YAMAHA

English

中文

POWER AMPLIFIER

TX6n/TX5n/TX4n

Owner's Manual
使用说明书

EN
ZH

部件名称	有毒有害物质或元素					
	铅（Pb）	汞（Hg）	镉（Cd）	六价铬（Cr（VI））	多溴联苯（PBB）	多溴二苯醚（PBDE）
外壳、框架	×	○	○	○	○	○
印刷线路板	×	○	×	○	○	○

○: 表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T 11363-2006标准规定的限量要求以下。

×: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T 11363-2006标准规定的限量要求。

(此产品符合EU的RoHS指令。)

(この製品はEUのRoHS指令には適合しています。)

(This product conforms to the RoHS regulations in the EU.)

(Dieses Produkt entspricht der RoHS-Richtlinie der EU.)

(Ce produit est conforme aux réglementations RoHS de l'UE.)

(Este producto cumple con los requisitos de la directiva RoHS en la UE.)

此标识适用于在中华人民共和国销售的电子信息产品。
标识中间的数字为环保使用期限的年数。

PS 1

PRECAUTIONS

PLEASE READ CAREFULLY BEFORE PROCEEDING

* Please keep this manual in a safe place for future reference.

⚠ *WARNING*

Always follow the basic precautions listed below to avoid the possibility of serious injury or even death from electrical shock, short-circuiting, damages, fire or other hazards. These precautions include, but are not limited to, the following:

Power supply/Power cord

- Only use the voltage specified as correct for the device. The required voltage is printed on the name plate of the device.
- Do not place the power cord near heat sources such as heaters or radiators, and do not excessively bend or otherwise damage the cord, place heavy objects on it, or place it in a position where anyone could walk on, trip over, or roll anything over it.
- Be sure to connect to an appropriate outlet with a protective grounding connection. Improper grounding can result in electrical shock.

Do not open

- Do not open the device or attempt to disassemble the internal parts or modify them in any way. The device contains no user-serviceable parts. If it should appear to be malfunctioning, discontinue use immediately and have it inspected by qualified Yamaha service personnel.

Water warning

- Do not expose the device to rain, use it near water or in damp or wet conditions, or place containers on it containing liquids which might spill into any openings. If any liquid such as water seeps into the device, turn off the power immediately and unplug the power cord from the AC outlet. Then have the device inspected by qualified Yamaha service personnel.
- Never insert or remove an electric plug with wet hands.

If you notice any abnormality

- If the power cord or plug becomes frayed or damaged, or if there is a sudden loss of sound during use of the device, or if any unusual smells or smoke should appear to be caused by it, immediately turn off the power switch, disconnect the electric plug from the outlet, and have the device inspected by qualified Yamaha service personnel.
- If this device should be dropped or damaged, immediately turn off the power switch, disconnect the electric plug from the outlet, and have the device inspected by qualified Yamaha service personnel.

⚠ *CAUTION*

Always follow the basic precautions listed below to avoid the possibility of physical injury to you or others, or damage to the device or other property. These precautions include, but are not limited to, the following:

Power supply/Power cord

- Remove the electric plug from the outlet when the device is not to be used for extended periods of time, or during electrical storms.
- When removing the electric plug from the device or an outlet, always hold the plug itself and not the cord. Pulling by the cord can damage it.

Location

- Before moving the device, remove all connected cables.
- When setting up the device, make sure that the AC outlet you are using is easily accessible. If some trouble or malfunction occurs, immediately turn off the power switch and disconnect the plug from the outlet. Even when the power switch is turned off, electricity is still flowing to the product at the minimum level. When you are not using the product for a long time, make sure to unplug the power cord from the wall AC outlet.
- If the device is mounted in an EIA standard rack, carefully read the section "Precautions when rack-mounting the unit" on page 6. Inadequate ventilation can result in overheating, possibly causing damage to the device(s), malfunction, or even fire.
- Do not use the device in a confined, poorly-ventilated location. If this device is to be used in a small space other than an EIA-standard rack, make sure that there is adequate space between the device and surrounding walls or other devices: at least 10cm at the sides, 15cm behind and 40cm above. Inadequate ventilation can result in overheating, possibly causing damage to the device(s), or even fire.
- Do not expose the device to excessive dust or vibrations, or extreme cold or heat (such as in direct sunlight, near a heater, or in a car during the day) to prevent the possibility of panel disfiguration or damage to the internal components.
- Do not place the device in an unstable position where it might accidentally fall over.
- Do not block the vents. This device has ventilation holes at the front/rear to prevent the internal temperature from becoming too high. In particular, do not place the device on its side or upside down. Inadequate ventilation can result in overheating, possibly causing damage to the device(s), or even fire.
- Do not use the device in the vicinity of a TV, radio, stereo equipment, mobile phone, or other electric devices. Doing so may result in noise, both in the device itself and in the TV or radio next to it.

Connections

- Before connecting the device to other devices, turn off the power for all devices. Before turning the power on or off for all devices, set all volume levels to minimum.
- Use only speaker cables for connecting speakers to the speaker jacks. Use of other types of cables may result in fire.
- Do not place the device in a location where it may come into contact with corrosive gases or salt air. Doing so may result in malfunction.

Maintenance

- Inspect the cooling fan air filter and clean it periodically (see the reference manual (PDF file)). Dust and dirt can seriously degrade the effectiveness of the cooling fan and result in malfunction or fire.
- Remove the power plug from the AC outlet when cleaning the device.

Handling caution

- When turning on the AC power in your audio system, always turn on the device LAST, to avoid speaker damage. When turning the power off, the device should be turned off FIRST for the same reason.

- Condensation can occur in the device due to rapid, drastic changes in ambient temperature – when the device is moved from one location to another, or air conditioning is turned on or off, for example. Using the device while condensation is present can cause damage. If there is reason to believe that condensation might have occurred, leave the device for several hours without turning on the power until the condensation has completely dried out.
- Do not insert your fingers or hands in any gaps or openings on the device (vents, ports, etc.).
- Avoid inserting or dropping foreign objects (paper, plastic, metal, etc.) into any gaps or openings on the device (vents, ports, etc.) If this happens, turn off the power immediately and unplug the power cord from the AC outlet. Then have the device inspected by qualified Yamaha service personnel.
- Do not use the device or headphones for a long period of time at a high or uncomfortable volume level, since this can cause permanent hearing loss. If you experience any hearing loss or ringing in the ears, consult a physician.
- Do not rest your weight on the device or place heavy objects on it, and avoid use excessive force on the buttons, switches or connectors.
- Do not use this device for any purpose other than driving loudspeakers.

Backup battery

- This device has a built-in backup battery that maintains data in internal memory even when the device's power is switched off. The backup battery will eventually become depleted, however, and when that happens the contents of the internal memory will be lost.* To prevent loss of data be sure to replace the backup battery before it becomes fully depleted. When the remaining capacity of the backup battery becomes so low that it needs to be replaced a "Critical Battery" or "No Battery" message will appear on the display during operation or when the device is powered on. If either of these messages appears do not turn off the power and immediately transfer any data you want to save to a computer or other external storage device, then have qualified Yamaha service personnel replace the backup battery. The average life of the internal backup battery is approximately 5 years, depending on operating conditions.

* Data items maintained in the internal memory by the backup battery are as follows:

- Current scene parameters and number.
- Device parameters (Utility, AnalogInputMeter, SpeakerOut meter, etc.).
- Event log.

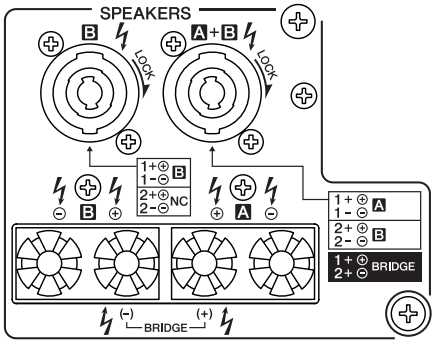
Data items other than those described above are stored in memory that does not require backup power, and will be retained even if the backup battery fails.

XLR-type connectors are wired as follows (IEC60268 standard): pin 1: ground, pin 2: hot (+), and pin 3: cold (-).
Use only Neutrik NL4 plugs for connecting Speakon connectors.

Yamaha cannot be held responsible for damage caused by improper use or modifications to the device, or data that is lost or destroyed.

Always turn the power off when the device is not in use.

The performance of components with moving contacts, such as switches, volume controls, and connectors, deteriorates over time. Consult qualified Yamaha service personnel about replacing defective components.



This ϟ mark indicates a dangerous electrically live terminal. When connecting an external wire to this terminal, it is necessary either to have "a person who have received appropriate guidance on handling" make the connection or to use leads or a cord that have been manufactured in such a way that the connection can be made simply and without problem.

(hazardous)

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Specifications and descriptions in this owner's manual are for information purposes only.

Yamaha Corp. reserves the right to change or modify products of specifications at any time without prior notice. Since specifications, equipment or options may not be the same in every locale, please check with your Yamaha dealer.

European models
Purchaser/User Information specified in EN55103-1 and EN55103-2.
Inrush Current: 17A
Conforms to Environments: E1, E2, E3, E4

IMPORTANT NOTICE FOR THE UNITED KINGDOM

Connecting the Plug and Cord

WARNING: THIS APPARATUS MUST BE EARTHED
IMPORTANT. The wires in this mains lead are coloured in accordance with the following code:

GREEN-AND-YELLOW	:	EARTH
BLUE	:	NEUTRAL
BROWN	:	LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:

The wire which is coloured GREEN-and-YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol ⏚ or colored GREEN or GREEN-and-YELLOW.

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

• This applies only to products distributed by Yamaha Music U.K. Ltd. (3 wires)

Contents

Included Accessories

- Owner's Manual
- Two handles
- Four flat-head screws
- Euroblock connector (3P)
- Four Rubber feet

Precautions when rack-mounting the unit

Operation of this device is guaranteed for an environmental temperature range of 0 – 40°C. If you are mounting only this device in an EIA standard rack, you may mount multiple units without leaving a space between them. If you are mounting this device along with other types of device in an EIA standard rack, the ambient temperature inside the rack may rise due to heat produced from the other devices, preventing this device from performing as designed. To ensure that heat does not build up inside this device, you must observe the following conditions when mounting it in a rack.

- If you mount this device in a rack together with heat-generating devices such as power amps made by other companies, you must leave 1U or more space between this device and other devices. You should also install a ventilation panel in this space or leave it open to ensure adequate ventilation.
- Leave the back of the rack open, and allow 10 cm or more distance between the rack and the wall or ceiling to ensure adequate ventilation. If you are unable to leave the back of the rack open, you must install a commercially available fan kit or other forced air circulating system to the rack. If you have installed a fan kit, there may be cases in which closing the back of the rack will provide better cooling. For details, refer to the instructions that came with the rack system or fan kit.

Introduction

Thank you for purchasing the Yamaha TX6n, TX5n, TX4n Power Amplifier. In order to take full advantage of the TX6n/TX5n/TX4n's (TXn) functionality and to ensure trouble-free operation, please read this owner's manual carefully before use. After you have read the manual, keep it in a safe place for reference when needed.

Features

The TXn series are high audio quality, high efficiency, high reliability, low impedance drive power amplifiers that utilize Yamaha's famed DSP and digital audio networking technology.

■ Flexible support for analog and digital audio formats

In addition to two-channel analog input, these amplifiers come with an AES/EBU card installed in their MY card slot, allowing digital signals to be input and output. Separately sold MY cards can be installed in this MY slot to support a variety of digital audio formats.

■ Monitor and control from Amp Editor

By connecting a computer in which the "Amp Editor" application software is installed, the computer can be used to monitor the TXn units, or to control the TXn units such as switching the amplifier power's Standby/On and mute status. This monitoring and control can also be performed from the panel of the TXn unit.

■ Versatile speaker processing

Since signal processors such as equalizer, delay, and crossover are built in, the use of external equipment can be minimized. These can be controlled from the panel of the TXn unit or via Amp Editor. Speaker processor libraries created on the Yamaha DME series or the SP2060 can also be used.

About Setup

■ Attaching the handles

You can attach the handles to the amplifier using the supplied flat-head screws.
Follow the steps below to attach the handles:

1. Remove the rack mount brackets.
2. Attach the handles to the amplifier by tightening the flat-head screws into the four screw holes for each handle.
3. Replace the rack mount brackets.

■ Adjusting the position in the rack

If there is insufficient space between the rear of the amplifier and the rack, you can adjust the position of the rack mount brackets so that the front panel of the amplifier protrudes from the front of the rack by 22 mm.

Related manuals and software

This manual primarily explains how to set up the TXn at the time of installation. Manuals that contain detailed explanations of the TXn and Amp Editor, as well as Amp Editor itself, can be downloaded from the following website.

http://www.yamahaproaudio.com/

- **List of related manuals**

TX6n/5n/4n Reference Manual	Provides a detailed explanation of the TXn's panel operations, etc.
Amp Editor Installation Guide	Explains the installation and uninstallation procedures for Amp Editor.
Amp Editor Owner's Manual	Explains how to use Amp Editor.

NOTE • In order to view the downloaded manuals, Adobe Reader must be installed in your computer. If you don't have Adobe Reader, please access the Adobe Corporation's website at the following URL, and download Adobe Reader (free of charge).

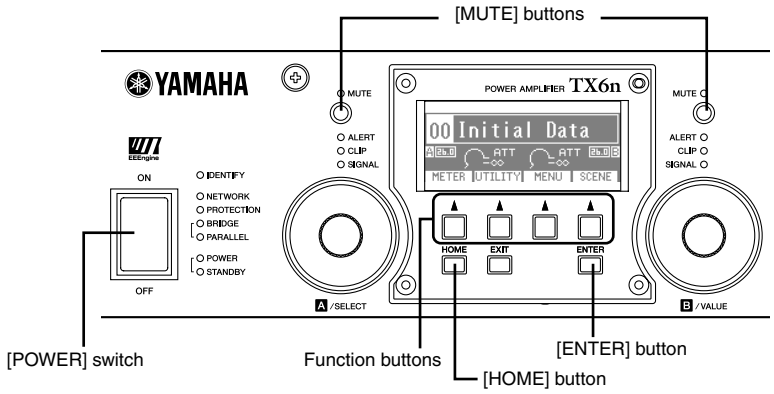
http://www.adobe.com/

Firmware Updates

The firmware version of the TXn itself can be checked from the TXn's panel and from Amp Editor. You can update the firmware via Amp Editor. For the update procedure, refer to the Amp Editor Owner's Manual. You can download the latest firmware from the "Downloads" page on the following website.

http://www.yamahaproaudio.com/

Preparation



Connecting the AC Power Cable

CAUTION

- **Be sure to turn all devices OFF before connecting AC mains power.**

Insert the plug into an AC outlet. Be sure to use an AC outlet of the voltage specified for the device.

Turning the Power on and off

CAUTION

- **To prevent the initial power-on surge from generating a large noise spike or damaging your speaker system, turn the devices on in the following order: audio sources, mixer (such as M7CL or PM5D), and finally power amplifiers. Reverse this order when turning power off.**

1. Press the front panel [POWER] switch to the "ON" position to turn the power on.

2. Press the [POWER] switch to the "OFF" position to turn off the power.

NOTE

- The settings at the time you powered-off are remembered. When you turn on the power to the TXn, it will start up with the same settings. You can use the "Last Mem. Resume" setting to set up the TXn so that at startup it will recall the scene number selected before you turned off the power to the device.

CAUTION

- **Do not turn off the power while the upper part of the display indicates "Do Not Turn Off!" Otherwise, a malfunction may occur.**

CAUTION

- **A small amount of current is flowing even when the power switch is off. If you will not be using this device for an extended period of time, be sure to disconnect the power plug from the AC outlet.**

Switching the Power Status between Standby and On

1. Hold down the panel [HOME] button for at least three seconds.

The TXn's display will show the HOME screen, and then a message of "Turning power on: Are you sure?" or "Going Standby: Are you sure?" will appear.

2. Press the panel [ENTER] button, and the power status will switch between Standby and On.

NOTE

- Standby is a state in which the speaker output's power amp section is off (operation other than speaker output will continue).

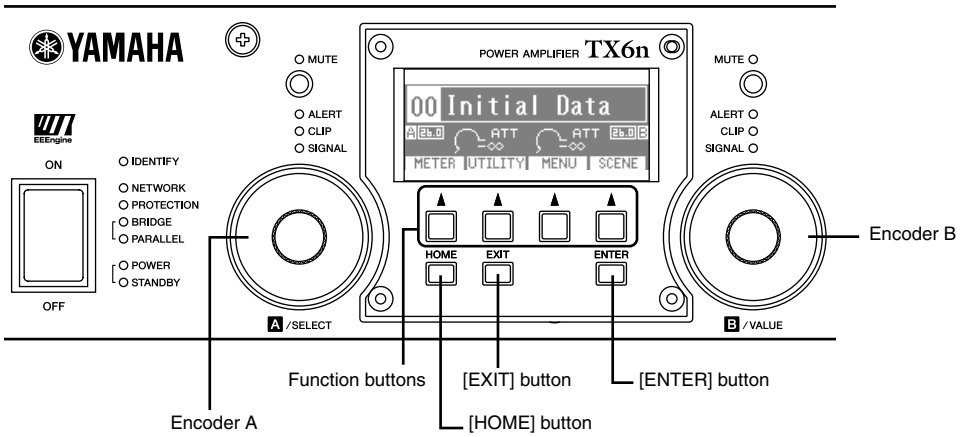
Switching Mute on/off

Hold down the [MUTE] button of the channel you want to mute for at least one second.

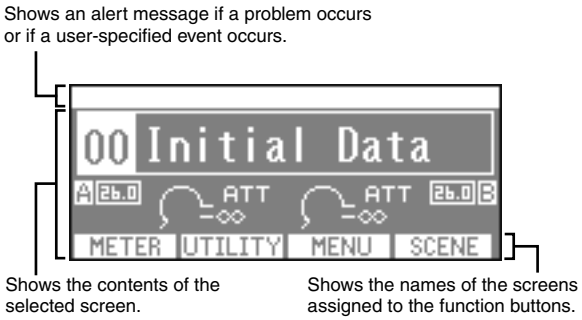
The channel's output will be muted, and the [MUTE] indicator will light.
To switch mute off, press the [MUTE] button again for at least one second.

Basic Operation of the TXn

Panel Operations



About the Display



Switching Screens

By pressing a function button you can move to the screen indicated above that button. By pressing the [HOME] button you can move to the HOME screen. By pressing the [EXIT] button you can move to the screen one level above.

Editing the Parameters

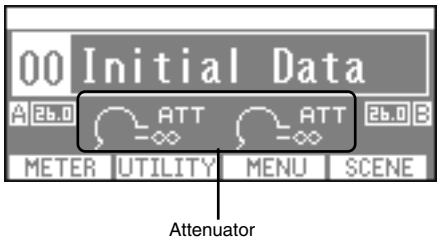
Use encoders A and B to move to the parameter that you want to edit, and use encoder B to edit the value.

NOTE • When you edit a parameter in the UTILITY screen, press the [ENTER] button to confirm it after you finish editing. A parameter that has not been confirmed will flash. If you move the cursor or move to a different screen without confirming the parameter, your change will not be applied.

Adjusting the Attenuator

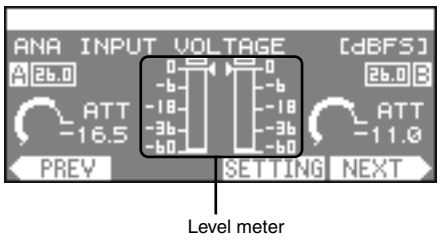
When the display shows the attenuator (i.e., in the HOME screen or the METER screen), you can use encoders A and B to adjust each channel's attenuation.

NOTE • If the display shows a screen other than the HOME screen or METER screen, encoders A and B are used to set parameters.



Displaying the Meter

To display the meter, access the HOME screen and press the left-most function button (METER). You can change the meter type by using the left-most function button (PREV) and the right-most function button (NEXT).



Operations that can be Performed from the Panel

NOTE • For details, refer to the TX6n/5n/4n Reference Manual.

Category	Subcategory		Explanation
METER	ANA INPUT VOLTAGE		Shows the input level from the analog input connectors.
	SLOT INPUT VOLTAGE		Shows the input level from the slot.
	SP OUTPUT VOLTAGE		Shows the output level from the [SPEAKERS] connectors.
	SP OUTPUT POWER		Shows the output power from the [SPEAKERS] connectors.
	SP OUTPUT IMPEDANCE		Shows the output impedance from the [SPEAKERS] connectors.
	SLOT OUTPUT METER		Shows the output level to the slot.
	THERMAL		Shows the heat sink temperature.
UTILITY	Device Setup		Makes settings to distinguish the amplifier on a network.
	Word Clock Setup		Sets the word clock.
	Information		Shows information about the amplifier.
	Network Setup		Specifies the IP address and other settings for using the amplifier in a network.
	LCD Setup		Specifies the display settings.
	Front Panel Operation		Turns panel operation lock on/off.
	Scene Setup		Makes scene* settings.
	Misc Setup		Sets the amplifier's internal clock, etc.
MENU	General	Sensitivity/Amp Gain	Sets the input sensitivity/gain.
		Stereo/Bridge/Parallel	Specifies the amplifier's mode (Stereo/Bridge/Parallel).
		Attenation Link	Specifies whether attenuator operation will be linked between channels A and B.
		Input Redundancy	Specifies the redundant connection mode, etc.
	Signal Path		Makes settings for the equalizer, delay, crossover, and others that process the audio signal. Speaker Processor libraries can also be recalled.
	Signal Chain	Analog Input Signal Chain	Makes settings for checking whether the audio signal is being correctly input from the analog connectors.
		Slot Input Signal Chain	Makes settings for checking whether the audio signal is being correctly input from the slot.
		Output Signal Chain	Makes settings for checking the status of output from the [SPEAKERS] connectors.
	Calibration	Calibrate by Pilot Tone	Uses a pilot tone to measure the impedance of the connected speakers.
		Calibrate by Program Source	Uses an audio signal to measure the impedance of the connected speakers.
	Limiter	Voltage Limiter	Makes settings for the limiter.
		Power Limiter	
		Limiter Gain Reduction	Specifies whether the limiter will be linked between channels A and B.
SCENE	Recall		Recalls a scene*.
	Store		Stores a scene*.
	Edit		Edits a scene*.
	Clear		Clears a scene*.

*Scene.....The settings listed above, such as power Standby/On or mute (with the exception of UTILITY), are called a "scene". By recalling a scene, the saved settings can be immediately applied to the amplifiers.

Audio I/O Settings

The TXn can be operated in one of three audio input/output modes: Stereo mode, Parallel mode, or Bridge mode. Make audio input/output connections and settings as follows.

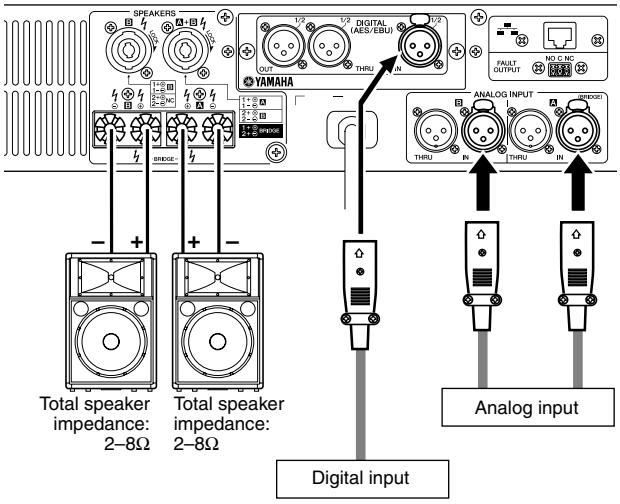
NOTE • With the factory settings, if both analog and digital (input from the slot) signals are input simultaneously, the two signal will be mixed and output. This setting can be changed from the panel of the TXn or via Amp Editor. For details on making this setting, refer to "TX6n/5n/4n Reference Manual" or "Amp Editor Owner's Manual."

• Use 110-ohm AES/EBU digital cables for digital audio connections. Using analog cables may degrade the sonic quality.

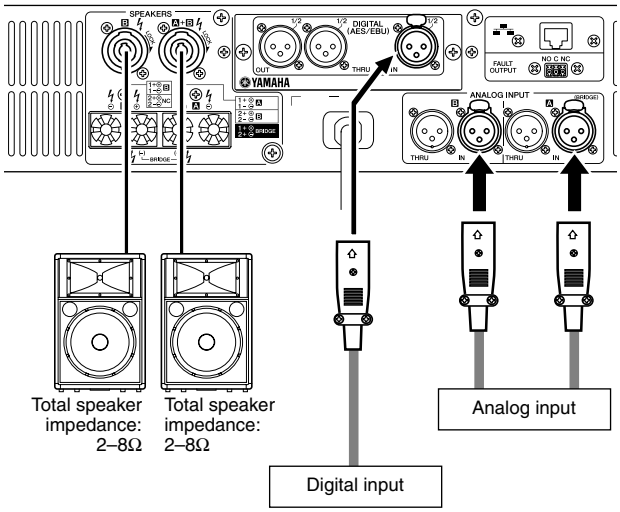
Stereo Mode

Channels A and B (analog) or channels 1 and 2 (digital) will operate independently in stereo.

5-way binding post connectors



Speakon connectors

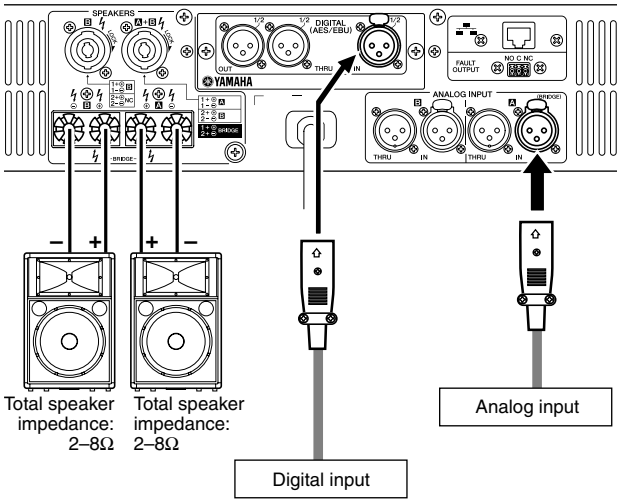


NOTE • Each of 5-way binding post connectors and Speakon connectors are internally parallel-connected. When using both connectors simultaneously, total speaker impedance of each connector must be 4–16 Ω.

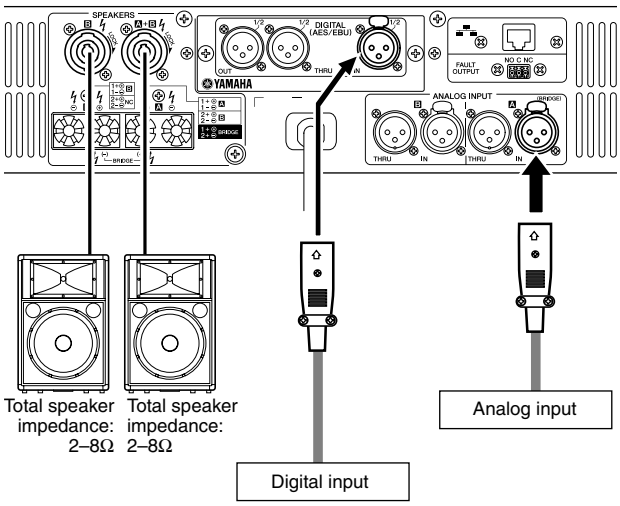
Parallel Mode

The amplifier will operate as a two-channel monaural amp, with the input signal of channel A (analog) or channel 1 (digital) as the source. Channel B (analog) and channel 2 (digital) will not be used.

5-way binding post connectors



Speakon connectors

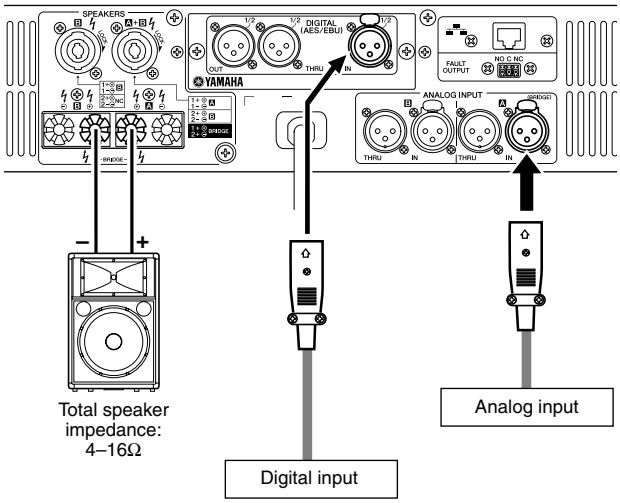


NOTE • Each of 5-way binding post connectors and Speakon connectors are internally parallel-connected. When using both connectors simultaneously, total speaker impedance of each connector must be 4–16 Ω.

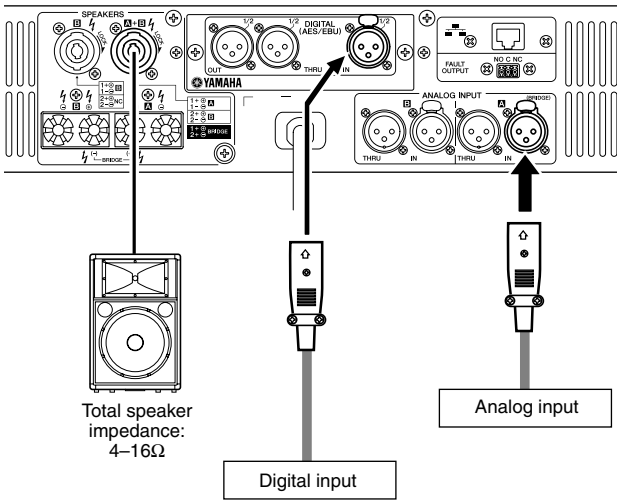
Bridge Mode

The amplifier will operate as a monaural high-power amp, with the input signal of channel A (analog) or channel 1 (digital) as the source.

5-way binding post connectors



Speakon connectors

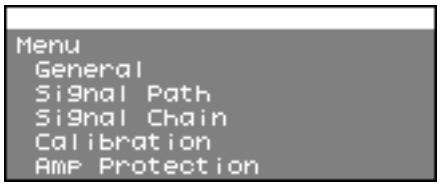


NOTE • Each of 5-way binding post connectors and Speakon connectors are internally parallel-connected. When using both connectors simultaneously, total speaker impedance of each connector must be 8–32 Ω.

Mode Setting

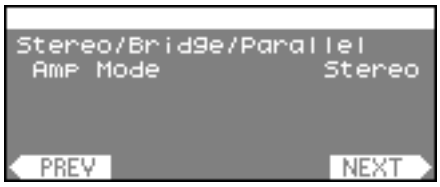
Select the power amp mode according to the type of connections you've made.

1. **Press the [HOME] button to access the HOME screen, and press the third function button from the left (MENU) to access the MENU screen.**



2. **Use the encoder A to move the cursor (the blinking frame) to "General," and press the [ENTER] button.**

3. **Use the function buttons (PREV/NEXT) to access Stereo/Bridge/Parallel screen.**



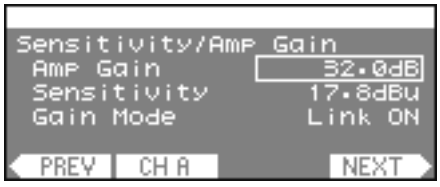
4. **Use the encoder B to select the desired mode, and press the [ENTER] button to confirm.**

Gain Setting

Set the amplifier gain.

1. **Follow the steps 1 and 2 of the above "Mode Setting" to select "MENU" → "General."**

2. **Use the function buttons (PREV/NEXT) to access the Sensitivity/Amp Gain screen.**



3. **Use encoder A to move the cursor to Amp Gain or Sensitivity, and encoder B to edit the parameter value.**

4. **If the parameter value is blinking, press the [ENTER] button to confirm the value.**

NOTE • Refer to the TX6n/5n/4n Reference Manual for details on the gain.

Word Clock Setting

If you want to input or output digital audio signals, you must check the word clock settings as necessary. Refer to the TX6n/5n/4n Reference Manual for details on how to check these settings. The factory setting is "Auto Scan Mode: ON."

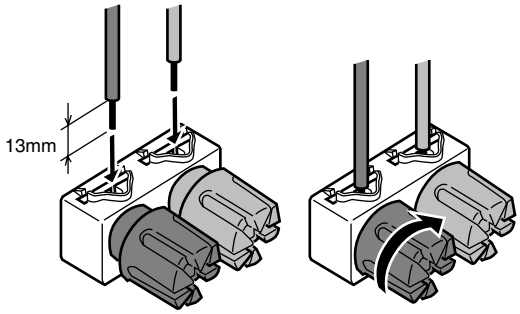
Wiring of the [SPEAKERS] Connectors

Turn off the POWER switch before connecting external devices to the TXn.

5-way Binding Post Connectors

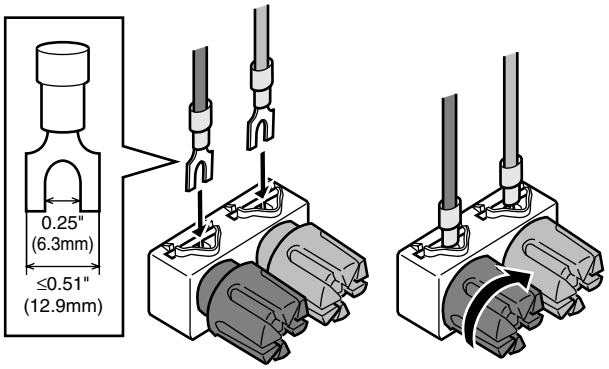
No Plugs

Remove about 13mm of insulation from the end of each speaker cable, and pass the bare wire through the holes in the appropriate speaker terminals. Tighten the terminals to securely clamp the wires. Be sure that the bare wire ends do not jut out from the terminals and touch the chassis.



Y-plugs

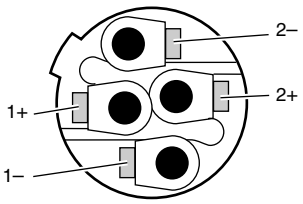
From above, insert the Y-plugs all the way into the opening, and tighten the terminals.



Speakon Connectors

Insert the Speakon cable plug (Neutrik NL4) into the connector, and turn it to the right to lock it.

Neutric NL4 plugs



CHANNEL A

Stereo/Parallel Mode

Neutrik	Amplifier
1+	A+
1–	A–
2+	B+
2–	B–

Bridge Mode

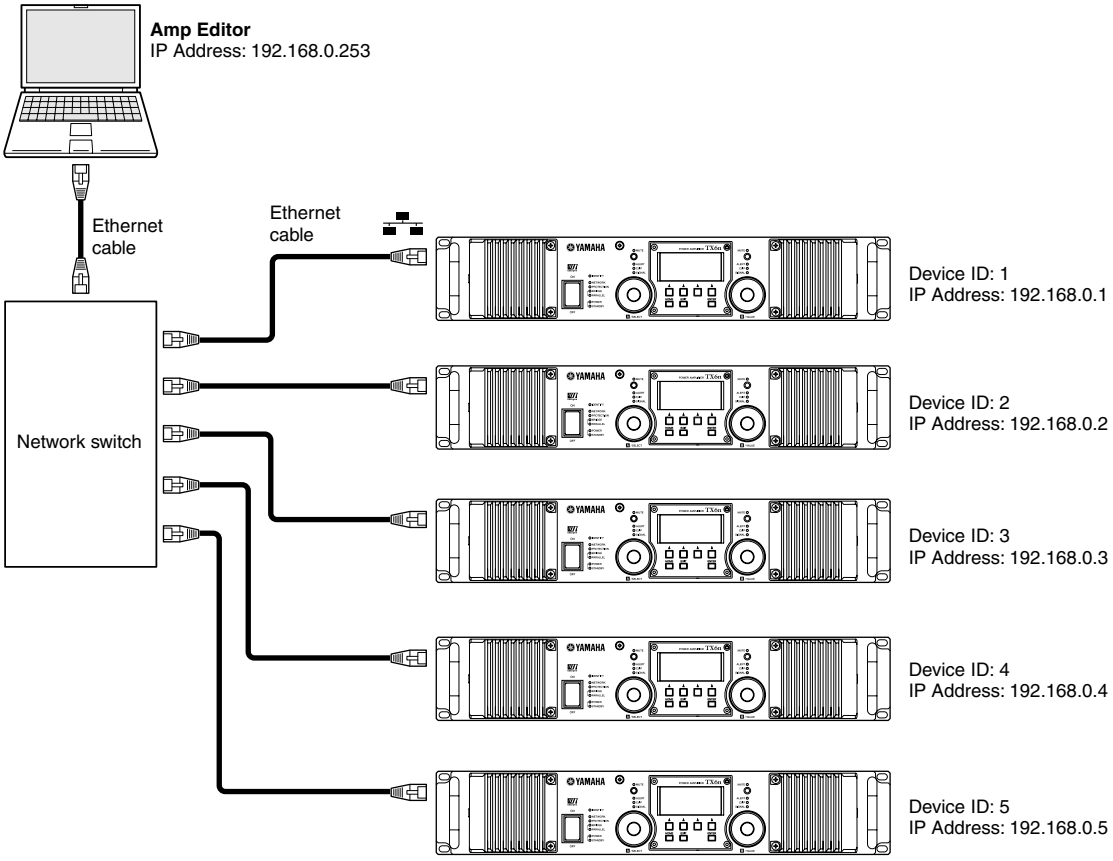
Neutrik	Amplifier
1+	+
1–	
2+	–
2–	

CHANNEL B

Neutrik	Amplifier
1+	B+
1–	B–

Network Connection Example

If you connect the TXn units' [NETWORK] connector to a computer via an Ethernet cable, you'll be able to monitor/control the TXn units from Amp Editor. Including computers and other equipment, a total of up to 253 units can be connected in a single network.



NOTE
- If you wish to connect multiple TXn units, use a network switch that supports 100Base-TX/10Base-T.
- The Ethernet cable between the network switch and the TXn can be up to 100 meters long. Due to the quality of cables and network switch performance, however, proper operation at the maximum length cannot be guaranteed in some cases.
- Since the TXn supports Auto MDI/MDI-X, it will automatically detect whether the connected cable is of the straight type or crossover type, and will configure itself to create the optimal connection. Therefore, you can use either a straight or crossover cable.
- To prevent electromagnetic interference, use an STP (Shielded Twisted Pair) cable.
- Refer to the Amp Editor Installation Guide and the Amp Editor Owner's Manual for information on the TXn initial setup for using the TXn in a network.

Troubleshooting

Symptom	Possible causes	Response
No sound from the speaker	The cable is not connected properly.	Make the correct connections to the audio input jack and the speaker output jack.
	The gain or attenuator setting has lowered the level.	Gain is adjusted by the MENU screen → General → Sensitivity/Amp Gain. Attenuator is adjusted by turning the encoder in the HOME screen.
	The [MUTE] button is on.	If the front panel [MUTE] indicator is on, hold down the [MUTE] button for one second or longer to cancel muting.
	The protection circuit has operated, muting the output.	If the amplifier has overheated, clean the filter elements and improve the ventilation around the amplifier. If the power supply has malfunctioned, contact your Yamaha dealer.
Noise from the speaker	The word clock from the slot input is not synchronized with the master clock.	Select the word clock from the slot as the master clock, or turn Auto Scan Mode on.
	Analog input level is exceeding the input sensitivity setting.	Adjust MENU screen → General → Sensitivity/Amp Gain setting according to the input level.
An alert message is displayed	An amplifier malfunction or other alert event related to the amplifier audio has occurred.	For details on the meaning of each alert message and the appropriate measures to take, refer to the Amp Editor Owner's Manual.
Panel operations are not accepted	The unit is locked.	Refer to "Front Panel Operation" in the TX6n/5n/4n Reference Manual.
A scene can be saved but not recalled	Scene Recall Enable is turned OFF.	Turn the UTILITY screen → Scene Setup → Scene Recall Enable setting ON.
Library can be recalled, but not saved	You cannot save library data from the TXn front panel.	Save the library data from Amp Editor.
All scene data saved in the TXn has disappeared	The power was turned off while the TXn's data was being saved.	If you saved the project in Amp Editor, synchronize from Amp Editor to the TXn.
To return to the default parameter values	–	Recalling a scene 00 (default setting scene) will return all the parameters other than those in the UTILITY settings to their default values. The TXn allows you to edit a wide variety of parameters, but can also be used as an analog amplifier by returning to the default parameter values. Default values of the main parameters are STEREO for amplifier mode, 26dB for gain, and -∞dB for attenuation. Refer to the TX6n/5n/4n Reference Manual for detailed information on scenes.

Initializing the internal memory

You can initialize the amp's internal memory. As desired, you can initialize the following two types of data.

- **User Data**: Initialize all user data except for the event log and speaker processor library.
- **Library**: Initialize only the speaker processor library.

CAUTION

• When you initialize the internal memory, the settings that had been stored will be lost. Use the following procedure with caution.

1. Power-off the TXn.

2. While holding down the [HOME] key, turn on the power; the Initialize screen will appear.

3. Use encoder A to select the data that you want to initialize, and press the [ENTER] button to execute initialization.

When initialization is completed, the amp will automatically restart.

CAUTION

• During initialization, the display will show the message "Do not turn off!" Never turn off the amp while this message is displayed.

Specifications

General Specifications

			TX6n		TX5n		TX4n	
			120V	230V (*1)	120V	230V (*1)	120V	230V (*1)
Output Power	1kHz, THD + N = 1%	8Ω per channel	1800W	1800W	1300W	1300W	1100W	1100W
		4Ω per channel	3000W	3000W	2200W	2300W	1900W	2000W
		2Ω per channel	2750W	2750W	2500W	2500W	2200W	2200W
		8Ω bridge	6000W	6000W	4400W	4600W	3800W	4000W
		4Ω bridge	5500W	5500W	5000W	5000W	4400W	4400W
	20ms burst	2Ω per channel	4100W	4120W	3480W	3600W	2990W	3050W
		4Ω bridge	8200W	8240W	6960W	7200W	5980W	6100W
	Constant voltage line		—		STEREO mode : 100V line, 1250W / 8Ω BRIDGE mode : 200V line, 2500W / 16Ω		—	
Voltage Gain	RL = 8Ω Analog input to speaker output		43.8dB – 19.8dB, 0.1dB step		43.8dB – 19.8dB, 0.1dB step		43.8dB – 19.8dB, 0.1dB step	
Input Sensitivity	RL = 8Ω Analog input to speaker output		0.0dBu – 24.0dBu, 0.1dB step		-1.4dBu – 22.6dBu, 0.1dB step		-2.6dBu – 21.4dBu, 0.1dB step	
SN Ratio	20Hz – 20kHz, DIN AUDIO	Analog input to speaker output (Input sensitivity = +24dBu)	103dB		102dB		101dB	
		AES/EBU input to speaker output	108dB		107dB		106dB	

All Models			
THD + N	1kHz, half power	RL = 4Ω, 8Ω	≤0.2%
		RL = 2Ω	≤0.4%
Intermodulation Distortion	60Hz : 7kHz, 4 : 1, Half power (*2), RL = 4Ω, 8Ω		≤0.25%
Frequency Response	RL = 8Ω, Po = 1W, 20Hz – 20kHz		+0dB, -1.0dB
Channel Separation	Att. max, half power (*3), RL = 8Ω, 1kHz, input 600Ω shunt		65dB
Damping Factor	RL = 8Ω, ≤100Hz		>300
Maximum Input Level			+24dBu (*4)
Attenuation			0dB – -80dB, -∞dB (0.5dB step)
Input Impedance			20kΩ (balanced), 10kΩ (unbalanced)
A/D, D/A Converter			24-bit
Sampling Frequency			96k, 88.2k, 48k, 44.1kHz
Signal Processing			32bit DSP
Signal Delay	Analog input to speaker output	fs = 96kHz	729us
		fs = 48kHz	1.13ms
	AES/EBU input to speaker output	fs = 96kHz	708us
		fs = 48kHz	1.02ms
	Analog input to AES/EBU output	fs = 96kHz	396us
		fs = 48kHz	583us
	AES/EBU input to AES/EBU output	fs = 96kHz	365us
		fs = 48kHz	479us
	AES/EBU input to AES/EBU though output		0.04us
Controls	Front panel		POWER switch (push ON / push OFF), Rotary encoder x 2, Function button x 4, HOME button x 1, EXIT button x 1, ENTER button x 1, Mute button x 2

Connectors	Analog input	In	XLR-3-31 type x 2
		Thru	XLR-3-32 type x 2
	AES/EBU input/output	In	XLR-3-31 type x 1 (2 channels, 24-bit 96kHz – 44.1kHz)
		Thru	XLR-3-32 type x 1 (2 channels)
		Out	XLR-3-32 type x 1 (2 channels, 24-bit 96kHz – 44.1kHz)
	Speaker output		Neutrik® Speakon® NL4 x 2, 5-way binding post x 2 pairs
	Ethernet		RJ45 x 1
	Fault output		Euroblock connector (3P) x 1
Indicators	LCD		160 x 64 Full dot type
	LED	POWER	x 1 (White)
		STANDBY	x 1 (Orange)
		PARALLEL	x 1 (Orange)
		BRIDGE	x 1 (Green)
		PROTECTION	x 1 (Red)
		NETWORK	x 1 (Green)
		IDENTIFY	x 1 (Blue)
		SIGNAL	x 1 (Green)
		CLIP	x 1 (Red)
		ALERT	x 1 (Orange)
		MUTE	x 2 (Red)
Load Protection			POWER switch ON / OFF mute
			DC-fault : Amplifier shuts down automatically
			Clip limiting : THD ≥ 0.5%
Amplifier Protection			Thermal : Mute the output (heatsink temp ≥ 90˚C) (return automatically.)
			VI limiter(RL ≤ 1Ω) : Limit the output
Power Supply Protection			Thermal : Amplifier shuts down automatically. (heatsink temp ≥ 100˚C)
Cooling			Variable speed fan : x 2
Power Requirements			U.S./Canada: 120V, 60Hz Korea: 220V, 60Hz China: 220V, 50Hz Other: 220V-240V, 50/60Hz
Power Consumption			TX6n: 1800W, TX5n: 1600W, TX4n: 1500W
Power Cord Length			1.5m
Dimensions (W x H x D)			480mm x 88mm x 461mm; 18-7/8" x 3-7/16" x 18-1/8"
Weight			16kg; 35.3lbs
Operation free-air Temperature Range			0˚C to +40˚C
Storage Temperature Range			-20˚C to +60˚C
Accessory			Handle x 2 (with flat-head screw x 4), Euroblock connector (3P) x 1, Rubber Feet x 4, Owner's Manual

(*1) Output power depends on the power supply voltage. These figures are based on 230V.
If the power supply voltage is 220V, output power will be about 8% less than the power shown in the table. Output power will be about 7% more in case of 240V.
(*2) 1/8 power = 9dB below rated power
(*3) Half power = 3dB below rated power
(*4) 0dBu = 0.775Vrms

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MEMO

MEMO

注意事项

请在操作使用前，首先仔细阅读下述内容

*** 请将本说明书存放在安全的地方，以便将来随时参阅。**

⚠ 警告

为了避免因触电、短路、损伤、火灾或其它危险可能导致的严重受伤甚至死亡，请务必遵守下列基本注意事项。这些注意事项包括但不限于下列情况：

电源 / 电源线

- 只能使用本设备所规定的额定电压。所要求的电压被印在本设备的铭牌上。
- 请勿将电源线放在热源如加热器或散热器附近，不要过分弯折或损伤电源线，不要在其上加压重物，不要将其放在可能被踩踏引起绊倒或可能被碾压的地方。
- 请务必连接到带有保护接地连接的适当电源插座。接地不当可能引起触电。

请勿打开

- 请勿打开本设备并试图拆卸其内部零件或进行任何方式的改造。本设备不含任何用户可自行修理的零件。若出现异常，请立即停止使用，并请有资格的 Yamaha 维修人员进行检修。

关于潮湿的警告

- 请勿让本设备淋雨或在水附近及潮湿环境中使用，或将盛有液体的容器放在其上，否则可能会导致液体溅入任何开口。如果任何液体如水渗入本设备，请立即切断电源并从 AC 电源插座拔下电源线。然后请有资格的 Yamaha 维修人员对设备进行检修。
- 切勿用湿手插拔电源线插头。

当意识到任何异常情况时

- 若电源线出现磨损或损坏，使用设备过程中声音突然中断或因此而发出异常气味或冒烟，请立即关闭电源开关，从电源插座中拔出电源线插头，并请有资格的 Yamaha 维修人员对设备进行检修。
- 若本设备发生摔落或损坏，请立即关闭电源开关，从电源插座中拔出电源线插头，并请有资格的 Yamaha 维修人员对设备进行检修。

⚠ 小心

为了避免您或周围他人可能发生的人身伤害、设备或财产损失，请务必遵守下列基本注意事项。这些注意事项包括但不限于下列情况：

电源 / 电源线

- 当准备长期不使用本设备或发生雷电时，请从电源插座中拔出电源线插头。
- 当从本设备或电源插座中拔出电源线插头时，请务必抓住插头而不是电源线。直接拽拉电源线可能会导致损坏。

安放位置

- 移动设备之前，请务必拔出所有的连接电缆。
- 设置设备时，请确认要使用的交流电源插座伸手可及。如果发生问题或者故障，请立即断开电源开关并从电源插座中拔下插头。即使电源开关已经关闭，也会有最小的电流通向本产品。预计长时间不使用本产品时，请务必将电源线从 AC 电源插座拔出。
- 如果在 EIA 标准托架中安装设备，请仔细阅读第 6 页上的“用托架安装设备时的注意事项”。通风不畅可能导致过热，并可能损坏设备、引发故障，甚至引起火灾。
- 请勿在禁闭的通风不佳位置使用本设备。若需要在很小空间中而非在 EIA 标准托架中使用本设备，请务必保证本设备与周围墙壁或其他设备之间具有足够的空间。两侧至少 10cm，后面至少 15cm，上面至少 40cm。通风不畅可能导致过热，并可能损坏设备，甚至引起火灾。
- 为了避免操作面板发生变形或损坏内部组件，请勿将本设备放在有大量灰尘、震动、极端寒冷或炎热 (如阳光直射、靠近加热器或烈日下的汽车里) 的环境中。
- 请勿将本设备放在不稳定的地方，否则可能会导致突然翻倒。
- 请勿堵塞通风孔。本设备在正面 / 背面都有通风孔，用以防止设备内部温度过高。特别要注意不要侧面或上下颠倒放置本设备。通风不畅可能导致过热，并可能损坏设备，甚至引起火灾。
- 请勿在电视机、收音机、立体声设备、手机或其他电子设备附近使用本设备。这可能会在设备本身以及靠近设备的电视机或收音机中引起噪音。

连接

- 将本设备连接到其它设备之前，请关闭所有设备的电源开关。在打开或关闭所有设备的电源开关之前，请将所有音量都调到最小。
- 将扬声器连接到扬声器插口时，只能使用扬声器电缆。使用其它种类的电缆可能会导致火灾。
- 不要将设备置于可能接触腐蚀性气体或含盐份的空气中。否则可能会导致设备的故障。

维护保养

- 检查冷却风扇空气过滤网并定期清洁 (参见参考手册 (PDF 文件))。灰尘或脏物可能会严重降低冷却风扇的效率，进而导致故障或火灾。
- 清洁设备时，请从 AC 电源插座拔出电源插头。

小心操作

- 打开音频系统的交流电源时，请始终最后打开本设备，以避免损坏扬声器。同样，关闭电源时，请首先关闭本设备。
- 由于环境温度快速、剧烈的变化（例如，将设备从一个位置移动到另一个位置，或者打开或关闭空调时），可能会导致设备内发生结露。出现结露时使用本机可能会造成设备损坏。如果有理由相信可能已经发生了结露，将设备的电源关闭并停止使用数小时，直到结露完全干燥为止。
- 请勿将手指或手插入本设备的任何间隙或开口（通风口、端口等）。
- 请避免在设备上的任何间隙或开口（通风口、端口等）插入或落进异物（纸张、塑料、金属等）。万一发生这种情况，请立即关闭电源开关，从 AC 电源插座中拔出电源插头。然后请有资格的 Yamaha 维修人员进行检修。
- 请勿长时间持续在很高或不舒服的音量水平使用本设备或耳机，否则可能会造成永久性听力损害。若发生任何听力损害或耳鸣，请去看医生。
- 请勿将身体压在本设备上或在其上放置重物，操作按钮、开关或插口时要避免过分用力。
- 请勿将本设备用于带动扩音器以外的其他目的。

备份电池

- 本设备带有内置备份电池，保证数据即使在关闭电源后也能保存在内部存储器中。备份电池的电量可能耗尽，发生该种情况时，内部存储器中保存的内容会丢失。* 为防止数据的丢失，请确保在电量完全耗尽之前更换备份电池。备份电池的电量极低需要更换时，操作过程中或开机时显示屏会出现“Critical Battery”（缺少电池）或“No Battery”（无电池）的提示信息。如果其中任何一种信息出现，请不要关闭设备，要马上将数据保存到计算机或其他外接存储设备，然后请具备资质的 Yamaha 服务商更换备份电池。根据操作情况，内部备份电池的平均寿命大约为 5 年。

  * 备份电池支持的内部存储器中所保存的数据项目如下：
    - 当前场景参数和编号。
    - 设备参数 (Utility、 AnalogInputMeter、 SpeakerOutmeter 等)。
    - Event 日志。

  上述数据以外的数据项目保存在无需备份电池供电的存储器中，即使备份电池电量耗尽，也能正常保存。

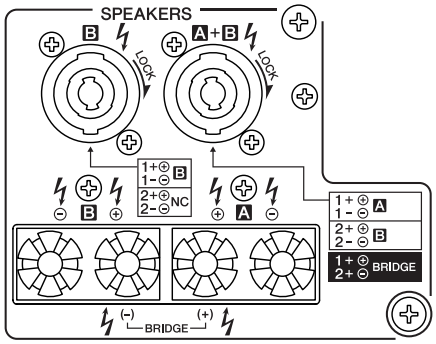
XLR 型插口应按下图所示进行布线 (IEC60268 标准): 针 1：地线，针 2：热线 (+) 和针 3：冷线 (-)。

连接 Speakon 接口时只能使用 Neutrik NL4 插头。

对由于不正当使用或擅自改造本设备所造成的损失、数据丢失或破坏， Yamaha 不负任何责任。

当不使用本设备时，请务必关闭其电源。

经常动态接触的零部件，如开关、控制旋钮、接口等，随着时间的推移，其性能会逐渐下降。请让有资格的 Yamaha 维修服务人员为您更换有缺陷的零部件。



此 ϟ 符号表示端子带电，有危险。
将外部导线连接到此端子时，必须由 “接受过相关操作指导的人员”进行连接，或导线经过加工，使其连接简便而不会发生问题。

(hazardous)

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欧洲型号

购买者 / 用户信息在 EN55103-1 和 EN55103-2 中说明。

突入电流：17 A

符合环境标准：E1、 E2、 E3、 E4

目录

随机附件

- 使用说明书
- 两个把手
- 四个平头螺丝
- Euroblock 连接头 （ 3P ）
- 四个橡胶脚垫

用托架安装设备时的注意事项

本设备可以在 0-40 ℃的环境温度范围内正常操作。如果只将本设备安装在 EIA 标准托架中，则可以安装多台设备而无需在设备之间留出空间。如果将本设备连同其它类型的设备一起安装在 EIA 标准托架中，其它设备产生的热量可能会造成托架内部环境温度升高，从而导致本设备无法正常工作。为确保本设备内部不会积聚热量，将其安装在托架中时必须遵守下列条件。

- 如果将本设备与其它发热设备（如其它公司生产的功率放大器）一起安装到托架中，必须在本设备和其它设备间留出 1U 或更大的空间。还应该在此空间安装通风面板或保持其开放通畅以确保足够的通风效果。
- 使托架的背面保持打开，并使托架与墙壁或天花板间留出 10 cm或更大的距离以确保足够的通风效果。如果无法使托架的背面保持打开，则必须在托架上安装市售的风扇组件或强制空气循环系统。如果已安装了风扇组件，则将托架背面关闭可能会达到更好的冷却效果。有关详细信息，请参见托架系统或风扇组件附带的操作说明。

前言

感谢您购买 Yamaha TX6n、TX5n、TX4n 功率放大器。为了充分利用 TX6n/TX5n/TX4n（TXn）的功能并确保顺畅的操作，请在使用之前仔细阅读本使用说明书。阅读本说明书后，请将其存放在安全的地方以备将来参阅。

特点

TXn系列功率放大器采用Yamaha著名的DSP和数字音频联网技术，具有高音频质量、高效率、高可靠性和低阻抗驱动的特点。

■ 对模拟和数字音频格式的灵活支持

除了可以进行双通道模拟输入外，该系列放大器还在MY卡插槽中装有AES/EBU卡，这样就可以进行数字信号的输入和输出。在MY插槽中还可以安装另售的MY卡以支持各种数字音频格式。

■ 从Amp Editor 进行监听和控制

通过连接安装有 “Amp Editor”应用程序软件的计算机，就可以将该计算机用于监听TXn和控制TXn设备，例如：切换功率放大器的电源关/开和静音状态。也可以从TXn设备的面板执行这种监听和控制操作。

■ 多种音箱处理

由于内置了如均衡器、延迟和分频器的信号处理器，大大减少了外部设备的使用。可以通过TXn的面板和Amp Editor来控制这些信号处理器。另外，还可以使用在Yamaha DME系列或SP2060上创建的音箱处理器数据库。

关于安装

■ 安装把手

使用附赠的平头螺丝将把手安装到功率放大器。

请按照以下步骤安装把手：

1. 拆下机架上的支架。
2. 将平头螺丝插入把手上的四个螺丝孔，然后拧紧到功放上。
3. 将支架重新安装在机架上。

■ 在机架中调整功放的位置

如果功放背部和机架之间没有足够的空间，可以调整机架中支架的位置，让功放前面板突出在机架之外22mm。

相关说明书和软件

本说明书主要对安装时如何设置TXn进行了说明。可以从下列网站下载含有TXn和Amp Editor详细说明的说明书以及Amp Editor。

http://www.yamahaproaudio.com/

• 相关说明书列表

TX6n/5n/4n参考手册	提供TXn面板操作的详细说明等。
Amp Editor安装指南	对Amp Editor的安装和卸载步骤进行说明。
Amp Editor使用说明书	对如何使用Amp Editor进行说明

注 • 要想查看下载的说明书，必须在计算机上安装Adobe Reader。如果没有Adobe Reader，请访问以下的Adobe公司网站，下载Adobe Reader（免费）。

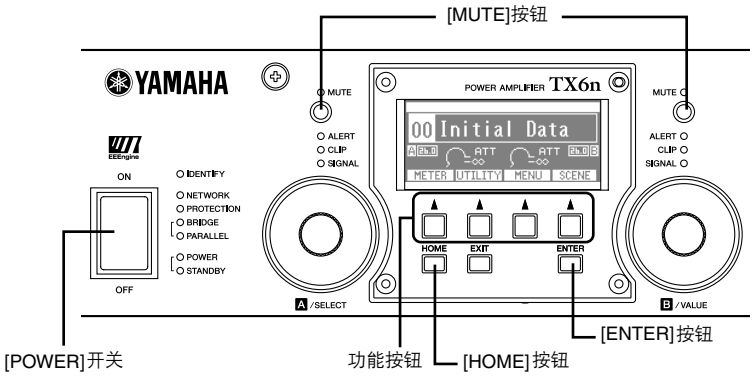
http://www.adobe.com/

固件升级

可以从TXn的面板和Amp Editor查看TXn自身的固件版本。 可以通过Amp Editor来升级固件。有关升级步骤，请参见Amp Editor使用说明书。
可以从下列网站的 “下载”页面上下载最新的固件。

http://www.yamahaproaudio.com/

准备



连接AC电源线

小心

- 在连接AC主电源前，请务必关闭所有的设备。

将插头插入AC插座。务必使用设备指定电压的AC插座。

打开和关闭电源

小心

- 为了防止初始开机电涌产生较大的噪声尖峰信号或损坏您的音箱系统，请按照以下顺序开启设备的电源：音频源、调音台（如**M7CL**或**PM5D**），最后打开功率放大器。关闭电源时请将该顺序颠倒执行。

1. **将前面板的[POWER]开关按到“ON”位置打开电源。**

2. **将[POWER]开关按到 “OFF”位置关闭电源。**

注

- 关闭电源时所做设置会被记忆。当您打开TXn的电源时，机器的开始状态为同样的设置。您可使用“Last Mem. Resume”设置对TXn进行设定，使其在开机时调用关机前所选择的场景编号。

小心

- 显示屏的上部显示 “**Do Not Turn Off!**”时，请勿关闭电源，否则，可能会发生故障。

小心

- 即使电源开关已关闭，仍会残余少量电流。若将长时间不使用本设备，请务必从**AC**插座上拔下电源插头。

在关和开之间切换电源的状态

1. **按住面板[HOME]按钮至少三秒钟。**

TXn的显示屏将显示HOME屏幕，随后将出现“Turning power on: Are you sure?”（打开电源：确定吗？）或 “Going Standby: Are you sure?”（进入待机：确定吗？）信息。

2. **按面板的[ENTER]按钮，电源状态将在关和开之间切换。**

注

- Standby（待机）是一种音箱输出放大模块为关闭的状态（音箱输出模块以外的其它模块依旧工作）。

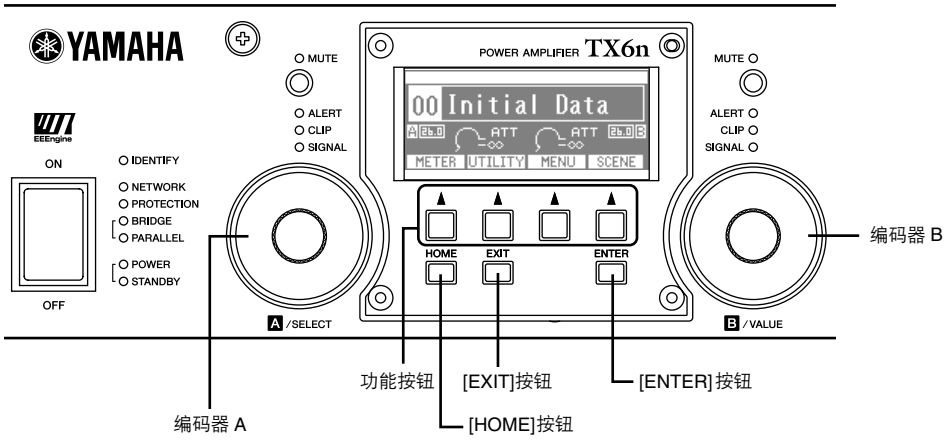
切换静音的开/关

按住想要静音通道的[MUTE]按钮至少一秒钟。

通道的输出将被静音，并且[MUTE]指示灯将亮起。

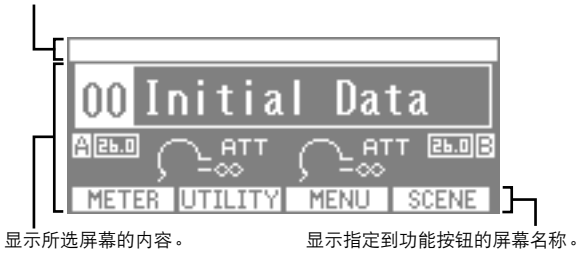
若要关闭静音，再次按[MUTE]按钮至少一秒钟。

面板操作



关于显示屏

发生问题或出现用户指定事件时，显示警告信息。



显示所选屏幕的内容。

显示指定到功能按钮的屏幕名称。

切换屏幕

通过按功能按钮就可以移动到该按钮上所指示的屏幕。通过按[HOME]按钮可以移动到HOME屏幕。通过按[EXIT]按钮可以移动到上一级屏幕。

编辑参数

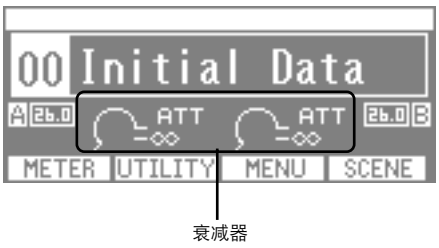
使用编码器 A和B移动到想要编辑的参数，然后使用编码器 B 编辑值。

注 • 在UTILITY屏幕中编辑参数时，完成编辑后按[ENTER]按钮进行确认。未经确认的参数将闪烁。如果没有确认参数就移动光标或移动到其它屏幕，所做的更改将不会被应用。

调整衰减器

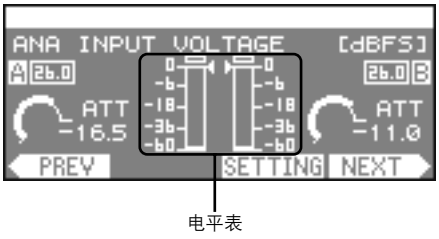
显示屏显示衰减器时 （即，在HOME屏幕或METER屏幕中），可以使用编码器 A和B调整各个通道的衰减。

注 • 如果显示屏显示的是HOME或METER之外的屏幕，则编码器 A和B用于设置参数。



显示电平表

若要显示电平表，进入HOME屏幕，然后按最左边的功能按钮 （METER）。使用最左边的功能按钮 （PREV）和最右边的功能按钮 （NEXT）可以更改电平表类型。



可通过面板执行的操作

注 • 有关详细信息，请参见TX6n/5n/4n参考手册。

类别	子类别		说明
METER	ANA INPUT VOLTAGE		显示来自模拟输入接口的输入电平。
	SLOT INPUT VOLTAGE		显示来自插槽的输入电平。
	SP OUTPUT VOLTAGE		显示来自[SPEAKERS]接口的输出电平。
	SP OUTPUT POWER		显示来自[SPEAKERS]接口的输出功率。
	SP OUTPUT IMPEDANCE		显示来自[SPEAKERS]接口的输出阻抗。
	SLOT OUTPUT METER		显示至插槽的输出电平。
	THERMAL		显示散热器温度。
UTILITY	Device Setup		进行能够在网络上区分出放大器的设置。
	Word Clock Setup		设置字时钟。
	Information		显示有关放大器的信息。
	Network Setup		指定IP地址和在网络中使用放大器的其它设置。
	LCD Setup		指定显示设置。
	Front Panel Operation		打开/关闭面板操作锁定。
	Scene Setup		进行场景*设置。
	Misc Setup		设置放大器的内部时钟等。
MENU	General	Sensitivity/Amp Gain	设置输入灵敏度/增益。
		Stereo/Bridge/Parallel	指定放大器的模式（Stereo/Bridge/Parallel）。
		Attenation Link	指定是否在通道A和B之间链接衰减器操作。
		Input Redundancy	指定冗余连接模式等。
	Signal Path		进行均衡器、延迟、分频器和其它处理音频信号效果器的设置。也可以调用音箱处理器数据库。
	Signal Chain	Analog Input Signal Chain	进行设置以检查音频信号是否从模拟接口正确输入。
		Slot Input Signal Chain	进行设置以检查音频信号是否从插槽正确输入。
		Output Signal Chain	进行设置以检查从[SPEAKERS]接口输出的状态。
	Calibration	Calibrate by Pilot Tone	使用导频音测量所连接音箱的阻抗。
		Calibrate by Program Source	使用音频信号测量所连接音箱的阻抗。
	Limiter	Voltage Limiter	进行限制器的设置。
		Power Limiter	
		Limiter Gain Reduction	指定是否在通道A和B之间链接限制器。
SCENE	Recall		调用场景*。
	Store		储存场景*。
	Edit		编辑场景*。
	Clear		清除场景*。

*场景 .....上述设置，如电源关/开或静音（UTILITY除外），被成为 “场景”。通过调用场景，所保存的设置可以被立即应用到放大器。

音频I/O设置

可以用三种音频输入/输出模式之一操作TXn：Stereo模式、 Parallel模式，或Bridge模式。如下进行音频输入/输出连接和设置。

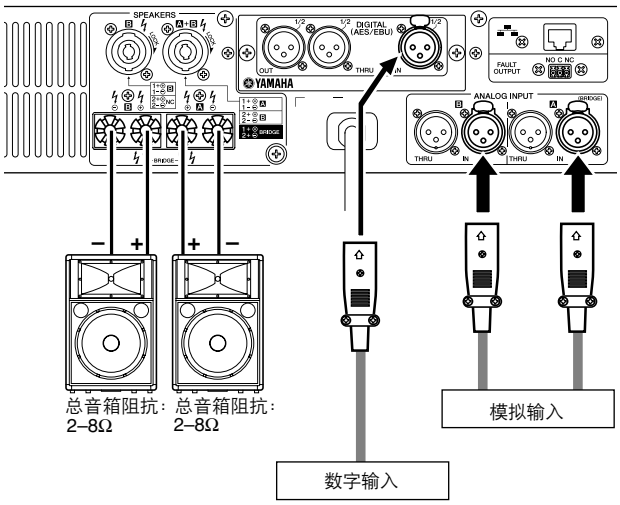
注 • 根据出厂设置，如果模拟和数字（从插槽输入）信号同时输入，两种信号将被混合并输出。可以从TXn的面板或通过Amp Editor更改此设置。有关进行此设置的详细信息，请参见 “TX6n/5n/4n参考手册”或 “Amp Editor使用说明书”。

• 为数字音频连接使用110-ohm AES/EBU数字电缆。使用模拟电缆可能会降低声音质量。

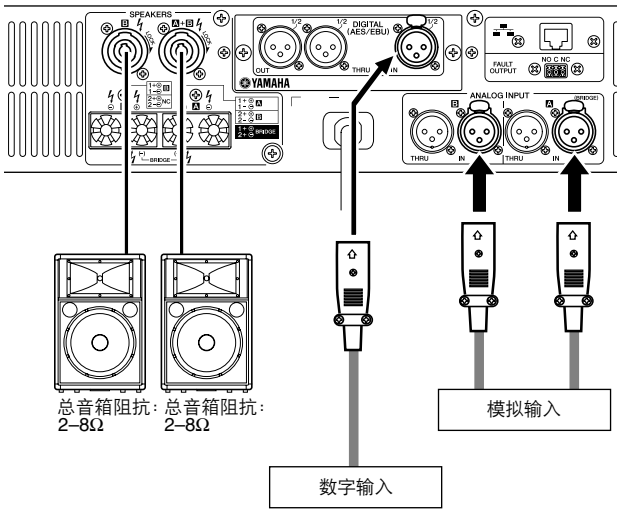
Stereo模式

在立体声中，通道A和B （模拟）或通道1和2 （数字）将独立操作。

5路接线柱接口



Speakon接口

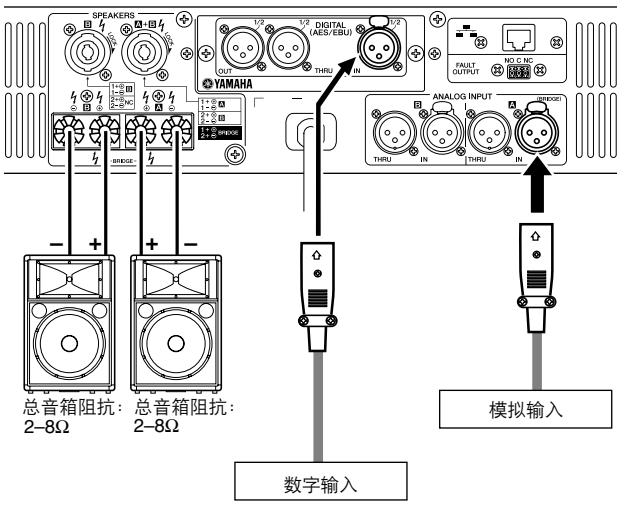


注 • 各个5路接线柱接口和Speakon接口在内部是并联的。同时使用这两种接口时，每个接口的总音箱阻抗必须为4–16Ω。

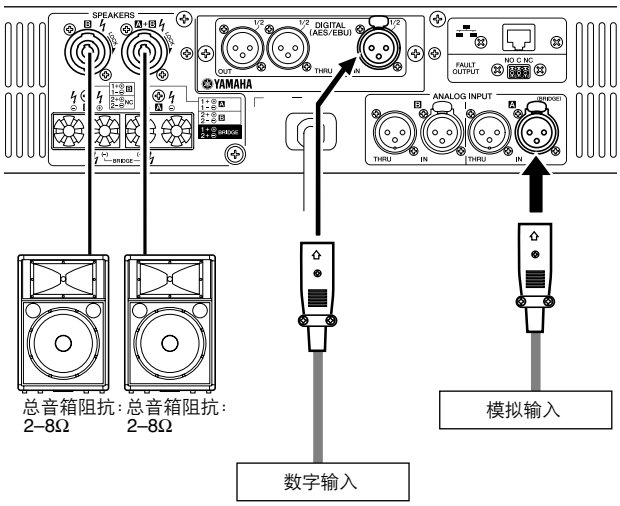
Parallel模式

将通道A （模拟）或通道1 （数字）的输入信号作为信号源时，放大器将被用作双通道单音放大器。通道B （模拟）和通道2 （数字）不会被使用。

5路接线柱接口



Speakon接口

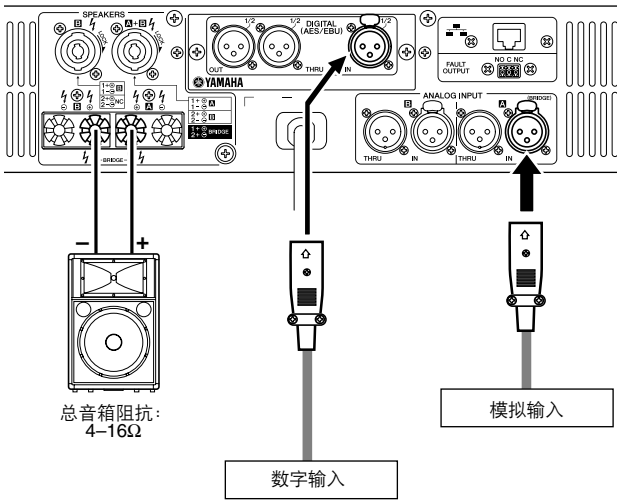


注 • 各个5路接线柱接口和Speakon接口在内部是并联的。同时使用这两种接口时，每个接口的总音箱阻抗必须为4–16Ω。

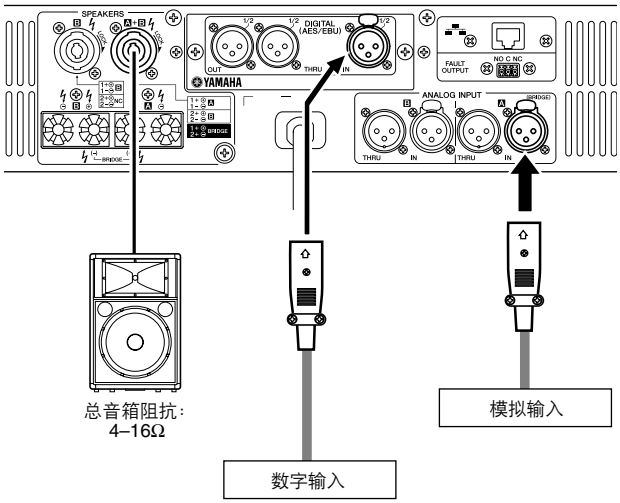
Bridge模式

将通道A （模拟）或通道1 （数字）的输入信号作为信号源时，放大器将被用作单音高功率放大器。

5路接线柱接口



Speakon接口

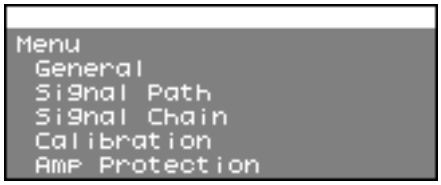


注 • 各个 5路接线柱接口和 Speakon接口在内部是并联的。同时使用这两种接口时，每个接口的总音箱阻抗必须为 8-32Ω。

模式设置

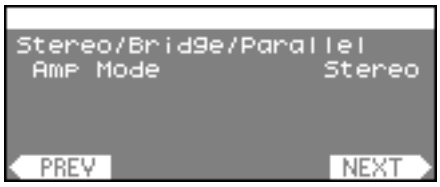
请根据所进行的连接类型选择功率放大器模式。

1. **按[HOME]按钮进入HOME屏幕，然后按从左边数第三个功能按钮（MENU）进入MENU屏幕。**



2. **使用编码器A将光标 （闪烁边框）移动到“General”，然后按[ENTER]按钮。**

3. **使用功能按钮 （PREV/NEXT）进入Stereo/Bridge/Parallel屏幕。**



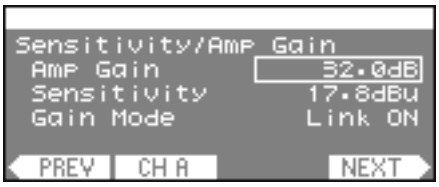
4. **使用编码器B选择所需的模式，然后按[ENTER]按钮进行确认。**

增益设置

设置放大器增益。

1. **根据上述 “模式设置”中步骤1和2的说明选择“MENU”→ “General”。**

2. **使用功能按钮 （PREV/NEXT）进入Sensitivity/Amp Gain屏幕。**



3. **使用编码器A将光标移动到Amp Gain或Sensitivity，然后用编码器B编辑参数值。**

4. **如果参数值闪烁，按[ENTER]按钮确认数值。**

注 • 有关增益的详细信息，请参见TX6n/5n/4n参考手册。

字时钟设置

如果想要输入或输出数字音频信号，必须根据需要检查字时钟设置。有关如何检查这些设置的详细信息，请参见TX6n/5n/4n参考手册。出厂设置为 “Auto Scan Mode: ON”。

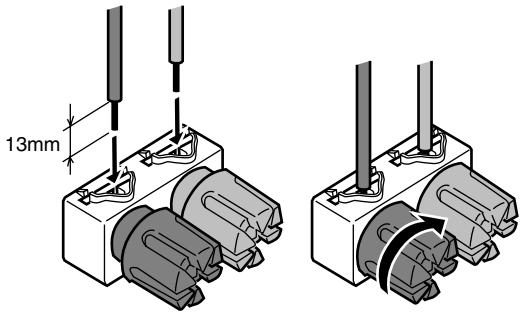
[SPEAKERS]接口的接线

将外接设备连接到TXn前，请关闭POWER开关。

5路接线柱接口

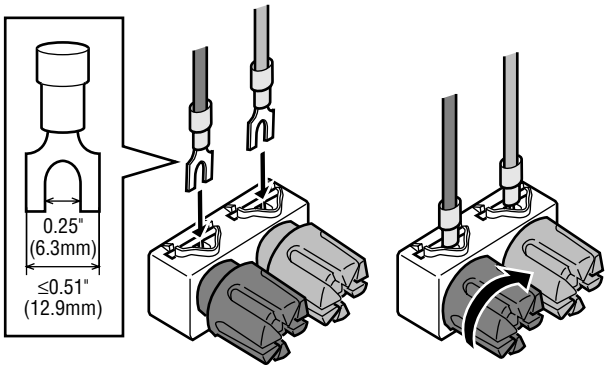
无插头

在每根音箱电缆端部，剥掉13mm长的绝缘层，将裸线部分穿过音箱的相应端子孔中。拧紧端子直到紧紧夹住电线。请勿让裸露的电线头伸出端子孔并碰到底盘。



Y插头

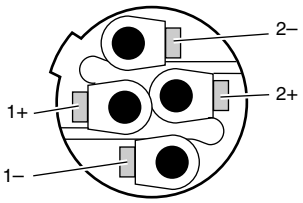
将Y插头从上面完全插入到开口中，并拧紧端子。



Speakon接口

将Speakon电缆插头（Neutrik NL4）插入接口中，然后向右转动将其锁定。

Neutrik NL4插头



通道 A

Stereo/Parallel模式

Neutrik	功率放大器
1+	A+
1–	A–
2+	B+
2–	B–

Bridge模式

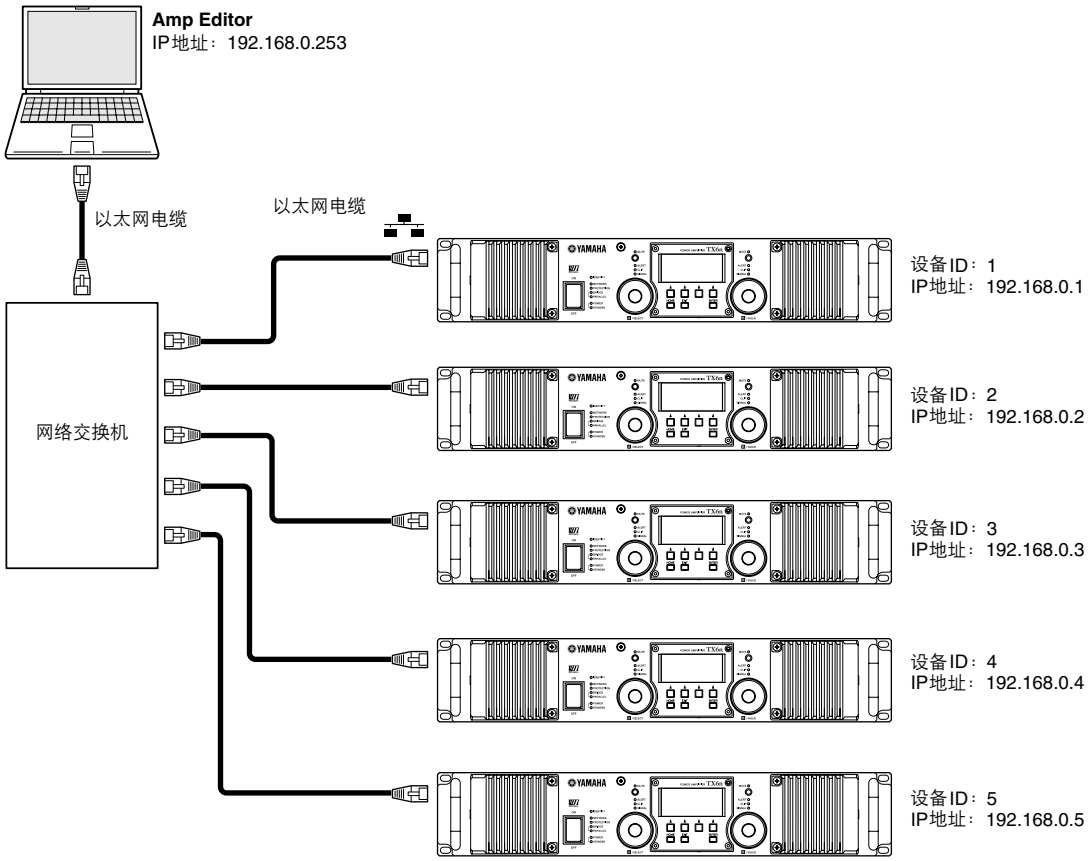
Neutrik	功率放大器
1+	+
1–	
2+	–
2–	

通道 B

Neutrik	功率放大器
1+	B+
1–	B–

网络连接示例

如果通过以太网电缆将TXn设备的[NETWORK]接口连接到计算机，就可以从Amp Editor监听/控制TXn设备。包括计算机和其它设备在内，在一个网络中总共可以最多连接253台设备。



注
- 如果想要连接多台TXn设备，请使用支持100Base-TX/10Base-T的网络交换机。
- 网络交换机和TXn间的以太网电缆最长可为100米。由于电缆的质量和网络交换机的性能差异，在某些情况下无法保证在最大长度时的正常运行。
- 因为TXn支持自动MDI/MDI-X，它将自动检测所连接的缆线是直接连接还是交叉连接类型的，并且会自动优化连接。因此，您可以使用直接和交叉连接的缆线。
- 为防止电磁干扰，请使用STP（屏蔽双绞）电缆。
- 有关要在网络中使用TXn所进行的TXn初始设置的信息，请参见Amp Editor的安装指南和使用说明书。

故障排除

症状	可能原因	对应措施
音箱不发声	没有正确连接电缆	正确连接音频输入插口和音箱输出插口。
	增益或衰减器设置降低了电平	通过MENU屏幕 → General → Sensitivity/Amp Gain调整增益。通过在HOME屏幕中转动编码器调整衰减器。
	打开了[MUTE]按钮	如果前面板上的[MUTE]指示灯亮起，按住[MUTE]按钮一秒钟或更长以取消静音。
	保护电路操作，输出被静音	如果放大器过热，请清洁过滤网滤芯并改善放大器周围的通风效果。如果电源发生故障，请联系Yamaha经销商。
音箱发出噪音	来自插槽输入的字时钟未与主时钟同步。	将来自插槽的字时钟选择作为主时钟，或者将Auto Scan Mode设为ON。
	模拟输入电平超过了输入灵敏度设置。	根据输入电平调整MENU屏幕 → General → Sensitivity/Amp Gain设置。
显示警告信息	放大器故障或发生了其它有关放大器音频的警告事件。	有关各警告信息的含义以及所应采取相应措施的详细信息，请参见Amp Editor使用说明书。
不能应用面板操作	设备被锁定	请参见TX6n/5n/4n参考手册中的 “Front Panel Operation”。
可以保存但是无法调用场景	将Scene Recall Enable设为了OFF	将UTILITY 屏幕 → Scene Setup → Scene Recall Enable的设置设为ON。
可以调用但是无法保存数据库	无法从TXn前面板保存数据库数据。	从Amp Editor保存数据库数据。
在TXn中保存的所有场景数据消失	正在保存TXn的数据时电源关闭。	如果在Amp Editor中保存了项目，将Amp Editor同步到TXn。
返回到默认参数值	–	调用场景00（默认设置场景）会将除UTILITY设置中参数外的其它所有参数返回到其默认值。TXn允许您编辑各种参数，但是将参数值返回到默认参数值时也可以将其用作模拟放大器。主要参数的默认值为：放大器模式：STEREO，增益：26dB，衰减：-∞dB。 有关场景的详细信息，请参见TX6n/5n/4n参考手册。

初始化内存

可以初始化功率放大器的内存。根据需要，可以初始化下列两种类型的数据。
- **User Data**：初始化除事件日志和音箱处理器数据库外的所有用户数据。
- **Library**：仅初始化音箱处理器数据库。

小心
- 初始化内存后，已存储的设置将丢失。使用下列步骤时要小心。

1. **关闭TXn的电源。**

2. **按住[HOME]键的同时，打开电源；将出现Initialize屏幕。**

3. **使用编码器A选择想要初始化的数据，然后按[ENTER]按钮执行初始化。**

初始化完成后，功率放大器将自动重启。

小心
- 初始化期间，显示屏将显示信息 “**Do not turn off!**”，切勿在显示此信息时关闭放大器。

技术规格

一般规格

US：120V 国家机型
EU：220V-240V 国家机型

			TX6n		TX5n		TX4n	
			120V(US)	230V(EU) (*1)	120V(US)	230V(EU) (*1)	120V(US)	230V(EU) (*1)
输出功率	1kHz，THD + N = 1%	8Ω 每通道	1800W	1800W	1300W	1300W	1100W	1100W
		4Ω 每通道	3000W	3000W	2200W	2300W	1900W	2000W
		2Ω 每通道	2750W	2750W	2500W	2500W	2200W	2200W
		8Ω bridge	6000W	6000W	4400W	4600W	3800W	4000W
		4Ω bridge	5500W	5500W	5000W	5000W	4400W	4400W
	20ms 突发噪声	2Ω 每通道	2750W	2750W	2500W	2500W	2200W	2200W
		4Ω bridge	5500W	5500W	500W	5000W	4400W	4400W
	恒定电压线路		—		STEREO模式： 100V线路，1250W / 8Ω BRIDGE模式： 200V线路，2500W / 16Ω		—	
电压增益	Att. 最大， RL = 8Ω 模拟输入到音箱输出		43.8dB – 19.8dB， 步幅0.1dB		43.8dB – 19.8dB， 步幅0.1dB		43.8dB – 19.8dB， 步幅0.1dB	
输入灵敏度	Att. 最大， RL = 8Ω 模拟输入到音箱输出		0.0dBu – 24.0dBu， 步幅0.1dB		-1.4dBu – 22.6dBu， 步幅0.1dB		-2.6dBu – 21.4dBu， 步幅0.1dB	
信噪比	20Hz – 20kHz, DIN AUDIO	模拟输入到音箱输出（输入灵敏度＝+24dBu）	103dB		102dB		101dB	
		AES/EBU输入到音箱输出	108dB		107dB		106dB	
功率消耗	待机		20W		20W		20W	
	闲置		100W		100W		100W	
	1/8 功率（*2）， 2Ω/粉红噪声		1800W		1600W		1500W	

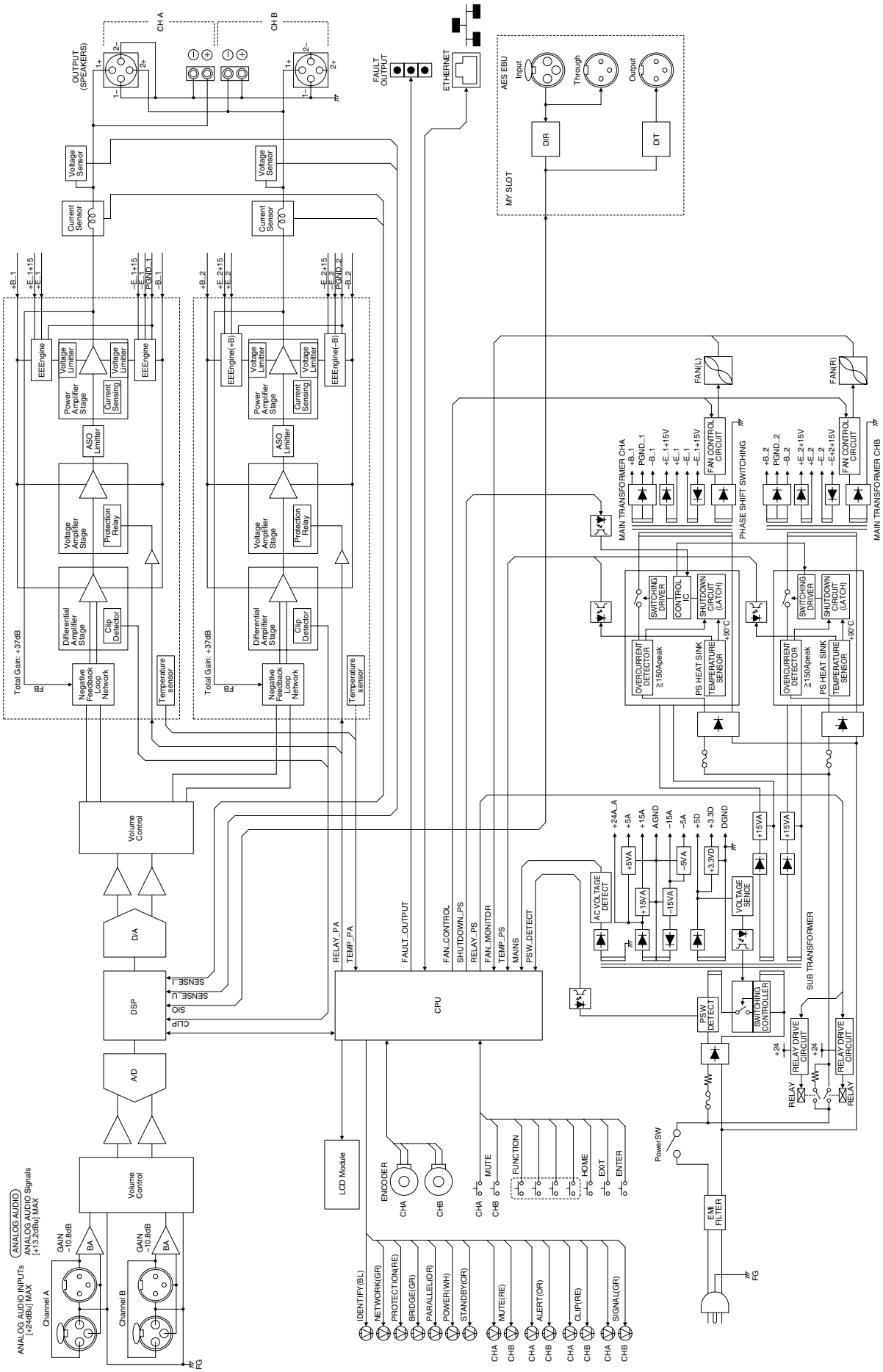
所有型号			
THD + N	1kHz，半功率	RL = 4Ω， 8Ω	0.2%
		RL = 2Ω	0.4%
互调失真	60Hz：7kHz， 4：1，半功率（*2）， RL＝4Ω， 8Ω		0.25%
频率响应	RL = 8Ω， Po = 1W， 20Hz – 20kHz	最大值	+0.5dB
		类型	0dB
		最小值	-0.5dB
相位响应	10Hz– 20kHz	类型	0˚
		最大值	9˚
通道分离	Att. 最大，半功率（*3）， RL = 8Ω， 1kHz，输入600 Ω分流		65dB
阻尼因子	RL = 8Ω， 1kHz		800
最大输入电压			+24dBu（*4）
衰减			0dB – -80dB，步幅0.5dB
输入阻抗			20kΩ（平衡式）， 10kΩ（非平衡式）
A/D， D/A转换器			24-bit 96kHz
DSP（数字信号处理）	用户处理，音箱处理		24-bit，定点DSP处理
	其它目的		32-bit，浮点DSP处理
信号延迟	模拟输入到音箱输出	fs = 96kHz	729us
		fs = 48kHz	1.13ms
	AES/EBU输入到音箱输出	fs = 96kHz	708us
		fs = 48kHz	1.02ms
	模拟输入到AES/EBU输出	fs = 96kHz	396us
		fs = 48kHz	583us
	AES/EBU输入到AES/EBU输出	fs = 96kHz	365us
		fs = 48kHz	479us
	AES/EBU输入到AES/EBU完全输出		40ns

控制按钮	前面板		POWER开关（按开/按关） 旋转编码器 x 2， 功能按钮 x 4， HOME按钮 x 1， EXIT按钮 x 1， ENTER按钮 x 1， MUTE按钮 x2
接口	模拟输入	输入	XLR-3-31型 x 2
		Thru	XLR-3-32型 x 2
	AES/EBU输入/输出	输入	XLR-3-31型 x 1 （2通道， 24-bit 96kHz – 44.1kHz）
		Thru	XLR-3-32型 x 1（2通道）
		输出	XLR-3-32型 x 1 （2通道， 24-bit 96kHz–44.1kHz）
	音箱输出		Neutrik® Speakon® NL4 x 2， 5路接线柱 x 2对
	以太网		RJ45 x 1
	故障输出		Euroblock 接口 （3P）x 1
指示器	LCD		160 x 64 点阵式显示屏
	LED	POWER	x 1（白）
		STANDBY	x 1（橙）
		PARALLEL	x 1（橙）
		BRIDGE	x 1（绿）
		PROTECTION	x 1（红）
		NETWORK	x 1（绿）
		IDENTIFY	x 1（蓝）
		SIGNAL	x 1（绿）
		CLIP	x 1（红）
		ALERT	x 1（橙）
		MUTE	x 2（红）
载荷保护			POWER开关ON/OFF静音
			DC故障：放大器自动关闭
			削波限制：THD ≥ 0.5%
功放保护			热保护：静音输出（散热器温度 ≥ 90℃） （自动返回。）
			VI 限制器（RL ≤ 1Ω）：限制输出
电源供电保护			热保护：放大器自动关闭。（散热器温度 ≥ 100℃）
冷却			可变速风扇：x 2
电源要求			US：120V (60Hz) EU：220V – 240V (50Hz / 60Hz)
电源线长度			1.5m
尺寸（宽×高×深）			480mm x 88mm x 461mm
重量			16kg
空气流通时的工作温度范围			0℃ 至 +40℃
贮藏温度范围			-20℃ 至 +60℃
附件			把手 x 2 （带平头螺丝 x 4）、Euroblock 接口 （3P）x 1，橡胶脚垫 x 4,使用说明书

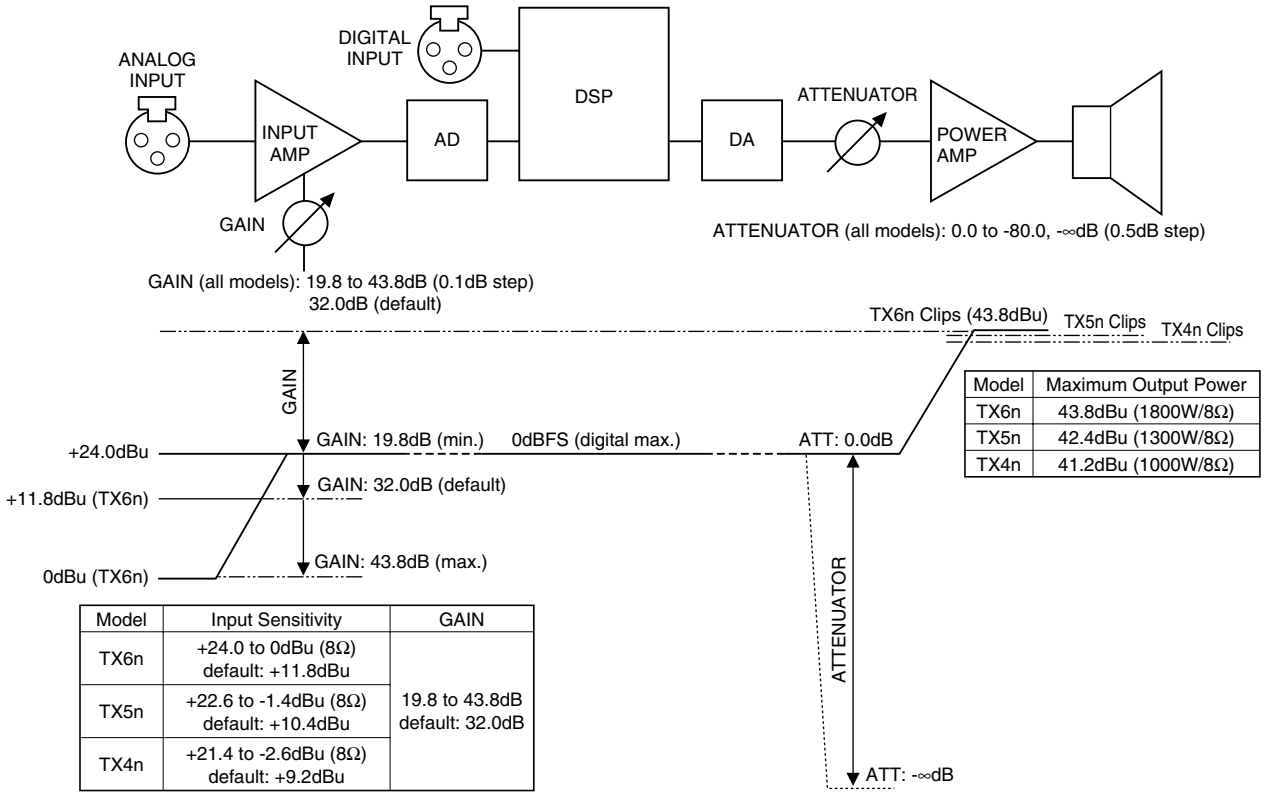
(*1) 输出功率因电源电压而异。这些数值均以230V为基础计算得出。
如果电源电压为220V，实际输出功率值可能会比表中所列数值低8%。如果电源电压为240V，实际输出功率可能会高出7%。
(*2) 1/8功率 = 额定功率9 dB以下
(*3) 半功率 = 额定功率3 dB以下
(*4) 0dBu = 0.775Vrms

商标声明：
Neutrik®、 Speakon®仅供参考，其为各自公司的财产。

Block Diagram



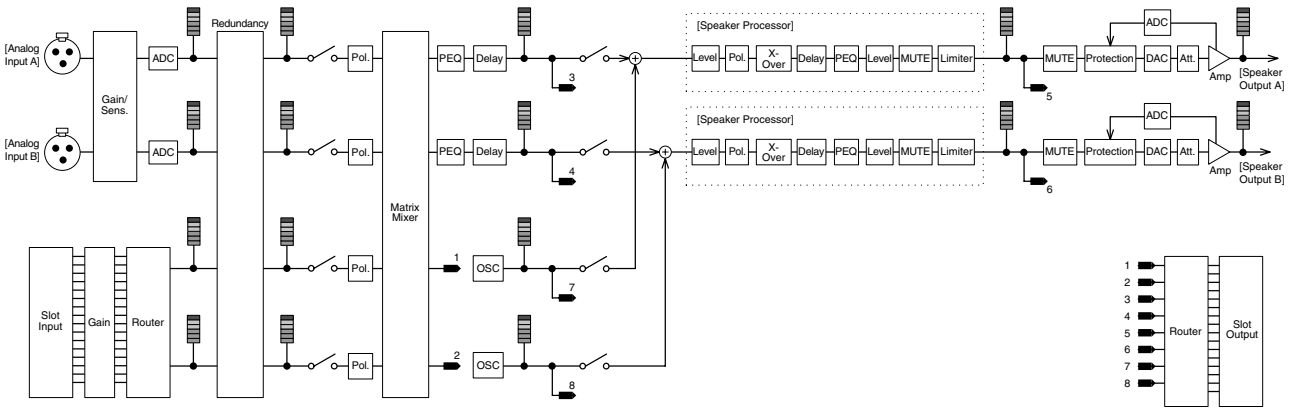
Level Diagram



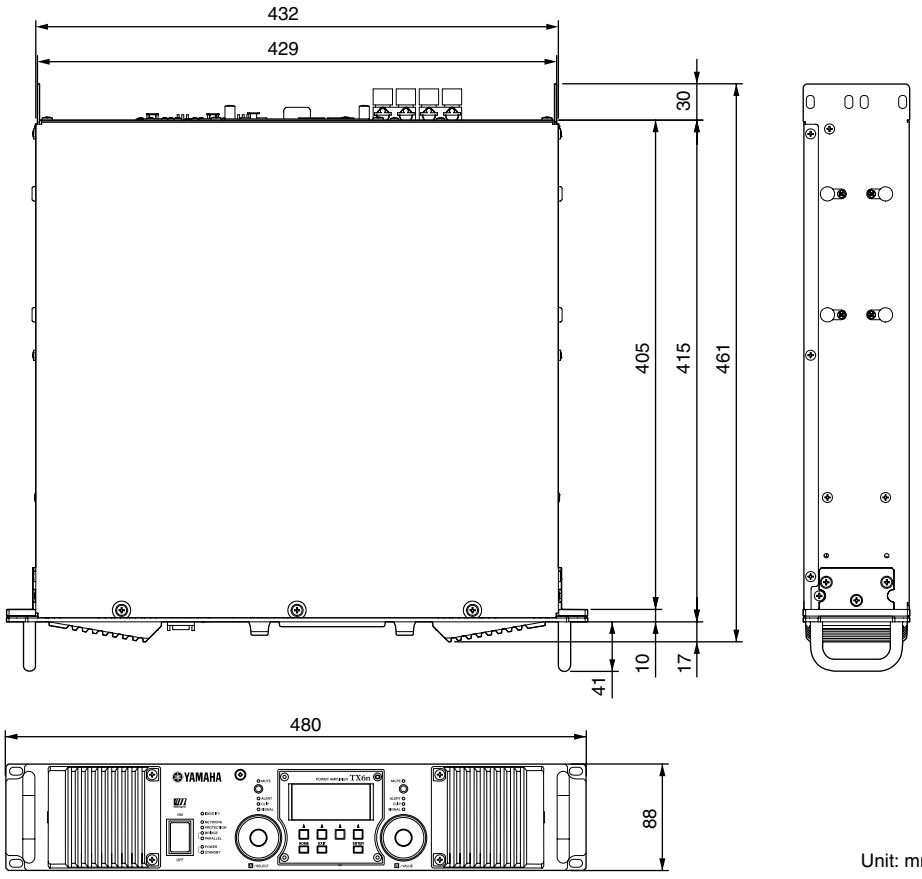
Model	Maximum Output Power
TX6n	43.8dBu (1800W/8Ω)
TX5n	42.4dBu (1300W/8Ω)
TX4n	41.2dBu (1000W/8Ω)

Model	Input Sensitivity	GAIN
TX6n	+24.0 to 0dBu (8Ω) default: +11.8dBu	19.8 to 43.8dB default: 32.0dB
TX5n	+22.6 to -1.4dBu (8Ω) default: +10.4dBu	
TX4n	+21.4 to -2.6dBu (8Ω) default: +9.2dBu	

DSP Block Diagram



Dimensions



Unit: mm

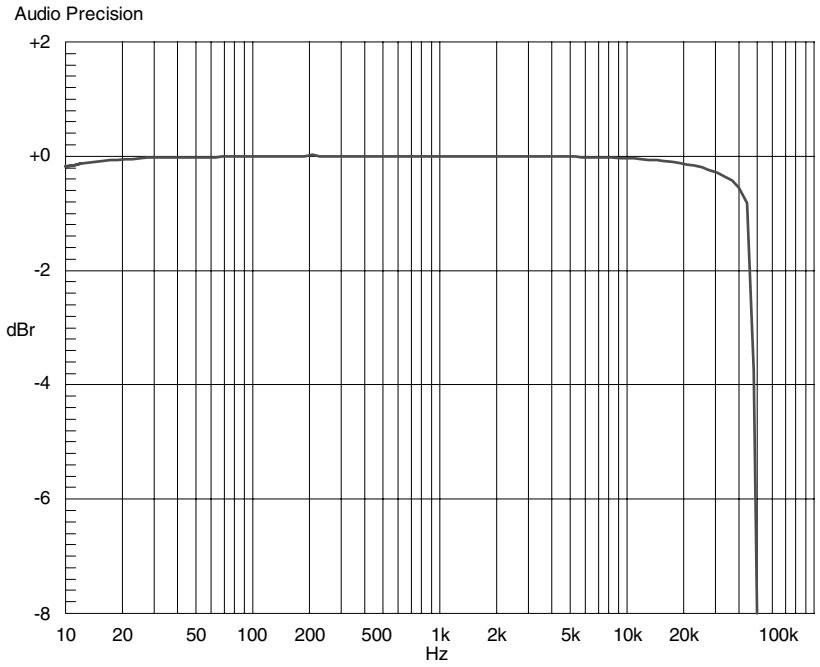
Current Draw

			Line Current (A)		Power (W)			Thermal Dissipation	
			100/120V	230/240V	In	Out	Dissipated	Btu/h	kcal/h
TX6n	standby		0.36	0.20	19	0	19	65	16
	idle		1.6	0.88	75	0	75	256	605
	1/8 power	8ohms/ch	13.7	7.5	833	425	408	1390	351
		4ohms/ch	19.2	10.6	1250	688	563	1920	484
		2ohms/ch	22.0	12.1	1432	688	745	2540	641
	1/3 power	8ohms/ch	26.9	14.8	1828	1133	695	2370	597
		4ohms/ch	40.4	22.2	2910	1833	1077	3670	926
		2ohms/ch	44.7	24.5	3216	1833	1383	4720	1190
TX5n	standby		0.36	0.20	19	0	19	65	16
	idle		1.6	0.9	75	0	75	256	65
	1/8 power	8ohms/ch	10.4	5.7	637	325	312	1070	269
		4ohms/ch	14.7	8.1	955	525	430	1470	369
		2ohms/ch	20.0	11.0	1302	625	677	2310	582
	1/3 power	8ohms/ch	20.6	11.3	1398	867	531	1810	457
		4ohms/ch	30.9	17.0	2222	1400	822	2810	707
		2ohms/ch	40.6	22.3	2924	1667	1257	4290	1080
TX4n	standby		0.36	0.20	19	0	19	65	16
	idle		1.6	0.9	75	0	75	256	65
	1/8 power	8ohms/ch	8.0	4.4	490	250	240	820	207
		4ohms/ch	12.2	6.7	795	438	358	1220	308
		2ohms/ch	17.6	9.7	1146	550	596	2030	512
	1/3 power	8ohms/ch	15.8	8.7	1075	667	409	1390	351
		4ohms/ch	25.7	14.1	1852	1167	685	2340	589
		2ohms/ch	35.7	19.6	2573	1467	1106	3780	952

1/8 功率为具有临时截止的典型程序材料。大部分应用程序可以参照这些数值。
1/3 功率表示具有极高截止的程序材料。
测试信号：粉红噪音，从 22Hz 至 22kHz 的限制带宽
1W = 0.860kcal/h， 1BTU = 0.252kcal
请注意，线路电压 [V] x 线路电流 [A] = [VA]，并不等于 [W]。

突入电流：8A (100V), 9A (120V), 17A (240V)

Performance Graph



TX6n
FREQUENCY RESPONSE
INPUT : ANALOG
OUTPUT LOAD : 8ohm 0dBr=1W
Fs=96kHz
GAIN : 32dB
ATT : MAX

MEMO

For details of products, please contact your nearest Yamaha representative or the authorized distributor listed below.

关于各产品的详细信息，请向就近的 Yamaha 代理商或下列经销商询问。

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