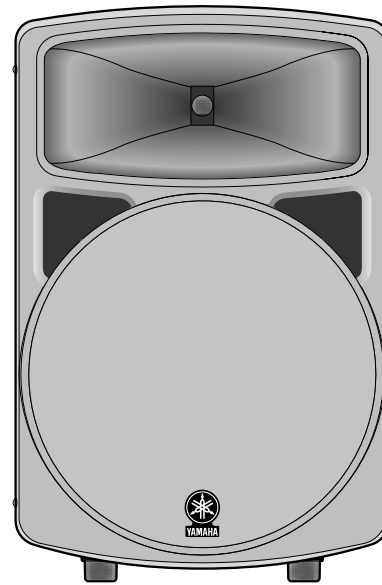




POWERED SPEAKER

MS400

Owner's Manual



Thank you for purchasing the Yamaha MS400 powered speaker system. The development of this powered bi-amplifier speaker system is a natural extension of Yamaha's extensive experience and knowledge of PA devices. The MS400 faithfully reproduces sound for a wide range of applications. Please read this owner's manual thoroughly to make the best use of the MS400 for the longest possible period of time. Keep the manual in a safe place for future reference.

Features

- Lightweight, high-powered speaker with a newly-developed 15-inch neodymium magnet woofer
- The speaker uses an "EE Engine" based on Yamaha's proprietary amplifier drive technology for high-efficiency drive. It features a high-output bi-amplifier configuration (LF 300 W and HF 100 W).
- Optional speaker stand and installation brackets available for various applications.

Contents

Precautions.....	2
Rear Panel.....	3
Connection Examples.....	4
Specifications.....	5
General specifications	5
Amp.unit	5
Dimensions	5
Performance graph	5
Block Diagram.....	5
Installation Examples.....	6

Precautions

- Do not allow water to enter this unit or allow the unit to become wet. Fire or electrical shock may result.
- Do not place a container with liquid or small metal objects on top of this unit. Liquid or metal objects inside this unit are a fire and electrical shock hazard.
- Connect the included power cord only to an AC outlet of the type stated in this Owner's Manual or as marked on the unit. Failure to do so is a fire and electrical shock hazard.
- Do not scratch, bend, twist, pull, or heat the power cord. A damaged power cord is a fire and electrical shock hazard.
- Do not place heavy objects, including this unit, on top of the power cord. A damaged power cord is a fire and electrical shock hazard. In particular, be careful not to place heavy objects on a power cord covered by a carpet.
- Place the device near a power outlet so you can easily plug it in.
- If you notice any abnormality, such as smoke, odor, or noise, or if a foreign object or liquid gets inside the unit, turn it off immediately. Remove the power cord from the AC outlet. Consult your dealer for repair. Using the unit in this condition is a fire and electrical shock hazard.
- Should this unit be dropped or the cabinet be damaged, turn the power switch off, remove the power plug from the AC outlet, and contact your dealer. If you continue using the unit without heeding this instruction, fire or electrical shock may result.
- Use only the included power cord for this unit. Using other types may be a fire and electrical shock hazard.
- The power to this device is not completely shut off even when the power switch is turned off. Locate the device close to the AC outlet so you can easily reach the power plug.
- If the power cord is damaged (i.e., cut or a bare wire is exposed), ask your dealer for a replacement. Using the unit with a damaged power cord is a fire and electrical shock hazard.
- Do not remove the unit's cover. You could receive an electrical shock. If you think internal inspection, maintenance, or repair is necessary, contact your dealer.
- Do not modify the unit. Doing so is a fire and electrical shock hazard.
- Turn off all audio equipment, and speakers when connecting to this unit. Use the correct connecting cables and connect as specified.
- Always lower the volume control to minimum before turning on the power to this unit. A sudden blast of sound may damage your hearing.
- Allow enough free space around the unit for normal ventilation. This should be: 20 cm at the sides, 25 cm behind, and 30 cm above.
For normal ventilation during use, remove the rear of the rack or open a ventilation hole.
If the airflow is not adequate, the unit will heat up inside and may cause a fire.
- This unit is heavy. Use two or more people to carry it.
- If you stack the speakers, secure the handles of the speakers using a belt and fix the speakers to the floor or wall to prevent them from falling and causing injury. Do not stack more than two speakers.
- Do not use the handles to suspend the speaker. Otherwise, it may fall, causing injury.
- Hold the power cord plug when disconnecting it from an AC outlet. Never pull the cord. A damaged power cord is a potential fire and electrical shock hazard.
- Do not touch the power plug with wet hands. Doing so is a potential electrical shock hazard.
- XLR-type connectors are wired as follows: pin 1: ground, pin 2: hot (+), and pin 3: cold (-).
- Using a mobile telephone near this unit may induce noise. If noise occurs, use the telephone away from the unit.
- Do not use the speakers at uncomfortably loud level. Otherwise, you may damage your hearing.
- If lightning begins to occur, turn off the power switch of the unit as soon as possible, and unplug the power cable plug from the electrical outlet.
- If there is a possibility of lightning, do not touch the power cable plug if it is still connected. Doing so may be an electrical shock hazard.

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:

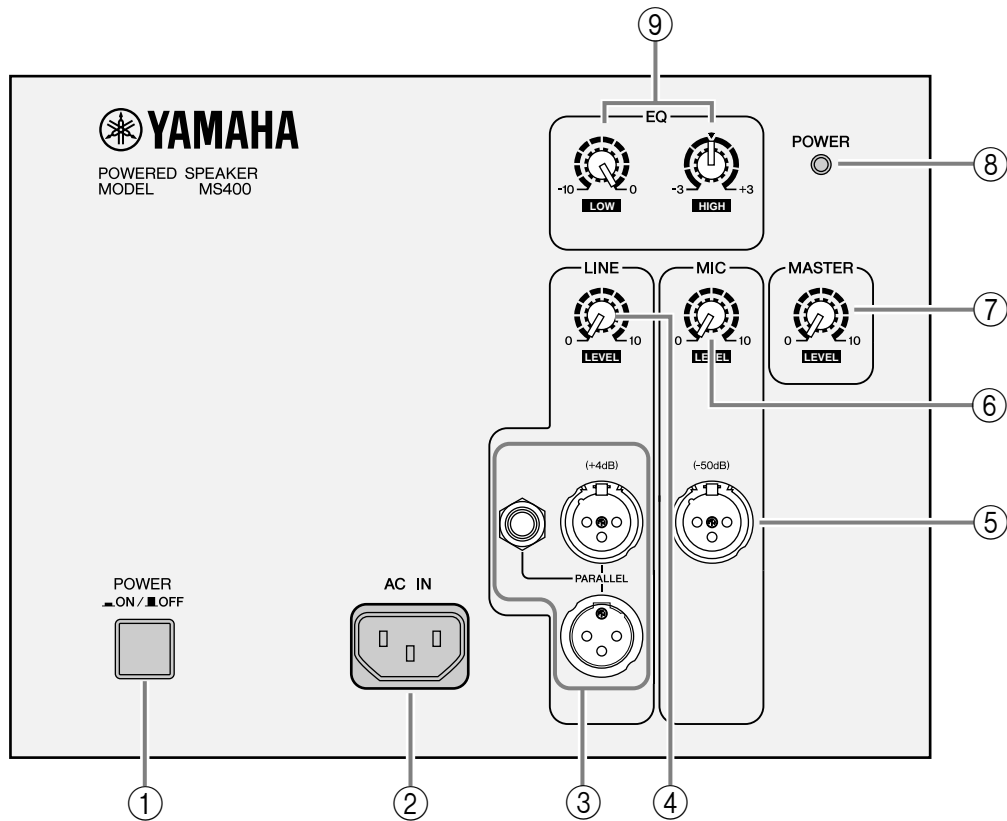
The wire which is coloured GREEN and YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol \perp or coloured GREEN and YELLOW.

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 KEMBLE MUSIC (U.K.) LTD.

Rear Panel



① **POWER switch**

This switch turns the power to the MS400 on and off. When you turn this switch on, the POWER indicator (⑧) lights up green.

② **AC IN connector**

Connect the included power cord here.

③ **LINE connectors**

These balanced connectors accept input from line-level sources, such as a mixer. The connectors include: an XLR-3-31 type; an XLR-3-32 type; a 1/4" TRS phone jack. They are all connected in parallel and can be used as line outputs. In this case, input signals from the MIC connector (⑤) will not be output.

④ **LINE LEVEL control**

This control enables you to adjust the level of signal input from the LINE connectors (③).

⑤ **MIC connector**

Mic-level sources are input at this balanced, XLR-3-31 type connector. The internal low-cut filter will cut the range of these signals below 70 Hz. The mic input will not be routed to any destination other than the speaker.

⑥ **MIC control**

This control enables you to adjust the level of signal input at the MIC connector (⑤).

⑦ **MASTER LEVEL control**

This control enables you to adjust the entire volume level.

⑧ **POWER indicator**

When you turn the power on, this indicator lights up green.

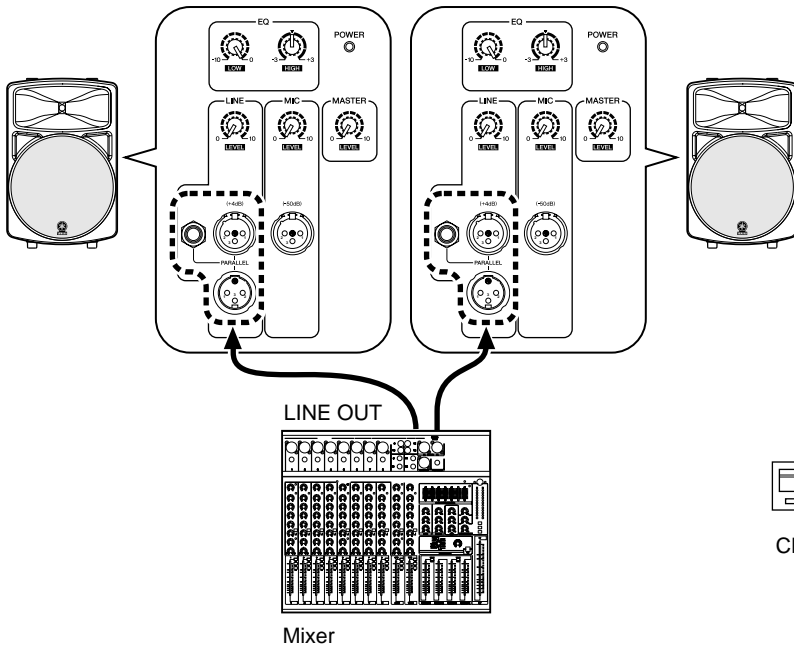
⑨ **EQ control**

LOW: This EQ adjusts the low band in the range of 0 ~ -10 dB with a center frequency of 55 Hz. The 0 (MAX) setting is flat. Turn the control counterclockwise to cut.

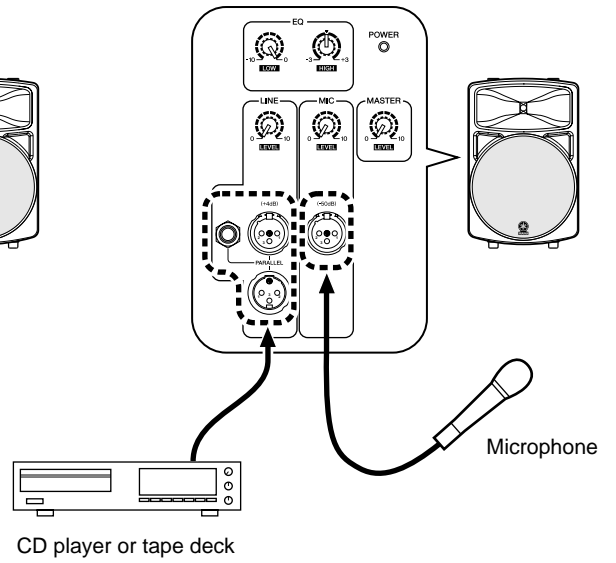
HIGH: This EQ adjusts the high band. The arrow setting ▼ is flat. Turn the control clockwise to boost and counterclockwise to cut the HF band (1.6 kHz or higher) in the range of ±3 dB.

Connection Examples

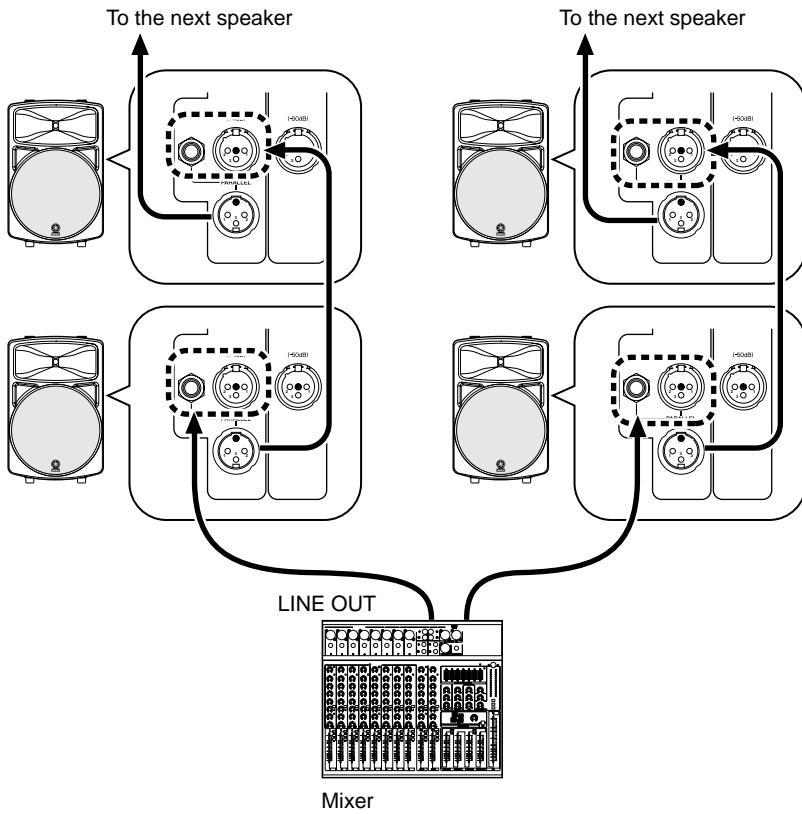
Stereo setup



Without a mixer



Daisy chain



Specifications

General specifications

Type

Bi-Amp 2-way bass reflex powered speaker
(Bi-amplifier electronic crossover network)

Speaker unit

LF : 38 cm cone

HF : 5 cm Titanium diaphragm compression driver

Frequency Range 50 Hz~16 kHz (-10 dB)

Maximum Output Level..... 124.5 dB (1m on Axis)

Directional angle..... 90° (H)/40° (V)

Dimension (W x H x D)..... 449 x 683 x 379 mm

Weight 24.2 kg

Color Black (approx. Munsell value:
5PB 2/1)

Tripod pole diameter 35~36 mm

Accessories..... Power cord (AC inlet type, 2.5 m)

Amp.unit

Maximum Output Power

LF: 300 W at 500 Hz, THD=1%, RL=4Ω

HF:100 W at 5 kHz, THD=1%, RL=16Ω

Crossover frequency 1.6 kHz (30 dB/oct.)

Input Sensitivity LINE: +4 dB*, MIC: -50 dB*

Input impedance..... LINE: 30 kΩ, MIC: 5 kΩ

Controls

LEVEL LINE, MIC, MASTER

EQ.....LOW: 0 (Max.) ~ -10 dB (Min.) at 55 Hz
HIGH: ±3 dB (HF)

Power switch..... On/Off

Connectors (all balanced):

LINE in/out.....XLR-3-31, XLR-3-32, phone
(They are all connected in parallel and can be used as line outputs.)

MIC in..... XLR-3-31

POWER indicator..... Green LED

Power Requirement USA and Canada 120 V, 60 Hz

Europe.....230 V, 50 Hz

Others240 V, 50 Hz

Power Consumption 120 W

Accessories.....Bracket adapter BAD251 (for
BWS251-400, BCS251, and BBS251)

* 0 dB=0.775 V

• Specifications and appearance are subject to change without notice.

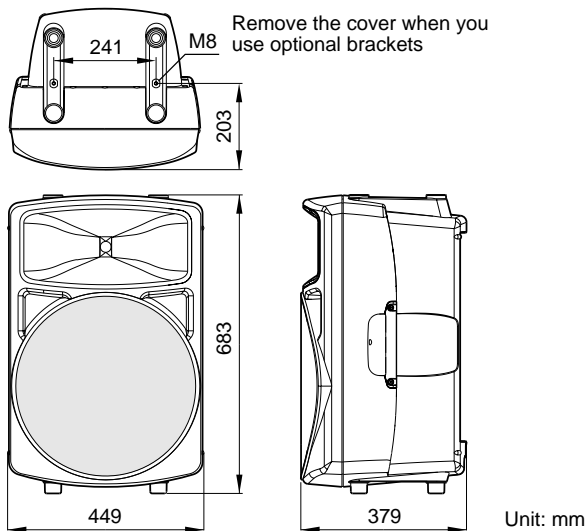
For European Model

Purchaser/User Information specified in EN55103-1 and EN55103-2.

Inrush Current: 25A

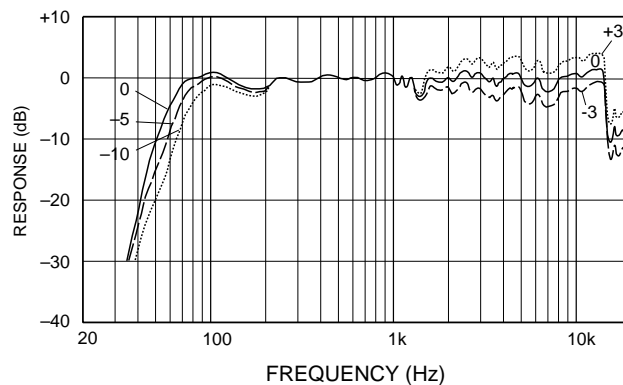
Conformed Environment: E1, E2, E3 and E4

Dimensions

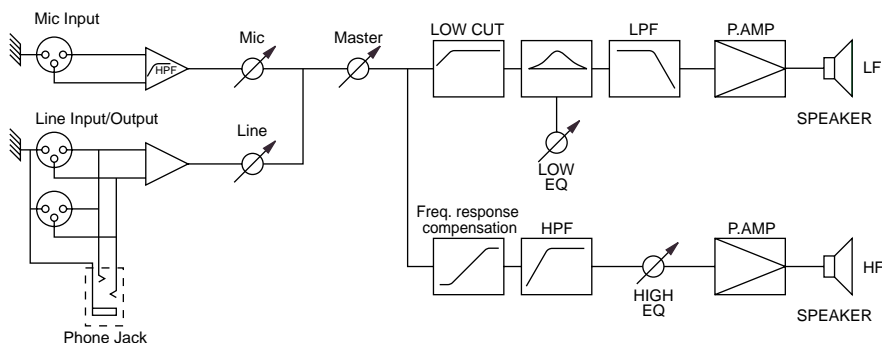


Performance graph

Standard Frequency Response



Block Diagram

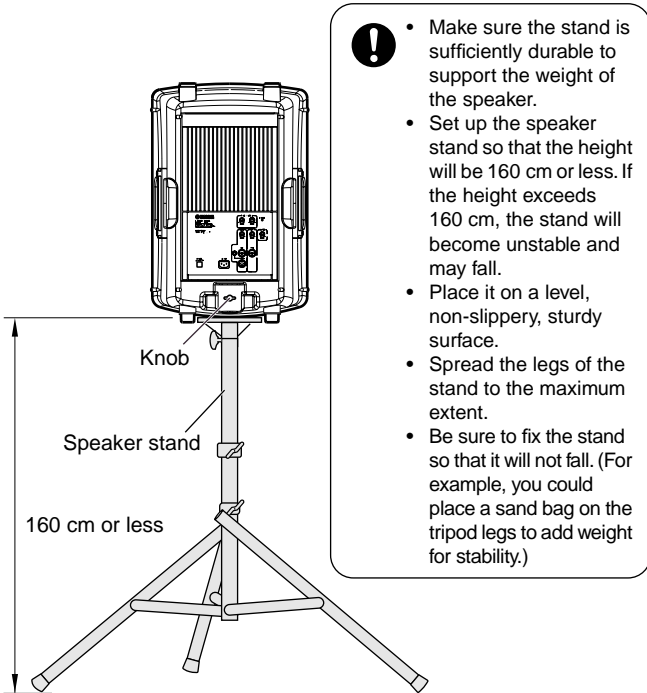


Installation Examples



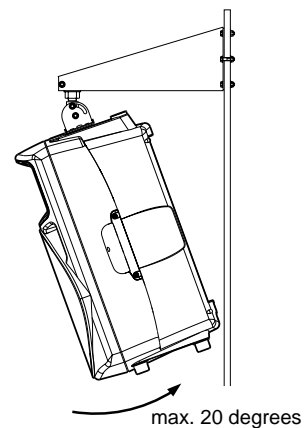
- Installation must be carried out by an installation specialist.
- Do not install two or more speakers on a single speaker stand or bracket. The speaker(s) may fall, resulting in injury.
- You need a BAD251 bracket adapter to use a BWS251-400, BCS251, or BBS251 speaker bracket.
- Due to abrasion or corrosion, parts may deteriorate. To use the product safely, be sure to perform regular maintenance and inspections.
- Read the instruction manual for the speaker stand or speaker bracket when you install the stand or bracket.

Speaker stand

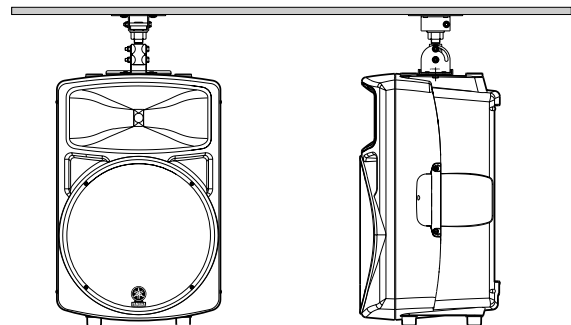


- Make sure the stand is sufficiently durable to support the weight of the speaker.
- Set up the speaker stand so that the height will be 160 cm or less. If the height exceeds 160 cm, the stand will become unstable and may fall.
- Place it on a level, non-slippery, sturdy surface.
- Spread the legs of the stand to the maximum extent.
- Be sure to fix the stand so that it will not fall. (For example, you could place a sand bag on the tripod legs to add weight for stability.)

BWS251-400 suspended speaker bracket and BAD251 adapter

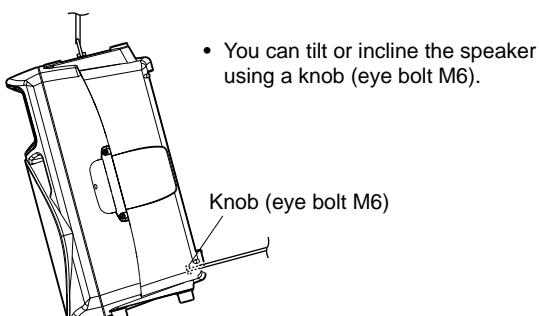
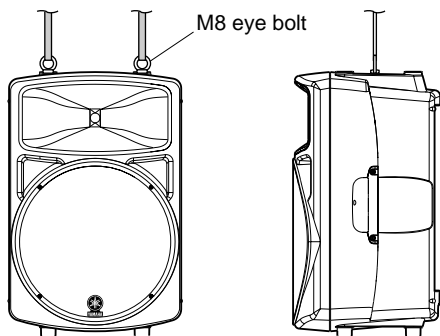


BCS251 ceiling speaker bracket and BAD251 adapter



Ceiling suspending with eye bolts

* M8 eye bolts are optional.



- You can tilt or incline the speaker using a knob (eye bolt M6).

BBS251 baton speaker bracket and BAD251 adapter

