

**POWERED SPEAKER SYSTEM****DHR 15****DHR 12****DHR 10****DHR 15M****DHR 12M****Reference Manual**

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## Available documentation

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The following documents are available for this product.

- **Owner’s manual (included in the product package)**

Describes safety precautions, installation, and implementation of this product. To learn how to use the product properly and safely, please read this manual before use.

- **Reference manual (this document)**

Explains all features of this product.

You can download each document from the Yamaha website. Please refer to them as necessary.

<https://download.yamaha.com/>

The precautions and other matters of concern are classified in this manual as follows.

-  **WARNING**

This content indicates “risk of serious injury or death.”

-  **CAUTION**

This content indicates “risk of injury.”

- **NOTICE**

Matters that must be observed to avoid product breakdown, damage or malfunction.

- **NOTE**

Points of note when using this product, limitations in functionality, and supplementary information that’s useful to know.

# NOTICE

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

## ■ Handling and maintenance

- Do not use the product in the vicinity of a TV, radio, or other electric products. Otherwise, the product, TV, or radio may generate noise.
- Do not expose the product to excessive dust or vibration, or extreme cold or heat, in order to prevent the possibility of panel disfiguration, unstable operation, or damage to the internal components.
- Do not install in locations where temperature changes are severe. Otherwise, condensation may form on the inside or the surface of the product, causing it to break or deform the wood. Do not leave condensation on the wood; wipe immediately with a soft cloth.
- If there is reason to believe that condensation might have occurred, leave the product for several hours without turning on the power until the condensation has completely dried out, in order to prevent possible damage.
- Do not touch the speaker driver unit, since it might cause malfunction.
- Air blowing out of the bass reflex ports (hole or holes at the front) is normal, and often occurs when the speaker is handling program material with heavy bass content.
- Do not place the speaker face down.
- Clean the product with a dry and soft cloth. Do not wipe product surfaces with benzene, paint thinners, cleaning fluids, or a chemical-impregnated wiping cloth, which could cause discoloration or change surface characteristics.
- Always turn the power off when the device is not in use.

## Information

### ■ About functions

- XLR-type connectors are wired as follows (IEC60268 standard): pin 1: ground, pin 2: hot (+), and pin 3: cold (-).

### ■ About this manual

- 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.

## Main Features

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- **Sophisticated DSP processing**

Our proprietary sound-processing technology, FIR-X Tuning, utilizes a linear-phase FIR (Finite Impulse Response) filter and delivers an excellent, high resolution sound with a smooth frequency response that is unaffected by phase interference near the crossover point.

- **Easy sound optimization**

D-CONTOUR (Dynamic CONTOUR) constantly monitors the output of multiple frequency bands, and applies the optimum EQ adjustments to each according to the listener's preferences. There are two modes: an FOH/MAIN mode for use as a main speaker, and a MONITOR mode for use as a floor monitor, letting you select the preset tuning optimized for each application.

- **Various input/output connectors and convenient, simple mixing function**

The comprehensive set of connectors—including XLR for a mixer, phone for a musical instrument, and RCA pin for an audio player—provides maximum flexibility in use with a wide variety of applications. Also, the DHR features simple mixing functionality, enabling you to select either a direct output of channel 1 (CH1) (parallel connection) or a mixed output of CH1 and CH2, for convenient system setup.

- **Lineup for a variety of applications**

The models have been optimized for various applications. The DHR15 delivers a powerful sound and is ideal for use as a main speaker. The sound character of the DHR15M and DHR12M has been optimized for monitoring, which makes them ideal as compact floor monitors. In addition, you can change the sound directivity by rotating the horn on the DHR12 or DHR10, which enables you to install them vertically or horizontally in a fixed installation by using compatible brackets.

- **High-grade and durable wood cabinet for superior sound**

The naturally textured wood cabinet of the DHR speakers feature a durable coating with high scratch resistance that protects the cabinet surface from impact during transport, installation, and removal.

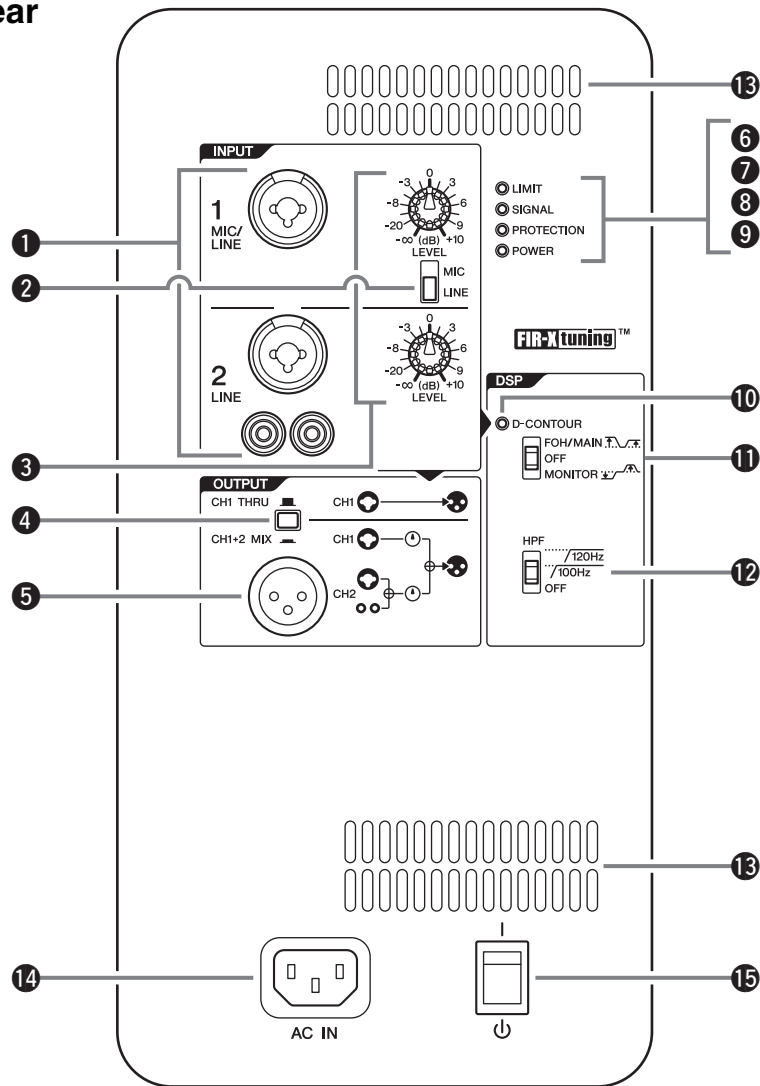
## Included Accessories

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- AC power cord ×1
- Owner's manual ×1

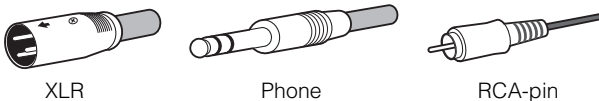
# Controls and Connectors

## Rear



### 1 Input connectors (CH1 and CH2)

These are balanced combo connectors that support both XLR and phone plugs (both CH1 and CH2), and RCA pin plugs (CH2 only). For the combo connectors, connect a mixer, microphone, or digital musical instrument such as a keyboard. For RCA-pin connectors, connect a device such as an MP3 player or a CD player. For devices with high level signals such as a mixer, connect to CH2, or connect to CH1 then set the [MIC/LINE] switch (2) to [LINE].



#### NOTE

For CH2, inputs to the combo connector and to the RCA pin connectors will be mono mixed at a fixed balance. If you want to change the balance, adjust the volume of the connected sound source.

### 2 [MIC/LINE] switch

Set this switch to [MIC] or [LINE] for the CH1 connector, depending on the level of the input signal. For low-level signals (such as microphones), set the switch to [MIC]. For high-level signals (such as mixer), set the switch to [LINE].

### 3 [LEVEL] knobs

Adjust the level of each input connector (1).

### 4 Output switch

Selects the output signal sent to the output connector (5).

[CH1 THRU]: Delivers the direct output signal of CH1 only. Signal from CH2 will not be output.

[CH1+2 MIX]: Outputs the mixed signals of CH1 and CH2.

### 5 Output connector

This is a balanced XLR 3-pin chassis output connector. This can be used to connect another DHR speaker. Outputs the signal selected by 4 output switch.

**6 [LIMIT] indicator**

Indicates (lit in red) that the limiter is on when the output voltage of the amplifier has exceeded the maximum level, or when excessive integral power consumption is detected. If this indicator stays lit, lower the input level.

**NOTE**

Integral power consumption refers to the sum of power provided to the speaker driver per unit time.

**7 [SIGNAL] indicator**

Indicates (lit in green) when an audio signal exceeding the threshold has been detected.

**8 [PROTECTION] indicator**

Indicates (lit in red) when the protection circuit is active. The protection circuit will be activated and the speaker outputs will be muted in the situations listed below.

- If amplifier overheating is detected
- If overcurrent is detected
- When turning the power on; the protection circuit will be activated for a few seconds to prevent noise. The indicator turns off when the power supply has started normally.

If the protection circuit has engaged, waiting until the amplifier cools down or powering off and on again will return to normal operation. If the unit does not return to normal operation, please contact your Yamaha dealer.

**9 [POWER] indicator**

Indicates (lit in green) when the [ I / ⏻ ] (power) (15) switch is turned on.

**10 [D-CONTOUR] indicator**

Indicates (lit in yellow) when the [D-CONTOUR] switch (11) is set to [FOH/MAIN] or [MONITOR].

**11 [D-CONTOUR] switch**

Selects one of the D-CONTOUR (Dynamic CONTOUR) presets.

[FOH/MAIN]: Boosts the high and low frequency components so that the frequency response is suitable for a main speaker.

[MONITOR]: Reduces the low frequency range, which could otherwise tend to be boomy if the speaker is set directly on the floor. This enables you to hear mid and high frequency ranges clearly when using as a floor monitor.

[OFF]: Turns off D-CONTOUR. This is a generic frequency response setting.

**12 [HPF] switch**

Selects the cutoff frequency of the high pass filter. If you set this switch to [120Hz] or [100Hz], the low frequency components below each threshold will be cut. If you use the unit alone, set this switch to [OFF]. If you plan to use the unit along with a subwoofer, we recommend that you set this switch to [120Hz] or [100Hz].

**13 Vent**

The unit contains a cooling fan.

**CAUTION**

**Do not block the vents. This product has ventilation holes at the rear to prevent the internal temperature from becoming too high. Inadequate ventilation can result in overheating, possibly causing damage to the product(s), or even fire.**

**14 [AC IN] socket**

Connect the supplied power cord in the order below. Before connecting the power cord, make sure that the DHR power is turned off.

1. Insert the plug of the power cord into this socket.
2. Plug the other end of the cord into the AC outlet.

**NOTE**

When removing the power cord, perform this procedure in reverse order.

**WARNING**

**Use only the supplied power cord.**

**CAUTION**

**Turn off the power before you connect or disconnect the power cord.**

**15 [ I / ⏻ ] (power) switch**

Turns the power supply on [ I ] or sets it to standby [ ⏻ ]. First, turn on the power of the connected sound source (external device), then the unit. When turning off the power, reverse the order by turning off the power of the unit first and then the connected sound source (external device).

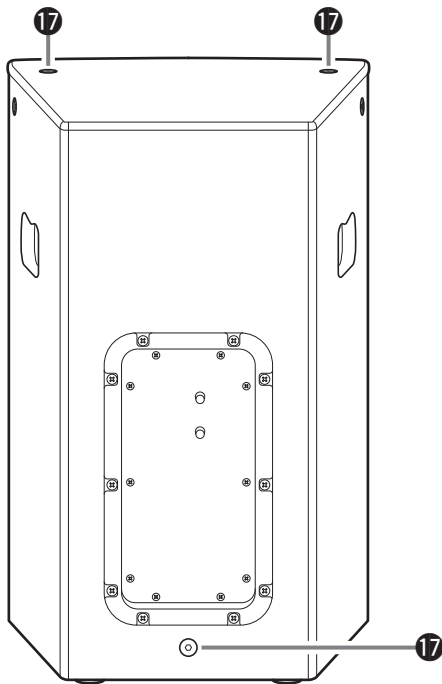
**NOTICE**

**Even when the switch is in the standby position, a small amount of electricity is still flowing to the unit.**

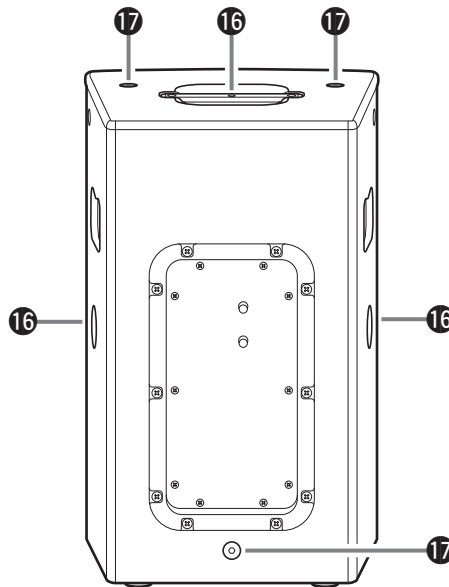
**NOTE**

- Rapidly turning the unit on and off in succession can cause it to malfunction. After turning the unit off, wait for about 5 seconds before turning it on again.
- If you are using multiple units, turn on the power to each unit one by one. If you turn on the power to multiple units simultaneously, a temporary drop in the power voltage may occur, possibly resulting in abnormal operation of the units.

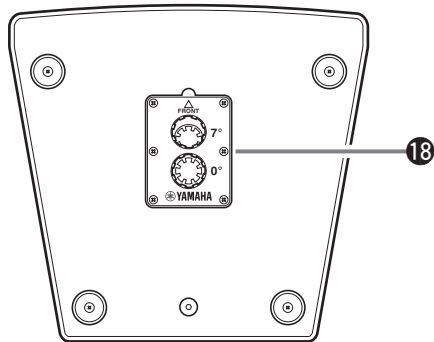
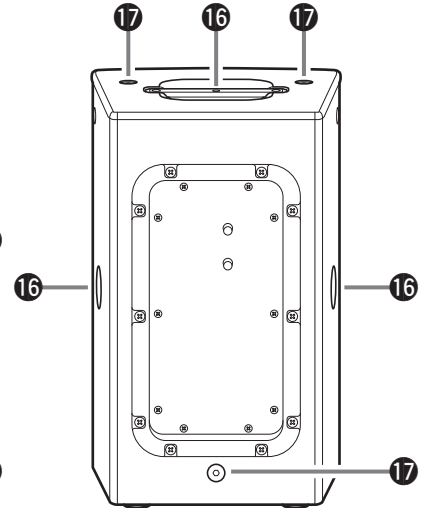
**Rear (DHR15)**



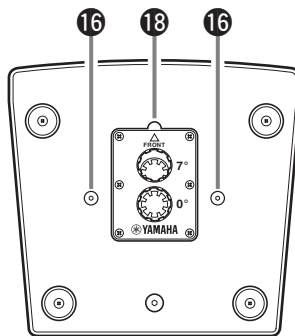
**Rear (DHR12)**



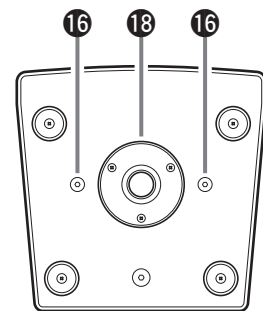
**Rear (DHR10)**



**Bottom**

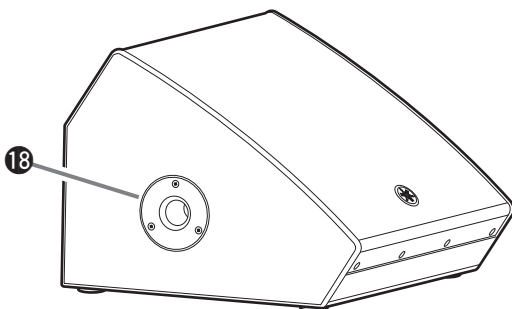


**Bottom**



**Bottom**

**Side (DHR15M, DHR12M)**



**16 Screw holes for U-bracket M8**

For installation using separately sold U-brackets.

**17 Screw holes for eye bolts M10**

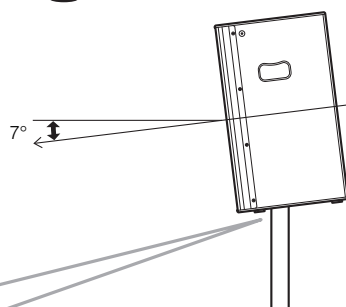
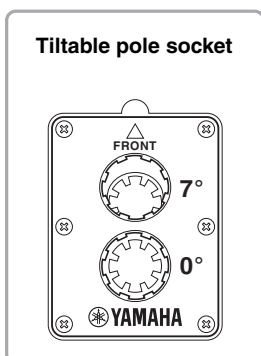
For installation using commercially available eye bolts (M10).

**18 Pole socket**

This socket is compatible with commercially available speaker stands and speaker poles of 35 mm diameter.

**Tiltable pole socket (DHR15, DHR12)**

This mount has two pole sockets. You can choose the angle of the speaker so that it is positioned vertically or tilting down toward the floor by 7 degrees.



# Setup Examples

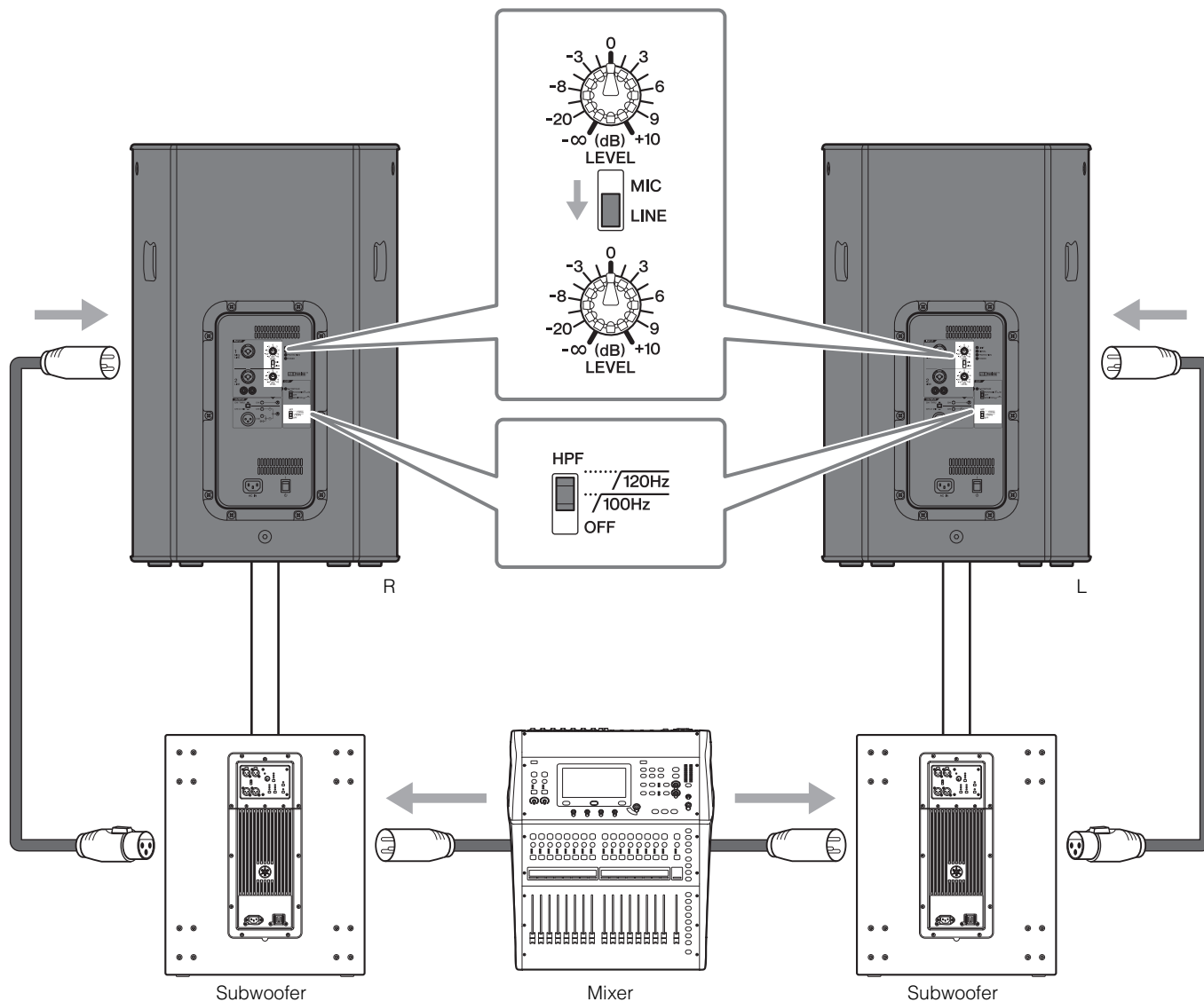
## System with two DHRs and subwoofers—using the DHR15

This system is the most suitable for a main speaker system. If desired, you can add other DHR12M to create a floor monitor system.

Main application: small-sized live venue, house of worship, event site

### NOTE

We recommend to use Yamaha DXS18 as a subwoofer. In this case, we recommend that the DHR15's HPF cutoff frequency and the DXS18's LPF cutoff frequency are set to the same settings; however, you can adjust it as desired.

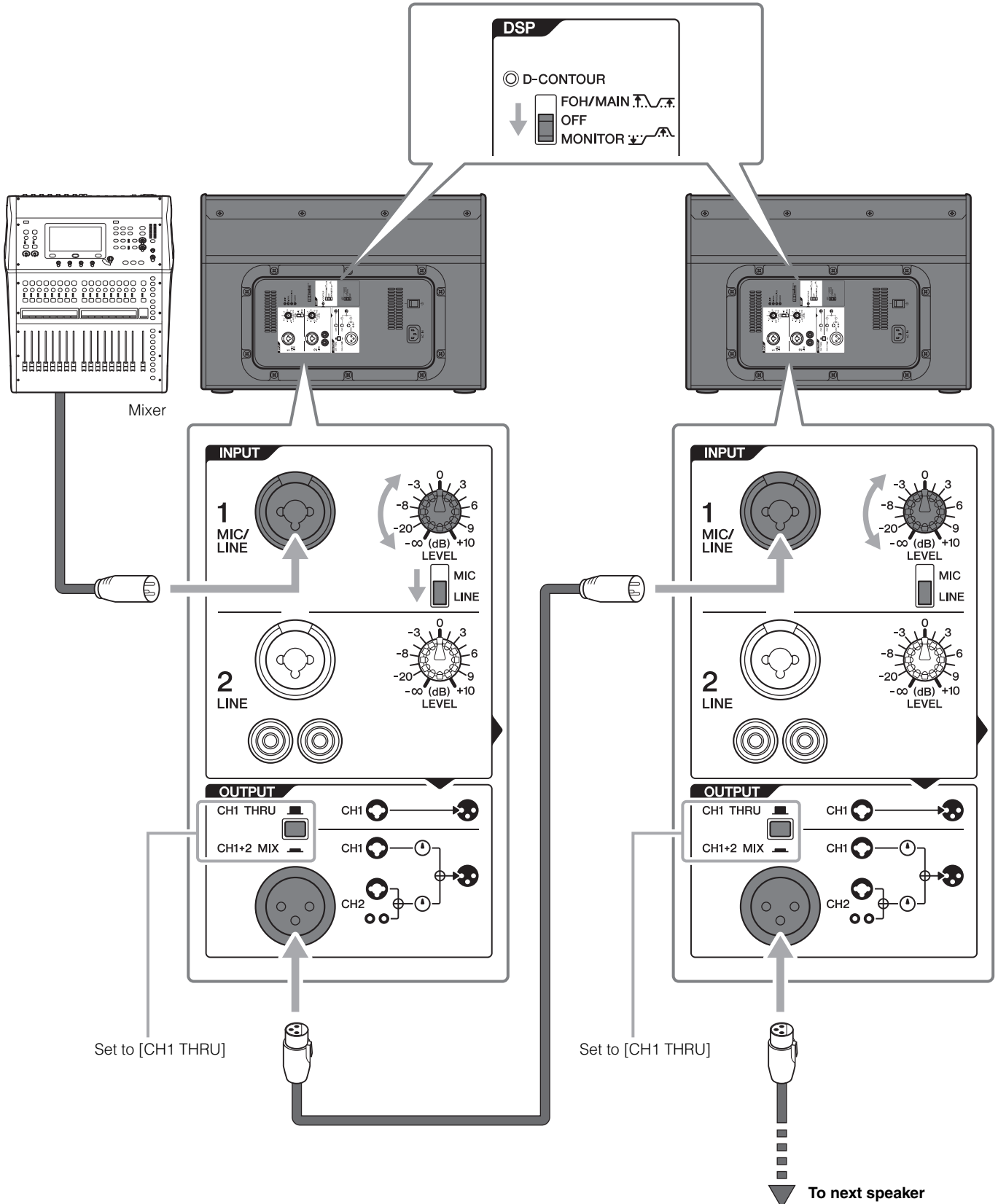




## Floor monitor system—using the DHR15M, DHR12M

This system is suitable for a performer's monitoring system. For use as a vocal monitor, set the [D-CONTOUR] switch to [MONITOR].

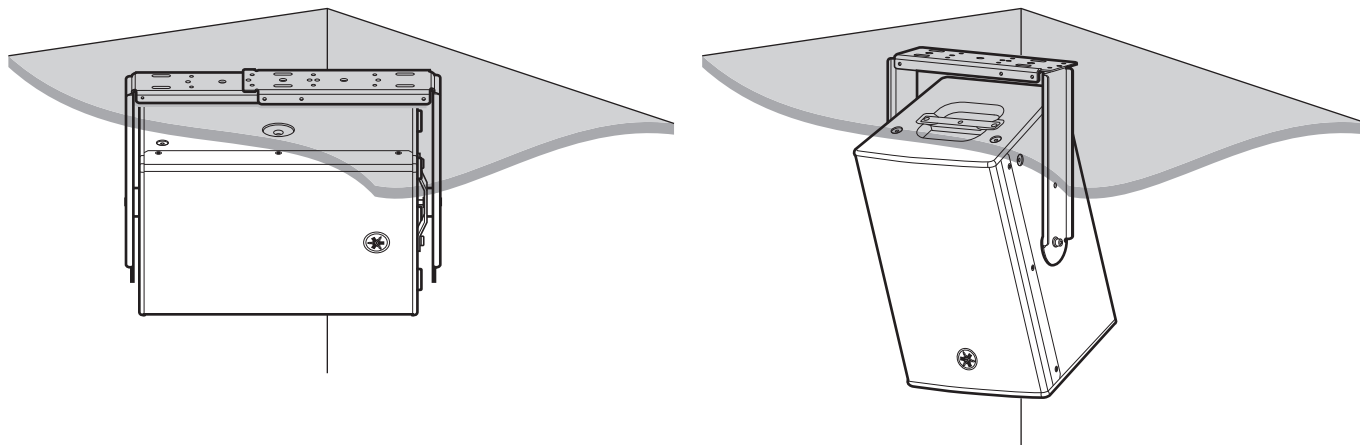
If necessary, you can additionally connect up to four speakers in parallel. In this case we recommend that the signal is input to CH1 and the output switch is set to [CH1 THRU].



## Fixed installations—using the DHR12, DHR10

**NOTE**

The illustrations are based on the DHR10.



DHR12 and DHR10 can be neatly installed on a ceiling or a wall, either horizontally or vertically, using the separately sold Yamaha UB-DXRDR12 and UB-DXRDR10 U-bracket respectively. For instructions on installing the U-bracket, refer to the manual for the UB-DXRDR12 and UB-DXRDR10.

**NOTE**

You can use the U-bracket in combination with optional brackets sold separately. For more information, visit the following Yamaha Pro Audio website.  
<https://www.yamahaproaudio.com/>

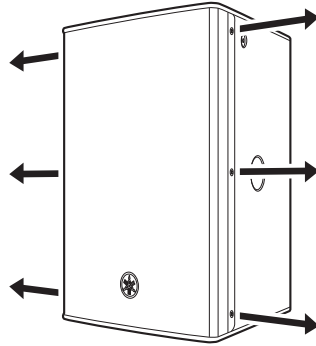
In addition, the DHR12 and DHR10 feature a rotatable horn (90 degrees). When they are shipped from the factory, the speaker directivity is set wide horizontally and narrow vertically, assuming that the speaker is installed vertically. If you are planning to install the speaker in a horizontal orientation, we recommend that you change the directivity by changing the horn orientation.

## Rotatable Horn (DHR12, DHR10)

### NOTE

The illustrations are based on the DHR10.

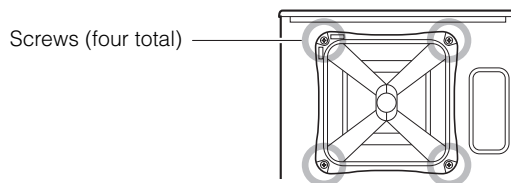
- Using a No. 2 Phillips head screwdriver, remove all fixing screws on the grille, and then remove the grille from the speaker.



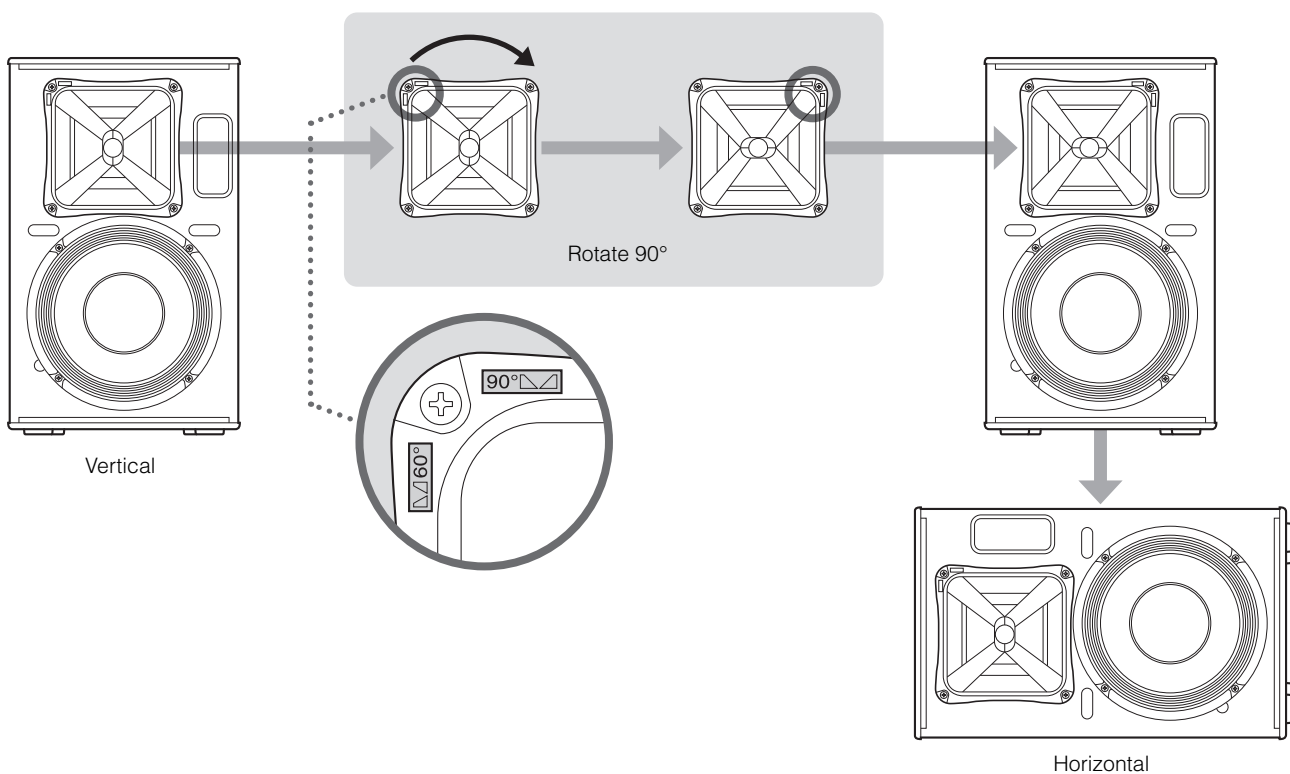
- Using a No. 2 Phillips head screwdriver, remove all screws installed on the horn and then pull the horn out from the speaker.

### NOTE

While removing the screws with the Phillips head screwdriver, do not apply too much pressure onto the screws. Otherwise, the nuts inside the cabinet may fall off.



- Rotate the horn 90 degrees, and re-install the horn to the speaker, reversing the steps above.



# Installation Examples

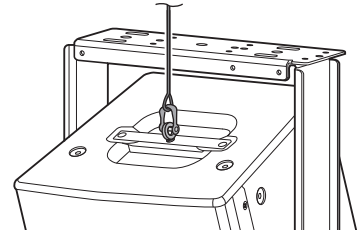


## CAUTION

- Before doing any installation or construction work, consult with your Yamaha dealer.
- The installation should be checked thoroughly at regular intervals. Some fittings may deteriorate over extended periods of time due to wear and/or corrosion.
- Make sure that the wires, wall, ceiling, and mounting hardware are strong enough to support the weight of the speaker.
- Be sure to take precautionary measures using safety wire to prevent the speaker from falling.
- When attaching 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.
- Be sure to use eye bolts that comply with standards and safety regulations in your area.

## NOTE

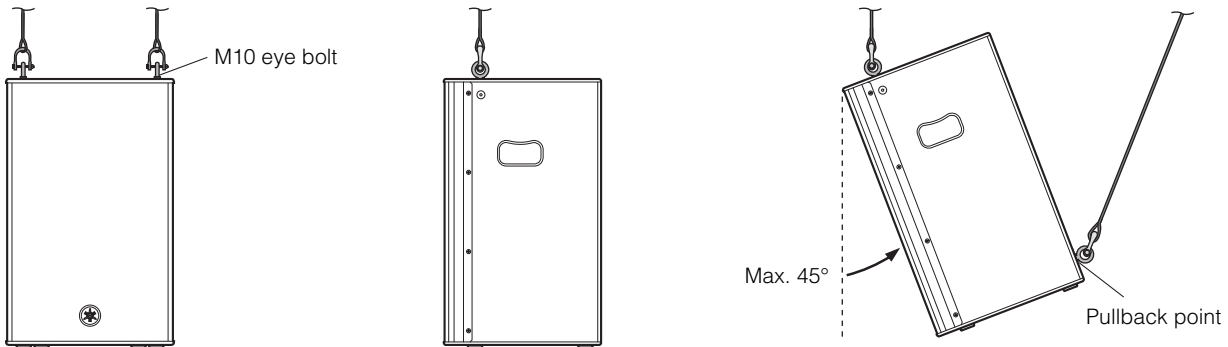
Safety wire can be attached to the screw holes for eye bolts and to the screw holes for the U-bracket (DHR12, DHR10) located at the center of the handle. The illustration below is an example of using the U-bracket.



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

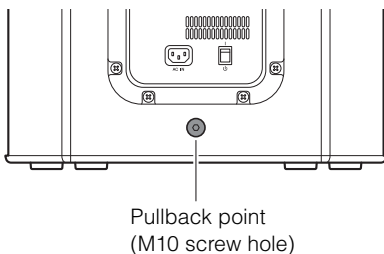
## Suspended Installation Using Eye Bolts (DHR15, DHR12, DHR10)

Attach commercially available long eye bolts (30–50 mm in length) to the screw holes located at the top (two locations) and on the lower rear (one location). The screw diameter is M10. Keep in mind that you will need to use two points on the top to suspend the unit.



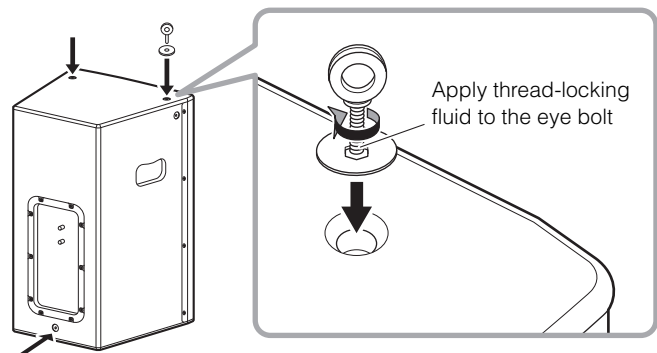
### ■ Pullback point

Lower rear



### ■ Securing the eye bolts

Remove the flat-head screws that were installed when the unit was shipped from the factory, and then insert the eye bolts through the washers when attaching them.



## NOTE

The screw holes for eye bolts go through the cabinet wall. When not using eye bolts, tighten the flat-head screws in order to prevent air leaks.

### ■ Suspension angle

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 of perpendicular (as shown).

**Correct:** Within 45° of perpendicular



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



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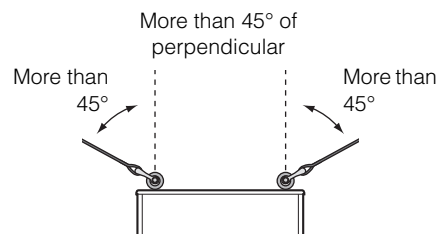
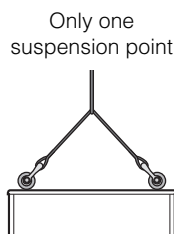
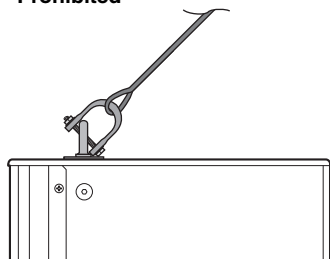
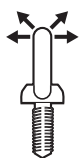
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## Troubleshooting

Symptom		Possible causes	Possible solution
Power does not turn on.		The power cord is not connected properly.	Connect the power cord all the way in so that it is firmly in place.
Power suddenly went off.		The protection system has been activated, shutting down the power supply.	Turn off the power, wait until the amplifier cools down, and then turn on again.
No Sound.		The cable is not connected properly.	Connect the cable all the way in so that it is firmly in place.
Sound is interrupted suddenly.		The protection circuit has been activated, muting the output.	Wait until the amplifier cools down. If the unit won't automatically reset itself, turn off the power, and then on again.
Sound howls (feedback).		A microphone is directed toward the speaker.	Aim the speaker away from the area where the microphone picks up sound.
		Sound is amplified too much.	Lower the volume of the input device and locate the microphone closer to the sound source.
Each speaker sound differs (if multiple speakers are used).		Settings for each speaker differ.	Set the [HPF] switch and [D-CONTOUR] switch of each speaker to the same positions.
Sound is distorted.	The [LIMIT] indicator is off.	Input volume is excessive.	When the [MIC/LINE] switch is set to [MIC], and even if you lower the volume fully the sound is still distorted, set the switch to the [LINE] position. If the sound is still distorted even if the switch has been set to [LINE], lower the volume of the connected input devices.
	The [LIMIT] indicator is on.	Output volume is excessive.	Turn the [LEVEL] knob to lower the output level to a point so that the [LIMIT] indicator lights only occasionally.
The microphone volume is too low.		The [MIC/LINE] switch is set to [LINE].	Set the [MIC/LINE] switch to the [MIC] position.
Low and high frequency are unbalanced.		The output limiter is active.	Lower the input level or the output level until the [LIMIT] indicator lights occasionally.

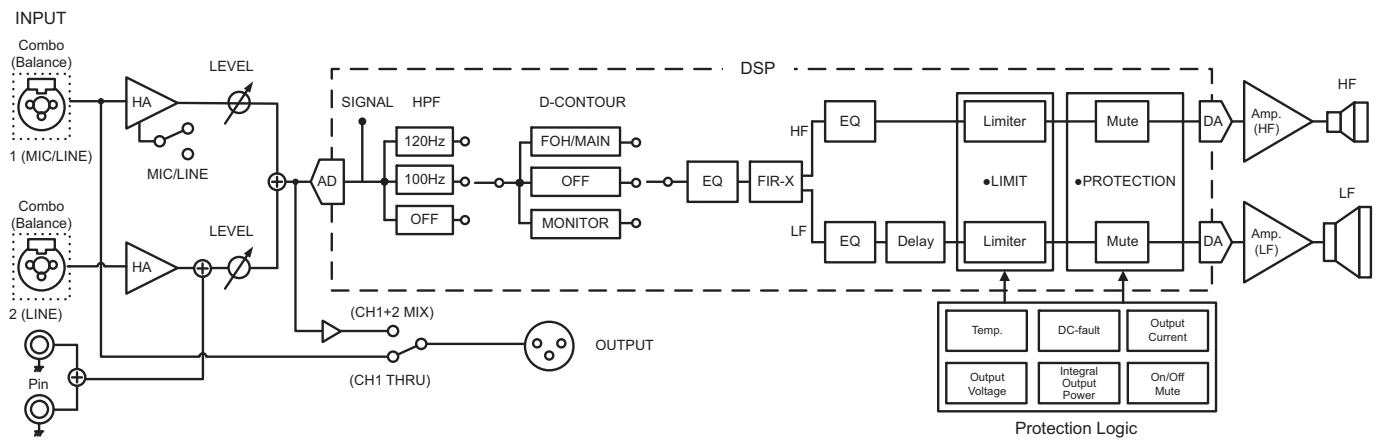
If any specific problem should persist, please contact your Yamaha dealer.

# Specifications

General specifications		DHR15M	DHR12M	DHR15	DHR12	DHR10
System Type		2-way, Bi-amp Powered Speaker, Bass-reflex Type				
Frequency Range (-10 dB)		50 Hz-20kHz	55 Hz-20 kHz	44 Hz-20 kHz	48 Hz-20kHz	52 Hz-20 kHz
Coverage Angle		H65° × V75°	H90° × V90°	H90° × V60°	H90° × V60° (Rotatable)	H90° × V60° (Rotatable)
Crossover Frequency, Type		1.8 kHz	1.8 kHz	1.8 kHz	1.8 kHz	1.9 kHz
		FIR-X tuning™ (Linear Phase FIR Filter)				
Maximum SPL *Measured peak SPL with IEC noise@1m		131 dB SPL	129 dB SPL	131 dB SPL	130 dB SPL	128 dB SPL
Transducer		DHR15M	DHR12M	DHR15	DHR12	DHR10
LF	Diameter	15" Cone	12" Cone	15" Cone	12" Cone	10" Cone
	Voice coil	3"	2.5"	2.5"	2.5"	2"
	Magnet	Ferrite	Ferrite	Ferrite	Ferrite	Ferrite
HF	Diaphragm	1.75"	1.75"	1.4"		
	Type	1" Throat Compression Driver, Coaxial	1" Throat Compression Driver, Coaxial	1" Throat Compression Driver		
	Magnet	Ferrite	Ferrite	Ferrite		
Enclosure		DHR15M	DHR12M	DHR15	DHR12	DHR10
Material, Finish, Color		Plywood, Durable polyurea coating, Black				
Floor Monitor Angle		57°	57°	—	—	—
Dimensions (W×H×D, with rubber feet)		642 × 369 × 505 mm (25.3" × 14.5" × 18.9")	500 × 343 × 454 mm (19.7" × 13.5" × 17.9")	432 × 692 × 405 mm (17.0" × 27.2" × 15.9")	359 × 578 × 340 mm (14.1" × 22.8" × 13.4")	305 × 494 × 300 mm (12.0" × 19.5" × 11.8")
Net Weight		23.0 kg (50.7 lbs)	16.5 kg (36.4 lbs)	24.0 kg (52.9 lbs)	19.2 kg (42.3 lbs)	15.0 kg (33.1 lbs)
Grille		Matte black powder coated perforated steel grille with cloth mesh lining, t=2.0		Matte black powder coated perforated steel grille, t=1.5		
Handles		Side × 1	Side × 1	Side × 2	Top × 1, Side × 2	Top × 1
Pole Socket		35 mm × 1	35 mm × 1	35 mm × 2 (0 and -7 degree)	35 mm × 2 (0 and -7 degree)	35 mm × 1
Rigging Points		—	—	Top × 2, Rear × 1 (Fit for M10 × 30-50 mm Eyebolts)	Top × 2, Rear × 1 (Fit for M10 × 30-50 mm Eyebolts), Bottom × 2, Side × 2 (Fit for M8 × 55 mm UB-DXRDR12)	Top × 2, Rear × 1 (Fit for M10 × 30-50 mm Eyebolts), Bottom × 2, Side × 2 (Fit for M8 × 55 mm UB-DXRDR10)
Options		—	—	—	UB-DXRDR12	UB-DXRDR10
Amplifier		DHR15M	DHR12M	DHR15	DHR12	DHR10
Amplifier class		Class-D				
Power Rating *1	Dynamic	1000 W (LF: 800 W, HF: 200 W)				700 W (LF: 500 W, HF: 200 W)
	Continuous	465 W (LF: 400 W, HF: 65 W)				325 W (LF: 260 W, HF: 65 W)
Cooling		Fan Cooling, 4 Speeds				
AD/DA		24 bit 48 kHz Sampling				
HPF		OFF, 100 Hz, 120 Hz, 24 dB/Oct.				
DSP Preset		D-CONTOUR: FOH/MAIN, MONITOR, OFF				
Protection	Speaker	Clip Limiting, Integral Power Protection, DC-fault				
	Amplifier	Thermal, Output Over Current				
	Power Supply	Thermal, Output Over Voltage, Output Over Current				
I/O connectors	Input	Input1: Combo × 1, Input2: Combo × 1, RCA PIN × 2 (Unbalanced)				
	Output	Output: XLR3-32 × 1 (CH1 Parallel Through or CH1+CH2 Mix)				
	Power	IEC AC inlet × 1				
Input Impedance		INPUT1: LINE: 10 kΩ, MIC: 3 kΩ, INPUT2: 10 kΩ				
Input Sensitivity (LEVEL: Maximum)		INPUT1: LINE: 0 dBu, MIC: -32 dBu, INPUT2: 0 dBu				
Input Sensitivity (LEVEL: Center)		INPUT1: LINE: +10 dBu, MIC: -22 dBu, INPUT2: +10 dBu				
Maximum Input Level		INPUT1: LINE: +24 dBu, MIC: -8 dBu, INPUT2: +24 dBu				
Controls		LEVEL × 2, LINE/MIC, HPF, D-CONTOUR, THRU/MIX, POWER				
Indicators (LED)		LIMIT (Red), SIGNAL (Green), PROTECTION (Red), POWER (Green), D-CONTOUR (Orange)				
Idle Power Consumption		18 W				18 W
1/8 Power Consumption		74 W				60 W
Power Requirements		100 V, 110-120 V, 220-240 V, 110 V/127 V/220 V (Brazil), 50/60 Hz				
Temperature range	Operation	Min 5°C-Max 40°C				
	Storage	Min -20°C-Max 50°C				
AC cord	Length	2500 ± 50 mm				

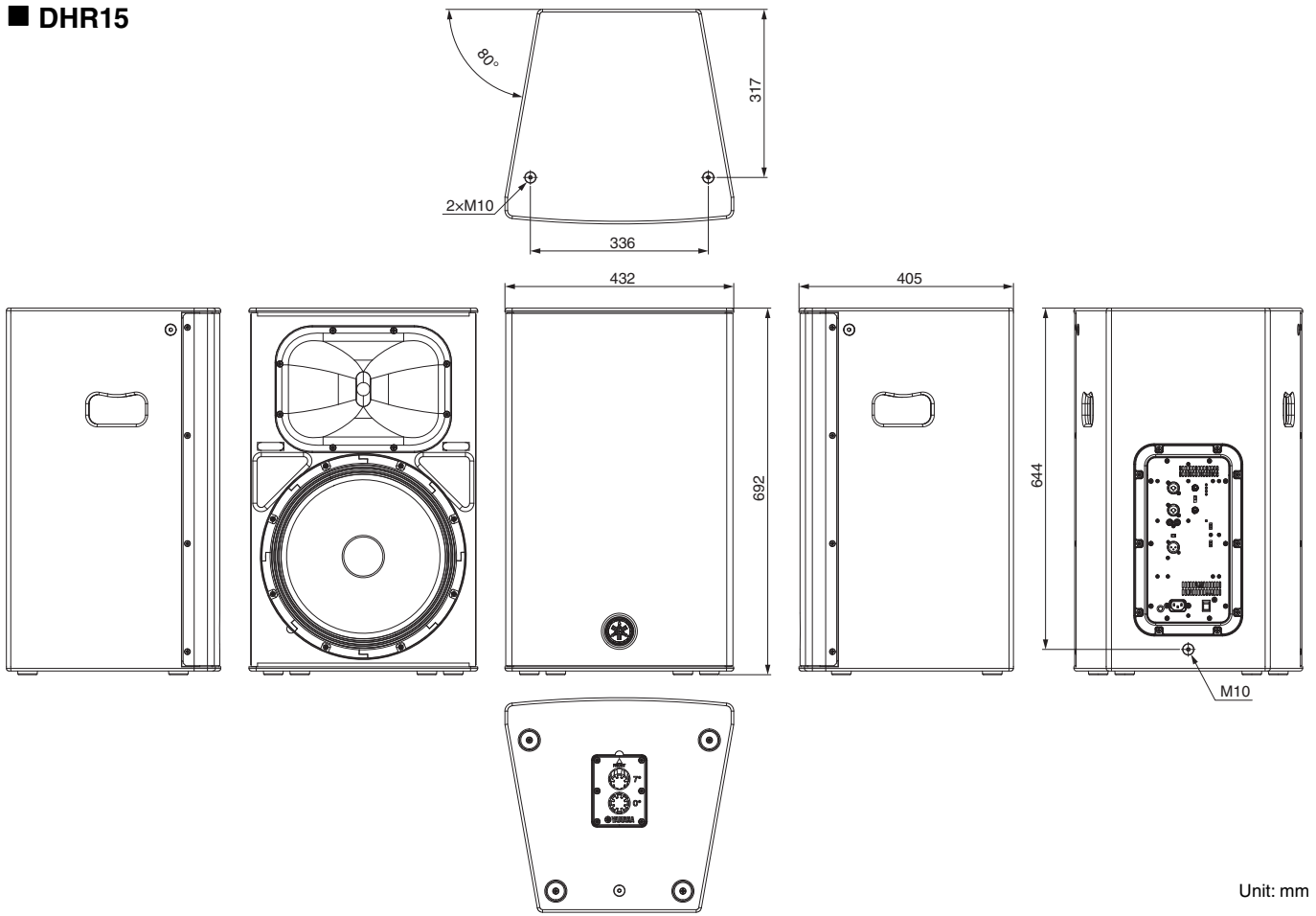
\*1 Dynamic: Total peak power of individual outputs. Measured at minimum load impedance, with protection released.  
Continuous: Measured at nominal impedance, with protection activated.

# Block Diagram



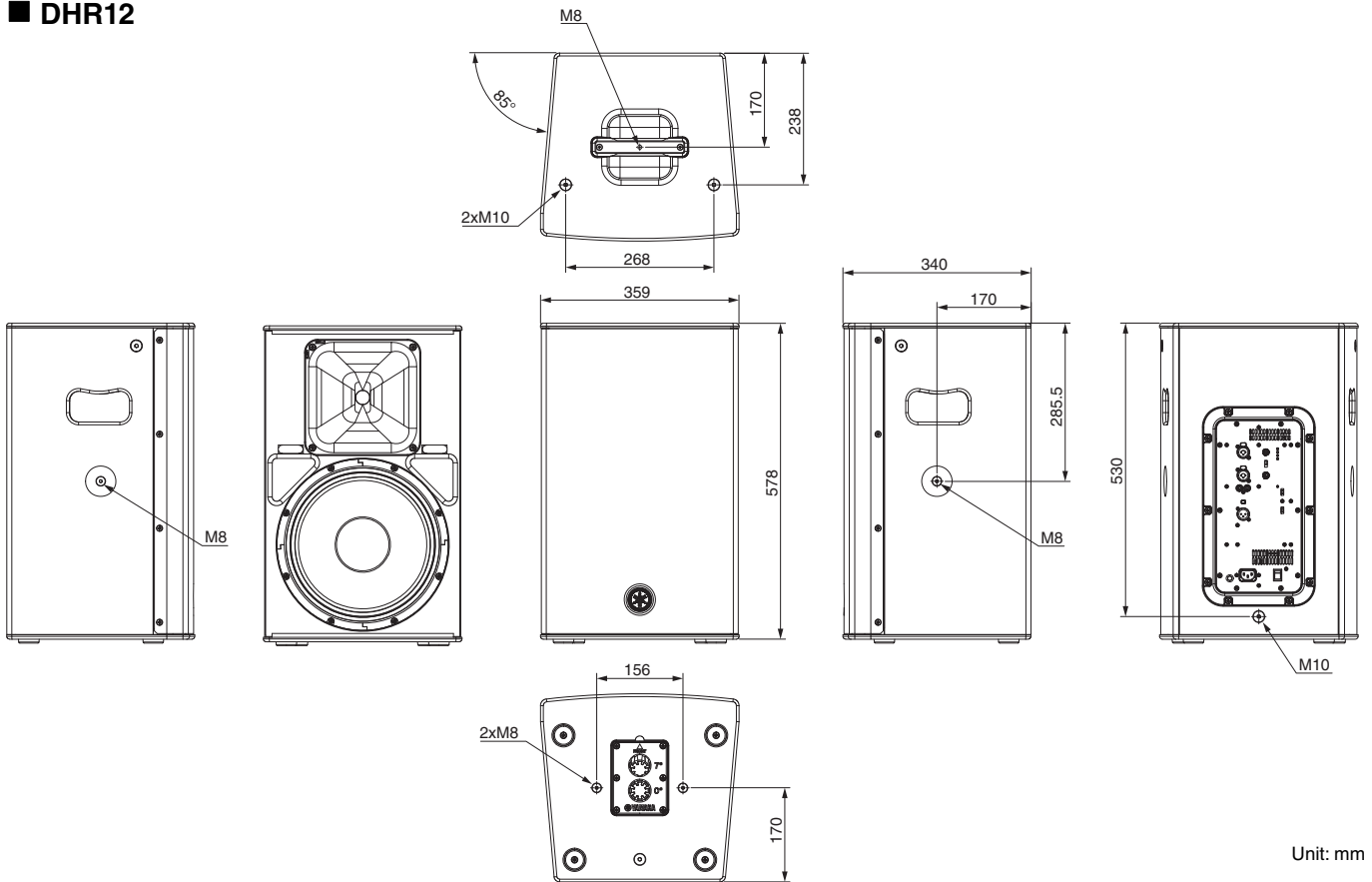
# Dimensions

## ■ DHR15



Unit: mm

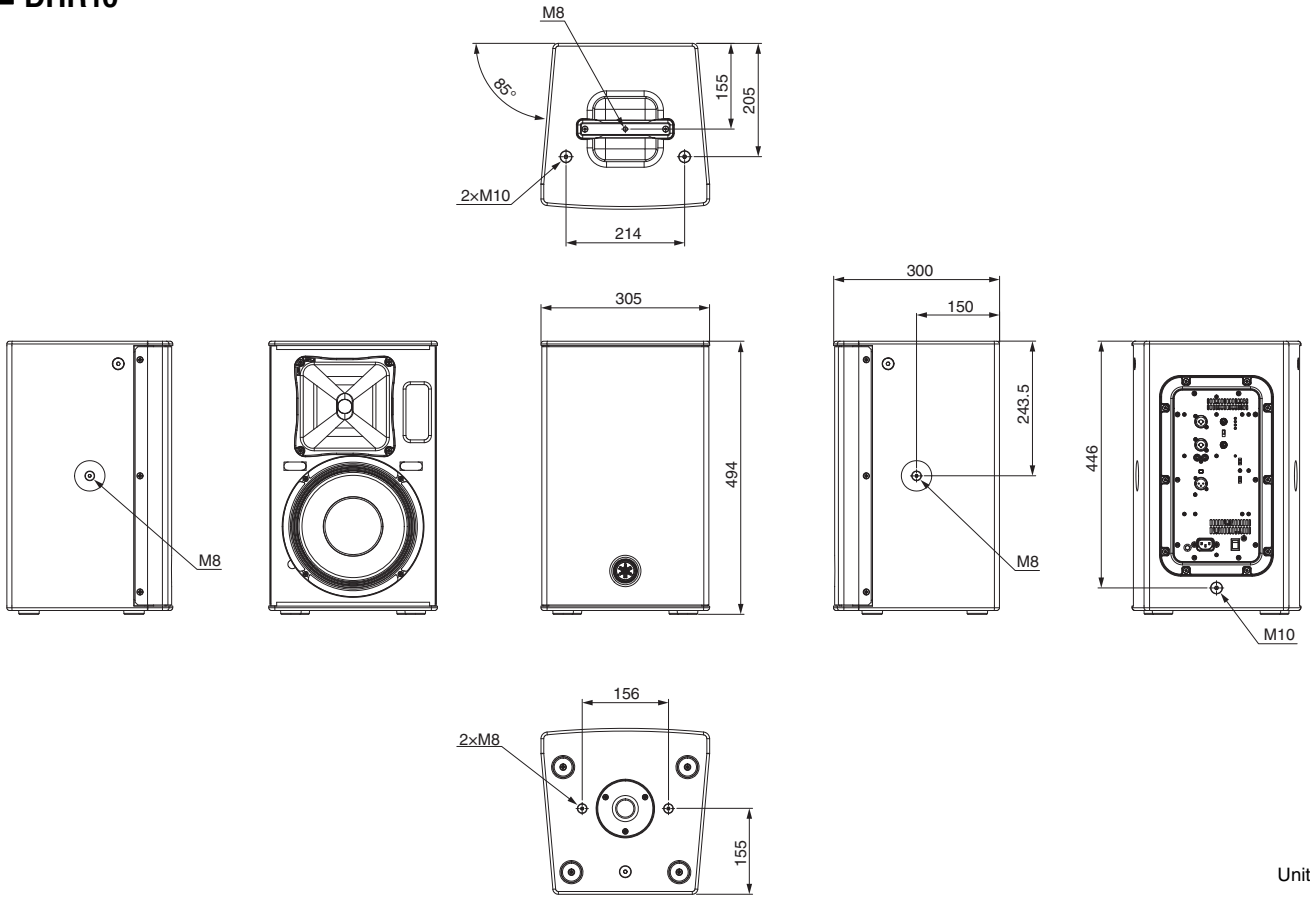
## ■ DHR12



Unit: mm

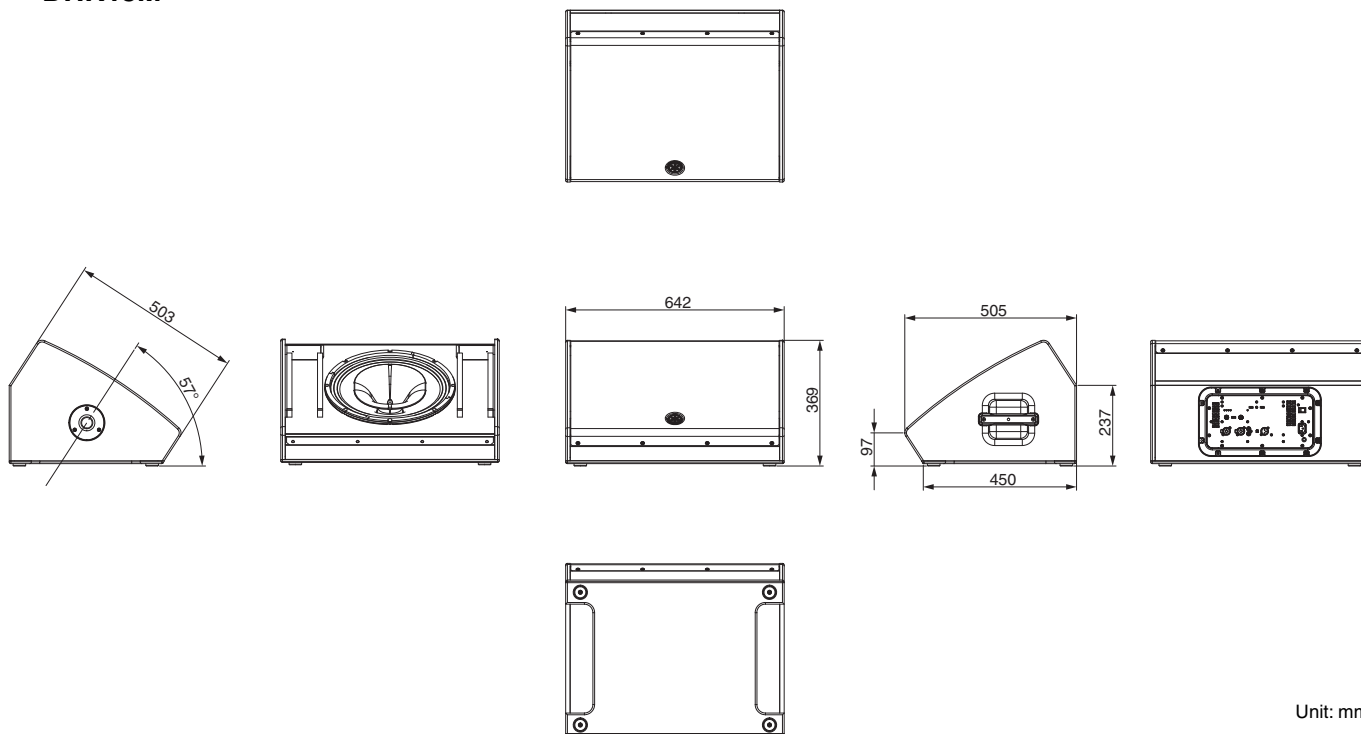


■ DHR10



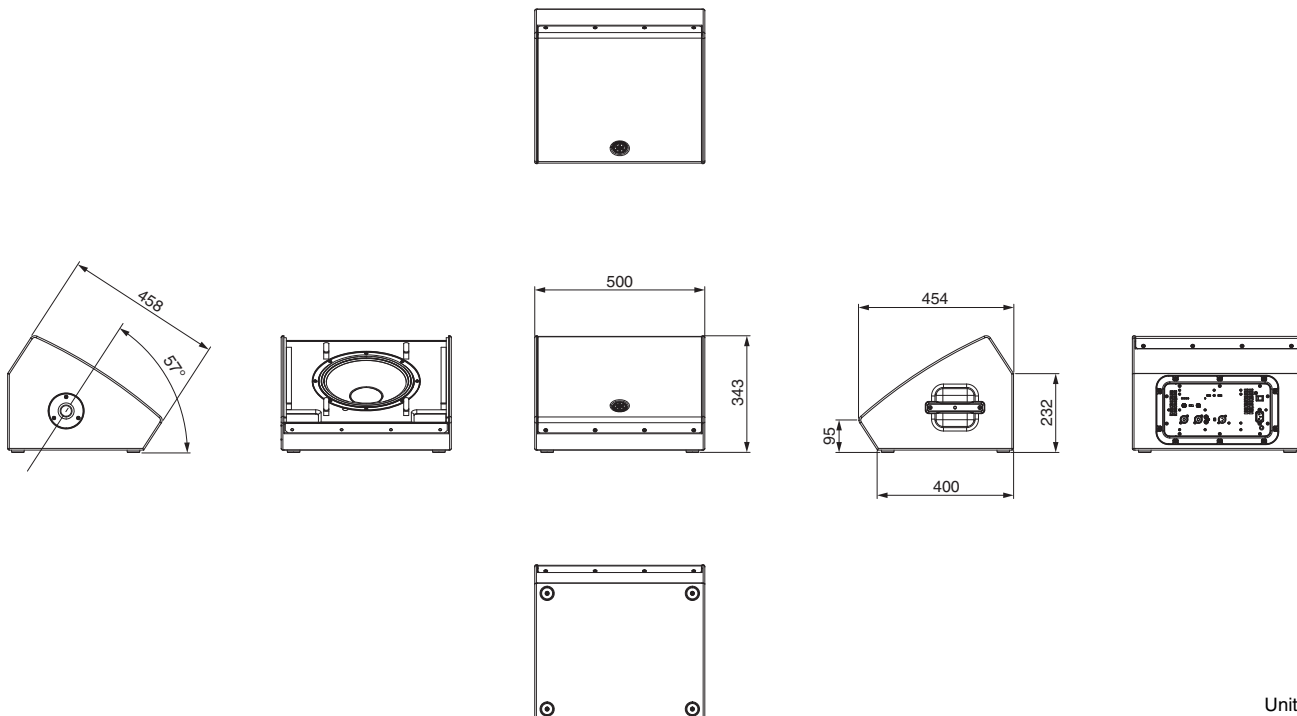
Unit: mm

■ DHR15M



Unit: mm

■ DHR12M



Unit: mm

\* The contents of this manual apply to the latest specifications as of the publishing date. To obtain the latest manual, access the Yamaha website then download the manual file.

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<https://www.yamahaproaudio.com/>

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