

electro-harmonix

TUBE EQ **Vacuum Tube Filter**

Congratulations on your purchase of the Tube EQ vacuum tube filter. This uniquely powerful tool is designed to enhance your music and expand the range of your existing equipment. The Tube EQ is used differently than most standard equalizer or tone control circuits, so please take a few minutes to familiarize yourself with the Tube EQ's controls and how they work.

Your unit comes equipped with a 12 Volt/1 Amp AC external power adapter. Use only the power adapter supplied, and make sure it is appropriate to your location (USA, Europe, Japan, Australia). Using the wrong adapter can cause damage to the unit or to you! Use of the wrong adapter will void the warranty.

The Tube EQ consists of two (2) filter sections that are summed together to create an endless range of tonal possibilities. A passive "shelving" type "tone stack" with Bass and Treble controls is combined with an active "parametric" bandpass filter with its own gain, frequency and "Q" controls. Turning the BASS, TREBLE or BANDPASS GAIN controls clockwise (CW), increases the level of each respective range. Keeping each control at maximum counter-clockwise (CCW), or OFF, attenuates the input signal by about 20 dBs.

TREBLE – Determines the high frequency content of the filter.

BASS – Determines the low frequency content of the filter.

FREQUENCY – Determines the center frequency of the bandpass filter.

BANDPASS GAIN – Determines the level of the bandpass filter.

Q – Determines the width and resonance of the bandpass filter.

In addition to the input and output jacks at the front of the unit, there is also an insert for an expression pedal. When this is used, the pedal will control the frequency center of the bandpass filter only. This produces nice "wah"

like effects and more. It is also recommended that you try this first without using the BASS or TREBLE controls at all. Leave them OFF.

The FREQUENCY control must be set to the maximum clockwise setting to get the full range of the pedal. The FREQUENCY control can then be used as a range trim with the expression pedal to make a fine adjustment to the range of the pedal sweep. Turning the FREQUENCY knob counter-clockwise with the pedal plugged in has the effect of both reducing the range and lowering the frequency center of the bandpass filter. If the FREQUENCY knob is turned all the way counter-clockwise, the pedal will not do anything.

In addition to an expression pedal, a DC control voltage (CV) can be inserted to allow remote sweeping of the frequency control. The range of this input is 0 - 5.0VDC.

Make sure all controls are set at minimum (fully CCW). Connect your instrument to the input jack and your amp to the output jack. The unit's power LED should be lit.

Set the BASS and TREBLE controls to halfway between minimum and maximum. Test your instrument's sound in both bypass and effect. You should hear a big difference in the frequency extremes.

Turn OFF both the BASS and TREBLE controls (fully CCW).

Set the FREQUENCY control to halfway between minimum and maximum. Set the Q control to halfway between minimum and maximum. Set the BANDPASS GAIN control to halfway between minimum and maximum.

Test your instrument in both bypass and effect. You should hear a big difference in the midrange. Turn the FREQUENCY knob back and forth to get a feel for how much range the bandpass filter has. Turn the Q knob OFF and repeat the last step. Carefully turn the Q control $\frac{3}{4}$ (CW) the way up. You will hear the resonance sharply increase. Turning the Q control all the way up may and probably will cause oscillation. In some cases, this will find excellent uses in electronic music. For guitar and bass, this will most likely provide more than needed. Get a sense of the useful range for your instrument.

Try combining the BASS and TREBLE with different mixes of the BANDPASS GAIN/FREQUENCY/Q to get subtle or extreme tone changes to the bypassed sound. With a little practice, many different kinds of shaping can be simply accomplished. It is often the case that a gentle use of the BANDPASS GAIN knob gives the best results when mixed with the BASS and TREBLE knobs.

Remember to turn the BASS and TREBLE OFF when using an expression pedal or control voltage (CV).

As always, experiment to achieve your own unique sounds. When used properly, the TUBE EQ will provide a lifetime of musical pleasure!