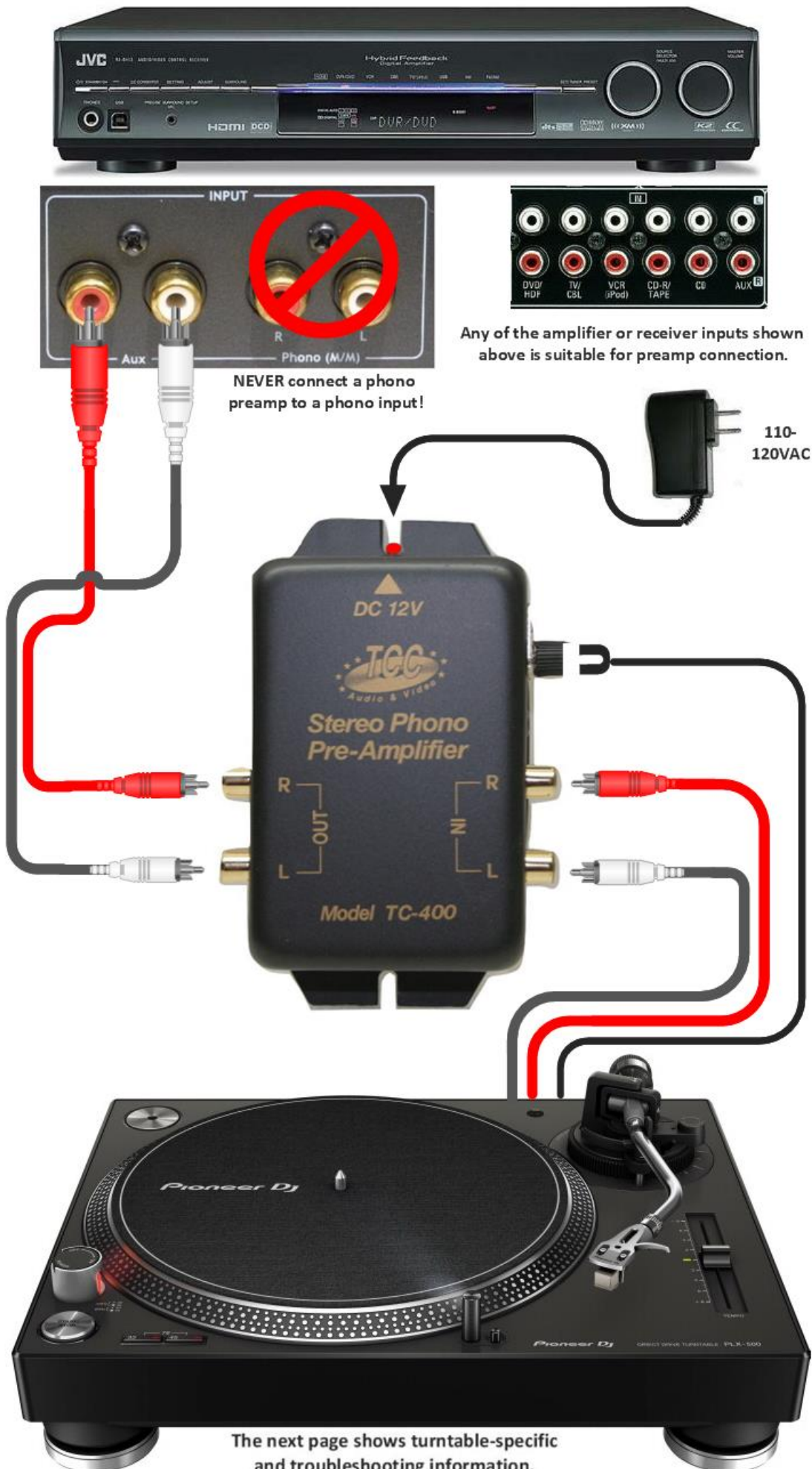


TC-400G/L Installation and Usage Guide



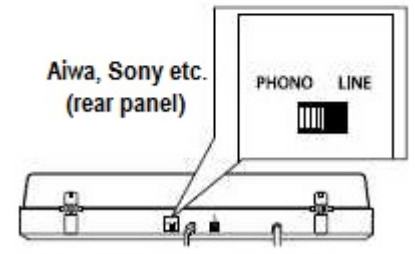
The next page shows turntable-specific and troubleshooting information.

Using With USB and Other Turntables Equipped With Built-in Preamps



Typical bypass switch labeling;
PHONO / LINE
EQ OFF / ON
BYPASS ON / OFF
THRU / ON

Some tables (including MM models with USB) have built-in phono preamps. External preamps like ours can be used with these, but the internal preamp **MUST** be turned off or bypassed. Failing to do this will result in massive overloading and distortion. Most preamps built into turntables produce inferior quality audio and are very noisy (typically <50dB S/N); even our least expensive model easily outperforms these. Bypass switches that turn off the internal preamp and allow use of an external preamp instead vary in labeling and location depending on turntable brand. To use one of our preamps instead of your turntable's internal one, set the table's bypass switch as shown in **RED**. If in doubt, try both positions; the one that sounds good is the right setting...



Ground Wires (and what to do when there isn't one)

Some turntables have removable ground wires; usually these have a ground screw terminal or binding post near the RCA cable or jacks as at the right. Technics brand tables for many years featured plug-in ground wires; the lower image at right shows the jack for these circled in red. These tables will **HUM** if no ground wire is connected (as will *any* table with a built-in ground wire that is left unconnected). You can make your own Technics ground wire from a length of braided hookup or speaker wire; simply ball up the bared end so that it fits snugly into the ground jack, and secure with electrical or other tape.



Most tables which have built in preamps and/or USB also have **NO** ground wire, and do *not* require one. A few manufacturers (most notably JVC) wire their tables so that the signal (RCA) cable also carries the chassis ground connection, and so they have no separate ground wire. Adding one creates a ground loop and will actually **CAUSE** hum; do not do this. Lastly, ground wires occasionally get amputated or break off, especially if embedded in the RCA cable as was common with AR and some other table brands (see image at right). If your table hums, this may be the reason. If insufficient 'stump' remains to allow splicing a new ground lead, you may need to go inside the table to connect a replacement.



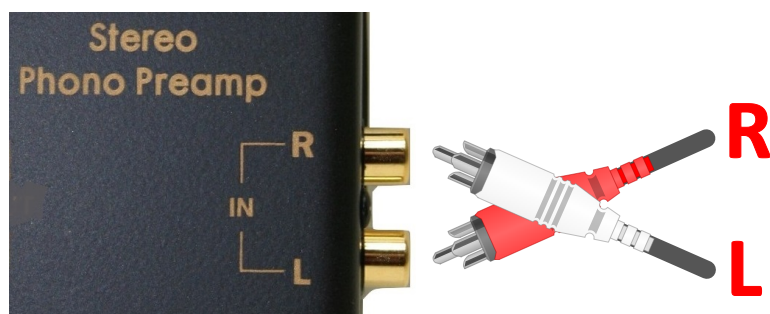
The next page provides troubleshooting info for power and audio issues.

Troubleshooting Guide

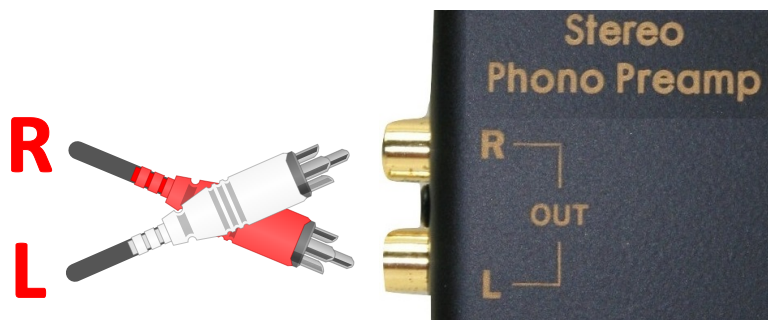
Channel Missing, Low or Has Hum

These issues are EASY to diagnose and localize; all that's required is a methodical, step-by-step approach. Most channel out and other channel specific issues are due to problems at the audio source, not with the preamp. Often turntables and cartridges being used with our preamps are decades old, and have sat unused for years. Oxidation of connections (cartridge wiring, headshell plug-ins, patch cord plugs) is the most common cause of missing or intermittent audio. To determine where the fault lies, perform a simple step-by-step test. Turn the volume down when connecting or disconnecting cables as follows.

Start by swapping the left and right plugs (from the table) going into the preamp input. When you plug the left plug into the right input (and vice versa), does the problem switch speakers? If it does, the cause is definitively not the preamp; check your cartridge, the table and its cable.

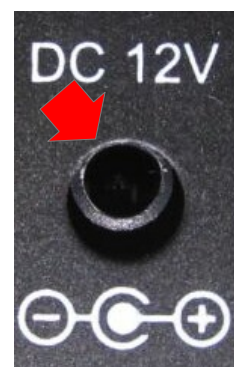


If no change, return the input cables to their proper jacks and then proceed next to swap the left and right plugs at the preamp's OUTPUT. If the problem now switches speakers, the preamp is most likely at fault. If no change, check the output cable and amp/receiver for a problem.



No Power (LED not lit)

All of our preamp models *except* the TC-450 have either a power LED or source indicator LEDs which confirm the presence of power. If not lit, make sure that the power switch (if so equipped) is on. Some models have this switch integrated with the level control while on others it is stand-alone. Confirm that the DC power plug is fully inserted in its jack, and that the DC jack is not sprung out of its hole in the preamp rear panel (see illustration at right). If the jack is displaced, you can remedy this by inserting the DC plug and gently pressuring sideways or vertically as needed until the jack pops back into place. Lastly, try the adaptor in a different AC outlet. Most verified no power issues result from adaptor failure, not a fault with the preamp itself. Power adaptors lead hard lives, being exposed to lightning and other power mains irregularities; the upside to this is that they serve as buffers, preventing surges from reaching and damaging the preamp. Replacement AC adaptors are available on our website.



Power But No Audio

No audio is rarely a phono preamp issue. Usually it's the result of misconnection (reversing the preamp inputs and outputs), or connection to a "dead" input on the receiver or amplifier. Many home theater receivers have both digital and analog inputs with the same labels (CD, DAT, etc); on most, only one *or* the other can be used. If a CD player is already connected to the Toslink or PCM CD input, the analog CD input will usually be inactive and will produce no sound. If you already have a working analog source connected, try temporarily hooking up your turntable and preamp to that input. Assuming this produces good sound, you can then move on to figure out why other inputs don't function. A thorough reading of your receiver's user manual will usually provide the solution.