



MICRO SYNTH

Analog Guitar Synthesizer

Congratulations on your purchase of the Electro-Harmonix XO Micro Synth for guitar. This is a very powerful tool for musical expression. Please take a few minutes to familiarize yourself with the Micro Synth's controls to learn how to get the best out of this special instrument.

The **Micro Synth** can create some of the most popular synthesizer textures at a fraction of the cost for such capabilities. Its four voices: **GUITAR, OCTAVE, SUB OCTAVE AND SQUARE WAVE** are completely independent and fully mixable. The **MICRO SYNTH** can modify these signals with envelope control for a variety of "bowed" or "blown" sounds. In addition, a sophisticated swept filter control allows highly variable frequency adjustments to be applied to the overall output signal. When combined, these controls offer the user a creative capability that is virtually limitless.

WARNING: Your Micro Synth comes equipped with an Electro-Harmonix **9.6DC-200BI power supply** (same as used by Boss™ & Ibanez™ 9.6 Volts DC 200mA). The Micro Synth requires 55mA at 9VDC with a center negative plug. The Micro Synth does not take batteries. Using the wrong adapter may damage your unit and void the warranty.

PREAMP GAIN ADJUSTMENT: The preamp gain in the Micro Synth has been set at the factory for use with a guitar equipped with single-coil pickups. If you will be using another instrument with higher or lower output, it may be necessary to readjust this setting. A screwdriver or alignment tool with a tip width of no more than 1/16" is required. To access the preamp gain adjustment, remove the bottom plate from the Micro Synth. Look for the small trim pot in the lower left corner of the circuit board, it is labeled TRIM1 GAIN TRIM. Turning the trim pot clockwise will increase the preamp gain. Turning it counter-clockwise will decrease preamp gain. Please do not touch any other components when the bottom plate is removed or you risk damaging the circuit board or the components.

OPERATION: The Micro Synth's controls operate as described below. In all cases, high-numbered control settings increase the level of the given effect.

FOOTSWITCH and Status LED – The Footswitch selects either effect mode or True Bypass. When the Status LED is lit, the Micro Synthesizer is in effect mode. When the Status LED is off, the Micro Synth is in True Bypass mode.

TRIGGER – Determines the input volume at which the filter circuits will "turn on." It does not affect any other circuitry. If the TRIGGER is set too high, the filter may "stutter" due to multiple triggering. This is especially true if full chords are played. It is best to set the TRIGGER at exactly the sensitivity needed for your playing.

The next four controls of the Micro Synth comprise the VOICE MIXING section: **GUITAR**, **SUB-OCTAVE** (one octave below), **OCTAVE** (one octave above), **SQUARE WAVE**. Each voice is completely independent and can be mixed with the others in any degree. Please note the following voice characteristics:

GUITAR – Controls the output volume of the input signal through the filter.

SUB OCTAVE – Controls the output volume of the Sub-Octave. The Sub-Octave effect only tracks single notes.

OCTAVE – Controls the output volume of the Octave. The Octave only tracks single notes. This voice contains a small amount of harmonic distortion for added richness of tone.

SQUARE WAVE – Controls the output volume of the Square wave. Intensity of this voice is also determined by instrument attack or volume. In all other respects it operates in a similar fashion to a standard distortion device.

ATTACK DELAY – Determines the time required for the voice signals to reach full volume. Higher-numbered settings can completely remove the initial attack of the instrument. Different delay times contribute greatly to the characteristic sounds of various instruments. It is recommended that you synchronize your playing to the speed setting of the **ATTACK DELAY**.

The final four controls comprise the FILTER SWEEP section.

RESONANCE – Affects the degree of sharpness, or “Q” of the filter. Higher settings will produce a more emphasized filter sound and also add a slight boost to the signal.

START FREQUENCY – Determines the frequency at which the filter sweep begins.

STOP FREQUENCY – Determines the frequency at which the filter sweep ends. This is also the “resting frequency” of the filter, and if **START** and **STOP** controls are set at the same level no sweep will occur, though the filter will provide emphasis of that particular frequency band. In addition to lead synthesizer sounds, **START** and **STOP** controls can be used to simulate attack, decay, and harmonic content of acoustic instruments.

RATE – Determines the speed at which the filter sweeps from **START FREQUENCY** to **STOP FREQUENCY**. It is recommended that RATE be synchronized with your playing speed.

SOUND TEMPLATES – The sample settings included with these instructions will help you get familiar with your MICRO SYNTH and its controls. Once you’ve tried all the sample settings, feel free to experiment and develop your own unique palette of sounds. You can record your new settings in the blank templates provided.

-Power-

9V Power Jack – Connect the output plug of the supplied AC Adaptor into the 9V power jack at the top of the Micro Synth. The Micro Synth's maximum current requirement is 55mA at 9VDC. The polarity of the power jack is center negative. The maximum allowable power supply voltage is 12VDC.

- WARRANTY INFORMATION -

Please register online at <http://www.ehx.com/product-registration> or complete and return the enclosed warranty card within 10 days of purchase. Electro-Harmonix will repair or replace, at its discretion, a product that fails to operate due to defects in materials or workmanship for a period of one year from date of purchase. This applies only to original purchasers who have bought their product from an authorized Electro-Harmonix retailer. Repaired or replaced units will then be warranted for the unexpired portion of the original warranty term.

If you should need to return your unit for service within the warranty period, please contact the appropriate office listed below. Customers outside the regions listed below, please contact EHX Customer Service for information on warranty repairs at info@ehx.com or +1-718-937-8300. USA and Canadian customers: please obtain a **Return Authorization Number (RA#)** from EHX Customer Service before returning your product. Include with your returned unit: a written description of the problem as well as your name, address, telephone number, e-mail address, and RA#; and a copy of your receipt clearly showing the purchase date.

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This warranty gives a purchaser specific legal rights. A purchaser may have even greater rights depending upon the laws of the jurisdiction within which the product was purchased.

To hear demos on all EHX pedals visit us on the web at **www.ehx.com**
Email us at **info@ehx.com**

FCC COMPLIANCE

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- *Reorient or relocate the receiving antenna.*
- *Increase the separation between the equipment and receiver.*
- *Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.*
- *Consult the dealer or an experienced radio/TV technician for help.*

Modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment under FCC rules.