



# Owner's Manual

WAZA Tube Amp Expander Core

技 WAZA CRAFT



English

日本語

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Français

Italiano

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Português

Nederlands

Before using this unit, carefully read "USING THE UNIT SAFELY" and "IMPORTANT NOTES" (the leaflet "USING THE UNIT SAFELY" and the Owner's Manual (p. 2)). After reading, keep the document(s) where it will be available for immediate reference.

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# USING THE UNIT SAFELY

## WARNING

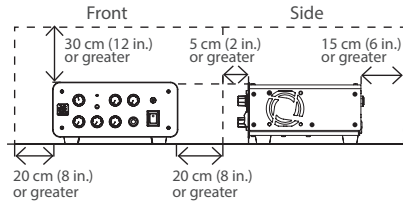
### Make sure that the power cord is grounded

Connect mains plug of this model to a mains socket outlet with a protective earthing connection.



### Secure a sufficient amount of space at the setup location

Since this unit normally emits a slight amount of heat, make sure to secure sufficient space around it, as shown below.



## WARNING

### Use only the supplied AC adaptor and the correct voltage

Be sure to use only the AC adaptor supplied with the unit. Also, make sure the line voltage at the installation matches the input voltage specified on the AC adaptor's body. Other AC adaptors may use a different polarity, or be designed for a different voltage, so their use could result in damage, malfunction, or electric shock.



### Use only the supplied power cord

Use only the attached power cord. Also, the supplied power cord must not be used with any other device.



## CAUTION

### Keep small items out of the reach of children

To prevent accidental ingestion of the parts listed below, always keep them out of the reach of small children.



- Removable Parts
  - BT-DUAL cover (p. 9)
  - BT-DUAL screw (p. 9)
  - Jack caps (p. 3)

### Handle the ground terminal carefully

If you remove the screw from the ground terminal, be sure to replace it; don't leave it lying around where it could accidentally be swallowed by small children. When refastening the screw, make that it is firmly fastened, so it won't come loose.



# IMPORTANT NOTES

## Power Supply

- Place the AC adaptor so that the side with text is downward.

## Placement

- Depending on the material and temperature of the surface on which you place the unit, its rubber feet may discolor or mar the surface.

## Repairs and Data

- Before sending the unit away for repairs, be sure to make a backup of the data stored within it; or you may prefer to write down the needed information. Although we will do our utmost to preserve the data stored in your unit when we carry out repairs, in some cases, such as when the memory section is physically damaged, restoration of the stored content may be impossible. Roland assumes no liability concerning the restoration of any stored content that has been lost.

## Additional Precautions

- Any data stored within the unit can be lost as the result of equipment failure, incorrect operation, etc. To protect yourself against the irretrievable loss of data, be sure to make a backup of the data stored within it; or you may prefer to write down the needed information.

- Roland assumes no liability concerning the restoration of any stored content that has been lost.
- Do not use connection cables that contain a built-in resistor.

## Intellectual Property Right

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- Roland, BOSS, Tube Logic, 技 and WAZA are either registered trademarks or trademarks of Roland Corporation in the United States and/or other countries.
- ASIO is a trademark and software of Steinberg Media Technologies GmbH.
- The term "Bluetooth" and the logo is the registered trademark of Bluetooth SIG, Inc., and are licensed by Roland.
- The following functions are available when you connect the BT-DUAL (model name).
  - Background audio playback via Bluetooth Audio
  - Editing via Bluetooth MIDI
- This Product uses the Source Code of  $\mu$ T-Kernel under T-License 2.0 granted by the T-Engine Forum ([www.tron.org](http://www.tron.org)).
- This product includes third party open source software.

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## Important: connection-related points of caution

If a tube amp is used without connecting to any speaker output, this may significantly damage the vacuum tube and cause a malfunction. These connection-related points of caution are extremely important. Be sure to read this section to protect your valuable tube amp, speakers, this unit and other devices from damage.

Make sure to correctly connect and operate your tube amp, speakers and any other devices. If you make a mistake when connecting and operating this equipment, this may cause this unit as well as any connected devices to malfunction. We assume no responsibility for any malfunctions that may occur with this unit or any connected devices due to wrong connections or operations.

### Make sure to turn off the power when connecting/disconnecting any equipment

- To avoid faulty operations or malfunctions when connecting to or disconnecting from other devices, always turn down the volume and turn off the power of all the units.
- Be sure to connect the tube amp speaker cable to the FROM TUBE AMP jack. Never connect the cable to any other jacks. If you mistakenly connect the cable to other jacks, this may cause this unit or the tube amp to malfunction.



- Do not turn on the tube amp if nothing is connected to the tube amp speaker output.
- The speaker cable should be firmly plugged into the jack. If nothing is connected or if the cable is not plugged in all the way, the tube amp output may be in a no-load state, which could cause the tube amp to malfunction.

### Tube amp output

- You can connect a tube amp to this unit with a maximum of 100 W output.
- Do not connect a tube amp with an output over 100 W, as this may cause this unit to malfunction.

### Tube amp volume settings

- This unit lets you enjoy the character and feeling of the tube amp's sound at lower volumes. Use caution when doing so, as this could cause an excessive load on the tube amp. Set the tube amp volume to an appropriate level. If you make the circuit oscillate by raising the volume too much, this could cause the tube amp to malfunction.

### Speaker cable

- Be sure to use speaker cable to connect the tube amp to this unit and this unit to your speaker. Do not use shielded cables designed for use with guitars, as this could cause the unit to malfunction, or the cable might start to smoke or catch fire.

### Speaker input tolerance

- A 30 W power amp is built into this unit. The input tolerance of your connected speaker should be at least 30 W.

- If you use a tube amp speaker that's less than 30 W, be sure to use the same volume or lower than you would use when directly driving a speaker with just that tube amp.

### Impedance settings

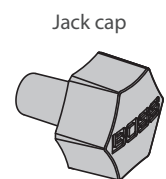
- The speaker output jack of the tube amp to which you're connecting should be able to handle 8Ω of power.

### When turning the power off

- When you turn this unit off, make sure to turn off the tube amp first. If the tube amp is still on when you turn off this unit, either this unit or the tube amp may malfunction.

### How to use the jack caps

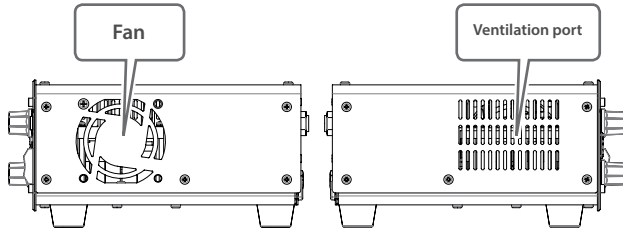
- Some of the jacks on the rear panel are fitted with jack caps, to prevent wrong connections. If you are not connecting anything to a jack, be sure to attach a jack cap.



- Store the jack caps in a safe place where children cannot reach, to prevent them from being accidentally swallowed.

## Heat generated by this unit and protection from overheating

- A fan built into this unit operates when the internal temperature rises. Do not block the ventilation port for cooling on the side of this unit.



- Dust may tend to collect on the ventilation port. Remove any dust that builds up.

## Overheating protection

- The overheating protection feature on this unit activates when the internal temperature goes too high. When this happens, the POWER indicator blinks yellow, and the output volume is limited.



- If the overheat protection activates, lower the volume on the tube amp. Also, check whether the ventilation port is not blocked.
- The overheat protection is canceled once the internal temperature goes down.
- If the internal temperature gets even higher for some reason, the POWER indicator changes from blinking yellow to blinking red, and the output from this unit is cut. If this happens, turn this unit off at once, and check whether there are any foreign objects or the like blocking the fan. If there is no change even though you've removed the foreign object, the unit may be malfunctioning. Consult with the dealer where you purchased this product for help.

# Panel descriptions

## Front panel



### 1 [REACTIVE LOAD] knob

The reactive load feature generates a load that operates like a real speaker for the tube amp.

There are two reactive load circuits in this unit that are designed to produce the optimal sound from each kind of tube amp.

#### COMBO

This setting is used when connecting to a combo amp (such as a 1 × 12" speaker configuration).

#### STACK

This setting is used when connecting to a stack-type amp (such as a closed-back cabinet 4 × 12" speaker configuration).

### 2 INPUT SIG/PEAK indicator

Indicates the level of input signal from the tube amp to the FROM TUBE AMP jack (p. 6) of this unit.

Lit color	Explanation
Green	Lights up when a signal is present.
Red	Lights up when there is too much signal level.

### 3 RIG

You can configure the effects from a dedicated app. These settings are collectively called a "rig".

#### [RIG] knob

Recalls the rig settings (1–10) that you saved on this unit.

#### [WRITE] button

Saves the AIR FEEL settings you configured on this unit as a rig (1–10).

For details on how to save a rig, refer to "Saving a rig" (p. 8).

### 4 [AIR FEEL LEVEL] knob

Adjusts the reverberation and feeling of ambience that's output from the LINE OUT connectors, the PHONES jack and the USB port.

### 5 [SPEAKER OUT] knob

Adjusts the volume of the speakers.

### 6 [LINE OUT] knob

Adjusts the volume of audio that's output from the LINE OUT L/R connectors (p. 6).

### 7 PHONES

#### [PHONES] knob

Adjusts the volume of signal output from the PHONES jack (p. 6).

#### PHONES jack

Connect your headphones here.

### 8 POWER

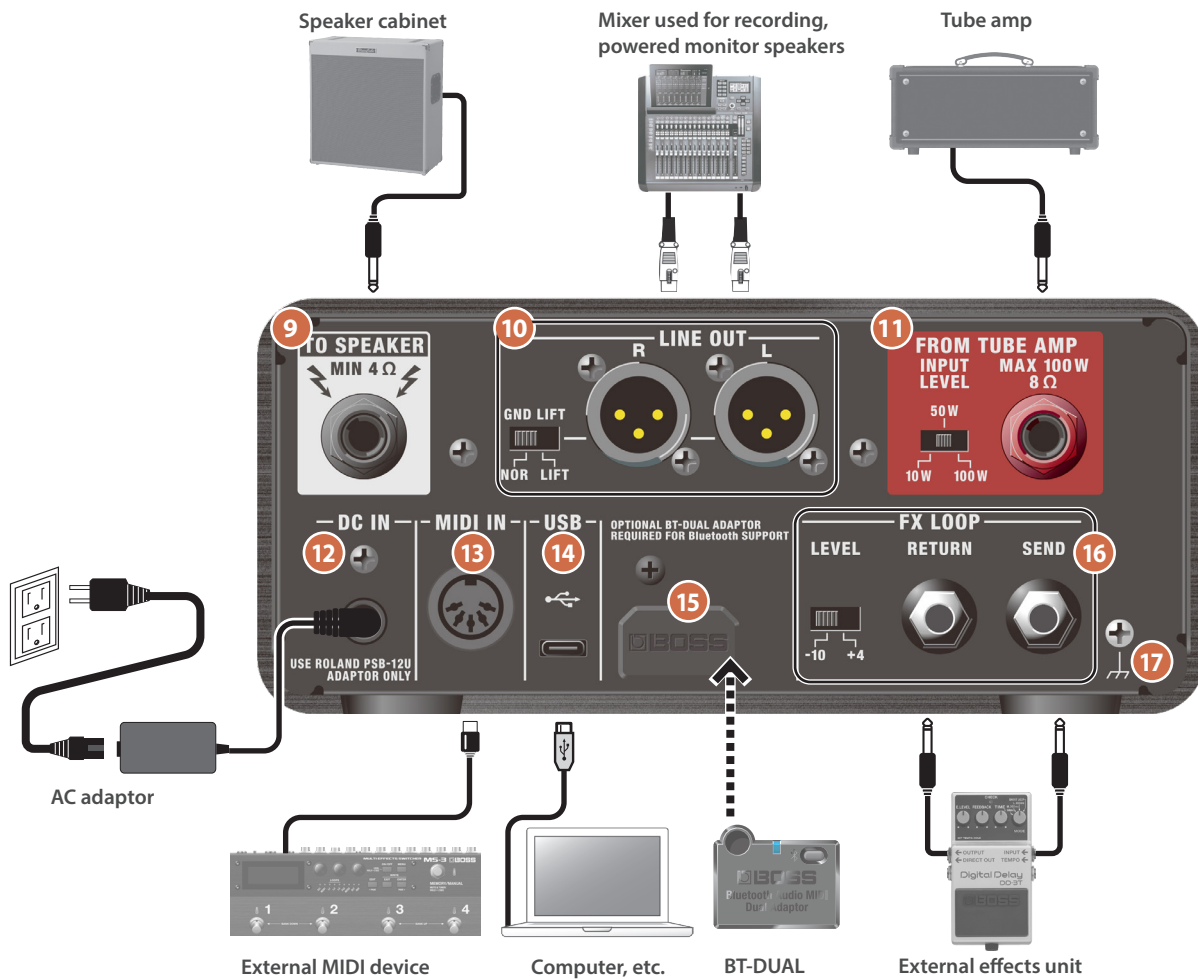
#### [POWER] switch

Turns the power of this unit on/off.

#### POWER indicator

If this is on, the button lights up blue. When overheat protection (p. 4) is activated, the light changes to blinking yellow or red.

## Rear panel (connecting your equipment)



### 9 TO SPEAKER jack

Connect a speaker here with an impedance of 4Ω or greater.

- \* If you don't need to connect speakers, this connection is not required.
- \* When using a combo amp with an integrated speaker and amp, remove the speaker cable connecting to the amp and connect to the TO SPEAKER jack on this unit. If the speaker cable isn't long enough to reach this unit, you must procure an extension speaker cable separately.

### 10 LINE OUT

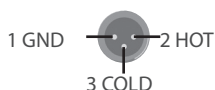
#### L/R connectors

Connect these connectors to a mixer used for recording, or to powered monitor speakers.

#### [GND LIFT] switch

Selects whether to connect the LINE OUT L/R connectors to the ground of this unit. Disengage the ground with this switch if you hear any noise that might be caused by a ground loop. Usually, you should set this to "NOR" (normal).

- \* Pin assignment of LINE OUT L/R connectors



### 11 FROM TUBE AMP jack

Connect the tube amp speaker output to this jack. You can connect a tube amp with up to a 100 W output.

If you have more than one speaker output on your tube amp, connect only this unit. Connecting speakers in addition to this unit may cause the tube amp to malfunction.

- \* Don't connect anything here besides a tube amp. Failure to observe this may cause the devices connected to this unit to malfunction.

#### [INPUT LEVEL] switch

Set this to the output wattage of the connected tube amp. If the tube amp's output is within the range of 10 W, 50 W and 100 W, and if the wattage is 20 W (for example), use either the 10 W or the 50 W setting and input the sound, so that the INPUT SIG/PEAK indicator on the front panel does not light up red.

### 12 DC IN jack

Connect the included AC adaptor to this jack.

- \* Use only the AC adaptor (PSB-12U) that came with this unit.

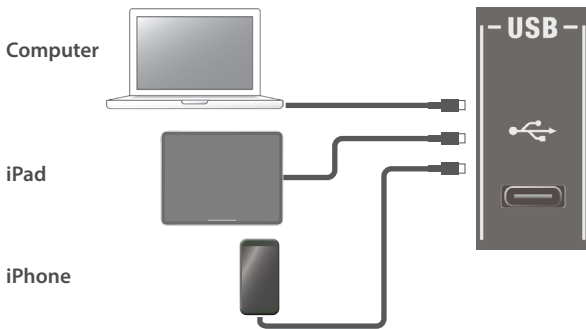
### 13 MIDI IN jack

Connect an external MIDI device here. For details, refer to "Controlling this unit from an external MIDI device" (p. 10).

**14 USB ↔ jack (USB Type-C)**

Use a commercially available USB Type-C<sup>®</sup> cable to connect this unit to a computer, iPad, or iPhone.

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



For details, refer to “Connecting to a computer” (p. 11) and “Connecting to an iPad/iPhone” (p. 11).

**15 Bluetooth<sup>®</sup> adaptor connector**

Connect the **Bluetooth<sup>®</sup> Audio MIDI Dual Adaptor** (Model BT-DUAL, sold separately) to wirelessly play back music from your mobile device such as a smartphone or tablet (hereafter “mobile device”), or to edit the effects using an app on your mobile device. For details, refer to “Wireless connection with a mobile device” (p. 9).

**16 FX LOOP**

**[SEND/RETURN] jacks**

Connect an external effect device (mono). Connect the SEND jack to the input of your external effect device, and connect the output of your external effect device to the RETURN jack.

**[LEVEL] switch**

Sets the base level for the SEND/RETURN jacks to either -10 dBu or +4 dBu, depending on the base level of the external effect unit.

**LOOP setting**

Sets whether to connect to the external effect unit in series or in parallel.

**This is set using the dedicated app, and can't be set by operating this unit.**

Value	Explanation
PARALLEL (default value)	Mixes the external effect sound and direct sound.
SERIES	Only the external effect sound is output.

**17 Ground terminal**

Connect this to an external earth or ground. Connect this if you hear hum noise.

**Turning the power on**

- \* Once everything is properly connected (p. 6), be sure to follow the procedure below to turn on their power. If you turn on equipment in the wrong order, you risk causing malfunction or equipment failure.

- 1. Check that the SPEAKER OUT, LINE OUT and PHONES knob volume of this unit and the volume on any externally connected devices are set to “0” .**
- 2. Turn on this unit.**
- 3. Turn on the tube amp.**
- 4. Turn on the power of other connected external devices.**

Before switching off the power, lower the volume on all connected devices and then turn off the power of this unit (the reverse of when you switch this unit on).

- \* Before turning the unit on/off, always be sure to turn the volume down. Even with the volume turned down, you might hear some sound when switching the unit on/off. However, this is normal and does not indicate a malfunction.
- \* If you need to turn off the power completely, first turn off the unit, then unplug the power cord from the power outlet. Refer to “To completely turn off power to the unit, pull out the plug from the outlet”.

### Saving a rig

You can save the operations you make on this unit as well as the effect settings you change using the dedicated app to one of the ten rigs (1–10).

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

A rig can be selected when the [WRITE] button is blinking green.

**2. Turn the [RIG] knob to select the rig (1–10) to save.**

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

**3. Press and hold the [WRITE] button for two second or longer.**

The [WRITE] button blinks red, and the rig is saved.

- \* The existing rig in that number slot is overwritten. This also overwrites the factory settings.
- \* You can use the dedicated app to edit even more detailed settings and manage your rig library. For details, refer to “Connecting to a computer” (p. 11).
- \* See “How to use the WAZA Tube Amp Expander Core editor” for a list of rigs (factory settings).

### Restoring the factory settings

Here’s how the settings stored in this unit can be returned to their factory-set condition (factory reset).

**1. Turn off this unit.**

**2. Set the [REACTIVE LOAD] knob to COMBO.**

**3. Set the [RIG] knob to “9”.**

**4. Turn the power on while holding down the [WRITE] button.**

The [WRITE] button blinks red.

\* To cancel the operation, turn off the power.

**5. Press the [WRITE] button.**

This executes the factory reset.

- The SIG/PEAK indicator blinks red during the factory reset.
- Don’t turn off the power while the factory reset is in progress.
- The SIG/PEAK indicator lights up green when the factory reset is complete.

**6. Turn this unit on again.**

All settings return to their factory-set state.

# Wireless connection with a mobile device

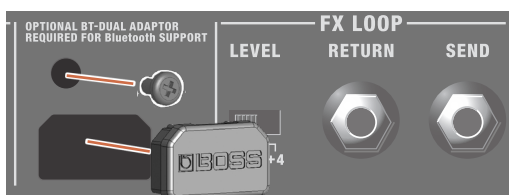
Attach the **Bluetooth®** Audio MIDI Dual Adaptor (Model: BT-DUAL, sold separately) to the WAZA Tube Amp Expander Core to wirelessly play back music on your mobile device, or to edit the effects of this unit from the app on your mobile device.

Note that the WAZA Tube Amp Expander Core does not offer Bluetooth functionality. You'll need to attach the BT-DUAL (sold separately) to use Bluetooth.

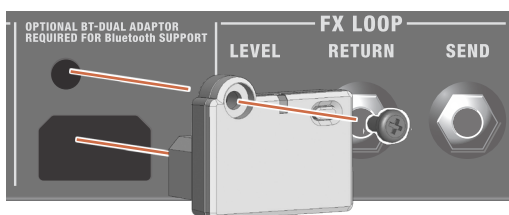
## Attaching the BT-DUAL

Attach the BT-DUAL to the **Bluetooth®** adaptor connector.

1. Power down this unit and unplug the AC adaptor from the power outlet.
2. Remove the BT-DUAL cover and screw from the **Bluetooth®** adaptor connector on the rear panel.



3. Attach the BT-DUAL and fasten the screw that you removed in step 2 in place.



### NOTE

- Be sure to use only the screw that was originally mounted on the **Bluetooth®** adaptor connector. If you use a different screw, the unit may malfunction.
- Do not touch the circuitry or the jacks.
- After you have attached the adaptor, check again to make sure it's properly installed.

## Listening to sound via wireless connection with a mobile device

### Bluetooth® audio functionality

You can play back music or music video content on a mobile device with Bluetooth audio functionality by connecting to the PHONES jack on this unit, or through a device that's connected to the LINE OUT connectors.

### Registering a mobile device (Pairing)

"Pairing" is the procedure by which the mobile device that you want to use is registered on this unit (the two devices recognize each other).

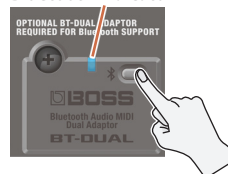
Here's how to configure the settings so that you use this unit to wirelessly listen to the music data that you play on your mobile device.

#### MEMO

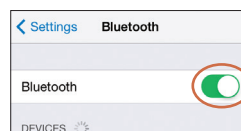
This explanation uses the iPhone as an example. For details, refer to the owner's manual of your mobile device.

1. Turn on the power of this unit.
2. Place the mobile device that you want to connect close to the amp.
3. Hold down the pairing button on the BT-DUAL until the Bluetooth indicator blinks rapidly.

#### Bluetooth indicator



4. Turn on the Bluetooth function of the mobile device.



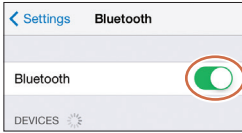
5. Tap "WAZA TAE Core Audio", shown on the Bluetooth device screen of your mobile device.

This pairs the WAZA TAE Core Audio with your mobile device. When pairing succeeds, "WAZA TAE Core Audio" is added to the list of paired devices on your mobile device.

- \* If you don't complete the pairing within a certain time, the Bluetooth indicator goes dark and the unit exits pairing standby mode.

### Connecting an already-paired mobile device

1. With the BT-DUAL's Bluetooth indicator off, press the pairing button.
2. Turn on the Bluetooth function of the mobile device.



#### MEMO

- If you were unable to connect using the steps above, tap "WAZA TAE Core Audio", displayed in the Bluetooth device screen of the mobile device.
- To disconnect, press the pairing button on the BT-DUAL to make the Bluetooth indicator go dark, or turn off the mobile device's Bluetooth function.

### Adjusting the volume of Bluetooth audio

1. Adjust the volume on the mobile device.  
Adjust the Bluetooth audio volume.
2. Turn the [PHONES] or [LINE OUT] knob on this unit.

The [PHONES] and [LINE OUT] knobs also control the volume of Bluetooth audio and the volume of signal for devices connected to the USB port.

When you turn the [PHONES] and [LINE OUT] knobs, this controls both the volume of Bluetooth audio and the volume of the devices connected to each jack or port.

### Disabling Bluetooth functionality

This shows how to disconnect the BT-DUAL from your Bluetooth-connected mobile device.

1. Press the pairing button on the BT-DUAL.  
The Bluetooth indicator goes dark.

### Controlling this unit from the mobile device app

For details on the WAZA Tube Amp Expander Core Editor for mobile devices, see the BOSS website.

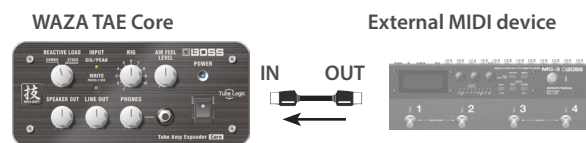
<https://www.boss.info/>

## Controlling this unit from an external MIDI device

With this unit, you can use MIDI to perform the following operations.

- Switch between rig numbers  
You can make the rig numbers on this unit switch when a program change message is received from an external MIDI device.
- Receive control change messages  
This unit can receive control change messages to control specified parameters while you're playing.

### Connection example



For details on how to configure the MIDI settings, refer to "How to use the WAZA Tube Amp Expander Core Editor" (BOSS website).

# Connecting to a computer

Connecting this unit to a computer via USB lets you do the following.

- Transmit and receive digital audio signals between the computer and this unit
- Use the dedicated app, “WAZA Tube Amp Expander Core Editor”

## Installing the USB driver

**You must install the USB driver before connecting this unit to a computer.**

Download the USB driver from the BOSS website.

Install this dedicated driver before making a USB connection. For details, refer to the “Readme.htm” file included with the download.

<https://www.boss.info/support/>

The program you need to use, and the steps you need to take to install the USB driver will differ depending on your computer setup, so please carefully read and refer to the Readme.htm file that comes with the download.

## Configuring the settings of this unit

This shows how to configure the USB settings on this unit by using the dedicated USB driver.

1. Turn off this unit.
2. Set the [REACTIVE LOAD] knob to COMBO, and set the [RIG] knob to “2”.
3. Turn the power on while holding down the [WRITE] button.  
If the SIG/PEAK indicator light up green, the setting is complete.
4. Turn the power on again.

## Using this unit as an audio interface

You can do the following things when you use this unit as an audio interface.

- Recording the sound from this unit to your computer
- Output the sound from this computer to the LINE OUT connectors and the PHONES jack of this unit.
- \* For details of the audio signal flow when connected via USB and instructions on how to make settings, refer to “How to use the WAZA Tube Amp Expander Core Editor” (BOSS website).
- \* Refer to the instruction manual for the software you are using to learn how to switch the input source of the software.

## Operating this unit from the computer app

You can use the dedicated computer app, “WAZA Tube Amp Expander Core Editor” to do the following.

- Edit the rig settings.
- Assign a name to a rig.
- Reorder the rigs as you want and switch them around.
- Back up the rigs and settings for this unit, and restore these settings.
- Load up to 64 IR data sets into this unit.
- Show the download page for the WAZA Tube Amp Expander Core Owner’s Manual.

Download the WAZA Tube Amp Expander Core Editor for your computer from the BOSS website (<https://www.boss.info/support/>).

# Connecting to an iPad/iPhone

You can exchange digital audio signals between an iPad or iPhone that’s connected to this unit via USB.

**This feature uses the standard USB driver installed in the OS, so it’s not necessary to install a dedicated driver.**

## Configuring the settings of this unit

This shows how to configure the USB settings on this unit by using the standard driver installed in the OS.

1. Turn off this unit.
2. Set the [REACTIVE LOAD] knob to “COMBO”, and set the [RIG] knob to “1”.
3. Turn the power on while holding down the [WRITE] button.  
If the SIG/PEAK indicator light up green, the setting is complete.
4. Turn the power on again.

## Using this unit as an audio interface

You can do the following things when you use this unit as an audio interface.

- Record the audio from this unit to an iPad/iPhone
- Output the sound from an iPad/iPhone to the LINE OUT connectors and the PHONES jack of this unit.

# Main specifications

<b>Maximum Input Power</b>	FROM TUBE AMP: 100 W
<b>Safety Load (power off)</b>	FROM TUBE AMP: 330 Ω
<b>Rated Power Output</b>	TO SPEAKER: 30 W (8 Ω)
<b>Load Impedance</b>	TO SPEAKER: 4–16 Ω
<b>Input Impedance</b>	FROM TUBE AMP: 8 Ω FX LOOP RETURN: 1 MΩ
<b>Output Impedance</b>	LINE OUT L/R: 600 Ω FX LOOP SEND: 1 kΩ
<b>Nominal Output Level</b>	LINE OUT L/R: +4 dBu
<b>FX LOOP Nominal Input/Output Level</b>	-10/+4 dBu (selectable)
<b>Maximum Output Level</b>	LINE OUT L/R: +13 dBu FX LOOP SEND: +6 dBu (-10) /+20 dBu (+4)
<b>Controls</b>	POWER switch SPEAKER OUT knob LINE OUT knob PHONES knob REACTIVE LOAD knob RIG knob AIR FEEL LEVEL knob WRITE button INPUT LEVEL switch FX LOOP LEVEL switch GND LIFT switch
<b>Indicators</b>	POWER WRITE INPUT SIG/PEAK

<b>Connectors</b>	FROM TUBE AMP jack: 1/4-inch phone type TO SPEAKER jack: 1/4-inch phone type LINE OUT L/R connectors: XLR type LINE OUT MONO (FOH) connector: XLR type PHONES jack: Stereo 1/4-inch phone type FX LOOP SEND jack: 1/4-inch phone type FX LOOP RETURN jack: 1/4-inch phone type USB port: USB Type-C® MIDI IN connector Bluetooth® adaptor connector: Dedicated connector DC IN jack
<b>Power Supply</b>	AC adaptor
<b>Current Draw</b>	470 mA
<b>Dimensions (including feet)</b>	200 (W) x 202 (D) x 99 (H) mm 7-7/8 (W) x 8 (D) x 3-15/16 (H) inches
<b>Weight</b>	2.2 kg 4 lbs 14 oz
<b>Accessories</b>	Owner's manual AC adaptor Power cord
<b>Options (sold separately)</b>	Bluetooth® Audio MIDI Dual Adaptor (Model: BT-DUAL) Wireless MIDI Expression Pedal: EV-1-WL Wireless Foot Switch: FS-1-WL

\* 0 dBu = 0.775 Vrms

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