



MEMO

- **MONO** This effect sound is mono.
- **STEREO** This effect sound is output with two channels.
- **MONO/STEREO** These effects take a mono input and output it on two channels.

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Basic Operation

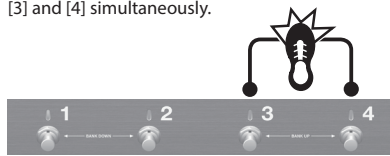
Basic Procedure for Effect Editing

1. Recall the patch that you want to edit.

- Switch banks (01–50).

Press the number switch [3] and [4] simultaneously.

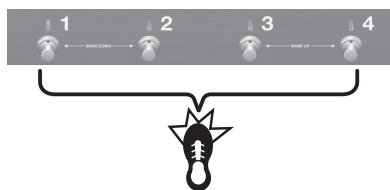
Bank up



Bank down

Press the number switch [1] and [2] simultaneously.

- Press a number switch [1]–[4] to switch patches.



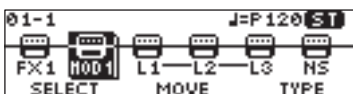
- You can also change patches consecutively by turning the [1] knob.



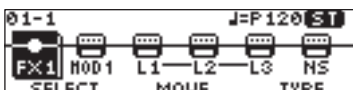
2. Press the [EDIT] button.



The effect chain screen appears.



3. Use the [1] knob to choose the effect you're going to edit.



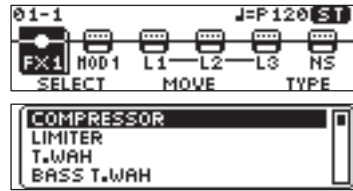
You can press the [ON/OFF] button to turn on/off the effect where the cursor is located (shown highlighted).



Effects that are turned on are indicated with icons. Effects that are turned off are indicated with “•.”

MEMO

If you've selected FX1, FX2, MOD1, MOD2, DLY, or REV, you can use the [3] knob to choose its effect type.



4. Press the [ENTER] button to enter the edit screen.



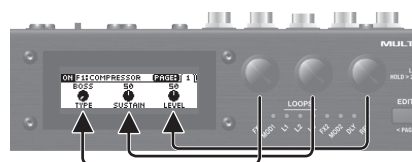
MEMO

- Pressing the [ON/OFF] button in the edit screen switches the effect's on/off status. This lets you hear what the effect is doing.
- If you long-press the [ON/OFF] button, a popup screen appears, allowing you to switch the effect type. Use knobs [1]–[3] to switch the effect type.

When tabs are displayed on the screen, you can switch pages by pressing the [< PAGE] [PAGE >] buttons.



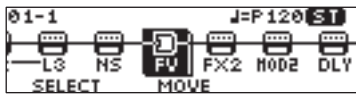
5. Use the [1]–[3] knobs to edit the value of the parameters shown in the screen.



6. Press the [EXIT] button a number of times to return to the play screen.

Changing the Effect Connection Order

1. In the effect chain screen, use the [1] knob to select the effect that you want to move.



NOTE

- You can't move L1-3. However, FX1, FX2, MOD1, MOD2, DLY, REV, NS, and FV can be freely moved before or after L1-3.
- MST, PATCH LVL, OUTPUT, and CTL cannot be moved.

2. Use the [2] knob to move the selected effect.



Changing the CTL/ASSIGN/MIDI Settings

For each patch, you can make CTL, ASSIGN, and MIDI settings to operate a variety of parameters.

1. In the effect chain screen, choose "CTL" with the [1] knob, and press the [ENTER] button.

The CTL, ASSIGN & MIDI SETTING screen appears.



2. Use the [1]-[3] knobs to choose the controller that you want to edit.

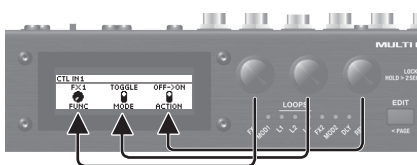
Controllers that are turned on are indicated with icons. When controllers are turned off, "OFF" is indicated.

3. Press the [ENTER] button to enter the edit screen.



When page tabs are displayed on the screen, you can switch pages by pressing the [< PAGE] [PAGE >] buttons.

4. Use the [1]-[3] knobs to edit the value of the parameters shown in the screen.



5. Press the [EXIT] button a number of times to return to the play screen.

Saving a Patch (Write)

If you want to save the patch that you created, execute the Write operation.

* You can use dedicated software to save, exchange, initialize, or back up patches.

NOTE

- If you do not save the patch, the edited settings will be lost when you turn off the power or switch to another patch.
- When you save, the patch that had been in the save-destination is overwritten.

1. Press the [EXIT] button and [ENTER] button simultaneously.

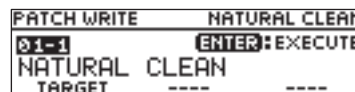


The WRITE UTILITY screen appears.



2. Choose "WRITE" with the [1]-[3] knobs, and press the [ENTER] button.

3. Choose the patch write destination (01-1-50-4) with the [1] knob, and press the [ENTER] button.



Here you can edit the name.

Controller	Operation
[1] knob	Changes the character
[2] knob	Moves the cursor
[3] knob	Selects the type of characters
[EDIT] button	Delete the character at the cursor location
[MENU] button	Insert a space at the cursor location

4. To save the patch, press the [ENTER] button.

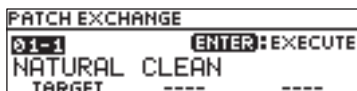
* If you decide to cancel, press the [EXIT] button.

Once the patch has been saved, you are returned to the Play screen.

Exchanging Patches

Here's how to exchange the currently selected patch with a patch that you specify.

1. In the WRITE UTILITY screen, choose "EXCHANGE" with the [1]–[3] knobs, and press the [ENTER] button.
2. Choose the exchange-destination patch with the [1] knob.



3. To exchange the patches, press the [ENTER] button.

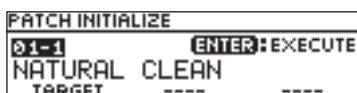
* If you decide to cancel, press the [EXIT] button.

Once the patches has been exchanged, you are returned to the Play screen.

Initializing a Patch

Here's how to return the selected patch to the default values.

1. In the WRITE UTILITY screen, choose "INITIALIZE" with the [1]–[3] knobs, and press the [ENTER] button.
2. Choose the initialize-destination patch with the [1] knob.



3. To initialize the patch, press the [ENTER] button.

* If you decide to cancel, press the [EXIT] button.

Once the patch has been initialized, you are returned to the Play screen.

FX1/FX2



With FX1 and FX2, you can select the effect to be used from the following. You can select the same effect for FX1 and FX2.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
TYPE	Refer to FX1/FX2 TYPE	

How to choose TYPE

1. Press the [EDIT] button → Choose “FX1 or “FX2.”
2. Choose “TYPE” with the [3] knob.

FX1/FX2 TYPE

This is a list of the effects that can be selected for FX1/FX2.









Effect name	Explanation
COMPRESSOR	This is an effect that produces a long sustain by evening out the volume level of the input signal. You can also use it as a limiter to suppress only the sound peaks and prevent distortion.
LIMITER	The limiter attenuates loud input levels to prevent distortion.
T. WAH	You can produce a wah effect with the filter changing in response to the guitar level.
BASS T. WAH	This is a touch-wah that is tuned for bass.
AUTO WAH	This changes the filtering over a periodic cycle, providing an automatic wah effect.
WAH	You can control the wah effect in real time by adjusting the expression pedal connected to the CTL IN jacks. * To use this, connect an expression pedal such as the EV-5 or EV-30 to a CTL IN jack; then go to CTL,ASSIGN&MIDI SETTING, and set the EXP1 or 2 setting to assign FUNC (FUNCTION) as F1: WH/PB, F2: WH/PB, F1: W/P/F, or F2: W/P/F.
BASS WAH	This is a wah that is tuned for bass. * To use this, connect an expression pedal such as the EV-5 or EV-30 to a CTL IN jack; then go to CTL,ASSIGN&MIDI SETTING, and set the EXP1 or 2 setting to assign FUNC (FUNCTION) as F1: WH/PB, F2: WH/PB, F1: W/P/F, or F2: W/P/F.
OD/DS	This effect distorts the sound to create long sustain.
BASS OD/DS	This is an overdrive/distortion that is tuned for bass.
GRAPHIC EQ	Adjusts the tone as an equalizer. You can adjust the tone character in seven bands.
PARA.EQ (PARAMETRIC EQ)	Adjusts the tonal quality. You can adjust the tone character in four bands.
AC. GUITAR SIMULATOR	This effect simulates the tonal character of an acoustic guitar.
DEFRETTED	This simulates a fretless guitar.
SITAR SIM	This simulates a sitar.
SLOW GEAR	This produces a volume-swell effect (“violin-like” sound).
BASS SLOW GEAR	This is a slow gear that is tuned for bass.
OCTAVE	This adds a note one octave lower and a note two octaves lower, creating a richer sound.
BASS OCTAVE	This is an octave that is tuned for bass.

Effect name	Explanation
PITCH SHIFTER	This effect changes the pitch of the original sound (up or down) within a range of two octaves.
BASS PITCH SHIFTER	This is a pitch shifter that is tuned for bass.
HARMONIST	Harmonist is an effect where the amount of shifting is adjusted according to an analysis of the guitar input, allowing you to create harmony based on diatonic scales. * Because of the need to analyze the pitch, chords (two or more sounds played simultaneously) cannot be played. Be sure to mute all the other strings and play only one note at a time. * When you are to play the next string while a certain sound is still playing, mute the previous sound and then play the next one with a clear attack. If the unit cannot detect the attack, it may not sound correctly. * The sensitivity may vary according to the guitar’s TONE knob and pickup type.
BASS HARMONIST	This is a harmonist that is tuned for bass.
OVERTONE	This effect uses MDP (Multi-Dimensional Processing) technology to add new harmonics to the sound, producing resonance and richness that was not present in the original sound.
PEDAL BEND	This lets you use the pedal to get a pitch bend effect. * Because of the need to analyze the pitch, chords (two or more sounds played simultaneously) cannot be played. * To use this, connect an expression pedal such as the EV-5 or EV-30 to a CTL IN jack; then go to CTL,ASSIGN&MIDI SETTING, and set the EXP1 or 2 setting to assign FUNC (FUNCTION) as F1: WH/PB, F2: WH/PB, F1: W/P/F, or F2: W/P/F.
BASS PEDAL BEND	This is a pedal bend that is tuned for bass. * Because of the need to analyze the pitch, chords (two or more sounds played simultaneously) cannot be played. * To use this, connect an expression pedal such as the EV-5 or EV-30 to a CTL IN jack; then go to CTL,ASSIGN&MIDI SETTING, and set the EXP1 or 2 setting to assign FUNC (FUNCTION) as F1: WH/PB, F2: WH/PB, F1: W/P/F, or F2: W/P/F.
SOUND HOLD	You can have sound played on the guitar be held continuously. This effect allows you to perform the melody in the upper registers while holding a note in the lower registers. * This function will not work properly when two or more notes are played simultaneously. * To use this, go to CTL,ASSIGN&MIDI SETTING; then for NUM 1–4, M/M, CURRENT NUMBER, or a CTL 1–4 switch connected to a CTL IN jack, assign FUNC (FUNCTION) as F1: SOL/TRG or F2: SOL/TRG.
S-BEND	Applies intense bending. * To use this, go to CTL,ASSIGN&MIDI SETTING; then for NUM 1–4, M/M, CURRENT NUMBER, or a CTL 1–4 switch connected to a CTL IN jack, assign FUNC (FUNCTION) as F1: SOL/TRG or F2: SOL/TRG.
BASS S-BEND	This is a S-bend that is tuned for bass. * To use this, go to CTL,ASSIGN&MIDI SETTING; then for NUM 1–4, M/M, CURRENT NUMBER, or a CTL 1–4 switch connected to a CTL IN jack, assign FUNC (FUNCTION) as F1: SOL/TRG or F2: SOL/TRG.
WARP	Produces a dream-like sound. * To use this, go to CTL,ASSIGN&MIDI SETTING; then for NUM 1–4, M/M, CURRENT NUMBER, or a CTL 1–4 switch connected to a CTL IN jack, assign FUNC (FUNCTION) as F1: SOL/TRG or F2: SOL/TRG.

Effect name	Explanation
FEEDBACKER	<p>Generates feedback performance.</p> <p>* Note that the notes you want to apply feedback to must be played singly and cleanly.</p> <p>* To use this, go to CTL, ASSIGN&MIDI SETTING; then for NUM 1–4, M/M, CURRENT NUMBER, or a CTL 1–4 switch connected to a CTL IN jack, assign FUNC (FUNCTION) as F1: SOL/TRG or F2: SOL/TRG.</p>
SUB DELAY	This is a delay with the maximum delay time of 1,000 ms. This effect is useful for making the sound fatter.

COMPRESSOR

STEREO MONO

Parameter	Value	Explanation
		Selects the compressor type.
	BOSS 	This models the BOSS CS-3.
	HI-BAND 	This is a compressor that adds an even stronger effect in the high end.
	LIGHT 	This is a compressor with a light effect.
	D-COMP 	This models the MXR DynaComp.
TYPE	ORANGE 	This is modeled on the sound of the Dan Armstrong ORANGE SQUEEZER.
	FAT 	When applied heavily, this compressor effect provides a fat tone with a boosted midrange.
	MILD 	When applied heavily, this compressor effect produces a sweet tone with the high end cut.
	STEREO *1 	This selects a stereo compressor.
SUSTAIN	0–100	Adjusts the range (time) over which low-level signals are boosted. Larger values will result in longer sustain.
ATTACK	0–100	Adjusts the attack time.
LEVEL	0–100	Adjusts the volume.
TONE	-50–+50	Adjusts the tone.

*1 If a mono effect or a loop is connected after a stereo effect, the stereo effect is lost.

LIMITER

STEREO

Parameter	Value	Explanation
		Selects the limiter type.
TYPE	BOSS	This selects a stereo limiter.
	RACK 160D	This models the dbx 160X.
	VTG RACK U	This models the UREI 1178.
THRESHOLD	0–100	Adjust this as appropriate for the input signal from your guitar. When the input signal level exceeds this threshold level, limiting will be applied.
RATIO	1:1–INF:1	This selects the compression ratio used with signals in excess of the threshold level.
LEVEL	0–100	Adjusts the volume.
ATTACK	0–100	Adjusts the attack time.
RELEASE	0–100	Adjusts the release time.

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.

T. WAH

MONO

Parameter	Value	Explanation
MODE	Selects the wah mode.	
	LPF	Low pass filter. This creates a wah effect over a wide frequency range.
	BPF	Band pass filter. This creates a wah effect in a narrow frequency range.
POLARITY	Selects the direction in which the filter will change in response to the input.	
	DOWN	The frequency of the filter will fall.
	UP	The frequency of the filter will rise.
SENS	0-100	Adjusts the sensitivity at which the filter will change in the direction determined by the polarity setting. Higher values will result in a stronger response. With a setting of 0, the strength of picking will have no effect.
FREQ (FREQUENCY)	0-100	Adjusts the center frequency of the Wah effect.
PEAK	0-100	Adjusts the way in which the wah effect applies to the area around the center frequency. Higher values will produce a stronger tone which emphasizes the wah effect more. With a value of 50 a standard wah sound will be produced.
E.LEVEL (EFFECT LEVEL)	0-100	Adjusts the volume of the effect sound.
D.LEVEL (DIRECT LEVEL)	0-100	Adjusts the volume of the direct sound. 100=±0 dB


BASS T. WAH

MONO

Parameter	Value	Explanation
MODE	Selects the wah mode.	
	LPF	Low pass filter. This creates a wah effect over a wide frequency range.
	BPF	Band pass filter. This creates a wah effect in a narrow frequency range.
POLARITY	Selects the direction in which the filter will change in response to the input.	
	DOWN	The frequency of the filter will fall.
	UP	The frequency of the filter will rise.
SENS	0-100	Adjusts the sensitivity at which the filter will change in the direction determined by the polarity setting. Higher values will result in a stronger response. With a setting of 0, the strength of picking will have no effect.
FREQ (FREQUENCY)	0-100	Adjusts the center frequency of the Wah effect.
PEAK	0-100	Adjusts the way in which the wah effect applies to the area around the center frequency. Higher values will produce a stronger tone which emphasizes the wah effect more. With a value of 50 a standard wah sound will be produced.
E.LEVEL (EFFECT LEVEL)	0-100	Adjusts the volume of the effect sound.
D.LEVEL (DIRECT LEVEL)	0-100	Adjusts the volume of the direct sound. 100=±0 dB

AUTO WAH

MONO

Parameter	Value	Explanation
MODE	Selects the wah mode.	
	LPF	Low pass filter. This provides a wah effect over a wide frequency range.
	BPF	Band pass filter. This provides a wah effect in a narrow frequency range.
RATE	0-100, BPM 	Adjusts the frequency (speed) of the change. * When set to BPM, the value of each parameter will be set according to the value of the "MASTER BPM" (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
DEPTH	0-100	Adjusts the depth of the effect.
FREQ (FREQUENCY)	0-100	Adjusts the center frequency of the Wah effect.
PEAK	0-100	Adjusts the way in which the wah effect applies to the area around the center frequency. Higher values will produce a stronger tone which emphasizes the wah effect more. With a value of 50 a standard wah sound will be produced.
E.LEVEL (EFFECT LEVEL)	0-100	Adjusts the volume of the effect sound.
D.LEVEL (DIRECT LEVEL)	0-100	Adjusts the volume of the direct sound. 100=±0 dB

WAH

MONO

Parameter	Value	Explanation
TYPE	Selects the type of wah.	
	CRY WAH	This models the sound of the CRY BABY wah pedal popular in the '70s.
	VO WAH	This models the sound of the VOX V846.
	FAT WAH	This is a wah sound featuring a bold tone.
	LIGHT WAH	This wah has a refined sound with no unusual characteristics.
	7STR WAH	This expanded wah features a variable range compatible with seven-string and baritone guitars.
	RESO WAH	This completely original effect offers enhancements on the characteristic resonances produced by analog synth filters.
PD.POS (PEDAL POSITION)	0-100	Adjusts the position of the wah pedal. This parameter is used after it's been assigned to an expression pedal or similar controller.
PD.MIN (PEDAL MIN)	0-100	Selects the tone produced when the heel of the expression pedal is depressed.
PD.MAX (PEDAL MAX)	0-100	Selects the tone produced when the toe of the expression pedal is depressed.
E.LEVEL (EFFECT LEVEL)	0-100	Adjusts the volume of the effect sound.
D.LEVEL (DIRECT LEVEL)	0-100	Adjusts the volume of the direct sound. 100=±0 dB

BASS WAH

MONO

Parameter	Value	Explanation
TYPE		Selects the type of wah.
	CRY WAH	This models the sound of the CRY BABY wah pedal popular in the '70s.
	VO WAH	This models the sound of the VOX V846.
	FAT WAH	This is a wah sound featuring a bold tone.
	LIGHT WAH	This wah has a refined sound with no unusual characteristics.
	BASS WAH	This wah has been specially adapted for use in the bass registers. Inclusion of the low-frequency range in the wah sound produces a robust wah effect, with no dilution of the sound.
	RESO WAH	This completely original effect offers enhancements on the characteristic resonances produced by analog synth filters.
PD.POS (PEDAL POSITION)	0–100	Adjusts the position of the wah pedal. This parameter is used after it's been assigned to an expression pedal or similar controller.
PD.MIN (PEDAL MIN)	0–100	Selects the tone produced when the heel of the expression pedal is depressed.
PD.MAX (PEDAL MAX)	0–100	Selects the tone produced when the toe of the expression pedal is depressed.
E.LEVEL (EFFECT LEVEL)	0–100	Adjusts the volume of the effect sound.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB

OD/DS

MONO

Parameter	Value	Explanation	
TYPE		Selects the type of overdrive/distortion.	
	MID BOOST	This is a booster with unique characteristics in the midrange.	
	CLEAN BST (CLEAN BOOST)	This not only functions as a booster, but also produces a clean tone that has punch even when used alone.	
	TREBLE BST (TREBLE BOOST)	This is a booster that has bright characteristics.	
	CRUNCH	A lustrous crunch sound with an added element of amp distortion.	
	NATURAL OD	This is an overdrive sound that provides distortion with a natural feeling.	
	WARM OD	This is a warm overdrive.	
	FAT DS	A distortion sound with thick distortion.	
	LEAD DS	Produces a distortion sound with both the smoothness of an overdrive along with a deep distortion.	
	METAL DS	This is distortion sound that is ideal for performances of heavy riffs.	
	OCT FUZZ	A fuzz sound with rich harmonic content.	
	BLUES OD	This is a crunch sound of the BOSS BD-2. This produces distortion that faithfully reproduces the nuances of picking.	
	OD-1	This models the sound of the BOSS OD-1. This produces sweet, mild distortion.	
	T-SCREAM	This models the Ibanez TS-808.	
	TURBO OD	This is the high-gain overdrive sound of the BOSS OD-2.	
	DISTORTION	This gives a basic, traditional distortion sound.	
	RAT	This models the Proco RAT.	
	GUV DS	This models the Marshall GUV/NOR.	
	DST+	This models the MXR DISTORTION+.	
	METAL ZONE	This models the sound of the BOSS MT-2. It produces a wide range of metal sounds, from old style to slash metal.	
	60S FUZZ	This models the FUZZFACE. It produces a fat fuzz sound.	
	MUFF FUZZ	This models the Electro-Harmonix Big Muff π.	
	DRIVE	0–120	Adjusts the depth of distortion.
	TONE	-50+50	Adjusts the tone.
	E.LEVEL (EFFECT LEVEL)	0–100	Adjusts the volume of the effect sound.
	BOTTOM	-50+50	Adjusts the tone for the low frequency range. Turning this to the left (counterclockwise) produces a sound with the low end cut; turning it to the right boosts the low end in the sound.
	D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB
SOLO SW	OFF, ON	Switches to a tone that is suitable for solos.	
SOLO LVL (SOLO LEVEL)	0–100	Adjusts the volume level when SOLO SW is ON.	

BASS OD/DS

MONO

Parameter	Value	Explanation
		Selects the type of overdrive/distortion.
TYPE	MID BOOST	This is a booster with unique characteristics in the midrange.
	CLEAN BST (CLEAN BOOST)	This not only functions as a booster, but also produces a clean tone that has punch even when used alone.
	TREBLE BST (TREBLE BOOST)	This is a booster that has bright characteristics.
	BASS OD	Overdrive tuned especially for use with basses.
	BASS DST	Distortion tuned especially for use with basses.
	BASS MUFF	This models the Electro-Harmonix BASS Big Muff π .
	DRIVE	0–120
STONE	-50+50	This adjusts the tone.
E.LEVEL (EFFECT LEVEL)	0–100	Adjusts the volume of the effect sound.
BOTTOM	-50+50	Adjusts the tone for the low frequency range. Turning this to the left (counterclockwise) produces a sound with the low end cut; turning it to the right boosts the low end in the sound.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB
SOLO SW	OFF, ON	Switches to a tone that is suitable for solos.
SOLO LVL (SOLO LEVEL)	0–100	Adjusts the volume level when SOLO SW is ON.

GRAPHIC EQ

STEREO

Parameter	Value
31 Hz	-20+20 dB
62 Hz	
125 Hz	
250 Hz	
500 Hz	
1 kHz	
2 kHz	
4 kHz	
8 kHz	
16 kHz	
LEVEL	-20+20 dB

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.

PARAMETRIC EQ

STEREO

Parameter	Value	Explanation
LOW GAIN	-20+20 dB	Adjusts the low frequency range tone.
HIGH GAIN	-20+20 dB	Adjusts the high frequency range tone.
LEVEL	-20+20 dB	Adjusts the overall volume level of the equalizer.
LM FREQ (LOW-MID FREQUENCY)	20 Hz–10.0 kHz	Specifies the center of the frequency range that will be adjusted by the LOW-MID GAIN.
LM Q (LOW-MID Q)	0.5–16	Adjusts the width of the area affected by the EQ centered at the LOW-MID FREQ. Higher values will narrow the area.
LM GAIN (LOW-MID GAIN)	-20+20 dB	Adjusts the low-middle frequency range tone.
HM FREQ (HIGH-MID FREQUENCY)	20 Hz–10.0 kHz	Specifies the center of the frequency range that will be adjusted by the HIGH-MID GAIN.
HM Q (HIGH-MID Q)	0.5–16	Adjusts the width of the area affected by the EQ centered at the HIGH-MID FREQ. Higher values will narrow the area.
HM GAIN (HIGH-MID GAIN)	-20+20 dB	Adjusts the high-middle frequency range tone.
LOW CUT	FLAT, 20 Hz–800 Hz	This sets the frequency at which the low cut filter begins to take effect. When "FLAT" is selected, the low cut filter will have no effect.
HIGH CUT	630 Hz–12.5 kHz, FLAT	This sets the frequency at which the high cut filter begins to take effect. When "FLAT" is selected, the high cut filter will have no effect.

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.

AC. GUITAR SIMULATOR

MONO

Parameter	Value	Explanation
BODY	0–100	Adjusts the body resonance.
LOW	-50+50	Specifies the sense of volume for the low-frequency range.
HIGH	-50+50	Specifies the sense of volume for the high-frequency range.
LEVEL	0–100	Specifies the volume of the effect.

DEFRETTER

MONO

Parameter	Value	Explanation
SENS	0–100	This controls the input sensitivity of the defretter.
DEPTH	0–100	This controls the rate of the harmonics.
TONE	-50+50	Adjusts the amount of blurring between the notes.
E.LEVEL (EFFECT LEVEL)	0–100	Adjusts the volume of the effect sound.
ATTACK	0–100	Adjusts the attack of the picking sound.
RESONANCE	0–100	Adds a characteristically resonant quality to the sound.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB

SITAR SIM

MONO

Parameter	Value	Explanation
SENS	0–100	Adjusts the sensitivity of the sitar. When it is set to a lower value, no effect of the sitar is obtained with weaker picking, while stronger picking produces the effect. When it is set to a higher value, the effect of the sitar can be obtained whether the picking is weak or strong.
DEPTH	0–100	This adjusts the amount of effect applied.
TOPE	-50–+50	This adjusts the tone. The high end is boosted as the value increases.
E.LEVEL (EFFECT LEVEL)	0–100	Adjust the volume of the sitar sound.
RESONANCE	0–100	This adjusts the undulation of the resonance.
BUZZ	0–100	Adjusts the amount of characteristic buzz produced by the “buzz bridge” when the strings make contact with it.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB

SLOW GEAR

STEREO

Parameter	Value	Explanation
SENS	0–100	Adjusts the sensitivity of the slow gear. When it is set to a lower value, the effect of the slow gear can be obtained only with a stronger picking, while no effect is obtained with a weaker picking. When the value is set higher, the effect is obtained even with a weak picking.
RISE TIME	0–100	Adjusts the time needed for the volume to reach its maximum from the moment you begin picking.
LEVEL	0–100	Adjusts the volume of the effect sound.

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.

BASS SLOW GEAR

STEREO

Parameter	Value	Explanation
SENS	0–100	Adjusts the sensitivity of the slow gear. When it is set to a lower value, the effect of the slow gear can be obtained only with a stronger picking, while no effect is obtained with a weaker picking. When the value is set higher, the effect is obtained even with a weak picking.
RISE TIME	0–100	Adjusts the time needed for the volume to reach its maximum from the moment you begin picking.
LEVEL	0–100	Adjusts the volume of the effect sound.

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.

OCTAVE

MONO

Parameter	Value	Explanation
-1 OCT	0–100	Adjusts the volume of the sound one octave below.
-2 OCT	0–100	Adjusts the volume of the sound two octaves below.
D.LEVEL (DIRECT LEVEL)	0–120	Adjusts the volume of the direct sound. 100=±0 dB

BASS OCTAVE

MONO





Parameter	Value	Explanation
-1 OCT	0–100	Adjusts the volume of the sound one octave below.
-2 OCT	0–100	Adjusts the volume of the sound two octaves below.
D.LEVEL (DIRECT LEVEL)	0–120	Adjusts the volume of the direct sound. 100=±0 dB

PITCH SHIFTER

MONO

MONO

STEREO

Parameter	Value	Explanation
VOICE		Selects the number of voices for the pitch shift sound.
	1VOICE 	One-voice pitch-shifted sound output in mono.
	2MONO 	Two-voice pitch-shifted sound (1:PITCH, 2:PITCH) output in mono.
	2STEREO 	Two-voice pitch-shifted sound (1:PITCH, 2:PITCH) output through L channel and R channel.
1:PITCH 2:PITCH	-24–+24	Adjusts the amount of pitch shift (the amount of interval) in semitone steps.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB
1:MODE 2:MODE		Selection for the pitch shifter mode.
	FAST, MEDIUM, SLOW	The response is slower in the order of FAST, MEDIUM and SLOW, but the modulation is lessened in the same order.
	MONO	MONO is used for inputting single notes. * You may be unable to produce the intended effect when playing chords (two or more notes played simultaneously).
1:FINE 2:FINE	-50–+50	Make fine adjustments to the interval. The amount of the change in the Fine 100 is equivalent to that of the Pitch 1.
1:P-DLY (1:PRE DELAY) 2:P-DLY (2:PRE DELAY)	0 ms–300 ms, BPM 	Adjusts the time from when the direct sound is heard until the pitch shifted sounds are heard. Normally you can leave this set at 0 ms. * When set to BPM, the value of each parameter will be set according to the value of the “MASTER BPM” (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
1:E.LEVEL (1:EFFECT LEVEL) 2:E.LEVEL (2:EFFECT LEVEL)	0–100	Adjusts the volume of the pitch shifter.
1:F-BAK (1:FEEDBACK)	0–100	Adjusts the feedback amount of the pitch shift sound.

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.

BASS PITCH SHIFTER



Parameter	Value	Explanation
VOICE	Selects the number of voices for the pitch shift sound.	
	1VOICE	One-voice pitch-shifted sound output in mono.
	2MONO	Two-voice pitch-shifted sound (1:PITCH, 2:PITCH) output in mono.
	2STEREO	Two-voice pitch-shifted sound (1:PITCH, 2:PITCH) output through L channel and R channel.
1:PITCH 2:PITCH	-24+24	Adjusts the amount of pitch shift (the amount of interval) in semitone steps.
D.LEVEL (DIRECT LEVEL)	0-100	Adjusts the volume of the direct sound. 100=±0 dB
1:MODE 2:MODE	Selection for the pitch shifter mode.	
	FAST, MEDIUM, SLOW	The response is slower in the order of FAST, MEDIUM and SLOW, but the modulation is lessened in the same order.
	MONO	MONO is used for inputting single notes. * You may be unable to produce the intended effect when playing chords (two or more notes played simultaneously).
1:FINE 2:FINE	-50+50	Make fine adjustments to the interval. The amount of the change in the Fine 100 is equivalent to that of the Pitch 1.
1:P-DLY (1:PRE DELAY) 2:P-DLY (2:PRE DELAY)	0 ms-300 ms, BPM	Adjusts the time from when the direct sound is heard until the pitch shifted sounds are heard. Normally you can leave this set at 0 ms. * When set to BPM, the value of each parameter will be set according to the value of the "MASTER BPM" (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
1:E.LEVEL (1:EFFECT LEVEL) 2:E.LEVEL (2:EFFECT LEVEL)	0-100	Adjusts the volume of the pitch shifter.
1:F-BAK (1:FEEDBACK)	0-100	Adjusts the feedback amount of the pitch shift sound.

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.

HARMONIST







Parameter	Value	Explanation
VOICE	Selects the number of voices for the pitch shift sound.	
	1VOICE	One-voice pitch-shifted sound output in mono.
	2MONO	Two-voice pitch-shifted sound (1:HARM, 2:HARM) output in mono.
	2STEREO	Two-voice pitch-shifted sound (1:HARM, 2:HARM) output through L channel and R channel.
1:HARM (1:HARMONY) 2:HARM (2:HARMONY)	-2oct- +2oct	This determines the pitch of the sound added to the input sound, when you are making a harmony. It allows you to set it by up to 2 octaves higher or lower than the input sound.
KEY (MASTER KEY)	C (Am)-B (G#m)	The key setting corresponds to the key of the song (#, b) as follows. Major C F B ^b E ^b A ^b D ^b Minor Am Dm Gm Cm Fm B ^b m Major C G D A E B F [#] Minor Am Em Bm F [#] m C [#] m G [#] m D [#] m
1:P-DLY (1:PRE DELAY) 2:P-DLY (2:PRE DELAY)	0 ms-300 ms, BPM	Adjusts the time from when the direct sound is heard until the harmonist sounds are heard. Normally you can leave this set at 0 ms. * When set to BPM, the value of each parameter will be set according to the value of the "MASTER BPM" (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
1:F-BAK (1:FEEDBACK)	0-100	Adjusts the feedback amount of the harmonist sound.
1:E.LEVEL (1:EFFECT LEVEL) 2:E.LEVEL (2:EFFECT LEVEL)	0-100	Adjusts the volume of the harmony sound.
D.LEVEL (DIRECT LEVEL)	0-100	Adjusts the volume of the direct sound. 100=±0 dB

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.

BASS HARMONIST

MONO MONO ▶ STEREO

Parameter	Value	Explanation
		Selects the number of voices for the pitch shift sound.
VOICE	1VOICE 	One-voice pitch-shifted sound output in mono.
	2MONO 	Two-voice pitch-shifted sound (1:HARM, 2:HARM) output in mono.
	2STEREO 	Two-voice pitch-shifted sound (1:HARM, 2:HARM) output through L channel and R channel.
1:HARM (1:HARMONY) 2:HARM (2:HARMONY)	-2oct→+2oct	This determines the pitch of the sound added to the input sound, when you are making a harmony. It allows you to set it by up to 2 octaves higher or lower than the input sound.
KEY (MASTER KEY)	C (Am)–B (G#m)	The key setting corresponds to the key of the song (#, ♭) as follows. Major C F B ^b E ^b A ^b D ^b Minor Am Dm Gm Cm Fm B ^b m Major C G D A E B F [#] Minor Am Em Bm F [#] m C [#] m G [#] m D [#] m
1:P-DLY (1:PRE DELAY) 2:P-DLY (2:PRE DELAY)	0 ms–300 ms, BPM 	Adjusts the time from when the direct sound is heard until the harmonist sounds are heard. Normally you can leave this set at 0 ms. * When set to BPM, the value of each parameter will be set according to the value of the "MASTER BPM" (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
1:F-BAK (1:FEEDBACK)	0–100	Adjusts the feedback amount of the harmonist sound.
1:E.LEVEL (1:EFFECT LEVEL) 2:E.LEVEL (2:EFFECT LEVEL)	0–100	Adjusts the volume of the harmony sound.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.

OVERTONE

MONO

Parameter	Value	Explanation
LOWER (LOWER LEVEL)	0–100	Adjusts the volume of the harmonic one octave below.
UPPER (UPPER LEVEL)	0–100	Adjusts the volume of the harmonic one octave above.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB
DETUNE	0–100	Adjusts the amount of the detune effect that adds depth to the sound.
TONE	-50→+50	Adjusts the tone.

PEDAL BEND

MONO

Parameter	Value	Explanation
PITCH	-24→+24	This sets the pitch at the point where the expression pedal is all the way down.
PD.POS (PEDAL POSITION)	0–100	Adjusts the pedal position for pedal bend. This parameter is used after it's been assigned to an expression pedal or similar controller.
E.LEVEL (EFFECT LEVEL)	0–100	Adjusts the volume of the pitch bend sound.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB

BASS PEDAL BEND

MONO

Parameter	Value	Explanation
PITCH	-24→+24	This sets the pitch at the point where the expression pedal is all the way down.
PD.POS (PEDAL POSITION)	0–100	Adjusts the pedal position for pedal bend. This parameter is used after it's been assigned to an expression pedal or similar controller.
E.LEVEL (EFFECT LEVEL)	0–100	Adjusts the volume of the pitch bend sound.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB

SOUND HOLD

MONO

Parameter	Value	Explanation
TRIGGER	OFF, ON	When TRIGGER is ON, the sound hold effect is applied. You can assign this to a number pedal or a CTL pedal and operate it.
RISE TIME	0–100	Adjusts how rapidly the Sound Hold sound is produced.
LEVEL	0–120	Adjusts the volume of the hold sound.

S-BEND

MONO

Parameter	Value	Explanation
TRIGGER	OFF, ON	When TRIGGER is ON, the S-bend effect is applied. You can assign this to a number pedal or a CTL pedal and operate it.
PITCH	-3oct, -2oct, -1oct, +1oct, +2oct, +3oct, +4oct	Adjusts the amount of pitch shift in octave steps.
RISE TIME	0–100	Adjusts the amount of time it is to take for the effect to transition to the maximum.
FALL TIME	0–100	Adjusts the amount of time it is to take for the effect to transition to the original.

BASS S-BEND

MONO

Parameter	Value	Explanation
TRIGGER	OFF, ON	When TRIGGER is ON, the S-bend effect is applied. You can assign this to a number pedal or a CTL pedal and operate it.
PITCH	-3oct, -2oct, -1oct, +1oct, +2oct, +3oct, +4oct	Adjusts the amount of pitch shift in octave steps.
RISE TIME	0–100	This parameter adjusts the amount of time it is to take for the effect to transition to the maximum.
FALL TIME	0–100	This parameter adjusts the amount of time it is to take for the effect to transition to the original.

WARP

STEREO

Parameter	Value	Explanation
TRIGGER	OFF, ON	When TRIGGER is ON, the warp effect is applied. You can assign this to a number pedal or a CTL pedal and operate it.
RISE TIME	0–100	This parameter adjusts the amount of time it is to take for the effect to transition to the maximum.
FALL TIME	0–100	This parameter adjusts the amount of time it is to take for the effect to transition to the original.
LEVEL	0–100	Adjusts the volume of the effect sound.

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.

FEEDBACKER




MONO

Parameter	Value	Explanation
TRIGGER	OFF, ON	When TRIGGER is ON, the feedback effect is applied. You can assign this to a number pedal or a CTL pedal and operate it.
DEPTH	0–100	Adjusts the ease with which feedback will occur when the FEEDBACKER is on.

SUB DELAY

MONO

MONO >
STEREO

Parameter	Value	Explanation
TYPE	Selects the type of delay.	
	MONO 	This delay effect outputs the same sound from both L channel and R channel.
	PAN 	Provides a tap delay effect that divides the delay time between L channel and R channel.
TIME (DELAY TIME)	1 ms–1000 ms, BPM 	Adjusts the delay time. * When set to BPM, the value of each parameter will be set according to the value of the "MASTER BPM" (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
FEEDBACK	0–100	Adjusts the volume that is returned to the input. Higher settings will result in more delay repeats.
E.LEVEL (EFFECT LEVEL)	0–120	Adjusts the volume of the delay sound.
HIGH CUT	630 Hz–12.5 kHz, FLAT	This sets the frequency at which the high cut filter begins to take effect. When "FLAT" is selected, the high cut filter will have no effect.
TAP TIME *1	0–100%	Adjusts the delay time of L channel delay. This setting adjusts L channel delay time relative to R channel delay time (considered as 100%).
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB

*1 Setting available when TYPE is set to PAN.

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.

MOD1/MOD2



With MOD1 and MOD2, you can select the modulation effect to be used from the following. You can select the same effect for MOD1 and MOD2.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
TYPE	Refer to MOD1/MOD2 TYPE	

How to choose TYPE

1. Press the [EDIT] button → Choose “MOD1” or “MOD2.”
2. Choose “TYPE” with the [3] knob.

MOD1/MOD2 TYPE

This is a list of the effects that can be selected for MOD1/MOD2.

Effect name	Explanation
CHORUS	In this effect, a slightly detuned sound is added to the original sound to add depth and breadth.
2X2 CHORUS	Frequency band division is employed to produce two different choruses, one for low frequencies and one for higher frequencies, for both L channel and R channel (for a total of four). This allows you to achieve a more natural chorus sound.
PHASER	By adding varied-phase portions to the direct sound, the phaser effect gives a whooshing, swirling character to the sound.
FLANGER	The flanging effect gives a twisting, jet-airplane-like character to the sound.
BASS FLANGER	This is a flanger that is tuned for bass.
TREMOLO	Tremolo is an effect that creates a cyclic change in volume.
PAN	With the volume level of the left and right sides alternately changing, when playing sound in stereo, you can get an effect that makes the guitar sound appear to fly back and forth between the speakers.
ROTARY	This produces an effect like the sound of a rotary speaker.
UNI-V	This models the Uni-Vibe. Although this resembles a phaser effect, it also provides a unique undulation that you can't get with a regular phaser.
SLICER	This consecutively interrupts the sound to create the impression that a rhythm backing phrase is being played.
VIBRATO	This effect creates vibrato by slightly modulating the pitch.
RING MOD	Produces a metallic sound, creating the impression that the sound is being focused.

CHORUS







Parameter	Value	Explanation
	Selects the chorus mode.	
MODE	MONO	This chorus effect outputs the same sound from both L channel and R channel.
	STEREO1	This is a stereo chorus effect that adds different chorus sounds to L channel and R channel.
	STEREO2	This stereo chorus uses spatial synthesis, with the direct sound output in L channel and the effect sound output in R channel.
RATE	0–100, BPM	Adjust the speed of the chorus effect for the high frequency range. * When set to BPM, the value of each parameter will be set according to the value of the “MASTER BPM” (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
DEPTH	0–100	Adjusts the depth of the chorus effect. * To use it for doubling effect, set the value to 0.
E.LEVEL (EFFECT LEVEL)	0–100	Adjusts the volume of the effect sound.
PRE.DLY (PRE DELAY)	0.0 ms–40.0 ms	Adjusts the time needed for the effect sound to be output after the direct sound has been output. By setting a longer pre delay time, you can obtain an effect that sounds like more than one sound is being played at the same time (doubling effect).
LOW CUT	FLAT, 20 Hz–800 Hz	This sets the frequency at which the low cut filter begins to take effect. When FLAT is selected, the low cut filter will have no effect.
HIGH CUT	630 Hz–12.5 kHz, FLAT	This sets the frequency at which the high cut filter begins to take effect. When FLAT is selected, the high cut filter will have no effect.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.

2X2 CHORUS





MONO
STEREO

Parameter	Value	Explanation
LOW RATE	0–100, BPM  	Adjust the speed of the chorus effect for the low frequency range. * When set to BPM, the value of each parameter will be set according to the value of the "MASTER BPM" (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
LOW DPT. (LOW DEPTH)	0–100	Adjust the depth of the chorus effect for the low frequency range. If you wish to use this as a doubling effect, use a setting of 0.
LOW LVL (LOW LEVEL)	0–100	Adjusts the volume of the effect sound in the low-frequency range.
HIGH RATE	0–100, BPM  	Adjust the speed of the chorus effect for the high frequency range. * When set to BPM, the value of each parameter will be set according to the value of the "MASTER BPM" (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
HIGH DPT. (HIGH DEPTH)	0–100	Adjust the depth of the chorus effect for the high frequency range. If you wish to use this as a doubling effect, use a setting of 0.
HIGH LVL (HIGH LEVEL)	0–100	Adjusts the volume of the effect sound in the high-frequency range.
LOW P-DLY (LOW PRE DELAY)	0.0 ms–40.0 ms	Adjusts the delay of the effect sound in the low-frequency range. Extending the pre-delay will produce the sensation of multiple sounds (doubling effect).
HIGH P-DLY (HIGH PRE DELAY)	0.0 ms–40.0 ms	Adjusts the delay of the effect sound in the high-frequency range. Extending the pre-delay will produce the sensation of multiple sounds (doubling effect).
XOVER (CROSSOVER FREQUENCY)	100 Hz–4.00 kHz	Adjusts the frequency dividing the low- and high-frequency ranges.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.


PHASER

MONO

Parameter	Value	Explanation
TYPE		Selects the number of stages that the phaser effect will use.
	4STAGE	This is a four-phase effect. A light phaser effect is obtained.
	8STAGE	This is a eight-phase effect. It is a popular phaser effect.
	12STAGE	This is a twelve-phase effect. A deep phase effect is obtained.
	BiPHASE	This is the phaser with two phase shift circuits connected in series.
RATE	0–100, BPM  	Adjust the rate of the phaser effect. * When set to BPM, the value of each parameter will be set according to the value of the "MASTER BPM" (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
DEPTH	0–100	Determines the depth of the phaser effect.
RESONANCE	0–100	Determines the amount of resonance (feedback). Increasing the value will emphasize the effect, creating a more unusual sound.
MANUAL	0–100	Adjusts the center frequency of the phaser effect.
STEP RATE	OFF, 0–100, BPM  	Adjusts the cycle of the step function that changes the rate and depth. When it is set to a higher value, the change will be finer. Set this to "OFF" when not using the Step function. * When set to BPM, the value of each parameter will be set according to the value of the "MASTER BPM" (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
E.LEVEL (EFFECT LEVEL)	0–100	Adjusts the volume of the phaser.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB

FLANGER


STEREO

Parameter	Value	Explanation
RATE	0–100, BPM 	Adjusts the rate of the flanging effect. * When set to BPM, the value of each parameter will be set according to the value of the “MASTER BPM” (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
DEPTH	0–100	Determines the depth of the flanging effect.
RESONANCE	0–100	Determines the amount of resonance (feedback). Increasing the value will emphasize the effect, creating a more unusual sound.
MANUAL	0–100	Adjusts the center frequency at which to apply the effect.
SEPARAT (SEPARATION)	0–100	Adjusts the diffusion. The diffusion increases as the value increases.
LOW CUT	FLAT, 55 Hz–800 Hz	Adjusts the frequency at which the low cut filter begins to take effect. When “FLAT” is selected, the low cut filter will have no effect.
E.LEVEL (EFFECT LEVEL)	0–100	Adjusts the volume of the flanger.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.

BASS FLANGER


STEREO

Parameter	Value	Explanation
RATE	0–100, BPM 	Adjusts the rate of the flanging effect. * When set to BPM, the value of each parameter will be set according to the value of the “MASTER BPM” (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
DEPTH	0–100	Determines the depth of the flanging effect.
RESONANCE	0–100	Determines the amount of resonance (feedback). Increasing the value will emphasize the effect, creating a more unusual sound.
MANUAL	0–100	Adjusts the center frequency at which to apply the effect.
SEPARAT (SEPARATION)	0–100	Adjusts the diffusion. The diffusion increases as the value increases.
LOW CUT	FLAT, 55 Hz–800 Hz	Adjusts the frequency at which the low cut filter begins to take effect. When “FLAT” is selected, the low cut filter will have no effect.
E.LEVEL (EFFECT LEVEL)	0–100	Adjusts the volume of the flanger.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.

TREMOLO


STEREO

Parameter	Value	Explanation
WAVE (WAVE SHAPE)	0–100	Adjusts changes in volume level. A higher value will steepen wave's shape.
RATE	0–100, BPM 	Adjusts the frequency (speed) of the change. * When set to BPM, the value of each parameter will be set according to the value of the “MASTER BPM” (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
DEPTH	0–100	Adjusts the depth of the effect.
LEVEL	0–100	Adjusts the volume.

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.

PAN

STEREO

Parameter	Value	Explanation
TYPE	AUTO	This varies the volume level on the left and right according to the settings for WAVE SHAPE, RATE, and DEPTH.
	MANUAL	Output uses the volume balance set with POS.
WAVE (WAVE SHAPE) *1	0–100	Adjusts changes in volume level. A higher value will steepen wave's shape.
RATE *1	0–100, BPM 	Adjusts the frequency (speed) of the change. * When set to BPM, the value of each parameter will be set according to the value of the “MASTER BPM” (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
DEPTH *1	0–100	Adjusts the depth of the effect.
POS (POSITION) *2	L100– CENTER–R100	This adjusts the volume balance between L channel and R channel.
LEVEL	0–100	Adjusts the volume.



*1 Setting available when TYPE is set to AUTO.

*2 Setting available when TYPE is set to MANUAL.

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.


ROTARY

MONO
STEREO

Parameter	Value	Explanation
SPEED	SLOW, FAST	Changes the simulated speaker's rotating speed (SLOW or FAST).
RATE SLOW	0–100, BPM 	Adjusts the SPEED of rotation when set to "SLOW."
RATE FAST	0–100, BPM 	Adjusts the SPEED of rotation when set to "FAST." * When set to BPM, the value of each parameter will be set according to the value of the "MASTER BPM" (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
DEPTH	0–100	Adjusts the amount of depth in the rotary effect.
RISE TIME	0–100	Adjusts the time it takes for the rotation SPEED to change when switched from "SLOW" to "FAST."
FALL TIME	0–100	Adjusts the time it takes for the rotation SPEED to change when switched from "FAST" to "SLOW."
B/H BAL (BASS/HORN BALANCE)	100:0-0:100	Adjusts the volume balance between the BASS rotor and the HORN rotor.
E.LEVEL (EFFECT LEVEL)	0–100	Adjusts the volume of the effect sound.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB


UNI-V

MONO

Parameter	Value	Explanation
RATE	0–100, BPM 	Adjusts the rate of the UNI-V effect. * When set to BPM, the value of each parameter will be set according to the value of the "MASTER BPM" (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
DEPTH	0–100	Adjusts the depth of the UNI-V effect.
LEVEL	0–100	Adjusts the volume.

SLICER


STEREO

Parameter	Value	Explanation
PATTERN	P1–P20	Selects the slice pattern that will be used to cut the sound.
RATE	0–100, BPM 	Adjust the rate at which the sound will be cut. * When set to BPM, the value of each parameter will be set according to the value of the "MASTER BPM" (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
TRG.SNS (TRIGGER SENS)	0–100	Adjusts the sensitivity of triggering. With low settings of this parameter, softly picked notes will not retrigger the phrase (i.e., the phrase will continue playing), but strongly picked notes will retrigger the phrase so that it will playback from the beginning. With high settings of this parameter, the phrase will be retriggered even by softly picked notes.
E.LEVEL (EFFECT LEVEL)	0–100	Adjusts the volume of the effect sound.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.

VIBRATO

STEREO

Parameter	Value	Explanation
RATE	0–100, BPM 	Adjusts the rate of the vibrato. * When set to BPM, the value of each parameter will be set according to the value of the "MASTER BPM" (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
DEPTH	0–100	Adjusts the depth of the vibrato.
TRIGGER	OFF, ON	Selects on/off of the vibrato. * It is assumed that this parameter will be assigned to the footswitch.
RISE TIME	0–100	Adjusts the time passing from the moment the TRIGGER is turned on until the set vibrato is obtained. * When a patch with TRIGGER set to ON is called up, the effect obtained is identical to what happens when TRIGGER is switched from Off to On. If you want the vibrato effect to be produced immediately after the patches are switched, set RISE TIME to 0.
LEVEL	0–100	Adjusts the volume.

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.

RING MOD

STEREO

Parameter	Value	Explanation
MODE	Selects the mode for the ring modulator.	
	NORMAL	This is a normal ring modulator.
	INTELLIGENT	By ring-modulating the input signal, a bell like sound is created. The intelligent ring modulator changes the oscillation frequency according to the pitch of the input sound and therefore produces a sound with the sense of pitch, which is quite different from NORMAL. This effect does not give a satisfactory result if the pitch of the guitar sound is not correctly detected. So, you must use single notes, not chords.
FREQ (FREQUENCY)	0-100	Adjusts the frequency of the internal oscillator.
E.LEVEL (EFFECT LEVEL)	0-100	Adjusts the volume of the effect sound.
D.LEVEL (DIRECT LEVEL)	0-100	Adjusts the volume of the direct sound. 100=±0 dB

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.

DLY (DELAY)



DLY lets you choose from various types of delay.

This effect adds delayed sound to the direct sound, giving more body to the sound or creating special effects.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
TYPE	Refer to DLY TYPE	

How to choose TYPE

1. Press the [EDIT] button → Choose "DLY"
2. Choose "TYPE" with the [3] knob.


DLY TYPE

This is a list of the effects that can be selected for DLY.

TYPE	Explanation
SINGLE	This is a simple mono delay.
PAN	<p>This delay is specifically for stereo output. This allows you to obtain the tap delay effect that divides the delay time, then deliver them to L channel and R channel.</p>
STEREO	The direct sound is output from L channel, and the effect sound is output from R channel.
DUAL-S (DUAL-SERIES)	<p>This is a delay comprising two different delays connected in series. Each delay time can be set in a range from 1 ms to 1000 ms.</p> <p>D1: DELAY 1 D2: DELAY 2</p>
DUAL-P (DUAL-PARALLEL)	<p>This is a delay comprising two delays connected in parallel. Each delay time can be set in a range from 1 ms to 1000 ms.</p>
DUAL-L/R	<p>This is a delay with individual settings available for L channel and R channel. Delay 1 goes to L channel, Delay 2 to R channel.</p>
REVERSE	This produces an effect where the sound is played back in reverse.
ANALOG	This gives a mild analog delay sound. The delay time can be set within the range of 1 to 2000 ms.
TAPE (TAPE ECHO)	This setting provides the characteristic wavering sound of the tape echo. The delay time can be set within the range of 1 to 2000 ms.
MODULATE	This delay adds a pleasant wavering effect to the sound.
TERA ECHO	This effect uses MDP (Multi-Dimensional Processing) technology to create a unique ambience and a spaciousness that changes according to your picking dynamics.


SINGLE

MONO

Parameter	Value	Explanation
TIME (DELAY TIME)	1 ms–2000 ms, BPM 	Adjusts the delay time. * When set to BPM, the value of each parameter will be set according to the value of the "MASTER BPM" (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
FEEDBACK	0–100	Adjusts the volume that is returned to the input. A higher value will increase the number of the delay repeats.
E.LEVEL (EFFECT LEVEL)	0–120	Adjusts the volume of the delay sound.
HIGH CUT	630 Hz–12.5 kHz, FLAT	Adjusts the frequency at which the high cut filter begins to take effect. When "FLAT" is selected, the high cut filter will have no effect.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB

STEREO


STEREO

Parameter	Value	Explanation
TIME (DELAY TIME)	1 ms–2000 ms, BPM 	Adjusts the delay time. * When set to BPM, the value of each parameter will be set according to the value of the "MASTER BPM" (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
FEEDBACK	0–100	Adjusts the volume that is returned to the input. A higher value will increase the number of the delay repeats.
E.LEVEL (EFFECT LEVEL)	0–120	Adjusts the volume of the delay sound.
HIGH CUT	630 Hz–12.5 kHz, FLAT	Adjusts the frequency at which the high cut filter begins to take effect. When "FLAT" is selected, the high cut filter will have no effect.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.

PAN


MONO
STEREO

Parameter	Value	Explanation
TIME (DELAY TIME)	1 ms–2000 ms, BPM 	Adjusts the delay time. * When set to BPM, the value of each parameter will be set according to the value of the "MASTER BPM" (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
FEEDBACK	0–100	Adjusts the volume that is returned to the input. A higher value will increase the number of the delay repeats.
E.LEVEL (EFFECT LEVEL)	0–120	Adjusts the volume of the delay sound.
HIGH CUT	630 Hz–12.5 kHz, FLAT	Adjusts the frequency at which the high cut filter begins to take effect. When "FLAT" is selected, the high cut filter will have no effect.
TAP TIME	0–100%	Adjusts the delay time of L channel delay. This setting adjusts L channel delay time relative to R channel delay time (considered as 100%).
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.



DUAL-S (DUAL-SERIES)

MONO

Parameter	Value	Explanation
1:TIME (1:DELAY TIME) 2:TIME (2:DELAY TIME)	1 ms–1000 ms, BPM 	Adjusts the delay time. * When set to BPM, the value of each parameter will be set according to the value of the "MASTER BPM" (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time. * DLY TAP applies only to 1: TIME.
1:F-BAK (1:FEEDBACK) 2:F-BAK (2:FEEDBACK)	0–100	Adjusts the amount of feedback of the DELAY 1 (or DELAY 2). A higher value will increase the number of the delay repeats.
1:HICUT (1:HIGH CUT) 2:HICUT (2:HIGH CUT)	630 Hz–12.5 kHz, FLAT	Adjusts the frequency at which the high cut filter begins to take effect. When "FLAT" is selected, the high cut filter will have no effect.
1:E.LEVEL (1:EFFECT LEVEL) 2:E.LEVEL (2:EFFECT LEVEL)	0–120	Adjusts the volume of the DELAY 1 (or DELAY 2).
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB



DUAL-P (DUAL-PARALLEL)

MONO

Parameter	Value	Explanation
1:TIME (1:DELAY TIME) 2:TIME (2:DELAY TIME)	1 ms–1000 ms, BPM  – 	Adjusts the delay time. * When set to BPM, the value of each parameter will be set according to the value of the “MASTER BPM” (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time. * DLY TAP applies only to 1:TIME.
1:F-BAK (1:FEEDBACK) 2:F-BAK (2:FEEDBACK)	0–100	Adjusts the amount of feedback of the DELAY 1 (or DELAY 2). A higher value will increase the number of the delay repeats.
1:HICUT (1:HIGH CUT) 2:HICUT (2:HIGH CUT)	630 Hz–12.5 kHz, FLAT	Adjusts the frequency at which the high cut filter begins to take effect. When “FLAT” is selected, the high cut filter will have no effect.
1:E.LEVEL (1:EFFECT LEVEL) 2:E.LEVEL (2:EFFECT LEVEL)	0–120	Adjusts the volume of the DELAY 1 (or DELAY 2).
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB

DUAL-L/R



STEREO

Parameter	Value	Explanation
1:TIME (1:DELAY TIME) 2:TIME (2:DELAY TIME)	1 ms–1000 ms, BPM  – 	Adjusts the delay time. * When set to BPM, the value of each parameter will be set according to the value of the “MASTER BPM” (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time. * DLY TAP applies only to 1:TIME.
1:F-BAK (1:FEEDBACK) 2:F-BAK (2:FEEDBACK)	0–100	Adjusts the amount of feedback of the DELAY 1 (or DELAY 2). A higher value will increase the number of the delay repeats.
1:HICUT (1:HIGH CUT) 2:HICUT (2:HIGH CUT)	630 Hz–12.5 kHz, FLAT	Adjusts the frequency at which the high cut filter begins to take effect. When “FLAT” is selected, the high cut filter will have no effect.
1:E.LEVEL (1:EFFECT LEVEL) 2:E.LEVEL (2:EFFECT LEVEL)	0–120	Adjusts the volume of the DELAY 1 (or DELAY 2).
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.



REVERSE

MONO

Parameter	Value	Explanation
TIME (DELAY TIME)	1 ms–2000 ms, BPM  – 	Adjusts the delay time. * When set to BPM, the value of each parameter will be set according to the value of the “MASTER BPM” (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
FEEDBACK	0–100	Adjusts the volume that is returned to the input. A higher value will increase the number of the delay repeats.
E.LEVEL (EFFECT LEVEL)	0–120	Adjusts the volume of the delay sound.
HIGH CUT	630 Hz–12.5 kHz, FLAT	Adjusts the frequency at which the high cut filter begins to take effect. When “FLAT” is selected, the high cut filter will have no effect.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB



ANALOG

MONO

Parameter	Value	Explanation
TIME (DELAY TIME)	1 ms–2000 ms, BPM  – 	Adjusts the delay time. * When set to BPM, the value of each parameter will be set according to the value of the “MASTER BPM” (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
FEEDBACK	0–100	Adjusts the volume that is returned to the input. A higher value will increase the number of the delay repeats.
E.LEVEL (EFFECT LEVEL)	0–120	Adjusts the volume of the delay sound.
HIGH CUT	630 Hz–12.5 kHz, FLAT	Adjusts the frequency at which the high cut filter begins to take effect. When “FLAT” is selected, the high cut filter will have no effect.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB



TAPE (TAPE ECHO)

MONO

Parameter	Value	Explanation
TIME (DELAY TIME)	1 ms–2000 ms, BPM  	Adjusts the delay time. * When set to BPM, the value of each parameter will be set according to the value of the "MASTER BPM" (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
FEEDBACK	0–100	Adjusts the volume that is returned to the input. A higher value will increase the number of the delay repeats.
E.LEVEL (EFFECT LEVEL)	0–120	Adjusts the volume of the delay sound.
HIGH CUT	630 Hz–12.5 kHz, FLAT	Adjusts the frequency at which the high cut filter begins to take effect. When "FLAT" is selected, the high cut filter will have no effect.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB




MODULATE

MONO

Parameter	Value	Explanation
TIME (DELAY TIME)	1 ms–2000 ms, BPM  	Adjusts the delay time. * When set to BPM, the value of each parameter will be set according to the value of the "MASTER BPM" (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
FEEDBACK	0–100	Adjusts the volume that is returned to the input. A higher value will increase the number of the delay repeats.
E.LEVEL (EFFECT LEVEL)	0–120	Adjusts the volume of the delay sound.
MOD RATE (MODULATION RATE)	0–100	Adjusts the modulation rate of the delay sound.
MOD DEPTH (MODULATION DEPTH)	0–100	Adjusts the modulation depth of the delay sound.
HIGH CUT	630 Hz–12.5 kHz, FLAT	Adjusts the frequency at which the high cut filter begins to take effect. When "FLAT" is selected, the high cut filter will have no effect.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB

TERA ECHO

MONO
STEREO

Parameter	Value	Explanation
TIME	0–100	Adjusts the delay time. * When set to BPM, the value of each parameter will be set according to the value of the "MASTER BPM" (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
FEEDBACK	0–100	Adjusts the volume that is returned to the input. A higher value will increase the number of the delay repeats.
E.LEVEL (EFFECT LEVEL)	0–100	Adjusts the volume of the delay sound.
TONE	-50–+50	Adjusts the tone.
HOLD	OFF, ON	The effect sound is held when you turn this on. * Patches are written with the HOLD parameter set to Off.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB
MODE	Selects the mode of effect sound.	
	MONO 	This effect sound outputs the same sound from both L channel and R channel.
	STEREO1 	This is a stereo effect sounds that adds different effect sounds to L channel and R channel.
	STEREO2 	This stereo effect sound uses spatial synthesis, with the direct sound output in L channel and the effect sound output in R channel.

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.

REV (REVERB)



REV lets you choose from various types of reverb. Different settings can simulate a variety of spaces.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
TYPE	Refer to REV TYPE	

How to choose TYPE

1. Press the [EDIT] button → Choose “REV”
2. Choose “TYPE” with the [3] knob.

REV TYPE

This is a list of the effects that can be selected for REV.

Effect name	Explanation
AMBIENCE	Simulates an ambience mic (off-mic, placed at a distance from the sound source) used in recording and other applications. Rather than emphasizing the reverberation, this reverb is used to produce a sense of openness and depth.
ROOM	Simulates the reverberation in a small room. Provides warm reverberations.
HALL1	Simulates the reverberation in a concert hall. Provides clear and spacious reverberations.
HALL2	Simulates the reverberation in a concert hall. Provides mild reverberations.
PLATE	Simulates plate reverberation (a reverb unit that uses the vibration of a metallic plate). Provides a metallic sound with a distinct upper range.
SPRING	Simulates the sound of a guitar amp's built-in spring reverb.
MODULATE	This reverb adds the wavering sound found in hall reverb to provide an extremely pleasant reverb sound.
DELAY	This effect adds delayed sound to the direct sound, giving more body to the sound or creating special effects.

AMBIENCE



Parameter	Value	Explanation
TIME (REVERB TIME)	0.1 s–10.0 s	Adjusts the length (time) of reverberation.
PRE.DLY (PRE DELAY)	0 ms–500 ms	Adjusts the time until the reverb sound appears.
E.LEVEL (EFFECT LEVEL)	0–100	Adjusts the volume of the reverb sound.
LOW CUT	FLAT, 20 Hz–800 Hz	Adjusts the frequency at which the low cut filter begins to take effect. When “FLAT” is selected, the low cut filter will have no effect.
HIGH CUT	630 Hz–12.5 kHz, FLAT	Adjusts the frequency at which the high cut filter begins to take effect. When “FLAT” is selected, the high cut filter will have no effect.
DENSITY	0–10	Adjusts the density of the reverb sound.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.

ROOM



Parameter	Value	Explanation
TIME (REVERB TIME)	0.1 s–10.0 s	Adjusts the length (time) of reverberation.
PRE.DLY (PRE DELAY)	0 ms–500 ms	Adjusts the time until the reverb sound appears.
E.LEVEL (EFFECT LEVEL)	0–100	Adjusts the volume of the reverb sound.
LOW CUT	FLAT, 20 Hz–800 Hz	Adjusts the frequency at which the low cut filter begins to take effect. When “FLAT” is selected, the low cut filter will have no effect.
HIGH CUT	630 Hz–12.5 kHz, FLAT	Adjusts the frequency at which the high cut filter begins to take effect. When “FLAT” is selected, the high cut filter will have no effect.
DENSITY	0–10	Adjusts the density of the reverb sound.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.

HALL1



Parameter	Value	Explanation
TIME (REVERB TIME)	0.1 s–10.0 s	Adjusts the length (time) of reverberation.
PRE.DLY (PRE DELAY)	0 ms–500 ms	Adjusts the time until the reverb sound appears.
E.LEVEL (EFFECT LEVEL)	0–100	Adjusts the volume of the reverb sound.
LOW CUT	FLAT, 20 Hz–800 Hz	Adjusts the frequency at which the low cut filter begins to take effect. When “FLAT” is selected, the low cut filter will have no effect.
HIGH CUT	630 Hz–12.5 kHz, FLAT	Adjusts the frequency at which the high cut filter begins to take effect. When “FLAT” is selected, the high cut filter will have no effect.
DENSITY	0–10	Adjusts the density of the reverb sound.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.

HALL2

MONO
STEREO

Parameter	Value	Explanation
TIME (REVERB TIME)	0.1 s–10.0 s	Adjusts the length (time) of reverberation.
PRE.DLY (PRE DELAY)	0 ms–500 ms	Adjusts the time until the reverb sound appears.
E.LEVEL (EFFECT LEVEL)	0–100	Adjusts the volume of the reverb sound.
LOW CUT	FLAT, 20 Hz–800 Hz	Adjusts the frequency at which the low cut filter begins to take effect. When "FLAT" is selected, the low cut filter will have no effect.
HIGH CUT	630 Hz–12.5 kHz, FLAT	Adjusts the frequency at which the high cut filter begins to take effect. When "FLAT" is selected, the high cut filter will have no effect.
DENSITY	0–10	Adjusts the density of the reverb sound.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.

PLATE

MONO
STEREO

Parameter	Value	Explanation
TIME (REVERB TIME)	0.1 s–10.0 s	Adjusts the length (time) of reverberation.
PRE.DLY (PRE DELAY)	0 ms–500 ms	Adjusts the time until the reverb sound appears.
E.LEVEL (EFFECT LEVEL)	0–100	Adjusts the volume of the reverb sound.
LOW CUT	FLAT, 20 Hz–800 Hz	Adjusts the frequency at which the low cut filter begins to take effect. When "FLAT" is selected, the low cut filter will have no effect.
HIGH CUT	630 Hz–12.5 kHz, FLAT	Adjusts the frequency at which the high cut filter begins to take effect. When "FLAT" is selected, the high cut filter will have no effect.
DENSITY	0–10	Adjusts the density of the reverb sound.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.

SPRING

MONO
STEREO

Parameter	Value	Explanation
TIME (REVERB TIME)	0.1 s–10.0 s	Adjusts the length (time) of reverberation.
PRE.DLY (PRE DELAY)	0 ms–500 ms	Adjusts the time until the reverb sound appears.
E.LEVEL (EFFECT LEVEL)	0–100	Adjusts the volume of the reverb sound.
LOW CUT	FLAT, 20 Hz–800 Hz	Adjusts the frequency at which the low cut filter begins to take effect. When "FLAT" is selected, the low cut filter will have no effect.
HIGH CUT	630 Hz–12.5 kHz, FLAT	Adjusts the frequency at which the high cut filter begins to take effect. When "FLAT" is selected, the high cut filter will have no effect.
DENSITY	0–10	Adjusts the density of the reverb sound.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.

MODULATE


MONO
STEREO

Parameter	Value	Explanation
TIME (REVERB TIME)	0.1 s–10.0 s	Adjusts the length (time) of reverberation.
PRE.DLY (PRE DELAY)	0 ms–500 ms	Adjusts the time until the reverb sound appears.
E.LEVEL (EFFECT LEVEL)	0–100	Adjusts the volume of the reverb sound.
LOW CUT	FLAT, 20 Hz–800 Hz	Adjusts the frequency at which the low cut filter begins to take effect. When "FLAT" is selected, the low cut filter will have no effect.
HIGH CUT	630 Hz–12.5 kHz, FLAT	Adjusts the frequency at which the high cut filter begins to take effect. When "FLAT" is selected, the high cut filter will have no effect.
DENSITY	0–10	Adjusts the density of the reverb sound.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.

DELAY

MONO
STEREO

Parameter	Value	Explanation
TIME (DELAY TIME)	1 ms–650 ms, BPM 	Adjusts the delay time. * When set to BPM, the value of each parameter will be set according to the value of the "MASTER BPM" (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
FEEDBACK	0–100	Adjusts the amount of delay sound returned to the input. A higher value will increase the number of the delay repeats.
E.LEVEL (EFFECT LEVEL)	0–120	Adjusts the volume of the delay sound.
HIGH CUT	630 Hz–12.5 kHz, FLAT	Adjusts the frequency at which the high cut filter begins to take effect. When "FLAT" is selected, the high cut filter will have no effect.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound. 100=±0 dB

* If a mono effect or a loop is connected after this effect, the stereo effect is lost.

L1 (LOOP 1)



Specifies the SEND/RETURN routing for L1.

* It is not possible to move L1.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Specifies whether the SEND/RETURN route of L1 is enabled (ON) or disabled (OFF).

L2 (LOOP 2)



Specifies the SEND/RETURN routing for L2.

* It is not possible to move L2.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Specifies whether the SEND/RETURN route of L2 is enabled (ON) or disabled (OFF).

L3 (LOOP 3)



Specifies the SEND/RETURN routing for L3.

* It is not possible to move L3.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Specifies whether the SEND/RETURN route of L3 is enabled (ON) or disabled (OFF).

NS (NOISE SUPPRESSOR)



STEREO

This effect reduces the noise and hum picked up by guitar pickups. Since it suppresses the noise in synchronization with the envelope of the guitar sound (the way in which the guitar sound decays over time), it has very little effect on the guitar sound, and does not harm the natural character of the sound.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Switches the noise suppressor effect on/off.
THRESHOLD	0–100	Adjust this parameter as appropriate for the volume of the noise. If the noise level is high, a higher setting is appropriate. If the noise level is low, a lower setting is appropriate. Adjust this value until the decay of the guitar sound is as natural as possible. * High settings for the threshold parameter may result in there being no sound when you play with your guitar volume turned down.
RELEASE	0–100	Adjusts the time from when the noise suppressor begins to function until the noise level reaches "0."
This controls the noise suppressor based on the volume level for the point specified in Detect.		
INPUT		Input volume from input jack. * Ordinarily, DETECT should be set to "INPUT."
NS INPUT		Noise suppressor input volume. * When connected as illustrated below, and you want to prevent a spatial-type effects sound (such as a delay sound) from being eradicated by the NS, you should set DETECT to "NS INPUT."
DETECT		<p>Spatial-type effect</p>
FV OUT		Volume after passing through Foot Volume. * If you want to use FV (Foot Volume) in place of the guitar's volume control, you need to set DETECT to "FV OUT."
		<p>Foot Volume</p>

FV (FOOT VOLUME)



STEREO

This is a volume control effect.

It's controlled by the expression pedal connected to the CTL IN jack.

Parameter	Value	Explanation
MIN (VOLUME MIN)	0-100	Sets the volume when the heel of the expression pedal is depressed.
MAX (VOLUME MAX)	0-100	Sets the volume when the toe of the expression pedal is depressed.
CURVE (VOLUME CURVE)	0-100	<p>Selects how the actual volume changes relative to the amount the pedal is pressed.</p> <p>Volume</p> <p>When the pedal is fully raised</p> <p>When the pedal is fully advanced</p>
LEVEL	0-100	Adjusts the volume.

MST (MASTER SETTING)



These settings apply to all patches.

* It is not possible to move MST.

Parameter	Value	Explanation
KEY (MASTER KEY)	C (Am)- B (G#m)	<p>This sets the key for the FX1/FX2 HARMONIST.</p> <p>Major C F B^b E^b A^b D^b</p> <p>Minor Am Dm Gm Cm Fm B^bm</p> <p>Major C G D A E B F[#]</p> <p>Minor Am Em Bm F[#]m C[#]m G[#]m D[#]m</p>
BPM (MASTER BPM)	P40-P250 S40-P250	<p>Adjusts the BPM value for each patch.</p> <p>P40-P250: If the PREFERENCE setting BPM is set to PATCH.</p> <p>S40-S250: If the PREFERENCE setting BPM is set to SYSTEM.</p> <p>* BPM (beats per minute) indicates the number of quarter note beats that occur each minute.</p>
TEMPO HOLD *1	OFF, ON	Specifies whether the BPM data of the patch before switching is held (ON) or not held (OFF).
LOW GAIN (MASTER EQ LOW GAIN)	-20-+20 dB	Adjusts the low frequency range tone.
MID GAIN (MASTER EQ MID GAIN)	-20-+20 dB	Adjusts the middle frequency range tone.
HIGH GAIN (MASTER EQ HIGH GAIN)	-20-+20 dB	Adjusts the high frequency range tone.
MID FREQ (MASTER EQ MID FREQUENCY)	-20-+20 dB	Specify the center of the frequency range that will be adjusted by the MID GAIN.
MID Q (MASTER EQ MID Q)	0.5-16	Adjusts the width of the area affected by the EQ centered at the MID FREQ. Higher values will narrow the area.
SOLO SW (MASTER SOLO SW)	OFF, ON	Switches the MASTER SOLO on/off.
SOLO LVL (MASTER SOLO LEVEL)	0-200	Adjusts the volume when master solo is on. * A value of 100 is ± 0 dB, and a value of 200 is +6 dB.

*1 Setting available when BPM of PREFERENCE is set to PATCH.

PATCH LVL (PATCH LEVEL)

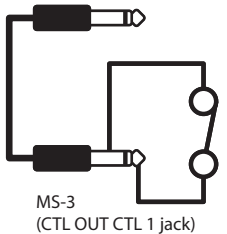
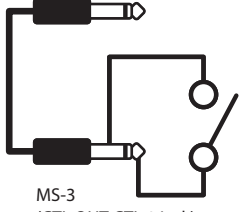



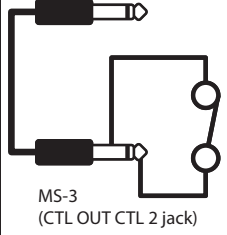
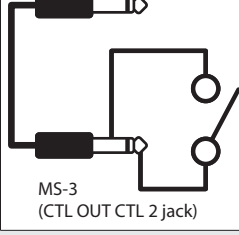

Parameter	Value	Explanation
PATCH LEVEL	0-200	Sets the patch volume. Select PATCH LVL, and use the [3] knob to adjust the setting.

OUTPUT (OUTPUT SETTING)



These are the settings for OUTPUT SELECT, CTL OUT1, and CTL OUT2.

Parameter	Value	Explanation
OUT SEL. (OUTPUT SELECT)	Selects how the sound is output to the OUTPUT L/MONO jack and the R jack.	
	L	Output the sound only to the OUTPUT L/MONO jack. * If the OUTPUT R jack is not connected, the level will be lower. * If the PREFERENCE setting OUTPUT SEL is set to SYSTEM, this is shown as L (SYS).
	R	Output the sound only to the OUTPUT R jack. * If the OUTPUT L/MONO jack is not connected, the level will be lower. * If the PREFERENCE setting OUTPUT SEL is set to SYSTEM, this is shown as R (SYS).
	L+R	The same sound is output from the OUTPUT L/MONO jack and the OUTPUT R jack. * The stereo sensation of the effect is lost. * If the PREFERENCE setting OUTPUT SEL is set to SYSTEM, this is shown as L+R (SYS).
	STEREO	* If the PREFERENCE setting OUTPUT SEL is set to SYSTEM, this is shown as ST (SYS).
CTLOUT1	Specify the control signals that are sent from the CTL 1 of the CTL OUT jack when you switch patches. The available control signals depend on the MENU item CTL OUT MODE SETTING (p. 40) setting.	
	For LAT	
	OFF	Sends "off." Guitar amp (Channel switching jack)  MS-3 (CTL OUT CTL 1 jack)
ON	Sends "on." Guitar amp (Channel switching jack)  MS-3 (CTL OUT CTL 1 jack)	

Parameter	Value	Explanation
CTLOUT1	For PLS, INV	
	OFF	Sends a short (100 ms) pulse when changing between "off" and "on."
	ON	* If the display of the MS-3 differs from the state of the connected equipment, switch the state of the connected equipment.
	If the MENU item CTL OUT MODE SETTING is TAP2, TAP3, or TAP4	
	OFF	Sends nothing.
	TAP: 	Sends tempo at the interval of the specified note value according to the MASTER BPM value. * Depending on the MASTER BPM setting, there are cases in which this cannot be sent.
	TAP: 40-250	Sends the specified tempo (♩=)
CTLOUT2	Specify the control signals that are sent from the CTL 2 of the CTL OUT jack when you switch patches. The available control signals depend on the MENU item CTL OUT MODE SETTING (p. 40) setting.	
	For LAT	
	OFF	Sends "off." Guitar amp (Channel switching jack)  MS-3 (CTL OUT CTL 2 jack)
	ON	Sends "on." Guitar amp (Channel switching jack)  MS-3 (CTL OUT CTL 2 jack)
	For PLS, INV	
OFF	Sends a short (100 ms) pulse when changing between "off" and "on."	
ON	* If the display of the MS-3 differs from the state of the connected equipment, switch the state of the connected equipment.	
If the MENU item CTL OUT MODE SETTING is TAP2, TAP3, or TAP4		
OFF	Sends nothing.	
	TAP: 	Sends tempo at the interval of the specified note value according to the MASTER BPM value. * Depending on the MASTER BPM setting, there are cases in which this cannot be sent.
	TAP: 40-250	Sends the specified tempo (♩=)

CTL (CTL,ASSIGN&MIDI SETTING)



In CTL you can edit the following items.

- NUM1–4 *1
- MEMORY/MANUAL SW
- CURRENT NUMBER SW *2
- EXP1, EXP2
- CTLIN1–4
- ASSIGN1–8
- PATCH MIDI1–4

*1 Valid only in manual mode

*2 Valid only in memory mode

NUM1–4 (NUMBER SW1–4)

Specify the parameters that are controlled by number switches [1]–[4] in manual mode.


Parameter	Value	Explanation
FUNC (FUNCTION)	OFF	No assignment. The icon changes from to OFF .
	FX1	Turns FX1 on/off.
	FX2	Turns FX2 on/off.
	MOD1	Turns MOD1 on/off.
	MOD2	Turns MOD2 on/off.
	L1	Turns L1 on/off.
	L2	Turns L2 on/off.
	L3	Turns L3 on/off.
	DLY	Turns DLY on/off.
	REV	Turns REV on/off.
	BPM TAP	Used for tap input of the master BPM. The indicator of the assigned number switch blinks in time with the BPM. * Regardless of SOURCE MODE (MOMENT or TOGGLE), this uses the timing at which you press the assigned number switch.
	DLY TAP	Used for tap input of the delay time. The indicator of the assigned number switch blinks in time with the BPM. * Regardless of SOURCE MODE (MOMENT or TOGGLE), this uses the timing at which you press the assigned number switch.
	F1SOLO/TRG (FX1 SOLO/ TRIGGER)	If FX1 is on, this turns on/off the following parameters. <ul style="list-style-type: none"> • SOLO SW within OD/DS • SOLO SW within BASS OD/DS • TRIGGER within SOUND HOLD • TRIGGER within S-BEND • TRIGGER within BASS S-BEND • TRIGGER within WARP • TRIGGER within FEEDBACK

Parameter	Value	Explanation
FUNC (FUNCTION)	F2SOLO/TRG (FX2 SOLO/ TRIGGER)	If FX2 is on, this turns on/off the following parameters. <ul style="list-style-type: none"> • SOLO SW within OD/DS • SOLO SW within BASS OD/DS • TRIGGER within SOUND HOLD • TRIGGER within S-BEND • TRIGGER within BASS S-BEND • TRIGGER within WARP • TRIGGER within FEEDBACK
	M.SOLO (MASTER SOLO)	Turns on/off the MASTER SOLO SW within MASTER SETTING.
	CTLOUT1	Turns CTL 1 of the CTL OUT on/off. * This works only if CTLOUT (p. 40) is set to LAT, PLS, or INV.
	CTLOUT2	Turns CTL 2 of the CTL OUT on/off. * This works only if CTLOUT (p. 40) is set to LAT, PLS, or INV.
	TUNER	Turns TUNER on/off.
	LED	Turns the indicator on/off. Turns on/off the indicator of the assigned number switch.
MODE (SOURCE MODE)	Specifies how the value changes when you operate the number switch.	
	MOMENT	The normal state is Off (minimum value), with the switch On (maximum value) only while the number switch is depressed.
ACTION	TOGGLE	The setting is toggled On (maximum value) or Off (minimum value) with each press of the number switch.
	OFF → ON, ON → OFF	<When MODE is set to MOMENT> OFF → ON: On while the switch is held down, and off when it is not held down. ON → OFF: Off while the switch is held down, and on when it is not held down.

MEMORY MANUAL (MEMORY/MANUAL SW)

Use the [MEMORY/MANUAL] switch to specify the parameter that you want to control.


* With the factory settings, the SYSTEM setting is selected. If you want to make individual settings for each patch, change the PREF (MENU) setting M/M to "PATCH," and then edit the parameters.

Parameter	Value	Explanation
FUNC (FUNCTION)	OFF	No assignment. The icon changes from  to OFF .
	FX1	Turns FX1 on/off.
	FX2	Turns FX2 on/off.
	MOD1	Turns MOD1 on/off.
	MOD2	Turns MOD2 on/off.
	L1	Turns L1 on/off.
	L2	Turns L2 on/off.
	L3	Turns L3 on/off.
	DLY	Turns DLY on/off.
	REV	Turns REV on/off.
	BPM TAP	Used for tap input of the master BPM. * Regardless of SOURCE MODE (MOMENT or TOGGLE), this uses the timing at which you press the assigned number switch.
	DLY TAP	Used for tap input of the delay time. * Regardless of SOURCE MODE (MOMENT or TOGGLE), this uses the timing at which you press the [MEMORY/MANUAL] switch.
	F1SOL/TRG (FX1 SOLO/TRIGGER)	If FX1 is on, this turns on/off the following parameters. <ul style="list-style-type: none"> • SOLO SW within OD/DS • SOLO SW within BASS OD/DS • TRIGGER within SOUND HOLD • TRIGGER within S-BEND • TRIGGER within BASS S-BEND • TRIGGER within WARP • TRIGGER within FEEDBACK
	F2SOL/TRG (FX2 SOLO/TRIGGER)	If FX2 is on, this turns on/off the following parameters. <ul style="list-style-type: none"> • SOLO SW within OD/DS • SOLO SW within BASS OD/DS • TRIGGER within SOUND HOLD • TRIGGER within S-BEND • TRIGGER within BASS S-BEND • TRIGGER within WARP • TRIGGER within FEEDBACK
	M.SOLO (MASTER SOLO)	Turns on/off the MASTER SOLO SW within MASTER SETTING.
	CTL0UT1	Turns CTL 1 of the CTL OUT on/off. * This works only if CTL0UT is set to LAT, PLS, or INV.
	CTL0UT2	Turns CTL 2 of the CTL OUT on/off. * This works only if CTL0UT is set to LAT, PLS, or INV.
	TUNER	Turns TUNER on/off.
	M/M (MEMORY/MANUAL)	Switches between memory mode and manual mode.
M/M+TNR (MEMORY/ MANUAL+TUNER)	Switches between memory mode and manual mode. Long-pressing turns the TUNER on. * When TUNER is on, pressing the [MEMORY/MANUAL] switch once again turns TUNER off.	
TNR+M/M (TUNER+MEMORY/ MANUAL)	Turns TUNER on/off. Long-pressing switches between memory mode and manual mode.	

Parameter	Value	Explanation
MODE (SOURCE MODE)		Specifies how the value changes when you operate the [MEMORY/MANUAL] switch.
	MOMENT	The normal state is Off (minimum value), with the switch On (maximum value) only while the [MEMORY/MANUAL] switch is depressed.
	TOGGLE	The setting is toggled On (maximum value) or Off (minimum value) with each press of the [MEMORY/MANUAL] switch.
ACTION	OFF → ON, ON → OFF	<When MODE is set to MOMENT> OFF → ON: On while the switch is held down, and off when it is not held down. ON → OFF: Off while the switch is held down, and on when it is not held down.

CURRENT NUMBER (CURRENT NUMBER SW)


Specify the parameter that is controlled when you operate the number switch of the currently selected patch in memory mode.

Parameter	Value	Explanation
FUNC (FUNCTION)	OFF	No assignment. The icon changes from  to OFF .
	FX1	Turns FX1 on/off.
	FX2	Turns FX2 on/off.
	MOD1	Turns MOD1 on/off.
	MOD2	Turns MOD2 on/off.
	L1	Turns L1 on/off.
	L2	Turns L2 on/off.
	L3	Turns L3 on/off.
	DLY	Turns DLY on/off.
	REV	Turns REV on/off.
	BPM TAP	Used for tap input of the master BPM. * Regardless of SOURCE MODE (MOMENT or TOGGLE), this uses the timing at which you press the assigned number switch.
	DLY TAP	Used for tap input of the delay time. * Regardless of SOURCE MODE (MOMENT or TOGGLE), this uses the timing at which you press the assigned number switch.
	F1SOLO/TRG (FX1 SOLO/ TRIGGER)	If FX1 is on, this turns on/off the following parameters. <ul style="list-style-type: none"> • SOLO SW within OD/DS • SOLO SW within BASS OD/DS • TRIGGER within SOUND HOLD • TRIGGER within S-BEND • TRIGGER within BASS S-BEND • TRIGGER within WARP • TRIGGER within FEEDBACK
	F2SOLO/TRG (FX2 SOLO/ TRIGGER)	If FX2 is on, this turns on/off the following parameters. <ul style="list-style-type: none"> • SOLO SW within OD/DS • SOLO SW within BASS OD/DS • TRIGGER within SOUND HOLD • TRIGGER within S-BEND • TRIGGER within BASS S-BEND • TRIGGER within WARP • TRIGGER within FEEDBACK
	M.SOLO (MASTER SOLO)	Turns on/off the MASTER SOLO SW within MASTER SETTING.
CTLOUT1	Turns CTL 1 of the CTL OUT on/off. * This works only if CTLOUT is set to LAT, PLS, or INV.	
CTLOUT2	Turns CTL 2 of the CTL OUT on/off. * This works only if CTLOUT is set to LAT, PLS, or INV.	
TUNER	Turns TUNER on/off.	
MODE (SOURCE MODE)	Specifies how the value changes when you operate the number switch.	
	MOMENT	The normal state is Off (minimum value), with the switch On (maximum value) only while the number switch is depressed.
	TOGGLE	The setting is toggled On (maximum value) or Off (minimum value) with each press of the number switch.

Parameter	Value	Explanation
ACTION	OFF → ON, ON → OFF	<When MODE is set to MOMENT> OFF → ON: On while the switch is held down, and off when it is not held down. ON → OFF: Off while the switch is held down, and on when it is not held down.


EXP 1, EXP 2

These specify the parameters that are operated by expression pedals (EXP 1, 2) connected to the CTL IN jacks.

Parameter	Value	Explanation
FUNC (FUNCTION)	OFF	No assignment. The icon changes from  to OFF .
	FV (FOOT VOLUME)	Controls the LEVEL of FV (FOOT VOLUME).
	F1:WH/PB (FX1:WAH/ PEDAL BEND)	If FX1 is on, this turns on/off the following parameters. <ul style="list-style-type: none"> • PEDAL POSITION within WAH • PEDAL POSITION within BASS WAH • PEDAL POSITION within PEDAL BEND • PEDAL POSITION within BASS PEDAL BEND
	F2:WH/PB (FX2:WAH/ PEDAL BEND)	If FX2 is on, this turns on/off the following parameters. <ul style="list-style-type: none"> • PEDAL POSITION within WAH • PEDAL POSITION within BASS WAH • PEDAL POSITION within PEDAL BEND • PEDAL POSITION within BASS PEDAL BEND
	F1:F/W/P (FX1:FV/WAH/ PEDAL BEND)	When FX1 is on, the following parameters are controlled. <ul style="list-style-type: none"> • PEDAL POSITION within WAH • PEDAL POSITION within BASS WAH • PEDAL POSITION within PEDAL BEND • PEDAL POSITION within BASS PEDAL BEND When FX1 is off, the LEVEL of FOOT VOLUME is controlled.
F2:F/W/P (FX2:FV/WAH/ PEDAL BEND)	When FX2 is on, the following parameters are controlled. <ul style="list-style-type: none"> • PEDAL POSITION within WAH • PEDAL POSITION within BASS WAH • PEDAL POSITION within PEDAL BEND • PEDAL POSITION within BASS PEDAL BEND When FX2 is off, the LEVEL of FOOT VOLUME is controlled.	

CTL IN1–4

These specify the parameters that are operated by footswitches (CTL 1–4) connected to the CTL IN jacks.

Parameter	Value	Explanation
FUNC (FUNCTION)	OFF	No assignment. The icon changes from  to OFF .
	FX1	Turns FX1 on/off.
	FX2	Turns FX2 on/off.
	MOD1	Turns MOD1 on/off.
	MOD2	Turns MOD2 on/off.
	L1	Turns L1 on/off.
	L2	Turns L2 on/off.
	L3	Turns L3 on/off.
	DLY	Turns DLY on/off.
	REV	Turns REV on/off.
	BPM TAP	Used for tap input of the master BPM. * Regardless of SOURCE MODE (MOMENT or TOGGLE), this uses the timing at which you press the footswitch.
	DLY TAP	Used for tap input of the delay time. * Regardless of SOURCE MODE (MOMENT or TOGGLE), this uses the timing at which you press the footswitch.
	F1SOL/TRG (FX1 SOLO/TRIGGER)	If FX1 is on, this turns on/off the following parameters. <ul style="list-style-type: none"> • SOLO SW within OD/DS • SOLO SW within BASS OD/DS • TRIGGER within SOUND HOLD • TRIGGER within S-BEND • TRIGGER within BASS S-BEND • TRIGGER within WARP • TRIGGER within FEEDBACK
	F2SOL/TRG (FX2 SOLO/TRIGGER)	If FX2 is on, this turns on/off the following parameters. <ul style="list-style-type: none"> • SOLO SW within OD/DS • SOLO SW within BASS OD/DS • TRIGGER within SOUND HOLD • TRIGGER within S-BEND • TRIGGER within BASS S-BEND • TRIGGER within WARP • TRIGGER within FEEDBACK
	M.SOLO (MASTER SOLO)	Turns on/off the MASTER SOLO SW within MASTER SETTING.
	CTLOUT1	Turns CTL 1 of the CTL OUT on/off. * This works only if CTLOUT is set to LAT, PLS, or INV.
	CTLOUT2	Turns CTL 2 of the CTL OUT on/off. * This works only if CTLOUT is set to LAT, PLS, or INV.
	TUNER	Turns TUNER on/off.
	M/M (MEMORY/MANUAL)	Switches between memory mode and manual mode.
M/M+TNR (MEMORY/ MANUAL+TUNER)	Switches between memory mode and manual mode. Long-pressing turns the TUNER on. * When TUNER is on, pressing the footswitch once again turns TUNER off.	
TNR+M/M (TUNER+MEMORY/ MANUAL)	Turns TUNER on/off. Long-pressing switches between memory mode and manual mode.	








Parameter	Value	Explanation
FUNC (FUNCTION)	BANK+	Switches to the next bank number.
	BANK-	Switches to the previous bank number.
	PATCH+	Switches to the next patch number.
	PATCH-	Switches to the previous patch number.
MODE (SOURCE MODE)	Specifies how the value changes when you operate the footswitch.	
	MOMENT	The normal state is Off (minimum value), with the switch On (maximum value) only while the footswitch is depressed.
	TOGGLE	The setting is toggled On (maximum value) or Off (minimum value) with each press of the footswitch.
ACTION	OFF → ON, ON → OFF	<p><When MODE is set to MOMENT> OFF → ON: On while the switch is held down, and off when it is not held down. ON → OFF: Off while the switch is held down, and on when it is not held down.</p>

ASSIGN 1–8

For each parameter, you can specify, in detail, which controller will control which parameter.

You can make eight settings for each patch.

Parameter	Value	Explanation
ASSIGN	OFF, ON	Turns the ASSIGN 1–8 on/off. * If you set SOURCE to WAVE, leave ASSIGN turned OFF until you finish making the settings. If this is left ON, parameters might be switched unintentionally while you make settings.
SOURCE	Specifies the controller (source).	
	NUM1	Assigns number switch [1] when in manual mode.
	NUM2	Assigns number switch [2] when in manual mode.
	NUM3	Assigns number switch [3] when in manual mode.
	NUM4	Assigns number switch [4] when in manual mode.
	M/M (MEMORY/MANUAL)	Assigns the [MEMORY/MANUAL] switch.
	CURNUM (CURRENT NUMBER)	Assigns the currently selected number switch when in memory mode.
	EXP1	Assigns the expression pedal connected to EXP 1 of the CTL IN jacks.
	EXP2	Assigns the expression pedal connected to EXP 2 of the CTL IN jacks.
	CTL IN1	Assigns the footswitch connected to CTL 1 of the CTL IN jacks.
	CTL IN2	Assigns the footswitch connected to CTL 2 of the CTL IN jacks.
	CTL IN3	Assigns the footswitch connected to CTL 3 of the CTL IN jacks.
	CTL IN4	Assigns the footswitch connected to CTL 4 of the CTL IN jacks.
	INT (INTERNAL PEDAL)	Assigns the internal pedal.
WAV (WAVE PEDAL)	Assigns the wave pedal.	
MODE (SOURCE MODE)	Specifies how the value changes when you operate the controller.	
	MOMENT	The normal state is Off (minimum value), with the switch On (maximum value) only while the control is being operated.
	TOGGLE	The setting is toggled On (maximum value) or Off (minimum value) with each time control is operated.
CATEGORY (TARGET CATEGORY)	Selects the parameter to be changed.	
TARGET	Refer to "Target List" (p. 34).	
MIN (TARGET MIN)	Sets the minimum value for the range in which the parameter can change. The value differs depending on the parameter assigned for TARGET parameter.	
MAX (TARGET MAX)	Sets the maximum value for the range in which the parameter can change. The value differs depending on the parameter assigned for TARGET parameter.	
ACT.LOW (ACT RANGE LOW)	0–126	Sets the controllable range for target parameters within the source's operational range. Target parameters are controlled within the range set with ACT.LOW and ACT.HIGH. You should normally set ACT.LOW to 0 and ACT.HIGH to 127.
ACT.HIGH (ACT RANGE HIGH)	1–127	

Parameter	Value	Explanation
WAVE RATE *1	0-100, BPM 	Adjusts the time spend for one cycle of the assumed expression pedal. * When set to BPM, the value of each parameter will be set according to the value of the "MASTER BPM" (p. 26) specified for each patch. This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the tempo, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
WAVE FORM *1	SAW	
	TRI	
	SIN	
TRIGGER (INTERNAL PEDAL TRIGGER) *2	Specifies how the motion of the internal pedal will be triggered.	
	PAT CNG (PATCH CHANGE)	This is activated when a patch is selected.
	NUM1	This is activated when the number switch [1] is operated while in manual mode.
	NUM2	This is activated when the number switch [2] is operated while in manual mode.
	NUM3	This is activated when the number switch [3] is operated while in manual mode.
	NUM4	This is activated when the number switch [4] is operated while in manual mode.
	M/M (MEMORY/MANUAL)	This is activated when the [MEMORY/MANUAL] switch is operated.
	CURNUM (CURRENT NUMBER)	This is activated when the currently selected number switch is operated while in memory mode.
	EXP1	This is activated when the expression pedal connected to EXP 1 of the CTL IN jacks is operated.
	EXP2	This is activated when the expression pedal connected to EXP 2 of the CTL IN jacks is operated.
	CTL IN1	This is activated when the footswitch connected to CTL 1 of the CTL IN jacks is operated.
	CTL IN2	This is activated when the footswitch connected to CTL 2 of the CTL IN jacks is operated.
	CTL IN3	This is activated when the footswitch connected to CTL 3 of the CTL IN jacks is operated.
CTL IN4	This is activated when the footswitch connected to CTL 4 of the CTL IN jacks is operated.	
TIME *2	0-100	This specifies the time over which the internal pedal will move from the toe-raised position to the toe-down position.
CURVE *2	Select one of the following curves to specify the change produced by the internal pedal.	
	LINEAR	
	SLOW	
	FAST	

*1 Available if SOURCE is set to WAVE.

*2 Available if SOURCE is set to INT.

Target List

CATEGORY	Target	CATEGORY	Target	CATEGORY	Target		
FX1	ON/OFF	F1 B.OD/DS (FX1: BASS OD/DS)	TYPE	F1 P.SHIFT (FX1: PITCH SHIFTER)	VOICE		
	TYPE		DRIVE		1:MODE		
F1 COMP (FX1: COMPRESSOR)	TYPE		E.LEVEL		1:PITCH		
	SUSTAIN		tone		1:FINE		
	LEVEL		BOTTOM		1:P-DLY		
	ATTACK		D.LEVEL		1:F-BAK		
F1 LIMITER (FX1: LIMITER)	tone		SOLO SW		1:E.LEVEL	F1 B.P.SFT (FX1: BASS PITCH SHIFTER)	2:MODE
	TYPE		SOLO LVL		2:PITCH		
	THRESHOLD		F1 G.EQ (FX1: GRAPHIC EQ)		31 Hz		2:FINE
	LEVEL				62 Hz		2:P-DLY
	RATIO	125 Hz		2:E.LEVEL			
ATTACK	250 Hz	D.LEVEL					
RELEASE	500 Hz	F1 HARM (FX1: HARMONIST)		VOICE			
F1 T.WAH (FX1: T.WAH)	SENS		1 kHz	1:MODE			
	PEAK		2 kHz	1:PITCH			
	E.LEVEL		4 kHz	1:FINE			
	MODE		8 kHz	1:P-DLY			
	POLARITY	16 kHz	1:F-BAK				
	FREQ	LEVEL	1:E.LEVEL				
F1 B.T.WAH (FX1: BASS T. WAH)	D.LEVEL	F1 P.REQ (FX1: PARAMETRIC EQ)	LOW GAIN	2:MODE			
	SENS		LM FREQ	2:PITCH			
	PEAK		LM Q	2:FINE			
	E.LEVEL		LM GAIN	2:P-DLY			
	MODE		HM FREQ	2:E.LEVEL			
F1 A.WAH (FX1: AUTO WAH)	POLARITY		HM Q	HIGH GAIN	D.LEVEL		
	FREQ		HM GAIN	LOW CUT	F1 B.HARM (FX1: BASS HARMONIST)	VOICE	
	D.LEVEL		HIGH CUT	LOW CUT		1:HARM	
	F1B. WAH (FX1: BASS WAH)		MODE	LEVEL		HIGH CUT	1:P-DLY
			PEAK	F1 AC.SIM (FX1: AC.GUITAR SIMULATOR)		LEVEL	1:F-BAK
E.LEVEL		BODY	1:E.LEVEL				
RATE		LOW	2:HARM				
DEPTH		HIGH	2:P-DLY				
FREQ	LEVEL	2:E.LEVEL					
F1 WAH (FX1: WAH)	D.LEVEL	F1 DEFRET (FX1: DEFRETTER)	SENS	D.LEVEL			
	TYPE		DEPTH	F1 OvrTONE (FX1: OVERTONE)	VOICE		
	E.LEVEL		E.LEVEL		1:HARM		
	PD.POS		tone		1:P-DLY		
PD.MIN	ATTACK		1:F-BAK				
PD.MAX	RESONANCE		1:E.LEVEL				
F1B. WAH (FX1: BASS WAH)	D.LEVEL		D.LEVEL	D.LEVEL	2:HARM		
	E.LEVEL		F1 SITAR (FX1: SITAR SIM)	SENS	2:P-DLY		
	PD.POS			DEPTH	2:E.LEVEL		
	PD.MIN			E.LEVEL	D.LEVEL		
	PD.MAX	tone		F1 PD.BND (FX1: PEDAL BEND)	LOWER		
TYPE	RESONANCE	UPPER					
DRIVE	BUZZ	D.LEVEL					
E.LEVEL	D.LEVEL	DETUNE					
tone	SENS	tone					
F1 OD/DS (FX1: OD/DS)	TONE	F1 SLW GR (FX1: SLOW GEAR)	RISE TIME	F1 B.P.BND (FX1: BASS PEDAL BEND)	PITCH		
	BOTTOM		LEVEL		E.LEVEL		
	D.LEVEL		LEVEL		PD.POS		
	SOLO SW		LEVEL		D.LEVEL		
	SOLO LVL		-2OCT		F1 S.HOLD (FX1: SOUND HOLD)	TRIGGER	
F1 OCTAVE (FX1: OCTAVE)	-1OCT	F1 B.OCT (FX1: BASS OCTAVE)	RISE TIME				
	D.LEVEL		E.LEVEL				
	-2OCT		PD.POS				
-1OCT	D.LEVEL		D.LEVEL				
D.LEVEL	-2OCT		D.LEVEL				
-1OCT	-1OCT	TRIGGER					
D.LEVEL	D.LEVEL	RISE TIME					
	D.LEVEL	E.LEVEL					

CATEGORY	Target	CATEGORY	Target	CATEGORY	Target	
F1 S-BEND (FX1: S-BEND)	TRIGGER	F2 B. WAH (FX2: BASS WAH)	TYPE	F2 SLW GR (FX2: SLOW GEAR)	SENS	
	PITCH		D.LEVEL		RISE TIME	
	RISE TIME		E.LEVEL		LEVEL	
	FALL TIME		PD.POS		F2 B.SLWG (FX2: BASS SLOW GEAR)	SENS
F1 B.S-BEND (FX1: BASS S-BEND)	TRIGGER		PD.MIN	RISE TIME		
	PITCH		PD.MAX	LEVEL		
	RISE TIME		F2 OD/DS (FX2: OD/DS)	-2OCT		
FALL TIME	TYPE			-1OCT		
F1 WARP (FX1: WARP)	TRIGGER	DRIVE		D.LEVEL		
	LEVEL	E.LEVEL		F2 B.OCT (FX2: BASS OCTAVE)	-2OCT	
	RISE TIME	SOLO SW	-1OCT			
FALL TIME	SOLO LVL	D.LEVEL				
F1 F-BAK (FX1: FEEDBACKER)	TRIGGER	F2 B.OD/DS (FX2: BASS OD/DS)	TYPE		F2 P.SHIFT (FX2: PITCH SHIFTER)	VOICE
	DEPTH		DRIVE	1:MODE		
F1 SUB DLY (FX1: SUB DELAY)	TYPE		E.LEVEL	1:PITCH		1:FINE
	TIME		DRIVE	1:P-DLY		1:F-BAK
	FEEDBACK		E.LEVEL	1:F-BAK		1:E.LEVEL
	HIGH CUT		SOLO SW	2:MODE		2:PITCH
	E.LEVEL		SOLO LVL	2:FINE		2:P-DLY
	D.LEVEL		F2 G.EQ (FX2: GRAPHIC EQ)	31 Hz		2:P-DLY
TAP TIME	62 Hz	D.LEVEL		F2 B.PSFT (FX2: BASS PITCH SHIFTER)	VOICE	
FX2	125 Hz	250 Hz			1:MODE	
	ON/OFF	500 Hz			1:PITCH	
TYPE	1 kHz	1 kHz	1:FINE		1:P-DLY	
F2 COMP (FX2: COMPRESSOR)	SUSTAIN	2 kHz	4 kHz	1:F-BAK	1:E.LEVEL	
	LEVEL	4 kHz	8 kHz	2:MODE	2:PITCH	
	ATTACK	8 kHz	16 kHz	2:FINE	2:P-DLY	
	THRESHOLD	16 kHz	LEVEL	2:E.LEVEL	D.LEVEL	
	LEVEL	F2 P.EQ (FX2: PARAMETRIC EQ)	LOW GAIN	F2 HARM (FX2: HARMONIST)	VOICE	
ATTACK	LM FREQ		1:HARM			
RELEASE	LM Q		1:P-DLY			
F2 LIMITER (FX2: LIMITER)	TYPE		LM GAIN		1:F-BAK	1:E.LEVEL
	THRESHOLD		HM FREQ		2:HARM	2:P-DLY
	LEVEL		HM Q		2:E.LEVEL	D.LEVEL
	RATIO		HM GAIN		F2 B.HARM (FX2: BASS HARMONIST)	VOICE
	ATTACK		HIGH GAIN			1:HARM
RELEASE	LOW CUT	1:P-DLY				
RELEASE	HIGH CUT	1:F-BAK				
F2 T.WAH (FX2: T.WAH)	SENS	LEVEL	1:E.LEVEL	2:HARM		
	PEAK	F2 AC.SIM (FX2: AC.GUITAR SIMULATOR)	2:P-DLY	2:E.LEVEL		
	E.LEVEL		LOW	D.LEVEL		
	MODE		HIGH	F2 A.WAH (FX2: AUTO WAH)	MODE	
	POLARITY		LEVEL		PEAK	
	FREQ	SENS	E.LEVEL			
D.LEVEL	DEPTH	RATE				
F2 B.T.WAH (FX2: BASS T. WAH)	SENS	F2 DEFRET (FX2: DEFRETTER)	E.LEVEL	DEPTH		
	PEAK		TYPE	TONE		
	E.LEVEL		D.LEVEL	ATTACK		
	MODE		E.LEVEL	RESONANCE		
	POLARITY		SENS	D.LEVEL		
FREQ	DEPTH		F2 OvrTONE (FX2: OVERTONE)	LOWER		
D.LEVEL	E.LEVEL			UPPER		
F2 A.WAH (FX2: AUTO WAH)	TYPE			TONES	D.LEVEL	
	D.LEVEL	RESONANCE		DETUNE		
	E.LEVEL	BUZZ	TONE			
	RATE	D.LEVEL	F2 SITAR (FX2: SITAR SIM)	TYPE		
	DEPTH	SENS		D.LEVEL		
FREQ	DEPTH	E.LEVEL				
D.LEVEL	TONES	RESONANCE				
F2 WAH (FX2: WAH)	TYPE	BUZZ	D.LEVEL			
	D.LEVEL	D.LEVEL	BUZZ			
	E.LEVEL	RESONANCE	D.LEVEL			
	PD.POS	BUZZ	D.LEVEL			
	PD.MIN	D.LEVEL	D.LEVEL			
PD.MAX	D.LEVEL	D.LEVEL	D.LEVEL			

EFFECT

CATEGORY	Target
F2 PD.BND (FX2: PEDAL BEND)	PITCH
	E.LEVEL
	PD.POS
	D.LEVEL
F2 B.P.BND (FX2: BASS PEDAL BEND)	PITCH
	E.LEVEL
	PD.POS
	D.LEVEL
F2 S.HOLD (FX2: SOUND HOLD)	TRIGGER
	RISE TIME
	E.LEVEL
F2 S-BEND (FX2: S-BEND)	TRIGGER
	PITCH
	RISE TIME
	FALL TIME
F2 B.S-BEND (FX2: BASS S-BEND)	TRIGGER
	PITCH
	RISE TIME
	FALL TIME
F2 WARP (FX2: WARP)	TRIGGER
	LEVEL
	RISE TIME
	FALL TIME
F2 F-BAK (FX2: FEEDBACKER)	TRIGGER
	DEPTH
F2 SUB DLY (FX2: SUB DELAY)	TYPE
	TIME
	FEEDBACK
	HIGH CUT
	E.LEVEL
	D.LEVEL
	TAP TIME
MOD1	ON/OFF
	TYPE
M1 CHORUS (MOD1: CHORUS)	MODE
	RATE
	DEPTH
	E.LEVEL
	PRE.DLY
	LOW CUT
	HIGH CUT
D.LEVEL	
M1 2X2CHO (MOD1: 2X2 CHORUS)	LOW RATE
	LOW DPT.
	LOW P-DLY
	HIGH RATE
	HIGH DPT.
	HIGH P-DLY
	LOW LEVEL
HIGH LEVEL	
M1 PHASER (MOD1: PHASER)	XOVER
	D.LEVEL
	TYPE
	RATE
	DEPTH
	RESONANCE
	MANUAL
STEP RATE	
E.LEVEL	
D.LEVEL	

CATEGORY	Target
M1 FLANGER (MOD1: FLANGER)	RATE
	DEPTH
	RESONANCE
	MANUAL
	SEPARAT
	LOW CUT
	E.LEVEL
D.LEVEL	
M1 B.FL (MOD1: BASS FLANGER)	RATE
	DEPTH
	RESONANCE
	MANUAL
	SEPARAT
	LOW CUT
	E.LEVEL
D.LEVEL	
M1 TREM (MOD1: TREMOLO)	RATE
	DEPTH
	LEVEL
	WAVE
M1 PAN (MOD1: PAN)	TYPE
	RATE
	DEPTH
	WAVE
	POS
M1 ROTARY (MOD1: ROTARY)	LEVEL
	SPEED
	RATE SLOW
	RATE FAST
	DEPTH
	RISE TIME
	FALL TIME
	B/H BAL
	E.LEVEL
	D.LEVEL
M1 UNI-V (MOD1: UNI-V)	RATE
	DEPTH
	LEVEL
	PATTERN
M1 SLICER (MOD1: SLICER)	RATE
	E.LEVEL
	TRG.SNS
	D.LEVEL
M1 VIBRATO (MOD1: VIBRATO)	RATE
	DEPTH
	LEVEL
	TRIGGER
	RISE TIME
M1 RING (MOD1: RING MOD)	MODE
	FREQ
	E.LEVEL
	D.LEVEL
MOD2	ON/OFF
	TYPE
M2 CHORUS (MOD2: CHORUS)	MODE
	RATE
	DEPTH
	E.LEVEL
	PRE.DLY
	LOW CUT
	HIGH CUT
	D.LEVEL

CATEGORY	Target
M2 2X2CHO (MOD2: 2X2 CHORUS)	LOW RATE
	LOW DPT.
	LOW P-DLY
	HIGH RATE
	HIGH DPT.
	HIGH P-DLY
	LOW LEVEL
HIGH LEVEL	
M2 PHASER (MOD2: PHASER)	XOVER
	D.LEVEL
	TYPE
	RATE
	DEPTH
	RESONANCE
	MANUAL
STEP RATE	
E.LEVEL	
D.LEVEL	
M2 FLANGER (MOD2: FLANGER)	RATE
	DEPTH
	RESONANCE
	MANUAL
	SEPARAT
M2 B.FL (MOD2: BASS FLANGER)	LOW CUT
	E.LEVEL
	D.LEVEL
	RATE
	DEPTH
	RESONANCE
	MANUAL
SEPARAT	
M2 TREM (MOD2: TREMOLO)	LOW CUT
	E.LEVEL
	D.LEVEL
	RATE
M2 PAN (MOD2: PAN)	DEPTH
	LEVEL
	WAVE
	POS
	LEVEL
M2 ROTARY (MOD2: ROTARY)	SPEED
	RATE SLOW
	RATE FAST
	DEPTH
	RISE TIME
	FALL TIME
	B/H BAL
E.LEVEL	
D.LEVEL	
M2 UNI-V (MOD2: UNI-V)	RATE
	DEPTH
	LEVEL
	PATTERN
M2 SLICER (MOD2: SLICER)	RATE
	E.LEVEL
	TRG.SNS
	D.LEVEL

CATEGORY	Target
M2 VIBRATO (MOD2: VIBRATO)	RATE
	DEPTH
	LEVEL
	TRIGGER
	RISE TIME
M2 RING (MOD2: RING MOD)	MODE
	FREQ
	E.LEVEL
	D.LEVEL
L1	ON/OFF
L2	ON/OFF
L3	ON/OFF
DLY	ON/OFF
	TYPE
	TIME
	FEEDBACK
	HIGH CUT
	E.LEVEL
	D.LEVEL
	TAP TIME
DLY D1	1:TIME
	1:F-BAK
	1:HICUT
	1:E.LEVEL
DLY D2	2:TIME
	2:F-BAK
	2:HICUT
	2:E.LEVEL
DLY MOD	MOD RATE
	MOD DEPTH
DLY TE	MODE
	TIME
	FEEDBACK
	E.LEVEL
	TOPE
	D.LEVEL
	HOLD
REV	ON/OFF
	TYPE
	TIME
	PRE.DLY
	LOW CUT
	HIGH CUT
	DENSITY
	E.LEVEL
	D.LEVEL
	SPRING
	DLY TIME
	DLY FB
	DLY HI CUT
	DLY E.LEVEL
DLY D.LEVEL	
FOOT VOL (FOOT VOLUME)	CURVE
	MIN
	MAX
	LEVEL
NS (NOISE SUPPRESSOR)	ON/OFF
	THRESHOLD
	RELEASE
	DETECT

CATEGORY	Target
MASTER	LOW GAIN
	MID GAIN
	HIGH GAIN
	MID FREQ
	MID Q
	SOLO SW
	SOLO LVL
	PATCH LVL
	BPM
	KEY
BPM/KEY	OUTSEL.
	CTL OUT1
OUTPUT	CTL OUT2
	ON/OFF
TUNER	ON/OFF
TAP	BPM TAP
	DLY TAP

CATEGORY	CH	CC#
MIDI	1-16	000-127

Virtual Expression Pedal System (Internal Pedal/Wave Pedal)

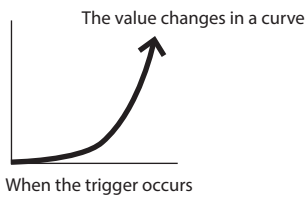
By assigning a desired parameter to the virtual expression pedal, you can produce an effect as though you were operating a physical expression pedal to change the volume or tone quality in real time.

The virtual expression pedal system provides the following two types of functions, and you can use the SOURCE setting for ASSIGN 1–8 to choose the desired type.

* If you want to use the internal pedal or wave pedal, set the ASSIGN parameter MODE to "MOMENT."

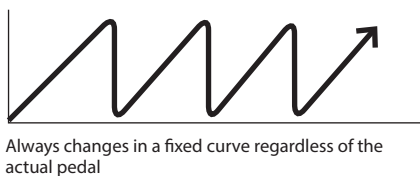
Internal pedal

If SOURCE is set to "INT PDL," the virtual expression pedal will begin operating when started by the specified trigger (INT PDL TRIGGER), modifying the parameter specified by TARGET.



Wave pedal

If SOURCE is set to "WAVE PEDAL," the virtual expression pedal will cyclically modify the parameter specified by TARGET in a fixed wave form.



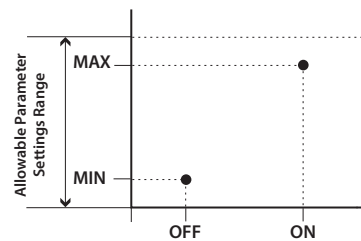
About the Range of a Target's Change

The value of the parameter selected as the target changes within the range defined by "Min" and "Max," as set on the MS-3.

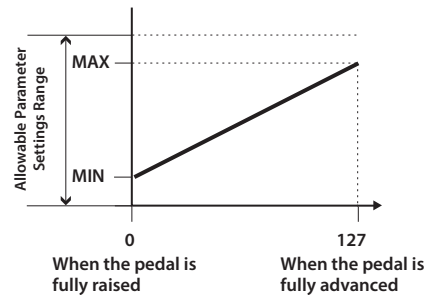
When using an external footswitch, or other controller that acts as an on/off switch, "Min" is selected with Off (CLOSED), and "Max" is selected with On (OPEN).

When using an external expression pedal or other controller that generates a consecutive change in the value, the value of the setting changes accordingly, within the range set by the minimum and maximum values. Also, when the target is of an on/off type, the median value of the received data is used as the dividing line in determining whether to switch it on or off.

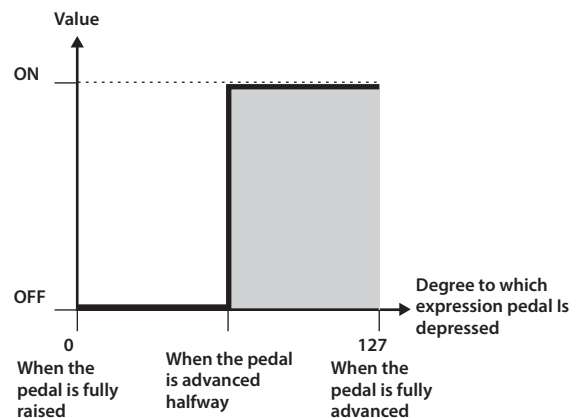
When using the footswitch:



When using the expression pedal:



When controlling the On/Off target with the expression pedal:



* The range that can be selected changes according to the target setting.

* When the "minimum" is set to a higher value than the "maximum," the change in the parameter is reversed.

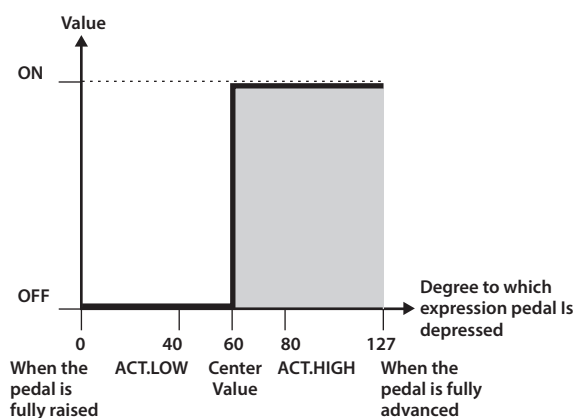
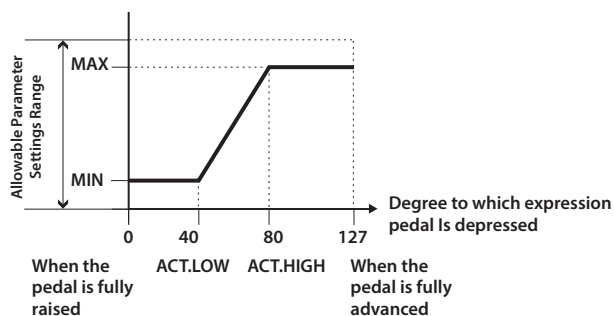
* The values of settings can change if the target is changed after the "minimum" and "maximum" settings have been made. If you've changed the target, be sure to recheck the "minimum" and "maximum" settings.

About the Range of a Controller's Change

This sets the operational range within which the value of the setting changes when an expression pedal or other controller that changes the value consecutively is used as the source.

If the controller is moved outside the operational range, the value does not change, it stops at "minimum" or "maximum."

(Example) With ACT.LOW: 40, ACT.HIGH: 80




* When using a footswitch or other on/off switching controller as the source, leave these at "ACT.LOW: 0" and "ACT.HIGH: 127." With certain settings, the value may not change.

PATCH MIDI 1–4

Here you can specify the MIDI messages that are transmitted when you switch patches.

When the Patch MIDI screen is displayed, pressing the [ON/OFF] button transmits all of the MIDI messages that are assigned in Patch MIDI 1–8.

Parameter	Value	Explanation
CH	OFF, 1–16	Specifies the transmit channel for MIDI messages. If this is OFF, no MIDI messages are transmitted. The icon changes from  to OFF .
BANK LSB BANL MSB		Specifies whether bank select messages are transmitted when you switch patches. * It is not possible to turn on only Bank LSB. * Not transmitted if PC is OFF. * It is not possible to transmit only bank select. Bank select is always transmitted in conjunction with program change.
	OFF	Not transmitted.
	0–127	The specified value is transmitted.
PC		Specifies whether a program change is transmitted when you switch patches.
	OFF	Not transmitted.
	1–128	The specified value is transmitted.
CC1 NUM CC2 NUM		Specifies whether a control change is transmitted when you switch patches.
	OFF	Not transmitted.
	0–127	The specified control change is transmitted.
CC1 VAL CC2 VAL	0–127	Specifies the value of the control change.

MENU

DISPLAY



Here you can adjust the brightness of the characters in the display.

Parameter	Value	Explanation
CONTRAST	1–16	Higher values increase the brightness.

GLOBAL (GLOBAL EQ)



This adjusts the tone of the OUTPUT regardless of the equalizer on/off settings of individual patches.

Parameter	Value	Explanation
LOW GAIN	-20–+20 dB	Adjusts the low frequency range tone.
MID GAIN	-20–+20 dB	Adjusts the middle frequency range tone.
HIGH GAIN	-20–+20 dB	Adjusts the high frequency range tone.
MID FREQ (MID FREQUENCY)	20.0 Hz–10.0 kHz	Specifies the center of the frequency range that will be adjusted by the MID GAIN.
MID Q	0.5–16	Adjusts the width of the area affected by the EQ centered at the MID FREQ. Higher values will narrow the area.
EQ LVL (EQ LEVEL)	-20–+20 dB	Adjusts the GLOBAL EQ level.

PLAY (PLAY OPTION)



Here you can specify what happens when you operate the pedals or switches while performing, the range of banks that are used, and whether the beat indicator is shown.

Parameter	Value	Explanation
EXP1 HLD (EXP1 PEDAL HOLD) EXP2 HLD (EXP2 PEDAL HOLD)	OFF	When you switch patches, the state of FUNCTION operations for EXP 1 and EXP 2 is not applied.
	ON	When you switch patches, the state of FUNCTION operations for EXP 1 and EXP 2 is applied if the state is the same as for the previous patch. For example, if the FUNCTION of EXP 1 is FOOT VOLUME for both the previous patch and the newly selected patch, the pedal position at the moment the patch was switched will continue to control the volume after the patch is switched.
SW MODE (SWITCH MODE)	Specifies the timing at which the bank or patch is changed when you operate the switch. * This is valid only for NUM 1–4 in memory mode.	
	PUSH	The change happens when you press the switch.
	RELEASE	The change happens when you release the switch.
BNK.CNG (BANK CHANGE MODE)	Specifies how patches are switched.	
	WAIT	Although the indication in the display is updated to reflect the change in the bank, the patch will not change until a number switch has been pressed.
	IMMED (IMMEDIATE)	The patch changes immediately when you change banks. (Example) 01-1 → 02-1, 01-3 → 02-3

Parameter	Value	Explanation
BNK.MIN (BANK EXTENT MIN) BNK.MAX (BANK EXTENT MAX)	(MIN) 01–50 (MAX) 01–50	Specify the lower and upper limit of the banks that can be selected. Only the specified range of banks are available for selection.
1+2 (press simultaneously NUM1+NUM2)	OFF, BANK DOWN	Specifies whether bank-down occurs when you press number switches [1] and [2] simultaneously. * Valid only in memory mode.
2+3 (press simultaneously NUM2+NUM3)	OFF, TUNER	Specifies whether tuner on/off occurs when you press number switches [2] and [3] simultaneously. * Valid only in memory mode.
3+4 (press simultaneously NUM3+NUM4)	OFF, BANK UP	Specifies whether bank-up occurs when you press number switches [3] and [4] simultaneously. * Valid only in memory mode.
BEAT LED (BEAT INDICATOR)	OFF, ON	If this is ON, the MEMORY/MANUAL indicator blinks in time with the BPM setting. The indicator blinks blue in memory mode, and blinks red in manual mode.

CTL OUT (CTL OUT MODE SETTING)



Specifies the operation of the CTL OUT 1/2 jacks.

Parameter	Value	Explanation	
1 MODE (CTL OUT1 MODE) 2 MODE (CTL OUT2 MODE)	LAT (LATCH)	Latch operation	
	PLS (PULSE)	Send a pulse when changing patches.	
	INV (INVERT)	PLS	
		INV	
	TAP2	Turns on/off twice at the Master BPM setting when the patch changes.	
	TAP3	Turns on/off three times at the Master BPM setting when the patch changes	
TAP4	Turns on/off four times at the Master BPM setting when the patch changes		

Knob (Knob Setting)



Here you can assign the desired parameters to knobs [1]–[3] in the play screen.

* The settings you make here are only for the knobs in the play screen.

Parameter	Value	Explanation
Knob 1–Knob 3		
OFF	OFF	No assignment.
PATCH	PATCH	Change patches.
MASTER BPM	BPM	Changes the MASTER BPM.
MASTER KEY	KEY	Changes the MASTER KEY.
PATCH LEVEL	PATCH LVL	Adjusts the patch level.
MASTER EQ LOW GAIN	M.EQ:LG	Adjusts the MASTER EQ LOW GAIN.
MASTER EQ MID GAIN	M.EQ:MG	Adjusts the MASTER EQ MID GAIN.
MASTER EQ MID FREQUENCY	M.EQ:MF	Adjusts the MASTER EQ MID FREQUENCY.
MASTER EQ MID Q	M.EQ:MQ	Adjusts the MASTER EQ MID Q.
MASTER EQ HIGH GAIN	M.EQ:HG	Adjusts the MASTER EQ HIGH GAIN.
MASTER SOLO SW	M.SOLO SW	Switches the MASTER SOLO SW on/off.
MASTER SOLO LEVEL	M.SOLO LVL	Adjusts the volume when master solo is on.
OUTPUT SELECT	OUTSEL.	Switches the output setting of the OUTPUT L/MONO jack and R jack.
CTLOUT1	CTLOUT1	Changes the control signal setting for CTL 1 of the CTL OUT jack. The control signal that can be selected depends on the CTL OUT MODE SETTING in MENU.
CTLOUT2	CTLOUT2	Changes the control signal setting for CTL 2 of the CTL OUT jack. The control signal that can be selected depends on the CTL OUT MODE SETTING in MENU.
GLOBAL EQ LOW GAIN	G.EQ:LG	Adjusts the GLOBAL EQ LOW GAIN.
GLOBAL EQ MID GAIN	G.EQ:MG	Adjusts the GLOBAL EQ MID GAIN.
GLOBAL EQ MID FREQUENCY	G.EQ:MF	Adjusts the GLOBAL EQ MID FREQUENCY.
GLOBAL EQ MID Q	G.EQ:MQ	Adjusts the GLOBAL EQ MID Q.
GLOBAL EQ HIGH GAIN	G.EQ:HG	Adjusts the GLOBAL EQ HIGH GAIN.
GLOBAL EQ LEVEL	G.EQ:LVL	Adjusts the GLOBAL EQ LEVEL.
FOOT VOLUME LEVEL	FV:LVL	Adjusts the FOOT VOLUME LEVEL.
BEAT INDICATOR	BEAT LED	Switches the BEAT INDICATOR on/off.
MEMORY/MANUAL	M/M	Switches between memory mode and manual mode.

MIDI (MIDI Setting)



Specifies whether MIDI clock messages are transmitted from the MIDI OUT connector.

Parameter	Value
CLK OUT (CLOCK OUT)	OFF, ON

PREF (Preference)



Here you can specify whether the settings for the switches, external footswitches, and external expression pedals of the MS-3, and the OUTPUT SELECT and BPM settings, will use separate settings for each patch, or whether the same settings will be shared by all patches.

Parameter	Value	Explanation
NUM1 (NUMBER 1 SW)	PATCH, SYSTEM	Operation of number switch [1] in manual mode
NUM2 (NUMBER 2 SW)		Operation of number switch [2] in manual mode
NUM3 (NUMBER 3 SW)		Operation of number switch [3] in manual mode
NUM4 (NUMBER 4 SW)		Operation of number switch [4] in manual mode
M/M (MEMORY/MANUAL SW)		Operation of [MEMORY/MANUAL] switch
CURNUM (CURRENT NUMBER SW)		Operation when the currently selected number switch is operated in memory mode (Example) Operation of number switch [1] when 01-1 is selected
EXP1		Operation when the expression pedal connected to EXP 1 of the CTL IN jacks is operated
EXP2		Operation when the expression pedal connected to EXP 2 of the CTL IN jacks is operated
CTLIN1		Operation when the expression pedal connected to CTL 1 of the CTL IN jacks is operated
CTLIN2		Operation when the expression pedal connected to CTL 2 of the CTL IN jacks is operated
CTLIN3		Operation when the expression pedal connected to CTL 3 of the CTL IN jacks is operated
CTLIN4		Operation when the expression pedal connected to CTL 4 of the CTL IN jacks is operated
OUTPUTSEL (OUTPUT SELECT)		How sound is output from the OUTPUT L/MONO jack and R jack
BPM		MASTER BPM

AUTO OFF



The MS-3 can turn off its power automatically. The power will turn off automatically when 10 hours have passed since you last played or operated the unit. The display will show a message approximately 15 minutes before the power turns off.

With the factory settings, this function is turned "ON" (power-off in 10 hours). If you want to have the power remain on all the time, turn it "OFF."

* When the power is turned off, any settings you were editing will be lost. You must save settings that you want to keep.

Parameter	Value	Explanation
AUTO OFF	OFF	The power will not turn off automatically.
	ON	The power will automatically turn off when 10 hours have passed since you last played or operated the MS-3.

F.RESET (FACTORY RESET)



Initializes the MS-3 to its factory-set condition. Refer to "Restoring the Factory Settings."

Parameter	Value	Explanation
FROM	SYSTEM	System parameter settings
	01-1-50-4	Settings for patch numbers 01-1-50-4
TO	SYSTEM	System parameter settings
	01-1-50-4	Settings for patch numbers 01-1-50-4

Other Settings

TUNER

In the tuner screen, you can operate knob [1] and knob [3] to set the following parameters.



[1] knob

Parameter	Value	Explanation
PITCH	435 Hz-445 Hz	Specifies the reference pitch.

[3] knob

Parameter	Value	Explanation
OUTPUT	MUTE	Sound will not be output while tuning.
	BYPASS	While tuning, the sound of the guitar being input to the MS-3 will be output without change. All effects will be off.
	THRU	Allows you to tune while hearing the current effect sound.

Patch List

* "NUM1"-"NUM4" are the parameters that are assigned in manual mode. "CURRENT NUMBER" is the parameter that are assigned in memory mode.

No.	Patch name	Explanation	NUM1	NUM2	NUM3	NUM4	CURRENT NUMBER	EXP1
01-1	NATURAL CLEAN	A warm clean sound with COMP, ANALOG DELAY, and REVERB. In manual mode, turn L1 on to use with a distortion pedal of your choice, or turn CHORUS on to add spaciousness.	L1: OFF ↔ ON	L2: OFF ↔ ON	MOD1 (CHORUS): OFF ↔ ON	DLY (ANALOG): ON ↔ OFF	-	FOOT VOLUME
01-2	LOOPS->MID BOOST	A sound with light REVERB on L1. In manual mode, you can turn L1-L3 on/off directly. NUM4 turns on/off the MID BOOST EQ with FX1 and FX2 combined. In memory mode, the selected number switch for this patch (CURRENT NUMBER) turns on MID BOOST EQ, FX1, and FX2.	L1: ON ↔ OFF	L2: OFF ↔ ON	L3: OFF ↔ ON	FX1 (P. EQ): OFF ↔ ON FX2 (P. EQ): OFF ↔ ON	FX1 (P. EQ): OFF ↔ ON FX2 (P. EQ): OFF ↔ ON	FOOT VOLUME
01-3	SLAPBACK ECHO	A slapback sound with CRUNCH and TAPE ECHO. In manual mode, you can add MID BOOSTER and SPRING REVERB.	FX1 (OD/DS): ON ↔ OFF	FX2 (OD/DS): OFF ↔ ON	DLY (TAPE): ON ↔ OFF	REV (SPRING): OFF ↔ ON	-	FOOT VOLUME
01-4	PHASE DLY COMBO	A sound with DELAY, DUAL-P DELAY, and PHASER in sync with BPM. In manual mode, NUM1 works to turn FLANGER on for additional modulation, and NUM4 functions to tap the master BPM.	MOD1 (FLANGER): OFF ↔ ON	FX1 (SUB DELAY): ON ↔ OFF	MOD2 (PHASER): ON ↔ OFF	BPM TAP	BPM TAP	FOOT VOLUME
02-1	CHORUS CRUNCHY	A lead sound with COMP, CRUNCH, and CHORUS. In manual mode, you can add DELAY.	FX1 (COMP): ON ↔ OFF	FX2 (OD/DS): ON ↔ OFF	MOD1 (CHORUS): ON ↔ OFF	DLY (SINGLE): OFF ↔ ON	-	FOOT VOLUME
02-2	SIMPLE RIG	A straight pop-rock guitar sound with GUV DS and ROOM REVERB. In manual mode, NUM2 increases the DRIVE amount for lead sound, and NUM3 adds DELAY.	FX1 (OD/DS): ON ↔ OFF	LED: OFF ↔ ON FX1 (OD/DS): DRIVE DOWN ↔ UP	DL (SINGLE): OFF ↔ ON	REV (ROOM): ON ↔ OFF	-	FOOT VOLUME
02-3	DIRTY FLT SPACE	A lead sound with T. WAH, which responds to your picking nuance, and MUFF FUZZ. Subtle modulation is added by MODULATE DELAY.	FX1 (OD/DS): ON ↔ OFF	FX2 (T. WAH): ON ↔ OFF	MOD1 (CHORUS): OFF ↔ ON	DLY (MODULATE): ON ↔ OFF	-	FOOT VOLUME
02-4	TWISTED	A modulated drive sound often used in jazz-funk or jam bands. PHASER and 2X2 CHORUS are synced to BPM. In memory mode, the selected number switch for this patch (CURRENT NUMBER) functions to tap the master BPM. In manual mode, NUM4 functions to tap the master BPM as well. Also, NUM4 turns on PITCH SHIFTER for more intense modulation.	FX1 (OD/DS): ON ↔ OFF	FX2 (PITCH SHIFTER): OFF ↔ ON	MOD1 (2X2 CHORUS): ON ↔ OFF	BPM TAP	BPM TAP	FOOT VOLUME
03-1	FLYBY CHORUS	A deep and spacious sound with the combination of multiple DELAY and CHORUS.	FX1 (SUB DELAY): ON ↔ OFF	FX2 (SUB DELAY): ON ↔ OFF	MOD1 (CHORUS): ON ↔ OFF	DLY (TAPE): ON ↔ OFF	-	FOOT VOLUME
03-2	PHASE CRUNCH	A crunch sound with modulation, ideal for rhythm guitar. In manual mode, NUM1 varies the sound by adding OD/DS before PHASER.	FX1 (OD/DS): OFF ↔ ON	MOD1 (PHASER): ON ↔ OFF	MOD2 (CHORUS): OFF ↔ ON	DLY (TAPE): OFF ↔ ON	-	FOOT VOLUME
03-3	ROUND & ROUND	A sound with SLOW GEAR and ROTARY. In manual mode, you can vary the sound by adding another SLOW GEAR.	FX1 (SLOW GEAR): ON ↔ OFF	FX2 (SLOW GEAR): OFF ↔ ON	MOD1 (ROTARY): ON ↔ OFF	DLY (SINGLE): ON ↔ OFF	-	FOOT VOLUME
03-4	FUNK RHYTHM	An ideal clean sound for soul or funk style rhythm guitar. In manual mode, you can add AUTO WAH, CHORUS, and ANALOG DELAY.	FX2 (AUTO WAH): OFF ↔ ON	MOD1 (PHASER): ON ↔ OFF	MOD2 (CHORUS): OFF ↔ ON	DLY (ANALOG): OFF ↔ ON	-	FOOT VOLUME
04-1	ROCK YOU LUV L1	Connect a distortion pedal to L1 to cover from rhythm to lead tone with your choice of distortion. In manual mode, NUM1 turns on S-BEND, and NUM4 turns DELAY and MASTER SOLO on simultaneously. In memory mode, the selected number switch for this patch (CURRENT NUMBER) turns DELAY and MASTER SOLO on.	FX1 SOLO/TRIGGER: OFF ↔ ON	L1: ON ↔ OFF	MOD1 (PHASER): ON ↔ OFF	MASTER SOLO: OFF ↔ ON DLY (SINGLE): OFF ↔ ON	MASTER SOLO: OFF ↔ ON DLY (SINGLE): OFF ↔ ON	FOOT VOLUME
04-2	MOON & OCEAN	An ideal sound for arpeggios with a dreamlike soundscape by two BPM-synchronized DUAL-P DELAYS units with different DELAY TIME settings. In manual mode, NUM2 turns L2 on for lead sound with you favorite distortion pedal, and NUM4 functions to tap the master BPM to control the two synchronized DELAYS. In memory mode, the selected number switch for this patch (CURRENT NUMBER) turns L1 on.	FX1 (COMP): ON ↔ OFF	L1: OFF ↔ ON	MOD1 (CHORUS): ON ↔ OFF	BPM TAP	L1: OFF ↔ ON	FOOT VOLUME
04-3	TREMOLO MOD DLY	A sound with COMP, TREMOLO, and MODULATE DELAY. In manual mode, NUM2 turns PHASER on to add more intense modulation.	FX1 (COMP): ON ↔ OFF	MOD2 (PHASER): OFF ↔ ON	MOD1 (TEREMOLO): ON ↔ OFF	DLY (MODULATE): ON ↔ OFF	-	FOOT VOLUME
04-4	TRIPLE BPM DELAY	A delay sound with three types of delay (eighth note, dotted eighth note, quarter note). You can use this in conjunction with a pedal of your choice connected to L1. In memory mode, the selected number switch for this patch (CURRENT NUMBER) functions to tap the master BPM. In manual mode, NUM4 functions to tap the master BPM as well.	FX1 (SUB DELAY): ON ↔ OFF	FX2 (SUB DELAY): ON ↔ OFF	DLY (SINGLE): ON ↔ OFF	BPM TAP	BPM TAP	FOOT VOLUME
05-1	L1+L2+L3+DELAY	A setting to combine pedals connected to L1/L2/L3 with delay. In manual mode, you can switch each pedal on/off individually.	L1: ON ↔ OFF	L2: ON ↔ OFF	L3: ON ↔ OFF	DLY (SINGLE): ON ↔ OFF	-	FOOT VOLUME

No.	Patch name	Explanation	NUM1	NUM2	NUM3	NUM4	CURRENT NUMBER	EXP1
05-2	BOOST+L1+CHO+DLY	A sound with a pedal connected to L1 with BOOSTER, CHORUS, and DELAY. In memory mode, the selected number switch for this patch (CURRENT NUMBER) turns on/off the BOOSTER that's located before L1.	FX1 (OD/DS): OFF ↔ ON	L1: ON ↔ OFF	MOD2 (CHORUS): ON ↔ OFF	DLY (ANALOG): ON ↔ OFF	FX1 (OD/DS): OFF ↔ ON	FOOT VOLUME
05-3	L1+CHO+BPM DLY	A sound with a pedal connected to L1 with CHORUS and BPM-synchronized DELAY. In memory mode, the selected number switch for this patch (CURRENT NUMBER) functions to tap the master BPM. In manual mode, NUM4 functions to tap the master BPM as well.	L1: ON ↔ OFF	MOD2 (CHORUS): ON ↔ OFF	DLY (SINGLE): ON ↔ OFF	BPM TAP	BPM TAP	FOOT VOLUME
05-4	L1+BPM DLY x2	A sound with a pedal connected to L1 with two types of BPM-synchronized DELAY (dotted eighth note, quarter note). In memory mode, the selected number switch for this patch (CURRENT NUMBER) functions to tap the master BPM. In manual mode, NUM4 functions to tap the master BPM as well.	L1: ON ↔ OFF	FX2 (SUB DELAY): ON ↔ OFF	DLY (SINGLE): ON ↔ OFF	BPM TAP	BPM TAP	FOOT VOLUME
06-1	Djenty L2&L3	A Djenty-type sound perfect for drop tunings. T-Scream for FX1 is used as a booster, and METAL DS is selected for FX2. NS before FX2 makes the sound well-defined. In manual mode, use NUM1 to switch FX1 ↔ L2, and NUM2 to switch FX2 ↔ L3, letting you combine the distortion pedal of your choice.	L2: OFF ↔ ON FX1 (OD/DS): ON ↔ OFF	L3: OFF ↔ ON FX2 (OD/DS): ON ↔ OFF	MOD1 (CHORUS): OFF ↔ ON	DLY (SINGLE): OFF ↔ ON REV (ROOM): OFF ↔ ON	-	FOOT VOLUME
06-2	PROGRESSIVE AMBI	A clean sound that creates a floating sensation while preserving the outline of the notes. This is not an extreme ambient sound; rather, it blends naturally into the song.	FX1 (COMP): ON ↔ OFF	MOD1 (CHORUS): ON ↔ OFF	MOD2 (PHASER): ON ↔ OFF	REV (AMBI): ON ↔ OFF	-	FOOT VOLUME
06-3	DREAM LEAD L1	A smooth high-gain lead sound. In manual mode, switches between FX2 (OD/DS)'s LEAD DS and L1 for a distortion pedal of your choice.	FX1 (COMP): ON ↔ OFF	FX2 (OD/DS): ON ↔ OFF L1: OFF ↔ ON	MOD2 (CHORUS): ON ↔ OFF	DLY (SINGLE): ON ↔ OFF	-	FOOT VOLUME
06-4	FILTER LEAD L1	A lead sound with extreme T. WAH. Connecting a distortion pedal of your choice to L1 is recommended.	FX1 (T.WAH): ON ↔ OFF	FX2 (COMP): ON ↔ OFF	MOD1 (CHORUS): ON ↔ OFF	DLY (SINGLE): OFF ↔ ON	-	FOOT VOLUME
07-1	AC.SIM for Hum	An acoustic guitar sound simulation for humbucking pickups. In manual mode, you can use CHORUS and DELAY for wider soundscape.	FX1 (AC.SIM): ON ↔ OFF	FX2 (P. EQ): ON ↔ OFF	MOD1 (CHORUS): OFF ↔ ON	DLY (SINGLE): OFF ↔ ON	-	FOOT VOLUME
07-2	AC.SIM for Single	An acoustic guitar sound simulation for single coil pickups. In manual mode, you can use BASS FLANGER, CHORUS, and DELAY for wider soundscape.	MOD1 (B.FLANGER): OFF ↔ ON	MOD2 (CHORUS): OFF ↔ ON	REV (PLATE): ON ↔ OFF	DLY (SINGLE): OFF ↔ ON	-	FOOT VOLUME
07-3	A-HOLLOW for Hum	An authentic hollow-body jazz guitar sound. Using a front humbucking pickup is recommended. In manual mode, you can add DELAY, BOOST, and PHASER to add a contemporary atmosphere.	LED: OFF ↔ ON REV E.LEVEL: 15 ↔ 45	LED: OFF ↔ ON FX2 OD/DS TYPE: MID BOOST ↔ RAT	MOD1 (PHASER): OFF ↔ ON	BPM TAP	-	FOOT VOLUME
07-4	C-HOLLOW for Hum	Provides a fat and sweet contemporary jazz guitar sound. Using a front humbucking pickup is recommended. In manual mode, you can add solo boost, REVERSE DELAY, and PHASER to create a more aggressive sound.	MASTER SOLO: OFF ↔ ON	LED: OFF ↔ ON DLY E.LEVEL: 30 ↔ 65	MOD1 (CHORUS): OFF ↔ ON	BPM TAP	-	FOOT VOLUME
08-1	EDGE DELAY	A sound with BPM-synchronized TREMOLO, DELAY, and MODULATE DELAY. In memory mode, the selected number switch for this patch (CURRENT NUMBER) functions to tap the master BPM.	FX1 (COMP): ON ↔ OFF	FX2 (SUB DELAY): ON ↔ OFF	MOD1 (TEREMOLO): ON ↔ OFF	DLY (MODULATE): ON ↔ OFF	BPM TAP	FOOT VOLUME
08-2	EDGE ROTARY	A sound with T-SCREAM, ROTARY, SPRING REVERB, and MODULATE DELAY. The SPRING REVERB effect responds to your picking nuance.	FX1 (OD/DS): ON ↔ OFF	MOD1 (ROTARY): ON ↔ OFF	REV (SPRING): ON ↔ OFF	DLY (MODULATE): ON ↔ OFF	-	FOOT VOLUME
08-3	EDGE MOD DELAY	A sound with RAT, PHASER, AMBIENCE REVERB, and MODULATE DELAY. In manual mode, switches between RAT and L1. In memory mode, the selected number switch for this patch (CURRENT NUMBER) switches between RAT and L1.	FX1 (OD/DS): ON ↔ OFF L1: OFF ↔ ON	L1: OFF ↔ ON FX1 (OD/DS): ON ↔ OFF	MOD1 (PHASER): ON ↔ OFF	DLY (MODULATE): ON ↔ OFF	L1: OFF ↔ ON FX1 (OD/DS): ON ↔ OFF	FOOT VOLUME
08-4	SLOW GEAR + ECHO	A strings-type sound with SLOW GEAR to suppress the attack of notes. In manual mode, NUM2 adds OVERTONE to create a sound with an extended range.	FX1 (SLOW GEAR): ON ↔ OFF	FX2 (OVERTONE): OFF ↔ ON	MOD1 (PHASER): OFF ↔ ON	DLY (MODULATE): ON ↔ OFF	-	FOOT VOLUME
09-1	ORGANIST	A patch that simulates organ sound. In memory mode, the selected number switch for this patch (CURRENT NUMBER) switches the SPEED of ROTARY. In manual mode, use NUM3 to turn L1 on, combining organ sound with a distortion pedal of your choice.	FX1 (OVERTONE): ON ↔ OFF	MOD1 (ROTARY): ON ↔ OFF	LED: OFF ↔ ON MOD1 ROTARY SPEED: SLOW ↔ FAST	DLY (MODULATE): ON ↔ OFF	-	FOOT VOLUME
09-2	E-SITAR SIMULATE	A sound reminiscent of an electric sitar. This works with both single notes and chords.	FX1 (SITAR SIM): ON ↔ OFF	FX2 (LIMITER): ON ↔ OFF	MOD1 (CHORUS): OFF ↔ ON	DLY (SINGLE): OFF ↔ ON	-	FOOT VOLUME

No.	Patch name	Explanation	NUM1	NUM2	NUM3	NUM4	CURRENT NUMBER	EXP1
09-3	EASTERN VIBE	An oriental sound reminiscent of the Chinese erhu. In memory mode, the selected number switch for this patch (CURRENT NUMBER) applies vibrato while you hold down the number switch, adding expression to your performance.	MOD1 (ROTARY): OFF ↔ ON	L1: OFF ↔ ON	MOD2 (VIBRATO): OFF ↔ ON	BPM TAP	MOD2 (VIBRATO): OFF ↔ ON	FOOT VOLUME
09-4	FRETLESS BALLAD	A sound reminiscent of the fretless guitar. Using the rear pickup is recommended. In manual mode, you can also add OVERTONE and ROTARY to produce an organ-type sound.	FX2 (OVERTONE): OFF ↔ ON	MOD1 (ROTARY): OFF ↔ ON	MOD2 (CHORUS): ON ↔ OFF	DLY (TAPE): ON ↔ OFF	–	FOOT VOLUME
10-1	EXP1 PEAL BEND	A lead sound with PEDAL BEND and WARM OD. An expression pedal connected to the EXP 1 of the CTL IN jacks can be used to operate PEDAL BEND. If you turn FX1 off, the expression pedal acts as FOOT VOLUME.	FX1 (PEDAL BEND): ON ↔ OFF	FX2 (OD/DS): ON ↔ OFF	MOD1 (PHASER): OFF ↔ ON	DLY (SINGLE): ON ↔ OFF	–	FX1:W/P/F
10-2	EXP1 WAH	A lead sound with WAH and OD/DS CRUNCH. An expression pedal connected to the EXP 1 of the CTL IN jacks can be used to operate WAH. If you turn FX1 off, the expression pedal acts as FOOT VOLUME.	FX1 (WAH): ON ↔ OFF	FX2 (OD/DS): ON ↔ OFF	MOD1 (PHASER): OFF ↔ ON	DLY (ANALOG): OFF ↔ ON	–	FX1:W/P/F
10-3	EXP1 SPACY LEAD	A sound with PEDAL BEND, L1, TERA ECHO, and ROOM REVERB. An expression pedal connected to the EXP 1 of the CTL IN jacks can be used to operate PEDAL BEND. If you turn FX1 off, the expression pedal acts as FOOT VOLUME.	FX1 (PEDAL BEND): ON ↔ OFF	L1: ON ↔ OFF	MOD1 (CHORUS): OFF ↔ ON	DLY (TERA ECHO): ON ↔ OFF	–	FX1:W/P/F
10-4	SLICED MIX	A sound with SLICER, DELAY, CHORUS, and periodically varying PITCH SHIFTER all in synchronization with BPM. In memory mode, the selected number switch for this patch (CURRENT NUMBER) functions to tap the master BPM. In manual mode, NUM4 functions to tap the master BPM as well.	FX1 (PITCH SHIFTER): ON ↔ OFF	MOD1 (SLICER): ON ↔ OFF	DLY (MODULATE): ON ↔ OFF	BPM TAP	BPM TAP	FOOT VOLUME
11-1	CLEAN FEEDBACK	A patch that creates feedback sound even with clean sound. In memory mode, the selected number switch for this patch (CURRENT NUMBER) turns on the TRIGGER of FEEDBACKER while you hold down the number switch, sustaining the feedback sound. In manual mode, use NUM2 to perform the same operation.	FX1 (COMP): ON ↔ OFF	FX2 SOLO/TRIGGER: OFF ↔ ON	MOD1 (CHORUS): OFF ↔ ON	DLY (SINGLE): OFF ↔ ON	FX2 SOLO/TRIGGER: OFF ↔ ON	FOOT VOLUME
11-2	WARP TIME	A patch that overlays delay sounds to produce a dreamlike impression. In memory mode, the selected number switch for this patch (CURRENT NUMBER) turns on the TRIGGER of WARP while you hold down the number switch, layering successive delay sounds. In manual mode, use NUM2 to perform the same operation. You can also use NUM1 to turn SITAR SIM on for variety.	FX1 (SITAR SIM): OFF ↔ ON	FX2 SOLO/TRIGGER: OFF ↔ ON	MOD1 (CHORUS): ON ↔ OFF	DLY (SINGLE): OFF ↔ ON	FX2 SOLO/TRIGGER: OFF ↔ ON	FOOT VOLUME
11-3	GREAT WIDE OPEN	A spacious sound with MODULATE DELAY, MODULATE REVERB, and CHORUS. This patch lets you use PAN to vary the stereo position of the sound. Using a stereo connection is recommended.	FX1 (G.EQ): ON ↔ OFF	FX2 (COMP): ON ↔ OFF	MOD1 (CHORUS): ON ↔ OFF	DLY (MODULATE): ON ↔ OFF	–	FOOT VOLUME
11-4	SKY AMBIENCE	An ambient-type sound with LIMITER for consistent volume, and fairly deep REVERB and DELAY. It is recommended for arpeggios.	FX1 (LIMITER): ON ↔ OFF	FX2 (SUB DELAY): ON ↔ OFF	MOD1 (CHORUS): ON ↔ OFF	DLY (SINGLE): ON ↔ OFF	–	FOOT VOLUME
12-1	AUTO VOL DELAY	By placing BPM-synchronized TREMOLO before DELAY, this patch automatically varies the level of the signal that is sent to DELAY. In memory mode, the selected number switch for this patch (CURRENT NUMBER) functions to tap the master BPM.	FX1 (SUB DELAY): ON ↔ OFF	FX2 (SUB DELAY): ON ↔ OFF	MOD1 (TEREMOLO): ON ↔ OFF	DLY (TAPE): ON ↔ OFF	BPM TAP	FOOT VOLUME
12-2	DIAMOND ECHO	By combining MODULATE DELAY and MODULATE REVERB, this patch creates a sound with distinctive modulation character.	MOD1 (CHORUS): OFF ↔ ON	MOD2 (PHASER): OFF ↔ ON	DLY (MODULATE): ON ↔ OFF	REV (MODULATE): ON ↔ OFF	–	FOOT VOLUME
12-3	CLEAN DLY WALL	Although this sound combines multiple CHORUS and DELAYS, it's a patch that adjusts the FEEDBACK amount and EQ CUT so that it won't get in the way of your performance.	FX1 (SUB DELAY): ON ↔ OFF	FX2 (SUB DELAY): ON ↔ OFF	MOD1 (CHORUS): ON ↔ OFF	DLY (ANALOG): ON ↔ OFF	–	FOOT VOLUME
12-4	DEEP SIX	This patch starts with SUB DELAY and SLOW GEAR to create gentle ambience, and then applies four types of modulation: CHORUS, PHASER, MODULATE DELAY, and MODULATE REVERB. The RATE is set differently for each effect, generating a mysterious modulation.	FX1 (SLOW GEAR): ON ↔ OFF	FX2 (SUB DELAY): ON ↔ OFF	MOD1 (CHORUS): ON ↔ OFF	BPM TAP	–	FOOT VOLUME
13-1	CLEAN LEAD	A clean sound for melodies or for lead guitar. In manual mode, use NUM2 to add NATURAL OD for a lead sound. You can also use NUM3 to add CHORUS and create spaciousness.	FX1 (COMP): ON ↔ OFF	FX2 (OD/DS): OFF ↔ ON	MOD1 (CHORUS): OFF ↔ ON	DLY (TAPE): ON ↔ OFF	–	FOOT VOLUME

No.	Patch name	Explanation	NUM1	NUM2	NUM3	NUM4	CURRENT NUMBER	EXP1
13-2	CLEAN RHYTHM	A clean sound for rhythm, with light COMPRESSOR. In manual mode, you can add T. WAH, PHASER, CHORUS, and DELAY to get a sound that suitable for various genres.	FX2 (T.WAH): OFF ↔ ON	MOD1 (PHASER): OFF ↔ ON	MOD2 (CHORUS): OFF ↔ ON	DLY (SINGLE): OFF ↔ ON	-	FOOT VOLUME
13-3	BRIGHT ARPEGGIO	An appropriate clean sound for arpeggios. In manual mode, you can use NUM1 to apply FLANGER, adding deep modulation.	MOD1 (FLANGER): OFF ↔ ON	MOD2 (CHORUS): ON ↔ OFF	DLY (TAPE): ON ↔ OFF	REV (PLATE): ON ↔ OFF	-	FOOT VOLUME
13-4	FAT DS DRIVE	A responsive drive sound. In manual mode, you can use NUM4 to turn DLY on while simultaneously turning on the SOLO SW of FX1 OD/DS, for a sound that's ideal for soloing.	FX1 (OD/DS): ON ↔ OFF	MOD1 (PHASER): OFF ↔ ON	MOD2 (FLANGER): OFF ↔ ON	DLY (ANALOG): OFF ↔ ON FX1 (OD/DS): SOLO OFF ↔ ON	-	FOOT VOLUME
14-1	NATURAL CRUNCH	An ideal crunch sound for rhythm guitar. In manual mode, you can add TREMOLO, CHORUS, and ANALOG DELAY, and use NUM1 to apply MID BOOST.	FX1 (OD/DS): OFF ↔ ON	MOD1 (TEREMOLO): OFF ↔ ON	MOD2 (CHORUS): OFF ↔ ON	DLY (ANALOG): OFF ↔ ON	-	FOOT VOLUME
14-2	GIUITAR SLAP&TAP	An ideal sound for both slapping and tapping on guitar. A clearly-defined sound with COMP and OD/DS which is set to LOW GAIN.	FX1 (COMP): ON ↔ OFF	FX2 (OD/DS): ON ↔ OFF	MOD1 (CHORUS): OFF ↔ ON	DLY (ANALOG): OFF ↔ ON	-	FOOT VOLUME
14-3	LoFi DRIVE	A mechanical-sounding tone that sounds as though it's been down-sampled to a lower bit depth using RING MOD. In manual mode, use NUM2 to turn on the SOLO SW of OD/DS, for a sound that's ideal for soloing.	FX1 (OD/DS): ON ↔ OFF	FX1 SOLO/TRIGGER: OFF ↔ ON	MOD1 (RING MOD): ON ↔ OFF	DLY (TAPE): ON ↔ OFF	-	FOOT VOLUME
14-4	LOWRIFF-VIBE	An aggressive sound with OCTAVE, FUZZ, and UNI-V. UNI-V is synchronized to BPM. In memory mode, the selected number switch for this patch (CURRENT NUMBER) functions to tap the master BPM. In manual mode, NUM4 functions to tap the master BPM as well.	FX1 (OCTAVE): ON ↔ OFF	FX2 (OD/DS): ON ↔ OFF	MOD1 (UNI-V): ON ↔ OFF	BPM TAP	BPM TAP	FOOT VOLUME
15-1	SWITCHDS<->L1	In memory mode, the selected number switch for this patch (CURRENT NUMBER) exchanges the on/off setting of L1 simultaneously. In manual mode, use NUM1 to perform the same operation.	FX1 (OD/DS): ON ↔ OFF L1: OFF ↔ ON	MOD2 (CHORUS): OFF ↔ ON	FX2 (SUBDELAY): OFF ↔ ON	DLY (ANALOG): ON ↔ OFF	FX1 (OD/DS): ON ↔ OFF L1: OFF ↔ ON	FOOT VOLUME
15-2	PANTREM&OD<->L1	A sound with T-SCREAM, TREMOLO, PAN DELAY, and REVERB. Using a stereo connection is recommended. In manual mode, you can press NUM1 to swap T-SCREAM and L1.	FX1 (OD/DS): ON ↔ OFF L1: OFF ↔ ON	DLY (PAN): ON ↔ OFF	MOD1 (TREMOLO): ON ↔ OFF	BPM TAP	BPM TAP	FOOT VOLUME
15-3	RAVEMACHINEL1	A mixture-rock sound with AUTO WAH with a distortion pedal connected to L1.	FX1 (OVERTONE): OFF ↔ ON	FX2 (AUTO WAH): ON ↔ OFF	MOD1 (RING MOD): OFF ↔ ON	DLY (SINGLE): OFF ↔ ON	-	FOOT VOLUME
15-4	MIDBOOSTDIST	A mid-boosted distortion sound with fixed WAH. In manual mode, adds solo boost, CHORUS, and DELAY.	FX1: SOLO/TRIGGER OFF ↔ ON	FX2 (WAH): ON ↔ OFF	MOD1 (CHORUS): OFF ↔ ON	DLY (SINGLE): OFF ↔ ON	-	FOOT VOLUME
16-1	WIDEMODCLEAN	A spacious clean sound with FLANGER and CHORUS.	FX1 (COMP): ON ↔ OFF	FX2 (SUB DELAY): ON ↔ OFF	MOD1 (FLANGER): ON ↔ OFF	DLY (ANALOG): ON ↔ OFF	-	FOOT VOLUME
16-2	HARDROCKDIST	A hard rock sound that places PHASER before DISTORTION. In memory mode, the selected number switch for this patch (CURRENT NUMBER) applies FLANGER while you hold down the number switch, adding modulation.	MOD1 (PHASER): ON ↔ OFF	MOD2 (FLANGER): OFF ↔ ON	FX1 (OD/DS): ON ↔ OFF	DLY (ANALOG): ON ↔ OFF	MOD2 (FLANGER): OFF ↔ ON	FOOT VOLUME
16-3	WALLOFECHO	A shoegaze sound with deep TERA ECHO and AMBIENCE REVEB.	FX1 (OD/DS): ON ↔ OFF	FX2 (LIMITER): ON ↔ OFF	MOD1 (VIBRATO): ON ↔ OFF	DLY (TERA ECHO): ON ↔ OFF	-	FOOT VOLUME
16-4	SYNTHYWHISTLE	A synth-type sound with OVERTONE and ROTARY for "whistling" effect. In manual mode, you can use NUM3 to add SLICER for additional variety.	FX1 (OVERTONE): ON ↔ OFF	MOD1 (ROTARY): ON ↔ OFF	MOD2 (SLICER): OFF ↔ ON	DLY (TAPE): ON ↔ OFF	-	FOOT VOLUME
17-1	VIBRATIONBLUES	A sweet and bluesy drive sound that preserves the nuances of your picking. In memory mode, the selected number switch for this patch (CURRENT NUMBER) applies VIBRATO while you hold down the number switch.	FX1 (OD/DS): ON ↔ OFF	FX2 (PITCH SHIFTER): OFF ↔ ON	MOD1 (VIBRATO): OFF ↔ ON	DLY (SINGLE): OFF ↔ ON	MOD1 (VIBRATO): OFF ↔ ON	FOOT VOLUME
17-2	SPACEDEBRIS	A sound with BPM-synchronized TREMOLO, PHASER, and TAPE ECHO to create complex modulation. In memory mode, the selected number switch for this patch (CURRENT NUMBER) turns on PITCH SHIFTER while you hold down the number switch, adding brilliant and complex resonance.	FX1 (COMP): ON ↔ OFF	LED: OFF ↔ ON DLYFEEDBACK: 23 ↔ 100	FX2 (PITCH SHIFTER): OFF ↔ ON	BPMTAP	FX2 (PITCH SHIFTER): OFF ↔ ON	FOOT VOLUME
17-3	INTOTHESTONE	A sound added slightly pitch-shifted sounds by PITCH SIFTER, and applied TAPE ECHO and MODULATE REVERB. In memory mode, the selected number switch for this patch (CURRENT NUMBER) varies multiple parameters while you hold down the number switch, creating a psychedelic sound.	FX1 (PITCH SHIFTER): ON ↔ OFF	FX2 (PITCH SHIFTER): ON ↔ OFF	MOD1 (ROTARY): OFF ↔ ON	BPMTAP	DLYFEEDBACK: 25 ↔ 75 FX2 PITCH SHIFTER 1FINE: 0 ↔ +35 DLYE.LEVEL: 82 ↔ 100 REVTIME: 4.75 ↔ 10.05	FOOT VOLUME

No.	Patch name	Explanation	NUM1	NUM2	NUM3	NUM4	CURRENT NUMBER	EXP1
17-4	EXTREAMSCREAM	A roaring sound produced by applying OCT FUZZ afterwards to the REVERB at the earlier stage. In memory mode, the selected number switch for this patch (CURRENT NUMBER) produces an even more extreme scream sound while you hold down the number switch. In manual mode, use NUM2 to switch OCT FUZZ off; then use NUM1 to add a distortion pedal connected to L1, letting you experience a powerful modulation that transcends the jet sound produced by S-BEND and FLANGER.	L1: OFF ↔ ON	FX2 (OD/DS): ON ↔ OFF	REV (ROOM): ON ↔ OFF	DLY (SINGLE): ON ↔ OFF	REV TIME: 2.05 ↔ 6.05 FX15-BENDTRIGGER: OFF ↔ ON	FOOT VOLUME
18-1	CLOUDAMBIENT	An ambient sound in which SLOW GEAR, ANALOG DELAY, and TREMOLO are used to mildly modulate the entire sound. In manual mode, subtle movement and depth are added as long as you hold down NUM2 to apply DELAY.	FX1 (SLOW GEAR): ON ↔ OFF	FX2 (SUB DELAY): OFF ↔ ON	MOD1 (TEREMOLO): ON ↔ OFF	BPM TAP	-	FOOT VOLUME
18-2	FRIZZLEDUP	A sound with RING MOD and OCT FUZZ to emphasize the overtone an octave below. In memory mode, the selected number switch for this patch (CURRENT NUMBER) uses OVERTONE to raise the pitch by an octave, returning to the original pitch.	FX2 (OVERTONE): OFF ↔ ON	MOD1 (RING MOD): ON ↔ OFF	MOD2 (SLICER): OFF ↔ ON	BPM TAP	FX2 (OVERTONE): OFF ↔ ON	FOOT VOLUME
18-3	DELAYWAVE	A sound which combines REVERSE DELAY with a conventional DELAY to create a complex delay sound.	FX1 (SUB DELAY): ON ↔ OFF	FX2 (SUB DELAY): ON ↔ OFF	MOD1 (PHASER): ON ↔ OFF	DLY (REVERSE): ON ↔ OFF	-	FOOT VOLUME
18-4	GLITCHSLICE	A mechanical sound with SLOW GEAR and COMP to erase the attack, and then applies RING MOD. In memory mode, the selected number switch for this patch (CURRENT NUMBER) raises the pitch by an octave using OVERTONE, returning to the original pitch.	FX1 (SLOW GEAR): ON ↔ OFF	DLY (SINGLE): OFF ↔ ON	MOD2 (SLICER): OFF ↔ ON	BPM TAP	MOD2 (SLICER): OFF ↔ ON	FOOT VOLUME
19-1	[Ba]SCOOPSLAP	A sound suitable for slapping, in a wide range of musical genres. In memory mode, the selected number switch for this patch (CURRENT NUMBER) turns MASTER SOLO on.	FX1 (P. EQ): ON ↔ ON	FX2 (LIMITER): ON ↔ OFF	MOD1 (CHORUS): OFF ↔ ON	MASTER SOLO: OFF ↔ ON	MASTER SOLO: OFF ↔ ON	FOOT VOLUME
19-2	[Ba]FUNKYOD&L1	A sound with BASS OD, and is ideal for funk rock. In manual mode, use NUM3 to turn L1 on. You can use this in conjunction with a distortion pedal or preamp pedal of your choice that you've connected.	FX1 (BASS OD/DS): ON ↔ OFF	FX2 (G. EQ): ON ↔ OFF	L1: OFF ↔ ON	DLY (SINGLE): OFF ↔ ON	-	FOOT VOLUME
19-3	[Ba]LOUDFLT/OCT	A sound with BASS OD and T. WAH. In memory mode, the selected number switch for this patch (CURRENT NUMBER) switches T. WAH to BASS OCTAVE. In manual mode, use NUM3 to perform the same operation. Also, use NUM4 to turn MASTER SOLO on.	FX1 (BASS T. WAH): ON ↔ OFF	FX2 (BASS OD/DS): ON ↔ OFF	LED: OFF ↔ ON FX1 TYPE: BASS T. WAH ↔ BASS OCTAVE	MASTER SOLO: OFF ↔ ON	FX1 TYPE: BASS T. WAH ↔ BASS OCTAVE	FOOT VOLUME
19-4	[Ba]SLAPCHORUS	A clear sound with CHORUS lightly applied, suitable for slap.	FX1 (P. EQ): ON ↔ OFF	FX2 (LIMITER): ON ↔ OFF	MOD1 (CHORUS): ON ↔ OFF	DLY (ANALOG): OFF ↔ ON	-	FOOT VOLUME
20-1	[Ba]N.Y.STUDIO	A sound with 2X2 CHORUS, P. EQ, and CLEAN BOOST, for slapping in the style of jazz fusion.	FX1 (P. EQ): ON ↔ OFF	FX (BASS OD/DS): ON ↔ OFF	MOD1 (2X2 CHORUS): ON ↔ OFF	DLY (SINGLE): OFF ↔ ON	-	FOOT VOLUME
20-2	[Ba]DOUBLECOMP	A clean sound with two COMP units and CHORUS.	FX1 (COMP): ON ↔ OFF	FX2 (COMP): ON ↔ OFF	MOD1 (CHORUS): ON ↔ OFF	REV (MODULATE): ON ↔ OFF	-	FOOT VOLUME
20-3	[Ba]U.K.R&B	A sound with UNI-V strongly applied, suitable for British jazz funk. Fingerpicking is recommended.	FX1 (P. EQ): ON ↔ OFF	FX2 (LIMITER): ON ↔ OFF	MOD1 (UNI-V): ON ↔ OFF	DLY (SINGLE): OFF ↔ ON	-	FOOT VOLUME
20-4	[Ba]FUNKYSLAP	A sound with COMP and BASS T. WAH, suitable for slap. In manual mode, use NUM3 to turn ROTARY on.	FX1 (COMP): ON ↔ OFF	FX2 (BASS T. WAH): ON ↔ OFF	MOD1 (ROTARY): OFF ↔ ON	DLY (SINGLE): OFF ↔ ON	-	FOOT VOLUME
21-1	[Ba]FLANGEROCK	A rock sound with BASS FLANGER, BASS OD, and SLICER, suitable for playing with a pick. BASS FLANGER and SLICER are synchronized to BPM. In memory mode, the selected number switch for this patch (CURRENT NUMBER) functions to tap the master BPM. In manual mode, NUM4 functions to tap the master BPM as well.	FX1 (BASS OD/DS): ON ↔ OFF	FX2 (BASS FLANGER): ON ↔ OFF	MOD2 (SLICER): ON ↔ OFF	BPM TAP	BPM TAP	FOOT VOLUME
21-2	[Ba]OCT+L1+T.WAH	A sound with BASS OCTAVE, T. WAH, and a distortion pedal and preamp that are connected to L1. Ultra-low sound is generated by BASS OCTAVE.	FX1 (BASS OCTAVE): ON ↔ OFF	L1: ON ↔ OFF	FX2 (BASS T. WAH): ON ↔ OFF	MOD1 (CHORUS): OFF ↔ ON	-	FOOT VOLUME
21-3	[Ba]PICKPOP	A sound with P. EQ and LIMITER, with an emphasized attack that's ideal for playing with a pick.	FX1 (P. EQ): ON ↔ OFF	FX2 (LIMITER): ON ↔ OFF	MOD1 (BASS FLANGER): OFF ↔ ON	DLY (SINGLE): ON ↔ OFF	-	FOOT VOLUME
21-4	[Ba]PHASEL1+FZ	A sound with BASS MUFF and PHASER. In manual mode, turns on L1, CHORUS, and TERA ECHO.	L1: OFF ↔ ON	FX1 (BASS OD/DS): ON ↔ OFF	MOD1 (CHORUS): OFF ↔ ON	DLY (TERA ECHO): OFF ↔ ON	-	FOOT VOLUME

No.	Patch name	Explanation	NUM1	NUM2	NUM3	NUM4	CURRENT NUMBER	EXP1
22-1	[Ba]EXP1CRYVIBE	A sound with BASS DIST, BASS WAH, and UNI-V. An expression pedal connected to the EXP 1 of the CTL IN jacks can be used to operate BASS WAH. If you turn FX2 off, the expression pedal acts as FOOT VOLUME.	FX1 (BASS OD/DS): ON ↔ OFF	FX2 (BASS WAH): ON ↔ OFF	MOD1 (UNI-V): ON ↔ OFF	DLY (TERA ECHO): OFF ↔ ON	–	FX2: W/P/F
22-2	[Ba]EXP1OVERWAH	A sound with OVERTONE and BASS WAH. An expression pedal connected to the EXP 1 of the CTL IN jacks can be used to operate BASS WAH.	FX1 (BASS WAH): ON ↔ OFF	FX2 (OVERTONE): ON ↔ OFF	MOD1 (CHORUS): OFF ↔ ON	DLY (TERA ECHO): OFF ↔ ON	–	FX1: WH/PB
22-3	[Ba]EXP1PB/SL	A sound with BASS PEDAL BEND, BASS MUFF, and SLICER. SLICER is synchronized to BPM. An expression pedal connected to the EXP 1 of the CTL IN jacks can be used to operate BASS PEDAL BEND. In memory mode, the selected number switch for this patch (CURRENT NUMBER) functions to tap the master BPM. In manual mode, NUM4 functions to tap the master BPM as well.	FX1 (BASS PEDAL BEND): ON ↔ OFF	FX2 (BASS OD/DS): ON ↔ OFF	MOD1 (SLICER): ON ↔ OFF	BPM TAP	BPM TAP	FX1: WH/PB
22-4	[Ba]ROTARYBASS	A sound processed by the ROTARY effect is combined with the direct bass sound.	FX1 (LIMITER): ON ↔ OFF	FX2 (P. EQ): ON ↔ OFF	MOD1 (ROTARY): ON ↔ OFF	DLY (SINGLE): OFF ↔ ON	–	FOOT VOLUME
23-1	[Ba]WARP+F-BACKER	A sound with WARP, FEEDBACKER, and PAN DELAY. In memory mode, the selected number switch for this patch (CURRENT NUMBER) turns on the TRIGGER of WARP and FEEDBACKER while you hold down the number switch, continuing the feedback sound and delay sound. In manual mode, use NUM4 to perform the same operation.	FX1 (WARP): ON ↔ OFF	FX2 (FEEDBACKER): ON ↔ OFF	DLY (PAN): ON ↔ OFF	FX1 SOLO/TRIGGER: OFF ↔ ON FX2 FEEDBACKER TRIGGER: OFF ↔ ON	FX1 SOLO/TRIGGER: OFF ↔ ON FX2 FEEDBACKER TRIGGER: OFF ↔ ON	FOOT VOLUME
23-2	[Ba]BEND+F-BACKER	A sound with BASS S-BEND, FEEDBACKER, and PAN DELAY. In memory mode, the selected number switch for this patch (CURRENT NUMBER) turns on the TRIGGER of BASS S-BEND and FEEDBACKER while you hold down the number switch, continuing the raised-pitch feedback sound. In manual mode, use NUM4 to perform the same operation.	FX1 (BASS S-BEND): ON ↔ OFF	FX2 (FEEDBACKER): ON ↔ OFF	DLY (PAN): ON ↔ OFF	FX1 SOLO/TRIGGER: OFF ↔ ON FX2 FEEDBACKER TRIGGER: OFF ↔ ON	FX1 SOLO/TRIGGER: OFF ↔ ON FX2 FEEDBACKER TRIGGER: OFF ↔ ON	FOOT VOLUME
23-3	[Ba]SPACYREVERB	A spacious reverb sound that's suitable for finger picking.	FX1 (COMP): ON ↔ OFF	FX2 (P. EQ): ON ↔ OFF	MOD1 (CHORUS): ON ↔ OFF	REV (MODULATE): ON ↔ OFF	–	FOOT VOLUME
23-4	[Ba]PITCHDETUNE	A clean sound with BASS PITCH SHIFTER, with a chorus effect applied. The selected number switch for this patch (CURRENT NUMBER) turns on BASS OCTAVE.	FX1 (BASS OCTAVE): OFF ↔ ON	FX2 (BASS PITCH SHIFTER): ON ↔ OFF	DLY (MODULATE): ON ↔ OFF	REV (PLATE): ON ↔ OFF	FX1 (BASS OCTAVE): OFF ↔ ON	FOOT VOLUME
24-1	[Ba]RINGDOUBLE	Mechanical sound is added by applying RING MOD. Playing with a pick is recommend.	FX1 (LIMITER): ON ↔ OFF	FX2 (BASS OCTAVE): OFF ↔ ON	MOD1 (RING MOD): ON ↔ OFF	REV (MODULATE): OFF ↔ ON	–	FOOT VOLUME
24-2	[Ba]SPACEBAR	A sound with BPM-synchronized AUTO WAH and CHORUS, together with BASS HARMONIST, DELAY, and MODULATE REVERB, producing a unique floating sensation. In memory mode, the selected number switch for this patch (CURRENT NUMBER) functions to tap the master BPM. In manual mode, NUM4 functions to tap the master BPM as well.	FX1 (BASS HARMONIST): ON ↔ OFF	FX2 (AUTO WAH): ON ↔ OFF	MOD1 (CHORUS): ON ↔ OFF	BPM TAP	BPM TAP	FOOT VOLUME
24-3	[Ba]SLOWCELLO	A sound reminiscent of a bowed cello. The selected number switch for this patch (CURRENT NUMBER) turns on VIBRATO while you hold down the number switch, varying the expression. In manual mode, use NUM3 to perform the same operation.	FX1 (BASS SLOW GEAR): ON ↔ OFF	FX2 (AC.SIM): ON ↔ OFF	MOD1 (VIBRATO): OFF ↔ ON	REV (HALL1): ON ↔ OFF	MOD1 (VIBRATO): OFF ↔ ON	FOOT VOLUME
24-4	[Ba]FRETLESS	A sound reminiscent of a fretless bass.	FX1 (P. EQ): ON ↔ OFF	FX2 (DEFRETTER): ON ↔ OFF	MOD1 (CHORUS): OFF ↔ ON	REV (PLATE): ON ↔ OFF	–	FOOT VOLUME
25-1	[Ba]SUPERLOW+L1	An ultra-low sound with P. EQ and L1. You can connect a distortion pedal or preamp pedal of your choice to L1, and use it as part of the combination.	L1: ON ↔ OFF	MOD1 (CHORUS): OFF ↔ ON	DLY (TAPE): OFF ↔ ON	REV (PLATE): ON ↔ OFF	–	FOOT VOLUME
25-2	[Ba]FLANGE OCT	A sound with BASS OCTAVE and BASS FLANGER.	FX1 (COMP): ON ↔ OFF	FX2 (BASS OCTAVE): ON ↔ OFF	MOD1 (BASS FLANGER): ON ↔ OFF	DLY (SINGLE): ON ↔ OFF	–	FOOT VOLUME
25-3	[Ba]TIGHTBOTTOM	A tight and clean sound with LIMITER and P. EQ.	FX1 (LIMITER): ON ↔ OFF	FX2 (P. EQ): ON ↔ OFF	MOD1 (CHORUS): OFF ↔ ON	DLY (SINGLE): OFF ↔ ON	–	FOOT VOLUME
25-4	[Ba]BASSSYNTH	A synth-type sound with DEFRETTER, BASS OCTAVE, 2X2 CHORUS, VIBRATO, and TERA ECHO.	FX1 (DEFRETTER): ON ↔ OFF	FX2 (BASS OCTAVE): ON ↔ OFF	MOD1 (2X2 CHORUS): ON ↔ OFF	DLY (TERA ECHO): ON ↔ OFF	–	FOOT VOLUME
26-1– 35-4	INITPATCHLOOPS	This is the initial patch, which is set so that L1, L2, L3, and DLY can be switched on/off in manual mode.	L1: OFF ↔ ON	L2: OFF ↔ ON	L3: OFF ↔ ON	DLY (SINGLE): OFF ↔ ON	–	FOOT VOLUME
36-1– 45-4	INITPATCHL1+FX	This is the initial patch, which is set so that L1, FX1, MOD2, and DLY can be switched on/off in manual mode.	L1: OFF ↔ ON	FX1 (COMP): OFF ↔ ON	MOD2 (CHORUS): OFF ↔ ON	DLY (SINGLE): OFF ↔ ON	–	FOOT VOLUME
46-1– 50-4	INITPATCHFX	This is the initial patch, which is set so that FX1, FX2, MOD2, and DLY can be switched on/off in manual mode.	FX1 (COMP): OFF ↔ ON	FX2 (SUB DELAY): OFF ↔ ON	MOD2 (CHORUS): OFF ↔ ON	DLY (SINGLE): OFF ↔ ON	–	FOOT VOLUME