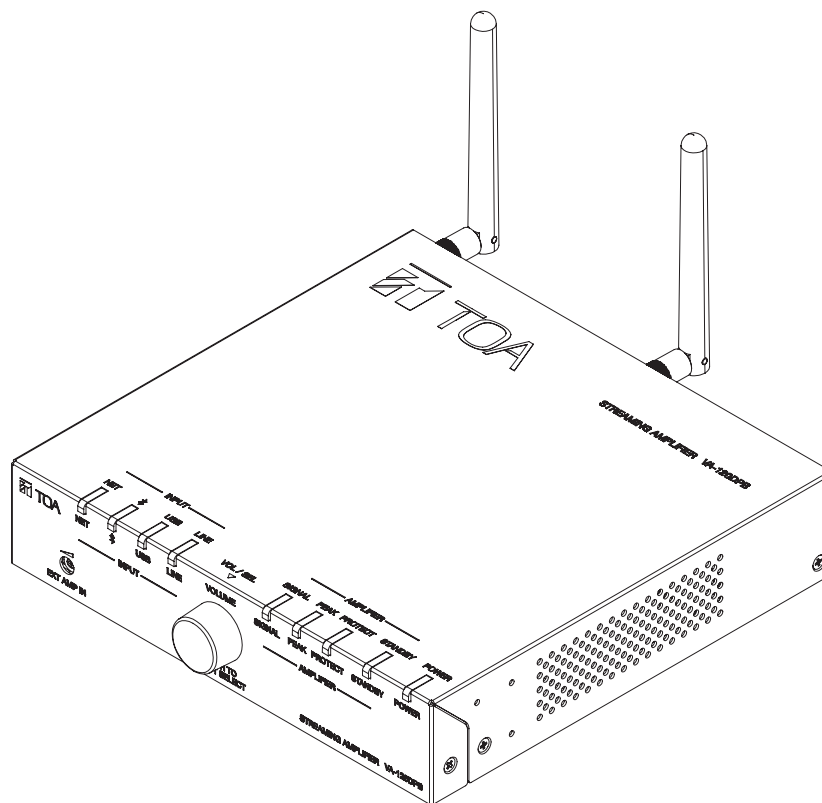




INSTRUCTION MANUAL

STREAMING AMPLIFIER

VA-120DPB-AS1



Thank you for purchasing TOA's Streaming Amplifier
Please carefully follow the instructions in this manual to ensure long, trouble-free use of your equipment.

TOA Corporation

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1. SAFETY PRECAUTIONS

- Before installation or use, be sure to carefully read all the instructions in this section for correct and safe operation.
- Be sure to follow all the precautionary instructions in this section, which contain important warnings and cautions regarding safety.
- After reading, keep this manual for future reference.

Safety Symbol and Message Conventions

Safety symbols and messages described below are used in this manual to prevent bodily injury and property damage which could result from mishandling. Before operating your product, read this manual first and understand the safety symbols and messages so you are thoroughly aware of the potential safety hazards.



WARNING

Indicates a potentially hazardous situation which, if mishandled, could result in death or serious personal injury.

When Installing the Unit

- Do not expose the unit to rain or an environment where it may be splashed by water or other liquids, as doing so may result in fire or electric shock.
- Use the unit only with the voltage specified on the unit. Using a voltage higher than that which is specified may result in fire or electric shock.
- Do not cut, kink, otherwise damage nor modify the power supply cord. In addition, avoid using the power cord in close proximity to heaters, and never place heavy objects -- including the unit itself -- on the power cord, as doing so may result in fire or electric shock.
- Be sure to ground to the safety ground (earth) terminal to avoid electric shock. Never ground to a gas pipe as a catastrophic disaster may result.
- Avoid installing or mounting the unit in unstable locations, such as on a rickety table or a slanted surface. Doing so may result in the unit falling down, causing personal injury and/or property damage.
- Since the unit is designed for indoor use, do not install it outdoors. If installed outdoors, the aging of parts causes the unit to fall off, resulting in personal injury. Also, when it gets wet with rain, there is a danger of electric shock.
- The terminals marked with the symbol ⚡ are hazardous live.
The external wiring to these terminals requires installation by an instructed person.

When the Unit is in Use

- Should the following irregularity be found during use, immediately switch off the power, disconnect the power supply plug from the AC outlet and contact your nearest TOA dealer. Make no further attempt to operate the unit in this condition as this may cause fire or electric shock.
 - If you detect smoke or a strange smell coming from the unit.
 - If water or any metallic object gets into the unit
 - If the unit falls, or the unit case breaks
 - If the power supply cord is damaged (exposure of the core, disconnection, etc.)
 - If it is malfunctioning (no tone sounds)
- To prevent a fire or electric shock, never open nor remove the unit case as there are high voltage components inside the unit. Refer all servicing to your nearest TOA dealer.
- Do not place cups, bowls, or other containers of liquid or metallic objects on top of the unit. If they accidentally spill into the unit, this may cause a fire or electric shock.
- Do not insert nor drop metallic objects or flammable materials in the ventilation slots of the unit's cover as this may result in fire or electric shock.
- Do not touch a power supply plug during thunder and lightning, as this may result in electric shock.



CAUTION

Indicates a potentially hazardous situation which, if mishandled, could result in moderate or minor personal injury, and/or property damage.

When Installing the Unit

- Never plug in nor remove the power supply plug with wet hands, as doing so may cause electric shock.
- When unplugging the power supply cord, be sure to grasp the power supply plug; never pull on the cord itself. Operating the unit with a damaged power supply cord may cause a fire or electric shock.

- When moving the unit, be sure to remove its power supply cord from the wall outlet. Moving the unit with the power cord connected to the outlet may cause damage to the power cord, resulting in fire or electric shock. When removing the power cord, be sure to hold its plug to pull.
- Do not block the ventilation slots in the unit's cover. Doing so may cause heat to build up inside the unit and result in fire. Also, periodically clean the ventilation slots of dust.
- Avoid installing the unit in humid or dusty locations, in locations exposed to the direct sunlight, near the heaters, or in locations generating sooty smoke or steam as doing otherwise may result in fire or electric shock.
- To avoid electric shocks, be sure to switch off the unit's power when connecting speakers.
- Be sure to follow the instructions below when rack-mounting the unit. Failure to do so may cause a fire or personal injury.
 - Install the equipment rack on a stable, hard floor. Fix it with anchor bolts or take other arrangements to prevent it from falling down.
 - When connecting the unit's power cord to an AC outlet, use the AC outlet with current capacity allowable to the unit.
 - Rack-mounting screws are not supplied with the optional MB-15B-BK Half width blank panel. Prepare them that are appropriate for the equipment rack.

When the Unit is in Use

- Do not place heavy objects on the unit as this may cause it to fall or break which may result in personal injury and/or property damage. In addition, the object itself may fall off and cause injury and/or damage.
- Make sure that the volume control is set to minimum position before power is switched on. Loud noise produced at high volume when power is switched on can impair hearing.
- Do not operate the unit for an extended period of time with the sound distorting. Doing so may cause the connected speakers to heat, resulting in a fire.
- Contact your TOA dealer as to the cleaning. If dust is allowed to accumulate in the unit over a long period of time, a fire or damage to the unit may result.
- If dust accumulates on the power supply plug or in the wall AC outlet, a fire may result. Clean it periodically. In addition, insert the plug in the wall outlet securely.
- Switch off the power, and unplug the power supply plug from the AC outlet for safety purposes when cleaning or leaving the unit unused for 10 days or more. Doing otherwise may cause a fire or electric shock.

Warning: Operation of this equipment in a residential environment could cause radio interference.

- The socket-outlet shall be installed near the equipment and the plug (disconnecting device) shall be easily accessible.
- The apparatus shall be connected to a mains socket outlet with a protective earthing connection.

2. GENERAL DESCRIPTION

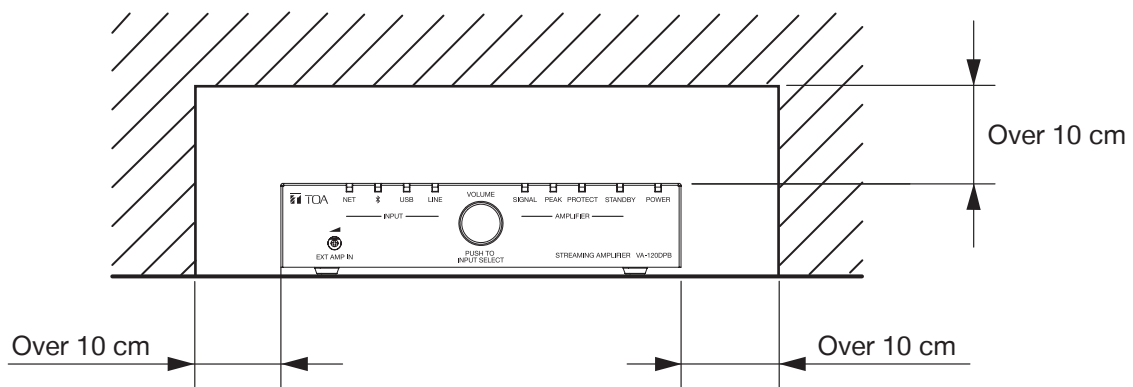
The VA-120DPB-AS is a wireless streaming 120 W power amplifier with network and Bluetooth[®] connectivity. Its output is compatible with both high-impedance (100V lines) and low-impedance speaker connections. It permits not only support streaming high-quality music, but also equipped with an external power amplifier input capability for priority broadcast. With the compact design and lightweight, it can be mounted in an EIA Standard equipment rack (1 unit size), desktop and wall mount installation. The VA-120DPB-AS is ideal for high-quality music streaming, BGM and paging announcement application in hotels, retail stores, restaurants or coffee shops.

3. FEATURES

- Lightweight owing to the built-in digital power amplifier unit. The amplifier unit is also equipped with auto standby function for reducing power consumption.
- Switchable speaker output 4 - 16 Ω or 100 V line.
- Equipped with an external power amplifier input (100 V line) capability for priority broadcast.
- Wired network and Wi-Fi, Bluetooth 5.0, wireless connectivity support.
- With the 4STREAM app, you can stream music from a variety of sources including your phone, and popular streaming services. It also supports multiroom and multizone control, allowing you to play music in different rooms or areas by multiple units connecting in same network.
- High quality music streaming support sample rate decoding up to 24 bit, 192 kHz.
- Full wireless control by FREE iOS & Android 4STREAM app.

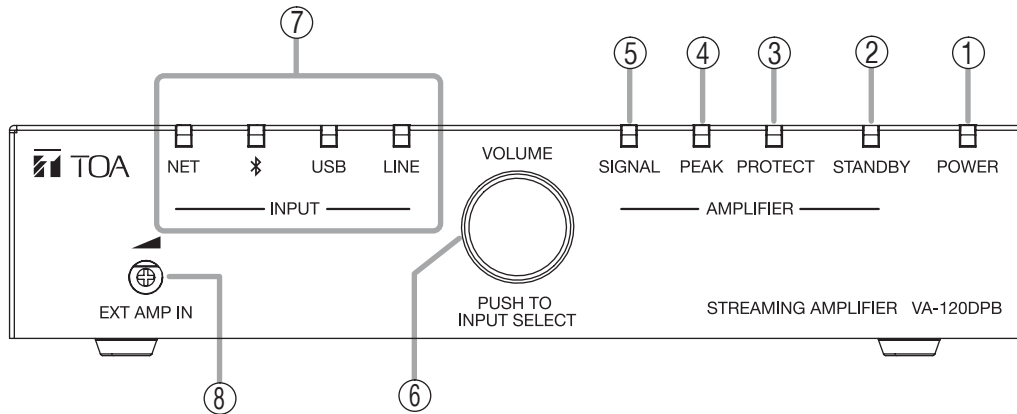
4. INSTALLATION PRECAUTIONS

- The supplied power supply cord is designed for exclusive use with the unit. Never use it with other equipment.
- Install the unit in a well-ventilated environment so that temperature inside the unit will not rise.
- When installing the unit on the desk or mouting on the wall, keep the unit over 10 cm away from objects that may obstruct air flow as shown below.
- When installing the Streaming Amplifier in an equipment rack, mount perforated panels. See "6.2. Rack mounting" on [p.9](#)



5. NOMENCLATURE AND FUNCTIONS

[Front]



1. Power indicator (Green)

Lights when the power is switched ON and goes OFF when it is switched off.

2. Amplifier standby indicator (Orange)

Lights when the integrated amplifier is in standby mode.

The integrated amplifier will automatically enter standby mode if no audio signal is input for approximately 20 minutes. It will automatically resume from standby mode when audio signal is input.

3. Amplifier protect indicator (Red)

Lights while the internal protection circuit is operating.

4. Amplifier peak indicator (Red)

Lights when output signal from the speaker output terminal (14) reaches the peak level, this indicates that sound is distorted.

In such case, adjust each input volume control to reduce output level.

5. Amplifier signal indicator (Green)

Lights to indicate presence of an input signal.

6. Streaming input mode selector with volume control

- Short press once to switch streaming input mode.
- Long press to terminate the current Wi-Fi or Bluetooth connection when in Wi-Fi or Bluetooth input mode.
- Rotate the knob clockwise to increase the input level and counterclockwise to decrease the input level of audio streaming source.

This Streaming mode selector with volume control is synchronized with 4STREAM app control.

7. Input mode indicator (Green)

The indicator corresponding to the selected input source and unit's operating status.

(*) See table below for more detail.

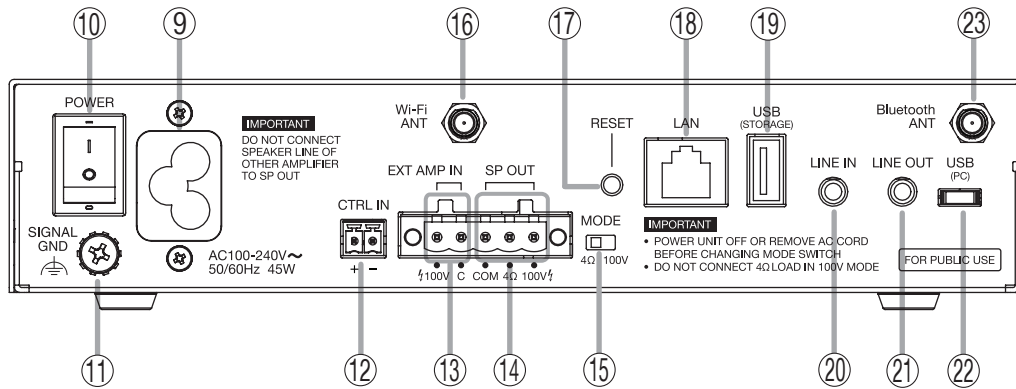
8. External amplifier input volume control

Adjust the volume level of the External amplifier input (13). Rotate this volume control clockwise to increase the volume level and counterclockwise to decrease it. Rotating the control fully counterclockwise mutes the input sound source from External amplifier input.

(*) The table below shows the input status indicator

Operating mode		Operating status	LED Indicator status			
			NET	Bluetooth	USB	LINE
Streaming	Network input	Setting up network connection	Flashing	Unlit	Unlit	Unlit
		Network is connected	Lit	Unlit	Unlit	Unlit
	Bluetooth input	Performing pairing	Unlit	Flashing	Unlit	Unlit
		Bluetooth is connected	Unlit	Lit	Unlit	Unlit
	USB input	There is no USB memory device or PC connected	Unlit	Unlit	Flashing	Unlit
		USB memory device or PC is connected	Unlit	Unlit	Lit	Unlit
	LINE input	LINE IN jack is not connected	Unlit	Unlit	Unlit	Flashing
		LINE IN jack is connected	Unlit	Unlit	Unlit	Lit
Priority broadcast		Muting streaming input sources, only external amplifier input is broadcast.	Flashing	Flashing	Flashing	Flashing

[Rear]



9. AC inlet

Connect the supplied power cord to this receptacle.



CAUTION

Be sure to use the supplied power cord. Using any other power cord may cause electric shock.

10. Power switch

Pushing this switch to the ON position (I) turns the power ON, while pushing it to the OFF position (O) turns the power OFF.

11. Functional ground terminal

Noise may be generated when external equipment is connected to the unit. In this case, connect this terminal to the functional ground terminal of the external equipment, and the noise may be reduced.

Note

This ground is not for protective ground.

12. Control input terminal

Short-circuit current: 10 mA or less, open voltage: 35 V DC or less,
Removable terminal block (3.81 mm, 2 pins)
Input the control signals for controlling the priority broadcast.
The priority broadcast is activated during this terminal is closed.

13. External amplifier input

40 dB* (100 V line), 65 k Ω , transformer balanced,
Removable terminal block (5.00 mm, 5 pins)
Connects to 100 V line speaker output of external amplifier.
The input volume can be changed with the External amplifier input volume control (8).

14. Speaker output terminal

Removable terminal block (5.00 mm, 5 pins), Outputs the audio signals of the power amplifier output.

The specifications of each output are as follows:

Rated output:	120 W
Low impedance:	4 - 16 Ω
High impedance (100 V line):	83 Ω

Notes

- Never use the low impedance and high impedance terminals simultaneously. Doing so may cause damage to the unit or the peripheral equipment.
- Never make connection to 4 Ω terminal when the Impedance setting switch (15) is set to 100 V.

Tip

To change impedance between high and low, use the Impedance setting switch (15).

15. Impedance setting switch

Changes the speaker output impedance either to low or high.

100 V: High impedance

4 Ω : Low impedance

Notes

- This switch is factory-preset to the 4 Ω position.
- Make sure that the power unit is switched OFF before changing this switch setting. Change cannot be performed when the power is ON. The impedance remains as it is even if you change the switch setting when the power is ON. However, the impedance will change when you turn the power ON again after turning the power unit OFF or disconnecting to the AC power supply.

* 0 dB = 1 V

16. Wi-Fi antenna terminal

Connects to the supplied antenna for a Wi-Fi connection to a network.

17. Reset button

- Short press once: Switch streaming input mode or turns on the streaming function when the streaming function is off.
- Short press twice: Reset Wi-Fi or Bluetooth settings when in Wi-Fi or Bluetooth input mode.
- Short press three times: Restore to factory settings.
- Long press (press and hold more than 5 seconds): Turns off the streaming function.

18. Network connection terminal

RJ45 Ethernet jack for a wired connection to a network.

Notes

- When using a Wi-Fi connection, a wired LAN connection is not necessary.
- When streaming high resolution contents via the network, we recommend using the wired network connection for stable streaming.

19. USB (STORAGE) terminal

USB 2.0 type-A port for connecting a USB storage device. The unit can playback audio files saved on USB storage device.

Notes

- Compatible with USB 2.0 devices. The USB storage device (flash drive) with a capacity of up to 32 GB and USB mass storage class device using FAT32 format.
- Connect a USB storage device directly to the USB storage terminal of the unit. Do not use extension cables.
- Stop playback of the USB storage device before disconnecting it from the USB storage terminal.

20. Line input jack

-10 dB*, 10 k Ω , unbalanced, Φ 3.5 mm stereo mini-jack type.

Input jack dedicated for external equipment output audio signal.

21. Line output jack

-10 dB*, 10 k Ω , unbalanced, Φ 3.5 mm stereo mini-jack type.

The streaming input signal after being adjusted by volume control (6) is output.

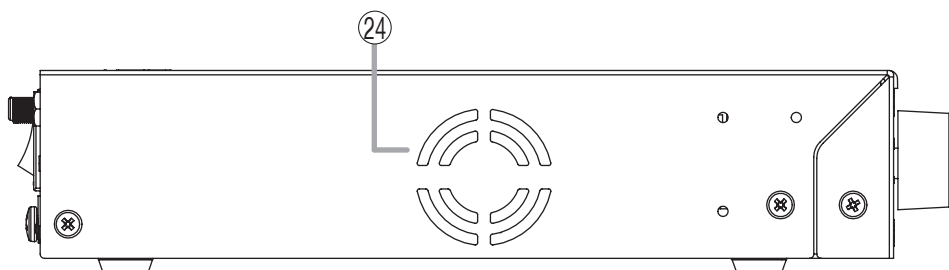
22. USB (PC) terminal

Micro-USB port for connecting to PC via USB cable (make sure it is a data cable including the signal wires). The PC will automatically discover a USB sound card.

23. Bluetooth antenna terminal

Connects to the supplied antenna for a Bluetooth connection.

[Left Side]



24. Fan

Exhaust fan

Note

Avoid blocking the fan, as this could result in unit failure.

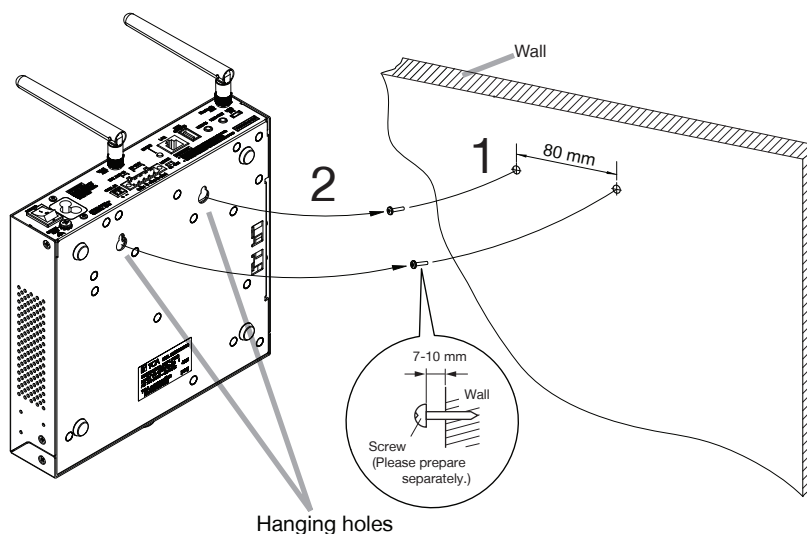
* 0 dB = 1 V

6. UNIT-MOUNTING

6.1. Mounting on the wall

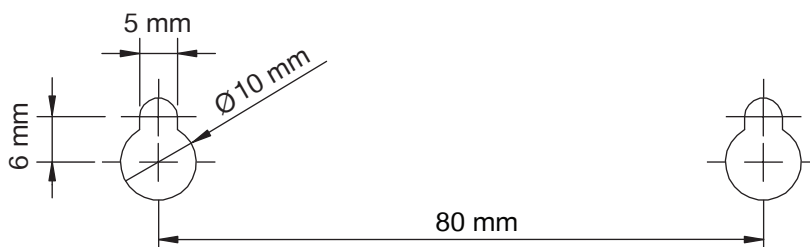
Step 1. Install two surface-mount screws in the wall 80 mm apart and leave them sticking out approximately 7 - 10 mm from the wall surface.

Step 2. Place the amplifier's hanging holes over the two installed screws to mount the amplifier to the wall surface.



Note:

The surface-mount screws are not supplied with the unit. Referring to the mounting hole's dimensional diagram below, prepare the correct type of screws appropriate to the wall material.

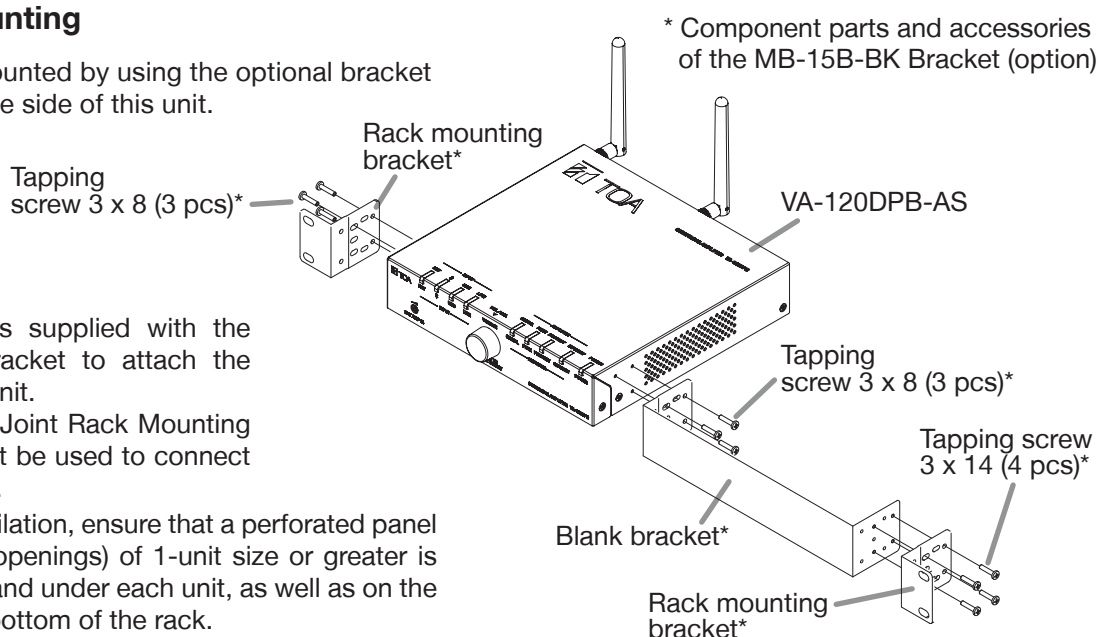


WARNING

Install the unit only in a location that can structurally support the weight of the unit. Doing otherwise may result in the unit falling down and causing personal injury and/or property damage.

6.2. Rack mounting

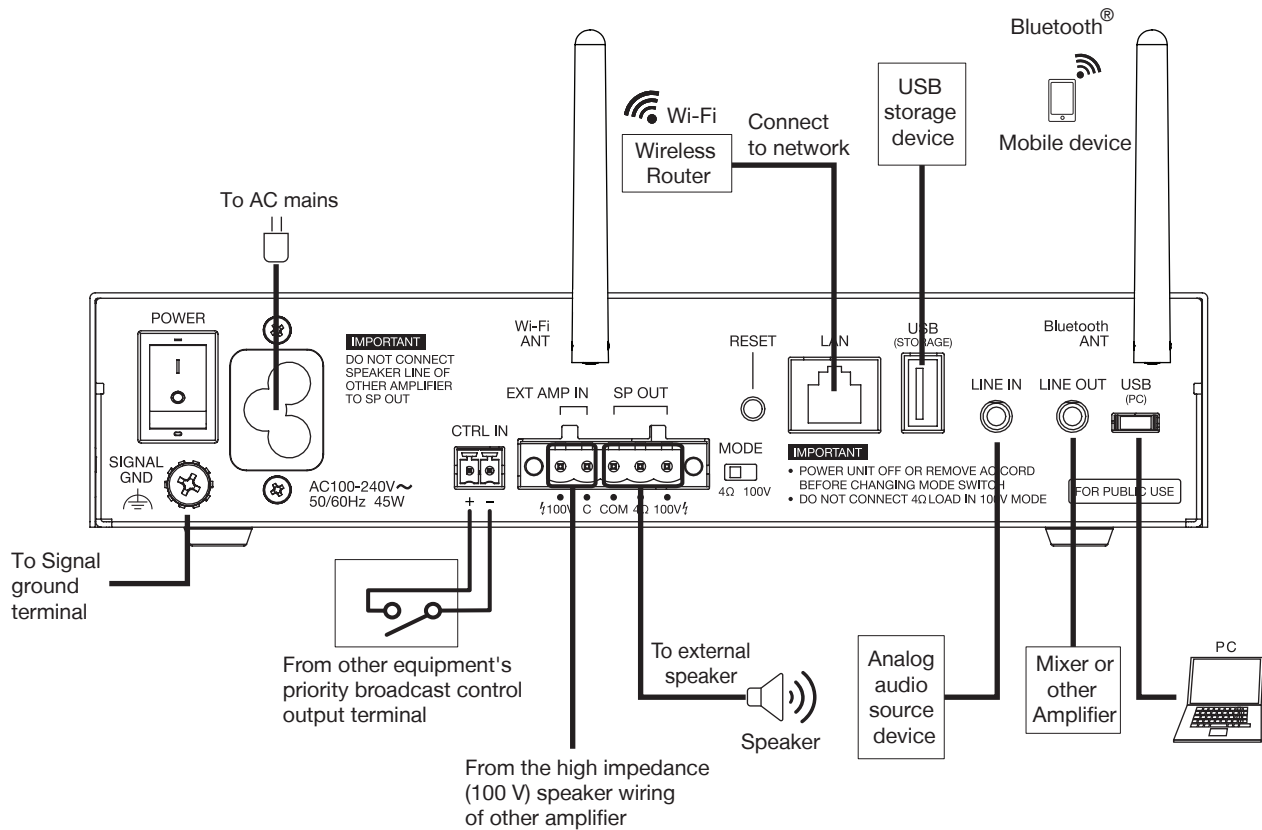
It can be rack-mounted by using the optional bracket MB-15B-BK to the side of this unit.



Notes

- Use the screws supplied with the MB-15B-BK Bracket to attach the bracket to the unit.
- The MB-15B-J Joint Rack Mounting Brackets cannot be used to connect 2 units together.
- To improve ventilation, ensure that a perforated panel (panel with air openings) of 1-unit size or greater is imounted over and under each unit, as well as on the top and at the bottom of the rack.

7. CONNECTIONS



External cable wiring must be only carried out by qualified and trained personnel.

7.1. Speaker Connection

Impedances indicate at the terminal represent the total impedance (load) of the speaker output terminal. Impedance can be switched from high impedance to low impedance. For cable wiring to the removable terminal block, refer to [p.12](#).

Notes

- Never make connection to both 4 Ω (low impedance) and 100 V line (high impedance) terminals simultaneously.
- Never make connection to 4 Ω terminal when the Impedance setting switch is set to 100 V.

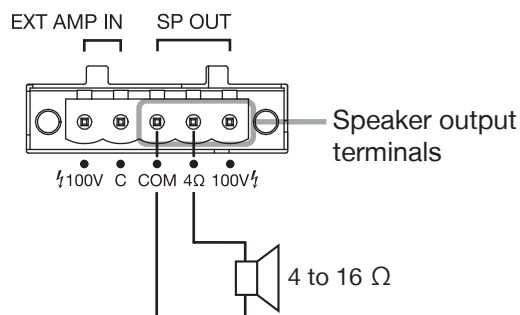
Tip

Recommended speaker cable is IV or HIV cable with thickness described below.

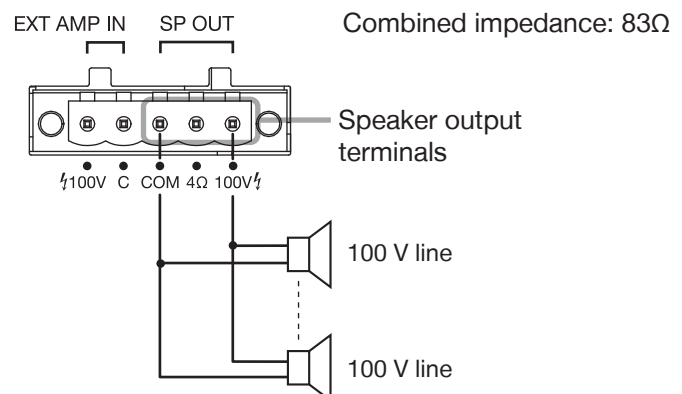
Solid copper cable: $\varnothing 0.32 - 2.0$ mm

Stranded copper cable: $0.05 - 3.3$ mm² (AWG 30 - 12)

[Low impedance terminal]

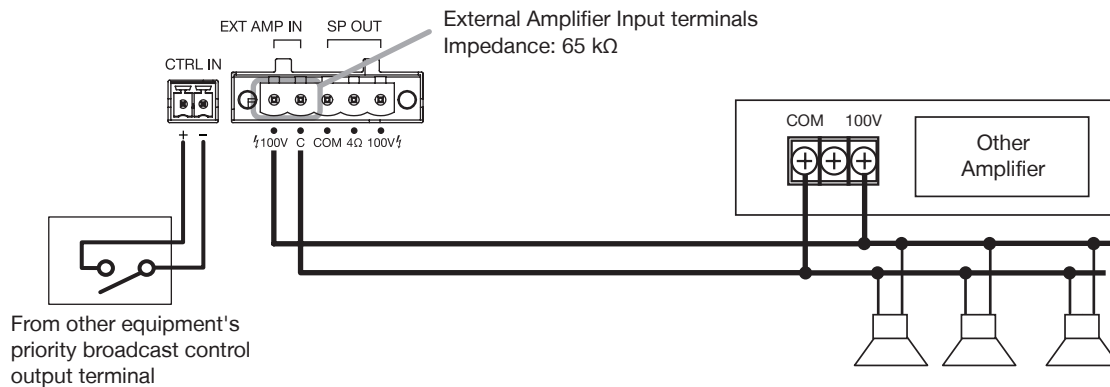


[High impedance terminal]



7.2. External Amplifier Input Connection

Connect the high impedance (100 V) speaker wiring of other amplifier to the External Amplifier Input terminals. For cable wiring to the removable terminal block, refer to [p.12](#)

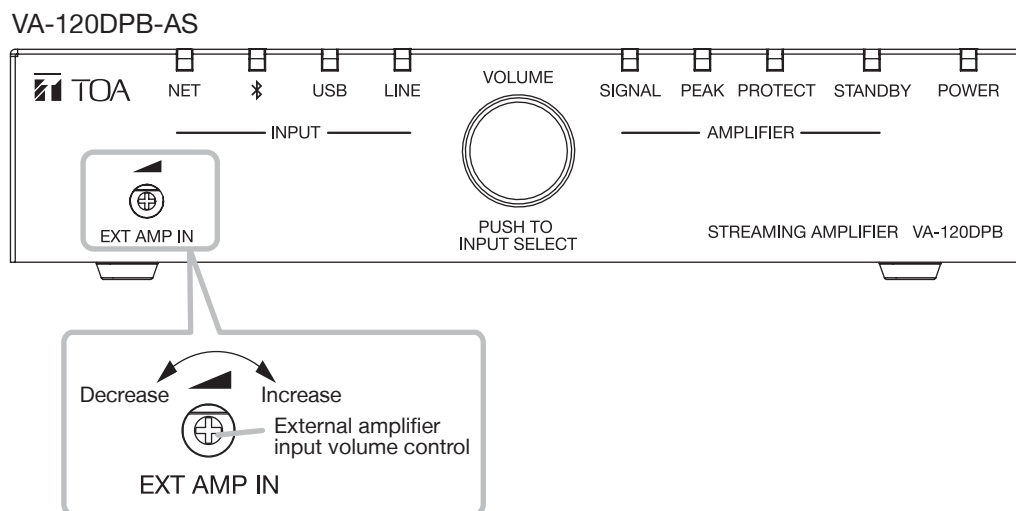


[Volume adjustment]

Rotate the External amplifier input volume control clockwise to increase the volume level and counterclockwise to decrease it. Rotating the control fully counterclockwise mutes the input sound source from External amplifier input.

Notes

- Rotate the External amplifier input volume control screw using an appropriate screwdriver. When rotating, do not press on the screwdriver with too much force, so as to avoid damage to the adjuster.
- This volume is factory-preset to the min position.



7.3. Removable Terminal Plug Connection

Step 1. Wiring the supplied removable terminal plug.

1-1. Loosen the terminal screws to insert the wire.

1-2. Tighten the terminal screws.

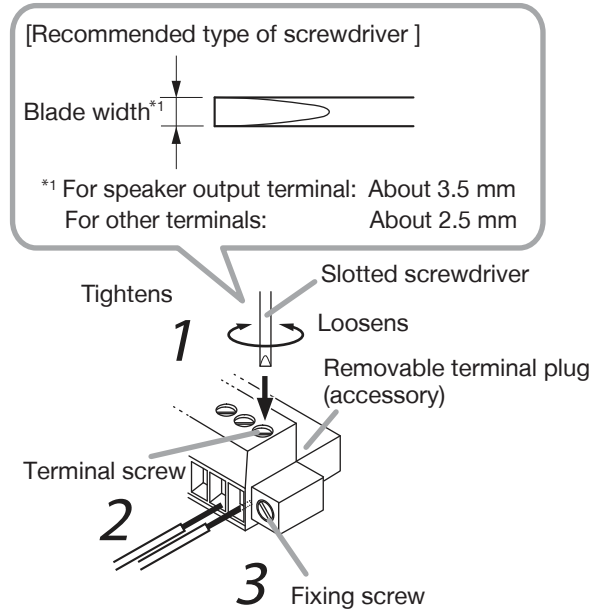
Ensure that the wire does not break free when pulled. If the wire does pull free, repeat the connection procedure from the start.

Step 2. Insert the wired terminal plug into the corresponding terminal block in the unit's rear panel.

Step 3. Only when the fixing screw is inserted, tighten the fixing screw.

Notes

- Do not reverse **Steps 1** and **2** above. Poor contact may result if force is applied to the unit's internal circuit board pins while the terminal screws are being tightened.
- When detaching the terminal plug, pull it straight out. Pulling it out at an angle may cause the terminal plug or terminal block to break.



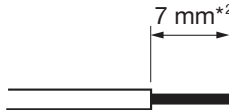
Tips

- Applicable cable size

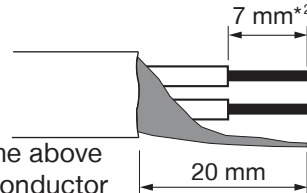
	For External amplifier input and Speaker output terminals	For other terminals
Conductor cross-section area	0.05 – 3.3 mm ²	0.08 – 2.0 mm ²
AWG	AWG 30 – 12 or equivalent	AWG 28 – 14 or equivalent

- Cable sheath to trim

Solid cable and stranded cable



Shielded cable



*2 Expose 8 mm or more when using the above ferrule terminal, and cut off an extra conductor protruding from the sleeve.

Note

Avoid soldering stranded or shielded cable, as contact resistance may increase when the cable is tightened and the solder is crushed, possibly resulting in an excessive rise in joint temperatures.

- When connecting 2 cables or a shielded cable to a single terminal, use a ferrule terminal with an insulation sleeve to crimp the cables because such cable conductors could become loose.

(1) Recommended ferrule terminals for signal cables

(made by Phoenix Contact)

Unit: mm

	Model Number	a	b	l ₁	l ₂
①	AI 0,34-8 TQ	2	0.8	12.5	8
②	AI 0,5-8 WH	2.5	1.1	14	8

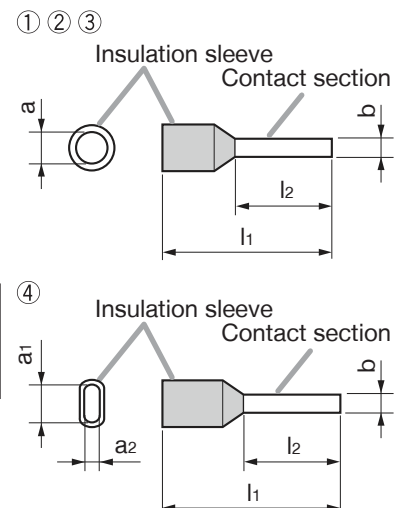
(2) Recommended ferrule terminals for speaker cables

(made by Phoenix Contact)

Unit: mm

	Model Number	a	a ₁	a ₂	b	l ₁	l ₂
③	AI 1,5-8 BK	3.4	—	—	1.8	14	8
④	AI-TWIN 2 x 1,5-8 BK	—	6.6	3.6	2.3	16	8

Crimping tool: CRIMPFOX 10S (made by Phoenix Contact)



8. HOW TO USE

8.1. App download

Download the 4STREAM application from App Store for iOS based devices and Google Play Store for Android based devices.

The application supports English, Spanish, French, German, Italian, Portuguese, Korean, Simplified Chinese, Traditional Chinese and Japanese.



8.2. First time usage and Wi-Fi setup

- Step 1.** Power up the device.
- Step 2.** Make sure your mobile has connected to network using 2.4GHz and your GPS and Bluetooth is on.
- Step 3.** Open 4STREAM App and wait for device discovery. This will take a few seconds.
- Step 4.** 4STREAM App will ask to check the indicator, there should be a slow flashing NET indicator lights that indicate it is waiting for Wi-Fi connection. Click on Indicator is blinking. If is not NET indicator, press the streaming input mode selector with volume control (6) to change mode.
- Step 5.** For Android device, the system will ask for permission to use GPS data & File storage, please click accept to continue. This GPS permission is setup by Google for BLE usage, once setup is finish you can go to system settings and disable it. File storage permission is to let 4STREAM App access your mp3 files store in your mobile.
- Step 6.** 4STREAM App will list out all the device available for setup, choose the one you want.
- Step 7.** 4STREAM App will then ask you to choose the network you want the device to connect to, choose the one you want to connect.
- Step 8.** Now enter password for your network, if this is not the network you want the device to connect, you can change it to the desire one.
- Step 9.** Then you can change the name of the device. You can select a preset one or enter your own.
- Step 10.** After you define the name of the device, you will see it appears in the device list in 4STREAM App and now you can start streaming music.

Note:

If you change to another router, or the password of the connected router has been changed, short press twice the Reset button (17) in Wi-Fi mode to reset the Wi-Fi connection.

8.3. Connection via LAN

Plug in the wired cable to the RJ45 Ethernet, this allows you to directly stream music from your smart devices without having to go through the Wi-Fi setup process using the app.

Switch to NET mode, the NET indicator will turn on and you can start streaming music.

Note:

Your smart device and this device must be in the same network.

8.4. Bluetooth

To use Bluetooth, please switch to Bluetooth input mode, then you can search for a Bluetooth device name "VA-120DPB_XXXXX_YYYY" (XXXXX is serial number, YYYY is MAC address number) from Bluetooth setting of your smart device (such as Mobile Phone, Pad, PC) and pair it.

Once connected, the Bluetooth indicator will stay on which indicates the connection is successful and now you can start streaming music. The device will remember connected devices, it will auto connect to paired device.

Note:

To terminate the current Bluetooth connection, long press the Streaming input mode selector with volume control (6) or short press twice the Reset button (17) to disconnect all the connection.

8.5. USB storage device

Plug in the USB storage device with audio files and the device will auto switch to USB input mode and playback the audio files.

The USB indicator will turn on.

8.6. Connect to PC

Connect the device to your PC via USB cable (make sure it is a data cable including the signal wires). Switch to USB input mode, the USB indicator will turn on.

The PC will automatically discover a USB sound card. You will need to select this device as the sound output device in your PC for it work.

Look for the device name call “Up2Stream USB Audio” and connect to it. This allows you to stream audio from your PC directly to the device.

Support both Windows & Mac PC.

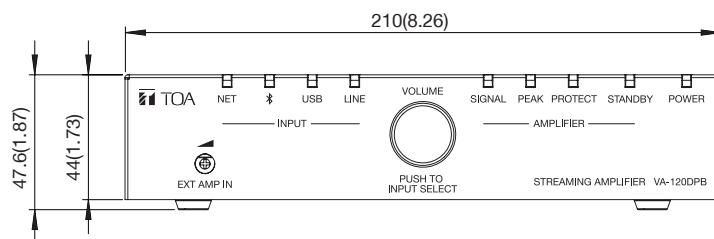
8.7. Line In mode

Connect audio source to Line input (20) , switch to Line input mode.

The LINE indicator will turn on.

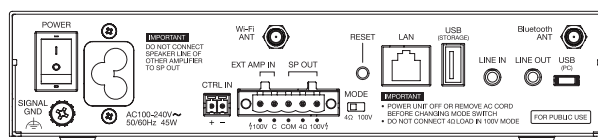
9. DIMENSIONAL DRAWINGS

[Front]

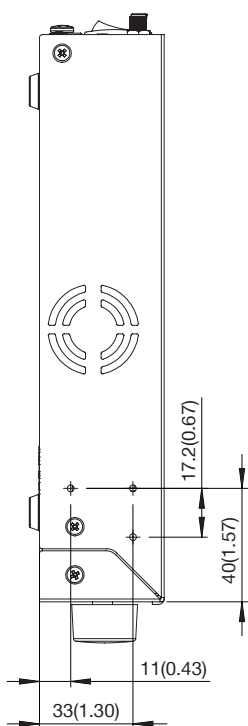


Unit: mm (in)

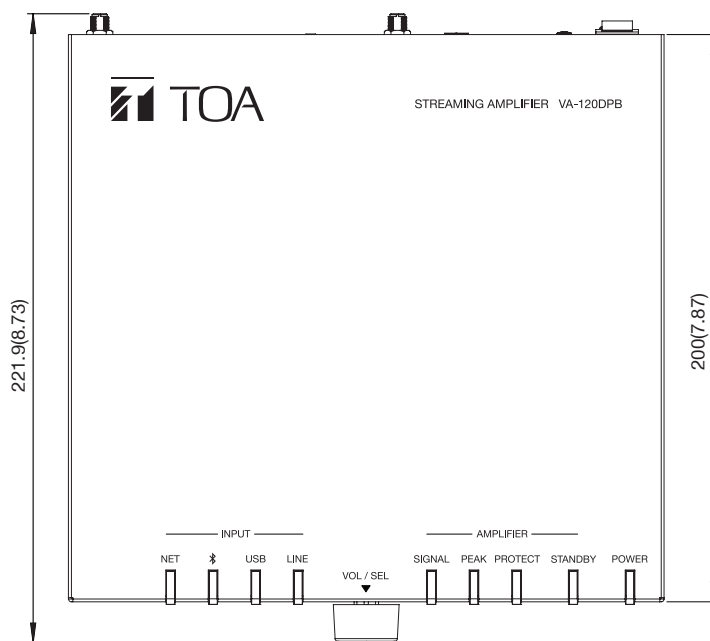
[Rear]



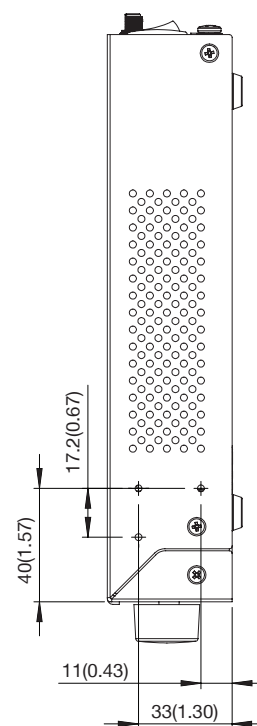
[Left]



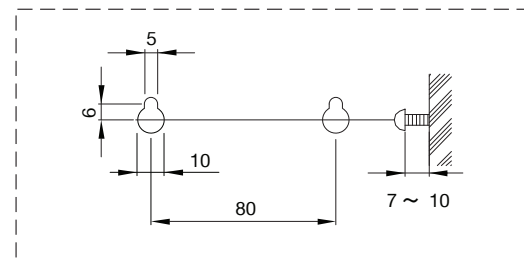
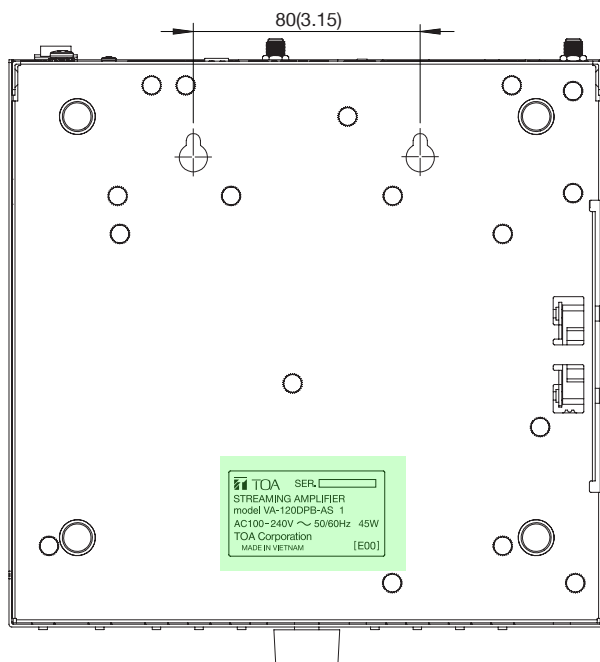
[Top]



[Right]

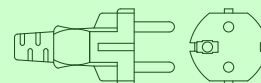


[Bottom]



Hanging holes dimension diagram

AC plug
(Power cord)



10. SPECIFICATIONS

Power Source	100 - 240 V AC 50/60 Hz
Rated Output	120 W (Speaker Output)
Power Consumption	170 W (rated output), 45 W (1/8 of rated output)
Frequency Response	40 Hz to 20 kHz
Distortion	1 % or less at 1 kHz (20 kHz LPF (AUX-0025))
Tone Control (only mobile app)	Bass: ± 10 dB at 100 Hz Treble: ± 10 dB at 10 kHz
Signal to Noise Ratio	70 dB or more
Audio Input	LINE IN: -10 dB (*1), 10 k Ω , \varnothing 3.5 mm stereo mini-jack BLUETOOTH: 5.0 SBC/AAC Wi-Fi: IEEE 802.11 b/g/n 2.4GHz LAN: 10/100M Ethernet, RJ45 USB (storage): USB 2.0 Type-A port (*2) USB (PC): Micro-USB port EXT AMP IN: 40 dB (*1) (100 V line), 65 k Ω , transformer balanced, removable terminal block (5 pins)
Audio Output	SPEAKER OUT: Low impedance (4-16 Ω)/High impedance (100 V line/total 83 Ω) selectable. removable terminal block (5 pins) LINE OUT: -10 dB (*1), 10 k Ω , \varnothing 3.5 mm stereo mini-jack
Audio Format	FLAC/MP3/AAC/AAC+/ALAC/APE/WAV
Sampling Frequency	Decoding up to 192 kHz/24 bits.
Control Input	CTRL IN: No-voltage make contact input, open voltage: 35 V DC or less, short-circuit current: 10 mA or less, removable terminal block (2 pins)
LED Indicators	NET (Green), Bluetooth (Green), USB (Green), LINE (Green), SIGNAL (Green), PEAK (Red), PROTECT (Red), STANDBY (Orange), POWER (Green)
Operating Temperature	0 to 40 °C (32 to 104 °F)
Operating Humidity	90 % RH or less (no condensation)
Finish	Front case: Surface-treated steel plate, black, paint Rear chassis: Surface-treated steel plate
Dimension	210 (W) X 44 (H) X 200 (D) mm or 8.27" X 1.73" X 7.87" (excluding projection)
Weight	1.8 kg (3.97 lb)
Accessories	Removable terminal plug (5 mm, 5 pins).....1 Removable terminal plug (3.8 mm, 2 pins).....1 Power supply cord (2 m (6.56 ft)).....1 External antenna.....2
Option (*3)	Half width blank panel: MB-15B-BK (for rack mounting one VA-120DPB-AS unit)

(*1) 0 dB = 1 V

(*2) A USB 2.0-compatible FAT32-formatted flash memory device of up to 32 GB in capacity can be used.

(*3) When using the optional MB-15B-BK, use the bracket mounting screws supplied with this unit.

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