QS-BOGEYBOX-2 Remote Transmitter User Guide

Contents

QS-BOGEYBOX-2 Remote Transmitter

Specifications

- **Product:** BOGEYBOX Remote Transmitter
- **Power Source:** 2 x AAA Batteries or 5-15Vdc External Supply
- **Transmission Modes:** FM, LORA Modes 1-7
- **Range:** Varies based on transmission mode and environmental factors
- **Battery Life:** Approx. 30 operations per day

Product Usage Instructions

Connect Your Switch Inputs

Connect your switch inputs to Switch I/P1, Switch I/P2, Switch I/P3, and Switch I/P4. Note that these are no-volt inputs.

Operation

The BOGEYBOX remains in Deep Sleep mode until any of the no-volt inputs change state. When this happens, it wakes up and transmits an RF signal with the LED flashing to indicate the transmission.

Configuration

- **Insert** 2 x AAA Batteries or connect a 5-15V external supply.
- **Use the Supply Selector** Jumper Link to choose the power source.
- **Link** 1 – **Acknowledge Request:** Connect this link for acknowledgment requests within the transmitted signal.
- **Link 2 – Continuous or State Change:** Fit this link for continuous RF signal transmission or leave it open for brief signals on state change.

Setting RF Transmission Mode

- To set the RF transmission mode, press the switch once. The LED will flash once, indicating the current mode.
- Repeat pressing the switch to cycle through FM and LORA modes 1-7. Wait for the LED flash indicating the selected mode.

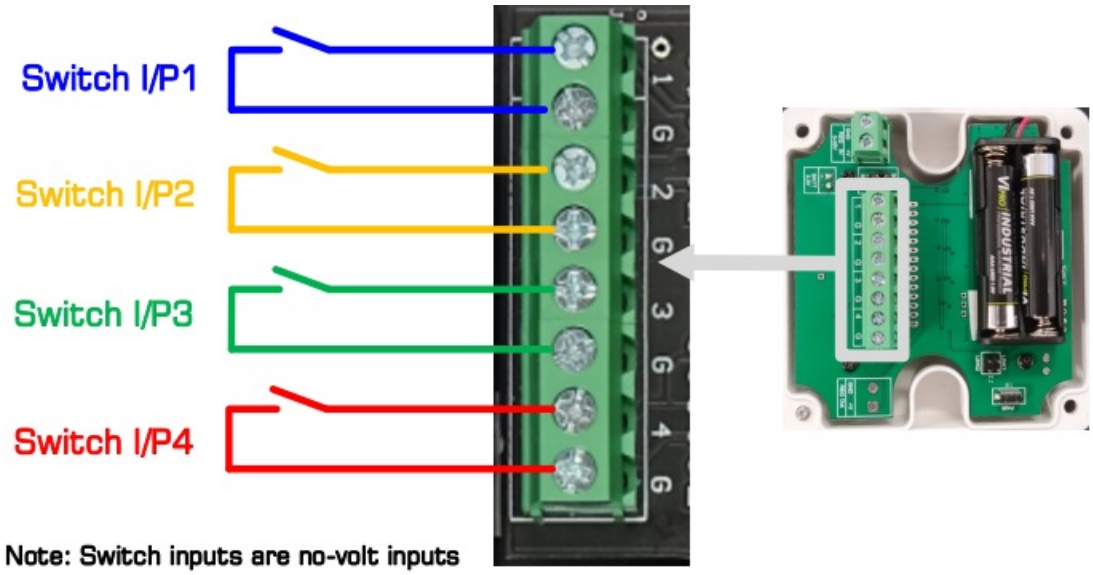
FAQ

Q: How can I extend the battery life of my BOGEYBOX?

A: To extend battery life, consider using an external power supply instead of AAA batteries if possible. Additionally, choose lower transmission modes for shorter response times.

Open Enclosure

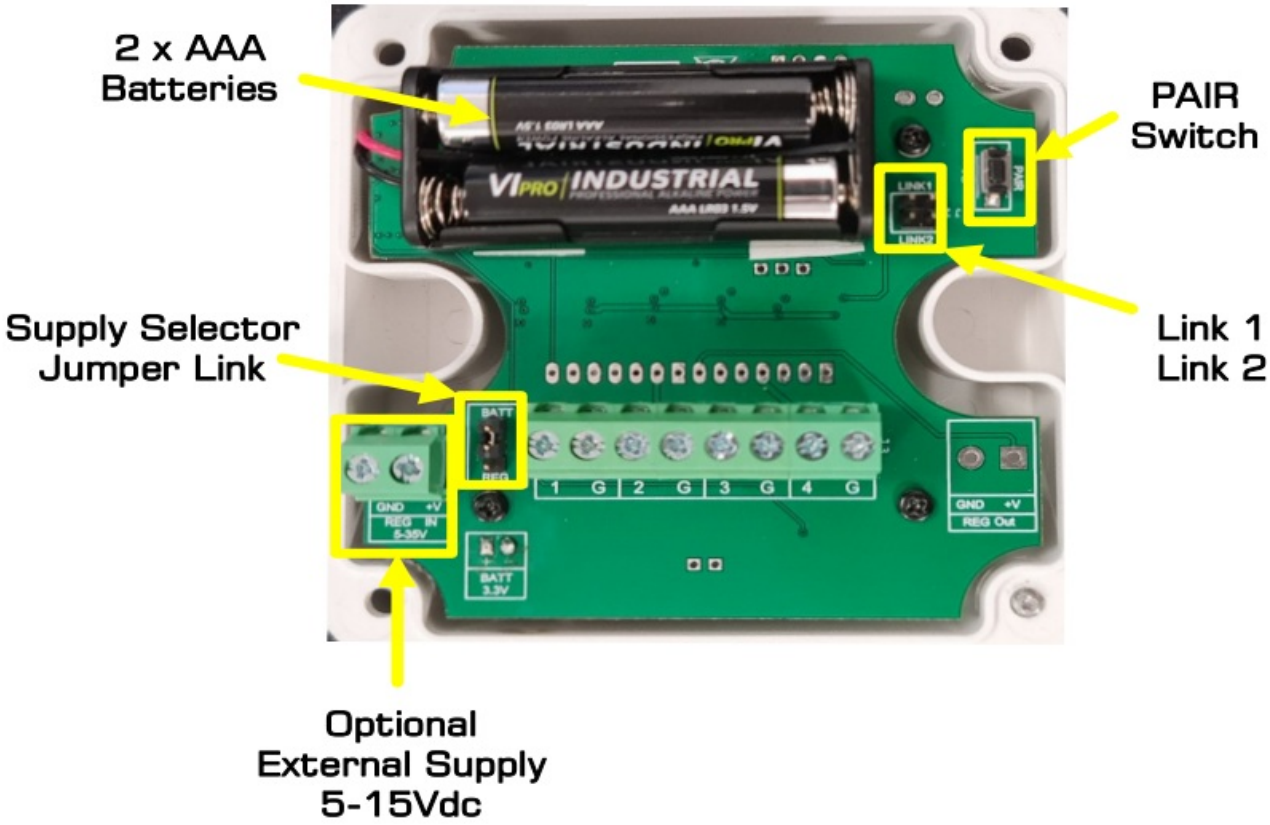
Connect Your Switch Inputs



Operation

BOGEYBOX will remain in a “Deep Sleep” mode at all times when no inputs are active. When any of the No-Volt inputs change state, (Closes or Opens) BOGEYBOX will wake up and Transmit an RF signal. The LED Flashes to indicate RF Transmission.

Configuration



Supply Selector Jumper Link

- Connects the power source either from the 2 x AAA Batteries or from the screw terminal input. External supply can be 5-15Vdc (some boards incorrectly state 5-35V).

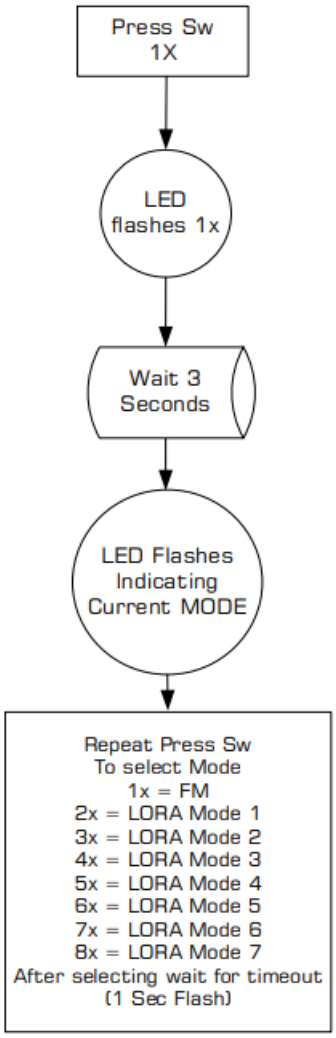
Jumper Link 1 – Acknowledge Request

- When Link is connected, the BOGEYBOX includes an “acknowledgment request” within the transmitted radio signal.
- When Acknowledgment is requested, and the Acknowledgment is received, BOGEYBOX will Flash the Green LED, if the BOGEYBOX fails to receive an Acknowledgment, it will re-attempt to transmit four times before flashing the Red (no Ack received) LED.

Jumper Link 2 – Continuous or State Change

- If using a Momentary Switch, fit Jumper Link 2
- BOGEYBOX will continuously send an RF signal for as long as the no-volt input is activated. Using this mode consumes power for as long as the switch is active.
- If Using a Latching Switch Operation, leave Jumper Link 2 open BOGEYBOX transmits a brief RF signal only when the no-volt input changes state.

To Set the RF Transmission MODE

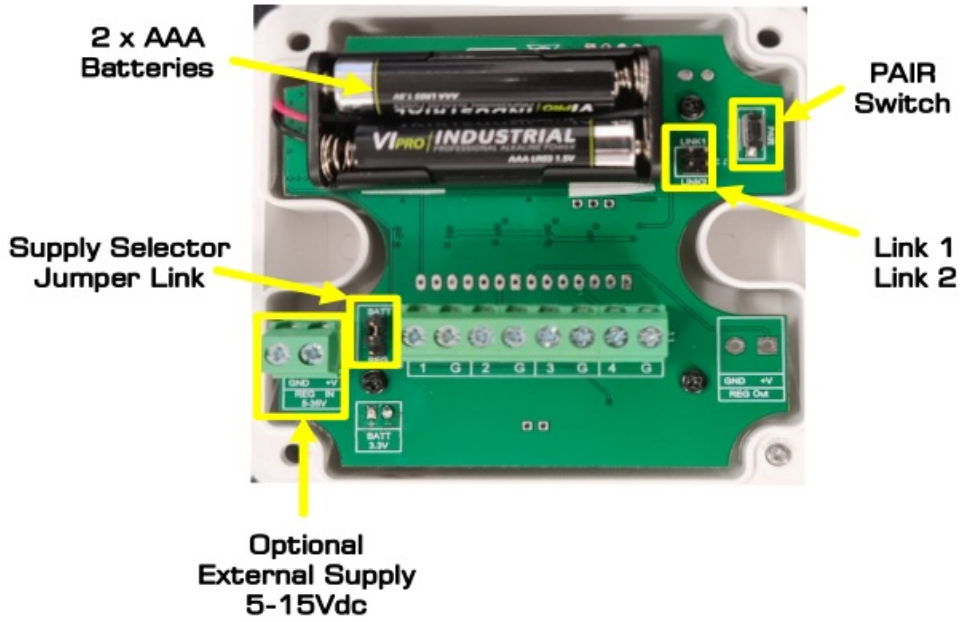


- This sets the type of RF Transmission.
- Possible options are FM, or LORA Modes 1 – 7
- FM or LORA mode 1 provides the quickest response; from the Transmitter switch (Sw) pressed to the Receiver Relay output.
- LORA mode 7 provides the longest operating range but with the longest time delay from button press to receiver relay actuation.

1. **Notes** Range is dependant on many factors including the mode of transmission. Range can be reduced by 75% in built-up areas with poor antenna, and environmental conditions.
2. Battery life quoted is approximate based on 30 operations per day.

RF Transmission	Mode (No of LED Flashes)	Propagation Time from TX to output Activated (approx)	Operations from a Single battery charge
FM	**1**	20 mS	1Million
LoRa Mode 1	**2**	20 mS	~550K
LoRa Mode 2	**3**	40 mS	288K
LoRa Mode 3	**4**	80 mS	144K
LoRa Mode 4	**5**	160 mS	72K
LoRa Mode 5	**6**	320 mS	36K
LoRa Mode 6	**7**	640 mS	18K
LoRa Mode 7	**8**	1.28 Secs	~9,000

Configuration



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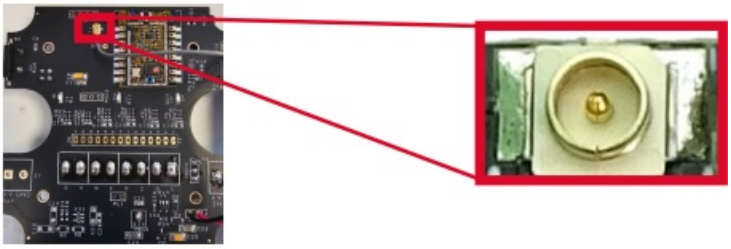
External Antenna Option

- The antenna can be unplugged from the UFL socket on the reverse of the PCB



- RF Solutions offers several lengths of Coax Cable assembly CBA-UFLSMA which plugs directly onto the UFL Antenna connector on the BOGEYBOARD and provides a panel mount SMA connector.

- There is a large selection of suitable Antennas with varying form factors all of which have a matching SMA connector.

ANT-GSM5WM

- Wall mount antenna
- 3m cable
- Active gain: +5dB
- RG58 Coax

ANT-PUKDB

- Vandal Proof Panel Mount
- 1.5m Coax to SMA
- 433 / 868MHz
- **Active gain:** +2dB

Simplified Declaration of Conformity RED

- Hereby, RF Solutions Limited declares that the radio equipment type defined within this document complies with Directive 2014/53/EU.
- The full text of the EU Declaration of Conformity is available at the following internet address: **www.rfsolutions.co.uk**

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- DO NOT Discard normal waste, please recycle.
- Meets the following EC Directives
- ROHS Directive 2011/65/EU and amendment 2015/863/EU Specifies certain limits for hazardous substances.

WEEE Directive 2012/19/EU

- 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 in an approved compliance scheme.
- Environment Agency producer registration number: WEE/JB0104WV.

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. RF Solutions battery producer number: BPRN00060.

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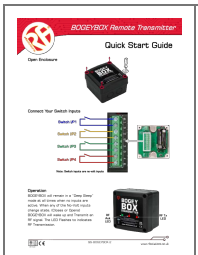
Documents / Resources

	**BOGEYBOX QS-BOGEYBOX-2 Remote Transmitter** [pdf] User Guide QS-BOGEYBOX-2 Remote Transmitter, QS-BOGEYBOX-2, Remote Transmitter, Transmitter

References

- **RF Solutions | Remote control systems, RF Modules, Antennas**
- **User Manual**