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## Radial Engineering J48 MK2

# Radial J48 MK2 48V Phantom Power Active Direct Box User Manual

Model: J48 MK2 (R8003001)

## 1. INTRODUCTION

The Radial J48 MK2 is an active direct box designed to convert unbalanced instrument signals into balanced, low-impedance signals suitable for professional mixing consoles and recording equipment. It operates on 48V phantom power, providing a wide, distortion-free frequency response and dynamic range for various instruments. This manual provides essential information for the proper setup, operation, and maintenance of your J48 MK2.

## 2. SAFETY INFORMATION

Please read and understand all safety instructions before operating this device.

- **Proposition 65 Warning:** This product may contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
- Do not expose the unit to rain or moisture.
- Do not open the chassis; there are no user-serviceable parts inside. Refer all servicing to qualified personnel.
- Ensure proper ventilation around the unit during operation.
- Use only with 48V phantom power sources as intended.

## 3. PRODUCT OVERVIEW

The Radial J48 MK2 is engineered for optimal performance with modern instruments, offering robust construction and transparent audio conversion. Its features include a unique switch-mode power supply for high rail voltage, ensuring signal integrity even with dynamic sources.

### Key Features:

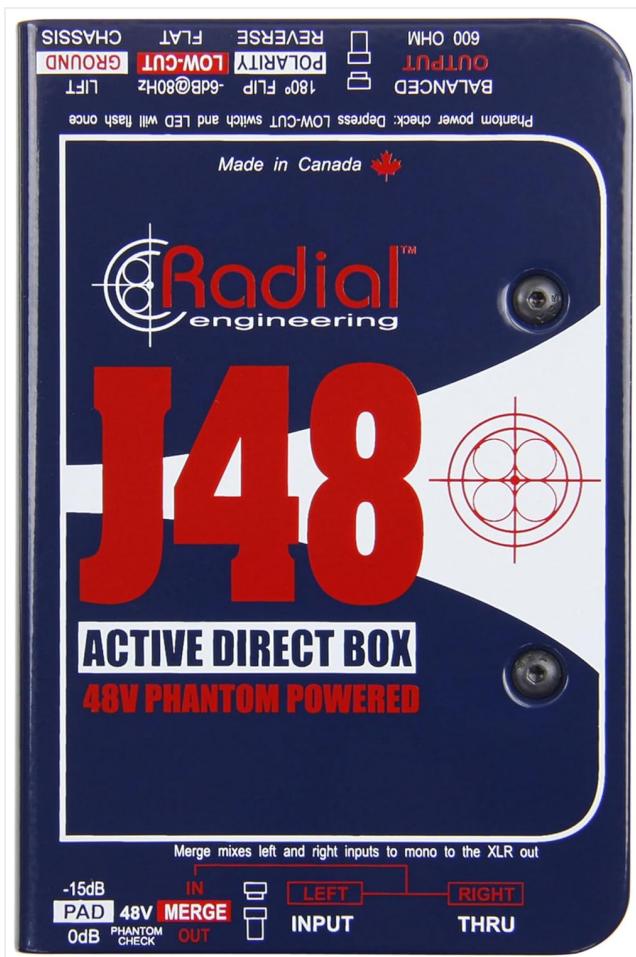
- Active 48-Volt phantom powered operation.
- High rail voltage to prevent clipping with powerful instruments.
- Low inter-modulation distortion for clear audio.
- Innovative merge function for stereo-to-mono summing.
- 80Hz high-pass roll-off filter to reduce low-frequency rumble.

- Rugged alloy steel construction for durability.

## Controls and Connectors:



**Figure 3.1:** Angled view of the Radial J48 MK2, showing input and output sections. This image highlights the overall design and layout of the direct box.



**Figure 3.2:** Top-down view of the Radial J48 MK2, illustrating the labels for all switches and connectors on the top panel.



**Figure 3.3:** Side view of the Radial J48 MK2, focusing on the input jacks and associated controls like the PAD, 48V Check, and MERGE buttons.

- **INPUT (1/4" Jack):** Connect your instrument or audio source here.
- **THRU (1/4" Jack):** Provides a direct, unprocessed signal to feed an instrument amplifier or monitor.
- **-15dB PAD Switch:** Attenuates the input signal by 15dB for high-output sources, preventing overload.
- **48V Phantom Check LED:** Illuminates momentarily when 48V phantom power is detected.
- **MERGE Button:** Combines the LEFT and RIGHT 1/4" inputs into a mono signal, sent to the XLR output.
- **BALANCED OUTPUT (XLR):** Provides a balanced, low-impedance output signal to a mixing console or audio interface.
- **180° POLARITY FLIP Switch:** Reverses the polarity of the XLR output signal, useful for phase correction.
- **LOW-CUT (-6dB@80Hz) Switch:** Activates an 80Hz high-pass filter to reduce unwanted low-frequency rumble or mud.
- **GROUND LIFT Switch:** Disconnects the audio ground from the chassis ground to eliminate hum and buzz caused by ground loops.

## 4. SETUP

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Follow these steps to connect your Radial J48 MK2:

1. **Connect Instrument:** Plug your instrument (e.g., guitar, bass, keyboard) into the **INPUT 1/4"** jack on the J48 MK2.
2. **Connect to Amplifier (Optional):** If you wish to send your instrument's signal to an on-stage amplifier or monitor, connect a 1/4" cable from the **THRU** jack on the J48 MK2 to your amplifier's input.
3. **Connect to Mixer/PA:** Connect a balanced XLR cable from the **BALANCED OUTPUT** of the J48 MK2 to an XLR input on your mixing console or audio interface.
4. **Activate Phantom Power:** Ensure that the connected mixing console or audio interface provides 48V phantom power to the XLR input. The 48V Phantom Check LED on the J48 MK2 will briefly illuminate to confirm power reception. The J48 MK2 requires 48V phantom power for operation.

## 5. OPERATING INSTRUCTIONS

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Optimize your sound using the J48 MK2's controls:

- **Using the -15dB PAD:** If your instrument has a very high output (e.g., active pickups, high-output keyboards), engage the **-15dB PAD** switch. This reduces the input signal level, preventing distortion and ensuring a clean signal to the mixer.
- **MERGE Function:** For instruments with stereo outputs (e.g., some keyboards or media players) that you want to sum to a single mono XLR output, press the **MERGE** button. Connect the left output to the **INPUT** jack and the right output to the **THRU** jack. The J48 MK2 will then combine these into a mono signal at the XLR output.

- **POLARITY FLIP (180°):** In multi-microphone or multi-DI setups, phase cancellation can occur, leading to a thin or hollow sound. If you suspect phase issues, engage the **180° POLARITY FLIP** switch to invert the phase of the XLR output. Listen for an improvement in low-end response or overall clarity.
- **LOW-CUT Filter:** To reduce unwanted low-frequency noise, stage rumble, or to clean up the low-end of an instrument's signal, engage the **LOW-CUT** switch. This activates an 80Hz high-pass filter, removing frequencies below 80Hz.
- **GROUND LIFT:** If you experience hum or buzz in your audio signal, it may be due to a ground loop. Engage the **GROUND LIFT** switch to disconnect the audio ground from the chassis ground. If the hum persists, try disengaging it, as sometimes lifting the ground can introduce noise in certain setups.

## 6. MAINTENANCE

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The Radial J48 MK2 is built for durability and requires minimal maintenance.

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the unit. Avoid abrasive cleaners or solvents.
- **Storage:** Store the unit in a dry environment, away from extreme temperatures and direct sunlight.
- **Inspection:** Periodically check cables and connectors for wear or damage.

There are no user-serviceable parts inside the J48 MK2. Any internal servicing should be performed by authorized Radial Engineering technicians.

## 7. TROUBLESHOOTING

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If you encounter issues with your J48 MK2, refer to the following common problems and solutions:

- **No Sound:**
  - Ensure 48V phantom power is active on the mixer's XLR input. The 48V Phantom Check LED should briefly flash upon connection.
  - Check all cable connections (instrument to INPUT, J48 OUTPUT to mixer).
  - Verify the instrument is working and its volume is up.
  - Ensure the mixer channel is unmuted and its gain is appropriately set.
- **Hum or Buzz:**
  - Engage or disengage the **GROUND LIFT** switch to break potential ground loops.
  - Ensure all equipment is properly grounded.
  - Check for faulty cables.
- **Distorted Sound:**
  - Engage the **-15dB PAD** switch if your instrument has a high output level.
  - Reduce the input gain on your mixing console.
  - Check for damaged cables or faulty equipment.
- **Thin or Hollow Sound:**
  - If using multiple microphones or DIs, try engaging the **180° POLARITY FLIP** switch to correct phase issues.

If problems persist, contact Radial Engineering support for further assistance.

## 8. SPECIFICATIONS

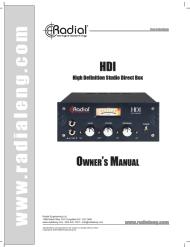
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<b>Model Number</b>	R8003001
<b>Item Weight</b>	1.58 pounds (0.72 kg)
<b>Product Dimensions</b>	6.5 x 4.1 x 3.1 inches (16.5 x 10.4 x 7.9 cm)
<b>Power Requirement</b>	48 Volts Phantom Power
<b>Connector Type</b>	1/4" TS (Input/Thru), 3-Pin XLR (Output)
<b>Material Type</b>	Alloy Steel
<b>Color Name</b>	Blue
<b>Input Pad</b>	-15dB
<b>Low-Cut Filter</b>	-6dB @ 80Hz

## 9. WARRANTY AND SUPPORT

For warranty information, technical support, or service inquiries, please contact Radial Engineering directly through their official website or authorized distributors. Keep your purchase receipt as proof of purchase for warranty claims.

### Related Documents - J48 MK2

	<p><a href="#">Radial J48 Active Direct Box User Guide</a></p> <p>Comprehensive user guide for the Radial J48 Active Direct Box, detailing its features, functions, specifications, and warranty information for professional audio applications.</p>
	<p><a href="#">Radial HDI High Definition Studio Direct Box Owner's Manual</a></p> <p>Comprehensive owner's manual for the Radial HDI High Definition Studio Direct Box, detailing features, connections, front and rear panel controls, specifications, and applications for professional audio recording and live performance.</p>
	<p><a href="#">Radial JDI Passive Direct Box User Guide</a></p> <p>Comprehensive user guide for the Radial JDI passive direct box, detailing its features, specifications, applications, and troubleshooting. Learn about its Jensen transformer, input/output impedance, and how to achieve optimal audio performance.</p>

 <p><b>Headbone VT</b></p> <p><a href="#">User Guide</a></p> <p><small>CAUTION: Please read safety information contained on the Headbone VT User Guide before connecting and operating the Headbone VT.</small></p> <p><small>Radial Engineering 1850 8th Avenue Ave, Port Coquitlam BC V3C 3H3 Sales: 604.940.8050 • Fax: 604.940.8103 email: info@radialeng.com</small></p>	<p><a href="#">Radial Headbone VT User Guide: Guitar Amp Head Switching</a></p> <p>Comprehensive user guide for the Radial Headbone VT, a device that allows guitarists to switch between two tube amplifier heads and a single speaker cabinet with footswitch control. Covers setup, features, safety, and troubleshooting.</p>
 <p><b>HotShot MD</b></p> <p><small>Stage Mic Switcher</small></p> <p><a href="#">User Guide</a></p> <p><small>Radial Engineering Ltd 1850 8th Avenue Ave, Port Coquitlam BC V3C 3H3 • Tel: 604.940.8050 Fax: 604.940.8103 • email: info@radialeng.com</small></p>	<p><a href="#">Radial HotShot MD Stage Mic Switcher User Guide</a></p> <p>User guide for the Radial HotShot MD, a stage microphone switcher designed for momentary rerouting of dynamic microphones to multiple destinations, featuring easy control for vocalists and band communication.</p>
 <p><b>Workhorse™ Powerhouse</b></p> <p><small>500 Series Rack</small></p> <p><a href="#">User Guide</a></p> <p><small>Radial Engineering Ltd 1850 8th Avenue Ave, Port Coquitlam BC V3C 3H3 • Tel: 604.940.8050 Fax: 604.940.8103 • email: info@radialeng.com</small></p>	<p><a href="#">Radial Workhorse Powerhouse 500 Series Rack User Guide</a></p> <p>User guide for the Radial Workhorse Powerhouse, a 10-slot 500 series rack frame. Details features, installation, signal flow, power supply, specifications, and warranty information for professional audio engineers.</p>

## Documents - Radial Engineering – J48 MK2



### [\[pdf\]](#) User Manual Instructions Frequently Asked Questions Specifications Guide Warranty Diagram

radialeng THE J48 QUICK START This section is for advanced users. It provides a quick set of instructions those that are familiar with direct boxes. User Guide Manual WEB 05 25 stageeventlight se up files 216570 j48 manual web |||

[www.radialeng.com](#) J48 Active Direct Box User Guide #1165 - 1845 Kingsway Ave,

Port Coquitlam BC V3C ... ng 14 J48 User Guide BLOCK DIAGRAM AND

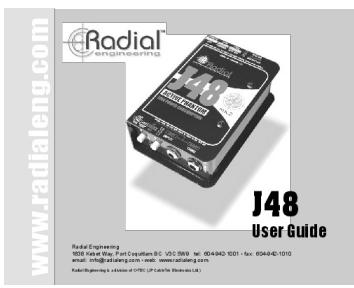
SPECIFICATIONS Radial Engineering 15 J48 User Guide **J48 MK2** Specifications

Type: Input impedance: Output impedance: Frequency response: Noise Floor Total...

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J48 Manual Converted indd radialeng im static thomann de Owners Radial Engineering THE QUICK START This section is for advanced users It provides a quick set of instructions those that are familiar with direct boxes For up and coming engineers we suggest you read through the manual before using your Caution! Nothing altered nothing changed just pure natural tone instrument We invite to this so Congratulations on purchase J48™ box Three years in making unique has been designed handle can maximize it's potential Please log onto further details updates MK2 V3 1 05 20 part R800 9616 00 INTRODUCTION new generation active battery equipped also forward any comments questions or suggestions info@radialeng love hear from you! Enjoy True Music User Guide 1638 Kebet Way Port Coquitlam BC V3C 5W9 tel 604 942 1001 fax 1010 email web 199359 43423 J48UserGuide 89408 96366 DataSheet R8003002 3 j48 133210 RADIAL pics atg atgdata document fullcompass common files bhphotovideo lit images scan co uk Products millionheadpro image upload m markertek Attachments Manuals 237191w3bj61r6liu1x1rqi wpengine netdna ssl 2017 80 2018 03 cdns3 gear4music media 13 regietek Documents Manuals www.radialeng.com J48 User Guide Radial Engineering 1638 Kebet Way, Port Coquitlam BC V3C 5W9 tel: 604-942-1001 fax: 604-942-1010 email: info radialeng.com web: www.radialeng.com Radial Engineering is a division of CTEC JP CableTek Electronics Ltd. RADIAL **J48 MK2** USER GUIDE TABLE OF CONTENTS... lang:en **score:33** filesize: 457.12 K page\_count: 18 document date: 2006-06-20



[Wireless Microphone Systems Catalog - Full Compass](#)

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Explore a wide range of direct boxes from top manufacturers like Radial, Behringer, Avalon, DBX, and more. This catalog details specifications, features, and pricing for various active and passive direct boxes for professional audio applications.

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