MOOER

VEM BoX

Vocal Multi-Effects Processor

Owner's Manual

Contents

Precautions

Power Supply
Please connect the designated AC adapter to an AC outlet of the correct voltage.
Please be sure to use only an AC adapter which supplies 9V DC, 300 mA, center minus.
Unplug the AC power adapter when not using or during electrical storms.

Connections
Always turn off the power of this and all other equipments before connecting or disconnecting, this will help prevent malfunction and / or damage to other devices. Also make sure to disconnect all connection cables and the power cord before moving this unit.

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

● Direct sunlight
● Heat sources
● Magnetic fields
● Extreme temperature or humidity
● Excessive dusty or dirty location
● High humidity or moisture
● Strong vibration or shock

Interference with other electrical devices
Radios and televisions placed nearby may experience reception interference. Operate this unit at a suitable distance from radios and televisions.

Cleaning
Clean only with a soft, dry cloth. If necessary, slightly moisten the cloth.
Do not use abrasive cleanser, cleaning alcohol, paint thinners, wax, solvents, cleaning fluids, or chemical-impregnated wiping cloths.

Handling
Do not apply excessive force to the switches or controls.
Do not let paper, metallic, or other objects into this unit.
Take care not to drop the unit, and do not subject it to shock or excessive pressure.

Items Explanation

Patch
A patch is comprised of information about the on/off status and effect parameter settings used in each module.

Bank
A bank is a group of ten patches. VEM Box has 7 banks, labelled with numbers 0 to 3 (unchangeable preset banks) and letters A to d (editable user banks).

Effect module
A patch can be thought of as a combination of up to 8 single effects. Each such effect is referred to as an effect module.

Effect type
Some effect modules have several different effects which are referred to as effect types. Only one of these can be selected at a time.

Effect parameter
All effect modules have various parameters that can be adjusted. These are called effect parameters or simply parameters. When thinking of an effect module as a compact effect, the parameters change the tone and effect intensity similar to the knobs on the device.

Mode
Mode is the status of different function of keys and controls, VEM Box has Patch Mode for selecting and using patches, Loop Mode for recording loop phrase, Edit Mode for modifying effects, and Store Mode for saving patches.

Main Features

- 8 Effect Modules & 54 Effect Types
- 40 Preset Patches & 40 User Patches
- Phrase Looper with 16 seconds of recording time
- Vocoder Function
- Assignable Expression Pedal
- Patch Pre-Select function
- Compact operation interface
- Lightweight and tiny for easy transportation
- AC adapter 9V DC power supply
- AA/LR6 battery (x4) power supply

Battery Operation

1. Turn off the VEM Box and open the battery holder on the bottom.
2. Insert 4 AA/LR6 batteries and close the battery holder.

Press latch to release and then lift cover.

OPEN

Latch

Four batteries (size AA/LR6)
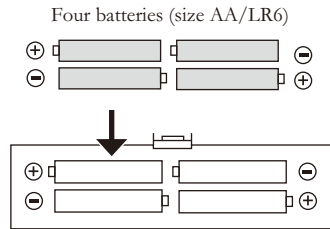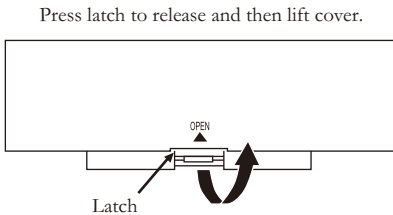
Note: *When the batteries are getting low, the display will show* `Lb` *to indicate this situation.*
Note: *When using batteries, it is suggested to disconnect the microphone cable plug from the [MIC IN] jack when not using the device, to conserve battery power.*

Panel Instruction

HARMONY
RATE
MOD
EQ
TRANS
PREAMP
PEDAL
MIC LEVEL
RANGE
DELAY
D.TIME
REVERB
DECAY
VOCODER
PATCH STORE

VALUE

EXP. PEDAL
Press

VEM BoX
Vocal Multi-Effects Processor

BANK PATCH

A.0.

DATA   EDIT

REC/OVERDUB

MOOER

MODULE BYPASS

▼ PATCH ▲
BYPASS
HOLD FOR LOOP

DC9V   INST.IN   INST.THRU   OUTPUT

+—€—

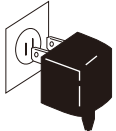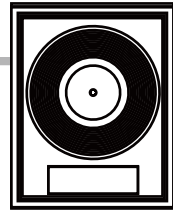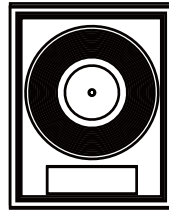MIC IN   [PHONES]
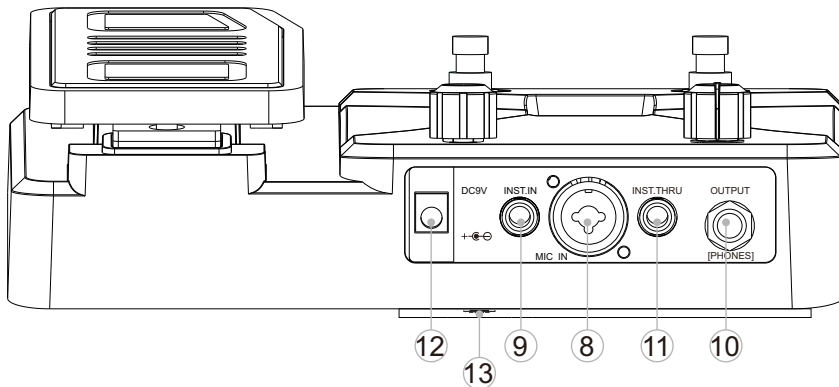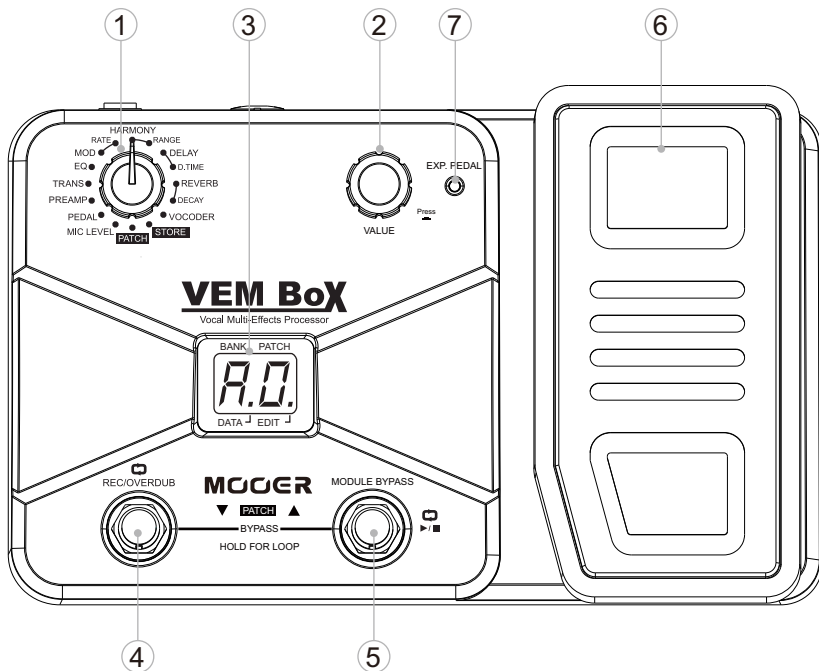
01 **Module Selector:** Switches between every function module. In patch edit mode, this knob selects the module/parameter for operation.

02 **VALUE Knob with Enter Button:** Dial the knob for setting master level, or changing parameter values. Press the button to switch effect type, ensure storing, etc.

03 **LED Display:** Shows bank and patch numbers, setting values, and other information for operating.

04 **PATCH − [REC/OVERDUB] Footswitch:** Selects patches (backwards), start loop recording/overdubbing, and other functions.

05 **PATCH + [MODULE BYPASS] Footswitch:** Selects patches (forwards), play/stop loop, bypass effect module, and other functions.

06 **Expression Pedal:** Adjusts volume or some effect parameters.

07 **EXP. PEDAL LED:** Indicates the status of the expression pedal.

08 **MIC IN Jack:** XLR + 1/4″ TRS audio jack, for connecting microphone. When operating VEM Box on batteries, plugging Mic cable into this jack will turn on the unit.

09 **INST. IN Jack:** 1/4″ mono audio jack, for connecting guitar or other instruments.

10 **OUTPUT [PHONES] Jack:** 1/4″ stereo audio jack, for connecting headphone or amplifier. Using a mono cable can output the signal to an amplifier, or use a Y cable to output the signal to two amplifiers. Also can plug a stereo headphone into this jack.

11 **INST. THRU Jack:** 1/4″ mono audio jack, output the signal directly from INST.IN jack.

12 **DC 9V Jack:** For power supply, use a 9-volt DC regulated by AC adapter, 300mA (plug polarity is positive on the barrel and negative in the center).

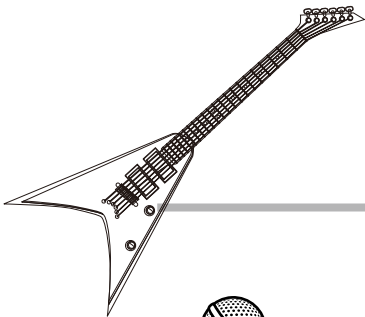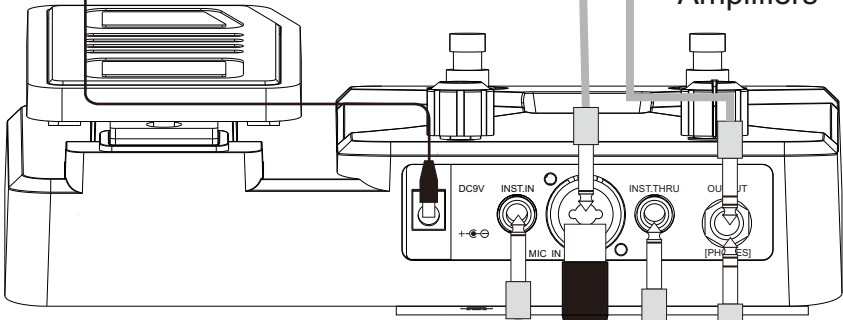**13** **Battery Holder:** For installing batteries (AA/LR6 x 4).
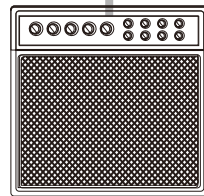
Connections

AC adapter

Microphone

Amplifiers

DC9V INST.IN   INST.THRU   OUTPUT

MIC IN   [PHONES]

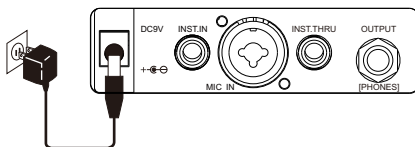Microphone

Headphones

Guitar amplifier

Operation

Patch Selecting

01 **Power On**
Plug the cable of AC Adapter (9V, 300mA, center minus) into the [DC 9V] Jack, when using batteries, plug the Mic cable into [MIC IN] this jack will turn the device on.

Bank name / Patch name
BANK PATCH
DATA EDIT

02 **Selecting Patches**
Set the Module Selector to [PATCH], the LED display will show the information of bank and patch number, step on [PATCH +/-]footswitch to change patches (Hold one footswitch to switch patches quickly).
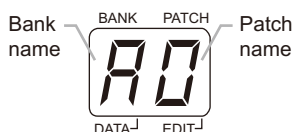
Pressing [PATCH +] footswitch time and again (or holding [PATCH +] footswitch) cycles through patches in the order *A0*~*A9* ... *d0*~*d9*, *00*~*09*... *30* ~*39* , *A0* Pressing or holding [PATCH -] footswitch will switch patches in the opposite order.

03 **Adjusting the master volume**
Set the Module Selector to [PATCH], rotate [VALUE] knob to adjust the master volume of VEM Box (when setting up the master volume, LED display will show the current level). The range of master volume is *00*~*99*, 70 is the default value.

BANK PATCH
70
DATA EDIT

04 **Entering Bypass Mode**
When in PATCH mode, press both [PATCH –] and [PATCH +] footswitches together to enter bypass mode. LED will display *bP* , and all of the effects will be turned off.

BANK PATCH
bP
DATA EDIT
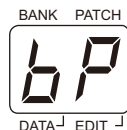
Expression Pedal

01　Volume Control
If the [EXP. PEDAL] LED is not lighted up, the expression pedal will be a volume pedal for controlling the master level of VEM Box.

02　Effect Control
If the [EXP. PEDAL] LED is lighted up, the expression pedal will be an expression pedal for controlling the effect's parameter which was set up in PEDAL setting.

03　Control Assign
Set the Module Selector to [PEDAL], the LED display will show the controlling object of the expression pedal.
There are 9 kinds of parameter can be controlled by the pedal, LED will show the type of parameter in control:

Control Target	LED Display	Control Parameter
Wah	*HA*	Central Frequency
Transducer	*tr*	Gain / Cutoff
Modulation Rate	*Mr*	Rate / Frequency
Modulation Depth	*Md*	Depth
Harmony Range	*Hr*	Pitch
Delay Time	*dt*	Time
Delay Feedback	*dF*	Feedback
Reverb Level	*rL*	Reverb Level
Vocoder Gender	*uG*	Gender

Rotate [VALUE] knob to choose one kind of controlling target, then the expression pedal will work with the corresponding parameter.

Note: There will be a symbol ➤ behind the effect parameter which can be controlled by the pedal (refer to Effect Explanation for detail).
*Note: If the effect module of the chosen target was not turned on, the pedal will be of no effect.*
Note: Pedal setting can be stored in patch.
Note: The expression pedal will be effective in EDIT mode.

04 Switch Control Mode (Volume-Effect)

Push down the expression pedal at full tilt to switch the control mode from volume control to effect control, and [EXP.PEDAL] LED will shift from extinguish to light. It also can switch the control mode from effect control to volume control, [EXP.PEDAL] LED will shift from light to extinguish.

Push strongly, so that pedal touches here
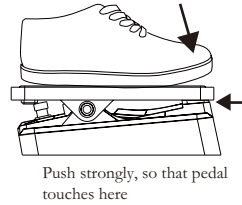
05 Pedal Reset

The responsivity of the expression pedal on VEM Box can be reset as necessary. If the effect change seems insufficient when pushing the pedal down, or if the volume or tone changes excessively even when the pedal is only lightly pushed, or if it's hard to switch the pedal mode, adjust the pedal as follows:

a. Set the Module Selector to [PEDAL] and hold down [VALUE] button and then power on, the indication 𝘜𝘗 will appear on the LED display, and then release the [VALUE] button.

b. Fully raise the expression pedal and press [VALUE] button once, the indication 𝘥𝘯 will appear on the LED display.

c. Push the expression pedal fully down and press [VALUE] button again, the indication 𝘗𝘳 will appear on the LED display.

d. Push strongly down the expression pedal at full tilt and press [VALUE] button once more. The Pedal Reset adjustment is completed, and VEM Box will return to the play mode. If the indication 𝘌𝘳 is shown, press [VALUE] button and repeat the procedure from step b.
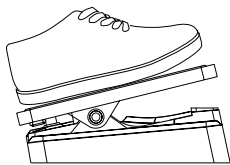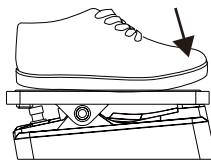
Fully raise   Fully down   Push strongly, so that pedal touches here
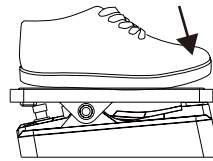
Patch Editing

01 **Select Effect Module**

Set the Module Selector to the effect module which you want to edit, the available setting options are listed below:

01.MIC LEVEL (Para)
02.PEDAL (Para)
03.PREAMP (Type & Para)
04.TRANS (Type & Para)
05.EQ (Type & Para)
06.MOD (Type & Para)
07.RATE (Para)
08.HARMONY (Type)
09.RANGE (Para)
10.DELAY (Type & Para)
11.D.TIME (Para)
12.REVERB (Type & Para)
13.DECAY (Para)
14.VOCODER (Type & Para)

Effect type — BANK PATCH — Parameters value
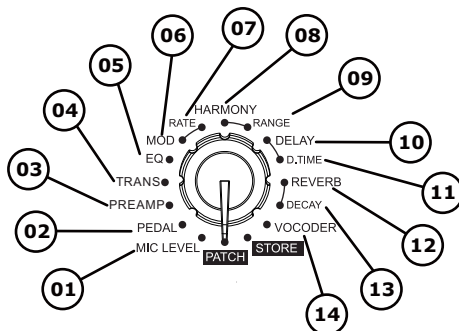
Type & Para: The effect type (left side of the display) and parameter's value (right side of the display) are adjusted simultaneously.

Type: Only select the effect type.

Effect type — BANK PATCH
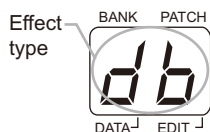
Para: Only adjust the parameter's value.

Parameter value — BANK PATCH
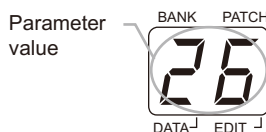
In fact, the RATE module is a part of MOD module, the RANGE module is a part of HARMONY module, the D.TIME module is a part of DELAY module, and the DECAY module is a part of REVERB module.
They are all parameter's value setting module which belongs to the previous effect module.

02 Change Setting

Press [VALUE] knob to change effect/parameter type ahead, hold and rotate [VALUE] knob to change effect/parameter type ahead (clockwise) or backwards (anticlockwise), rotate [VALUE] knob to set a new value of the effect type or parameter. As long as the selected item's value changes, a dot (.) will appear in the bottom right of the display. This indicates that a setting has been changed from the currently stored value.
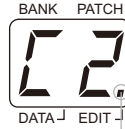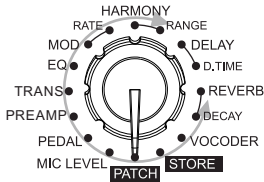
Dot indicates that setting
has been changed

03 Bypass an Effect Module

When adjusting an effect in EDIT mode, press [MODULE BYPASS] / [PATCH +] footswitch to bypass this effect module, the indication ⌐F will appears on the display and the module will be turned off. Pressing [MODULE BYPASS] / [PATCH +] switches once more will return the setting to the previous condition.
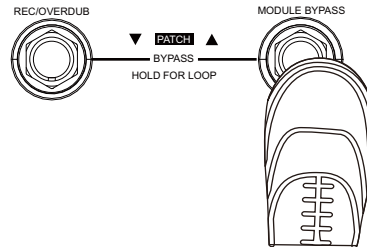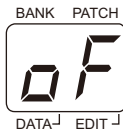
04 Adjusting the MIC LEVEL

Set the Module Selector to [MIC LEVEL], rotate [VALUE] knob to adjust the volume of a patch, LED display will show the current level.
The range of patch level is ⌐⌐~⌐⌐ .

Note: *If you return to [PATCH] module and select another patch, the changes you have made in edit mode will be lost unless you store the patch first.*

Patch Storing/Copying

01 **Enter Storing Mode**
Set the Module Selector to [STORE] to enter storing mode, the display will show the current editing patch's number.

02 **Storing/Copying Patch**
When in [STORE] mode, press [VALUE] button once to do the storing, the patch's number on the display will begin to flash, at that time, rotate [VALUE] knob or press [PATCH -] / [PATCH +] footswitch to change patch number, when you got the expectant position, press [VALUE] button again to confirm the patch storing, the patch's number on the display will stop flashing.

Note: To cancel the store process, rotate the Module Selector to another position, well then the patch will not be saved.
Note: An edited patch can be stored in a user bank (ᴀ~d), it can not be stored in a preset patch (0~3).
Note: Storing an existing patch in another location can create a copy.

Patch Pre-Select Recall Function

Patch Pre-Select function can let you select the patch first but not to activate it, and then perform an additional step to activate the patch.
To use this function, conform to the following instructions:

01 Before power on, hold down the [PATCH +] footswitch, and then power to the VEM Box, $P5$ will appear on the display and last flashing for 3 seconds, it indicates setting up to Patch Pre-Select function successfully.
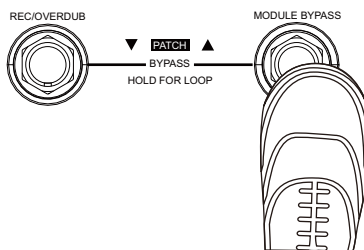
02 In PATCH mode, select the patch to use next. The selected new bank and patch's number flash on the display, but the sound does not change yet.

03 Press both [PATCH -] and [PATCH +] footswitches together, the selected patch will be activated, the sound changes, and the display will stop flashing.
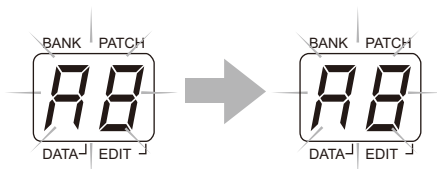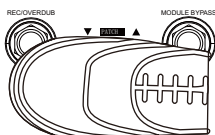
04 To return the normal patch selecting method, turn the power off and then on again. The Patch Pre-Select function will not preserve when power on again.

Vocoder Functions

Vocoder is a process of using real-time frequency spectrum of one sound (Modulator) to modulate the frequency spectrum of another (Carrier). it contains a series of bandpass filters that allow through only those frequencies detected in the Modulator source. For example, when a human voice is used to modulate a synthesizer voice, it will sound like the synthesizer is talking, very interesting effects.

01 **Selecting Vocoder Types**
Set the Module Selector to [VOCODER] to enter Vocoder module, you can select vocoder types by pressing [VALUE] button. There are 3 types of vocoder effects in VEM Box: Vocoder, Robot, Whisper.

Vocoder is a standard classical vocoder, you need to plug an instrument into the INST. IN jack as a carrier source, and connect your microphone to [MIC IN] jack, then play the instrument while speaking or singing, you will enjoy the wonder sound.

Robot is a traditional vocoder effect often heard from many sci-fi movies, to use this vocoder effect, just plug your mic and speak or sing.

Whisper is an alternative vocoder effect which can makes your voice sound like devil speaking, to use this vocoder effect, just plug your mic and speak or sing.

02 **Adjusting Vocoder Effects**
Each vocoder effect has the same parameter (Gender) to adjust, use [VALUE] knob to change parameter range ($1 \sim 9$), gender can slew the pitch of the vocoder down for a more masculine sound (smaller value) or up for a more feminine sound (bigger value).

Note: When Vocoder module is working, other effects module will be invalid, but the parameters of them will be unchanged.
Note: When saving a patch with active vocoder effects, other module's parameter can be stored as well whereas they are invalid. When vocoder is set to off in this patch, other effects modules will return to their corresponding state.

15

Loop Functions

01 Enter Loop Mode
Hold down [PATCH –] and [PATCH +] footswitches together longer than 2 seconds to enter Loop mode, LED display will show 𝐿𝑃.

BANK   PATCH
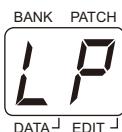
02 Loop Recording
When in Loop mode, press [PATCH-] / [REC/OVERDUB] footswitch once to start recording, 𝑟𝐶 will appear on the LED display and last flashing.

BANK   PATCH

During first time recording, press [PATCH-] / [REC/OVERDUB] footswitch again to set the loop end, recording will be stopped and turn to loop playback; press [PATCH+] footswitch can also set the loop end but the loop will be stopped.

Note: The maximuem recording time is 16 seconds, the loop end will be set immediately once the first recording time go beyond 16 seconds.
Note: Only the MIC IN singal can be recorded.

03 Overdub
When a loop is already recorded, no matter it is stopped or in playback, press [PATCH-] / [REC/OVERDUB] footswitch to start overdubbing, 𝑟𝐶 will flashing on the LED display again.

BANK   PATCH

During overdubbing, press [patch-] / [REC/OVERDUB] footswitch will stop overdubbing and turn to playback, then press [patch-] / [REC/OVERDUB] footswitch again will do another overdubbing.

You can record a loop and overdub it again and again, there is no limit of overdubbing times .

Note: Once the overdubbing time go beyond the loop length, a new overdubbing will begin automatically from the loop start.

04 Delete Loop
If VEM Box have a recorded loop data, a dot (.) will appear in the middle bottom of LED display. Hold down VALUE button longer than 3 seconds while the loop is in the stop status, the loop data will be deleted and the dot (.) will disappear as well.

05 **Play/Stop loop**
When loop is at stop status (LED display shows ⬚), press [PATCH+] footswitch to start loop playing (if there is no loop data, playback can not be executed).

When the loop is playing (⬚ is flashing on the LED display), press [PATCH+] footswitch to stop playback,LED display will show ⬚.

When recording (⬚ is flashing on the LED display), press [PATCH+] footswitch to stop playing and recording, LED display will turn to show ⬚, press [PATCH+] footswitch again to start playback.

06 **Exit Loop mode**
When in Loop mode, hold down [PATCH –] and [PATCH +] footswitches together longer than 2 seconds to exit loop function.

07 **Selecting effects and Patch in Loop mode**
When in Loop mode, you can select patches and adjust effects as well. Set the Module Selector to [PATCH] module, you can select patches by rotating [VALUE] knob. When adjusting effects in loop mode, the parameters's value shown in LED display will last flashing, moreover, the LED will return to indicate loop function if there is no operation in 3 seconds.

Note: The loop data will be remain even though you exit the loop mode, it will be lost after power off or deleting operation.
Note: When selecting patches or adjusting effects in Loop mode, any operation of Loop function will turned the LED display to indicate loop information at once.
Note: In Loop mode, store function can not be operated.

Factory Reset

Factory Reset function will initialize all setting of VEM Box. All the user patches will be erased and overwritten by the preset patches.
To do the factory reset, conform to the following instructions:

Before power on, set the Module Selector to [PATCH], hold down the [PATCH -] and [PATCH +] footswitch and the [VALUE] button simultaneously, and then power to the VEM Box, r5 will appear on the display and last flashing.
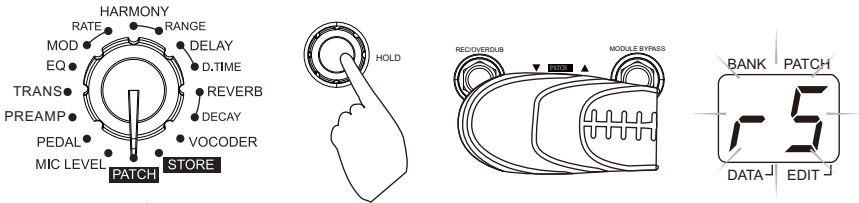
At that time, press [VALUE] button to confirm, r5 will be flashing in a faster speed for 2 seconds, then turn to display r5 at a steady status for 3 second, then back to the normal state, the factory reset operation have been done.

FASTER FLASHING
2 SECONDS

3 SECONDS
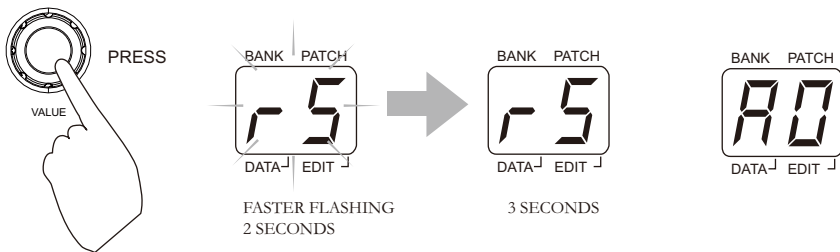
Note: If you want to quit Factory Reset halfway, move the Module Selector to another location, then the Factory Reset will be canceled.

Effects Explanation

General Instruction

Effect Chain

Modules

PREAMP	TRANSDUCER		EQ	MOD	HARMONY	DELAY	REVERB
Compressor	Tube	Overdrive	Low	Chorus	1 Voice Harmony	Digital	Room
Limiter	Distortion	Fuzz	Mid	Flanger	2 Voices Harmony	Analog	Chamber
Boost	Grunge	Beast	High	Talk Flanger	3 Voices Harmony	Mod	Hall
Noise Reduce	Low Cut	Mid Cut	Presence	Phaser	Double	Tape Echo	Church
Auto Wah	High Cut	Radio		Step Phaser	Pitch Shift	Echo	Plate
Sense Wah	Telephone	Megaphone		Tremolo	Detune		Mod
Manual Wah	LoFi			Vibrato			

Types

VOCODER
Vocoder
Robot
Whisper

MOD column continued: Filter, Ring, Stutter

VEM Box has 8 effect modules, 54 types of effect in total, can offer up to 7 simultaneous effects (VOCODER module can not work with any other module at one time).
Each effect module has several different effect types, only one type can be selected at a time. All effect types have various parameters that can be adjusted, the parameters change the tone and effect intensity similar to the knobs on the device.

Explain the Effects Modules/Types/Parameters
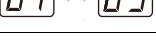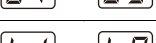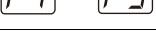
PREAMP Module

Type Name	Display	Effect Explanation
Compressor	$C1 \leftrightarrow C9$	This effect is used for controlling dynamics of the signal, it limits high-level signals and boosts low-level signals. The parameter's value controls the **Depth**.
Limiter	$L1 \leftrightarrow L9$	This effect limits high-level signals to avoid overload. The parameter's value controls the **Depth**.
Boost	$b1 \leftrightarrow b9$	This effect can enhance the gain and dynamic of the signal. The parameter's value controls the **Gain**.
NR	$n1 \leftrightarrow n9$	Noise Reduction, it will reduce the noise of input signal. The parameter's value controls the NR's **Intensity**.
Auto Wah	$A1 \leftrightarrow A9$	This effect creates a recurrent wah-wah sound. The parameter's value controls the **Rate**.

Sense Wah	$\boxed{5\,1}$ ↔ $\boxed{5\,9}$	This effect varies wah sound according to input intensity. The parameter's value controls the **Sensitivity**.
Manual Wah ✐	$\boxed{\Pi\,1}$ ↔ $\boxed{\Pi\,9}$	This effect varies wah sound by turning the knob or controlling the expression pedal. The parameter's value controls the **Central Frequency**.

✐ *This mark means the parameter can be controlled by the expression pedal if corresponding type was chosen in PEDAL module.*

TRANS (Transducer) Module

Type Name	Display	Effect Explanation
Tube ✐	$\boxed{t\,1}$ ↔ $\boxed{t\,9}$	This effect simulates a warm tube drive tone of classical tube preamplifier. The parameter's value controls the **Gain**.
Overdrive ✐	$\boxed{o\,1}$ ↔ $\boxed{o\,9}$	This effect produces a natural overdrive sound. The parameter's value controls the **Gain**.
Distortion ✐	$\boxed{d\,1}$ ↔ $\boxed{d\,9}$	This effect creates a smooth distortion sound. The parameter's value controls the **Gain**.
Fuzz ✐	$\boxed{F\,1}$ ↔ $\boxed{F\,9}$	This effect creates a classic fuzz sound. The parameter's value controls the **Gain**.
Grunge ✐	$\boxed{G\,1}$ ↔ $\boxed{G\,9}$	This effect creates a dirty but powerful distortion sound. The parameter's value controls the **Gain**.
Beast ✐	$\boxed{b\,1}$ ↔ $\boxed{b\,9}$	This effect makes your voice offensive like a beast. The parameter's value controls the **Gain**.
Low Cut ✐	$\boxed{L\,1}$ ↔ $\boxed{L\,9}$	This effect cuts the low frequency. The parameter's value controls the **Cutoff**.
Mid Cut ✐	$\boxed{\Pi\,1}$ ↔ $\boxed{\Pi\,9}$	This effect cuts the mid frequency. The parameter's value controls the **Cutoff**.
High Cut ✐	$\boxed{H\,1}$ ↔ $\boxed{H\,9}$	This effect cuts the high frequency. The parameter's value controls the **Cutoff**.
Radio ✐	$\boxed{r\,1}$ ↔ $\boxed{r\,9}$	This effect sounds like coming from an old radio. The parameter's value controls the **Cutoff**.
Telephone ✐	$\boxed{P\,1}$ ↔ $\boxed{P\,9}$	This effect sounds like coming from a telephone. The parameter's value controls the **Cutoff**.
Megaphone ✐	$\boxed{E\,1}$ ↔ $\boxed{E\,9}$	This effect sounds like coming from a megaphone The parameter's value controls the **Cutoff**.
LoFi ✐	$\boxed{\text{i}\,1}$ ↔ $\boxed{\text{i}\,9}$	This effect creates a rough lofi sound. The parameter's value controls the **Cutoff**.

EQ (Equalizer) Module

Type Name	Display	Effect Explanation
Low	$L1 \leftrightarrow L9$	This controls the bottom band of the equalizer, the central frequency is 200Hz. The parameters value controls the **Gain**.
Mid	$\Pi1 \leftrightarrow \Pi9$	This controls the middle band of the equalizer, the central frequency is 500Hz. The parameters value controls the **Gain**.
High	$H1 \leftrightarrow H9$	This controls the high band of the equalizer, the central frequency is 1kHz. The parameters value controls the **Gain**.
Presence	$P1 \leftrightarrow P9$	This controls the ultra high band of the equalizer, the central frequency is 8kHz. The parameter 's value controls the **Gain**.

EQ Gain-Display Comparison:

Para-Display	1	2	3	4	5	6	7	8	9
Gain	-12dB	-9dB	-6dB	-3dB	0dB	+3dB	+6dB	+9dB	+12dB

MOD (Modulation) Module

Type Name	Display	Effect Explanation
Chorus	$C1 \leftrightarrow C9$	This effect creates a shining dimensional sound. The parameter's value controls the **Depth**.
Flanger	$F1 \leftrightarrow F9$	This effect produces an undulating and floating feeling sound. The parameter's value controls the **Depth**.
Talk Flanger	$A1 \leftrightarrow A9$	This effect produces another kind of flanger sound. The parameter's value controls the **Depth**.
Phaser	$P1 \leftrightarrow P9$	This effect creates a pulsing-like sound. The parameter's value controls the **Depth**.
Step Phaser	$E1 \leftrightarrow E9$	This effect produces a phaser sound with more pulsing feeling. The parameter's value controls the **Depth**.
Tremolo	$t1 \leftrightarrow t9$	This effect periodically influences the volume of the signal. The parameter's value controls the **Depth**.
Vibrato	$u1 \leftrightarrow u9$	This effect periodically influences the pitch of the signal. The parameter's value controls the **Depth**.
Filter	$L1 \leftrightarrow L9$	This effect produces a sweeping filter sound. The parameter's value controls the **Depth**.
Ring	$r1 \leftrightarrow r9$	Produces sounds like ring bell. The parameter's value controls the **Effect's Level**.
Stutter	$S1 \leftrightarrow S9$	This effect makes your sound on and off. The parameter's value controls the **Depth**.
Rate	$01 \leftrightarrow 50$	Control the speed of effects, except Ring.
Frequency	$01 \leftrightarrow 50$	Control the frequency when use Ring.

HARMONY Module

Type Name	Display	Effect Explanation
1 Voice Harmony	`1H`	This effect transfers the pitch and blend with the original note.
2 Voices Harmony	`2H`	This effect creates 2 pitch shift sound blended with the original note.
3 Voices Harmony	`3H`	This effect creates 3 pitch shift sound blended with the original note
Double	`db`	This effect makes your voice thicker and wider.
Pitch Shift	`P5`	This effect transfers the original note's pitch.
Detune	`dt`	This effect slightly shifts the pitch and mixes it back with the original signal to create a chorus-like effect.

HARMONY Range Comparison:

Type Name	Display	Effect Explanation
1 Voice Harmony	`-12` ↔ `12`	Control the harmony range from -12 semitones to +12 semitones.
2 Voices Harmony	`2A` ↔ `2J`	Each parameter corresponds to a 2 Voices Harmony sound, conform to the following list.
3 Voices Harmony	`3A` ↔ `3J`	Each parameter corresponds to a 3 Voices Harmony sound, conform to the following list.
Double	`01` ↔ `30`	Control the doubling effects' depth.
Pitch Shift	`-12` ↔ `12`	Control the pitch range from -12 semitones to +12 semitones.
Detune	`01` ↔ `30`	Control the pitch range from 1 cent to 30 cents.

2 Voices Harmony (semitone)		3 Voices Harmony (semitone)	
`2A`	-12, +12	`3A`	-12, -7, -4
`2b`	-7, -12	`3b`	-12, -7, +12
`2C`	-7, -4	`3C`	-12, -5, +12
`2d`	-7, +4	`3d`	-12, +5, +12
`2E`	-7, +7	`3E`	-12, +7, +12
`2F`	-4, +4	`3F`	-7, -4, +4
`2G`	-4, +7	`3G`	-7, -4, +7
`2H`	+4, +7	`3H`	-7, +4, +7
`2I`	+5, +12	`3I`	-4, +4, +7
`2J`	+7, +12	`3J`	+4, +7, +12

DELAY Module

Type Name	Display	Effect Explanation
Digital	$d\,1 \leftrightarrow d\,9$	Repeat the signal with no special processing, creates the most clean delay sound. The parameter's value controls the **Feedback**.
Analog	$A\,1 \leftrightarrow A\,9$	Simulates an analog delay equipment, produces a warm and vintage delay sound. The parameter's value controls the **Feedback**.
Mod	$\Pi\,1 \leftrightarrow \Pi\,9$	Adds chorus effect to the delay sound, has more extensive spacy feeling. The parameter's value controls the **Feedback**.
Tape Echo	$t\,1 \leftrightarrow t\,9$	Simulates an Tape Echo machine, creates a tape-like delay sound. The parameter's value controls the **Feedback**.
Echo	$E\,1 \leftrightarrow E\,9$	Simulates the real Echo, authentic and natural delay sound. The parameter's value controls the **Feedback**.
Delay Time	$0\,1 \leftrightarrow 1.5$	The value indicates the delay time from 10ms~1500ms.

REVERB Module

Type Name	Display	Effect Explanation
Room	$r\,1 \leftrightarrow r\,9$	Simulates the acoustics of a Room. The parameter's value controls the Reverb's **Level**.
Chamber	$A\,1 \leftrightarrow A\,9$	Simulates the acoustics of a Chamber. The parameter's value controls the Reverb's **Level**.
Hall	$H\,1 \leftrightarrow H\,9$	Simulates the acoustics of a concert Hall. The parameter's value controls the Reverb's **Level**.
Church	$C\,1 \leftrightarrow C\,9$	Simulates the acoustics of a big church. The parameter's value controls the Reverb's **Level**.
Plate	$P\,1 \leftrightarrow P\,9$	Simulates a Plate reverberation. The parameter's value controls the Reverb's **Level**.
Mod	$\Pi\,1 \leftrightarrow \Pi\,9$	Add Chorus effect to a Hall reverb. The parameter's value controls the Reverb's **Level**.
Decay	$0\,1 \leftrightarrow 3\,0$	Control the Decay of Reverb effect

VOCODER Module

Type Name	Display	Effect Explanation
Vocoder	$u\,1 \leftrightarrow u\,9$	Offers a wonderful vocoder effect, like the guitar sound (keyboard, synthesizer, or other instruments) is talking. The parameter's value controls the Vocoder's **Gender**.
Robot	$r\,1 \leftrightarrow r\,9$	This effect can make your voice sound like a robot. The parameter's value controls the Vocoder's **Gender**.
Whisper	$H\,1 \leftrightarrow H\,9$	This effect can make your voice sound like devil speaking. The parameter's value controls the Vocoder's **Gender**.

Note: The Vocoder effect must work with instruments input, or else there is no sound, the Robot effect and Whisper effect didn't have to.

Specification

No. of Effect Modules:	8 Modules (Max. 7 simultaneous modules)
No. of Effect Types:	54 Types
Preset Patch Memory:	40 Patches (4 Banks, each bank has 10 patches)
User Patch Memory:	40 Patches (4 Banks, each bank has 10 patches)
MIC IN Jack:	XLR+1/4″ TRS audio jack
INST. IN Jack:	1/4″ mono audio jack
OUTPUT [PHONES] Jack:	1/4″ stereo audio jack(doubles as line/headphone jack)
INST. THRU Jack:	1/4″ mono audio jack
Power requirements:	AC adapter 9V DC, 300 mA (center minus plug)
	or 4 AA/LR6 batteries
Dimensions:	158mm (D) x 237mm (W) x 63mm (H)
Weight:	750g (without batteries)
Accessories:	Owner's Manual, AC adapter 9V DC

* Disclaimer: Any specification's update won't be amended in this manual.

Troubleshooting

Can not power on

Check power connection.

------ Make sure the power is connected correctly.

Check the adapter.

------ Make sure the adapter's type is DC9V/300mA/center minus.

When using battery, check whether the cable is inserted entirely to the MIC IN jack.

When using battery, check the battery, is the battery low or dead?

------ Make sure the battery is at work and the MIC IN jack is connected with an audio cable.

No sound or low volume

Check connection of cables.

------ Make sure all the cables are connected firmly.

Check the on/off switch of microphone and the volume setting of amplifier.

------ Make sure each equipment's volume is set to an appropriate level.

High noise

Check the adapter.

------ Make sure the adapter's type is DC9V/300mA/center minus.

Check the cables.

------ Make sure the cables are connected firmly and have no quality problem.

Appendix

Patch List

Patch	Patch Name	Reverb Level	Patch	Patch Name	Pedal Assign
A0	Simple Repeat	Volume	C0	Tape Echo	Volume
A1	Bright Hall	Reverb Level	C1	3-Voice Plate	Volume
A2	FB Plate	Volume	C2	Double	Volume
A3	Dirty Thing	Volume	C3	Telephone	Volume
A4	4th Down	Volume	C4	Naughty Child	Volume
A5	Radio	Volume	C5	Holy Water	Reverb Level
A6	Choir	Volume	C6	5th Up	Volume
A7	Ghost Vib	Vibrato Depth	C7	Dark Hall	Reverb Level
A8	Evil Voice	Harmony Range	C8	Breathe	Volume
A9	Classic Vocoder	Volume	C9	Devil Inside	Vocoder Gender
b0	Beast Speak	Volume	d0	Chorus Echo	Volume
b1	Comp Echo	Volume	d1	Detune	Volume
b2	Nice 2-Voice	Volume	d2	4th Wah	Volume
b3	Chop Chop	Stutter Rate	d3	Spacy	Reverb Level
b4	Lofi Harmony	Volume	d4	Fuzzy Boy	Fuzz Gain
b5	Top On Tower	Volume	d5	Fast Echo	Delay Feedback
b6	Little Jet	Flanger Rate	d6	Broken Mirror	Volume
b7	Underwater	Flanger Rate	d7	Scary Movie	Reverb Level
b8	Infiniteness	Volume	d8	Snow Man	Volume
b9	Reform	Vocoder Gender	d9	Robot	Vocoder Gender

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