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# Getting ready

## Top panel



### 1 [PHONES/LINE] knob

Sets the volume for the PHONES/LINE OUT.

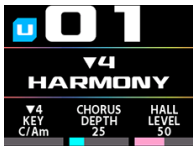
\* This doesn't change the volume for the OUTPUT L/R.

### 2 Display

Shows various information for the VE-22.

#### MEMO

The screen that appears after you turn on the power is called the "play screen".



### 3 [MEMORY] knob

Operation	Function
Turn	Switches between memories or menus.
Press	Confirms the operation.
Press and turn	Turn while pressing to skip ahead 10 memories.

### 4 [EXIT] button

Operation	Function
Press	Returns to the previous screen or undoes an operation.
Long-press	While on the play screen, long-press the button to turn the lock function on. This disables the [MEMORY], [HARMONY], [EFFECT] and [ECHO] knobs as well as the [MENU] button. This prevents accidental changes to the settings. Long-press again to turn the lock function off.

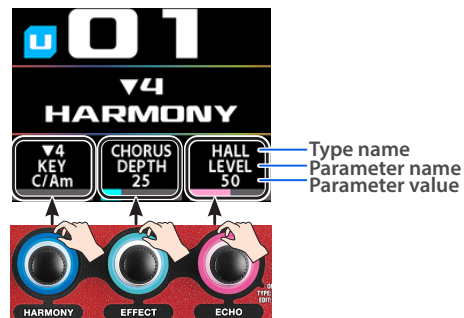
### 5 [MENU] button

Configures the functions.

Operation	Function
Press	The MENU screen appears.
Press twice	The DYNAMICS edit screen appears.

When you press 4 and 5 together, the MEMORY WRITE screen appears (p. 11).

### 6 [HARMONY], [EFFECT] and [ECHO] knobs



Operation	Function
Press	Switches the effect on/off. When this is on, the knob's indicator lights up.
Turn	Edits the parameter values shown in the display. Turn the knob while holding down the [MENU] button to edit the value in increments of 10.
Press and turn	Changes the type.
Press twice	Switches to the edit screen.

### 7 Pedal switch

There are two modes for the pedal switches: memory mode and manual mode, each with different functions.

You can press the [▼] and [▲] switches at the same time to switch between modes ("Switching the pedal mode" (p. 7)).

#### Memory mode

The pedal switch functions are (from left to right) HARMONY on/off, ▼ (memory decrement), ▲ (memory increment).

You can assign other functions to the [HARMONY] switch (p. 13).

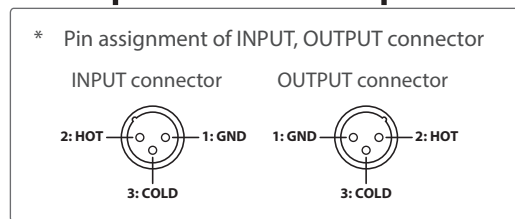
#### Manual mode

The pedal switch functions are (from left to right) HARMONY, EFFECT and ECHO on/off.

You can assign other functions to the switches (p. 14).

## Rear panel (connecting your equipment)

\* To prevent malfunction and equipment failure, always turn down the volume, and turn off all the units before making any connections.



### 1 INPUT connector

Connect your microphone here.

### 2 [MIC SENS] knob

Adjusts the input sensitivity for the mic. Set this by following the steps in "Configuring the mic settings (MIC)" (p. 5).

### 3 [PHANTOM] switch

Set this to match the mic you've connected.

When using a condenser mic, set this to "ON", and when using a dynamic mic, set this to "OFF".

### About phantom power

This unit can supply phantom power (+48 V) to the mic. When using a condenser mic that requires phantom power, set the [PHANTOM] switch to "ON" ("Phantom power settings" (p. 4)).

### 4 OUTPUT R, L/MONO connectors

Connect this to your PA mixer or other audio equipment.

This is for audio output.

Use the "OUTPUT" (p. 23) setting to set the type of audio for output.

### 5 PHONES/LINE OUT jack

Connect a pair of headphones (sold separately) that uses a stereo mini plug cable here.

For line-level output to a mixer, connect a commercially available stereo miniature phone to RCA phono type cable to the PHONES/LINE OUT jack.

### 6 AUX IN jack

When you connect an audio player or other device that uses a stereo mini plug to this jack, the sound from that device is mixed and sent to the OUTPUT connectors and the PHONES/LINE OUT jack.

This lets you practice singing along with backing tracks.

\* Use the controls of the connected device (such as an audio player) to adjust the volume.

### 7 CTL 1, 2/EXP jack

You can control various parameters from a connected device with a footswitch (FS-5U, FS-6, FS-7: sold separately) or an expression pedal (EV-30, FV-500L, FV-500H or Roland EV-5: sold separately) that's connected to the CTL 1,2/EXP jack. For details on the settings, refer to "CTL 1, 2/EXP" (p. 15).

\* Use only the specified expression pedal. By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.

### 8 USB port

Use this port to connect the VE-22 to your computer or iOS device for recording ("USB" (p. 27)).

Use a USB Type-C® cable.

\* Do not use a USB cable that is designed only for charging a device. Charge-only cables cannot transmit data.

### 9 DC IN jack

Connect an AC adaptor (BOSS PSA-S series, sold separately) here.

\* Use the cord hook to secure the cord of the AC adaptor as shown in the illustration.

AC adaptor cord



### 10 [POWER] switch

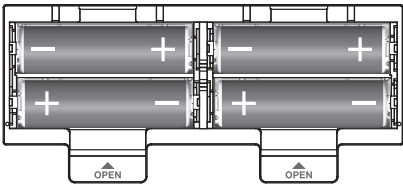
Turns the power on/off.

### 11 Ground terminal

Connect this to an external earth or ground if necessary.

## Installing the batteries

Install the batteries into the battery case at the bottom of this unit. Make sure that the batteries face the right way.



- \* When turning the unit over, be careful so as to protect the buttons and knobs from damage. Also, handle the unit carefully; do not drop it.
- \* If you handle batteries improperly, you risk explosion and fluid leakage. Make sure that you carefully observe all of the items related to batteries that are listed in "USING THE UNIT SAFELY" and "IMPORTANT NOTES" ( the leaflet "USING THE UNIT SAFELY").

### MEMO

"BATTERY LOW" appears on the display if the remaining battery power is low.

If this happens, replace the batteries with new ones.

## Turning the power on/off

### Turning the power on

1. Turn on the [POWER] switch of this unit first, then turn on any connected devices, and finally turn on the amps or speakers that are connected to this unit.
2. Adjust the volume of the connected equipment.

### Turning the power off

1. Turn off the power of the devices in the following order: first the amp/speakers, then the connected devices, and last the [POWER] switch of this unit.

## Phantom power settings

If you're using a condenser mic that requires phantom power, follow the steps below to turn phantom power on.

1. Switch the [PHANTOM] switch on the rear panel to the "ON" position.

"+48" appears on the play screen.



### NOTE

- When the batteries are running low, phantom power is not activated when you turn the [PHANTOM] switch ON. In this case, "BATTERY LOW" is indicated. Replace the batteries with new ones, or use an AC adaptor.
- If the battery power runs low while the [PHANTOM] switch is ON, "BATTERY LOW" appears in the display, but phantom power remains active. If you replace the batteries with new ones or use an AC adaptor, the "BATTERY LOW" message disappears.

# Basic operation

## Configuring the mic settings (MIC)

1. Connect a mic to the INPUT connector.



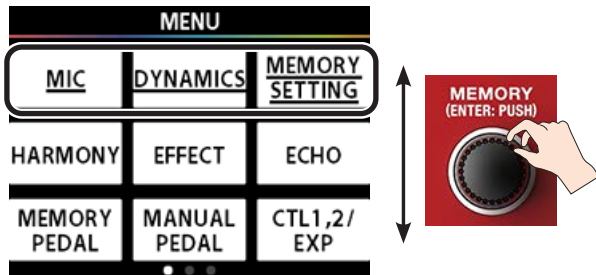
2. Press the [MENU] button.

The MENU screen appears.



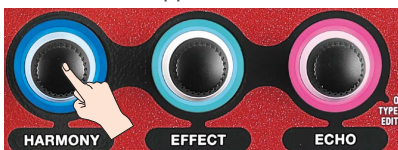
3. Turn the [MEMORY] knob to select the "MIC" row.

All items in the selected row are underlined.



4. Press the [HARMONY] knob.

The MIC screen appears.

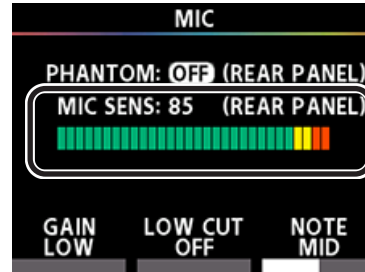


- \* The positions of the items onscreen correspond to the positions of the knobs (left, center, right). For this reason, if you want to select the "MIC" item separately while the "MIC" line is selected, press the [HARMONY] knob on the left.

5. Input some audio into the mic.
6. Turn the [MIC SENS] knob on the rear panel to adjust the mic input sensitivity.

### Improving S/N (signal-to-noise) for noise reduction

The optimum setting for the [MIC SENS] knob is about when only one yellow bar lights up at the loudest input volume.



Parameter	Value	Explanation
GAIN	LOW HIGH	If the yellow bars don't light up even when the [MIC SENS] knob is set to MAX, turn the [HARMONY] knob and set the GAIN to "HIGH".
LOW CUT	OFF, ON	You can cut out unnecessary low-band audio by turning the [EFFECT] knob and setting LOW CUT to "ON".
NOTE (NOTE SENS)	LOW MID HIGH	You can turn the [ECHO] knob to set the frequency upper limit (NOTE SENS) at which harmony and pitch correction are applied. In environments where feedback tends to occur, set NOTE to "LOW" to suppress unnecessary sounds.

7. Press the [EXIT] button several times to return to the play screen (the initial screen).



## Applying a harmony effect

1. Press the [HARMONY] pedal. The indicator lights up.



2. Use the [HARMONY] knob to edit the parameter value.



You can change the type of parameters shown from the edit screen.

- “Changing the parameters shown on the play screen” (p. 9)

# Editing the memories

## How the memories are structured

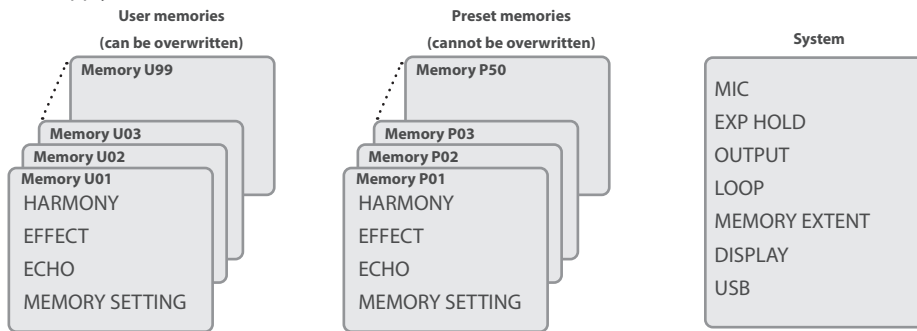
A combination of effects built into the VE-22 and their settings is called a “memory”.

### User memories and preset memories

There are two types of memories: “user memories”, which can be overwritten; and “preset memories”, which can’t be overwritten. After editing the settings of a memory, you can save it in the user memories and recall it for later use.

### System

These are saved settings that apply to all memories.



## Switching the pedal mode

There are two modes for the pedal switches: memory mode and manual mode. The pedal operation changes depending on the mode.

### Memory mode

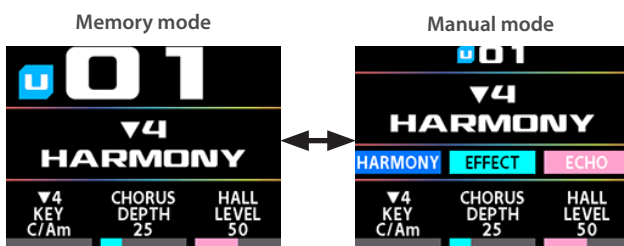
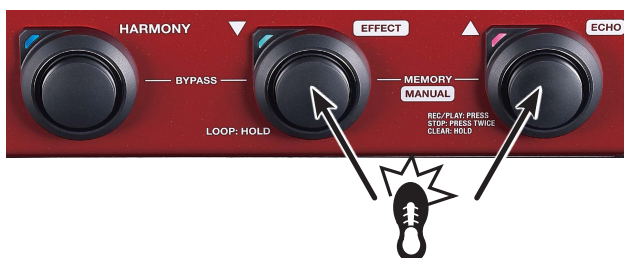
This mode lets you recall and use the memories that are saved in the unit. Use the [▼] and [▲] switches to switch memories. You can assign other functions to the [HARMONY] switch (“MEMORY PEDAL” (p. 13)).

### Manual mode

This mode is for operating the functions assigned to the pedal switch. The assigned factory settings are HARMONY, EFFECT and ECHO on/off.

You can assign different functions to the [HARMONY], [EFFECT] and [ECHO] pedals respectively (“MANUAL PEDAL” (p. 14)).

1. Press the [EFFECT] (▼) and [ECHO] (▲) switches at the same time.



Each time you do this, the unit toggles between memory mode and manual mode.

The settings you make in either memory mode or manual mode are retained when you switch between modes.

## Switching between memories

1. Switch to memory mode.



2. On the play screen, press the [▼] or [▲] switch to select a memory.

Press the [▼] switch to recall the previous memory number, and press the [▲] switch to recall the next memory number.

- \* You can't recall a different memory while any screen other than the play screen is displayed.

Press the [EXIT] button to return to the play screen and select a memory.

### MEMO

You can also turn the [MEMORY] knob to select a memory.

## Creating the sound you like

- \* Your settings are lost if you switch between memories or turn off the power without performing the MEMORY WRITE (p. 11) operation.  
You must perform a MEMORY WRITE after you change the settings.
- \* For details on the effect parameter, refer to the “Parameter Guide” (BOSS website).

## Configuring the dynamics

These parameters are for configuring the basic mic sound. If you’ve applied heavy compression (COMP) or if you’re using the distortion effect, you can adjust the NS (noise suppressor) to suppress noise.

This function can be configured differently for each memory.

- \* Your settings are lost if you switch between memories or turn off the power without performing the MEMORY WRITE (p. 11) operation.  
You must perform a MEMORY WRITE after you change the settings.

### 1. Press the [MENU] button.

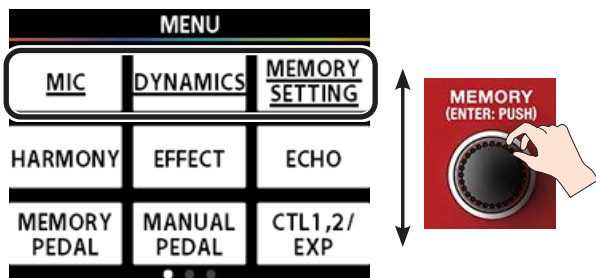
The MENU screen appears.



- \* You can also press the [MENU] button twice to open the DYNAMICS screen shown in step 4.

### 2. Turn the [MEMORY] knob to select the “DYNAMICS” row.

All items in the selected row are underlined.



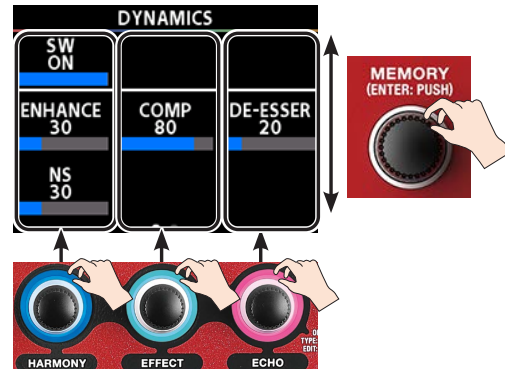
### 3. Press the [EFFECT] knob.

The DYNAMICS screen appears.



### 4. Use the [HARMONY], [EFFECT] and [ECHO] knobs to adjust the various parameter values.

To move the lines that change what to adjust, turn the [MEMORY] knob.



### 5. Press the [EXIT] button several times to return to the play screen (the initial screen).



### 6. Follow the steps in “Saving a memory (MEMORY WRITE)” (p. 11) to save the memory you edited.

- \* Your settings are lost if you switch between memories or turn off the power without performing the MEMORY WRITE (p. 11) operation.

## Configuring HARMONY, EFFECT and ECHO

Use the respective menus for HARMONY, EFFECT and ECHO to edit the sound settings.

Menu	Explanation
HARMONY	Selects the type and key of the harmony.
EFFECT	Use settings like PTC CRCT (pitch correct) to make the voice sound like a frog voice, or DIST (distortion) to make the voice sound distorted.
ECHO	Configures the echo (reverberation such as HALL, and delay sound).

- \* Your settings are lost if you switch between memories or turn off the power without performing the MEMORY WRITE (p. 11) operation.  
You must perform a MEMORY WRITE after you change the settings.

## Recalling a memory

### 1. Turn the [MEMORY] knob to switch between memories (U01–U99, P01–P50).

#### MEMO

If you turn the [MEMORY] knob counterclockwise while U01 is shown, the display changes to P50. If you turn the [MEMORY] knob clockwise while P50 is shown, the display changes to U01.

## Adjusting the effects

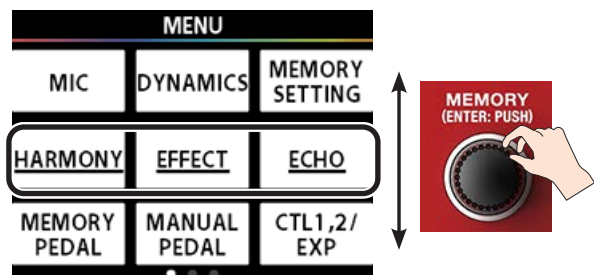
### 1. Press the [MENU] button.

The MENU screen appears.



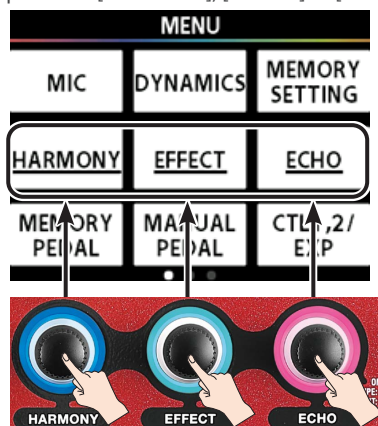
### 2. Turn the [MEMORY] knob to select the "HARMONY" row.

All items in the selected row are underlined.



### 3. Use the [HARMONY], [EFFECT] and [ECHO] knobs to select the effect to edit.

When you open the HARMONY, EFFECT or ECHO editing screens, press the [HARMONY], [EFFECT] or [ECHO] knob respectively.



\* The positions of the items onscreen correspond to the positions of the knobs (left, center, right). For this reason, if you want to select the "HARMONY" item separately while the "HARMONY" line is selected, press the [HARMONY] knob on the left.

### 4. Input some audio into the mic.

### 5. Use the [HARMONY], [EFFECT] and [ECHO] knobs to adjust the sound.

To move the lines that indicate what to adjust, turn the [MEMORY] knob.

### MEMO

- You can make the value change in increments of 10 by either turning the [HARMONY], [EFFECT] or [ECHO] knob while holding down the knob, or turning the [HARMONY], [EFFECT] or [ECHO] knob while holding down the [MENU] button.

- Use the "LEVEL" parameter in ECHO to adjust the echo level for each parameter. We normally recommend that you set the "MST LEVEL" in ECHO to "50".

The MST LEVEL for ECHO is a global system parameter for all memories.

- If the acoustic reflections in the concert venue where you're playing are too loud or soft, you can adjust the echo level for all memories at once with "MST LEVEL" in ECHO.

Increase the echo level: 51–100

Decrease the echo level: 0–49

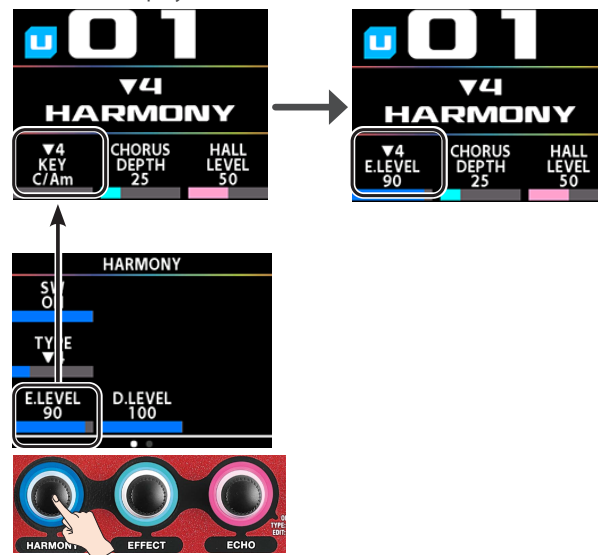
### 6. Follow the steps in "Saving a memory (MEMORY WRITE)" (p. 11) to save the memory you edited.

- Your settings are lost if you switch between memories or turn off the power without performing the MEMORY WRITE (p. 11) operation.

### Changing the parameters shown on the play screen

By pressing the [HARMONY], [EFFECT] or [ECHO] knob twice on the edit screen, you can assign the parameters for the knob you pressed to the [HARMONY], [EFFECT] or [ECHO] knob on the play screen.

By assigning the parameters in the edit screen that you want to operate to the play screen, you can change the settings in real time from the play screen.



- The memory reverts to its original settings when you switch memories. Use the MEMORY WRITE operation (p. 11) to save the current settings.

## Making settings in MEMORY SETTING

These settings are for adjusting the memory's volume, as well as the BPM that's used to make the effect sound in time with the tempo.

- \* Your settings are lost if you switch between memories or turn off the power without performing the MEMORY WRITE (p. 11) operation.  
You must perform a MEMORY WRITE after you change the settings.

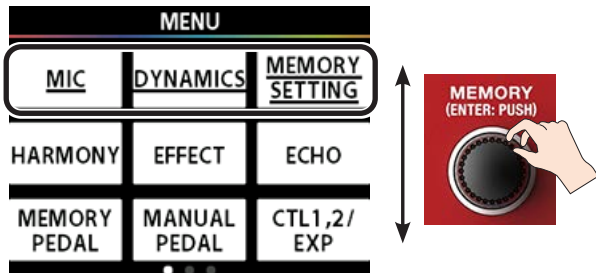
### 1. Press the [MENU] button.

The MENU screen appears.



### 2. Turn the [MEMORY] knob to select the "MEMORY SETTING" row.

All items in the selected row are underlined.



### 3. Press the [ECHO] knob.

The MEMORY SETTING screen appears.



### 4. Use the [HARMONY], [EFFECT] and [ECHO] knobs to adjust the respective parameter values.

Parameter	Value	Explanation
VOLUME	0-100	This volume comes before the echo effect in the signal chain, and adjusts the memory's volume.
		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. See the function block diagram (p. 30).
OUT LEVEL	0-200	This volume control comes after the echo effect in the signal chain, and adjusts the memory's volume.

Parameter	Value	Explanation
BPM	40-250	When you specify a note value for the DELAY 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. For details, refer to "About BPM TAP" (p. 13).
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.

### 5. Follow the steps in "Saving a memory (MEMORY WRITE)" (p. 11) to save the memory you edited.

## Saving a memory (MEMORY WRITE)

You can save the effect and control settings to user memory (U01–U99).

As you can specify a memory number for the save destination, this lets you overwrite the settings of other memories, such as copying the settings of memory U01 to memory U02.

Use the MEMORY WRITE operation when you want to change the name of a memory.

### NOTE

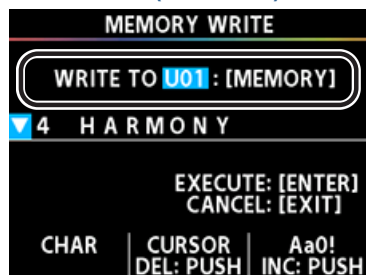
Memory numbers P01–P50 are preset memories and cannot be overwritten.

1. Press the [EXIT] and [MENU] buttons at the same time.

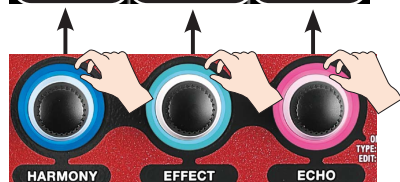
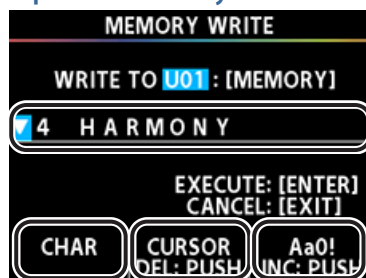
The MEMORY WRITE screen appears.



2. Turn the [MEMORY] knob to specify the write destination (U01–U99).



3. Use the [HARMONY], [EFFECT] and [ECHO] knobs to input the memory name.

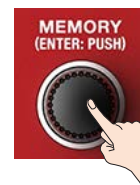


Knob	Operation	Explanation
[HARMONY] knob	Turn	Specifies the character.
[EFFECT] knob	Turn	Moves the cursor.
	Press	Deletes the character.
[ECHO] knob	Turn	Specifies uppercase/lowercase characters, numbers or symbols.
	Press	Adds a space.

4. Press the [MEMORY] (ENTER) knob to save.

The message "EXECUTING..." is shown. The unit returns to the play screen when saving is finished.

- \* If you decide not to save, press the [EXIT] button. Press the [EXIT] button to return to the Play screen.



## Changing the order of memories (MEMORY ORDER)

You can change the order of memories U01–U99.

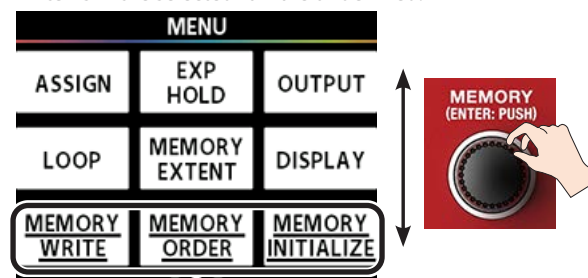
It's useful to put your memories in the order they are used in your performance.

1. Press the [MENU] button.

The MENU screen appears.

2. Turn the [MEMORY] knob to select the "MEMORY ORDER" row.

All items in the selected row are underlined.



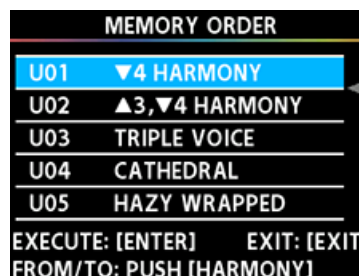
3. Press the [EFFECT] knob.

The MEMORY ORDER screen appears.



4. Turn the [HARMONY] knob to select (highlight) the memory to move.

- \* Press and turn the [HARMONY] knob to move the highlight 10 memories at a time.



5. Press the [HARMONY] knob.

This confirms the memory to move. The arrow (◀) that specifies the move destination is highlighted in blue.

**6. Turn the [HARMONY] knob to select the move destination.**

\* Press and turn the [HARMONY] knob if you want to move the arrow (◀) 10 memories at a time.

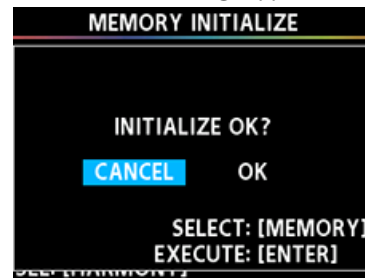
**7. To exchange the memories, press the [MEMORY] (ENTER) button.**

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

**8. Press the [EXIT] button several times to return to the play screen.**

**5. To initialize, press the [MEMORY] (ENTER) knob.**

A confirmation message appears.



**6. Turn the [MEMORY] knob to select "OK", and press the [MEMORY] (ENTER) knob.**

\* If you decide to cancel, select "CANCEL" and press the [MEMORY] (ENTER) knob.

## Initializing memories (MEMORY INITIALIZE)

This shows how to restore the specified user memories (U01–U99) to their default values.

**NOTE**

The initialize operation can't be undone.

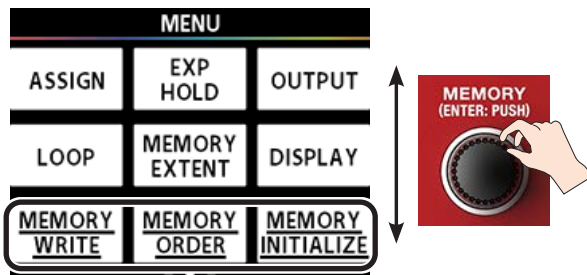
**1. Press the [MENU] button.**

The MENU screen appears.



**2. Turn the [MEMORY] knob to select the "MEMORY INITIALIZE" row.**

All items in the selected row are underlined.

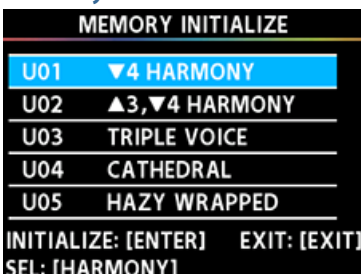


**3. Press the [ECHO] knob.**

The MEMORY INITIALIZE screen appears.



**4. Turn the [HARMONY] knob to select (highlight) the memory to initialize.**



# Useful functions

## MEMORY PEDAL

The pedal switches on the top panel can be assigned to a variety of functions, which are useful when you're playing live.

MEMORY PEDAL lets you assign functions that can be controlled by the [HARMONY] pedal switch, when this unit is in memory mode (p. 7).

These settings can be saved for each memory.

- \* Your settings are lost if you switch between memories or turn off the power without performing the MEMORY WRITE (p. 11) operation. You must perform a MEMORY WRITE after you change the settings.

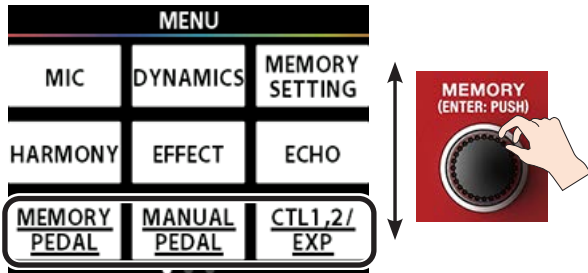
### 1. Press the [MENU] button.

The MENU screen appears.



### 2. Turn the [MEMORY] knob to select the "MEMORY PEDAL" row.

All items in the selected row are underlined.

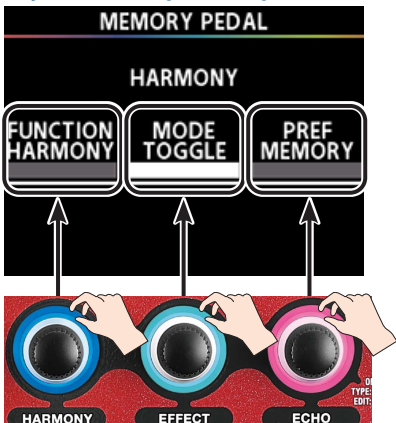


### 3. Press the [HARMONY] knob.

The MEMORY PEDAL screen appears.



### 4. Use the [HARMONY], [EFFECT] and [ECHO] knobs to adjust the respective parameter values.



Parameter	Value	Explanation
FUNCTION	HARMONY	Specifies the function.
	EFFECT	
	ECHO	
	BPM TAP	
	OFF	
MODE	When FUNCTION = HARMONY: MOMENT (MOMENTARY) or TOGGLE	Configures the operation.
	When FUNCTION = EFFECT: MOMENT (MOMENTARY) or TOGGLE	MOMENT: The effect you set is applied only while you are pressing the pedal.
	When FUNCTION = ECHO: MOMENT (MOMENTARY)/ TOGGLE	TOGGLE: Switches between on/off each time you press the footswitch.
	When FUNCTION = BPM TAP, OFF: No MODE parameter.	
PREF (PREFERENCE)*1	MEMORY	Used as a function for each memory.
	SYSTEM	Used as a global function for all memories.

\*1: These are system parameters that globally apply to all memories. You can't change the settings on a per-memory basis.

### 5. Follow the steps in "Saving a memory (MEMORY WRITE)" (p. 11) to save the settings you edited.

- \* Your settings are lost if you switch between memories or turn off the power without performing the MEMORY WRITE (p. 11) operation.

## About BPM TAP

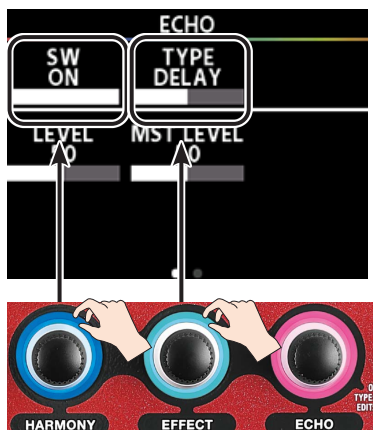
When you set FUNCTION to "BPM TAP", you can set the parameters below to use the tempo at which you tap the pedal.

- ECHO: DELAY TIME parameter for DELAY
- EFFECT: RATE parameter for CHORUS, FLANGER, PHASER, VIBRATO and SLICER

## Examples of settings

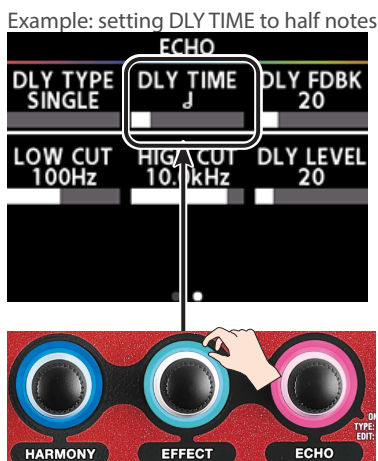
As an example, here are the settings for using BPM TAP to control the DELAY TIME.

1. Set the FUNCTION of MEMORY PEDAL to "BPM TAP" ("MEMORY PEDAL" (p. 13)).  
The HARMONY pedal indicator blinks.
2. Press the [EXIT] button several times to return to the play screen.
3. Press the [ECHO] knob twice.  
The ECHO edit screen appears.
4. Use the [HARMONY] knob to turn the switch "ON", and the [EFFECT] knob to set the TYPE to "DELAY".



5. Turn the [MEMORY] knob to show DLY TIME.

6. Turn the [EFFECT] knob to set the DLY TIME (delay time).



7. Follow the steps in “Saving a memory (MEMORY WRITE)” (p. 11) to save the settings you edited.

8. Press the [HARMONY] pedal several times in quarter-note intervals (tap input).

The HARMONY pedal indicator starts blinking at the tempo you tapped.

- When you set DLY TIME to a half-note interval, the delay time becomes twice as long as the tap input time, and the delay sounds at an interval that’s twice as long as the interval at which the [HARMONY] pedal indicator blinks.
- When you set DLY TIME to an eighth-note interval, the delay time becomes half as long as the tap input time, and the delay sounds at an interval that’s half as long as the interval at which the [HARMONY] pedal indicator blinks.

In this way, you can easily set the delay time to match the tempo of your performance by using the BPM TAP function.

## MANUAL PEDAL

The pedal switches on the top panel can be assigned to a variety of functions, which are useful when you’re playing live.

MANUAL PEDAL lets you assign functions that can be controlled by the [HARMONY], [EFFECT] and [ECHO] pedal switches, when this unit is in manual mode (p. 7).

These settings can be saved for each memory.

- \* Your settings are lost if you switch between memories or turn off the power without performing the MEMORY WRITE (p. 11) operation. You must perform a MEMORY WRITE after you change the settings.

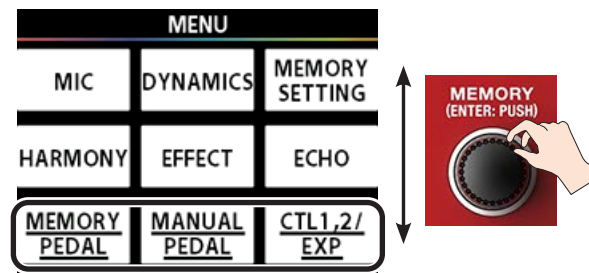
1. Press the [MENU] button.

The MENU screen appears.



2. Turn the [MEMORY] knob to select the “MANUAL PEDAL” row.

All items in the selected row are underlined.



3. Press the [EFFECT] knob.

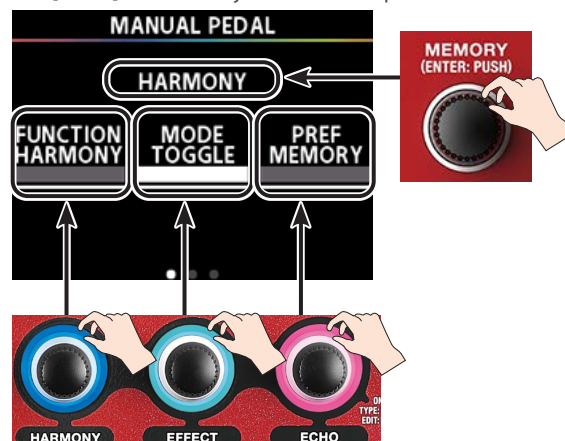
The MANUAL PEDAL screen appears.



4. Set the values for each parameter.

You can use the [MEMORY] knob to specify the pedal switch to which you wish to assign a function.

After you specify the pedal switch, use the [HARMONY], [EFFECT] and [ECHO] knobs to adjust the various parameter values.



Parameter	Value	Explanation
FUNCTION	HARMONY	Specifies the function.
	EFFECT	
	ECHO	
	BPM TAP	
	OFF	
MODE	When FUNCTION = HARMONY: MOMENT (MOMENTARY)/ TOGGLE	Configures the operation.
	When FUNCTION = EFFECT: MOMENT (MOMENTARY)/ TOGGLE	MOMENT: The effect you set is applied only while you are pressing the pedal.
	When FUNCTION = ECHO: MOMENT (MOMENTARY) or TOGGLE	TOGGLE: Switches between on/off each time you press the footswitch.
	When FUNCTION = BPM TAP, OFF: No MODE parameter.	
PREF (PREFERENCE)*1	MEMORY	Used as a function for each memory.
	SYSTEM	Used as a global function for all memories.

\*1: These are system parameters that globally apply to all memories. You can't change the settings on a per-memory basis.

**5. Follow the steps in “Saving a memory (MEMORY WRITE)” (p. 11) to save the settings you edited.**

\* Your settings are lost if you switch between memories or turn off the power without performing the MEMORY WRITE (p. 11) operation.

## CTL 1, 2/EXP

You can assign various functions to a pedal switch or expression pedal connected to the CTL 1,2/EXP jack on the rear panel. This feature is useful when you're playing live.

These settings can be saved for each memory.

\* Your settings are lost if you switch between memories or turn off the power without performing the MEMORY WRITE (p. 11) operation. You must perform a MEMORY WRITE after you change the settings.

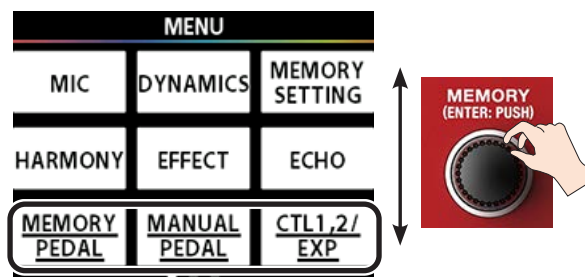
**1. Press the [MENU] button.**

The MENU screen appears.



**2. Turn the [MEMORY] knob to select the “CTL 1.2/EXP” row.**

All items in the selected row are underlined.



**3. Press the [ECHO] knob.**

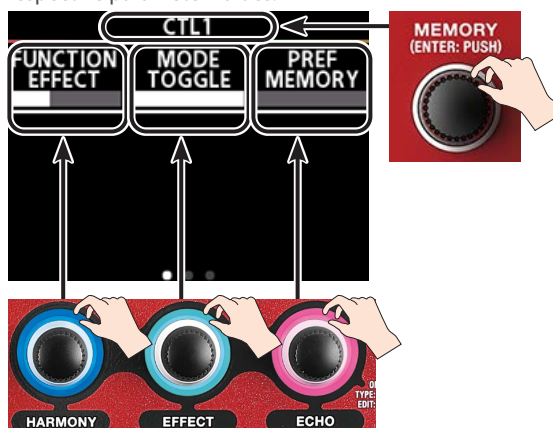
The CTL 1,2/EXP settings screen appears.



**4. Set the values for each parameter.**

You can use the [MEMORY] knob to specify the external controller (CTL 1, 2 or EXP) to which you wish to assign a function.

Use the [HARMONY], [EFFECT] and [ECHO] knobs to set the respective parameter values.



Parameter	Value	Explanation
<b>Common for CTL 1 and 2</b>		
FUNCTION	MEMORY ▼	Specifies the function.
	MEMORY ▲	
	HARMONY	
	EFFECT	
	ECHO	
	BPM TAP	
	LOOP (LOOP ON/OFF) LOOP CTL (LOOP CONTROL) OFF	
MODE	When FUNCTION = HARMONY: MOMENT (MOMENTARY) or TOGGLE	Configures the operation.
	When FUNCTION = EFFECT: MOMENT (MOMENTARY) or TOGGLE	MOMENT: The effect you set is applied only while you are pressing the pedal.
	When FUNCTION = ECHO: MOMENT (MOMENTARY)/ TOGGLE	TOGGLE: Switches between on/off each time you press the footswitch.
	When FUNCTION = MEMORY ▼, MEMORY ▲, BPM TAP, LOOP, LOOP CTL or OFF, there is no MODE parameter.	

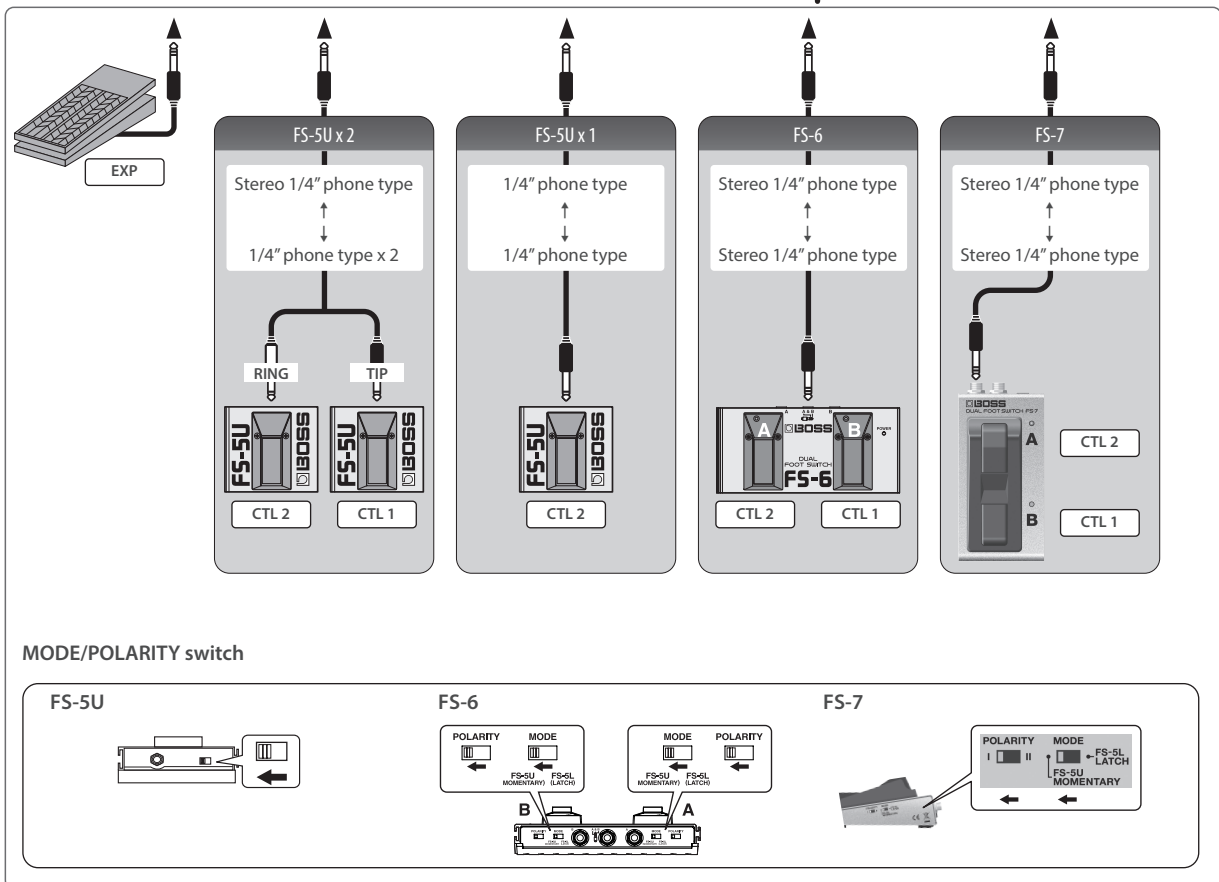
Parameter	Value	Explanation
PREF (PREFERENCE)*1	MEMORY	Used as a function for each memory.
	SYSTEM	Used as a global function for all memories.
<b>EXP</b>		
FUNCTION	VOLUME, OFF	Specifies the function.
PREF (PREFERENCE)*1	MEMORY	Used as a function for each memory.
	SYSTEM	Used as a global function for all memories.
MIN	0–100 Not available when FUNCTION = OFF.	Sets the value used when the expression pedal is at the minimum setting (all the way pressed down with your heel).
MAX	0–100 Not available when FUNCTION = OFF.	Sets the value used when the expression pedal is at the maximum setting (all the way pressed down with your toes).

\*1: These are system parameters that globally apply to all memories. You can't change the settings on a per-memory basis.

**5. Follow the steps in “Saving a memory (MEMORY WRITE)” (p. 11) to save the settings you edited.**

\* Your settings are lost if you switch between memories or turn off the power without performing the MEMORY WRITE (p. 11) operation.

## Connecting external pedals



## ASSIGN

You can specify in detail the parameters controlled when you operate the pedal switches on this unit or an external controller connected to the CTL 1,2/EXP jack.

This setting lets you switch up to eight parameters at once by operating an external controller, which is useful when you're playing live.

These settings can be saved for each memory.

- \* Your settings are lost if you switch between memories or turn off the power without performing the MEMORY WRITE (p. 11) operation.  
You must perform a MEMORY WRITE after you change the settings.

## Examples of settings

This example shows how to configure the following two parameters to switch at the same time when the pedal is in memory mode and you press the [HARMONY] pedal.

Turn chorus ON and raise the echo volume

1. Set the effect (CHORUS) to "ON".
2. Set the echo LEVEL to "80".

## Getting ready

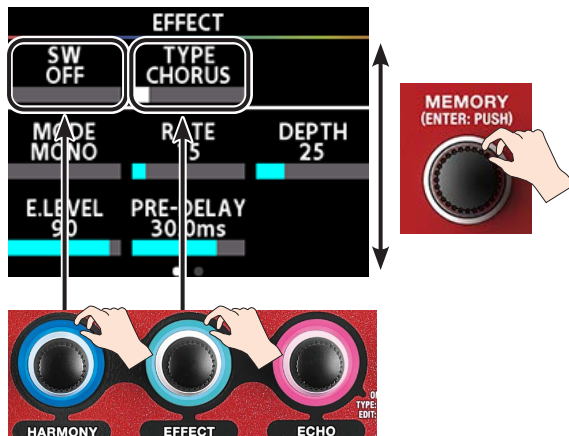
1. Press the [▼] switch and [▲] switch simultaneously to enter memory mode.



2. Configure the effect settings.

- 2-1. Press the [EFFECT] knob twice to open the EFFECT screen.

- 2-2. Set SW to "OFF" and TYPE to "CHORUS".

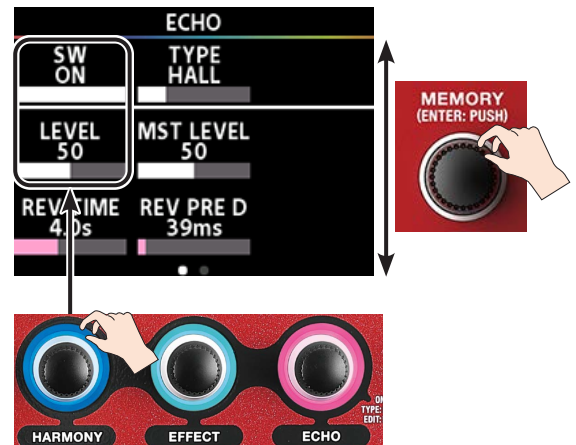


3. Press the [EXIT] button to return to the play screen.

4. Configure the echo settings.

- 4-1. Press the ECHO knob twice to open the ECHO screen.

- 4-2. Set SW to "ON" and LEVEL to "50".



5. Press the [EXIT] button to return to the play screen.

6. Turn the [HARMONY] pedal function off.

By using this setting, you can make the HARMONY pedal function (HARMONY: ON/OFF) not be assigned in memory mode.

- 6-1. Press the [MENU] button.

- 6-2. Turn the [MEMORY] knob to select the "MEMORY PEDAL" row.

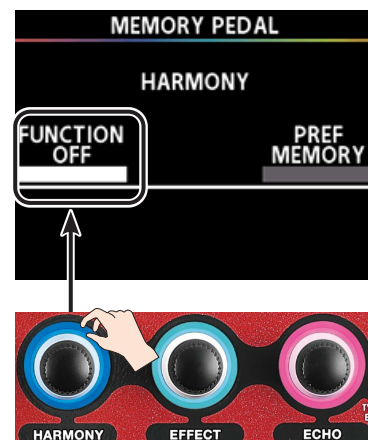
All items in the selected row are underlined.

- 6-3. Press the [HARMONY] knob.

The HARMONY PEDAL screen appears.



- 6-4. Use the [HARMONY] knob to set the FUNCTION to "OFF".



## ASSIGN settings

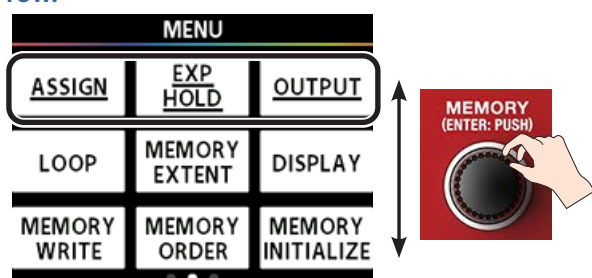
Access the ASSIGN screen from the MENU screen to configure the ASSIGN settings.

### 1. Press the [MENU] button.

The MENU screen appears.



### 2. Turn the [MEMORY] knob to select the "ASSIGN" row.



### 3. Press the [HARMONY] knob.

The ASSIGN screen opens.



### 4. Set the effect (CHORUS) to "ON".

Set the parameters as shown below.

ASSIGN		
NUMBER 1	SW ON	SOURCE MEM.HRM
CATEGORY EFFECT	TYPE ---	TARGET SW
MODE TOGGLE	MIN OFF	MAX ON

### 5. Set the echo LEVEL to "80".

Set the parameters as shown below.

ASSIGN		
NUMBER 2	SW ON	SOURCE MEM.HRM
CATEGORY ECHO		TARGET LEVEL
MODE TOGGLE	MIN 50	MAX 80

### 6. Follow the steps in "Saving a memory (MEMORY WRITE)" (p. 11) to save the settings you edited.

\* Your settings are lost if you switch between memories or turn off the power without performing the MEMORY WRITE (p. 11) operation.

### 7. Press the [EXIT] button several times to return to the play screen.

This completes the settings.

Toggling the [HARMONY] pedal ON/OFF switches between the following settings.

- EFFECT (CHORUS) ON/OFF
- ECHO LEVEL (volume) 50/80

ASSIGN parameter list

Parameter	Value	Explanation
NUMBER	1–8	You can set up to eight operations for ASSIGN. * Specify this assignment number first, and then set the parameters below.
SW	OFF, ON	Specifies whether the set operation is ON (enabled) or OFF (disabled).
SOURCE	Specifies the controller.	
	MEM.HRM	Assigns the memory mode [HARMONY] pedal.
	MAN.HRM	Assigns the manual mode [HARMONY] pedal.
	MAN.EFX	Assigns the manual mode [EFFECT] pedal.
	MAN.ECHO	Assigns the manual mode [ECHO] pedal.
	CTL 1, CTL 2	Assigns the footswitch connected to the CTL 1,2/EXP jack on the rear panel.
	EXP	Assigns the expression pedal connected to the CTL 1,2/EXP jack on the rear panel.
CATEGORY	HARMONY, EFFECT, ECHO, M.SETTING (MEMORY SETTING)	Selects the parameter category to change.
TYPE	Only if the CATEGORY parameter is HARMONY or EFFECT. See the TARGET list.	Selects the parameter type to be changed.
TARGET	See the TARGET list.	Selects the parameter to be changed.
MODE	MOMENT (MOMENTARY)	The normal state is OFF (minimum value), and is ON (maximum value) only while the controller is operated.
	TOGGLE	The setting is toggled OFF (minimum value) or ON (maximum value) with each operation.
MIN	See the TARGET list.	This sets the minimum value for the range in which the parameter can change. The value differs depending on the parameter assigned for the TARGET parameter.
MAX	See the TARGET list.	This sets the maximum value for the range in which the parameter can change. The value differs depending on the parameter assigned for the TARGET parameter.

TARGET list

CATEGORY	TYPE	TARGET
HARMONY	—	SW
		KEY
		E.LEVEL (EFFECT LEVEL)
		D.LEVEL (DIRECT LEVEL)
	DOUBLE	V1 LEVEL
	TRIPLE	V1 LEVEL
		V2 LEVEL
	▼4	▼4 LEVEL
	▲3	▲3 LEVEL
	▼4+DBL	▼4 LEVEL
		DBL LEVEL
	▲3+DBL	▲3 LEVEL
		DBL LEVEL
	▼6, ▼4	▼6 LEVEL
		▼4 LEVEL
	▲3, ▼4	▲3 LEVEL
		▼4 LEVEL
	▲3, ▲5	▲3 LEVEL
		▲5 LEVEL
	MANUAL	VOICE 1
V1 LEVEL		
VOICE 2		
V2 LEVEL		

CATEGORY	TYPE	TARGET
EFFECT	—	SW
	PTC CRCT (PITCH CORRECT)	KEY
		NOTE
		SHIFT
	SHORT DL (SHORT DELAY)	TIME
		FEEDBACK
		E.LEVEL (EFFECT LEVEL)
	CHORUS	RATE
		DEPTH
		E.LEVEL (EFFECT LEVEL)
		D.LEVEL (DIRECT LEVEL)
	FLANGER	RATE
		DEPTH
		RESO
		E.LEVEL (EFFECT LEVEL)
	PHASER	D.LEVEL (DIRECT LEVEL)
		RATE
		DEPTH
		RESO
	VIBRATO	E.LEVEL (EFFECT LEVEL)
		D.LEVEL (DIRECT LEVEL)
		RATE
		DEPTH
	DIST (DISTORTION)	LEVEL
		TRIGGER
		GAIN
		TONE
DIST+CHO (DISTORTION+CHORUS)	E.LEVEL (EFFECT LEVEL)	
	D.LEVEL (DIRECT LEVEL)	
	D: GAIN (DISTORTION GAIN)	
	D: TONE (DISTORTION TONE)	
	D: E.LEVEL (DISTORTION EFFECT LEVEL)	
DIST+FL (DISTORTION+FLANGER)	D: D.LEVEL (DISTORTION DIRECT LEVEL)	
	C: RATE (CHORUS RATE)	
	C: DEPTH (CHORUS DEPTH)	
	C: E.LEVEL (CHORUS EFFECT LEVEL)	
	C: D.LEVEL (CHORUS DIRECT LEVEL)	
DIST+PH (DISTORTION+PHASER)	D: GAIN (DISTORTION GAIN)	
	D: TONE (DISTORTION TONE)	
	D: E.LEVEL (DISTORTION EFFECT LEVEL)	
	D: D.LEVEL (DISTORTION DIRECT LEVEL)	
	P: RATE (PHASER RATE)	
RING MOD (RING MODULATOR)	P: DEPTH (PHASER DEPTH)	
	P: RESO (PHASER RESONANCE)	
	P: E.LEVEL (PHASER EFFECT LEVEL)	
	P: D.LEVEL (PHASER DIRECT LEVEL)	
	FREQ	
	E.LEVEL (EFFECT LEVEL)	
	D.LEVEL (DIRECT LEVEL)	

## Useful functions

CATEGORY	TYPE	TARGET
EFFECT	SLICER	PATTERN
		RATE
		DUTY
		DEPTH
		ATTACK
		TRIGGER
	RADIO	LO-FI
		LEVEL
	LO-FI	BIT
SAMPLE		
BALANCE		
ECHO	—	SW
		LEVEL
		DLY TIME (DELAY TIME)
		DLY FDBK (DELAY FEEDBACK)
		DLY LEVEL (DELAY LEVEL)
		REV TIME (REVERB TIME)
		REV PRE D (PRE DELAY)
REV LEVEL (REVERB ELVEL)		
M.SETTING (MEMORY SETTING)	—	VOLUME
		OUT LEVEL

## EXP HOLD

This lets you set whether to retain the expression pedal value that was used in the previous memory when you switch to a new memory (HOLD: ON), or not (HOLD: OFF).

When EXP HOLD is set to “ON”, the expression pedal value from the previous memory is retained when you switch between memories in the middle of a song, which saves you the trouble of operating the expression pedal again.

This setting is a system parameter that’s globally enabled for all memories.

The data is automatically saved, even if you don’t perform the MEMORY WRITE operation.

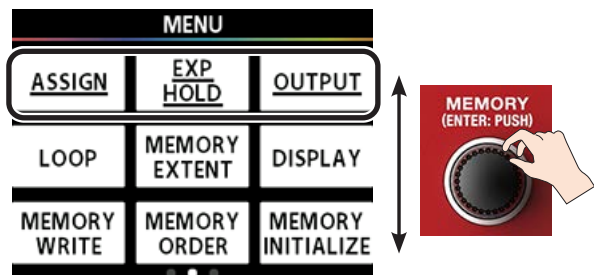
### 1. Press the [MENU] button.

The MENU screen appears.



### 2. Turn the [MEMORY] knob to select the “EXP HOLD” row.

All items in the selected row are underlined.



### 3. Press the [EFFECT] knob.

The EXP HOLD screen appears.



### 4. Turn the [HARMONY] knob to make the setting.

Parameter	Value	Explanation
HOLD	OFF, ON	This lets you set whether to retain the expression pedal value that was used in the previous memory when you switch to a new memory (HOLD: ON), or not (HOLD: OFF).

### 5. Press the [EXIT] button several times to return to the play screen.

## OUTPUT

Configure these parameters according to the device that’s connected to the OUTPUT.

This setting is a system parameter that’s globally enabled for all memories.

The data is automatically saved, even if you don’t perform the MEMORY WRITE operation.

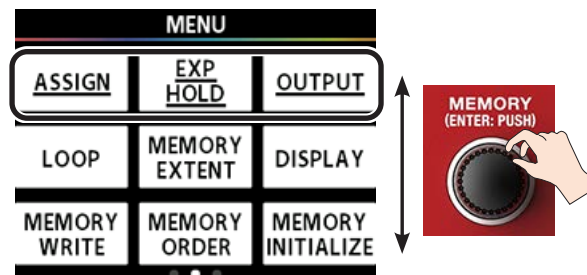
### 1. Press the [MENU] button.

The MENU screen appears.



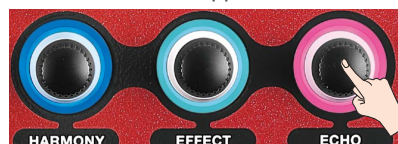
### 2. Turn the [MEMORY] knob to select the “OUTPUT” row.

All items in the selected row are underlined.



### 3. Press the [ECHO] knob.

The OUTPUT screen appears.



### 4. Turn the [HARMONY] and [EFFECT] knobs to make the settings.

Parameter	Value	Explanation
MST LEVEL (MASTER LEVEL)	0–200	Adjust this to match the input level of the audio equipment (mixer or monitor amp) that’s connected to the OUTPUT. The recommended value is 100.
MODE	MONO	Adjust this to match the audio equipment (mixer or monitor amp) that’s connected to the OUTPUT. Converts the stereo signal inside the VE-22 to mono, and outputs this to the OUTPUT L and R connectors.
	STEREO	Uses both OUTPUT L and R to output a stereo signal.
	FX/DRY	The signal that’s output from OUTPUT L is the dry sound plus the effect sound converted to mono. The signal that’s output from OUTPUT R has no effects applied (bypass).

### 5. Press the [EXIT] button several times to return to the play screen.

## Creating a loop phrase (LOOP)

With the loop function, you can record a phrase up to 37 seconds and play it back repeatedly (loop playback).

You can also layer different phrases over the recording (overdubbing).

This lets you recreate an a cappella chorus just by overdubbing different melody lines with your vocals, create rhythm phrases by combining different voice percussion effects and so on.

This setting is a system parameter that's globally enabled for all memories.

The data is automatically saved, even if you don't perform the MEMORY WRITE operation.

### NOTE

The phrases you record cannot be saved in this unit's memory.

## Getting ready to record

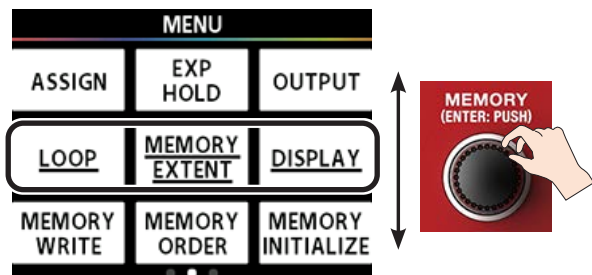
### 1. Press the [MENU] button.

The MENU screen appears.



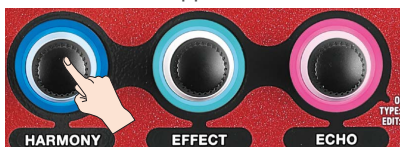
### 2. Turn the [MEMORY] knob to select the "LOOP" row.

All items in the selected row are underlined.



### 3. Press the [HARMONY] knob.

The LOOP screen appears.



### 4. Turn the [HARMONY] and [EFFECT] knobs to make the settings.

Parameter	Value	Explanation
TYPE	PERFORM	For performance. This records phrases to which the harmony, effect and echo are applied.
	CHECK	For sound check. This records phrases prior to applying harmony, effect and echo. This lets you check the sound or make adjustments while playing back your vocal recording.
LEVEL	0-100	Adjusts the playback volume of the recorded phrase.

\* See the function block diagram (p. 30) for where each loop is placed in the signal chain.

## Recording

### 1. Switch the pedal mode to memory mode (p. 7).



### 2. Long-press the [▼] switch to turn the loop function ON.

### 3. Press the [▲] switch.

Recording starts when you press the [▲] switch (the pedal indicator lights up red).

### 4. Press the [▲] switch again.

Recording ends. Once recording ends, your recorded content plays back in a loop (the pedal indicator lights up blue).

### MEMO

The phrase loop may result in an oscillating sound if your recording is extremely short.

### 5. To overdub, repeat steps 3 and 4.

The pedal indicator lights up yellow during overdubbing.

### 6. To exit loop playback, quickly press the [▲] switch twice (within one second).

The unit returns to playback standby mode, and the pedal indicator blinks blue.

### 7. Press the [▲] switch to begin playback.

### 8. To erase what you recorded, long-press the [▲] switch.

The pedal indicator blinks white, and the unit enters record standby mode.

### MEMO

When operating the loop with only the built-in pedals, the loop function is only enabled in memory mode.

When using the loop function in manual mode, connect a pedal switch to the CTL 1,2/EXP jack, and configure LOOP and LOOP CTL for the CTL 1,2 function (p. 15).

**Record**

Recording starts immediately when you press the [▲] switch.  
At the point where you want to loop, press the pedal to switch to playback.



**Loop playback**

The loop plays back.  
Press the [▲] switch to switch to overdubbing.



**Overdub**

Record additional layers while the loop plays back.  
Press the [▲] switch to switch to playback.



**Stop/clear**

To stop, press the [▲] switch quickly twice.  
Long-press the [▲] switch to clear the phrase.

### Pedal indicator display

Status	Indication
Standby	Blinking white (no phrase) Blinking blue (phrase exists)
Recording	Lit red
Overdubbing	Lit yellow
Loop playback	Lit blue

## MEMORY EXTENT

This sets the upper and lower limits for the selectable memories. With this function, you can only select memories within the range you set. These parameters are system parameters with common settings for all memories. The data is automatically saved, even if you don't perform the MEMORY WRITE operation.

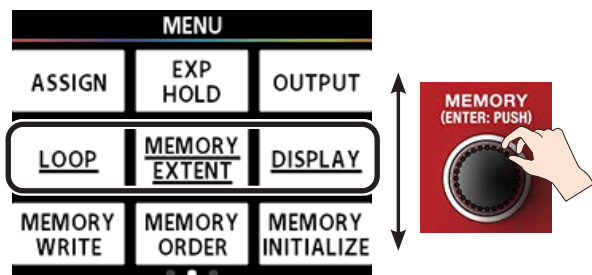
### 1. Press the [MENU] button.

The MENU screen appears.



### 2. Turn the [MEMORY] knob to select the "MEMORY EXTENT" row.

All items in the selected row are underlined.



### 3. Press the [EFFECT] knob.

The MEMORY EXTENT screen appears.



### 4. Turn the [HARMONY] and [EFFECT] knobs to make the settings.

Parameter	Value	Explanation
MIN	U01–U99, P01–P50	Sets the lower limit for the memories.
MAX	U01–U99, P01–P50	Sets the upper limit for the memories.

## DISPLAY

This function includes the settings for the colors of the display and the LED indicators. This parameter is a system parameter with common settings for all memories. The data is automatically saved, even if you don't perform the MEMORY WRITE operation.

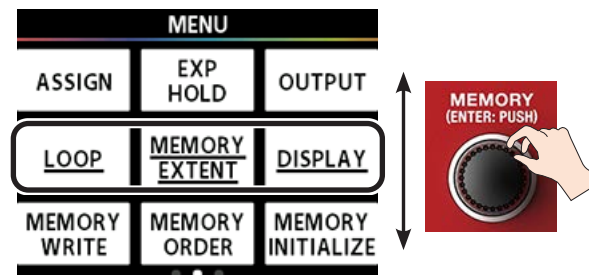
### 1. Press the [MENU] button.

The MENU screen appears.



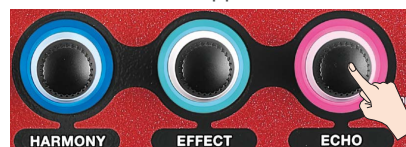
### 2. Turn the [MEMORY] knob to select the "DISPLAY" row.

All items in the selected row are underlined.



### 3. Press the [ECHO] knob.

The DISPLAY screen appears.



### 4. Turn the [HARMONY] knob to make the setting.

Parameter	Value	Explanation
COLOR	TYPE 1	The display and LED indicator colors change depending on the effect type.
	TYPE 2	The LEDs only light up to indicate their state in white and in color changes that are easy to distinguish (only red, yellow and blue).  This mode is recommended for users with difficulties distinguishing colors or who prefer a classic-looking display.

## USB

Use this function when connecting a Windows, Mac or iOS device via a commercially available USB cable to the VE-22, for recording, playing backing tracks and so on.

See the function block diagram (p. 30) for the audio signal path.

This setting is a system parameter that's globally enabled for all memories.

The data is automatically saved, even if you don't perform the MEMORY WRITE operation.

- \* A commercially available USB Camera Adapter is required to connect this unit to an iOS device with a Lightning connector.
- \* When connecting an iOS device, set the MODE to "GENERIC".

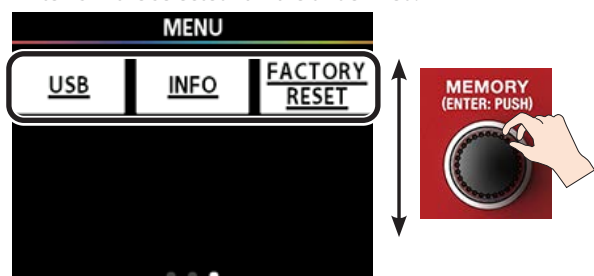
### 1. Press the [MENU] button.

The MENU screen appears.



### 2. Turn the [MEMORY] knob to select the "USB" row.

All items in the selected row are underlined.



### 3. Press the [HARMONY] knob.

The USB screen appears.



### 4. Use the [HARMONY], [EFFECT] and [ECHO] knobs to set the respective parameters.

- \* Also see the function block diagram (p. 30).

Parameter	Value	Explanation
MODE	VENDOR	When connecting to a Windows or macOS device, use the "VENDOR" setting. Install the VE-22 driver that you downloaded from the BOSS website.
	GENERIC	When connecting to an iOS device, use the "GENERIC" setting. The unit operates using standard iOS functionality. Some functions may be limited when compared with the VENDOR setting.
OUTPUT	0–200	Adjusts the level of audio output to the computer after passing through the effects of the VE-22.
MIX IN	0–200	Adjusts the level of the sound that's input from the computer. With this setting, the input sound from the computer is mixed into the final stage of the VE-22 signal chain.
LPBCK SW (LOOPBACK SW)	OFF, ON	Turn this on to send (loop back) the input sound from your computer back to the computer.
LPBCK (LOOPBACK)	0–200	Adjusts the level of the sound looped back to the computer.
DRY OUT	0–200 (only supported when the MODE parameter is "VENDOR")	This adjusts the level of audio input from the INPUT of the VE-22 that is not processed with effects and is instead output directly to the computer.
INPUT	0–200 (only supported when the MODE parameter is "VENDOR")	Adjusts the input level from the computer to the VE-22's effects.

## INFO

This feature lets you access the Reference Manual (BOSS website).

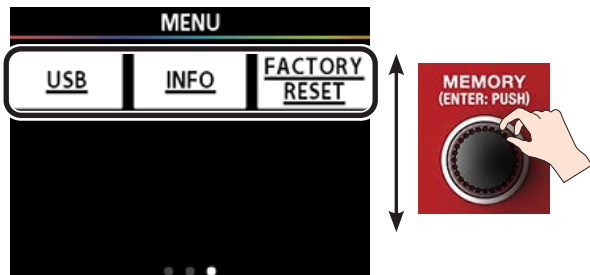
### 1. Press the [MENU] button.

The MENU screen appears.



### 2. Turn the [MEMORY] knob to select the "INFO" row.

All items in the selected row are underlined.



### 3. Press the [EFFECT] knob.

INFORMATION appears. Scan this 2D code with your smartphone or other device to view the Reference Manual (BOSS website).



## FACTORY RESET

Here's how you can restore the effect and control settings to the factory settings (factory reset).

By specifying FROM and TO, you can restore only certain memories to their factory settings.

### NOTE

You can't undo a factory reset operation.

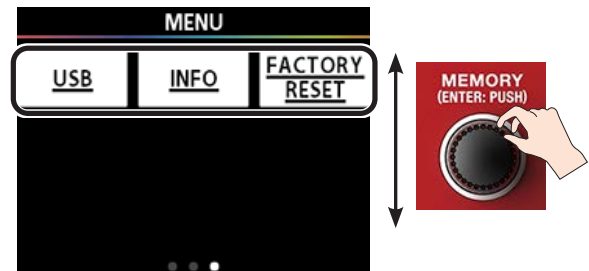
### 1. Press the [MENU] button.

The MENU screen appears.



### 2. Turn the [MEMORY] knob to select the "FACTORY RESET" row.

All items in the selected row are underlined.



### 3. Press the [ECHO] knob.

The FACTORY RESET screen appears.



### 4. Use the [HARMONY] knob (FROM) and the [EFFECT] knob (TO) to specify the range for the factory reset operation.

### 5. Press the [MEMORY] (ENTER) knob.

A confirmation message appears.

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



### 6. To perform the factory reset, use the [MEMORY] knob to select "OK", and press the [MEMORY] (ENTER) knob.

\* If you decide to cancel, select "CANCEL" or press the [EXIT] button.

The unit returns to the MENU screen once the factory reset is complete.

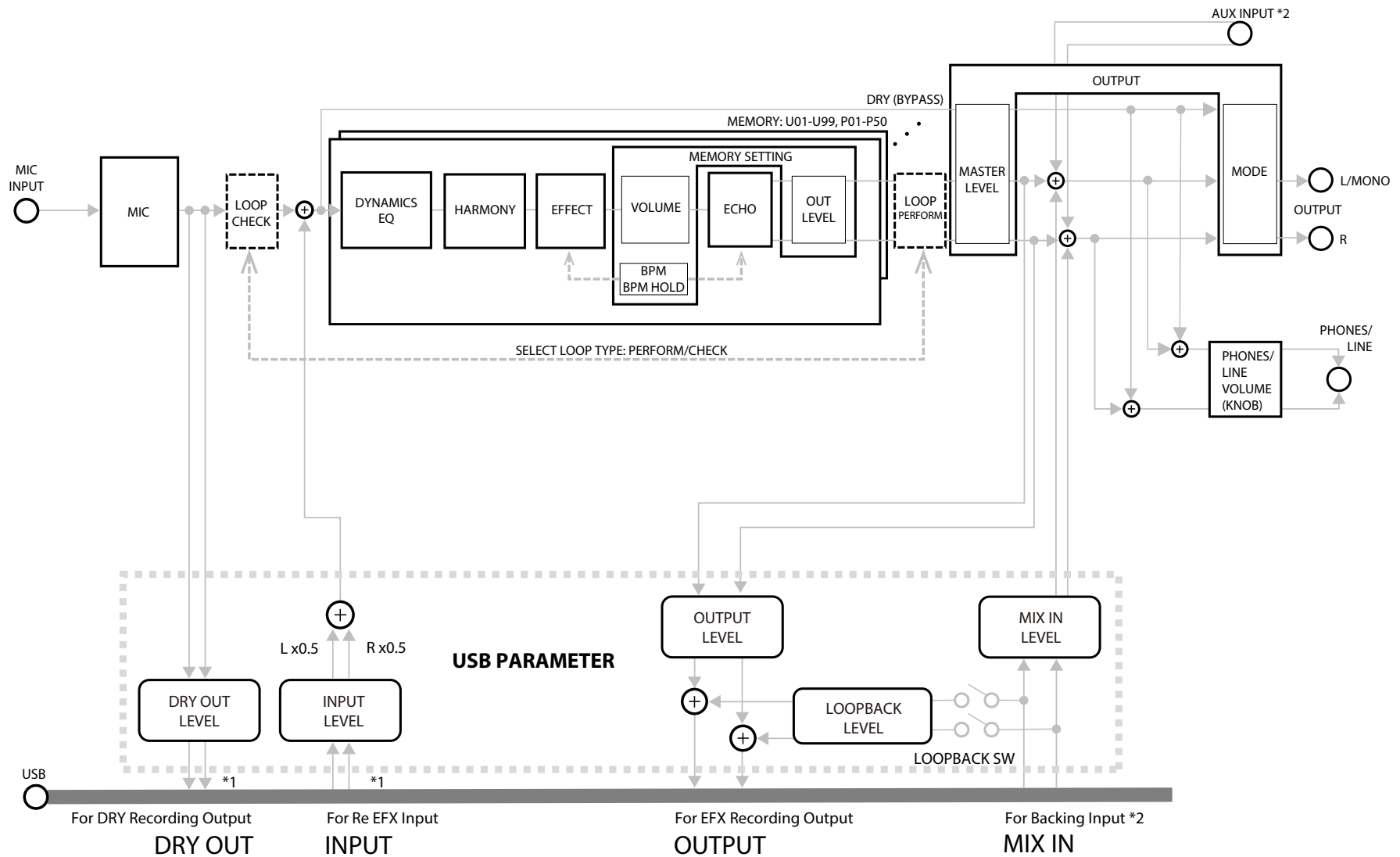
## Main specifications

Sample Rate	48 kHz
AD Conversion	24 bits + AF method * AF method (Adaptive Focus method) is a proprietary method from Roland & BOSS that vastly improves the signal-to-noise (SN) ratio of the AD and DA converters.
DA Conversion	32 bits
Processing	32-bit floating point
Effects	39 types
Memories	99 (User) + 50 (Preset)
Phrase Loop	37 sec.
Nominal Input Level	INPUT: -40 dBu (Adjustable) AUX IN: -20 dBu
Maximum Input Level	INPUT: 0 dBu AUX IN: 0 dBu
Input Impedance	INPUT: 4 k $\Omega$ AUX IN: 27 k $\Omega$
Nominal Output Level	OUTPUT L/MONO, R: -40 dBu PHONES/LINE OUT: -10 dBu
Output Impedance	OUTPUT L/MONO, R: 600 $\Omega$ PHONES/LINE OUT: 47 $\Omega$
Recommended Load Impedance	OUTPUT L/MONO, R: 600 $\Omega$ or greater PHONES/LINE OUT: 47 $\Omega$ or greater
Display	Graphic color LCD 320 x 240 dots
Connectors	INPUT connector: XLR type, balanced, phantom power (DC 48 V, 10 mA Max) OUTPUT L/MONO, R connectors: XLR type PHONES/LINE OUT jack: Stereo miniature phone type AUX IN jack: Stereo miniature phone type CTL 1,2 / EXP jack: 1/4-inch TRS phone type USB COMPUTER port: USB Type-C® DC IN jack
Power Supply	Alkaline battery (AA, LR6) x 4 or AC adaptor (PSA-S series: sold separately)
Current Draw	260 mA (with phantom power) 180 mA (without phantom power)
Expected battery life under continuous use	Alkaline battery: Approximately 6 hours (with phantom power) Alkaline battery: Approximately 9 hours (without phantom power) * This can vary depending on the specifications of the batteries, capacity of the batteries, and the conditions of use.
Dimensions	218 (W) x 143 (D) x 64 (H) mm 8-5/8 (W) x 5-11/16 (D) x 2-9/16 (H) inches
Weight (including batteries)	910 g 2 lbs 0.1 oz
Accessories	STARTUP GUIDE Alkaline battery (AA, LR6) x 4 Leaflet "USING THE UNIT SAFELY"
Options (sold separately)	AC adaptor: PSA-S series Footswitch: FS-5U, FS-6, FS-7 Expression Pedal: EV-30, FV-500L, FV-500H, Roland EV-5 Carrying Bag: CB-VE22

\* 0 dBu=0.775 Vrms

\* This document explains the specifications of the product at the time that the document was issued. For the latest information, refer to the Roland website.

# Function block diagram



\*1 Only supported by the VENDOR driver (VE-22 driver) for Windows and macOS. Not supported for iOS (GENERIC driver).

\*2 The AUX INPUT and USB for Backing Input are output to both the OUTPUT connectors and PHONES/LINE OUT jack. The audio is mixed as follows according to the OUTPUT MODE setting.

OUTPUT MODE	AUX and USB for Backing Input are mixed.
MONO	The input is converted to mono and output to the L and R outputs respectively.
STEREO	The input is output as-is to the L and R outputs.
FX/DRY	The input is converted to mono and output to the L (mono) side only.