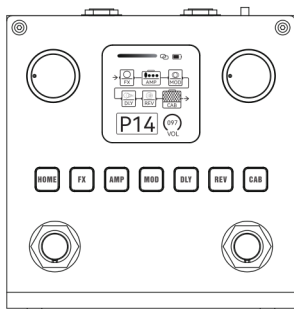


M-VAVE

USER MANUAL

BLACKBOX

Guitar/Bass AMP Modeler Multi Effects Processor



BLACKBOX is a portable and multifunctional Guitar/Bass effector. It has 80 editable Presets, the users also can customize effectors chain and save. It has built-in battery, it can last up to 10 hours on a full charge. BLACKBOX has 6 effects Modules, it contains the Noise Gate, Boost, Compressor, 20 Preamp, 3-band EQ, 7 Modulations, 5 Delays, 6 Reverbs, 20 IR CAB slots.

Press the HOME button on the Main Display Screen to enter the Module Operation Screen, then use the PARA Knob to customize the position of the effects Module. At this time, you can also select any Module by pressing the Right-Footswitch and then open/close this module with the Left-Footswitch, which is convenient for the user to control the Module on/off with the foot during the performance. When you click the MOD/DLY Button, the MOD/DLY Module opens on the screen, you can tap the Right-Footswitch to adjust the effect speed of the MOD/DLY Module.

You can download the computer software or mobile APP from our official channels, use it to edit presets, swap presets, share presets, import/export presets, and import the IR files, import the official shared AMP module timbre data, besides you can restore the factory Settings or firmware upgrade on the computer. It support BT wireless music, earphone monitoring function, and computer sound card, etc. It integrates a variety of function, it is easy-carry and it has excellent sound! It could be a good partner of your music instruments.

■ The power supply:

It is equipped with built-in battery for power supply, which can last for 10 hours after full charge. It can charge with the 5V adapter or the power bank. When the battery run low, you can use the 5V 2A adapter, you need 5 hours to fully charge the battery. When the battery run low, don't use it for a long time to avoid unstable working performance, please charge it in time.

■ The connection:

Be sure to turn off the power of related equipment before connecting or disconnecting the device.

■ The electrical interference:

The electromagnetic wave of radio, television and other equipment may cause interference to the equipment, so please try to stay away from radio, television and other equipment.

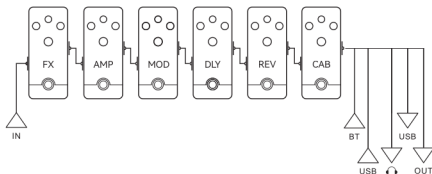
■ The location:

To avoid deformation, discoloration, or other serious damage, do not expose this unit to the following conditions:

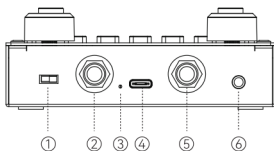
- a. Heat sources
- b. Magnetic fields
- c. Sunlight
- d. High temperature or moist district
- e. Excessively dusty or dirty locations
- f. Strong vibrations or shocks

EN Effectors chain diagram

(The order of the 6 effects Modules can be customized.)



EN Rear panel



①**Power switch.**

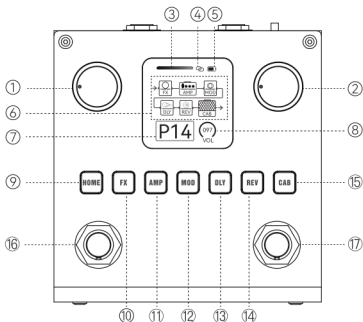
②**IN:** 1/4" MONO audio input jack.

③**Charging indicator:** When the battery is normally using, the indicator will go off; During charging, the indicator will stay red, then it will change to a different color after fully charging.

④**USB jack:** Use to charge the battery/The BLACKBOX can be sound card of computer/Computer software can be connected for interactive data transmission.

⑤**OUT:** 1/4" MONO audio output jack.

⑥**Earphone output.**



① **Master**, You can use it to control BLACKBOX's final output volume.

② **PARA knob** (Rotary encoder with button) , Rotate it to select items or adjust parameters, Click it to enter, exit, or confirm the items, Press and hold for 1 second to display the "Save to" screen, Press and hold for 2 second to display the "Swap to" screen. When on the "Save to" or "Swap to" screen, if you click the HOME button, you can exit and return to "Main Display Screen".

Save to

<P08>

P08 Swap to

<P09>

③ **IN jack input volume real-time display bar.**

④ **Wireless BT pattern**, When the pattern is off, it indicates that BT is not enabled. A white pattern indicates that BT has started but is not connected. The blue pattern indicates that BT is successfully connected.

⑤ **Battery status pattern.**

⑥ **This diagram shows the order and the on/off state of the 6 effect Modules.**

⑦ **Preset number**, Blackbox includes 80 Presets, with the first 40 (P01~P40) containing default factory effects. When you need the factory reset, you can separately reset these 40 Presets to the default values. If you want reset all the 80 Presets, it is also feasible.

Note: Enter the mobile APP or computer software interface to perform this operation.

⑧ **The volume of current Preset.**

⑨ **HOME illuminated Button(BT status light)**, click the HOME button to display the Main Display Screen on the screen, then press the HOME button again to enter the Module Operation Screen. Press and hold it to open/close the BT. When the button light off, the BT had been turned off; when the button light flashing, it means BT is turning on, but not in connection; when the button light keep on, it means BT has been connected.

"Main Display Screen" is the home page displayed right after the power is turned on. You can directly see the key information and settings of the current Preset, you can also know about battery conditions and other information and so on.



Module Operation Screen: In this screen, you can easily operate the connection order of 6 modules, you can also open/close a module freely by using two Footswitches.



⑩FX Module illuminated Button, Click to enter the Edit Settings Menu of Module, then click again to turn on/off Module. Hold for the button can quickly turn on/off Module. If this Button is lighting on, it means the Module is turned on. If the light goes off, the Module is turned off.

When the Edit Settings Menu is displayed on the screen, you can use the PARA encoder to adjust any of the effects and parameters on the screen. At this time, you can also use the Left Footswitch to turn the current Module on/off.

⑪AMP Module illuminated Button.

⑫Modulation Module illuminated Button, When the Screen displays the MOD's Edit Settings Menu, you use the Right Foot switch, you can also Tap to obtain the Speed parameter of the effect. At this time, if the Module has been turned on, the button light will also blink based on the Speed parameter.

⑬Delay Module illuminated Button, When the Screen displays the DLY's Edit Settings Menu, you use the Right Foot switch, you can also Tap to obtain the Time parameter of the effect. At this time, if the Module has been turned on, the button light will also blink based on the Time parameter.

⑭REV Module illuminated Button.

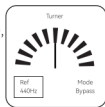
⑮IR CAB Module illuminated Button.

⑯Left Footswitch, it use to turn down the Presets when in Main Display Screen. In some other interfaces, it can be used for on/off Modules.

You can press the left and right Footswitches at the same time to enter Tuning Mode, and then click either Footswitch to exit tuning.

⑰Right Footswitch, it use to turn up the Presets when in Main Display Screen. When in the Module Operation Screens, it can be used to select Modules. When in the MOD/DLY Module screen, you can tap the Right-Footswitch to adjust the effect speed of the MOD/DLY Module.

Tips: The tuning interface is shown in the picture. There are two items to choose from in this interface, the "refer to" item is to select the standard A's frequency 430-450Hz, the "Mode" item is to select the voice output status Bypass or Mute.



EN Effectors module

I: FX Module

1.Noise Gate

● Gate parameter, Adjust the threshold of Noise Gate, When set to 0, the effect is turned off.

2.Boost(Noise Gate can be added)

● Gate parameter, Adjust the threshold of Noise Gate, When set to 0, the effect is turned off.

● Gain parameter, Adjust the gain of the Boost.

3.Compress(Noise Gate can be added)

● Gate parameter, Adjust the threshold of Noise Gate, When set to 0, the effect is turned off.

● Intense parameter, The intensity of wet sound of Compress, the dry sound is reduced when the parameter is increased, at this time, the Lvl parameter is appropriately increased to obtain a better timbre.

● Sustain parameter, If you turn the Sustain parameter down and the Intense parameter up, you can get better timbre.

● Level parameter, Use this parameter to adjust the output volume of this Module again.

II: AMP Module (1-15 is guitar preamp, 16-20 for bass preamp)

- Gain
- Level
- Bass
- Mid
- Treble

III: Modulation Module

1.Chorus

- Speed
- Depth
- Mix: Adjust the dry and wet ratio.

2.Phaser

- Speed
- Dry: Adjust the amount of dry sound used.
- Wet: Adjust the amount of wet sound used.
- Feedback: Adjust the feedback amount of Phaser.

3.Tremolo, it is basically a change of the signal level controlled by an Low-frequency Oscillator.

- Speed
- Depth
- Level parameter, Use this parameter to adjust the output volume of this Module again.

4.Flanger, it is use the same principle as Chorus, but it uses a shorter delay time and adds regeneration(or repeats) to the modulating delay. This results in an exaggerated up and down sweeping motion to the effect.

- Speed
- Depth
- Feedback: Adjust the feedback amount of Flanger.
- Mix: Adjust the dry and wet ratio.

5.Vibrato, The vibrato effect modulates the pitch of the incoming signal. The result is similar to the Tremolo technique used by vocalists. In contrast to a Chorus or Flanger effect, no direct signal is combined with the pitch-modulated signal.

- Speed
- Depth

6.Univibe, a unique timbre, a combination of chorus and phaser.

- Speed
- Depth
- Mix

7. Autofilter

- Speed
- Min
- Max
- Mix
- Feedback

IV: Delay Module

1. Analog, it is the delay effect of the signal of the analog tube, and the timbre has the characteristics of retro and warm.

- Time, adjust the feedback speed of echo repeats, 600-60bpm.
- Feedback, the feedback times of echo repeats.
- Mix, Adjust the dry and wet ratio.
- Phaser, the Phaser effect is increased in the Delay wet sound. This parameter can adjust the amount of Phaser used.
- Frequency, this parameter adjusts the speed and frequency of the Phaser.

2. Ducking Delay, When we process the delayed wet sound, we add the Noise Gate to the part before the wet sound. Thus, the front part of the wet sound is suppressed to achieve a front evasive effect, and the sound is gradually increased, the dynamics of the delay are more 'felt' than 'heard'.

- Time, adjust the feedback speed of echo repeats, 600-60bpm.
- Feedback, the feedback times of echo repeats.
- Mix, Adjust the dry and wet ratio.
- Unpack, After this parameter is turned up, the sudden rise in the volume of the wet rear part can be unpacked, so as to achieve a smoother delay dynamic.
- Speed, the Chorus effect is increased in the Delay wet sound. This parameter can adjust the speed of Chorus used.
- Depth, this parameter adjusts the depth of the Chorus.

3, dTape, Tape delay, it replicates the unique delay style of tape machine, you can not only get the warmth and silky of professional grade tape machine, but also simulate the sound effects of tape in real situations such as CRINKLE, BIAS, and so on.

- Time, adjust the feedback speed of echo repeats, 600–60bpm.
- Feedback, the feedback times of echo repeats.
- Mix, Adjust the dry and wet ratio.
- Grit, the GRIT takes on the function of TAPE BIAS. This parameter adjusts tape machine bias, from under biased to over-biased, it sounds like an overdrive of wet sounds. Bias sets the dynamic range and headroom of the wet signal.
- Speed, the SPEED takes on the function of TAPE CRINKLE. This parameter adjusts the amount and severity of tape irregularities, including friction, creases, splices and contaminants. Tape Crinkle characteristics track accordingly to tape speed. Set to minimum for a fresh, clean tape. Set to maximum for a tape that has been mangled and chewed for years.
- Depth, This parameter control varies the amount of mechanically related tape speed fluctuations. This also results in natural tape machine style modulation, it's like a chorus. Parameter minimum for a more tuned, cleaned and serviced tape machine. Parameter maximum to hear the sound of a tape machine in need of service. In between the extreme settings, a natural tape modulation is achieved.

4. Dual Delay, two independent delay echoes, the time-lag of the first echo and the second echo achieves a very interesting delay rhythm effect.

- Time, adjust the feedback speed of echo repeats, 1200–120bpm.
- Feedback, the feedback times of echo repeats.
- Mix, Adjust the dry and wet ratio.
- Time-Mode, Adjust the time-lag between the two echoes, the minimum is the equivalent of no time-lag, and the greater the number, the greater the time-lag.
- Speed, the Chorus effect is increased in the Delay wet sound. This parameter can adjust the speed of Chorus used.
- Depth, this parameter adjusts the depth of the Chorus.

5. Lofi Delay, a special, retro and destructive delay effect, the wet sound reflects the filter, the vinyl record, the noise lo-fi and many other senses.

- Time, adjust the feedback speed of echo repeats, 600-60bpm.
- Feedback, the feedback times of echo repeats.
- Mix, Adjust the dry and wet ratio.
- Grit, When the parameter is turned up, it sounds like a overdrive wet sound.
- Speed, the Chorus effect is increased in the Delay wet sound. This parameter can adjust the speed of Chorus used.
- Depth, this parameter adjusts the depth of the Chorus.

V: Reverb Module

1. Room reverb, it simulates a relatively small, simple-structured room sound where many reflections are absorbed by soft material in the room, and sound is reflected by walls.

- Decay, Adjust the duration of echo.
- Mix, Adjust the ratio of wet and dry.
- HPass, HIGH pass, only used to regulate wet sound.
- LPass, Low pass, only used to regulate wet sound
- Depth, the pitch of wet sound produces a small cyclical rise and fall, you will hear vintage and charming background sound.

2. Hall reverb, it gives a wide, slightly scattering feeling, it simulates a grand ambient sound.

- Decay
- Mix
- HPass
- LPass
- Depth

3. SWELL reverb, the Swell machine brings in the reverb gradually behind the dry signal for subtle evolving textures, like having a volume pedal on the wet sound.

- Decay
- Mix, If the dry sound is removed, and set the RiseT parameter to 0, it can mimic the sound of string instruments such as the violin.
- HPass
- LPass
- RiseTime, it adjusts the rise time of the swelled signal, I suggest you choose shorter times for single-line soloing or longer times for ambient chord work.

4. Spring reverb, it is a common type of reverberation. The sound signal is transmitted to the spring tank, and the pickup picks up the resonant sound of the spring tank, to mimics the reverberation effect produced in space.

- Decay
- Mix
- HPass
- LPass
- Combs, control the number of springs.

5. Shimmer reverb, there is a pitch-shift sound in the wet sound. Adjust the pitch of the pitch-shift sound, you can get the dissonant interval, create a scary background sound. You also can get the harmonic interval, it's awonderful sound, a resplendent and unearthly ambience. The Amount parameter allow for a range of shimmer effects from laid-back and subtle to full-blown majestic splendor.

- Decay
- Mix
- Tone, Adjust the high frequency of the reverb wet sound.
- Pitch, Adjust the pitch of the pitch-shift sound, the minimum value is the same as the original sound, the maximum value is two octaves above the original sound.

- Amount, adjust the amount of pitch-shift sound.

6. Cloud reverb, is a gorgeous large ambient reverberation, it sounds like the music come from all sides of the cloud. Cloud reverb can take any modest guitar or synth sound and turn it into a gorgeous ensemble.

- Decay
- Mix
- HPass
- LPass
- Diffusion, softens the early reflections to create a more diffused reverb. As Diffusion is increased, the reverb is smoothed and softened, the delay and reverberation mix together more naturally.

VI: IR CAB Module (1–15 is guitar CAB simulator, 16–20 is bass CAB simulator)

- Level
- Low cut, Adjust the low cut point, optionally 20–300 Hz.
- High cut, Adjust the high cut point, optionally 15000–5000 Hz.

EN Technical parameters

Input	Standard 1/4" jack MONO/TS
Output	Standard 1/4" jack MONO/TS, 1/8" Stereo jack, XLR balanced jack, Phone recording jack
Sample rate	44.1KHz/24bit
Size	310(L)X65(W)X40(H)mm
Weight	613g
Power supply& USB data transmit	Type-C、5V≥300mA
Battery capacity	3000mah
Current draw	200mA
Attachment	User manual, USB cable, recording cable

EN Download Software

- **Website :**
www.m-vave.com
- **M-EFCS for Windows/Mac OS :**
<http://www.m-vave.com/appdownload>
- **M-EFCS for Android/iOS :** →
- **APP using tips:**



scan the QR code

Run the APP and click the "≡" button, click the "Current Device" and select the "BLACKBOX", then scan nearby devices, you can connect to use.

We will continue to improve our products and reserve the right to modify certain functions and specifications (including but not limited to appearance, packaging design, operation manual, accessories, dimensions, specifications, displays, etc.) without further notice. Please confirm the product functions and specifications with the local distributor before the purchase. Product pictures and color may be different due to lighting error and screen admiration setting. It may be different from the physical product effect. Please refer to the physical object accordingly.

EN FCC Warning

★ Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. 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.

FCC Radiation Exposure Statement The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation.