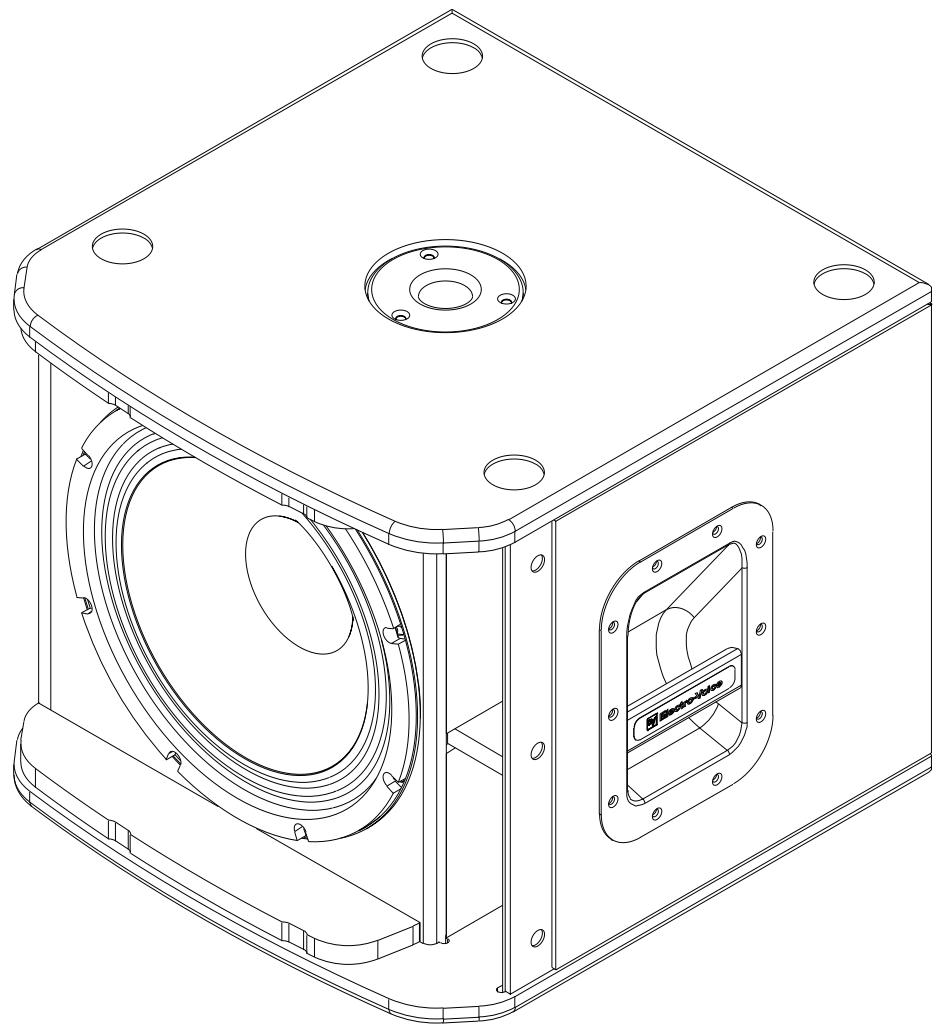
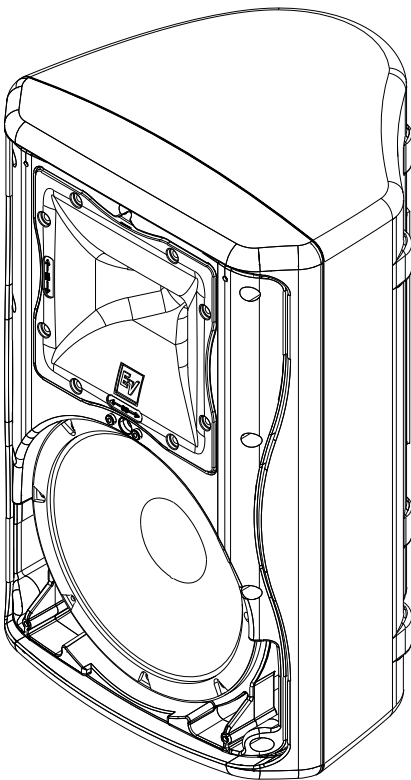


ZX1
ZX1-Sub

Zx1 Series Loudspeaker Owner's Manual



ZX1
ZX1-Sub

Live For Sound
www.electrovoice.com



Important Safety Instructions

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
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The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

WARNING:	TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.
AVIS:	RISQUE DE CHOC ELECTRIQUE. NE PAS OUVRIR.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING:	CONNECT ONLY TO MAINS SOCKET WITH PROTECTIVE EARTHING CONNECTION.
-----------------	---



The asterisk within an equilateral triangle is intended to inform the user to necessary installation or removal instructions regarding equipment or hardware use relating to the system.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
8. Only use attachments/accessories specified by the manufacturer.
9. Do not expose this apparatus to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on this apparatus.



Management of WEEE (waste electrical and electronic equipment) (applicable in Member States of the European Union and other European countries with individual national policies on the management of WEEE) The symbol on the product or on its packaging indicates that this product may not be treated as regular household waste, but has to be disposed through returning it at an Electro-Voice dealer.

Precautions



- If Zx1 loudspeakers are used outdoors on a sunny day, place the loudspeakers in a shaded or covered area.



- Do not use Zx1 loudspeakers in an environment where temperatures exceed +40°C (104°F).



- Never expose a Zx1 loudspeaker to rain, water, or high moisture.



- Electro-Voice Zx1 loudspeakers are easily capable of generating sound pressure levels sufficient to cause permanent hearing damage to anyone within normal coverage distance. Caution should be taken to avoid prolonged exposure to sound pressure levels exceeding 90 dB.

Table Of Contents

Description	4
System Features.....	4
Specifications	5
Tripod and Floor Monitor Operation	6
Suspending Zx1 Loudspeakers.....	8
Rotating the 90° Horn	9
Rotating the Logo	9
Recommended Configurations.....	10
Dimensions.....	12
Frequency Response Graphs	13
Zx1 Model Reference Table.....	13
Troubleshooting.....	14

Description

Thank you for choosing an Electro-Voice Zx1 passive loudspeaker system. Please take time to consult this manual to understand all the features built into your Electro-Voice system and fully utilize its performance capabilities.

Only to be expected from Electro-Voice, the Zx1 packs a big-stage punch. Electro-Voice drivers, components, and amplifiers are legendary—all proven at the highest levels of live performance. Zx1 wraps Electro-Voice technology in a durable, lightweight cabinet, resulting in the most powerful and versatile compact loudspeaker available today. Match Zx1 with the Zx1-Sub to create a truly exceptional professional sound system.

System Features

Zx1 – 8” Two-Way Powered Loudspeaker

The Zx1 is a compact, powerful and versatile choice for sound reinforcement and stage monitoring applications—lightweight and durable, with a 800 W amp.

- Extremely Smooth, Wide Frequency Response
- Attractive, Clean Design with Full Grille
- EV8L 8 in High-Output LF Transducer
- DH2005 1” Exit True Compression Driver
- 90° x 50° Coverage Pattern
- Rotatable Horn Design
- Integral Monitor Angle on Enclosure
- 200W Cont., 800 W Peak Power Handling
- High Sensitivity, 123 dB Maximum SPL
- Built-In Pole Mount
- Integral Handle Pocket for Easy Carrying

Zx1-Sub – 12” Passive Subwoofer

Optimized for performance with the Zx1-Sub adds a deep, low-frequency, punch that you can hear and feel.

- 15 mm Plywood Enclosure, Internally Braced, with Textured Paint
- EVS-12S 305 mm (12 in) Woofer for Powerful, Engaging Bass Response
- Pole Mount for Full-Range Systems



Specifications

Model	Zx1-90	Zx1-Sub
Freq. Response (-3dB) ¹ :	60 Hz – 20 kHz	53 Hz – 125 Hz
Freq. Range (-10dB) ¹ :	48 Hz – 20 kHz	42 Hz – 200 Hz
Rec. Hipass Frequency:	40 Hz	38 Hz
Axial Sensitivity:	94 dB (1W / 1m)	94 dB
Max. Measured SPL ^{1, 2} :	126 dB	127 dB
Horizontal Coverage:	90° or 50°	Omnidirectional
Vertical Coverage:	50° or 90°	Omnidirectional
Power Handling:	200 W Cont., 400 W Prog., 800 W Peak	400 W Cont., 800 W Prog., 1600 W Peak
LF Transducer:	EV8L, 203 mm (8 in) Driver	EVS-12S, 305 mm (12 in) Woofer
HF Transducer:	DH2005, 25.4 mm (1") Exit Compression Driver	N/A
Crossover Frequency:	1.7 kHz	N/A
Nominal Impedance:	8 Ω	8 Ω
Minimum Impedance:	6 Ω	7.5 Ω
Connectors:	Speakon NL4 (2)	Speakon NL4 (2)
Enclosure Material:	ABS	9-ply 15 mm Plywood, Internally Braced, with Textured Paint
Grille:	Polyester Powder Coated 18GA Galvanized Steel	16 GA Steel with Black Powdercoat
Dimensions (H x W x D):	457mm x 282mm x 264mm (17.98 in x 11.12 in x 10.38 in)	400 mm x 444.5 mm x 457.2 mm (15.75 in x 17.50 in x 18.00 in)
Net Weight:	8.4 kg (18.5 lb)	19.8 kg (43.6 lb)
Shipping Weight:	10.2 kg (22.5 lb)	25.4 kg (56.0 lb)

1. Half-Space Measurement

2. Maximum SPL is measured in 1m using broadband pink noise at rated peak power rating.

Tripod and Floor Monitor Operation

Floor Monitor

Electro-Voice Zx1 loudspeakers may be used as a floor monitor by placing the speaker on the integral monitor angle. Make sure to:

- Place the speaker on a level, stable surface that is solid and secure.
- Route cables and position the stand so that performers, production crew and audience members will not trip over the stand or cables and pull the speaker system over.
- Secure cables with wire ties or tape whenever possible.

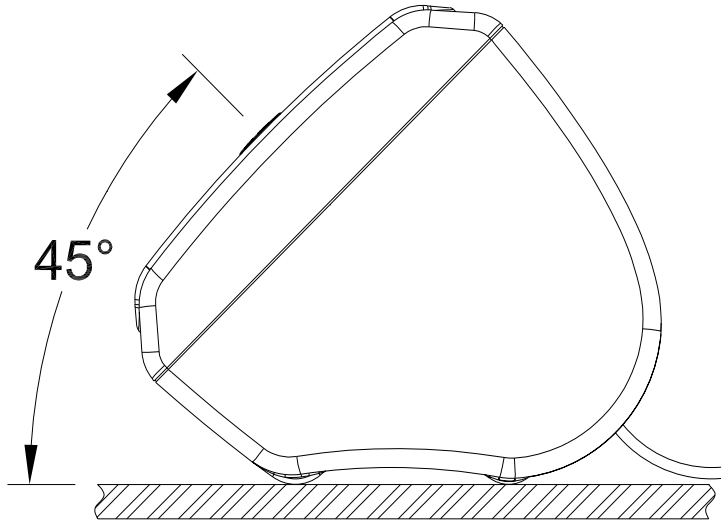


Figure 1:
Zx1 Monitor Position

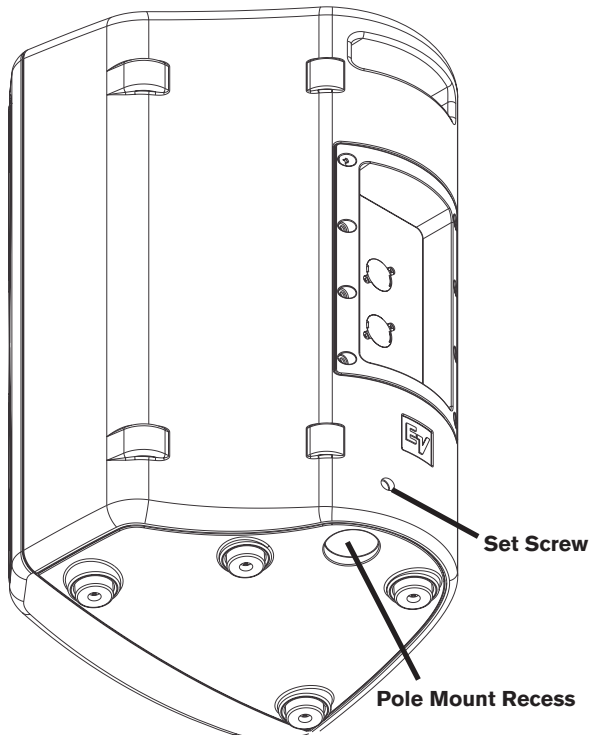


Figure 2a:
Zx1 Pole Mount Location

Tripod and Floor Monitor Operation (cont')

Tripod

Electro-Voice Zx1 speakers include 35mm (1-3/8 inch) stand mounts to allow mounting on tripod stands. Make sure to:

- Check the specifications of the speaker stand to be certain it is capable of supporting the weight of the speaker.
- Check that the speaker stand is placed on a flat, stable surface and be sure to fully extend the legs of the stand. Do not try to make the stand "taller" and compromise its structural integrity.
- Route cables and position the stand so that performers, production crew and audience members will not trip over the stand or cables and pull the speaker system over.
- Secure cables with wire ties or tape whenever possible.
- Do not attempt to suspend more than one speaker on a stand designed for a single speaker.
- Unless you are confident that you can safely handle lifting the weight of the speaker onto the stand, ask another person to help you place it.
- Tighten the set screw to minimize rattling and to prevent the speaker from rotating during use.

Pole Mount

Electro-Voice Zx1-Sub speakers include 35mm (1-3/8 inch) pole mount cups to allow mounting a full range speaker above it. Make sure to:

- Use a speaker pole that is no longer than 1.2 m (4 ft) and mount a speaker weighing no more than 11.3 kg (25 lb).
- Check that the Zx1-SUB is placed on a flat and stable surface.

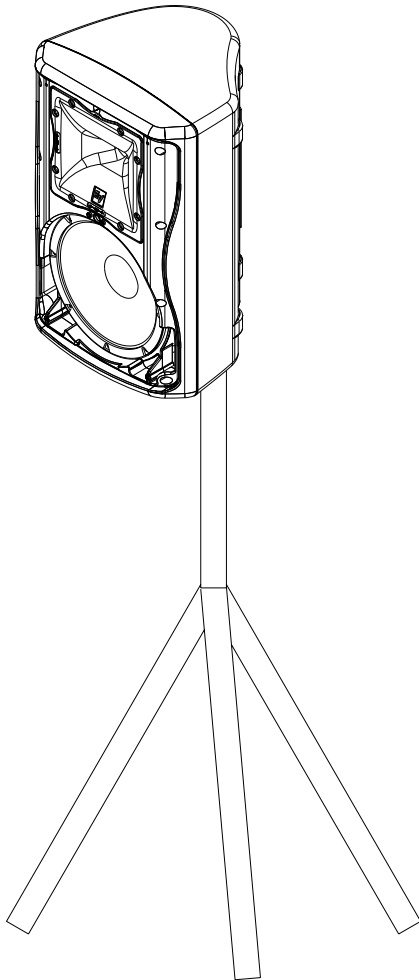


Figure 2b:
Zx1 on Tripod Stand

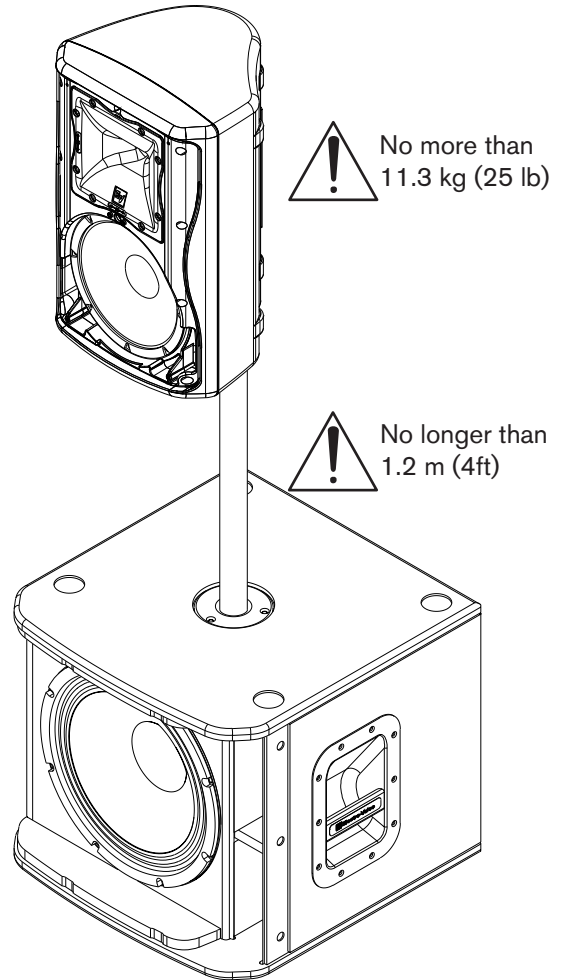


Figure 2c:
Zx1 and Zx1-Sub Full-Range/Sub Stack with Pole Mount

Suspending Zx1 Loudspeakers

Electro-Voice Zx1 loudspeakers may be safely suspended with single stud fittings by using the MP1 suspension kit, or quickly attached to a truss by using the CA-Zx truss clamp adaptor (both sold separately). See MP1 or CA-Zx instruction sheets for proper assembly and use.



WARNING:

Suspending any object is potentially dangerous and should only be attempted by individuals who have a thorough knowledge of the techniques and regulations of rigging objects overhead. Electro-Voice strongly recommends that Zx1 speakers be suspended taking into account all current national, federal, state and local regulations. It is the responsibility of the installer to ensure that Zx1 speakers are safely installed in accordance with all such regulations. If Zx1 speakers are suspended, Electro-Voice strongly recommends that the system be inspected at least once a year. If any sign of weakness or damage is detected, remedial action should be taken immediately. There are instruction sheets for each EV Suspension and Array Kit that should also be consulted prior to suspending speakers.

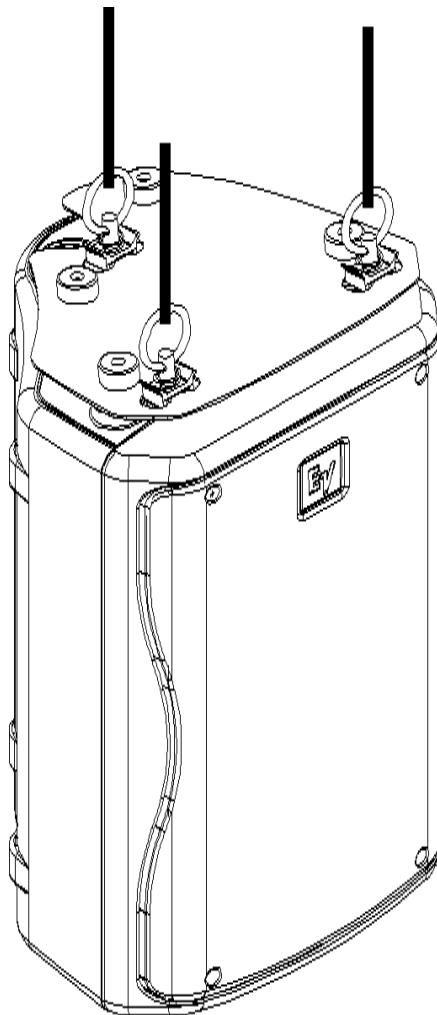


Figure 3:
MP1-B Mounting Plate Accessory

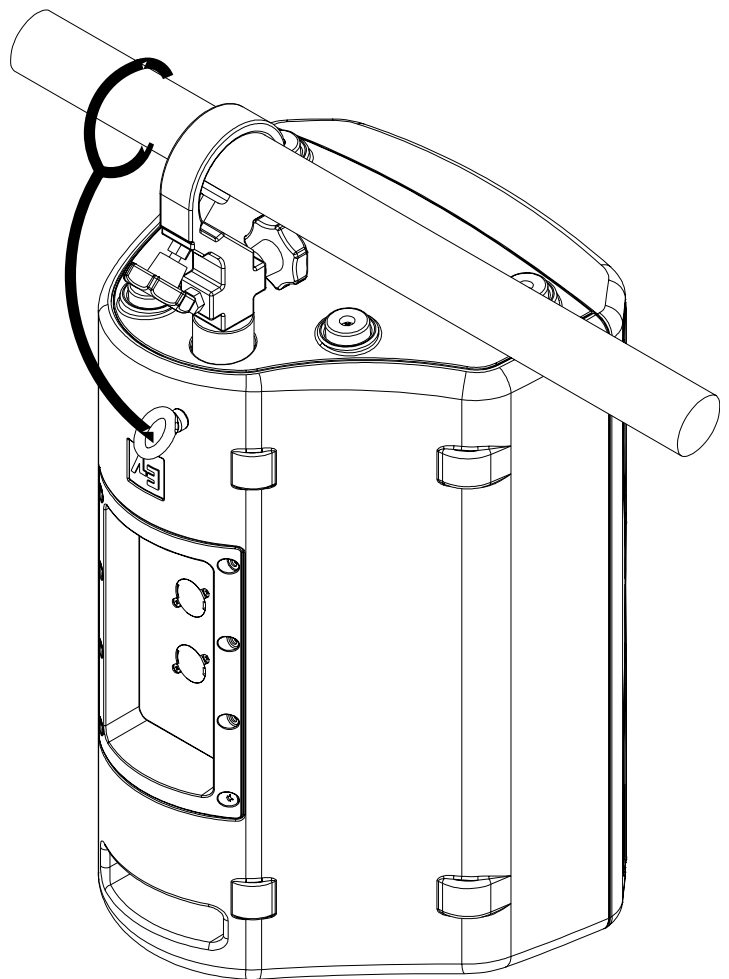


Figure 4:
CA-ZX Truss Clamp Accessory

Rotating the 90° Horn

The 90° version of the Zx1 allows for the horn to be rotated for more effective coverage if desired. The horn is factory-installed with the 90° coverage in the horizontal plane and the 50° coverage in the vertical plane. The 100° version of the Zx1 has the same coverage pattern in both the horizontal and vertical planes, so rotating the horn will not change the coverage pattern.

To **rotate the horn** follow the steps below:

1. Remove the **grille screws/grille assembly**.
2. Remove the **horn screws/horn assembly**.
3. Rotate the **horn assembly 90°**.
4. Secure the **horn assembly with the horn mounting screws**.
5. Secure the **grille assembly with the grille mounting screws**.

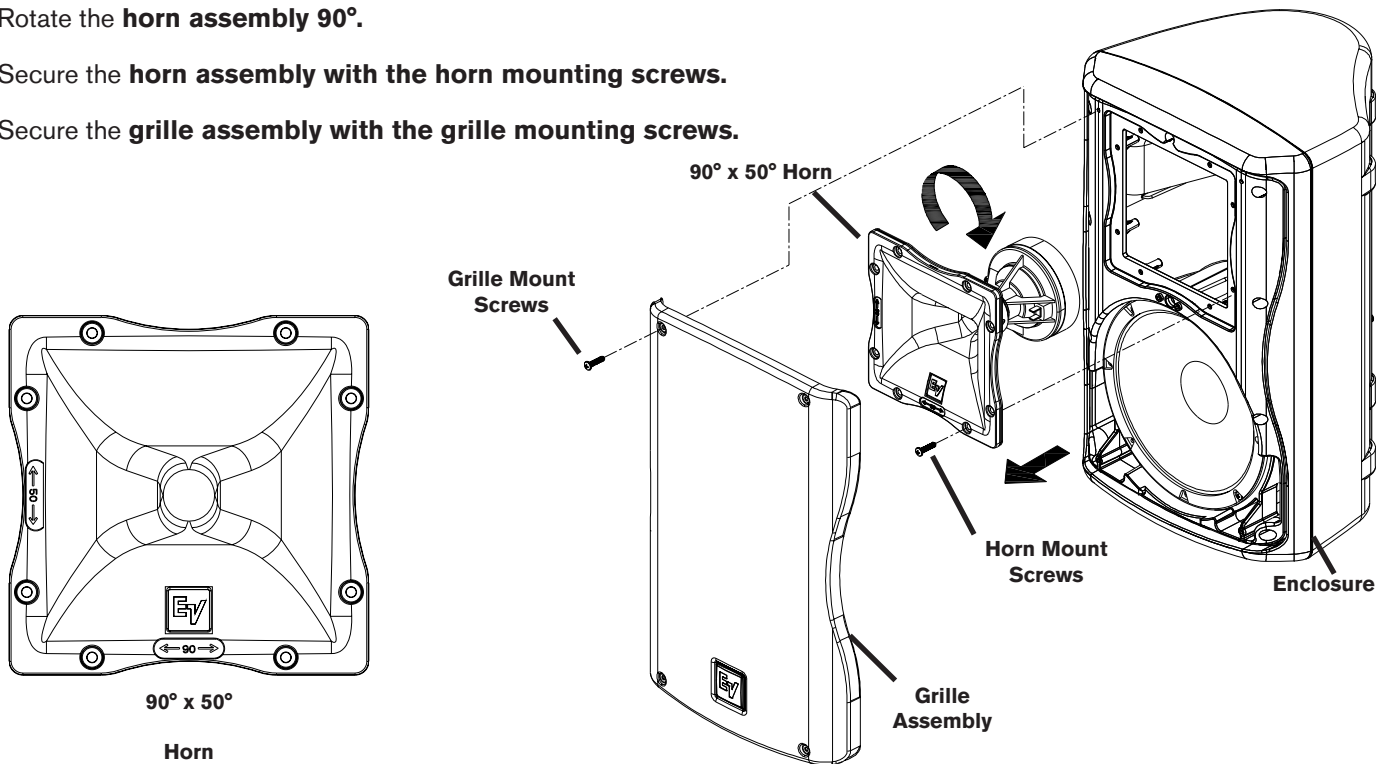


Figure 5:
Rotating the Zx1-90 Horn

Rotating the Logo

All versions of the Zx1 (except the Zx1-Sub) allow for the logo badge to be rotated, if desired. The logo badge is square and can be rotated in 90° increments.

To **rotate the logo badge**, follow the steps below:

1. Using your finger or a flat-edge screwdriver (using care not to scratch grille), grip/pry under the **logo badge**.
2. Pull the **logo badge** outwards from the logo recess until it fully clears the front surface of the grille.
3. Rotate the **logo badge**, in 90° increments, to the desired orientation.
4. Release the **logo badge** and let it “spring” back into the logo recess.

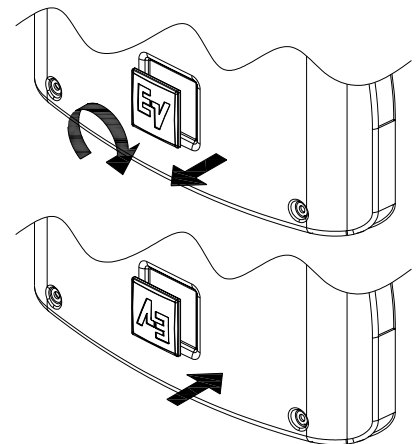



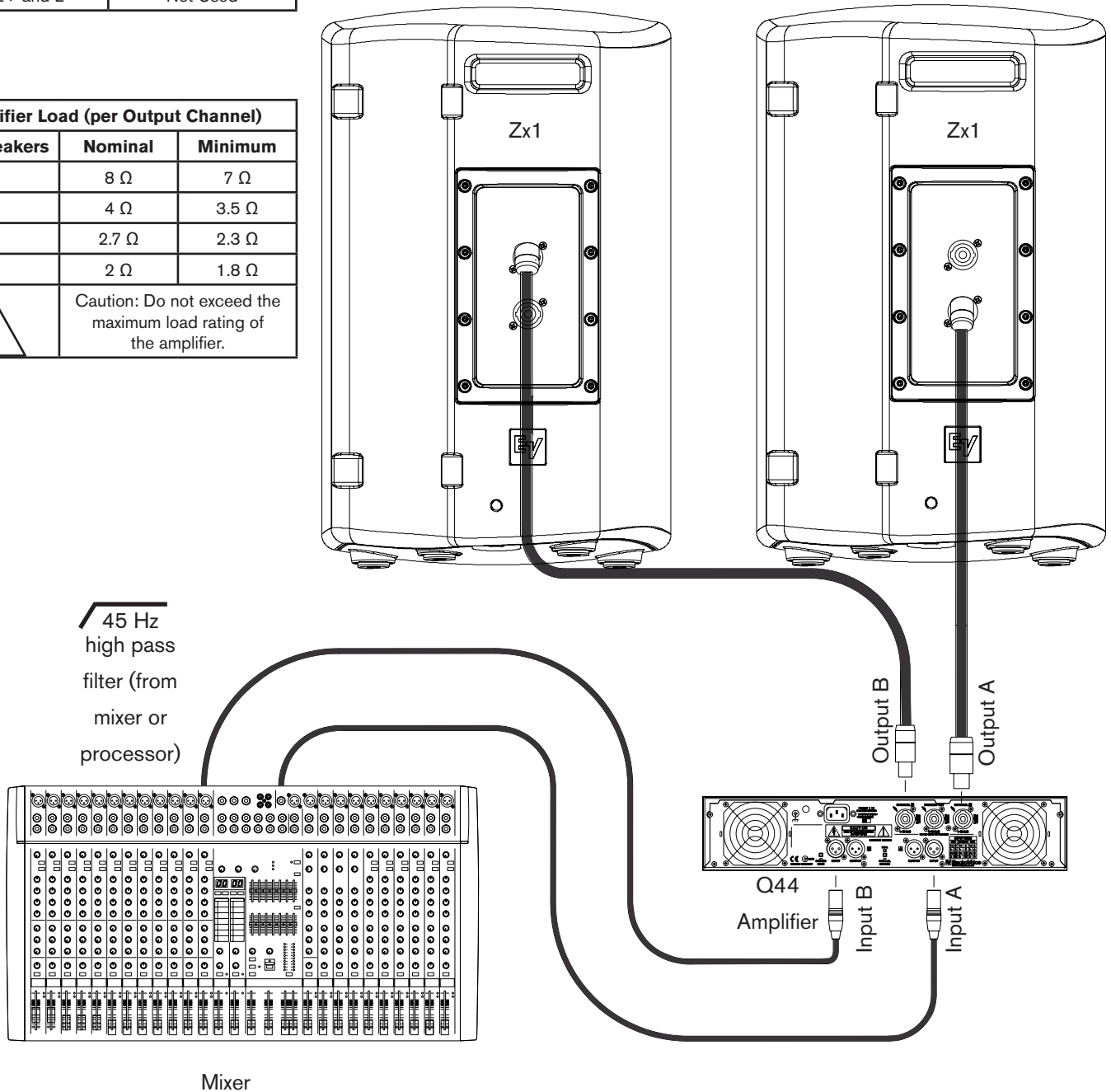
Figure 6:
Rotating the Zx1 Logo

Recommended Configurations

Basic Stereo System using Zx1's

NL4 Pin Configuration	
Pins 1+ and 1-	Used
Pins 2+ and 2-	Not Used

Amplifier Load (per Output Channel)		
# of Speakers	Nominal	Minimum
1	8 Ω	7 Ω
2	4 Ω	3.5 Ω
3	2.7 Ω	2.3 Ω
4	2 Ω	1.8 Ω
	Caution: Do not exceed the maximum load rating of the amplifier.	



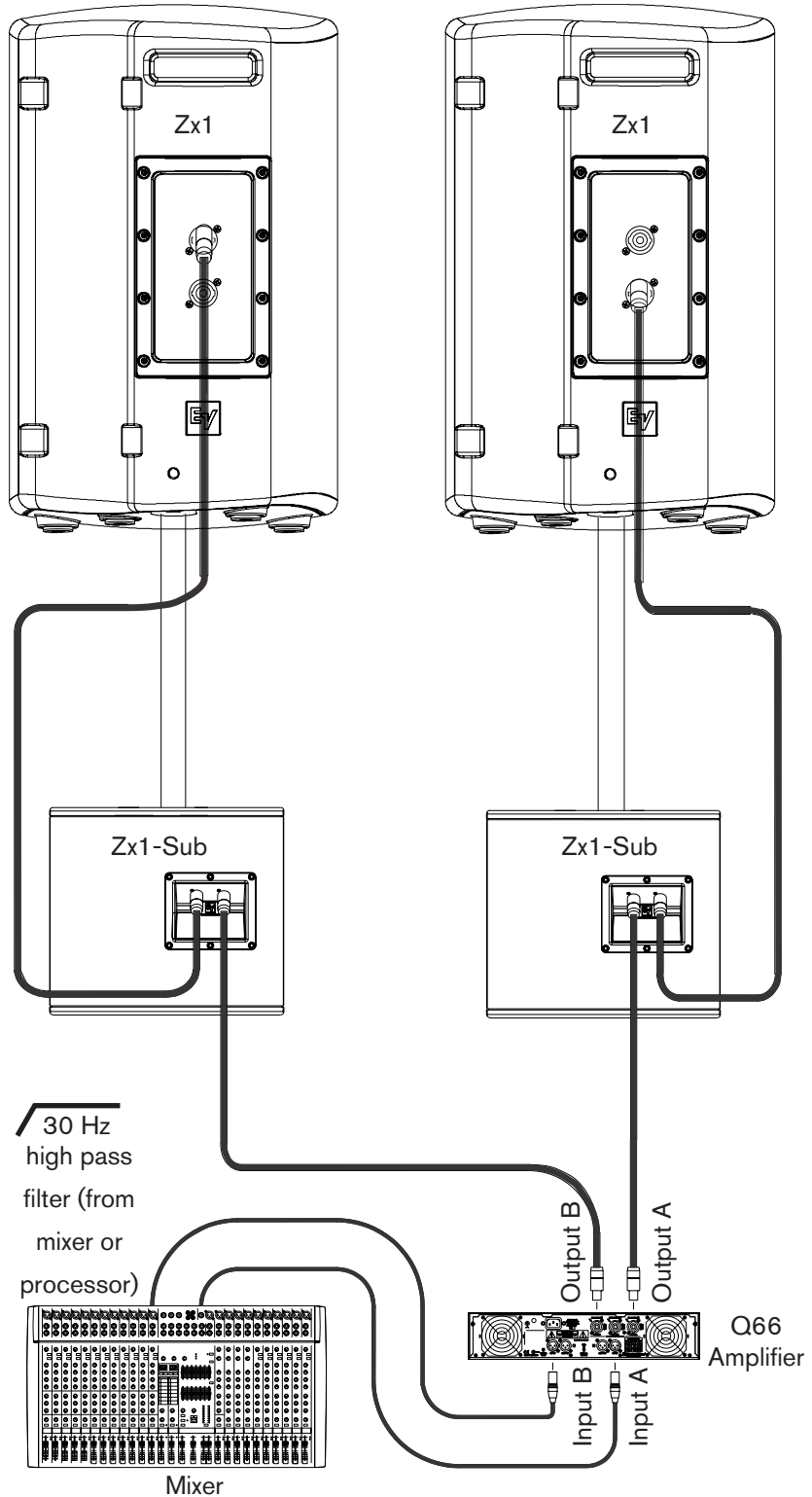
Recommended Configurations (cont')

Linking Zx1-Sub subwoofers to Zx1's

This configuration allows a user to increase the low frequency performance without using additional amplifier channels.

NL4 Pin Configuration	
Pins 1+ and 1-	Used
Pins 2+ and 2-	Not Used

Amplifier Load (per Output Channel)		
# of Subwoofer/ Full-Range Combinations	Nominal	Minimum
1	6 Ω	4.6 Ω
2	3 Ω	2.3 Ω
	Caution: Do not exceed the maximum load rating of the amplifier.	

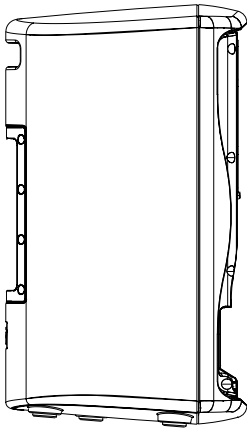


ZX1

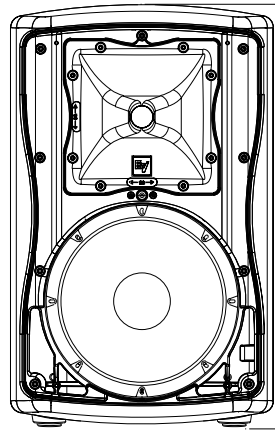
ZX1-Sub

Dimensions

Zx1

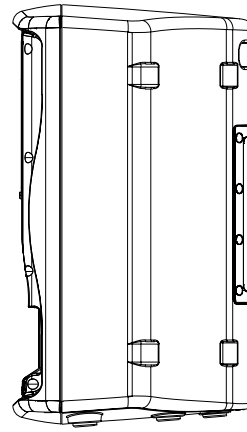


Left View

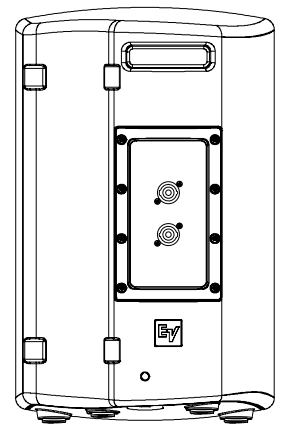


Front View

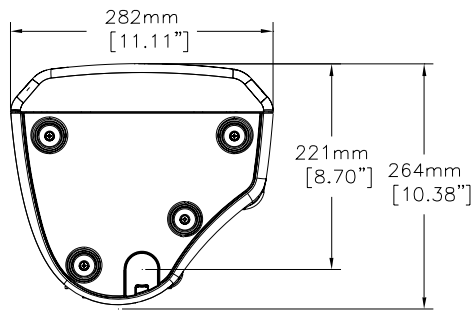
457mm
[17.98"]



Right View



Rear View



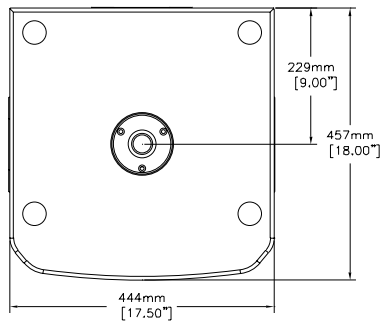
Bottom View

282mm
[11.11"]

221mm
[8.70"]

264mm
[10.38"]

Zx1-Sub

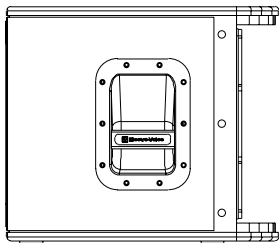


Top View

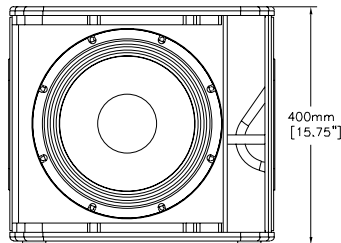
229mm
[9.00"]

457mm
[18.00"]

444mm
[17.50"]

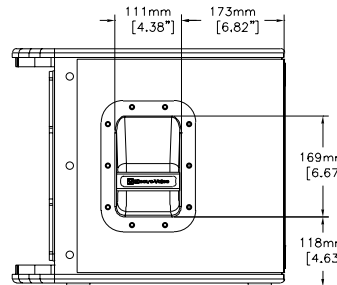


Left View



Front View

400mm
[15.75"]



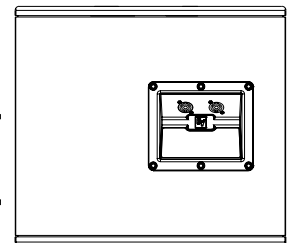
Right View

111mm
[4.38"]

173mm
[6.82"]

169mm
[6.67"]

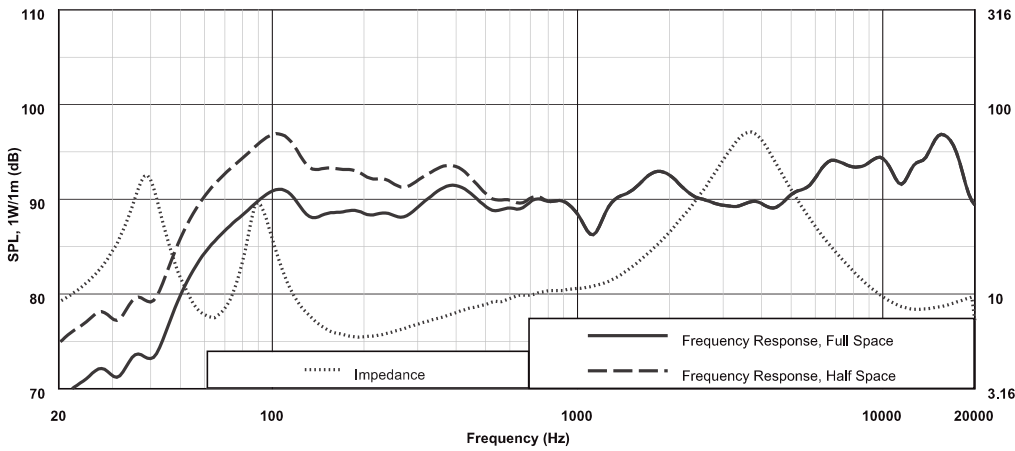
118mm
[4.63"]



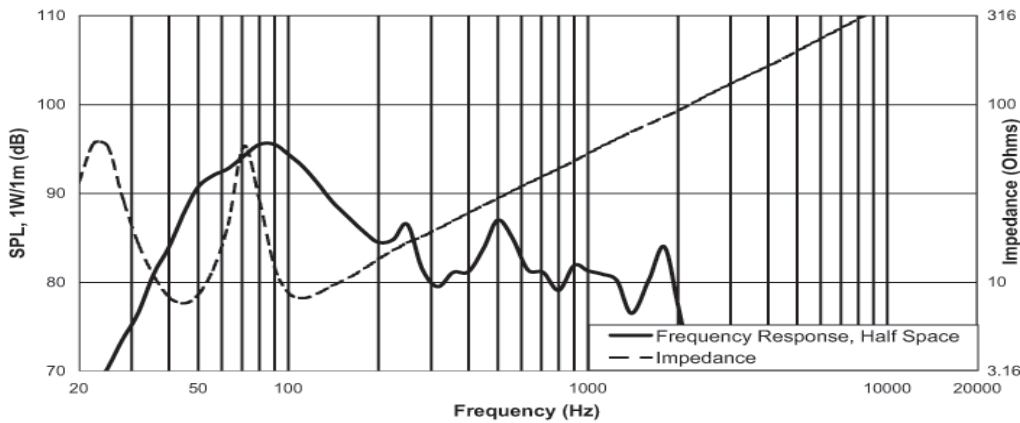
Rear View

Frequency Response Graphs

Zx1-90



Zx1-Sub



Zx1 Model Reference Table

Accessory Model/Commercial Code	Description
ASP-1	Adjustable Subwoofer Pole Mount
MP1-B	Mounting Plate Kit, Black Finish
CB1	Carrying Bag, Convertible, Black Finish
ZX-ZXA-CVR for Zx1 ZXA1-SUB-CVR for Zx1-Sub	Slip Cover, Black Finish
CA-ZX	Truss Clamp Adapter, Black Finish
TSS-1	Tripod Speaker Stand
TSP-1	(2) TSS-1 Tripod Speaker Stands with Carrying Case

Troubleshooting

Problem	Possible Cause(s)	Action
1. No Sound	Amplifier	Connect a known working test speaker to the amplifier outputs. If there is no sound, check that all the electronics are on, the signal routing is correct, the source is active, the volume is turned up, and so on. Correct/repair/replace as necessary. If there is sound, the problem is in the wiring.
	Wiring	Verify that you have connected the correct wire pairs to the amplifier. Play something at low level through the amplifier (for example, from a CD player or tuner). Connect the test speaker in parallel with the malfunctioning line. If the sound level has gone or is very weak, the line has a short in it (possibly a severe scrape, pinch, or staple puncture). If the sound level is normal, the wire is open (possibly a cut wire or a missed connection). Using the test speaker, move down the line and test each connection/junction until you find the problem and correct it. Observe proper polarity.
2. Poor Low Frequency Response	Speakers wired out-of-polarity	When two speakers are connected out of polarity, the low frequencies will cancel each other acoustically. Carefully observe the wire markings or tracers on your speaker wires. Verify that the amplifier (+) terminal is connected to pin 1+ of the NL4 connector and the amplifier (-) terminal is connected to pin 1- of the NL4 connector.
3. Intermittent output such as crackling or distortion	Faulty Connection	Check all connections at amplifier and speakers to ensure they are all clean and tight. If the problem persists, it may be in the amplifier or wiring. See Problem 1 above.
4. Constant noise such as buzzing, hissing, humming	Defective amplifier or other electronic device	If the noise is present but no program material is playing, the likely cause is the signal chain in the electronics. Evaluate each component as necessary to isolate the problem.
	Poor system grounding or ground loop	Check and correct the system grounding, as required.
If these suggestions do not solve your problem, contact your nearest Electro-Voice dealer or Electro-Voice distributor.		



Warranty Information

Visit www.electrovoice.com/warranty for warranty information.

Electro-Voice

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