

**Pre-Installation Notes:**

- Rugged Fire and Safety Intercom Kits include an intercom, cabling, at least two jack boxes, filter, and universal radio interface cable.
- Configurations can vary to support different types of headsets and number of users or listeners. Please refer to the configuration layout section in this document for details.
- The intercom comes with universal mounting brackets.
- Additional PTT Boxes, jack boxes, cabling and headsets can be purchased at www.ruggedradios.com or call 805-541-1696 for more information.
- Headsets and headset coil cords are sold separately from kits.

Installation Notes and Tips:

- Plan your layout ahead of installation to make sure all cables reach their ports without strain.
- Mount and secure jack boxes in accessible places for use and service.
- Add cabling after all jack boxes and intercoms are mounted and secured.
- Route cables away from power, ignition box, heat sources, or antenna cables to avoid RF interference.
- Install the audio filter (PN: AUDIO-FILTER-ICM) in-line after the power cable and before the intercom.
- If you are using only one two-way radio it must be plugged into the port labeled "RADIO1".
NOTE: Only the Red PTT button on the PTT jack boxes will be used to activate radio transmit.
The Blue PTT button will have no function.

Installation Checklist

- ☐ Prepare installation site.
- ☐ Mount jack boxes.
- ☐ Complete wiring connections.
- ☐ Install optional accessories.
- ☐ Connect power source & chassis ground.
- ☐ Test intercom functions making adjustments as needed.
- ☐ Permanently mount intercom.
- ☐ Be sure all cabling is not twisted or pinched and properly connected.
- ☐ Re-test all intercom functions.

If you have any other questions, our team is ready to help give us a call.

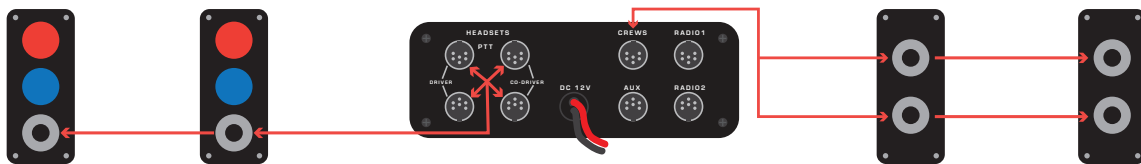


IMPORTANT:

Please note crew jack boxes (such as JB-FC-2) must daisy-chain only from the CREWS port. PTT jack boxes (such as JB-FC-1-PTT, JACK-BOX-611) must daisy-chain only from the "HEADSETS" ports with only other PTT jack boxes to function properly.

Daisy chain from the HEADSETS ports to PTT jack boxes only.

Daisy chain from the CREWS port to crew jack boxes only.



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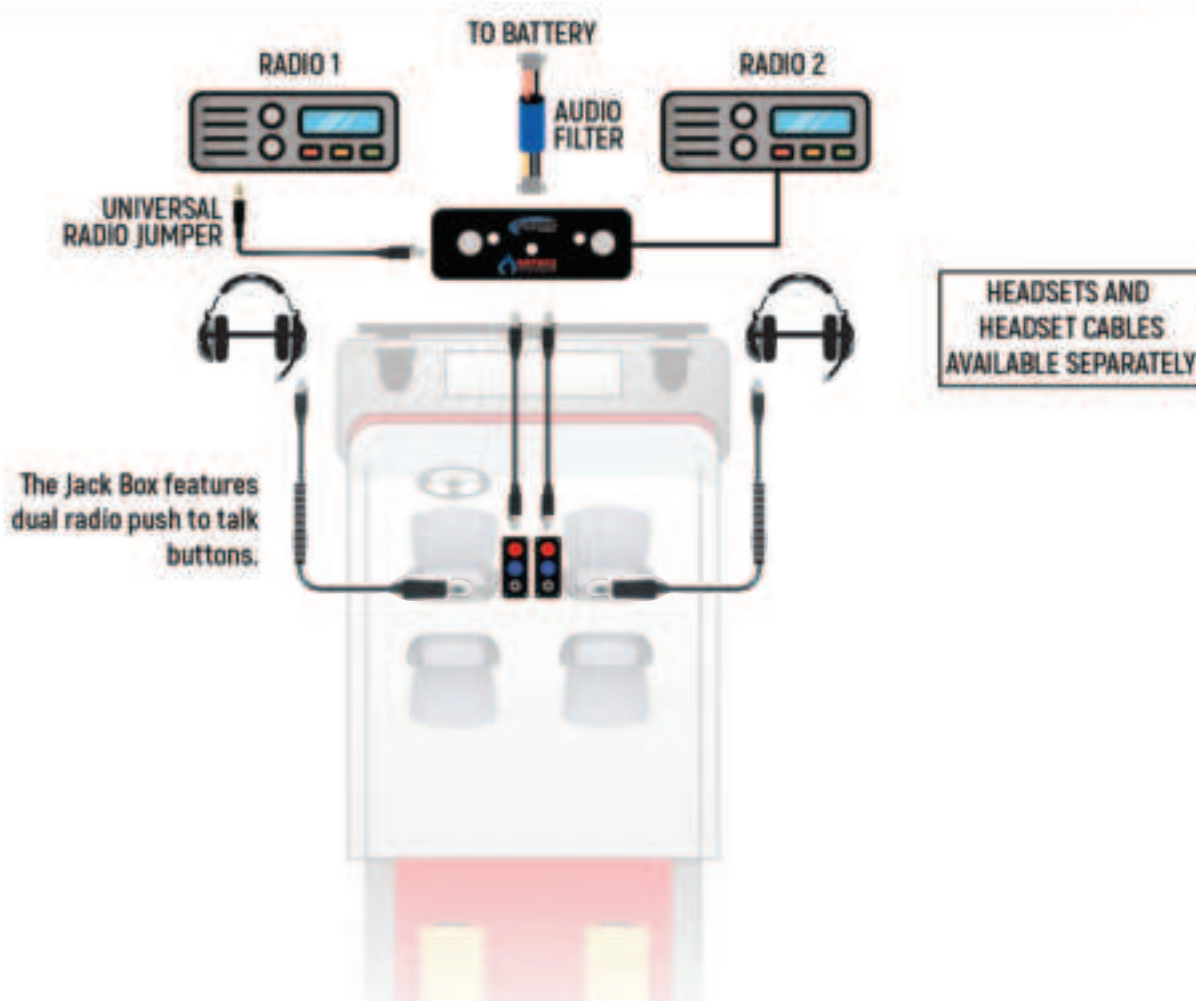
2-Person Dual Radio System



Fire and Safety 2-Person Dual Radio Intercom Kit
SKU: 800-2P

Kit Includes:

QTY	INCLUDED PARTS
1	RRP800 Dual Radio Intercom
2	15 ft. Quick Lock™ Easy Extension Cables
2	Engineer Jack Boxes with Dual Radio Push-to-Talk
1	Dual Crew Headset Jack Boxes
1	Universal Radio Jumper Kit (for one radio)
1	Inline Electrical Noise Reducing Intercom Audio Filter



4-Person Dual Radio System

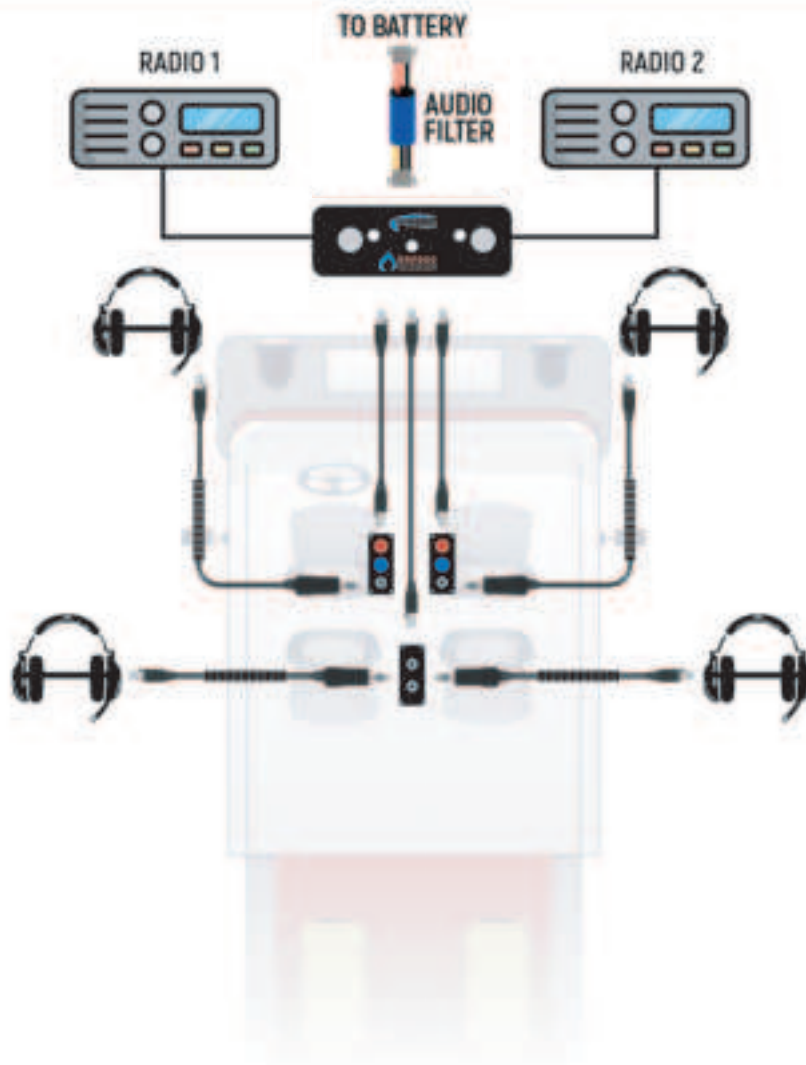


Fire and Safety 4-Person Dual Radio Intercom Kit

SKU: 800-4P

Kit Includes:

QTY	INCLUDED PARTS
1	RRP800 Dual Radio Intercom
3	15 ft. Quick Lock™ Easy Extension Cables
2	Engineer Jack Boxes with Dual Radio Push-to-Talk
1	Dual Crew Headset Jack Boxes
1	Universal Radio Jumper Kit (for one radio)
1	Inline Electrical Noise Reducing Intercom Audio Filter



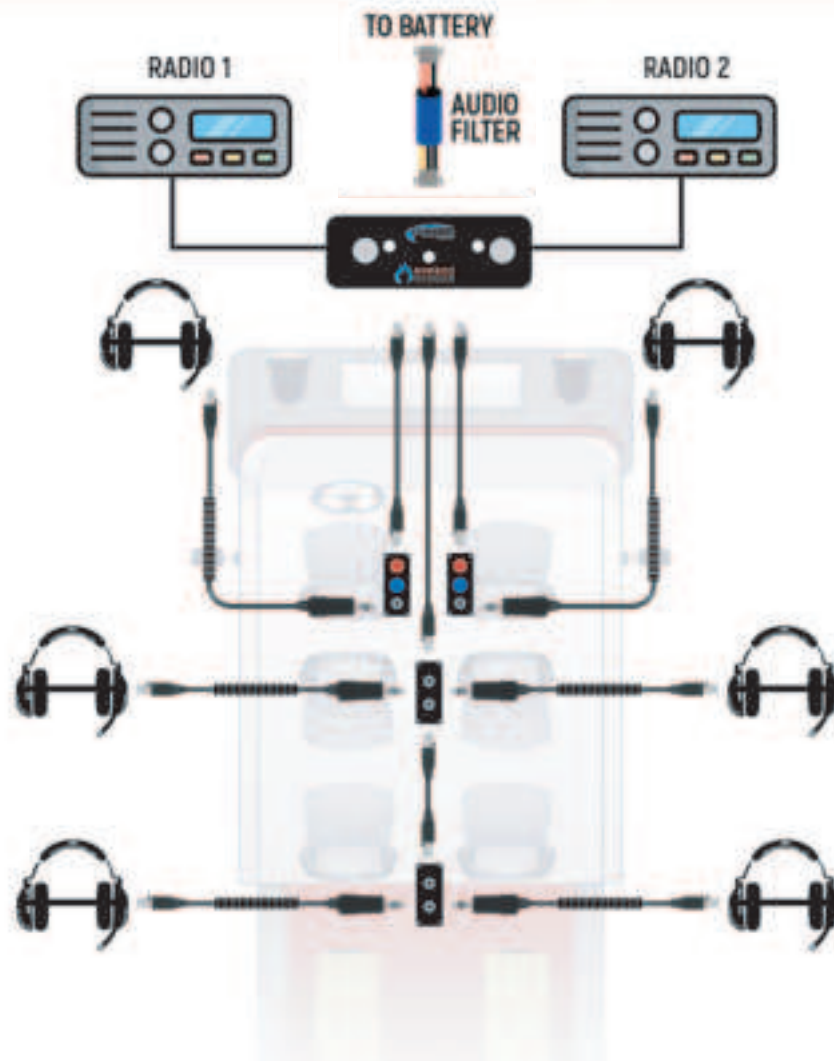
6-Person Dual Radio System



Fire and Safety 6-Person Dual Radio Intercom Kit
SKU: 800-6P

Kit Includes:

QTY	INCLUDED PARTS
1	RRP800 Dual Radio Intercom
4	15 ft. Quick Lock™ Easy Extension Cables
2	Engineer Jack Boxes with Dual Radio Push-to-Talk
2	Dual Crew Headset Jack Boxes
1	Universal Radio Jumper Kit (for one radio)
1	Inline Electrical Noise Reducing Intercom Audio Filter



6-Person Dual Radio System



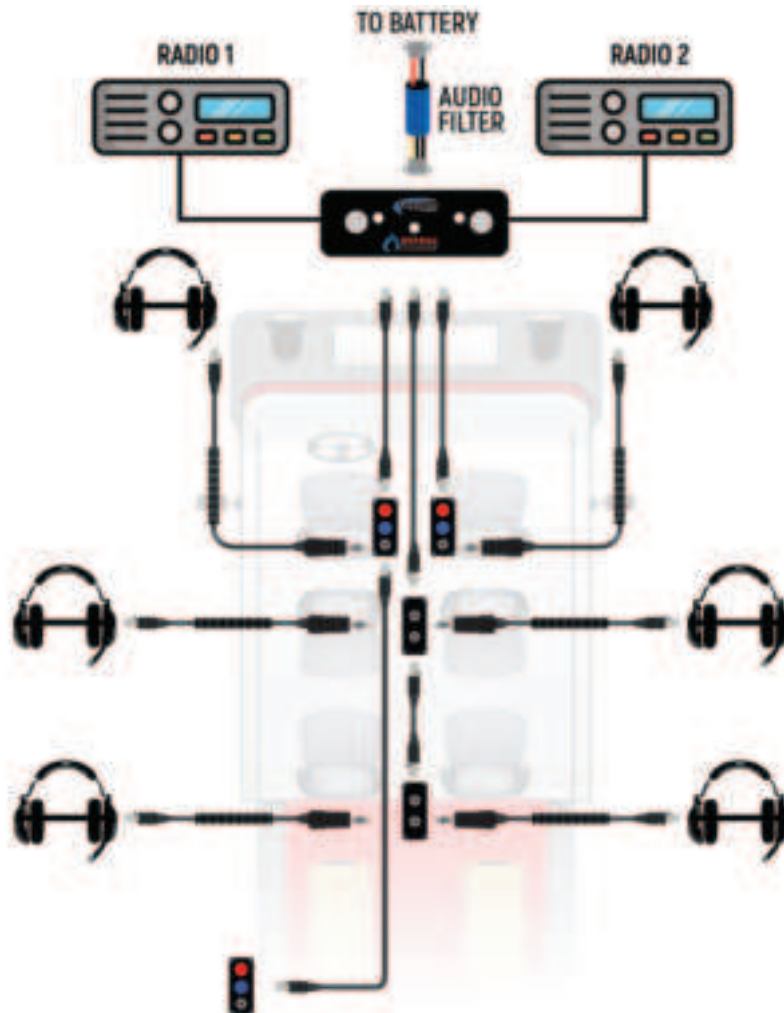
Plus Pump Panel

Fire and Safety 6-Person Dual Radio Intercom Kit
SKU: 800-6P-PP

Kit Includes:

QTY	INCLUDED PARTS
1	RRP800 Dual Radio Intercom
5	15 ft. Quick Lock™ Easy Extension Cables
3	Engineer Jack Boxes with Dual Radio Push-to-Talk
2	Dual Crew Headset Jack Boxes
1	Universal Radio Jumper Kit (for one radio)
1	Inline Electrical Noise Reducing Intercom Audio Filter

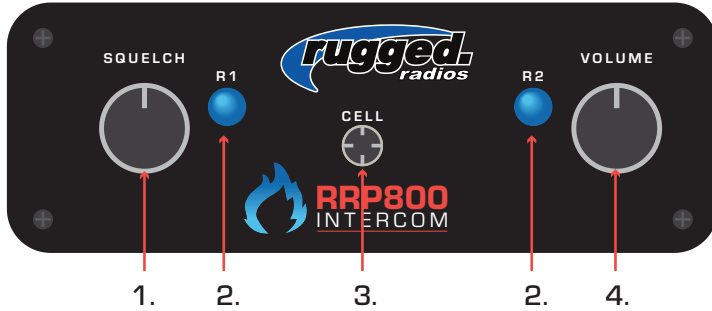
PUMP PANEL NOTE: Do NOT chain the pump panel box from any of the CREW jack boxes which do not have a PTT.



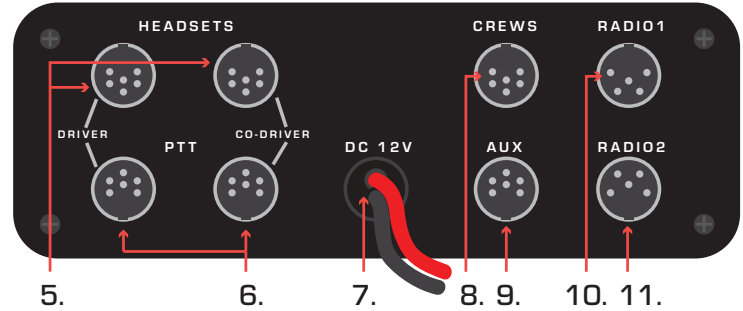


User Guide

FRONT



BACK



No.	Part	Function
1.	Squelch Knob	Adjusts mic sensitivity for voice activation.
2.	LED Lights	Blue LED indicates power is on, red LED indicates transmitting.
3.	Cell Port	3.5mm 4-conductor female port for optional cell phone integration.
4.	Volume Knob	Controls power on/off and master volume between headsets.
5.	Headsets Ports	Connects driver and co-driver headsets to intercom. Route away from power and antenna cables. (TX/PTT ability)
6.	PTT Ports	Connects driver and co-driver PTTs to intercom.
7.	DC 12V Cable	Connects +/- directly to 12v battery.
8.	Crews Port	Connects additional headsets to intercom. (No TX/PTT ability)
9.	Aux Port	Allows input for audio/music, cell phone integration, and record audio out.
10.	Radio 1 Port	Connects to Radio 1
11.	Radio 2 Port	Connects to Radio 2

Operation

1. Turn volume dial (4) clockwise to power on the intercom and increase volume.
2. Place the headset over the ears, and the microphone against the lips.
3. Adjust squelch on the intercom, and volume on headsets/intercom as needed.

Squelch Adjustment

Rotate the squelch knob (1) fully clockwise, which opens all microphone circuits. Speak into the mic and you should be able to hear your own voice (this is known as side tone). Listen for the ambient sound picked up by the microphone. Slowly rotate the squelch counter-clockwise one click at a time until the ambient noise is silenced. If set properly, the mic will activate when you speak, but will stay off when no one is speaking. If your voice does not open the mic, increase squelch slightly (clockwise). If the mic opens too easily, decrease squelch slightly (counter-clockwise).

Connecting 2-Way Radios

- Plug-and-play radio interface cables are available for many popular 2-way radio brands / models such as, Rugged, Motorola, Kenwood, Icom, etc. See www.ruggedradios.com or call 805-541-1696 for more information.
- For custom radio connections, the Rugged Universal Jumper Kit (PN: CJ-UNI-KIT) can connect to virtually any radio, requiring only final termination at the radio end.



User Guide cont.

2-Way Radio Use

- Receive volume is controlled solely by your 2-way radio volume control (not intercom or headset volume).
- A 5-pin extension cable (PN:CS-5P-EXT) can be purchased to extend the radio jumper cable to the intercom.
- More than two radios can be added by adding a Multi Radio Interface (PN: RRP100).
 - See www.ruggedradios.com or call 805-541-1696 for more information.
- Push-To-Talk (PTT) Buttons are only used for transmitting over a 2-way radio connected to your intercom.
 - To transmit, press and hold the PTT button, speak, then release when finished.

Transmitting with the Dual PTT Jack Box:

- When pressing the **Red** PTTs, the intercom R1 LED will turn from **blue** to **red**.
- When pressing the **Blue** PTTs, the intercom R2 LED will turn from **blue** to **red**.
- If using only one mobile radio with the intercom, only use the "Radio 1" port and **Red** PTTs.
 - The **Blue** PTTs will have no function here unless a second radio is used.

Intercom Connector Pinouts

The following pin out diagram can be used for building custom cables and connections.

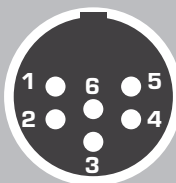
Connector Pinout Chart				
	Driver headsets	Co-driver headsets	Crew	Radio 1
Pin 1	GND	GND	GND	GND
Pin 2	PTT 1	PTT 1	MIC Crew 1	PTT
Pin 3	MIC +	MIC +	MIC Crew 2	MIC +
Pin 4	PTT 2	PTT 2	MIC Crew 3	SPK +
Pin 5	SPK +	SPK +	SPK +	SPK -
Pin 6	N.C	N.C	MIC Crew 4	N.C
	Driver PTT	Co-driver PTT	Aux	Radio 2
Pin 1	GND	GND	GND	GND
Pin 2	PTT 1	PTT 1	N/C	PTT
Pin 3	MIC +	MIC +	AUX In (L)	MIC +
Pin 4	PTT 2	PTT 2	AUX In (R)	SPK +
Pin 5	SPK +	SPK +	AUX Out	SPK -
Pin 6	N.C	N.C	N/C	

Male Pinout Configuration

5-pin Connectors
RADIO 1 & 2



6-pin Connectors
HEADSETS, PTT,
CREWS, & AUX



General

- Follow cables and make sure everything is properly connected, check with configuration diagrams on the previous pages
- Check cabling runs from “IN” to “OUT”
- Check headsets, radios, and PTT boxes are connected in the correct ports
- Reinsert and press in securely plugs and adapters
- Check intercom is turned on
- Check power input Voltage
- Check intercom/radio settings
- Check for blown fuses and circuit breakers
- Check for any visible damage to unit[s]

Noise

- Check the connection at the battery terminals
- Ensure cables are not coiled or pinched
- Check for electronic and signal interference
- Check for a faulty alternator

Headset

- Adjust volume knob
- Microphone needs to be up against the lips
- Check LEDS
- Determine if headset has PTT or not
- Determine if headset with the yellow on/off button is engaged
- Test mic at different audio levels
- Plug same headset into other jacks to test if the headset or jack box is faulty
- Replace or test with different cables
- Check for stuck or broken pins on box or headset

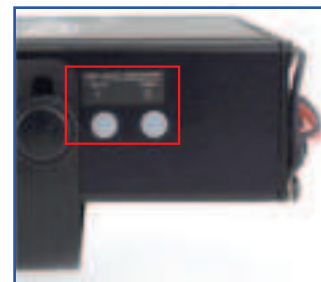
Intercom

- Check unit is powered
- Check LEDS are illuminated in blue when unit is turned and powered on
- Turn on box with volume dial
- Adjust Squelch
- Check cabling to headsets, jack boxes, and PTTS are securely plugged into their respective port
- Check voltage input
- Check ground and power wires are not damaged
- Try a different power cable or connector
- Look for broken or bent pins in the ports
- Check fuse
- Swap unit with another

Radio

- Check Volume and Radio gain levels. Transmit-mic gain and receive-audio gain on intercom side panels default setting are typically optimal but can be adjusted if necessary.
- Check Radio has power & connected to intercom in Radio 1 (or 2) ports
- Check no PTTs are being pressed
- Check Radio has correct firmware loaded
- Check auxiliary PTT is enabled in radio programming software
- Try to operate radio independently of intercom
- Swap unit with another

Volume & Radio Gain Locations



PTT Jack Box

- Check PTT buttons are not stuck
- Ensure no physical object is pressing on the PTT when mounted and not in use
- Check cabling and units are installed from “IN” to “OUT”
- Check that PTT jackboxes are cabled to “Headset” ports on the Intercom and not “Crews”
- Try different cables, intercom, headset, or jack box
- Check for bent or broken pins
- Swap unit with another jack box



Specifications

General Specifications

Electrical	Control/Features	Mechanical
<ul style="list-style-type: none">• Voltage supply: 12 V DC• Current consumption: 70mA typical w/2 headsets• Max current consumption: < 180 mA• Audio output power: 250 mW• MIC source impedance: 680 ohms• MIC source voltage: 8~9 V typical• Headphone impedance: 150-1000 W typical• Audio distortion: <10% @85 mW into 150 W load• 3 dB MIC frequency response: 200 Hz-2000Hz	<ul style="list-style-type: none">• Voice activated (VOX)• Cell phone jack• Volume control• Squelch control• 2-stage LED with 'stuck MIC' indicator• 2 Radio connections• Stereo-IN with auto music mute• Record-OUT• Pigtail type power cable (2A fuse)	<ul style="list-style-type: none">• Number of positions: 2-6 places• Extruded aluminum construction• Thermoplastic Elastomer gaskets• Plug & play installation• Adjustable mounting bracket• Daisy chained jack box installation• Dimensions: 5.7"L x 3.9"W x 1.6"H• Weight: 532 g (intercom only)

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