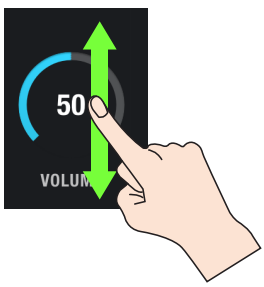
Using BOSS TONE STUDIO for WAZA-AIR

To begin, connect BOSS TONE STUDIO to the WAZA-AIR unit.
For details on how to make connections, refer to the “Connecting the BOSS TONE STUDIO iOS App to the WAZA-AIR Unit” PDF or “Connecting the BOSS TONE STUDIO Android App to the WAZA-AIR Unit” PDF.

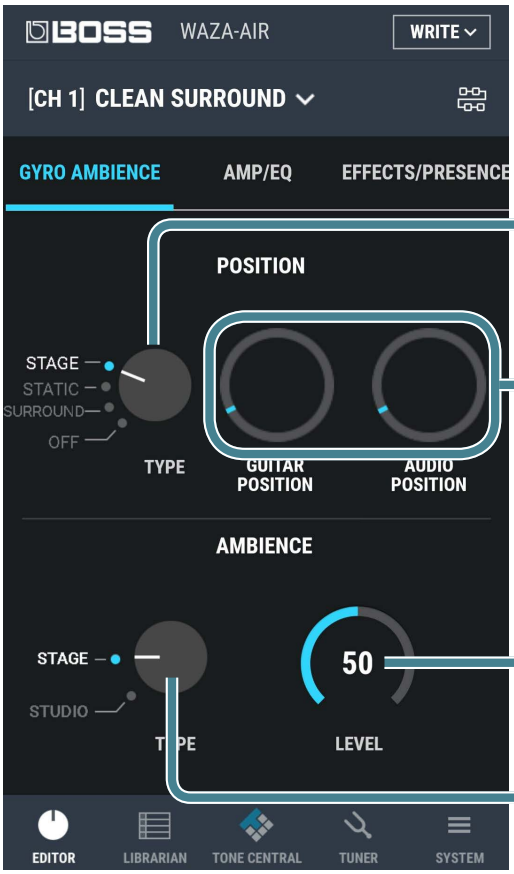
To edit values



Slide up or down to edit a parameter.
Long-press to enter a numeric value or choose from a list.

Editor Top Screen

GYRO AMBIENCE



Selects the effect produced by the gyro sensor.

Indicates the position of the sound.

Specifies the amount of reverberation.

Selects the type of reverberation.

You can automatically position the sound using the gyro sensor built into the WAZA-AIR, and adjust the ambience sound effect.

POSITION

Selects the effect produced by the gyro sensor.

OFF

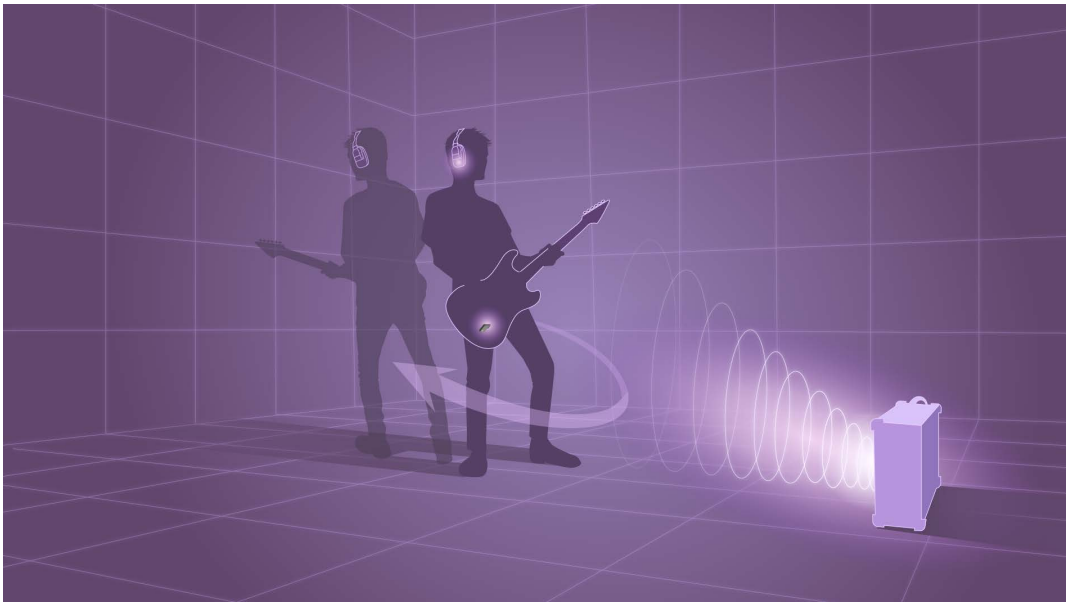
The ambience effect is disabled (the guitar amp sound and the Bluetooth audio are heard in stereo).

SURROUND (*1)

The guitar amp sound is always heard from the front.

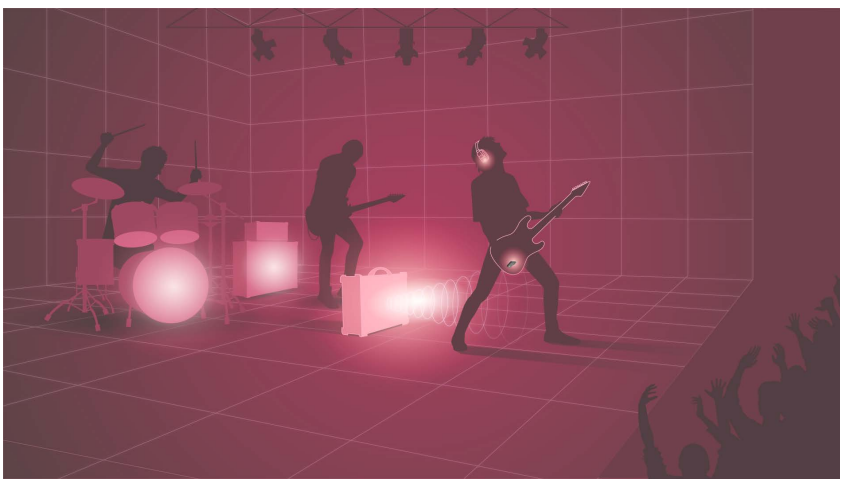
STATIC (*1 *2)

The guitar amp sound is heard from the front. Moving your head (changing the orientation of the WAZA-AIR unit) changes the direction from which the guitar amp sound is heard.



STAGE (*1)

The guitar amp sound and the Bluetooth audio are heard from behind.
This gives the impression of sound heard by a guitarist standing on stage.
Moving your head (changing the orientation of the WAZA-AIR unit) changes the direction from which the guitar amp sound and the Bluetooth audio are heard.



*1 Bluetooth audio is played back in stereo.

*2 To reset the sound position to its default state, press the WAZA-AIR unit's up/down buttons simultaneously. The sound position is also reset to its default state when you change the POSITION's TYPE setting and when you switch patches.

Parameter	Value	Explanation
GUITAR POSITION *3	0–359	Indicates the position of the guitar sound that's connected wirelessly.
AUDIO POSITION	0–359	Indicates the position of the Bluetooth audio sound.

*3 Position can be adjusted when TYPE is SURROUND.

MEMO

- If you move your head in any direction other than horizontal rotation (such as moving your head up and down), the position of the sound might drift. If this occurs, press the WAZA-AIR unit's up/down buttons simultaneously to reset the sound position to its default state.
- Do not move the WAZA-AIR unit immediately (approximately one second) after turning on its power. Observing this will improve the accuracy of the gyro sensor built into the WAZA-AIR unit, making it less likely that the position will drift.
- With the factory settings, the following patches are selected to POSITION TYPE.

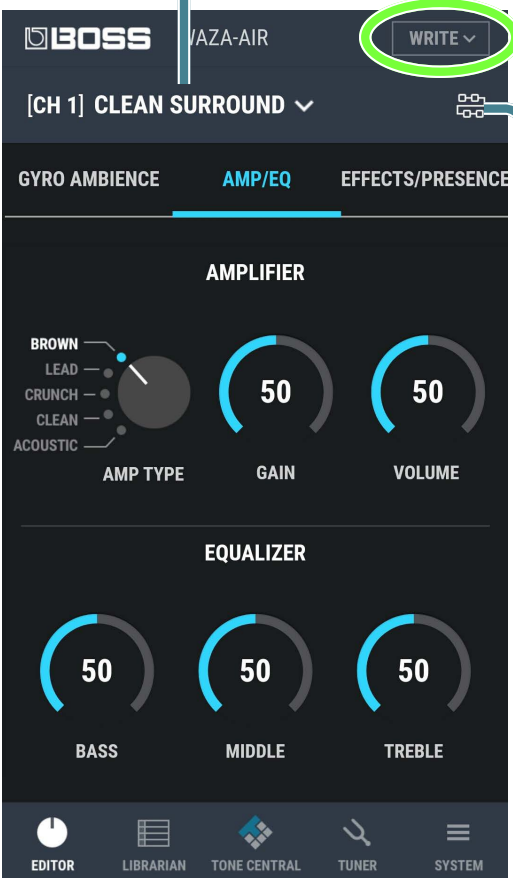
Patch	POSITION TYPE
CH 1, CH 2	SURROUND
CH 3, CH 4	STATIC
CH 5, CH 6	STAGE

Parameter	Value	Explanation
TYPE	Lets you output sound corresponding to a selected size of room.	
	STUDIO	Ambience settings typical of a recording studio.
	STAGE	Ambience settings typical of a large live performance stage.
LEVEL	0–100	Specifies the amount of reverberation.

AMP/EQ

Shows the currently selected patch. Tap this to switch patches.

Saves an edited effect to the WAZA-AIR unit.



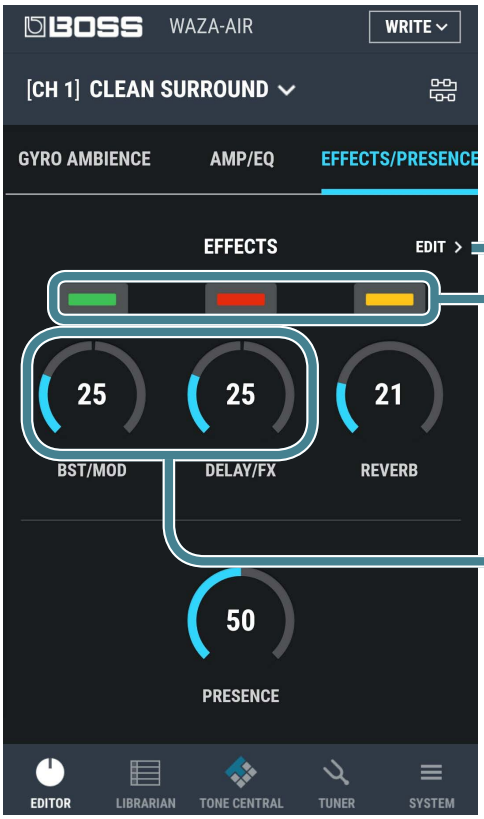
Initializes the parameters.

Changes the effect placement (connection order type).

MEMO

For the detailed explanation of the effects, refer to “Effect Parameter List” (p. 37).

EFFECTS/PRESENCE

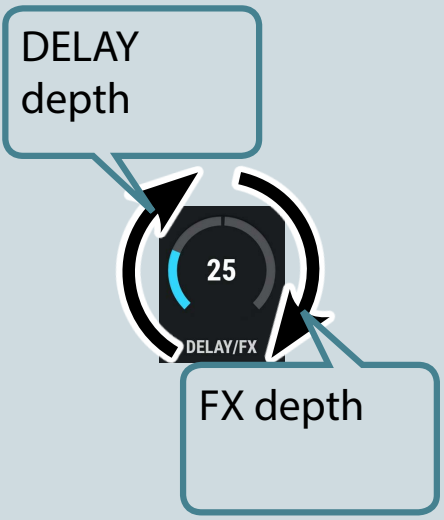


Moves to the EFFECTS detail screen (p. 12) .

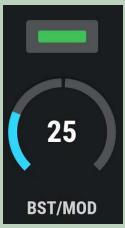
Each time you tap, the color alternates between green, red, and orange, and the setting changes.

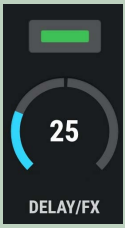
The effect type changes depending on the position of the knob.

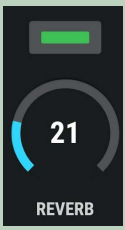
(Example)



With the factory settings, the following effects are assigned to each knob.

Knob	Color	BST	MOD
BST/MOD 	Green	BLUES DRIVE	CHORUS
	Red	OVERDRIVE	FLANGER
	Orange	DISTORTION	PHASER

Knob	Color	DELAY	FX
DELAY/FX 	Green	DIGITAL DELAY	TREMOLO
	Red	ANALOG DELAY	T.WAH
	Orange	TAPE ECHO	OCTAVE

Knob	Color	REVERB
REVERB 	Green	PLATE REVERB
	Red	SPRING REVERB
	Orange	HALL REVERB

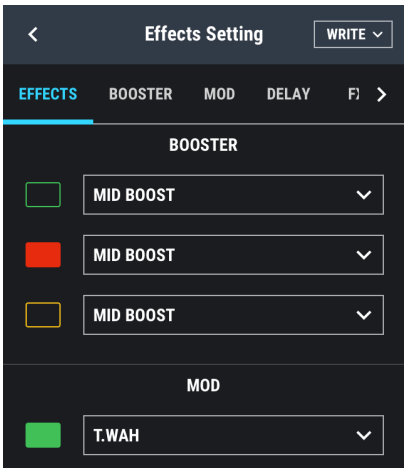
MEMO

For the detailed explanation of the effects, refer to “Effect Parameter List” (p. 37).

EFFECTS Detail Screen

EFFECTS Tab

This screen assigns effects to the [BST/MOD] knob, [DELAY/FX] knob, and [REVERB] knob.
For details, refer to “Using Effects” in the owner’s manual of the WAZA-AIR unit.



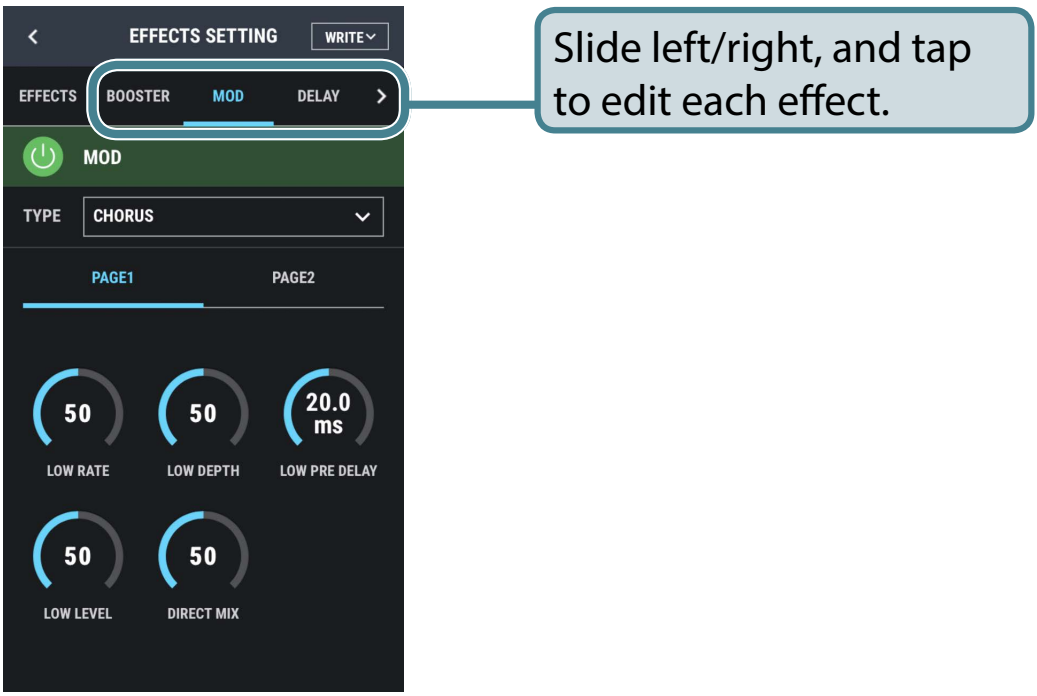
[REVERB] knob settings

You can assign delay, reverb, or both to the [REVERB] knob.

MODE	Explanation
DELAY	The delay selected by DELAY2 is assigned.
DLY+REV	The delay selected by DELAY2 and the reverb selected by REVERB are both assigned.
REVERB	The reverb selected by REVERB is assigned.

Editing the Effects

Here's how to edit the effects you specified in the EFFECTS tab.

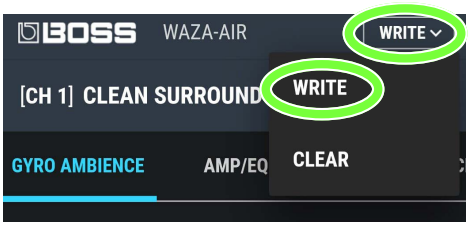


EQ, NS

You can edit the EQ (PARAMETRIC EQUALIZER) and NS (NOISE SUPPRESSOR) parameters for each patch.

Saving an Edited Effect in the WAZA-AIR Unit (WRITE)

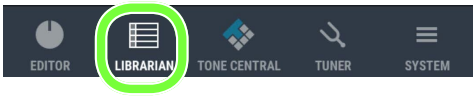
1. Tap the [WRITE] button, and then tap "WRITE" in the list.



2. Select a writing-destination, enter a name, and tap the [WRITE] button.

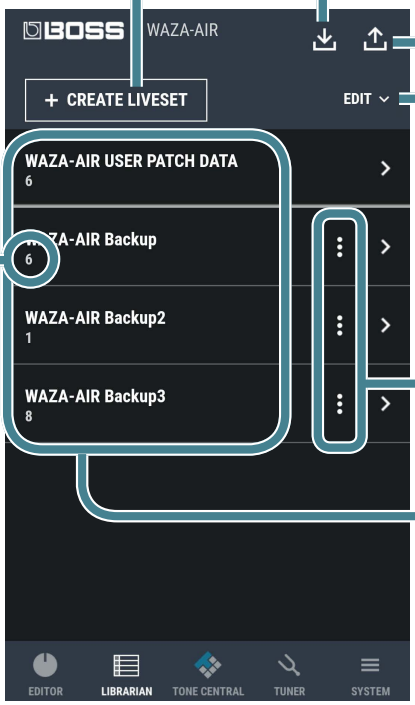
* When you save the edited data, it overwrites the patch in the WAZA-AIR unit. The previous settings cannot be recovered. Select a patch that you don't mind overwriting.

LIBRARIAN Screen



LIVESET LIST

Tap the [LIBRARIAN] button; the liveset list appears. There can be a maximum of 30 livesets.



Creates a new liveset.

Imports a liveset.

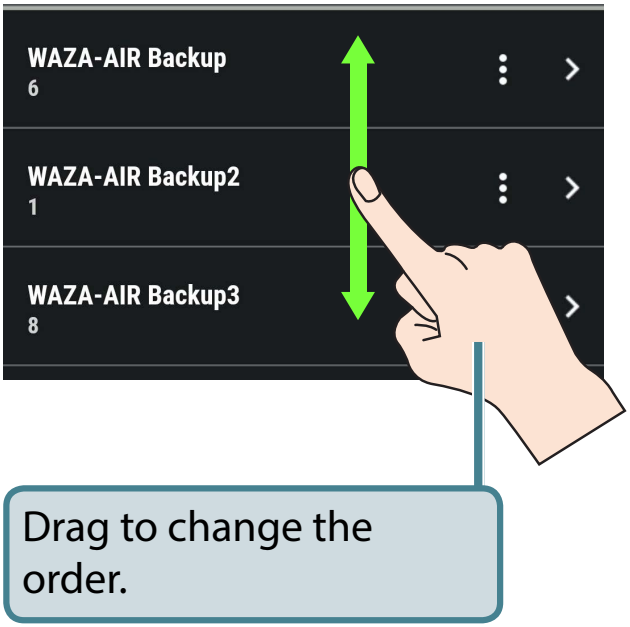
Exports a liveset.

Copies or deletes a liveset.

Tap to edit the name of the liveset.

Tap to see a list of the patches (p. 17) in the liveset that you tapped.

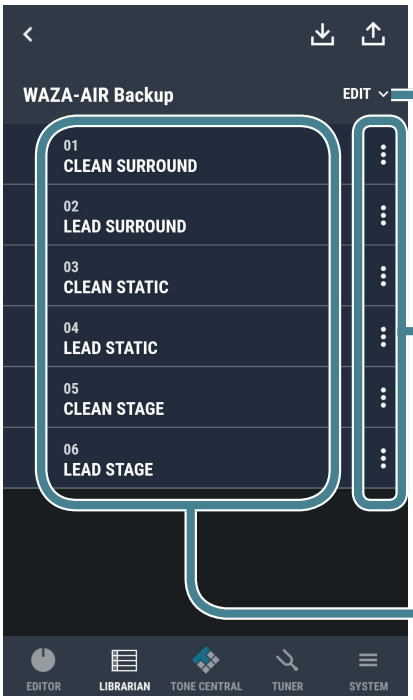
Indicates the number of patches in the liveset.



Drag to change the order.

PATCH LIST

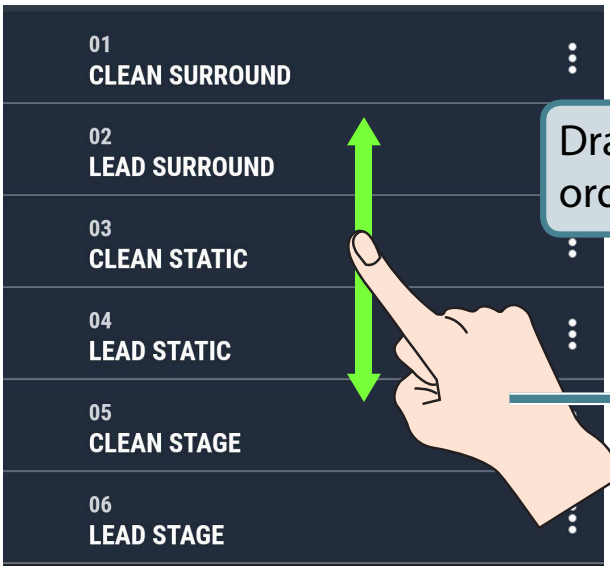
Up to 20 patches can be placed in one liveset.



Copies or deletes a patch.

Tap to edit the name of a patch.

Tap to switch to the sound of the patch you tapped, letting you preview it.

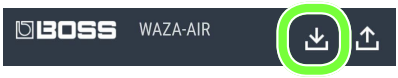


Drag to change the order.

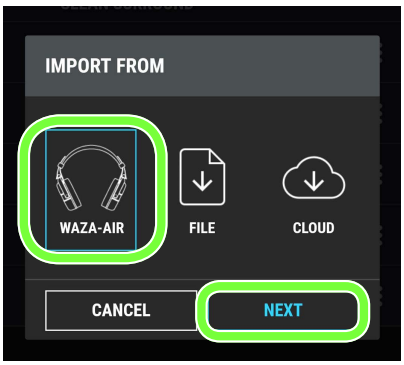
Importing Patches from the WAZA-AIR Unit into LIBRARIAN (IMPORT FROM WAZA-AIR)

1. Tap the [LIBRARIAN] button.

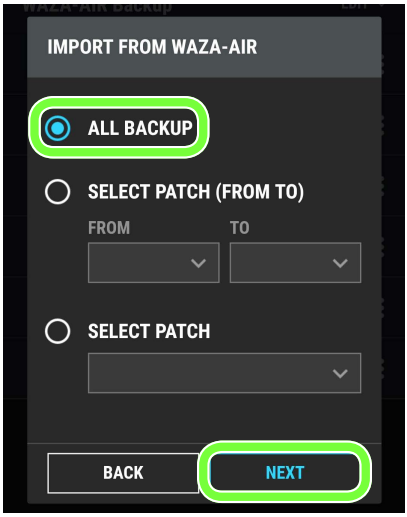
2. In the upper part of the screen, tap the button.



3. Tap "WAZA-AIR," and then tap the [NEXT] button.



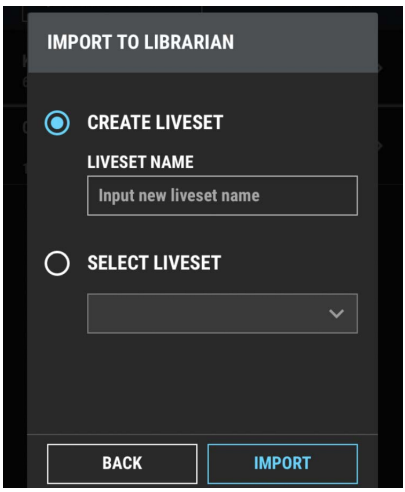
4. **Tap "ALL BACKUP," and then tap the [NEXT] button.**



* "ALL BACKUP" saves all patches as a liveset.
* "SELECT PATCH (FROM TO)" saves the patches between "FROM" and "TO" as a liveset.
* "SELECT PATCH" saves only the selected patch as a liveset.

Creating a new liveset

5. **Select "CREATE LIVESET," enter a name in LIVESET NAME, and tap the [IMPORT] button.**



Adding to an existing liveset

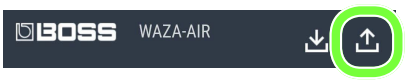
5. **Tap "SELECT LIVESET," select the liveset to which you want to add, and tap the [IMPORT] button.**

Exporting a Liveset from LIBRARIAN into the WAZA-AIR Unit (EXPORT TO WAZA-AIR)

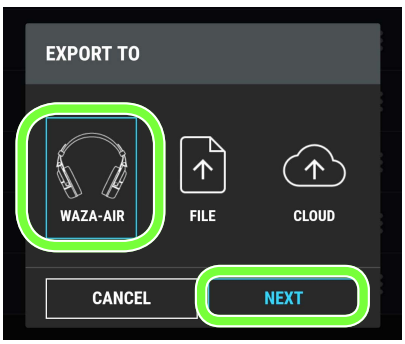
Here's how a saved liveset can be exported to patches in the WAZA-AIR unit.

1. **Tap the [LIBRARIAN] button.**

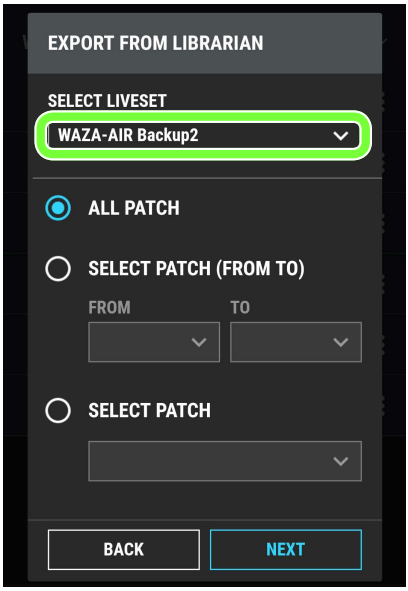
2. **In the upper part of the screen, tap the button.**



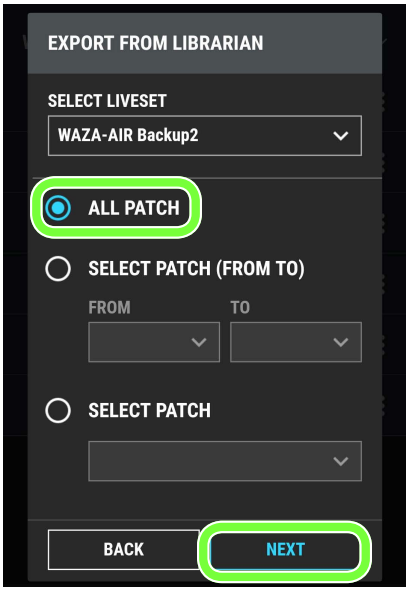
3. **Tap "WAZA-AIR," and then tap the [NEXT] button.**



4. Select the liveset that you want to export.



5. In the liveset area, tap “ALL PATCH,” then tap the [NEXT] button.



* “ALL PATCH” exports all patches of the liveset to the WAZA-AIR unit.

* “SELECT PATCH (FROM TO)” exports the patches between “FROM” and “TO” to the WAZA-AIR unit.
* “SELECT PATCH” exports the selected patch to the WAZA-AIR unit.

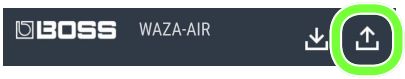
6. Select the patch at which you want to start overwriting the data in the WAZA-AIR unit, and tap the [EXPORT] button.

Exporting a Liveset from LIBRARIAN to the Mobile Device (EXPORT TO FILE)

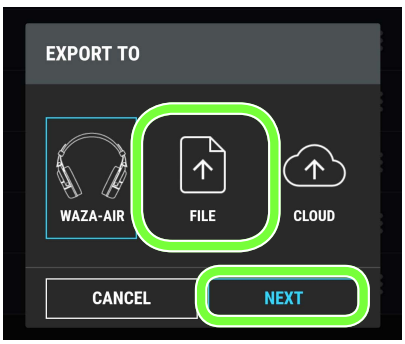
Here's how a liveset from LIBRARIAN can be converted into a liveset file and exported to the mobile device.

1. **Tap the [LIBRARIAN] button.**

2. **In the upper part of the screen, tap the button.**



3. **Tap "FILE," and then tap the [NEXT] button.**



4. Select the liveset that you want to export, and tap the [EXPORT] button.

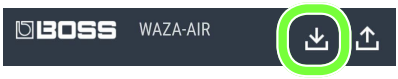
5. The data is exported to the mobile device.

Importing a File from the Mobile Device into LIBRARIAN (IMPORT FROM FILE)

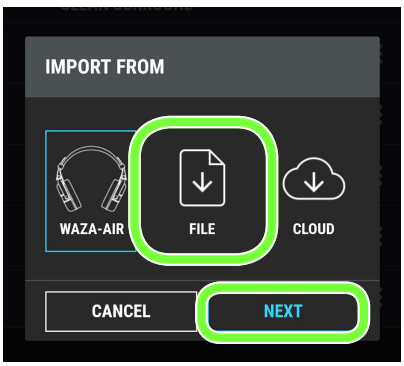
Here's how a liveset file previously exported to the mobile device can be imported into LIBRARIAN.

1. **Tap the [LIBRARIAN] button.**

2. **In the upper part of the screen, tap the button.**



3. **Tap "FILE," and then tap the [NEXT] button.**



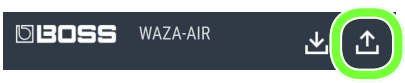
4. **Select a liveset file that was exported to the mobile device.**

Exporting a Liveset from LIBRARIAN to a Cloud Service (EXPORT TO CLOUD)

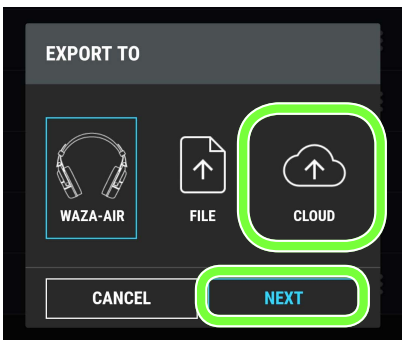
Here's how a liveset from LIBRARIAN can be converted to a liveset file and exported to a cloud service.

1. **Tap the [LIBRARIAN] button.**

2. **In the upper part of the screen, tap the button.**



3. **Tap "CLOUD" and then tap the [NEXT] button.**



4. **Select the liveset that you want to export to a cloud service, and tap the [EXPORT] button.**

5. **The Cloud screen appears, allowing you to export the file.**

Choose iCloud Drive for an iOS device, or Google Drive for an Android device.

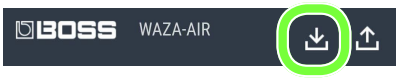
> In some cases, your mobile device might support more than one cloud service. This app only supports operation using iCloud Drive on iOS devices and Google Drive on Android devices.

Importing a File from a Cloud Service into LIBRARIAN (IMPORT FROM CLOUD)

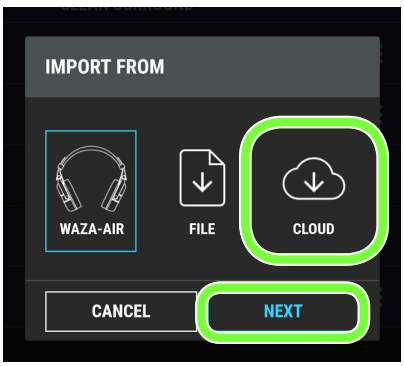
Here's how a liveset file previously exported to a cloud service can be imported into LIBRARIAN.

1. **Tap the [LIBRARIAN] button.**

2. **In the upper part of the screen, tap the button.**



3. **Tap "CLOUD," and then tap the [NEXT] button.**



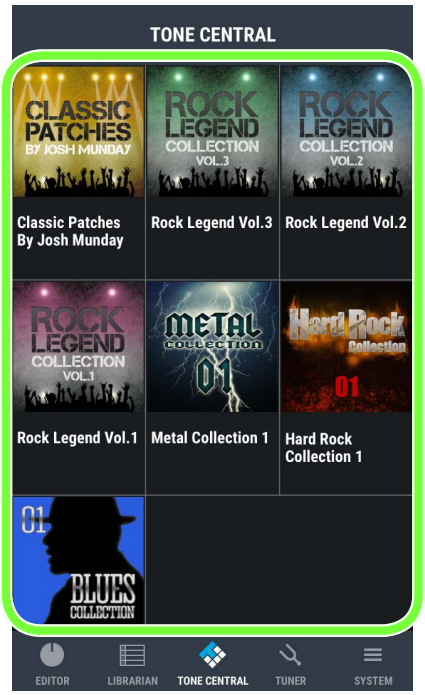
4. **Select a liveset file that was saved in the cloud.**

Adding a Liveset from BOSS TONE CENTRAL to LIBRARIAN

Here's how a liveset available on BOSS TONE CENTRAL can be downloaded and used in the WAZA-AIR unit.

1. Tap the [TONE CENTRAL] button.

2. Tap one of the displayed livesets.



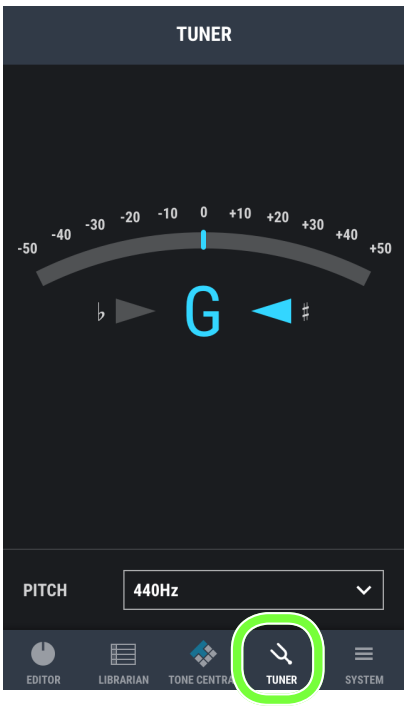
A description or an introductory video appears.

* You can preview a patch by tapping the patch list within the content. To preview, turn on either CH A or CH B in the TONE SETTING section of the WAZA-AIR unit.

3. In the upper part of the screen, tap “ADD.”

The liveset is downloaded and added to LIBRARIAN.

Using the Tuner



Tap the [TUNER] button to start the tuner.

PITCH	435 Hz–445 Hz (default: 440 Hz)

MEMO

The WAZA-AIR unit's tuner function (simultaneously hold down the up/down buttons) cannot be used while the TUNER screen is shown.

SYSTEM

Bluetooth SETTING

Here you can edit the Bluetooth connection settings.

HEADPHONES BATTERY CHECK

Here you can check the remaining amount of battery power for the WAZA-AIR unit.

STANDBY SETTING

AUTO STANDBY

The WAZA-AIR unit has a function that automatically switches to standby mode when you stop performing or operating the unit. Here you can specify the length of time after you stop performing until the unit automatically enters standby mode.

Value	Explanation
MOTION SENSING	If the transmitter that's plugged into the guitar is powered-on, the unit automatically enters standby mode if no vibration is detected for a certain interval of time. In this case, the power automatically turns on when the transmitter detects vibration.
SOUND SENSING	If the transmitter that's plugged into the guitar (instrument) is powered-on, the unit automatically enters standby mode if a silent state in which the guitar (instrument) is not played continues for a certain interval of time. In this case, the power automatically turns on when the transmitter detects a signal.

MEMO

When you change the setting, plug the transmitter into the WAZA-AIR unit. AUTO WIRELESS CONNECTION will operate, enabling the setting.

CABINET

CABINET RESONANCE

Adds the resonance of a speaker cabinet.

Value	Explanation
VINTAGE	The warm and sweet sound of a vintage cabinet.
MODERN	A modern cabinet sound notable for a tight low-end.
DEEP	Sound with powerful low-end as well as a distinctive edge.

GLOBAL EQ

Here you can place the GLOBAL EQ before or after the effect chain.

OWNER'S MANUAL

Here you can view the owner's manual for the unit or pages of this manual.

* Your mobile device must be connected to the internet.

GUITAR WIRELESS

Here you can view the reception status of the radio signal from the transmitter.

VERSION

Here you can view version information and license information for the BOSS TONE STUDIO for WAZA-AIR software.

Effect Parameter List

BST (BOOSTER)

Various boosters and distortion effects can be selected.

BOOSTER Type

Type	Explanation
CLEAN BOOST	This not only functions as a booster, but also produces a clean tone that has punch even when used alone.
TREBLE BOOST	This is a booster that has bright characteristics.
MID BOOST	This is a booster with unique characteristics in the midrange. Making the connection before the COSM amp produces sound suitable for solos.
CRUNCH OD	A lustrous crunch sound with an added element of amp distortion.
BLUES DRIVE	This is a crunch sound of the BOSS BD-2. This produces distortion that faithfully reproduces the nuances of picking.
OVERDRIVE	This models the sound of the BOSS OD-1. This produces sweet, mild distortion.

Type	Explanation
NATURAL OD	This is an overdrive sound that provides distortion with a natural feeling.
WARM OD	This is a warm overdrive.
TURBO OD	This is the high-gain overdrive sound of the BOSS OD-2.
T-SCREAM	This models an Ibanez TS-808.
DISTORTION	This gives a basic, traditional distortion sound.
FAT DS	A distortion sound with thick distortion.
DST+	This models a MXR DISTORTION+.
GUV DS	This models a Marshall GUV'NOR.
RAT	This models a Proco RAT.
METAL ZONE	This models the sound of the BOSS MT-2. It produces a wide range of metal sounds, from old style to slash metal.
METAL DS	This is distortion sound that is ideal for performances of heavy riffs.
'60S FUZZ	This models a FUZZFACE. It produces a fat fuzz sound.
MUFF FUZZ	This models an Electro-Harmonix Big Muff π.
OCT FUZZ	A fuzz sound with rich harmonic content.

BOOSTER Parameters

Parameter	Value	Explanation
TYPE	Refer to BOOSTER Type	
DRIVE	0–120	Adjusts the depth of distortion.
TONE	-50–+50	Adjusts the tone.
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.
EFFECT LEVEL	0–100	Adjusts the volume of the effect 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.
DIRECT MIX	0–100	Adjusts the volume of the direct sound.

MOD/FX

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

MOD/FX Type

This is a list of the effects that can be selected for MOD/FX.

Effect Name	Explanation
CHORUS	Frequency band division is employed to produce two different choruses, one for low frequencies and one for higher frequencies. This allows you to achieve a more natural chorus sound.
FLANGER	The flanging effect gives a twisting, jet-airplane-like character to the sound.
PHASER	By adding varied-phase portions to the direct sound, the phaser effect gives a whooshing, swirling character to the sound.
UNI-V	This models a Uni-Vibe. Although this resembles a phaser effect, it also provides a unique undulation that you can't get with a regular phaser.

Effect Name	Explanation
TREMOLO	Tremolo is an effect that creates a cyclic change in volume.
VIBRATO	This effect creates vibrato by slightly modulating the pitch.
ROTARY	This produces an effect like the sound of a rotary speaker.
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.
SLOW GEAR	This produces a volume-swell effect ("violin-like" sound).
SLICER	This consecutively interrupts the sound to create the impression that a rhythm backing phrase is being played.
COMP (Compressor)	This is an effect that produces a long sustain by evening out the volume level of the input signal. You can also use it as a limiter to suppress only the sound peaks and prevent distortion.
LIMITER	The limiter attenuates loud input levels to prevent distortion.
T. WAH (Touch Wah)	You can produce a wah effect with the filter changing in response to the guitar level.
AUTO WAH	This changes the filtering over a periodic cycle, providing an automatic wah effect.
PEDAL WAH	This lets you produce a pedal wah effect.
GRAPHIC EQ (Graphic Equalizer)	Adjusts the tone. You can adjust the sound character in ten bands.

Effect Name	Explanation
PARAMETRIC EQ (Parametric Equalizer)	Adjusts the tone. You can adjust the sound character in four bands.
GUITAR SIM (Guitar Simulator)	Simulation of the characteristics of particular guitar components such as pickups and different guitar bodies allows you to switch among a number of different guitar types all while using a single guitar.
AC.GUITAR SIM (Acoustic Guitar Simulator)	This transforms the sound of an electric guitar into the sound of an acoustic guitar.
AC. PROCESSOR (Acoustic Processor)	This processor allows you to change the sound produced by the pickup on an acoustic electric guitar, creating a richer sound similar to that obtained with a microphone placed close to the guitar.
WAVE SYNTH	This is a synth sound that processes the guitar input signal.
OCTAVE	This adds a note one octave lower, creating a richer sound.
PITCH SHIFTER	This effect changes the pitch of the original sound (up or down) within a range of two octaves.
HARMONIST	Harmonist is an effect where the amount of shifting is adjusted according to an analysis of the guitar input, allowing you to create harmony based on diatonic scales.
HUMANIZER	This can create human vowel-like sounds.
PHASER 90E	This models an MXR EVH-90 Phase Shifter.

Effect Name	Explanation
FLANGER117E	This models an MXR EVH-117 Flanger.

MOD/FX Efffect Parameters

CHORUS

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

Parameter	Value	Explanation
LOW RATE	0–100	Adjust the speed of the chorus effect for the low frequency range.
LOW DEPTH	0–100	Adjust the depth of the chorus effect for the low frequency range. If you wish to use this as a doubling effect, use a setting of 0.
LOW PRE DELAY	0.0 ms–40.0 ms	Adjusts the delay of the effect sound in the low-frequency range. Extending the pre-delay will produce the sensation of multiple sounds (doubling effect).
LOW LEVEL	0–100	Adjusts the volume of the effect sound in the low-frequency range.

Parameter	Value	Explanation
DIRECT MIX	0–100	Adjusts the volume of the direct sound.
HIGH RATE	0–100	Adjust the speed of the chorus effect for the high frequency range.
HIGH DEPTH	0–100	Adjust the depth of the chorus effect for the high frequency range. If you wish to use this as a doubling effect, use a setting of 0.
HIGH PRE DELAY	0.0 ms–40.0 ms	Adjusts the delay of the effect sound in the high-frequency range. Extending the pre-delay will produce the sensation of multiple sounds (doubling effect).
HIGH LEVEL	0–100	Adjusts the volume of the effect sound in the high-frequency range.
XOVER FREQUENCY (CROSSOVER FREQUENCY)	100 Hz–4.00 kHz	This sets the frequency dividing the low- and high-frequency ranges.

FLANGER

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

Parameter	Value	Explanation
RATE	0–100	This sets the rate of the flanging effect.
DEPTH	0–100	Determines the depth of the flanging effect.
RESO (RESONANCE)	0–100	Determines the amount of resonance (feedback). Increasing the value will emphasize the effect, creating a more unusual sound.
MANUAL	0–100	Adjusts the center frequency at which to apply the effect.
EFFECT LEVEL	0–100	Adjusts the volume of the flanger.
LOW CUT	FLAT, 55 Hz–800 Hz	This sets the frequency at which the low cut filter begins to take effect. When "FLAT" is selected, the low cut filter will have no effect.
DIRECT MIX	0–100	Adjusts the volume of the direct sound.

PHASER

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

Parameter	Value	Explanation
TYPE	Selects the number of stages that the phaser effect will use.	
	4 STAGE	This is a four-phase effect. A light phaser effect is obtained.
	8 STAGE	This is a eight-phase effect. It is a popular phaser effect.
	12 STAGE	This is a twelve-phase effect. A deep phase effect is obtained.
	BiPHASE	This is the phaser with two phase shift circuits connected in series.
RATE	0–100	This sets the rate of the phaser effect.
DEPTH	0–100	Determines the depth of the phaser effect.
RESO (RESONANCE)	0–100	Determines the amount of resonance (feedback). Increasing the value will emphasize the effect, creating a more unusual sound.
MANUAL	0–100	Adjusts the center frequency of the phaser effect.
EFFECT LEVEL	0–100	Adjusts the volume of the phaser.

Parameter	Value	Explanation
STEP RATE	OFF, 0–100	This sets the cycle of the step function that changes the rate and depth. When it is set to a higher value, the change will be finer. Set this to "OFF" when not using the Step function.
DIRECT MIX	0–100	Adjusts the volume of the direct sound.

UNI-V

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

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

TREMOLO

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

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

VIBRATO

This effect creates vibrato by slightly modulating the pitch.

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

ROTARY

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

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

RING MOD

The sound can be unmusical and lack distinctive pitches.

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

SLOW GEAR

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

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

SLICER

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

Parameter	Value	Explanation
PATTERN	P1–P20	Select the slice pattern that will be used to cut the sound.
RATE	0–100	Adjust the rate at which the sound will be cut.
TRIGGER SENS	0–100	Adjust the sensitivity of triggering. With low settings of this parameter, softly picked notes will not retrigger the phrase (i.e., the phrase will continue playing), but strongly picked notes will retrigger the phrase so that it will playback from the beginning. With high settings of this parameter, the phrase will be retriggered even by softly picked notes.
EFFECT LEVEL	0–100	Adjusts the volume of the effect sound.
DIRECT MIX	0–100	Adjusts the volume of the direct sound.

COMP

This is an effect that produces a long sustain by evening out the volume level of the input signal. You can also use it as a limiter to suppress only the sound peaks and prevent distortion.

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

Parameter	Value	Explanation
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.
LEVEL	0–100	Adjusts the volume.
TONE	-50–+50	Adjusts the tone.

LIMITER

The limiter attenuates loud input levels to prevent distortion.

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

T. WAH

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

Parameter	Value	Explanation
MODE	Selects the wah mode.	
	LPF	Low pass filter. This provides a wah effect over a wide frequency range.
	BPF	Band pass filter. This provides a wah effect in a narrow frequency range.
POLAR	Selects the direction in which the filter will change in response to the input.	
	DOWN	The frequency of the filter will fall.
	UP	The frequency of the filter will rise.
SENS	0–100	Specifies the sensitivity with which the filter changes in the direction specified by the POLAR setting. Higher values will produce a stronger tone which emphasizes the wah effect more. With a setting of 0, the strength of picking will have no effect.
FREQ	0–100	Adjusts the center frequency of the Wah effect.

Parameter	Value	Explanation
PEAK	0–100	Adjusts the way in which the wah effect applies to the area around the center frequency. Higher values will produce a stronger tone which emphasizes the wah effect more. With a value of 50 a standard wah sound will be produced.
EFFECT LEVEL	0–100	Adjusts the volume of the effect sound.
DIRECT MIX	0–100	Adjusts the volume of the direct sound.

AUTO WAH

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

Parameter	Value	Explanation
MODE	Selects the wah mode.	
	LPF	Low pass filter. This provides a wah effect over a wide frequency range.
	BPF	Band pass filter. This provides a wah effect in a narrow frequency range.
RATE	0–100	Adjusts the frequency (speed) of the change.
DEPTH	0–100	Adjusts the depth of the effect.
FREQ	0–100	Adjusts the center frequency of the Wah effect.
PEAK	0–100	Adjusts the way in which the wah effect applies to the area around the center frequency. Higher values will produce a stronger tone which emphasizes the wah effect more. With a value of 50 a standard wah sound will be produced.
EFFECT LEVEL	0–100	Adjusts the volume of the effect sound.
DIRECT MIX	0–100	Adjusts the volume of the direct sound.

PEDAL WAH

This lets you produce a pedal wah effect.

Parameter	Value	Explanation
TYPE	Selects the wah mode.	
	CRY WAH	This models the sound of the CRY BABY wah pedal popular in the ’70s.
	VO WAH	This models the sound of the VOX V846.
	FAT WAH	This is a wah sound featuring a bold tone.
	LIGHT WAH	This wah has a refined sound with no unusual characteristics.
	7STRING WAH	This expanded wah features a variable range compatible with seven-string and baritone guitars.
	RESO WAH	This completely original effect offers enhancements on the characteristic resonances produced by analog synth filters.
PEDAL POS (PEDAL POSITION)	0–100	Adjusts the position of the wah pedal.

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

GRAPHIC EQ

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

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

PARAMETRIC EQ

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

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

Parameter	Value	Explanation
HIGH-MID Q	0.5–16	Adjusts the width of the area affected by the EQ centered at the HIGH-MID FREQ. Higher values will narrow the area.
LOW CUT	FLAT, 20 Hz–800 Hz	This sets the frequency at which the low cut filter begins to take effect. When "FLAT" is selected, the low cut filter will have no effect.
HIGH CUT	630 Hz–12.5 kHz, FLAT	This sets the frequency at which the high cut filter begins to take effect. When "FLAT" is selected, the high cut filter will have no effect.

GUITAR SIM

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

Parameter	Value	Explanation
TYPE	Selects the type of the guitar simulator.	
	S → H	Changes from a single-coil pickup tone to a humbucking pickup tone.
	H → S	Changes from a humbucking pickup tone to a single-coil pickup tone.
	H → HF (HALF TONE)	Changes from a humbucking pickup tone to a single-coil pickup half tone.
	S → HOLLOW	Changes a single-coil pickup tone to a hollow body tone with the body resonance added.
	H → HOLLOW	Changes a humbucking pickup tone to a hollow body tone with the body resonance added.
	S → AC (ACOUSTIC)	Changes a single-coil pickup tone to an acoustic guitar tone.
	H → AC (ACOUSTIC)	Changes a humbucking pickup tone to an acoustic guitar tone.

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

AC. GUITAR SIM

This effect simulates the tonal character of an acoustic guitar.

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

AC. PROCESSOR

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

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

WAVE SYNTH

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

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

- Because of the need to analyze the pitch, chords (two or more sounds played simultaneously) cannot be played. Be sure to mute all the other strings and play only one note at a time.
- If the unit cannot detect the attack, it may not sound correctly. If the unit cannot detect the attack, it may not sound correctly.
- The sensitivity may vary according to the guitar's TONE knob and pickup type.

Parameter	Value	Explanation
WAVE	Selects a wave type which the synth sound is based.	
	SAW	Creates a synth sound with a saw waveform (⩘⩘⩘).
	SQUARE	Creates a synth sound with the square waveform (⎍⎍⎍).
CUTOFF	0–100	Adjusts the frequency where the harmonics contents of the sound are cut off.

Parameter	Value	Explanation
RESONANCE	0–100	Adjusts the amount of resonance (and the tone coloration) in the synth sound. The higher the value, the more the synth tone coloration is emphasized.
SYNTH LEVEL	0–100	Adjusts the volume of the synth sound.
FILTER SENS	0–100	Adjusts the amount of filtering applied in response to the input.
FILTER DECAY	0–100	This sets the time needed for the filter to finish its sweep.
FILTER DEPTH	0–100	Adjusts the depth of the filter. When the value is higher, the filter will change more drastically.
DIRECT MIX	0–100	Adjusts the volume of the direct sound.

OCTAVE

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

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

PITCH SHIFTER

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

Parameter	Value	Explanation
VOICE	Selects the number of voices for the pitch shift sound.	
	1VOICE	One-voice pitch-shifted sound output in mono.
	2VOICE	Two-voice pitch-shifted sound (PS1, PS2) output in mono.
PS1:PITCH **PS2:PITCH**	-24–+24	Adjusts the amount of pitch shift (the amount of interval) in semitone steps.
PS1:LEVEL **PS2:LEVEL**	0–100	Adjusts the volume of the pitch shifter.
DIRECT MIX	0–100	Adjusts the volume of the direct sound.
PS1:MODE **PS2:MODE**	Selection for the pitch shifter mode.	
	FAST, MEDIUM, SLOW	The response is slower in the order of FAST, MEDIUM and SLOW, but the modulation is lessened in the same order.
	MONO	MONO is used for inputting single notes. * You may be unable to produce the intended effect when playing chords (two or more notes played simultaneously).

Parameter	Value	Explanation
PS1:FINE **PS2:FINE**	-50–+50	Make fine adjustments to the interval. The amount of the change in the Fine 100 is equivalent to that of the Pitch 1.
PS1:PRE DELAY **PS2:PRE DELAY**	0 ms–300 ms	Adjusts the time from when the direct sound is heard until the pitch shifted sounds are heard. Normally you can leave this set at 0 ms.
PS1:FEEDBACK	0–100	Adjusts the feedback amount of the pitch shift sound.

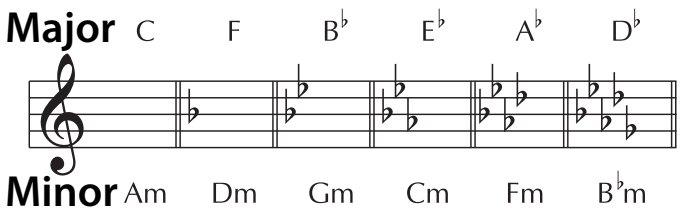
HARMONIST

Harmonist is an effect where the amount of shifting is adjusted according to an analysis of the guitar input, allowing you to create harmony based on diatonic scales.

* Because of the need to analyze the pitch, chords (two or more sounds played simultaneously) cannot be played. Be sure to mute all the other strings and play only one note at a time.
* If the unit cannot detect the attack, it may not sound correctly. If the unit cannot detect the attack, it may not sound correctly.
* The sensitivity may vary according to the guitar's TONE knob and pickup type.

Parameter	Value	Explanation
VOICE	Selects the number of voices for the pitch shift sound.	
	1VOICE	One pitch-shifted voice is output in mono.
	2VOICE	Two pitch-shifted voices are output in mono.

Parameter	Value	Explanation
HR1:HARMONY **HR2:HARMONY**	-2 oct–+2 oct, USER	This determines the pitch of the sound added to the input sound, when you are making a harmony. It allows you to set it by up to 2 octaves higher or lower than the input sound. When the scale is set to USER, this parameter sets the user scale number to be used.
MASTER KEY	C (Am)–B (G#m)	The key of the song you're performing is shown as described in *1 according to the key signature (♯, ♭) of the musical notation.
DIR.MIX (DIRECT MIX)	0–100	Adjusts the volume of the direct sound.
HR1:PRE DELAY **HR2:PRE DELAY**	0 ms–300 ms,	Adjusts the time from when the direct sound is heard until the harmonist sounds are heard. Normally you can leave this set at 0 ms.
HR1:FEEDBACK	0–100	Adjusts the feedback amount of the harmonist sound.



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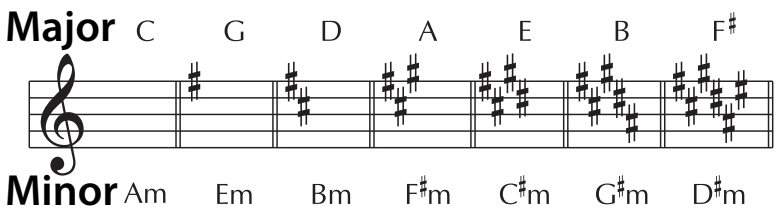

Parameter		Value	Explanation
HR1:LEVEL **HR2:LEVEL**		0–100	Adjusts the volume of the harmony sound.
USER SCALE *2 *3	**C**	-24⏬C –+24⏫C	You can specify a pitch in the range two octaves above or below the direct sound.
	Db	-24⏬D♭ –+24⏫D♭	
	D	-24⏬D –+24⏫D	
	Eb	-24⏬E♭ –+24⏫E♭	
	E	-24⏬E –+24⏫E	
	F	-24⏬F –+24⏫F	
	F#	-24⏬F♯ –+24⏫F♯	
	G	-24⏬G –+24⏫G	
	Ab	-24⏬A♭ –+24⏫A♭	
	A	-24⏬A –+24⏫A	
	Bb	-24⏬B♭ –+24–⏫ B♭	
	B	-24⏬B –+24⏫B	

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

*3 The correspondence between the note names and the parameters of PAGE 3–6 differs depending on the specified KEY.

This is the tonic (root note) of the KEY specified by the MASTER KEY parameter of PAGE 1. The table shows the example of when KEY is set to C (Am).

HUMANIZER

This can create human vowel-like sounds.

Parameter	Value	Explanation
MODE	This sets the mode that switches the vowels.	
	PICKING	It changes from VOWEL 1 to VOWEL 2 along with the picking. The time spent for the change is adjusted with the rate.
	AUTO	By adjusting the rate and depth, two vowels (VOWEL 1 and VOWEL 2) can be switched automatically.
VOWEL 1	a, e, i, o, u	Selects the first vowel.
VOWEL 2	a, e, i, o, u	Selects the second vowel.
RATE	0–100	Adjusts the cycle for changing the two vowels.
DEPTH	0–100	Adjusts the depth of the effect.
LEVEL	0–100	Adjusts the volume.

Parameter	Value	Explanation
SENS *1	0–100	Adjusts the sensitivity of the humanizer. When it is set to a lower value, no effect of the humanizer is obtained with weaker picking, while stronger picking produces the effect. When it is set to a higher value, the effect of the humanizer can be obtained whether the picking is weak or strong.
MANUAL *2	0–100	Adjusts the cycle for changing the two vowels. When it is set to lower than 50, the time for VOWEL 1 is shorter. When it is set to higher than 50, the time for VOWEL 1 is longer.

*1 Setting available when MODE is set to PICKING.

*2 Setting available when MODE is set to AUTO.

PHASER 90E

This models an MXR EVH-90 Phase Shifter.

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

FLANGER117E

This models an MXR EVH-117 Flanger.

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

DELAY/DELAY 2

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

DELAY Type

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

DELAY Parameters

Parameter	Value	Explanation
TYPE	Refer to DELAY Type	
DELAY TIME	1 ms–2000 ms	Adjusts the delay time.
FEEDBACK	0–100	Adjusts the volume that is returned to the input. A higher value will increase the number of the delay repeats.
HIGH CUT	630 Hz–12.5 kHz, FLAT	This sets the frequency at which the high cut filter begins to take effect. When "FLAT" is selected, the high cut filter will have no effect.
EFFECT LEVEL	0–120	Adjusts the volume of the delay sound.
DIRECT MIX	0–100	Adjusts the volume of the direct sound.
MODULATION RATE	0–100	Adjusts the modulation rate of the delay sound. * Only when TYPE is MODULATE or SDE-3000.
MODULATION DEPTH	0–100	Adjusts the modulation depth of the delay sound * Only when TYPE is MODULATE or SDE-3000.
MODULATION SW	OFF, ON	Turns the modulation on/off. * Only when TYPE is SDE-3000.

Parameter	Value	Explanation
FILTER	OFF, ON	Turns the filter on/off. If this is on, a natural-sounding effect is obtained when you're using the delay as an echo. * Only when TYPE is SDE-3000.
RANGE	8 kHz, 17 kHz	Models the way in which the SDE-3000's frequency response is affected by the delay range. * Only when TYPE is SDE-3000.
DELAY PHASE	NORMAL, INV	Specifies the phase of the delay sound. Selecting INV inverts the phase. * Only when TYPE is SDE-3000.
FEEDBACK PHASE	NORMAL, INV	Specifies the phase of the delay sound feedback. Selecting INV inverts the phase. * Only when TYPE is SDE-3000.

REVERB

This effect adds reverberation to the sound.

REVERB Type

TYPE	Explanation
PLATE	Simulates plate reverberation (a reverb unit that uses the vibration of a metallic plate). Provides a metallic sound with a distinct upper range.
ROOM	Simulates the reverberation in a small room. Provides warm reverberations.
HALL 1	Simulates the reverberation in a concert hall. Provides clear and spacious reverberations.
SPRING	This simulates the sound of a guitar amp's built-in spring reverb.
MODULATE	This reverb adds the wavering sound found in hall reverb to provide an extremely pleasant reverb sound.

REVERB Parameters

Parameter	Value	Explanation
TYPE	Refer to REVERB Type	
REVERB TIME	0.1 s–10.0 s	Adjusts the length (time) of reverberation.
PRE DELAY	0 ms–500 ms	Adjusts the time until the reverb sound appears.
EFFECT LEVEL	0–100	Adjusts the volume of the reverb sound.
DIRECT MIX	0–100	Adjusts the volume of the direct sound.
LOW CUT	FLAT, 20 Hz–800 Hz	This sets the frequency at which the low cut filter begins to take effect. When "Flat" is selected, the low cut filter will have no effect.
HIGH CUT	630 Hz–12.5 kHz, FLAT	This sets the frequency at which the high cut filter begins to take effect. When "FLAT" is selected, the high cut filter will have no effect.
DENSITY	0–10	Adjusts the density of the reverb sound.
SPRING SENS (TYPE = SPRING only)	0–100	Adjusts the sensitivity of the spring effect. When the value is set higher, the effect is obtained even with a weak picking.

EQ (PARAMETRIC EQ)

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

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
LOW GAIN	-20–+20 dB	Adjusts the low frequency range tone.
LOW-MID GAIN	-20–+20 dB	Adjusts the low-middle frequency range tone.
HIGH-MID GAIN	-20–+20 dB	Adjusts the high-middle frequency range tone.
HIGH GAIN	-20–+20 dB	Adjusts the high frequency range tone.
LEVEL	-20–+20 dB	Adjusts the overall volume level of the equalizer.
LOW-MID FREQUENCY	20 Hz–10.0 kHz	Specifies the center of the frequency range that will be adjusted by the LOW-MID GAIN.
LOW-MID Q	0.5–16	Adjusts the width of the area affected by the EQ centered at the LOW-MID FREQ. Higher values will narrow the area.

Parameter	Value	Explanation
HIGH-MID FREQUENCY	20 Hz–10.0 kHz	Specifies the center of the frequency range that will be adjusted by the HIGH-MID GAIN.
HIGH-MID Q	0.5–16	Adjusts the width of the area affected by the EQ centered at the HIGH-MID FREQ. Higher values will narrow the area.
LOW CUT	FLAT, 20 Hz–800 Hz	This sets the frequency at which the low cut filter begins to take effect. When "FLAT" is selected, the low cut filter will have no effect.
HIGH CUT	630 Hz–12.5 kHz, FLAT	This sets the frequency at which the high cut filter begins to take effect. When "FLAT" is selected, the high cut filter will have no effect.
POSITION	AMP IN, AMP OUT	This lets you place the EQ before (AMP IN) or after (AMP OUT) the AMP EQ block.

NS

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

Parameter	Value	Explanation
ON/OFF	OFF, ON	Turns this effect on/off.
THRESHOLD	0–100	Adjust this parameter as appropriate for the volume of the noise. If the noise level is high, a higher setting is appropriate. If the noise level is low, a lower setting is appropriate. * High settings for the threshold parameter may result in there being no sound when you play with your guitar volume turned down.

Parameter	Value	Explanation
RELEASE	0–100	Adjusts the time from when the noise suppressor begins to function until the noise level reaches "0."