Effect Name	Explanation
AC.GUITAR SIM (Acoustic Guitar Simulator)	This transforms the sound of an electric guitar into the sound of an acoustic guitar.
AC. PROCESSOR (Acoustic Processor)	This processor allows you to change the sound produced by the pickup on an acoustic electric guitar, creating a richer sound similar to that obtained with a microphone placed close to the guitar.
WAVE SYNTH	This is a synth sound that processes the guitar input signal.
OCTAVE	This adds a note one octave lower, creating a richer sound.
PITCH SHIFTER	This effect changes the pitch of the original sound (up or down) within a range of two octaves.
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.
HUMANIZER	This can create human vowel-like sounds.
PHASER 90E	This models an MXR EVH-90 Phase Shifter.
FLANGER117E	This models an MXR EVH-117 Flanger.

MOD/FX Efffect Parameters

CHORUS

Frequency band division is employed to produce two different choruses, one for low frequencies and one for higher frequencies. This allows you to achieve a more natural chorus sound.

Parameter	Value	Explanation
LOW RATE	0–100,	Adjust the speed of the chorus effect for the low frequency range.
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 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).
LOW LEVEL	0–100	Adjusts the volume of the effect sound in the low-frequency range.
DIRECT MIX	0–100	Adjusts the volume of the direct sound.
HIGH RATE	0–100,	Adjust the speed of the chorus effect for the high frequency range.
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 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).
HIGH LEVEL	0–100	Adjusts the volume of the effect sound in the high-frequency range.
XOVER FREQUENCY (CROSSOVER FREQUENCY)	100 Hz–4.00 kHz	This sets the frequency dividing the low- and high-frequency ranges.

FLANGER

The flanging effect gives a twisting, jet-airplane-like character to the sound.

Parameter	Value	Explanation
RATE	0–100	This sets the rate of the flanging effect.
DEPTH	0–100	Determines the depth of the flanging effect.
RESO (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.
EFFECT LEVEL	0–100	Adjusts the volume of the flanger.
LOW CUT	FLAT, 55 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.
DIRECT MIX	0–100	Adjusts the volume of the direct sound.

PHASER

By adding varied-phase portions to the direct sound, the phaser effect gives a whooshing, swirling character to the sound.

Parameter	Value	Explanation
TYPE	Selects the number of stages that the phaser effect will use.	
	4 STAGE	This is a four-phase effect. A light phaser effect is obtained.
	8 STAGE	This is a eight-phase effect. It is a popular phaser effect.
	12 STAGE	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	This sets the rate of the phaser effect.
DEPTH	0–100	Determines the depth of the phaser effect.
RESO (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.
EFFECT LEVEL	0–100	Adjusts the volume of the phaser.
STEP RATE	OFF, 0–100	This sets 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.
DIRECT MIX	0–100	Adjusts the volume of the direct sound.

UNI-V

This models a Uni-Vibe.

Although this resembles a phaser effect, it also provides a unique undulation that you can't get with a regular phaser.

Parameter	Value	Explanation
RATE	0–100	Adjusts the rate of the UNI-V effect.
DEPTH	0–100	Adjusts the depth of the UNI-V effect.
LEVEL	0–100	Adjusts the volume.

TREMOLO

Tremolo is an effect that creates a cyclic change in volume.

Parameter	Value	Explanation
WAVE SHAPE	0–100	Adjusts changes in volume level. A higher value will steepen wave's shape.
RATE	0–100	Adjusts the frequency (speed) of the change.
DEPTH	0–100	Adjusts the depth of the effect.
LEVEL	0–100	Adjusts the volume.

VIBRATO

This effect creates vibrato by slightly modulating the pitch.

Parameter	Value	Explanation
RATE	0–100	Adjusts the rate of the vibrato.
DEPTH	0–100	Adjusts the depth of the vibrato.
LEVEL	0–100	Adjusts the volume.

ROTARY

This produces an effect like the sound of a rotary speaker.

Parameter	Value	Explanation
RATE	0–100	Adjusts the speed of the rotation.
DEPTH	0–100	Adjusts the amount of depth in the rotary effect.
LEVEL	0–100	Adjusts the volume.

RING MOD

The sound can be unmusical and lack distinctive pitches.

Parameter	Value	Explanation
MODE	This 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.
FREQUENCY	0–100	Adjusts the frequency of the internal oscillator.
EFFECT LEVEL	0–100	Adjusts the volume of the effect sound.
DIRECT MIX	0–100	Adjusts the volume of the direct sound.

SLOW GEAR

This produces a volume-swell effect ("violin-like" sound).

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.

SLICER

This consecutively interrupts the sound to create the impression that a rhythm backing phrase is being played.

Parameter	Value	Explanation
PATTERN	P1–P20	Select the slice pattern that will be used to cut the sound.
RATE	0–100	Adjust the rate at which the sound will be cut.
TRIGGER SENS	0–100	Adjust 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.
EFFECT LEVEL	0–100	Adjusts the volume of the effect sound.
DIRECT MIX	0–100	Adjusts the volume of the direct sound.

COMP

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.

Parameter	Value	Explanation
TYPE	BOSS COMP	This models a 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 a MXR DynaComp.
	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.
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 strength of the picking attack when the strings are played. Higher values result in s sharper attack, creating a more clearly defined sound.
LEVEL	0–100	Adjusts the volume.
TONE	-50–+50	Adjusts the tone.

LIMITER

The limiter attenuates loud input levels to prevent distortion.

Parameter	Value	Explanation
TYPE	Selects the limiter type.	
	BOSS LIMITER	This selects a stereo limiter.
	RACK 160D	This models a dbx 160X.
	VTG RACK U (VINTAGE RACK U)	This models a 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.
ATTACK	0–100	Adjusts the strength of the picking attack when the strings are played. Higher values result in s sharper attack, creating a more clearly defined sound.
RELEASE	0–100	Adjusts the release time.
LEVEL	0–100	Adjusts the volume.

T. WAH

You can produce a wah effect with the filter changing in response to the guitar level.

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.
POLAR	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	Specifies the sensitivity with which the filter changes in the direction specified by the POLAR setting. Higher values will produce a stronger tone which emphasizes the wah effect more. With a setting of 0, the strength of picking will have no effect.
FREQ	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.
EFFECT LEVEL	0–100	Adjusts the volume of the effect sound.
DIRECT MIX	0–100	Adjusts the volume of the direct sound.

AUTO WAH

This changes the filtering over a periodic cycle, providing an automatic wah effect.

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	Adjusts the frequency (speed) of the change.
DEPTH	0–100	Adjusts the depth of the effect.
FREQ	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.
EFFECT LEVEL	0–100	Adjusts the volume of the effect sound.
DIRECT MIX	0–100	Adjusts the volume of the direct sound.

PEDAL WAH

You can control the wah effect in real time by adjusting the expression pedal connected to the FX jack on the rear panel of the GA-FC foot controller (sold separately).

Parameter	Value	Explanation
TYPE	Selects the wah mode.	
	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.
	7STRING 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.
PEDAL POS (PEDAL POSITION)	0–100	Adjusts the position of the wah pedal. * This parameter is used after it's been assigned to an EXP Pedal or similar controller.
PEDAL MIN	0–100	Selects the tone produced when the heel of the EXP Pedal is depressed.
PEDAL MAX	0–100	Selects the tone produced when the toe of the EXP Pedal is depressed.
EFFECT LEVEL	0–100	Adjusts the volume of the effect sound.
DIRECT MIX	0–100	Adjusts the volume of the direct sound.

GRAPHIC EQ

This adjusts the tone. You can adjust the sound quality in ten bands.

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

PARAMETRIC EQ

This adjusts the tone. You can adjust the sound quality in four bands.

Parameter	Value	Explanation
LOW GAIN	-20–+20 dB	Adjusts the low frequency range tone.
LOW-MID GAIN	-20–+20 dB	Adjusts the low-middle frequency range tone.
HIGH-MID GAIN	-20–+20 dB	Adjusts the high-middle 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.
LOW-MID FREQUENCY	20 Hz–10.0 kHz	Specifies the center of the frequency range that will be adjusted by the LOW-MID GAIN.
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.
HIGH-MID FREQUENCY	20 Hz–10.0 kHz	Specifies the center of the frequency range that will be adjusted by the HIGH-MID GAIN.
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.
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.

GUITAR SIM

Simulation of the characteristics of particular guitar components such as pickups and different guitar bodies allows you to switch among a number of different guitar types all while using a single guitar.

Parameter	Value	Explanation
TYPE	Selects the type of the guitar simulator.	
	S → H	Changes from a single-coil pickup tone to a humbucking pickup tone.
	H → S	Changes from a humbucking pickup tone to a single-coil pickup tone.
	H → HF (HALF TONE)	Changes from a humbucking pickup tone to a single-coil pickup half tone.
	S → HOLLOW	Changes a single-coil pickup tone to a hollow body tone with the body resonance added.
	H → HOLLOW	Changes a humbucking pickup tone to a hollow body tone with the body resonance added.
	S → AC (ACOUSTIC)	Changes a single-coil pickup tone to an acoustic guitar tone.
	H → AC (ACOUSTIC)	Changes a humbucking pickup tone to an acoustic guitar tone.
	P → AC (PIEZO → ACOUSTIC)	Changes a piezo pickup tone to an acoustic guitar tone.
LOW	-50–+50	Adjusts the low frequency range tone.
HIGH	-50–+50	Adjusts the high frequency range tone.
BODY	0–100	Adjusts the way the body sounds when TYPE is set to S → HOLLOW, H → HOLLOW, S → AC, H → AC or P → AC. The body sound increases as the value is raised; reducing the value produces a tone similar to that from a piezo pickup.
LEVEL	0–100	Adjusts the volume of the effect sound.

AC. GUITAR SIM

This effect simulates the tonal character of an acoustic guitar.

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.

AC. PROCESSOR

This processor allows you to change the sound produced by the pickup on an acoustic electric guitar, creating a richer sound similar to that obtained with a microphone placed close to the guitar.

Parameter	Value	Explanation
TYPE	Selects the modeling type.	
	SMALL	This is the sound of a small-bodied acoustic guitar.
	MEDIUM	This is a standard, unadorned acoustic guitar sound.
	BRIGHT	This is a bright acoustic guitar sound.
	POWER	This is a powerful acoustic guitar sound.
BASS	-50–+50	Adjusts the tone for the low frequency range.
MIDDLE	-50–+50	Adjusts the midrange balance.
TREBLE	-50–+50	Adjusts the tone for the high frequency range.
PRESENCE	-50–+50	Adjusts the balance in the extended upper range.
LEVEL	0–100	Adjusts the volume.
MIDDLE FREQ	20.0 Hz–10.0 kHz	Specifies the frequency range to be adjusted with Middle.

WAVE SYNTH

This is a synth sound that processes the guitar input signal.

* When you use a wave synthesizer, observe the following points.

- 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.
- If the unit cannot detect the attack, it may not sound correctly. 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.

Parameter	Value	Explanation
WAVE	Selects a wave type which the synth sound is based.	
	SAW	Creates a synth sound with a saw waveform (⩘⩘⩘).
	SQUARE	Creates a synth sound with the square waveform (⊓⊔⊓⊔).
CUTOFF	0–100	Adjusts the frequency where the harmonics contents of the sound are cut off.
RESONANCE	0–100	Adjusts the amount of resonance (and the tone coloration) in the synth sound. The higher the value, the more the synth tone coloration is emphasized.
SYNTH LEVEL	0–100	Adjusts the volume of the synth sound.
FILTER SENS	0–100	Adjusts the amount of filtering applied in response to the input.
FILTER DECAY	0–100	This sets the time needed for the filter to finish its sweep.
FILTER DEPTH	0–100	Adjusts the depth of the filter. When the value is higher, the filter will change more drastically.
DIRECT MIX	0–100	Adjusts the volume of the direct sound.

OCTAVE

This adds a note one octave lower, creating a richer sound.

Parameter	Value	Explanation
RANGE	This selects the register to which the effect is applied.	
	RANGE 1 (B1–E6)	B1 (corresponds to the sound of an open 7th string) to E6 (corresponds to the 1st string played at the 24th fret)
	RANGE 2 (B1–E5)	B1 (corresponds to the sound of an open 7th string) to E5 (corresponds to the 1st string played at the 12th fret)
	RANGE 3 (B1–E4)	B1 (corresponds to the sound of an open 7th string) to E4 (corresponds to the sound of an open 1st string)
	RANGE 4 (B1–E3)	B1 (corresponds to the sound of an open 7th string) to E3 (corresponds to the 4th string played at the 2nd fret)
EFFECT LEVEL	0–100	Adjusts the volume of the sound one octave below.
DIRECT MIX	0–100	Adjusts the volume of the direct sound.

PITCH SHIFTER

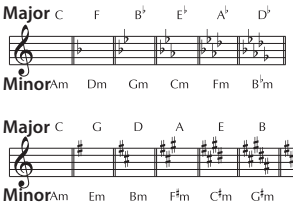
This effect changes the pitch of the original sound (up or down) within a range of two octaves.

Parameter	Value	Explanation
VOICE	Selects the number of voices for the pitch shift sound.	
	1VOICE	One-voice pitch-shifted sound output in monaural.
	2VOICE	Two-voice pitch-shifted sound (PS1, PS2) output in monaural.
PS1:PITCH PS2:PITCH	-24–+24	Adjusts the amount of pitch shift (the amount of interval) in semitone steps.
1:LEVEL 2:LEVEL	0–100	Adjusts the volume of the pitch shifter.
DIRECT MIX	0–100	Adjusts the volume of the direct sound.
PS1:MODE PS2: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).
PS1:FINE PS2: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.
PS1:PRE DELAY PS2:PRE DELAY	0 ms–300 ms	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" 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.
PS1:FEEDBACK	0–100	Adjusts the feedback amount of the pitch shift sound.

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.
* If the unit cannot detect the attack, it may not sound correctly. 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.

Parameter	Value	Explanation
VOICE	Selects the number of voices for the pitch shift sound.	
	1VOICE	One pitch-shifted voice is output in monaural.
	2VOICE	Two pitch-shifted voices are output in monaural.
HR1:HARMONY HR2:HARMONY	-2 oct–+2 oct, USER	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. When the scale is set to USER, this parameter sets the user scale number to be used.
MASTER KEY	C (Am)–B (G#m)	The key setting corresponds to the key of the song (#, b) as follows. 
DIR.MIX (DIRECT MIX)	0–100	Adjusts the volume of the direct sound.
HR1:PRE DELAY HR2:PRE DELAY	0 ms–300 ms,	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.
HR1:FEEDBACK	0–100	Adjusts the feedback amount of the harmonist sound.
HR1:LEVEL HR2:LEVEL	0–100	Adjusts the volume of the harmony sound.

Parameter		Value	Explanation
USER SCALE *1 *2	C	-24𝄫C–+24𝄪C	You can specify a pitch in the range two octaves above or below the direct sound.
	Db	-24𝄫D♭–+24𝄪D♭	
	D	-24𝄫D–+24𝄪D	
	Eb	-24𝄫E♭–+24𝄪E♭	
	E	-24𝄫E–+24𝄪E	
	F	-24𝄫F–+24𝄪F	
	F#	-24𝄫F♯–+24𝄪F♯	
	G	-24𝄫G–+24𝄪G	
	Ab	-24𝄫A♭–+24𝄪A♭	
	A	-24𝄫A–+24𝄪A	
	Bb	-24𝄫B♭–+24–𝄪B♭	
	B	-24𝄫B–+24𝄪B	

*1 This can be specified if HR1:HARMONY or HR2:HARMONY is "USER."

*2 The correspondence between the note names and the knobs differs depending on the specified KEY. Knob [1] of the first page is the tonic (root note) of the specified KEY. The table shows the example of when KEY is set to C (Am).

HUMANIZER

This can create human vowel-like sounds.

Parameter	Value	Explanation
MODE	This sets the mode that switches the vowels.	
	PICKING	It changes from VOWEL 1 to VOWEL 2 along with the picking. The time spent for the change is adjusted with the rate.
	AUTO	By adjusting the rate and depth, two vowels (VOWEL 1 and VOWEL 2) can be switched automatically.
VOWEL 1	a, e, i, o, u	Selects the first vowel.
VOWEL 2	a, e, i, o, u	Selects the second vowel.
RATE	0–100	Adjusts the cycle for changing the two vowels.
DEPTH	0–100	Adjusts the depth of the effect.
LEVEL	0–100	Adjusts the volume.
SENS *1	0–100	Adjusts the sensitivity of the humanizer. When it is set to a lower value, no effect of the humanizer is obtained with weaker picking, while stronger picking produces the effect. When it is set to a higher value, the effect of the humanizer can be obtained whether the picking is weak or strong.
MANUAL *2	0–100	Adjusts the cycle for changing the two vowels. When it is set to lower than 50, the time for VOWEL 1 is shorter. When it is set to higher than 50, the time for VOWEL 1 is longer.

*1 Setting available when MODE is set to PICKING.

*2 Setting available when MODE is set to AUTO.

PHASER 90E

This models an MXR EVH-90 Phase Shifter.

Parameter	Value	Explanation
SCRIPT	OFF, ON	Switches the character of the phaser. OFF: Modern ON: Vintage
SPEED	0–100	Sets the rate and the depth of the phaser effect.

FLANGER117E

This models an MXR EVH-117 Flanger.

Parameter	Value	Explanation
MANUAL	0–100	Adjusts the center frequency at which to apply the effect.
WIDTH	0–100	Determines the depth of the flanging effect.
SPEED	0–100	This sets the rate of the flanging effect.
REGEN.	0–100	Determines the amount of feedback. Increasing the value will emphasize the effect, creating a more unusual sound.

DELAY/DELAY 2

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

DELAY Type

TYPE	Explanation
DIGITAL	This is a simple monaural delay.
ANALOG	This gives a mild analog delay sound.
TAPE ECHO	This setting provides the characteristic wavering sound of the tape echo.
REVERSE	This produces an effect where the sound is played back in reverse.
MODULATE	This delay adds a pleasant wavering effect to the sound.
SDE-3000	This models the sound of the Roland SDE-3000.

DELAY Parameters

Parameter	Value	Explanation
TYPE	Refer to DELAY Type	
DELAY TIME	1 ms–2000 ms	Adjusts the delay time.
FEEDBACK	0–100	Adjusts the volume that is returned to the input. A higher value will increase the number of the delay repeats.
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.
EFFECT LEVEL	0–120	Adjusts the volume of the delay sound.
DIRECT MIX	0–100	Adjusts the volume of the direct sound.
MODULATION RATE	0–100	Adjusts the modulation rate of the delay sound. * Only when TYPE is MODULATE or SDE-3000.
MODULATION DEPTH	0–100	Adjusts the modulation depth of the delay sound * Only when TYPE is MODULATE or SDE-3000.
MODULATION SW	OFF, ON	Turns the modulation on/off. * Only when TYPE is SDE-3000.
FILTER	OFF, ON	Turns the filter on/off. * If this is on, a natural-sounding effect is obtained when you're using the delay as an echo. * Only when TYPE is SDE-3000.
RANGE	8kHz, 17kHz	* Models the way in which the SDE-3000's frequency response is affected by the delay range. * Only when TYPE is SDE-3000.
DELAY PHASE	NORMAL, INV	Specifies the phase of the delay sound. Selecting INV inverts the phase. * Only when TYPE is SDE-3000.
FEEDBACK PHASE	NORMAL, INV	Specifies the phase of the delay sound feedback. Selecting INV inverts the phase. * Only when TYPE is SDE-3000.

REVERB

This effect adds reverberation to the sound.

REVERB Type

TYPE	Explanation
PLATE	Simulates plate reverberation (a reverb unit that uses the vibration of a metallic plate). Provides a metallic sound with a distinct upper range.
ROOM	Simulates the reverberation in a small room. Provides warm reverberations.
HALL 1	Simulates the reverberation in a concert hall. Provides clear and spacious reverberations.
SPRING	This 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.

REVERB Parameters

Parameter	Value	Explanation
TYPE	Refer to REVERB Type	
REVERB TIME	0.1 s–10.0 s	Adjusts the length (time) of reverberation.
PRE DELAY	0 ms–500 ms	Adjusts the time until the reverb sound appears.
EFFECT LEVEL	0–100	Adjusts the volume of the reverb sound.
DIRECT MIX	0–100	Adjusts the volume of the direct sound.
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.
DENSITY	0–10	Adjusts the density of the reverb sound.
SPRING SENS **(TYPE = SPRING only)**	0–100	Adjusts the sensitivity of the spring effect. When the value is set higher, the effect is obtained even with a weak picking.

EQ (PARAMETRIC EQ)

This adjusts the tone. You can adjust the sound quality in four bands.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
LOW GAIN	-20–+20 dB	Adjusts the low frequency range tone.
LOW-MID GAIN	-20–+20 dB	Adjusts the low-middle frequency range tone.
HIGH-MID GAIN	-20–+20 dB	Adjusts the high-middle 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.
LOW-MID FREQUENCY	20 Hz–10.0 kHz	Specifies the center of the frequency range that will be adjusted by the LOW-MID GAIN.
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.
HIGH-MID FREQUENCY	20 Hz–10.0 kHz	Specifies the center of the frequency range that will be adjusted by the HIGH-MID GAIN.
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.
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.

NS

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.

NS Parameters

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this 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. * 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."

S/R (SEND/RETURN)

These are settings for the EFFECT LOOP (SEND/RETURN) jacks.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
POSITION	POST AMP, POST REV	Specifies the position at which the external effect unit is connected within the KATANA's effect chain.
MODE	SERIES, PARALLEL	Specifies whether the external effect unit is connected in series or in parallel.
SEND LEVEL	0–100	Adjusts the volume of the output to the external effects device.
RETURN LEVEL	0–100	Adjusts the volume of the input from the external effects device.

* The S/R setting is valid if a plug is connected to the RETURN jack.