RAVO MP-10

GUITAR/BASS MULTI-EFFECTS PROCESSOR
&
USB AUDIO INTERFACE

OWNER'S MANUAL

RAVO Tonebank

RAVO Tonebank is a free tone editor software designed for RAVO*. It has a friendly, easy-to-use graphical user interface and all edits will be transferred in real time. You can use the RAVO Tonebank software for editing, importing/exporting and sharing your own patches. Connect your RAVO to your computer with a USB cable (sold separately), open the RAVO Tonebank software, and ROCK!

You can download RAVO Tonebank here:
www.hotoneaudio.com/support

*Note: RAVO Tonebank is now only compatible with PC.

OWNER'S MANUAL

Thank you for purchasing a HOTONE product. Please read this manual carefully to learn about all functions of the RAVO.

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Precautions

Please observe the following precaution tips to ensure safe use of this unit.

Power Considerations

Since power consumption of this unit is high, we recommend the use of an AC adapter.
If you use batteries, please use alkaline batteries.

AC Adapter Operation

- Always use a DC9V center negative 500mA AC adapter. Use of an adapter other than that specified could damage the unit or cause malfunction and pose a safety hazard.
- Always connect the AC adapter to an AC outlet that supplies the rated voltage required by the adapter.
- When disconnecting the AC adapter from an AC outlet, always pull the adapter itself.
- During lightning storms or when not using the unit for an extended period, disconnect the AC adapter from the AC outlet.

Battery Operation

- Use 4 conventional 1.5V AAA batteries (or nickel metal hydride batteries).
- Carefully read the safety indications on the batteries before use.
- When not using the unit for an extended period, remove the batteries from the unit.
- If battery leakage should occur, thoroughly wipe the battery holder and the battery terminals to remove battery fluid.
- Close the battery holder cover when using the RAVO.

Environment Considerations

Avoid using the unit in any of the following conditions that could cause malfunction:

- Extremely hot or cold places
- Near heaters and other heat sources
- Sandy or dusty places
- Places that are extremely humid or exposed to splashing water
- Places with lots of vibrations

Handling

- Never put objects filled with liquids, such as vases, on the unit since this could cause electric shock.
- Never place candles and other burning objects on top of the RAVO. Doing so could cause a fire.
- The RAVO is a precision instrumental device. Do not apply excessive force to the switches and other controls, exposing the unit to strong impacts, including applying excessive force, dropping it or bumping it, which could cause it to break.
- Do not put foreign objects, including coins and wires, or liquids, including water, soft drinks and alcohol, into the RAVO.

Connecting cables and input and output jacks

Please always turn OFF the power to the unit and all other equipment before connecting or disconnecting any cables. Also make sure to disconnect all connection cables and the AC adapter before moving the unit.

Alterations

Never open the case or attempt to modify the product in any way since this can result in damage to the unit. HOTONE Corporation will not assume responsibility for any damage to the unit caused by alterations.

Volume

Do not use the RAVO at a loud volume for a long time since this could cause hearing impairment.

Usage Precautions

Electrical interference with other equipment

In consideration of safety, the RAVO has been designed to provide maximum protection against the emission of electromagnetic radiation from the device and to minimize external electromagnetic interference. However, equipment that is very susceptible to interference or that emits powerful electromagnetic waves should not be placed near the RAVO, as interference could occur. In such a case, place the RAVO and the other equipment sufficiently far apart.

With any type of digital control device, the RAVO included, electromagnetic interference could cause malfunction and could corrupt or destroy data. Please use caution.

Cleaning

Use a soft cloth to clean the panels if they become dirty. If necessary, slightly moisten the cloth. Never use cleansers, wax, or solvents such as paint thinner, benzene or alcohol.

Malfunction

If the unit should malfunction, disconnect the AC adapter and turn the power OFF immediately. Then, disconnect all other connected cables.

Prepare information including the model name, serial number, specific symptoms related to the malfunction, your name, address and telephone number and contact the store where you bought the unit, or contact HOTONE support.

Please keep this manual in a convenient place for future reference.

Definitions

● Module

As shown in **Panel Introduction** section (→P9), you can use up to 8 effect units simultaneously. Each of these units is called a “module”.

● Effect type

Among the modules, some allow different “effect types” to be activated. For example, when using the MOD module you can choose one of several modulation effect types, including chorus, flanger, tremolo, and so on.

● Parameter

Variables that determine the application of an effect are called “parameters”. If we imagine each module as a separate effect pedal, then each parameter would be a knob on that pedal.

● Patch

The ON/OFF status of each module and the parameter settings are stored in units called “patches”. Use patches to recall and save effects.

● Bank

A set of 10 patches is called a “bank”. This unit has a total of 20 banks, including user banks A–J, which can be edited and saved and preset banks 0–9, which can only be recalled.

● Mode

Each operation status of the RAVO is called a “mode”. Depending on the currently selected mode, the functions of keys and knobs change. The modes include the play mode in which you choose a patch and play your instrument, the rhythm mode in which you can play back a rhythm pattern, the edit mode in which you can create and change patches, and the store mode in which you can save patches.

Panel Introduction

Top View

Rear View

1. **Module Selector:** Switches between every function module. In patch edit mode, this knob selects the module/parameter for operation.

2. **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.

3. **EXP.PEDAL LED:** Indicates the status of Expression Pedal.

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

5. [▼]/[▲] **Footswitches:** Selects patches, controls the tuner, start/stop drum rhythm, start/stop/record phrases and other functions.

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

7 **AUX IN Jack:** 1/8” (3.5mm) stereo input audio jack, you can connect a CD player, MP3 Player or other devices for jamming, practicing, etc.

8 **PHONES Jack:** 1/8” (3.5mm) stereo output audio jack, for connecting headphones.

9 **INPUT Jack:** 1/4” mono audio jack, for connecting guitar.

10 **OUTPUT Jack:** 1/4” stereo audio jack, for connecting guitar amplifier. You can use a mono cable to output the signal to an amplifier, or use a Y cable to output the signal to two amplifiers.

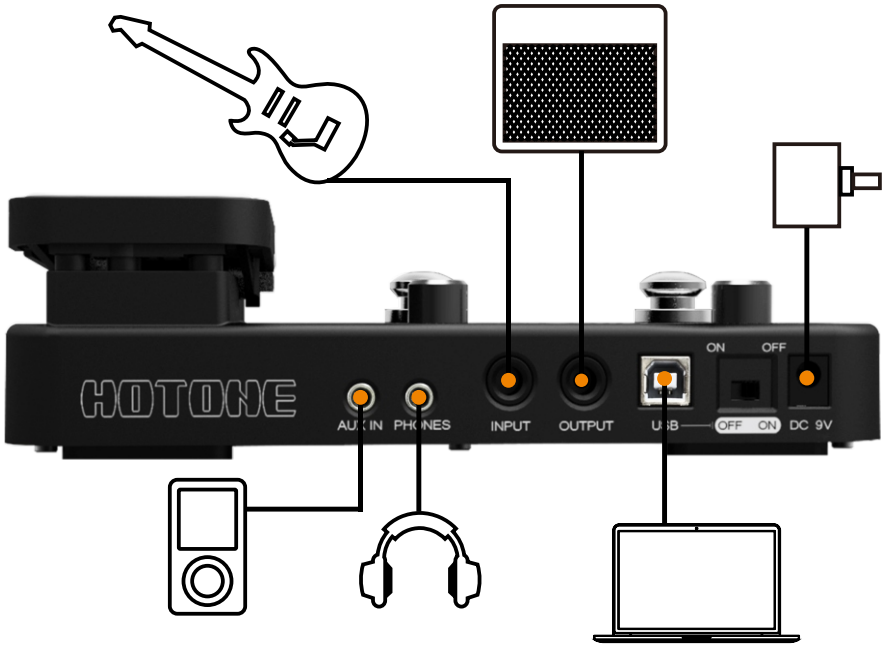
11 **USB Jack:** For connecting to a computer, then RAVO becomes a USB audio interface.

12 **Power switch:** For switching ON/OFF status.
NOTE: For using USB bus power, you should slide the switch to OFF position to get this unit powered.

13 **DC 9V Jack:** For power supply, use a 9-volt DC regulated by AC adapter, 500mA (plug polarity is positive on the barrel and negative in the center).

14 **Battery Holder:** For installing batteries (AAA x 4).

Connections



Beginner's Guide

- - - - - - How To Play - - - - - -

1. Turn the power on

Minimize the volume of the amp.

● Using batteries

1. Turn the unit over and open the battery holder on the bottom.
2. Insert 4 AAA batteries into the battery holder.
3. Close the cover.

When the remaining charge is low, "Low Battery" appears on the display and flash.

4.Plug the guitar cable into the INPUT jack will turn the device on.

● Using an AC adapter

Connect the included AC adapter, and slide the power switch to ON position.

Note: Be sure to use the included HOTONE AC adapter ONLY.

● Using USB bus power

Connect the USB jack to computer by USB cable, and slide the power switch to OFF position.

2. Set the unit to play mode

Turn the module selector to “PLAY”, LED (on the left side) shows the patch number; LCD (on the right side) shows the patch name and master volume.

When in play mode:

Turn the VALUE knob to adjust Master Volume.

Push the VALUE button to start/stop Drum playback.

3. Select a patch

The LED display will show the information of current bank and patch number. Step on [▼]/[▲] footswitches to change patches (Hold one footswitch to switch patches quickly).

Pressing [▲] footswitch time and again (or holding [▲] footswitch for fast switching) cycles through patches in the order A0~A9...J0~J9, 00~09...90~99, A0. Pressing or holding [▼] footswitch will switch patches in the opposite order.

Note:
Using pre-patch-select mode(→P32), you can jump directly to a patch that is far from the current patch.

4. Adjust the patch volume

Turn the module selector to CTRL and use VALUE knob to adjust patch volume. The range of volume is 00~99.

- - - - - - - - Bypass/Mute/Tuner Function - - - - - - - -

1. Set the unit to play mode

2. Set the unit to bypass/mute

Press both [▼]/[▲] footswitches at the same time.

● To set the unit to bypass

After “BYPASS/TUNER” appears on the screen, release the switches within one second.

● To set the unit to mute

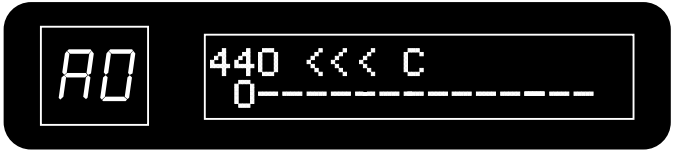
After “BYPASS/TUNER” disappears and “MUTE TUNER” appears on the screen, release the switches within one second.

Note:

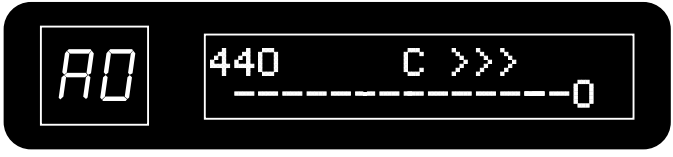
- *If you continue to press both [▼]/[▲] footswitches for more than 2 seconds, the looper becomes active(→P18).*
- *You cannot set the unit to bypass/mute from edit mode.*
- *When you press both [▼]/[▲] footswitches at the same time, the footswitch that is momentarily pressed first could change the tone in some cases. Please avoid making sound when pressing the switches.*

3. Tune the guitar

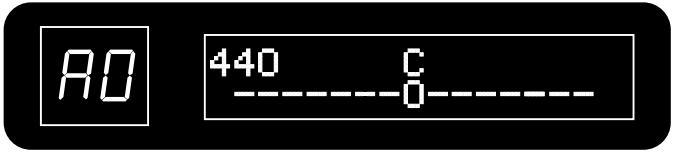
The note name appears on screen, and the pitch accuracy is indicated by the symbols below.



Low(flat)



High(sharp)



In tune

4. Change the frequency of the tuner's standard pitch.

Turn the VALUE knob to set the standard pitch of middle A from 435~445 Hz (Default: 440 Hz).

5. Return to play mode

Press either [▼]/[▲] footswitch.

- - - - - - - - - Looper Function - - - - - - - - -

You can use the looper function to record some phrases for practicing, jamming, etc. The maximum recording time of the looper is 30 seconds.

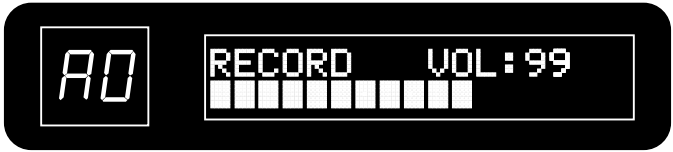
1. Activate the looper

In play mode, press and hold both [▼]/[▲] footswitches until "LOOPER" appears on the screen.

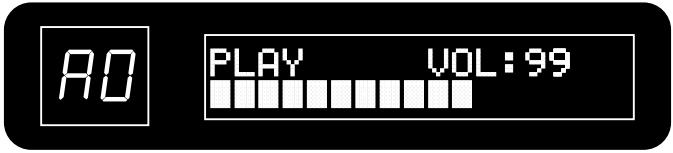
After 2 seconds, LCD becomes to display:

2. Record a phrase and play it back

Press the [▼] footswitch, and play the phrase that you want to record. "RECORD" appears on the display and recording starts.

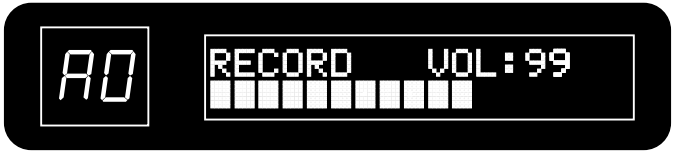


Press [▼] footswitch again to set the loop end and start playback.

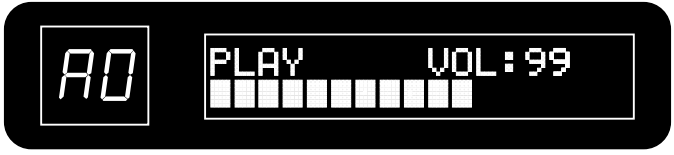


3. Overdub a phrase

During loop playback, press the [▼] footswitch and overdubbing starts.



To end overdubbing, press the [▼] footswitch again (“PLAY” appears on the display).



To stop loop playback, press the [▲] footswitch (“STOP” appears on the display).

To start loop playback again, press the [▼] footswitch.

4. Adjust the loop volume

Turn VALUE knob to adjust the loop volume in looper mode.

Note:

- *When in looper mode, the effects can still be edited, but you cannot change the patch.*
- *When in looper mode, push VALUE button to start/stop drum playback.*

5. Erase the phrase

Press and hold the [▲] footswitch to erase the recorded phrase.
After erasing operation is done, LCD displays “EMPTY”.

6. Return to play mode

PRESS both [▼]/[▲] footswitches.

- - - - - - - - - Drum Module (Drum Machine) - - - - - - - - -

1. Active drum machine

Turn the module selector to DRUM module.

2. Start/stop drum playback

In Play and Looper mode, press VALUE button to start/stop drum playback.
In DRUM module, press either [▼]/[▲] footswitch to start/stop drum playback.
In Edit mode, press [▼] footswitch to start/stop drum playback.

3. Select the style of drum rhythm

Turn VALUE knob to change styles.

4. Adjust the tempo (BPM, Beats Per Minute)

Press VALUE button to move the target parameter to BPM, then turn VALUE knob to set the BPM. Tempo can be set in a range from 040–250 BPM (beats per minute).

5. Adjust the drum volume

Press VALUE button to move the target parameter to VOL, then turn VALUE knob to set the volume. Drum volume can be set in a range from 00~99.

Note:
When in LOOPER mode, drum rhythm can be recorded in the loop data at the first recording, when recording is finished and turn to playback, the drum function will become unavailable unless the loop data is erased.

Advanced Operations

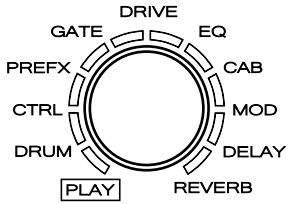
- - - - - - - - - Edit Your Own Sound - - - - - - - - -

1. Select a patch to edit

Step on [▼]/[▲] footswitches to choose a patch (Hold one footswitch for quick switch).

2. Select a module to edit

Turn the module selector to the module you want to edit.



This activates edit mode, the available setting options are listed below:

01.PREFX
02.GATE
03.DRIVE
04.EQ
05.CAB
06.MOD
07.DELAY
08.REVERB

For more module details,please check **Effect Types and Parameters** section(→P44).

3. Change the effect type

Turn VALUE knob to change the effect type.

The screen display will change according to the effect type.
E.g.: DynComp -> ProComp

4. Adjust the parameters

Press VALUE button to move the target object between effect types and 3 parameters, turn VALUE knob to adjust the parameter.

5. Turn a module ON/OFF

Press [▲] footswitch to turn an effect/module on/off.
When a module is set to off, the screen will display “MODULE OFF”.

Note: DRUM and CTRL are not effect modules, cannot be turned OFF.

6. Adjust the patch volume and set up the EXP pedal

Turn the module selector to CTRL and use VALUE knob to adjust patch volume, range is 00~99.

Press VALUE button to move the target object between Patch VOL, EXP, and MIN/MAX, use VALUE knob to adjust the parameter.

7. Finish editing

Turn the module selector to “PLAY” to return to the play mode.

Note:
If you change to another patch after editing, all edits will be lost. Save the patch to keep your edits.

- - - - - - - - - Store - - - - - - - - -

1. Activate store mode

Select the patch that you want to save or copy, and hold the VALUE button up to 2 seconds.

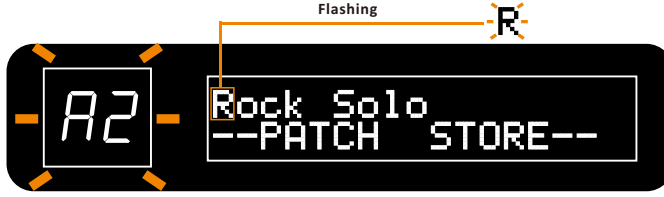
2. Select the location to store

After holding VALUE button, the patch number begins to flash on the display.

Use [▼]/[▲] footswitches to choose location.

3. Rename the patch

The patch name will be flashing with one letter/symbol (current editing position), turn VALUE knob to change the letter/symbol, press VALUE button to confirm the current letter/symbol and switch to the next editing position.



4. Store the patch

Hold the VALUE button again to store the patch. The patch number flashes faster and then stops flashing.

Note:
To cancel this operation, turn the Module selector instead of pressing the VALUE key.

- - - - - - - - - Factory Reset - - - - - - - - -

You can restore all the patches in the A–J banks to their factory settings.

To use the Factory Reset function, turn the module selector to PLAY and turn the power on while pressing and holding the VALUE button. The following message appears on the display:

Press VALUE button to restore all patches to their factory settings and return to play mode.

To cancel this operation, press [▼] or [▲] footswitch.

Caution:
Executing factory reset will erase ALL the patches saved in the user banks.

--------- Pre-Patch-Select Function ---------

The pre-patch-select mode allows you to select a patch in advance, and only switch to that patch after you confirm the selection. This function is convenient during a live performance when you want to prepare switching to a patch that is saved in a distant position. In this mode, the LED will keep flashing.

1. Turn the power ON while pressing the [▲] footswitch.

“Pre-Patch-Select” appears on the screen about 3 seconds, then enters the normal status and the unit starts in pre-patch-select mode.

2. Use the [▼]/[▲] footswitches to select the next patch.

Patch number keeps flashing and does not change until confirmation is completed in step 3.

3. To change the patch, press both [▼]/[▲] footswitches at the same time.

Note:

- *If you enter edit mode or store mode when the screen for step 2 is open, the current patch is the one affected.*
- *To return to the usual patch order, turn the power OFF and ON again.*

- - - - - - - - - Using The Expression Pedal - - - - - - - - -

Use the built-in expression pedal to control volume and effects parameters in real time.

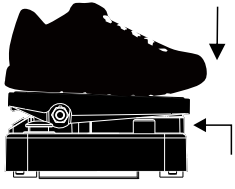
1. Set the control parameter

Turn the module selector to CTRL and press VALUE button to move the current editing object to EXP, use VALUE knob to change the control target of expression pedal, among PREFX, DRIVE, MOD, DELAY, REVERB.

2. Switch between volume control and effects control

There is a LED next to the expression pedal. When lit up, the EXP pedal controls the effects; when not lit up, the EXP pedal controls the VOLUME.

Press down the expression pedal strongly to switch the control mode between volume control (LED extinguished) and effect control (LED lit up).



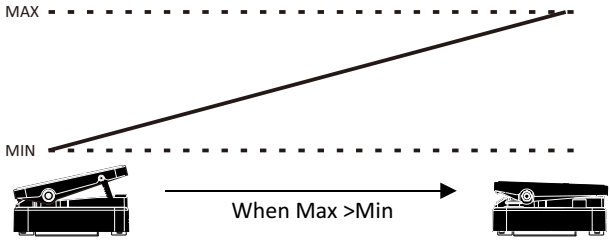
3. Adjust the pedal range

Press VALUE button to move the current editing object to MIN, use VALUE knob to set the minimum value.

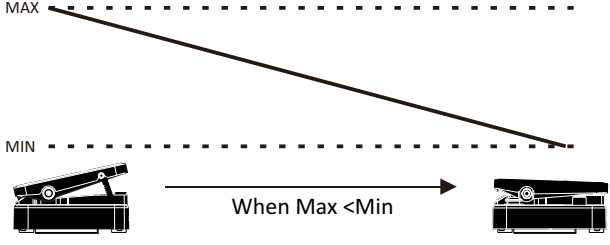
Press VALUE button again to move the current editing object to MAX and turn VALUE knob to set the maximum value.

The minimum value can be set higher than the maximum value. Set this way, the effect is smallest when the pedal is fully pressed and largest when it is fully up.

Parameter value



Parameter value



Note:

- *In the Effect Type Parameters section(→P44), a pedal icon appears next to effect types/parameters that can be controlled by the expression pedal.*
- *When controlling effects, if you press the expression pedal until it stops and then push it down farther, the controlled module will be turned off.*
- *When the controlled module is OFF, you can press hard on the built-in expression pedal to turn the module ON, or choose a different module to be controlled.*

4. When you are finished setting the expression pedal, turn the module selector to “PLAY” to return to play mode.

Note:The expression pedal setting will be lost if you select a different patch. Save the patch if necessary(→P29).

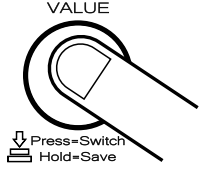
- - - - - - - - - Expression Pedal Calibration - - - - - - - - -

The expression pedal can be calibrated if necessary. If there does not seem to be much effect even when you press the pedal, or the volume or tone changes greatly even when the pedal is only pressed lightly, use the following procedures to readjust it.

1. Turn the module selector to CTRL and turn the power on while pressing VALUE button.

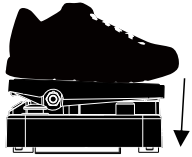
LCD displays “EXP Pedal Calibration” 3 seconds and then display “Fully Raise Towards Heel”:

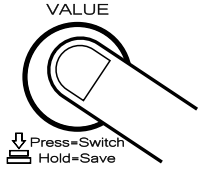
2. Press the pedal all the way back toward the heel and press VALUE button.



Then it displays “Fully Down Towards Toe”:

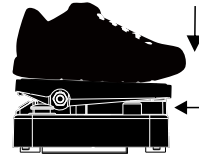
3. Press the pedal all the way forward, towards the toe, lift your foot and then press VALUE button again.





Then it displays “Press Strongly”:

4. Press strongly down the expression pedal at full tilt.



After finishing the adjustment, “Pedal Calibration Completed!” will appear:

Then the unit enters play mode.

If “Error!” is shown on the screen, do the calibration again from step 2.

- - - - - - Using Audio Interface Functions - - - - - -

This unit can be used with computers running the following operating systems.

Compatible OS

- Windows XP SP2 or later
  Windows Vista or later
  Windows 7 or later
- Mac OS X (10.4.6/10.5/10.6 or later)

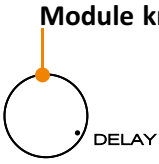
For recording and playback, this unit supports the following formats.

- Quantization (bit-rate): 16-bit
- Sampling frequency: 44.1kHz

The unit will be recognized as an audio device by the computer when connected by the USB cable.

Note:
If you turn the power switch OFF and connect the unit to a computer by USB, it will operate on USB bus power from that computer.

Effect Types and Parameters



DELAY Module (14)

Module name

DigiDLL/DigiDLM/DigiDLS (Digital Delay Long/Mid/Short)

These effects produce a pure, accurate delay effect.

PARM1		PARM2		PARM3	
FB (Feedback)	01~99	Time	50~4000ms(DigiDLL) 50~1000ms(DigiDLM) 50~500ms(DigiDLS)	LEV (Level)	01~99
Adjusts the feedback of delay.		Adjusts the delay time.		Adjusts the effect level.	

Parameters 1-3

When a pedal icon is shown next to a parameter, it can be controlled with the expression pedal. If you set the module to be controlled by the expression pedal, you can control the parameter in real time when you select a patch that uses it.

**The Manufacturers and product names mentioned below are trademarks or registered trademarks of their respective owners. The trademarks were used merely to identify the sound character of the products.*

--------- Effect Types List ---------

PREFX (Pre Effects) Module (18)

PREFX 

DynComp (Dynamic Compressor)

This compressor is based on the MXR M132 Super Comp*.

PARM1		PARM2		PARM3	
SENS (Sense)	01~99	ATK (Attack)	01~99	VOL (Volume)	01~99
Adjusts the sensitivity. Higher values result in higher sensitivity.		Sets compressor attack time from short to long.		Adjusts the level of the signal after it has passed through the compressor.	

ProComp (Pro Compressor)

This compressor allows more detailed adjustment.

PARM1		PARM2		PARM3	
THRE (Threshold)	01~99	RTO (Ratio)	01~99	VOL (Volume) 	01~99
Sets the level that activates the compressor.		Adjusts the compression ratio.		Adjusts the level of the signal after it has passed through the compressor.	

SmoComp (Smooth Compressor)

This compressor Based on Diamond Compressor* which provides a more natural sound.

PARM1		PARM2		PARM3	
COMP (Compression)	01~99	TONE	01~99	VOL (Volume) 	01~99
Sets the compression level.		Adjusts the compression tone.		Adjusts the level of the signal after it has passed through the compressor.	

BasComp (Bass Compressor)

This compressor is specially designed for bass guitar, with more bottom end.

PARM1		PARM2		PARM3	
THRE (Threshold)	01~99	RTO (Ratio)	01~99	VOL (Volume) 	01~99
Sets the level that activates the compressor.		Adjusts the compression ratio.		Adjusts the level of the signal after it has passed through the compressor.	

Limiter

This effect reduces high-level signals only.

PARM1		PARM2		PARM3	
THRE (Threshold)	01~99	RLS (Release)	01~99	VOL (Volume) 	01~99
Sets the level that activates the limiter.		Sets compressor release time from short to long.		Adjusts the level of the signal afterit has passed through the limiter.	

B Boost/M Boost/T Boost (Bass Boost/Mid Boost/Treble Boost)

These 3 effects increase bass/mid/high frequency signal gain to make the sound more satiated and powerful.

PARM1		PARM2		PARM3	
GAIN	01~99	TONE	01~99	VOL (Volume) 	01~99
Sets how much bass/mid/ treble gain is increased from boost.		Adjusts the tone shape of the booster.		Adjusts the level of the signal after it has passed through the booster.	

AutoWah

This effect varies wah effect automatically with speed control.

PARM1		PARM2		PARM3	
DEP (Depth)	01~99	RATE 	01~99	VOL (Volume)	01~99
Adjusts the depth of the effect.		Adjusts the speed of the effect.		Adjusts the level of the signal after it has passed through the effect.	

Q Wah

This effect varies wah effect automatically and provides a Q control.

PARM1		PARM2		PARM3	
Q	01~99	RATE 	01~99	VOL (Volume)	01~99
Adjusts the intensity of the resonance sound.		Adjusts the speed of the effect.		Adjusts the level of the signal after it has passed through the effect.	

SensWah (Sense Wah)

This effect varies wah effect depending on picking dynamics.

PARM1		PARM2		PARM3	
SENS (Sense) 	01~99	RESO (Resonance)	01~99	VOL (Volume)	01~99
Adjusts the sensitivity of the effect.		Adjusts the intensity of the resonance sound.		Adjusts the level of the signal after it has passed through the effect.	

Cry Wah

This simulates a vintage CryBaby* wah pedal.

PARM1		PARM2		PARM3	
FREQ 	01~99	Q	01~99	VOL (Volume)	01~99
Adjusts the emphasized frequency.		Adjusts the intensity of the resonance sound.		Adjusts the level of the signal after it has passed through the effect.	

Vox Wah

This simulates a vintage Vox V846* wah pedal.

PARM1		PARM2		PARM3	
FREQ 	01~99	Q	01~99	VOL (Volume)	01~99
Adjusts the emphasized frequency.		Adjusts the intensity of the resonance sound.		Adjusts the level of the signal after it has passed through the effect.	

BassWah

This simulates a CRYBABY Bass* wah pedal.

PARM1		PARM2		PARM3	
FREQ 	01~99	Q	01~99	VOL (Volume)	01~99
Adjusts the emphasized frequency.		Adjusts the intensity of the resonance sound.		Adjusts the level of the signal after it has passed through the effect.	

SlowAtk (Slow Attack)

This effect simulates a BOSS SG-1 Slow Gear* pedal.

PARM1		PARM2		PARM3	
THRE (Threshold)	01~99	ATK (Attack) 	01~99	VOL (Volume)	01~99
Sets the level that activates the effect.		Sets the attack time from short to long.		Adjusts the level of the signal after it has passed through the effect.	

Cle Oct (Clean Octave)

This effect simulates a Electro-Harmonix Micro POG*, which adds an effect sound one octave below/above the original sound.

PARM1		PARM2		PARM3	
LOW	01~99	HIGH	01~99	DRY 	01~99
Sets the level of one Octave below.		Sets the level of one Octave above.		Adjusts the level of dry signal.	

RingMod

This effect produces a metallic ringing sound.

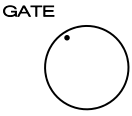
PARM1		PARM2		PARM3	
FREQ 	01~99	TONE	01~99	MIX	-50~50
Sets the frequency been modulated.		Adjusts the tone.		Adjusts the mix with the dry signal.	

Lo-Fi

This effect produces a lo-fi style tone.

PARM1		PARM2		PARM3	
DEP (Depth)	01~99	TONE	01~99	MIX 	-50~50
Sets the depth of lo-fi effect.		Adjusts the tone.		Adjusts the mix with the dry signal.	

GATE Module (2)



NorGate (Normal Noise Gate)

This is a noise gate that cuts the sound during playing pauses.

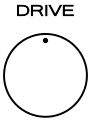
PARM1		PARM2		PARM3	
THRE (Threshold)	01~99	ATK (Attack)	01~99	RLS (Release)	01~99
Sets the level that activates the noise gate.		Sets noise attack time to from short to long.		Sets noise release time to from short to long.	

DtyGate (Dirty Noise Gate)

This is a noise gate with a hard reduction process.

PARM1		PARM2		PARM3	
THRE (Threshold)	01~99	ATK (Attack)	01~99	RLS (Release)	01~99
Sets the level that activates the noise gate.		Sets noise attack time to from short to long.		Sets noise release time to from short to long.	

DRIVE (Overdrive/Distortion/Amplifier Simulator) Module (36)



Tube OD(Tube Overdrive)

This simulates an Ibanez TS808 Tube Screamer* overdrive pedal.

VintgOD (Vintage Overdrive)

This simulates a vintage BOSS OD-1 Over Drive* pedal.

SuperOD (Super Overdrive)

This simulates a BOSS SD-1Super OverDrive* pedal.

CompsOD (Compulsive Overdrive)

This simulates a Fulltone OCD* Overdrive pedal.

SparkOD (Spark Drive)

This simulates a Voodoo Lab Sparkle Drive* overdrive pedal.

MonkyOD (Monkey Overdrive)

This simulates a Digitech Bad Monkey* overdrive pedal.

BassOD(Bass Overdrive)

This simulates a BOSS ODB-3* Bass Overdrive pedal.

Muff FZ (Muff Fuzz)

This simulates a vintage Electro-Harmonix Big Muff PI* fuzz pedal.

Face FZ (Face Fuzz)

This simulates a vintage Dallas-Arbiter FUZZ fACE* fuzz pedal.

Bend FZ (Bend Fuzz)

This simulates a vintage Vox Tone Bender* fuzz pedal.

Bass FZ (Bass Fuzz)

This simulates an Electro-Harmonix Hog's Foot Fuzz* pedal.

Plus DS (Plus Distortion)

This simulates a MXR M104 Distortion+* pedal.

PopDist (Pop Distortion)

This simulates a BOSS DS-1 Distortion* pedal.

ClassDS (Classic Distortion)
This simulates a vintage PROCO RAT* Distortion pedal.
Guv DS (Guvnor Distortion)
This simulates a Marshall Gov'nor* Distortion pedal.
ShredDS (Shred Distortion)
This simulates a Marshall Shred Master* Distortion pedal.
SmashDS (Smash Distortion)
This simulates an Ibanez SM-7 SMASHBOX* Distortion pedal.
MetalDS (Metal Distortion)
This simulates a BOSS MT-2 Metal Zone* Distortion pedal.
GrungDS (Grunge Distortion)
This simulates a DOD FX69 GRUNGE* Distortion pedal.
CrunchD (Crunch Distortion)
This simulates a MI AUDIO CRUNCH BOX Distortion* pedal.

Tweed57
This simulates a vintage Fender Tweed Deluxe* combo amplifier.
Black65
This simulates a vintage Fender '65 Deluxe Reverb* combo amplifier.
Brit 30
This simulates a vintage VOX Ac30* combo amplifier.
Brit30+
This simulates a MATCHLESS CHIEFTAIN* combo amplifier.
Brit 45
This simulates a Marshall JTM45* amplifier.
Brit800
This simulates a Marshall JCM800* amplifier.
Plexi59
This simulates a vintage Marshall 1959 SuperLead* amplifier.

Mark 2c
This simulates a MESA BOOGIE Mark ll C+* amplifier.
Rectif
This simulates a MESA BOOGIE Dual Rectifier* amplifier.
EVH5150
This simulates a PEAVEY EVH 5150* amplifier.
Bass 59
This simulates a Fender BASSMAN* bass amplifier.
BassSVT
This simulates a AMPEG SVT* bass amplifier.
Bass103
This simulates a HIWATT DR103* bass amplifier.
Bass360
This simulates an ACOUSTIC 360* bass amplifier.

BassF2B

This simulates an ALEMBIC F2B bass preamp.

The 35 effect types above have the same parameters.

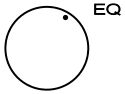
PARM1		PARM2		PARM3	
GAIN	01~99	TONE	01~99	LEV (Level)	01~99
Adjusts the gain.		Adjusts the brightness.		Adjusts the level of the signal after it has passed through the drive.	

Acoustic (Acoustic Guitar Simulator)

This effect changes the tone of an electric guitar to make it sound like an acoustic guitar.

PARM1		PARM2		PARM3	
BODY	01~99	TOP	01~99	LEV (Level)	01~99
Adjusts the body resonance of acoustic guitars.		Adjusts the unique string tone of acoustic guitars.		Adjusts the level of the signal after it has passed through the simulator.	

EQ (Equalizer) Module (6)



GT EQ 1 (Guitar Equalizer 1)

This unit has a 3-band equalizer suited for guitar.

PARM1		PARM2		PARM3	
LOW 160Hz	-12~12	MID 500Hz	-12~12	HI 3.2kHz	-12~12
Boosts or cuts the low (160 Hz) frequency band (±12dB).		Boosts or cuts the mid (800 Hz) frequency band (±12dB).		Boosts or cuts the high (3.2 kHz) frequency band (±12dB).	

GT EQ 2(Guitar Equalizer 2)

This unit has a 3-band equalizer suited for guitar.

PARM1		PARM2		PARM3	
LOW 125Hz	-12~12	MID 800Hz	-12~12	HI 2kHz	-12~12
Boosts or cuts the low (125 Hz) frequency band (±12dB).		Boosts or cuts the mid (500 Hz) frequency band (±12dB).		Boosts or cuts the high (2 kHz) frequency band (±12dB).	

GT EQ 3(Guitar Equalizer 3)

This unit has a 3-band equalizer suited for guitar.

PARM1		PARM2		PARM3	
LOW 100Hz	-12~12	MID 1kHz	-12~12	HI 6.4kHz	-12~12
Boosts or cuts the low (100 Hz) frequency band (±12dB).		Boosts or cuts the mid (1 kHz) frequency band (±12dB).		Boosts or cuts the high (6.4 kHz) frequency band (±12dB).	

BassEQ1 (Bass Equalizer 1)

This unit has a 3-band equalizer suited for bass.

PARM1		PARM2		PARM3	
LOW 62.5Hz	-12~12	MID 500Hz	-12~12	HI 1kHz	-12~12
Boosts or cuts the low (62.5 Hz) frequency band (±12dB).		Boosts or cuts the mid (500 Hz) frequency band (±12dB).		Boosts or cuts the high (1 kHz) frequency band (±12dB).	

BassEQ2 (Bass Equalizer 2)

This unit has a 3-band equalizer suited for bass.

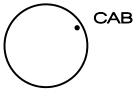
PARM1		PARM2		PARM3	
LOW 100Hz	-12~12	MID 600Hz	-12~12	HI 4kHz	-12~12
Boosts or cuts the low (100 Hz) frequency band (±12dB).		Boosts or cuts the mid (600 Hz) frequency band (±12dB).		Boosts or cuts the high (4 kHz) frequency band (±12dB).	

BassEQ3 (Bass Equalizer 3)

This unit has a 3-band equalizer suited for bass.

PARM1		PARM2		PARM3	
LOW 50Hz	-12~12	MID 400Hz	-12~12	HI 800Hz	-12~12
Boosts or cuts the low (50 Hz) frequency band (±12dB).		Boosts or cuts the mid (400 Hz) frequency band (±12dB).		Boosts or cuts the high (800 Hz) frequency band (±12dB).	

CAB (Cabinet) Module (22)



Tweed 8

This simulates a Fender Tweed Champ* 1x8 cabinet.

Grh 110

This simulates a GRETSCH 6156* 1x10 cabinet.

Dlx 112

This simulates a Fender Deluxe Reverb* 1x12 cabinet.

AC 112

This simulates a VOX AC15* 1x12 cabinet.

AC 212

This simulates a VOX AC30* 2x12 Cabinet.

JC 212

This simulates a Roland JC120*2x12 cabinet.

Twin212
This simulates a Fender Twin Reverb* 2x12 cabinet.
Chf 212
This simulates a MATCHLESS CHIEFTAIN* 2x12 Cabinet.
Gbk 412
This simulates a Marshall* 4x12 cabinet with Greenback* speakers.
V30 412
This simulates a Marshall* 4x12 cabinet with Vintage 30* speakers.
MB 412
This simulates a MESA BOOGIE* 4x12 cabinet.
Pvy 412
This simulates a PEAVEY 5150* 4x12 cabinet.
Sol 412
This simulates a SOLDANO* 4x12 cabinet.

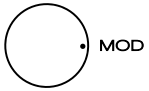
BassB15
This simulates an AMPEG B15* 1x15 bass cabinet.
Bass118
This simulates a SWR* 1x18 bass cabinet.
Bass360
This simulates an ACOUSTIC 360* 1x18 bass cabinet.
AC 215
This simulates a VOX AC100* 2x15 bass cabinet.
MB 215
This simulates a MESA BOOGIE* 2x15 bass cabinet.
Bass410
This simulates a Fender BASSMAN* 4x10 bass cabinet.
Hiwt412
This simulates a HIWATT DR103* 4x12 bass cabinet.

Bass412
This simulates a Marshall* 4x12 bass cabinet.
Bass810
This simulates an AMPEG SVT* 8x10 bass cabinet.

The 22 effect types above have the same parameters.

PARM1		PARM2		PARM3	
MIC (Mic Distance)	01~99	PRES (Presence)	01~99	VOL (Volume)	01~99
Adjusts the distance between microphone and cabinet.		Adjusts the presence.		Adjusts the level of the signal after it has passed through the effect.	

MOD (Modulation) Module (24)



VintgCH (Vintage Chorus)

This simulates a BOSS CE-1 Chorus* pedal.

PARM1		PARM2		PARM3	
DEP (Depth)	01~99	RATE	01~99	MIX	-50~50
Adjusts the chorus depth.		Adjusts the chorus speed.		Adjusts the mix with the original signal.	

ModrnCH (Modern Chorus)

This effect produces a modern feeling chorus sound, bright and deep.

PARM1		PARM2		PARM3	
DEP (Depth)	01~99	RATE	01~99	MIX	-50~50
Adjusts the chorus depth.		Adjusts the chorus speed.		Adjusts the mix with the original signal.	

Hard CH (Hard Chorus)

This effect produces a thick and solid chorus.

PARM1		PARM2		PARM3	
DEP (Depth)	01~99	RATE	01~99	MIX 	-50~50
Adjusts the chorus depth.		Adjusts the chorus speed.		Adjusts the mix with the original signal.	

Shim CH (Shimmer Chorus)

This effect produces a light and clear chorus.

PARM1		PARM2		PARM3	
DEP (Depth)	01~99	RATE	01~99	MIX 	-50~50
Adjusts the chorus depth.		Adjusts the chorus speed.		Adjusts the mix with the original signal.	

Bass CH (Bass Chorus)

This effect produces a chorus tone that suit for bass.

PARM1		PARM2		PARM3	
DEP (Depth)	01~99	RATE	01~99	MIX 	-50~50
Adjusts the chorus depth.		Adjusts the chorus speed.		Adjusts the mix with the original signal.	

Detune (Detune Chorus)

This effect mixes dry signal with a slightly pitch shifting sound.

PARM1		PARM2		PARM3	
DEP (Depth)	-50~50	DLY (Pre Delay)	01~99	MIX 	-50~50
Adjusts the detuning in cents, value of “0” will do a double effect.		Sets the pre-delay time of the effect sound		Adjusts the mix with the original signal.	

Flanger

This effect produces a standard flanger tone.

PARM1		PARM2		PARM3	
DEP (Depth)	01~99	RATE 	01~99	MIX	-50~50
Adjusts the flanger depth.		Adjusts the flanger speed.		Adjusts the mix with the original signal.	

NFB FLG (Negative Feedback Flanger)

This effect produces a special flanger tone with negative feedback.

PARM1		PARM2		PARM3	
DEP (Depth)	01~99	RATE 	01~99	MIX	-50~50
Adjusts the flanger depth.		Adjusts the flanger speed.		Adjusts the mix with the original signal.	

Jet FLG (Jet Flanger)

This effect produces a massive flanger tone with plenty of feedback.

PARM1		PARM2		PARM3	
DEP (Depth)	01~99	RATE 	01~99	MIX	-50~50
Adjusts the flanger depth.		Adjusts the flanger speed.		Adjusts the mix with the original signal.	

StepFLG (Step Flanger)

This effect produces an automatic flanger tone with step variation.

PARM1		PARM2		PARM3	
DEP (Depth)	01~99	RATE 	01~99	MIX	-50~50
Adjusts the flanger depth.		Adjusts the flanger speed.		Adjusts the mix with the original signal.	

BassFLG (Bass Flanger)

This effect produces a flanger tone that suit for bass.

PARM1		PARM2		PARM3	
DEP (Depth)	01~99	RATE 	01~99	MIX	-50~50
Adjusts the flanger depth.		Adjusts the flanger speed.		Adjusts the mix with the original signal.	

Phaser

This effect adds a phasing variation to the sound.

PARM1		PARM2		PARM3	
DEP (Depth)	01~99	RATE 	01~99	MIX	-50~50
Adjusts the effect depth.		Adjusts the effect speed.		Adjusts the mix with the original signal.	

FB PHS (Feedback Phaser)

This effect produces a phasing sound with feedback.

PARM1		PARM2		PARM3	
DEP (Depth)	01~99	RATE 	01~99	MIX	-50~50
Adjusts the effect depth.		Adjusts the effect speed.		Adjusts the mix with the original signal.	

O-Trem (Opto Tremolo)

This effect simulates the DEMETER TREMULATOR* tremolo pedal.

PARM1		PARM2		PARM3	
DEP (Depth)	01~99	RATE 	01~99	VOL (Volume)	01~99
Adjusts the tremolo depth.		Adjusts the tremolo speed.		Adjusts the effect volume.	

B-Trem (Bias Tremolo)

This effect produces a lush, warm, and roundly pulsing tremolo.

PARM1		PARM2		PARM3	
DEP (Depth)	01~99	RATE 	01~99	VOL (Volume)	01~99
Adjusts the tremolo depth.		Adjusts the tremolo speed.		Adjusts the effect volume.	

T-Trem (Tube Tremolo)

This effect simulates the Electro-Harmonix WIGGLER* tremolo pedal.

PARM1		PARM2		PARM3	
DEP (Depth)	01~99	RATE 	01~99	VOL (Volume)	01~99
Adjusts the tremolo depth.		Adjusts the tremolo speed.		Adjusts the effect volume.	

VintgVB (Vintage Vibrato)

This effect simulates a vintage Boss VB-2 Vibrato* pedal.

PARM1		PARM2		PARM3	
DEP (Depth)	01~99	RATE 	01~99	VOL (Volume)	01~99
Adjusts the vibrato depth.		Adjusts the vibrato speed.		Adjusts the effect volume.	

ModrnVB (Modern Vibrato)

This effect produces a bright and deep vibrato tone.

PARM1		PARM2		PARM3	
DEP (Depth)	01~99	RATE 	01~99	VOL (Volume)	01~99
Adjusts the vibrato depth.		Adjusts the vibrato speed.		Adjusts the effect volume.	

U-Vibe

This effect simulates the vintage SHIN-EI UNI-VIBE* rotary pedal.

PARM1		PARM2		PARM3	
DEP (Depth)	01~99	RATE	01~99	VOL (Volume)	01~99
Adjusts the rotary depth.		Adjusts the rotary speed.		Adjusts the effect volume.	

Pitch (Pitch Shift)

This effect shifts the pitch from -12 semitones to +12 semitones.

PARM1		PARM2		PARM3	
RAN (Range)	-12~12	TONE	01~99	MIX	-50~50
Adjusts the pitch shift amount in semitones.		Adjusts the tone of shifted notes.		Adjusts the mix with the original signal.	

FBPitch (Feedback Pitch Shift)

This effect shifts pitch with a short delay and feedback.

PARM1		PARM2		PARM3	
RAN (Range) 	-12~12	FB (Feedback)	01~99	MIX	-50~50
Adjusts the pitch shift amount in semitones.		Adjusts the amount of feedback.		Adjusts the mix with the original signal.	

AutoLPF (Auto Low Pass Filter)

This effect produces low filter variation at a regular rate.

PARM1		PARM2		PARM3	
FREQ	01~99	RATE 	01~99	MIX	-50~50
Adjusts the filter working frequency.		Adjusts the filter speed.		Adjusts the mix with the original signal.	

AutoBPF (Auto Band Pass Filter)

This effect produces an auto band pass filter effect.

PARM1		PARM2		PARM3	
FREQ	01~99	RATE	01~99	MIX	-50~50
Adjusts the filter working frequency.		Adjusts the filter speed.		Adjusts the mix with the original signal.	

AutoHPF (Auto High Pass Filter)

This effect produces high filter variation at a regular rate.

PARM1		PARM2		PARM3	
FREQ	01~99	RATE	01~99	MIX	-50~50
Adjusts the filter working frequency.		Adjusts the filter speed.		Adjusts the mix with the original signal.	

DELAY Module (14)

DigiDLL/DigiDLM/DigiDLS (Digital Delay Long/Mid/Short)

These effects produce a pure, accurate delay effect.

PARM1		PARM2		PARM3	
FB (Feedback)	01~99	Time	50~4000ms(DigiDLL) 50~1000ms(DigiDLM) 50~500ms(DigiDLS)	LEV (Level)	01~99
Adjusts the feedback of delay.		Adjusts the delay time.		Adjusts the effect level.	

AnlgDLL (Analog Delay Long)

This effect simulates an Electro-Harmonix DELUXE MEMORY MAN* analog delay pedal.

PARM1		PARM2		PARM3	
FB (Feedback)	01~99	Time	50ms~1100ms	LEV (Level)	01~99
Adjusts the feedback of delay.		Adjusts the delay time.		Adjusts the effect level.	

AnlgDLM (Analog Delay Mid)

This effect simulates a MXR M169 CARBON COPY* analog delay pedal.

PARM1		PARM2		PARM3	
FB (Feedback)	01~99	Time	50ms~600ms	LEV (Level)	01~99
Adjusts the feedback of delay.		Adjusts the delay time.		Adjusts the effect level.	

AnlgDLS (Analog Delay Short)

This effect simulates a vintage BOSS DM-2 DELAY* pedal.

PARM1		PARM2		PARM3	
FB (Feedback)	01~99	Time	50ms~300ms	LEV (Level)	01~99
Adjusts the feedback of delay.		Adjusts the delay time.		Adjusts the effect level.	

Slapback (Slapback Echo)

This effect simulates the classic slapback echo tone.

PARM1		PARM2		PARM3	
FB (Feedback)	01~99	Time 	75ms~250ms	LEV (Level)	01~99
Adjusts the feedback of delay.		Adjusts the delay time.		Adjusts the effect level.	

Mod DL (Mod Delay)

This effect produces a pure delay with chorus effect.

PARM1		PARM2		PARM3	
FB (Feedback) 	01~99	Time	50ms~4000ms	LEV (Level)	01~99
Adjusts the feedback of delay.		Adjusts the delay time.		Adjusts the effect level.	

TapeEKO (Tape Echo)

This effect simulates the echo tone from a tape machine.

PARM1		PARM2		PARM3	
FB (Feedback)	01~99	Time 	50ms~1000ms	LEV (Level)	01~99
Adjusts the feedback of delay.		Adjusts the delay time.		Adjusts the effect level.	

TubeEKO (Tube Echo)

This effect simulates the sound from a tube-driven echo machine.

PARM1		PARM2		PARM3	
FB (Feedback)	01~99	Time 	50ms~1000ms	LEV (Level)	01~99
Adjusts the feedback of delay.		Adjusts the delay time.		Adjusts the effect level.	

Dyna DL (Dynamic Delay)

This effect produces a pure delay tone with dynamic delay volume variation.

PARM1		PARM2		PARM3	
FB (Feedback) 	01~99	Time	50ms~4000ms	LEV (Level)	01~99
Adjusts the feedback of delay.		Adjusts the delay time.		Adjusts the effect level.	

SweepDL (Sweep Delay)

This effect produces a delay tone with sweeping filter.

PARM1		PARM2		PARM3	
FB (Feedback) 	01~99	Time	50ms~4000ms	LEV (Level)	01~99
Adjusts the feedback of delay.		Adjusts the delay time.		Adjusts the effect level.	

Lofi DL (Lo-Fi Delay)

This effect produces a delay tone with sample reducing feedback.

PARM1		PARM2		PARM3	
FB (Feedback)	01~99	Time 	50ms~1000ms	LEV (Level)	01~99
Adjusts the feedback of delay.		Adjusts the delay time.		Adjusts the effect level.	

PPongDL (Ping-Pong Delay)

This ping-pong delay outputs the delay sound alternately to the left and right.

PARM1		PARM2		PARM3	
FB (Feedback) 	01~99	Time	50ms~2000ms	LEV (Level)	01~99
Adjusts the feedback of delay.		Adjusts the delay time.		Adjusts the effect level.	

REVERB Module (8)

Room

This reverb effect simulates the acoustics of a room.

Stage

This reverb effect simulates the acoustics of a live stage.

Hall

This reverb effect simulates the acoustics of a hall.

Stadium

This reverb effect simulates the acoustics of a stadium.

Church

This reverb effect simulates the acoustics of a church.

Plate

This reverb effect simulates a plate reverberator.

Spring
This reverb effect simulates a spring reverberator.
Mod REV (Mod Reverb)
This reverb effect provides a reverb with modulation.

The 8 effect types above have the same parameters.

PARM1		PARM2		PARM3	
DEC (Decay)	01~99	TONE	01~99	MIX 	-50~50
Sets the duration of the reverberations.		Adjusts the tone.		Adjusts the mix with the original signal.	

Patch List

Bank (User/Factory)	Patch No.	Name	EXP.Pedal Target
		GENERAL EFFECTS	
A/0	0	Rock Solo	Volume
	1	Smooth Drive	Volume
	2	Chorus Clean	Volume
	3	Golden Age	Volume
	4	Fuzzy Jet	Jet FLG: RATE
	5	Countryside	Volume
	6	Dirty Funk	Volume
	7	Basic Jazz	Volume
	8	Fusion Gig	Cry Wah: FREQ
	9	Brown Metal	Volume

B/1	0	Scooped Solo	Cry Wah: FREQ (press to activate)
	1	British Crunch	Volume
	2	Cowboy Overdrive	B-Trem: RATE
	3	Dreamy Clean	AnlgDLL: Time
	4	Stoned Fuzz	Volume
	5	OS Punk	Volume
	6	Tweedy OD	Volume
	7	Post Punk Rhythm	Volume
	8	Funky Autowah	Volume
	9	AC Verb	Volume

C/2	0	Smooth Cali	Volume
	1	Vintage OCTA	Cle OCT: DRY
	2	’65 Organ	Volume
	3	AC Blues	Volume
	4	Alternativity	Volume
	5	Modern Clean	Volume
	6	Rotating OD	U-Vibe: RATE
	7	Djentlemen	Volume
	8	Sludge	Volume
	9	Solo Shifter	Pitch: RAN

AMBIENT/SPECIAL EFFECTS			
D/3	0	Ghost Notes	Volume
	1	Distorted Wall	Volume
	2	Midnight	Volume
	3	Dynamic Rules!	Volume
	4	Synth Fuzz	Volume
	5	No Attack	SlowATK: ATK
	6	Hold On	DigiDLM: FB
	7	Tape Machine	Volume
	8	Shim Verb	Volume
	9	Rock Organ	Volume

ICONIC EFFECTS			
E/4	0	Crazy Randy	Volume
	1	Jimi's Haze	Cry Wah: FREQ (press to activate)
	2	Van Phase	Volume
	3	Bohemian Red	Volume
	4	Passion & Love	Cry Wah: FREQ (press to activate)
	5	Europe	Volume
	6	Edgy Delay	AnlgDLL: Time
	7	Neo Malmsteen	Volume
	8	Back in Angus	Volume
	9	Eric's Cream	Volume

F/5	0	Green Idiots	Volume
	1	Roto Muff	U-Vibe: RATE
	2	My Iron Harmonic	Volume
	3	ZZ Garage	Volume
	4	Kurt's Spirit	Volume
	5	The Way of Pat	Volume
	6	Plexi Wing	Cry Wah: FREQ (press to activate)
	7	Surfin'	B-Trem: RATE
	8	Liquid Animation	Cry Wah: FREQ (press to activate)
	9	Manhattan	Volume

G/6	0	Road Salt	B-Trem: RATE
	1	Alien & Satch	Volume
	2	Icy Camel	Volume
	3	LUKE	Volume
	4	Fuzzy Krimson	Volume
	5	Toolkit	Volume
	6	Eyes Closed	Volume
	7	Gilmour's Island	Volume
	8	Texas Trouble	Volume
	9	Dire Brothers	Volume

BASS EFFECTS			
H/7	0	Basic Bass	Volume
	1	Finger Bass	Volume
	2	Pick Bass	Volume
	3	Chorus Bass	Volume
	4	Overdriven Bass	Volume
	5	Screamin' Bass	Volume
	6	Synth Bass	Volume
	7	Fuzzy Bass	Volume
	8	Driven Pick Bass	Volume
	9	Wah Bass	BassWah: FREQ

I/8	0	Smooth Bass	Volume
	1	Dist 412 Bass	Volume
	2	DI Bass	Volume
	3	Chapman Bass	Volume
	4	Funky Bass	Volume
	5	Touch Bass	Volume
	6	Flanger Bass	Volume
	7	Tremolo Bass	T-Trem: RATE
	8	Slapback Bass	Volume
	9	Phase Bass	Volume

J/9	0	Auto Filter Bass	Volume
	1	Bass Dialing	Volume
	2	Delayed Bass	Volume
	3	Sweeping Bass	Volume
	4	Slow Gear Bass	Volume
	5	Lo-Fi Bass	Volume
	6	Solo Bass	Volume
	7	Organ Bass	Volume
	8	Cello Bass	Volume
	9	Bass Shifter	Pitch: RAN

Drum Rhythm List

Genre	No.	Type	Time Signature	Default Tempo
8Beat	00	8Beat1	4/4	120 BPM
	01	8Beat2	4/4	120 BPM
	02	8Beat3	4/4	120 BPM
	03	8Beat4	4/4	120 BPM
	04	8Beat5	4/4	120 BPM
	05	8Beat6	4/4	120 BPM
	06	8Beat7	4/4	120 BPM
	07	8Beat8	4/4	120 BPM
	08	8Beat9	4/4	120 BPM
	09	8Beat10	4/4	120 BPM

16Beat	10	16Beat1	4/4	120 BPM
	11	16Beat2	4/4	120 BPM
	12	16Beat3	4/4	120 BPM
	13	16Beat4	4/4	120 BPM
	14	16Beat5	4/4	120 BPM
	15	16Beat6	4/4	120 BPM
	16	16Beat7	4/4	120 BPM
	17	16Beat8	4/4	120 BPM
	18	16Beat9	4/4	120 BPM
	19	16Beat10	4/4	120 BPM

4Beat	20	4Beat1	4/4	120 BPM
	21	4Beat2	4/4	120 BPM
	22	4Beat3	4/4	120 BPM
	23	4Beat4	4/4	120 BPM
	24	4Beat5	4/4	120 BPM
	25	4Beat6	4/4	120 BPM
	26	4Beat7	4/4	120 BPM
	27	4Beat8	4/4	120 BPM
	28	4Beat9	4/4	120 BPM
	29	4Beat10	4/4	120 BPM

Rock	30	Rock n' Roll	4/4	210 BPM
	31	Classic Rock	4/4	120 BPM
	32	Pop Rock	4/4	120 BPM
	33	Slow Rock	4/4	72 BPM
	34	Rock Shuffle	4/4	120 BPM
	35	Rock Ballad	4/4	66 BPM
	36	Punk	4/4	240 BPM
	37	New Wave	4/4	120 BPM
	38	Hard Rock	4/4	135 BPM
	39	Metal	4/4	120 BPM

Funk	40	Classic Funk	4/4	108 BPM
	41	Funk Rock	4/4	114 BPM
	42	Electric Funk	4/4	108 BPM
	43	Soul	4/4	105 BPM
	44	R&B	4/4	100 BPM
Jazz	45	Jazz	4/4	120 BPM
	46	Big Band	4/4	180 BPM
	47	Fusion	4/4	120 BPM
	48	Swing	4/4	144 BPM
	49	Dixieland	4/4	240 BPM

Blues	50	Blues	4/4	108 BPM
	51	Country	4/4	114 BPM
	52	Country Folk	4/4	138 BPM
	53	Rockabilly	4/4	180 BPM
	54	Bluegrass	2/4	132 BPM
Electronic	65	Hip Hop	4/4	84 BPM
	66	Trip Hop	4/4	84 BPM
	67	Techno	4/4	132 BPM
	68	Break Beat	4/4	128 BPM
	69	Drum n' Bass	4/4	174 BPM

Latin	55	Bossa nova	4/4	120 BPM
	56	Rumba	4/4	114 BPM
	57	Samba	4/4	108 BPM
	58	Cha Cha	4/4	126 BPM
	59	Tango	4/4	120 BPM
	60	Reggae	4/4	90 BPM
	61	Beguine	4/4	120 BPM
	62	Latin Pop	4/4	108 BPM
	63	Latin Rock	4/4	135 BPM
	64	Latin Dance	4/4	126 BPM

World	70	Waltz	3/4	174 BPM
	71	Polka	4/4	120 BPM
	72	March	4/4	120 BPM
	73	6/8 March	6/8	180 BPM
	74	Army March	4/4	120 BPM
	75	Mazurka	3/4	150 BPM
	76	Musette	3/4	192 BPM
	77	Ska	4/4	144 BPM
	78	New Age	4/4	90 BPM
	79	World	4/4	108 BPM

Various Beat	80	3/4 Beat1	3/4	120 BPM
	81	3/4 Beat2	3/4	120 BPM
	82	6/8 Beat1	6/8	120 BPM
	83	6/8 Beat2	6/8	120 BPM
	84	5/4 Beat	5/4	156 BPM
	85	6/4 Beat	6/4	125 BPM
	86	7/4 Beat	7/4	114 BPM
	87	9/8 Beat	9/8	120 BPM
	88	10/8 Beat	10/8	120 BPM
	89	11/8 Beat	11/8	120 BPM

Metro	90	Metro 1/4	1/4	120 BPM
	91	Metro 2/4	2/4	120 BPM
	92	Metro 3/4	3/4	120 BPM
	93	Metro 4/4	4/4	120 BPM
	94	Metro 5/4	5/4	120 BPM
	95	Metro 6/4	6/4	120 BPM
	96	Metro 7/4	7/4	120 BPM
	97	Metro 6/8	6/8	120 BPM
	98	Metro 7/8	7/8	120 BPM
	99	Metro 9/8	9/8	120 BPM

Troubleshooting

● The unit will not turn ON

- Make sure the AC adapter is plugged in correctly.
- When using USB bus power, confirm the USB cable is connected correctly.
- When using batteries, make sure that they are still charged and the INPUT jack is plugged in with cable.

● No sound or very low volume

- Check the connections.
- Adjust the patch level.
- Adjust the master level.
- When adjusting the volume with an expression pedal, make sure that a suitable volume setting has been set with the pedal.
- Confirm that unit is not in mute mode.
- The unit might have switched to standby to save power. In standby, audio input and output are disabled.

● There is a lot of noise

- Check the shielded cables you are using for defects.
- Use only the HOTONE AC adapter.
- Try to adjust the GATE module settings again.

● Cannot change patches

•The unit might be in “pre-patch-select mode”.
•If it is, turn the power OFF and ON again to restart in the normal mode.

● Sound is distorted/tone is extreme

• Try adjusting the Gain and Level parameters of the DRIVE module.
• Check your guitar, cable, and amplifier.

● The expression pedal is not working well

• Check the expression pedal settings.
• Calibrate the expression pedal.

Specifications

Effect types: 130 types

Effect modules: Max. 8 simultaneous modules

Number of user banks/patches: 10 patches x 10 banks

Preset banks/patches: 10 patches x 10 banks

Sampling frequency: 44.1 kHz

A/D conversion: 24-bit with 512 x oversampling

D/A conversion: 24-bit with 512 x oversampling

Signal processing: 32-bit

Maximum recording time (looper mode): 30 seconds

INPUT jack: Standard 1/4" (6.35mm) monaural jack

AUX jack: Standard 1/8" (3.5mm) stereo jack

Input impedance: 470kΩ

Output impedance (OUTPUT jack): 100Ω

OUTPUT jack: Standard 1/4″ (6.35mm) stereo jack

PHONES jack: Standard 1/8″ (3.5mm) stereo jack

S/N Ratio (equivalent input noise): 106 dB

Power: AC adapter: DC9V (center negative), 500 mA

Batteries: Max. 6.5 hours of continuous operation using 4 AAA size alkaline batteries

USB: USB bus powered, USB Audio 2.0, USB MIDI

Dimensions: 210mm (D) x 125mm (W) x 50mm (H)

Weight: 650g (without batteries)

RAVO MP-10