

# Using the WAZA Tube Amp Expander Core Editor

This guide shows how to use the WAZA Tube Amp Expander Core Editor.

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## Preparing to use the editor

### Installing the USB driver

Before you use the editor, the appropriate USB driver for the product you're using must be installed on your computer.

#### 1. From the product support page, download the WAZA TAE Core Driver.

To obtain the latest USB driver, access the following URL and download and install the appropriate driver for the product you're using.  
**<https://www.boss.info/support/>**

#### 2. Double-click the WAZA TAE Core Driver you downloaded.

Installation begins.

Follow the onscreen instructions to install.

When the screen indicates "Installation has been completed", click the [Close] button.

The WAZA TAE Core Driver is now installed on your computer.

### Installing the editor

#### MEMO

Before you install the editor, you must follow the steps in "Installing the USB driver" (p. 1) to install the USB driver on your computer.

#### 1. From the product support page, download the WAZA Tube Amp Expander Core Editor. **<https://www.boss.info/support/>**

#### 2. Decompress the downloaded ZIP file.

This is an archive file in ZIP format. Double-click the file to unzip it.

## Mac users

#### 3. Double-click "WAZA Tube Amp Expander Core Editor Installer.pkg".

Installation begins.

#### 4. Follow the onscreen instructions to install.

#### 5. When the screen indicates "The installation was successful. The software was installed", click the [Close] button.

## Launching the editor

#### 1. Use a USB cable to connect the WAZA Tube Amp Expander Core to your computer, and then turn on the power of the WAZA Tube Amp Expander Core.

#### MEMO

You can still edit livesets even when the WAZA Tube Amp Expander Core is not connected to a computer via USB cable.

To save this data, the WAZA Tube Amp Expander Core must be connected to your computer.

#### 2. From the "Start" menu, select [All Programs] → [WAZA Tube Amp Expander] → [WAZA Tube Amp Expander EDITOR].

The first time you launch the software, the dialog box "Choose a device to connect with" appears.

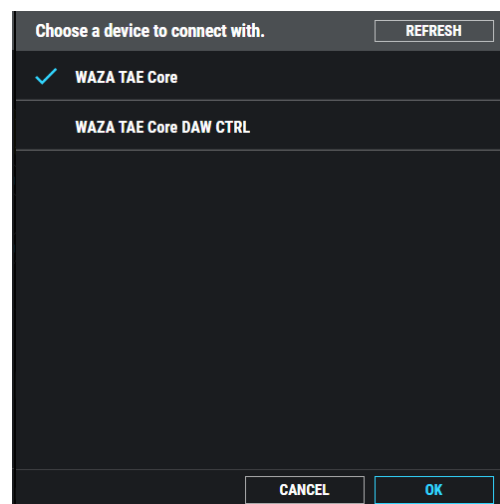
#### MEMO

On the second and subsequent startups, the device is selected automatically.

#### macOS users

From the Finder, in the Applications/BOSS/WAZA Tube Amp Expander Core folder, double-click [WAZA Tube Amp Expander Core Editor (.app)].

#### 3. Select "WAZA TAE Core" and click the [OK] button.



The editor starts.

## Windows users

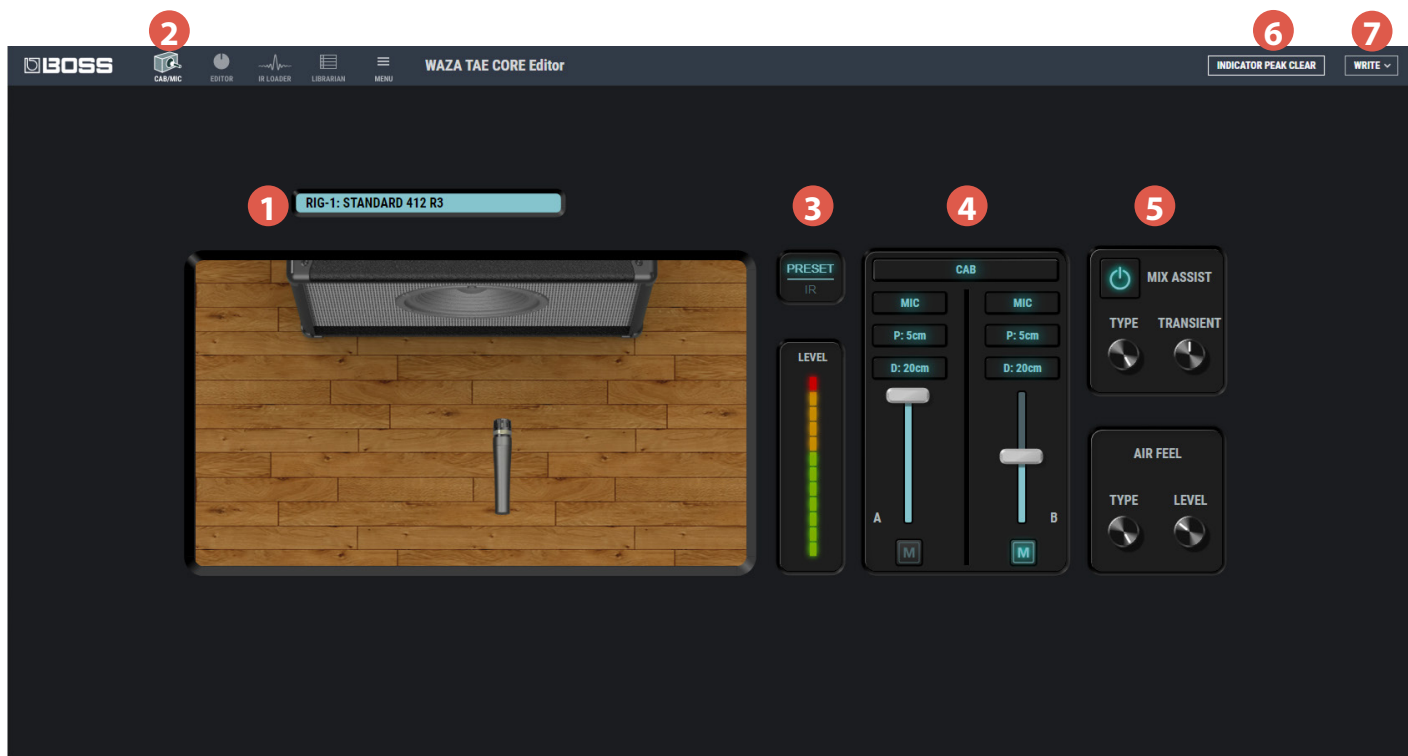
#### 3. Double-click "WAZA Tube Amp Expander Core Editor Installer.exe".

Installation begins.

#### 4. Follow the onscreen instructions to install.

#### 5. When you see the message "Completing the WAZA Tube Amp Expander Core Editor for Setup Wizard", click the [Finish] button.

## CAB/MIC basic screen



### 1. Rig select area

You can adjust the sound settings (rig) stored on the unit by selecting them.

### 2. Function select area

#### CAB/MIC basic screen

Adjusts the basic parts of the LINE and PHONES output sound, such as the cabinet or microphone.

#### EDITOR basic screen

Adjusts the effects, volume and so forth.

#### IR LOADER screen

Used for capturing IR (Impulse Response) data.

#### LIBRARIAN screen

You can back up all rigs or reorder them here.

#### MENU screen

Shows the settings and information of the unit.

### 3. [PRESET/IR] button

Selects the mode.

Select PRESET mode to use a preset cabinet/mic.

You can adjust the position of the mic and make detailed adjustments to the sound.

If you want to use the Celestion IR data that is factory-installed or the IR data captured by IR Loader, select IR mode.

You can combine two IR units and set the volume, time difference, phase and output method.

### 4. Cabinet/mic parameter editing area

Configures the cabinet and mic settings.

Press the buttons for each parameter to set the type or value from the list. You can also drag the mic to set its position.

The level meter indicates the input level.

### 5. MIX ASSIST/AIR FEEL parameter editing area

Configure the MIX ASSIST and AIR FEEL settings here.

Drag the dial for each parameter up or down to set the value. (This can also be set using the mouse wheel.) You can also click the dial to set the value up or down with the cursor keys. You can double-click and then enter a numeric value from your computer keyboard, or directly select a value from a list.

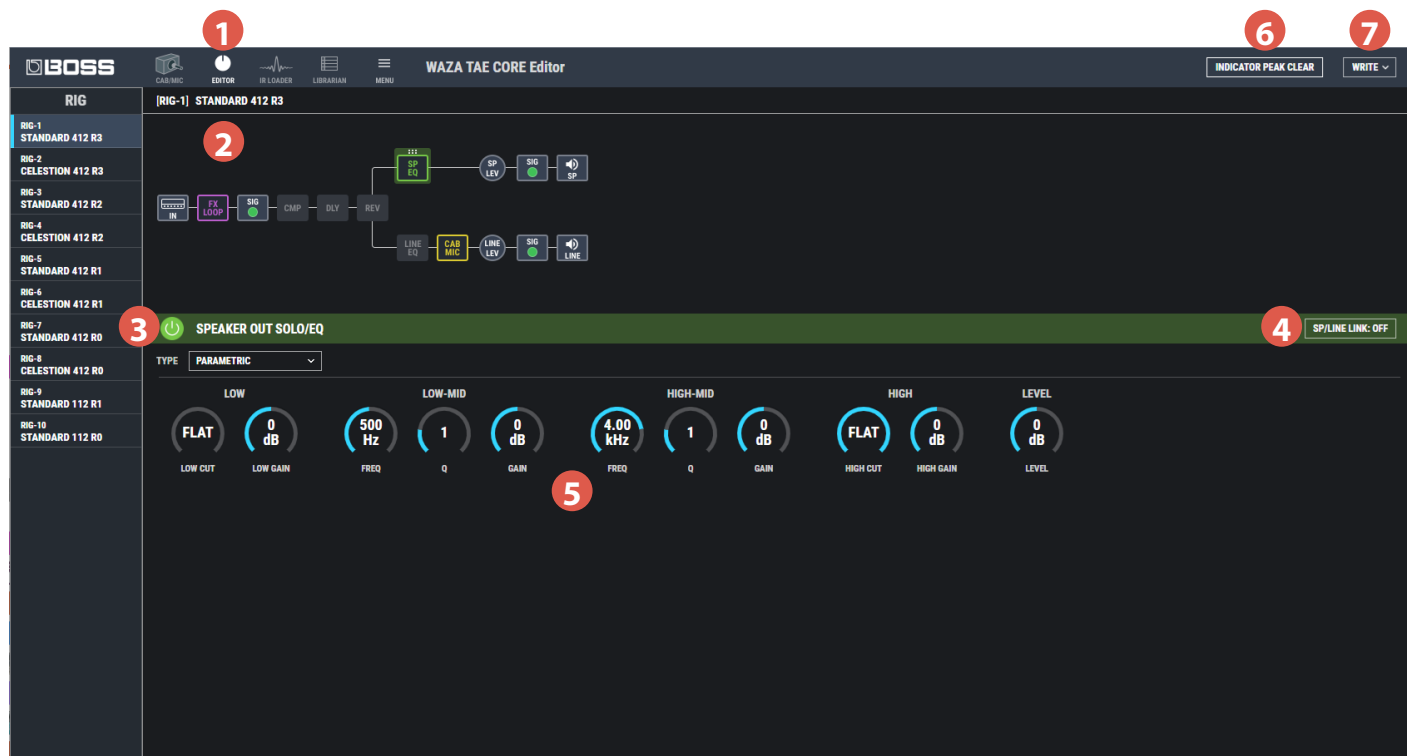
### 6. [INDICATOR PEAK CLEAR] button

If the INPUT SIG/PEAK indicator on the front panel is on peak hold, clicking the indicator turns it off.

### 7. [WRITE] button

Click this to access the WRITE or CLEAR list.

## EDITOR basic screen



### 1. Function select area

Press the [EDITOR] button.

### 2. Effect select area

Click a block once to select an effect. The parameters of the selected effect are shown at the bottom of the screen. The second and subsequent clicks toggle the effect on/off.

 is shown for the selected block.

### 3. Effect ON/OFF button

### 4. [SP/LINE LINK] button

Click to show the SP/LINE LINK ON/OFF list. For information on LINK, refer to the block diagram.

### 5. Parameter editing area

Drag the dial of each parameter up or down to edit its value (you can also use the mouse wheel to edit the value).

You can also click the dial and use the cursor keys to increment/decrement the value. You can double-click and then enter a numeric value from your computer keyboard, or directly select a value from a list.

When you click the [TYPE] box, a list appears where you can choose the type.

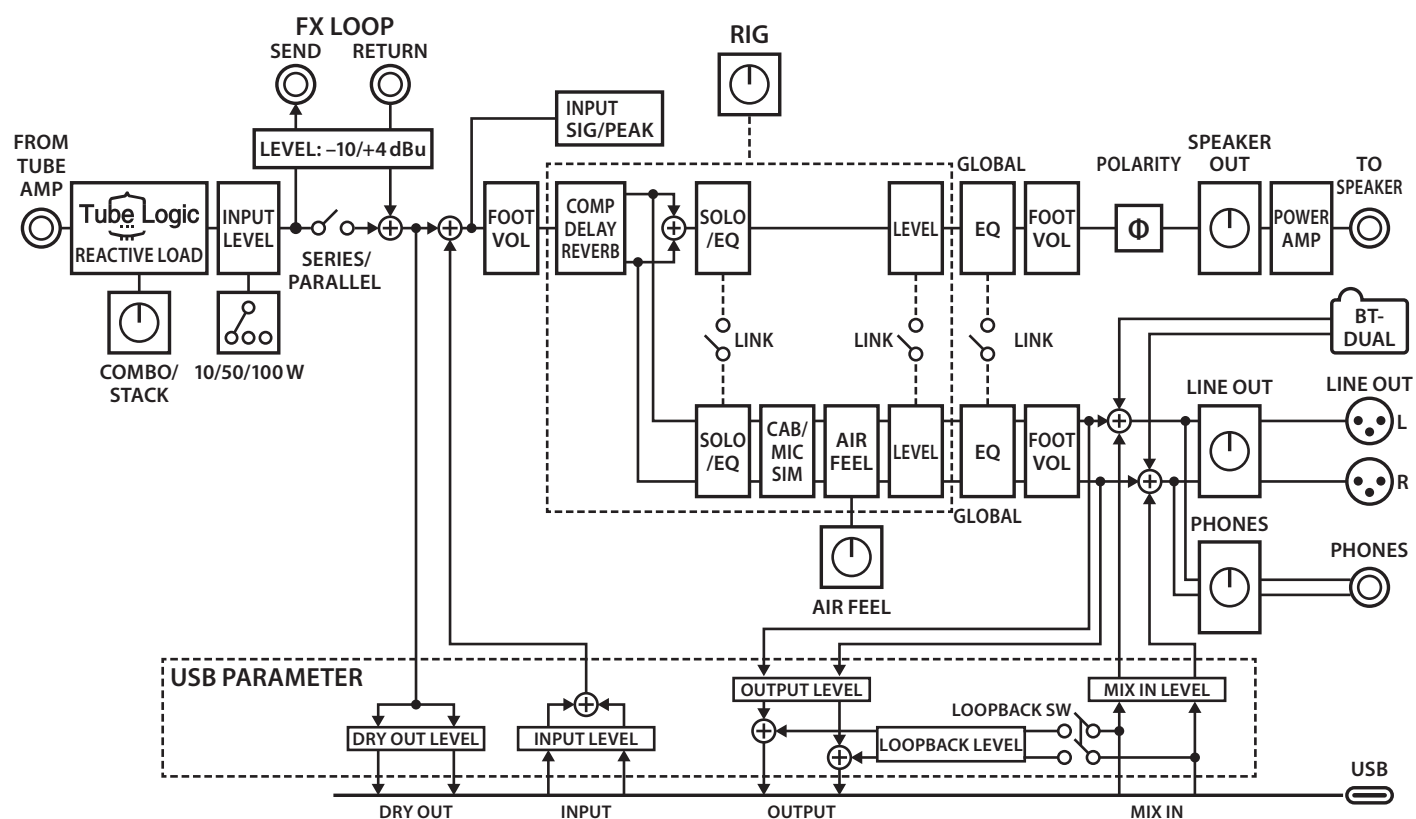
### 6. [INDICATOR PEAK CLEAR] button

If the INPUT SIG/PEAK indicator on the front panel is on peak hold, clicking the indicator turns it off.

### 7. [WRITE] button

Click this to access the WRITE or CLEAR list.

## BLOCK DIAGRAM



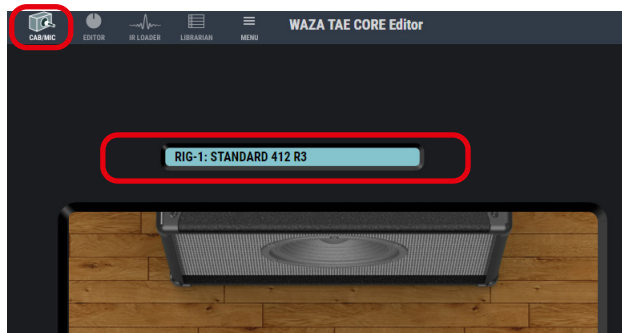
## Editing a rig

This example shows how to edit "RIG-1 STANDARD 412 R3".

### 1. Click the [CAB/MIC] button in the function select area.

Use the CAB/MIC screen to set the sound quality and sound image of the LINE and PHONES outputs.

### 2. Select the rig to edit. For this example, click "RIG-1 STANDARD 412 R3".



### 3. Use the [CAB] button to select the cabinet type, and the [MIC] button to select the mic type.

For "RIG-1 STANDARD 412 R3", the CAB TYPE is 4x12" standard, MIC A is DYN57, and MIC B is RBN121.

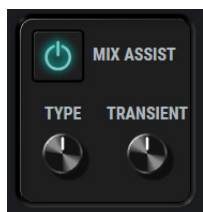
### 4. Set the position, volume and mute of the mic.

You can also adjust the mic position by dragging the mic image.

For "RIG-1 STANDARD 412 R3", MIC B is muted. By unmuting, you can simulate two microphones.



### 5. Use Mix Assist to adjust the sound quality.



Mix Assist is a function that can enhance the quality of the final mix, by reducing the frequency band that interferes with other instruments or by emphasizing the frequency band that is important for the guitar.

Adjust the TYPE and TRANSIENT settings to match the mix.

### 6. Use Air Feel to adjust the stereo image.



This gives a natural-sounding spatial acoustic feel, as if you were listening to the amp cabinet right in front of you. Adjust the TYPE and LEVEL to match the output environment and volume.

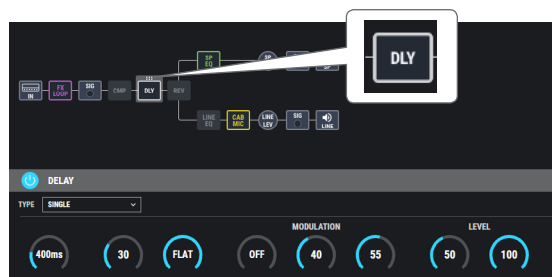
### 7. Click the [EDITOR] button in the function select area.

Configure the effects.

### 8. In the effect blocks of the effect chain screen (the upper part of the screen), click the effect block that you want to edit.

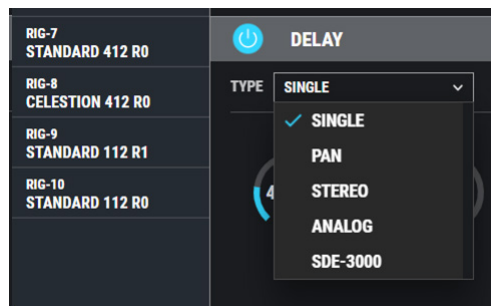
For this example, click the [DLY] (DELAY) block.

A frame is shown around the effect block that you click, and the effect settings are shown in the lower part of the screen.



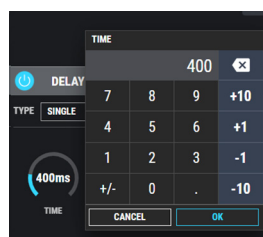
### 9. Edit the effect.

- To change the type of delay, click the [TYPE] box and select from the list.



- You can drag a parameter's dial up or down (or use the mouse wheel) to edit the value.

You can also click the dial and use the cursor keys to increment/decrement the value. Further, you can double-click and then enter a numeric value from your computer keyboard, or choose a value directly from the list.

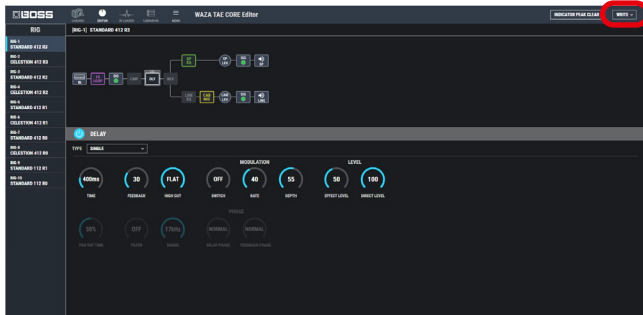


### 10. To edit another effect, repeat steps 8 and 9.

### Saving an edited rig to the unit (WRITE)

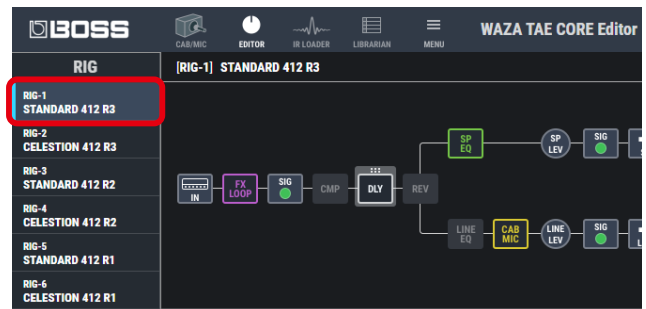
Here's how to save the edited effects to the WAZA Tube Amp Expander Core.

1. In the upper right of the screen, click the [WRITE] button.



5. Click the [WRITE] button.

The edited sound is saved in the specified rig.

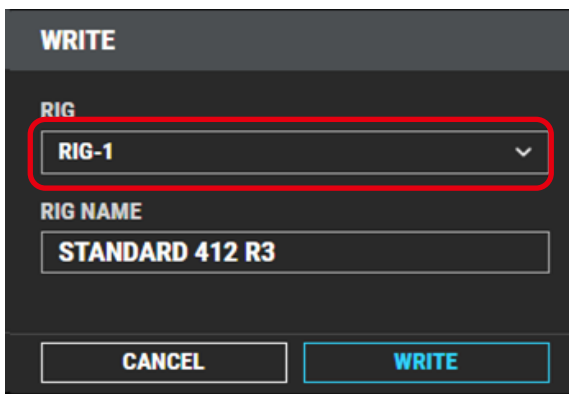


2. Click "WRITE".

The "WRITE" dialog box appears.

3. Select the rig number for the save destination.

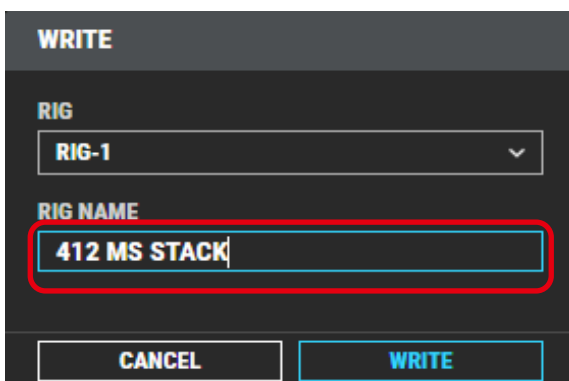
For this example, select "RIG-1".



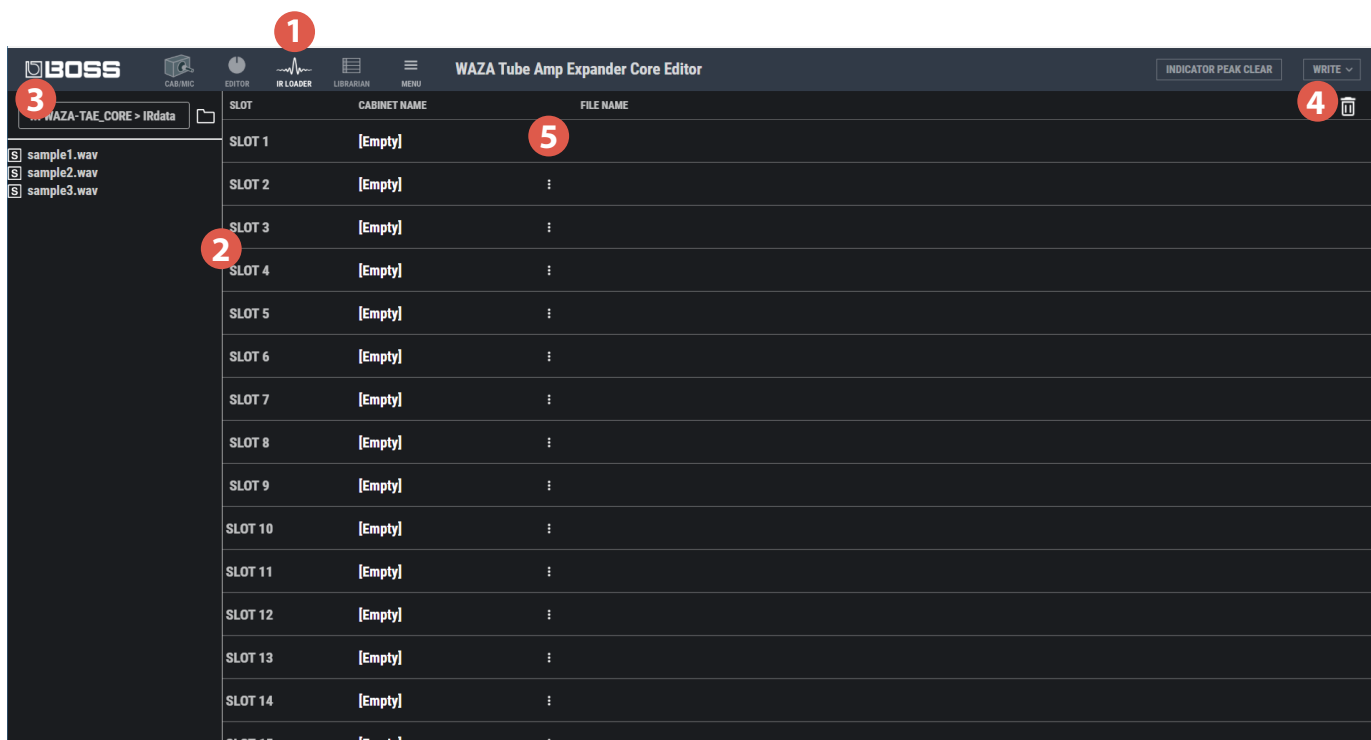
#### NOTE

When you save, the rig in the selected number is overwritten. The original settings cannot be recovered. Select a rig that you don't mind overwriting.

4. If you want to change the name of the rig, click the RIG NAME field and use your computer keyboard to enter a name.



### IR LOADER basic screen



#### 1. Function select area

Press the [IR LOADER] button.

#### 2. Slot list

The cabinet and file names for all 64 slots are shown in the list.

#### 3. File browser

Selects the folder containing the IR data.

#### 4. [Trash] button

Clears the IR data that's read into the selected slot.

#### 5. CABINET NAME edit button

Click this to edit the name of the cabinet.

#### IR data formats that can be loaded

| Item               | Explanation                             |
|--------------------|-----------------------------------------|
| Format (extension) | WAV (.wav)                              |
| Sampling frequency | 44.1, 48, 96 kHz                        |
| Bit rate           | 16/24-bit linear, 32-bit floating point |
| Length             | Supports up to 500 ms                   |
| Stereo             | Supported                               |

### Loading IR data into the WAZA Tube Amp Expander Core

1. Click the [IR LOADER] button in the function select area.
2. In the file browser, select the IR data that you want to load.
  - [S] is a stereo file, which uses two slots.
  - You can use the [Ctrl] or [Shift] keys to select multiple data items at the same time.
3. Drag and drop to select a slot.
  - IR data is sequentially read from the selected slot.
  - You can't change the slot numbers.

### Setting the cabinet name

You can set a name for the IR data that you loaded. When IR data is selected on the CAB/MIC screen, the name you set is shown.

1. Select the slot whose name you want to set, then press the [ ] button in the CABINET NAME column.
2. Input the name.

### Clearing IR data

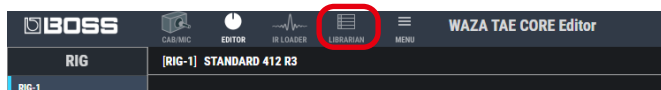
1. Select the slot containing the IR data that you want to clear.

You can select multiple slots at one time.
2. Drag and drop the data to the [Trash] icon.

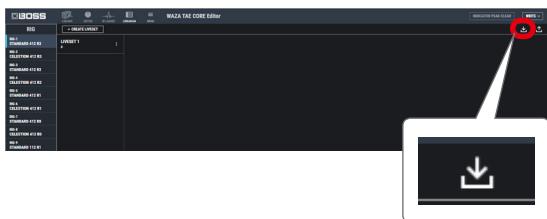
### Importing all rigs into LIBRARIAN (IMPORT FROM WAZA Tube Amp Expander Core)

Here's how you can import all of the WAZA Tube Amp Expander Core rigs into the LIBRARIAN. All rigs are saved as a liveset.

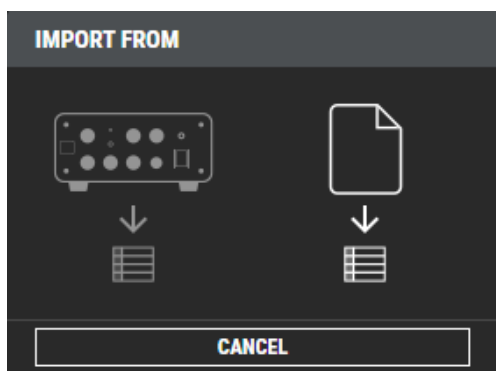
1. Click the [LIBRARIAN] button in the function select area.



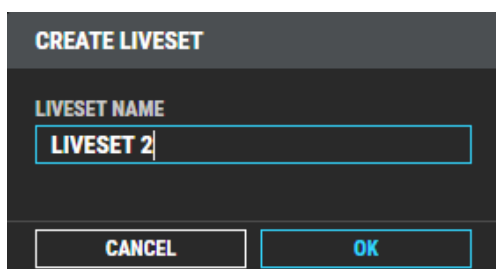
2. At the top of the editor screen, click the [Import] button.



3. Click the [WAZA Tube Amp Expander Core] button.



The CREATE LIVESET screen appears.



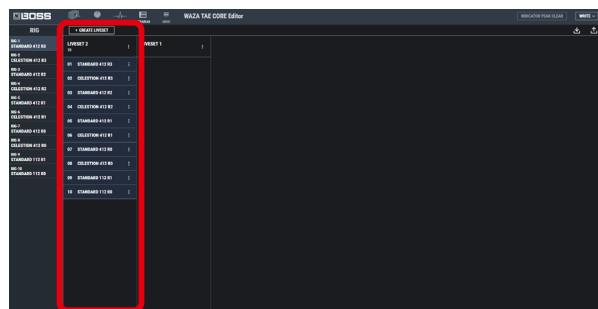
4. Enter the liveset name, and click the [OK] button.

Import begins. If you decide to cancel during the operation, click the [CANCEL] button.

Some time is required to import all of the WAZA Tube Amp Expander Core's rig. When importing is finished, the message "Completed!!" appears.

5. Click the [OK] button.

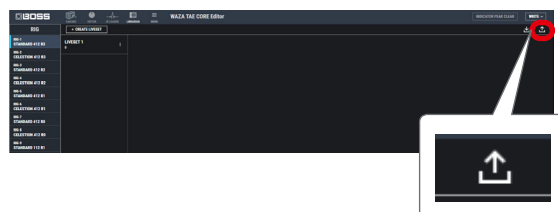
The rigs are saved in liveset format in the LIBRARIAN.



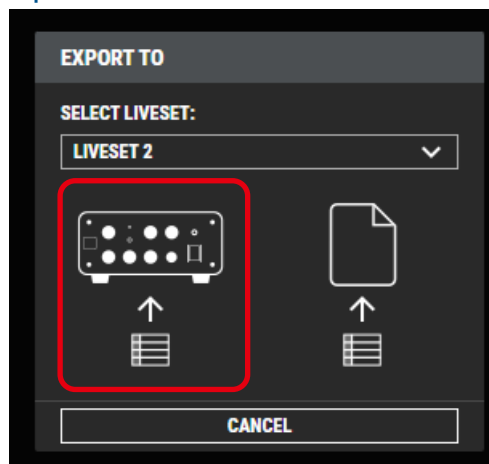
### Restoring all livesets from LIBRARIAN (EXPORT TO WAZA Tube Amp Expander Core)

Here's how the livesets that you saved can be restored to the WAZA Tube Amp Expander Core.

1. At the top of the screen, click the [Export] button.



2. From SELECT LIVESET, select the liveset that you want to export.



3. Click the [WAZA Tube Amp Expander Core] button.

Export begins. If you decide to cancel during the operation, click the [CANCEL] button.

When export is finished, the message "Completed!!" appears.

4. Click the [OK] button.

The selected liveset is written back into the WAZA Tube Amp Expander Core.

### Restoring a rig to the WAZA Tube Amp Expander Core

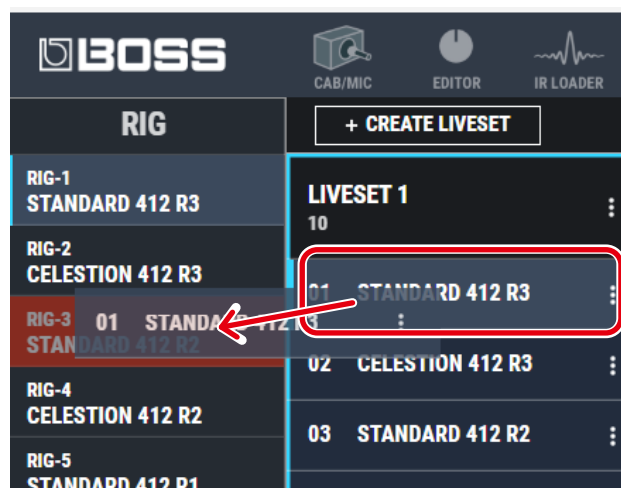
Here's how to select a rig from a liveset that you saved, and restore it back to the WAZA Tube Amp Expander Core.

1. Drag the rig that you want to restore and drop it onto the desired rig number of the WAZA Tube Amp Expander Core.

#### NOTE

When you drop a rig, it overwrites the rig of the selected number, and the original settings cannot be recovered. Select a rig that you don't mind overwriting.

In this example, drag and drop the rig called "RIG-1 STANDARD 412 R3" to "RIG-3 STANDARD 412 R2".



When you select the rig "RIG-3" on WAZA Tube Amp Expander Core, you can use the restored rig.

#### MEMO

You can also select multiple rigs, as described in "Selecting multiple rigs" (p. 12).

### Saving a Liveset to a Computer (EXPORT TO FILE)

Livesets that you backed up can be exported to your computer.

1. At the top of the screen, click the [Export] button.
2. From SELECT LIVESET, select the liveset that you want to export.
3. Click the [FILE] button.  
The "Save As" dialog box appears.
4. Enter a name and the save destination, and click the [Save] button.

A liveset file (.tsl) is created at the save-destination.

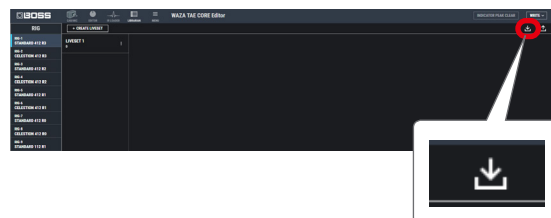
### What you can do with an exported liveset

- Use a USB flash drive to copy livesets to a different computer
- Send the liveset via e-mail to another WAZA Tube Amp Expander Core user

### Importing a liveset from a computer into the LIBRARIAN (IMPORT FROM FILE)

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

1. At the top of the screen, click the [Import] button.

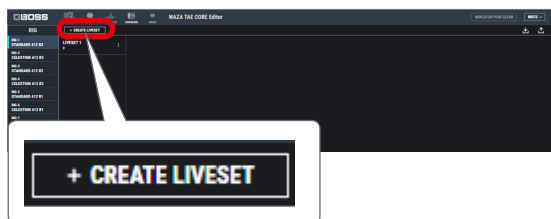


2. Click the [FILE] button.  
The "Open" dialog box appears.
3. Select the liveset file (extension: .tsl) that you want to import into LIBRARIAN, and click the [Open] button.  
The liveset is imported into LIBRARIAN.

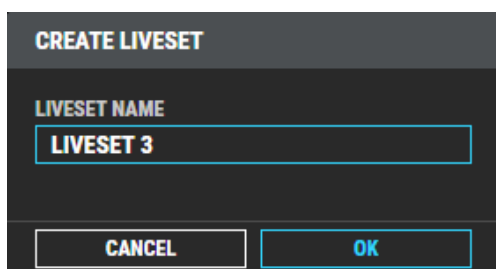
## Creating an original liveset

You can collect your favorite rigs to create an original liveset.

1. Click the [LIBRARIAN] button in the function select area.

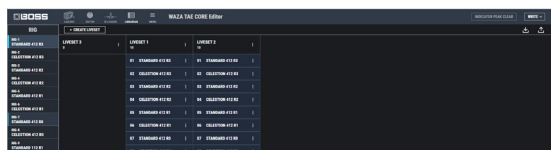


2. Input a name for the liveset.

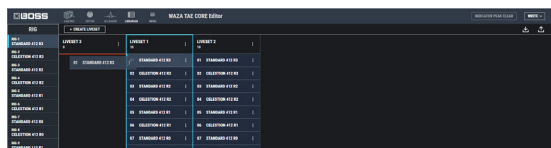


3. Click the [OK] button.

An empty liveset containing no rigs is created.



4. From the memory list on the left side of the editor screen, drag and drop your favorite rigs into the new liveset.



The selected rigs are registered in the new liveset.

### MEMO

- A maximum of 15 rigs can be registered in one liveset. If there would be more than 15 rigs when inserting them, the rigs that exceed 15 are not inserted (a message is shown).
- Rigs that are registered in another liveset can also be dragged and dropped into a new liveset.
- You can drag and drop the rigs in the liveset to change their order.
- The editor lets you create up to 50 livesets. If you want to create and save more than 50 livesets, use the EXPORT TO FILE function to save existing livesets on your computer.

## Copying a rig

Here's how to copy a rig to another liveset or to a WAZA Tube Amp Expander Core rig.

1. Select the rig that you want to copy.

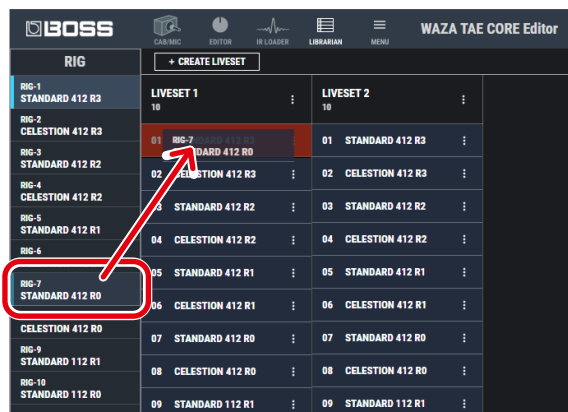
### MEMO

You can also select and copy multiple rigs, as described in "Selecting multiple rigs" (p. 12).

2. Drag and drop the selected rigs onto the desired copy destination.

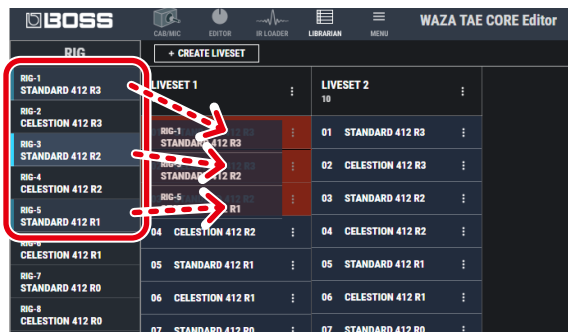
### NOTE

When you drop the rigs, the rigs in the selected red area are overwritten, and the original settings cannot be recovered. Select a rig that you don't mind overwriting.



### MEMO

- If you select non-consecutive rigs and copy them, they are copied as successive rigs.



- A maximum of 15 rigs can be registered in one liveset. If inserting rigs would cause the liveset to exceed 15 rigs, the rigs that exceed 15 are not inserted (a message is shown).
- Rigs that are registered in a liveset can be copied to your own liveset or to a new liveset.

### Selecting multiple rigs

You can select multiple rigs by using your computer's mouse and keyboard.

#### Selecting a range of rigs

Here's how to select a range of consecutive rigs.

1. Click the first rig that you want to select.
2. While holding down the [Shift] key on your computer keyboard, click the last rig that you want to select.

This selects the first rig you clicked through the last rig.

#### Selecting rigs individually

Here's how to select just the individual rigs that you click.

1. While holding down the [Ctrl] key on your computer keyboard, click a rig that you want to select.

The rigs you click are selected. The selected rigs are highlighted.

##### macOS users

While holding down the [Command] key on your computer keyboard, click the rigs that you want to select.

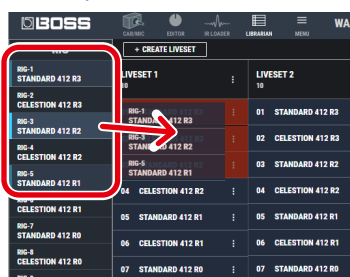
2. If you want to select other rigs, repeat step 1.

If you hold down the [Ctrl] key and click a selected (highlighted) rig again, the selection is cleared (the rig is no longer highlighted).

### The difference between operations when selecting and copying multiple rigs

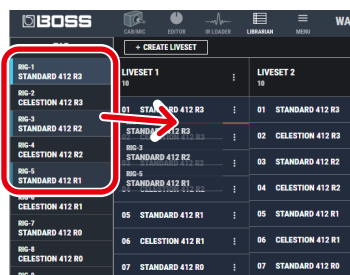
When you drag and drop the selected rigs, the copy result differs depending on what you do with the mouse.

#### Drag and drop when a red area is shown at the copy destination (overwrite copy)



The rigs are copied to the area indicated by the red color.

#### Dragging and dropping between copy destination rigs (insert)



This inserts the rigs at the position marked by the red line. Subsequent rigs are moved backward.

### Moving a rig

You can move rigs to another liveset or to a WAZA Tube Amp Expander Core rig. When you move a rig, it disappears from its previous location.

1. Select the rig that you want to move.

##### MEMO

You can also select and move multiple rigs, as described in "Selecting multiple rigs" (p. 12).

2. While holding down the [Alt] key on your computer keyboard, drag and drop the selected rig to the desired copy destination.

##### macOS users

Drag and drop while holding down your computer keyboard's [option] key.

### Deleting rigs

Here's how to delete a rig you no longer need.

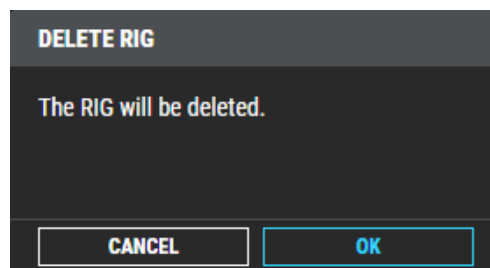
1. Select the rig that you want to delete.

##### MEMO

You can also select and delete multiple rigs, as described in "Selecting multiple rigs" (p. 12).

2. Press the [Delete] key on your computer keyboard.

The "DELETE RIG" message appears.



##### NOTE

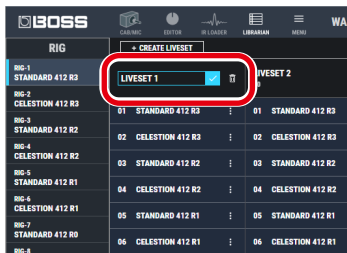
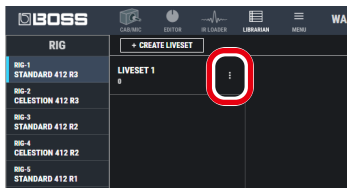
Deleted rigs cannot be recovered. If you decide not to delete, click the [CANCEL] button.

3. Click the [OK] button.

The selected rig or rigs are deleted.

## Editing a liveset name

1. Click the [⋮] button to the right of the name of the liveset that you want to edit.

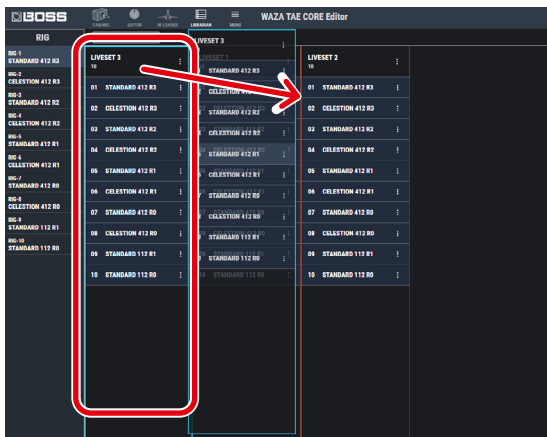


## Rearranging livesets

Here's how to rearrange (sort) the livesets that are shown.

1. Click the liveset that you want to rearrange.
2. Drag and drop the liveset name.

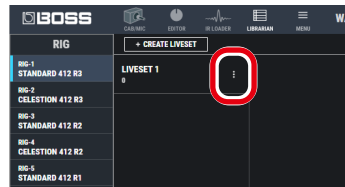
The liveset moves to the position indicated by the red line.



## Deleting a liveset

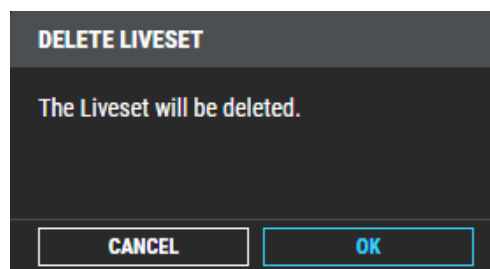
Here's how to delete a liveset that you no longer need.

1. Click the [⋮] button to the right of the name of the liveset that you want to delete.



2. Click the [X] button.

The "DELETE LIVESET" dialog box appears.



### NOTE

Deleted livesets cannot be recovered. If you decide not to delete, click the [CANCEL] button.

3. Click the [OK] button.

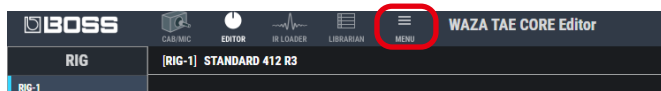
The selected liveset is deleted.

### Selecting the device controlled by the editor

Here's how to select the device controlled by the editor.

1. Click the [MENU] button in the function select area.

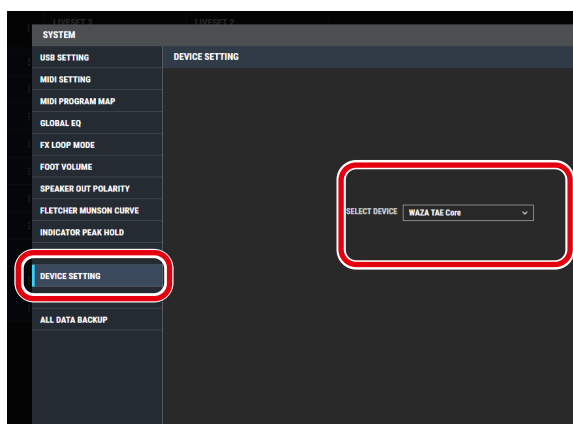
The MENU screen appears.



2. Click [DEVICE SETTING].

The Device settings screen appears.

3. Click SELECT DEVICE, and from the list choose [WAZA TAE Core].



### Checking the version

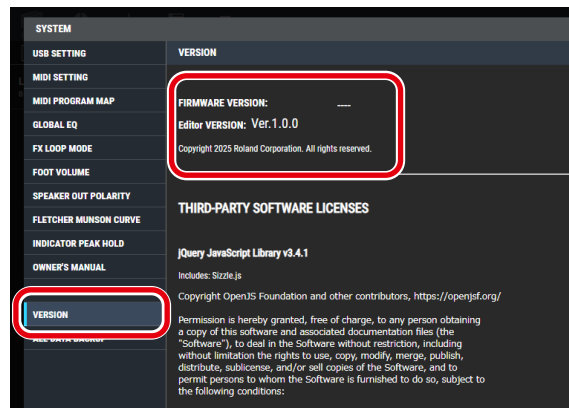
This shows how to check the version of the WAZA Tube Amp Expander Core and the editor.

1. Click the [MENU] button in the function select area.

The MENU screen appears.

2. Click [VERSION].

The version information is shown.



### Downloading the Owner's Manual

You can access the BOSS website from within the app.

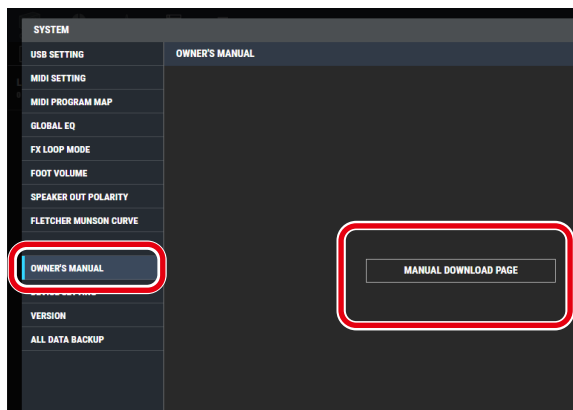
1. Click the [MENU] button in the function select area.

The MENU screen appears.

2. Click [OWNER'S MANUAL].

3. Click [MANUAL DOWNLOAD PAGE].

The Web browser launches and the BOSS website is shown.

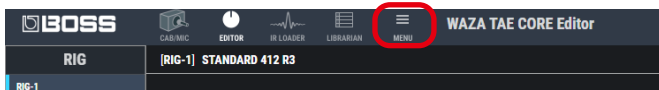


### Saving all settings to the computer (ALL DATA BACKUP)

Here's how to back up all data saved in the WAZA Tube Amp Expander Core to your computer.

**1. Click the [MENU] button in the function select area.**

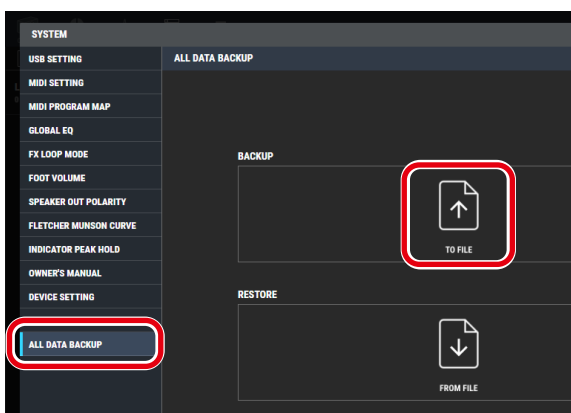
The MENU screen appears.



**2. Click [ALL DATA BACKUP].**

The ALL DATA BACKUP screen appears.

**3. Click the [TO FILE] button.**



The "Save As" dialog box appears.

**4. Enter a name and the save destination, and click the [Save] button.**

This executes the backup.

Some time is required to back up all the data.

When finished, the message "Completed!!" appears.

**5. Click the [OK] button.**

An "all-data" file (.alb file) is created in the save destination.

\* Livesets are not backed up. To use the liveset on another computer, execute "Saving a Liveset to a Computer (EXPORT TO FILE)" (p. 10).

### Restoring an "all-data" file from the computer (ALL DATA RESTORE)

Here's how to restore an all-data file previously saved on the computer to the WAZA Tube Amp Expander Core.

**NOTE**

When restoring, all data is overwritten and cannot be returned to its previous settings.

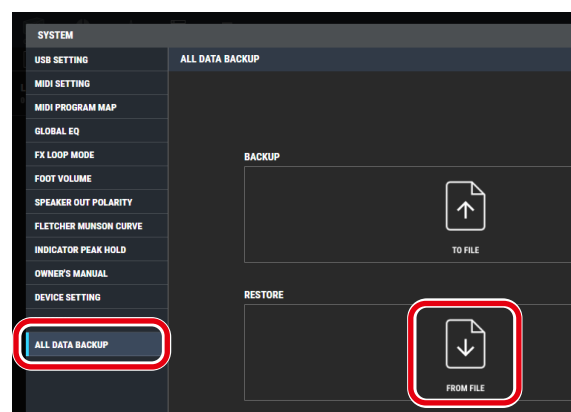
**1. Click the [MENU] button in the function select area.**

The MENU screen appears.

**2. Click [ALL DATA BACKUP].**

The ALL DATA BACKUP screen appears.

**3. Click the [FROM FILE] button.**



The "Open" dialog box appears.

**4. Select the all data file (extension: .alb) that you want to restore, and click the [Open] button.**

This restores the data.

Some time is required to restore all the data. When finished, the message "Completed!!" appears.

**5. Click the [OK] button.**

All data is restored to the WAZA Tube Amp Expander Core.

# Parameters

## RIG

### CAB/MIC SIMULATION

STEREO

These parameters select the speaker cabinet and mic, and configure the mic settings.

| Parameter                   | Value               | Explanation                                                                                                                                                                        |
|-----------------------------|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ON/OFF                      | OFF, ON             | Switches this feature on/off.                                                                                                                                                      |
| MODE                        | PRESET              | Uses the cab and mic data included as presets. You can also set the position of the microphone.                                                                                    |
|                             | IR                  | This unit comes preset with the Celestion IR data, which lets you play with high-quality sound right away using the factory settings. You can also use data captured by IR Loader. |
| Parameters when MODE=PRESET |                     |                                                                                                                                                                                    |
| CAB TYPE                    | 4x12" STANDARD      | The sound of a closed-back cabinet with four standard 12-inch speakers.                                                                                                            |
|                             | 4x12" R-FIER        | The sound of a Mesa Boogie Recto cabinet (closed-back) equipped with four Celestion Vintage 30s (12-inch).                                                                         |
|                             | 4x12" BRIT STACK    | The sound of a Marshall 1960B cabinet (closed-back) equipped with four Celestion G12T-75 speakers (12-inch).                                                                       |
|                             | 4x12" CLASSIC STACK | The sound of a Marshall 1960B cabinet (closed-back) equipped with four Celestion Greenback speakers (12-inch).                                                                     |
|                             | 4x12" Green/V30     | The sound of a FRIEDMAN 412 cabinet (closed-back) that contains two Celestion Greenback (12-inch) and Celestion Vintage 30 speakers (12-inch) each.                                |
|                             | 4x12" for FOH       | A closed-back cabinet with four standard 12-inch speakers. This is a well-defined sound that's suitable for mixing to FOH.                                                         |
|                             | 4x10" STANDARD      | The sound of an open-back cabinet with four standard 10-inch speakers.                                                                                                             |
|                             | 4x10" SUPER COMBO   | The cabinet sound of the Fender Super Reverb. This is an open-back cabinet equipped with four CTS Alnico speakers (10-inch).                                                       |
|                             | 4x10" TWEED COMBO   | The cabinet sound of the Fender Bassman. An open-back cabinet with four Jensen P10R (10-inch) speakers.                                                                            |
|                             | 4x10" for FOH       | An open-back cabinet with four standard 10-inch speakers. This is a well-defined sound that's suitable for mixing to FOH.                                                          |
|                             | 2x12" STANDARD      | The sound of an open-back cabinet with two standard 12-inch speakers.                                                                                                              |
|                             | 2x12" DIAMOND AMP   | The cabinet sound of the VOX AC30. This is an open-back cabinet with two Celestion Greenback speakers (12-inch).                                                                   |
|                             | 2x12" for FOH       | An open-back cabinet with two standard 12-inch speakers. This is a well-defined sound that's suitable for mixing to FOH.                                                           |
|                             | 1x12" STANDARD      | The sound of an open-back cabinet with one standard 12-inch speaker.                                                                                                               |
|                             | 1x12" TWEED DELUXE  | The cabinet sound of the Fender Tweed Deluxe. This is an open-back cabinet with one Jensen P12Q speaker (12-inch).                                                                 |
|                             | 1x12" DELUXE COMBO  | The cabinet sound of the Fender Deluxe Reverb. This is an open-back cabinet with one Jensen C12K speaker (12-inch).                                                                |
|                             | 1x12" for FOH       | An open-back cabinet with one standard 12-inch speaker. This is a well-defined sound that's suitable for mixing to FOH.                                                            |
|                             | 1x10" STANDARD      | The sound of an open-back cabinet with one standard 10-inch speaker.                                                                                                               |
|                             | 1x10" for FOH       | An open-back cabinet with one standard 10-inch speaker. This is a well-defined sound that's suitable for mixing to FOH.                                                            |
|                             | 1x8" STANDARD       | The sound of an open-back cabinet with one standard 8-inch speaker.                                                                                                                |
| CAB TYPE                    | 1x8" MINI COMBO     | The cabinet sound of the Fender Champ.                                                                                                                                             |
|                             | 1x8" for FOH        | An open-back cabinet with one standard 8-inch speaker. This is a well-defined sound that's suitable for mixing to FOH.                                                             |

| Parameter                        | Value                            | Explanation                                                                                                                                                                                                                                                                                                                 |
|----------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MIC A TYPE<br>MIC B TYPE         | DYN57                            | This is the sound of the SHURE SM57. General dynamic mic used for instruments and vocals. Optimal for use in miking guitar amps.                                                                                                                                                                                            |
|                                  | DYN421                           | This is the sound of the SENNHEISER MD 421. Dynamic mic with extended low end.                                                                                                                                                                                                                                              |
|                                  | CND451                           | This is the sound of the AKG C451B. Small condenser mic for use with instruments.                                                                                                                                                                                                                                           |
|                                  | CND87                            | This is the sound of the NEUMANN U 87. Condenser mic with flat response.                                                                                                                                                                                                                                                    |
|                                  | RBN121                           | This models the ROYER R-121. Ribbon mic that offers a warm, natural sound.                                                                                                                                                                                                                                                  |
| MIC A DISTANCE<br>MIC B DISTANCE | 0 cm–20 cm, MEDIUM, LONG         | Simulates the distance between the mic and speaker.<br>The distance from the speakers is farther in the order of 0cm<20cm<MEDIUM<LONG.                                                                                                                                                                                      |
| MIC A POSITION<br>MIC B POSITION | This simulates the mic position. |                                                                                                                                                                                                                                                                                                                             |
|                                  | CENTER                           | Simulates the condition that the mic is set in the middle of the speaker cone.                                                                                                                                                                                                                                              |
|                                  | 1 cm–10 cm                       | Simulates the condition that the mic is moved away from the center of the speaker cone.                                                                                                                                                                                                                                     |
| MIC A LEVEL<br>MIC B LEVEL       | 0–120                            | Adjusts the volume of the mic.                                                                                                                                                                                                                                                                                              |
| MIC A MUTE<br>MIC B MUTE         | OFF, ON                          | When this is on, the mic's audio is muted.                                                                                                                                                                                                                                                                                  |
| Parameters when MODE=IR          |                                  |                                                                                                                                                                                                                                                                                                                             |
| CAB A TYPE<br>CAB B TYPE         | Celestion IR *1                  | IR data from Celestion is used.                                                                                                                                                                                                                                                                                             |
|                                  | User IR 1–64                     | You can create an original cab type by using the IR Loader to load IR (Impulse Response) data into the unit.                                                                                                                                                                                                                |
| MIC A LEVEL<br>MIC B LEVEL       | 0–120                            | Adjusts the volume of the mic.                                                                                                                                                                                                                                                                                              |
| TIME ALIGNMENT                   | 50:0–0:50                        | Sets the delay time for A and B as a unit of one sample. By changing the phase difference between the two signals, you can adjust the point at which the sound is well mixed.<br>At 0:0, the A and B delays are eliminated.<br>At 50:0, the signal of A is delayed by 50 samples, and the delay for signal B is eliminated. |
|                                  |                                  |                                                                                                                                                                                                                                                                                                                             |
| MIC A MUTE<br>MIC B MUTE         | OFF, ON                          | When this is on, the mic's audio is muted.                                                                                                                                                                                                                                                                                  |
| MIC A PHASE<br>MIC B PHASE       | OFF, ON                          | Sets the phase. When this is ON, the phase is inverted.                                                                                                                                                                                                                                                                     |
| MONO MIX                         | OFF, ON                          | Sets the output method for the cab/mic simulation. When this is ON, the A and B signals are mixed and output as a monaural signal. The same signal is output to the L and R channels. When this is OFF, this outputs signal A to the L channel and signal B to the R channel.                                               |

\*1: IR data from Celestion



| Cabinet name                      | Speaker                        | Cabinet type | Mic                                                             |
|-----------------------------------|--------------------------------|--------------|-----------------------------------------------------------------|
| Celestion G12M 4x12" Close DYN57  | 4x12" Celestion G12M Greenback | CLOSED       | SHURE SM57 General dynamic mic used for instruments and vocals. |
| Celestion G12M 4x12" Close RBN121 | 4x12" Celestion G12M Greenback | CLOSED       | ROYER R-121 Ribbon mic that offers a warm, natural sound.       |
| Celestion G12M 4x12" Close DYN421 | 4x12" Celestion G12M Greenback | CLOSED       | SENNHEISER MD-421 Dynamic mic with extended low end.            |
| Celestion V30 4x12" Close DYN57   | 4x12" Celestion Vintage 30     | CLOSED       | SHURE SM57 General dynamic mic used for instruments and vocals. |
| Celestion V30 4x12" Close RBN121  | 4x12" Celestion Vintage 30     | CLOSED       | ROYER R-121 Ribbon mic that offers a warm, natural sound.       |
| Celestion G12M 1x12" Open DYN57   | 1x12" Celestion G12M Greenback | OPEN         | SHURE SM57 General dynamic mic used for instruments and vocals. |
| Celestion G12M 1x12" Open RBN121  | 1x12" Celestion G12M Greenback | OPEN         | ROYER R-121 Ribbon mic that offers a warm, natural sound.       |
| Celestion G12M 1x12" Open DYN421  | 1x12" Celestion G12M Greenback | OPEN         | SENNHEISER MD-421 Dynamic mic with extended low end.            |
| Celestion V30 1x12" Open DYN57    | 1x12" Celestion Vintage 30     | OPEN         | SHURE SM57 General dynamic mic used for instruments and vocals. |
| Celestion V30 1x12" Open RBN121   | 1x12" Celestion Vintage 30     | OPEN         | ROYER R-121 Ribbon mic that offers a warm, natural sound.       |

## MIX ASSIST

This function enhances the quality of the final mix, by reducing the frequency band that interferes with other instruments or by emphasizing the frequency band that is important for the guitar. Select the type that matches the mix and performance style you want.

| Parameter | Value    | Explanation                                                                                                                                                                                                                  |
|-----------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ON/OFF    | OFF, ON  | Switches this feature on/off. When this is off, the output of a realistic, unprocessed microphone sound is output.                                                                                                           |
| TYPE      | 1        | This type reduces the high-frequency range that overlaps with the hi-hat and the low-frequency range that is difficult to distinguish from the kick or bass guitar, resulting in a sound that blends better when mixing.     |
|           | 2        | The band is slightly narrower than type 1, emphasizing the frequency band that's important for the guitar. This type gives your guitar more presence, while still blending well in the mix.                                  |
|           | 3        | This is a sound that brings the tonal definition of the guitar to the forefront. This type is ideal for a guitar-based mix, such as solo parts.                                                                              |
| TRANSIENT | -100+100 | By setting this to the minus side, you can reduce unnecessary high-level spikes that occur when the guitar volume rises, for a smoother guitar signal. You can also set this to the plus side to give the sound more attack. |

## AIR FEEL

This gives a natural-sounding spatial acoustic feel, as if you were listening to the amp cabinet right in front of you. Adjust the TYPE and LEVEL to match the output environment and volume.

| Parameter | Value   | Explanation                                                                                                                                                                       |
|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TYPE      | STUDIO1 | This gives a stereo image of playing through an amp in a carpeted studio with features that reduce the reflected sound. Produces a stereo image with higher clarity than STUDIO2. |
|           | STUDIO2 | This gives a stereo image of playing through an amp in the studio.                                                                                                                |
| LEVEL     | 0-100   | Adjusts the Air Feel volume. This works in conjunction with the [AIR FEEL LEVEL] knob on the unit's panel.                                                                        |

## FX LOOP

Turns the external effect FX LOOP on/off.

| Parameter | Value   | Explanation                   |
|-----------|---------|-------------------------------|
| ON/OFF    | OFF, ON | Switches this feature on/off. |

## COMPRESSOR

MONO

This is an effect that produces a long sustain without distortion, by smoothing out the volume level of the input signal.

| Parameter | Value      | Explanation                                                                                                                                      |
|-----------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| ON/OFF    | OFF, ON    | Switches this feature on/off.                                                                                                                    |
| TYPE      | RACK 160D  | This models a dbx 160X.                                                                                                                          |
|           | VTG 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 is applied. |
| RATIO     | 1:1-INF:1  | Selects the compression ratio applied with signals that exceed the threshold level.                                                              |
| LEVEL     | 0-100      | Adjusts the volume.                                                                                                                              |

## Parameters

| 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. |
| RELEASE   | 0–100 | Adjusts the release time.                                                                                                                                |

## DELAY

MONO > STEREO MONO STEREO

This is a delay with a maximum delay time of 2,000 ms. This produces a variety of delay sounds ranging from simple effects to the sounds of the Roland SDE-3000.

| Parameter         | Value                                        | Explanation                                                                                                                                                           |
|-------------------|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ON/OFF            | OFF, ON                                      | Switches this feature on/off.                                                                                                                                         |
| TYPE              | SINGLE                                       | A simple mono delay.                                                                                                                                                  |
|                   | PAN                                          | This delay is specifically for stereo output. This gives a tap delay effect, with the delay time (how long the sound is delayed) divided across the L and R channels. |
|                   | STEREO                                       | The direct sound is output from the left channel, and the delay sound is output from the right channel.                                                               |
|                   | ANALOG                                       | Gives a mild analog delay sound. The delay time can be set within the range of 12–1,200 ms.                                                                           |
|                   | SDE-3000                                     | This models the sound of the Roland SDE-3000.                                                                                                                         |
| TIME              | 1–2000 ms<br>(12–1,200 ms if TYPE is ANALOG) | Adjusts the delay time.                                                                                                                                               |
| FEEDBACK          | 0–100                                        | Adjusts the volume of delay that is returned to the input. Higher values increase the number of delay repeats.                                                        |
| HIGH CUT *1       | 630Hz–12.5kHz<br>FLAT                        | Cuts the frequencies above the frequency that you set. When FLAT is selected, the high cut filter has no effect.                                                      |
| MODULATION SW     | OFF, ON                                      | Turns the modulation on/off.                                                                                                                                          |
| MODULATION RATE   | 0–100                                        | Adjusts the modulation rate of the delay sound.                                                                                                                       |
| MODULATION DEPTH  | 0–100                                        | Adjusts the modulation depth of the delay sound.                                                                                                                      |
| EFFECT LEVEL      | 0–120                                        | Adjusts the volume of the delay sound.                                                                                                                                |
| DIRECT LEVEL      | 0–100                                        | Adjusts the volume of the direct sound.                                                                                                                               |
| FILTER *2         | 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.                                                 |
| RANGE *2          | 8kHz, 17kHz                                  | Models the way in which the SDE-3000's frequency response is affected by the delay range.                                                                             |
| DELAY PHASE *2    | NORMAL, INVERSE                              | Specifies the phase of the delay sound. Selecting INVERSE inverts the phase. This effect is more pronounced when used together with modulation.                       |
| FEEDBACK PHASE *2 | NORMAL, INVERSE                              | Specifies the phase of the delay sound feedback. Selecting INVERSE inverts the phase.                                                                                 |
| PAN TAP TIME *3   | 0–100%                                       | Adjusts the delay time of the right channel delay. This setting adjusts the R channel delay time relative to the L channel delay time (considered as 100%).           |

## REVERB

MONO > STEREO

This effect adds reverberation to the sound.

| Parameter                | Value                 | Explanation                                                                                                                                       |
|--------------------------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| ON/OFF                   | OFF, ON               | Switches this feature on/off.                                                                                                                     |
| TYPE                     | HALL1                 | Simulates the reverberation in a concert hall. Provides clear and spacious reverberations.                                                        |
|                          | HALL2                 | Simulates the reverberation in a concert hall. Provides mild reverberations.                                                                      |
|                          | PLATE                 | Simulates plate reverberation (a reverb unit that uses the vibration of a metallic plate). Provides a metallic sound with a distinct upper range. |
|                          | ROOM1                 | Simulates the reverberation in a small room. Provides warm reverberations.                                                                        |
|                          | ROOM2                 | Simulates the reverberation of a room larger than ROOM1.                                                                                          |
|                          | SPRING                | This simulates the sound of a guitar amp's built-in spring reverb.                                                                                |
| TIME                     | 0.1s–10.0s            | Adjusts the length (time) of reverberation.                                                                                                       |
| TOPE                     | -50–0–+50             | Adjusts the tonal character of the reverb.                                                                                                        |
| DENSITY                  | 1–10                  | Adjusts the density of the reverb sound.                                                                                                          |
| PRE-DELAY                | 0ms–200ms             | Adjusts the time until the reverb sound starts to output.                                                                                         |
| SPEAKER OUT SEND         | OFF, ON               | Sets whether reverb is applied to the SPEAKER OUT signal (on) or not (off).                                                                       |
| SPEAKER OUT EFFECT LEVEL | 0–100                 | Adjusts the volume of reverb that's sent to SPEAKER OUT.                                                                                          |
| SPEAKER OUT DIRECT LEVEL | 0–100                 | Adjusts the volume of direct signal that's sent to SPEAKER OUT.                                                                                   |
| GLOBAL EFFECT LEVEL      | 0–200                 | Adjusts the volume of reverb that's applied to the SPEAKER OUT and LINE OUT signal.                                                               |
| LOW CUT                  | FLAT, 20.0Hz–800Hz    | Cuts the frequencies below the frequency that you set. When FLAT is selected, the low cut filter will have no effect.                             |
| LOW DAMP                 | -50–0–+50             | Adjusts the amount of attenuation for the low frequency region.                                                                                   |
| HIGH CUT                 | 630Hz–12.5kHz<br>FLAT | Cuts the frequencies above the frequency that you set. When FLAT is selected, the high cut filter has no effect.                                  |
| HIGH DAMP                | -50–0–+50             | Adjusts the amount of attenuation for the high frequency region.                                                                                  |
| LINE OUT SEND            | OFF, ON               | Sets whether reverb is applied to the LINE OUT signal (on) or not (off).                                                                          |
| LINE OUT EFFECT LEVEL    | 0–100                 | Adjusts the volume of reverb that's sent to LINE OUT.                                                                                             |
| LINE OUT DIRECT LEVEL    | 0–100                 | Adjusts the volume of direct sound that's sent to LINE OUT.                                                                                       |

\*1: Setting available when TYPE is set to anything other than SDE-3000.

\*2: Setting available when TYPE is set to SDE-3000.

\*3: Setting available when TYPE is set to PAN.

## SPEAKER OUT SOLO/EQ

MONO

These parameters adjust the tonal character of the SPEAKER OUT signal.

| Parameter    | Value      | Explanation                                                |
|--------------|------------|------------------------------------------------------------|
| ON/OFF       | OFF, ON    | Switches this feature on/off.                              |
| SP/LINE LINK | OFF, ON    | When turned on, LINE OUT EQ is linked with SPEAKER OUT EQ. |
| TYPE         | PARAMETRIC | You can adjust the sound character in four bands.          |
|              | GRAPHIC    | You can adjust the sound character in ten bands.           |

## PARAMETRIC

These parameters adjust the tonal character. You can adjust the sound character in four bands.

| Parameter     | Value                 | Explanation                                                                                                           |
|---------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------|
| LOW CUT       | FLAT, 20.0Hz–800Hz    | Cuts the frequencies below the frequency that you set. When FLAT is selected, the low cut filter will have no effect. |
| LOW GAIN      | -20–+20dB             | Adjusts the low frequency range tone.                                                                                 |
| LOW-MID FREQ  | 20.0Hz–16.0kHz        | Specifies the center of the frequency range to 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.    |
| LOW-MID GAIN  | -20–+20dB             | Adjusts the low-middle frequency range tone.                                                                          |
| HIGH-MID FREQ | 20.0Hz–16.0kHz        | Specifies the center of the frequency range to 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.   |
| HIGH-MID GAIN | -20–+20dB             | Adjusts the high-middle frequency range tone.                                                                         |
| HIGH CUT      | 630Hz–16.0kHz<br>FLAT | Cuts the frequencies above the frequency that you set. When FLAT is selected, the high cut filter has no effect.      |
| HIGH GAIN     | -20–+20dB             | Adjusts the high frequency range tone.                                                                                |
| LEVEL         | -20–+20dB             | Adjusts the overall volume of the equalizer. Adjust this level if you want to use it for soloing.                     |

## GRAPHIC

These parameters adjust the tonal character. You can adjust the sound character in ten bands.

| Parameter | Value     | Explanation                                                                                       |
|-----------|-----------|---------------------------------------------------------------------------------------------------|
| 31.5Hz    | -20–+20dB | Adjust the volume of each frequency band.                                                         |
| 63Hz      |           |                                                                                                   |
| 125Hz     |           |                                                                                                   |
| 250Hz     |           |                                                                                                   |
| 500Hz     |           |                                                                                                   |
| 1kHz      |           |                                                                                                   |
| 2kHz      |           |                                                                                                   |
| 4kHz      |           |                                                                                                   |
| 8kHz      |           |                                                                                                   |
| 16kHz     |           |                                                                                                   |
| LEVEL     | -20–+20dB | Adjusts the overall volume of the equalizer. Adjust this level if you want to use it for soloing. |

## LINE OUT SOLO/EQ

STEREO

Adjusts the tonal character of signal from the LINE OUT jacks.

| Parameter    | Value      | Explanation                                             |
|--------------|------------|---------------------------------------------------------|
| ON/OFF       | OFF, ON    | Switches this feature on/off.                           |
| SP/LINE LINK | OFF, ON    | When turned on, SPEAKER OUT is linked with LINE OUT EQ. |
| TYPE         | PARAMETRIC | You can adjust the sound character in four bands.       |
|              | GRAPHIC    | You can adjust the sound character in ten bands.        |

## PARAMETRIC

These parameters adjust the tonal character. You can adjust the sound character in four bands.

| Parameter     | Value                 | Explanation                                                                                                           |
|---------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------|
| LOW CUT       | FLAT, 20.0Hz–800Hz    | Cuts the frequencies below the frequency that you set. When FLAT is selected, the low cut filter will have no effect. |
| LOW GAIN      | -20–+20dB             | Adjusts the low frequency range tone.                                                                                 |
| LOW-MID FREQ  | 20.0Hz–16.0kHz        | Specifies the center of the frequency range to 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.    |
| LOW-MID GAIN  | -20–+20dB             | Adjusts the low-middle frequency range tone.                                                                          |
| HIGH-MID FREQ | 20.0Hz–16.0kHz        | Specifies the center of the frequency range to 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.   |
| HIGH-MID GAIN | -20–+20dB             | Adjusts the high-middle frequency range tone.                                                                         |
| HIGH CUT      | 630Hz–16.0kHz<br>FLAT | Cuts the frequencies above the frequency that you set. When FLAT is selected, the high cut filter has no effect.      |
| HIGH GAIN     | -20–+20dB             | Adjusts the high frequency range tone.                                                                                |
| LEVEL         | -20–+20dB             | Adjusts the overall volume of the equalizer. Adjust this level if you want to use it for soloing.                     |

## GRAPHIC

These parameters adjust the tonal character. You can adjust the sound character in ten bands.

| Parameter | Value     | Explanation                                                                                       |
|-----------|-----------|---------------------------------------------------------------------------------------------------|
| 31.5Hz    | -20–+20dB | Adjust the volume of each frequency band.                                                         |
| 63Hz      |           |                                                                                                   |
| 125Hz     |           |                                                                                                   |
| 250Hz     |           |                                                                                                   |
| 500Hz     |           |                                                                                                   |
| 1kHz      |           |                                                                                                   |
| 2kHz      |           |                                                                                                   |
| 4kHz      |           |                                                                                                   |
| 8kHz      |           |                                                                                                   |
| 16kHz     |           |                                                                                                   |
| LEVEL     | -20–+20dB | Adjusts the overall volume of the equalizer. Adjust this level if you want to use it for soloing. |

## SPEAKER OUT LEVEL

These parameters adjust the volume of the SPEAKER OUT signal.

| Parameter      | Value   | Explanation                                                      |
|----------------|---------|------------------------------------------------------------------|
| SP / LINE LINK | OFF, ON | When turned on, LINE OUT LEVEL is linked with SPEAKER OUT LEVEL. |
| LEVEL          | 0–120   | Adjusts the volume.                                              |

## LINE OUT LEVEL

Adjusts the volume of signal from the LINE OUT jacks.

| Parameter      | Value   | Explanation                                                      |
|----------------|---------|------------------------------------------------------------------|
| SP / LINE LINK | OFF, ON | When turned on, SPEAKER OUT LEVEL is linked with LINE OUT LEVEL. |
| LEVEL          | 0–120   | Adjusts the volume.                                              |

## MENU

## USB SETTING

Here you can make USB audio-related settings for when the unit is connected to a computer via USB.

| Parameter      | Value   | Explanation                                                                                                                                                            |
|----------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DRY OUT LEVEL  | 0–200%  | Adjusts the level of sound after the external FX LOOP, before passing through the effects of this unit or through the CAB/MIC simulation.                              |
| INPUT LEVEL    | 0–200%  | Inputs the sound from the computer before passing through the internal effects. At this time, the sound from the computer is mixed with the sound from the guitar amp. |
| OUTPUT LEVEL   | 0–200%  | This adjusts the level of sound output from the final LINE OUT stage to the computer through the effects of this unit and through the CAB/MIC simulation.              |
| MIX IN LEVEL   | 0–200%  | Inputs the sound from the computer after the internal LINE OUT. At this time, the input sound from the computer is mixed with the LINE OUT audio.                      |
| LOOPBACK SW    | OFF, ON | Turn this on to send (loop back) the input sound from your computer back to the computer.                                                                              |
| LOOPBACK LEVEL | 0–200%  | Adjusts the level of the sound looped back to the computer.                                                                                                            |

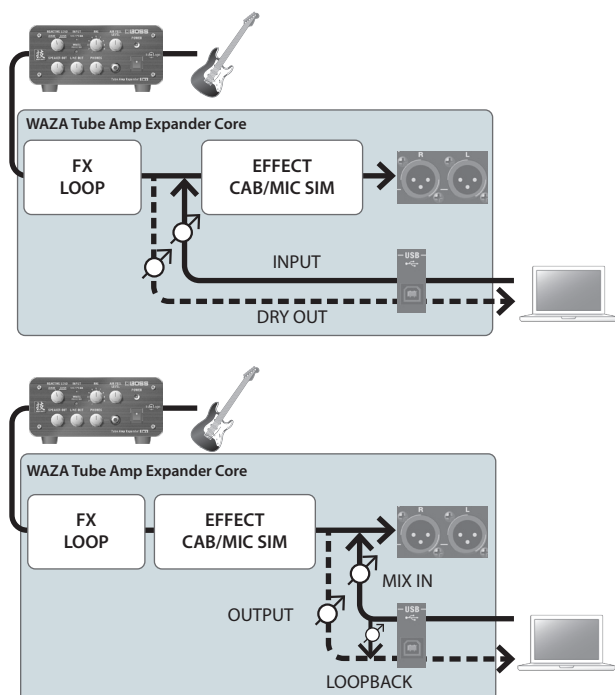
## USB audio flow

The WAZA Tube Amp Expander Core has two USB audio inputs/outputs: MIX IN/OUTPUT and INPUT/DRY OUT. (For macOS, MIX IN/OUTPUT is indicated as “1, 2/1-2”, and INPUT/DRY OUT is indicated as “3, 4 / 3-4”) OUTPUT outputs the effect sound from LINE OUT, and MIX IN is mixed with the sound from the tube amp (playing the guitar) at the final stage of LINE OUT. You can also loop back the MIX IN sound to OUTPUT.

DRY OUT outputs the sound immediately following the external FX LOOP before the built-in effects of WAZA Tube Amp Expander Core, and INPUT is mixed before the built-in effects of WAZA Tube Amp Expander Core.

Because the WAZA Tube Amp Expander Core outputs from both OUTPUT and DRY OUT to the computer, you can record the sound before the built-in effect and the effect sound from LINE OUT at the same time if you use two tracks for the tube amp (guitar).

If you are not satisfied with the effect sound from LINE OUT, you can play back the dry sound that was simultaneously recorded from DRY OUT, and pass it through the effect chain of the WAZA Tube Amp Expander Core to create the sound.



## MIDI SETTING

These are the settings for using the unit connected with an external MIDI device.

| Parameter             | Value                                                             | Explanation                                                                                                                                                                                                                    |
|-----------------------|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RX CHANNEL            | Sets the MIDI channel used for receiving MIDI data.               |                                                                                                                                                                                                                                |
|                       | OFF, Ch. 1–Ch. 16                                                 | Specifies the receive channel.                                                                                                                                                                                                 |
| OMNI MODE             | This configures the settings for the channels used for MIDI data. |                                                                                                                                                                                                                                |
|                       | OFF                                                               | Receives data according to the RX CHANNEL setting.                                                                                                                                                                             |
|                       | ON                                                                | Messages are received on all MIDI channels, regardless of the MIDI channel settings.                                                                                                                                           |
| FX LOOP RX CC#        | Switches the FX LOOP on/off.                                      |                                                                                                                                                                                                                                |
|                       | OFF                                                               | Control change messages are not received.                                                                                                                                                                                      |
|                       | CC#1–CC#31, CC#64–CC#95                                           | Sets the controller number according to the messages transmitted by the external MIDI device. When the control value is between 0 and 63, this is turned off. When the control value is between 64 and 127, this is turned on. |
| COMP RX CC#           | Switches the compressor on and off.                               |                                                                                                                                                                                                                                |
|                       | OFF                                                               | Control change messages are not received.                                                                                                                                                                                      |
|                       | CC#1–CC#31, CC#64–CC#95                                           | Sets the controller number according to the messages transmitted by the external MIDI device. When the control value is between 0 and 63, this is turned off. When the control value is between 64 and 127, this is turned on. |
| DELAY RX CC#          | Switches the delay on/off.                                        |                                                                                                                                                                                                                                |
|                       | OFF                                                               | Control change messages are not received.                                                                                                                                                                                      |
|                       | CC#1–CC#31, CC#64–CC#95                                           | Sets the controller number according to the messages transmitted by the external MIDI device. When the control value is between 0 and 63, this is turned off. When the control value is between 64 and 127, this is turned on. |
| REVERB RX CC#         | Switches the reverb on/off.                                       |                                                                                                                                                                                                                                |
|                       | OFF                                                               | Control change messages are not received.                                                                                                                                                                                      |
|                       | CC#1–CC#31, CC#64–CC#95                                           | Sets the controller number according to the messages transmitted by the external MIDI device. When the control value is between 0 and 63, this is turned off. When the control value is between 64 and 127, this is turned on. |
| SPEAKER OUT EQ RX CC# | Toggles SPEAKER OUT EQ on/off.                                    |                                                                                                                                                                                                                                |
|                       | OFF                                                               | Control change messages are not received.                                                                                                                                                                                      |
|                       | CC#1–CC#31, CC#64–CC#95                                           | Sets the controller number according to the messages transmitted by the external MIDI device. When the control value is between 0 and 63, this is turned off. When the control value is between 64 and 127, this is turned on. |

| Parameter                  | Value                                                                                   | Explanation                                                                                                                                                                                                                          |
|----------------------------|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LINE OUT EQ RX CC#         | Turns LINE OUT EQ on/off.                                                               |                                                                                                                                                                                                                                      |
|                            | OFF                                                                                     | Control change messages are not received.                                                                                                                                                                                            |
|                            | CC#1–CC#31, CC#64–CC#95                                                                 | Sets the controller number according to the messages transmitted by the external MIDI device.<br>When the control value is between 0 and 63, this is turned off.<br>When the control value is between 64 and 127, this is turned on. |
| FOOT VOL PRE EFFECT RX CC# | This controls the foot volume of the PRE EFFECT that comes before the built-in effects. |                                                                                                                                                                                                                                      |
|                            | OFF                                                                                     | Control change messages are not received.                                                                                                                                                                                            |
|                            | CC#1–CC#31, CC#64–CC#95                                                                 | Sets the controller number according to the messages transmitted by the external MIDI device. The control value works within the 0–127 range.                                                                                        |
| FOOT VOL MAIN RX CC#       | This controls the foot volume of MAIN that comes after the built-in effects.            |                                                                                                                                                                                                                                      |
|                            | OFF                                                                                     | Control change messages are not received.                                                                                                                                                                                            |
|                            | CC#1–CC#31, CC#64–CC#95                                                                 | Sets the controller number according to the messages transmitted by the external MIDI device. The control value works within the 0–127 range.                                                                                        |

## MIDI PROGRAM MAP

This lets you set which program change message data received by the unit corresponds to which rig, when the rig is switched in response to a program change message transmitted by an external MIDI device.

| Parameter   | Value      | Explanation                                                              |
|-------------|------------|--------------------------------------------------------------------------|
| PC#1–PC#128 | NONE       | Program change messages are not received.                                |
|             | RIG1–RIG10 | Sets the rig number (RIG1–RIG10) that corresponds to the program number. |

## GLOBAL EQ

### SPEAKER OUT

These parameters configure the GLOBAL EQ for SPEAKER OUT.

| Parameter     | Value                 | Explanation                                                                                                           |
|---------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------|
| ON/OFF        | OFF, ON               | Switches this feature on/off.                                                                                         |
| SP/LINE LINK  | OFF, ON               | When turned on, the GLOBAL EQ for LINE OUT is linked with the GLOBAL EQ for SPEAKER OUT.                              |
| LOW CUT       | FLAT, 20.0Hz–800Hz    | Cuts the frequencies below the frequency that you set. When FLAT is selected, the low cut filter will have no effect. |
| LOW GAIN      | –20–+20dB             | Adjusts the low frequency range tone.                                                                                 |
| LOW-MID FREQ  | 20.0Hz–16.0kHz        | Specifies the center of the frequency range to 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.    |
| LOW-MID GAIN  | –20–+20dB             | Adjusts the low-middle frequency range tone.                                                                          |
| HIGH-MID FREQ | 20.0Hz–16.0kHz        | Specifies the center of the frequency range to 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.   |
| HIGH-MID GAIN | –20–+20dB             | Adjusts the high-middle frequency range tone.                                                                         |
| HIGH CUT      | 630Hz–16.0kHz<br>FLAT | Cuts the frequencies above the frequency that you set. When FLAT is selected, the high cut filter has no effect.      |
| HIGH GAIN     | –20–+20dB             | Adjusts the high frequency range tone.                                                                                |
| LEVEL         | –20–+20dB             | Adjusts the overall volume of the equalizer. Adjust this level if you want to use it for soloing.                     |

### LINE OUT

These parameters configure the GLOBAL EQ for LINE OUT.

| Parameter     | Value                 | Explanation                                                                                                           |
|---------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------|
| ON/OFF        | OFF, ON               | Switches this feature on/off.                                                                                         |
| LOW CUT       | FLAT, 20.0Hz–800Hz    | Cuts the frequencies below the frequency that you set. When FLAT is selected, the low cut filter will have no effect. |
| LOW GAIN      | –20–+20dB             | Adjusts the low frequency range tone.                                                                                 |
| LOW-MID FREQ  | 20.0Hz–16.0kHz        | Specifies the center of the frequency range to 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.    |
| LOW-MID GAIN  | –20–+20dB             | Adjusts the low-middle frequency range tone.                                                                          |
| HIGH-MID FREQ | 20.0Hz–16.0kHz        | Specifies the center of the frequency range to 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.   |
| HIGH-MID GAIN | –20–+20dB             | Adjusts the high-middle frequency range tone.                                                                         |
| HIGH CUT      | 630Hz–16.0kHz<br>FLAT | Cuts the frequencies above the frequency that you set. When FLAT is selected, the high cut filter has no effect.      |
| HIGH GAIN     | –20–+20dB             | Adjusts the high frequency range tone.                                                                                |
| LEVEL         | –20–+20dB             | Adjusts the overall volume of the equalizer. Adjust this level if you want to use it for soloing.                     |

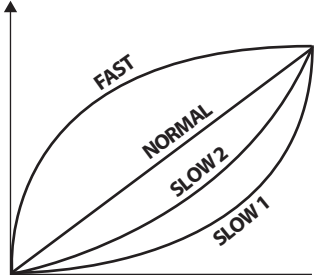
## FX LOOP MODE

This sets the mode for FX LOOP.

| Parameter    | Value    | Explanation                                                                                                                                                                      |
|--------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FX LOOP MODE | PARALLEL | Mixes the external effect sound and direct sound.                                                                                                                                |
|              | SERIES   | Only the external effect sound is output.<br>* With the "SERIES" setting, if the volume of your external effect device is turned down or if it is turned off, no sound is heard. |

## FOOT VOLUME

Sets the level and volume curve of the expression pedal connected via MIDI. This can be set in PRE EFFECT and MAIN respectively.

| Parameter    | Value                      | Explanation                                                                                                                                                                                                                                                                   |
|--------------|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| VOLUME MIN   | 0–100                      | Sets the volume when the heel of the EXP Pedal is depressed.                                                                                                                                                                                                                  |
| VOLUME MAX   | 0–100                      | Selects the volume when the toe of the EXP Pedal is depressed.                                                                                                                                                                                                                |
| VOLUME CURVE | SLOW1, SLOW2, NORMAL, FAST | <p>You can select how the actual volume changes relative to the amount the pedal is pressed.</p> <p>Volume</p>  <p>When the pedal is fully raised      When the pedal is fully advanced</p> |

When the power is turned on, the signal is output at the VOLUME MAX setting.

## SPEAKER OUT POLARITY

This lets you reverse the SPEAKER OUT polarity.

| Parameter            | Value           | Explanation                                              |
|----------------------|-----------------|----------------------------------------------------------|
| SPEAKER OUT POLARITY | NORMAL, INVERSE | When this is set to "INVERSE", the polarity is reversed. |

## FLETCHER MUNSON CURVE

You can apply the Fletcher Munson curves (loudness curves) to adjust the frequency response for SPEAKER OUT. This is effective when you use the [SPEAKER OUT] knob to decrease the volume.

| Parameter             | Value   | Explanation                   |
|-----------------------|---------|-------------------------------|
| FLETCHER MUNSON CURVE | OFF, ON | Switches this feature on/off. |

## INDICATOR PEAK HOLD

Sets the peak indication style of the SIG/PEAK indicator.

| Parameter | Value                   | Explanation                   |
|-----------|-------------------------|-------------------------------|
| PEAK HOLD | OFF, ON                 | Switches this feature on/off. |
| HOLD TIME | 1, 2, 3, 4sec, CONTINUE | Sets the hold time.           |

# Rig list (factory settings)

| RIG    |                  | PRESET/IR | CAB TYPE                                                                    | MIC TYPE                       | MIX ASSIST | AIR FEEL             | FX LOOP | COMPRESSOR<br>DELAY<br>REVERB<br>SOLO/EQ |
|--------|------------------|-----------|-----------------------------------------------------------------------------|--------------------------------|------------|----------------------|---------|------------------------------------------|
| RIG 1  | STANDARD 412 R3  | PRESET    | 4x12" STANDARD                                                              | A: DYN57<br>B: RBN121(MUTE ON) | ON: TYPE 3 | STUDIO 2<br>LEVEL 30 | ON      | OFF                                      |
| RIG 2  | CELESTION 412 R3 | IR        | A: Celestion G12M 4x12" Close DYN57<br>B: Celestion G12M 4x12" Close RBN121 |                                | ON: TYPE 3 | STUDIO 2<br>LEVEL 30 | ON      | OFF                                      |
| RIG 3  | STANDARD 412 R2  | PRESET    | 4x12" STANDARD                                                              | A: DYN57<br>B: RBN121(MUTE ON) | ON: TYPE 2 | STUDIO 2<br>LEVEL 30 | ON      | OFF                                      |
| RIG 4  | CELESTION 412 R2 | IR        | A: Celestion G12M 4x12" Close DYN57<br>B: Celestion G12M 4x12" Close RBN121 |                                | ON: TYPE 2 | STUDIO 2<br>LEVEL 30 | ON      | OFF                                      |
| RIG 5  | STANDARD 412 R1  | PRESET    | 4x12" STANDARD                                                              | A: DYN57<br>B: RBN121(MUTE ON) | ON: TYPE 1 | STUDIO 2<br>LEVEL 30 | ON      | OFF                                      |
| RIG 6  | CELESTION 412 R1 | IR        | A: Celestion G12M 4x12" Close DYN57<br>B: Celestion G12M 4x12" Close RBN121 |                                | ON: TYPE 1 | STUDIO 2<br>LEVEL 30 | ON      | OFF                                      |
| RIG 7  | STANDARD 412 R0  | PRESET    | 4x12" STANDARD                                                              | A: DYN57<br>B: RBN121(MUTE ON) | OFF        | STUDIO 2<br>LEVEL 30 | ON      | OFF                                      |
| RIG 8  | CELESTION 412 R0 | IR        | A: Celestion G12M 4x12" Close DYN57<br>B: Celestion G12M 4x12" Close RBN121 |                                | OFF        | STUDIO 2<br>LEVEL 30 | ON      | OFF                                      |
| RIG 9  | STANDARD 112 R1  | PRESET    | 1x12" STANDARD                                                              | A: DYN57<br>B: RBN121(MUTE ON) | ON: TYPE 1 | STUDIO 2<br>LEVEL 30 | ON      | OFF                                      |
| RIG 10 | STANDARD 112 R0  | PRESET    | 1x12" STANDARD                                                              | A: DYN57<br>B: RBN121(MUTE ON) | OFF        | STUDIO 2<br>LEVEL 30 | ON      | OFF                                      |