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 EHX Customer Service at 718-937-8300 or info@ehx.com for a Return Authorization Number. Along with your pedal, please include a brief description of the problem as well as your name, address, telephone number, copy of your receipt, and a check or money order.

United States - $12
Canada - $15
Europe and outside countries - $25

Ship to:
Electro-Harmonix
C/O New Sensor Corporation
55-01 2nd Street
Long Island City, NY, 11101
Attn: Service Department

Please make checks/money orders **payable to New Sensor Corporation**.

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

Email us at info@ehx.com.

electro-harmonix

Deluxe Big Muff Pi

Congratulations! You have just purchased the ultimate harmonic distortion-sustain device developed to date for the electric guitar player: the Deluxe Big Muff Pi! We started with our beloved NYC Big Muff Pi and carefully added select new features to create a versatile distortion that is extremely musical sounding. Please review this manual to learn the unique potential of the Deluxe Big Muff Pi.

Features Include:

- **Big Muff Knob Layout** – familiar Sustain, Tone and Volume controls
- **MIDS EQ** – fully parametric MIDS EQ includes variable frequency sweep, boost or cut level control and switchable Q or bandwidth amount
- **Footswitch for MIDS EQ –**turn on the MIDS EQ circuit with the stomp of your foot
- **Gate** – remove unwanted hum
- **Attack** –preserves pick attack with an enhanced version of your dry signal
- **Bass Boost** – switchable bass boost
- **Expression Pedal Input** – sweep the frequency of the MIDS EQ with your foot
- **True Bypass**

The Deluxe Big Muff Pi feature set is a culmination of ideas Mike Matthews has always wanted to see in a Big Muff plus suggestions from many friends of Electro-Harmonix. The MIDS EQ allows tonal shaping of the Big Muff distortion like never seen before, the GATE function lends itself to playing the Big Muff in new ways providing blasts of fuzz when you play and silence when you don't, the ATTACK control adds definition to chords and riffs without getting in the way of the Big Muff's original tone, and BASS BOOST brings back some low end when TONE is turned up to its treble settings.

-CONTROLS -

VOLUME Knob – Works as a master volume control for the entire pedal.

TONE Knob – Provides a range of sounds from high treble to deep bass. As you turn the TONE knob clockwise, treble increases and bass decreases.

SUSTAIN Knob – As in the original Big Muff Pi, adjusts the amount of sustain and distortion.

BASS BOOST/NORMAL Switch – When set to NORMAL, the Big Muff circuit is identical to our NYC Big Muff that we currently manufacture. Flip the switch up to BASS BOOST and the volume level of bass frequencies through the Big Muff circuit increases. Although the BASS BOOST function can be subtle it is most useful when TONE is set above the center, 12 o'clock position.

ATTACK Knob – Is a volume control for the Attack effect. As you turn the ATTACK knob clockwise the Attack volume increases. Turn ATTACK all the way down (fully counter-clockwise) to turn Attack off.

The Attack signal path runs in parallel to the Big Muff's circuit. The function of the Attack circuit is to enhance the sound of your picking by applying 2 carefully chosen bandpass filters to the input signal followed by a volume expander that ensures your pick attack is louder than the sustained portion of the note. The Attack signal is not clean; it is usually very gritty but not nearly as distorted as the Big Muff circuit.

GATE Knob – Turning GATE clockwise raises the Gate threshold requiring greater input amplitude to open the noise gate, allowing your notes to be heard and your instrument to pass through. Turn the GATE knob down all the way, to fully counter-clockwise, to disable the noise gate.

MIDS LEVEL Knob – When MIDS is engaged (LED near MIDS Footswitch is lit) the MIDS LEVEL knob either boosts or cuts up to +/- 10dB, at the frequency set by the FREQ knob located below it. Turn MIDS LEVEL clockwise from its center 12 o'clock position to boost the center frequency. To cut, turn MIDS LEVEL counter-clockwise from the 12 o'clock position. This knob has a notch near the 12 o'clock position to help identify the center of the knob's travel. In the center position, MIDS EQ is flat; it does not boost or cut. The MIDS LEVEL knob has no function when MIDS is bypassed (LED near MIDS Footswitch is off).

MIDS FREQ Knob – Sets the center frequency of the MIDS EQ circuit ranging from 310Hz to 5.0kHz. To hear the range of the MIDS FREQ knob, turn the MIDS LEVEL knob up past 3 o'clock, make sure MIDS is enabled (LED near MIDS Footswitch is lit), then play your instrument while turning the MIDS FREQ knob. This knob has no function if either the MIDS section is bypassed (LED near MIDS Footswitch is off) or the MIDS LEVEL knob is set to its center position.

The MIDS FREQ knob can be controlled by an external expression pedal or control voltage (CV). Connect the external device to the EXP jack on the input side of the Deluxe Big Muff. The position of the MIDS FREQ knob sets the toe position of the expression pedal or maximum frequency for CV. The heel position of the expression pedal equals the MIDS FREQ knob's fully counter-clockwise position. Please see EXP Input below for more on the expression pedal.

MIDS Q Switch (HIGH/LOW) – The Q switch sets the resonance or bandwidth of the MIDS EQ. What this means is in LOW mode the EQ sounds broader or rounder and affects a larger range of frequencies; in HIGH mode the EQ sounds sharper or peakier and affects a narrow range of frequencies.

MIDS FOOTSWITCH / LED – Engages or bypasses the MIDS EQ section. When the white status LED is lit, the MIDS EQ circuit is active and the MIDS LEVEL and FREQ knobs can be used to produce a multitude of different tones.

BYPASS FOOTSWITCH / LED – Toggles between effect mode and true bypass. When the red status LED is lit, the effect is active. When the LED is off, the Deluxe Big Muff Pi is in True Bypass mode.

-I/O AND POWER CONNECTIONS -

INPUT – Plug your instrument into here. The input impedance presented at this jack is approximately 130kΩ.

OUTPUT – This is the output of the Deluxe Big Muff Pi. Connect it to the input of your amp or another effects pedal. The output impedance at the OUTPUT jack is 300 ohms.

EXP Input– Connect an expression pedal with a TRS plug to this jack to sweep the MIDS center frequency with your foot or other extremity. Additionally, the EXP IN jack can be connected to a Control Voltage (CV) source using a TS plug; the acceptable range for the control voltage is 0V to 5V. **Some suggested Expression Pedals:** EHX Expression Pedal, M-Audio® EX-P, Moog® EP-2, Roland® EV-5 or Boss® FV-500L. The polarity of the expression pedal's plug must connect the Sleeve to the heel position, Ring connected to the toe position and the Tip connected to the wiper. The nominal expression pedal impedance is 10k but it can accept impedances ranging from 6k to 100k. **Please note:** if the MIDS EQ section is bypassed, the expression pedal is disabled.

9V POWER – The Deluxe Big Muff can run off of a 9V battery or you can use a 9VDC AC Adapter capable of delivering at least 50mA. The optional 9V power supply from Electro-Harmonix is the 9.6DC-200BI (same as used by Boss™ & Ibanez™) and delivers up to 200mA at 9.6 Volts DC. The actual current draw of the Deluxe Big Muff is 22mA at 9VDC. The AC Adapter must have a barrel connector with center negative plug. The Deluxe Big Muff accepts most BOSS® style AC Adapters. Please do not exceed 12VDC at the power jack. The battery may be left in or taken out when using an AC Adapter.

-OPERATION AND WARNINGS -

CHANGING THE BATTERY

To change the 9-Volt battery, you must remove the 4 screws on the bottom of the Deluxe Big Muff Pi. 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.

SHIELDING

To achieve its long sustain, the Deluxe Big Muff Pi has a very high maximum gain. This requires that pickups and cables be well shielded and properly grounded to avoid excessive hum when high sustain knob settings are used.

INTERNAL TRIM POTS

The Deluxe Big Muff Pi's MIDS EQ section has three trim pots for adjusting the following: 1) High Q bandwidth, 2) High Q Output Volume and 3) overall MIDS EQ Output Volume. We set these trim pots at the factory so that 1) HIGH Q mode is very resonant but does not self-oscillate, 2) HIGH Q mode is just a bit louder than LOW Q mode and 3) when engaged, MIDS EQ creates a slight volume boost over MIDS EQ bypassed for most settings of MIDS knobs.

We realize our settings may not be perfect for everyone. If you would like to make adjustments to the trim pots, remove the 4 screws on the bottom of the unit and remove the bottom plate. Place the pedal knob-side-down with the power jack facing away from you. In the upper left area of the printed circuit board you will see three small trim pots.

Before you start: we recommend you photograph or sketch the position of each trim pot as it came to you from the factory in case you want to go back to those settings. The factory trim pot settings vary considerably from unit to unit.

When adjusting the trim pots use a small flat head or slotted screwdriver with a width of 2mm. Please do not touch any other parts of the circuit board while the bottom plate is off or you risk damaging a component.

The signal path through the trim pots goes in this order:

HI Q AMT (TRIM1) → HI Q VOL (TRIM2) → MID EQ OUT VOL (TRIM3)

Change HI Q's bandwidth by adjusting HI Q AMT. The volume level of HI Q mode also changes: increasing HI Q AMT increases HIGH Q's volume; decreasing HI Q AMT decreases HIGH Q's volume. Therefore if you adjust HI Q AMT you may also need to adjust the HI Q VOL trim pot.

If you want to change the volume of LOW Q mode: 1) adjust the MID EQ OUT VOL trim appropriately until you are happy with LOW Q's volume, 2) compare HIGH Q's volume to LOW Q's volume and adjust the HI Q VOL trim if necessary.