

SPEAKER SYSTEM





CBR series CBR15 CBR12 CBR10

Owner's Manual

English

Auf der Rückseite befindet sich die deutsche Version der Bedienungsanleitung.

In order to take full advantage of the CBR series' (referred to in this manual as CBR) superior functionality and enjoy years of trouble-free use, please read this manual before you begin using the product. After you have read the manual, keep it in a safe place for reference when needed.

- This manual uses example illustrations taken from the CBR12 if not otherwise specified.
- The illustrations as shown in this manual are for instructional purposes only.
- The company names and product names used in this manual are the trademarks or registered

trademarks of their respective companies.

· High-quality speaker unit, with smooth directional characteristics, and ports reducing wind roar in order to achieve High-resolution sound quality

- · High sound pressure thanks to the unit's high-input tolerance and exceptional reliability from protection
- · Highly portable light and compact cabinet
- Input connectors supporting both speakON and phone plugs
- · Installable with eye bolt rigging and brackets

Included Accessories

- Technical Specifications (English only): includes specifications, block diagram, and dimensions.
- Owner's Manual (this leaflet)

Features

PRECAUTIONS

PLEASE READ CAREFULLY BEFORE **PROCEEDING**

Please keep this manual in a safe place for future

⚠ 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:

Do not open

Fire warning

 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, discont and have it inspected by qualified Yamaha service

Do not put burning items, such as candles, on the unit. A burning item may fall over and cause a fire.

⚠ 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

Location

- Do not place the device in an unstable position or fai to secure it properly in a potentially dangerous position where it may fall even if the position is horizontal. The device may accidentally fall over, resulting in damage
- Do not use the speaker's handles for suspended nstallation. Doing so can result in damage or injury.
- Do not hold the bottom of the device when transporting or moving it. In doing so, you may pinch your hands under the device, and result in injury.
- Do not place the device in a location where it may come into contact with corrosive gases or salt air. Doing so
- nay result in malfunction. Before moving the device, remove all connected cables Always consult qualified Yamaha service personnel if the device installation requires construction work, and
- make sure to observe the following precautions Choose mounting hardware and an installation location that can support the weight of the device
- Avoid locations that are exposed to constant vibration - Use the required tools to install the device. Inspect the device periodically.

• Before connecting the device to other devices, turn off

- off for all devices, set all volume levels to minimum Use only speaker cables. Use of other types of cables
- may result in fire.

Handling caution • Do not insert your fingers or hands in any gaps or

- 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 the 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

 Do not operate the device if the sound is distorting. Prolonged use in this condition could cause overheating

• When choosing a power amplifier for use with this device, make sure that the output power of the amplifier is lower than the power capacity of this device. If

- the output power is higher than the power capacity, malfunction or fire may occur.

 • Do not input excessively loud signals that may result in
- lipping in the amplifier or cause the following eedback, when using a microphone
- Continuous and extremely loud sound from a musical nstrument, etc. Continuous and extremely loud distorted sound
- Noise caused by plugging/unplugging the cable while
- the amplifier is turned on
 Even if the output power of the amplifier is lower than

the power capacity of this device (program), damage to the device, malfunction or fire may occur. Yamaha cannot be held responsible for damage caused by improper use or modifications to the device, or data

(PA-4)

NOTICE

To avoid the possibility of malfunction/damage to the product, damage to data, or damage to other property, follow the notices below.

Handling and Maintenance

that is lost or destroyed.

- Do not expose the device to excessive dust or vibration extreme cold or heat (such as in direct sunlight, near a heater, or in a car during the day), in order to prevent the possibility of panel disfiguration, unstable operation, or damage to the internal components.
- Do not place vinyl, plastic or rubber objects on the device, since this might discolor the panel.
- When cleaning the device, use a dry and soft cloth. Do not use paint thinners, solvents, cleaning fluids, or
- nical-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 enditioning is turned on or off, for example. Using the device while condensation is present can cause nage. If there is reason to believe that condensation

might have occurred, leave the device for several hours

- until the condensation has completely dried out.

 When turning on the AC power in your audio system always turn on the power amplifier LAST, to avoid speaker damage. When turning the power off, the ower amplifier should be turned off FIRST for the same
- Be sure to observe the power amplifier's rated load impedance, particularly when connecting speakers in parallel. Connecting an impedance load outside the amplifier's rated range can damage the power amplifier.
- All full-range loudspeakers are fitted with a self-res poly switch that protects the high-frequency driver from damage caused by excessive power. If a loudspeaker cabinet loses high-frequency output, immediately remove power from the power amplifier and wait for two to three minutes. This should be long enough to allow the poly switch to reset. Reapply power and check the performance of the high-frequency driver befo
- not cause the poly switch to interrupt the signal. • Air blowing out of the bass reflex ports is normal, and often occurs when the speaker is handling program material with heavy bass content.

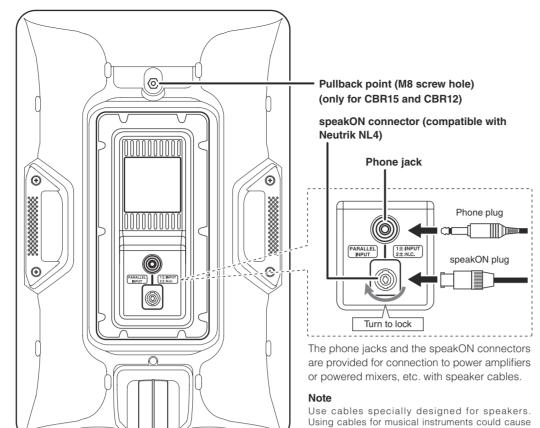
continuing, with the power reduced to a level that does

Connectors

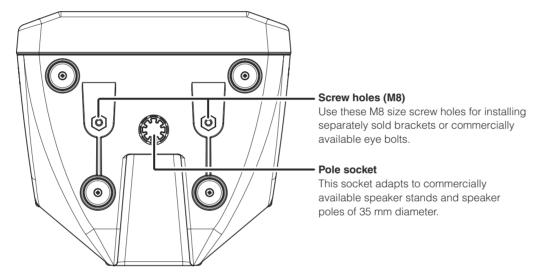
• Use only Neutrik speakON plugs (NL4) for connecting

Controls and Connectors

Rear



Bottom



Connection

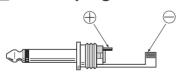
Wiring

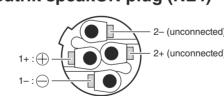
Make sure to wire the plugs as shown below.

Phone plug

Neutrik speakON plug (NL4)

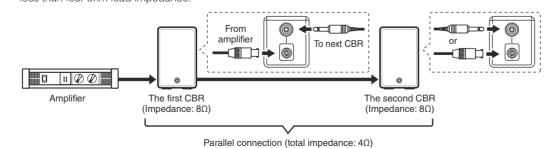
overheating and result in fire.





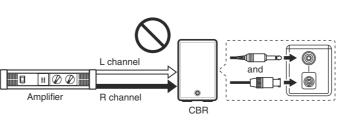
Parallel connection of speakers

The signals of the phone jack and speakON connector are connected in parallel. The first CBR receives the signal from an amplifier (such as a power amplifier, a powered mixer, etc.) with the phone jack or the speakON connector, and routes the signal to the second CBR. When connecting CBRs in parallel, be sure to check the load impedance the amplifier can drive. The nominal impedance of one CBR is eight ohms and the total impedance of two parallel connected CBRs is four ohms. In this case, the amplifier must be able to drive less than four ohm load impedance



Invalid connection

Do not connect the input from the amplifier to both the phone jack and the speakON connector simultaneously. This creates a dangerous short circuit.



Installation Examples

Before doing any installation or construction work, consult with your Yamaha dealer.
For optimum safety, the installation should be checked thoroughly at regular intervals. Some fittings may deteriorate over

When installing the safety wire to the wall, install it higher than the wire's attachment point on the speaker, with as little slack as possible. If the wire is too long, and the speaker happens to fall, the wire may snap as a result of too much strain.

When choosing the installation location, suspension wire and mounting hardware, make sure all are strong enough to

Yamaha cannot be held responsible for damage or injury caused by insufficient strength of the support

Installation using separately sold Yamaha speaker

Attach the bracket to two screw holes at the bottom of the unit using commercially available screws

following chart.

■ Using the BCS251 ceiling bracket

■ Using the BBS251 baton bracket

φ 34 - φ 51

Troubleshooting

Howling sound A microphone is directed toward the Aim the speaker away from the area where the

High frequency | The protection circuit is operating in | Refer to "Protection circuit" in the NOTICE.

The cable is not connected properly. • Connect the cable all the way in so that it is firmly

l impedance.

n order to prevent the unit from falling down, attach the safety wire as shown in the

Possible causes

The sound is amplified too much.

speakers is less than the minimum

Example: More than two speakers

power amplifier, the load impedance

If any specific problem should persist, however, please contact your Yamaha dealer.

load impedance of the amplifier.

(eight ohms) are connected to a

The total impedance of the

of which is six ohms

the HF unit.

No sound.

(feedback).

The amplifier

shuts down.

range is

attenuated.

(M8 x 16 mm) or eye bolts (M8 x 15 mm). For details on installing the bracket, refer to the corresponding

Maximum tilt angle

CBR15

CBR12

CBR10

■ Using the BWS251-300 or BWS251-400 wall mounting bracket

The tilt angle depends on the position relation between the speaker

BWS251-300

BWS251-400

23°

35°

(Pullback point for CBR15

and CBR12 only)

Possible solution

If the speakON connector is used, connect to "1+"

and "1-" and turn the plug to be locked.

Lower the volume of input device and locate the

Check the minimum load impedance of the power

microphone more closely to the sound source.

amplifier, and lower the number of speakers

connected in parallel not to be less than the

and the wall. The maximum downward tilt angle is shown in the

• Make sure to take measures to prevent the speaker from falling down in the event of a installation failure.

extended periods of time due to wear and/or corrosion

support the weight of the speaker.

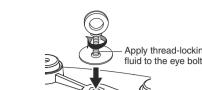
structure or improper installation.

brackets

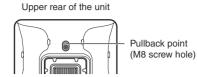
Pullback point (only for CBR15 and CBR12) When the unit is shipped from the factory, a seal is

stuck on the pullback point (screw hole). Make sure to

peel off the seal when using the pullback point. • The CBR10 does not have a pullback point.



washer to attach them.



Apply thread-locking

Securing the screws and eye

• Insert the screw or eye bolt through the

Installation using eye bolts

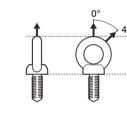
Attach commercially-available eye bolts (M8 x 15 mm) to the screw holes located at the bottom (two locations) and on the upper rear (one location, only for CBR15 and CBR12). Keep in mind that you will need two points at the bottom to suspend the unit.

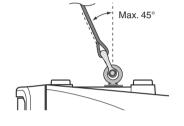


NOTICE

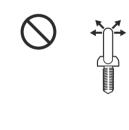
The strength of an eye bolt differs depending on the suspension angle. Make sure to use eye bolts within a range of 0 to 45 degrees from a right angle (as shown).

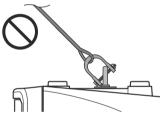
Correct: Within 45° from a right angle





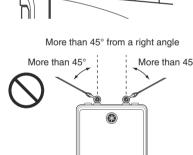
Incorrect: Do not suspend the eye bolts as shown in the illustrations below





Only one suspension point





General Specifications

CBR12

CBR15

| System Type | | 2-way Speaker, Bass-reflex Type | | |
|---|-------|---|-------------------------|--------------------------------------|
| Frequency Range (-10dB) | | 46 Hz-20 kHz | 48 Hz-20 kHz | 50 Hz-20 kHz |
| Coverage Angle (Horizontal x Vertical) | | H90° x V60° Constant Directivity Horn | | |
| Maximum SPL (Calculated, 1m) | | 126 dB SPL | 125 dB SPL | 123 dB SPL |
| Crossover Frequency | | 2.0 kHz | 2.1 kHz | 2.8 kHz |
| Nominal Impedance | | 8Ω | 8Ω | 8Ω |
| Power Rating (IEC noise) | NOISE | 250 W | 175 W | 175 W |
| | PGM | 500 W | 350 W | 350 W |
| | MAX | 1000 W | 700 W | 700 W |
| Sensitivity (1W, 1m) | | 96 dB SPL | 96 dB SPL | 94 dB SPL |
| Components | LF | 15" Cone, 2.5" Voice Coil | 12" Cone, 2" Voice Coil | 10" Cone, 2" Voice Coil |
| | HF | 1.4" Voice Coil, Compression Driver | | 1" Voice Coil, Compression Driver |
| Dimensions (WxHxD, | | 455 x 700 x 378 mm | 376 x 601 x 348 mm | 308 x 493 x 289 mm |
| Including Rubber Feet) | | (17.9" x 27.6" x 14.9") | (14.8" x 23.7" x 13.7") | (12.1" x 19.4" x 11.4") |
| Net Weight | | 17.7 kg (39.0 lbs) | 13.9 kg (30.6 lbs) | 9.4 kg (20.7 lbs) |
| Handles | | Side x 2 | | Top x 1 |
| Pole Socket | | φ35 mm, Bottom x 1 | | |
| Rigging Points | | Bottom x 2, Rear x 1 (Fit for M8 x 15 mm) | | Bottom x 2 (Fit for M8 x 15 mm) |
| Optional Speaker Brackets | | BBS251, BCS251, BWS251-300, BWS251-400 | | |
| Connectors | | 1/4" Phone x 1, speakON NL4MP x 1 | | |
| | | | | |

* 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 separately sold accessories may not be the same in every locale, please check with your Yamaha dealer.