



OWNER'S MANUAL



## **SAFETY PRECAUTIONS:**

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Be sure to use only properly rated power adapters or universal power supplies (pedal board power supplies) with appropriate attention paid to proper voltage, amperage and ground schemes. Improper voltage/amperage being provided to the pedal may cause poor tone, inconsistent performance, damage to the unit or all of the above. Proper voltage, amperage and grounding specs are supplied at the end of this manual.
- REPLACE THE BOTTOM LID before the unit is used after battery replacement. Some electronic parts inside are static sensitive and can be damaged from even a small static charge from contact with carpet or other conductive surfaces. DO NOT SET A POWERED UNIT "CONTROLS UP" ON A METAL (or any) SURFACE WITH THE BOTTOM REMOVED!

Congratulations on your choice of MESA/Boogie® and welcome to the MESA® Family! The same passion for excellence, commitment to quality and dedication to customer satisfaction is present in each and every product we make in our one-and-only shop in Petaluma, California, U.S.A. Rest assured that the very same people that hand-build the finest amplifiers in the world built your pedal and you have access to the same resources for help that all our customers do. Call on us anytime and enjoy!

## **THROTTLE BOX EQ™**

With the worldwide success of the THROTTLE BOX™ overdrive, we saw potential for an even more powerful version that included our classic Five-Band Graphic Equalizer. With the added shaping power the on-board Five Band Graphic EQ creates, the THROTTLE BOX EQ™ can go anywhere you want to take it stylistically. The middle range of the GAIN control delivers tight, stinging overdrive that—depending on whether you choose LO or HI GAIN Modes—can cover everything from Blues to Modern Metal with plenty of attitude and an urgent percussive nature. Cranking things up into the upper one-third of the GAIN control in HI unleashes a hot-rod that's blistering with searing top-end harmonics. For Hard Rock and Metal our Graphic EQ set to the popular mid-scooped "V-Curve" has a 40-year track record of creating the heaviest sounds around. Yet with limitless curve possibilities, the Graphic expands the potential for sonic diversity across all styles as well as being able to unleash Mayhem. Like the original, this expanded THROTTLE BOX includes two Modes but here they are controlled by a HI/LO footswitch that enables you to

have two gain regions to choose from during live performance. There are also dedicated HI LEVEL and LO LEVEL Output controls, allowing you to set the desired volume level for each Gain Mode individually. The EQ can be assigned to either or both of these Gain Mode choices so that it becomes active with the desired Gain Mode selection. And of course it wouldn't be a Throttle Box without the powerful MID CUT control from the original that allows global scooping of the mids in addition to whatever you might do with the Graphic sliders. And finally, the internally selectable BOOST switch hidden under the Bottom Plate on the original THROTTLE BOX appears on this EQ version as an easily accessible Top Panel BOOST switch for extra girth and a bit of gain enhancement. We're confident this pedal will exceed your expectations and provide an inspiring tool for expression.

## **FEATURES & CONTROLS**

**OUT** This 1/4" phono jack is the OUTPUT for the device. Connect the OUTPUT to the Input of your amplifier - or the INPUT of the next device in line on your pedal board.

**IN** This ¼" phono jack is the Instrument Input for the device. Plug the Output of your guitar into this jack with a shielded cable of good quality. The jack is a switching type jack and the circuit is turned on when a cable is inserted. When the circuit is activated by inserting a cable, the internal battery is being used to power it—so be sure to unplug the cable from the INPUT when it's not in use.

***NOTE:** The internal battery is switched to an "ON" state (drawing current and supplying voltage) by a switching element in the INPUT jack. To prolong battery life, disconnect the cable from the ¼" INPUT jack whenever the unit is not in use*

***NOTE:** If you wish to leave the INPUT connected permanently—as in a pedal board scenario—it is advisable to power the unit with an external DC 9V power supply. When an external (plug-in) DC 9-volt power supply is used to power the unit the DC Receptacle on the pedal automatically disconnects the battery to avoid battery wear and preserve its useful life. If you are going to use external DC power either for long periods or permanently in a pedal board set-up, remove the internal battery to prevent (forgotten) battery corrosion.*

***NOTE:** A Word on Cables... Always use shielded instrument cables of the best quality and shortest length possible when connecting these types of devices. This will minimize degradation of your sound, particularly high frequency roll-off, due to the added capacitance in longer lengths of cable. We recommend no more than 18-20 feet total (Input and Output combined) between your instrument and the termination at the INPUT of the amplifier. If you must use longer cable lengths, you might consider the use of a Buffer or Line Driver to keep the tonal integrity intact. While these change the sound slightly, it will usually be preferable to top end roll-off. And yes—those little 4" interconnects count too, so include them in your cable length.*

**HI LEVEL** This is the master output (volume) level for the HI Mode and it controls the amount of signal provided to the host amplifier when the HI Mode is active. It enables you to set the level of the HI Mode relative to that of the LO Mode. Use it to jump out for a featured part or solo or set it at an equivalent volume to that of the LO Mode. HI LEVEL allows for an OUTPUT volume setting above or below that of the BYPASS Mode. Another application is higher HI LEVEL settings to purposefully send a hotter signal to the host amp and "slam" the input stage for increased clip, drive or gain.

**LO LEVEL** This control determines the output (volume) level for the LO Mode when it is active. Like HI LEVEL, it allows for relative volume levels of the LO Mode above or below that of the HI Mode. Use LO LEVEL to set the signal strength of the LO Mode in relation to the BYPASS Mode. Like the HI LEVEL, LO LEVEL may also be used to “slam” the Input stage of the host amplifier for more overdrive.

**NOTE:** *Separate HI LEVEL and LO LEVEL controls were included to allow for compensation of volume levels between the two Modes (HI/LO) when one Mode is being used with the Five Band Graphic EQ and the other Mode is not. This allows for maximum flexibility and permits a radically EQ'd sound in one Mode (HI for example) to be matched level-wise to a sound without the Graphic EQ active in the other Mode (LO).*

**TONE** This all-in-one EQ control is common on devices that do not incorporate individual TREBLE and BASS controls. It provides simple, global adjustment of the entire range of frequencies with one control, but your ear may perceive it as most active on the amount of high frequencies present in the mix. A setting of 12:00 represents a “flat” setting with highs neither boosted nor cut. Increasing the TONE control past 12:00 boosts a broad band of high frequencies. Decreasing the TONE below 12:00 cuts (rolls off) the same spectrum of high frequencies.

**GAIN** This control determines the amount of gain (overdrive) in the signal path for both LO and HI Modes.

Set low (8:00 – 10:30) it produces a range of subtle overdrive that's soft and furry, yet featuring the classic mid-punch associated with these types of circuits. In the LO Mode this range is great for pushed and clip-threshold rhythm sounds and to add a slight bump for Blues solo sounds.

The middle range (10:30 – 1:30) offers the most useful region of gain that begins to saturate but still retains a dynamic punch that keeps notes expressive and tight. This works well for both Rhythm and Solo work across many styles of music where medium levels of saturation are appropriate in both Modes.

The high range of the GAIN control (1:30 – 5:30) is all about thick saturation. This region will be the obvious choice for extreme Rock, Metal and Heavy styles yet should not be overlooked for searing sustain in single-note soloing. Don't forget to experiment with this region for some great Rock Solo sounds in the LO Mode as well.

**MID CUT** In addition to the standard “blend-type” TONE control, the THROTTLE BOX EQ incorporates a global (works in LO and HI Modes) MID CUT control (located just below the HI LEVEL) that scoops out the midrange for a wider, bigger sound. It can also be used to mimic the classic Boogie “V” GRAPHIC EQ curve. This has been an essential ingredient for the many Artists that have employed this powerful tool on our amplifiers for decades to get some of the heaviest sounds around. This control works backwards from what you might be used to with Tone controls. As you increase the control you are increasing the “cut” and scooping out more midrange frequencies—until at the maximum setting (5:30) there is hardly any midrange left in the signal path.

**FIVE BAND GRAPHIC EQ** These two mini toggle switches, two LEDs and the five Sliders comprise the GRAPHIC EQ section of the THROTTLE BOX EQ™. The two mini toggles control whether or not the GRAPHIC EQ is active in HI, LO or both. The Red LED is illuminated when the EQ is active in the corresponding Mode. The curved bar just below the Sliders is fitted to help protect the Sliders and prevent accidental bumping of them by the stray shoe in performance situations.

The GRAPHIC EQ provides for +/- 12db of boost or cut in each band of the 5 Slider pots. This makes for a very powerful response and you can easily blow holes (cut) or add unpleasant peaks (boost) in your sound if it is not used with taste and musicality in mind.

While there are almost limitless ways to set the Sliders and craft your own signature sound, one “curve” in particular has found its place in Rock history and this is the classic “V-Curve”. Here the center (Midrange) 750 (Hz) Slider is dipped to scoop out substantial amounts of midrange creating a hollow sound.

Next the two Low (80 Hz) and Low Mid (240 Hz) Sliders are boosted to just above the grid line between middle and top lines to create huge “tuned” bottom end.

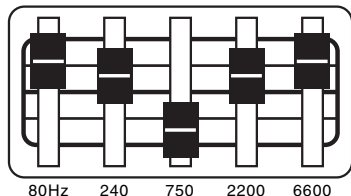
And finally the Hi Mid (2200 Khz) and High (6600 Khz) Sliders are also boosted to just above the grid line between center and top lines to add cut and harmonic layers in the top end.

There you have it... the Boogie® V-Curve. Many iconic Artists have used this setting over the last four decades and for Heavy styles there aren't many things that come close to this incredible sound. And this mid-dipped curve works for other applications as well as it puts a smile on everything and makes things big and exciting.

From there you will want to adjust the Sliders to fit your amp, cabinet, speakers, guitar, pickups and hands to achieve the version of this iconic “V-Curve” sound that you like. Though we've given you an example that is extremely popular, there is no “right” curve here. Just experiment until your ears and hands are happy.

**NOTE:** *May we suggest frequently referencing a “Flat” (EQ OUT) sound as you dial for Tone as it is very easy to get an “EQ Hangover” and apply more EQ than necessary. This especially applies to the 750Hz (center) Slider. As your ear adjusts to less and less midrange, many people crave more and more scoop. Just remember the guitar is a midrange instrument and you will likely need some mids to cut through a mix and sound present.*

**Example of Classic “Boogie V-Curve”**



The curved bar just below the Sliders has been fitted to help protect the Sliders and prevent accidental bumping of them by the stray shoe in performance situations.

**BOOST** Another valuable feature is the global (works in both LO and HI Modes) BOOST switch that allows you to further shape the overall EQ of the pedal to your needs. This switch adds a bit of gain, girth and fat low end and fills in all the “holes” and generally makes your sound bigger. You may have to adjust the TONE control and/or the setting of the Graphic EQ to achieve your preferred and/or a balanced sound with the BOOST activated.

Heavy, high gain sounds usually benefit from the BOOST position engaged. Low to medium gain sounds can work with both positions, but often benefit from the more tapered and balanced low end of the non-BOOST or normal position.

**HI/LO FOOTSWITCH** The HI/LO footswitch incorporated into the GAIN circuit creates two different gain regions (overdrive levels). This footswitch toggles you between the HI and LO Gain Modes.

**LO** works great for Crunch or clipped chording and medium gain solo sounds. **HI** provides an increased level of saturation that is better suited for heavy Rock and Metal rhythm styles and smoldering single note lead work. Try the LO Mode with the BOOST bypassed for the best balance when searching for lower to mid gain sounds appropriate for Blues, R&B or any other time when subtle saturation is in order (see BOOST section earlier in this manual). The balance between low end and top end will be more in-sync and even, making the sound sweeter and more dynamic. The HI Mode kicks the gain up a few notches and delivers much more overdrive, sustain and harmonic layering. Try the BOOST engaged for high gain applications where you need maximum saturation and thunderous, tuned low-end for Heavy styles.

**BYPASS** This footswitch is pretty self-explanatory... it “hard” bypasses the THROTTLE BOX EQ™. It removes all circuitry from your signal path and uses a piece of wire from the INPUT to the OUTPUT. It is the same as having a very short piece of wire in line with your guitar’s signal cable. In the BYPASS Mode none of the controls on the THROTTLE BOX EQ™ have any effect on the signal and you can rest assured your guitar’s sound is not being altered in any way by the THROTTLE BOX EQ™.

**NOTE:** Make sure to take into account that any length of cable more than a few inches may have some cable capacitance and roll off a bit of top end. Use as short of cables as possible to avoid this annoyance.

**EXTERNAL DC POWER JACK** This standard female DC Receptacle on the pedal is the External Power Supply Jack and it accepts the male plug from a standard 9-Volt DC “wall-wart” power supply. When installing your unit into a pedal board utilizing a universal power supply (multi-output pedal board power supplies), connect the external power source here. SEE WARNING BELOW!

**NOTE:** The External DC Power Supply is Not Included. **WARNING!!!** To avoid immediate damage to your unit and the voiding of your warranty, the External Power Supply **MUST** be 9VDC with a **NEGATIVE CENTER** plug polarity and a jack size of 2.1mm x 5.5mm. Do NOT connect a 9-Volt AC Voltage Power Supply to the EXT Power Jack!

The internal battery is (are) automatically disconnected by a switching element in the External DC Receptacle on the front of the pedal. However, if you know you will not be using battery power for an extended period—for example, if you are mounting the unit to your pedal board permanently - it is wise to remove the battery to avoid possible damage from long-term battery corrosion.

**BATTERY** This unit can operate on either one 9-Volt or two 9-Volt batteries (for longer replacement intervals) or a standard 9-Volt “wall-wart” DC power supply. The unit is shipped from the Factory with a single long-life 9-Volt Battery to facilitate easier trial demonstration in a music store environment.

**NOTE:** *If you need longer battery life (playing time) and will not be powering the unit with an external power supply, it is possible to add an additional battery for a total of two 9-Volt Batteries. We have provided a second Battery Terminal in the Battery Compartment and you can feel free to add a second battery at any time by removing the four screws on the Bottom Plate and connecting the battery alongside the included factory battery. This will provide longer periods of operation in the Battery mode and increase replacement intervals.*

**NOTE:** *The internal battery (1 or 2) is switched to an “ON” state (drawing current and supplying voltage) by a switching element in the INPUT jack. Disconnect the cable from the ¼” INPUT jack whenever the unit is not in use to prolong battery life*

To access the 9-Volt battery for inspection, replacement or removal; make sure the External Power Jack is disconnected, remove the four Phillips-head screws from the four corners of the bottom lid and remove it. Note the orientation/direction of the battery and terminals and replace it (them if using two) in the same position.

**NOTE: BATTERY TYPES.** *Any type of 9-Volt battery will work in this device if it is fully charged and functional. Carbon Zinc, Alkaline or even Nickel Cadmium Rechargeable type batteries are all acceptable replacements. Some pedal aficionados prefer the “sweetness” they claim to hear from standard Carbon Zinc type batteries, but you will have to decide what type best serves your needs.*

## **SPECIFICATIONS**

- Dimensions (W/D/H): 5.78" x 4.76" x 2.30" (146.8mm x 121mm x 58.4mm)
- Weight: 1.7lbs (817g) with (one) battery, 1.6lbs (726g) without battery
- True Bypass Switching
- Battery Type: 9VDC (One or Two—Two for extended battery-powered use)
- Power Consumption (Current Draw): 9VDC/30mA
- AC to DC Adapter (Optional): Power Jack 2.1mm x 5.5mm, 9VDC with Negative Center (Regulated Recommended)
- Input Impedance: 1M Ohm (500k Ohm minimum)
- Output Impedance: 10k Ohm

# CLASSIC ROCK CRUNCH



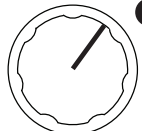
HI LEVEL



LO LEVEL



TONE



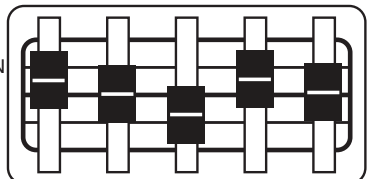
GAIN



MID CUT



EQ HI



80Hz 240 750 2200 6600



EQ LO



BOOST  
(OUT)

OUT ←

IN ←



HI / LO

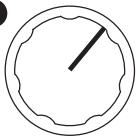


BYPASS





**HI SOLO**



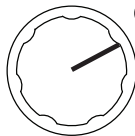
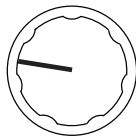
HI LEVEL



LO LEVEL



TONE



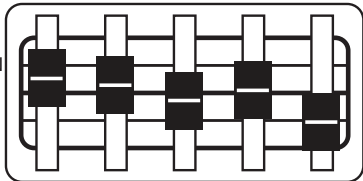
GAIN



MID CUT



EQ HI



80Hz

240

750

2200

6600



EQ LO



BOOST  
(IN)

OUT ←

IN ←



HI / LO



BYPASS



# HI "V" CRUNCH



HI LEVEL



LO LEVEL



TONE



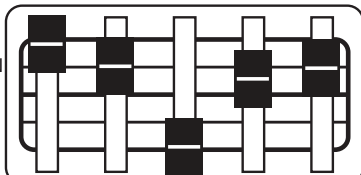
GAIN



MID CUT



EQ HI



80Hz 240 750 2200 6600



EQ LO



BOOST  
(IN)

OUT ←

IN ←



HI / LO

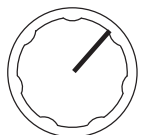


BYPASS

# LO STINGING BLUES



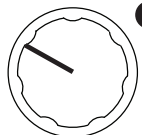
HI LEVEL



LO LEVEL



TONE



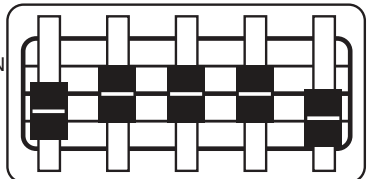
GAIN



MID CUT



EQ HI



80Hz 240 750 2200 6600



EQ LO



BOOST (OUT)



OUT ←

IN ←



HI / LO



BYPASS

# ***MESA/BOOGIE***®

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