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## Loudspeaker XY Series Installation manual

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<b>XY-81</b>	8-inch two-way loudspeaker
<b>XY-101</b>	10-inch two-way loudspeaker
<b>XY-122</b>	12-inch two-way loudspeaker
<b>XY-152</b>	15-inch two-way loudspeaker
<b>XY-2</b>	Two-way loudspeaker
<b>XY-3B</b>	Three-way bi-amp loudspeaker
<b>XY-115S</b>	15-inch bass reflex subwoofer
<b>XY-118S</b>	18-inch bass reflex subwoofer
<b>XY-215S</b>	Dual 15-inch quasi-bandpass subwoofer
<b>XY-218S</b>	Dual 18-inch bass reflex subwoofer
<b>XY-218HS</b>	Dual 18-inch horn-loaded subwoofer

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# 1 Introduction

## WARNING

- These loudspeakers must be installed by a qualified technician as it involves such tasks as selecting a location for installation, drilling holes in walls/ceiling and wiring. Have the installer carefully follow the installation instructions.
- Certain technical skills are required to install the loudspeaker. Please have the product installed by a professional.
- Pioneer DJ is not responsible for any loss or damage that results from improper installation, insufficient strength of installation materials, misuse, modification or natural disasters.

## 1.1 Before you start

- Make sure to use amplifiers with rated load impedances that match the speaker impedance for the amplifiers connected to each loudspeaker.
- Furthermore, any devices or objects easily affected by magnetism (floppy disks, magnetic cards, magnetic tape etc.) should be kept well away from the speakers.

In order to prevent damage to the loudspeaker resulting from input overload, please observe the following precautions:

- If you supply amplification power to the loudspeaker excessively, the speaker could be damaged and overheating could cause a hazard.
- Only connect, turn ON or OFF the audio system or any one part (such as DJ player and Mixer) when the power to the amplifier is turned off. If any operations are performed while the amplifier is turned on, there is the possibility of damaging the treble frequency speaker unit.
- When using a graphic equaliser to emphasise loud sounds in the high-frequency range, do not use excessive amplifier volume.
- Do not try to force a low-powered amplifier to produce high sound levels as the amplifier's harmonic distortion will be increased, and you may damage the speaker.
- These loudspeakers require properly adjusted signal inputs optimized for each speaker units. Otherwise speaker units may deteriorate even if the power is below the power handling capacity.

## CAUTION: installation

- Ensure that the floor or stage surface can withstand the weight of the system.
- The installation technician must follow professional installation techniques to protect the loudspeaker against falling.
- When installing the speakers, make sure that the wall/ceiling is strong enough to support the speakers.
- Improper installation of the speakers could cause them to fall and cause damage or injuries to persons nearby.
- Do not attempt to stack devices together for use other than specified systems. Such devices may become unstable and tip over or fall, leading to injury. Make sure to secure each device in place using the pole mount, ratchet straps or other hardware to prevent them from tipping over or falling when stacking devices together. Pioneer DJ shall accept no liability for damage or injury caused by accidents resulting from Pioneer products tipping over or falling due to them being insufficiently secured.
- Switch off and unplug your power amplifier and consult the instructions when connecting up components. Make sure you use the correct connecting cables.
- Keep magnetic objects such as screwdrivers or steel parts away from the tweeter and woofer speakers. Since the speakers use strong magnets, the objects may be attracted, causing injury or damaging the diaphragm.
- Do not install the loudspeaker in areas exposed to direct sunlight or near heating appliances. Such conditions may result in shrinkage of the wood materials and finish, leading to deformation of the enclosure, discolouration, or damage to the speakers. Conditions considered unpleasant by humans are detrimental to speakers as well. Providing a comfortable environment for the speakers will assist them in demonstrating their best performance. Please maintain the usage environment as follows:

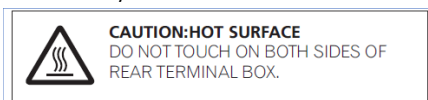
Temperature:	15 °C to 25 °C (59 °F to 77 °F)
Relative Humidity:	35 % to 65 % (winter)
	40 % to 70 % (summer)
- Do not store speakers at temperatures outside of the rated temperature range as doing so may cause the speaker to drop in performance or become damaged.

Storage temperature range:	-20 °C to +55 °C (-4 °F to +131 °F)
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- Do not use the product in locations subject to extreme fluctuations in temperature. Doing so could cause the product to malfunction.
- When using room air-conditioners or stoves to rapidly cool or heat room spaces, take precautions to avoid excessive dehumidification.
- Avoid placing the speaker near areas such as windows, as outside air can cause condensation to occur within the speaker.

- These loudspeaker is designed for indoor use only. To avoid electric shock hazard, do not place them outside, or in an overly humid area.
- Do not attach subwoofers to the wall or ceiling, as they may cause injury in the event of a fall.

#### **CAUTION: in use**

- Do not attempt to use the product for other applications.
- Do not use the speaker to output distorted sound for long periods of times. This can result in a fire hazard.
- Please also remember that vibrations from subwoofer systems can shake other loudspeakers out of place, which may present a toppling hazard.
- Do not attempt to use the product with the XY Series grille detached as doing so could result in damage to the product. Consult a qualified professional for assistance with removing the grille for maintenance purposes.
- If you notice anything unusual with a speaker or ceiling suspension hardware, immediately stop using it and detach it without delay.
- If you notice cracking on the speaker enclosure, immediately stop using it and detach it without delay.
- Detach speakers that are not used or cannot be used without delay.
- For XY-2 Only



#### **For Europe**



If you want to dispose of this product, do not mix it with general household waste. There is a separate collection system for used electronic products in accordance with legislation that requires proper treatment, recovery and recycling.

Private households in the member states of the EU, in Switzerland and Norway may return their used electronic products free of charge to designated collection facilities or to a retailer (if you purchase a similar new one).

For countries not mentioned above, please contact your local authorities for the correct method of disposal.

By doing so you will ensure that your disposed product undergoes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health.

#### **The Safety of Your Ears is in Your Hands**

Get the most out of your equipment by playing it at a safe level – a level that lets the sound come through clearly without annoying blaring or distortion and, most importantly, without affecting your sensitive hearing. Sound can be deceiving. Over time, your hearing “comfort level” adapts to higher volumes of sound, so what sounds “normal” can actually be loud and harmful to your hearing. Guard against this by setting your equipment at a safe level BEFORE your hearing adapts.

#### **ESTABLISH A SAFE LEVEL:**

- Set your volume control at a low setting.
- Slowly increase the sound until you can hear it comfortably and clearly, without distortion.
- Once you have established a comfortable sound level, set the dial and leave it there.

#### **BE SURE TO OBSERVE THE FOLLOWING GUIDELINES:**

- Do not turn up the volume so high that you can't hear what's around you.
- Use caution or temporarily discontinue use in potentially hazardous situations.
- Do not use headphones while operating a motorised vehicle; the use of headphones may create a traffic hazard and is illegal in many areas.

### **About trademarks and registered trademarks**

- Pioneer is a registered trademark of PIONEER CORPORATION.
- SpeakON is a registered trademark of Neutrik.

The names of companies and products mentioned herein are the trademarks of their respective owners.



# 1 Introduction

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## 1.2 Installation guidelines

### WARNING

- Ensure that the floor, wall, ceiling, or stage surface can withstand the weight of the system. Consult a qualified professional for advice if the strength of the surface is unknown.
- After installation, you must confirm that the speakers are safely installed.
  
- You must periodically check that the speakers are safely installed, without any loosened bolts, deterioration of parts, and so on. Also you must check right after earthquake.
- Wherever possible, avoid high stacks and use ratchet straps to secure loudspeakers together. Please also remember that vibrations from subwoofer systems can shake other loudspeakers out of place, which may present a toppling hazard. The use of ratchet straps and non-slip material is recommended to prevent this.
- When this product is placed in an elevated place such as on a shelf or stage, a speaker may be moved by vibrations and fall to the floor, causing an injury or accident. Take measures to prevent a speaker from sliding off a shelf or a stage.
- At least two persons should together lift the speaker to install.
- Give sufficient consideration to safety when performing the work.

### Full-range loudspeakers

- The XY-81, XY-101, XY-122 and XY-152 come with pre-inserted mounting screws. These screws can be taken out and used to attach either special mounting hardware designed for the product or commercially available mounting hardware.
- Make sure to attach a wire for preventing falling parts and equipment of adequate strength using screw holes not used by mounting hardware.

### Mid-high loudspeaker

- The XY-2 yoke is equipped with hole for mounting on the ceiling or walls.
- This mounting hole and included special bolt can be used to mount the XY-2 to the bottom of the XY-3B.
- Make sure to attach a wire for preventing falling parts and equipment of adequate strength using holes for mounting secondary safety wires.
- The sides of the XY-2 are equipped with the socket head bolts for adjusting the forward tilt of the speaker.

### WARNING

- When attaching the speakers to the wall or ceiling, you should first confirm that the wall or ceiling being used is strong enough to support their weight. If you are unsure then consult a specialist. If the speakers should fall then it could lead to serious injury, and is potentially very dangerous.
- Check to make sure that any mounting hardware used is enough to support the system, whether using special hardware designed for the system or commercially available hardware. Make sure to read the Introduction section in this manual and the instruction manual for the mounting hardware thoroughly before proceeding. Take every precaution to prevent the product and associated parts from falling as they could cause serious injury if they fell onto a person.
- Use screws suitable for ceiling material and screw mounting parts in solid locations.
- Make sure to use mounting hardware of sufficient strength to secure the speaker in place when using non-designated hardware. The speaker could fall, causing accidents, if not properly secured.
- The fall prevention wire must be attached to a suitably strong location. The strength of the location to which the wire is attached being insufficient can lead to the speakers falling or cause accidents. The fall prevention wire and screw to attach the fall prevention wire to the ceiling or wall are not supplied with the speakers, so please purchase them separately.

# 1 Introduction

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## Subwoofers

- A pole mount can be attached to the XY-115S, XY-118S and XY-215S. The pole mount can be attached by inserting and screwing it into the holes.

### **WARNING**

- Check to make sure that any mounting hardware used is enough to support the system, when using commercially available hardware. Make sure to read the Introduction section in this manual and the instruction manual for the mounting hardware thoroughly before proceeding. Be careful not to place any devices or other equipment on top of the system as such devices could fall, causing severe injury.
- Make sure to install the system in a stable location if using a pole for mounting.
- Make sure to use mounting hardware of sufficient strength to secure the speaker in place. The speaker could fall, causing accidents, if not properly secured.

# 1 Introduction

## 1.3 System set-up

### WARNING

- Loudspeaker systems are potentially dangerous objects if used incorrectly. Please ensure that you read this section fully, and contact your local dealer should you be in any doubt over correct operation procedures.
- Professional loudspeaker systems are capable of producing damage-inducing sound pressure levels, and hence care should be taken when setting your system up, particularly when it comes to loudspeaker placement within a venue. Damage to the ear can result from levels above 90 dB under prolonged exposure.

### Stand mounting

- The XY-81, XY-101, XY-122 and XY-152 can be mounted on a loudspeaker stand using the equipped polemount adapter for a standard 35 mm (1.4 in.) loudspeaker stand.

The XY-2 can be mounted on loudspeaker stand using polemount adapter which fits both for hole of 13mm diameter and for a standard 35 mm (1.4 in.) loudspeaker stand.

When mounting in this way, please consider the following:

- Ensure your stand height is locked off and the tripod legs are positioned so as to be stable.
- Ensure to take overturn preventing measure and fall preventing measure.
- Check the weight loading of your stands and adapters before attempting to mount the loudspeaker.
- Do not stack a second loudspeaker on top of the stand-mounted one.
- Ensure cables are run so as to leave enough slack to enable neat wiring, and thus reduce the risk of the speaker being pulled over. Loose cables should be covered or taped down wherever possible to reduce trip hazards.
- When using poles on top of subwoofer systems, please observe similar precautions.

### Pole-mounted full-range loudspeakers from the XY-115S, XY-118S and XY-215S

- The XY-115S, XY-118S and XY-215S can support other loudspeakers using an M20 threaded pole adapter. When mounting in this way, please consider the following:

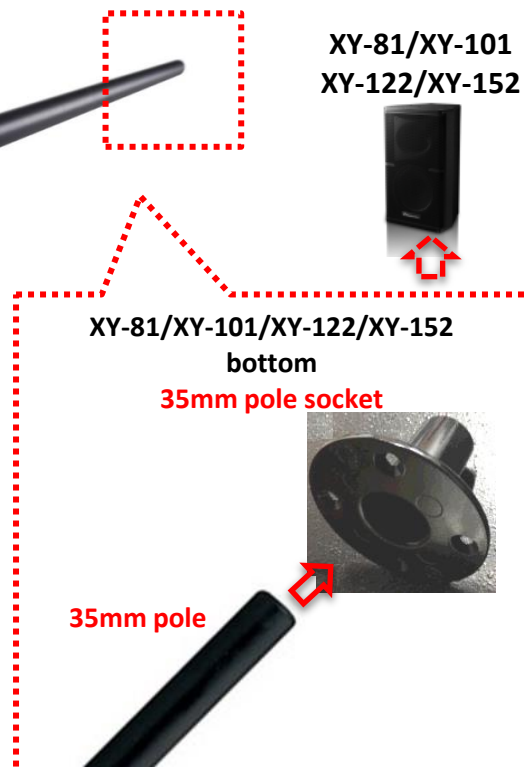
- Ensure the M20 pole is screwed in tightly, your stand height is locked off and the system is stable.
- Do not stack a second loudspeaker on top of the stand-mounted one.
- Ensure cables are run so as to leave enough slack to enable neat wiring, and thus reduce the risk of the speaker being pulled over. Loose cables should be covered or taped down wherever possible to reduce trip hazards.

**Note:** When you want to combine the XY-81, XY-101, XY-122 or XY-152 enclosure with the XY-115S, XY-118S or XY-215S enclosure, ensure you use a commercially-available pole, where one of the edge is M20 threaded and the other is 35mm diameter as shown below.

XY-115S/XY-118S XY-215S



XY-81/XY-101  
XY-122/XY-152



## 2 Accessories

### WARNING

- The overhead suspension of loudspeakers is a very serious issue with potentially lethal consequences should anything go wrong.  
Rigging should only be carried out by experienced personnel following safe working practice.  
Should you be in any doubt whatsoever, please contact the retailer or dealer from which you purchased this product.
- When utilising any suspension method, a **secondary safety feature must be used**. For any suspension method, fit an eyebolt to any of the rigging points.  
A safety steel can then be attached to this and connected to your safety point.

### Hardware standby

The following hardware is provided with the XY series products so that commercially-available poles, brackets and other items can be attached.

(see Table 2-1 and 2-2 "Hardware standby")

### Caution

- Check to make sure that any commercially available mounting hardware used is enough to support the weight of the speaker system.
- If you use any commercially available eyebolt, ensure it is the same size as in the list below and have enough strength to withstand the weight of the loudspeaker.

Model	Bolt size	Length [mm]	Pitch [mm]	Effective length [mm]	Safe working load limits [kN] ([kg])
XY-81	M8	25	1.25	10 ~ 15	0.785 (80.0)
XY-101					
XY-122	M10	30	1.5	10 ~ 15	1.47 (150.0)
XY-152					
XY-3B					

- Please follow an instruction manual for a commercially available product for installation and safety measures.

### Accessories List

All the supplied accessories for XY series are listed in the following "Accessories List".

(see Table 2-1 and 2-2 "Accessories List")

Please ensure that you read "Section 1: Introduction" and "Section 3.1 - 3.2" fully, and have the product installed by a professional.

Have the installer carefully follow the installation instructions.

## 2 Accessories

Table 2-1. Full-range loudspeaker

		XY-81	XY-101	XY-122	XY-152	XY-2	XY-3B
Hardware standby	Wall Mount Bracket	4 × M6 threaded points	4 × M6 threaded points	4 × M8 threaded points	4 × M8 threaded points	-	-
	Suspension	9 × M8 threaded points(*2)	15 × M8 threaded points(*2)	14 × M10 threaded points(*2)	15 × M10 threaded points(*2)	1 × M12 mounting point (*3)	9 × M10 threaded points(*2)
	Speaker Pole / Tripod Stand	35 mm polemount socket	35 mm polemount socket	35 mm polemount socket	35 mm polemount socket	35 mm polemount socket(*4)	-
Accessories List	Vertical Flying Cradle (*1)	CP-XY8VC1	CP-XY10VC1	CP-XY12VC1	CP-XY15VC1	-	-
	Horizontal Flying Cradle (*1)	CP-XY8HC1	CP-XY10HC1	CP-XY12HC1	CP-XY15HC1	-	-
	Variable Angle Bracket (*1)	-	-	CP-XY12AB1	CP-XY15AB1	-	CP-XY3DF1 (*5)
	Dual Enclosure Flying Plate Set (*1)	-	-	CP-XY12DF1	CP-XY15DF1	-	CP-XY3DF1
	Transportation	-	-	-	-	-	CP-XY3WB1
Setting procedure		Refer to Section 3.2.1 - 2 Section 3.2.5 - 6			Refer to Section 3.2.1 - 6		

\*1 Eye bolts to be used as secondary safety feature are not included with the products.

\*2 When you use any commercially available eyebolts, please use the eyebolts meeting the following size and specification.

Model	Bolt size	Length [mm]	Pitch [mm]	Effective length [mm]	Safe working load limits [kN] ([kg])
XY-81	M8	25	1.25	10 ~ 15	0.785 (80.0)
XY-101					
XY-122	M10	30	1.5	10 ~ 15	1.47 (150.0)
XY-152					
XY-3B					

\*3 Using the included special bolt, attachment to the bottom of XY-3B is also available.

\*4 Available by using commercially polemount adapter for the speaker stand.

\*5 CP-XY3DF1 also can be used as Variable Angle Bracket not only Dual Enclosure Flying Plate Set.

Table 2-2. Subwoofer

		XY115S	XY118S	XY-215S	XY-218S	XY-218HS
Hardware standby	Speaker Pole	M20 polemount socket	M20 polemount socket	2 x M20 polemount sockets (top, right side)	-	-
Accessories List	Caster set	-	CP-XYCS1	CP-XYCS1	CP-XYCS1	CP-XYCS1
Setting procedure		Refer to Section 3.2.7				

## 2 Accessories

### Included items

#### White socket cover seal for the white models

##### Applicable models:

- XY-81-W : 1 piece of white seal is shipped with XY-81-W.
- XY-101-W : 1 piece of white seal is shipped with XY-101-W.
- XY-122-W : 1 piece of white seal is shipped with XY-122-W.
- XY-152-W : 1 piece of white seal is shipped with XY-152-W.
- XY-115S-W : 1 piece of white seal is shipped with XY-115S-W.
- XY-118S-W : 1 piece of white seal is shipped with XY-118S-W.
- XY-215S-W : 2 pieces of white seals are shipped with XY-215S-W.

NOTE: White plastic seals to cover the black pole socket is included in the above models.

A white seal can be attached to an unused black pole socket as you like.

Please follow the instructions below.

##### Part list

Item	Part Name	Qty	Service Part No.	Note
1	Pole cover	1	08A501	-

##### Procedure

- (1) White seal (A) is included inside of the packing box. (Fig.2-1)
- (2) Carefully remove the tip of the cover of the double-face tape on the white label(A), then peel it off.
- (3) Place the white seal (A) to fully cover the top of the pole socket. (Fig.2-2)

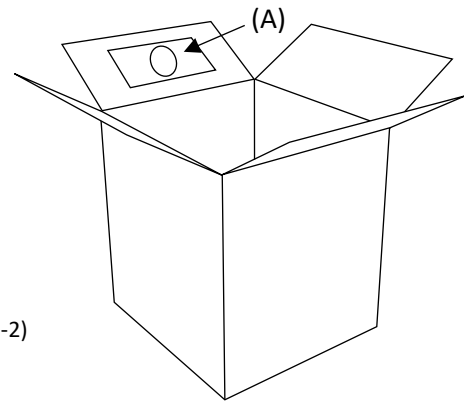


Fig.2-1

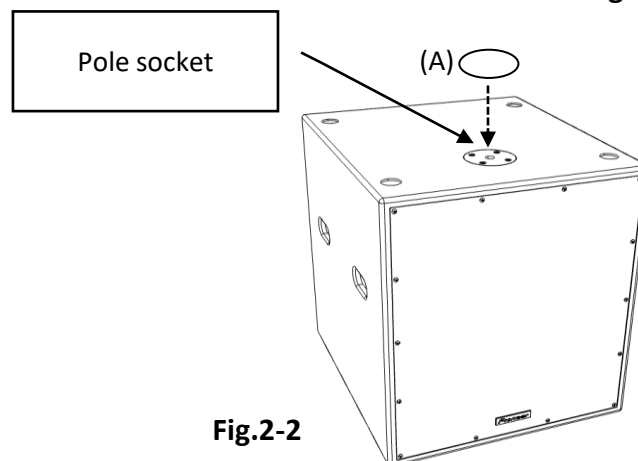


Fig.2-2

\*XY-118S-W is shown in the illustration.

## 2 Accessories

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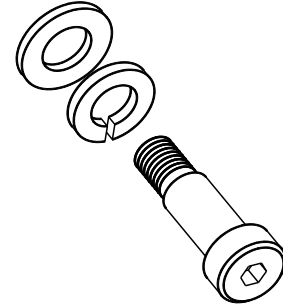
### Special bolt included with the XY-2 for attachment to the bottom of the XY-3B

XY-2 includes a special bolt set for attachment to the bottom of the XY-3B.

Ensure to read "3.2.2 Horizontal Flying Cradle & XY-2" to attach the XY-2 to the XY-3B safety.

**WARNING:**

- When attaching the XY-2 to the XY-3B, do not attach it to anywhere other than the bottom of the XY-3B.
- Do not use the bolt other than special bolt included with XY-2 for mounting to the XY-3B.



#### Part list

Item	Part Name	Qty	Service Part No.	Note
1	M10 Special bolt	1	-	M10 x 41mm (P=1.5), 6mm hex socket head shoulder bolt
2	Spring Washer	1	-	M12
3	Flat washer	1	-	M12

### 3 Rigging And Caster Setting

#### 3.1 Before Setting

##### 3.1.1 Guide for safe use

Improper installation of the speakers could cause them to fall and cause damage or injuries to persons nearby. Please check the following conditions of all the loudspeakers in this series always before they are rigged.

#### WARNING:

##### INTENDED USAGE

Do not use any other method than the one prescribed in this manual.

The XY Series rigging components must only be used in conjunction with the XY Series loudspeakers.

##### SAFETY CAUTIONS

Ensure and check all the speaker riggings are sufficiently secure to be used before using them. Damaged components must be withdrawn from use immediately.

Ensure the supplied bolts are used to fix the rigging accessories instead of the pre-inserted screws.

Any installation (permanent or temporary) must be securely attached to the structure of the building using chain, steel wire or web straps that are certified and load rated for the loudspeaker system.

Consideration must be taken when determining the loading on the structure to include loudspeakers and rigging hardware, and the appropriate safety factor can then be decided upon. If you are in any doubt whatsoever, please contact the retailer or dealer from which you purchased this product. A reputable rigging organisation should also be able to advise on legislation regarding safety factors for suspended systems of this type.

Be sure to use the supplied accessory screws.

Small parts such as flat washer, spring washer and nut out of the reach of children and infants. If accidentally swallowed, contact a doctor immediately.

##### EYEBOLT STRENGTH

When you use any commercially-available eyebolts, please use the eyebolts meeting the following size and specification:

Model	Bolt size	Length [mm]	Pitch [mm]	Effective length [mm]	Safe working load limits [kN] ([kg])
XY-81	M8	25	1.25	10 ~ 15	0.785 (80.0)
XY-101					
XY-122	M10	30	1.5	10 ~ 15	1.47 (150.0)
XY-152					
XY-3B					

NOTE only for XY-3B:

The nuts of the threaded fixing points on XY-3B are structured so that bolts cannot pass through them. (max threaded length is 15mm.)

NOTE: XY-3B is shown in the illustration.

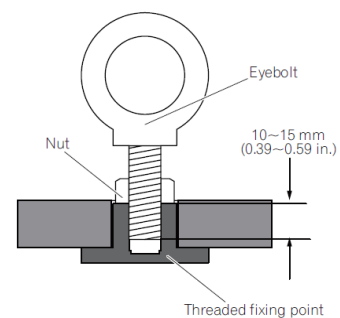


Fig. 3-1-1-A

##### Adjusting the direction of eyebolt

Screw the eye bolts into the nuts so that they are engaged within the range of 10 to 15 mm (0.39 to 0.59 in.) and then tighten the nuts with a spanner while matching the direction of the eye bolts to fix them in place. (Fig. 3-1-1-A)

The safe working load limits of an eyebolt are different depending on an inclined angle of the wire attached to the eyebolt. If the suspension angle of the wire attached to the eyebolt is inclined (not vertical) and correctly oriented in the plane of pull, be sure to read the catalogue of the eye bolt for details of the safe working load limits depending on the inclined angle. It is generally recommended that an angle of the wire attached to the eye bolt correctly oriented in the plane of pull be 45 degrees at maximum. Do not suspend the eye bolts as shown in the right figure. (Fig. 3-1-1-B)

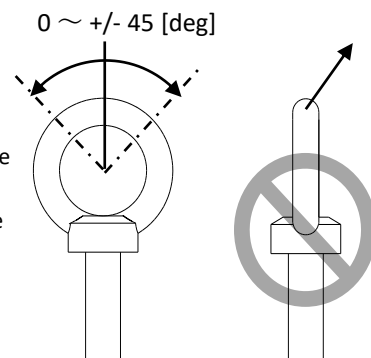


Fig. 3-1-1-B



### THE SECONDARY SAFETY FEATURE

The secondary safety feature must be used to prevent the speaker from falling. Eye bolts to be used as secondary safety feature are not included with the products. When you use any commercially-available eyebolts, the above-listed safe working load limits and other specifications should be met.

With any suspension method, a second anchor point should be used as safety feature.

Ensure a wire or a chain to be used as secondary safety feature is securely **suspended vertically from the ceiling or wall**.

If such a wire or a chain is suspended from the inclined ceiling or wall, or it is horizontally suspended, the wire or the chain would not be effective to prevent an accidental fall.

Do not use the double safety hoisting accessory enclosure connection together with the main hoisting accessory connection.

**An appropriate length of wire or chain should be used as second safety feature.** It is generally recommended that the fall prevention wire be 100 mm longer than the main suspension wire/chain/tool.

If the wire or the chain is too long, it would not be effective enough to prevent an accidental fall.

### AFTER INSTALLATION

After installation, you must confirm that the speakers are safely installed. You must also periodically check them to make sure that they are still safe.

After installing the speaker, never loosen any of its screws, since the speaker could fall or other accidents could occur. You must confirm that the speakers are safely installed right after earthquake.

### CAUTION:

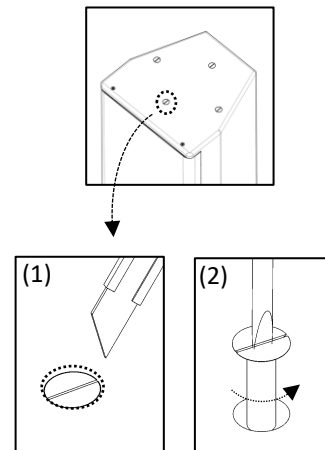
#### PREPARING THE CABINET

Pre-inserted M10 and M8 screws are mounted in the top, bottom, rear, left and right side of the loudspeaker enclosure. These screws are painted in the cabinet color.

Follow the steps below to ensure the cabinet paint is not peeled off during unscrewing.

(1) Make a small slit around the pre-inserted screws using an appropriate cutting knife.

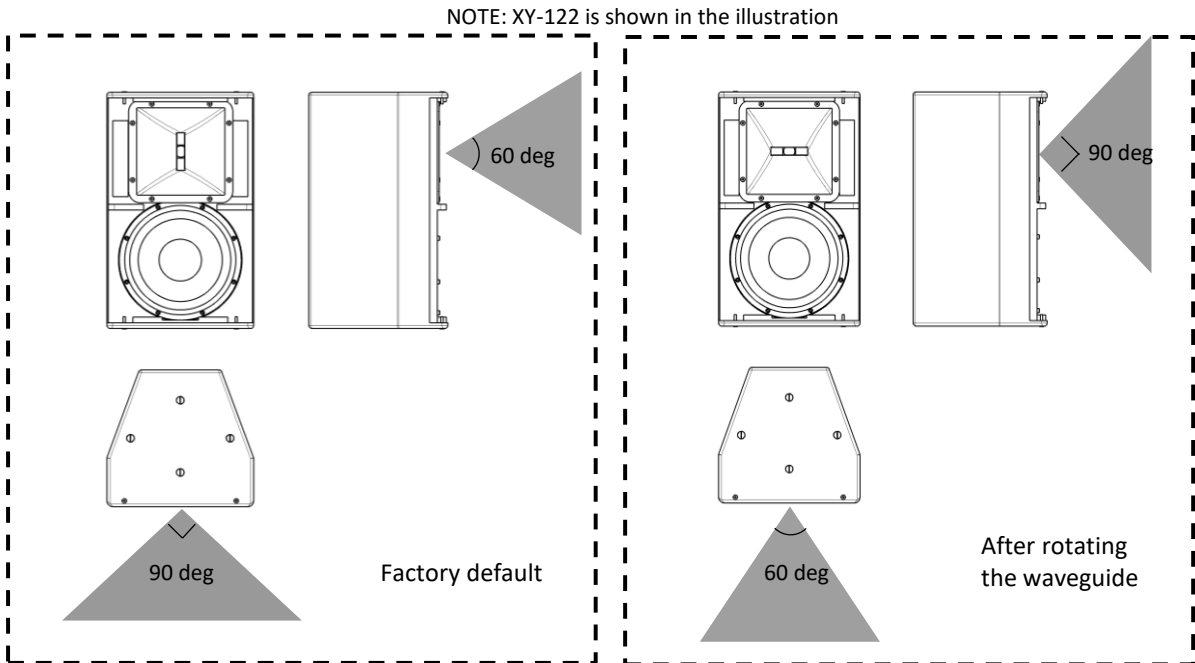
(2) Carefully remove the screws using a screwdriver, and ensure the cabinet coating is not peeled off.



### 3 Rigging And Caster Setting

#### 3.1.2 Horn rotation

HF dispersion orientation on XY-81/101/122/152 can be changed by rotating the HF waveguide 90 degrees. (Fig.3-1-3-A)



#### Required tools

##### XY-81/101

• 3mm hex key



• 4mm hex key



##### XY-122/152

• 4mm hex key



#### Procedure

- (1) Using a hex key, unscrew the bolts which fasten the grille to the both top and bottom of the enclosure.

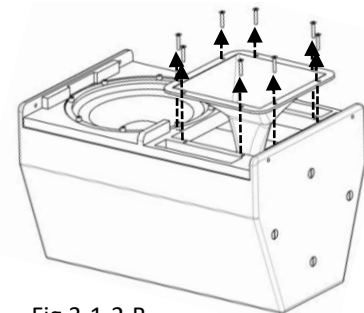
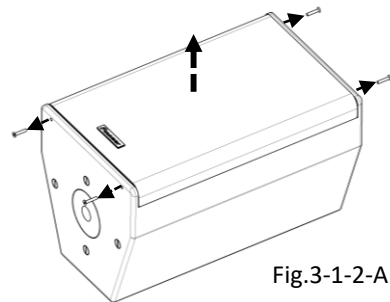
4 bolts from XY-81/101/122 and 6 bolts from XY-152 are needed to be removed from each enclosure.

- (2) Gently remove the grille from the front of the enclosure. (Fig.3-1-2-A)

- (3) Using a hex key, remove the bolts holding the HF waveguide in place. (Fig.3-1-2-B)

4 bolts from XY-81/101 and 8 bolts from XY-122/152 are needed to be removed from each enclosure.

NOTE: XY-122 is shown in the illustration.



### 3 Rigging And Caster Setting

---

- (4) Lift the waveguide up and rotate it 90 degrees to change the dispersion orientation depending on the orientation of the enclosure. When the HF waveguide is rotated back to the original orientation, ensure it is rotated in the reverse direction when it was first rotated. (Fig.3-1-2-C)
- (5) Reinstall the bolts and retighten. Avoid over tightening as this may crack the waveguide.
- (6) Reinstall the grille by gently placing it in place over the front of the loudspeaker.
- (7) Reinstall the bolts to secure it in place.

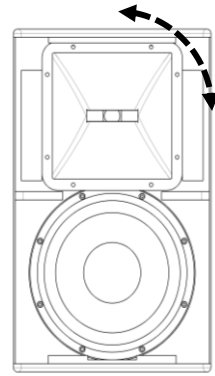


Fig.3-1-2-C

### 3 Rigging And Caster Setting

#### 3.1.3 Logo badge replacement

The location of Logo badge attached to the grilles on XY-81/101/122/152 can be changed.

##### Required tools

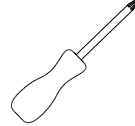
###### XY-81 / XY-101

- Phillips head screwdriver
- 3mm hex key



###### XY-122 / XY-152

- Phillips head screwdriver
- 4mm hex key



##### Procedure

- (1) Using a hex key, unscrew the bolts which fasten the grille to the both top and bottom of the enclosure.

4 bolts from XY-81/101/122 and 6 bolts from XY-152 are needed to be removed from the each enclosure.

- (2) Gently remove the grille from the front of the enclosure. (Fig.3-1-3-A)

- (3) Unscrew the screw on the rear side of the Logo badge and remove the Flat washer and the Spacer. (Fig.3-1-3-B)

- (4) Relocate the Logo badge to the desired position on the grille. The Logo badge can be rotated 90 degrees depending on the orientation of the enclosure. (Fig.3-1-3-C)

- (5) Reinstall the grille by gently placing it in place over the front of the loudspeaker. (Fig.3-1-3-D)

- (6) Reinstall the bolts to secure it in place. (Fig.3-1-3-E)

NOTE: XY-122 is shown in the illustration

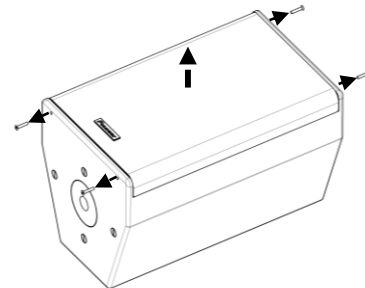


Fig.3-1-3-A

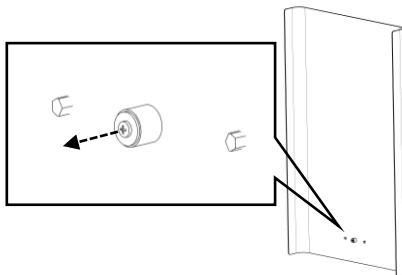


Fig.3-1-3-B

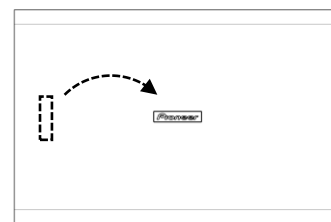


Fig.3-1-3-C

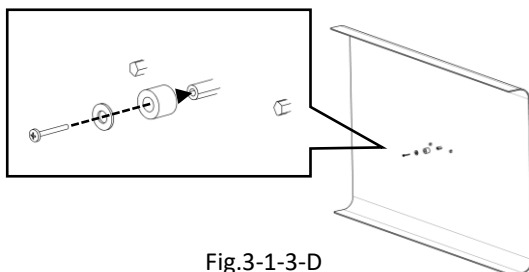


Fig.3-1-3-D

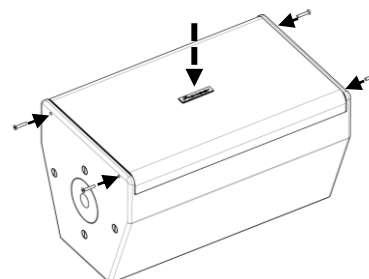


Fig.3-1-3-E

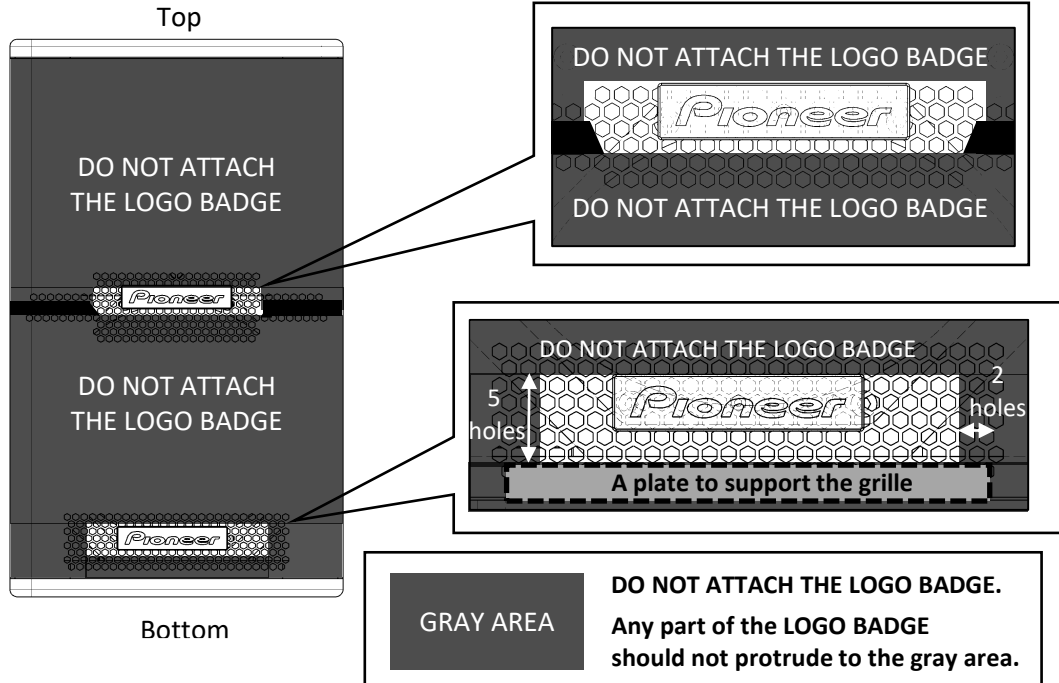
### 3 Rigging And Caster Setting

**CAUTION:**

**XY-81/101 Location where the Logo badge should be attached:**

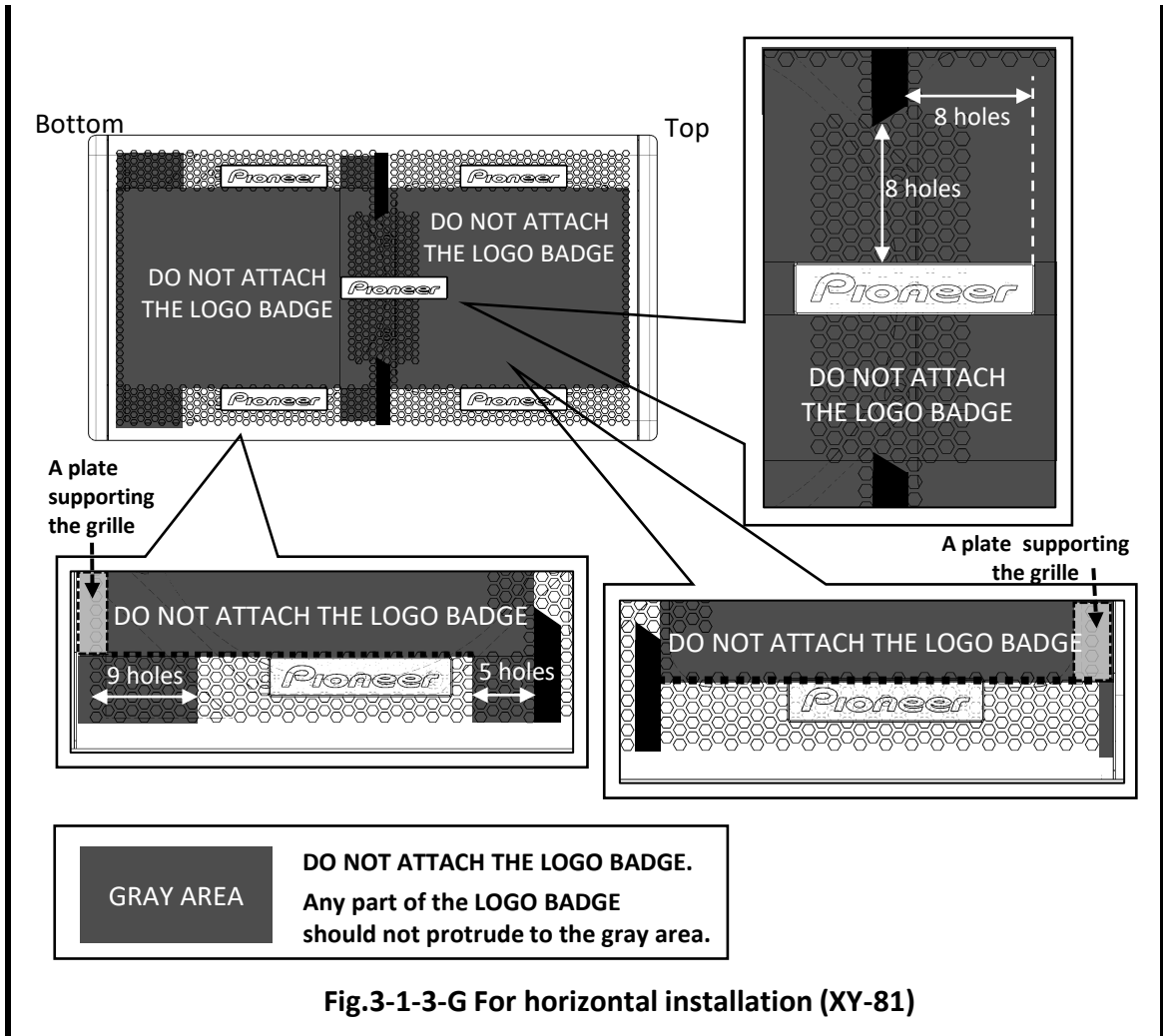
The Logo badge can be attached to only the limited locations on the grille.  
Please see the Fig.3-1-3-F, G, H, I. If the Logo badge is attached to other locations than the specified ones, the speaker could be damaged. Ensure the Logo badge is attached to the specified area.

**XY-81**



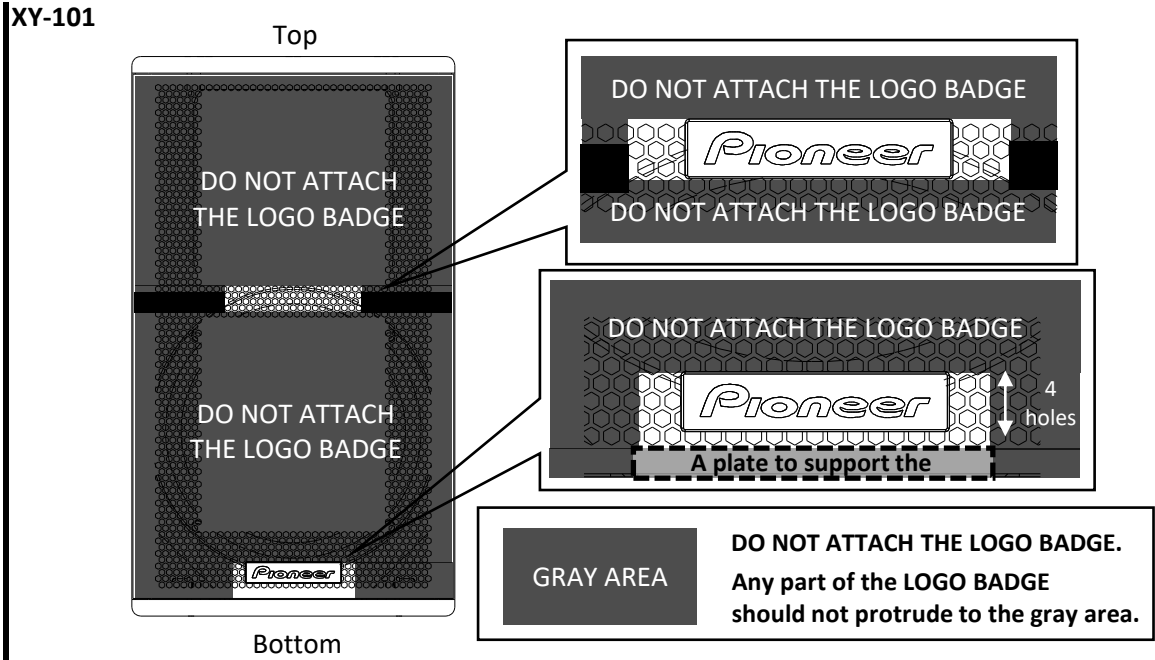
**Fig.3-1-3-F For vertical installation (XY-81)**

### 3 Rigging And Caster Setting

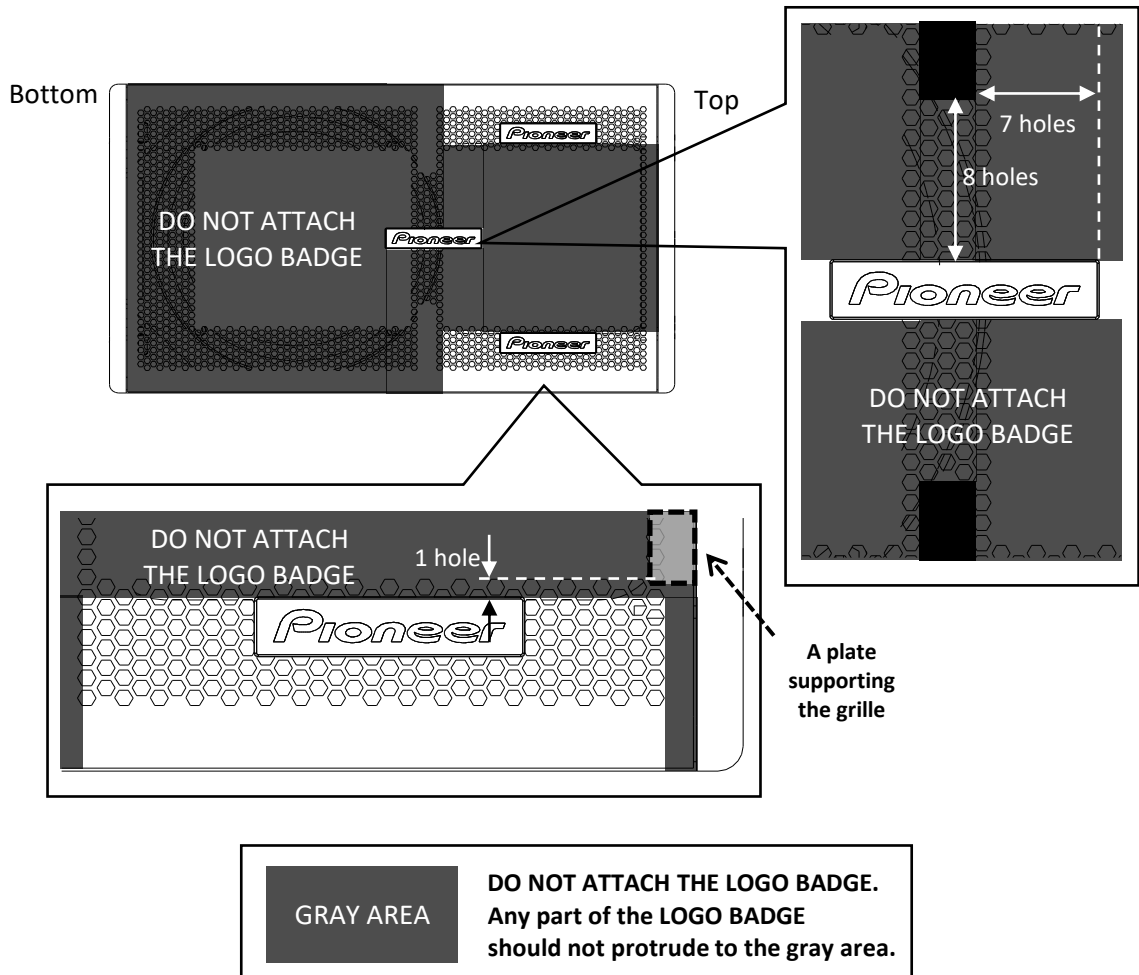


**Fig.3-1-3-G For horizontal installation (XY-81)**

### 3 Rigging And Caster Setting



**Fig.3-1-3-H For vertical installation (XY-101)**



**Fig.3-1-3-I For horizontal installation (XY-101)**

### 3 Rigging And Caster Setting

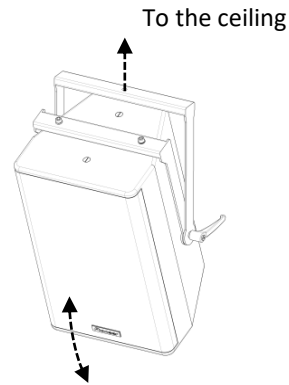
#### 3.2 Procedures

##### 3.2.1 Vertical Flying Cradle

When using the Vertical Flying Cradle, suspension of the XY-81/101/122/152 enclosure vertically from the ceiling as shown in the right figure is available. Speaker models compatible with respective Vertical Flying Cradles are shown in the table below.

Table.3-2-1-A: Models compatible with respective Vertical Flying Cradles

No.	Use model
CP-XY8VC1	XY-81
CP-XY10VC1	XY-101
CP-XY12VC1	XY-122
CP-XY15VC1	XY-152

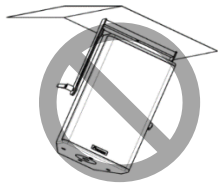


NOTE: XY-122 is shown in the illustration.

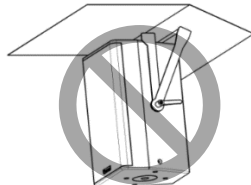
**WARNING:**

- Be careful not to insert your fingers between the steel arms when you adjust the angle of them.
- Securely fix the knob / lever of the Vertical Flying Cradle except during the installation work.
- Vertical Flying Cradle is not supposed to be used in the following situations, which may cause an injury or accident.

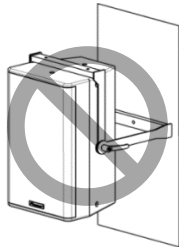
For all the models, the following situations are quite dangerous.



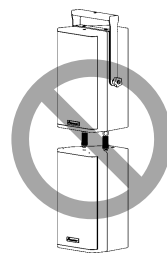
Suspending from sloped (non-horizontal) ceiling



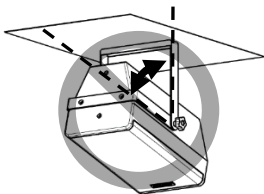
Suspending from the wall



Suspending multiple enclosures



Only for the following model:  
CP-XY8VC1/XY10VC1/XY15VC1



Inclining over 75 deg (XY-81/101), 45 deg (XY-152)



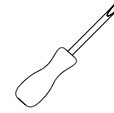
### 3 Rigging And Caster Setting

#### Part list (CP-XY8VC1)

Item	Part Name	Qty	Service Part No.	Note
1	Vertical Flying Cradle	1	-	-
	Outer Yoke	1	-	-
	Inner Yoke	1	-	-
	Neoprene Washer	2	05B010	φ 40mm x 2mm
	Flat Washer	2	06D009	M8
	Spring Washer	2	06D011	M8
2	Knob	2	05A101	M8
	M8 countersunk bolt	3	06G019	M8 x 30mm (P=1.25) 5mm hex socket head

#### Required tools

• Screwdriver



• 5mm hex key

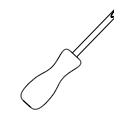


#### Part list (CP-XY10VC1)

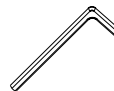
Item	Part Name	Qty	Service Part No.	Note
1	Vertical Flying Cradle	1	-	-
	Outer Yoke	1	-	-
	Inner Yoke	1	-	-
	Neoprene Washer	2	05B010	φ 40mm x 2mm
	Flat Washer	2	06D009	M8
	Spring Washer	2	06D011	M8
2	Knob	2	05A101	M8
	M8 socket head bolt	3	06G055	M8 x 45mm (P=1.25), 6mm hex socket head
3	Spring Washer	3	06D011	M8
4	Flat washer	3	06D009	M8

#### Required tools

• Screwdriver



• 6mm hex key

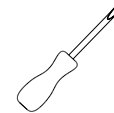


#### Part list (CP-XY12VC1)

Item	Part Name	Qty	Service Part No.	Note
1	Vertical Flying Cradle	1	-	-
	Outer Yoke	1	-	-
	Inner Yoke	1	-	-
	Neoprene Washer	2	05B011	φ 60mm x 2mm
	Flat Washer	2	06D014	M10
	Spring Washer	2	06D015	M10
2	Lever	2	05A103	M10
	M10 socket head bolt	3	06G052	M10 x 70mm (P=1.5), 8mm hex socket head
3	Spring Washer	3	06D015	M10
4	Flat washer	3	06D014	M10

#### Required tools

• Screwdriver



• 8mm hex key

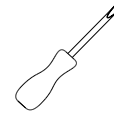


#### Part list (CP-XY15VC1)

Item	Part Name	Qty	Service Part No.	Note
1	Vertical Flying Cradle	1	-	-
	Outer Yoke	1	-	-
	Inner Yoke	1	-	-
	Neoprene Washer	2	05B011	φ 60mm x 2mm
	Flat Washer	2	06D014	M10
	Spring Washer	2	06D015	M10
2	Lever	2	05A103	M10
	M10 socket head bolt	3	06G052	M10 x 70mm (P=1.5), 8mm hex socket head
3	Spring Washer	5	06D015	M10
4	Flat washer	5	06D014	M10
5	M10 socket head bolt	3	06G053	M10 x 30mm (P=1.5), 8mm hex socket head
	Load Plate	1	-	-

#### Required tools

• Screwdriver



• 8mm hex key



### 3 Rigging And Caster Setting

#### Procedure (CP-XY8VC1/XY10VC1/XY12VC1/XY15VC1)

NOTE: XY-122 is shown in the illustrations below.

- (1) Remove the pre-inserted mounting screws from the top of enclosure. The number of screws to be removed from XY-81/101/122 is 2 (The location is shown in Fig.3-2-1-A) and from XY-152 is 4.

Only XY-152

NOTE: In addition, Using the supplied two M10 socket head bolts(E), align the mounting holes in the load plate(F) with the mounting point on the top of the enclosure. Tighten the bolts over 15N·m torque. (Fig.3-2-1-B)

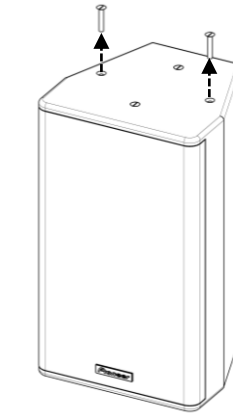
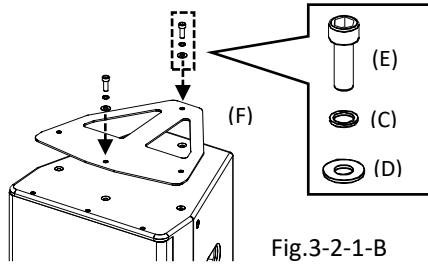
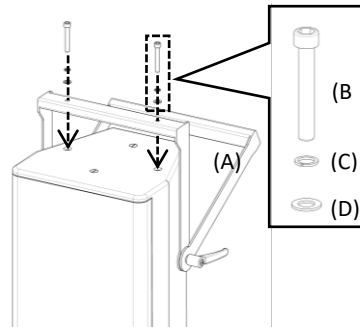


Fig.3-2-1-A

- (2) Using the supplied two bolts(B), align the mounting holes in the inner yoke of the Vertical Flying Cradle(A) with the mounting points on the top of the enclosure. The installation method depends on the model you use. Please follow the steps below for further details when installing such a model. (Fig.3-2-1-C)

XY-81:

Using the supplied two M8 countersunk bolts(B), align the mounting holes in the inner yoke of the Vertical Flying Cradle(A) with the mounting points on the top of the enclosure. Tighten the bolts over 7N·m torque.



### 3 Rigging And Caster Setting

XY-101/122/152:

Using the two socket head bolts(B), align the mounting holes in the inner yoke of the Vertical Flying Cradle(A) with the mounting points on the top of the enclosure. (Fig.3-2-1-C)

**WARNING:** The Vertical Flying Cradles should be installed to the XY-122/152 enclosure in a specific orientation. Please see Fig.3-2-1-D to install the Vertical Flying Cradle to the enclosure in the correct orientation.

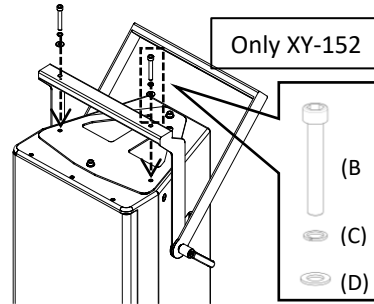
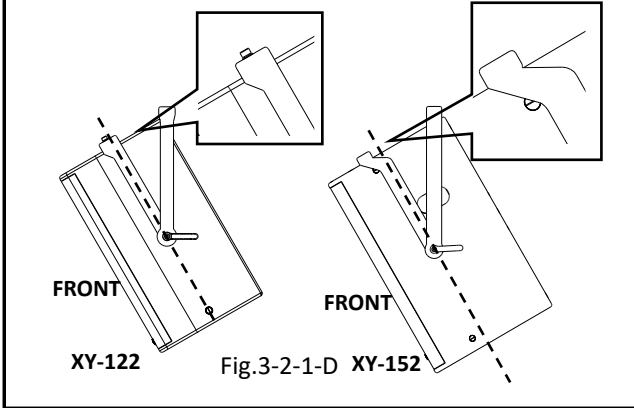


Fig.3-2-1-C

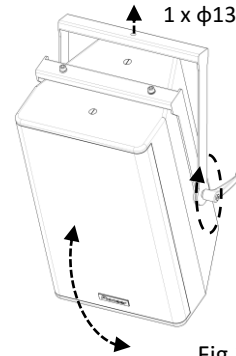


Fig.3-2-1-E

Ensure that both the Flat Washer(D) and the Spring Washer(C) are used - the Flat Washer(D) should be in contact with the cradle. Tighten the bolts over 15N·m torque (Only XY-101: 7N·m torque). (Fig.3-2-1-C)

- (3) Once the desired angle of the loudspeaker is set, tighten the knobs/levers on the cradle to lock the position in place. (Fig.3-2-1-E)
- (4) The hole on the outer yoke of the Vertical Flying Cradle (A) can be used to install the speaker to the ceiling. (Fig.3-2-1-E)
- (5) Remove the pre-inserted mounting screw on following point of the enclosure.

XY-81/101/122:

The front part or rear part of the top point on the enclosure XY-152:

The upper rear part on the enclosure

- (6) Ensure the commercially-available eyebolt is secured to the mounting point to suspend it with wire as a secondary safety feature. (Fig.3-2-1-F)

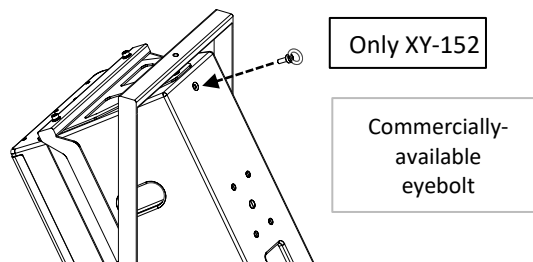
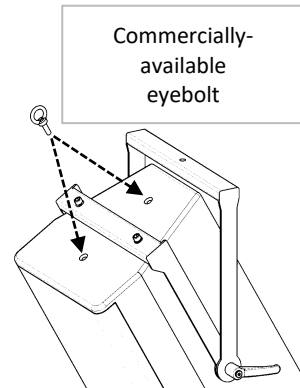


Fig.3-2-1-F

### 3 Rigging And Caster Setting

#### 3.2.2 Horizontal Flying Cradle & XY-2

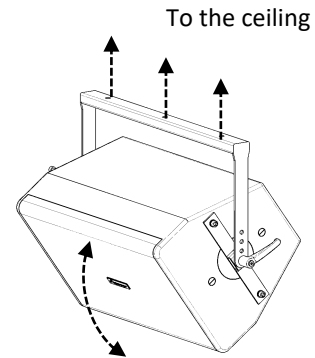
Using the Horizontal Flying Cradle, suspension of the XY-81/101/122/152 enclosure horizontally from the ceiling or the wall as shown in the right figure is available.

Also, using the included yoke, suspension of the XY-2 from the ceiling, wall, and bottom of XY-3B is available.

The orientation of the enclosure can be changed at any angle.

Several holes on both sides of the outer yoke of the cradle are used to change the length of the outer yoke so that the distance between the enclosure and the cradle can be adjusted. The factory default sets the distance between the enclosure and the cradle at the nearest position. If you want to connect a speaker cable and incline the enclosure, please select a different hole on the outer yoke to enlarge the distance.

NOTE: XY-122 is shown in the illustration.



Speaker models compatible with respective Horizontal Flying Cradles are shown in the table below.

Table.3-2-2-A: Models compatible with respective Horizontal Flying Cradles

No.	Use model
CP-XY8HC1	XY-81
CP-XY10HC1	XY-101
CP-XY12HC1	XY-122
CP-XY15HC1	XY-152
Not needed	XY-2

To the wall (Horizontal)

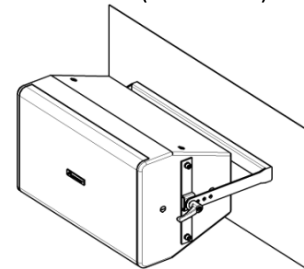
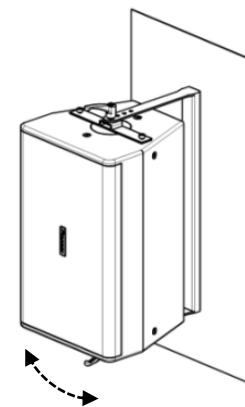


Table.3-2-2-B: Installation to the ceiling and wall

Part number	Installation to the ceiling	Installation to the wall	
		Vertical	Horizontal
CP-XY8HC1	Available	Available	Available
CP-XY10HC1	Available	Available	Available
CP-XY12HC1	Available	Installation prohibited	Available
CP-XY15HC1	Available	Installation prohibited	Available
XY-2	Available	Installation prohibited	Available

To the wall (Vertical)



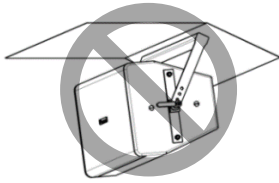
**Note:** The dispersion orientation when placing the XY-81/101/122/152 enclosure horizontally will be changed from the orientation when placing it vertically. Rotate the horn inside of the enclosure to reverse the dispersion orientation to the original orientation when it is placed vertically. Also, the location and the orientation of the logo badge can be changed. (See "3.1.2 Horn rotation" and "3.1.3 Logo badge replacement")

### 3 Rigging And Caster Setting

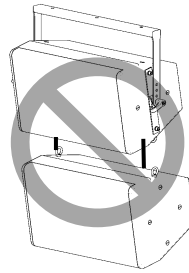
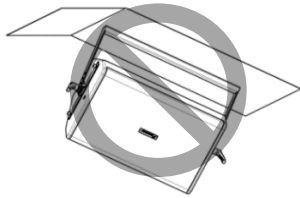
**WARNING:**

- Be careful not to insert your fingers between the steel arms when you adjust the angle of them.
- Horizontal Flying Cradle is not supposed to be used in the following situations, which may cause an injury or accident.

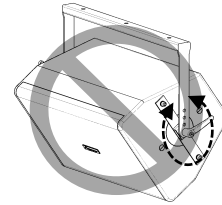
For ALL the models, the following situations are quite dangerous.



Suspending from sloped (non-horizontal) ceiling



Suspending Multiple enclosures



Excluding installation, loosening the side levers/handles/bolts.

Only for the following models:

CP-XY12HC1/XY15HC1/XY-2



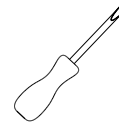
The outer yoke of the cradle is not horizontal to the wall

**Part list (CP-XY8HC1/CP-XY10HC1)**

Item	Part Name	Qty	Service Part No.	Note
1	Horizontal Flying Cradle	1	-	
	Main Yoke	1	-	
	Mounting Plate	2	-	
	Neoprene Washer	2	05B010	40mm x 2mm
	Flat Washer	2	06D009	M8
	Spring Washer	2	06D011	M8
	Knob	2	05A101	M8
2	M8 socket head bolt	5	06G046	M8 x 30mm (P=1.25), 6mm hex socket head

**Required tools**

- Screwdriver



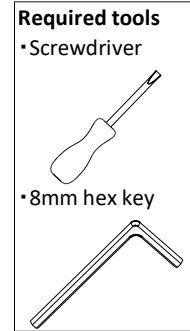
- 6mm hex key



### 3 Rigging And Caster Setting

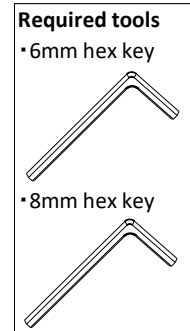
#### Part list (CP-XY12HC1/CP-XY15HC1)

Item	Part Name	Qty	Service Part No.	Note
1	Horizontal Flying Cradle	1	-	
	Main Yoke	1	-	
	Mounting Plate	2	-	
	Neoprene Washer	2	05B010	40mm x 2mm
	Flat Washer	2	06D014	M10
	Spring Washer	2	06D015	M10
	Lever	2	05A103	M10
2	M10 socket head bolt	5	06G053	M10 x 40mm (P=1.5), 8mm hex socket head
3	Spring Washer	5	06D015	M10
4	Flat washer	5	06D014	M10



#### Part list (XY-2)

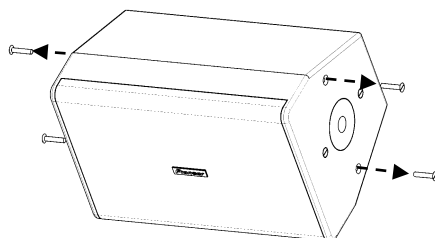
Item	Part Name	Qty	Service Part No.	Note
1	Main Yoke	1	-	
2	Yoke mount	2	-	
3	Flat Washer	2	06D014	M10
4	Spring Washer	2	06D015	M10
5	M10 socket head bolt	2	-	M10 x 40mm (P=1.5), 8mm hex socket head
6	M10 Special bolt	1	-	M10 x 41mm (P=1.5), 6mm hex socket head shoulder bolt
7	Spring Washer	1	-	M12
8	Flat washer	1	-	M12



#### Procedure (CP-XY8HC1/XY10HC1/XY12HC1/XY15HC1)

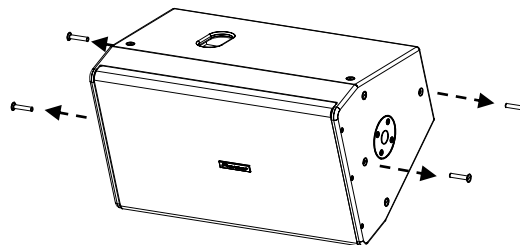
**Note:** The yoke length can be changed by unscrewing the lever and choosing mounting holes in the both plate ends of the Horizontal Flying Cradle.

- (1) Remove the four pre-inserted mounting screws on the top and the bottom of XY-81/101/122/152. (XY-81/101/122: Fig.3-2-2-A), (XY-152: Fig.3-2-2-B)



XY-122/101/122

Fig.3-2-2-A



XY-152

Fig.3-2-2-B

### 3 Rigging And Caster Setting

- (2) Using the supplied 4 bolts(B), align the mounting holes in the end mounts of the plate of the horizontal Flying Cradle(A) with the mounting points on the top and the bottom of the enclosure. The installation method depends on the model you use. Please follow the steps below for further details when installing such a model.

XY-81/101:

Using the supplied M8 countersunk bolts(B), align the mounting holes in the end mounts of the plate of the Horizontal Flying Cradle(A) with the mounting points on the top and the bottom of the enclosure. Tighten the bolts at 7N·m torque. (Fig.3-2-2-C)

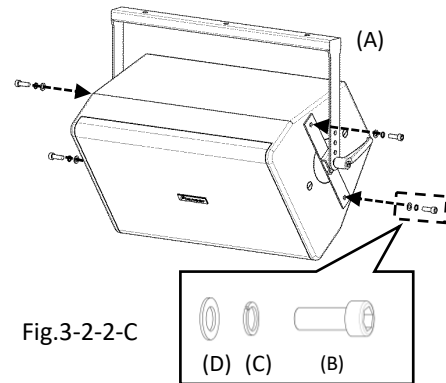
XY-122:

Using the supplied M10 hex socket head bolts(B), align the mounting holes in the end mounts of the plate of the Horizontal Flying Cradle(A) with the mounting points on the top and the bottom of the enclosure. Ensure that both Spring Washer(C) and Flat washer(D) are used - the Flat Washer(D) should be in contact with the cradle. Tighten the bolts at 15N·m torque. (Fig.3-2-2-C)

XY-152:

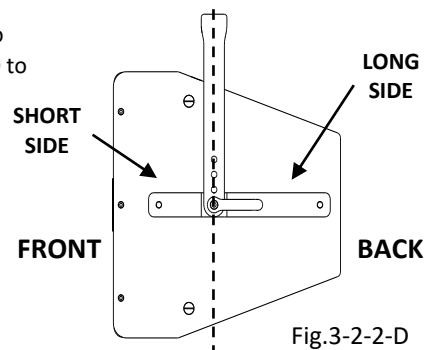
Using the supplied M10 hex socket head bolts(B), align the mounting holes in the end mounts of the plate of the Horizontal Flying Cradle(A) with the mounting points on the top and the bottom of the enclosure.

NOTE: XY-122 is shown in the illustration.



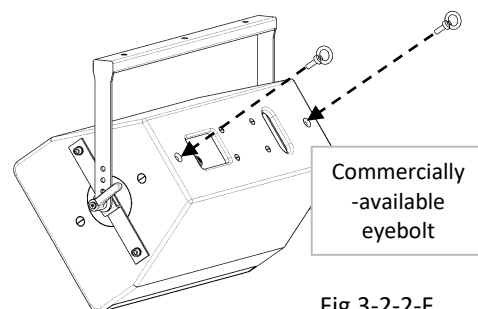
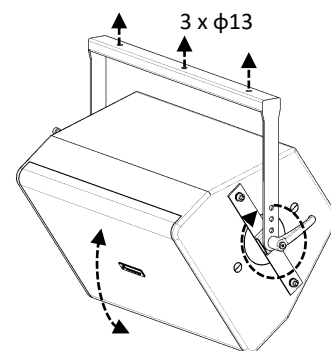
**WARNING:**

The mounting plate of Horizontal Flying Cradle should be installed to the XY-152 enclosure in a specific orientation. Please see Fig.3-2-2-D to install the Horizontal Flying Cradle in the correct orientation.



Ensure that both Spring Washer(C) and Flat washer(D) are used - the Flat Washer(D) should be in contact with the cradle. Tighten the bolts at 15N·m torque. (Fig.3-2-2-C)

- (3) Once the desired angle of the loudspeaker is set, tighten the knobs/levers on the cradle to lock the position in place. (Fig.3-2-2-E)
- (4) The holes on the top of the horizontal Flying Cradle(A) can be used to install the speaker to the ceiling or the wall in the horizontal position. (Fig.3-2-2-E)
- (5) Remove the two mounting screws pre-inserted in the holes on the rear side of enclosure.
- (6) Ensure the two commercially-available eyebolts are secured to the rear points on the enclosure to suspend it with wire as a secondary safety feature. (Fig.3-2-2-F)



### 3 Rigging And Caster Setting

#### Procedure (XY-2 single use)

**Note:** The yoke length can be changed by unscrewing the socket head bolts and choosing mounting holes in the both side plate ends of the yoke.

- (1) The hole on the top of the yoke can be used to install the speaker to the ceiling or the wall in the horizontal position. (Fig.3-2-2-G)

**WARNING:**

Do not use the special bolt included with XY-2 mounting to the ceilings or walls. Included bolt is dedicated for mounting to XY-3B.

- (2) Once the desired angle of the XY-2 is set, tighten the socket head bolt on the yoke to lock the position in place at 15N·m torque. (Fig.3-2-2-G)
- (3) Secondary safety feature must be provided using the holes on the back of the XY-2 for secondary safety wires. (Fig.3-2-2-H)

For preventing to occur the noise from secondary safety wires, wire length should be as short as possible. (Ex. Not using lower holes on back of XY-2, Surplus wire length:10cm)

Hole for secondary safety feature.

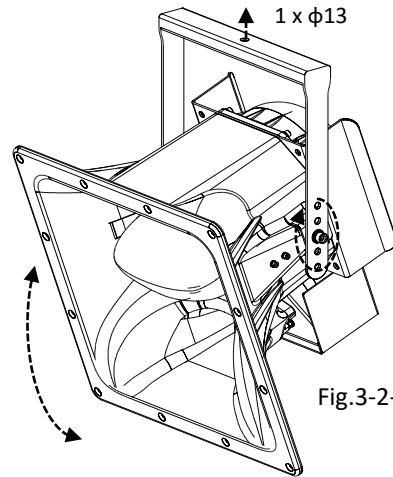


Fig.3-2-2-G

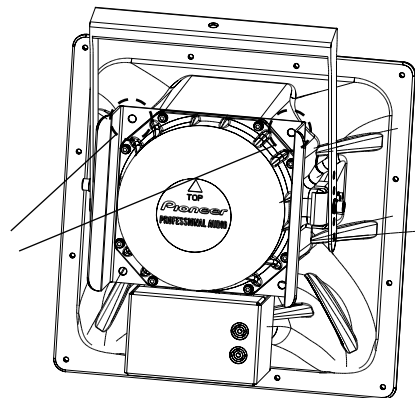


Fig.3-2-2-H

#### Procedure (Attachment to the bottom of XY-3B Three-way loudspeaker)

**WARNING:**

- When attaching the XY-2 to the XY-3B, do not attach it to anywhere other than the bottom of the XY-3B.
- Do not suspend anything other than an XY-2 to the bottom of the XY-3B. Also, do not suspend two or more XY-2s.

- (1) Using the included special bolts, align the mounting holes on the top of the XY-2 yoke with the mounting points on the bottom of the XY-3B enclosure.

**WARNING:**

- Do not use the bolt other than special bolt included with XY-2 for mounting to the XY-3B.

Ensure that both Spring washer and Flat washer are used - the Flat Washer should be in contact with the XY-2 yoke. Tighten the bolts at 15N·m torque. (Fig.3-2-2-I)

- (2) Once the desired angle of the XY-2 is set, tighten the socket head bolts on the side of yoke to lock the position in place at 15N·m torque. (Fig.3-2-2-I)

**WARNING:**

- Excluding installation, do not loosen the XY-2 side hexagon socket head cap bolts.

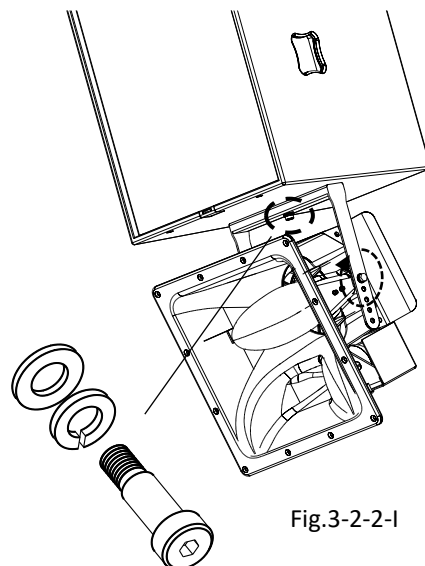


Fig.3-2-2-I

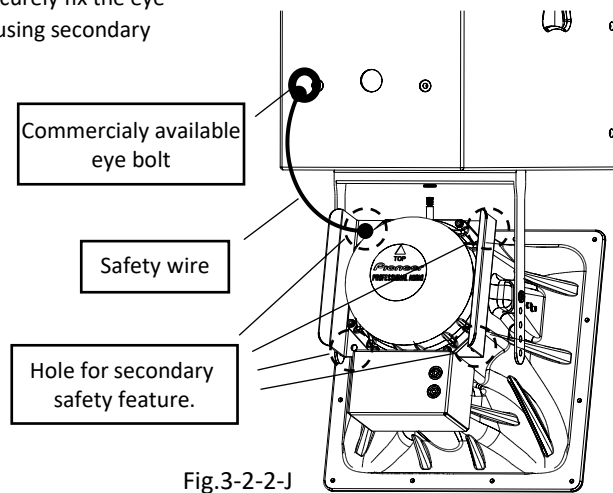
Special Bolt



### 3 Rigging And Caster Setting

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- (3) For secondary safety, ensure a commercially available eyebolt to the mounting point on the bottom of the XY-3B rear, securely fix the eyebolt on the XY-3B and the hole on the back of XY-2 using secondary safety wire. (Fig.3-2-2-J)



### 3 Rigging And Caster Setting

#### 3.2.3 Variable Angle Bracket

When using the Variable Angle Bracket, suspension of the enclosure vertically from the ceiling as shown in the right figure is available. It is easier to change the inclined angle of Variable Angle Bracket than that of Vertical Flying Cradle. Speaker models compatible with respective Variable Angle Brackets and the range of inclined angle when a Variable Angle Bracket is used to suspend the speaker from the ceiling is shown in the table below:

NOTE: XY-122 is shown in the illustration.

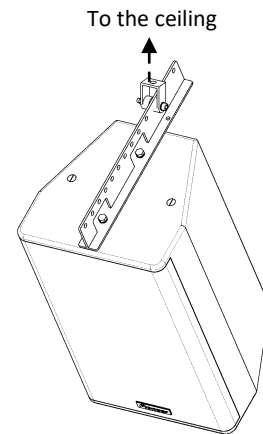


Table.3-2-3-A: Models compatible with each Variable Angle Bracket and the range of inclined angle

No.	Use model	The range of inclined angle
CP-XY12AB1	XY-122	17 degree (front) ~ -43 degree (back)
CP-XY15AB1	XY-152	22 degree (front) ~ -32 degree (back)
CP-XY3DF1	XY-3B	17 degree (front) ~ -31 degree (back)

**Note:** Variable Angle Bracket can be used together with Dual Enclosure Flying Plate Set.

Table.3-2-3-B: Mounting point of CP-XY12AB1 and inclined angle of the speaker

The mounting point	1	2	3	4	5	6	7	8	9	10	11	12	13
Angle [°]	17	13	10	7	3	-2	-7	-13	-19	-25	-31	-37	-43

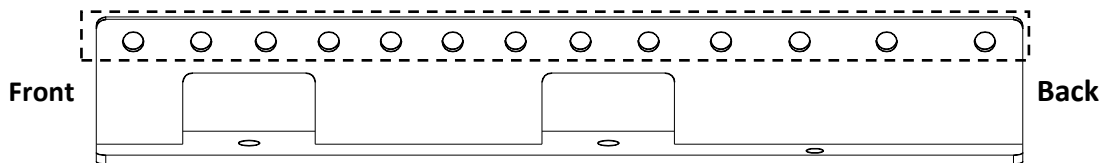


Table.3-2-3-C: Mounting point of CP-XY15AB1 and inclined angle of the speaker

The mounting point	1	2	3	4	5	6	7	8	9	10	11
Angle [°]	22	16	11	4	0	-5	-11	-16	-22	-27	-32

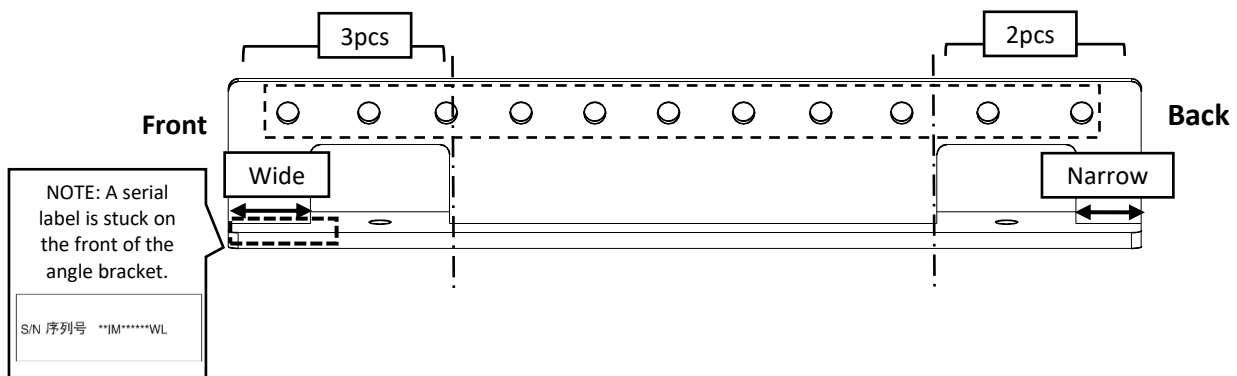
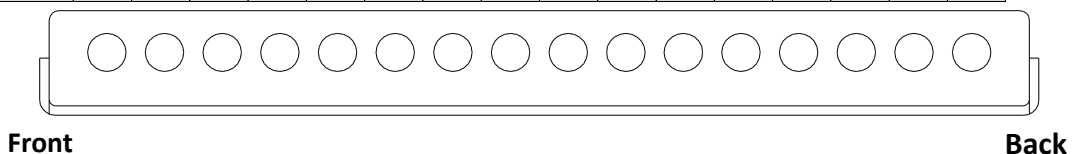


Table.3-2-3-D: Mounting point of CP-XY3DF1 and inclined angle of the speaker

The mounting point	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Angle [°]	Only XY-3B	17	14	10	7	4	0	-3	-7	-10	-13	-17	-20	-23	-26	-29	-31
	XY-3B + XY-2	13	10	8	5	2	0	-3	-5	-8	-10	-13	-16	-18	-20	-23	-25



### 3 Rigging And Caster Setting

NOTE: XY-122 and CP-XY12AB1 is used in the illustration below.

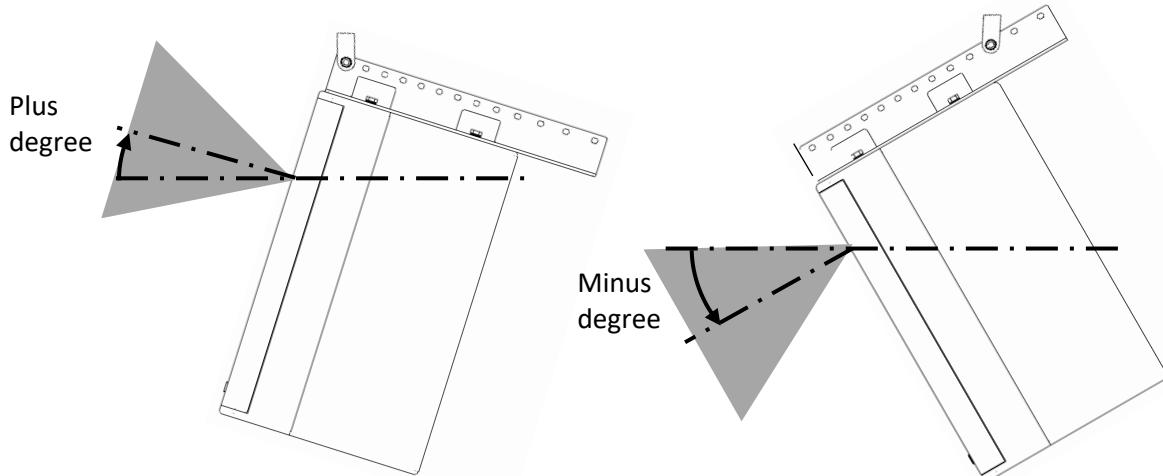
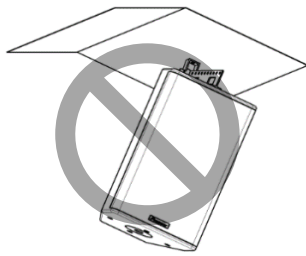


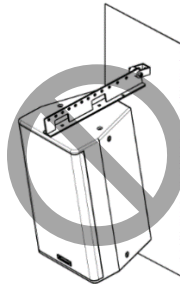
Fig.3-2-3-A

**WARNING:**

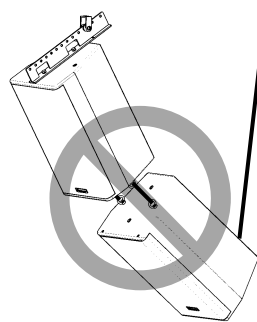
- Do not attempt to use this product with components other than the specified speaker.
- Be sure to use the supplied accessory screws.
- Flat washer and spring washer out of the reach of children and infants. If accidentally swallowed, contact a doctor immediately.
- After mounting the speaker with the cradle, never loosen any of its accessory installation screws, since the speaker could fall or other accidents could occur.
- Attach two or more wires to a rigging point different from those for installing the cradle to prevent swaying.
- Variable Angle Bracket is not supposed to be used in the following situations, which may cause an injury or accident.



Suspending from sloped (non-horizontal) ceiling



Suspending from the wall



Suspending Multiple enclosures

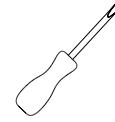
### 3 Rigging And Caster Setting

#### Part list (CP-XY12AB1/CP-XY15AB1)

Item	Part Name	Qty	Service Part No.	Note
1	Variable Angle Bracket	1	-	
2	Hook-clamp	1	-	
3	M10 socket head bolt	2	06G052	M10 x 70mm (P=1.5), 8mm hex socket head Included spare: 1
4	M10 hex head bolt	3	06C007	M10 x 40mm (P=1.5), 16mm hex head Included spare: 1
5	Spring washer for (D)	3	06D015	M10, Included spare: 1
6	Flat washer	5	06D014	M10, Included spare: 1
7	Nut	2	06E012	M10, Included spare: 1 16mm width across flat

#### Required tools

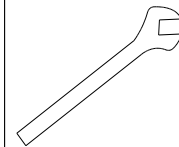
• Screwdriver



• 8mm hex key



• 16mm hex  
spanner



#### Part list (CP-XY3DF1)

Item	Part Name	Qty	Service Part No.	Note
1	Dual Enclosure Flying Plate	1	-	
2	Rear Plate Top	1	10B917L	Disuse
3	Rear Plate Bottom	1	10B917S	Disuse
4	M10 socket head bolt	9	06B522	M10 x 20mm (P=1.5), 8mm hex socket head Included spare: 5
5	Spring washer	9	06D015	M10, Included spare: 5
6	Flat washer	9	06D014	M10, Included spare: 5

#### Required tools

• 8mm hex key



### 3 Rigging And Caster Setting

#### Procedure (CP-XY12AB1/CP-XY15AB1)

- (1) Remove the two pre-inserted mounting screws on the top of enclosure. (Fig.3-2-3-B)
- (2) Using the supplied M10 hex head bolts(D), align the mounting holes in the Variable angle bracket(A) with the mounting points on the top of the enclosure.

NOTE: XY-122 is shown in the illustration.

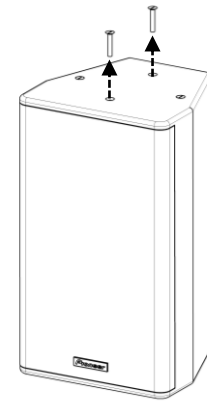


Fig.3-2-3-B

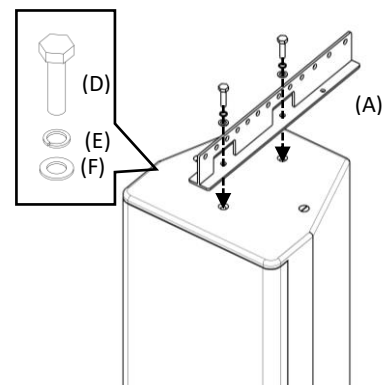
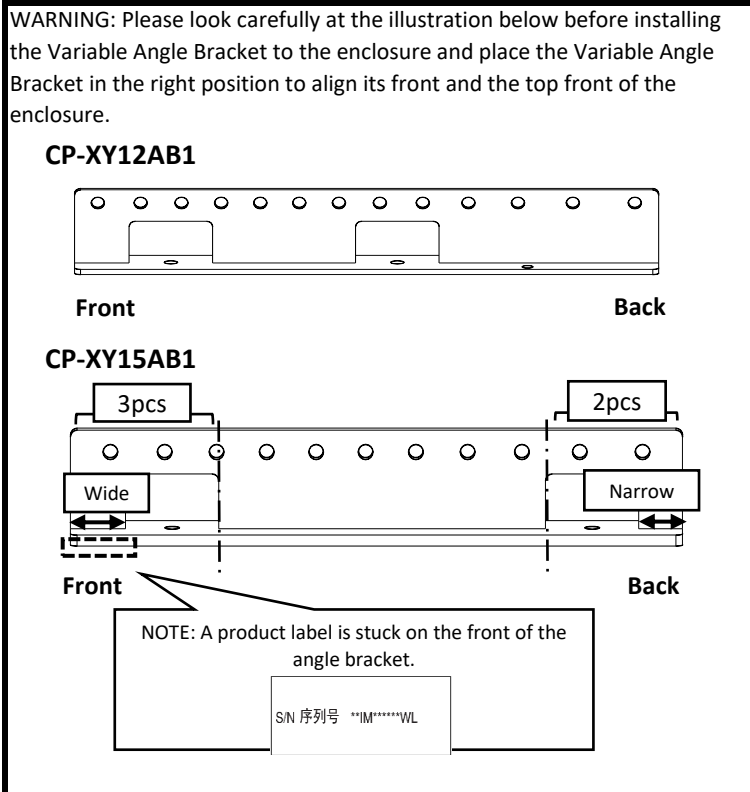


Fig.3-2-3-C

Ensure that both the Spring washers(E) and Flat washers(F) are used - the Flat washer(F) should be in contact with the bracket. Tighten the bolts at 15N·m torque. (Fig.3-2-3-C)

- (3) Using the socket head bolt(C) and the Nut(G), attach the hook-clamp(B) to the mounting point. Moving the pickup point to the rear of the enclosure will add down-tilt, and moving to the front of the enclosure will apply up-tilt. Ensure that two Flat Washers (F) are used between the Hook-clamp(B) and M10 socket head bolt(C) as well as the nut(G) and the hook-clamp(B). (Fig.3-2-3-D)

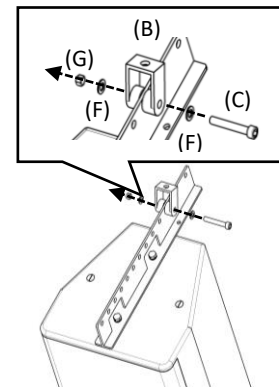


Fig.3-2-3-D

**Note:** For larger down-tilt angles, position the pivot on the last hole and use the point on the rear or underside as a pull-back.

- (4) The hole ( $\phi 13$ ) on the hook-clamp(B) can be used to install the speaker to the ceiling. (Fig.3-2-3-D)
- (5) Remove the pre-inserted M10 mounting screw on the either right or left mounting point on the top of the XY-122/152 enclosure.
- (6) Ensure the commercially-available eyebolt are secured to either right or left mounting point on the top of the enclosure to suspend it with wire as a secondary safety feature. (Fig.3-2-3-E)

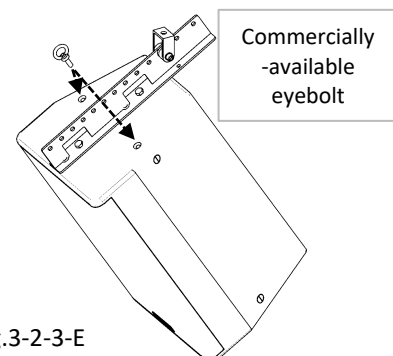


Fig.3-2-3-E

### 3 Rigging And Caster Setting

#### Procedure (CP-XY3DF1 as Variable angle bracket)

- (1) Using the supplied M10 socket head bolts(B), align the mounting holes in the Dual Flying Plate(A) with the mounting points on the top of the enclosure.

Ensure that both the Spring washers(C) and Flat washers(D) are used - the Flat washer(D) should be in contact with the bracket. Tighten the bolts at 15N·m torque. (Fig.3-2-3-F)

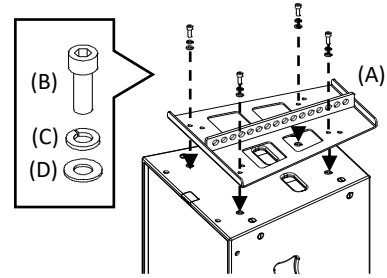


Fig.3-2-3-F

- (2) The 16 holes on the top plate can be used to install the speaker to the ceiling. (Fig.3-2-3-G)

**Note:** For larger down-tilt angles, position the pivot on the last hole and use the mounting point on the rear or underside as a pull-back.

**Note:** When hanging the XY-3 using the CP-XY3DF1, the XY-2 can be attached to the bottom of the XY-3B.

**WARNING:**

- Attach two or more wire to a rigging point different from those for installing the CP-XY3DF1 to prevent swaying. (Fig.3-2-3-H)
- When attaching the XY-2 to the XY-3B, do not attach it to anywhere other than the bottom of the XY-3B. Make sure to use the included bolt, washer, and spring washer supplied with XY-2.
- Do not suspend anything other than an XY-2 to the bottom of the XY-3B. Also, do not suspend two or more XY-2s.

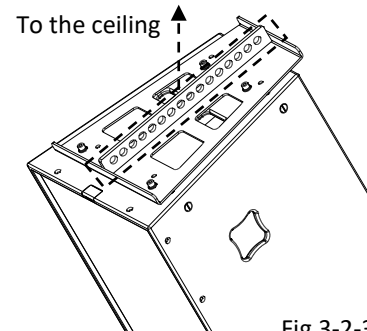


Fig.3-2-3-G

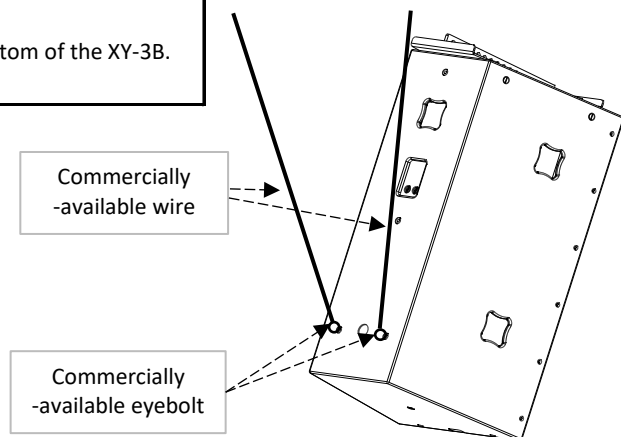


Fig.3-2-3-H

- (3) Ensure the commercially-available eyebolt are secured to mounting point on the rear top of the enclosure to suspend it with wire as a secondary safety feature. (Fig.3-2-3-I)

For preventing to occur the noise from secondary safety wires, wire length should be as short as possible.

Commercially -available eyebolt

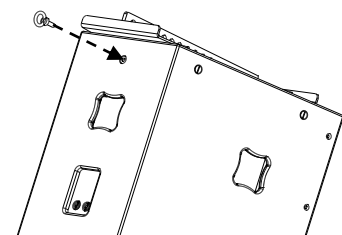


Fig.3-2-3-I

### 3 Rigging And Caster Setting

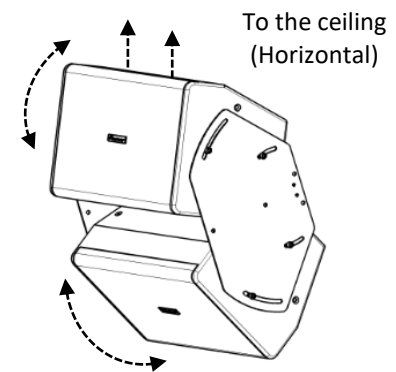
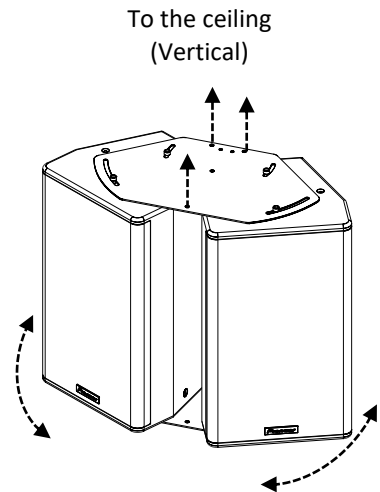
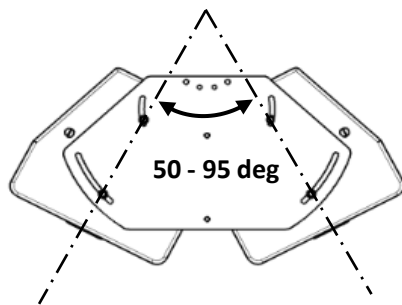
#### 3.2.4 Dual Enclosure Flying Plate Set

When using the Dual Enclosure Flying Plate Set, two enclosures can be stably combined side by side and vertically or horizontally suspended from the ceiling as shown in the figure below. Speaker models compatible with respective Dual Enclosure Flying Plate Set and the minimum and maximum angle between the 2 enclosures using the Dual Enclosure Flying Plate Set are shown below:

Table.3-2-4-A: Models compatible with Dual Enclosure Flying Plate Set and inclined angle between the 2 enclosures

No.	Use model	The range of inclined angle
CP-XY12DF1	XY-122	50 degree (min.) ~ 95 degree (max.)
CP-XY15DF1	XY-152	
CP-XY3DF1	XY-3B	25 degree (fixed)

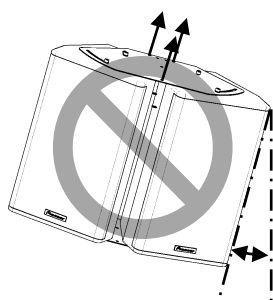
**Note:** Dual Enclosure Flying Plate Set can be used together with Variable Angle Bracket.



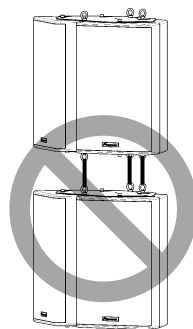
NOTE: XY-122 is shown in the illustration.

#### WARNING:

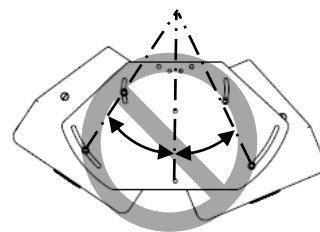
- Do not attempt to use this product with components other than the specified speaker.
- Be sure to use the supplied accessory screws.
- Flat washer and spring washer out of the reach of children and infants. If accidentally swallowed, contact a doctor immediately.
- After mounting the speaker with the cradle, never loosen any of its accessory installation screws, since the speaker could fall or other accidents could occur.
- Attach a wire to a rigging point different from those for installing the cradle to prevent swaying.
- Dual Enclosure Flying Plate Set is not supposed to be used in the following situations, which may cause an injury or accident.



Suspending from sloped (non-horizontal) ceiling



Suspending Over 2 enclosures



A deg ≠ B deg

Unsymmetry placement

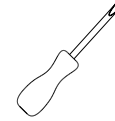
### 3 Rigging And Caster Setting

#### Part list (CP-XY12DF1/CP-XY15DF1)

Item	Part Name	Qty	Service Part No.	Note
1	Dual Enclosure Flying Plate	2	-	
2	M10 socket head bolt	9	06G053	M10 x 40mm (P=1.5), 8mm hex socket head Included spare:1
3	Spring washer	9	06D015	M10, Included spare:1
4	Flat washer	13	06D014	M10, Included spare:1
5	Nut	3	06E012	M10, Included spare:1 16mm width across flat
6	M8 socket head bolt (Only CP-XY12DF1)	3	06G046	M8 x 30mm(P=1.25), 6mm hex socket head Included spare:1
7	M8 flat washer (Only CP-XY12DF1)	5	06D009	M8, Included spare:1
8	M8 nut (Only CP-XY12DF1)	3	06E010	M8, Included spare:1 13mm width across flat

#### Required tools

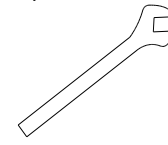
• Screwdriver



• 8mm hex key



• 16mm hex spanner



#### Part list (CP-XY3DF1)

Item	Part Name	Qty	Service Part No.	Note
1	Dual Enclosure Flying Plate	1	-	-
2	Rear Plate Top	1	10B917L	-
3	Rear Plate Bottom	1	10B917S	-
4	M10 socket head bolt	9	06B522	M10 x 20mm (P=1.5), 8mm hex socket head, Included spare:1
5	Spring washer	9	06D015	M10, Included spare:1
6	Flat washer	9	06D014	M10, Included spare:1

#### Required tools

• 8mm hex key



#### Procedure (CP-XY12DF1/CP-XY15DF1)

- (1) Remove the eight pre-inserted mounting screws on the top and the bottom of 2 units of XY-122/152. (Fig.3-2-4-A)
- (2) Using the supplied M10 socket head bolts(B), tentatively align the mounting holes on the Dual enclosure flying plate(A) with the mounting points of the top and the bottom of the enclosure. Ensure that both the Spring washer(C) and Flat washer(D) are used in between the Dual enclosure flying plate(A) and the M10 socket head bolt(B). Tighten the bolts at 15N·m torque. (Fig.3-2-4-B)

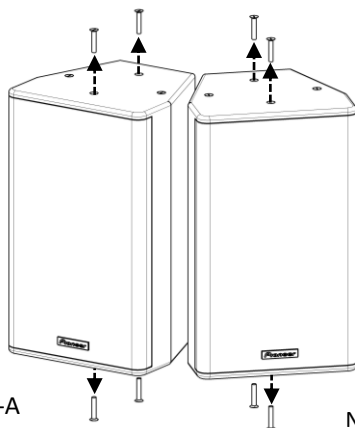


Fig.3-2-4-A

NOTE: XY-122 is shown in the illustration.

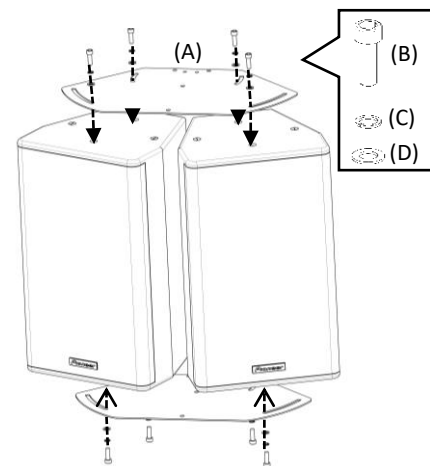


Fig.3-2-4-B



### 3 Rigging And Caster Setting

#### Vertical installation

- Once the desired angles of the two XY-122/152 are set, fully tighten all the M10 socket head bolts(B) on both the top and the bottom of the enclosure to lock the position in place. The three M10 holes on the top of the Dual enclosure flying plate can be used to install the speaker to the ceiling as shown in the figure. (Fig.3-2-4-C)

**Note:**

- The angle between the two enclosures can be adjusted as shown in Table.3-2-4-A
- If you lengthen the front side wire among the ones suspending the enclosure, the enclosure will be inclined downward. The Inclined angle is shown below.  
28 deg(XY-122) and 30 deg(XY-152) when the angle between the two enclosures is at 50 deg (minimum degrees) and 19 deg (XY-122) and 23 deg(XY-152) when the angle between them is at 95 deg (maximum degrees). (Fig.3-2-4-D)

NOTE: XY-122 is shown in the illustration.

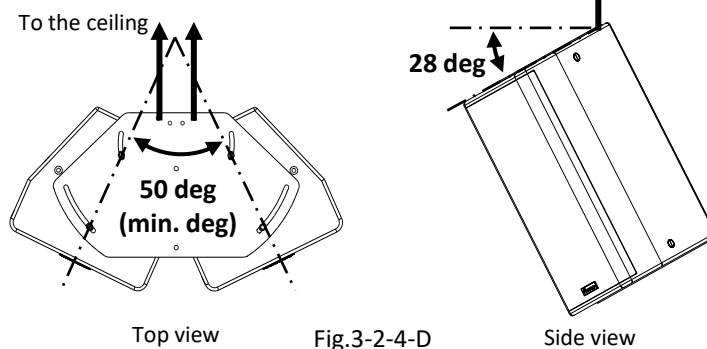


Fig.3-2-4-D

- Remove the two mounting screws pre-inserted M10 on both edges of the top of the XY-122/152 enclosure.
- Ensure the two commercially-available M10 eyebolts are secured to the mounting points on both edges of the top of the XY-122/152 enclosures to suspend it with wire as a secondary safety feature. (Fig.3-2-4-E)

**Note:**

- Eyebolts to be used as secondary safety feature cannot be mounted if the angle between the 2 enclosures is below minimum degrees. Since eyebolts should be mounted to the enclosure as secondary safety feature, the angle between the 2 enclosures should be between minimum degrees and maximum degrees in order to mount the eyebolts.

#### Horizontal installation

- Once the desired angles of the two XY-122/152 are set, fully tighten all the M10 socket head bolts(B) on both the top and the bottom of the enclosure to lock the position in place. (Fig.3-2-4-C)

**Note:** The angle between the two enclosures can be adjusted as shown in Table.3-2-4-A

- Remove the two mounting screws pre-inserted in the M10 holes on the side of the XY-122/152 enclosure. (Fig.3-2-4-F)

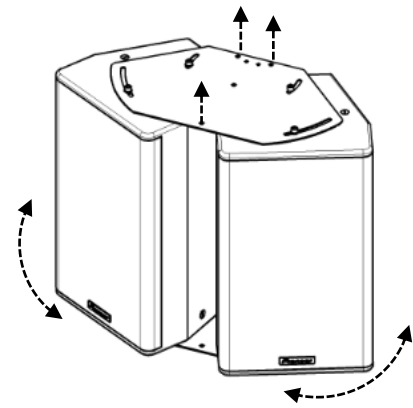


Fig.3-2-4-C

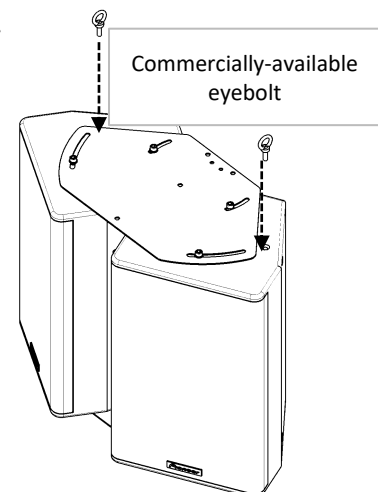


Fig.3-2-4-E

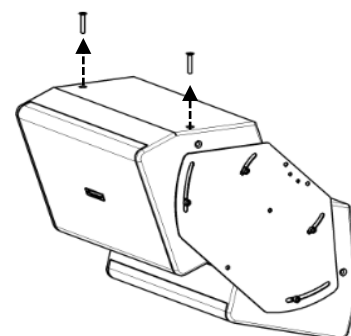


Fig.3-2-4-F

### 3 Rigging And Caster Setting

- (3) The XY-122/152 enclosure can be suspended from the ceiling when using two commercially-available M10 eyebolts as shown in the figure below. (Fig.3-2-4-G)
- (4) Remove the four pre-inserted M10 mounting screws on the rear side of XY-122/152 enclosure.
- (5) Ensure the four commercially-available M10 eyebolts are secured to the mounting points on the rear side of the XY-122/152 enclosures to suspend it with wire as a secondary safety feature. (Fig.3-2-4-H)

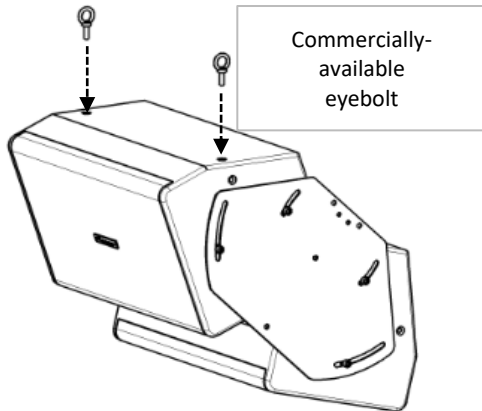


Fig.3-2-4-G

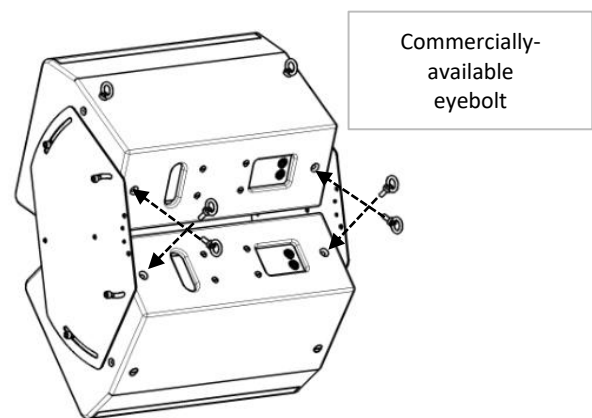


Fig.3-2-4-H

#### Procedure (CP-XY3DF1)

- (1) Using the supplied M10 socket head bolts(B), align the mounting holes on the Dual enclosure flying plate(A) with the mounting points of the top of the enclosure. Ensure that both the Spring washer(C) and Flat washer(D) are used in between the Dual enclosure flying plate(A) and the M10 socket head bolt(B). Tighten the bolts at 15N·m torque. (Fig.3-2-4-I)

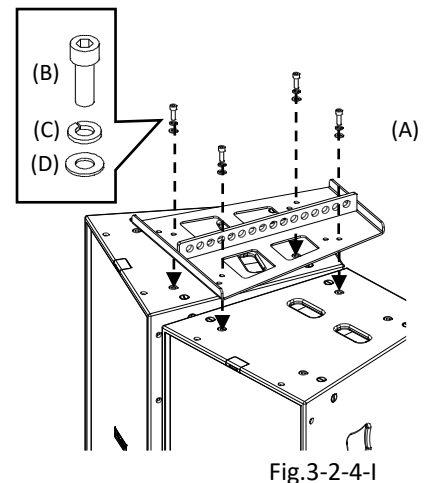
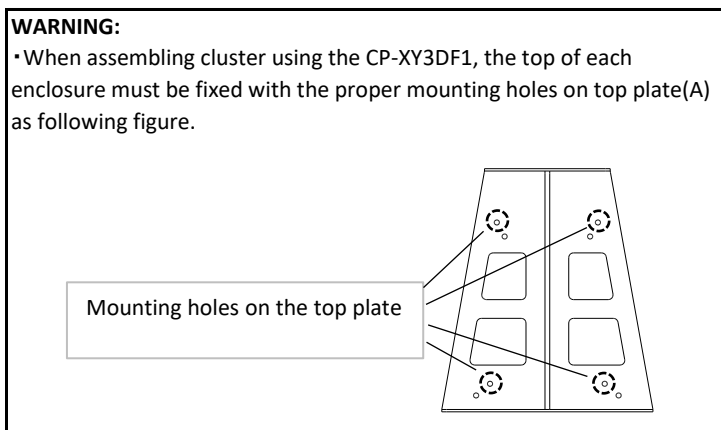


Fig.3-2-4-I

### 3 Rigging And Caster Setting

- (2) Using the supplied M10 socket head bolts(B), align the mounting holes on the Rear plate top(E) and Rear plate bottom(F) with the mounting points of the rear of the enclosures. Ensure that both the Spring washer(C) and Flat washer(D) are used in between the rear plates(E/F) and the M10 socket head bolt(B). Tighten the bolts at 15N·m torque. (Fig.3-2-4-J)

**WARNING:**

•When assembling cluster using the CP-XY3DF1, back of the enclosures must be fixed using a set of two rear plates.

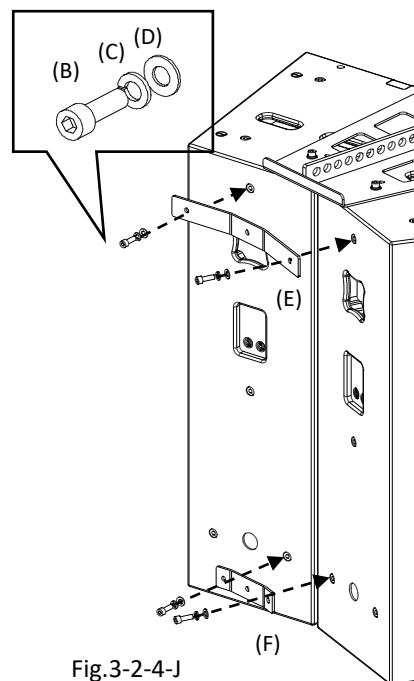


Fig.3-2-4-J

- (3) 16 holes on the top plate can be used to install the speaker to the ceiling. (Fig.3-2-4-K)

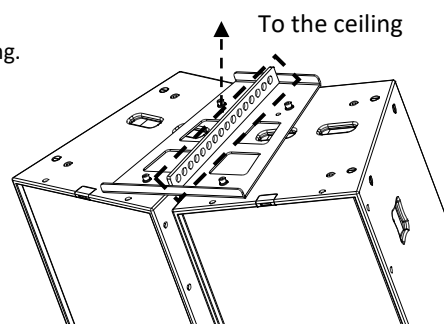
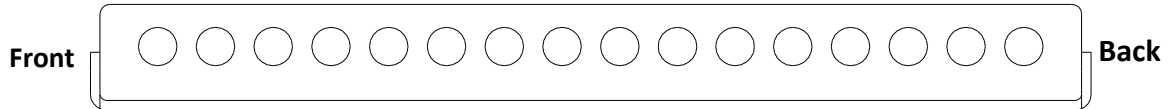


Fig.3-2-4-K

### 3 Rigging And Caster Setting

The range of inclined angle when a CP-XY3DF1 is used to suspend the speaker from the ceiling is shown in the table below:

The mounting point	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Angle [°]	Only XY-3B	20	18	14	11	8	5	2	-1	-5	-8	-11	-14	-17	-20	-23	-25
	XY-3B + XY-2	16	14	11	9	7	4	2	-1	-3	-6	-8	-11	-13	-15	-18	-20



**Note:** For larger down-tilt angles, position the pivot on the last hole and use the point on the rear or underside as a pull-back.

**Note:** When hanging the XY-3s using the CP-XY3DF1, the XY-2 can be attached to the bottom of each enclosure.

**WARNING:**

- Attach two or more wire to a rigging point different from those for installing the CP-XY3DF1 to prevent swaying. (Fig.3-2-4-L)
- When attaching the XY-2 to the XY-3B, do not attach it to anywhere other than the bottom of the XY-3B. Make sure to use the included bolt, washer, and spring washer.
- Do not suspend anything other than an XY-2 to the bottom of the XY-3B. Also, do not suspend two or more XY-2s to each of XY-3B.

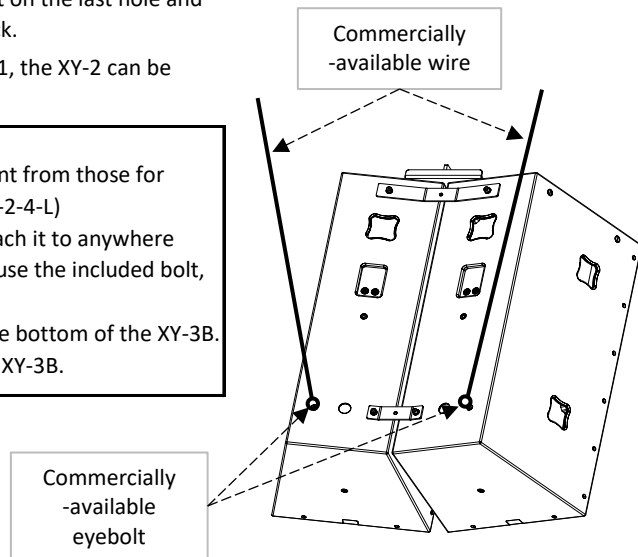


Fig.3-2-4-L

- (4) Ensure the two commercially-available eyebolt are secured to mounting point on the top of each enclosure to suspend it with wire as a secondary safety feature. (Fig.3-2-4-M)

For preventing to occur the noise from secondary safety wires, wire length should be as short as possible.

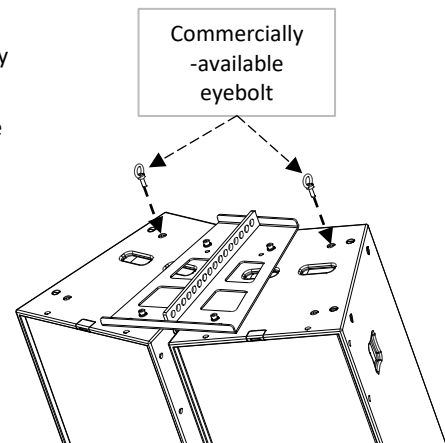
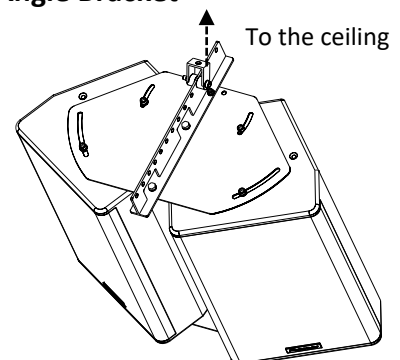


Fig.3-2-4-M

#### Combination of Dual Enclosure Flying Plate Set and Variable Angle Bracket

When using the Variable Angle Bracket together with Dual Enclosure Flying Plate, the 2 enclosures of XY-122/152 stably suspended from the ceiling can be inclined forward and backward. The angle between the 2 enclosures can be ranged from 50 degree to 95 degree.

**NOTE:** All the parts for a combination of Dual Enclosure Flying Plate Set and Variable Angle Bracket should be compatible with respective speakers, XY-122 and XY-152.

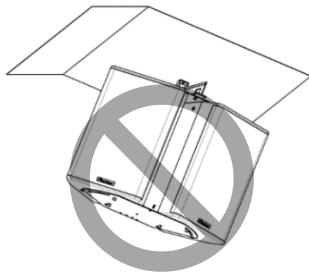


### 3 Rigging And Caster Setting

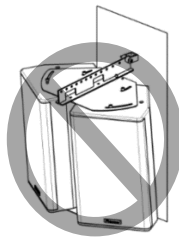
NOTE: XY-122 is shown in the illustration.

#### WARNING:

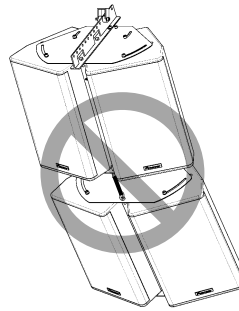
- Do not attempt to use this product with components other than the specified speaker.
- Be sure to use the supplied accessory screws.
- Flat washer and spring washer out of the reach of children and infants. If accidentally swallowed, contact a doctor immediately.
- After mounting the speaker with the cradle, never loosen any of its accessory installation screws, since the speaker could fall or other accidents could occur.
- Attach two or more wires to a rigging point different from those for installing the cradle to prevent swaying.
- The Variable Angle Bracket and the Dual Enclosure Flying Plate Set are not supposed to be used in the following situations, which may cause an injury or accident.



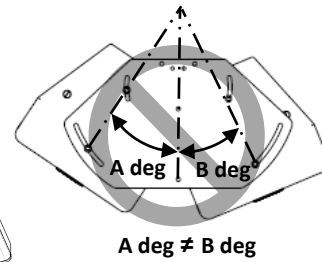
Suspending from sloped (non-horizontal) ceiling



Suspending from the wall



Suspending Over 2 enclosures



Unsymmetry placement

### 3 Rigging And Caster Setting

#### Part list

##### Dual Enclosure Flying Plate Set (CP-XY12DF1/CP-XY15DF1)

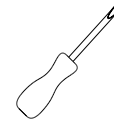
Item	Part Name	Qty	Service Part No.	Note
1	Dual Enclosure Flying Plate	2	-	
2	M10 socket head bolt	9	06G053	M10 x 40mm (P=1.5), 8mm hex socket head Included spare:1
3	Spring washer	9	06D015	M10, Included spare:1
4	Flat washer	13	06D014	M10, Included spare:1
5	Nut	3	06E012	M10, Included spare:1 16mm width across flat
6	M8 socket head bolt (Only CP-XY12DF1)	3	06G046	M8 x 30mm(P=1.25), 6mm hex socket head Included spare:1
7	M8 flat washer (Only CP-XY12DF1)	5	06D009	M8, Included spare:1
8	M8 nut (Only CP-XY12DF1)	3	06E010	M8, Included spare:1 13mm width across flat

##### Variable Angle Bracket for (CP-XY12AB1/CP-XY15AB1)

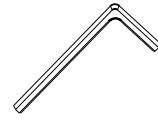
Item	Part Name	Qty	Service Part No.	Note
1	Variable Angle Bracket	1	-	
2	Hook-clamp	1	-	
3	M10 socket head bolt	2	06G052	M10 x 70mm (P=1.5), 8mm hex socket head Included spare: 1
4	M10 hex head bolt	3	06C007	M10 x 40mm (P=1.5), 16mm hex head Included spare: 1
5	Spring washer for (D)	3	06D015	M10, Included spare: 1
6	Flat washer	5	06D014	M10, Included spare: 1
7	Nut	2	06E012	M10, Included spare: 1 16mm width across flat

#### Required tools

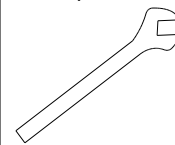
- Screwdriver



- 8mm hex key



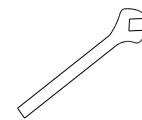
- 16mm hex spanner



- 6mm hex key



- 13mm hex spanner (Only CP-XY12DF1)



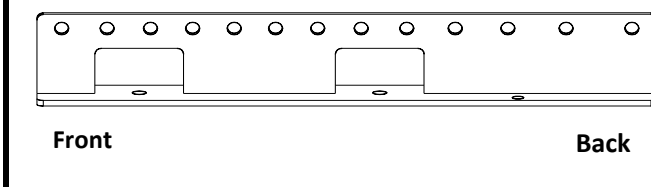
#### Procedure

- (1) Using the supplied bolts, align the mounting holes of the Dual Enclosure Flying Plate to the holes of the Variable Angle Bracket. The installation method depends on each model. Please follow the steps below for further details when installing each model.

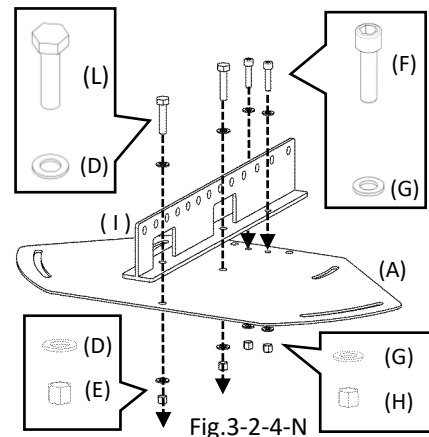
XY-122:

Using the supplied M10 hex head bolts(L), M8 socket head bolts(F) and the Nuts(E, H) align the two M10 holes in the center and the two M8 holes in the rear of the Dual enclosure flying plate(A) with the mounting points of the Variable angle bracket(I).

**WARNING:** Please look carefully at illustration below before installing the Variable Angle Bracket to the plate and place the Variable Angle Bracket in the right position to align its front and the top front of the plate.



NOTE: XY-122 is shown in the illustration.

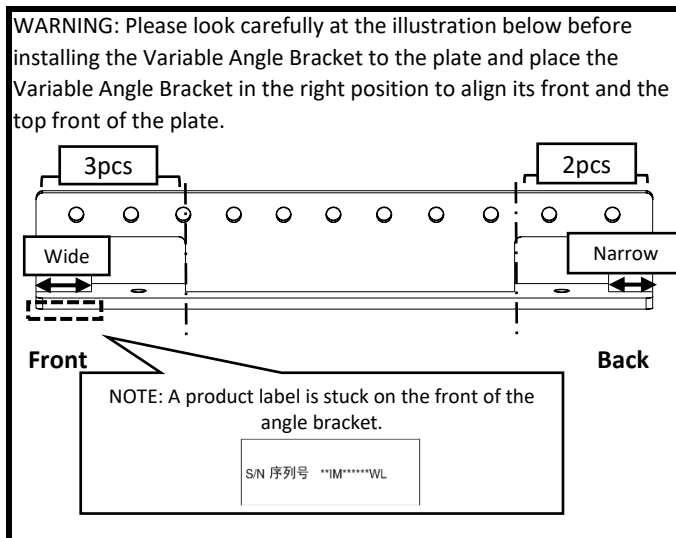


### 3 Rigging And Caster Setting

Ensure that each four Flat Washers(D, G) are used between the Variable angle bracket(I) and the bolts(L, F) as well as the nuts(E, H) and the Dual enclosure flying plate(A). Tighten the bolts at 15N·m torque (only bolt(F): 7N·m torque).

XY-152:

Using the supplied M10 hex head bolts(L) and the Nuts(E) align the two M10 holes in the center of the Dual enclosure flying plate(A) with the mounting points of the Variable angle bracket(I).



Ensure that four Flat Washers(D) are used between the Variable angle bracket(I) and the bolts(L) as well as the nuts(E) and the Dual enclosure flying plate(A). Tighten the bolts at 15N·m torque. (Fig.3-2-4-N)

- (2) Remove the eight pre-inserted mounting screws on the top and the bottom of the two XY-122/152 enclosures. (Fig.3-2-4-O)
- (3) Using the supplied M10 socket head bolts(B), tentatively align the mounting holes on the Dual enclosure flying plate(A) with the mounting points of both the top and the bottom of the enclosure. Tighten the bolts over 15N·m torque. Ensure that the Dual enclosure flying plate, where the Variable angle bracket is attached in the above (1), is attached to the top of XY-122/152. (Fig.3-2-4-P)
- (4) Remove the two mounting screws pre-inserted M10 on both edges of the top of the XY-122/152 enclosure.
- (5) Once the desired angles of the two XY-122/152 are set, fully tighten all the M10 socket head bolts to lock the position in place.

**Note:**

- The angle between the two enclosures can be adjusted shown in Table.3-2-4-A

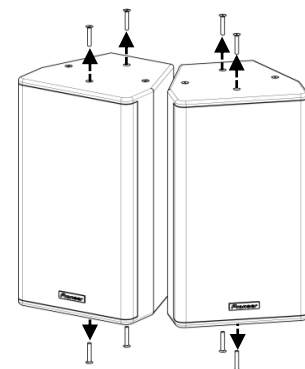


Fig.3-2-4-O

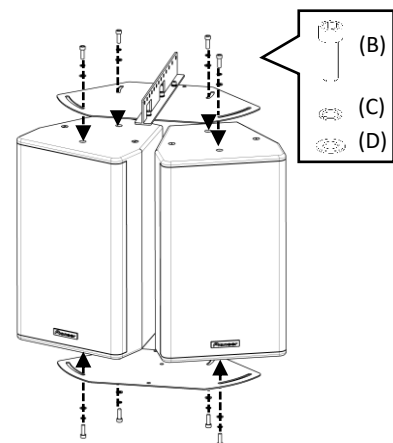


Fig.3-2-4-P

### 3 Rigging And Caster Setting

- (6) Using the supplied M10 socket head bolt(K) and Nuts(O) , attach a hook-clamp to the mounting point. Moving the pickup point to the rear of the enclosure will add down-tilt, and moving to the front of the enclosure will apply up-tilt. Ensure that two Flat washers(N) are used between the Hook-clamp(J) and M10 socket head bolt(K) as well as the nut(O) and the hook-clamp(J). (Fig.3-2-4-P)

The hole ( $\Phi 13$ ) on the Hook-clamp(J) can be used to install the speaker to the ceiling. (Fig.3-2-4-Q)

**Note:**

- When the hook clamp is mounted in the very rear mounting point, the inclined angle of the both enclosures is shown below. 36 deg(XY-122) and 29 deg(XY-152) when the angle between the two enclosures is at 50 deg (minimum degrees) and 29 deg(XY-122) and 22 deg(XY-152) when the angle between them is at 95 deg (maximum degrees).

- (7) Ensure the two commercially-available eyebolts are secured to the mounting points on both edges of the top of the XY-122/152 enclosures to suspend it with wire as a secondary safety feature. (Fig.3-2-4-R)

**Note:**

- Eyebolts to be used as secondary safety feature cannot be mounted if the angle between the 2 enclosures is below minimum degrees. Since eyebolts should be mounted to the enclosure as secondary safety feature, the angle between the 2 enclosures should be between minimum degrees and maximum degrees in order to mount the eyebolts.

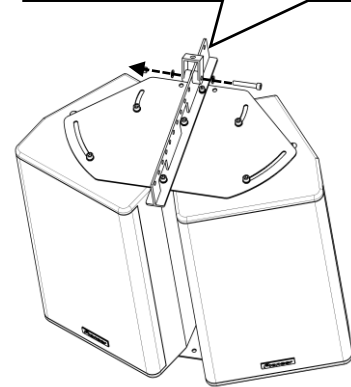
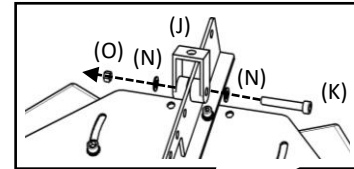


Fig.3-2-4-Q

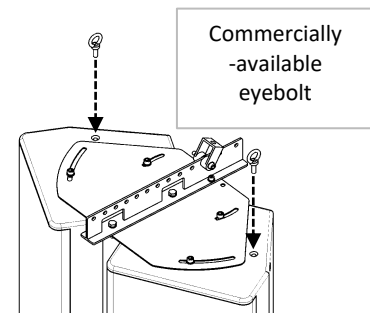


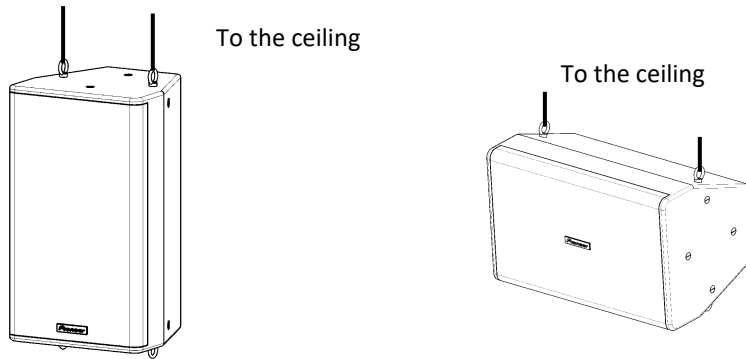
Fig.3-2-4-R



### 3 Rigging And Caster Setting

#### 3.2.5 Suspension of the enclosure using the eyebolt

The XY-81/101/122/152/3B enclosure has the mounting points where commercially-available eyebolts can be mounted. Using the commercially-available eyebolts, a XY-81/101/122/152/3B enclosure or a combination of them can be vertically or horizontally suspended.



NOTE: XY-122 is shown in the illustration.

#### WARNING:

##### Specification of eyebolt

- If you use any commercially available eyebolt, ensure it is the same size as in the list below and have enough strength to withstand the weight of the loudspeaker.

Table.3-2-5-B: Specification of eyebolt for each model

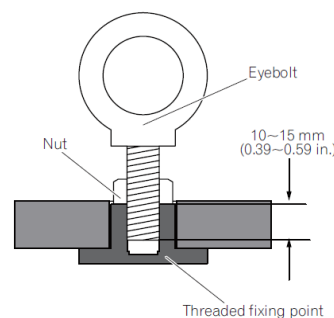
Model	Bolt size	Length [mm]	Pitch [mm]	Effective length [mm]	Safe working load limits [kN] ([kg])
XY-81	M8	25	1.25	10 ~ 15	0.785 (80.0)
XY-101					
XY-122					
XY-152	M10	30	1.5	10 ~ 15	1.47 (150.0)
XY-3B					

NOTE only for XY-3B:

The nuts of the threaded fixing points on XY-3B are structured so that bolts cannot pass through them. (max threaded length is 15mm.)

##### Adjusting the direction of eyebolt

Screw the eye bolts into the nuts so that they are engaged within the range of 10 to 15 mm (0.39 to 0.59 in.) and then tighten the nuts with a spanner while matching the direction of the eye bolts to fix them in place.



NOTE: XY-3B is shown in the illustration.

##### Limits of combining multiple speakers

- Be sure to meet the conditions and requirements shown in the Table.3-2-5-C.

Table.3-2-5-C: Limits and requirements of combining multiple speakers using eyebolts

Model	Max. No. of Total Enclosures	Min. No. of Suspension Lines for One Enclosures	Max. working load limit/mounting point
XY-81 XY-101 XY-122 XY-152	Three, *either vertical or horizontal	Two, *either vertical or horizontal	60 kg
XY-3B	*Combination with eyebolt is not allowed	Three, *Horizontal suspending is not allowed	60 kg

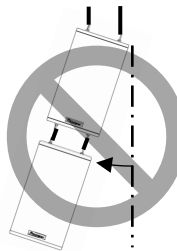
### 3 Rigging And Caster Setting

Eyebolt is not supposed to be used in the following situations, which may cause an injury or accident.  
For all the models, the following situations are quite dangerous.

For all models :

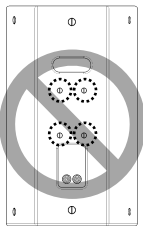


Suspending horizontally using eyebolts

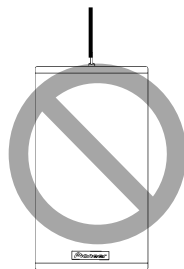


Not suspending vertically

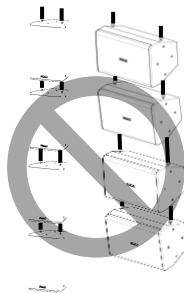
Only for the following models : XY-81 / 101 / 122 / 152



Suspending using M8 bolt holes for wall mount brackets

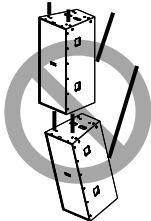


Suspended by 1 line of wire/chain/tool

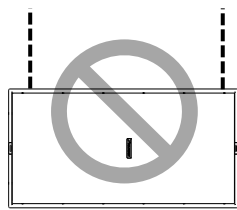


Suspending over 3 enclosures

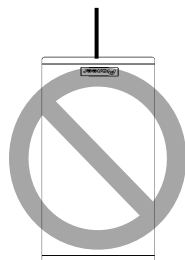
Only for the following model : XY-3B



Suspending multiple enclosures



Horizontal suspending



Suspending using XY-2 mounting holes at bottom

### 3 Rigging And Caster Setting

If eyebolts are secured to the rear side of the XY-81/101/122/152/3B enclosure for suspension, the enclosure can be inclined downward. The locations and number of mounting points of each model are listed in the Table.3-2-5-A.

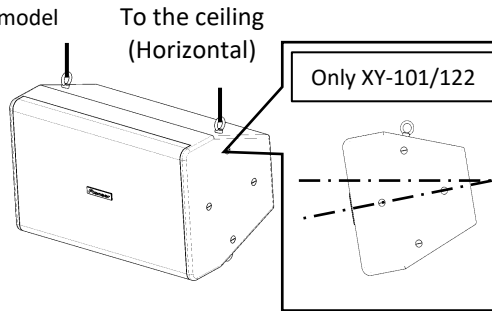
**Note:** If the recommended mounting points are used for horizontal suspension of the XY-101/122 enclosure, the enclosure is slightly inclined downward from the beginning. The inclined angle for each speaker are as follows:

- XY-101 : 17 degree
- XY-122 : 10 degree

If a larger angle of incline than the above is applied, ensure that the mounting points in the rear side of the enclosure is used.

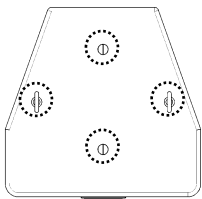
Table.3-2-5-A: Locations and number of mounting points of each model

Model	Hole size	Location		
		Top / Bottom	Left / Right	Rear
XY-81	M8	4 on each side	N/A	1
XY-101	M8	4 on each side	2 on each side	3
XY-122	M10	4 on each side	2 on each side	2
XY-152	M10	4 on each side	2 on each side	3
XY-3B	M10	4 on top 1 on bottom	N/A	4



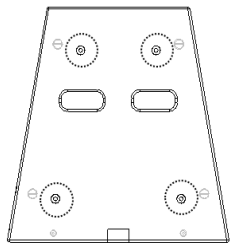
#### Top / Bottom

XY-81 / 101 / 122 / 152

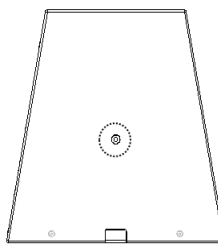


XY-3B

Top

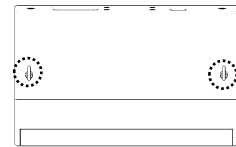


Bottom



#### Left / Right

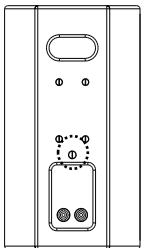
XY-101 / 122 / 152



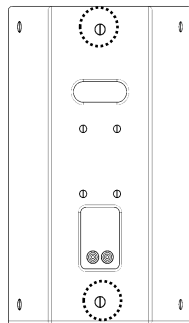
\*Only for combining XY-2

#### Rear

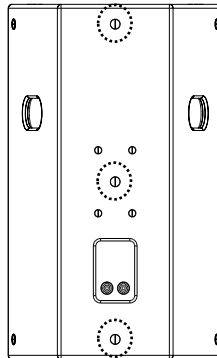
XY-81



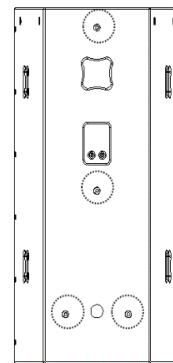
XY-122



XY-101 / 152



XY-3B



### 3 Rigging And Caster Setting

#### 3.2.6 Wall Mount Bracket

The holes for commercially-available wall mount brackets are provided on the rear of the XY-81/101/122/152.

**Note:** Pioneer does not sell wall mount brackets. Please ensure that the commercially-available wall mount bracket is compatible with the sizes shown in Table 3-2-6-A

Table 3-2-6-A: Size of the hole and the area for a wall mount bracket to be attached.

Model	Mounting point	Area for a wall mount bracket to be attached ( W mm x H mm )
XY-81	M6 X 4	50.8 mm x 108 mm
XY-101	M6 X 4	50.8 mm x 108 mm
XY-122	M8 X 4	70 mm x 127 mm
XY-152	M8 X 4	70 mm x 127 mm

#### Procedure

- (1) Remove the four mounting screws pre-inserted in the holes on the rear of the enclosure. (Fig.3-2-6-A)
- (2) Using bolts included with a commercially-available wall mount bracket, align the mounting holes on the wall mount bracket with the mounting points on the XY-81/101/122/152. Tighten the bolts over the following torque.  
XY-81/101: 4.9N·m torque.  
XY-122/152: 7N·m torque
- (3) Use the bolts included with the commercially-available wall mount bracket to attach the bracket to the wall.
- (4) Ensure the commercially-available eyebolt is secured to the rear part of the top point on the XY-81/101/122/152 safety feature.

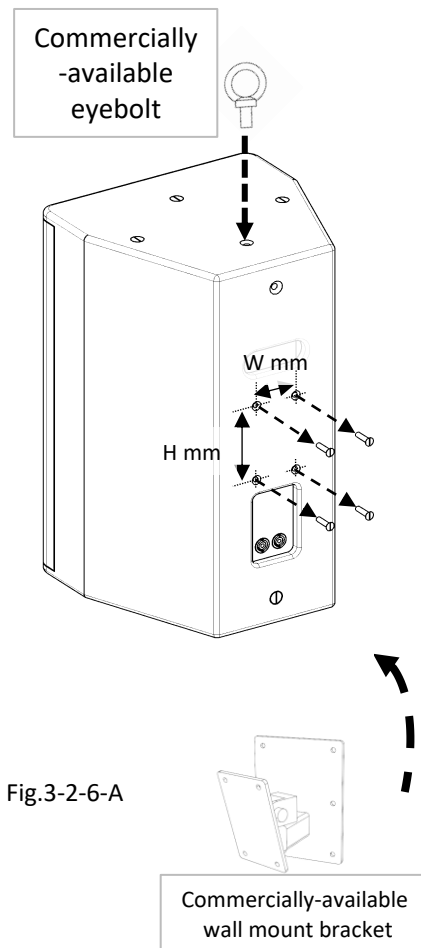
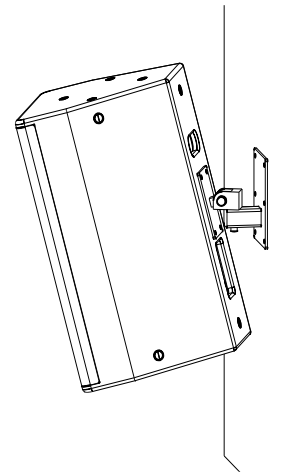


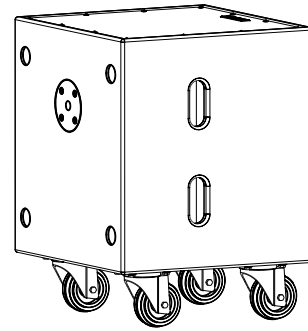
Fig.3-2-6-A

### 3 Rigging And Caster Setting

#### 3.2.7 Caster

The mounting points for casters to help moving the loudspeakers are on the rear side of XY-118S/215S/218S/218HS.

NOTE: XY-118S is shown in the illustration.

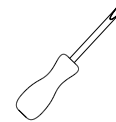


#### Part list (CP-XYCS1)

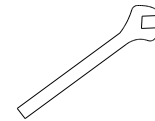
Item	Part Name	Qty	Service Part No.	Note
1	Caster	4	-	
2	M8 hex head bolt	17	06C005	M8 x 30mm (P=1.25) 13mm hex head
3	Spring washer	17	06D011	M8
4	Flat Washer	17	06D009	M8

#### Required tools

• Screwdriver



• 13mm hex spanner



#### Procedure

- (1) Unscrew the sixteen pre-inserted mounting screws on the rear of XY-118S/215S/218S/218HS. (Fig.3-2-7-A)
- (2) Using the four supplied M8 Hex head bolts(B), align the mounting points on the rear of the enclosure and the four holes on each Caster (A). Ensure that both Spring washer(C) and Flat washer(D) are used - the Flat washer(C) should be in contact with the Caster(A). Tighten the bolts at 7N·m torque. (Fig.3-2-7-B)
- (3) Turn the XY-118S/215S/218HS enclosure with its grille up to roll on the casters. (Fig.3-2-7-C)

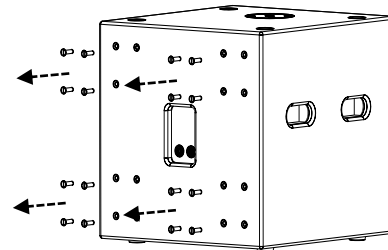


Fig.3-2-7-A

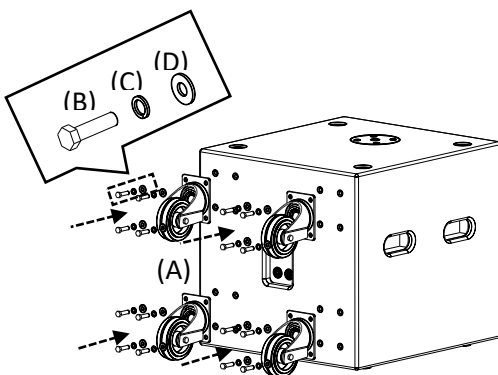


Fig.3-2-7-B

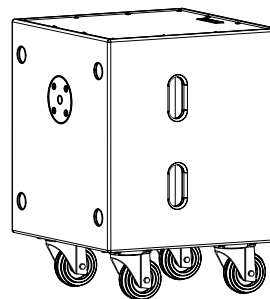


Fig.3-2-7-C

## 3 Rigging And Caster Setting

### 3.2.8 Wheel Board

A wheel board to help with transportation can be attached to the front of the XY-3B. Lock casters are provided to prevent unexpected movement with the wheel board. Also, you can use the wheel boards to stack two enclosures.

#### Part list (CP-XY3WB1)

Item	Part Name	Qty	Service Part No.	Note
1	Wheel Board	1	-	

#### Procedure

- (1) Attach the wheel board to the front of the enclosure using the butterfly latches on both sides of the wheel board. (Fig.3-2-8-A)
- (2) Lower down the cabinet so that its back is facing upward. (Fig.3-2-8-B)

#### WARNING :

- When attaching the wheel board to the enclosure, securely tighten the butterfly latches to the brackets on the sides of the enclosure.
- When attaching the wheel board to the enclosure, be sure to attach it so that the lock caster side is on the bottom side of the cabinet.
- The work to raise up and lower down the enclosure for transportation must be performed by two or more persons. Also, when raising up the enclosure after transportation, be sure to lock the lock casters.
- Be sure to lock the lock casters except during transportation. Additionally, do not place the enclosures in a sloping location.
- When stacking, do not use any other method than that specified in the user's manual. Additionally, do not stack more than three deep, stack in a sloping location, or stack any products other than the XY-3B.
- Stacking work should always be performed by two or more people.
- When stacking, apply the locking caster locks firmly. Additionally, after stacking, check that the guide on the underside of the wheel board on the upper enclosure is fit firmly into the enclosure on the underside.

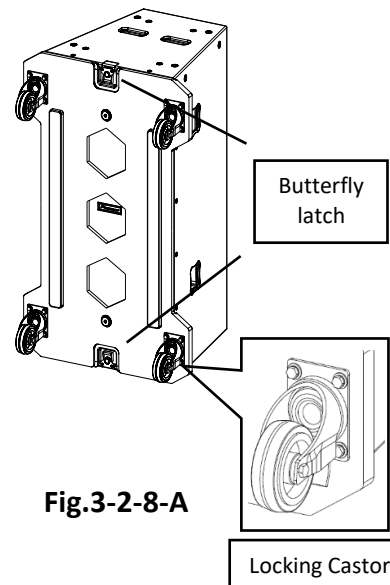
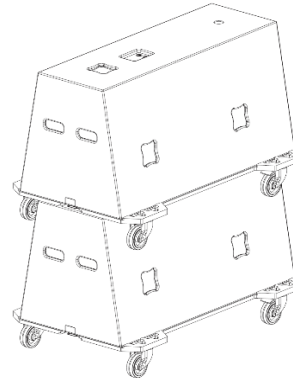


Fig.3-2-8-A

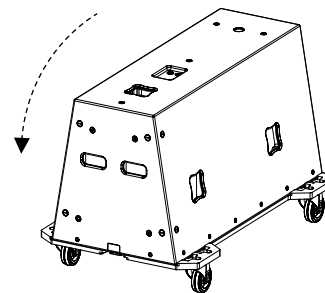


Fig.3-2-8-B

## 4 System Configuration

### 4.1 Connections

#### Power Amplifier Recommendations

In order to deliver best audio quality, amplifiers made by Powersoft is recommended to be used with the XY series loudspeakers.

Please refer to the table below for the combination of amplifiers with respective loudspeakers.

Table 4-1-1 Two-way loudspeaker

			Speaker					
			model	XY-81	XY-101	XY-122	XY-152	XY-3B (LF) (MHF)
Impedance			8Ω	8Ω	8Ω	8Ω	4Ω	8Ω
Power Handling	RMS		350W	400W	400W	650W	1200W	200W
	Program		700W	800W	800W	1300W	2400W	400W
Amplifier	Recommended		K2DSP	K2DSP	K3DSP	K3DSP	X4	
	Minimum		M20DHDSP	M30DHDSP	M30DHDSP	M30DHDSP		

			Speaker
			model
Impedance			8Ω
Power Handling	RMS		200W
	Program		400W
Amplifier	Recommended		X4
	Minimum		

Table 4-1-2 Subwoofer

			Speaker				
			model	XY-115S	XY-118S	XY-215S	XY-218S
Impedance			8Ω	8Ω	4Ω	4Ω	4Ω
Power Handling	RMS		700W	1000W	800W	1600W	1400W
	Program		1400W	2000W	1600W	3200W	2800W
Amplifier	Recommended		K3DSP	K10DSP	K3DSP	K10DSP	K10DSP
	Minimum			K3DSP	K2DSP	K6DSP	K6DSP

Table 4-1-3 Specification of Power Amplifier

		model	Impedance	Rated Power
<b>Amplifier</b>	<b>K-Series</b>	<b>K10DSP</b>	2Ω	6000W x 2ch
			4Ω	4000W x 2ch
			8Ω	2000W x 2ch
		<b>K6DSP</b>	2Ω	3600W x 2ch
			4Ω	2500W x 2ch
			8Ω	1300W x 2ch
		<b>K3DSP</b>	2Ω	2800W x 2ch
			4Ω	2600W x 2ch
			8Ω	1400W x 2ch
		<b>K2DSP</b>	2Ω	2400W x 2ch
			4Ω	1950W x 2ch
			8Ω	1000W x 2ch
	<b>M-Series</b>	<b>M50QHDSP</b>	4Ω	1250W x 4ch
			8Ω	750W x 4ch
		<b>M30DHDSP</b>	4Ω	1500W x 2ch
			8Ω	900W x 2ch
		<b>M20DHDSP</b>	4Ω	1200W x 2ch
			8Ω	600W x 2ch
	<b>X-Series</b>	<b>X8</b>	4Ω	3000W x 8ch
			8Ω	1600W x 8ch
<b>X4</b>		4Ω	3000W x 4ch	
		8Ω	1600W x 4ch	



## 4 System Configuration

### Loudspeaker connections

**WARNING: Ensure that cables are compatible with both the specifications of the Power Amplifier and Speaker used.**

**Using wrong pinouts may cause damage to the speakers or cause accidents.**

The XY Series are supplied as standard with Neutrik SpeakON™ NL4 connectors, wired pin 1+/1- and 2+/2-.

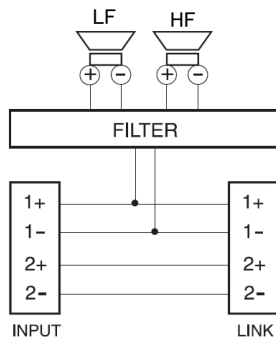
Pin 2+/2- is used for mid-high drivers in the XY-3B, and in the other models used for only link-through.

It is recommended that the resistance of your cable be less than one tenth of the nominal system impedance.

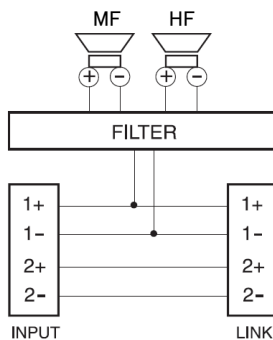
Given below are the recommended maximum cable lengths for different cross-sections and impedances.

Conductor Cross Sectional Area	Maximum Recommended Cable Length		
	4 Ω	8 Ω	16 Ω
1.0mm <sup>2</sup>	11m	22m	44m
1.5mm <sup>2</sup>	17m	34m	68m
2.0mm <sup>2</sup>	22m	44m	88m
2.5mm <sup>2</sup>	29m	58m	116m
4.0mm <sup>2</sup>	44m	88m	176m
6.0mm <sup>2</sup>	66m	132m	264m

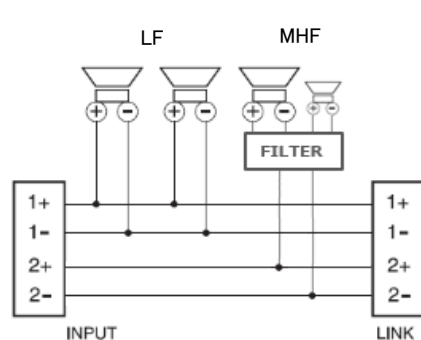
**XY-81 / 101 / 122 / 152**



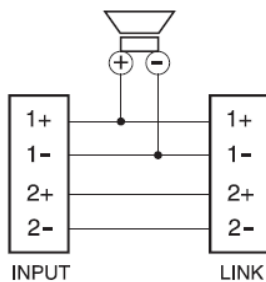
**XY-2**



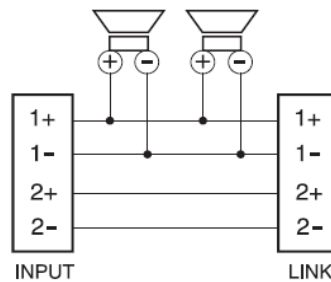
**XY-3B**



**XY-115S / 118S**



**XY-215S / 218S / 218HS**

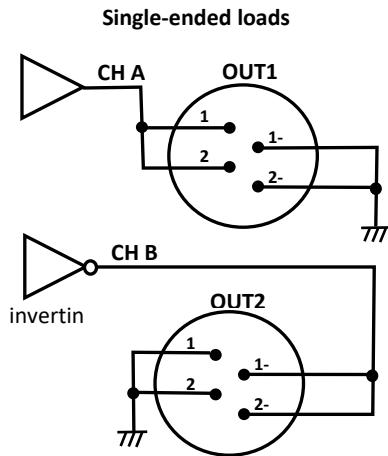


## 4 System Configuration

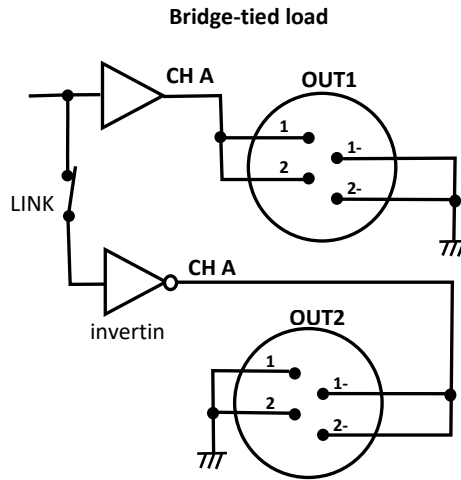
### CAUTION

Each amplifier has different pinouts for the Neutrik SpeakON™ connectors(NL4) .  
Following are only examples of connection. Please refer to the amplifier's manual for further information.

#### K-Series



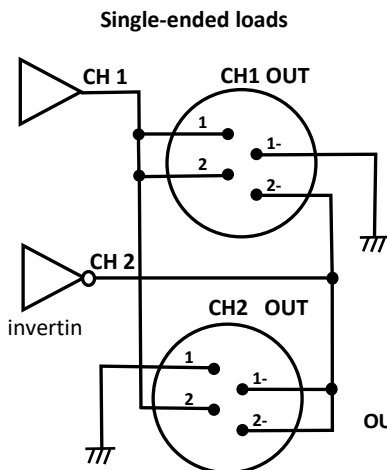
OUT1 1+ 2+ (Parallel) : Speaker 1+  
1- 2- (Parallel) : Speaker 1-  
OUT2 1+ 2+ (Parallel) : Speaker 2+  
1- 2- (Parallel) : Speaker 2-



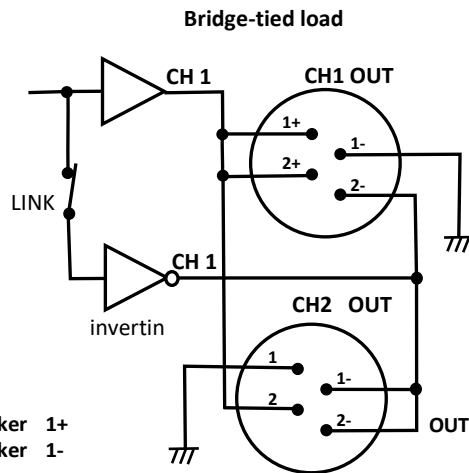
OUT1 1+ 2+ (Parallel) : Speaker 1+  
1- 2- : NC  
OUT2 1+ 2+ : NC  
1- 2- (Parallel) : Speaker 1-

It is written in Amplifier's USER GUIDE that 1+ and 2+, 1- and 2- pins of amplifier are used parallelly.

#### M-Series

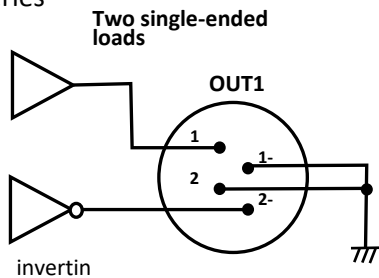


OUT1 1+ : Speaker 1+  
1- : Speaker 1-  
OUT2 1+ : Speaker 2+  
1- : Speaker 2-

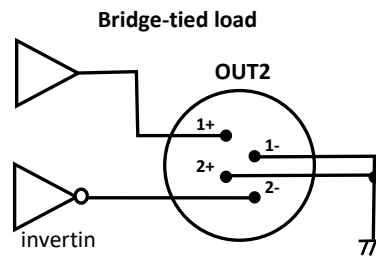


OUT1 2+ : Speaker 1+  
2- : Speaker 1-

#### X-Series



OUT1 1+ : Speaker 1+  
1- : Speaker 1-  
OUT2 1+ : Speaker 2+  
1- : Speaker 2-



OUT1 1+ : Speaker 1+  
1- : NC  
OUT2 2+ : NC  
2- : Speaker 1-

## 5 Drive unit replacement

### 5.1 Two-way loudspeaker

#### Guide for safe replacement of the drive units

Improper installation of the driver unit could cause them to fall and cause damage or injuries to persons nearby. Please check the following conditions of all the loudspeakers in the XY series always before the drive units are replaced.

#### **WARNING:**

##### **Intended usage**

Do not attempt to use this driver with components other than the specified loudspeaker.

##### **Safety cautions**

Certain technical skills and experiences are required to install the driver to the loudspeaker. Please have the driver installed by qualified professionals.

Ensure that the loudspeaker is placed on a stable place like on a floor. Do not replace the drivers when it is stacked on other loudspeakers or it is hung from the ceiling.

Be sure to use and tighten the pre-inserted bolts to the driver installed to the loudspeaker when you install this driver to the loudspeaker enclosure.

After installation, you must confirm that the bolts and screws used for the enclosures and the grilles of this product are tightened enough. Periodical inspections are also required to make sure they are still tightened enough.

Ensure that the LF driver is installed in accordance with the Installation Manual. Otherwise, your fingers might be caught and get injured during the installation process.

#### **CAUTION:**

##### **Cautions for audio quality**

Inappropriate installation could affect the sound quality.

##### **Storage temperature range**

Do not store speakers at temperatures outside of the rated temperature range as doing so may cause the speaker to drop in performance or become damaged.

Storage temperature range:  $-20^{\circ}\text{C}$  to  $+55^{\circ}\text{C}$  ( $-4^{\circ}\text{F}$  to  $+131^{\circ}\text{F}$ )

Do not use the product in locations subject to extreme fluctuations in temperature. Drastic fluctuation of the temperature and long storage in the cold temperature might cause small cracks in the magnet of the drive unit. The performance, reliability and safety for use of this product may not be affected even if the above issue occurs.

## 5 Drive unit replacement

### 5.1.1 XY-81/101

#### Part list

##### Grille

##### XY-81

Item	Part Name	Qty	Service Part No.	Note
	Grille	1	04X901	
Grille	M4 socket head bolt	4	06G016	M4 x 20mm (P=0.7) 3mm hex socket head

**Required tools**  
• 3mm hex key



##### XY-101

Item	Part Name	Qty	Service Part No.	Note
	Grille	1	04X907	
Grille	M4 socket head bolt	4	06G016	M4 x 20mm (P=0.7) 3mm hex socket head

**Required tools**  
• 3mm hex key



#### HF drive unit

##### XY-81

Item	Part Name	Qty	Service Part No.	Note
	HF drive unit	1	PT-XY81CD1	
	M6 socket head bolt	2	06G023	M6 x 20mm (P=1.0) 5mm hex socket head for drive unit
HF	M5 socket head bolt	4	06G001	M5 x 30mm (P=0.8) 4mm hex socket head for HF waveguide
	Flat washer	4	06D003	M5 for waveguide
	Spring washer	4	06D005	M5 for waveguide

**Required tools**  
• 4mm hex key



• 5mm hex key



• Elastomeric adhesive

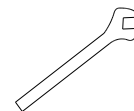
##### XY-101

Item	Part Name	Qty	Service Part No.	Note
	HF drive unit	1	PT-XY81CD1	
	Stud bolt set for HF		06C009	Include the following items.
	M6 Stud bolt	2	-	
	Nut	2	-	M6, 10mm width across flat
HF	Flat washer	2	-	M6
	Spring washer	2	-	M6
	M5 socket head bolt	4	06G001	M5 x 30mm (P=0.8) 4mm hex socket head for HF waveguide
	Flat washer	4	06D003	M5 for waveguide
	Spring washer	4	06D005	M5 for waveguide

**Required tools**  
• 4mm hex key



• 10mm spanner



## 5 Drive unit replacement

### LF drive unit

#### XY-81

Item	Part Name	Qty	Service Part No.	Note
	LF drive unit	1	PT-XY81LF1	
LF	M5 socket head bolt	8	06G001	M5 x 30mm (P=0.8) 4mm hex socket head
	Flat washer	8	06D003	M5
	Spring washer	8	06D005	M5

#### Required tools

- 4mm hex key



#### XY-101

Item	Part Name	Qty	Service Part No.	Note
	LF drive unit	1	PT-XY101LF1	
LF	M5 socket head bolt	4	06G001	M5 x 30mm (P=0.8) 4mm hex socket head
	Flat washer	4	06D003	M5
	Spring washer	4	06D005	M5

#### Required tools

- 4mm hex key

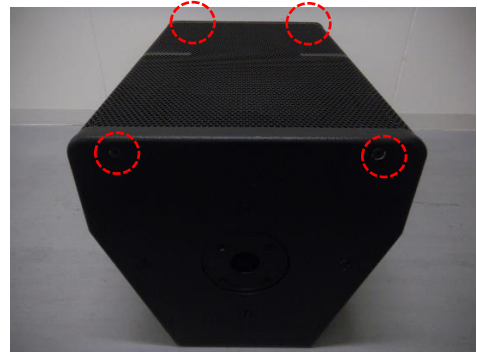


### Procedure (XY-81/101)

#### Removing and reinstalling the grille.

- (1) Remove the four socket head bolts from the grille.
- (2) Remove the grille from the enclosure.
- (3) Reverse the above steps when placing the grille back to the enclosure. The grille should be placed back in the same orientation before it was removed.

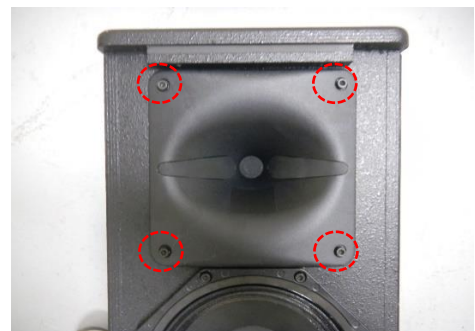
NOTE: XY-81 is used in the pictures.



#### Replacement of HF drive unit

HF waveguide/HF driver unit installed in XY-81 and XY-101 are the same, so almost the same procedures should be taken to replace .

- (1) Remove the four socket head bolts from the HF waveguide.
- (2) Lift the waveguide up and remove the cables from the HF drive unit.
- (3) **XY-81:** Remove the two packing from the inside of the horn. Insert an hex key into the two slits appearing after the packing was removed and remove the two socket head bolts from the HF drive  
**XY-101:** Remove the two nuts from the HF drive unit with a 10mm Spanner.



## 5 Drive unit replacement

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- (4) Replace the HF drive unit with a new one and tighten the socket head bolts or nuts.

Only XY-81

NOTE: Ensure that the packings are firmly attached to the slits using elastomeric adhesive, otherwise sound quality may be deteriorated.

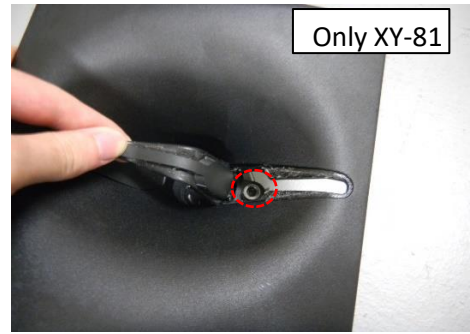
- (5) Connect the cables to the two terminals.

**Red Terminal (+) :** White cable

**Black Terminal (-) :** Yellow cable

- (6) Install the HF waveguide to the enclosure.

- (7) Tighten the four socket head bolts on the HF waveguide.  
Make sure to place the HF waveguide in the same orientation as before replacing the drive unit.



## 5 Drive unit replacement

### Replacement of LF drive unit

LF driver units installed in XY-81 and XY-101 are different, but almost the same procedures can be used to replace both LF drive units.

- (1) Remove the socket head bolts from the LF drive unit.  
The number of socket head bolts to be removed from XY-81 is 8 and from XY-101 is 4.
- (2) Lift the LF drive unit up and remove the cables from the LF drive unit.
- (3) Replace the LF drive unit with a new one.
- (4) Connect the cables to the two terminals.

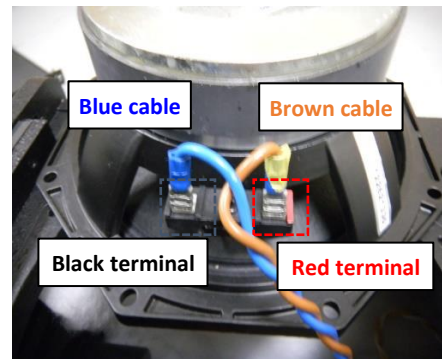
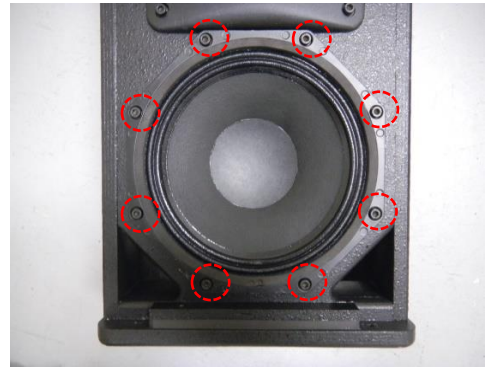
**Red Terminal (+) : Brown cable**

**Black Terminal (-) : Blue cable**

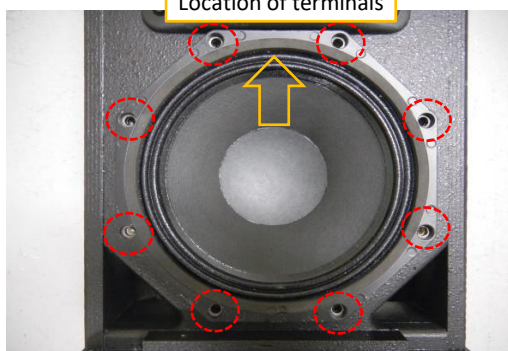
- (5) Reinstall the LF drive unit to the enclosure.  
Ensure that the terminals of the drive unit are placed as shown below.

CAUTION: The locations of the terminals on XY-81 and XY-101 are different. Please see the locations of each drive unit in the figures below when installing the LF drive unit.

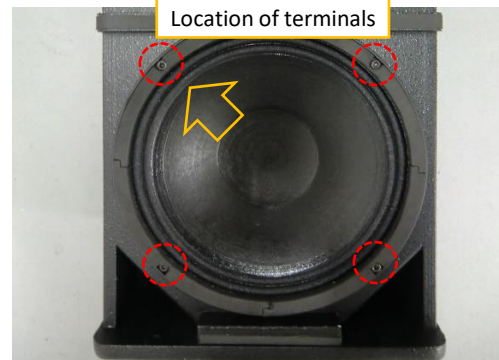
- (6) Tighten the socket head bolts on the LF drive unit.
- (7) Tighten the bolts to ensure a solid fit to the grille.



XY-81

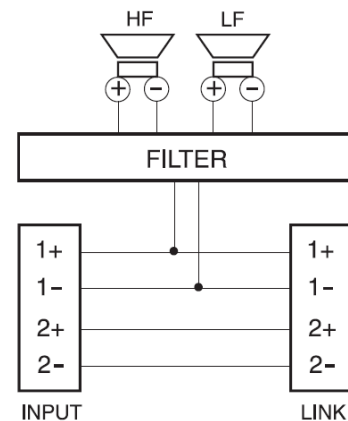


XY-101



### Additional information (XY-81/101)

For the connection information, please refer to following circuit diagram.



## 5 Drive unit replacement

### 5.1.2 XY-122/152

#### Part list

##### Grille

##### XY-122

Item	Part Name	Qty	Service Part No.	Note
	Grille	1	04X902	
Grille	M6 countersunk bolt	4	06G020	M6 x 30mm (P=1.0), 4mm hex socket head, for grille

#### Required tools

- 4mm hex key



##### XY-152

Item	Part Name	Qty	Service Part No.	Note
	Grille	1	04X908	
Grille	M6 countersunk bolt	6	06G020	M6 x 30mm (P=1.0), 4mm hex socket head, for grille

#### Required tools

- 4mm hex key



#### HF drive unit (XY-122/152)

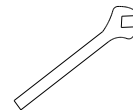
Item	Part Name	Qty	Service Part No.	Note
	HF drive unit	1	PT-XY122CD1	Include the following items.
	M6 Stud bolt	4	-	
	Nut	4	-	M6, 10mm width across flat
HF	Flat washer	4	-	M6
	Spring washer	4	-	M6
	M6 countersunk bolt	8	06G036	M6 x 40mm (P=1.0), 4mm hex socket head for HF waveguide

#### Required tools

- 4mm hex key



- 10mm spanner



#### LF drive unit

##### XY-122

Item	Part Name	Qty	Service Part No.	Note
	LF drive unit	1	PT-XY122LF1	
LF	M6 socket head bolt	8	06G003	M6 x 40mm (P=1.0), 5mm hex socket head
	Spring washer	8	06D0075	M6

#### Required tools

- 5mm hex key



##### XY-152

Item	Part Name	Qty	Service Part No.	Note
	LF drive unit	1	PT-XY152LF1	
LF	M6 socket head bolt	8	06G003	M6 x 40mm (P=1.0), 5mm hex socket head
	Spring washer	8	06D0075	M6

#### Required tools

- 5mm hex key

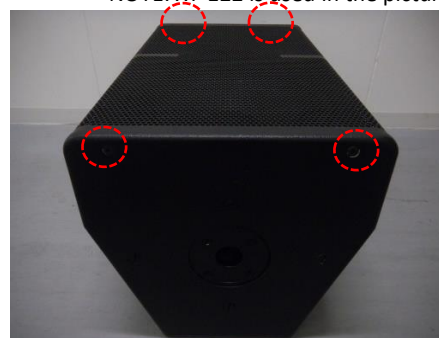


### Procedure (XY-122/152)

#### Removing and reinstalling the grille.

- (1) Remove the countersunk bolts from the grille.  
The number of countersunk bolts to be removed from XY-122 is 4 and from XY-152 is 6.
- (2) Remove the grille from the enclosure.
- (3) Reverse the above steps when placing the grille back to the enclosure. The grille should be placed back in the same orientation before it was removed.

NOTE: XY-122 is used in the pictures.

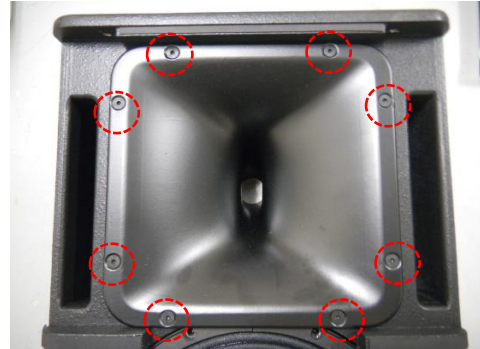




## 5 Drive unit replacement

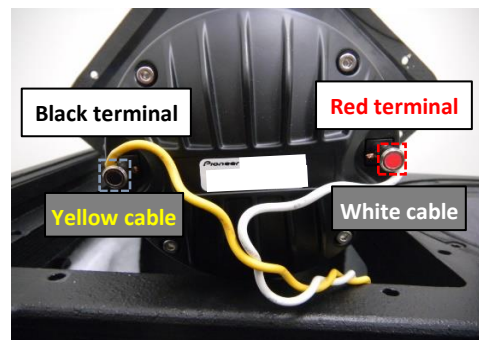
HF waveguide/HF driver unit installed in XY-122 and XY-152 are the same, so the same procedures should be taken to replace them.

- (1) Remove eight countersunk bolts from the HF waveguide.
- (2) Lift the waveguide up and remove the cables from the HF drive unit.
- (3) Remove the four nuts from the HF drive unit with a 10mm Spanner.
- (4) Replace the HF drive unit with a new one and tighten the four nuts with the Spanner.



### Replacement of HF drive unit

- (5) Connect the cables to the two terminals.  
**Red Terminal (+) :** White cable  
**Black Terminal (-) :** Yellow cable
- (6) Tighten eight countersunk bolts of the HF waveguide.  
Make sure to place the HF waveguide in the same orientation as before replacing the drive unit.



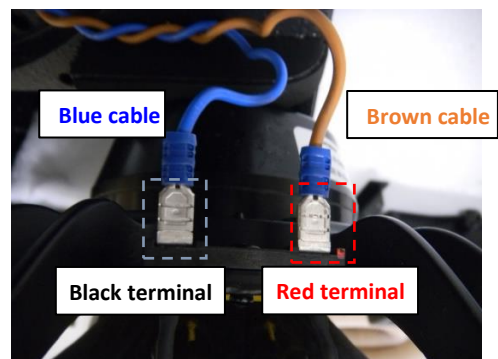
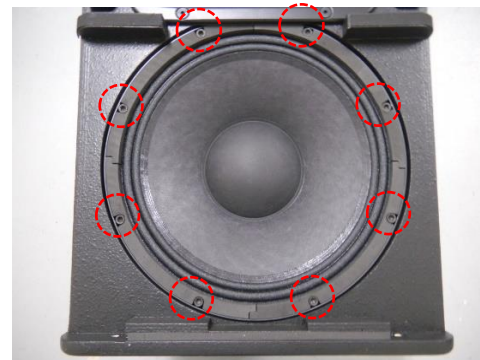
### Replacement of LF drive unit

LF driver units installed in XY-122 and XY-152 are different, but almost the same procedures can be used to replace both LF drive units.

CAUTION: Before replacing the LF drive unit on XY-122, remove the HF waveguide from the enclosure. (See "5.1.2 Replacement of HF drive unit")

- (1) Remove the eight socket head bolts from the LF drive unit.
- (2) Lift the LF drive unit up and remove the cables from the LF drive unit.
- (3) Replace the LF drive unit with a new one.
- (4) Connect the cables to the two terminals.

**Red Terminal (+) :** Brown cable  
**Black Terminal (-) :** Blue cable

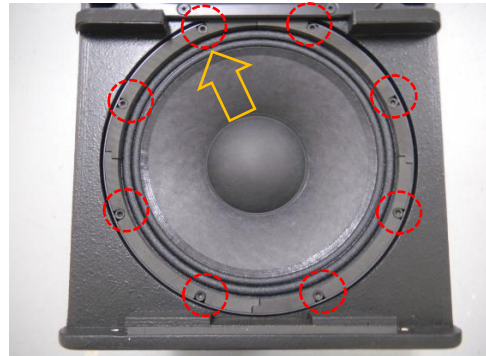


## 5 Drive unit replacement

- (5) Tighten the eight socket head bolts on the LF drive unit.  
Ensure that the terminals of the drive unit are placed as shown below.
- (6) Tighten the bolts to ensure a solid fit to the grille.

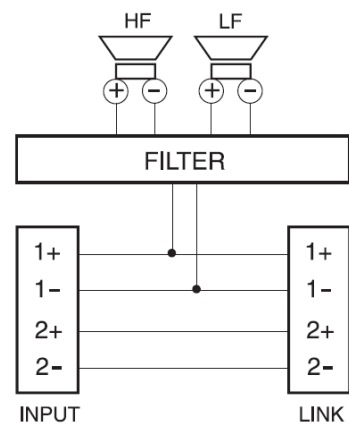
NOTE: XY-122 is used in the pictures.

Location of terminals



### Additional information (XY-122/152)

For the connection information, please refer to following circuit diagram.



## 5 Drive unit replacement

### 5.1.3 XY-2

#### Part list

Part Name	Qty	Service Part No.	Note
Moulded Bi-horn	-	-	-
Moulded Bi-horn set	1	-	-
MF section	-	-	-
Chamber	1	02X004	-
M6 socket head bolt1	8	06B304	M6 x 30mm (P=1.0), 5mm socket head for MF drive unit
Flat Washer	8	06D006	M6, for chamber
Spring Washer	8	06D0075	M6, for chamber
Heatsink	1	05X030	-
MF drive unit	1	PT-XY3MF1	-
M6 socket head bolt2	8	06B307	M6 x 45mm (P=1.0), 5mm socket head for MF drive unit
Flat Washer	8	06D006	M6, for MF drive unit
Spring Washer	8	06D0075	M6, for MF drive unit
HF section	-	-	-
Rear terminal box	1	-	-
Hex button bolt	3	06B201	M5 x 20 (P=0.8), 3mm socket head for Rear terminal box
Flat washer	3	06D003	M5, for Rear terminal box
Spring washer	3	06D005	M5, for Rear terminal box
HF drive unit	1	PT-XY3HF1	Include the following items.
M6 stud bolt	2	-	M6 x 30mm (P=1.0), stud bolt for HF drive unit
Nut	2	-	M6, 10mm width across flat, for HF drive unit
Flat Washer	2	-	M6, for HF drive unit
Spring Washer	2	-	M6, for HF drive unit

#### Required tools

##### For MF drive unit

- 5mm hex key



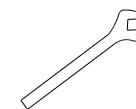
##### For Rear terminal box

- 3mm hex key



##### For HF drive unit

- 10mm hex spanner



#### Procedure

##### Replacement of MF drive unit

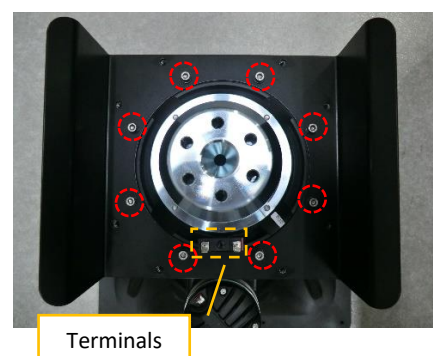
- (1) Remove the eight socket head bolts from the MF chamber.



- (2) Remove the eight socket head bolts from the MF drive unit.

- (3) Lift the heat sink and MF drive unit up and remove the cables from the MF drive unit.

- (4) Replace the MF drive unit with a new one. Ensure the location of terminals in MF drive unit.



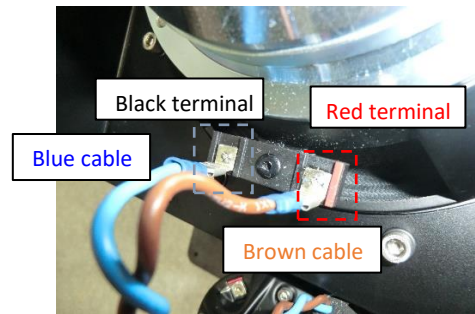
Terminals

## 5 Drive unit replacement

- (5) Connect the cables to the two terminals.

**Red Terminal (+) :** Brown cable

**Black Terminal (-) :** Blue cable



- (6) Put back the heat sink, chamber. When securing the chamber, securely hold the gasket wrapped around the cables in the lead wire hole of the chamber.



### Replacement of HF drive unit

- (1) Remove the three hex button bolt from the rear terminal box with a 3mm hex key



- (2) Remove the cables from HF drive unit.

- (3) Remove the two nuts from the HF drive unit with a 10mm Spanner.

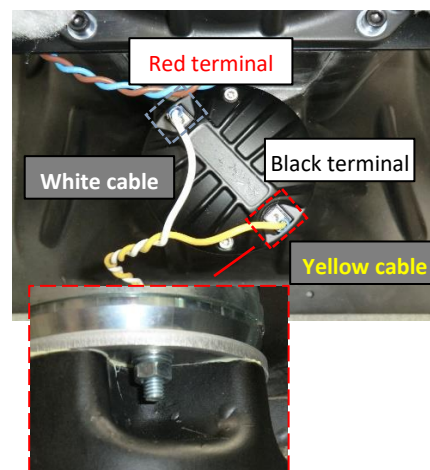
- (4) Replace the HF drive unit with a new one and tighten the two nuts.

- (5) Connect the cables to the HF drive unit.

**Red Terminal (+) :** White cable

**Black Terminal (-) :** Yellow cable

Make sure to place the rear terminal box in the same location as before replacing the drive unit.



- (6) Tighten the three M5 hex button bolts of the rear terminal box.

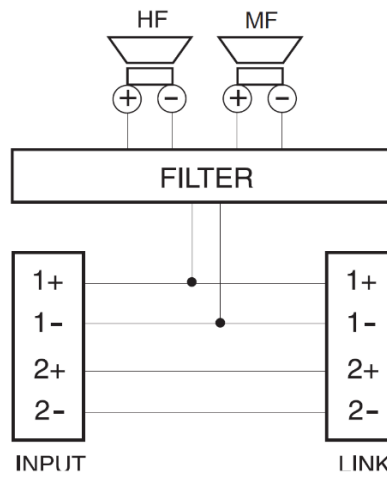
**CAUTION:** Make sure to prevent to be caught the cable between the rear terminal box and HF flange plate.

## 5 Drive unit replacement

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### Additional information (XY-2)

For the connection information, please refer to following circuit diagram.



## 5 Drive unit replacement

### 5.2 Three-way loudspeaker

#### 5.2.1 XY-3B

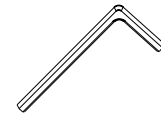
##### Part list

Part Name	Qty	Service Part No.	Note
<b>Grille</b>			
Grille	1	04X914	-
M6 countersunk bolt1	16	06B360	M6 x 30mm (P=1.0), 4mm countersunk socket bolt for grille
<b>LF section</b>			
LF drive unit	2	PT-XY3LF1	-
M6 socket head bolt1	16	06B304	M6 x 30mm (P=1.0), 5mm socket head for MF drive unit
Flat Washer	16	06D006	M6, for LF drive unit
Spring Washer	16	06D0075	M6, for LF drive unit
<b>Moulded Bi-horn</b>			
Moulded Bi-horn set	1	02X999	-
M6 countersunk bolt2	12	06B361	M6 x 40mm (P=1.0), 4mm countersunk socket bolt for horn
M10 countersunk bolt	2	06B530	M10 x 35mm (P=1.5), 6mm countersunk socket bolt for horn
<b>MF section</b>			
Chamber	1	02X004	-
M6 socket head bolt1	8	06B304	M6 x 30mm (P=1.0), 5mm socket head for MF drive unit
Flat Washer	8	06D006	M6, for chamber
Spring Washer	8	06D0075	M6, for chamber
Heatsink	1	05X030	-
MF drive unit	1	PT-XY3MF1	-
M6 socket head bolt2	8	06B307	M6 x 45mm (P=1.0), 5mm socket head for MF drive unit
Flat Washer	8	06D006	M6, for MF drive unit
Spring Washer	8	06D0075	M6, for MF drive unit
<b>HF section</b>			
HF drive unit	1	PT-XY3HF1	Include the following items.
M6 stud bolt	2	-	M6 x 30mm (P=1.0), stud bolt for HF drive unit
Nut	2	-	M6, 10mm width across flat
Flat Washer	2	-	M6, for HF drive unit
Spring Washer	2	-	M6, for HF drive unit

##### Required tools

###### For grille

- 4mm hex key



###### For LF drive unit

- 5mm hex key



###### For MHf Horn

- 4mm hex key



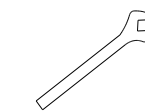
###### For MF drive unit

- 5mm hex key



###### For HF drive unit

- xx m hex spanner



##### Procedure

###### Removing and reinstalling the grille.

- (1) Remove the 16th countersunk bolts from the grille. (Fig. 5-2-1-A)
- (2) Remove the grille from the enclosure.
- (3) Reverse the above steps when placing the grille back to the enclosure. The grille should be placed back in the same orientation before it was removed.

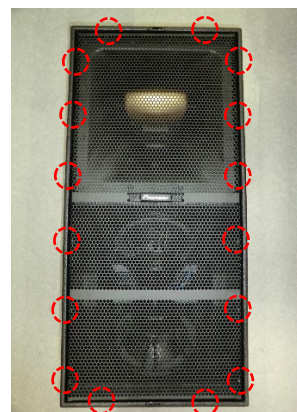


Fig.5-2-1-A



## 5 Drive unit replacement

### Replacement of LF drive unit

- (1) Remove the eight socket head bolts from the LF drive unit which is needed to replace. (Fig.5-2-1-B)
- (2) Lift the LF drive unit up and remove the cables from the LF drive unit.
- (3) Replace the LF drive unit with a new one. Ensure the location of terminals in the drive unit. (Fig.5-2-1-C)

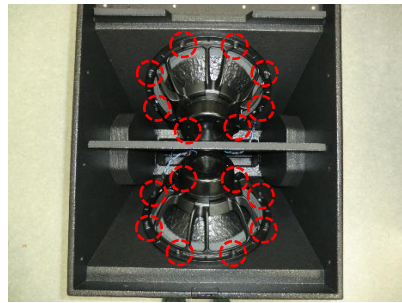


Fig.5-2-1-B

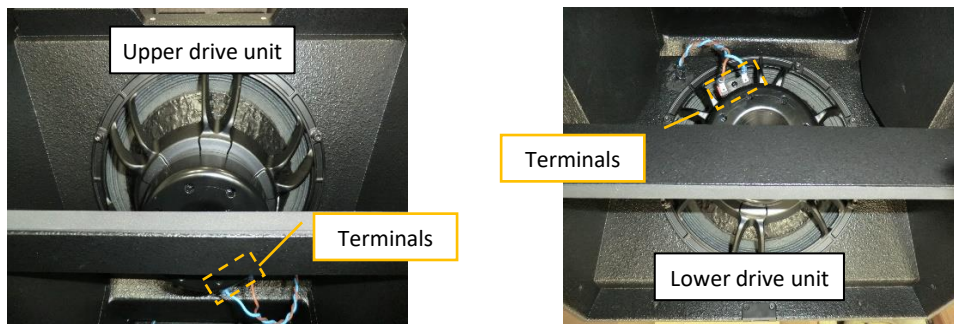


Fig.5-2-1-C

- (4) Connect the cables to the two terminals. Ensure the colour of terminals and cables. (Fig.5-2-1-D)

**Red Terminal (+) : Brown cable**  
**Black Terminal (-) : Blue cable**

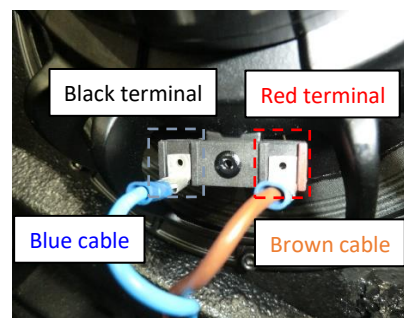


Fig.5-2-1-D

### Removing and reinstalling the moulded Bi-horn Set.

To replace the MF/HF drive unit, you need to remove the moulded Bi-horn from the cabinet.

- (1) Remove twelve M6 countersunk bolts from the Horn. (Fig.5-2-1-E)



Fig.5-2-1-E

## 5 Drive unit replacement

- (2) Remove two M10 countersunk bolts from side of enclosure. (Fig.5-2-1-F)

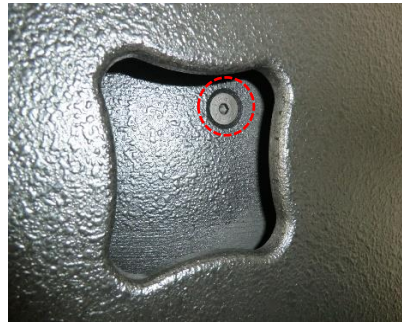


Fig.5-2-1-F

- (3) Lift the horn up and remove the cables from crossover network. (Fig.5-2-1-G)

### MF section

**Red Terminal (+):** Brown cable

**Black Terminal (-):** Blue cable

### HF section

**Red Terminal (+):** White cable

**Black Terminal (-):** Yellow cable

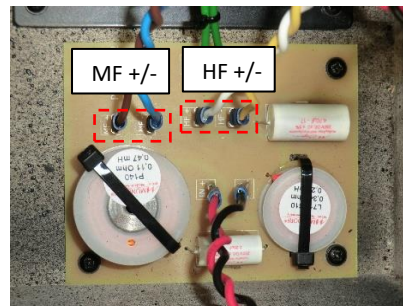


Fig.5-2-1-G

### Replacement of MF drive unit

- (1) Remove the two waddings from the heat sink. (Fig.5-2-1-



Fig.5-2-1-H

- (2) Remove the eight socket head bolts from the MF chamber. (Fig.5-2-1-I)



Fig.5-2-1-I



## 5 Drive unit replacement

- (3) Remove the eight socket head bolts from the MF drive unit. (Fig.5-2-1-J)
- (4) Lift the heat sink and MF drive unit up and remove the cables from the MF drive unit.
- (5) Replace the MF drive unit with a new one. Ensure the location of terminals in MF drive unit.

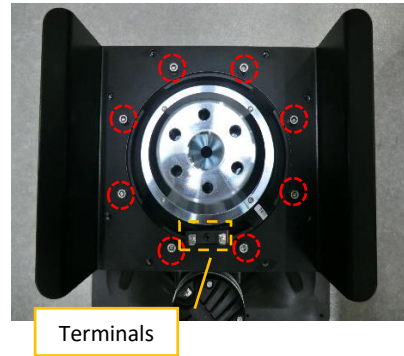


Fig.5-2-1-J

- (6) Connect the cables to the two terminals. (Fig.5-2-1-K)  
**Red Terminal (+) : Brown cable**  
**Black Terminal (-) : Blue cable**

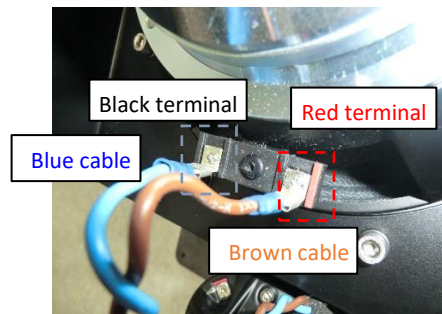


Fig.5-2-1-K

- (7) Put back the heat sink, chamber and waddings. When securing the chamber, securely hold the gasket wrapped around the cables in the lead wire hole of the chamber.  
(Ei 5 2 1 1)  
 Make sure to connect the cables to the terminals on the cross over network, and place the moulded Bi-Horn in the same orientation as before replacing the drive unit.
- (8) Tighten twelve M6 countersunk bolts of the moulded Bi-Horn and two M10 countersunk bolts of the cabinet.



Fig.5-2-1-L

### Replacement of HF drive unit

- (1) Remove the two nuts from the HF drive unit with a 10mm Spanner. (Fig.5-2-1-M-1)
- (2) Replace the HF drive unit with a new one and tighten the two nuts.
- (3) Connect the cables to the two terminals. (Fig.5-2-1-M-2)  
**Red Terminal (+) : White cable**  
**Black Terminal (-) : Yellow cable**  
 Make sure to connect the cables to the terminals on the cross over network, and place the moulded Bi-Horn in the same orientation as before replacing the drive unit.
- (4) Tighten twelve M6 countersunk bolts of the moulded Bi-Horn and two M10 countersunk bolts of the cabinet.

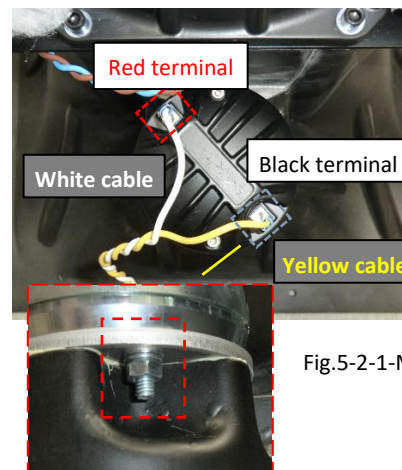


Fig.5-2-1-M-2

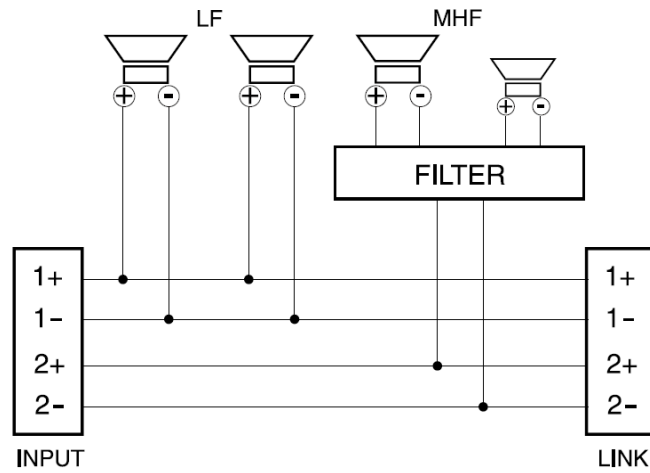
Fig.5-2-1-M-1

## 5 Drive unit replacement

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### Additional information (XY-3B)

For the connection information, please refer to following circuit



## 5 Drive unit replacement

### 5.3 Subwoofer

#### 5.3.1 XY-115S/118S/218S

##### Part list

##### Grille

##### XY-115S

Item	Part Name	Qty	Service Part No.	Note
Grille	Grille	1	04X909	For XY-115S
	Screw	12	06F002	for grille, XY-115S

##### Required tools

- Phillips head screwdriver



##### XY-118S

Item	Part Name	Qty	Service Part No.	Note
Grille	Grille	1	04X904	For XY-118S
	Screw	14	06F002	for grille, XY-118S

##### Required tools

- Phillips head screwdriver



##### XY-218S

Item	Part Name	Qty	Service Part No.	Note
Grille	Grille	1	04X910	For XY-218S
	Screw	24	06F002	for grille, XY-218S

##### Required tools

- Phillips head screwdriver



##### LF drive unit

##### XY-115S

Item	Part Name	Qty	Service Part No.	Note
	Drive unit	1	PT-XY115SL1	
LF	M6 socket head bolt	8	06G003	M6 x 40mm (P=1.0), 5mm hex socket head
	Spring washer	8	06D0075	M6

##### Required tools

- 5mm hex key



##### XY-118S

Item	Part Name	Qty	Service Part No.	Note
	Drive unit	1	PT-XY118SL1	
LF	M6 socket head bolt	8	06G003	M6 x 40mm (P=1.0), 5mm hex socket head
	Spring washer	8	06D0075	M6

##### Required tools

- 5mm hex key



##### XY-218S

Item	Part Name	Qty	Service Part No.	Note
	Drive unit	2	PT-XY118SL1	
LF	M6 socket head bolt	16	06G003	M6 x 40mm (P=1.0), 5mm hex socket head
	Spring washer	16	06D0075	M6

##### Required tools

- 5mm hex key



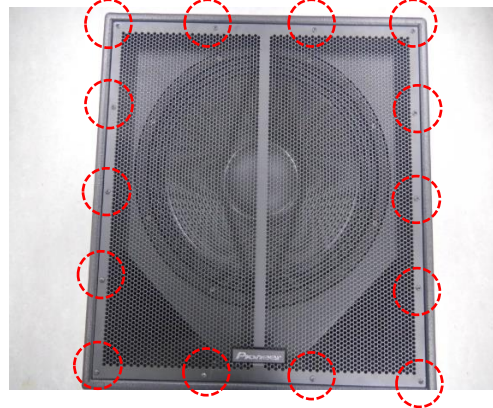
## 5 Drive unit replacement

### Procedure (XY-115S/118S/218S)

#### Removing and reinstalling the grille.

- (1) Remove the screws from the grille.
- (2) 12 pieces of screws for XY-115S, 14 pieces of screws for XY-118S and 24 pieces of screws for XY-218S are required to be removed.
- (3) Remove the grille from the enclosure.
- (4) Reverse the above steps when placing the grille back to the enclosure. The grille should be placed back in the same orientation before it was removed.

NOTE: XY-118S is used in the pictures.



#### Replacement of LF drive unit

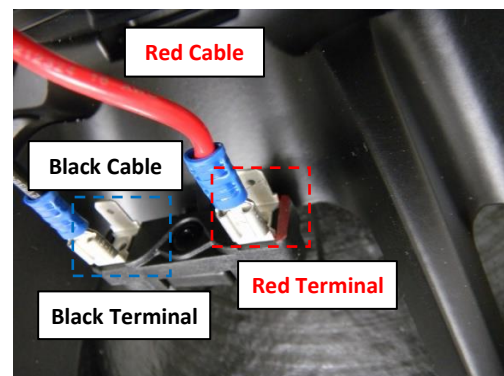
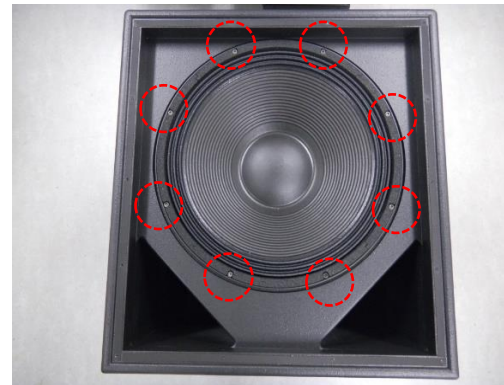
LF driver units installed in XY-115S and XY-118S are different, but almost the same procedures can be used to replace both LF drive units.

XY-218S has 2 LF drive units side by side. Please follow the steps below to replace one or both of the LF drive unit(s) you want to replace.

- (1) Remove the eight socket head bolts from the LF drive unit.
- (2) Lift the LF drive unit up and remove the cables from the LF drive unit.
- (3) Replace the LF drive unit with a new one.
- (4) Connect the cables to the two terminals.  
**Red Terminal (+) : Red cable**  
**Black Terminal (-) : Black cable**
- (5) Ensure that the terminals of the drive unit are placed as shown below.

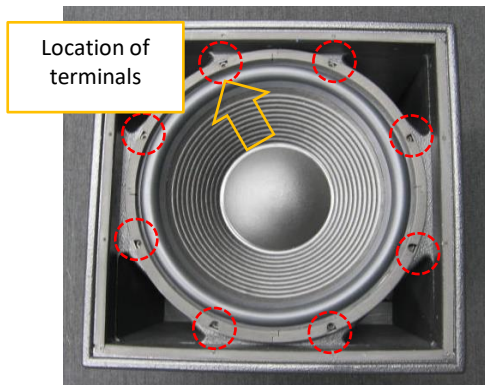
CAUTION: The locations of the terminals on XY-115S, 118S and XY-218S are different. Please see the locations of each drive unit in the figures below when installing the LF drive unit.

- (6) Install the LF drive unit to the enclosure.
- (7) Tighten the socket head bolts on the LF drive unit.
- (8) Tighten the screw to ensure a solid fit to the grille.

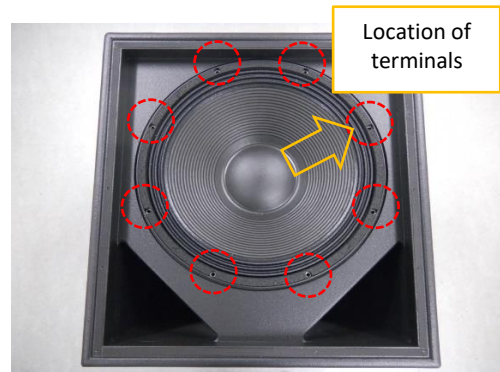


## 5 Drive unit replacement

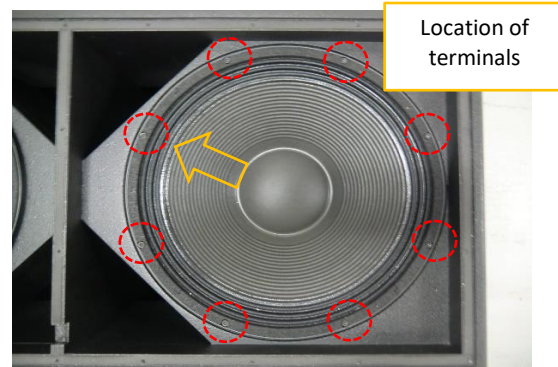
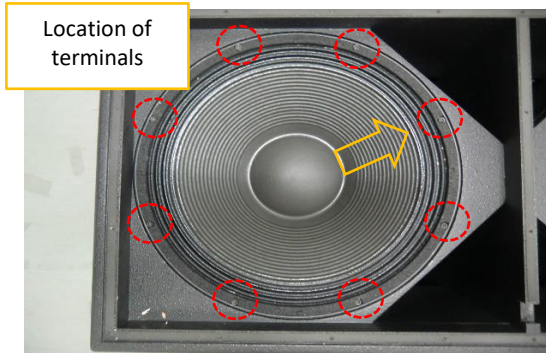
XY-115S



XY-118S



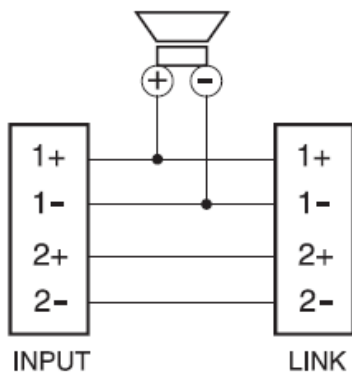
XY-218S



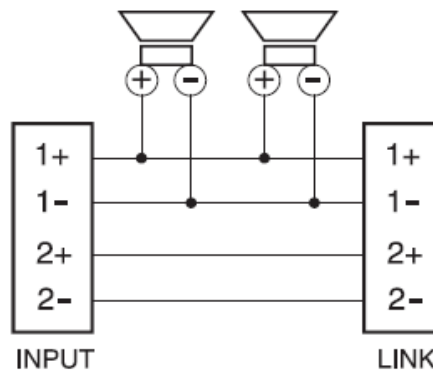
### Additional information (XY-115S/118S/218S)

For the connection information, please refer to following circuit diagram.

XY-115S/118S



XY-218S





## 5 Drive unit replacement

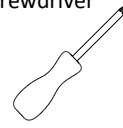
### 5.3.2 XY-215S

#### Part list

Item	Part Name	Qty	Service Part No.	Note
	Drive unit	2	PT-XY215SL1	
LF	M6 socket head bolt	16	06G003	M6 x 40mm (P=1.0) 5mm hex socket head
	Spring washer	16	06D0075	M6
Grille	Grille	1	04X903	
	Screw	10	06F002	for grille

#### Required tools

- Phillips head screwdriver



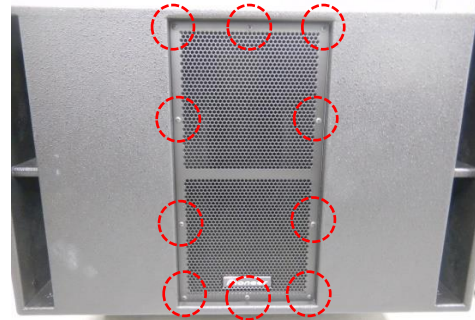
- 5mm hex key



#### Procedure (XY-215S)

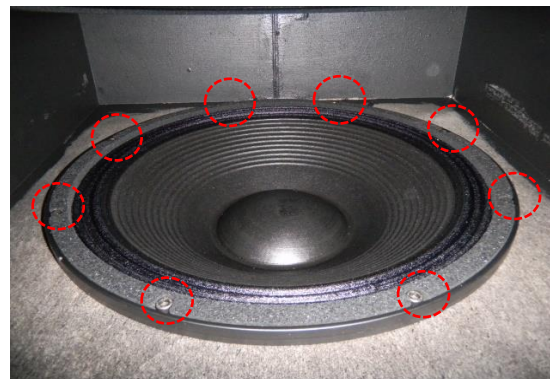
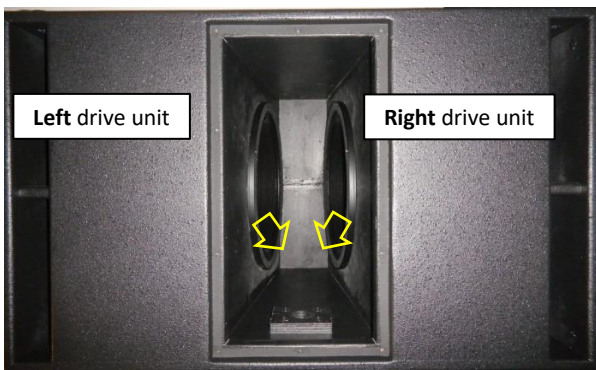
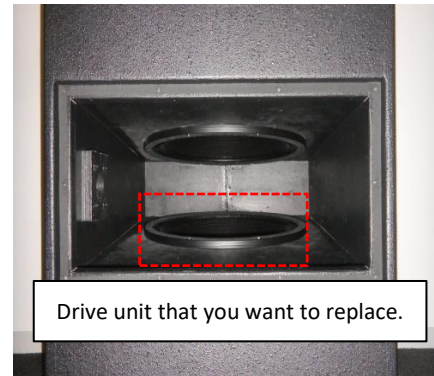
##### Removing and reinstalling the grille.

- (1) Remove the ten screws from the grille.
- (2) Remove the grille from the enclosure.
- (3) Reverse the above steps when placing the grille back to the enclosure. The grille should be placed back in the same orientation before it was removed.

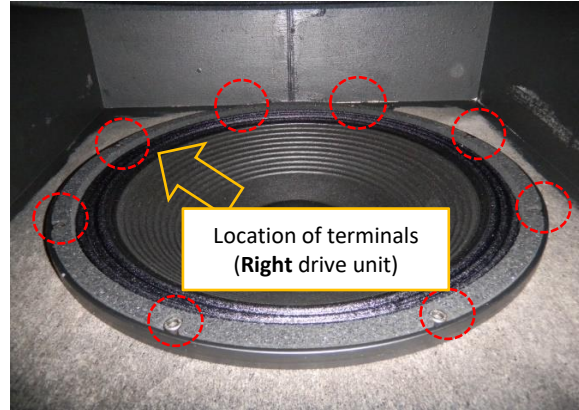
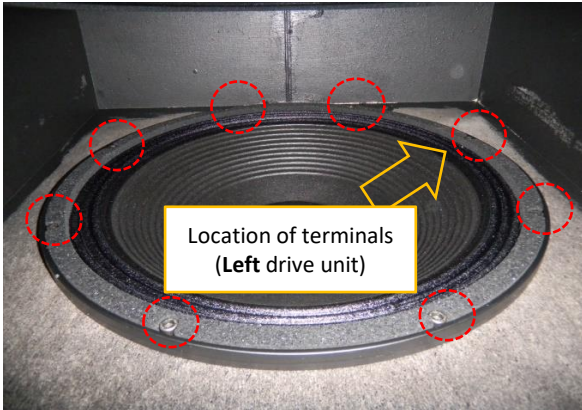


##### Replacement of LF drive unit

- (1) Turn the speaker enclosure 90 degrees so that the drive unit to be replaced will face upward.
- (2) Remove the eight socket head bolts from the drive unit.
- (3) Lift the LF drive unit up, and remove the cables from the LF drive unit.
- (4) Replace the LF drive unit with a new one.
- (5) Connect the cables to the two terminals.  
**Red Terminal (+) : Red cable**  
**Black Terminal (-) : Black cable**
- (6) Ensure that the terminals of the drive unit are placed as shown below.
- (7) Reinstall the LF drive unit to the enclosure.
- (8) Tighten the socket head bolts on the LF drive unit.
- (9) Tighten the countersunk bolts to ensure a solid fit to the grille.

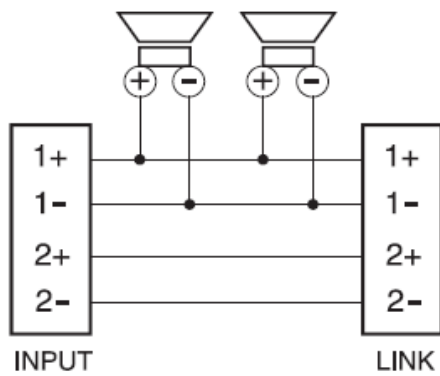


## 5 Drive unit replacement



### Additional information (XY-215S)

For the connection information, please refer to following circuit diagram.



## 5 Drive unit replacement

### 5.3.3 XY-218HS

#### Part list

Item	Part Name	Qty	Service Part No.	Note
	Drive unit	2	PT-XY118SL1	
LF	M6 socket head bolt	16	06G003	M6 x 40mm (P=1.0) 5mm hex socket head
	Spring washer	16	06D0075	M6
Door	M6 socket head bolt	24	06G003	M6 x 40mm (P=1.0) 5mm hex socket head
	Spring washer	24	06D0075	M6
	Flat washer	24	06D006	M6

#### Required tools

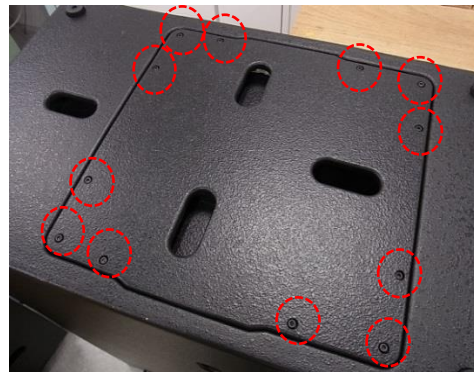
• 5mm hex key



#### Procedure (XY-218HS)

##### Removing and reinstalling the door.

- (1) Remove twelve socket head bolts from a door.
- (2) Take the door off the enclosure.
- (3) Reverse the above steps when placing the door back to the enclosure. The door should be placed back in the same direction before it was removed.



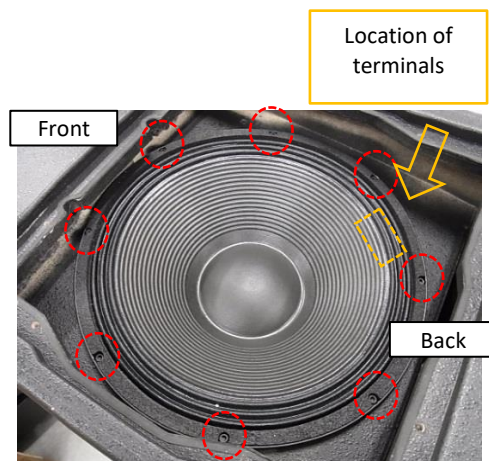
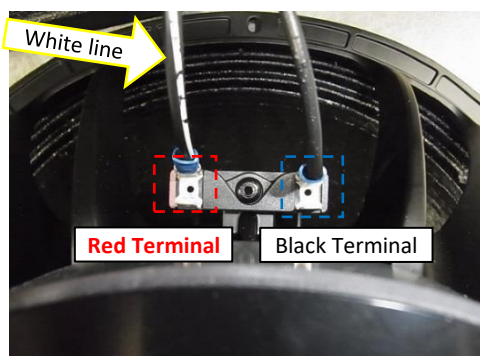
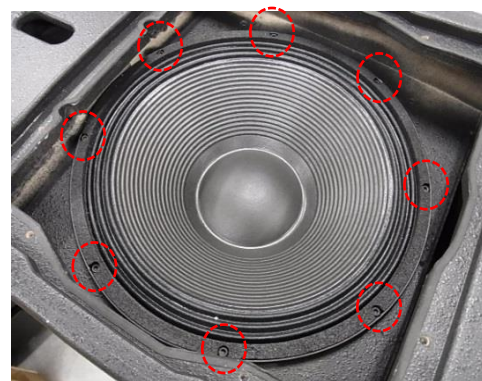
##### Replacement of LF drive unit

- (1) Remove eight socket head bolts from the drive unit.
- (2) Lift the LF drive unit up, and remove the cables from the LF drive unit.
- (3) Replace the LF drive unit with a new one.
- (4) Connect the cables to the two terminals.

**Red Terminal (+) : Black cable with a white line**

**Black Terminal (-) : Black cable**

- (5) Ensure that the terminals of the drive unit are placed as shown below.
- (6) Reinstall the LF drive unit to the enclosure.
- (7) Tighten the socket head bolts on the LF drive unit.
- (8) Tighten the bolt to ensure a so door fit to the door.



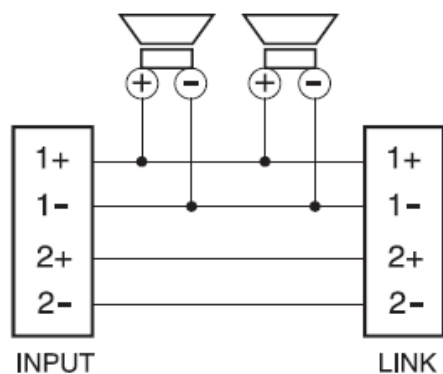


## 5 Drive unit replacement

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### Additional information (XY-218HS)

For the connection information, please refer to following circuit diagram.



## 6 Specifications

### 6.1 Spec sheet

Product Name	XY-81 XY-81-W	XY-101 XY-101-W	XY-122 XY-122-W	XY-152 XY-152-W
Enclosure Type	Two-way passive, reflex-loaded	Two-way passive, reflex-loaded	Two-way passive, reflex-loaded	Two-way passive, reflex-loaded
Frequency Response	75 Hz to 20 kHz	70 Hz to 20 kHz	70 Hz to 20 kHz	50 Hz to 20 kHz
Sensitivity (1w/1m)	91 dB	94 dB	101 dB	98 dB
Nominal Impedance	8 Ω	8 Ω	8 Ω	8 Ω
Power Handling	350 W RMS, 700 W Program	400 W RMS, 800 W Program	400 W RMS, 800 W Program	650 W RMS, 1300 W Program
Maximum SPL	116 dB cont., 122 dB peak	120 dB cont., 126 dB peak	127 dB cont., 133 dB peak	126 dB cont., 132 dB peak
Dispersion	90 °H x 60 °V, Rotatable	90 °H x 60 °V, Rotatable	90 °H x 60 °V, Rotatable	90 °H x 60 °V, Rotatable
Driver Configuration	8 inch (200 mm) LF cone driver, 1 inch (25 mm) exit neodymium HF compression driver	10 inch (250 mm) neodymium LF cone driver, 1 inch (25 mm) exit neodymium HF compression driver	12 inch (320 mm) neodymium LF cone driver, 1.4 inch (36 mm) exit neodymium HF compression driver	15 inch (380 mm) neodymium LF cone driver, 1.4 inch (36 mm) exit neodymium HF compression driver
Crossover	Asymmetric internal passive crossover	Asymmetric internal passive crossover	Asymmetric internal passive crossover	Asymmetric internal passive crossover
Connector	2 x Neutrik SpeakON™ NL4MD-V	2 x Neutrik SpeakON™ NL4MD-V	2 x Neutrik SpeakON™ NL4MD-V	2 x Neutrik SpeakON™ NL4MD-V
Dimensions (WxHxD)	262 mm x 462 mm x 255 mm (10.3 inch x 18.2 inch x 10 inch)	292 mm x 508 mm x 280 mm (11.5 inch x 20 inch x 11 inch)	380 mm x 622 mm x 360 mm (15 inch x 24.5 inch x 14.2 inch)	440 mm x 715 mm x 444 mm (17.3 inch x 28.1 inch x 17.5 inch)
Weight	12 kg (26.5 lb)	14 kg (30.9 lb)	23 kg (50.7 lb)	29 kg (63.9 lb)
Rigging and Hardware	8 x M8 threaded mounting points (4 top/4 bottom), 1 x M8 threaded mounting points on rear, 4 x M6 threaded points on rear (for wall mount bracket), 1 x flush handle on rear, 1 x 35 mm polemount socket	8 x M8 threaded mounting points (4 top/4 bottom), 3 x M8 threaded mounting points on rear, 4 x M8 threaded mounting points on side (2 left/2 right), 4 x M6 threaded points on rear (for wall mount bracket), 1 x flush handle on rear, 1 x 35 mm polemount socket	8 x M10 threaded mounting points (4 top/4 bottom), 2 x M10 threaded mounting points on rear, 4 x M10 threaded mounting points on side (2 left/2 right), 4 x M8 threaded points on rear (for wall mount bracket), 1 x flush handle on rear, 1 x 35 mm polemount socket	8 x M10 threaded mounting points (4 top/4 bottom), 3 x M10 threaded mounting points on rear, 4 x M10 threaded mounting points on side (2 left/2 right), 4 x M8 threaded points on rear (for wall mount bracket), 2 x flush handles (1 left/1 right), 1 x 35 mm polemount socket
Grill	Hex punched steel	Hex punched steel	Hex punched steel	Hex punched steel
Enclosure	15 mm (0.6 inch) birch plywood	15 mm (0.6 inch) birch plywood	15 mm (0.6 inch) birch plywood	15 mm (0.6 inch) birch plywood
Finish	Impact-resistant, Black semi-matt textured	Impact-resistant, Black semi-matt textured	Impact-resistant, Black semi-matt textured	Impact-resistant, Black semi-matt textured
Suggested Power Amplifier	Recommended : K2DSP Minimum : M20DHDSP	Recommended : K2DSP Minimum : M30DHDSP	Recommended : K3DSP Minimum : M30DHDSP	Recommended : K3DSP Minimum : M30DHDSP
Accessories	polemount socket cover (-W model only)	polemount socket cover (-W model only)	polemount socket cover (-W model only)	polemount socket cover (-W model only)

The specifications and design of this product are subject to change without notice.

## 6 Specifications

### 6.1 Spec sheet

Product Name	XY-3B XY-3B-W	XY-2
Enclosure Type	Three-way bi-amp loudspeaker	Two-way mid-high loudspeaker
Frequency Response	55 Hz to 17 kHz	170 Hz to 17 kHz
Sensitivity (1w/1m)	LF: 102 dB MHF: 107 dB	107 dB
Nominal Impedance	LF: 4Ω MHF: 8Ω	8Ω
Power Handling	LF: 1200 W RMS, 2400 W Program MHF: 200 W RMS, 400 W Program	200 W RMS, 400 W Program
Maximum SPL	LF: 133 dB cont., 139dB peak MHF: 130dB cont. , 136 dB peak	130 dB cont., 136 dB peak
Dispersion	50°H x 35°V	50°H x 35°V
Driver Configuration	LF: 2 x 12 inch (305 mm) neodymium cone driver, MF: 8 inch (203 mm) neodymium MF cone driver, HF: 1.0 inch (25 mm) exit neodymium compression driver	MF: 8 inch (203 mm) neodymium MF cone driver, HF: 1.0 inch (25 mm) exit neodymium compression driver
Crossover	MHF: Asymmetric internal passive crossover	Asymmetric internal passive crossover
Connector	2 × Neutrik SpeakON™ NL4MD-V	2 × Neutrik SpeakON™ NL4MD-V
Dimensions (WxHxD)	530 mm x 1080 mm x 540 mm (20.7 inch x 42.5 inch x 21.3 inch)	480 mm x 480 mm x 376 mm ( Not including the mounting yoke )
Weight	58.0 kg (127.9 lb)	13.5 kg (29.8 lb)
Rigging and Hardware	9 x M10 threaded mounting points ( 4 top / 1 bottom / 4 rear) 7 x flush handles (2 top / 2 left / 2 right / 1 rear)	1 x ø13 mounting hole on yoke
Grill	Hex punched steel	—
Enclosure	15 mm (0.6 inch) birch plywood	Polyurethane
Finish	Impact-resistant, Black semi-matt textured	Black semi-matt textured
Suggested Power Amplifier	Recommended : X4	Recommended : X4
Accessories	—	—

The specifications and design of this product are subject to change without notice.

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## 6 Specifications

### 6.1 Spec sheet

Product Name	XY-115S XY-115S-W	XY-118S XY-118S-W	XY-215S XY-215S-W	XY-218S XY-218S-W
Enclosure Type	Single driver, reflex-loaded subwoofer	Single driver, reflex-loaded subwoofer	Dual driver, quasi-bandpass subwoofer	Dual driver, reflex-loaded subwoofer
Frequency Response	45 Hz to 150 Hz	35 Hz to 150 Hz	42 Hz to 160 Hz	32 Hz to 150 Hz
Sensitivity (1w/1m)	96 dB (half space)	97 dB (half space)	102 dB (half space)	102 dB (half space)
Nominal Impedance	8 Ω	8 Ω	4 Ω	4 Ω
Power Handling	700 W RMS, 1400 W Program	1000 W RMS, 2000 W Program	800 W RMS, 1600 W Program	1600 W RMS, 3200 W Program
Maximum SPL	124 dB cont., 130 dB peak (half space)	127 dB cont., 133 dB peak (half space)	131 dB cont., 137 dB peak (half space)	134 dB cont., 140 dB peak (half space)
Dispersion	—	—	—	—
Driver Configuration	15 inch (380 mm) neodymium LF cone driver	18 inch (460 mm) LF cone driver	2 × 15 inch (380 mm) LF cone drivers	2 × 18 inch (460 mm) LF cone drivers
Crossover	—	—	—	—
Connector	2 × Neutrik SpeakON™ NL4MD-V	2 × Neutrik SpeakON™ NL4MD-V	2 × Neutrik SpeakON™ NL4	2 × Neutrik SpeakON™ NL4
Dimensions (WxHxD)	472 mm × 466 mm × 510 mm (18.6 inch × 18.3 inch × 20.1 inch)	590 mm × 643 mm × 650 mm (23.2 inch × 25.3 inch × 25.6 inch)	831 mm × 526 mm × 700 mm (32.7 inch × 20.7 inch × 27.6 inch)	1164 mm × 558 mm × 745 mm (45.8 inch × 22 inch × 29.3 inch)
Weight	30 kg (66.1 lb)	52 kg (114.7 lb)	71 kg (156.6 lb)	93 kg (205 lb)
Rigging and Hardware	2 × flush handles (1 left/1 right), 1 × M20 polemount socket for mid/high enclosures, 4 × rubber feet (bottom) and 4 × mating recesses (top)	4 × flush handles (2 left/2 right), 1 × M20 polemount socket for mid/high enclosures, 4 × rubber feet (bottom) and 4 × mating recesses (top), 16 × M8 holes with pre-inserted bolts for 4 × castors on rear	4 × flush handles, 2 × M20 polemount sockets for mid/high enclosures, 8 × rubber feet (bottom and left) and 4 × mating recesses (top), 16 × M8 holes with pre-inserted bolts for 4 × castors on rear	8 × flush handles (4 left/4 right), 8 × rubber feet (bottom and left) and 4 × mating recesses (top), 16 × M8 holes with pre-inserted bolts for 4 × castors on rear
Grill	Hex punched steel	Hex punched steel	Hex punched steel	Hex punched steel
Enclosure	15 mm (0.6 inch) birch plywood	18 mm (0.7 inch) birch plywood	18 mm (0.7 inch) birch plywood	18 mm (0.7 inch) birch plywood
Finish	Impact-resistant, Black semi-matt textured	Impact-resistant, Black semi-matt textured	Impact-resistant, Black semi-matt textured	Impact-resistant, Black semi-matt textured
Suggested Power Amplifier	Recommended : K3DSP	Recommended : K10DSP Minimum : K3DSP	Recommended : K3DSP Minimum : K2DSP	Recommended : K10DSP Minimum : K6DSP
Accessories	polemount socket cover (-W model only)	polemount socket cover (-W model only)	2 × polemount socket cover (-W model only)	—

The specifications and design of this product are subject to change without notice.

## 6 Specifications

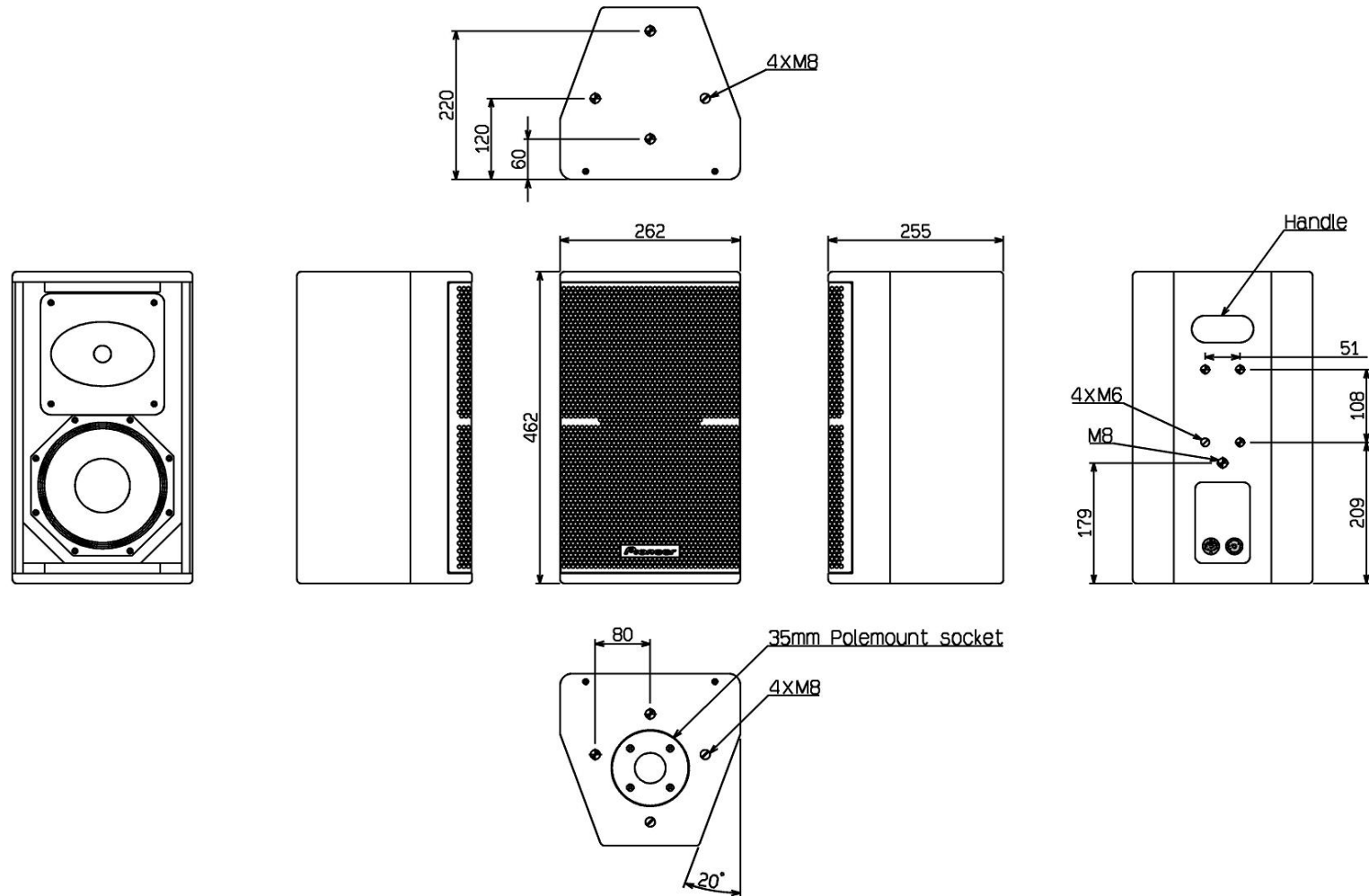
### 6.1 Spec sheet

Product Name	XY-218HS XY-218HS-W
Enclosure Type	Dual driver, horn-loaded subwoofer
Frequency Response	32 Hz to 150 Hz
Sensitivity (1w/1m)	107.5 dB (half space)
Nominal Impedance	4 $\Omega$
Power Handling	1400 W RMS, 2800 W Program
Maximum SPL	139 dB cont., 145 dB peak (half space)
Dispersion	—
Driver Configuration	2 $\times$ 18 inch (460 mm) LF cone drivers
Crossover	—
Connector	2 $\times$ Neutrik SpeakON™ NL4MD-V
Dimensions (WxHxD)	1308 mm $\times$ 558 mm $\times$ 890 mm (51.5 inch $\times$ 22.0 inch $\times$ 35.0 inch)
Weight	134 kg (296 lb)
Rigging and Hardware	12 $\times$ flush handles (4 left/4 right/2 Top/2 bottom), 10 $\times$ rubber feet (6 bottom and 4 left) and 6 $\times$ mating recesses (top), 16 $\times$ M8 holes with pre-inserted bolts for 4 $\times$ castors on rear
Grill	Hex punched steel
Enclosure	18 mm (0.7 inch) birch plywood
Finish	Impact-resistant, Black semi-matt textured
Suggested Power Amplifier	Recommended : K10DSP
Accessories	—

The specifications and design of this product are subject to change without notice.

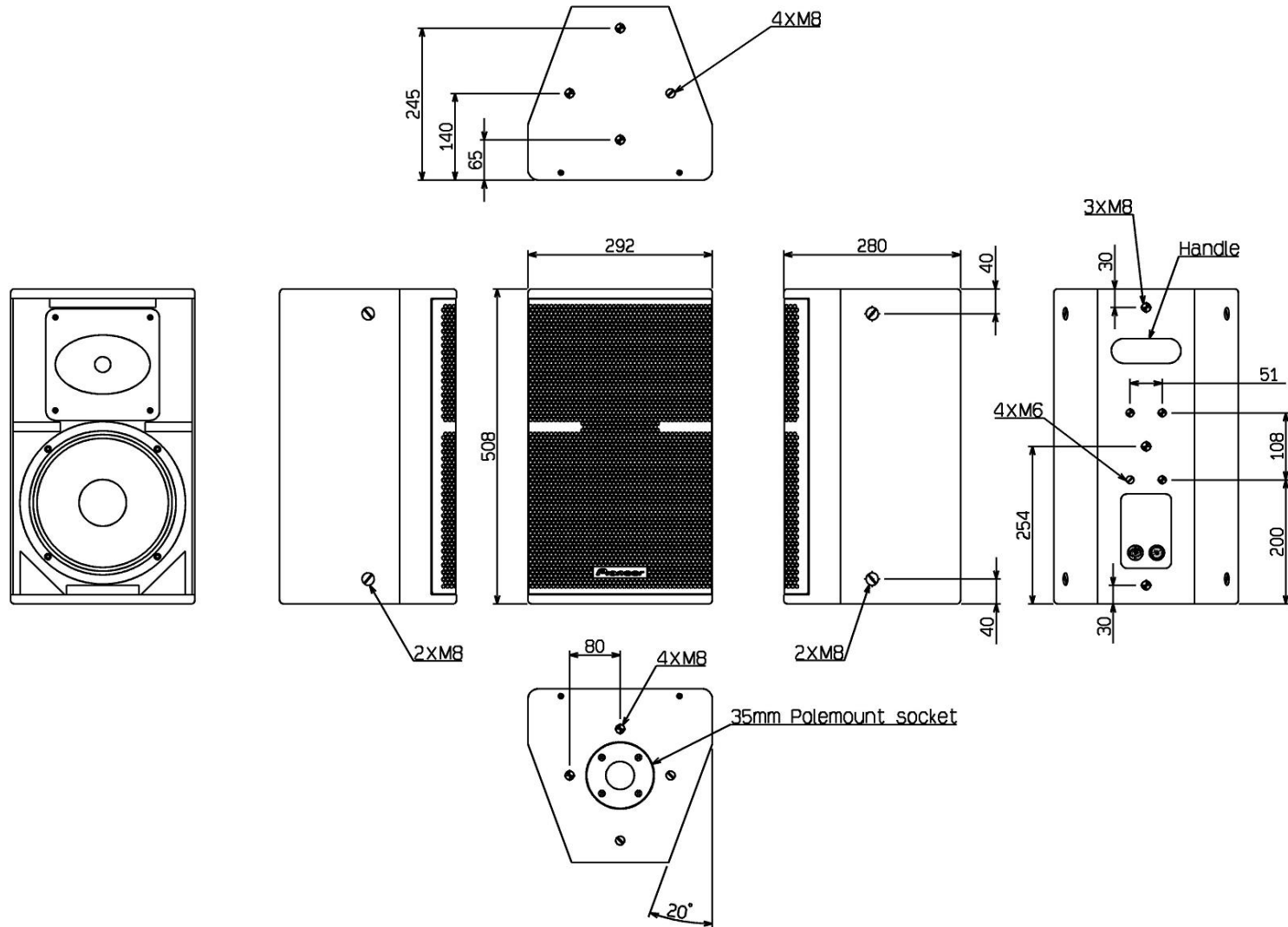
## 6 Specifications

### 6.2 Drawing



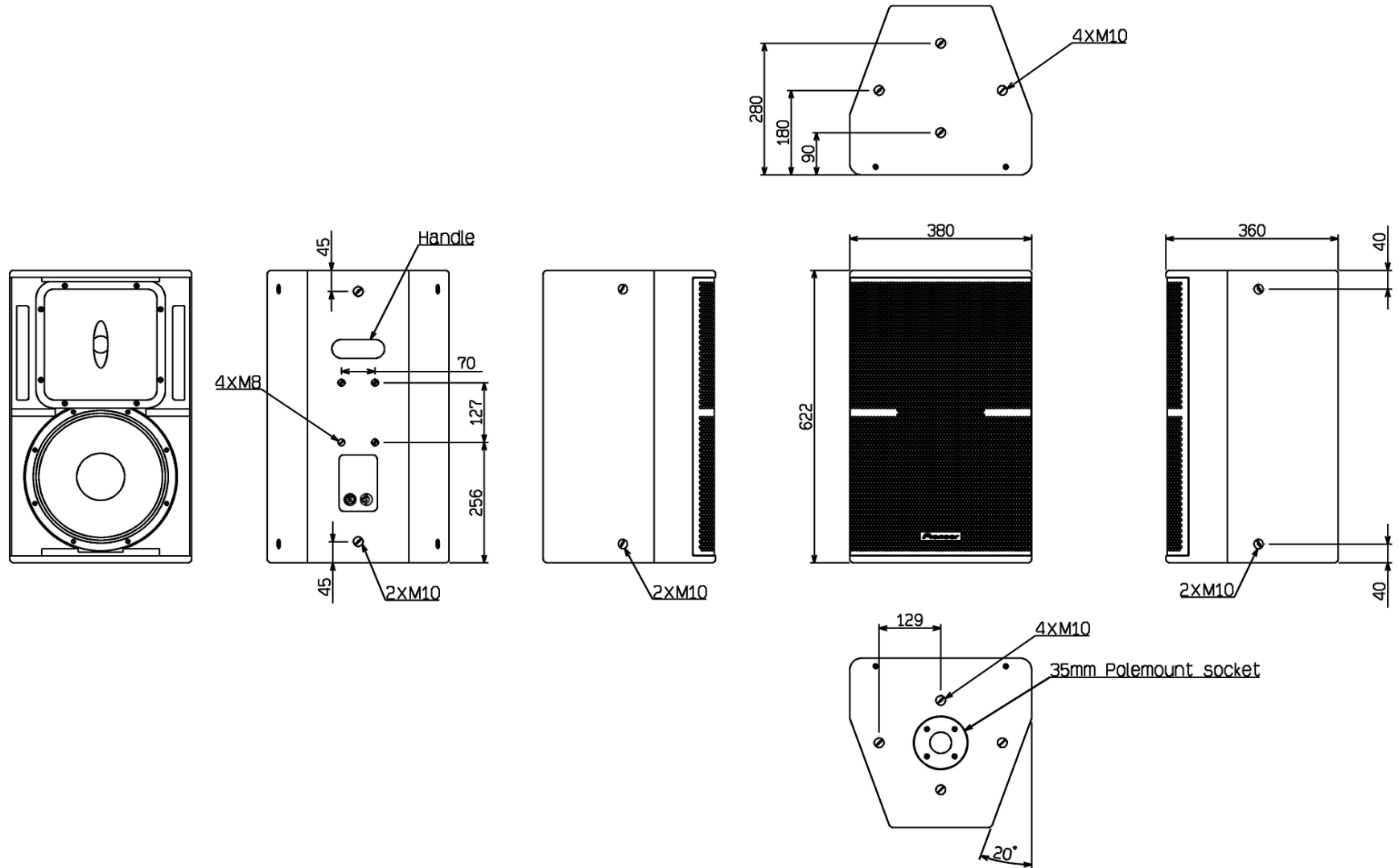
# 6 Specifications

## 6.2 Drawing



# 6 Specifications

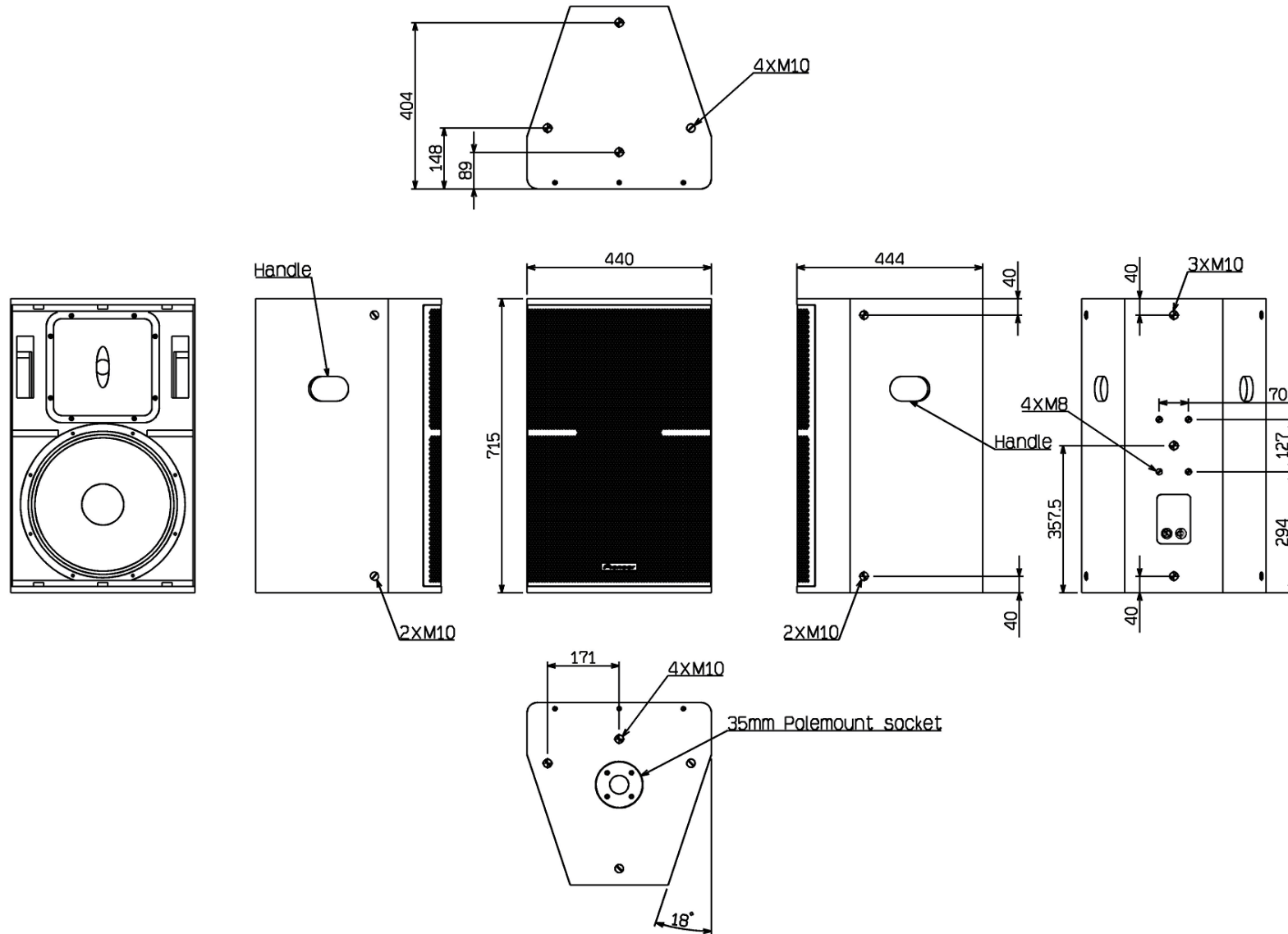
## 6.2 Drawing





# 6 Specifications

## 6.2 Drawing



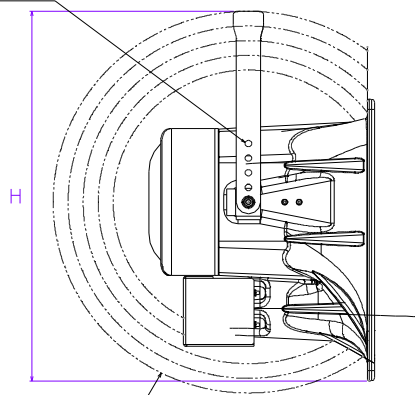
# 6 Specifications

## 6.2 Drawing

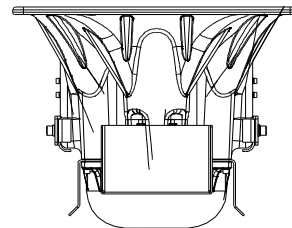
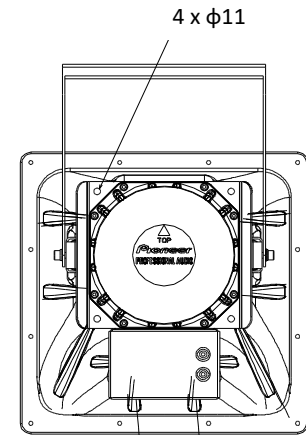
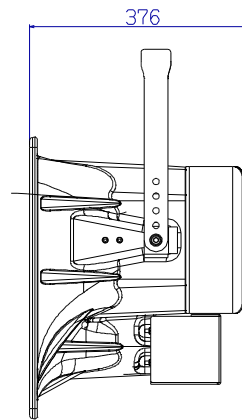
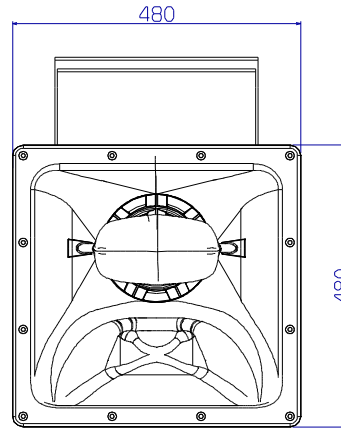
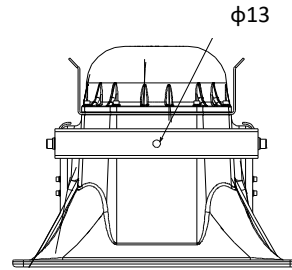


Point	H
1(min)	529,4
2	554,4
3(middle)	579,4
4	604,4
5(max)	629,4

5 height adjustable fixing points.  
Overall heights of product at each point are above.

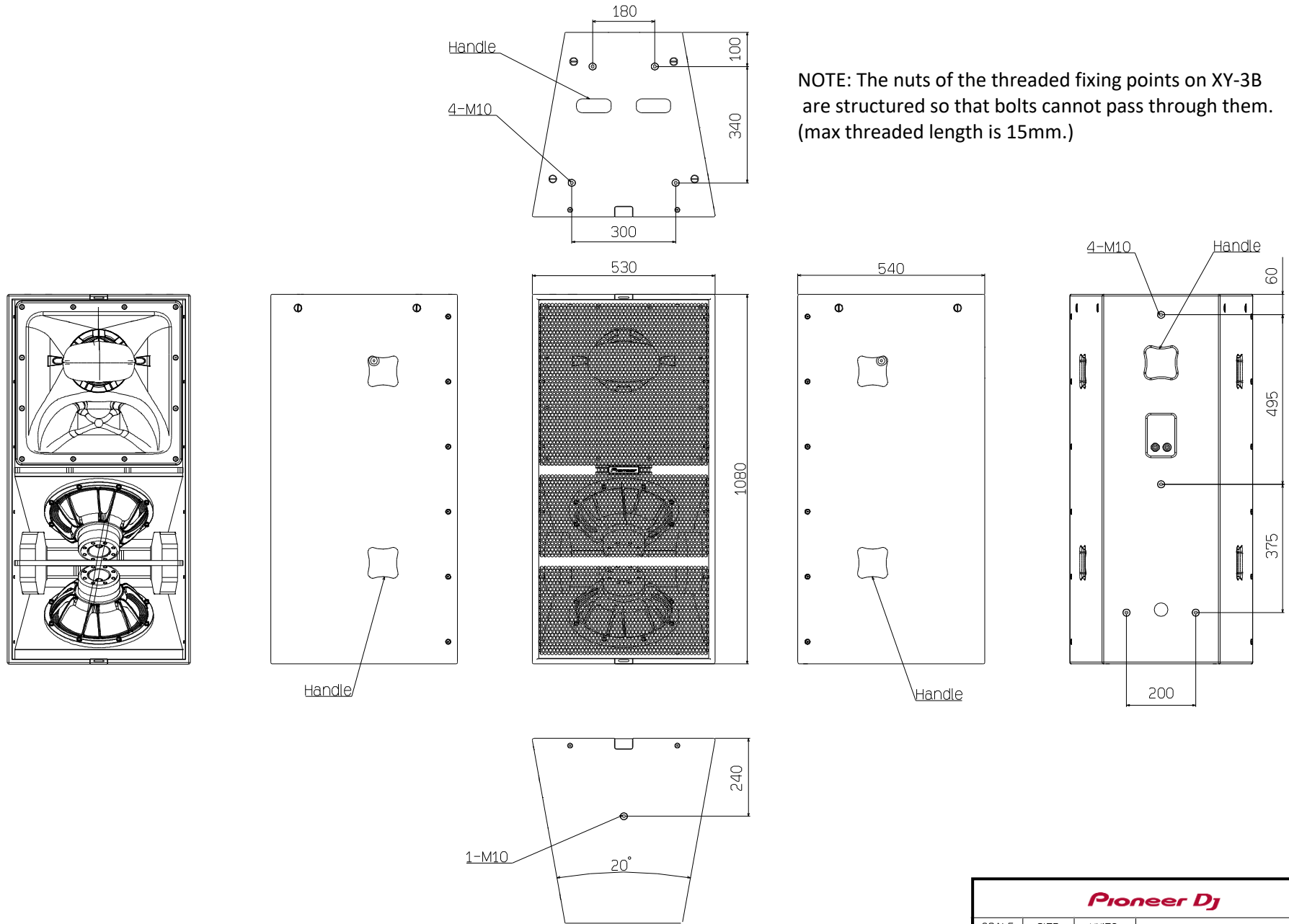


The range of motion for the yoke relative to each fixing point.  
At fixing point 4 and 5, the yoke has a free range of motion.



# 6 Specifications

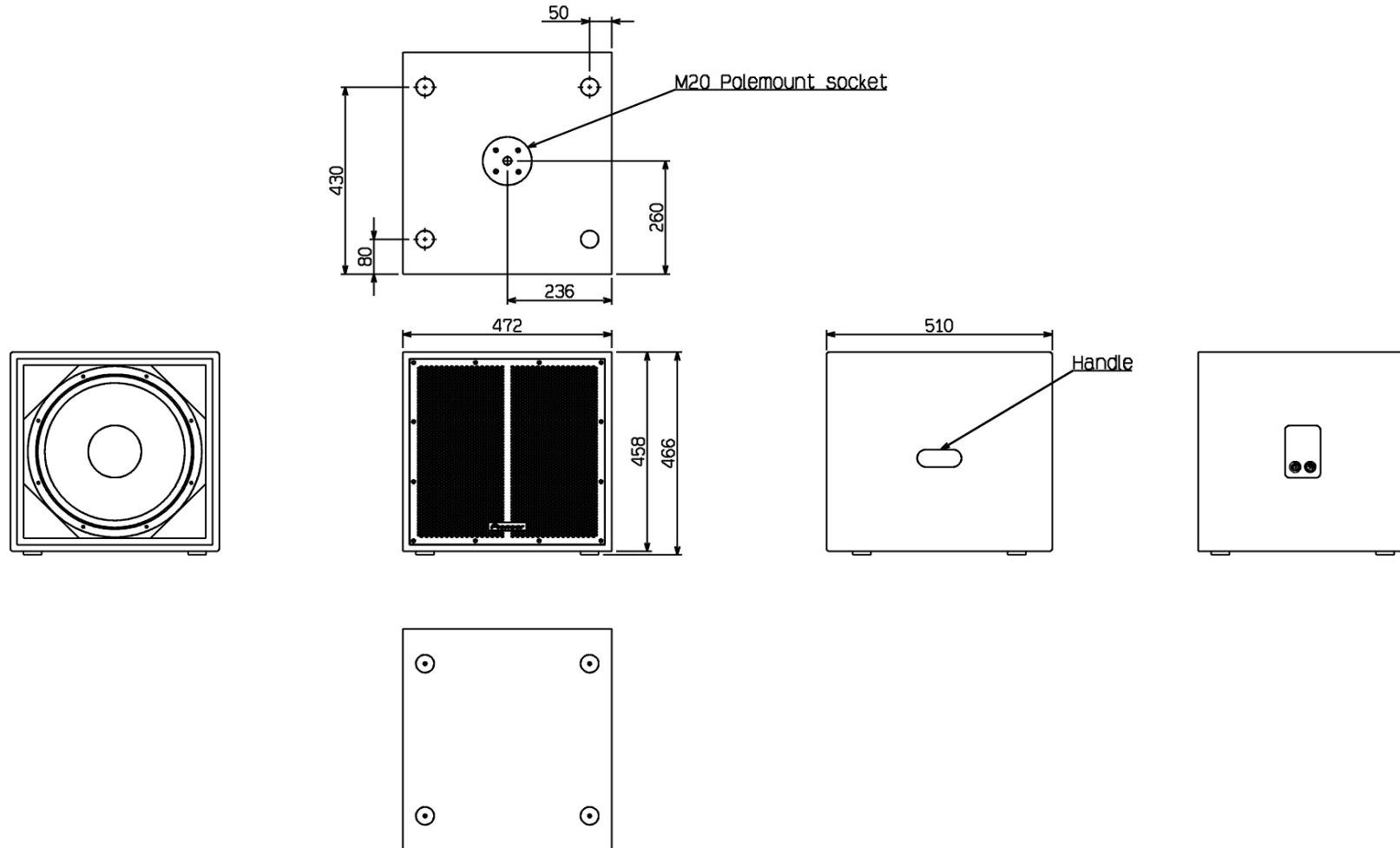
## 6.2 Drawing



<b>Pioneer Dj</b>			
SCALE 1:5	SIZE A1	UNITS mm	XY-3B

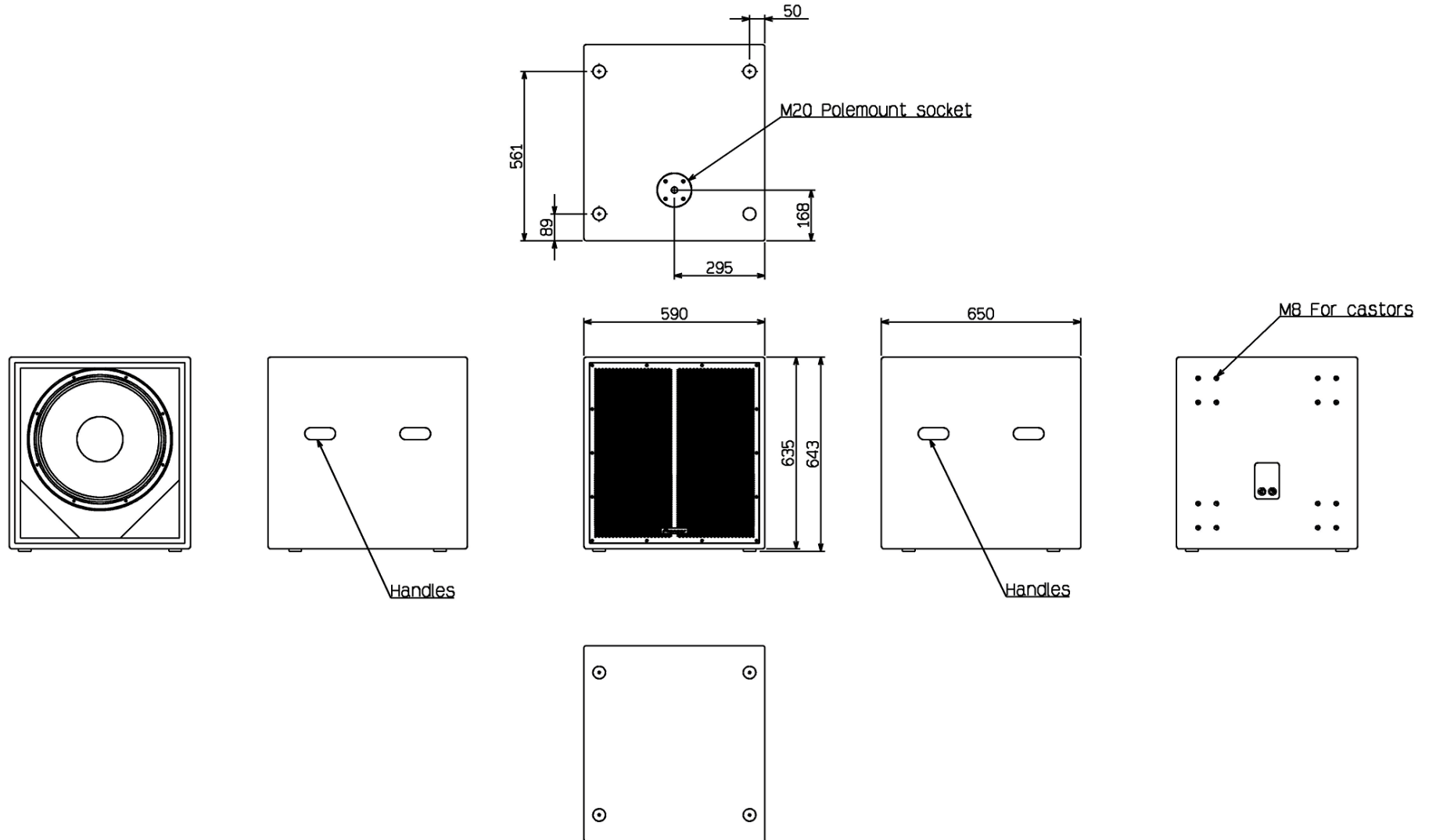
## 6 Specifications

### 6.2 Drawing



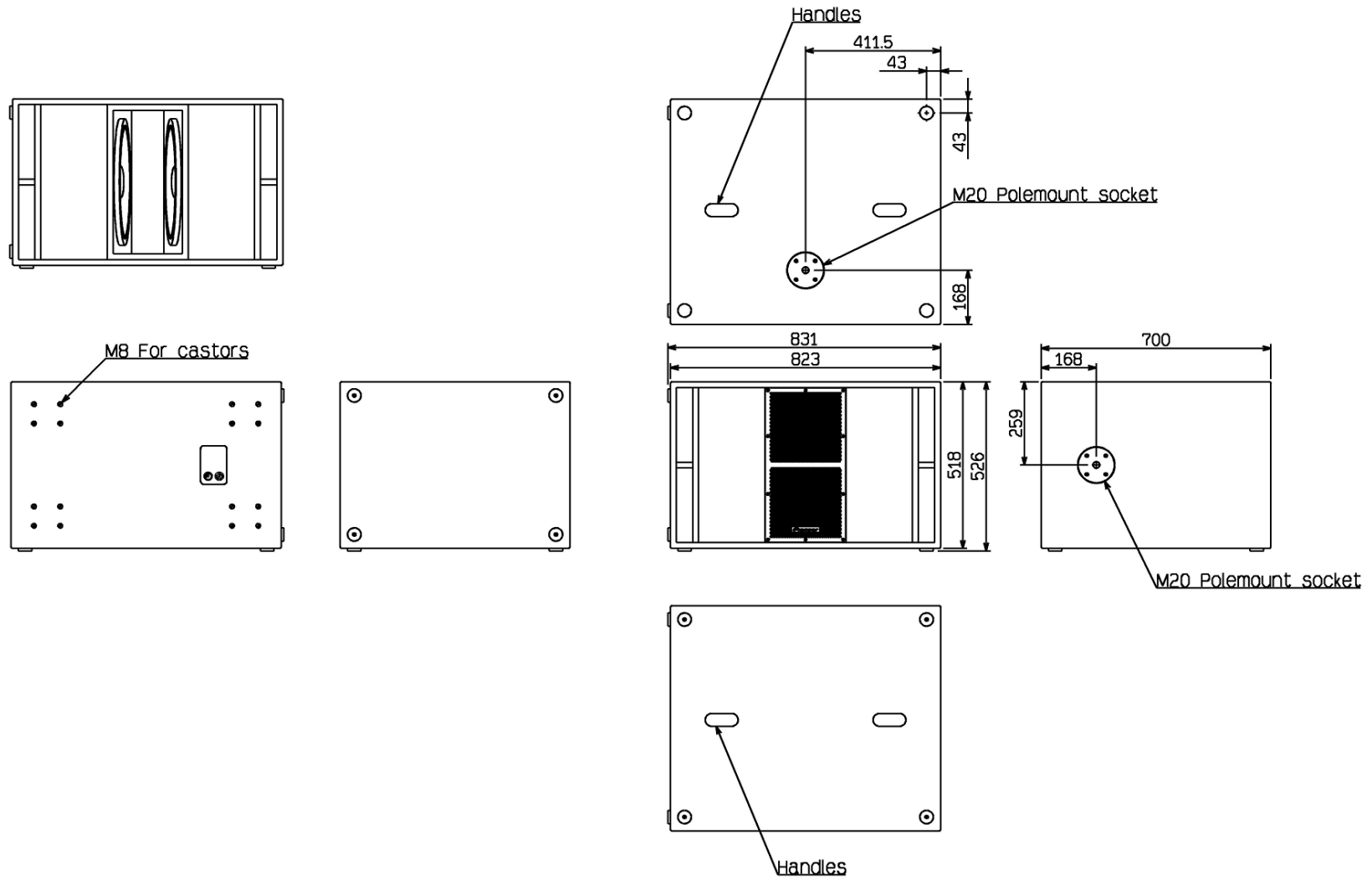
# 6 Specifications

## 6.2 Drawing



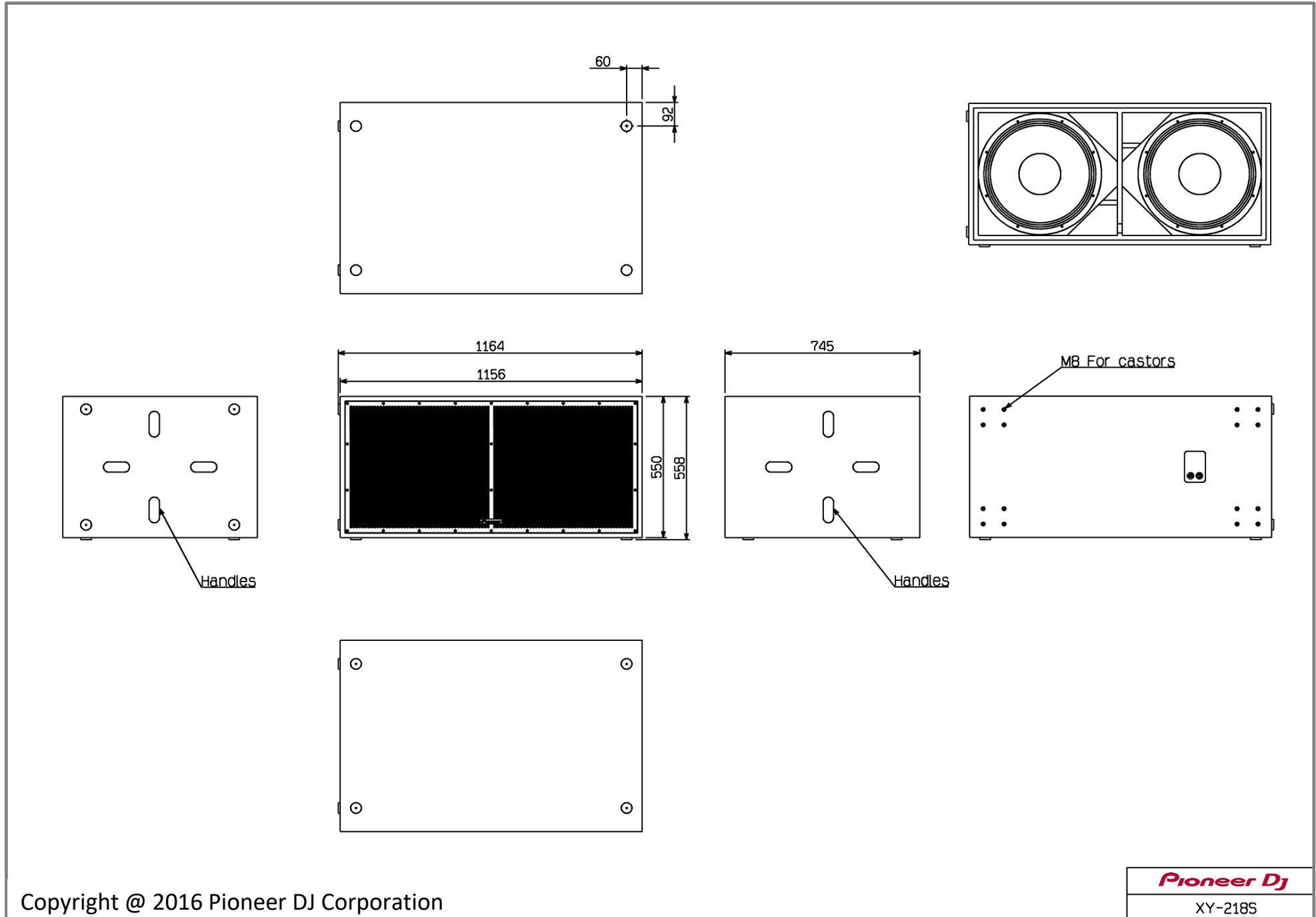
# 6 Specifications

## 6.2 Drawing



# 6 Specifications

## 6.2 Drawing



# 6 Specifications

## 6.2 Drawing

