

**POWER AMPLIFIER
PA2120**

Owner's Manual

First, please carefully read the "IMPORTANT SAFETY INSTRUCTIONS" on the reverse side.

Thank you for your purchase of the Yamaha PA2120 power amplifier. Please read through this manual carefully before beginning use, so that you will be able to take full advantage of the device's various functions. After you have read the manual, keep it in a safe place.

- The illustrations as shown in this manual are for instructional purposes only.
- The company names and product names in this manual are the trademarks or registered trademarks of their respective companies.

Features

- Complies with the ENERGY STAR international standard for energy efficient products.
- Supports both high-impedance and low-impedance speaker connections.
- Source and volume zoning capability for two zones in mono connection.
- Equipped with an auto-wake function that turns the power on after detecting an input signal when in standby mode.
- Able to be remotely controlled by connecting a DCP series control panel.
- Built-in "Speaker EQ" that allows for tuning the sound quality to be perfect for use with Yamaha speakers.

Accessories (Please confirm that all items are included)

- Power cord
- Euroblock plugs (6-pin x 1, 3-pin x 1, both with a 3.5mm pitch)
- Technical Specifications (English only): includes block diagrams, dimensions, and input/output specifications
- Owner's Manual (this sheet)

ENERGY STAR Certification

This device complies with the ENERGY STAR international standard for energy efficient products. It automatically enters into standby mode when no input signal is detected for 25 minutes in order to save power while not in use. In addition, a highly efficient amplifier circuitry design has been adopted to reduce energy consumption while the device is in use.

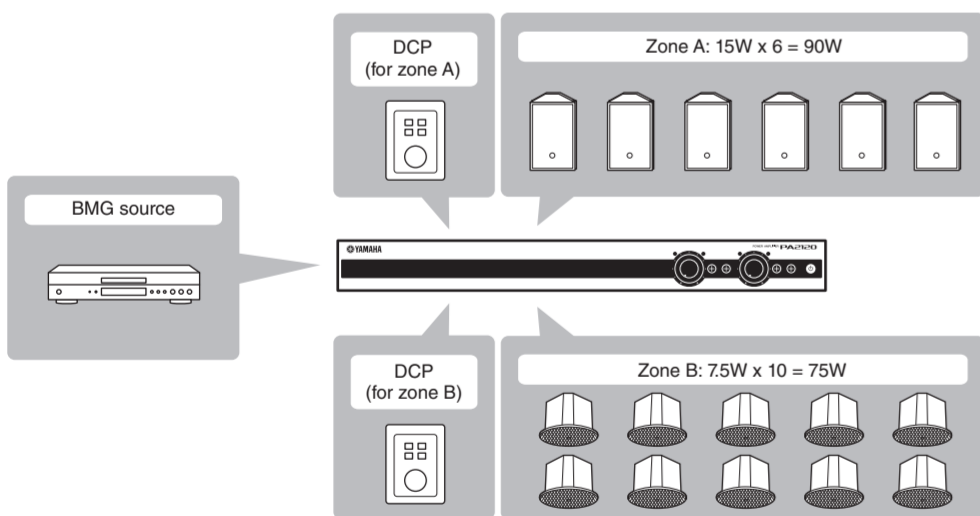


Auto-Standby and Auto-Wake Functions

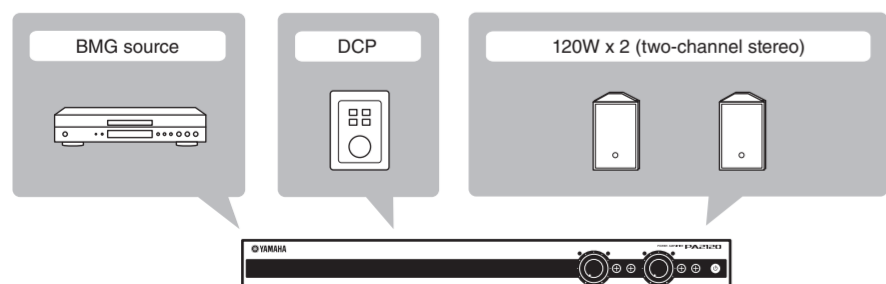
To reduce energy consumption, this device enters into standby mode when no input signal is detected for 25 minutes. It is also equipped with an auto-wake function that automatically turns the power on when an input signal is detected while in standby mode. Even when the device has been put into standby mode by the auto-standby function, any microphone or BGM audio input will restore the power. The auto-wake function is turned on by default. The auto-wake function can be turned on or off by changing the rear panel [SETUP] DIP switch setting. (Refer to "Controls and Functions.")

Setup Example

When multiple speakers are connected to the two zones: (MODE: MONO)



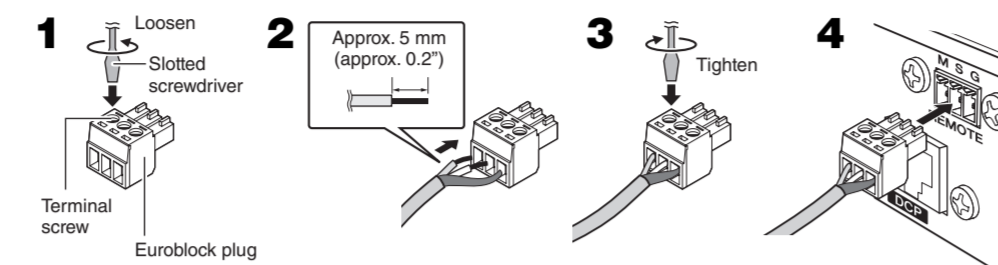
When two-channel stereo is used: (MODE: STEREO)



Connections

Attaching Euroblock Plugs

Example (connection to the [REMOTE] connector)



- NOTE**
- You must use the supplied Euroblock plugs. If the plugs have been lost, please contact your Yamaha dealer.
 - To prepare the cable for attachment to a Euroblock connector, strip the wire as shown in the illustration using stranded wire to make connections. With a Euroblock connection, stranded wires may be prone to breakage because of metal fatigue due to the weight of the cable or due to vibration. When rack mounting your device, use a lacing bar when possible to bundle and fasten the cables.
 - Do not tin (solder) the exposed end.

- Loosen terminal screws.
- Insert cables.
- Securely tighten terminal screws.
- Insert the Euroblock plug into a terminal of this device.

Connecting Speaker Cables

The [SPEAKERS] output connectors on the rear panel are barrier strip type connectors. The connections are described below for two methods: using a spade lug and using a bare conductor.

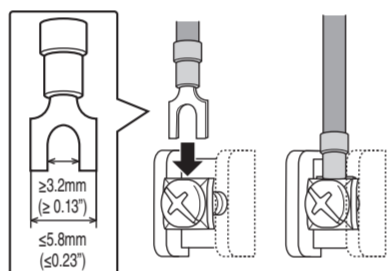
Caution

- Ensure that load is not applied to the speaker cable.
- This device uses a BTL (Balanced Transformer-Less) connection method for the amplifier output. As the amplifier output is sent to the positive and negative connectors, any contact with other terminals or the device chassis may lead to malfunction.

NOTE Connect the cables so that the amplifier's "+" and "-" symbols match those of the speaker. If they are reversed, the phase will be reversed and the sound will not be output correctly.

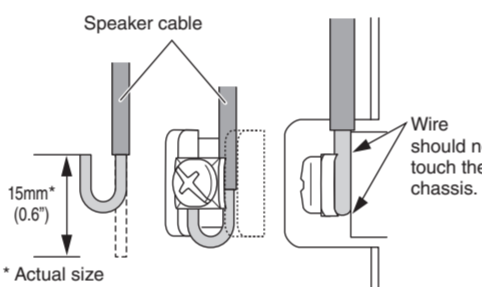
When using a spade lug

Loosen the screw, insert the spade lug all the way from below, and tighten the screw.



When using a bare conductor

Loosen the screw, wrap the conductor wire around the barrier strip terminal, and tighten the screw. Be sure that the bare wire does not touch the chassis.

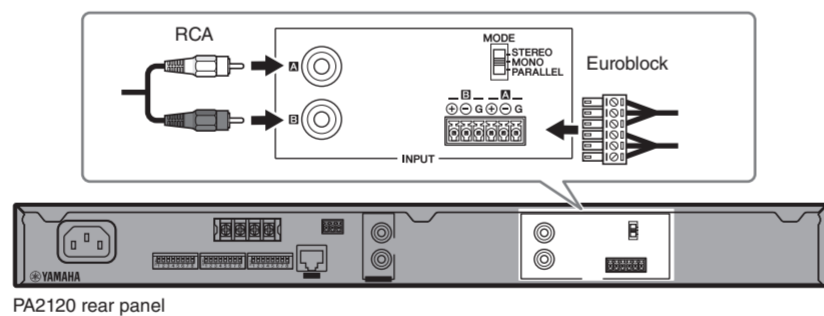


Connecting External Devices

Connect a BGM (background music) tuner, a CD player, a portable audio player, etc. to the stereo input jacks of this device. After finishing all connections, connect the power cord to an AC outlet.

Warning

When connecting the power cord to an AC outlet, an input signal will turn on the power of this device by the auto-wake function. To avoid unexpected loud sounds, be sure to connect microphones and external devices with the power off status.



NOTE Refer to "Attaching Euroblock Plugs" for Euroblock plug installation.

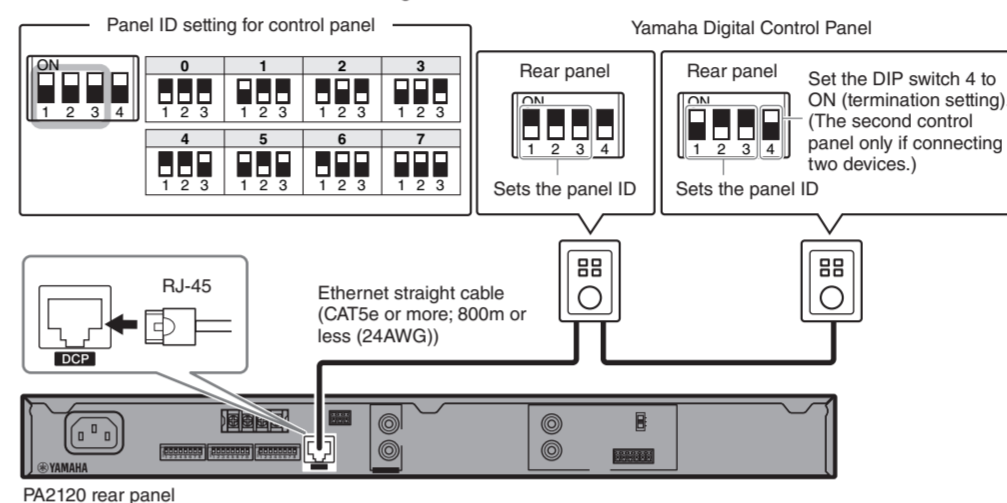
Connecting a Control Panel

Connecting Yamaha Digital Control Panel (DCP1V4S, DCP4S, DCP4V4S) to PA2120 enables you to control the volume remotely. You can connect up to two control panels. The total length of the cables from the PA2120 to the last control panel must not exceed 800 meters in the case of 24AWG.

NOTE When connecting control panels via DCH8, the total length of the cables to the final control panel must be less than 200m (according to DCH8 specifications). If you need a longer connection, we recommend not using the DCH8, but connecting the devices in a daisy-chain configuration.

Precautions when connecting two control panels:

- Connect them in a daisy-chain configuration
- Set the panel IDs separately. (0 or 1)
- Set the second control panel DIP switch 4 to ON. (termination setting)
This setting is only for the second device when connecting two devices.
- Ensure that the total Ethernet cable length does not exceed 800 meters in the case of 24AWG.



Functions Operated Via the Control Panel

DCP1V4S

Encoder	Switch 3	Switch 4
Volume control	Encoder operation target: SPEAKER A	Encoder operation target: SPEAKER B

DCP4S

Switch 1	Switch 2	Switch 3	Switch 4
Volume up: SPEAKER A	Volume down: SPEAKER A	Volume up: SPEAKER B	Volume down: SPEAKER B

DCP4V4S

Encoder 3	Encoder 4
Volume control: SPEAKER A	Volume control: SPEAKER B

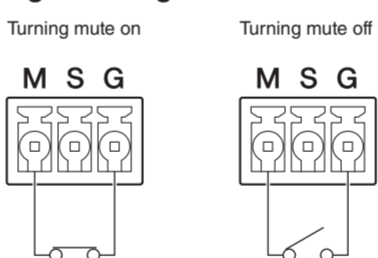
- NOTE**
- Controls not listed here will not work.
 - Settings by using control panels will be retained even if the control panels have been disconnected.

Using the [REMOTE] Connector (Euroblock 3-pin)

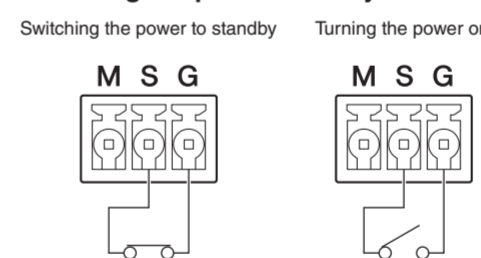
You can connect switches to the rear panel [REMOTE] connector, and use them to remotely mute/unmute all channels, or switch the power standby/on status.

From the left, the [REMOTE] connector consists of M (mute all), S (standby), and G (ground) pins. The [REMOTE] connector uses a Euroblock plug. For details on how to connect Euroblock plugs, refer to "Attaching Euroblock Plugs."

Muting/unmuting all channels



Switching the power standby/on status



- NOTE**
- When the device is put into standby mode via the [REMOTE] connector, it is not possible to turn the power back on by pressing the [O] button on the front panel, or by the auto-wake function with input signal detection. The power can only be turned on via the [REMOTE] connector.
 - When the device is put into mute mode via the [REMOTE] connector, the [O] button will flash in green.

Specifications

Output Power (20msec Burst, THD+N=1%)	AMP MODE = 3Ω	100W x 2ch
	AMP MODE = 4Ω	120W x 2ch
	AMP MODE = 8Ω	100W x 2ch
	AMP MODE = 70V/120V	120W x 2ch
	AMP MODE = 100V/120V	120W x 2ch
	AMP MODE = 70V/200V	200W x 1ch
AMP MODE = 100V/200V	200W x 1ch	
Amplifier type (Output circuitry) THD+N	LINE IN to SPEAKER OUT, Half power@1kHz	≤ 0.2%
	AMP MODE = 3Ω, 4Ω, 8Ω	≤ 0.2%
	LINE IN to SPEAKER OUT, Half power@1kHz	≤ 0.2%
	AMP MODE = 70V, 100V/120V	≤ 0.2%
	LINE IN to SPEAKER OUT, Half power@1kHz	≤ 0.2%
	AMP MODE = 70V, 100V/200V	≤ 0.2%

Frequency Response	LINE IN to SPEAKER OUT, 50Hz to 20kHz@1W	0dB, -3.0dB, +1.0dB
	AMP MODE = 3Ω, 4Ω, 8Ω	
	LINE IN to SPEAKER OUT, 90Hz to 20kHz@1W	
	AMP MODE = 70V, 100V/120V	0dB, -3.0dB, +1.0dB
	LINE IN to SPEAKER OUT, 90Hz to 20kHz@1W	
	AMP MODE = 70V, 100V/200V	
AC Power Requirement	LINE IN to THRU OUT, 20Hz-20kHz	0dB, -2.5dB, +1.0dB
	100V, 120V, 230V-240V 50Hz/60Hz (*1)	

*1 It has confirmed that it is working with ± 10% of the voltage of the rated supply voltage.

Power Consumption	Standby, default setting	≤ 1W
	AMP MODE = All	
	Idle	
	AMP MODE = 3Ω, 4Ω, 8Ω	
	Idle	
	AMP MODE = 70V, 100V	
	1/8 Output, Pink noise	
	AMP MODE = 4Ω	
	1/8 Output, Pink noise	
	AMP MODE = 70V/120V	

ENERGY STAR

- It automatically enters into standby mode when no input signal is detected for 25 minutes in order to save power while not in use.
- Amplifier efficiency: 44% and more.
- Less than 1W in standby.

Appendix

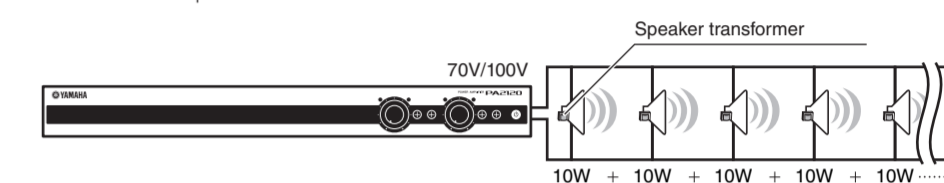
High-Impedance and Low-Impedance Connections

For a high-impedance connection, a speaker transformer that raises the impedance to several hundred or thousand ohms is added to the speaker system. This allows the speaker system to be effectively driven with much lower current than is required for a low-impedance connection. Therefore, a large number of speaker systems can be connected. Even over long distances, there is very little transmission loss due to the cable resistance being negligible in relation to the impedance of the speaker system. High-impedance speaker connections usually operate at a specific maximum power amplifier voltage of 100 or 70 volt. The more orthodox low-impedance connection does not use a speaker transformer. The speaker systems are directly connected to the power amplifier with a rated impedance generally a round 4 - 16 ohms. For short distances over which cable resistance is insignificant, low-impedance connections deliver a sound quality that is superior to high-impedance connections. The differences between connection methods are explained as follows.

Multiple Speaker System Drive Capability

High-Impedance Connections

As long as the total nominal power input rating for all speakers is within the power output capability of the amplifier, any number of speaker systems can be connected in parallel. The power input rating is determined by the speaker systems and speaker transformers used. It is also possible to connect speaker systems that have different input power ratings. In the case of speaker systems that are capable of changing their input power rating (Yamaha VXC and VXS series, etc.), this can be utilized to vary the volume of each speaker.

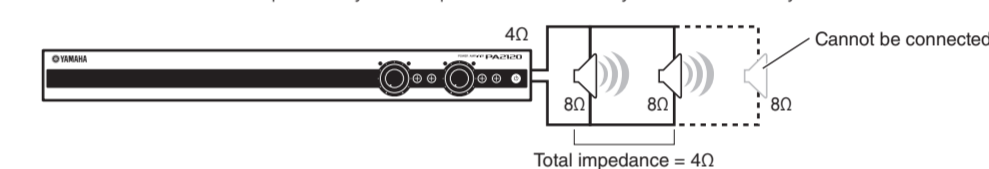


Low-Impedance Connections

When connecting multiple low-impedance speaker systems to a single channel, the following methods are possible.

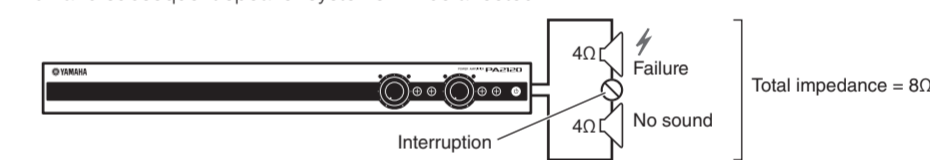
Parallel Connection

When multiple speaker systems having the same impedance are connected in parallel, the total impedance becomes the individual speaker system impedance divided by the number of systems connected.



Serial Connection

When connected in series, the total impedance is simply the sum of the impedances of the speaker systems connected. However, if one speaker system happens to fail, the electrical signal will not be passed on and subsequent speaker systems will be affected.



Precautions for Rack Mounting

This unit is rated for operation at ambient temperatures ranging from 0 to 40 degrees Celsius. When mounting the unit with other PA2120 unit(s) or other device(s) in an EIA standard equipment rack, internal temperatures can exceed the specified upper limit, resulting in impaired performance or failure. When rack mounting the unit, always observe the following requirements to avoid heat buildup:

- When mounting the unit in a rack with devices such as power amplifiers that generate a significant amount of heat, leave more than 1U of space between the PA2120 and other equipment. Also either leave the open spaces uncovered or install appropriate ventilating panels to minimize the possibility of heat buildup.
- To ensure sufficient air flow, leave the rear of the rack open and position it at least 10 centimeters from walls or other surfaces. If the rear of the rack can't be left open, install a commercially available fan or similar ventilating option to secure sufficient air flow. If you've installed a fan kit, there may be cases in which closing the rear of the rack will produce a greater cooling effect. Refer to the rack and/or fan unit manual for details.

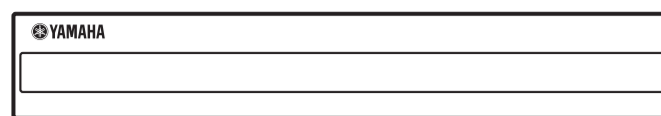
Operating temperature	0°C to +40°C
Storage temperature	-20°C to +60°C
Dimensions (W x H x D, not including knob)	480 x 44 x 351mm (18.90 x 1.73 x 13.82 inch)
Net Weight	4.8kg
Included Accessories	AC power cord (2.0m) x1, 3.5mm Euroblock plug (6pin) x1, 3.5mm Euroblock plug (3pin) x1, Owner's Manual x1, Technical Specifications x
Optional accessories	Digital Control Panel (DCP1V4S-US/EU, DCP4V4S-US/EU, DCP4S-US/EU)

* The contents of this manual apply to the latest specifications as of the printing date. Since Yamaha makes continuous improvements to the product, this manual may not apply to the specifications of your particular product. To obtain the latest manual, access the Yamaha website then download the manual file. Since specifications, equipment or separate sold accessories may not be the same in every locale, please check with your Yamaha dealer.

European models
Purchaser/User Information specified in EN55103-2-2009
Conforms to Environments: E1, E2, E3 and E4

Controls and Functions

Front Panel



1 [DIP] button (Standby/On)
Switches the device mode between standby and on.
On: Press the [DIP] button when in standby mode. The button lights in green to indicate that the device is on.
Standby: Press and hold the [DIP] button for at least one second when the device is on. The button lights in orange to indicate that the device is in standby mode.
The button lights in lime green for a few seconds while the status is switched between on and standby.

NOTE

- The device automatically enters standby mode when no input signal is detected for 25 minutes. The rear panel DIP switch can be set to enable the auto-wake function that turns the power on upon detecting an input signal.
- Rapidly turning the unit on and off in succession can cause it to malfunction. After turning the unit off, wait for about 6 seconds before turning it on again.

2 [VOLUME A] and [VOLUME B] knobs
Used to adjust [SPEAKER A] and [SPEAKER B] output levels.

3 [BASS] and [TREBLE] controls
Two-band equalizer used to adjust the tone of the output signal to [SPEAKER A] and [SPEAKER B].

4 [SIG] indicator
Lights up when the output signal to [SPEAKER A] or [SPEAKER B] is -42dBFS (42dB lower than the maximum output) or higher.

5 [LIMIT] indicator
Lights up when the limiter that prevents excessive output to [SPEAKER A] and [SPEAKER B] compresses the signal more than 3dB . Adjust the input and output levels as LIMIT indicators do not light.

6 AC IN connector
Connect the supplied power cord.

Caution

- When connecting the power cord, connect the power cord to the connector and then plug it into an appropriate AC power outlet.
- Before connecting or disconnecting the power cord, make sure that the device power is in standby mode.

7 [SETUP] DIP switches
Set the following functions of the device. The setting change will be applied after carrying out a power cycle by pressing the [DIP] button on the front panel.
DIP switch settings combinations are shown as follows.

DIP switch 1: Panel lock
Set whether to lock knobs and controls on the panel.

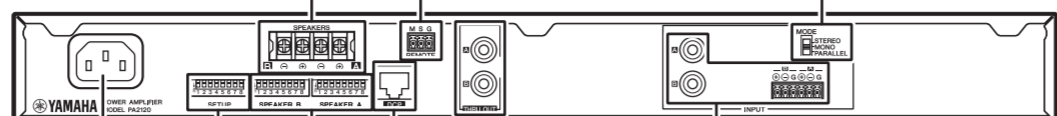
Setting
<input type="checkbox"/> Panel lock off (controls are enabled)
<input type="checkbox"/> Panel lock on (controls are disabled)

DIP switches 3/4: Auto-wake
Enables the function where the device automatically turns on from standby mode upon detection of an input signal.

Setting
<input type="checkbox"/> Auto-wake function on
<input type="checkbox"/> Auto-wake function on. Only when the system is switched from AC off to standby mode due to insertion of the AC plug, or put into standby mode by the auto-standby function.
<input type="checkbox"/> Auto-wake function off

NOTE The auto-wake function is completely disabled if the device has been put into standby mode through operation via the [REMOTE] connector.

Rear Panel



DIP switch 5: A - B volume link
Sets whether SPEAKER A and SPEAKER B volume is linked. When linked, the volume for both speakers can be controlled with the [VOLUME A] knob.

Setting
<input type="checkbox"/> Link off (SPEAKER A and SPEAKER B volume levels are independently controlled)
<input type="checkbox"/> Link on (SPEAKER A and SPEAKER B volume levels are both controlled via the [VOLUME A] knob)

DIP switch 8: DCP setup
When turning on the power, this sets whether resuming the settings of connected control panels or initializing.

Setting
<input type="checkbox"/> Resume (keeps the previous settings)
<input type="checkbox"/> Initialize (initializes the settings when turning on the power)

NOTE [SETUP] DIP switches other than the ones described above are not used.

8 [SPEAKERS] output terminals
Barrier strip type speaker output connectors. Output connectors A and B are available. Refer to "Connecting Speaker Cables" for the installation instructions.

9 [SPEAKER A] and [SPEAKER B] DIP switches
Sets the amplifier mode and speaker EQ to match the type of speakers that are connected. The setting change will be applied after carrying out a power cycle by pressing the [DIP] button on the front panel.
DIP switch setting combinations are shown as follows.

DIP switches 1, 2, and 3: Amplifier mode setup
Sets the amplifier output power and impedance

NOTE If the DIP switch settings do not match the actual speaker impedance or input power rating, the device may have poor performance, and it may even lead to malfunction or sound dropout. Always ensure that appropriate settings are chosen.

Setting
<input type="checkbox"/> Amplifier output 120W, High-impedance 100V
<input type="checkbox"/> Amplifier output 120W, High-impedance 70V
<input type="checkbox"/> Amplifier output 200W, High-impedance 100V, Output only from [SPEAKERS] output terminal A
<input type="checkbox"/> Amplifier output 200W, High-impedance 70V, Output only from [SPEAKERS] output terminal A
<input type="checkbox"/> Amplifier output 100W, Low-impedance 8Ω or more
<input type="checkbox"/> Amplifier output 120W, Low-impedance from 4Ω to less than 8Ω
<input type="checkbox"/> Amplifier output 100W, Low-impedance from 3Ω to less than 4Ω
<input type="checkbox"/> Output muted

10 [DMP] connector
Allows you to connect up to two DCP1V4S, DCP4S, or DCP4V4S Yamaha Digital Control Panels.
For more information regarding the connection method, refer to "Connecting a Control Panel."

11 [REMOTE] connector
A Euroblock 3-pin plug can be inserted to remotely carry out control such as muting all channels or putting the device in and out of standby mode. For more information, refer to "Using the [REMOTE] Connector (Euroblock 3-pin)."

12 [THRU OUT] jacks
RCA type line output jacks (unbalanced output). Output jacks A and B are available. The unaltered audio signal input from the [INPUT] connectors is output at the line level. These jacks can be used to connect an additional amplifier when the number of speakers is too much for this device to handle alone.

13 [INPUT] jacks/connectors
RCA type and Euroblock 3-pin line input jacks/connectors (RCA: unbalanced; Euroblock 3-pin: balanced). Two channels (A and B) are available. Connect the line output connector of an external device.

14 [MODE] switch
Sets the method in which input signals from [INPUT A] and [INPUT B] are sent as output to the [SPEAKERS] output terminals.

Switch	INPUT A output destination	INPUT B output destination
STEREO	A	B
MONO	Output to A and B with INPUT A and INPUT B signals mixed as mono	
PARALLEL	A and B	Muted

Caution

- Do not expose the device to rain, use it near water or in damp or wet conditions, or place it in any containers (such as vases, bottles or glasses) 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.

Hearing loss

- Avoid setting all equalizer controls and volume controls to their maximum. Depending on the condition of the connected devices, doing so may result in feedback that can cause hearing loss and damage the speakers.
- Do not use speakers 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.
- When turning on the AC power in your audio system, always turn on the device LAST, to avoid hearing loss and speaker damage. When turning the power off, the device should be turned off FIRST for the same reason.

Fire warning

- Do not place any burning items or open flames near the device, since they may cause a fire.

If you notice any abnormality

- If any of the following problems occur, immediately turn off the power switch and disconnect the electric plug from the outlet.
- When cleaning the device, use a dry and soft cloth. Do not use paint thinners, solvents, cleaning fluids, or chemical impregnated wiping cloths.
- 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 use this device for any purpose other than driving loudspeakers.
- Always turn the power off when the device is not in use.
- Even when the [(DIP)] (Standby/On) switch is in standby status (power lamp is off/ display is off), electricity is still flowing to the instrument at the minimum level. When you are not using the instrument for a long time, make sure you unplug the power cord from the wall AC outlet.

Information

Always follow the basic precautions listed below to avoid the possibility of electrical shock, fire or other hazards. These precautions include, but are not limited to, the following:

Power supply/power cord

- 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.

FCC INFORMATION (U.S.A.)

1. IMPORTANT NOTICE: DO NOT MODIFY THIS UNIT!
This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modifications not expressly approved by Yamaha may void your authority, granted by the FCC, to use the product.

2. IMPORTANT:
When connecting this product to accessories and/or another product use only high quality shielded cables. Cable(s) supplied with this product MUST be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.

3. NOTE:
This product has been tested and found to comply with the requirements listed in FCC Regulations, Part 15 for Class "B" digital devices. Compliance with these requirements provides a reasonable level of assurance that your use of this product in a residential environment will not result in harmful interference with other electronic devices. This equipment generates/uses radio frequencies and, if not installed and used according to the instructions found in the user's manual, may cause interference harmful to the operation of other electronic devices. Compliance with FCC regulations does not guarantee that interference will not occur in all installations. If this product is found to be the source of interference, which can be determined by turning the unit "OFF" and "ON", please try to eliminate the problem by using one of the following measures:

Relocate either this product or the device that is being affected by the interference.

Utilize power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter/s

In the case of radio or TV interference, relocate/reorient the antenna. If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to co-axial type cable.

If these corrective measures do not produce satisfactory results, please contact the local retailer authorized to distribute this type of product. If you can not locate the appropriate retailer, please contact Yamaha Corporation of America, Electronic Service Division, 6600 Orangethorpe Ave, Buena Park, CA 90620

The above statements apply ONLY to those products distributed by Yamaha Corporation of America or its subsidiaries.

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 coloured 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.

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FINLAND
Late on lítettävi suojamaadoituskoskettimilla varustettuun pitöräsiäen.
In Norway: Apparatet må tilkoples jordat stikkontakt.
In Sweden: Apparatens skall anslutas till jordat uttag.

MIDDLE EAST

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Siemenstrasse 22-24, 25462 Rellingen, Germany
Tel: +49-4101-3030

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Dubai, UAE, Dubai, UAE
Tel: +971-4-801-1500

MIDDLE EAST

TURKEY
Yamaha Music Europe GmbH
Merkez Akademi Türkiye İstanbul Sütlüce
Pakdemirler Sokak, Sütlüce, Şişli/Beşiktaş Böl. No:3, Şişli İstanbul, Turkey
Tel: +90-212-999-8010
Fax: 430-8650

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Tel: +49-4101-3030

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Siemenstrasse 22-24, 25462 Rellingen, Germany
Tel: +49-4101-3030

ASIA

YAMAHA MUSIC INDIA PRIVATE LIMITED
Spazedge Building, Ground Floor, Tower A,
Sector-47, Gurgaon- Sohna Road, Gurgaon-122002,
Haryana, India
Tel: +91-124-485-3300

INDONESIA
PT. Yamaha Music Indonesia (Distributor)
Yamaha Music Center Bldg. Jalan Jend. Gatot
Subroto Kav. 4, Jakarta 12950, Indonesia
Tel: +62-21-520-2777

KOREA
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8F, Donggongil Bldg. 2F, Tokaram-ro 87-gil,
Gangnam-gu, Seoul, 135-880, Korea
Tel: +82-2-3467-3300

MALAYSIA
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No. 8, Jalan Perbandaran, Kelana Jaya, 4701
Petaling Jaya, Selangor, Malaysia
Tel: +60-3-78030900

SINGAPORE
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Block 202, Hoagang Street 21, #02-04,
Singapore 530202, Singapore
Tel: +65-6740-9290

TAIWAN
Yamaha Music & Electronics Taiwan Co., Ltd.
2F, No. 1, Yuanfeng Rd. Banqiao Dist.
New Taipei City, 22063, Taiwan
Tel: +886-2-7741-8888

THAILAND
Siam Music Yamaha Co., Ltd.
3, 4, 15, 16th Fl., Siam Motors Building,
891/1 Rama 1 Road, Wangmai,
Pathumwan, Bangkok 10330, Thailand
Tel: +66-2-621-52622

VIETNAM
Yamaha Music Vietnam Company Limited
15th Floor, Nam A Bank Tower, 203-205 Lane
Mang Thang Tam St., Ward 4, Dist. 3,
Ho Chi Minh City, Vietnam
Tel: +84-8-3818-1122

OTHER ASIAN COUNTRIES
Yamaha Corporation
Sales & Marketing Division
10-1, Nakazawa-cho, Naka-ku, Hamamatsu,
Japan 430-8650
Tel: +81-53-460-2312

AMERICA

YAMAHA CORPORATION
10-1, Nakazawa-cho, Naka-ku, Hamamatsu, Japan 430-8650

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

- 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 pull anything over it.
- Only use the voltage specified as correct for the device. The required voltage is printed on the name plate of the device.
- Use only the supplied power cord/plug.
- If you intend to use the device in an area other than in the one you purchased, the included power cord may not be compatible. Please check with your Yamaha dealer.
- Check the electric plug periodically and remove any dirt or dust which may have accumulated on it.
- When setting up the device, make sure that the AC outlet you are using is easily accessible. If a power outage or malfunction occurs, immediately turn off the power switch and disconnect the plug from the outlet. Even when the power switch is turned off, as long as the power cord is not unplugged from the wall AC outlet, the device will not be disconnected from the power source. When installing in a rack, connect an AC power strip to make power on/off operations easier and more convenient.
- Remove the electric plug from the outlet when the device is not to be used for extended periods of time, or during electrical storms.
- Be sure to connect to an appropriate outlet with a protective grounding connection. Improper grounding can result in electrical shock, damage to the device(s), or even fire.

Do not open

- This device contains no user-serviceable parts. Do not open the device or attempt to disassemble the internal parts or modify them in any way. 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 it in any containers (such as vases, bottles or glasses) 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.

Hearing loss

- Avoid setting all equalizer controls and volume controls to their maximum. Depending on the condition of the connected devices, doing so may result in feedback that can cause hearing loss and damage the speakers.
- Do not use speakers 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.
- When turning on the AC power in your audio system, always turn on the device LAST, to avoid hearing loss and speaker damage. When turning the power off, the device should be turned off FIRST for the same reason.

Fire warning

- Do not place any burning items or open flames near the device, since they may cause a fire.

If you notice any abnormality

- If any of the following problems occur, immediately turn off the power switch and disconnect the electric plug from the outlet.
- When cleaning the device, use a dry and soft cloth. Do not use paint thinners, solvents, cleaning fluids, or chemical impregnated wiping cloths.
- 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 use this device for any purpose other than driving loudspeakers.
- Always turn the power off when the device is not in use.
- Even when the [(DIP)] (Standby/On) switch is in standby status (power lamp is off/ display is off), electricity is still flowing to the instrument at the minimum level. When you are not using the instrument for a long time, make sure you unplug the power cord from the wall AC outlet.

Information

Always follow the basic precautions listed below to avoid the possibility of electrical shock, fire or other hazards. These precautions include, but are not limited to, the following:

Power supply/power cord

- 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.

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:

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

CAUTION

Always follow the basic precautions listed below to avoid the possibility of electrical shock, fire or other hazards. These precautions include, but are not limited to, the following:

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WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

Information for Users on Collection and Disposal of Old Equipment

This symbol on the products, packaging, and/or accompanying documents means that used electrical and electronic products should not be mixed with general household waste. For proper treatment, recovery and recycling of old products, please take them to applicable collection points, in accordance with your national legislation and the Directives 2002/96/EC.

By disposing of these products correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling.

For more information about collection and recycling of old products, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items.

[For business users in the European Union]
If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

[Information on Disposal in other Countries outside the European Union]
This symbol is only valid in the European Union. If you wish to discard these items, please contact your local authorities or dealer and ask for the correct method of disposal.

(weee_eu_en_01)

Explanation of Graphical Symbols

The lightning flash with an overhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION:
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The above warning is located on the top of the unit.

IMPORTANT SAFETY INSTRUCTIONS

- 1 Read these instructions.
- 2 Keep these instructions.
- 3 Heed all warnings.
- 4 Follow all instructions.
- 5 Do not use this apparatus near water.
- 6 Do not use with dry cell.
- 7 Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8 Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9 Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10 Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11 Only use attachments/accessories specified by the manufacturer.
- 12 Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/appliances to avoid injury from tip-over.
- 13 Unplug this apparatus during lightning storms or when prolonged periods of time.
- 14 Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

WARNING
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

(UL60065_03)

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

NORTH AMERICA
CANADA
Yamaha Canada Music Ltd.
135 Milliken Avenue, Toronto, Ontario,
M1S 3R1, Canada
Tel: +1-416-298-1311

CENTRAL & SOUTH AMERICA
MEXICO
Yamaha de México, S.A. de C.V.
Av. Insurgentes Sur 1647 Piso 9, Col. San José
Insurgentes, Delagacion Benito Juárez, México,
D.F. C.P 03900
Tel: +52-55-5804-0600

BRAZIL
Yamaha Musical do Brasil Ltda.
Rua Fidéscio Ramos, 302 - C.J 52 E-54 - Torre B - Vila
Olimpia - CEP 04551-010 - São Paulo/SP, Brazil
Tel: +55-11-3704-1377

ARGENTINA
Yamaha Music Latin America, S.A.,
Sucursal Argentina
Oiga Cossetini 1553, Piso 4 Noric,
Madero Este C1107CEK,
Buenos Aires, Argentina
Tel: +54-11-4119-7000

VENEZUELA
Yamaha Musical de Venezuela, C.A.,
AV. Manzanares, C.C. Manzanares Plaza,
Piso 4, Oficina 0401, Baruta, Caracas, Venezuela
Tel: +58-212-943-1871

PANAMA AND OTHER LATIN AMERICAN COUNTRIES/ CARIBBEAN COUNTRIES
Yamaha Music Latin America, S.A.,
Edif. Torre Banco General, Piso 7, Urbanización
Marbella, Calle 47 y Aguilino de la Guardia,
Ciudad de Panamá, República de Panamá
Tel: +507-269-5311

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GERMANY
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Siemenstr