



# OCTAVE MULTIPLEXER

## Sub-Octave Generator

The Electro-Harmonix OCTAVE MULTIPLEXER is the result of many years of engineering research. To get the best results from it please put aside an hour or two for practice in a quiet room...just you, your guitar and amp, and the OCTAVE MULTIPLEXER.

The OCTAVE MULTIPLEXER produces a sub-octave note one octave below the note you play. With two filter controls and a SUB switch, the OCTAVE MULTIPLEXER allows you to shape the tone of the sub-octave from deep bass to fuzzy sub-octaves.

### -CONTROLS-

**HIGH FILTER Knob** – Adjusts a filter that will shape the tone of the sub-octave's higher order harmonics. Turning the HIGH FILTER knob clockwise will make the sub-octave sound more gnarly and fuzzy.

**BASS FILTER Knob** – Adjusts a filter that will shape the tone of the sub-octave's fundamental and lower order harmonics. Turning the BASS FILTER knob counter-clockwise will make the sub-octave sound deeper and bassier. PLEASE NOTE: the BASS FILTER knob is only active when the SUB switch is set to ON.

**SUB Switch** – Switches the Bass Filter in and out. When SUB is set to ON the Bass Filter and its corresponding knob are activated. When the SUB switch is set to OFF, only the High Filter is active. Turning the SUB switch on gives the sub-octave a deeper, bassier sound.

**BLEND Knob** – This is a wet/dry knob. Counter-clockwise is 100% dry. Clockwise is 100% wet.

**STATUS LED** – When the LED is lit; the Octave Multiplexer effect is active. When the LED is off, the Octave Multiplexer is in True Bypass Mode. The footswitch engages/disengages the effect.

**INPUT Jack** – Connect your instrument to the input jack. The input impedance presented at the input jack is 1Mohm.

**EFFECT OUT Jack** – Connect this jack to your amplifier. This is the Octave Multiplexer's output.

**DRY OUT Jack** – This jack is connected directly to the Input Jack. The DRY OUT jack gives the musician the ability to separately amplify the original instrument and the sub-octave created by the Octave Multiplexer.

**9V Power Jack** – The Octave Multiplexer can run off of a 9V battery or you can connect a 9VDC battery eliminator capable of delivering at least 100mA to the 9V power jack. The optional 9V power supply from Electro-Harmonix is US9.6DC-200BI (same as used by Boss™ & Ibanez™) 9.6 volts/DC 200mA. The battery eliminator must have a barrel connector with center negative. The battery may be left in or taken out when using an eliminator.

### -OPERATING INSTRUCTIONS and HINTS-

The Bass Filter emphasizes the lowest fundamental note, and should be used for bottom string playing. The knob should be set counter-clockwise to get the deepest sound and the SUB switch turned on. For higher strings the High Filter is used and the SUB switch is turned off.

The SUB switch should normally be ON when the MULTIPLEXER is used with a guitar to produce a deep bass sound. When it is OFF, the unit accepts much higher notes and inputs from other instruments. Some guitars may work better with the switch set to OFF.

Playing technique, The OCTAVE MULTIPLEXER is really a one note device. It will not operate on chords unless the lowest string is hit much harder than the others. For this reason, you should keep the silent strings dampened, particularly when playing rising runs.

Clean triggering, some guitars have body resonance that can over emphasize certain frequencies. When these coincide with the first overtone of a note played (an octave above the fundamental), the OCTAVE MULTIPLEXER can be fooled into triggering the overtone. The result is a yodeling effect. On most guitars, the rhythm pick-up (nearest to the fingerboard) gives the strongest fundamental. The tone filter controls should be set to mellow. It also helps if the strings are played well away from the bridge.

One other cause of dirty triggering is easily remedied – that is the replacement of worn or dirty strings. Worn strings develop small kinks where they cannot contact the frets. Those cause the overtones to go sharp, and results in the sub-octave sound glitching in the middle of a sustained note.

### - POWER -

Power from the internal 9-volt battery is activated by plugging into the INPUT jack. The input cable should be removed when the unit is not in use to avoid running down the battery. If a battery eliminator is used, the Octave Multiplexer will be powered as long as a wall-wart is plugged into the wall.

To change the 9-volt battery, you must remove the 4 screws on the bottom of the Octave Multiplexer. Once the screws are removed, you can take off the bottom plate and change the battery. Please do not touch the circuit board while the bottom plate is off or you risk damaging a component.