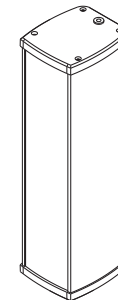




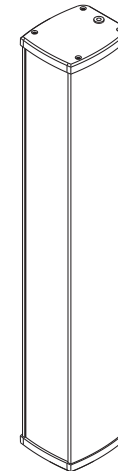
THE UNIVERSE OF INSTALLATION

User's Manual

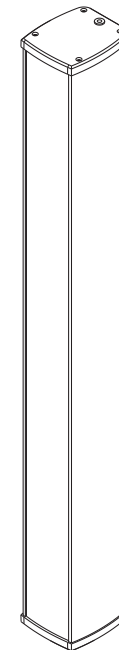
COLUMN ARRAY SPEAKERS



CAS-304



CAS-308



CAS-312



SHOW® is a registered trademark of
SEIKAKU TECHNICAL GROUP LIMITED

SEIKAKU TECHNICAL GROUP LIMITED

NO.1 LANE 17, SEC.2, HAN SHI WEST ROAD, TAICHUNG 40151, TAIWAN

tel: 886-4-22313737 - fax: 886-4-22346757

INDEX

01 SAFETY RELATED SYMBOLS	1
02 WARNING	2
03 INTRODUCTION	3
04 INSTALLATION	4
05 ACCESSORY	6
06 BACK PANEL DESCRIPTION	6
07 SYSTEM CONNECTION PLATE	8
08 TECHNICAL SPECIFICATIONS	9

IMPORTANT!

Please read this manual carefully before operating this unit for the first time.

All rights reserved to SEIKAKU. All features and content might be changed without prior notice. Any photocopy, translation, or reproduction of part of this catalogue without written permission is forbidden. **Copyright © 2009 SEIKAKU GROUP**

SAFETY RELATED SYMBOLS



The symbol is used to indicate that some hazardous live terminals are involved within this apparatus, even under the normal operating conditions.



The symbol is used in the service documentation to indicate that specific component shall be only replaced by the component specified in that Documentation for safety reasons.



Protective grounding terminal.



Alternating current /voltage.



Hazardous live terminal .

ON: Denotes the apparatus turns on.

OFF: Denotes the apparatus turns off, because of using the single pole switch, be sure to unplug the AC power to prevent any electric shock before you proceed your service.

WARNING: Describes precautions that should be observed to prevent the danger of injury or death to the user.



Disposing of this product should not be placed in municipal waste and should be separate collection.

CAUTION: Describes precautions that should be observed to prevent danger of the apparatus.

WARNING

• Power Supply

Ensure the source voltage matches the voltage of the power supply before turning ON the apparatus.

Unplug this apparatus during lightning storms or when unused for long periods of time.

• External Connection

The external wiring connected to the output hazardous live terminals requires installation by an instructed person, or the use of ready-made leads or cords.

• Do not Remove any Cover

There are maybe some areas with high voltages inside, to reduce the risk of electric shock, do not remove any cover if the power supply is connected.

The cover should be removed by the qualified personnel only.

No user serviceable parts inside.

• Fuse

To prevent a fire, make sure to use fuses with specified standard (current, voltage, type). Do not use a different fuse or short circuit the fuse holder.

Before replacing the fuse, turn OFF the apparatus and disconnected the power source.

• Protective Grounding

Make sure to connect the protective grounding to prevent any electric shock before turning ON the apparatus.

Never cut off the internal or external protective grounding wire or disconnect the wiring of protective grounding terminal.

• Operating Conditions

This apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on this apparatus.

TECHNICAL SPECIFICATIONS

Model Passive	CAS-312B / CAS-312W
System Type	Column Array Speaker
Input Voltage	70V/100V
Transformer selectable Power	15W / 30W / 60W / 120W
System Impedance	70V 330Ω / 167Ω / 83Ω / 41Ω
	100V 667Ω / 333Ω / 167Ω / 83Ω
Sensitivity (1w/1M)	99dB
Max SPL(1M)	125dB
Frequency Response(-6dB)	120Hz-18KHz
Speaker	12×3" full range speaker, 20mm Voice Coil
Angle of coverage(HxV)	120°x30° @ 4 kHz
Connect	Cable conductor
Enclosure Construction	Body in extruded aluminum, resistant paint, 1.0mm aluminum grille
Suspension/Mounting	12×M8 Points For Mounting
Dimensions(H×W×D)	1112mm(43.7")×1211mm(4.8")×140mm(5.5")
Net weight	13.3KG/29.3lbs

TECHNICAL SPECIFICATIONS

Model Passive	CAS-304B / CAS-304W
System Type	Column Array Speaker
Input Voltage	70V/100V
Transformer selectable Power	5W / 10W / 20W / 40W
System Impedance	70V 1000Ω / 500Ω / 250Ω / 125Ω
	100V 2000Ω / 1000Ω / 500Ω / 250Ω
Sensitivity (1w/1M)	93dB
Max SPL(1M)	114dB
Frequency Response(-6dB)	150Hz-18KHz
Speaker	4×3" full range speaker, 20mm Voice Coil
Angle of coverage(HxV)	120°x10° @ 4 kHz
Connect	Cable conductor
Enclosure Construction	Body in extruded aluminum, resistant paint, 1.0mm aluminum grille
Suspension/Mounting	6×M8 Points For Mounting
Dimensions(H×W×D)	448mm(17.6")×121mm(4.8")×140mm(5.5")
Net weight	5.2KG/11.46lbs

Model Passive	CAS-308B / CAS-308W
System Type	Column Array Speaker
Input Voltage	70V/100V
Transformer selectable Power	7.5W /15W / 30W / 60W
System Impedance	70V 667Ω / 333Ω / 167Ω / 83Ω
	100V 1333Ω / 667Ω / 333Ω / 167Ω
Sensitivity (1w/1M)	95dB
Max SPL(1M)	116dB
Frequency Response(-6dB)	150Hz-18KHz
Speaker	8×3" full range speaker, 20mm Voice Coil
Angle of coverage(HxV)	120°x20° @ 4 kHz
Connect	Cable conductor
Enclosure Construction	Body in extruded aluminum, resistant paint, 1.0mm aluminum grille
Suspension/Mounting	6×M8 Points For Mounting
Dimensions(H×W×D)	763mm(30")×121mm(4.8")×140mm(5.5")
Net weight	8.6KG/18.9lbs

To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

Do not use this apparatus near water. Install in accordance with the manufacture-r's instructions. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat. Do not block any ventilation openings.

No naked flame sources, such as lighted candles, should be placed on the apparatus.

IMPORTANT SAFETY INSTRUCTIONS

- Read these instructions.
- Follow all instructions.
- Keep these instructions.
- Heed all warnings.
- Only use attachments/accessories specified by the manufacturer.
- **Power Cord and Plug**

Do not defeat the safety purpose of the polarized or grounding type plug.

A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

- **Cleaning**

When the apparatus needs a cleaning, you can blow off dust from the apparatus with

a blower or clean with rag etc.

Don't use solvents such as benzol, alcohol, or other fluids with very strong volatility and flammability for cleaning the apparatus body. Clean only with dry cloth.

- **Servicing**

Refer all servicing to qualified personnel. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so .

Servicing is required when the apparatus has been damaged in any way , such as power supply cord or plug is damaged , liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture , does not operate normally, or has been dropped.

The mains plug is used as the disconnect device, the disconnect device shall remain readily operable.

Please read the instructions in details before you use, and follow the contents to do the most proper installation. After you have made the proper installation, please keep this instruction well for your references at any time.

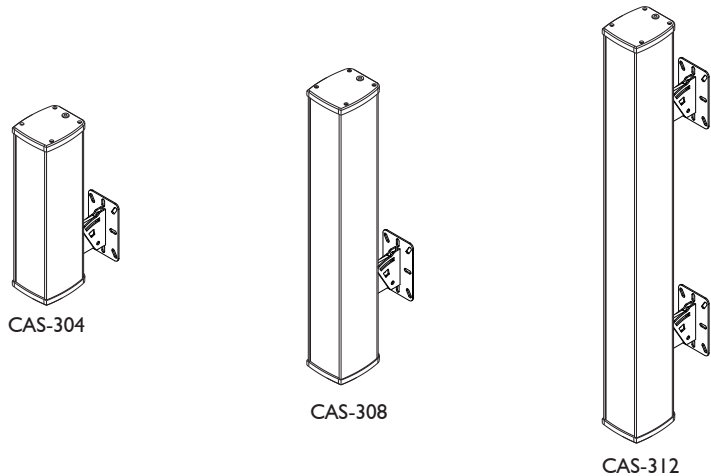
If you would like to do any changes for the installation regarding this product, please must make sure if the specifications are correct or not. Otherwise, the incorrect installation will probably result in the permanent damage to this product, therefore, please use it with cautions.

Cautions:

1. Absolutely not to do the installation that exceeds the specifications of this products because it will result in affecting the life and the capacity with regard to this product.
2. Keep away from the place that wets in rain directly if installing at outside.
3. Do not clean the appearance of the column speaker with an organic solvent or alcoholic detergent.
4. Do not repair or disassemble the product yourself if there is any damage or unusual situation, please should contact the person in charge of service immediately.

INTRODUCTION

The CAS series is a professional column array speaker developed by SHOW. With 1.0mm mesh and 1.0mm grille, it can effectively protect unit from external damage and prevent dust into the speaker. Cabinet is made by aluminum alloy with coating, to make delicate touch. 8 pieces 3" full-range horn unit with linear paper cone, cloth surrounding can achieve high sensitivity. The system apply power transformers to switch power, effectively protect the units. To prevent high power input signal damage units, they can be used in parallel to avoid causing damage to the PA amplifier with low impedance. Locked bracket screws to fixed plate inside cabinet. The fixing plate with 3 mm thick iron can effective decompose the bracket pull force.



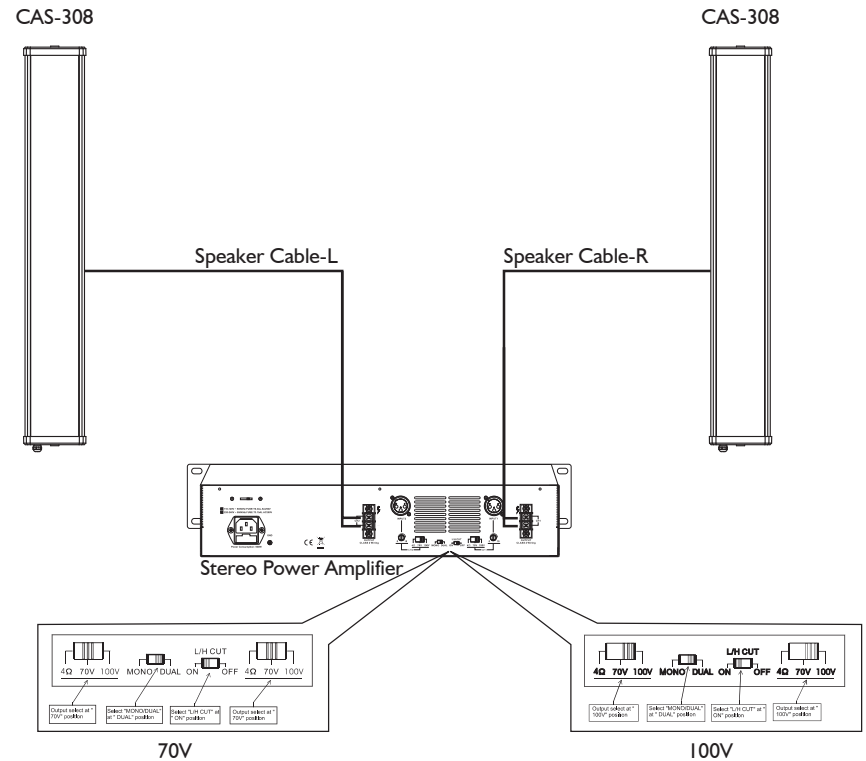
SYSTEM CONNECTION PLATE

CH1/CH2 loaded with 70V, dual channel input:

1. Select "MONO/DUAL" at "DUAL" position, dual channel input;
2. CH1/CH2 output select at "70V" position, both loaded with rated 70V speaker;
3. Select "L/H CUT" at "ON" position, to prevent low frequency protection and improve the transmission efficiency. Applicable to Public Address System.

CH1/CH2 loaded with 100V, dual channel input:

1. Select "MONO/DUAL" at "DUAL" position, dual channel input;
2. CH1/CH2 output select at "100V" position, both loaded with rated 100V speaker;
3. Select "L/H CUT" at "ON" position, to prevent low frequency protection and improve the transmission efficiency. Applicable to Public Address System;



CAS-308B / CAS308W

POWER SELECTIONS

- 1) Do not connect BLACK and WHITE for 70V input
- 2) Do not connect BLACK and BROWN for 100V input



	70V		100V	
WHITE	NO USE		1333Ω	7.5W
GREY	667Ω	7.5W	667Ω	15W
ORANGE	333Ω	15W	333Ω	30W
RED	167Ω	30W	167Ω	60W
BROWN	83Ω	60W	NO USE	
BLACK	COM			

Power Capacity: 60 Watts
Protection Class: IP66



CAS-312B / CAS312W

POWER SELECTIONS

- 1) Do not connect BLACK and WHITE for 70V input
- 2) Do not connect BLACK and BROWN for 100V input



	70V		100V	
WHITE	NO USE		667Ω	15W
GREY	330Ω	15W	333Ω	30W
ORANGE	167Ω	30W	167Ω	60W
RED	83Ω	60W	83Ω	120W
BROWN	41Ω	120W	NO USE	
BLACK	COM			

Power Capacity: 120 Watts
Protection Class: IP66

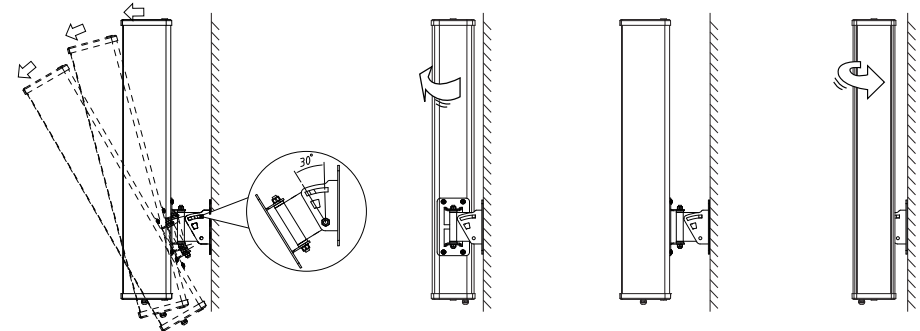


INSTALLATION

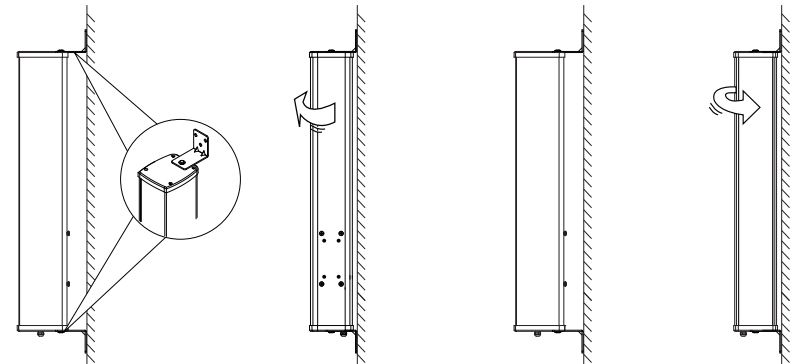
CAS-304 / CAS-308

- 1) Make sure the expansion screws of mounting brackets can firmly support the product weight before installation to avoid causing the injuries of the facilities and a worker if there is a falling.
- 2) Make sure the bracket is installed in vertical position and install expansion screw in the identified location.
- 3) Lock the bracket (in attached) to the wall enough tightly and ensure it's vertical between bracket and wall.
- 4) Remove the 6*M8 screws on back of column and fix it to the racket via the screws(in attached). Please make the column straight and firmly locked.
- 5) Adjust the column to appropriate angle with bracket adjustable angle vertical 0°~ 30°, horizon -90° ~ 90°.
- 6) Please first confirm the system you connected output of 100V, 70V. And make the cables connected.

• 180° x 30° bracket (angle vertical 0° ~ 30°, horizon -90° ~ 90°)



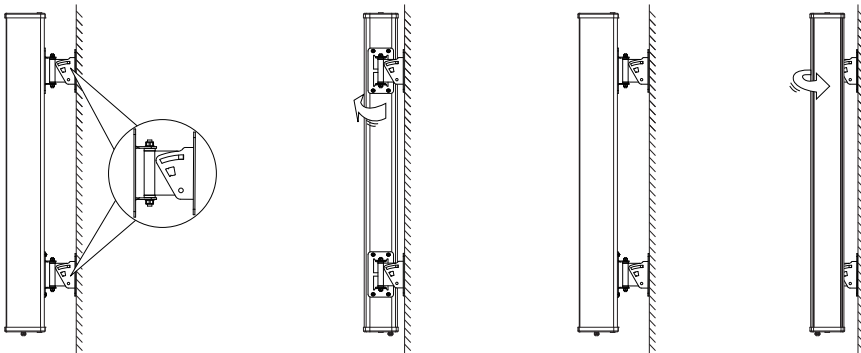
• L bracket (angle horizon -90° ~ 90°)



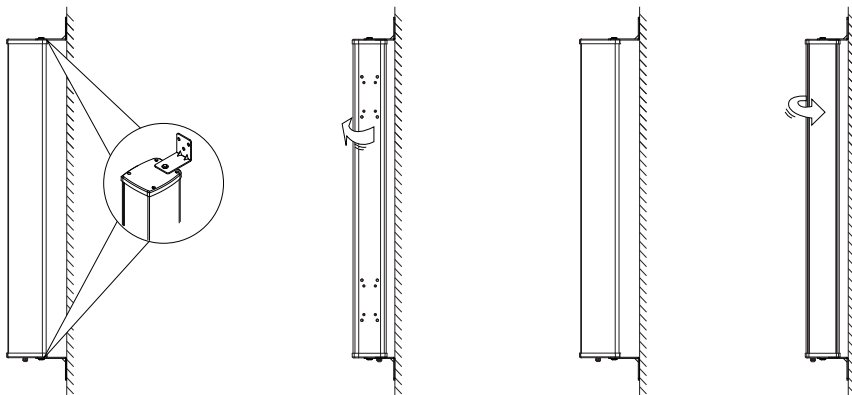
CAS-312

- 1) Make sure the expansion screws of mounting brackets can firmly support the product weight before installation to avoid causing the injuries of the facilities and a worker if there is a falling.
- 2) Make sure the bracket is installed in vertical position and install expansion screw in the identified location.
- 3) Lock the bracket (in attached) to the wall enough tightly and ensure it's vertical between bracket and wall.
- 4) Remove the 12*M8 screws on back of column and fix it to the racket via the screws(in attached). Please make the column straight and firmly locked.
- 5) Adjust the column to appropriate angle with bracket adjustable angle horizon $-90^{\circ} \sim 90^{\circ}$.
- 6) Please first confirm the system you connected output of 100V, 70V. And adjust band switch to the correct position, also the input signal must be connected correctly.

• 180° x 30° bracket (angle horizon $-90^{\circ} \sim 90^{\circ}$)

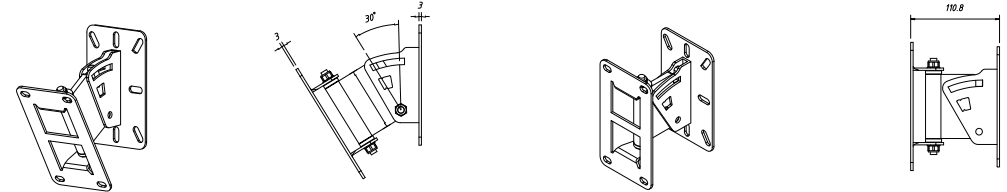


• L bracket (angle horizon $-90^{\circ} \sim 90^{\circ}$)

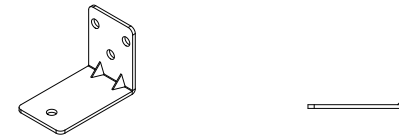


ACCESSORY

• 180° x 30° bracket



• L bracket



BACK PANEL DESCRIPTION

CAS-304B / CAS304W

POWER SELECTIONS

- 1) Do not connect BLACK and WHITE for 70V input
- 2) Do not connect BLACK and BROWN for 100V input



	70V		100V	
WHITE	NO USE	2000Ω	5W	
GREY	1000Ω	5W	1000Ω	10W
ORANGE	500Ω	10W	500Ω	20W
RED	250Ω	20W	250Ω	40W
BROWN	125Ω	40W	NO USE	
BLACK	COM			

Power Capacity: 40 Watts
Protection Class: IP66



MODEL SERIAL

MADE IN CHINA