



FEATURES

- 180° PHASE INVERT: Flips the electrical polarity of the output to compensate for amps or effects that invert the signal.
- GROUND LIFT: Disconnects ground at the balanced inputs to eliminate hum and buzz caused by ground loops.
- XLR INPUT: Balanced, low impedance, line-level input. Used to connect the output from a recording system.
- NO SLIP PAD: Full bottom surface neoprene pad provides electrical isolation and mechanical insulation. Keeps the JCR Reamp from moving around when placed on the guitar amp!
- ¼" TRS INPUT: Balanced, low impedance, line-level input wired in parallel with the XLR. Used to connect the output from a recording system.
- ¼" OUTPUT: Unbalanced, high impedance instrument-level output connects to guitar amps and effect pedals. Transformer isolated to prevent hum and buzz caused by ground loops.
- MUTE: Depress to silence the ¼" output.
- FILTER: Three position switch used to select between preset EQ filters.

 LOW-PASS (hi-cut):
-3dB @ 1kHz

 HIGH-PASS (low-cut):
-3dB @ 180Hz

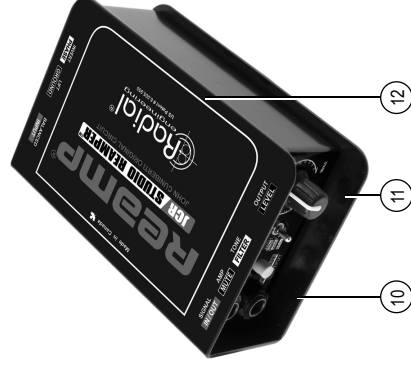
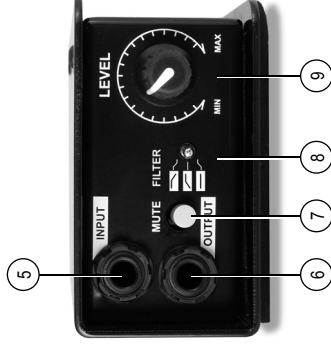
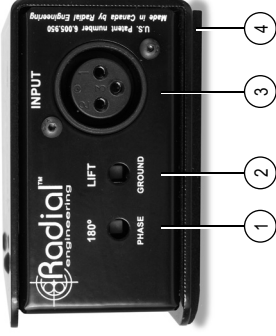
 FLAT: bypasses the filter circuit

- LEVEL CONTROL: Sets the reamping output level to your amp.

- STEEL CONSTRUCTION: Radial 'standard' heavy-duty 14-gauge steel construction for added durability and extra shielding against electromagnetic fields.

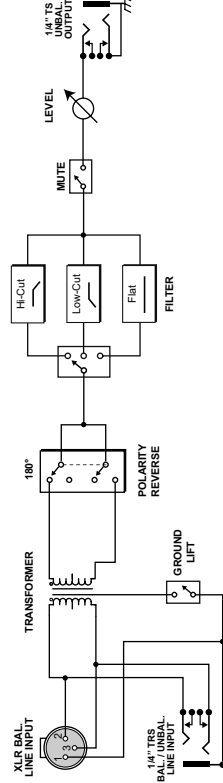
- BOOK-END DESIGN: Creates protective zone around connectors, switches and potentiometers for added protection.

- BAKED ENAMEL FINISH: Keeps your Radial JCR Reamp looking great for years!



Radial JCR Reamp® Specifications

Frequency response:	20Hz to 20kHz (+/- 0.2dB)
Total harmonic distortion:	0.05% @ 20Hz, 0.006% @ 1kHz
Input:	+4dB balanced line-level, 600-Ohms
Maximum input level:	+21dBu @ 20Hz
Output:	Instrument-level (variable), unbalanced, 5k Ohms
Power requirement:	Passive (no power needed to operate)
Size:	3.5" wide, 2" high, 5.5" deep (89mm x 51mm x 140mm)
Weight:	1 kg or 2.2 lbs
Warranty:	Transferable 3 year warranty



RADIAL ENGINEERING 3 YEAR TRANSFERABLE LIMITED WARRANTY

RADIAL ENGINEERING LTD. ("Radial") warrants this product to be free from defects in material and workmanship and will remedy any such defects free of charge according to the terms of this warranty. Radial will repair or replace (at its option) any defective component(s) of this product (excluding finish, and wear and tear on components under normal use) for a period of three (3) years from the original date of purchase. In the event that a particular product is no longer available, Radial reserves the right to replace the product with a similar product of equal or greater value. In the unlikely event that a defect is uncovered, please call 604-942-1001 or email service@radialeng.com to obtain an RA number (Return Authorization number) before the 3 year warranty period expires. The product must be returned prepaid in the original shipping container (or equivalent) to Radial or to an authorized Radial repair center and you must assume the risk of loss or damage. A copy of the original invoice showing date of purchase and the dealer name must accompany any request for work to be performed under this limited and transferable warranty. This warranty shall not apply if the product has been damaged due to abuse, misuse, misapplication, accident or as a result of service or modification by any other than an authorized Radial repair center.

THERE ARE NO EXPRESSED WARRANTIES OTHER THAN THOSE ON THE FACE HEREOF AND DESCRIBED ABOVE. NO WARRANTIES WHETHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL EXTEND BEYOND THE RESPECTIVE WARRANTY PERIOD DESCRIBED ABOVE OF THREE YEARS. RADIAL SHALL NOT BE RESPONSIBLE OR LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LOSS ARISING FROM THE USE OF THIS PRODUCT. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS, WHICH MAY VARY DEPENDING ON WHERE YOU LIVE AND WHERE THE PRODUCT WAS PURCHASED.

REAMP®

JCR STUDIO REAMPER™

JOHN CUNIBERTI ORIGINAL CIRCUIT



Order No. R800 1030 00
US Patent # 6,005,950

User Guide

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Radial JCR Reamp user guide V1.0 - May 2011 - Part #: R870 1042 00
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Congratulations and thank you on your purchase of the Radial JCR Reamp®. Radial is proud to continue the tradition set by John Cuniberti on building the very finest recording tools and are confident that you will find the JCR to follow suit. It may in fact become one of your favorite studio tools of all time!

Even though the JCR Reamp® is plug and play easy to use, we recommend that you take a few moments to read through the manual to understand the features and functionality and take full advantage of the many attributes that are built in. If you find that there is anything missing, please consult the FAQ section on the Radial JCR Reamp web page. This is where we post questions and answers that often can assist users with our products. If this does not address your needs, feel free to send us an email at info@radialeng.com and we will do our very best to reply to you in short order. Now get set to Reamp® like Steely Dan!

OVERVIEW

Reamping™ is usually referred to as a process whereby one takes a pre-recorded track and then sends the signal back to guitar amplifiers and effects pedals. In years gone by, this has mostly been applied to guitars. But today, Reamping is applied to bass, keyboards, voice and even drums!

The benefits to Reamping are many: it allows the engineer to capture the performance and then worry about details such as the tonal character of the instrument, the 'width' it will take in the track, and how effects such as reverb, flanging or compression may be used to enhance it during a passage or be applied to move it out of the way of a vocal. In other words, Reamping lets you make production decisions as you go along. You are not forced into making a commitment before all of the tracks have been recorded and assembled.

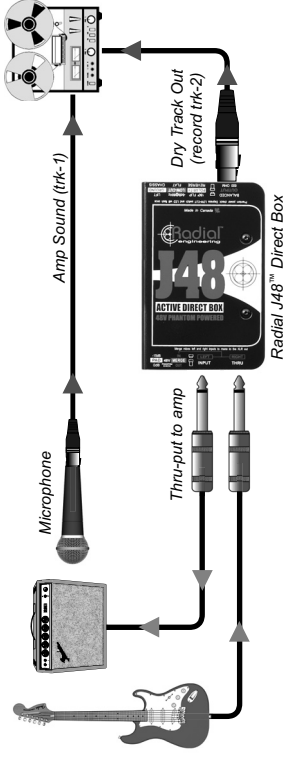
This user guide explains the process and discusses examples on how you can take advantage of the magic that Reamping brings to recording. Once you get started, you will quickly come to realize why Reamping has been the secret bullet for so many top producers and how it will become a critical part of your recording process. Have fun and don't be afraid to experiment.

GETTING STARTED

Reamping is a two part process. One typically begins by recording a dry track using a direct box and then plays it back via the Radial JCR Reamp. On playback the JCR Reamp does the work of converting the balanced signal to unbalanced, sets the level and introduces transformer isolation to eliminate any hum and buzz that may be encountered when mixing balanced professional studio gear with unbalanced guitar amplifiers. As with all audio equipment, make sure all levels are turned down and audio components turned off before making any connections. This helps avoid plug in transients that could damage sensitive electronics or blow speakers.

RECORDING PROCESS

Connect your guitar to the input of the Radial J48 or other direct box. The 'thru-put' is then connected to the guitar amplifier. This enables the guitarist to play and hear their amp under normal performance conditions.

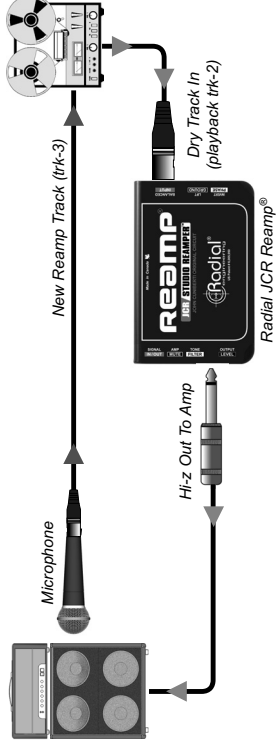


While this is happening, take the balanced low-Z out from the direct box and send this 'dry track' to the recorder. The dry track is be recorded on a second track and saved for Reamping. We recommend placing a mic in front of the guitar amp so that you can record the amp's sound at the same time as the dry track. This can be used to play back the track for the guitarist to review the performance or even saved and used at mix-down.

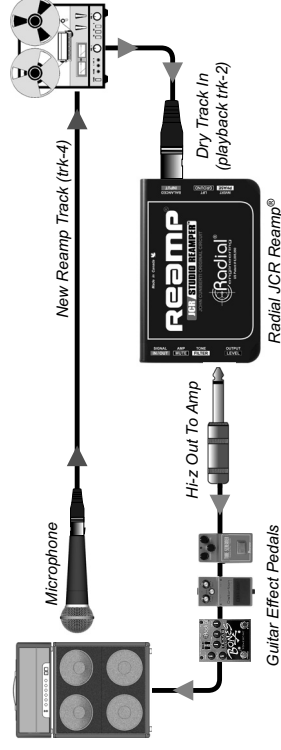
You will find that editing flubbed notes, moving things around or adjusting pitch is much easier when the track is dry (clean) as opposed to wet (distorted). If you are satisfied with the performance, you can send the guitarist home. You are now ready to start using the JCR Reamp.

REAMPING PROCESS

Take the dry track from your recording system and send it to the JCR Reamp. The JCR Reamp is equipped with both XLR and 1/4" input jacks that make it easy to adapt to most recording systems. Connect the 1/4" guitar output from the JCR Reamp to the guitar amplifier. Hit play... bringing up the level on your recorder and then slowly raise the level on the Reamp until you have reached a comfortable listening level. If you like, try interfacing some pedals in between the Reamp and your amp to hear their effect.



Basic setup with multi-track recording system, the JCR Reamp and amplifier.



Alternate setup with guitar effect pedals connected.

Once you get comfortable with the effect, we suggest you go back and test the levels by first connecting the guitar directly into your amp and then comparing the loudness when you are feeding the dry track from your recorder. Both your guitar and the recorder's playback should drive the amp at about the same level. Take note of the signal levels on both your workstation and the JCR Reamp so that settings can be repeated.

USING THE MUTE SWITCH

The JCR Reamp is equipped with a super handy mute feature. This allows the engineer in the studio to temporarily turn off (mute) the incoming track without changing any of the guitar amp or Reamp level settings.

For instance, the amp levels may be excessive and you may need to discuss a mic placement with your assistant. You can have the recording system playing back a loop and simply mute the Reamp to allow you to converse as you move things around without having to go back into the control room to stop the track.

USING THE PHASE REVERSE

There are several benefits to having a phase reverse switch (180° polarity) on hand. The most obvious is when using two JCR Reamps together with two amps - you may find that one amp is out of phase with the other. By depressing the 180° polarity reverse, you can bring the relative phase in line. The easiest way to test if you are in or out of phase is to face both amps together up close and play bass notes. If the notes disappear, you are likely out of phase.

Another benefit is when Reamping with a couple of mics in the room. Switching the polarity will actually move the hot spots (room modes) which can sometimes eliminate troublesome resonance. Simply depress the switch and listen. Choose whatever setting sounds best.

USING THE GROUND LIFT

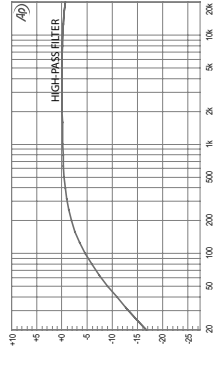
The very fact that the Reamp JCR is transformer based means that you will immediately enjoy the benefits of 100% isolation. This being said, there is still a common ground that connects the input to the output. This ground connection can be broken by depressing the ground lift switch. This disconnects pin-1 on the XLR. If you encounter hum and buzz, it is most likely being caused by a ground loop. Often, lifting the ground will alleviate the problem.

USING THE EQ FILTER

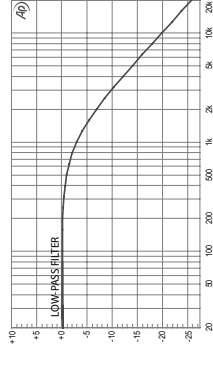
The JCR Reamp is equipped with a three-way toggle switch that introduces two types of filters or may simply be bypassed to revert back to the original Reamp circuit.

The down position is bypass. Moving the switch to the middle position turns on a high-pass filter that reduces the low frequency content of the signal. This can be helpful when trying to clean up the sound of a muddy guitar track. This can be particularly effective with heavily distorted tones.

Moving the switch to the up position turns on a low-pass filter that reduces the high frequency content of the signal. This is used to tame overly bright guitar amps. This can be particularly useful when trying to push a bass track back into the mix.



Freq. response with high-pass filter engaged.



Freq. response with low-pass filter engaged.