HORNET Remote Control Systems

- 433MHz FM Technology
- 1 – 3 Channels
- 1,000W per Output channel
- Relays Rated 5A @ 230Vac
- Up to 150metres Range
- 12-30Vdc Or 230Vac versions available
- Waterproof Receiver (IP68)
- High Security RF Protocol
- Outputs Momentary or Latching
- Any Switch Map to Any Relay Output
- Systems supplied 'ready to Go'

Applications

- General Purpose Remote Switching
- Garage Doors
- Electric Gates, Shutters
- All known Lighting types (LED, fluorescent, halogen, tungsten, xenon; basically all lighting types).
- Access Control

Description

Supplied complete ready to go the HORNET is a rugged IP68 weatherproof remote control system. Installation is easy via screw Terminals for Power and outputs.

Each receiver has 3 relay outputs, each capable of switching 1000watts. Each output can be momentary or latching action.

Additional transmitters may be added using the 'easy-learn' process, any button on the transmitter can be used to control one or many outputs of the receiver.

HORNET Remote Control Systems

Systems Part Numbers

Operating from 12-30Vdc

Part Number	Description	Frequency (MHz)	Range** (Metres)
HORNET-S1	System 1 channel	433.92	150
HORNET-S2	System 2 channel	433.92	150
HORNET-S3	System 3 channel	433.92	150

Systems Operating at 230Vac(see DS-HORNETMAINS)

Part Number	Description	Frequency (MHz)	Range** (Metres)
HORNET-S1M	System 1 channel	433.92	150
HORNET-S2M	System 2 channel	433.92	150

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

Additional Transmitters



Part Number	Description
HORNET-TX1	Transmitter 1 switch
HORNET-TX2	Transmitter 2 switch
HORNET-TX3	Transmitter 3 switch
HORNET -TX-IPKIT	'O' Ring, Seals Transmitter to IP65

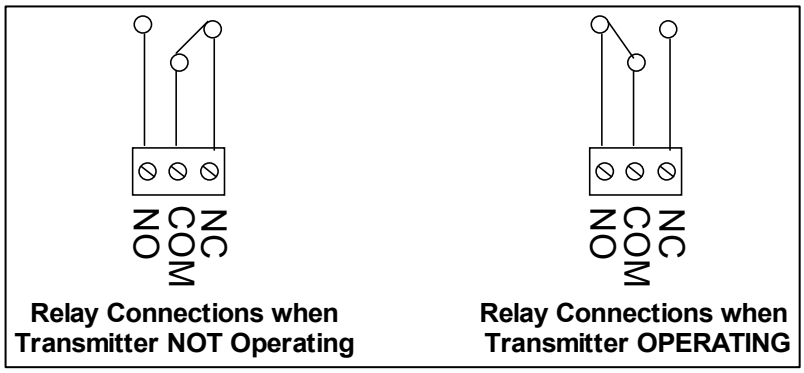
Bespoke Versions

Custom versions available with your own logo and or protocol.

Please contact Sales for further info.

Data Outputs

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

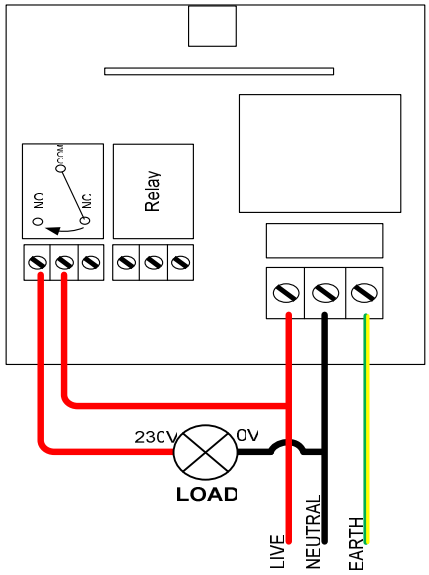


Relay Connections when Transmitter NOT Operating

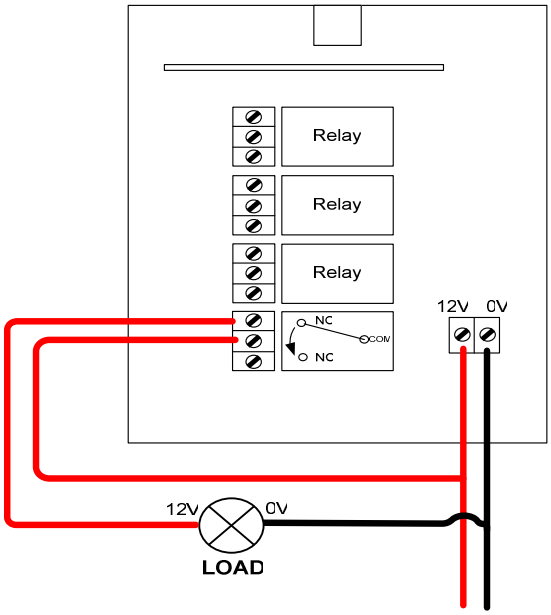
Relay Connections when Transmitter OPERATING

Installation

Below is a simple example showing one possible way to wire a relay in order to give switched power to an external load:



HORNET 230V Systems
230V Switched Output Example– Only to be used by a competent persor



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

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Pairing a Transmitter to a Receiver

Each transmitter has a unique identity. Each time a transmitter Switch is operated, it emits a secure RF signal. The Receiver can learn this signal and allocate to any of its outputs.

The only limitation is that each receiver has a maximum memory for up to 40 pairings, these can be from the same or any number of transmitters.

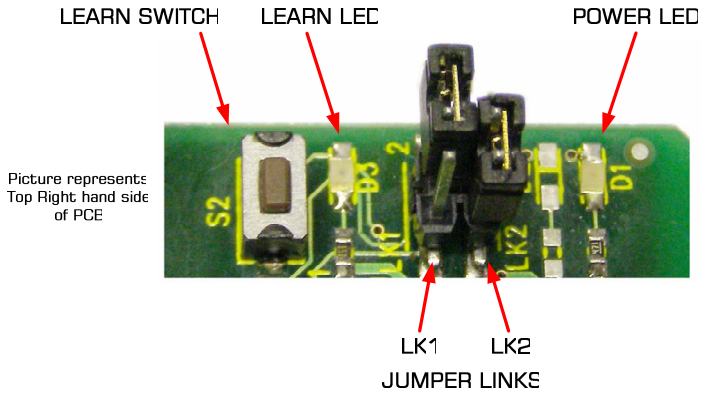
Hint: the same transmitter may be taught to different receivers to create 'master keys'.

HORNET-S1 / HORNET-S2 / HORNET-S3 (12-30Vdc Receivers)

To Learn a New Transmitter switch follow this procedure

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

1. Select the receiver output relay to learn to:
   2. Briefly press the receiver Learn switch (S2) once
   3. The Learn LED will flash once to indicate output relay 1 is selected
   4. After the LED stops flashing, press the Learn switch again to select the next relay channel
   5. Repeat step 4 until the required output relay is selected.
6. Press the button on the transmitter you want to learn to the relay output.
7. The Learn LED will illuminate, press the same transmitter button again.
8. The Learn LED will flash to indicate learning is complete.



Erasing Receivers Memory

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

NOTE: You cannot erase individual Tx encoders

Configuring Receiver Outputs

The jumper links configure the outputs to be Momentary or Latching.

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

(The configuration shown in the picture above represents the third row of the table)

HORNET-S1M / HORNET S2M (230Vac Powered Receivers)

Please Note: During Learn and Erase the relays operate at high speed. They should be isolated from sensitive equipment during this process.

To Pair a Transmitter button to receiver Output Relay #1

1. Apply power the receiver and wait 10secs for the unit to enter 'normal operation' mode.
2. Switch the receiver unit OFF and then ON again in ~1sec intervals **FOUR** times finally leaving the unit powered.
3. The receiver emits a continuous 'Click' to confirm it is now in 'learn' Mode
4. Press the chosen transmitter button.
5. The receiver will acknowledge by sounding the a single 'buzz'
6. Learn Process complete.

To Pair a Transmitter button to receiver Output Relay #2

1. Apply power the receiver and wait 10secs for the unit to enter 'normal operation' mode.
2. Switch the receiver unit OFF and then ON again in ~1sec intervals **SIX** times finally leaving the unit powered.
3. The receiver emits a continuous 'Click' to confirm it is now in 'learn' Mode
4. Press the chosen transmitter button.
5. The receiver will acknowledge by sounding the two 'buzzes'
6. Learn Process complete.

Erasing Receivers Memory

1. Power the receiver unit up and wait 10 seconds for the unit to enter 'normal operation' mode.
2. Switch the unit off and then on again at ~1 second intervals **TEN** times, leaving the unit powered.
3. The receiver confirms Erase cycle complete by giving three short 'Buzzes'
4. The unit has now erased all encoder data.

NOTE: You cannot erase individual Tx encoders

Configuring Receiver Outputs

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.

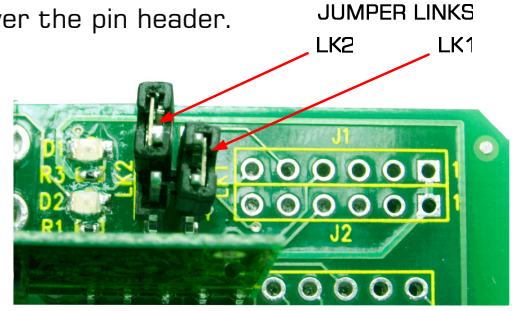
Link1 controls relay Output #1

Link2 controls relay Output #2

Link FITTED = LATCHING

Link OPEN = MOMENTARY

Image shows, RLY2 Momentary, RLY1 Latched.



HORNET Remote Control Systems

Technical Specifications

Transmitters: HORNET

Enclosure Rating: Standard (TBA)
With IPKit IP65
Battery Type: GP23AE, (supplied)
Dimensions: 66 x 36 x 17mm
Changing the Battery: Remove Two fixing screws, remove battery and replace note polarity

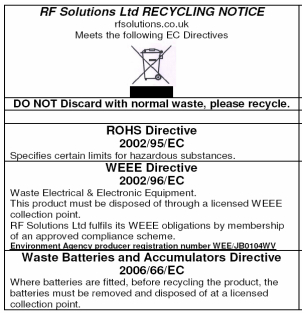
Electrical Characteristics	Min	Typical	Max	Units
Supply Voltage		12		V
Supply Current (transmitting)		8		mA
Frequency:	432.90	433.920	434.10	MHz
RF Output Power (ERP) @ 433 MHz	-	3	10	mW

Receiver Decoder

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	Units
Supply Voltage for 12-30V versions	10.5	12	30	Vdc
Supply Voltage for Mains versions		230		Vac
Relay Rating* (230Vac) RLY1-4		5(rms)	12(peak)	A
Supply Current : Quiescent @12V All relays operating*		10 140		mA
Supply Current @ 230V		~13		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

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



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