BOSS

Vocal Performer

VE-22

Parameter Guide

Contents

Effect parameter list

DYNAMICS

These parameters are for configuring the basic sound.

Parameter	Value	Explanation
SW	OFF, ON	Turns this effect on/off.
ENHANCE	OFF, 1–100	An effect that makes the sound clearer.
		Increasing the value creates a sound with greater clarity.
COMP	OFF, 1–100	Smooths out variances in volume.
		Larger values have a greater effect on smoothing out variances in volume.
DE-ESSER	OFF, 1–100	Reduces sibilants. Larger values reduce more of the high frequencies when you pronounce "s" words and other hissing sounds.
NS (NOISE SUPPRESSOR)	OFF, 1–100	Suppresses background noise during silence.
		Adjust this parameter as appropriate for the volume of the noise. If the noise level is high, a higher setting is appropriate.
EQ		
LEVEL	-15–0–+ 15 dB	Adjusts the overall EQ volume.
LOW GAIN	-15–0–+15 dB	Adjusts the sound level of the low-frequency range.
MID GAIN	-15–0–+15 dB	Adjusts the sound level of the middle-frequency range.
MID FREQ	160 Hz, 200 Hz, 250 Hz, 315 Hz, 400 Hz, 500 Hz, 630 Hz, 800 Hz, 1.00 kHz, 1.25 kHz, 1.60 kHz, 2.00 kHz, 2.50 kHz, 3.15 kHz, 4.00 kHz, 5.00 kHz, 6.30 kHz, 8.00 kHz	Specifies the center of the frequency range that will be adjusted by the MID GAIN.
HIGH GAIN	-15–0–+15 dB	Adjusts the sound level of the high-frequency range.

MEMORY SETTING

These parameters set the volume and tempo of the memories.

Parameter	Value	Explanation
VOLUME	0–100	This volume comes before the echo effect in the signal chain, and adjusts the volume of the memory.
		This is useful when you're playing live, as you can control the volume using an expression pedal connected to the CTL 1,2/EXP jack on the rear panel.
OUT LEVEL	0–200	This volume control comes after the echo effect in the signal chain, and adjusts the volume of the memory.
BPM	40–250	When you specify a note value for the DLY TIME of the DELAY or for the RATE of the CHORUS/FLANGER/PHASER/VIBRATO/SLICER, the unit operates at this BPM value.
		When you specify "BPM TAP" for the CTL 1,2, MEMORY PEDAL or MANUAL PEDAL function, you can set the BPM by tap input.
		This makes it easy to set the tempo in time with the song when you're playing live.
BPM HOLD	OFF, ON	Sets whether to keep using the BPM value of the previous memory (ON) or not (OFF) when you switch between memories.
		When you set this to "ON", this is enabled when you switch memories in the middle of a song, so that you don't have to input the BPM again.

HARMONY

The harmony feature lets you add natural-sounding harmonies to the audio.

Parameter	Value	Explanation
SW	OFF, ON	Turns this effect on/off.
TYPE	Refer to the details for the "TYPE" parameter.	
KEY	C/Am, D♭/B♭m, D/Bm, E♭/Cm, E/C♯m, F/Dm, F♯/D♯m, G/Em, Ab/Fm, A/F♯m, B♭/Gm, B/G♯m	Sets the key of the song.
E.LEVEL (EFFECT LEVEL)	0–100	Adjusts the overall volume for the harmony.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound.

TYPE

This is a list of the effects that can be assigned for HARMONY.

Effect name	Explanation
DOUBLE	Gives a double-track effect (*1).
TRIPLE	Adds even more thickness to the vocal sound than the DOUBLE effect.
▼4	Gives a ▼4 harmony effect, meaning a fourth lower. Set TYPE to "MANUAL" if you want to combine this with other harmonies.
▲3	Gives a ▲3 harmony effect, meaning a third above. Set TYPE to "MANUAL" if you want to combine this with other harmonies.
▼4+DBL (▼4+DOUBLE)	Adds a ▼4 harmony (a fourth below) and a DOUBLE effect. Set TYPE to "MANUAL" for other combinations.
▲3+DBL (▲3+DOUBLE)	Adds a ▲3 harmony (a third above) and a DOUBLE effect. Set TYPE to "MANUAL" for other combinations.
▼6, ▼4	Adds harmony effects such as a ▼4 (a fourth below) or a ▲3 (a third above). Set TYPE to "MANUAL" if you want to combine this with other harmonies.
▲3, ▼4	
▲3, ▲5	
MANUAL	A setting with more freedom over the harmony effects, including harmony parameter settings such as DOUBLE and TRIPLE. You can also set upper and lower octave pitches.

DOUBLE

Parameter	Value	Explanation
V1 PAN	L100–CENTER–R100	Adjusts the pan position for the DOUBLE part.
V1 LEVEL	0–100	Adjusts the volume for the DOUBLE part.
V1 DEPTH	OFF, LIGHT, NORMAL, DEEP	Adjusts how the double-track effect (*1) is applied in three levels. Set this to "OFF" to disable the double-track effect.

TRIPLE

Parameter	Value	Explanation
V1 PAN	L100–CENTER–R100	Adjusts the pan position for the TRIPLE 1 part.
V1 LEVEL	0–100	Adjusts the volume for the TRIPLE 1 part.
V1 DEPTH	OFF, LIGHT, NORMAL, DEEP	Adjusts how the double-track effect (*1) of the TRIPLE 1 part is applied in three levels. Set this to "OFF" to disable the double-track effect.
V2 PAN	L100–CENTER–R100	Adjusts the pan position for the TRIPLE 2 part.
V2 LEVEL	0–100	Adjusts the volume for the TRIPLE 2 part.
V2 DEPTH	OFF, LIGHT, NORMAL, DEEP	Adjusts how the double-track effect (*1) of the TRIPLE 2 part is applied in three levels. Set this to "OFF" to disable the double-track effect.

(*1) The double-track effect simulates the doubling effect produced when the same vocalist records the same melody a second time, adding thickness to the sound.

Effect parameter list

▼4

Parameter	Value	Explanation
▼4 PAN	L100–CENTER–R100	Adjusts the pan position of the ▼4 part.
▼4 LEVEL	0–100	Adjusts the part volume of the ▼4 part.
▼4 DEPTH	OFF, LIGHT, NORMAL, DEEP	Adjusts how the double-track effect (*1) of the ▼4 part is applied in three levels. Set this to "OFF" to disable the double-track effect.

▲3

Parameter	Value	Explanation
▲3 PAN	L100–CENTER–R100	Adjusts the pan position of the ▲3 part.
▲3 LEVEL	0–100	Adjusts the ▲3 part volume.
▲3 DEPTH	OFF, LIGHT, NORMAL, DEEP	Adjusts how the double-track effect (*1) of the ▲3 part is applied in three levels. Set this to "OFF" to disable the double-track effect.

▼4+DBL (▼4+DOUBLE)

Parameter	Value	Explanation
▼4 PAN	L100–CENTER–R100	Adjusts the pan position of the ▼4 part.
▼4 LEVEL	0–100	Adjusts the part volume of the ▼4 part.
▼4 DEPTH	OFF, LIGHT, NORMAL, DEEP	Adjusts how the double-track effect (*1) of the ▼4 part is applied in three levels. Set this to "OFF" to disable the double-track effect.
DBL PAN (DOUBLE PAN)	L100–CENTER–R100	Adjusts the pan position for the DOUBLE part.
DBL LEVEL (DOUBLE LEVEL)	0–100	Adjusts the volume for the DOUBLE part.
DBL DEPTH (DOUBLE DEPTH)	OFF, LIGHT, NORMAL, DEEP	Adjusts how the double-track effect (*1) of the DOUBLE part is applied in three levels. Set this to "OFF" to disable the double-track effect.

▲3+DBL (▲3+DOUBLE)

Parameter	Value	Explanation
▲3 PAN	L100–CENTER–R100	Adjusts the pan position of the ▲3 part.
▲3 LEVEL	0–100	Adjusts the ▲3 part volume.
▲3 DEPTH	OFF, LIGHT, NORMAL, DEEP	Adjusts how the double-track effect (*1) of the ▲3 part is applied in three levels. Set this to "OFF" to disable the double-track effect.
DBL PAN (DOUBLE PAN)	L100–CENTER–R100	Adjusts the pan position for the DOUBLE part.
DBL LEVEL (DOUBLE LEVEL)	0–100	Adjusts the volume for the DOUBLE part.
DBL DEPTH (DOUBLE DEPTH)	OFF, LIGHT, NORMAL, DEEP	Adjusts how the double-track effect (*1) of the DOUBLE part is applied in three levels. Set this to "OFF" to disable the double-track effect.

(*1) The double-track effect simulates the doubling effect produced when the same vocalist records the same melody a second time, adding thickness to the sound.

▼6, ▼4

Parameter	Value	Explanation
▼6 PAN	L100–CENTER–R100	Adjusts the pan position of the ▼6 part.
▼6 LEVEL	0–100	Adjusts the ▼6 part volume.
▼6 DEPTH	OFF, LIGHT, NORMAL, DEEP	Adjusts how the double-track effect (*1) of the ▼6 part is applied in three levels. Set this to "OFF" to disable the double-track effect.
▼4 PAN	L100–CENTER–R100	Adjusts the pan position of the ▼4 part.
▼4 LEVEL	0–100	Adjusts the part volume of the ▼4 part.
▼4 DEPTH	OFF, LIGHT, NORMAL, DEEP	Adjusts how the double-track effect (*1) of the ▼4 part is applied in three levels. Set this to "OFF" to disable the double-track effect.

▲3, ▼4

Parameter	Value	Explanation
▲3 PAN	L100–CENTER–R100	Adjusts the pan position of the ▲3 part.
▲3 LEVEL	0–100	Adjusts the ▲3 part volume.
▲3 DEPTH	OFF, LIGHT, NORMAL, DEEP	Adjusts how the double-track effect (*1) of the ▲3 part is applied in three levels. Set this to "OFF" to disable the double-track effect.
▼4 PAN	L100–CENTER–R100	Adjusts the pan position of the ▼4 part.
▼4 LEVEL	0–100	Adjusts the part volume of the ▼4 part.
▼4 DEPTH	OFF, LIGHT, NORMAL, DEEP	Adjusts how the double-track effect (*1) of the ▼4 part is applied in three levels. Set this to "OFF" to disable the double-track effect.

▲3, ▲5

Parameter	Value	Explanation
▲3 PAN	L100–CENTER–R100	Adjusts the pan position of the ▲3 part.
▲3 LEVEL	0–100	Adjusts the ▲3 part volume.
▲3 DEPTH	OFF, LIGHT, NORMAL, DEEP	Adjusts how the double-track effect (*1) of the ▲3 part is applied in three levels. Set this to "OFF" to disable the double-track effect.
▲5 PAN	L100–CENTER–R100	Adjusts the pan position of the ▲5 part.
▲5 LEVEL	0–100	Adjusts the ▲5 part volume.
▲5 DEPTH	OFF, LIGHT, NORMAL, DEEP	Adjusts how the double-track effect (*1) of the ▲5 part is applied in three levels. Set this to "OFF" to disable the double-track effect.

(*1) The double-track effect simulates the doubling effect produced when the same vocalist records the same melody a second time, adding thickness to the sound.

MANUAL

Parameter	Value	Explanation
VOICE 1	▼OCT, ▼6, ▼5, ▼4, ▼3, UNISON, ▲3, ▲4, ▲5, ▲6, ▲OCT	Sets the harmony type for the VOICE 1 part.
V1 PAN	L100–CENTER–R100	Adjusts the pan position for the VOICE 1 part.
V1 LEVEL	0–100	Adjusts the volume for the VOICE 1 part.
V1 DELAY	0–10	Adjusts the delay (time lag) for the VOICE 1 part.
V1 ACRCY (V1 ACCURACY)	0–10	Adjusts the pitch for the VOICE 1 part. The lower the value, the closer the pitch of the harmony is to the original vocal for the VOICE 1 part. Higher values make the pitch of the VOICE 1 part more accurate, but if the pitch of your vocal is off, the harmony may not sound correct. If this happens, set this to a lower value.
V1 VIB (V1 VIBRATO)	-10–+10	Sets how closely the VOICE 1 part vibrato follows your voice. Set this to a negative value if you want to make the harmony less expressive in relation to your vocals.
V1 FRMNT (V1 FORMANT)	-50–+50	Adjusts the vocal character of the VOICE 1 part. Negative (–) values produce a more masculine vocal character, and positive (+) settings produce a more feminine vocal character.
V1 TONE	-50–+50	Adjusts the tonal character of the VOICE 1 part.
V1 DEPTH	OFF, LIGHT, NORMAL, DEEP	Adjusts how the double-track effect (*1) of the VOICE 1 part is applied in three levels. Set this to "OFF" to disable the double-track effect.
VOICE 2	▼OCT, ▼6, ▼5, ▼4, ▼3, UNISON, ▲3, ▲4, ▲5, ▲6, ▲OCT	Sets the harmony type for the VOICE 2 part.
V2 PAN	L100–CENTER–R100	Adjusts the pan position for the VOICE 2 part.
V2 LEVEL	0–100	Adjusts the volume for the VOICE 2 part.
V2 DELAY	0–10	Adjusts the delay (time lag) for the VOICE 2 part.
V2 ACRCY (V2 ACCURACY)	0–10	Adjusts the pitch for the VOICE 2 part. The lower the value, the closer the pitch of the harmony is to the original vocal for the VOICE 2 part. Higher values make the pitch of the VOICE 2 part more accurate, but if the pitch of your vocal is off, the harmony may not sound correct. If this happens, set this to a lower value.
V2 VIB (V2 VIBRATO)	-10–+10	Sets how accurately the VOICE 2 part vibrato follows your voice. Set this to a negative value if you want to make the harmony less expressive in relation to your vocals.
V2 FRMNT (V2 FORMANT)	-50–+50	Adjusts the vocal character of the VOICE 2 part. Negative (–) values produce a more masculine vocal character, and positive (+) settings produce a more feminine vocal character.
V2 TONE	-50–+50	Adjusts the tonal character of the VOICE 2 part.
V2 DEPTH	OFF, LIGHT, NORMAL, DEEP	Adjusts how the double-track effect (*1) of the VOICE 2 part is applied in three levels. Set this to "OFF" to disable the double-track effect.

(*1) The double-track effect simulates the doubling effect produced when the same vocalist records the same melody a second time, adding thickness to the sound.

EFFECT

With EFFECT, you can select the effect to be used from the following.

Parameter	Value	Explanation
SW	OFF, ON	Turns this effect on/off.
TYPE		Refer to the details for the "TYPE" parameter.

TYPE

Effect name	Explanation
PTC CRCT (PITCH CORRECT)	Corrects the variances in pitch. This adjusts the pitch variations in steps, producing an artificial effect.
SHORT DL (SHORT DELAY)	This effect adds delayed sound to the direct sound for adding more sonic thickness or creating special effects.
CHORUS	An effect that adds a slightly modulated sound to the direct signal, creating beautiful spaciousness and depth.
FLANGER	The flanger effect gives a twisting, jet-airplane-like character to the sound.
PHASER	Gives a whooshing, swirling character to the sound by adding varied-phase portions to the direct sound.
VIBRATO	This effect creates vibrato by slightly modulating the pitch.
DIST (DISTORTION)	Produces a distorted vocal effect.
DIST+CHO (DISTORTION+CHORUS)	Uses DISTORTION and CHORUS at the same time.
DIST+FL (DISTORTION+FLANGER)	Uses DISTORTION and FLANGER at the same time.
DIST+PH (DISTORTION+PHASER)	Uses DISTORTION and PHASER at the same time.
RING MOD	Produces a metallic sound for a converging effect.
SLICER	This consecutively interrupts the sound to create the impression that a rhythm backing phrase is being played.
RADIO	Produces a voice that sounds like listening to a radio.
LO-FI	Degrades the sound quality to create a characteristic type of sound.

PTC CRCT (PITCH CORRECT)

Parameter	Value	Explanation
MODE	These parameters select the PITCH CORRECT mode.	
	SOFT	Applies smooth corrections to the pitch.
	HARD	Applies rapid corrections to the pitch.
	ELECTRIC	Applies step-like corrections to the pitch.
	ROBOT	Changes the pitch to a specific note name (for a robot voice).
	FLAT	Shifts the pitch by the amount specified by the SHIFT value without correcting it.
SCALE	Selects how the pitch is corrected.	
	CHROM (CHROMATIC)	The pitch is adjusted in semitones.
	KEY	Corrects the pitch to match the notes in the key of the song you set in the parameters.
KEY	C/Am–B/G#m	Sets the key of the song.
NOTE	C–B	Sets the pitch used when MODE is "ROBOT".
SPEED	0–10	Adjusts how quickly the pitch changes. Larger values make the pitch change quicker.
FORMANT	-50–+50	Negative (–) values produce a more masculine vocal character, and positive (+) settings produce a more feminine vocal character.
SHIFT	-12–+12	Sets how much the pitch changes.
TONE	-50–+50	Adjusts the tone.
STABILITY	-10–+10	Adjusts how easily the pitch changes. Larger values make the pitch more stable.

SHORT DL (SHORT DELAY)

Parameter	Value	Explanation
TIME	1–100 ms	Adjusts the delay time.
FEEDBACK	0–100	Adjusts the volume of delay that is returned to the input. Higher values increase the number of delay repeats.
E.LEVEL (EFFECT LEVEL)	0–120	Adjusts the volume of the delay sound.

CHORUS

Parameter	Value	Explanation
MODE	MONO	This chorus effect outputs the same sound from both L channel and R channel.
	STEREO	This is a two-phase stereo chorus effect that adds different chorus sounds to the L and R channels.
RATE	0–100, ♩♪	Adjusts the rate of the chorus effect. * If this value is set as a note length, the effect operates according to the "BPM" value in MEMORY SETTING (p. 2). This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the BPM, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
DEPTH	0–100	Adjusts the depth of the chorus effect. * To use this as a doubling effect, set this to "0".
E.LEVEL (EFFECT LEVEL)	0–100	Adjusts the volume of the effect sound.
PRE-DELAY	0.0–40.0 ms	Adjusts the time needed for the effect sound to be output after the direct sound has been output. By setting a longer pre delay time, you can obtain an effect that sounds like more than one sound is being played at the same time (doubling effect).
LOW CUT	FLAT, 20 Hz–800 Hz	Cuts the frequencies below the frequency that you set. When "FLAT" is selected, the low cut filter has no effect.
HIGH CUT	630 Hz–12.5 kHz, FLAT	Cuts the frequencies above the frequency that you set. When "FLAT" is selected, the high cut filter has no effect.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound.

FLANGER

Parameter	Value	Explanation
RATE	0–100, ♩♪	Sets the rate of the flanging effect. * If this value is set as a note length, the effect operates according to the "BPM" value in MEMORY SETTING (p. 2). This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the BPM, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
DEPTH	0–100	Determines the depth of the flanging effect.
RESO (RESONANCE)	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 at which to apply the effect.
LOW CUT	FLAT, 55 Hz–800 Hz	Cuts the frequencies below the frequency that you set. When "FLAT" is selected, the low cut filter has no effect.
E.LEVEL (EFFECT LEVEL)	0–100	Adjusts the volume of the effect sound.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound.

PHASER

Parameter	Value	Explanation
RATE	0–100, ♩	Sets the rate of the phaser effect. * If this value is set as a note length, the effect operates according to the "BPM" value in MEMORY SETTING (p. 2). This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the BPM, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
DEPTH	0–100	Determines the depth of the phaser effect.
RESO (RESONANCE)	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.
E.LEVEL (EFFECT LEVEL)	0–100	Adjusts the volume of the effect sound.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound.

VIBRATO

Parameter	Value	Explanation
RATE	0–100, ♩	Adjusts the rate of the vibrato. * If this value is set as a note length, the effect operates according to the "BPM" value in MEMORY SETTING (p. 2). This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the BPM, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
DEPTH	0–100	Adjusts the depth of the vibrato.
TRIGGER	OFF, ON	Selects on/off of the vibrato.
RISE TIME	0–100	Sets how long it takes from the moment the trigger turns on until the vibrato effect is applied.
LEVEL	0–100	Adjusts the volume.

DIST (DISTORTION)

Parameter	Value	Explanation
GAIN	0–100	Adjusts the depth of distortion.
TONE	-50–+50	Adjusts the tone.
E.LEVEL (EFFECT LEVEL)	0–100	Adjusts the volume of the effect sound.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound.

DIST+CHO (DISTORTION+CHORUS)

Parameter	Value	Explanation
D:GAIN (DISTORTION GAIN)	0–100	Adjusts the depth of distortion.
D:TONE (DISTORTION TONE)	-50–+50	Adjusts the tone.
D:E.LEVEL (DISTORTION EFFECT LEVEL)	0–100	Adjusts the volume of the effect sound (distortion).
D:D.LEVEL (DISTORTION DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound.
C:MODE (CHORUS MODE)	MONO	This chorus effect outputs the same sound from both L channel and R channel.
	STEREO	This is a two-phase stereo chorus effect that adds different chorus sounds to the L and R channels.
C:RATE (CHORUS RATE)	0–100, ♩	Adjusts the rate of the chorus effect. * If this value is set as a note length, the effect operates according to the "BPM" value in MEMORY SETTING (p. 2). This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the BPM, 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.
C:DEPTH (CHORUS DEPTH)	0–100	Adjusts the depth of the chorus effect. * To use this as a doubling effect, set this to "0".
C:E.LEVEL (CHORUS EFFECT LEVEL)	0–100	Adjusts the volume of the effect sound (chorus).
C:PRE-DLY (CHORUS PRE-DELAY)	0.0–40.0 ms	Adjusts the time it takes for the effect sound (chorus) 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).
C:LO CUT (CHORUS LOW CUT)	FLAT, 20 Hz–800 Hz	Cuts the frequencies below the frequency that you set. When "FLAT" is selected, the low cut filter has no effect.
C:HI CUT (CHORUS HIGH CUT)	630 Hz–12.5 kHz, FLAT	Cuts the frequencies above the frequency that you set. When "FLAT" is selected, the high cut filter has no effect.
C:D.LEVEL (CHORUS DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound.

DIST+FL (DISTORTION+FLANGER)

Parameter	Value	Explanation
D:GAIN (DISTORTION GAIN)	0–100	Adjusts the depth of distortion.
D:TONE (DISTORTION TONE)	-50–+50	Adjusts the tone.
D:E.LEVEL (DISTORTION EFFECT LEVEL)	0–100	Adjusts the volume of the effect sound (distortion).
D:D.LEVEL (DISTORTION DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound.
F:RATE (FLANGER RATE)	0–100, ♩♪	Sets the rate of the flanging effect. * If this value is set as a note length, the effect operates according to the "BPM" value in MEMORY SETTING (p. 2). This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the BPM, 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.
F:DEPTH (FLANGER DEPTH)	0–100	Determines the depth of the flanging effect.
F:RESO (FLANGER RESONANCE)	0–100	Determines the amount of resonance (feedback). Increasing the value emphasizes the effect, for a more unusual sound.
F:MANUAL (FLANGER MANUAL)	0–100	Adjusts the center frequency at which to apply the effect.
F:LO CUT (FLANGER LOW CUT)	FLAT, 55 Hz–800 Hz	Cuts the frequencies below the frequency that you set. When "FLAT" is selected, the low cut filter has no effect.
F:E.LEVEL (FLANGER EFFECT LEVEL)	0–100	Adjusts the volume of the effect sound (flanger).
F:D.LEVEL (FLANGER DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound.

DIST+PH (DISTORTION+PHASER)

Parameter	Value	Explanation
D:GAIN (DISTORTION GAIN)	0–100	Adjusts the depth of distortion.
D:TONE (DISTORTION TONE)	-50–+50	Adjusts the tone.
D:E.LEVEL (DISTORTION EFFECT LEVEL)	0–100	Adjusts the volume of the effect sound (distortion).
D:D.LEVEL (DISTORTION DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound.
P:RATE (PHASER RATE)	0–100, ♩♪	Sets the rate of the phaser effect. * If this value is set as a note length, the effect operates according to the "BPM" value in MEMORY SETTING (p. 2). This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the BPM, 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.
P:DEPTH (PHASER DEPTH)	0–100	Determines the depth of the phaser effect.
P:RESO (PHASER RESONANCE)	0–100	Determines the amount of resonance (feedback). Increasing the value emphasizes the effect, for a more unusual sound.
P:MANUAL (PHASER MANUAL)	0–100	Adjusts the center frequency of the phaser effect.
P:E.LEVEL (PHASER EFFECT LEVEL)	0–100	Adjusts the volume of the effect sound (phaser).
P:D.LEVEL (PHASER DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound.

RING MOD (RING MODULATOR)

Parameter	Value	Explanation
MODE	NORMAL, INTELGENT (INTELLIGENT)	When this is set to "NORMAL", the ring modulator operates at the oscillation frequency set in FREQ. When this is set to "INTELGENT", the FREQ (oscillator frequency) changes automatically according to the pitch of the input sound, producing a pitched sound.
FREQ (FREQUENCY)	0–100	Adjusts the frequency of the internal oscillator.
E.LEVEL (EFFECT LEVEL)	0–100	Adjusts the volume of the effect sound.
D.LEVEL (DIRECT LEVEL)	0–100	Adjusts the volume of the direct sound.

SLICER

| Parameter	Value	Explanation
PATTERN	1–20	Select the slice pattern that will be used to cut the sound.
RATE	0–100, ♩♪	Adjust the rate at which the sound will be cut. * If this value is set as a note length, the effect operates according to the "BPM" value in MEMORY SETTING (p. 2). This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the BPM, 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.
DUTY	1–99	Adjusts the duration of the sound for the slice pattern.
DEPTH	0–100	Adjusts the strength of the slice pattern.
ATTACK	0–100	Adjusts the attack volume of the slice pattern.
TRIGGER	OFF, ON	Makes the slice pattern play back from the beginning. * This parameter is controlled using the "ASSIGN" function.

RADIO

Parameter	Value	Explanation
LO-FI	1–10	Adjusts the amount of blurring between the notes.
LEVEL	0–100	Adjusts the volume of the effect sound.

LO-FI

Parameter	Value	Explanation
BIT	32–1 BIT	Sets the bit length.
SAMPLE	1/1–1/32	Sets the sample rate.
BALANCE	0–100	Sets the volume balance between the original sound and the effect sound. A setting of "0" outputs only the direct sound, and a setting of "100" outputs only the effect sound.

ECHO

Parameter	Value	Explanation
SW	OFF, ON	Turns this effect on/off.
TYPE	Refer to the details for the "TYPE" parameter.	
LEVEL (MEMORY ECHO LEVEL)	0–100	Adjusts the echo level for the memory.
MST LEVEL (MASTER ECHO LEVEL)	0–100	Adjusts the echo level for all memories (this is a global system parameter for all memories). We normally recommend that you set MST LEVEL to "50". However, if the acoustic reflections in the concert venue where you're playing are too loud or soft, you can globally adjust the echo level for all memories with MST LEVEL. Increase the echo level: 51–100 Decrease the echo level: 0–49
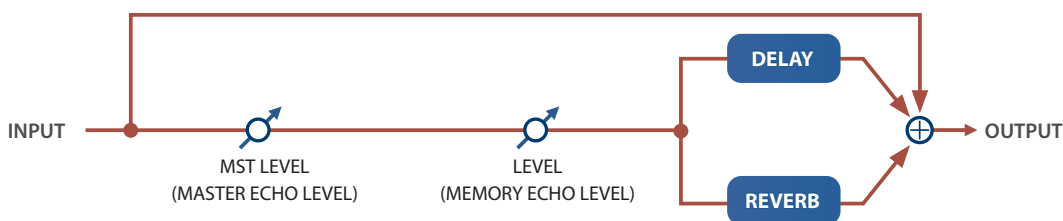
TYPE

Effect name	Explanation
AMBIENCE	Simulates an ambience mic (off-mic, placed at a distance from the sound source) used in recording and other applications. Rather than emphasizing the reverberation, this reverb is used to produce a sense of openness and depth.
ROOM	Simulates the reverberation in a small room. This offers a warm reverberation sound.
HALL	Simulates the reverberation in a concert hall. Provides clear and spacious 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.
DELAY	This effect adds a delayed sound to the direct sound, to give more fullness to the sound or create special effects.
DL+AMB	Produces the DELAY and AMBIENCE effects.
DL+ROOM	Produces the DELAY and ROOM effects.
DL+HALL	Produces the DELAY and HALL effects.
DL+PLATE	Produces the DELAY and PLATE effects.

AMBIENCE, ROOM, HALL, PLATE

Parameter	Value	Explanation
REV TIME (REVERB TYPE)	0.1–10.0s	Adjusts the length (time) of reverberation.
REV PRE D (PRE DELAY)	0–500 ms	Adjusts the time until the reverb sound starts to output.
LOW CUT	FLAT, 20 Hz–800 Hz	Cuts the frequencies below the frequency that you set. When "FLAT" is selected, the low cut filter has no effect.
HIGH CUT	630 Hz–12.5 kHz, FLAT	Cuts the frequencies above the frequency that you set. When "FLAT" is selected, the high cut filter has no effect.
DENSITY	0–10	Adjusts the density of the reverb sound.
REV LEVEL (REVERB LEVEL)	0–100	Adjusts the volume of the reverb sound.

DELAY

Parameter	Value	Explanation
DLY TYPE (DELAY TYPE)	SINGLE	This is a simple mono delay.
	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.
DLY TIME (DELAY TIME)	1–2000 ms, ♪—►◄	Adjusts the delay time. * If this value is set as a note length, the effect operates according to the "BPM" value in MEMORY SETTING (p. 2). This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the BPM, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
DLY FDBK (DELAY FEEDBACK)	0–100	Adjusts the volume of delay that is returned to the input. Higher values increase the number of delay repeats.
LOW CUT	FLAT, 20 Hz–800 Hz	Cuts the frequencies below the frequency that you set. When "FLAT" is selected, the low cut filter has no effect.
HIGH CUT	630 Hz–12.5 kHz, FLAT	Cuts the frequencies above the frequency that you set. When "FLAT" is selected, the high cut filter has no effect.
DLY LEVEL (DELAY LEVEL)	0–120	Adjusts the volume of the delay sound.

DL+AMB (DELAY+AMBIENCE), DL+ROOM (DELAY+ROOM), DL+HALL (DELAY+HALL), DL+PLATE (DELAY+PLATE)

Parameter	Value	Explanation
DLY TYPE (DELAY TYPE)	SINGLE	This is a simple mono delay.
	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.
DLY TIME (DELAY TIME)	1–2000 ms, ♪—►◄	Adjusts the delay time. * If this value is set as a note length, the effect operates according to the "BPM" value in MEMORY SETTING (p. 2). This makes it easier to achieve effect sound settings that match the tempo of the song. * If, due to the BPM, the time is longer than the range of allowable settings, it is then synchronized to a period either 1/2 or 1/4 of that time.
DLY FDBK (DELAY FEEDBACK)	0–100	Adjusts the volume of delay that is returned to the input. Higher values increase the number of delay repeats.
LOW CUT	FLAT, 20 Hz–800 Hz	A low cut filter for the delay. Cuts the frequencies below the frequency that you set. When "FLAT" is selected, the low cut filter has no effect.
HIGH CUT	630 Hz–12.5 kHz, FLAT	A high cut filter for the delay. Cuts the frequencies above the frequency that you set. When "FLAT" is selected, the high cut filter has no effect.
DLY LEVEL (DELAY LEVEL)	0–120	Adjusts the volume of the delay sound.
REV TIME (REVERB TIME)	0.1–10.0s	Adjusts the length (time) of reverberation.
REV PRE D (PRE DELAY)	0–500 ms	Adjusts the time until the reverb sound starts to output.
LOW CUT	FLAT, 20 Hz–800 Hz	A low cut filter for the reverb. Cuts the frequencies below the frequency that you set. When "FLAT" is selected, the low cut filter has no effect.
HIGH CUT	630 Hz–12.5 kHz, FLAT	A high cut filter for the reverb. Cuts the frequencies above the frequency that you set. When "FLAT" is selected, the high cut filter has no effect.
DENSITY	0–10	Adjusts the density of the reverb sound.
REV LEVEL (REVERB LEVEL)	0–100	Adjusts the volume of the reverb sound.

Sound list

Memory number	Category	Memory name
U01	HARMONY	▼4 HARMONY
U02	HARMONY	▲3, ▼4 HARMONY
U03	HARMONY	TRIPLE VOICE
U04	ECHO	CATHEDRAL
U05	ECHO	HAZY WRAPPED
U06	MUSIC	UK GARAGE
U07	MUSIC	HYPER POP
U08	EFFECT	FLANGER
U09	EFFECT	DIST+FLANGER
U10	SFX	ROBOT
U11	SFX	RING MOD
U12	SFX	HAUNTED
U13	HARMONY	▲3 HARMONY
U14	HARMONY	▼6, ▼4 HARMONY
U15	HARMONY	▲3, ▲5 HARMONY
U16	HARMONY	▲3, ▲5 ELECTRIC
U17	HARMONY	DOUBLE VOICE
U18	HARMONY	6 VOICE
U19	HARMONY	▼4 + DOUBLE
U20	HARMONY	▲3 + DOUBLE
U21	ECHO	ROCK
U22	ECHO	POP
U23	ECHO	BALLAD
U24	ECHO	OLDIES
U25	ECHO	ROOM
U26	ECHO	HALL
U27	ECHO	ARENA
U28	ECHO	SNOWY
U29	ECHO	CAVE
U30	MUSIC	HIP HOP
U31	MUSIC	BEAT BOX
U32	MUSIC	RAP
U33	MUSIC	TRAP
U34	MUSIC	DIGICORE
U35	EFFECT	LIGHT ENHANCE
U36	EFFECT	BRIGHT ENHANCE
U37	EFFECT	VIBRATO
U38	EFFECT	CHORUS
U39	EFFECT	PHASER
U40	EFFECT	DISTORTION
U41	EFFECT	PITCH CORRECT
U42	EFFECT	CHROMATIC
U43	INSTRUMENT	HARMONICA
U44	INSTRUMENT	HORN SOLO
U45	INSTRUMENT	HORN SOLO 2
U46	SFX	RADIO
U47	SFX	LO-FI
U48	SFX	SLICER
U49	SFX	HIGH to LOW
U50	SFX	LOW to HIGH

* U51–U99 and U01–U49 are the same as P01–P50 and U01–U50 respectively.