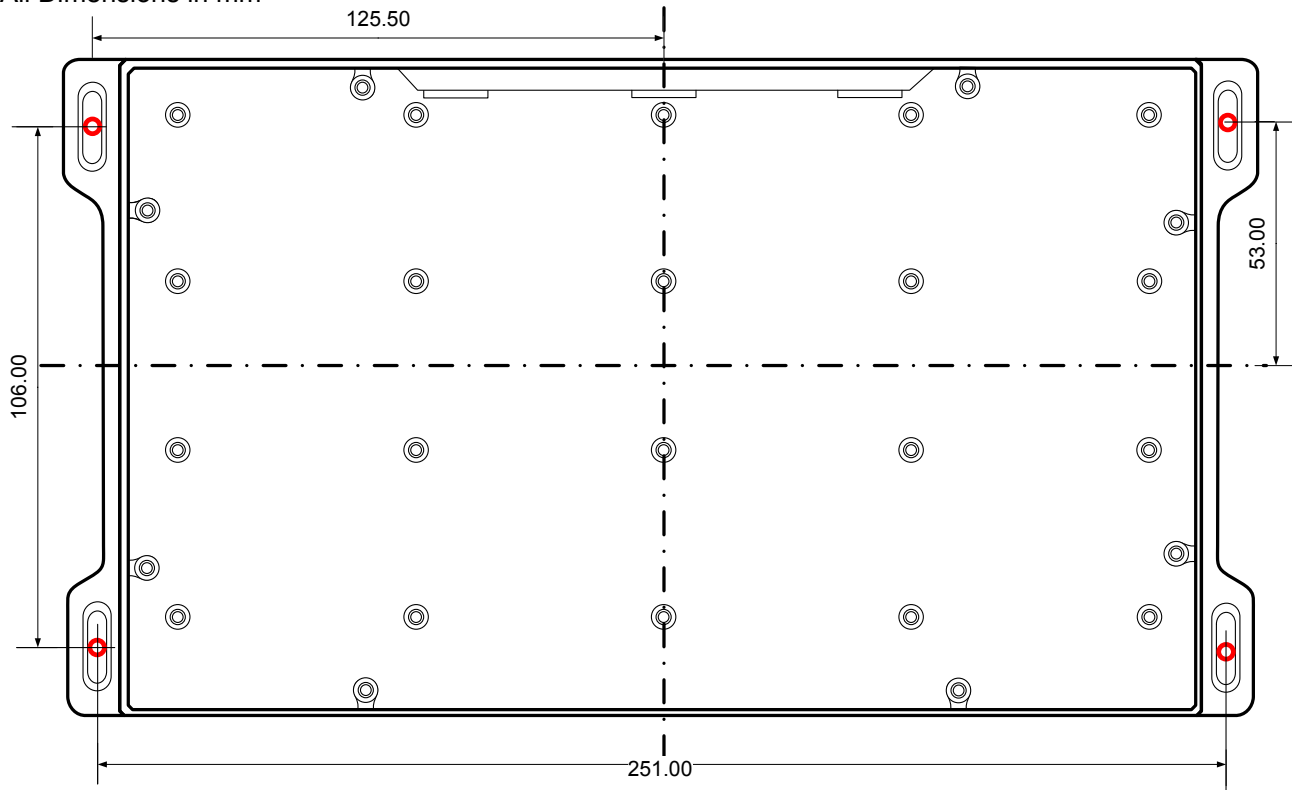
*The relay contacts in this unit are for functional use only and must not be used for isolation purposes

Approvals Information:

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

Wall Mounting template (not to scale)

All Dimensions in mm



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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