



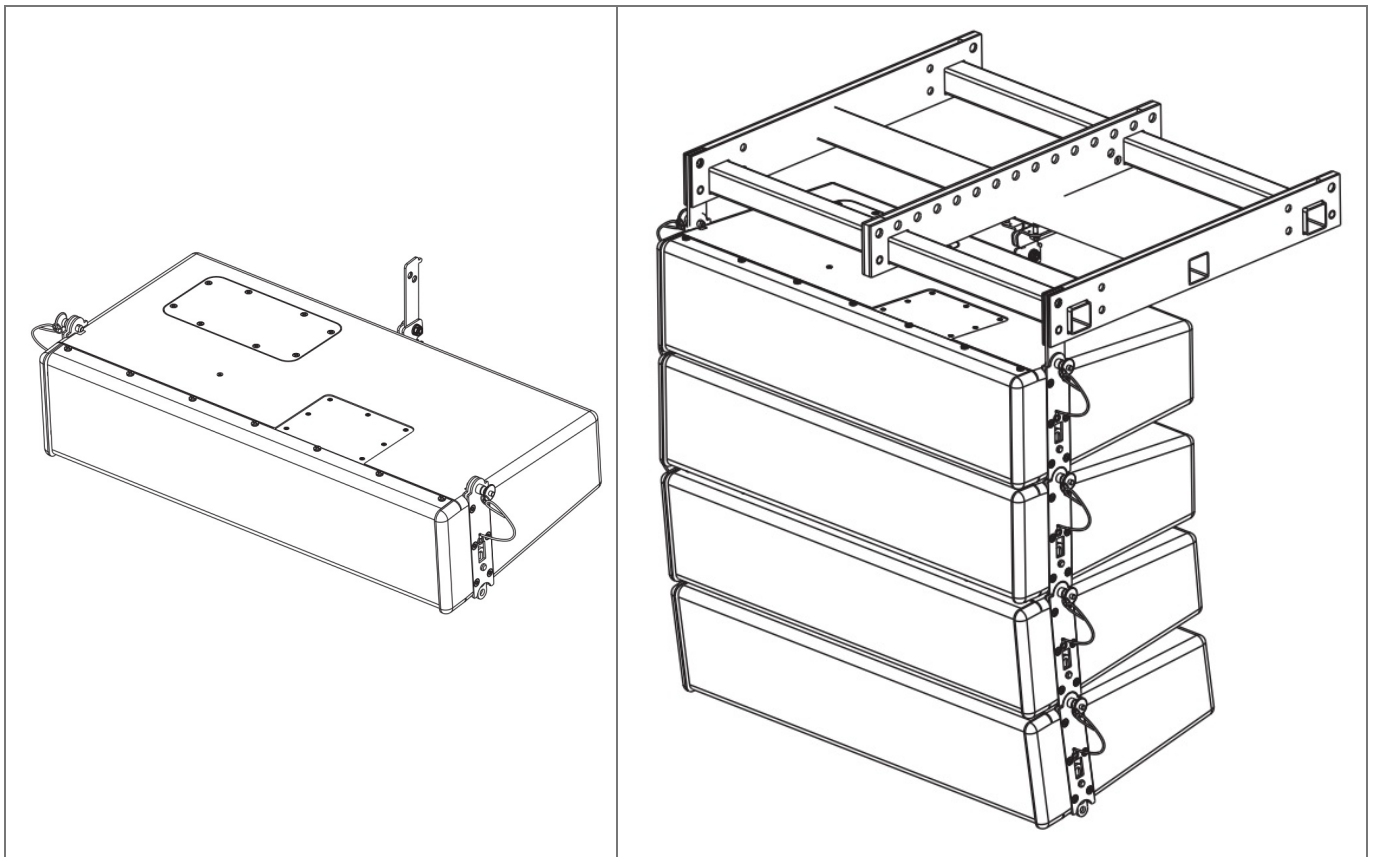
Beta Three R6 R Series 4×6 3 Way Full Range Medium Line Array System User Manual

[Home](#) » [Beta Three](#) » Beta Three R6 R Series 4×6 3 Way Full Range Medium Line Array System User Manual 



Beta Three

R6
R Series 4×6" 3 Way Full
Range Medium Line Array System
User Manual



Contents

- [1 SAFETY INSTRUCTIONS](#)
- [2 PRODUCT INTRODUCTION](#)
- [3 Product Description](#)
- [4 NL4 Wiring Connection](#)
- [5 INSTALLATION](#)
- [6 CONNECTING DIAGRAM](#)
- [7 TECHNICAL SPECIFICATIONS](#)
- [8 Documents / Resources](#)
 - [8.1 References](#)
- [9 Related Posts](#)



SAFETY INSTRUCTIONS

PLEASE READ THIS MANUAL FIRST

Thank you for buying β_3 product. Read this manual first as it will help you operate the system properly. Please keep this manual for future reference.



WARNING: This product must be installed by professionals. When using hanging brackets or rigging other than those supplied with the product, please ensure they comply with the local safety codes.

	CAUTION	
	RISK OF ELECTRICAL SHOCK DO NOT OPEN	
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.		



The exclamation point within an equilateral triangle is intended to alert you to the presence of important operating and servicing instructions.



ATTENTION: Don't refit the system or spare parts without being authorized as this will void the warranty.



WARNING: Don't place naked flames (such as candles) close to the equipment.

1. Read the instruction manual first before using this product.
2. Please keep this manual for future reference
3. Pay attention to all warnings.
4. Obey all operating instructions.
5. Do not expose this product to rain or moisture.
6. Clean this equipment with a dry cloth.
7. Do not block any ventilation openings. Install according to the manufacturer's instructions.
8. Do not install this product near any heat source, such as a heater, burner, or any other equipment with heat radiation.
9. Only use spare parts supplied by the manufacturer.
10. Pay attention to the safety symbols on the outside of the cover.



Product information is updated without maybe notification, please visit www.elderaudio.com for the latest update.

PRODUCT INTRODUCTION

R6

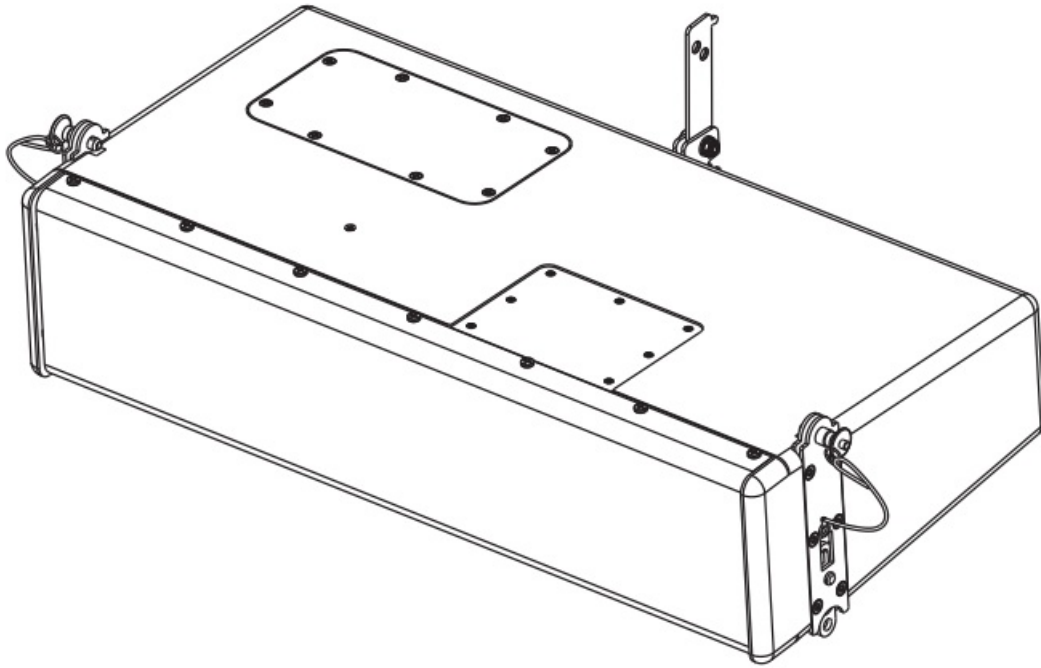
4×6" 3-way full-range medium line array system

Main Features

- Combines two 6" LF speakers, one 6" MF speaker, and one 155 belt type HF Driver.
- Frequency Response 50 Hz 20K Hz (-3dB).
- Sensitivity 98 dB, Max SPL 116 dB.
- RMS Power 140W Peak Power 560w.
- The system adopts the T shape structure and unique connection sockets, which shows good security. The

adjusted scope of the cabinet is 5°.

- The cabinet adopts new paints and advanced spraying techniques which greatly enhance the surface resistance.
- The sound produced by R6 is full and clear without any compromises on the massiness.
- R6 4 drivers three-way full-range speaker.



Product Description

As a medium-full range speaker in the line array series, p 3 R6 is composed of two 6" LF, one 6" MF, and one 155×65 ribbon HF driver. 50mm diameter voice coils are adopted in the LF driver with crossover frequency at 1k Hz. In the MF driver, a 38mm voice coil is used and the crossover frequency is set at 38mm. And the ribbon HF driver works between 3k – 30k Hz. The cross frequencies of the speaker are set reasonably. And the 3-way driver inner structure exempts the speaker from self disturbance.

The cabinet adopts new paints and advanced spraying techniques. the shape cabinet and the unique assembling screws enable high-security performance. The adjustable-rate of the cabinet is 5.

Angle adjustments can be handled easily by one person. The dispersion of the R6 is 120° x 30°. And if more than 4 pieces of R6 are rigged together, the vertical dispersion can be 90° x 10 °with a farther transmission distance.

In the LF speaker, the round copper wire in the 50mm diameter big power voice coil and the TIL bracket enhances the intensity and the endurance of the voice coil. In the MF speaker, the flat aluminum wire is adopted to enhance the sensitivity.

The RMS power of R6 can reach 140W and peak power can reach 560W. In the effective frequencies, a single speaker system can reach 95 dB of sensitivity.

The design of a parallel magnetic circuit can reduce the odd harmonic in the LF speaker to the fullest extent.

The cabinet of R6 is made of 15mm thick plywood with stretching resistance up to 3300N. The wedge structure frees the cabinet from any nails. The paint on the surface has high resistance to abrasion. The design of rigging methods is so reasonable that it can free the cabinet from an outside force. And the pulling resistance of the rigging accessories is 7 times higher than required. (45000N)

Thanks to the Q235 material and the powder spraying techniques, the grill of R6 has high intensity and high salt mist resistance. In the atmosphere of 5% sodium hydroxide, it has a salt mist resistance duration of 96 hours. In actual application, it can keep itself rust-free for 5 years. The inner side of the grill is padded with cotton to protect it from rain.

R6 is mainly designed to reduce disturbance to the fullest extent and enhance the sound quality. In R6 we fully abide by the line array design patterns. When the length of the rigging has reached 7 meters, the system can meet the reinforcement requirement of the line array system, especially for the human voice. The sound characteristics

of R6 can be defined as “clear full and without any compromises on the Massiness.”

The well-known ribbon HF driver has excellent high-frequency performance, which can reach 30k Hz. It can fully meet people’s high-frequency sound requirements.

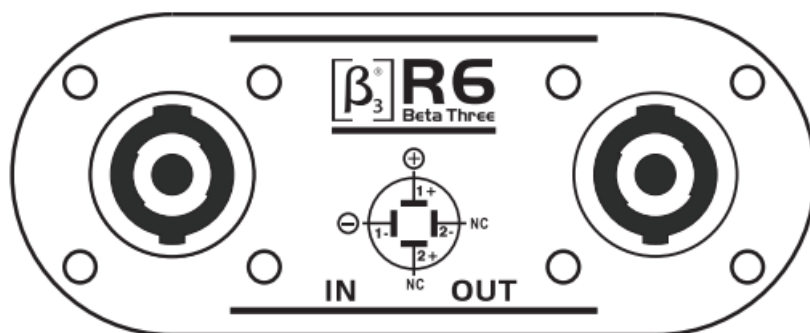
R6 is mainly applied in meeting rooms, large multifunction halls, auditoriums, churches, and mobile performances.

Applications

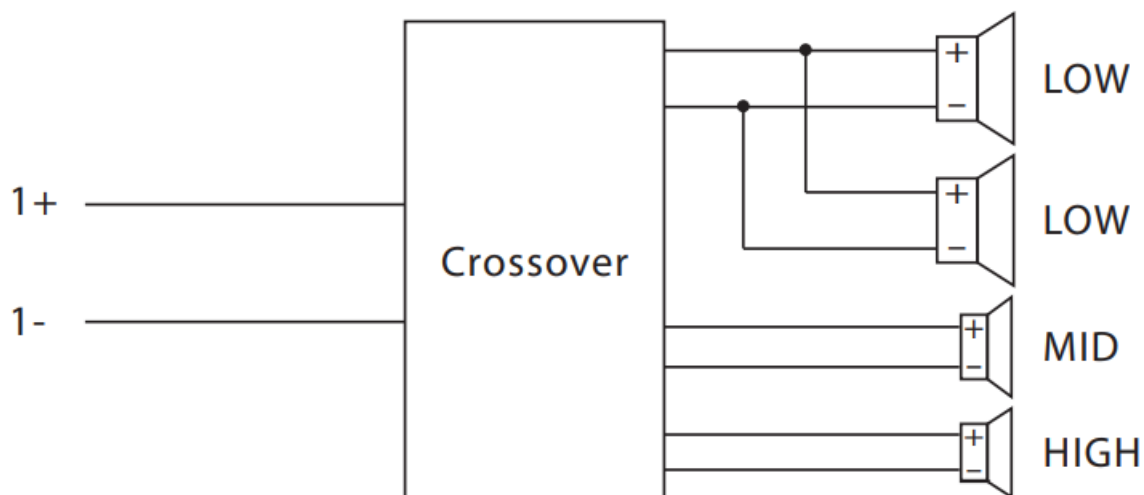
- Multi-function hall
- Auditorium
- Religion place
- All kinds of a living performance
- Assembly room

Two NL4 connectors are available for amplifier connections. The paralleled connector is very convenient for another speaker connection.

Speakon

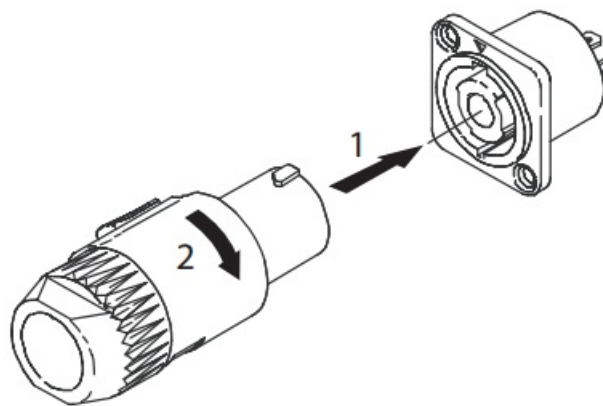


1+ 1- INPUT

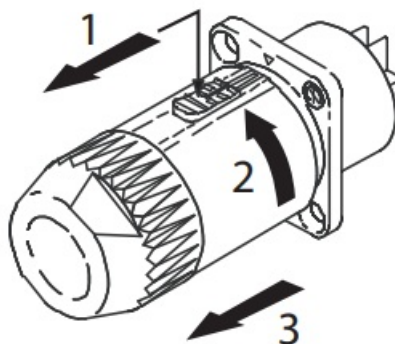


NL4 Wiring Connection

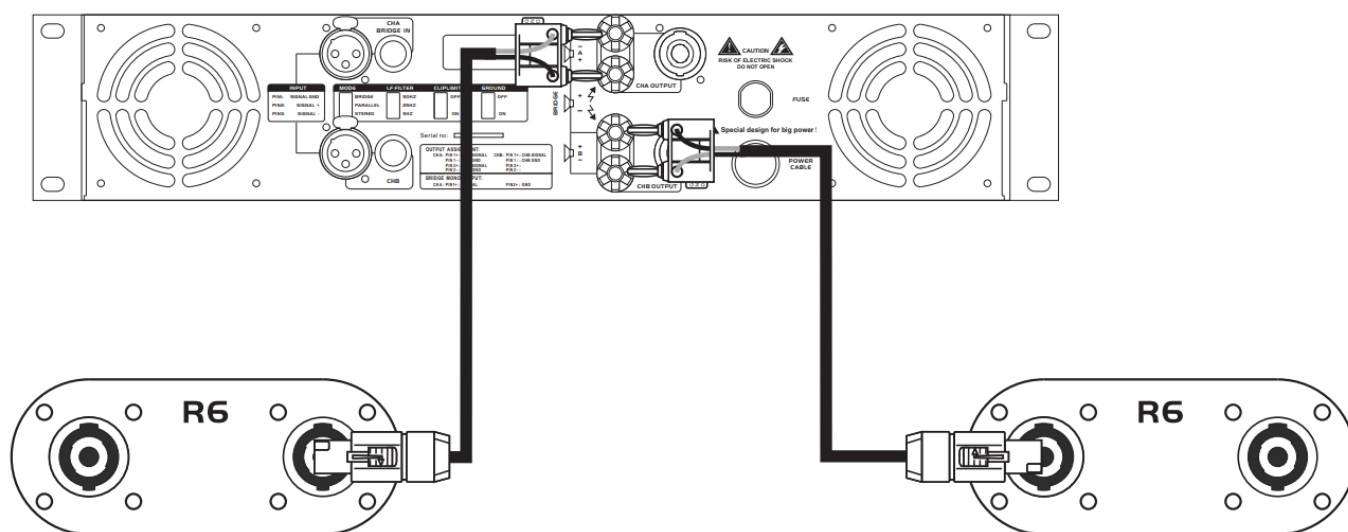
1. Connect



2. Disconnect



System Connection Reference



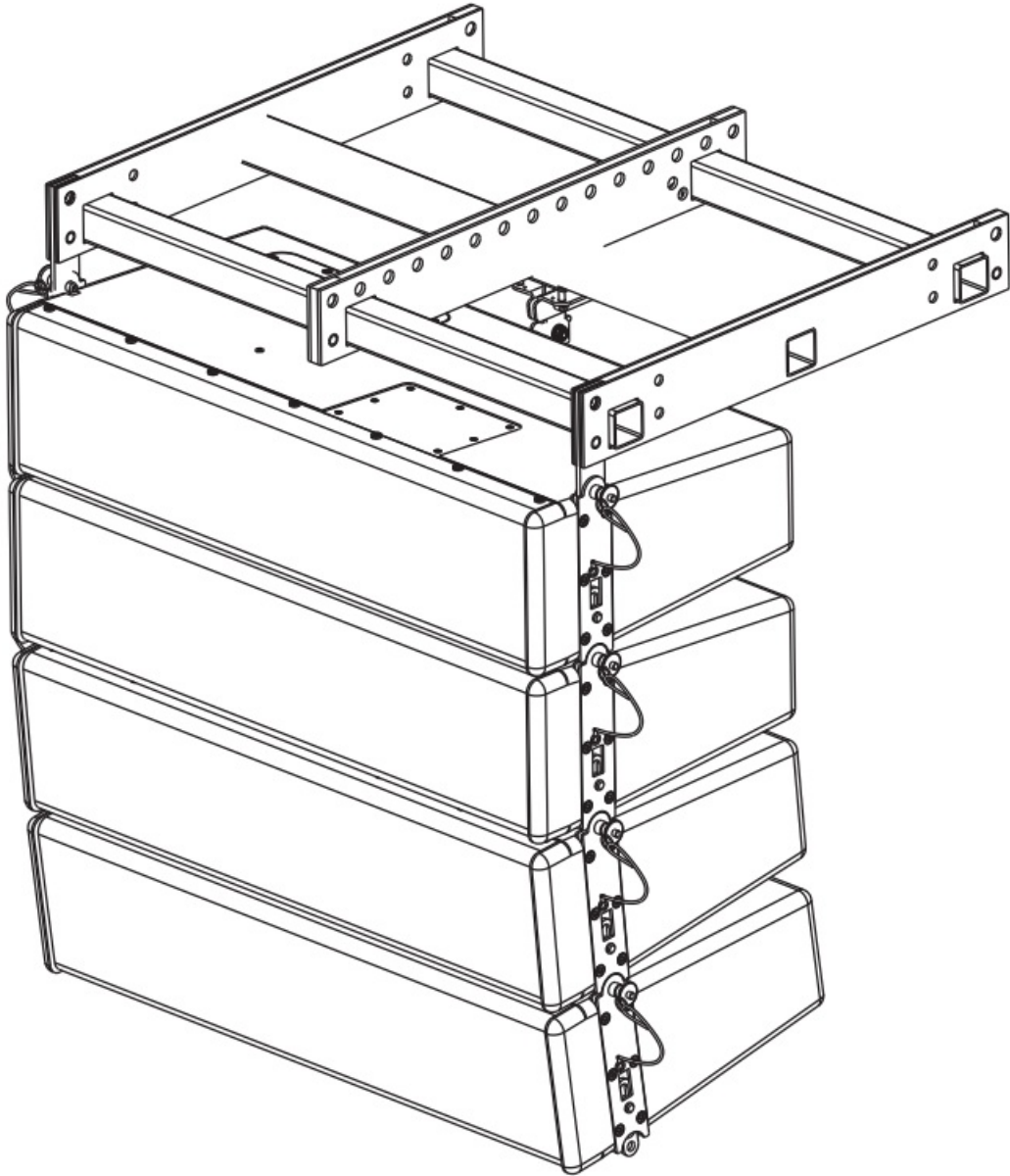
Warning: Please make sure the speaker impedance and polarity match the amplifiers.

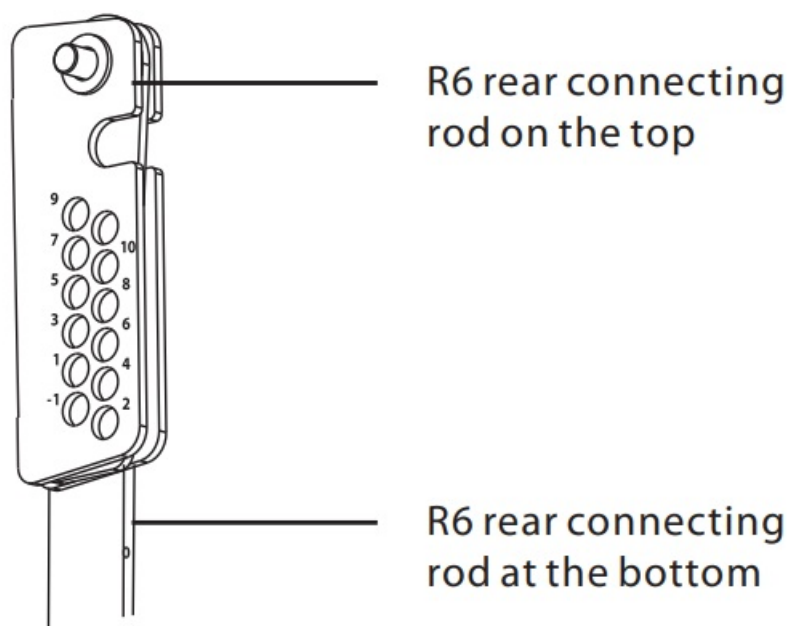
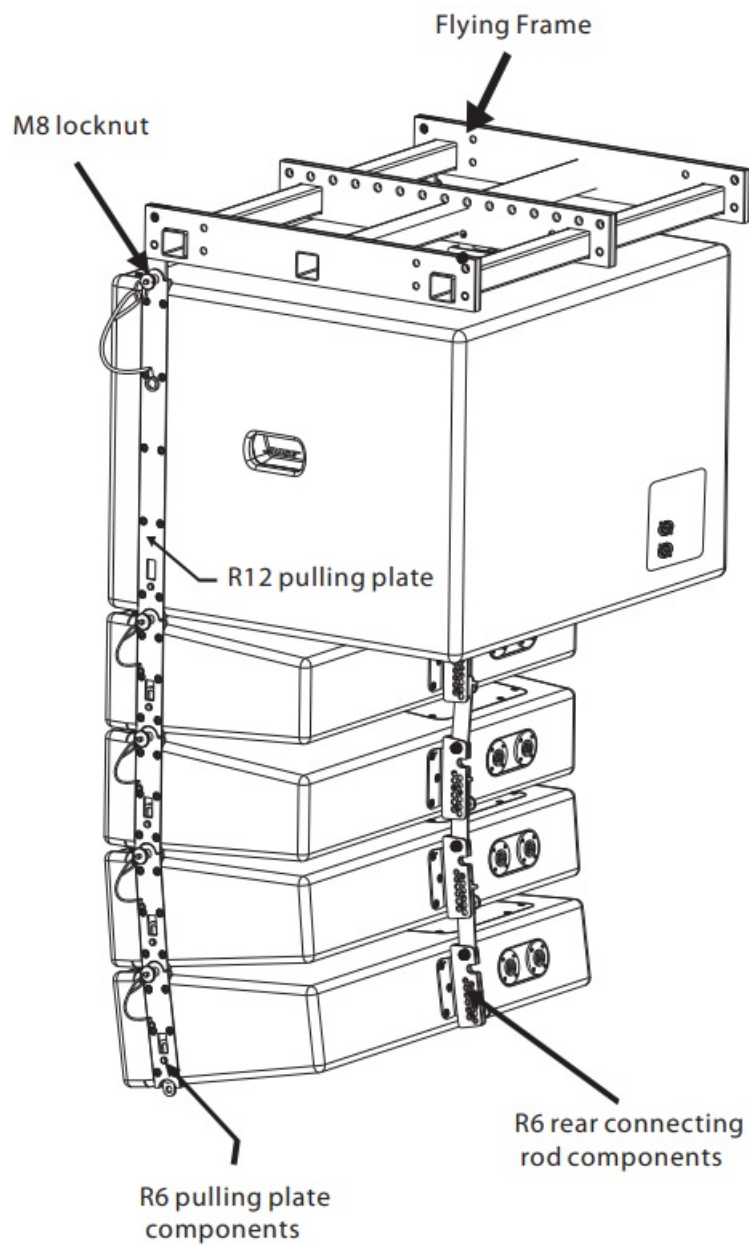
INSTALLATION

Installation Guidance

1. Open the package; take out R6, R12, and the accessories.
2. Install four U-rings into one flying frame.
3. Demount the ball-catch bolt from the pulling plate of R6, and place the R12 pulling plate lockpin into the slot of the R6 pulling plate with holes against each other, but the ball-catch bolt back.

4. Insert the connecting rod into the R6 rear and angle-adjustment slot of R12 on the bottom, and adjust the angle according to practical needs.
5. Install one or multiple sets of R6 by sequence onto the bottom of the previous R6.

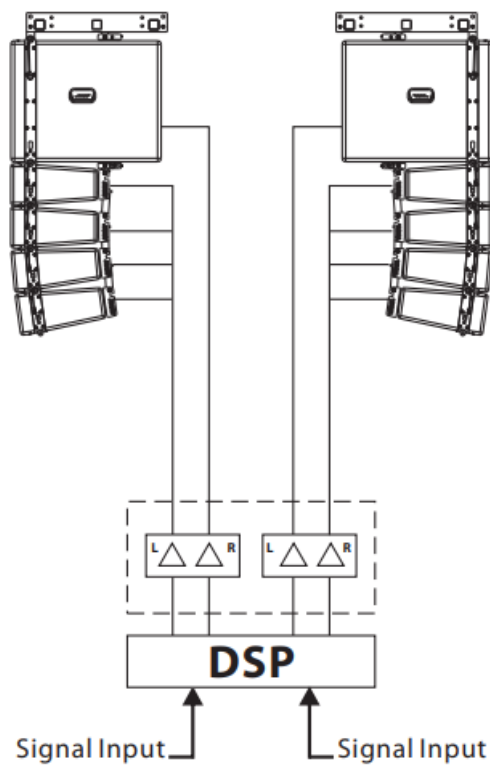
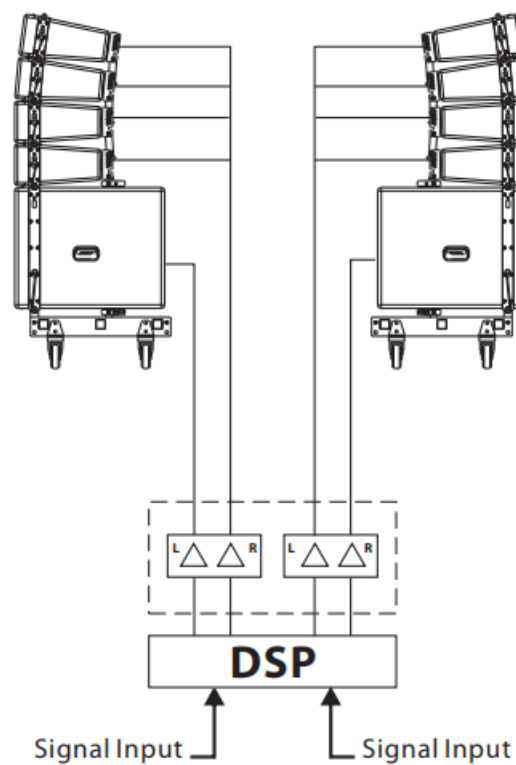




Warning: Make sure the mounting accessories' safety factor is not less than 5:1 or meets the local standard during installation.

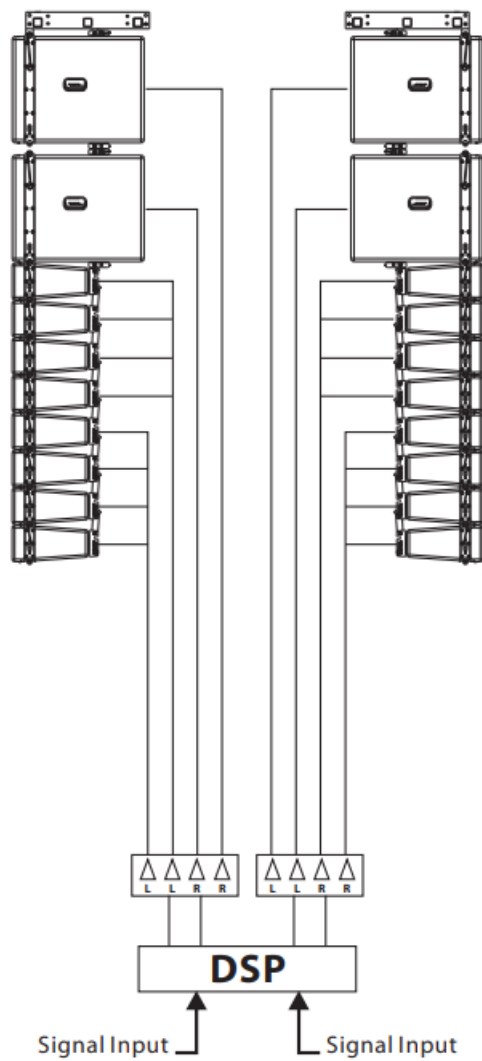
Method of angle adjustment:

When the angle of the hole against the connecting rod hole is 0, insert the bolt, and the vertical binding angle of the two cabinets is 0°. o

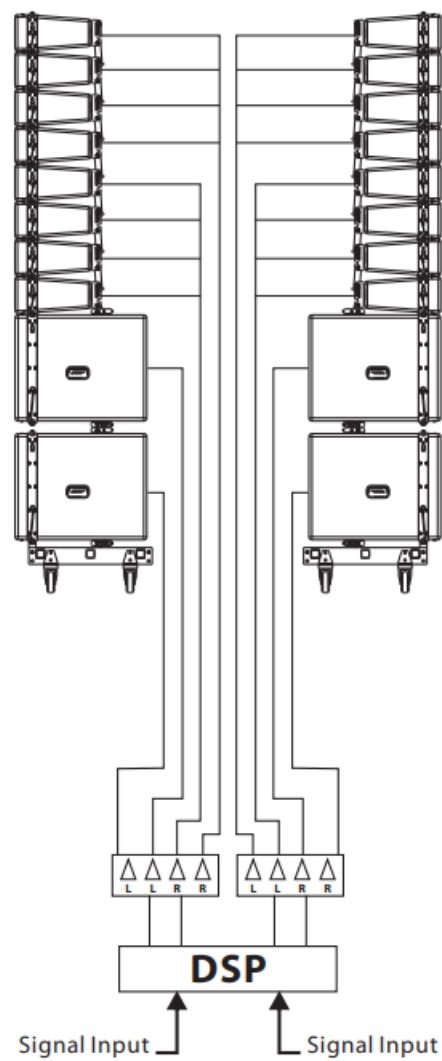
1. Application of mid-scale point source sound**A. Hanging****B. Grounding**

2. Application of large-scale point source sound

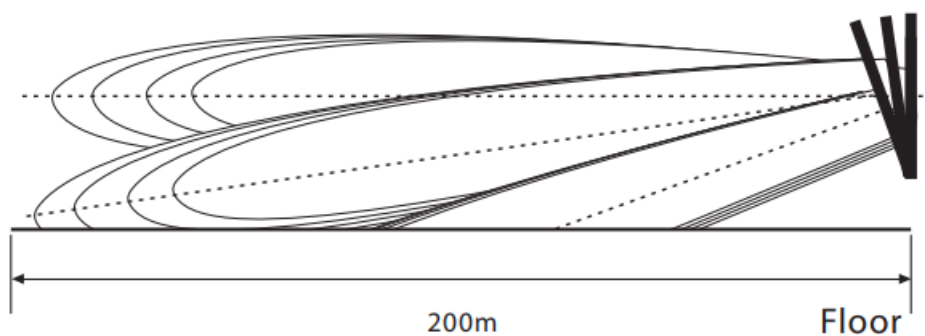
A. Hanging



B. Grounding



Coverage features of Line Array System

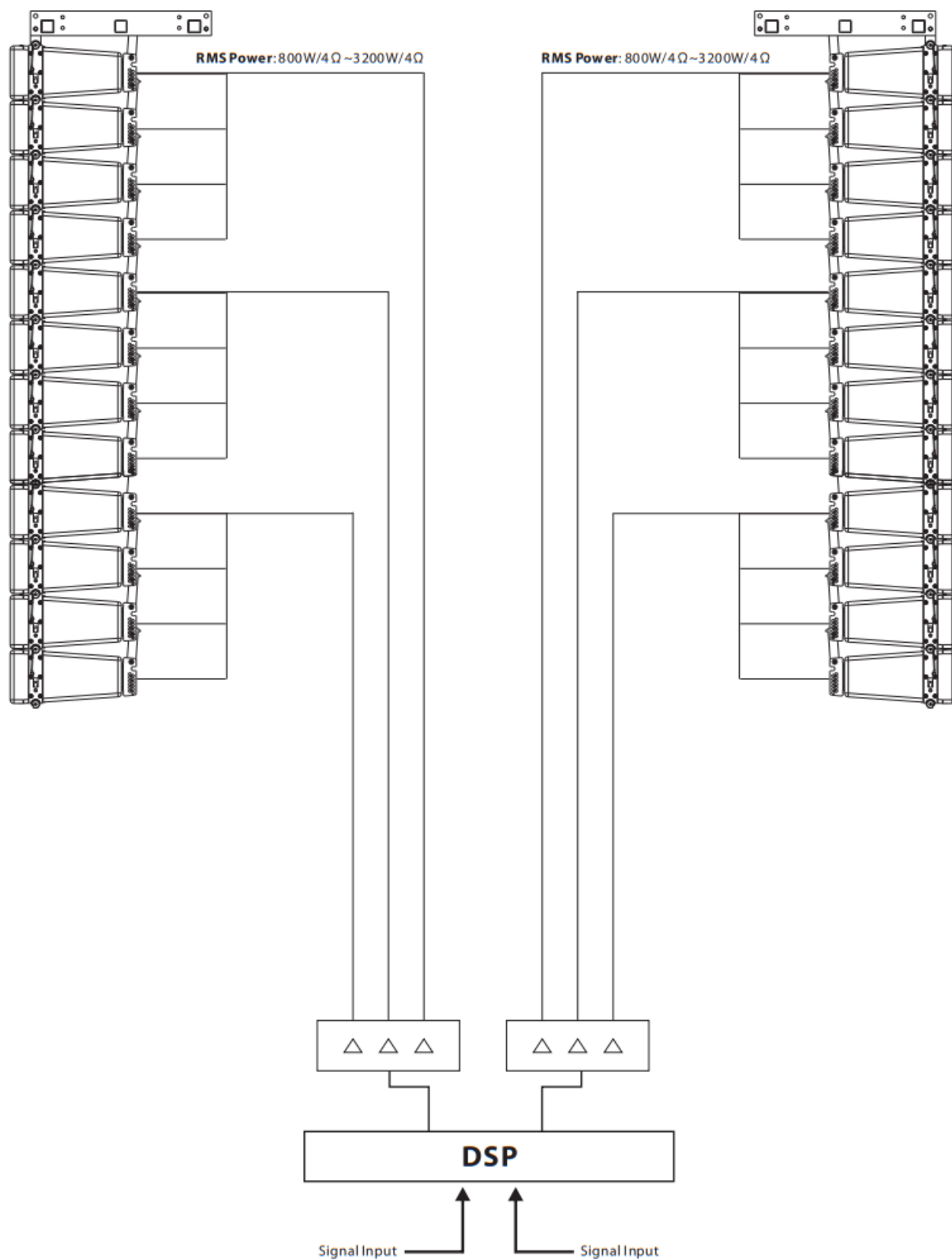


Warning: Always ensure the mounting accessories' safety factor is not less than 5:1 or that it meets the local standards.

CONNECTING DIAGRAM

Line Array Connecting Diagram

R6 has a built-in cross-over. With equalized power amplifier connecting to the DSP controller and frequency point setting at 160Hz, it can work normally.



Specifications

Product:	Passive Paint Wooden Full Range Speaker
Mid-high Driver:	1 X6.5" MF Driver + Ribbon HF drive
LF Driver:	2 X 6.5"LF Drivers
Frequency Response(-3dB)	50Hz-20kHz
Frequency Response(-10dB):	40Hz-20kHz
Sensitivity(1W@1 m)?.	95dB
Maximum. SPL(1m)3	116dB/122dB(PEAK)
Power:	140W (RMS) ⁴ 280W (MUSIC) 500W (PEAK)
Dispersion Angle (HxV) :	120° X 30°
Rated Impedance:	8 ohms
Cabinet:	Trapezoidal Cabinet , 15mm Plywood
Installation:	3-point Hanging
Paint:	Polyurethane-based painting. The steel grille is coated with powder to provide strong ultra-Weatherability
Connector:	NL4 X2
Dimension(WxDxH):	730X 363X 174mm (28.7X 14.3X 6.9in)
Packing Dimension(WxDxH):	840 X260 X 510mm (33.1 X 10.2 X 20.1in)
Net Weight:	17kg(37.4 lb)
Gross Weight:	19kg(41.8 lb)

TECHNICAL SPECIFICATIONS

Speaker Testing Method

1. Frequency Response

Use pink noise to test the speaker in the anechoic chamber, adjust the level to make the speaker work at its rated impedance, and set the output power at 1W, then test the frequency response 1m away from the speaker.

2. Sensitivity

Use full range Pink noise which has been modified using an EQ curve to test the speaker in the anechoic chamber, increasing the signal to make the speaker work at its rated impedance and set the power output at 1W, then test the sensitivity at 1m away from the speaker.

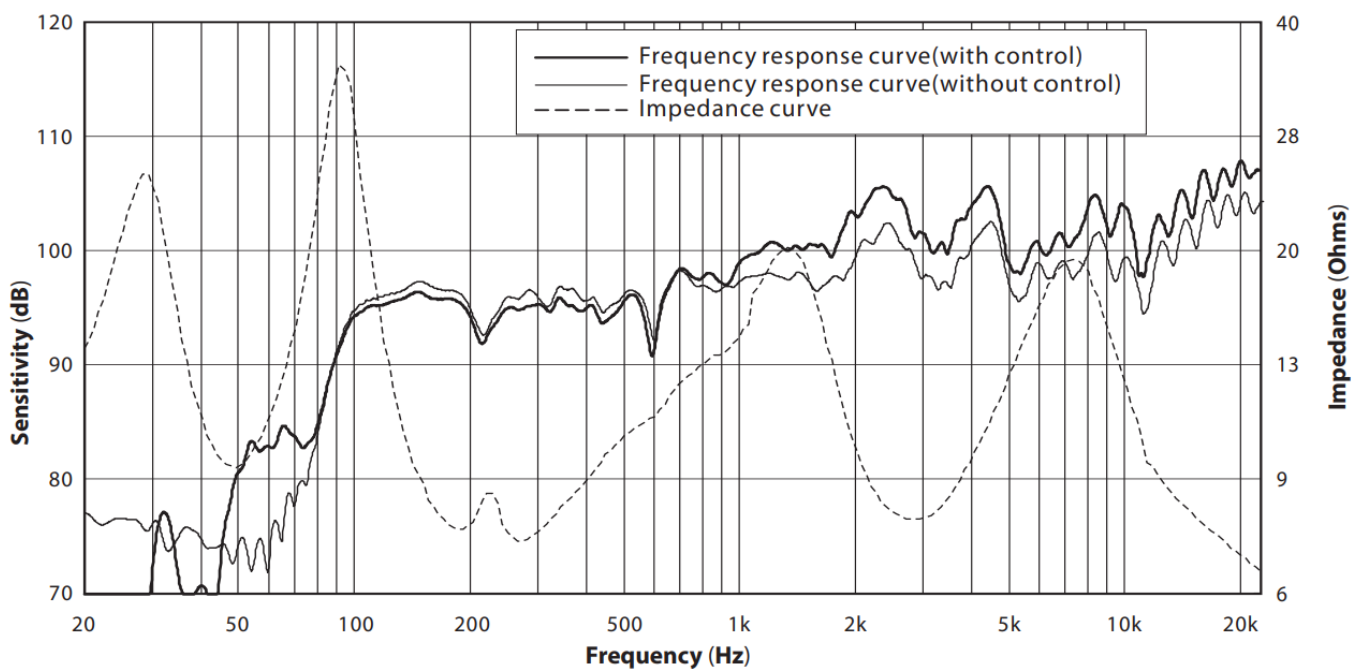
3. MAX.SPL

Use full range Pink noise which has been modified using an EQ curve to test the speaker in the anechoic chamber, increase the signal to make the speaker work at its maximum power output level, then test the SPL1m away from the speaker.

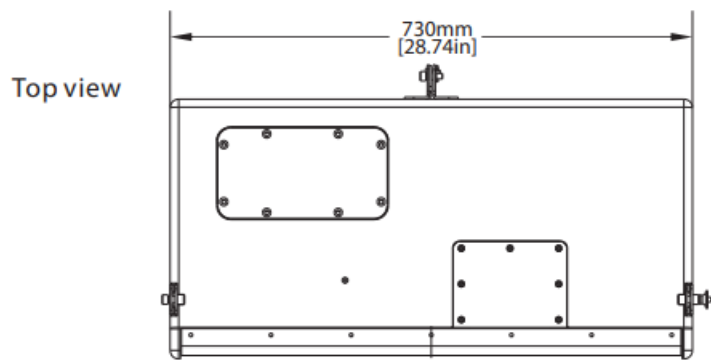
4. Rated Power

Use pink noise to the IEC#268-5 standard to test the speaker, and increase the signal for a continuous period of 100 hours, the rated Power is the power when the speaker will show no visible or measurable damage.

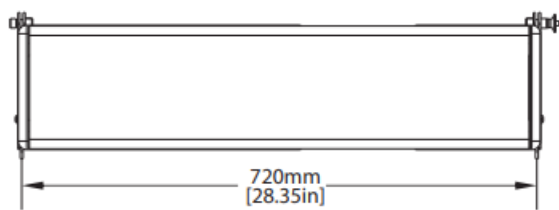
Technical Specifications



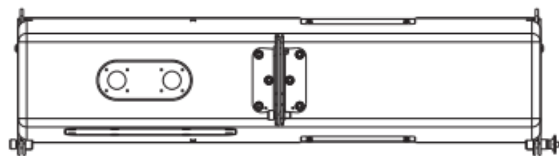
Dimensions



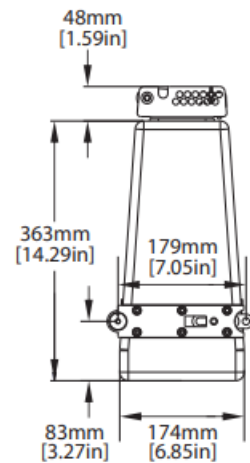
Front view



Back view



Side view



Notes:



Documents / Resources

	<p>Beta Three R6 R Series 4x6 3 Way Full Range Medium Line Array System [pdf] User Manual</p> <p>R6, R Series 4x6 3 Way Full Range Medium Line Array System</p>
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References

-  [Beta Three Professional Audio - Technology Creates Sound Enjoyment](#)
-  [_____](#)

Manuals+.