



EX-4

Parameter Guide / Sound List

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FX1/FX2/FX3/FX4

With FX1, FX2, FX3 and FX4, you can select the effect to be used from the following.

You can also select the same effects for FX1–FX4.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
FX TYPE	Refer to “FX1/FX2/FX3/FX4 FX TYPE”.	

FX1/FX2/FX3/FX4 FX TYPE

This is a list of the effects that can be selected for FX1/FX2/FX3/FX4.

Effect name		Explanation
COMPRESSOR	Compressor	This is an effect that produces a long sustain by evening out the volume level of the input signal.
LIMITER	Limiter	Attenuates loud input levels to prevent distortion.
SLOW GEAR	Slow gear	This produces a volume-swell effect (“violin-like” sound).
BASS SLOW GEAR	Bass slow gear	This is a slow gear effect for bass guitar.
PITCH SHIFT	Pitch shifter	This effect changes the pitch of the original sound (up or down) within a range of two octaves.
HARMONIST	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.
OCTAVE	Octave	This adds a note one octave lower and a note two octaves lower, creating a richer sound.
BASS OCTAVE	Bass octave	This is an octave effect for bass guitar.
HEAVY OCT	Heavy octave	Adds pitches one and two octaves lower than the input audio. This also applies when you play chords, adding thickness to the chords you play.
S-BEND	S-bend	Gives a pitch shift up/down effect that’s not possible when using typical guitar vibrato bar techniques.
PEDAL BEND	Pedal bend	This is a pitch bend effect that’s controlled by operating the expression pedal on this unit or by using an expression pedal connected to the CTL1(3),2(4)/EXP jack.
TUNE DOWN	Tune down	Gives the effect of tuning your guitar lower.
DEFRETTER	Defretter	This simulates a fretless guitar.
BASS DEFRETTER	Bass defretter	This simulates a fretless bass.
AC. GTR SIM	Acoustic guitar simulator	This effect simulates the tonal character of an acoustic guitar.
AC RESO	Acoustic resonance	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.
AC BASS	Acoustic bass	Simulates the sound of an acoustic bass.
SITAR SIM	Sitar simulator	This effect simulates the sound of the sitar.
GUITAR SYNTH	Guitar synth	This processes the guitar input sound to produce a synth sound.
BASS SYNTH	Bass synth	This processes the bass input sound to produce a synth sound. The filter operates differently according to how strongly you play the bass and what pitch you play.
OD/DS	Overdrive distortion	This effect distorts the sound to create long sustain.
PARA EQ	Parametric equalizer	This adjusts the tone. You can adjust the sound character in four bands.
GEQ	Graphic equalizer	This adjusts the tone. You can adjust the sound character in ten bands.
ENHANCER	Enhancer	This emphasizes the attack portion of the sound according to the changes in input level, adding more definition to the input audio.
TOUCH WAH	Touch wah	You can produce a wah effect with the filter changing in response to the guitar volume.
BASS TOUCH WAH	Bass touch wah	You can produce a wah effect with the filter changing in response to the bass level.
AUTO WAH	Auto wah	This effect changes the filtering over a periodic cycle, producing an automatic wah effect.
WAH	Wah	A pedal effect that peaks in a certain frequency range.
ENV FILTER	Envelope filter	Models the Mu-Tron III made by Musitronics. The filter operates according to the input strength, producing a wah effect. The filter lets only the low-frequency region pass through.
FEEDBACKER	Feedbacker	Generates feedback.

Effect name		Explanation
HUMANIZER	Humanizer	This alters the guitar audio signal to give it a human-like vocalized sound.
CHORUS	Chorus	This is an effect that adds a slightly modulated sound to the direct signal, creating beautiful spaciousness and depth.
FLANGER	Flanger	The flanger effect gives a twisting, jet-airplane-like character to the sound.
BASS FLANGER	Bass flanger	This is a flanger effect for bass guitar.
PHASER	Phaser	Gives a whooshing, swirling character to the sound by adding varied-phase portions to the direct sound.
BASS PHASER	Bass phaser	This is a phaser effect for bass guitar.
SCRIPT PH	Script phaser	Models the MXR Phase 90 which was manufactured during the '70s.
CLASSIC-VIBE	Classic vibe	Although this resembles a phaser effect, it also provides a unique undulation that you can't get with a regular phaser.
ROTARY	Rotary	This produces an effect like the sound of a rotary speaker.
VIBRATO	Vibrato	This effect creates vibrato by slightly modulating the pitch.
TREMOLO	Tremolo	This effect creates a cyclic change in volume.
PAN	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.
RING MOD	Ring modulator	This creates a bell-like sound by ring-modulating the guitar sound with the signal from the internal oscillator. The sound can be unmusical and lack distinctive pitches.
SLICER	Slicer	This consecutively interrupts (or slices) the sound to create the effect of a rhythm backing phrase being played.
DELAY	Delay	This effect adds delayed sound to the direct sound, to give more body to the sound or create special effects.
REVERB	Reverb	This effect adds reverberation to the sound.

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COMPRESSOR

STEREO **MONO**

This is an effect that produces a long sustain by evening out the volume level of the input signal.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
TYPE	BOSS COMP MONO	This models a BOSS CS-3.
	D-COMP MONO	This models a MXR Dyna Comp.
	ORANGE MONO	This is modeled on the sound of the Dan Armstrong ORANGE SQUEEZER.
	X-COMP MONO	This uses MDP (Multi-Dimensional Processing) to obtain a consistently natural playing feel and sound that responds to the pitch range and dynamics of your phrase.
	STEREO STEREO	This selects a stereo compressor.
	X-BASS MONO	This is a compressor for bass that uses MDP (Multi-Dimensional Processing).
ATTACK	0–100	Adjusts the strength of the picking attack when the strings are played.
SUSTAIN ^{*1}	0–100	Adjusts the range (time) over which low-level signals are boosted. Larger values will result in longer sustain.
THRESHOLD ^{*2}	0–100	The volume level at which compression begins.
LEVEL	0–100	Adjusts the volume.
TONE	-50–+50	This adjusts the tone.
RATIO	1:1–INF:1	Adjusts the compression ratio.

Parameter	Value	Explanation
DIRECT	0–100	Adjusts the volume of the direct sound.

*1 This setting is available when TYPE is set to anything but X-BASS.

*2 This setting is available when TYPE is set to X-BASS.

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LIMITER

STEREO

Attenuates loud input levels to prevent distortion.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
TYPE	BOSS	This selects a stereo limiter.
	RACK 160D	This models a dbx 160X.
	VTG RACK U	This models a UREI 1178.
ATTACK	0–100	Adjusts the strength of the picking attack when the strings are played. Higher values result in a sharper attack, creating a more clearly defined sound.
THRESHOLD	0–100	Adjust this as appropriate for the guitar input signal. When the input signal level exceeds this threshold level, limiting will be applied.
LEVEL	0–100	Adjusts the volume.
RATIO	1:1–INF:1	Selects the compression ratio applied with signals that exceed the threshold level.
RELEASE	0–100	Adjusts the release time.

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SLOW GEAR

STEREO

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

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
SENS	0–100	Adjusts the sensitivity of the humanizer. 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.

BASS SLOW GEAR

STEREO

This is a slow gear effect for bass guitar.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
SENS	0–100	Adjusts the sensitivity of the humanizer. 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.

Parameter	Value	Explanation
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.

PITCH SHIFT



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

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
VOICE	Selects the number of voices for the pitch shift sound.	
	1 VOICE 	One-voice pitch-shifted sound output in mono.
	2 MONO 	Two-voice pitch-shifted sound (PS1, PS2) output in mono.
	2 STEREO 	Two-voice pitch-shifted sound (PS1, PS2) output through left and right channels.
1: PITCH 2: 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.
1: MODE 2: MODE*	FAST, MEDIUM, SLOW, MONO	The response is slower in the order of FAST, MEDIUM and SLOW, but the modulation is lessened in the same order.
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: PRE-DELAY 2: PRE-DELAY*	0–300ms, 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" specified for each memory. 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. * is a double whole note, which is twice as long as a whole note.
1: FEEDBACK	0–100	Adjusts the feedback amount of the pitch shift sound.
DIRECT	0–100	Adjusts the volume of the direct sound.

* Can be set when VOICE is set to 2 MONO or 2 STEREO.

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.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.

Parameter	Value	Explanation
VOICE	Selects the number of voices for the pitch shift sound.	
	1 VOICE MONO	One-voice pitch-shifted sound output in mono.
	2 MONO MONO	Two-voice pitch-shifted sound (HR1, HR2) output in mono.
	2 STEREO MONO > STEREO	Two-voice pitch-shifted sound (HR1, HR2) output through left and right channels.
1: HARMONY 2: HARMONY ^{*1}	-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.
1: LEVEL 2: LEVEL ^{*1}	0-100	Adjusts the volume of the harmony sound.
1: PRE-DELAY 2: PRE-DELAY ^{*1}	0-300ms, BPM $\frac{1}{2}$ - $\frac{1}{4}$	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" specified for each memory. 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. * $\frac{1}{2}$ is a double whole note, which is twice as long as a whole note.
1: FEEDBACK	0-100	Adjusts the feedback amount of the harmonist sound.
DIRECT	0-100	Adjusts the volume of the direct sound.
KEY	C (Am)-B (G#m)	The key setting corresponds to the key of the song (#, b) as follows. 

*1 Can be set when VOICE is set to 2 MONO or 2 STEREO.

OCTAVE

MONO

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

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
-2 OCT	0-100	Adjusts the volume of the sound two octave below.
-1 OCT	0-100	Adjusts the volume of the sound one octaves below.
DIRECT	0-100	Adjusts the volume of the direct sound.

BASS OCTAVE

MONO

This is an OCTAVE effect for bass.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
-2 OCT	0-100	Adjusts the volume of the sound two octave below.
-1 OCT	0-100	Adjusts the volume of the sound one octaves below.

Parameter	Value	Explanation
DIRECT	0–100	Adjusts the volume of the direct sound.

HEAVY OCT (HEAVY OCTAVE)

MONO

Adds pitches one and two octaves lower than the input audio. This also applies when you play chords, adding thickness to the chords you play.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
-2 OCT	0–100	Adjusts the volume of the sound two octave below.
-1 OCT	0–100	Adjusts the volume of the sound one octaves below.
DIRECT	0–100	Adjusts the volume of the direct sound.

S-BEND

MONO

Gives a pitch shift up/down effect that's not possible when using typical guitar vibrato bar techniques.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
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.
TRIGGER	OFF, ON	The effect is applied when you switch this from OFF to ON. * When the memory is written, this parameter is stored in the OFF state.
FALL TIME	0–100	This parameter adjusts the amount of time it is to take for the effect to transition to the original.

PEDAL BEND

MONO

This is a pitch bend effect that's controlled by operating the expression pedal on this unit or by using an expression pedal connected to the CTL1(3),2(4)/EXP jack.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
PITCH MIN	-24–+24	This sets the pitch to the point where the pedal is fully raised (pressed down all the way with your heel).
PITCH MAX	-24–+24	This sets the pitch at the point where the pedal is all the way down.
PDL 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.
LEVEL	0–100	Adjusts the volume of the pitch bend sound.
DIRECT	0–100	Adjusts the volume of the direct sound.

TUNE DOWN

MONO

Gives the effect of tuning your guitar lower.

* Use single notes when playing with this effect.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
PITCH	-12–0	Adjusts the pitch in semitones.

DEFRETTER

STEREO

This simulates a fretless guitar.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
SENS	0–100	This controls the input sensitivity of the defretter.
TONE	-50–+50	Adjusts the amount of blurring between the notes.
LEVEL	0–100	Adjusts the volume of the effect sound.
ATTACK	0–100	Adjusts the attack of the picking sound.
DEPTH	0–100	This controls the rate of the harmonics.
RESO	0–100	Adds a characteristically resonant quality to the sound.
DIRECT	0–100	Adjusts the volume of the direct sound.

BASS DEFRETTER

STEREO

This simulates a fretless bass.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
SENS	0–100	This controls the input sensitivity of the defretter.
TONE	-50–+50	Adjusts the amount of blurring between the notes.
LEVEL	0–100	Adjusts the volume of the effect sound.
ATTACK	0–100	Adjusts the attack of the picking sound.
DIRECT	0–100	Adjusts the volume of the direct sound.

AC. GTR SIM (ACOUSTIC GUITAR SIMULATOR)

MONO

This effect simulates the tonal character of an acoustic guitar.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
BODY	0–100	Adjusts the body resonance.
LOW	-50–0–+50	Specifies the sense of volume for the low-frequency range.
HIGH	-50–0–+50	Specifies the sense of volume for the high-frequency range.
LEVEL	0–100	Adjusts the volume.

AC RESO (ACOUSTIC RESONANCE)

MONO

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
ON/OFF	OFF, ON	Turns this effect on/off.
RESO	0–100	Use this knob to adjust the balance between the body resonance effect of the acoustic guitar and the direct sound of the pickup.
TONE	-50–+50	This adjusts the tone.
LEVEL	0–100	Adjusts the volume.

Parameter	Value	Explanation
TYPE	NATURAL	A natural and uncolored sound.
	WIDE	A full sound with emphasized body resonance
	BRIGHT	A brilliant sound extending to the high range

AC BASS (ACOUSTIC BASS)

MONO

Simulates the sound of an acoustic bass.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
LOW	0–100	Adjusts the tonal character of the low-frequency range.
HIGH	0–100	Adjusts the high frequency range tone.
LEVEL	0–100	Adjusts the volume.

SITAR SIM

STEREO

This effect simulates the sound of the sitar.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
SENS	0–100	Adjusts the sensitivity of the sitar. When the sensitivity is set to a lower value, the sitar effect is not heard with weaker picking, but is heard with stronger picking. When the sensitivity is set to a higher value, the sitar effect is heard whether the picking is weak or strong.
DEPTH	0–100	Adjusts the amount of effect applied.
TONE	-50–+50	This adjusts the tone. The high end is boosted as the value increases.
RESO	0–100	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.
LEVEL	0–100	Adjust the volume of the sitar sound.
DIRECT	0–100	Adjusts the volume of the direct sound.

GUITAR SYNTH

This processes the guitar input sound to produce a synth sound.

- * When you use a guitar 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.
- * 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.

Parameter	Value	Explanation
TYPE	Selects a wave type which the synth sound is based.	
	SAW	Processes the inputted guitar sound to create a sawtooth wave signal.
	SQUARE	Processes the inputted guitar sound to create a square wave signal.
FREQ	0–100	Adjusts the frequency at which the harmonic contents of the sound are cut off.
RESO	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.
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.
LEVEL	0–100	Adjusts the volume of the synth sound.

Parameter	Value	Explanation
DIRECT	0–100	Adjusts the volume of the direct sound.

BASS SYNTH

MONO

This processes the bass input sound to produce a synth sound. The filter operates differently according to how strongly you play the bass and what pitch you play.

* Be sure to mute all the other strings and play only one note at a time.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
TYPE	Selects the synth type.	
	SAW	Processes the bass guitar input sound to create a synth sound with a sawtooth wave signal.
	SQUARE	Processes the bass input sound to create a synth sound with a square wave signal.
FREQ	0–100	Adjusts the frequency at which the harmonic contents of the sound are cut off.
RESO	0–100	Sets the resonant character of the 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.
LEVEL	0–100	Adjusts the volume of the effect sound.
DIRECT	0–100	Adjusts the volume of the direct sound.

OD/DS

MONO

This effect distorts the sound to create long sustain.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.

Parameter	Value	Explanation
TYPE	Selects the OD/DS type.	
	MID BOOST	This is a booster with unique characteristics in the midrange.
	CLEAN BST	This not only functions as a booster, but also produces a clean tone that has punch even when used alone.
	TREBLE BST	This is a booster that has bright characteristics.
	NATURAL OD	This is an overdrive sound that provides distortion with a natural feeling.
	WARM OD	This is a warm overdrive.
	BLUES OD	This is a crunch sound of the BOSS BD-2. This produces distortion that faithfully reproduces the nuances of picking.
	OVERDRIVE	A BOSS OD-1 type drive sound. This produces sweet, mild distortion.
	CRUNCH	A lustrous crunch sound with an added element of amp distortion.
	T-SCREAM	This models an Ibanez TS-808.
	TURBO OD	This is the high-gain overdrive sound of the BOSS OD-2.
	CENTA OD	This models a KILON CENTAUR.
	X-OD	This is an overdrive that uses MDP to obtain the distortion that's most appropriate in each pitch range.
	DIST	This gives a basic, traditional distortion sound.
	A-DIST	This uses MDP technology to obtain ideal distortion in all ranges of the guitar, from low to high.
	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.
	RAT	This models a Proco RAT.
	GUV DS	This models a Marshall GUVNOR.
	DIST+	This models a MXR DISTORTION+.
	X-DIST	This is a distortion that uses MDP to obtain the distortion that's most appropriate in each pitch range.
	METAL DS	This is distortion sound that is ideal for performances of heavy riffs.
	METAL ZONE	Produces a BOSS MT-2 type wide-ranging metal sound.
	HVY METAL	Produces a BOSS HM-2 type sound, a compressed distortion sound like a cranked-up amp.
	METAL CORE	Creates a BOSS ML-2 type sound, optimal for playing high-speed metal riffs.
	OCT FUZZ	A fuzz sound with rich harmonic content.
	60S FUZZ	This models a FUZZFACE. It produces a fat fuzz sound.
	MUFF FUZZ	This models an Electro-Harmonix Big Muff π.
	BASS OD	Overdrive tuned especially for use with basses.
	X-BASS OD	This effect uses MDP to provide ideal distortion in all pitch ranges of the bass, from low to high.
	BASS DS	Distortion tuned especially for use with basses.
	BASS DI	This models a MXR Bass D.I.+.
	SA DI DRIVE	This models a TECH21 SANSAMP BASS DRIVER DI.
	HI BAND DRV	With this effect, distortion is applied only to the high frequency sounds, and not to the sounds in the low frequency range. This effect retains a strong low end sound while adding powerful distortion.
	BASS MT	Wild, radical distortion sound.
	BASS FUZZ	Fuzz tuned especially for use with basses.
DRIVE	1–120	Adjusts the depth of distortion.
tone	-50–+50	Adjusts the tone.
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.
DIRECT	0–100	Adjusts the volume of the direct sound.
SOLO SW	OFF, ON	Switches to a tone that is suitable for solos.
SOLO LEVEL	0–100	Adjusts the volume level when the SOLO SW is ON.

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PARA EQ (PARAMETRIC EQUALIZER)

STEREO

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

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
LEVEL	-20~+20 dB	Adjusts the overall volume level of the equalizer.
LOW GAIN	-20~+20 dB	Adjusts the low frequency range tone.
HIGH GAIN	-20~+20 dB	Adjusts the high frequency range tone.
L MID FREQ (LOW-MID FREQ)	20.0Hz~12.5kHz	Specifies the center of the frequency range that will be adjusted by the LOW-MID GAIN.
L MID 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.
L MID GAIN (LOW-MID GAIN)	-20~+20 dB	Adjusts the low-middle frequency range tone.
H MID FREQ (HIGH-MID FREQ)	20.0Hz~12.5kHz	Specifies the center of the frequency range that will be adjusted by the HIGH-MID GAIN.
H MID 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.
H MID GAIN (HIGH-MID GAIN)	-20~+20 dB	Adjusts the high-middle frequency range tone.
LOW CUT	FLAT, 20.0 Hz~12.5 kHz	Sets the frequency at which the low cut filter begins to take effect. When "FLAT" is selected, the low cut filter has no effect.
HIGH CUT	20.0 Hz~12.5 kHz, FLAT	Sets the frequency at which the high cut filter begins to take effect. When FLAT is selected, the high cut filter has no effect.

GEQ (GRAPHIC EQUALIZER)

STEREO

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

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
31.5 Hz	-20~+20 dB	Adjust the volume of each frequency band.
63 Hz		
125 Hz		
250 Hz		
500 Hz		
1 kHz		
2 kHz		
4 kHz		
8 kHz		
16 kHz		
LEVEL	-20~+20 dB	Adjusts the overall volume level of the equalizer.

ENHANCER

STEREO

This emphasizes the attack portion of the sound according to the changes in input level, adding more definition to the input audio.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
SENS	0–100	Adjusts the enhancer's sensitivity. Larger values activate the effect even when you play the strings softly.
LOW	0–100	Adjusts the volume of the low-band enhancer audio.
LOW FREQ	31.5 Hz–125 Hz	Sets the frequency range of the low-band enhancer audio.
HIGH	0–100	Adjusts the volume of the high-band enhancer audio.
HIGH FREQ	800 Hz–8.00 kHz	Sets the frequency range of the high-band enhancer audio.
LEVEL	0–100	Adjusts the volume.

TOUCH WAH

STEREO

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

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
SENS	0–100	Specifies the sensitivity with which the filter moves in the direction specified by the POLARITY setting. Higher values produce a stronger tone which emphasizes the wah effect. The strength of picking has no effect when this is set to "0".
FREQ	0–100	Adjusts the center frequency of the wah effect.
LEVEL	0–100	Adjusts the volume.
FILTER	Select the wah mode.	
	LPF	Low pass filter. Passes only the low-frequency region.
	BPF	Band pass filter. Passes only the specified frequency region.
	HPF	High pass filter. Passes only the high-frequency region.
RESO	0–100	Adjusts the intensity of the wah effect in the area around the center frequency. Higher values produce a stronger filter tone that emphasizes the wah effect. A value of 50 produces a standard wah sound.
DECAY	0–100	Adjusts the rate at which the filter is moved.
POLARITY	Selects the direction in which the filter changes in response to the input.	
	DOWN	The frequency of the filter falls.
	UP	The frequency of the filter rises.
DIRECT	0–100	Adjusts the volume of the direct sound.

BASS TOUCH WAH

STEREO

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

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
SENS	0–100	Specifies the sensitivity with which the filter moves in the direction specified by the POLARITY setting. Higher values produce a stronger tone which emphasizes the wah effect. The strength of picking has no effect when this is set to "0".
FREQ	0–100	Adjusts the center frequency of the wah effect.
LEVEL	0–100	Adjusts the volume of the effect sound.

Parameter	Value	Explanation
FILTER	Select the wah mode.	
	LPF	Low pass filter. Passes only the low-frequency region.
	BPF	Band pass filter. Passes only the specified frequency region.
RESO	0–100	Adjusts the intensity of the wah effect in the area around the center frequency. Higher values produce a stronger filter tone that emphasizes the wah effect. A value of 50 produces a standard wah sound.
DECAY	0–100	Adjusts the rate at which the filter is moved.
POLARITY	Selects the direction in which the filter changes in response to the input.	
	DOWN	The frequency of the filter falls.
	UP	The frequency of the filter rises.
DIRECT	0–100	Adjusts the volume of the direct sound.

AUTO WAH

STEREO

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

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
RATE	0–100, BPM 	Adjusts the cycle or rate of the auto wah. * When set to BPM, the value of each parameter will be set according to the value of the “MASTER BPM” specified for each memory. 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. *  is a double whole note, which is twice as long as a whole note.
DEPTH	0–100	Adjusts the depth of the auto wah.
LEVEL	0–100	Adjusts the volume of the effect sound.
FILTER	Select the wah mode.	
	LPF	Low pass filter. Passes only the low-frequency region.
	BPF	Band pass filter. Passes only the specified frequency region.
	HPF	High pass filter. Passes only the high-frequency region.
FREQ	0–100	Adjusts the center frequency of the wah effect.
RESO	0–100	Adjusts the intensity of the wah effect in the area around the center frequency.
WAVEFORM	TRI, SINE	Selects the type of wave.
DIRECT	0–100	Adjusts the volume of the direct sound.

WAH

STEREO

A pedal effect that peaks in a certain frequency range.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.

Parameter	Value	Explanation
WAH 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.
	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.
	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.
LEVEL	0–100	Adjusts the volume of the effect sound.
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.
DIRECT	0–100	Adjusts the volume of the direct sound.
MIN	0–100	Selects the tone produced when the heel of the pedal is depressed.
MAX	0–100	Selects the tone produced when the toe of the pedal is depressed.

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ENV FILTER (ENVELOPE FILTER)

STEREO

Models the Mu-Tron III made by Musitronics. The filter operates according to the input strength, producing a wah effect. The filter lets only the low-frequency region pass through.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
SENS	0–100	Sets the input sensitivity.
TOPE	0–100	Sets the tone (brightness).
PEAK	0–100	Sets the strength (character) of the effect.
LEVEL	0–100	Adjusts the volume of the effect sound.
DIRECT	0–100	Adjusts the volume of the direct sound.

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FEEDBACKER

MONO

Generates feedback.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
MODE	NORMAL	Analyzes the pitch of the guitar sound being input, and then creates a feedback sound.
	OSC	A simulated feedback sound is created internally. When OSC is selected, the effect is activated after a single note is played and the note stabilizes. A feedback effect is created when the effect switches on. The feedback disappears when the effect is switched off.
DEPTH^{*1}	0–100	Adjusts how readily the feedback occurs when the effect is on.
RISE TIME^{*2}	0–100	Adjusts the time needed for the volume of the feedback sound to reach its maximum after you switch the effect on.
TRIGGER	OFF, ON	Feedback is applied if this is turned ON. * When the memory is written, this parameter is stored in the OFF state.

Parameter	Value	Explanation
OCT RISE TM ^{*2} (OCTAVE RISE TIME)	0–100	Adjusts the time needed for the volume of the feedback sound that's one octave higher to reach its maximum after you switch the effect on.
FEEDBACK ^{*2}	0–100	Adjusts the volume of the feedback sound.
OCT F-BACK ^{*2} (OCTAVE FEEDBACK)	0–100	Adjusts the volume of the feedback sound that's one octave higher.
VIB RATE ^{*2}	0–100	Adjusts the rate of the vibrato when feedback is on.
VIB DEPTH ^{*2}	0–100	Adjusts the depth of the vibrato when feedback is on.

*1 MODE=NORMAL only

*2 MODE=OSC only

HUMANIZER

STEREO

This alters the guitar audio signal to give it a human-like vocalized sound.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
MODE	This sets the mode for switching the vowels.	
	PICKING	Switches from VOWEL1 to VOWEL2 according to your picking. The RATE adjusts the time it takes to switch the vowels.
	AUTO	Adjusts the RATE and DEPTH used for switching between the two vowels (VOWEL1 and VOWEL2).
VOWEL1	a, e, i, o, u	Selects the first vowel.
VOWEL2	a, e, i, o, u	Selects the second vowel.
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 this is set to 50, the time it takes to switch between vowels 1 and 2 is the same; and when this is set to a value lower than 50, the time it takes to switch to VOWEL1 is shorter. When it is set to higher than 50, the time for VOWEL 1 is longer.
RATE	0–100 ms, BPM 	Adjusts the cycle for changing the two vowels. * When set to BPM, the value of each parameter will be set according to the value of the "MASTER BPM" specified for each memory. 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. *  is a double whole note, which is twice as long as a whole note.
DEPTH	0–100	Adjusts the depth of the effect.
LEVEL	0–100	Adjusts the volume.

*1 Setting available when MODE is set to PICKING.

*2 Setting available when MODE is set to AUTO.

CHORUS

MONO ▶ MONO STEREO

This is an effect that adds a slightly modulated sound to the direct signal, creating beautiful spaciousness and depth.

MONO/STEREO

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.

Parameter	Value	Explanation
TYPE	Selection for the chorus mode.	
	MONO STEREO	This chorus effect outputs the same sound from both L channel and R channel.
	DIR/EFX MONO ▶ STEREO	This stereo chorus uses spatial synthesis, with the direct sound output in the L channel and the effect sound output in the R channel.
	STEREO STEREO	This is a stereo chorus effect that adds different chorus sounds to L channel and R channel.
RATE	0–100, BPM $\kappa\kappa$ 	Adjusts the rate of the chorus effect. * When set to BPM, the value of each parameter will be set according to the value of the “MASTER BPM” specified for each memory. 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. * $\kappa\kappa$ is a double whole note, which is twice as long as a whole note.
DEPTH	0–100	Adjusts the depth of the chorus effect. To use this as a doubling effect, set this to “0”.
LEVEL	0–100	Adjusts the volume of the effect sound.
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).
WAVEFORM	TRI	Produces a typical chorus effect. 
	SINE	Produces a deeper sense of modulation. 
LOW CUT	FLAT, 20.0 Hz–12.5 kHz	Sets the frequency at which the low cut filter begins to take effect. When “FLAT” is selected, the low cut filter has no effect.
HIGH CUT	20.0 Hz–12.5 kHz, FLAT	Sets the frequency at which the high cut filter begins to take effect. When FLAT is selected, the high cut filter has no effect.
DIRECT	0–100	Adjusts the volume of the direct sound. Setting this to “0” cuts the direct sound.

FLANGER

STEREO

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

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
RATE	0–100, BPM $\kappa\kappa$ 	Sets 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” specified for each memory. 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. * $\kappa\kappa$ is a double whole note, which is twice as long as a whole note.
DEPTH	0–100	Determines the depth of the flanging effect.
LEVEL	0–100	Adjusts the volume of the flanger.
MANUAL	0–100	Adjusts the center frequency at which to apply the effect.
RESO	0–100	Determines the amount of resonance (feedback). Increasing the value emphasizes the effect, for a more unusual sound.
DIRECT	0–100	Adjusts the volume of the direct sound.

Parameter	Value	Explanation
LOW CUT	FLAT, 20.0 Hz–12.5 kHz	Sets the frequency at which the low cut filter begins to take effect. When “FLAT” is selected, the low cut filter has no effect.
STEP RATE	OFF, 0–100, BPM $\kappa\kappa$ 	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 “0” when not using the Step function.

BASS FLANGER

STEREO

This is a flanger effect for bass guitar.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
RATE	0–100, BPM $\kappa\kappa$ 	Sets 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” specified for each memory. 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. * $\kappa\kappa$ is a double whole note, which is twice as long as a whole note.
DEPTH	0–100	Determines the depth of the flanging effect.
LEVEL	0–100	Adjusts the volume of the flanger.
MANUAL	0–100	Adjusts the center frequency at which to apply the effect.
RESO	0–100	Determines the amount of resonance (feedback). Increasing the value emphasizes the effect, for a more unusual sound.
DIRECT	0–100	Adjusts the volume of the direct sound.
LOW CUT	FLAT, 20.0 Hz–12.5 kHz	Sets the frequency at which the low cut filter begins to take effect. When “FLAT” is selected, the low cut filter has no effect.
STEP RATE	OFF, 0–100, BPM $\kappa\kappa$ 	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 “0” when not using the Step function.

PHASER

STEREO

Gives a whooshing, swirling character to the sound by adding varied-phase portions to the direct sound.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
RATE	0–100, BPM $\kappa\kappa$ 	Adjusts the frequency (speed) of the volume change. * When set to BPM, the value of each parameter will be set according to the value of the “MASTER BPM” specified for each memory. 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. * $\kappa\kappa$ is a double whole note, which is twice as long as a whole note.
DEPTH	0–100	Determines the depth of the phaser effect.
LEVEL	0–100	Adjusts the volume.
STAGE	4 STAGE, 8 STAGE, 12 STAGE	Select the number of stages for the phaser effect.
RESO	0–100	Determines the amount of resonance (feedback). Increasing the value emphasizes the effect, for a more unusual sound.
MANUAL	0–100	Adjusts the center frequency of the phaser effect.
DIRECT	0–100	Adjusts the volume of the direct sound.

Parameter	Value	Explanation
STEP RATE	OFF, 0–100, BPM 	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. * When set to BPM, the value of each parameter will be set according to the value of the “MASTER BPM” specified for each memory. 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.

BASS PHASER

STEREO

This is a phaser effect for bass guitar.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
RATE	0–100, BPM 	Adjusts the frequency (speed) of the volume change. * When set to BPM, the value of each parameter will be set according to the value of the “MASTER BPM” specified for each memory. 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. *  is a double whole note, which is twice as long as a whole note.
DEPTH	0–100	Determines the depth of the phaser effect.
LEVEL	0–100	Adjusts the volume of the phaser.
STAGE	4 STAGE, 8 STAGE, 12 STAGE	Select the number of stages for the phaser effect.
RESO	0–100	Determines the amount of resonance (feedback). Increasing the value emphasizes the effect, for a more unusual sound.
MANUAL	0–100	Adjusts the center frequency of the phaser effect.
DIRECT	0–100	Adjusts the volume of the direct sound.
STEP RATE	OFF, 0–100, BPM 	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. * When set to BPM, the value of each parameter will be set according to the value of the “MASTER BPM” specified for each memory. 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.

SCRIPT PH (SCRIPT PHASER)

STEREO

Models the MXR Phase 90 which was manufactured during the '70s.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
RATE	0–100, BPM 	Adjusts the frequency (speed) of the volume change. * When set to BPM, the value of each parameter will be set according to the value of the “MASTER BPM” specified for each memory. 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. *  is a double whole note, which is twice as long as a whole note.
DEPTH	0–100	Determines the depth of the phaser effect.
LEVEL	0–100	Adjusts the volume.
DIRECT	0–100	Adjusts the volume of the direct sound.

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CLASSIC-VIBE

STEREO

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

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
RATE	0–100, BPM ♩	Adjusts the rate of the CLASSIC VIBE effect. * When set to BPM, the value of each parameter will be set according to the value of the "MASTER BPM" specified for each memory. 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. * ♩ is a double whole note, which is twice as long as a whole note.
DEPTH	0–100	Adjusts the depth of the CLASSIC VIBE effect.
LEVEL	0–100	Adjusts the volume.
MODE	CHORUS	Direct sound and effect sound are mixed and output.
	VIBRATO	Only effect sound is output.

ROTARY

MONO ▶
STEREO

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

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
SPEED SELECT	SLOW, FAST	This parameter changes the simulated speaker's rotating speed (SLOW or FAST).
SLOW RATE	0–100, BPM ♩	This parameter adjusts the SPEED SELECT of rotation when set to "SLOW". * When set to BPM, the value of each parameter will be set according to the value of the "MASTER BPM" specified for each memory. 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. * ♩ is a double whole note, which is twice as long as a whole note.
FAST RATE	0–100, BPM ♩	This parameter adjusts the SPEED SELECT 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" specified for each memory. 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. * ♩ is a double whole note, which is twice as long as a whole note.
LEVEL	0–100	Adjusts the volume.
RISE TIME	0–100	This parameter adjusts the time it takes for the rotation SPEED SELECT to change when switched from "SLOW" to "FAST."
FALL TIME	0–100	This parameter adjusts the time it takes for the rotation SPEED SELECT to change when switched from "FAST" to "SLOW."
MIC DISTANCE	0–100	Adjusts the distance between the horn/rotor and the mic.
BALANCE	0–100	Adjusts the balance between the treble rotor and the bass rotor.
DRIVE	0–100	Adjusts the amount of distortion in the preamp.
DIRECT	0–100	Adjusts the volume of the direct sound.

VIBRATO

STEREO

This effect creates vibrato by slightly modulating the pitch.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
RATE	0–100, BPM $\times$ 	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” specified for each memory. 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. * $\times$ is a double whole note, which is twice as long as a whole note.
DEPTH	0–100	Adjusts the depth of the vibrato.
LEVEL	0–100	Adjusts the volume.
RISE TIME	0–100	This sets the time passing from the moment the Trigger is turned on until the set vibrato is obtained.
TRIGGER	OFF, ON	This selects on/off of the vibrato.

TREMOLO

STEREO

This effect creates a cyclic change in volume.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
RATE	0–100, BPM $\times$ 	Adjusts the frequency (speed) of the volume change. * When set to BPM, the value of each parameter will be set according to the value of the “MASTER BPM” specified for each memory. 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. * $\times$ is a double whole note, which is twice as long as a whole note.
DEPTH	0–100	Adjusts the depth of the volume change.
LEVEL	0–100	Adjusts the volume.
WAVEFORM	0–100	Adjusts how the volume level changes (the curve). Higher values create steeper wave shapes (more abrupt changes).
TRIGGER	OFF, ON	Turns the tremolo on/off.
RISE TIME	0–100	Specifies the time from when trigger turns on until the specified tremolo effect is obtained.
DIRECT	0–100	Adjusts the volume of the direct sound.

PAN

STEREO

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.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
RATE	0–100, BPM $\times$ 	Adjusts the frequency (speed) of the volume change. * When set to BPM, the value of each parameter will be set according to the value of the “MASTER BPM” specified for each memory. 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. * $\times$ is a double whole note, which is twice as long as a whole note.
DEPTH	0–100	Adjusts the depth of the volume change.
LEVEL	0–100	Adjusts the volume.
WAVEFORM	0–100	Adjusts how the volume level changes (the curve). Higher values create steeper wave shapes (more abrupt changes).
DIRECT	0–100	Adjusts the volume of the direct sound.

RING MOD (RING MODULATOR)

STEREO

This creates a bell-like sound by ring-modulating the guitar sound with the signal from the internal oscillator. The sound can be unmusical and lack distinctive pitches.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
FREQ	0–100	Adjusts the frequency of the internal oscillator.
MOD RATE	0–100, BPM κ – 	Adjusts the rate at which the internal oscillator is modulated. * When set to BPM, the value of each parameter will be set according to the value of the “MASTER BPM” specified for each memory. 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. * κ is a double whole note, which is twice as long as a whole note.
MOD DEPTH	0–100	Adjusts the depth to which the internal oscillator is modulated.
LEVEL	0–100	Adjusts the volume of the effect sound.
DIRECT	0–100	Adjusts the volume of the direct sound.
INTELLIGENT	OFF, ON	If this is ON, the oscillator frequency changes according to the pitch of the input sound, producing a pitched sound. In this case, the expected effect does not occur if the pitch of the guitar sound is not detected correctly. This effect does not give a satisfactory result if the pitch of the guitar sound is not correctly detected.

SLICER

STEREO

This consecutively interrupts (or slices) the sound to create the effect of a rhythm backing phrase being played.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
PATTERN	P01–P20	Selects the rhythm pattern used to slice up the sound.
RATE	0–100, BPM κ – 	Adjusts the rate at which the sound is sliced. * When set to BPM, the value of each parameter will be set according to the value of the “MASTER BPM” specified for each memory. 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. * κ is a double whole note, which is twice as long as a whole note.
LEVEL	0–100	Adjusts the volume.
ATTACK	0–100	Adjusts the attack volume for the rhythm pattern.
DUTY	1–99	Adjusts the duration of the sound for the rhythm pattern.
TRIGGER	OFF, ON	When you switch this from OFF to ON, the rhythm pattern returns to the beginning. * When the memory is written, this parameter is stored in the OFF state.
DIRECT	0–100	Adjusts the volume of the direct sound.

DELAY

STEREO MONO

This effect adds delayed sound to the direct sound, to give more body to the sound or create special effects.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.

Parameter	Value	Explanation
TYPE	Selects the type.	
	STANDARD 	Delays the sound to create an echo-like effect.
	PAN 	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 and R channels.
	REVERSE 	Produces a reverse playback effect.
	ANALOG 	Gives a mild analog delay sound.
	SPACE ECHO 	Models the Roland RE-201.
	BIN ECHO 	This models the sound of the Binson Echorec2.
	GIGA DELAY 	This models the BOSS GIGA DELAY DD-20 in STANDARD mode.
	VINT.DIGITAL 	This is a warm delay that models the early digital delay sounds.
	SLOW ATTACK 	This is a delay with a slow attack applied, like playing with a volume control.
	SHIMMER 	Delay with pitch-shifted sound mixed in.
	WARP 	Produces a dream-like sound.
	TWIST 	Produces an aggressive sense of rotation. Using this in conjunction with distortion will produce an even wilder sense of rotation.
	GLITCH 	Creates a machine gun-like delay effect.
TIME ^{*1}	1–2000 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” specified for each memory. 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. *  is a double whole note, which is twice as long as a whole note. * The value to set differs depending on the type.
FEEDBACK ^{*2}	0–100	Adjusts the volume of delay that is returned to the input. Higher settings will result in more delay repeats.
LEVEL ^{*3}	1–120	Adjusts the volume of the delay sound. * The value to set differs depending on the type.
DIRECT ^{*2}	0–100	Adjusts the volume of the direct sound.
TONE ^{*4}	0–100	Adjusts the tonal character of the delay sound. When the knob is in the center position, the response is flat. Turning the knob toward the right boosts the high-frequency range, and turning it toward the left cuts the high-frequency range.
HIGH CUT ^{*5}	20.0 Hz–12.5 kHz, FLAT	Sets the frequency at which the high cut filter begins to take effect. When FLAT is selected, the high cut filter has no effect.
MOD RATE ^{*6}	0–100	Adjusts the modulation rate of the delay sound.
MOD DEPTH ^{*6}	0–100	Adjusts the modulation depth of the delay sound.
TAP TIME ^{*7}	0–100 %	Adjusts the delay time of the right channel delay. This setting adjusts the R channel delay time relative to the L channel delay time (considered as 100%).
TRIGGER ^{*8}	OFF, ON	If this is ON, the effect is applied. When the memory is written, this parameter is stored in the OFF state.
HEAD ^{*9}	1, 1+2, 1+3, 2+3, 1+2+3	Selects the combination playback heads. Playback heads 2/3 provide delay times that are two times or three times as long as playback head 1.
WOW&FLUT ^{*10} (WOW&FLATTER)	0–100	Adjusts the wow & flutter.

Parameter	Value	Explanation
SELECTOR ^{*11}	ECHO, REPEAT, SWELL	Selects the operating mode of the delay. Depending on mode that's selected, the FEEDBACK will not work in some cases.
FILTER ^{*12}	OFF, ON	Turns the filter on/off that cuts the high-band frequencies.
RANGE ^{*12}	8 kHz, 17 kHz	This selects the register to which the effect is applied.
DELAY PHASE ^{*12}	NORMAL, INVERT	Specifies the phase of the delay sound. Selecting INVERT inverts the phase.
FB PHASE ^{*12} (FEEDBACK PHASE)	NORMAL, INVERT	Specifies the phase of the delay sound feedback. Selecting INVERT inverts the phase.
TARGET ^{*13}	EFFECT	Produces a slow attack effect on only the delay sound.
	ALL	Produces a slow attack effect on both the direct sound and the delay sound.
SENS ^{*13}	0–100	Adjusts the sensitivity by which the volume is automatically adjusted according to the input. Increasing this value makes the response more sensitive at lower volumes.
RISE TIME ^{*14}	0–100	This parameter adjusts the amount of time it is to take for the effect to transition to the maximum.
FALL TIME ^{*15}	0–100	Adjusts the time it takes for the rotation effect to stop when MODE changes from RISE to FALL.
CURVE ^{*13}	-50–+50	Adjusts the envelope of the slow attack effect. Larger values produce a slower attack, and smaller values produce a faster attack.
PITCH ^{*16}	-24–+24	Lets you freely specify the amount of pitch shift for the delay.
GLITCH ^{*17}	0–100	Adjusts the intensity of the GLITCH effect.
BALANCE ^{*18}	0–100	Adjusts the balance between the pitch-shifted sound that is input to the delay and the direct sound.
PITCH FB ^{*16} (PITCH FEEDBACK)	0–100	Adjusts the amount of feedback for the delay that is applied to the direct sound.

*1 For all effects except for TWIST

*2 Only for effects besides WARP, TWIST and GLITCH

*3 For all effects except for GLITCH

*4 Only for GIGA DELAY

*5 Only for effects besides GIGA DELAY, WARP, TWIST and GLITCH

*6 Only for STANDARD and ANALOG

*7 Only for TAP

*8 Only for effects besides REVERSE. WARP, TWIST and GLITCH

*9 Only for SPACE ECHO

*10 Only for SPACE ECHO and BIN ECHO

*11 Only for BIN ECHO

*12 Only for VINT.DIGITAL

*13 Only for SLOW ATTACK

*14 Only for SLOW ATTACK and TWIST

*15 Only for TWIST

*16 Only for SHIMMER

*17 Only for GLITCH

*18 Only for SHIMMER and GLITCH

* Company names and product names appearing in this document are registered trademarks or trademarks of their respective owners.

* In this manual, company names and product names of the respective owners are used because it is the most practical way of describing the sounds that are emulated using DSP technology.

REVERB



This effect adds reverberation to the sound.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.

Parameter	Value	Explanation
TYPE	HALL S	Simulates the reverberation in a concert hall. Provides clear and spacious reverberations.
	HALL M	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.
	ROOM S	Simulates the reverberation in a small room. Provides warm reverberations.
	ROOM L	Simulates the reverberation of a room larger than ROOM S.
	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.
	SPRING	This simulates the sound of a guitar amp's built-in spring reverb.
	SHIMMER	Simulates reverberation with a distinctively sparkling high-frequency range.
TIME	0.1 s–10.0 s	Adjusts the length (time) of reverberation.
LEVEL	0–100	Adjusts the volume of the reverb sound.
DENSITY	1–10	Adjusts the density of the reverb sound.
TONE	-50–0–+50	Adjusts the tonal character of the reverb.
PRE-DELAY	0 ms–200 ms	Adjusts the time until the reverb sound starts to output.
LOW CUT	FLAT, 20.0 Hz–12.5 kHz	Sets the frequency at which the low cut filter begins to take effect. When "FLAT" is selected, the low cut filter has no effect.
HIGH CUT	630 Hz–12.5 kHz, FLAT	Sets the frequency at which the high cut filter begins to take effect. When FLAT is selected, the high cut filter has no effect.
DIRECT	0–100	Adjusts the volume of the direct sound.
LOW DAMP	-50–0–+50	Adjusts the amount of attenuation for the low frequency region.
HIGH DAMP	-50–0–+50	Adjusts the amount of attenuation for the high frequency region.
PITCH 1	-24–+24	Adjusts the amount of pitch shift.
PITCH 2		
PITCH LVL 1 (PITCH LEVEL 1)	0–100	Adjusts the volume of the pitch shifter.
PITCH LVL 2 (PITCH LEVEL 2)		

DIVIDER/MIXER

STEREO

Within the effect chain, the point where the signal is split into channels "A" and "B" is called the "divider" and the point where the two signals are recombined is called the "mixer".

Divider: Splits the signal into channels A and B.

MIXER: Lets you adjust the volume balance of channels "A" and "B", place them in the stereo field, or slightly delay the sound of channel "B" to produce a spacious sound.

MIXER

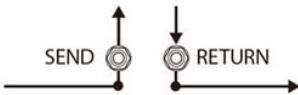
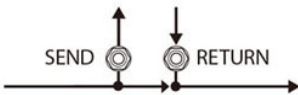
Parameter	Value	Explanation
MODE	STEREO	Channels "A" and "B" will be mixed and output in stereo.
	PAN L/R	Channels "A" and "B" will be assigned respectively to the L and R OUTPUT jacks.
A LEVEL	0–100	Adjusts the volume of the channel A.
B LEVEL	0–100	Adjusts the volume of the channel B.
A/B BALANCE	100:0–0:100	Adjusts the volume balance of channels "A" and "B".
SPREAD	100:0–0:100	Slightly delays the sound of channel "B" to make the sound more spacious.

SEND/RETURN

MONO

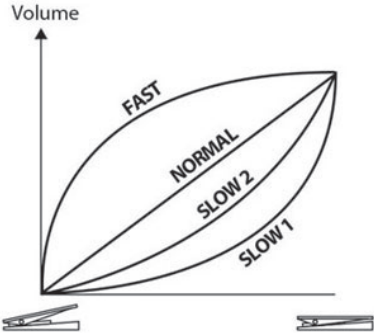
When the S/R MODE of HARDWARE SETTING is SEND/RETURN, you can connect an external effect unit between the OUTPUT R (SEND) and INPUT R (RETURN) jacks and use it as part of the EX-4 effect.

The sound that is input to SEND/RETURN within the effect chain will be output to the SEND jack. The sound that is input via the RETURN jack will be input to SEND/RETURN within the effect chain.

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
MODE	NORMAL	The input to SEND/RETURN within the effect chain will be output to the SEND jack, and the input from the RETURN jack will be output following SEND/RETURN. Use this setting if you want to connect an external effects processor in series within the EX-4's effect chain. 
	DIRECT MIX	The input to SEND/RETURN within the effect chain will be output to the SEND jack, and the input from the RETURN jack and the input to SEND/RETURN (the direct sound) will be mixed and output following SEND/RETURN. Use this when you want to mix the EX-4's effects sounds together with the sound with the external effects device applied to it. 
SEND LEVEL	0–200	Adjusts the volume of the output to the external effects device.
RETURN LEVEL	0–200	Adjusts the volume of the input from the external effects device.
ADJUST	OFF, 0–100	Adjusts the phase between the EX-4's internal processing and an external effect unit connected to the SEND/RETURN jacks. * You can adjust this if MODE is set to DIRECT MIX.
INVERT	OFF, ON	Inverts the phase of the signal sent from the external effect to the RETURN jack.

The following are settings that apply to all memories.

Parameter	Value	Explanation
MEM LEVEL	1–200	Sets the volume of the memory.
BPM	40–250	Adjusts the BPM value for each memory. BPM (beats per minute) indicates the number of quarter note beats that occur each minute.
KEY	C (Am)–B (G#m)	This sets the key for the HARMONIST.
SEAM LEVEL	0–100	Adjusts the level of direct sound that's produced instead of the effect sound, during the silence that occurs when you are switching between memories.
CARRYOVER	OFF, ON	You can specify whether the effect sound carries over when you switch memories.
TEMPO HOLD	OFF, ON	Specifies whether the tempo (BPM) changes or stays the same when you switch between memories.
OUT LEVEL	1–200	Adjusts the EX-4 output level. * This is a system parameter. The same setting of this parameter applies to all memories.
INPUT SET	SET 1-10	Selects the setting number for the input jack. ➔ INPUT SETTING (p. 31) * This is a system parameter. The same setting of this parameter applies to all memories.
ALL BYPASS	OFF, ON	While this is ON, the sound of the guitar being input to the EX-4 is outputted without change. All effects will be off.
NS1:PLACE, NS2:PLACE^{*1}	INPUT, FX1, FX2, FX3, FX4, SEND/RETURN, DIV(A), DIV(B), MIX, OUTPUT	Specifies the NS1 and NS2 position. * SEND/RETURN is enabled only when the S/R MODE for HARDWARE SETTING is set to SEND/RETURN. * DIV(A), DIV(B) and MIX are only available when STRUCTURE is set to a value other than SERIAL1.
NS1:SW, NS2:SW^{*1}	OFF, ON	Turns this effect on/off.
NS1:DETECT, NS2:DETECT^{*1}	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".  (Spatial-type effect)
NS1:THSHD, NS2:THSHD^{*1}	0–100	Adjust this parameter as appropriate for the volume of the noise. If the noise level is high, a higher setting is appropriate. Adjust the value so that the decay of the guitar sound sounds natural. * High settings for the threshold parameter may result in there being no sound when you play with your guitar volume turned down.
NS1:RELEASE, NS2:RELEASE^{*1}	0–100	Adjusts the time from when the noise suppressor begins to function until the noise level reaches "0".
FV:PLACE	INPUT, FX1, FX2, FX3, FX4, SEND/RETURN, DIV(A), DIV(B), MIX, OUTPUT	Specifies the FV position. * SEND/RETURN is enabled only when the S/R MODE for HARDWARE SETTING is set to SEND/RETURN. * DIV(A), DIV(B) and MIX are only available when STRUCTURE is set to a value other than SERIAL1.
FV:POSITION	0–100	Adjusts the volume.

Parameter	Value	Explanation
FV:CURVE	SLOW1, SLOW2, NORMAL, FAST	You can select how the actual volume changes relative to the amount the pedal is pressed. 
FV:MIN	0-100	Sets the volume when the heel of the EXP Pedal is depressed.
FV:MAX	0-100	Selects the volume when the toe of the EXP Pedal is depressed.

*1 NS2:PLACE-NS2:RELEASE can be configured when the STRUCTURE in CHAIN is set to a value other than SERIAL1.

INPUT SETTING

This shows you how to set the type of instrument to connect (guitar/bass), and how to adjust the input level to match the output level of your instrument.

You can save up to 10 instrument type and input level settings.

Parameter	Value	Explanation
INPUT SET	SET 1–SET 10	Select the setting (input level) for the guitar/bass that's connected to the INPUT jack.
INPUT GAIN	-10–+10 dB	Adjusts the guitar/bass input level.
INPUT TYPE	GUITAR, BASS	Sets the type of device (guitar/bass) to connect.

GLOBAL EQ

This adjusts the output tonal character. You can save up to three settings.

Parameter	Value	Explanation
SET	Selects the GLOBAL EQ setting.	
	OFF	Turns GLOBAL EQ off.
	SET1–SET3	Switches between settings 1–3.
LOW GAIN	-20–+20 dB	Adjusts the low frequency range tone.
HIGH GAIN	-20–+20 dB	Adjusts the high frequency range tone.
MID FREQ	20.0Hz–12.5kHz	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.
MID GAIN	-20–+20 dB	Adjusts the midrange balance.
LOW CUT	FLAT, 20.0 Hz–12.5 kHz	Sets the frequency at which the low cut filter begins to take effect. When "FLAT" is selected, the low cut filter has no effect.
HIGH CUT	20.0 Hz–12.5 kHz, FLAT	Sets the frequency at which the high cut filter begins to take effect. When FLAT is selected, the high cut filter has no effect.
LEVEL	-20–+20 dB	Adjusts the overall volume level of the equalizer.

PLAY OPTION

Here you can specify how the pedals will work during performance.

Parameter	Value	Explanation
MEM EXTENT MIN	U01–U128	Sets the minimum value for the selectable memories.
MEM EXTENT MAX	P01–P128	Sets the maximum value for the selectable memories.

HARDWARE SETTINGS

Parameter	Value	Explanation
EXP HOLD	ON	When you switch memories, the operational state (the pedal tilt position) of the EXP PEDAL before switching is carried over to the memory after switching.
	OFF	The operational states (pedal tilt position) of the EXP PEDAL is not carried over when memories are switched.
LOCK	OFF, ON	Enables/disables the knob operations.
COLOR	FULL	The screen displays in color. The LED indicator colors change depending on the effect type and so on. The screen displays in color.
	RED	The screen displays in black and white. The LED indicators basically display in red. When a function is used for which the color change is necessary, the colors yellow, blue and white are used to make the state easy to distinguish.
	BLUE	The screen displays in black and white. The LED indicators basically display in blue. When a function is used for which the color change is necessary, the colors red, yellow and white are used to make the state easy to distinguish.
	GREEN	The screen displays in black and white. The LED indicators basically display in green. When a function is used for which the color change is necessary, the colors red, yellow, blue and white are used to make the state easy to distinguish.
	YELLOW	The screen displays in black and white. The LED indicators basically display in yellow. When a function is used for which the color change is necessary, the colors red, blue and white are used to make the state easy to distinguish.
	ORANGE	The screen displays in black and white. The LED indicators basically display in orange. When a function is used for which the color change is necessary, the colors red, yellow, blue and white are used to make the state easy to distinguish.
	PINK	The screen displays in black and white. The LED indicators basically display in pink. When a function is used for which the color change is necessary, the colors red, yellow, blue and white are used to make the state easy to distinguish.
	PURPLE	The screen displays in black and white. The LED indicators basically display in purple. When a function is used for which the color change is necessary, the colors red, yellow, blue and white are used to make the state easy to distinguish.
	LIGHT BLUE	The screen displays in black and white. The LED indicators basically display in light blue. When a function is used for which the color change is necessary, the colors red, yellow, blue and white are used to make the state easy to distinguish.
	CYAN	The screen displays in black and white. The LED indicators basically display in cyan. When a function is used for which the color change is necessary, the colors red, yellow, blue and white are used to make the state easy to distinguish.
	WHITE	The screen displays in black and white. The LED indicators basically display in white. When a function is used for which the color change is necessary, the colors red, yellow and blue are used to make the state easy to distinguish.

Parameter	Value	Explanation
S/R MODE		When switching the S/R mode, disconnect the cables connected to the INPUT R (return) and OUTPUT R (send) jacks, and reconnect them to the correct connections so that no audio signal loops occur.
	STEREO I/O	Uses the INPUT R(RETURN)/OUTPUT R(SEND) jacks for INPUT R/OUTPUT R.
	SEND/RETURN	Uses the INPUT R(RETURN)/OUTPUT R(SEND) jacks for SEND/RETURN.

FOOTSW SETTING

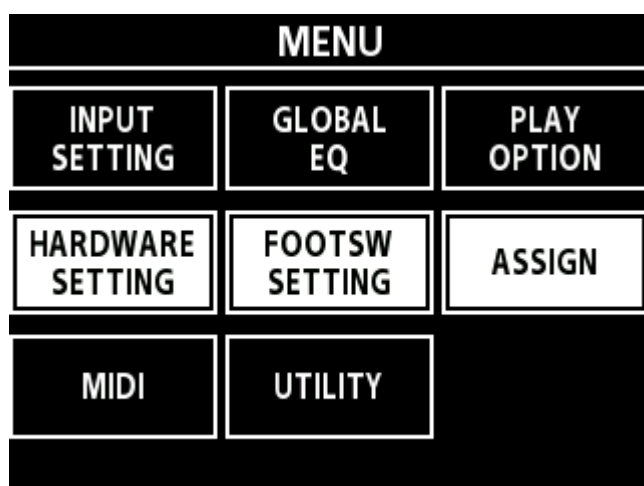
In the footswitch mode (FSW MODE) settings, you can choose how to operate the effects based on how you use them.

Parameter	Value	Explanation
▼/▲ FUNC	MEM ▼/▲, FX1/FX2, FX3/FX4, BYPASS/MEM ▲	Assigns the functions for the [▼/1] and [▲/2] switches when the footswitch mode is MEMORY MODE. * Refer to “Changing the footswitch functions in memory mode” in the “EX-4 Reference Manual”
▼&▲ SW	OFF, MEM/MAN	Toggles the function that’s used when you press the [▼/1] and [▲/2] switches at the same time on/off. * Refer to “Disabling simultaneous pressing of the footswitches” in the “EX-4 Reference Manual”
FSW MODE	MEMORY (Memory mode)	This mode lets you recall and use the memories that are saved in the unit. Press the [▼/1] switch to switch to the previous memory, and press the [▲/2] switch to switch to the next memory. * You can also assign different functions to the [▼/1] and [▲/2] switches.
	MANUAL (Manual mode)	This mode lets you use the [▼/1] and [▲/2] switches to control the effect blocks. Pressing the [▼/1] switch toggles the FX1 block on/off, and pressing the [▲/2] switch toggles the FX2 block on/off. * You can also assign different functions to the [▼/1] and [▲/2] switches.

ASSIGN

You can set up to eight operations for ASSIGN.

- 1 From the play screen, press the [MENU] button.
- 2 Turn the [SELECT] knob to move the cursor to the row containing “ASSIGN”.



3 Press the [3] knob to open the ASSIGN screen.

ASSIGN 1	
	VALUE
SW	ON
PREF	MEMORY
SOURCE	PDL1
ASSIGN MODE	PRESET
PRESET	FX1 OFF/ON
[1]:SELECT [2]:ASSIGN NUM [3]:VALUE	

4 Turn the [2] knob to select the assign number.

You can set up to eight assignments, from ASSIGN 1 to ASSIGN 8.

5 Use the following operation to change the settings.

Operation	Explanation
Turn the [SELECT] knob or the [1] knob	Moves the cursor.
Turn the [TYPE/VALUE] knob or the [3] knob	Change the value.

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

ASSIGN parameter list

Parameter	Value	Explanation
SW	OFF, ON	Turns the ASSIGN 1–8 on/off.
PREF	MEMORY	This lets you use different settings for each memory.
	SYSTEM	The same settings will be shared by all memories.
SOURCE	Specifies the controller (source).	
	PDL1	Assigns the [▼/1] switch.
	PDL2	Assigns the [▲/2] switch.
	CTL1(3)	Assigns the functions of the external footswitch connected to the CTL1(3) jack (FS-5U, FS-6, FS-7; sold separately).
	CTL2(4)	Assigns the functions of the external footswitch connected to the CTL2(4) jack (FS-5U, FS-6, FS-7; sold separately).
	EXP	Assigns the external expression pedal connected to the EXP jack.
	INT PEDAL	Assigns the internal pedal.
	WAVE PEDAL	Assigns the wave pedal.
	CC# 1–31, 64–95	Control Change messages from an external MIDI device.
ASSIGN MODE	PRESET, MANUAL	Determines whether you want to select a preset function or a function of your choice.

Parameter	Value	Explanation
PRESET	ALL BYPASS, MEMORY ▼, MEMORY ▲, MEMORY/MANUAL, TAP TEMPO, FX1 OFF/ON, FX2 OFF/ON, FX3 OFF/ON, FX4 OFF/ON, SND/RTN OFF/ON, FX1 TRIGGER, FX2 TRIGGER, FX3 TRIGGER, FX4 TRIGGER, NS1 OFF/ON, NS2 OFF/ON, MIX AB BALANCE, FV PDL POSITION, FX1 WAH, FX2 WAH, FX3 WAH, FX4 WAH, FX1 PEDALBEND, FX2 PEDALBEND, FX3 PEDALBEND, FX4 PEDALBEND	Selects a preset function. * See “ List of presets (p. 35) ” for the preset functions.
MODE^{*1}	Sets the action of the value for each operation. * This is only shown when selecting some parameters.	
	TOGGLE	The setting is toggled On (maximum value) or Off (minimum value) with each press of the footswitch.
	MOMENT	The normal state is Off (minimum value), with the switch On (maximum value) only while the footswitch is depressed.
CATEGORY^{*1}	This selects the parameter to be changed.	
TARGET^{*1}	TARGET list (p. 36)	
MIN^{*1}	This 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^{*1}	This sets the maximum value for the range in which the parameter can change. The value differs depending on the parameter assigned for TARGET parameter.	

*1 This can be set when ASSIGN MODE is set to “MANUAL”.

List of presets

PRESET	MODE	Explanation
ALL BYPASS	TOGGLE	Toggles ALL BYPASS on/off.
MEMORY ▼	MOMENT	Switches to the next memory number.
MEMORY ▲	MOMENT	Switches to the previous memory number.
MEMORY/MANUAL	TOGGLE	Toggles FSW MODE.
TAP TEMPO	MOMENT	Used for tap input of the MASTER BPM.
FX1 OFF/ON	TOGGLE	Turn the FX1 on/off.
FX2 OFF/ON	TOGGLE	Turn the FX2 on/off.
FX3 OFF/ON	TOGGLE	Turn the FX3 on/off.
FX4 OFF/ON	TOGGLE	Turn the FX4 on/off.
SND/RTN OFF/ON	TOGGLE	Switches the SEND/RETURN on and off.
FX1 TRIGGER	MOMENT	Switches the FX1 TRIGGER on/off.
FX2 TRIGGER	MOMENT	Switches the FX2 TRIGGER on/off.
FX3 TRIGGER	MOMENT	Switches the FX3 TRIGGER on/off.
FX4 TRIGGER	MOMENT	Switches the FX4 TRIGGER on/off.
NS1 OFF/ON	TOGGLE	Turn the NS1 on/off.
NS2 OFF/ON	TOGGLE	Turn the NS2 on/off.
MIX AB BALANCE	TOGGLE	Switches the A/B BALANCE for the MIXER block between 100:0 and 0:100. This has the effect of switching between the A/B channels.
FV PDL POSITION	MOMENT	Operates the FV:POSITION for the FOOT VOLUME.
FX1 WAH	MOMENT	Operates the PEDAL POSITION for the FX1 WAH.
FX2 WAH	MOMENT	Operates the PEDAL POSITION for the FX2 WAH.
FX3 WAH	MOMENT	Operates the PEDAL POSITION for the FX3 WAH.
FX4 WAH	MOMENT	Operates the PEDAL POSITION for the FX4 WAH.
FX1 PEDALBEND	MOMENT	Operates the PEDAL POSITION for the FX1 PEDALBEND.
FX2 PEDALBEND	MOMENT	Operates the PEDAL POSITION for the FX2 PEDALBEND.
FX3 PEDALBEND	MOMENT	Operates the PEDAL POSITION for the FX3 PEDALBEND.

PRESET	MODE	Explanation
FX4 PEDALBEND	MOMENT	Operates the PEDAL POSITION for the FX4 PEDALBEND.

TARGET list

CATEGORY	TARGET
FUNCTION	MEMORY▼
	MEMORY▲
	MEMORY/MANUAL
	BPM TAP
FX1	ON/OFF
	FX TYPE
FX1:COMPRESSOR	TYPE
	SUSTAIN
	THRESHOLD
	ATTACK
	LEVEL
	TONE
	RATIO
	DIRECT
FX1:LIMITER	TYPE
	THRESHOLD
	RATIO
	LEVEL
	ATTACK
	RELEASE
FX1:SLOW GEAR	SENS
	RISE TIME
	LEVEL
FX1:B.SLOW GEAR	SENS
	RISE TIME
	LEVEL
FX1:PITCH SHIFT	VOICE
	1: PITCH
	1: FINE
	1: MODE
	1: PRE-DELAY
	1: FEEDBACK
	1: LEVEL
	2: PITCH
	2: FINE
	2: MODE
	2: PRE-DELAY
	2: LEVEL
	DIRECT

CATEGORY	TARGET
FX1:HARMONIST	VOICE
	1: HARMONY
	1: LEVEL
	1: PRE-DELAY
	1: FEEDBACK
	2: HARMONY
	2: LEVEL
	2: PRE-DELAY
	DIRECT
FX1:OCTAVE	-1 OCT
	-2 OCT
	DIRECT
FX1:B.OCTAVE	-1 OCT
	-2 OCT
	DIRECT
FX1:HEAVY OCT	-1 OCT
	-2 OCT
	DIRECT
FX1:SBEND	TRIGGER
	PITCH
	RISE TIME
	FALL TIME
FX1:PEDAL BEND	PITCH MIN
	PITCH MAX
	POSITION
	LEVEL
	DIRECT
FX1:TUNE DOWN	PITCH
FX1:DEFRETTER	SENS
	ATTACK
	DEPTH
	RESO
	TONE
	LEVEL
	DIRECT
FX1:B.DEFRETTER	SENS
	ATTACK
	TONE
	LEVEL
	DIRECT
FX1:AC.GTR SIM	HIGH
	BODY
	LOW
	LEVEL
FX1:AC RESO	TYPE
	RESO
	TONE
	LEVEL

CATEGORY	TARGET
FX1:AC.BASS	LOW
	HIGH
	LEVEL
FX1:SITAR SIM	SENS
	DEPTH
	tone
	LEVEL
	RESO
	BUZZ
	DIRECT
FX1:GUITAR SYNTH	TYPE
	FREQ
	RESO
	FILTER SENS
	FILTER DECAY
	FILTER DEPTH
	LEVEL
	DIRECT
FX1:BASS SYNTH	TYPE
	FREQ
	RESO
	FILTER SENS
	FILTER DECAY
	FILTER DEPTH
	LEVEL
	DIRECT
FX1:OD/DS	TYPE
	DRIVE
	tone
	LEVEL
	BOTTOM
	DIRECT
	SOLO SW
	SOLO LEVEL
FX1:PARA EQ	LOW GAIN
	HIGH GAIN
	LEVEL
	LOW-MID FREQ
	LOW-MID Q
	LOW-MID GAIN
	HIGH-MID FREQ
	HIGH-MID Q
	HIGH-MID GAIN
	LOW CUT
	HIGH CUT

CATEGORY	TARGET
FX1:GEQ	31.5 Hz
	63 Hz
	125 Hz
	250 Hz
	500 Hz
	1 kHz
	2 kHz
	4 kHz
	8 kHz
	16 kHz
	LEVEL
FX1:ENHANCER	SENS
	LOW
	HIGH
	LOW FREQ
	HIGH FREQ
	LEVEL
FX1:THOUCH WAH	FILTER
	POLARITY
	SENS
	FREQ
	RESO
	DECAY
	LEVEL
	DIRECT MIX
FX1:B.TOUCH WAH	FILTER
	POLARITY
	SENS
	FREQ
	RESO
	DECAY
	LEVEL
	DIRECT
FX1: AUTO WAH	FILTER
	FREQ
	RATE
	DEPTH
	RESO
	LEVEL
	WAVEFORM
	DIRECT
FX1:WAH	WAH TYPE
	LEVEL
	DIRECT
	PDL POSITION
	MIN
	MAX

CATEGORY	TARGET
FX1:ENV FILTER	SENS
	tone
	PEAK
	LEVEL
	DIRECT
FX1: FEEDBACKER	MODE
	TRIGGER
	DEPTH
	RISE TIME
	OCT RISE TM
	FEEDBACK
	OCT F-BACK
	VIB RATE
	VIB DEPTH
FX1:HUMANIZR	MODE
	VOWEL1
	VOWEL2
	SENS
	RATE
	DEPTH
	MANUAL
	LEVEL
FX1:CHORUS	TYPE
	RATE
	DEPTH
	EFFECT LEVEL
	PRE-DELAY
	WAVEFORM
	LOW CUT
	HIGH CUT
	DIRECT
FX1:FLANGER	RATE
	DEPTH
	RESO
	MANUAL
	LOW CUT
	STEP RATE
	LEVEL
	DIRECT MIX
FX1:B.FLANGER	RATE
	DEPTH
	RESO
	MANUAL
	LOW CUT
	STEP RATE
	LEVEL
	DIRECT

CATEGORY	TARGET
FX1:PHASER	STAGE
	RATE
	DEPTH
	RESO
	MANUAL
	STEP RATE
	LEVEL
	DIRECT
FX1:B.PHASER	STAGE
	RATE
	DEPTH
	RESO
	MANUAL
	STEP RATE
	LEVEL
	DIRECT
FX1:SCRIPT PH	RATE
	DEPTH
	LEVEL
	DIRECT
FX1:CLASSIC VB	MODE
	RATE
	DEPTH
	LEVEL
FX1:ROTARY	SPEED SELECT
	SLOW RATE
	FAST RATE
	LEVEL
	RISE TIME
	FALL TIME
	MIC DISTANCE
	BALANCE
	DRIVE
	DIRECT
FX1:VIBRATO	RATE
	DEPTH
	RISE TIME
	TRIGGER
	LEVEL
FX1:TREMOLO	RATE
	DEPTH
	WAVEFORM
	LEVEL
	TRIGGER
	RISE TIME
	DIRECT

MENU

CATEGORY	TARGET
FX1:PAN	RATE
	DEPTH
	WAVEFORM
	LEVEL
	DIRECT
FX1:RING MOD	INTELLIGENT
	FREQ
	MOD RATE
	MOD DEPTH
	LEVEL
	DIRECT
FX1:SLICER	PATTERN
	RATE
	TRIGGER
	LEVEL
	ATTACK
	DUTY
	DIRECT
FX1:DELAY	TYPE
FX1:DLY STD	TIME
	FEEDBACK
	EFFECT LEVEL
	DIRECT
	HIGH CUT
	MOD RATE
	MOD DEPTH
FX1:DLY PAN	TAP TIME
FX1:DLY REVERSE	AUTO TRIGGER
FX1:DLY ANALOG	TIME
FX1:DLY SPACE EC	HEAD
	WOW&FLUTTER
FX1:DLY BIN ECHO	HEAD
	SELECTOR
FX1:DLY GIGA	TONE
FX1:DLY VINTAGE	FILTER
	RANGE
	DELAY PHASE
	FEEDBACK PHASE
FX1:DLY SLOW ATK	TARGET
	SENS
	RISE TIME
	CURVE
FX1:DLY SHIMMER	PITCH
	PITCH BALANCE
	PITCH FEEDBACK

CATEGORY	TARGET
FX1:DLY TWIST	MODE
	TRIGGER
	RISE TIME
	FALL TIME
	FADE TIME
	LEVEL
FX1:DLY GLITCH	TIME
	GLITCH
	BALANCE
FX1:REVERB	TYPE
	TIME
	TONE
	DENSITY
	EFFECT LEVEL
	PRE-DELAY
	LOW CUT
	HIGH CUT
	LOW DAMP
	HIGH DAMP
	DIRECT
FX1:REV SIMMER	PITCH1
	LEVEL1
	PITCH2
	LEVEL2
FX2 FX3 FX4	Same as FX1
SEND/RETURN	ON/OFF
	MODE
	SEND LEVEL
	RETURN LEVEL
	ADJUST
	INVERT
MIXER	A LEVEL
	B LEVEL
	A/B BALANCE
	SPREAD
NS1	ON/OFF
	THRESHOLD
	RELEASE
	DETECT
NS2	ON/OFF
	THRESHOLD
	RELEASE
	DETECT
FV	PDL POSITION
	VOLUME MIN
	VOLUME MAX
	VOLUME CURVE

CATEGORY	TARGET
MASTER	MEM LEVEL
	BPM
	KEY
	OUT LEVEL
	SEAM LEVEL
	ALL BYPASS

MIDI

Here you can make settings for using the EX-4 connected with an external MIDI device or with a second EX-4 unit.

MIDI SETTING

Parameter	Value	Explanation
RX CH	This sets the MIDI channel used for receiving MIDI messages.	
	CH1–CH16	Specifies the receive channel.
TX CH	Sets the MIDI channel used for transmitting MIDI messages.	
	CH1–CH16	Specifies the transmit channel.
	RX CH	Transmits on the same channel as the RX CHANNEL.
MIDI IN THRU	This specifies the connector from which to output the MIDI messages that are received at the MIDI IN connector.	
	OFF	MIDI messages are not transmitted.
	MIDI OUT	Messages are transmitted from the MIDI OUT connector.
	USB OUT	Messages are transmitted from the USB port.
	MIDI&USB	Output from the USB port and the MIDI OUT connector.
USB IN THRU	This specifies the connector from which to output the MIDI messages that are received at the USB port.	
	OFF	MIDI messages are not transmitted.
	MIDI OUT	Messages are transmitted from the MIDI OUT connector.
	USB OUT	Messages are transmitted from the USB port.
	MIDI&USB	Output from the USB port and the MIDI OUT connector.
SYNC	This setting determines the basis used for synchronizing the timing for effect modulation rates and other time-based parameters.	
	* When you have an external MIDI device connected, the MASTER BPM is then synchronized to the external MIDI device's tempo, thus disabling the MASTER BPM setting. To enable setting of the MASTER BPM, set to "INTERNAL."	
	* When synchronizing performances to the MIDI Clock signal from an external MIDI device, timing problems in the performance may occur due to errors in the MIDI Clock.	
	AUTO	Operations are synchronized to MIDI clock messages received via MIDI or USB. However, operations are automatically synchronized to the EX-4's internal clock if the , is unable to receive the external Clock.
	INTERNAL	Operations are synchronized to the EX-4's internal Clock.
	MIDI (AUTO)	Operations are synchronized to the MIDI Clock received via MIDI. However, operations are automatically synchronized to the EX-4's internal clock if the , is unable to receive the external Clock.
	USB (AUTO)	Operations are synchronized to the USB Clock received via USB. However, operations are automatically synchronized to the EX-4's internal clock if the , is unable to receive the external Clock.
CLOCK OUT	Specifies whether MIDI clock will be output from the EX-4.	
	OFF	MIDI clock is not output.
	ON	MIDI clock is output.
PDL1 CC	Specifies the controller number when transmitting pedal operations as control change messages.	
PDL2 CC	OFF	Control Change messages are not output.
CTL1(3) CC CTL2(4) CC EXP CC	CC#1–CC#31, CC#64–CC#95	Pedal operations are transmitted using the specified controller number.

PROGRAM MAP BANK1–BANK2

Use the program change map to customize which memories on the EX-4 correspond to which program change messages sent from an external MIDI device, switching to the memory in question.

Parameter	Value	Explanation
PC#1–PC#128	U001–U128, P001–P128	Sets the memory number (from U001 to P128) that corresponds to the program number.

MEMORY MIDI

When switching between memories in MEMORY (memory mode), these parameters are used to set the MIDI channels used for transmitting MIDI data to an external MIDI device, among other data.

Parameter	Value
1:CH	OFF, CH 1–CH16
1:PC#	OFF, 1–128
1:BANK MSB	OFF, 1–128
1:BANK LSB	OFF, 1–128
1:CC1#	OFF, 0–127
1:CC1 VALUE	0–127
1:CC2#	OFF, 0–127
1:CC2 VALUE	0–127
2:CH	OFF, CH 1–CH16
2:PC#	OFF, 1–128
2:BANK MSB	OFF, 1–128
2:BANK LSB	OFF, 1–128
2:CC1#	OFF, 0–127
2:CC1 VALUE	0–127
2:CC2#	OFF, 0–127
2:CC2 VALUE	0–127
3:CH	OFF, CH 1–CH16
3:PC#	OFF, 1–128
3:BANK MSB	OFF, 1–128
3:BANK LSB	OFF, 1–128
3:CC1#	OFF, 0–127
3:CC1 VALUE	0–127
3:CC2#	OFF, 0–127
3:CC2 VALUE	0–127
4:CH	OFF, CH 1–CH16
4:PC#	OFF, 1–128
4:BANK MSB	OFF, 1–128
4:BANK LSB	OFF, 1–128
4:CC1#	OFF, 0–127
4:CC1 VALUE	0–127
4:CC2#	OFF, 0–127
4:CC2 VALUE	0–127

BULK DUMP

You can use Exclusive messages to provide another EX-4 with identical settings, and save effect settings on a MIDI sequencer or other device.

Parameter	Value	Explanation
FROM TO	SYSTEM	System parameter settings
	GEAR SUITE	GEAR SUITE setting details
	U001–U128	User memory setting details

UTILITY

INFO. (INFORMATION)

Shows the 2D code for accessing the Reference Manual, as well as the EX-4’s software version.

FACTORY RESET

Initializes the EX-4 to its factory-set condition.

Parameter	Value	Explanation
FROM TO	SYSTEM	System parameter settings
	GEAR SUITE	GEAR SUITE setting details
	U001–U128	User memory setting details

Sound list

Preset memory list

Memory number	Memory name	GIUITAR/ BASS	STRUCTURE	FX1	FX2	FX3	FX4	Explanation
1	CLEAN LEAD	GIUITAR	SERIAL1	COMP	OD/DS	DELAY	REVERB	An orthodox combination of a MID BOOST OD/DS (overdrive/distortion) and COMPRESSOR. Turn the FX2 block BOOSTER on to make the sound more full-bodied.
2	DYNAMIC LEAD	GIUITAR	SERIAL1	COMP	OD/DS	PEQ	DELAY	An overdrive/distortion crunch sound with a stronger bottom end. Turn the FX1 block COMPRESSOR on to give the sound greater presence.
3	TAPE ECHO	GIUITAR	SERIAL1	DELAY (S.ECHO)	REVERB	-	-	A lightweight tape echo sound. This memory was designed to be used with this product placed at the end of the pedalboard effect chain.
4	SYMPHONY	GIUITAR	SERIAL1	COMP	SLOW GEAR	CHORUS	DELAY (SHIMMER)	A thick pad-like sound that's created using the SLOW GEAR, CHORUS and SHIMMER DELAY effects.
5	BLACK HALL	GIUITAR	SERIAL1	DELAY (ANALOG)	REVERB (SHIMMER)	-	-	A deep reverb sound that draws the listener in, created with the ANALOG DELAY and SHIMMER REVERB effects. This memory was designed to be used with this product placed at the end of the pedalboard effect chain.
6	60s ROCK 'N ROLL	GIUITAR	SERIAL1	OD/DS	REVERB	DELAY (S.ECHO)	-	A classic, lightweight slapback echo sound for use with 1960s rock music.
7	TREMOLO CLEAN	GIUITAR	SERIAL1	COMP	TREMOLO	PEQ	REVERB	A simple, clean tremolo sound.
8	FUNKY A-WAH	GIUITAR	SERIAL1	COMP	AUTO WAH	REVERB	-	A sound for strumming that uses AUTO WAH.
9	SHIMMER HALL	GIUITAR	PARALLEL1	REVERB (SHIMMER)	DELAY	DELAY	-	A spatial sound that follows the BPM, with a varied time and delay added to SHIMMER REVERB for spaciousness. This memory was designed to be used with this product placed at the end of the pedalboard effect chain.
10	FLEX CLEAN	GIUITAR	SERIAL1	OD/DS	CHORUS	COMP	DELAY	A clean sound that uses a light CHORUS and a dotted eighth note DELAY. Turn the FX1 block BOOSTER on for a distorted sound with an emphasized high-band range.
11	ACOUSTIC GUITAR	GIUITAR	SERIAL1	AC GUITAR SIMULATOR	COMP	PEQ	REVERB	Changes a single-coil pickup tone to an acoustic guitar tone.
12	RICH& LAYERED	GIUITAR	SERIAL1	COMP	DELAY (S.ECHO)	CHORUS	REVERB (SHIMMER)	A massive sound, which stacks the X-COMP for bass with SHIMMER REVERB and other effects. Turn the FX2 DELAY on to produce a complex reverberating sound combined with TAPE ECHO.
13	TRIO CHORUS	GIUITAR	SERIAL1	CHORUS	CHORUS	CHORUS	-	A chorus sound with depth, combining three CHORUS effects that use different PRE DELAY settings.

Sound list

Memory number	Memory name	GUITAR/ BASS	STRUCTURE	FX1	FX2	FX3	FX4	Explanation
14	SMOOTH VIBRATO	GUITAR	SERIAL1	COMP	VIBRATO	DELAY (S.ECHO)	REVERB (SHIMMER)	A backing sound that features a shimmering VIBRATO effect. Recommended when the pickup selector is set to an in-between (combined pickup) position.
15	DETUNED DS LEAD	GUITAR	SERIAL1	OD/DS	PITCH SHIFTER	DELAY	REVERB	A massive sound in which X-DIST is set up for the rear single pickup, and a feeling of spaciousness is produced by PITCH SHIFTER detuning.
16	W&F BLISS	GUITAR	SERIAL1	COMP	FLANGER	DELAY (S.ECHO)	REVERB (SHIMMER)	A sparkling reverberating sound that simulates tape delay with the COMPRESSOR taking effect, which emphasizes wow & flutter. Turn the FX2 block FLANGER on for added spaciousness.
17	STADIUM ROCK	GUITAR	SERIAL1	CHORUS	OD/DS	GEQ	REVERB	A sound that simulates the feeling of playing in a stadium, with a modulated CHORUS effect and REVERB added to a DISTORTION sound. This is recommended for rear humbucker pickups.
18	BOUNCE ARPEGGIO	GUITAR	PARALLEL1	OCTAVE	PITCH SHIFTER	PITCH SHIFTER	DELAY (S.ECHO)	Two PITCH SHIFTER effects with different PRE DELAY settings are combined to create a dreamlike and arpeggiated type of sound. Turn the FX1 block OCTAVE on for a more massive sound.
19	CHURCH LEAD	GUITAR	SERIAL1	OD/DS	OD/DS	DELAY (S.ECHO)	REVERB	A crunch lead sound with the sound of REVERB that's brought to the forefront. Recommended for front single-coil pickups.
20	SYN-FUZZ	GUITAR	SERIAL1	OD/DS	RING MODULAT OR	DELAY	-	A thick synthesizer-like sound, which combines OCT FUZZ with RING MODULATOR.
21	FOREVER CLEAN	GUITAR	PARALLEL1	CHORUS	REVERB	DELAY (S.ECHO)	COMP	A deep reverberation effect that combines a rather long DELAY and REVERB. Turn the FX1 block CHORUS on for even more complex reverberations.
22	OC METAL	GUITAR	SERIAL1	OCTAVE	OD/DS	-	-	A heavy sound that's like playing in unison with a bass, created by combining the OCTAVE and METAL DS effects. This memory was designed to be used with this product placed at the front of the pedalboard effect chain.
23	DELAY WITH YOU	GUITAR	PARALLEL1	PEQ	DELAY (S.ECHO)	DELAY (S.ECHO)	REVERB	An orthodox reverb sound, created with SPACE ECHO and REVERB. Turn the FX2 block on to add another SPACE ECHO for more massive reverberations. This memory was designed to be used with this product placed at the end of the pedalboard effect chain.
24	CRUNCHY TREMOLO	GUITAR	SERIAL1	OD/DS	CHORUS	TREMOLO	DELAY (S.ECHO)	A touch-responsive crunch sound that emphasizes the sense of movement created by the TREMOLO and DELAY. Turning CHORUS on for the FX2 block gives an even more spacious sound.

Memory number	Memory name	GUITAR/BASS	STRUCTURE	FX1	FX2	FX3	FX4	Explanation
25	SLAP BACK	GUITAR	SERIAL1	DELAY (S.ECHO)	REVERB	-	-	A simple slapback sound that combines SPACE ECHO with SPRING REVERB. This memory was designed to be used with this product placed at the end of the pedalboard effect chain.
26	FUZZ+DS	GUITAR	PARALLEL1	OD/DS	OD/DS	OD/DS	REVERB	A distorted sound with a muddy but full-bodied tone, which is created by mixing the WARM OD and FUZZ effects. Turn the FX1 BOOSTER on to produce an even more sustaining tone.
27	LUX REVERS	GUITAR	SERIAL1	DELAY	REVERB	-	-	An extravagant-sounding reverb with a floating feel, which uses REVERSE DELAY. This is recommended for humbucker pickups. This memory was designed to be used with this product placed at the end of the pedalboard effect chain.
28	PHASE-GAZER	GUITAR	PARALLEL1	COMP	OD/DS	OD/DS	PHASER	A swelling drive sound that mixes both OCT FUZZ and OVERDRIVE after passing through the COMPRESSOR, with the sound brought together by the PHASER.
29	BIG ORCHESTRA	GUITAR	SERIAL1	PITCH SHIFTER	GEQ	DELAY	REVERB (SHIMMER)	An orchestral pad sound with rich harmonics that uses both PAN DELAY and SHIMMER REVERB. Turn the FX1 block PITCH SHIFTER on to add an organ-like flavor to the sound.
30	EXTMETAL FLANGER	GUITAR	PARALLEL1	OD/DS	PITCH SHIFTER	FLANGER	GEQ	A massive metal sound that adds the swelling sound of the FLANGER to METAL DS, to which PITCH SHIFT is added one octave lower. This memory was designed to be used with this product placed at the front of the pedalboard effect chain.
31	SLOW GEAR	GUITAR	SERIAL1	SLOW GEAR	OD/DS	-	-	A drive sound with a reverse playback-like sound created using SLOW GEAR. This memory was designed to be used with this product placed at the front of the pedalboard effect chain.
32	SYNCPAD	GUITAR	SERIAL1	REVERB (SHIMMER)	SLICER	PEQ	REVERB	An ambient sequenced sound that uses the SLICER to add a rhythmic effect to the chords you play.
33	STADIUM HR	GUITAR	SERIAL1	SCRIPT PHASER	OD/DS	OD/DS	DELAY	A drive sound that's suitable for late-1980s hard rock, featuring two OVERDRIVE effects and a PHASER stacked together for a three-dimensional sound with motion.
34	MEGA SHIMMER	GUITAR	PARALLEL1	OD/DS	REVERB (SHIMMER)	REVERB (SHIMMER)	DELAY	A deep shimmer sound that mixes SHIMMER REVERB effects with different time settings. When OVERDRIVE for the FX1 block is ON, the sound gains greater presence.

Sound list

Memory number	Memory name	GUITAR/ BASS	STRUCTURE	FX1	FX2	FX3	FX4	Explanation
35	MILD JAZZ	GUITAR	SERIAL1	OD/DS	PEQ	DELAY	REVERB	A standard clean sound that's suitable for jazz, which uses a simple DELAY and REVERB. Turn the FX1 block BOOSTER on to get a sound that works for jazz-rock.
36	FUZZ GATE	GUITAR	SERIAL1	FLANGER	OD/DS	SLICER	DELAY (S.ECHO)	A sequenced sound that uses a FLANGER with resonance along with a SLICER that adds a rhythmic flavor. Turn the FX2 block FUZZ on to get an analog synthesizer-like sound.
37	RETRO AMBIENCE	GUITAR	SERIAL1	OD/DS	TREMOLO	DELAY (S.ECHO)	REVERB	A crunch sound to which tremolo is applied. Turn the FX1 block OVERDRIVE on to get a sound that's suitable for blues rock.
38	FUNKY ROCK	GUITAR	SERIAL1	COMP	OD/DS (OVERDRIVE)	CHORUS	DELAY	A chorus sound that uses the COMPRESSOR for a sound suitable for funk music. Turn the FX2 block OVERDRIVE on to get a modulated drive sound that's suitable for funk rock.
39	HEAVY OCTAVE	GUITAR	SERIAL1	OCTAVE	VIBRATO	OD/DS	-	A heavy metal sound with the OCTAVE effect applied. Turn the FX2 VIBRATO on to get a characteristic sound with an emphasized unstable sonic texture.
40	DANCING TREMOLO	GUITAR	PARALLEL1	COMP	OD/DS	TREMOLO	DELAY	A rhythmic sound created by TREMOLO and DELAY. Turn the FX2 OVERDRIVE on to get a crunch sound with modulation.
41	Hi-Fi CHURCH	GUITAR	SERIAL1	COMP	CHORUS	REVERB	REVERB	An ambient clean sound with a COMPRESSOR effect. This creates a realistic church reverb by connecting two REVERB effects in series. Turn the FX2 CHORUS on to get a deeper sound.
42	GRUNGE FUZZ	GUITAR	SERIAL1	OCTAVE	OD/DS	-	-	A grungy backing sound that offers a bold, sustaining FUZZ sound. Turn the FX1 OCTAVE on to get a brasher sound. This is recommended for humbucker pickups.
43	DOUBLE LAYER PH	GUITAR	PARALLEL1	COMP	OD/DS	PHASER	REVERB	A clean sound with a deep 12-stage phaser. Turn the FX2 DISTORTION on to mix distortion in, creating a thicker phaser sound.
44	DEEP DUB ECHO	GUITAR	SERIAL1	DELAY (S.ECHO)	REVERB	-	-	A dub sound with a deep echo. This memory was designed to be used with this product placed at the end of the pedalboard effect chain.
45	RICH CHORUS	GUITAR	SERIAL1	CHORUS	DELAY	REVERB	-	A warm chorus sound. Turn the FX2 DELAY on to add a rhythmic delay. This memory was designed to be used with this product placed at the end of the pedalboard effect chain.
46	JET FUZZ	GUITAR	SERIAL1	OCTAVE	OD/DS	FLANGER	DELAY (ANALOG)	A heavy sound with a brash FUZZ and a FLANGER effect. Turn the FX1 OCTAVE on for a more massive sound.

Memory number	Memory name	GUITAR/ BASS	STRUCTURE	FX1	FX2	FX3	FX4	Explanation
47	ROCK SHIMMER	GUITAR	PARALLEL1	COMP	OD/DS	CHORUS	DELAY (SHIMMER)	A sparkling SHIMMER sound that's modulated with a CHORUS effect, to which the COMPRESSOR is applied. Turn the FX2 FUZZ on for a sound with more pronounced harmonics.
48	ANALOG SPRING	GUITAR	SERIAL1	DELAY (ANALOG)	REVERB	-	-	A combo sound that's simple but warm, created with ANALOG DELAY and SPRING REVERB. This memory was designed to be used with this product placed at the end of the pedalboard effect chain.
49	+5TH MOD LEAD	GUITAR	PARALLEL1	OD/DS	FLANGER	PHASER	PITCH SHIFTER	A swelling lead sound with FLANGER and PHASER mixed in, to which the sound a fifth above is added using PITCH SHIFTER.
50	SCRIPT DRIVE	GUITAR	SERIAL1	SCRIPT PHASER	OD/DS	PEQ	-	A 1970s hard rock sound that features the SCRIPT PHASER and DISTORTION effects connected in series.
51	STRINGS PAD	GUITAR	SERIAL1	SLOW GEAR	REVERB (SHIMMER)	DELAY	-	A synth pad-like sound for which only the SHIMMER REVERB effect is heard, and for which SLOW GEAR is used to remove the attack portion of the sound.
52	HALFSTEP LOWER	GUITAR	SERIAL1	PITCH SHIFTER	OD/DS	GEQ	-	A heavy riff sound that uses PITCH SHIFTER to lower the sound a half step. This memory was designed to be used with this product placed at the front of the pedalboard effect chain.
53	MONO ORGAN	GUITAR	PARALLEL1	COMP	OCTAVE	PITCH SHIFTER	ROTARY	A simple organ sound created using PITCH SHIFTER and ROTARY. Turn the FX2 block OCTAVE on to add an organ bass-like tone to the sound.
54	QUACKY LEAD	GUITAR	SERIAL1	TOUCH WAH	COMP	OD/DS	DELAY (S.ECHO)	A unique funk sound that's like a duck call, which uses TOUCH WAH to change the sound dynamically according to your picking strength. Turn the FX2 COMPRESSOR on for a more full-bodied sound.
55	DRILLED RIFF	GUITAR	SERIAL1	RING MODULATOR	OD/DS	SLICER	-	A unique drill-like sound that combines the RING MODULATOR and SLICER effects. Turn the FX2 DISTORTION on for a more industrial-like effect.
56	REPEAT NOTE	GUITAR	PARALLEL1	TREMOLO	DELAY	SLOW GEAR	REVERB	An ambient sound that fades in the SLOW GEAR sound after the REVERSE DELAY.
57	LIGHT CRUNCH	GUITAR	SERIAL1	OD/DS	DELAY	-	-	A crunch sound that lets you enjoy the nuances of your picking. Recommended for front, center or mixed single-coil pickup combinations.
58	BALLAD DELAY	GUITAR	SERIAL1	DELAY	REVERB (SHIMMER)	-	-	A simple long delay, created by using DELAY and SHIMMER REVERB. This memory was designed to be used with this product placed at the end of the pedalboard effect chain.
59	SLICE & FILTERED	GUITAR	SERIAL1	OD/DS	AUTO WAH	SLICER	REVERB	A slicer sound that applies a filter using AUTO WAH, suitable for alternative rock. Turn the FX1 FUZZ on to add a sound one octave higher, giving the sound more thickness.

Sound list

Memory number	Memory name	GUITAR/ BASS	STRUCTURE	FX1	FX2	FX3	FX4	Explanation
60	STEP & SHIMMER	GUITAR	SERIAL1	COMP	PITCH SHIFTER	PHASER	DELAY (SHIMMER)	An ambient sound that connects the STEP PHASER and SHIMMER DELAY effects in series. Turn the FX2 PITCH SHIFTER on for a more massive sound.
61	SOFT PH LEAD	GUITAR	SERIAL1	PHASER	OD/DS	COMP	DELAY	A floating hard rock sound that combines a soft PHASER and OVERDRIVE effect.
62	ACTION STAGE	GUITAR	SERIAL1	PHASER	OD/DS	SLICER	REVERB	A pad sound with a deep reverb along with modulation generated by the PHASER and SLICER effects. Turn the FX2 block DISTORTION on to get a floating sound for riffs.
63	SUPER DELAY	GUITAR	SERIAL1	DELAY	REVERB	-	-	A simple dotted eighth-note delay, created by using DELAY and REVERB. This memory was designed to be used with this product placed at the end of the pedalboard effect chain.
64	TEXAS CRUNCH	GUITAR	SERIAL1	OD/DS	TREMOLO	REVERB	COMP	A simple blues rock sound, created by the OD/DS and SPRING REVERB effects. Add FX2 block TREMOLO for a soft modulation.
65	ANALOG LUXDELAY	GUITAR	PARALLEL1	PEQ	DELAY (ANALOG)	DELAY (ANALOG)	REVERB	An extravagant-sounding ambient sound that blends well in the mix, which applies SPRING REVERB to a mix of two ANALOG DELAY effects. This memory was designed to be used with this product placed at the end of the pedalboard effect chain.
66	TREMOLO VOYAGE	GUITAR	SERIAL1	OD/DS	COMP	TREMOLO	REVERB	A tremolo sound with a short ROOM REVERB. Turn the FX1 BOOSTER on to give the sound more presence.
67	MELLOW TREMOLO	GUITAR	SERIAL1	TREMOLO	DELAY (ANALOG)	REVERB	-	A clean tremolo sound that uses a deep REVERB effect. Turn on a fairly long DELAY in the FX2 block for a sound that's suitable for arpeggios.
68	NATURAL CRUNCH	GUITAR	SERIAL1	OD/DS	CHORUS	DELAY	REVERB	A crunch tone that emphasizes your picking nuances. Turn the FX2 CHORUS on for a modulated sound that's also suitable for playing chords.
69	SELF-REFLECT	GUITAR	PARALLEL1	DELAY	TOUCH WAH	VIBRATO	REVERB	A complex stereo delay sound that uses PAN DELAY with a long feedback. Use the FX2 block TOUCH WAH for even more unique filter effects.
70	COUNTRY CRUNCH	GUITAR	SERIAL1	COMP	TREMOLO	OD/DS	DELAY (S.ECHO)	A crunch sound that's good for country rock. Turn the FX2 block TREMOLO on for a modulated sound that's suitable for playing arpeggios and chords as well.
71	SLICER PAD	GUITAR	PARALLEL1	FLANGER	SLICER	SLICER	REVERB (SHIMMER)	A pad sound that uses a deep FLANGER and a rhythmic SLICER effect. Turn on the FX2 SLICER with different settings to emphasize the rhythm for a unique sound.
72	LA LEAD SOUND	GUITAR	PARALLEL1	COMP	OD/DS	OD/DS	PITCH SHIFTER	A 1980s hard rock sound with an A-DIST that achieves ideal distortion from low- to high-band, along with a PITCH SHIFTER to shift the pitch for a spacious effect. Turn on and mix in the FX2 DISTORTION to get a lead sound with presence.

Memory number	Memory name	GUITAR/ BASS	STRUCTURE	FX1	FX2	FX3	FX4	Explanation
73	PARALLEL SPACE	GUITAR	PARALLEL1	DELAY	REVERB	-	-	A clean reverberation sound that's suitable for recording, in which the signal is split and sent to the DELAY and REVERB respectively, so that the sound remains distinct. This offers a beautiful effect, even at the end of the signal chain after the signal passes through various effects. This memory was designed to be used with this product placed at the end of the pedalboard effect chain.
74	FUZZY LEAD	GUITAR	SERIAL1	OD/DS	PITCH SHIFTER	-	-	A lead sound that uses a bold, sustaining FUZZ effect. Turn the FX2 block PITCH SHIFTER on to transform the sound into a synthesizer-like lead sound. This memory was designed to be used with this product placed at the front of the pedalboard effect chain.
75	REVERSE CONCERT	GUITAR	SERIAL1	DELAY	DELAY	REVERB	-	An ambient sound that uses REVERSE DELAY. Turn the FX1 STANDARD DELAY on for a rhythmic reverberation sound.
76	GARAGE PUNK	GUITAR	SERIAL1	OD/DS	OD/DS	PEQ	REVERB	A garage punk-type backing sound that chains a DISTORTION effect after CLEAN BST. Recommended for rear single-coil pickups.
77	WAVE MOD	GUITAR	SERIAL1	CHORUS	PHASER	-	-	A complex modulation sound that connects a CHORUS and PHASER effect in series, each with different rates. Recommended for center position humbucker pickups.
78	AOR LEAD	GUITAR	SERIAL1	OD/DS	PITCH SHIFTER	CHORUS	-	A lead sound with an A-DIST that achieves ideal distortion from low- to high-band, along with a CHORUS that provides both spaciousness and modulation. Turn the FX2 block PITCH SHIFTER on to achieve a detuned effect, which adds a unique spaciousness to the sound.
79	BROKEN TOY	GUITAR	SERIAL1	RING MODULATOR	VIBRATO	SCRIPT PHASER	-	A characteristic pop sound with an unstable modulation that uses the RING MODULATOR and SCRIPT PHASER effects. Turn the FX2 VIBRATO on for a unique sound with emphasized instability.
80	HARMONIC LEAD	GUITAR	SERIAL1	OD/DS	OD/DS	HARMONIST	DELAY	A lead sound with a massive atmosphere that adds a third below with HARMONIST to the DISTORTION sound. Turn the FX1 BOOSTER on to give the sound more presence.
81	SITAR SIM	GUITAR	SERIAL1	SITAR SIM	COMP	PITCH SHIFTER	-	An ethnic sound that uses SITAR SIM. Uses PITCH SHIFTER to apply a detuning effect. This memory was designed to be used with this product placed at the front of the pedalboard effect chain.
82	RICH SHIMMER	GUITAR	SERIAL1	CHORUS	DELAY (SHIMMER)	-	-	An ambient sound that combines the CHORUS and SHIMMER DELAY effects. Recommended for single-coil pickups. This memory was designed to be used with this product placed at the end of the pedalboard effect chain.

Sound list

Memory number	Memory name	GUITAR/ BASS	STRUCTURE	FX1	FX2	FX3	FX4	Explanation
83	SLICER RIFF	GUITAR	SERIAL1	SLICER	REVERB	-	-	A rhythmic riff sound that features the SLICER effect. This memory was designed to be used with this product placed at the end of the pedalboard effect chain.
84	SPIRAL FUZZ	GUITAR	PARALLEL1	OD/DS	OCTAVE	CLASSIC-VIBE	SCRIPT PHASER	A fuzz sound with a deep swirling feel, which adds the CLASSIC VIBE effect with PHASER modulation to a brash FUZZ effect. Turn the FX2 OCTAVE on to mix in the low-end sound for greater presence.
85	DEFRET ECHO	GUITAR	SERIAL1	DEFRETTER	SLOW GEAR	CHORUS	DELAY (S.ECHO)	A dreamlike ambient sound that applies a deep SPACE ECHO and uses the DEFRETTER and SLOW GEAR effects to remove the attack.
86	TRIO LEAD	GUITAR	SERIAL1	OD/DS	HARMONIST	-	-	A multilayered lead sound that features a fat DISTORTION with a lower third added using the HARMONIST effect. This memory was designed to be used with this product placed at the front of the pedalboard effect chain.
87	MEGA JET FLANGER	GUITAR	SERIAL1	CLASSIC-VIBE	FLANGER	-	-	A jet engine-like sound, created using a simple FLANGER. Turn the FX1 CLASSIC-VIBE on to emphasize the modulation effect.
88	ROTOR-RIZED	GUITAR	SERIAL1	OD/DS	ROTARY	REVERB	COMP	An organ-like sound, which uses ROTARY and applies a light REVERB. Turn the FX1 OVERDRIVE on for a sound that works even better for playing leads.
89	DOUBLE FILTER	GUITAR	SERIAL1	HUMANIZER	AUTO WAH	-	-	A unique sound that combines HUMANIZER and AUTO WAH. Recommended for center, rear or mixed single-coil pickup combinations. This memory was designed to be used with this product placed at the front of the pedalboard effect chain.
90	CHOFIELD	GUITAR	SERIAL1	CHORUS	OD/DS	PEQ	-	A rather deep CHORUS sound. Turn the FX2 OVERDRIVE on for a sound that works even better for playing leads.
91	DEEP AMBIENT	GUITAR	SERIAL1	REVERB	DELAY	-	-	A rhythmic ambient sound that combines a deep REVERB and DELAY effect.
92	CHO+MOD DLY	GUITAR	SERIAL1	CHORUS	DELAY	-	-	A unique ambient sound that connects a stereo CHORUS in series with a DELAY that emphasizes the modulation. Designed for connecting to the SEND/RETURN jacks of a JC-120. This memory was designed to be used with this product placed at the end of the pedalboard effect chain.
93	SYNC AW+PH+DD	GUITAR	SERIAL1	AUTO WAH	PHASER	DELAY	REVERB	A rhythmic modulation sound that synchronizes the effects by using a BPM setting for the RATE of each effect block. Turn the FX1 block AUTO WAH on to give the sound a springy, dynamic feel.
94	TOUCH FUNK	GUITAR	SERIAL1	OD/DS	TOUCH WAH	COMP	REVERB	A funk sound that features TOUCH WAH. Turn the FX1 OVERDRIVE on to give the sound presence.

Memory number	Memory name	GUITAR/BASS	STRUCTURE	FX1	FX2	FX3	FX4	Explanation
95	8 bit LEAD	GUITAR	SERIAL1	OD/DS	PITCH SHIFTER	GEQ	DELAY (ANALOG)	A unique effect like an 8-bit synthesizer sound, which uses OCT FUZZ and a PITCH SHIFTER effect shifted down a fifth.
96	MELODY SMOOTH	GUITAR	SERIAL1	OD/DS	AC RESONANCE	COMP	REVERB	A sound that's suitable for melodic chord playing. AC RESO is used to give the sound more character. Turn the FX2 block BOOSTER on to slightly boost the mid- to low-range frequencies of the sound. Recommended for front single-coil pickups.
97	RING TALK	GUITAR	PARALLEL1	TREMOLO	RING MODULATOR	VIBRATO	REVERB	A distinctive, special-effect lead sound combining RING MODULATOR and VIBRATO.
98	BUBBLE TONE	GUITAR	PARALLEL1	OD/DS	ROTARY	CHORUS	-	A unique sound combining ROTARY with a CHORUS for which the RATE and DEPTH are set to maximum. Turn the FX1 OVERDRIVE on for a sound that's suitable for leads.
99	SPACY S-BEND	GUITAR	SERIAL1	S-BEND	VIBRATO	OD/DS	DELAY	A floating distortion sound that uses S-BEND. Press the [▼/1] switch to activate the S-BEND effect, which makes the pitch go up. Turn the FX2 VIBRATO on for a spacious sound produced by a detuning effect.
100	REVERSE S-BEND	GUITAR	PARALLEL1	OD/DS	S-BEND	S-BEND	FLANGER	A relaxed distortion sound with a swelling feel that's produced by the FLANGER effect. Press the [▼/1] or [▲/2] switches to activate the S-BEND effect, making the pitch either go down or up.
101	SPEED DOWN	GUITAR	SERIAL1	SLICER	S-BEND	OD/DS	OD/DS	A wild fuzz sound that connects OCT FUZZ and DISTORTION in series. Press the [▲/2] switch to activate S-BEND, which gives an effect like suddenly stopping an analog tape player. Turn the FX1 block SLICER on to emphasize the rhythm for a unique sound.
102	S2 DS & DIRECT	GUITAR	SERIAL2	OD/DS	DELAY (ANALOG)	-	-	A memory that uses the SERIAL2 chain structure. The L/R channels work independently from input to output. The L channel outputs a sound that's suitable for rock, and the R channel outputs the direct sound. * Set the HARDWARE SETTING > S/R MODE to "STEREO I/O".
103	P2 LEAD & CHORUS	GUITAR	PARALLEL2	PEQ	OD/DS	DELAY	CHORUS	A memory that uses the PARALLEL2 chain structure. The L channel output uses a DISTORTION sound, and the R channel output uses a clean CHORUS sound. Use this by connecting the L and R output channels respectively to an amp of your choice. * Set the HARDWARE SETTING > S/R MODE to "STEREO I/O".

Sound list

Memory number	Memory name	GUITAR/ BASS	STRUCTURE	FX1	FX2	FX3	FX4	Explanation
104	P3 AC SET	GUITAR	PARALLEL3	AC GUITAR SIMULATOR	AC RESONANCE	TREMOLO	REVERB	A memory that uses the PARALLEL3 chain structure. The L channel input uses an acoustic sound, and the R channel input uses a clean TREMOLO sound. Use this by connecting the guitar you like to the L and R input channels respectively as needed. * Set the HARDWARE SETTING > S/R MODE to "STEREO I/O".
105	[Ba]ROCK BASIC	BASS	PARALLEL1	X-BASS OD	PEQ	PEQ	COMP	A basic rock sound that applies OVERDRIVE and PEQ respectively to the split signals. Turn the FX2 block PEQ on for a thick, full-bodied bass sound.
106	[Ba]SLAP BASS	BASS	SERIAL1	COMP	GEQ	-	-	A sound that's suitable for slap bass and which can be used in a variety of genres, featuring a simple COMPRESSOR and PEQ configuration. This memory was designed to be used with this product placed at the front of the pedalboard effect chain.
107	[Ba]PARA DRIVE	BASS	PARALLEL1	COMP	X-BASS OD	PEQ	OD/DS	A sound that mixes two kinds of distortion: X-BASS OD and OCT FUZZ. Turn the FX1 COMPRESSOR on for a full-bodied, fat sound.
108	[Ba]HM PICK	BASS	PARALLEL1	COMP	BASS OD/DS	GEQ	-	An old-school metal sound that's suitable for playing with a pick, which uses BASS MT DISTORTION.
109	[Ba]OC DRIVE	BASS	SERIAL1	COMP	BASS OCTAVE	X-BASS OD	PEQ	A modern sound that can be used for drum and bass music and so on, which retains the direct sound using BASS OCTAVE and adds distortion with X-BASS OD.
110	[Ba]FOREST	BASS	SERIAL1	REVERB (SHIMMER)	DELAY (ANALOG)	-	-	An ambient sound that uses a DELAY with a short TIME setting, along with SHIMMER REVERB. This memory was designed to be used with this product placed at the end of the pedalboard effect chain.
111	[Ba]FL DRIVE	BASS	SERIAL1	X-BASS OD	BASS FLANGER	DELAY (SHIMMER)	-	A lovely, reverberating ambient sound that adds modulation with a FLANGER effect to X-BASS OD, as well as SHIMMER DELAY.
112	[Ba] PH+REV	BASS	SERIAL1	BASS PHASER	REVERB	-	-	A sound that's appropriate for soul and funk music, which uses the PHASER effect to create a characteristic effect.
113	[Ba]CHO DRIVE	BASS	PARALLEL1	BASS OD/DS	GEQ	X-BASS OD	CHORUS	A sound that adds the spaciousness of CHORUS to X-BASS OD. Turn the FX1 BASS OVERDRIVE on to mix in the X-BASS OD for greater presence.
114	[Ba]W ECHO	BASS	PARALLEL1	PEQ	DELAY (S.ECHO)	DELAY (S.ECHO)	REVERB	A long delay that uses SPACE ECHO. Turn the FX2 SPACE ECHO on with the TIME offset for a complex delay sound. This memory was designed to be used with this product placed at the end of the pedalboard effect chain.
115	[Ba]N.W. FLANGER	BASS	SERIAL1	BASS FLANGER	PEQ	GEQ	REVERB	A new wave/post-punk flanger sound that works well with both picking and slapping.

Memory number	Memory name	GUITAR/BASS	STRUCTURE	FX1	FX2	FX3	FX4	Explanation
116	[Ba]MOTO TOWN	BASS	SERIAL1	OD/DS	PEQ	-	-	A solid, grounded sound that's appropriate for soul and funk music. This memory was designed to be used with this product placed at the front of the pedalboard effect chain.
117	[Ba] MYSTERY	BASS	SERIAL1	RING MODULATOR	DELAY (SHIMMER)	-	-	A unique, unpredictable sound that uses the RING MODULATOR and SHIMMER DELAY effects.
118	[Ba] Lo-Fi	BASS	SERIAL1	OD/DS	DELAY (S.ECHO)	PEQ	-	A lo-fi sound with a SPACE ECHO tape-like feel that's added to the low frequency-centered tone, for which PEQ is used to cut the high-band frequencies.
119	[Ba] OCTAVER	BASS	SERIAL1	COMP	BASS OCTAVE	PEQ	-	A heavy bass sound that emphasizes the low end with OCTAVE applied.
120	[Ba] REGGAE	BASS	SERIAL1	BASS OD/DS	PEQ	GEQ	-	A sound that's suitable for reggae/dub music, which uses the PEQ and GEQ to adjust the frequency characteristics. Turn the FX1 BASS OD ON to add a mellow distortion effect.
121	[Ba] PICCOLO	BASS	SERIAL1	COMP	S-BEND	BASS OD/DS	REVERB	A sound suitable for leads, which uses X-BASS COMPRESSOR and PREAMP to adjust the signal into a piccolo bass-like sound. Press the [▲/2] switch to apply the S-BEND effect, making the pitch go up.
122	[Ba]CTB.	BASS	PARALLEL1	AC GUITAR SIMULATOR	PEQ	BASS DEFRETTER	PEQ	A contrabass-like sound that's easy to use in ensemble situations, and which features the natural sound of the strings. Uses AC.GTR SIM.
123	[Ba]FUNK-TRON	BASS	SERIAL1	BASS TOUCH WAH	PEQ	-	-	A sound suitable for funk music that uses BASS TOUCH WAH.
124	[Ba] FRETLESS	BASS	SERIAL1	BASS DEFRETTER	PEQ	REVERB	-	A reverb sound that uses BASS DEFRETTER, appropriate for playing with your fingers.
125	[Ba]FUZZ +PHASER	BASS	PARALLEL1	OD/DS	BASS PHASER	PEQ	PEQ	A psychedelic, retro synthesizer-like sound that combines OCT FUZZ with a BASS PHASER for which the rate is set to a slow setting. By using an external expression pedal, you can change the PEQ and FREQ and have fun creating unique modulations.
126	[Ba]S2 REC SET	BASS	SERIAL2	BASS OD/DS	GEQ	-	-	A memory that uses the SERIAL2 chain structure. The L/R channels work independently from input to output. The L channel outputs a DISTORTION sound that's suitable for rock, and the R channel outputs the direct sound. * Set the HARDWARE SETTING > S/R MODE to "STEREO I/O".

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Memory number	Memory name	GUITAR/ BASS	STRUCTURE	FX1	FX2	FX3	FX4	Explanation
127	[Ba]P2 W AMP	BASS	PARALLEL2	COMP	GEQ	BASS OD/ DS	REVERB	A memory that uses the PARALLEL2 chain structure. The L channel output features a clear sound, and the R channel output uses the DISTORTION sound. Use this by connecting the L and R output channels respectively to an amp of your choice. * Set the HARDWARE SETTING > S/R MODE to "STEREO I/O".
128	[Ba]P3 W BASS	BASS	PARALLEL3	PEQ	GEQ	GEQ	-	A memory that uses the PARALLEL3 chain structure. Configure different EQ settings for the L and R input channels. Use this by connecting the bass guitar you like to the L and R input channels respectively as needed. * Set the HARDWARE SETTING > S/R MODE to "STEREO I/O".

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