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Multi-Source™

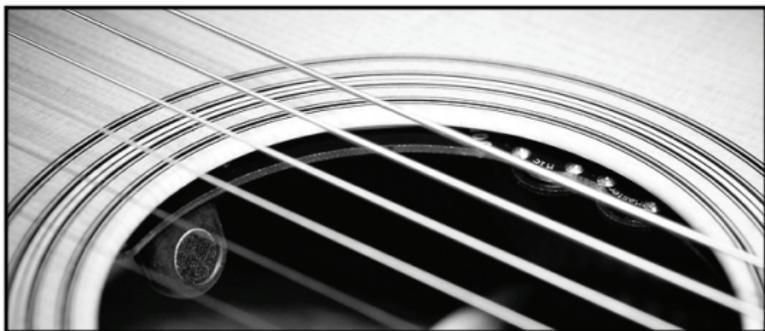
Pickup and Microphone System



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The Wavelength Multi-Source is a sensing and amplification system for acoustic guitar that blends an under-the-saddle pickup with a microphone. The pickup is a unitary design, constructed using a single layer of a piezoelectric co-polymer. 100% coverage copper shielding on the pickup insures immunity to external noise fields and quiet operation. The microphone is a miniature, omnidirectional electret condenser selected for linear response and exceptional sonic quality.

A lightweight Control Module, discreetly mounted just inside the sound hole, allows fingertip control of the pickup-to-mic mix ratio. Two low-profile potentiometers are utilized; one for the microphone level and one for master volume. The Control Module also serves as the anchor point for the microphone which is shock mounted using a special absorptive visco-elastic polymer. This feature isolates the mic from undesirable vibration and handling noise; providing detailed, transparent sound quality.

Introduction | Multi-Source

The supporting electronic package is made up of discrete hybrid circuitry, utilizing low noise field-effect transistors configured for class A operation. It provides exceptionally low noise, low distortion, low output impedance, high headroom and long battery life. Two internal adjustable trim pots are provided that allow up to 9dB of bass or treble boost on the pickup channel. The bass control can be used to highlight the body resonance and warm up the sound while the treble control can add brilliance and clarity and allow the player to cut through a stage mix. The microphone channel has a two stage frequency roll-off applied to combat any tendency towards low frequency feedback. Finally, for those wishing to customize their system, there is a user-configurable jumper on the PCB that allows the system to be configured for stereo output; assigning the mic to the “Ring” connection and the pickup to the “Tip” connection of the output jack.

The preamp is fully enclosed in a lightweight, anodized aluminum shell giving high immunity to hum and noise. The preamp is directly connected to a special TRS stereo endpin jack equipped with an additional sleeve connection to accommodate switching of the battery ground. The entire unit is powered by a proprietary voltage boost circuit that produces high headroom 18 Volts from two compact AA batteries.

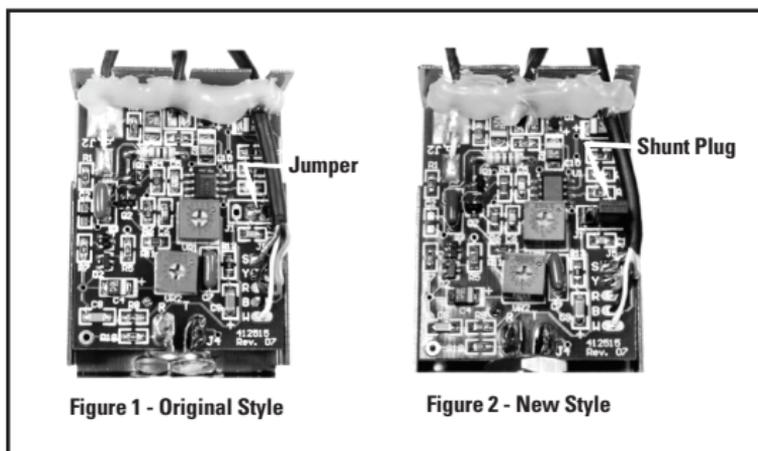
Converting the output signal to stereo operation

To reconfigure the Wave-Length Multi-Source for stereo output, follow these steps:

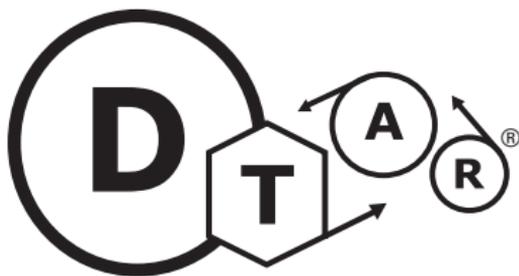
1. Look inside the guitar and find the cable clamps that secure the pickup lead wire, battery wires and Control Module cables going to the preamp chassis. Loosen only the cable clamps necessary to allow the preamp chassis to be moved as far as the sound hole. Do not attempt to remove the adhesive backed clamps from the guitar; you only need to un-bend them slightly so the cable cables can be moved.
2. Remove the strap button and outer nut and washer from the endpin jack. Keep this hardware in a safe place so you will not lose it.
3. Carefully slide the endpin/chassis assembly free from the end block of the guitar and move it into view from the sound hole. Do not apply any stress to the any of the cable attached to the preamp, especially the pickup cable.
4. Remove the two small screws that secure the chassis top to the sides. Put the top and screws with the other hardware.
5. Refer to figure 1 (on page 6). If you have the original style product, it will be necessary to cut or remove the small wire jumper indicated and resolder a jumper from the center connection point to the left connection point. If you have the

Converting the output signal to stereo operation

new style, you can simply remove the shunt plug and re-insert it so that it covers the center and left pins of the header.



6. Re-attach the chassis top, being sure to align the holes in the top with the potentiometer inside. Re-install the preamp in the endpin hole and tighten the nut and strap button securely. Secure the cables back inside the cable clamps so they cannot rattle against the inside of the guitar.



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