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***FISHMAN***

**USER GUIDE  
RARE EARTH SOUNDHOLE PICKUPS**

## Quick Install

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To temporarily install the pickup, loosen the clamps with a Phillips screwdriver. Position the pickup in the soundhole, parallel to and as close to the end of the fingerboard as possible. Gently re-tighten the clamps. For now, run the cable out through the soundhole.

**Precaution:** Don't let the pickup cable rest on your guitar's finish for long periods. The rubber jacket could interact with the finish and leave a permanent mark.

If you travel with your guitar or store it for long periods with the pickup in place, we strongly recommend that you have the endpin jack permanently installed in the guitar. Installation instructions for professional installers are available from Service & Support at [www.fishman.com](http://www.fishman.com).

## Mounting Clamps

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The jaws of the clamps are lined with natural cork, which will not interact with the guitar's finish. Use gentle pressure to tighten the clamps. Note that over-tightening may perforate the guitar finish.

## Power

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The Rare Earth switches on when you plug in. To conserve the batteries, unplug the endpin jack when not in use.

The batteries for the Rare Earth are conveniently mounted to the underside of the pickup. You can expect over 240 hours (110 hours for Rare Earth Blend) between battery changes. When the signal from the pickup starts to distort it is time to change the batteries. See page 9.

## Pickup Voicing

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The Rare Earth has been carefully voiced to reproduce a balanced string response. If your guitar has very high action on the bass side or very low action on the treble side, you may hear slight imbalance between the outside strings. In these cases, raise the bass side of the pickup with a shim.

The Rare Earth is voiced specifically for bronze or phosphor bronze strings. If nickel electric guitar strings are used with the Rare Earth, the lower wound strings will overpower the higher plain strings.

## Preamp

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All Rare Earth models feature a miniature preamp, housed within the body of the pickup. A low-noise circuit design preserves the pickup's performance in any audio environment. Plug the Rare Earth into an acoustic instrument amplifier, an unbalanced input of a mixer or a direct box, without signal loss or degradation. You may run cables up to 80' (25m) in length without audible signal loss.

# Pickup Types

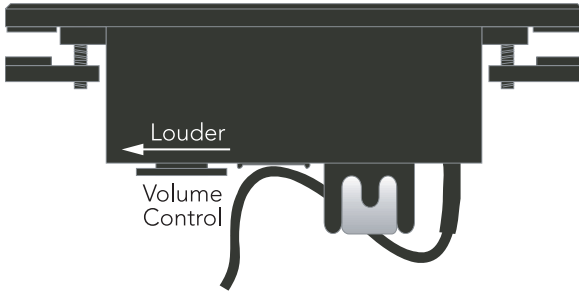
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## Single Coil

This model is for those who prefer the brightness and character associated with a single coil pickup. Note that this version, like all single coil pickups, is susceptible to 50–60Hz hum. To minimize noise, keep the Rare Earth Single Coil away from fluorescent lights, light dimmers, computer monitors and transformers.

## Humbucking

A "stacked coil" style, for musicians who demand brilliant acoustic tone with quieter reproduction than a single coil pickup can offer. A volume control, located on the bottom of the pickup, is easily accessible through the soundhole. Move the wheel clockwise to increase volume. For the lowest noise performance, keep the control at the highest setting.



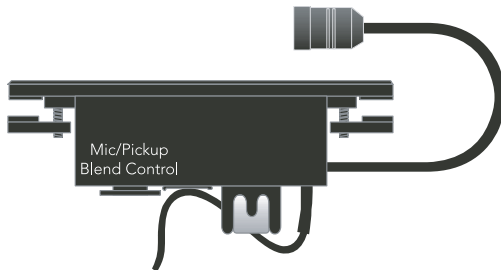
## Pickup Types (continued)

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### Blend

The Rare Earth Blend marries our active humbucking pickup to a high quality, internally mounted miniature microphone. These components couple seamlessly for cohesive, three-dimensional amplified acoustic tone. The microphone is a miniature electret type, with a hyper-cardioid response pattern. It easily adjusts into position with a flexible gooseneck mount.

Adjust the balance between the microphone and magnetic signals with the small rotary blend control, located underneath the pickup. Move the wheel toward the treble strings for more pickup, and toward the bass strings for more microphone.



# Battery Replacement

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Remove the pickup from the instrument and carefully pry out the batteries with a small flat-head jeweler's screwdriver. When you replace the batteries, observe the correct polarity. Note that plus (+) and minus (-) polarity marks are molded into the shell of the battery clip.

## Battery Requirements

Two 1.5 Volt silver oxide:

Eveready #357

ANSI-WS15

1EC-SR44

Will also accept one 3-Volt lithium battery:

Duracell DL1/3N

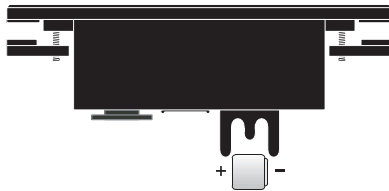
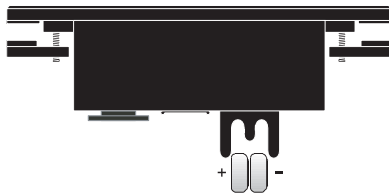
Eveready 2L76

Varta CR 1/3N 6132

Union Carbide 2L76

Sanyo CR 1/3N

Others: K58L





## Rare Earth Blend Microphone Placement

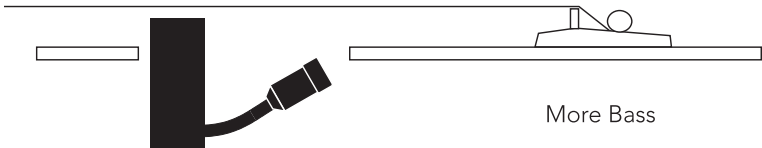
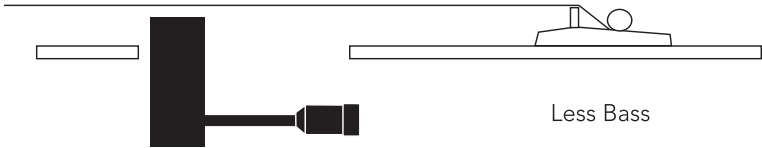
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Try experimenting with microphone placement until you find a position you like.

Here are some suggestions to get you started:

To begin, move the blend control toward the bass strings. A good starting position is with the microphone capsule parallel to the soundboard. Point it toward the edge of the soundhole to emphasize more bass. Once you find a sound you like, blend in the pickup to taste.

**Precaution:** Do not bend or twist the gooseneck where it joins the pickup housing.



## Stereo Operation

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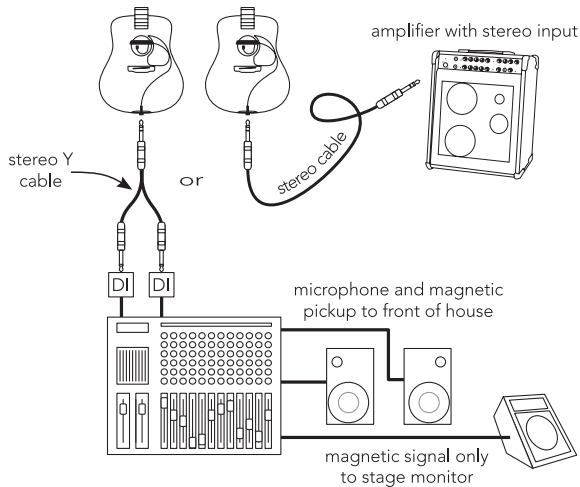
The Blend model can be modified so the microphone signal is added to the ring output. Instructions for this modification are available from Service & Support at [www.fishman.com](http://www.fishman.com).

Once the Rare Earth Blend is wired for stereo, the thumb-wheel will not affect the level of the microphone at the ring output, but it will continue to mix mic and pickup at the tip output. Move the thumb-wheel toward the treble side for all pickup to the tip.

For stereo operation, use a TRS cable or a stereo "Y" cable. If you plug in a mono cable, you may hear distortion from the mic.

# Suggestions for Stereo Operation

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# Specifications

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## All Models:

Output Impedance	1k Ohm
Recommended Minimum Load Impedance	10k Ohm
Supply Voltage	3.0–3.6V

## Single Coil:

Maximum Output Level	0dBu RMS
Output Noise Level	<-93dBu RMS, A-weighted
Current Consumption	0.5mA
Battery Life	>240 hours

## **Humbucking**

Maximum Output Level	-3dBu RMS
Output Noise Level	<-98dBu RMS, A-weighted
Current Consumption	0.5mA
Battery Life	>240 hours

## **Rare Earth Blend**

Maximum Output Level	-6dBu RMS
Output Noise Level	<-98dBu RMS, A-weighted
Current Consumption	1.1mA
Battery Life	>110 hours

The information and specifications in this manual subject to change without notice.

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