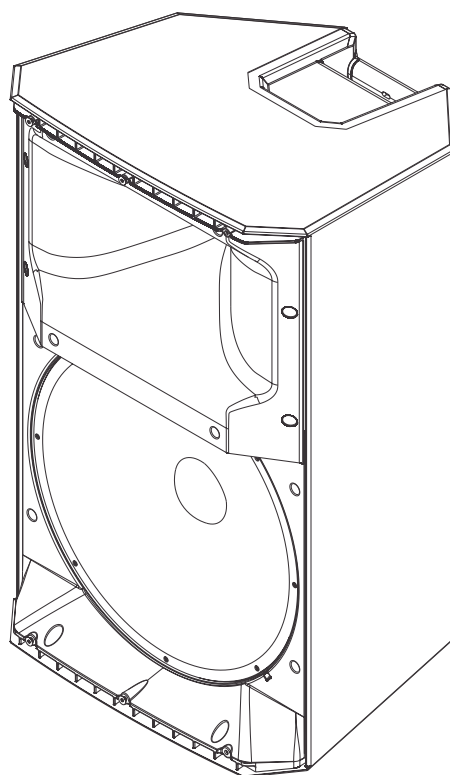
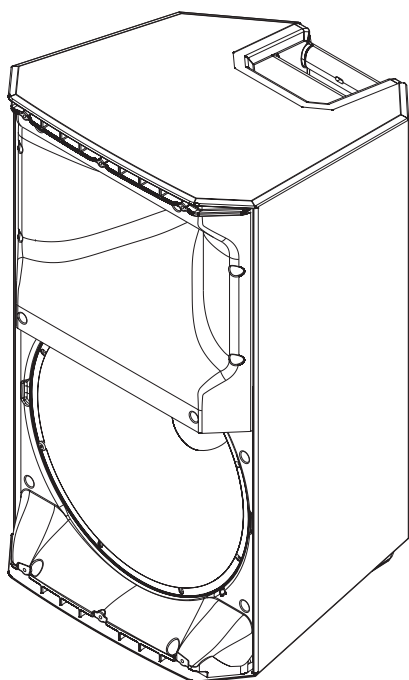


ZLX

ZLX Series Loudspeaker Owner's Manual



ZLX-12P

ZLX-15P

ZLX-12

ZLX-15

Live For Sound
www.electrovoice.com



Important Safety Instructions

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN		 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 block any ventilation openings. Install in accordance with the manufacturers instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. 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.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Unplug this apparatus during lightning storms or when unused for long periods of time.
13. Refer all servicing to qualified service personnel. 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
14. To completely disconnect AC power from this apparatus, the power supply cord must be unplugged.
15. 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.
16. The AC plug of the power supply cord shall remain readily operable.



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.

FCC Information

IMPORTANT: Do not modify this unit! Changes or modifications not expressly approved by the manufacturer could void the user's authority, granted by the FCC, to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Precautions



If ZLX series loudspeakers are used outdoors on a sunny day, place the loudspeakers in a shaded or covered area. The loudspeaker amplifiers have protection circuits that temporarily shut the loudspeaker off when extremely high temperatures are reached. This can happen on hot days when the loudspeaker is in direct sunlight.



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



Never expose a ZLX series loudspeaker to rain, water, or high moisture.



Electro-Voice ZLX series 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.

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ZLX

Description

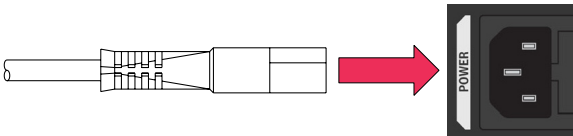
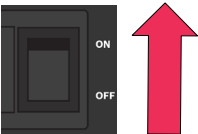
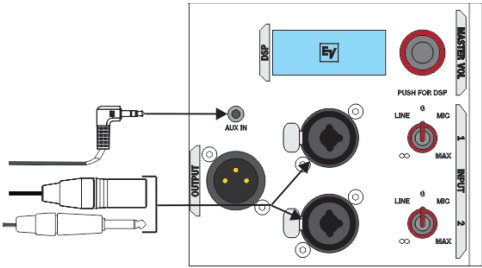
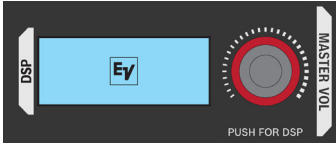
Thank you for choosing an Electro-Voice ZLX series powered and passive loudspeaker systems. Please take time to consult this manual to understand all the features built into your Electro-Voice system and fully utilize its performance capabilities.

ZLX models cut through the competition with the most complete and innovative package of features in their class—all of which work together to make it quicker and easier than ever to take control of your sound, whatever the gig. When choosing a loudspeaker, it's always wise to ask “What’s inside the box?” Then take a listen and hear the EV difference for yourself. Featuring custom drivers housed in an innovative new cabinet design, the two compact and versatile ZLX models make EV’s renowned sound quality and rugged reliability more accessible than ever before.

Quick Setup

The Electro-Voice ZLX series loudspeakers are fully integrated audio systems with carefully matched electronics and transducers. These products make it easy to setup a high quality sound system quickly with a minimum amount of cables and external electronics.

To get the ZLX series loudspeaker into operation as quickly as possible, please observe the following steps:

Step	Illustration
1. Connect the AC power cord from a grounded line receptacle to MAINS IN.	
2. Switch POWER to ON.	
3. Connect the 3.5 mm mini jack, XLR or TRS cable from an audio source to AUX IN, INPUT 1 or INPUT2.	
4. Push and hold DSP knob to select application MODE and LOCATION.	
5. From the DSP home screen increase the input gain knob while viewing the VU meters.	
6. Slowly adjust MASTER VOL to the desired volume.	



System Features

ZLX-12P & ZLX-15P—Powered Loudspeaker Systems

The only loudspeaker in its class that matches EV-engineered drivers with a custom-built Class-D amplifier module and powerful DSP. Whether pole-mounted or used as a floor monitor, ZLX delivers stunning sonic impact and intelligibility—the legendary “EV Sound” the pros trust.

- ZLX-12P: 50 Hz–20 kHz; 126 dB max SPL; 1000 W (Class D).
- ZLX-15P: 42 Hz–20 kHz; 127 dB max SPL; 1000 W (Class D).
- 12 inch and 15 inch woofer for low-end punch in a compact enclosure and 1.5 inch high-frequency titanium compression driver.
- LCD display and 1-knob DSP control with presets for precise and speedy setup.
- Input level meters and independent amplifier control to ensure optimal gain structure.
- Front LED for “power on” and “limit” indication.
- Patented split-baffle design for superior driver time alignment.
- Durable composite construction with innovative hi/lo grip design for easy pole mounting.
- LCD display allows for application and location EQ optimization.
- Innovative industrial design allows for professional look to match professional sound.
- Three handles including hi/lo grip ultimately makes for the most portable professional sound speaker on the market.
- Composite structure is built to last and provides road tested ruggedness.
- EV offers the best-in-class sound, design, and control using LCD controlled DSP that is inspired by EV’s concert tour grade products.

ZLX-12—12 inch Passive Loudspeaker System

A compact and versatile loudspeaker featuring EV-engineered drivers in a rugged enclosure. Whether pole-mounted or used as a floor monitor, ZLX delivers stunning sonic impact and intelligibility—the legendary “EV Sound” the pros trust.

- 12 inch woofer for low-end punch in a compact enclosure and 1.5 inch high-frequency titanium compression driver.
- Durable composite construction with innovative hi/lo grip design for easy pole mounting.
- Exclusive split-baffle design for superior driver time alignment.
- 55 Hz–20 kHz frequency range.
- 250 W continuous and 1000 W peak power handling.
- 95 dB SPL sensitivity; 125 dB max SPL.

ZLX-15—15 inch Passive Loudspeaker System

A compact and versatile loudspeaker featuring EV-engineered drivers in a rugged enclosure. Whether pole-mounted or used as a floor monitor, ZLX delivers stunning sonic impact and intelligibility—the legendary “EV Sound” the pros trust.

- 15 inch woofer for extended low-frequency response and 1.5 inch high-frequency titanium compression driver.
- Durable composite construction with innovative hi/lo grip design for easy pole mounting.
- Exclusive split-baffle design for superior driver time alignment.
- 44 Hz–20 kHz frequency range.
- 250 W continuous and 1000 W peak power handling.
- 96 dB SPL sensitivity; 126 dB max SPL.

Tripod and Floor Monitor Operation

Floor Monitor

Electro-Voice ZLX series 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 so that performers, production crew and audience members will not trip over the cables. Secure cables with wire ties or tape whenever possible.

See Figures 1a and 1b for optimal coverage areas in front of the loudspeaker when in monitor position.

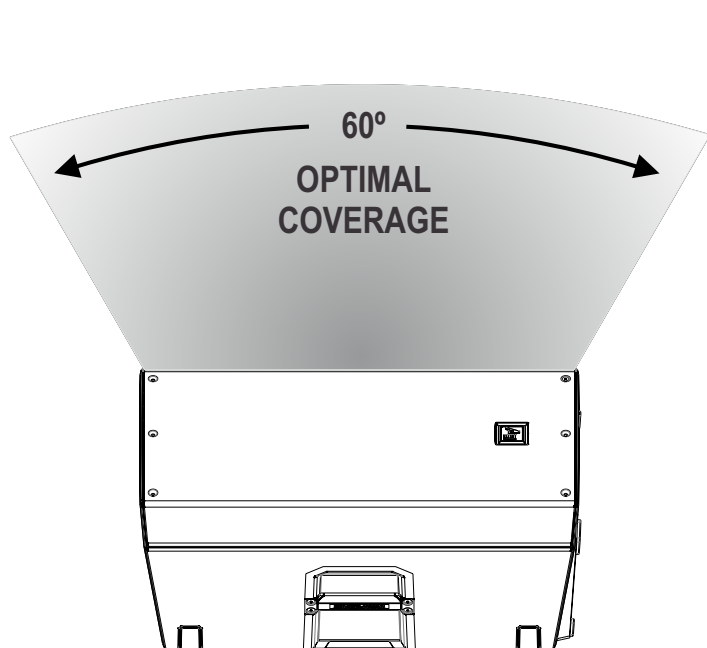


Figure 1a:
ZLX Optimum Coverage
(Front View)



Figure 1b:
ZLX Optimum Coverage
(Side View)

Tripod and Floor Monitor Operation (cont.)

Tripod

Electro-Voice ZLX series loudspeakers include 35 mm (1-3/8 in) stand mounts to allow mounting on tripod stands or above an ELX118P. 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.

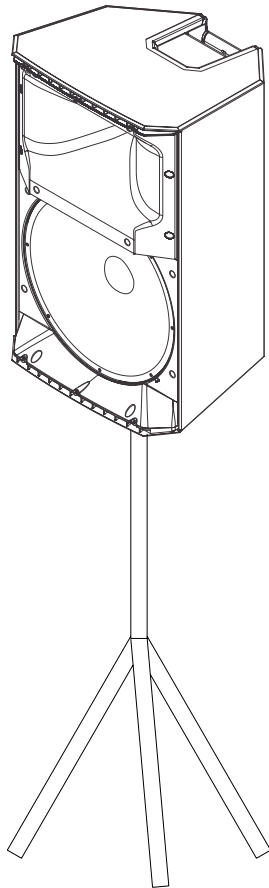


Figure 2a:
ZLX on Tripod Stand

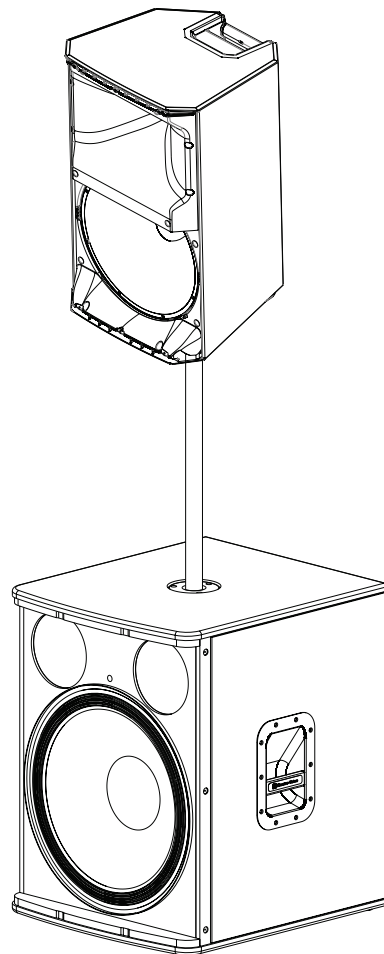
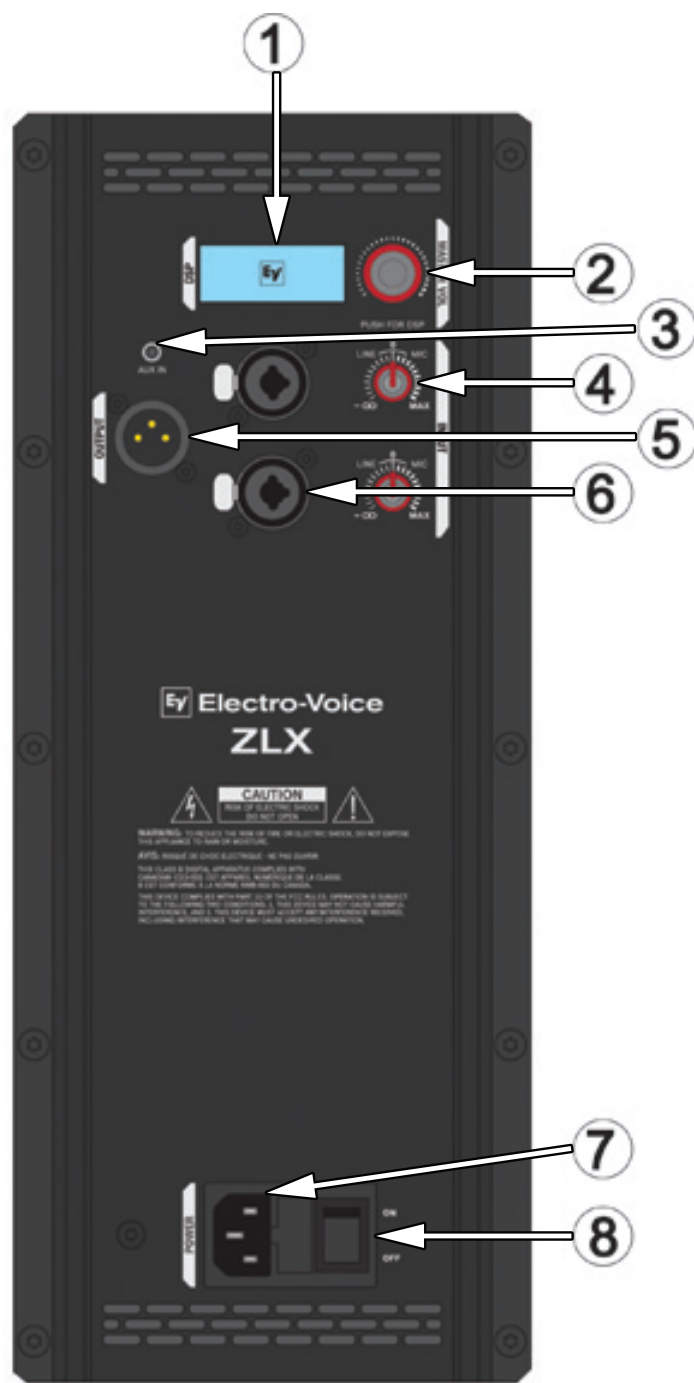


Figure 2b:
ZLX Full-Range/Sub Stack with Pole Mount

Amplifier Controls

The ZLX amplifier has a combination of controls and connectors to ensure the most versatile loudspeaker system. Each component below has a description.



1. LCD-DSP Control & Monitoring Interface

2. **MASTER VOL**—Turn the dial to the right to increase the sound level or turn the knob to the left to decrease the sound level.

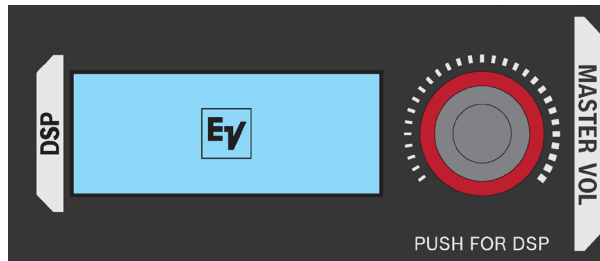
DSP—Push and hold the MASTER VOL knob to enter the DSP settings. Turn the MASTER VOL knob to scroll through the menu items. Push the MASTER VOL knob again to select the menu items.

3. **AUX IN**—3.5 mm audio jack input for connecting external audio media devices, such as MP3 players.
4. **INPUT LEVEL**—Level control for adjusting the individual input's sensitivity. LINE and MIC input level control is available for both INPUT 1 and INPUT 2.
5. **LINK OUTPUT**—XLR output connector sends the summation of all inputs' signals to another speaker or subwoofer.
6. **XLR/TRS INPUT**—Balanced input for the connection of signal sources like mixing consoles, instruments or microphones. Connections can be established using 1/4 inch TRS or XLR connectors.
7. **MAINS IN**—AC connection is established via an IEC-connector. The ZLX amplifier operates between 100V-240V (+/-10%).
8. **POWER**—AC switch for switching the power ON or OFF. The LCD screen lights up when the POWER is turned ON.

Figure 3:
ZLX-12P & ZLX-15P Amplifier Panel

LCD DSP Controls

An integrated LCD DSP control menu allows the user to select multiple DSP system settings on the loudspeaker.



ZLX-12P & ZLX-15P

LCD DSP Controls Menu		
DSP	EXIT	
	MODE	MUSIC (Default)
		LIVE
		SPEECH
		CLUB
	LOCATION	POLE (Default)
		MONITOR
		BRACKET
	TREBLE	0 dB (Default)
		-10 dB to +10 dB
	BASS	0 dB (Default)
		-10 dB to +10 dB
	SUB	OFF (Default)
		80Hz
		100Hz
		120Hz
		ELX118P
System	LED	ON (Default)
		OFF
		LIMIT
	LCD DIM	ON (Default)
		OFF
	CONTRAST	0 (Default)
		-10 to +10
	RESET	RESET ARE YOU SURE?
		NO (Default)
		YES
	INFO	PRODUCT NAME
		FIRMWARE VERSION
	EXIT	©2012 ELECTRO-VOICE

To **access the LCD DSP controls menu**, do the following:

1. Push and hold the **MASTER VOL knob** to enter the LCD DSP controls menu.
The LCD DSP Controls menu appears.
2. Turn the **MASTER VOL knob** to scroll through the menu items.
3. Push the **MASTER VOL knob** to select the menu item you want to modify.
The focus moves to the menu items on the right side of the LCD screen.
4. Turn the **MASTER VOL knob** to scroll through the menu items.
5. Push the **MASTER VOL knob** to confirm the selected menu items.
The setting is saved. The focus returns to the menu items on the left side of the LCD screen.
6. Repeat **steps 2–5** to modify additional DSP & system settings.
7. Select **EXIT** to return to the home screen.

LCD DSP Controls (cont.)

Exit

The **Exit** menu is used to return to the home screen.

Mode

The **Mode** menu is used to configure the type of sound the loudspeaker will deliver. The selection choices are MUSIC, LIVE, SPEECH, or CLUB. The default selection is MUSIC.

- **MUSIC**—Used for recorded music playback.
- **LIVE**—Used for vocal and instrumental applications.
- **SPEECH**—Used for spoken word applications.
- **CLUB**—Used for recorded electronic music playback.

Location

The **Location** menu is used to optimize the loudspeaker for spacial and boundary variances. The selection choices are POLE, MONITOR, or BRACKET. The default selection is POLE.

Treble

The **Treble** menu is used to configure the high frequencies of sound. The treble range is -10 dB to +10 dB. The default treble level is zero (0).

Bass

The **Bass** menu is used to configure the low frequencies of sound. The bass range is -10 dB to +10 dB. The default bass level is zero (0).

NOTE: Increasing Bass in CLUB mode reduces incrementally the overall loudspeaker's max level capability.

Sub

The **Sub** menu is used to configure the presence of a subwoofer and its cross-over frequency. Select the OFF position if no subwoofers are used with the system. Select the applicable cross-over frequency (80Hz, 100Hz, 120Hz, or ELX118P) if a subwoofer is used with the system. The default selection is OFF.

LED

The front **LED** is used to indicate the status of the loudspeaker. The selection choices are OFF, ON, or LIMIT. The limit selection allows the user to visually confirm from the front of the loudspeaker if the protection status is active. The LED turns off if the system is in LIMIT protection mode. The default selection is ON.

LCD DIM

The **LCD DIM** menu is used to configure the LCD screen to dim after 30 seconds of inactivity. This selection choices are ON or OFF. The default selection is ON.

Contrast

The **Contrast** menu is used to increase or decrease the visibility of the LCD screen. The contrast range is -10 to +10. The default contrast level is zero (0).

Reset

The **Reset** menu is used to revert the loudspeaker to the original factory default settings. The default selection is NO.

Info

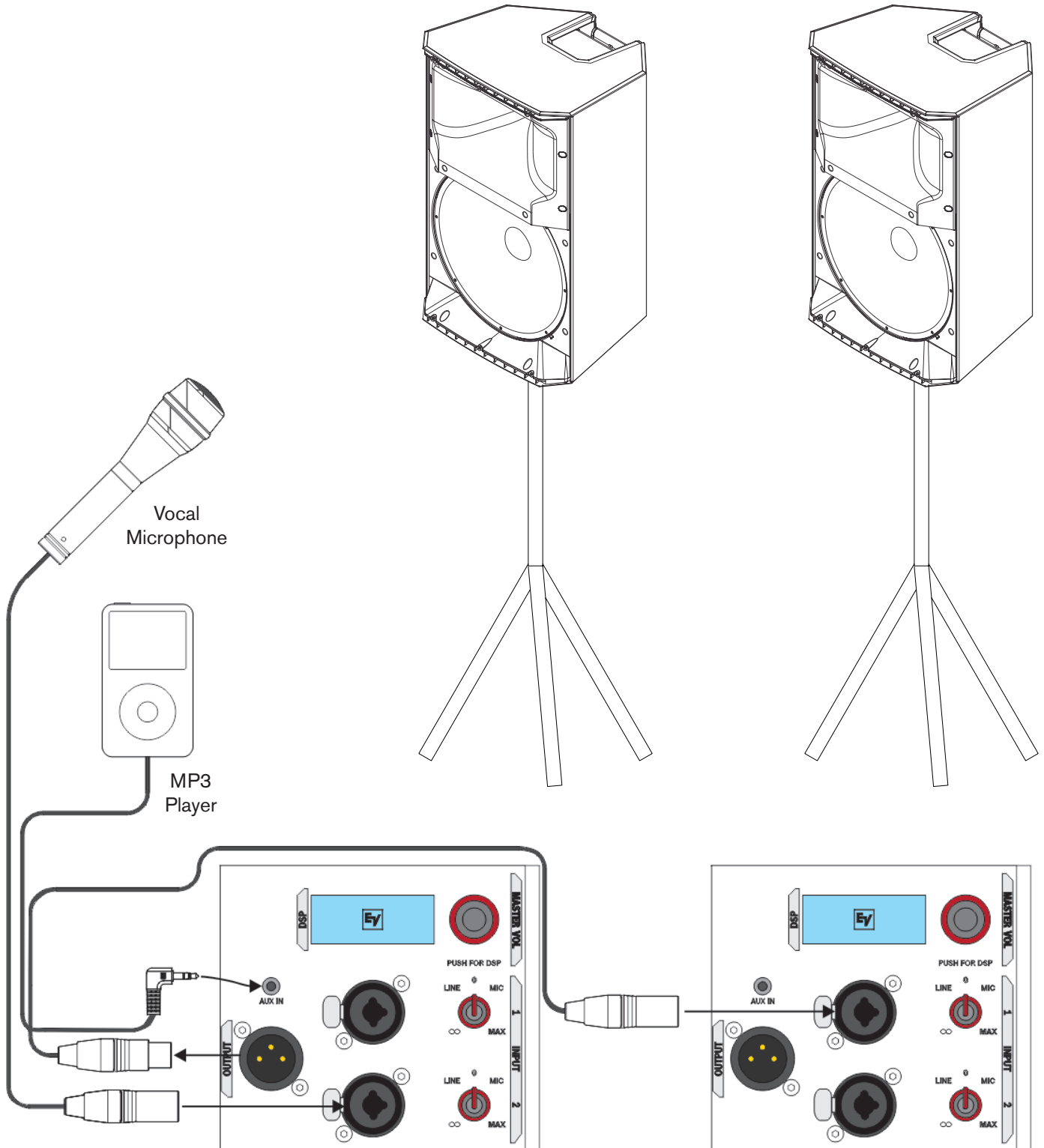
The **Info** menu provides information about the system model and the firmware version.

Exit

The **Exit** menu is used to return to the home screen.

Recommended Configurations

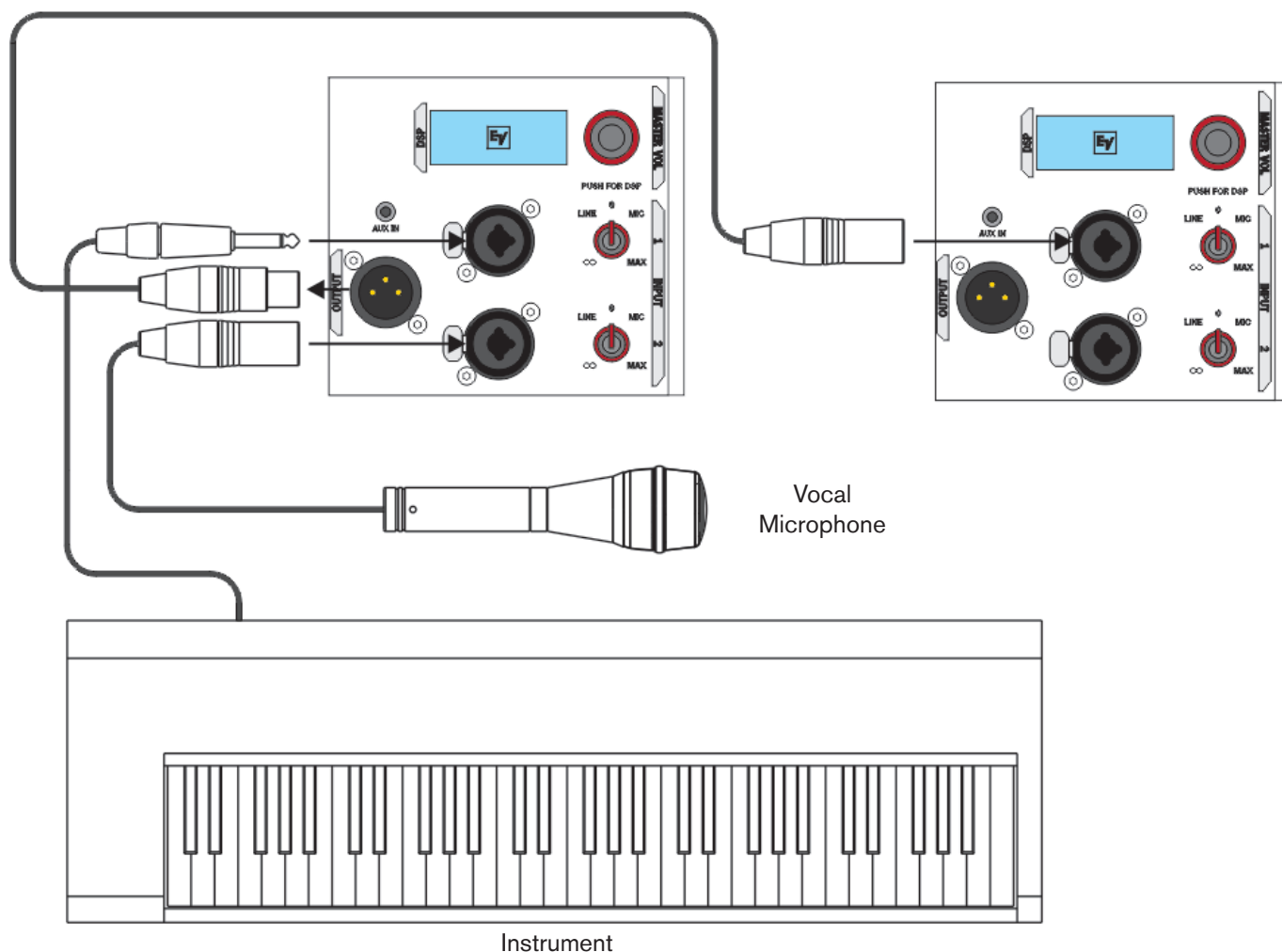
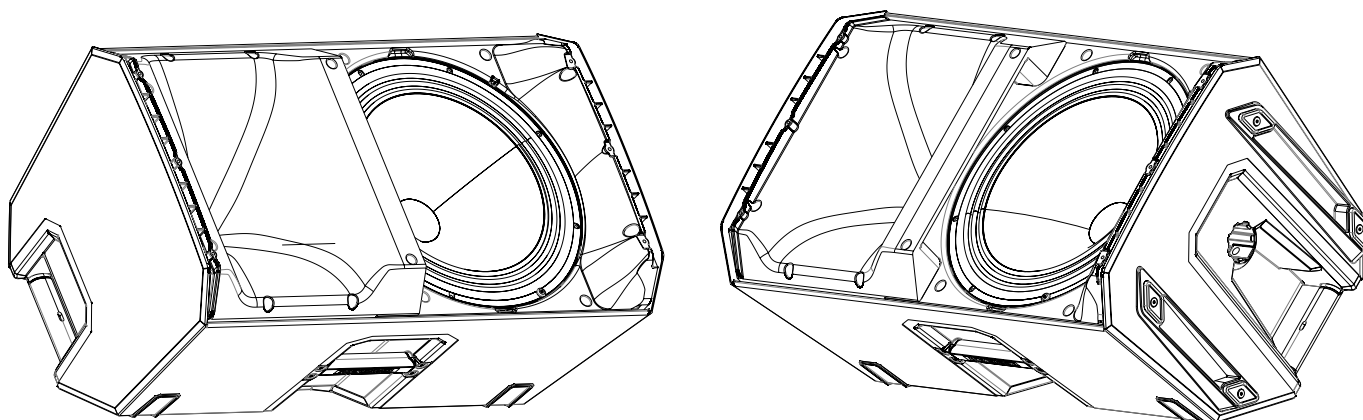
Daisy-Chaining Full-Range Systems (Powered versions shown)



Note: The direction of the arrow indicates the signal path.

Recommended Configurations (cont.)

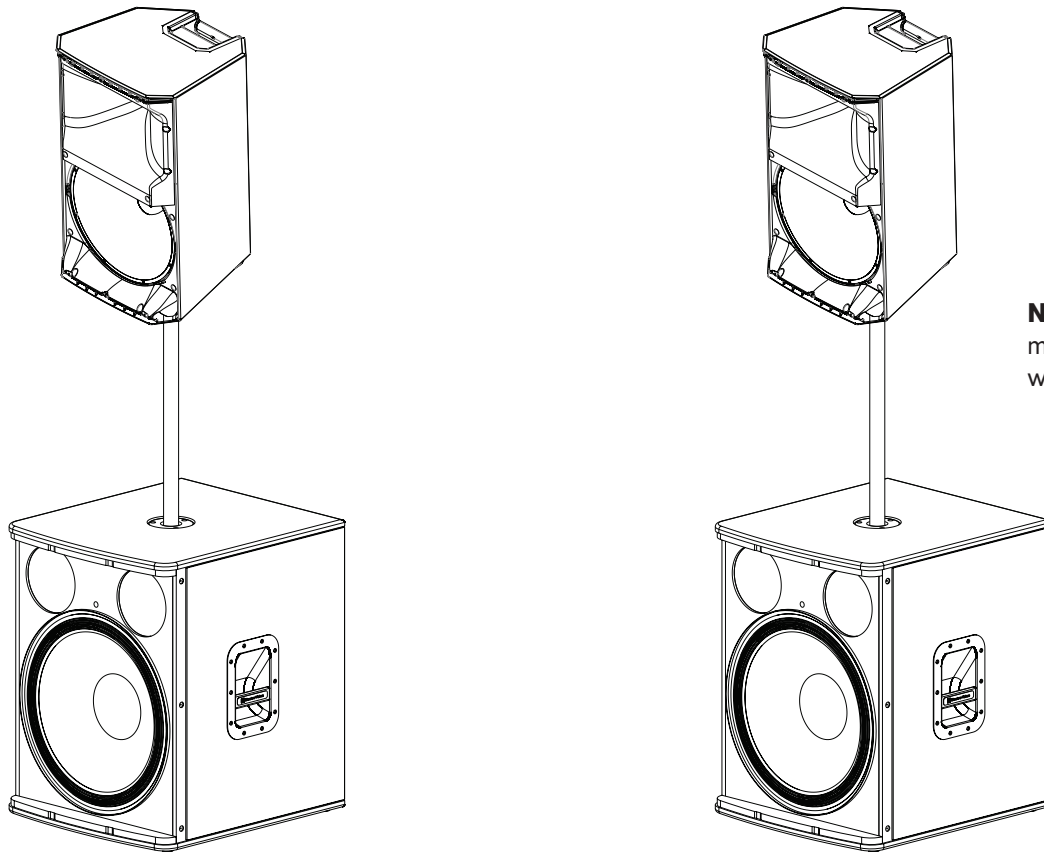
Using Full-Range Systems as Monitors (Powered versions shown)



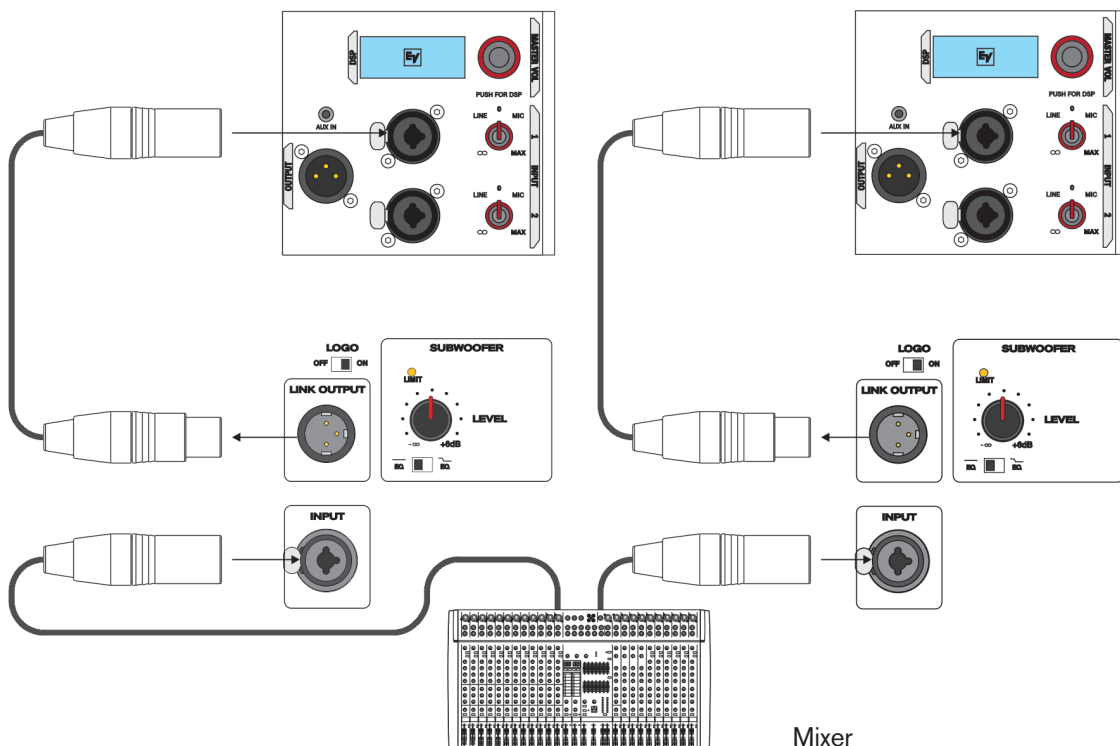
Note: The direction of the arrow indicates the signal path.

Recommended Configurations (cont.)

Stacking Full-Range Systems w/Subwoofers (Stereo ZLX-12P with two ELX118P's shown)



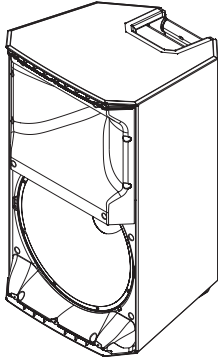
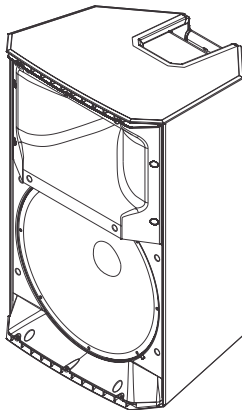
NOTE: ZLX-15P loudspeakers may also be used in combination with ELX118P subwoofers.



Mixer

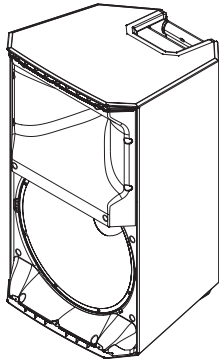
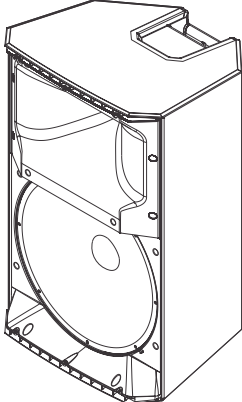
Note: The direction of the arrow indicates the signal path.

Specifications—ZLX Powered

Model (Part Number)	ZLX-12P (ZLX-12P)	ZLX-15P (ZLX-15P)
		
Freq. Response ¹ :	65 Hz – 18 kHz	55 Hz – 18 kHz
Freq. Range ¹ :	50 Hz – 20 kHz	42 Hz – 20 kHz
Max. Measured SPL:	126 dB	127 dB
Coverage (Horiz. x Vert.):	90° x 60°	
Power Rating:	1000 Watts	
LF Transducer:	EVS-12K, 300 mm (12 in) Woofer	EVS-15L, 380 mm (15 in) Woofer
HF Transducer:	DH-1K	
Connectors:	(2) XLR/TRS Combo Jack, (1) 3.5 mm Input, and (1) XLR link Output	
Enclosure Material:	Polypropylene	
Grille:	18 Gauge Steel with Black Powder Coat	
Dimensions (H x W x D):	610 mm x 356 mm x 356 mm (24 in x 14 in x 14 in)	685 mm x 423 mm x 383 mm (27 in x 17 in x 15 in)
Net Weight:	15.6 kg (34.3 lbs)	17.3 kg (38.0 lbs)
Shipping Weight:	19.0 kg (41.8 lbs)	23.0 kg (50.7 lbs)
Accessories:	ZLX-BRK, ZLX-12-CVR	ZLX-BRK, ZLX-15-CVR

¹ Using MUSIC DSP preset.

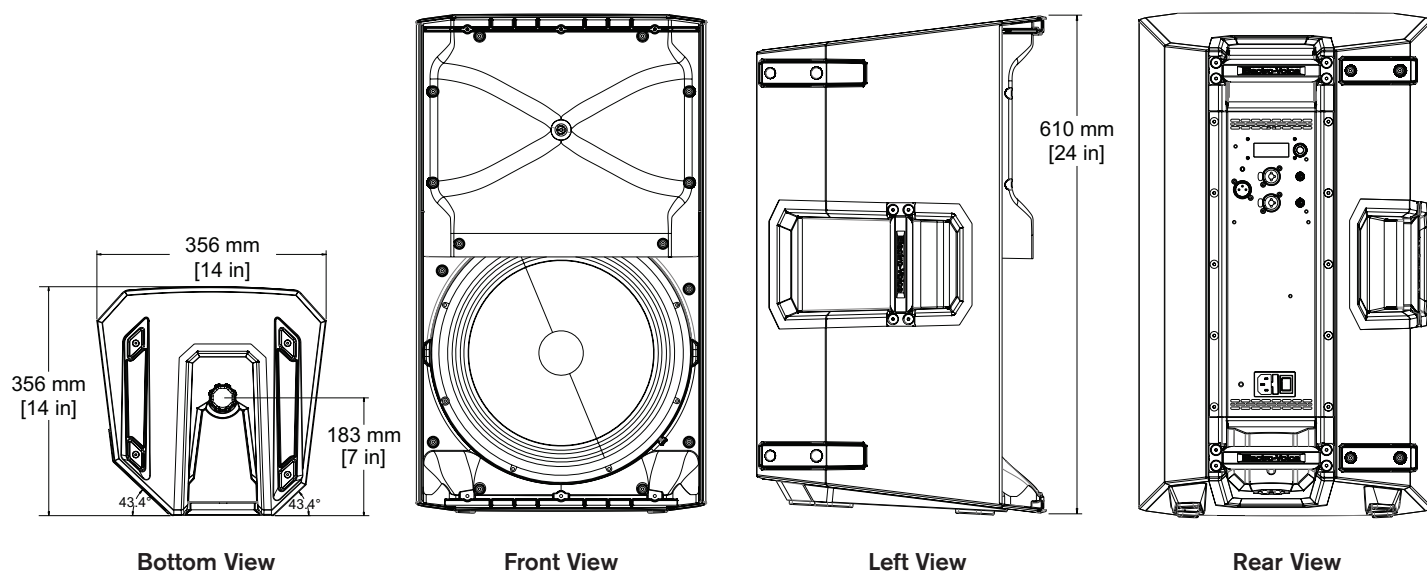
Specifications—ZLX Passive

Model (Part Number)	ZLX-12 (ZLX-12)	ZLX-15 (ZLX-15)
		
Freq. Response ² :	82 Hz – 18 kHz	56 Hz – 18 kHz
Freq. Range:	55 Hz – 20 kHz	44 Hz – 20 kHz
Axial Sensitivity:	95 dB	96 dB
Max. Measured SPL:	125 dB	126 dB
Recommended HP Freq.:	40 Hz	
Coverage (Horiz. x Vert.):	90° x 60°	
Power Handling:	250 Watts Continuous, 1000 Watts Peak	
LF Transducer(s):	EVS-12K, 300 mm (12 in) Woofer	EVS-15L, 380 mm (15 in) Woofer
HF Transducer:	DH-1K	
Cross-over Frequency:	2.1 kHz	1.7 kHz
Nominal Impedance:	8 Ω	
Minimum Impedance:	7 Ω	
Connectors:	Dual NL4	
Enclosure Material:	Polypropylene	
Grille:	18 Gauge Steel with Black Powder Coat	
Dimensions (H x W x D):	610 mm x 356 mm x 356 mm (24 in x 14 in x 14 in)	685 mm x 423 mm x 383 mm (27 in x 17 in x 15 in)
Net Weight:	14.9 kg (32.8 lb)	16.6 kg (36.5 lb)
Shipping Weight:	18.0 kg (39.6 lb)	22.0 kg (48.3 lb)
Accessories:	ZLX-BRK, ZLX-12-CVR	ZLX-BRK, ZLX-15-CVR

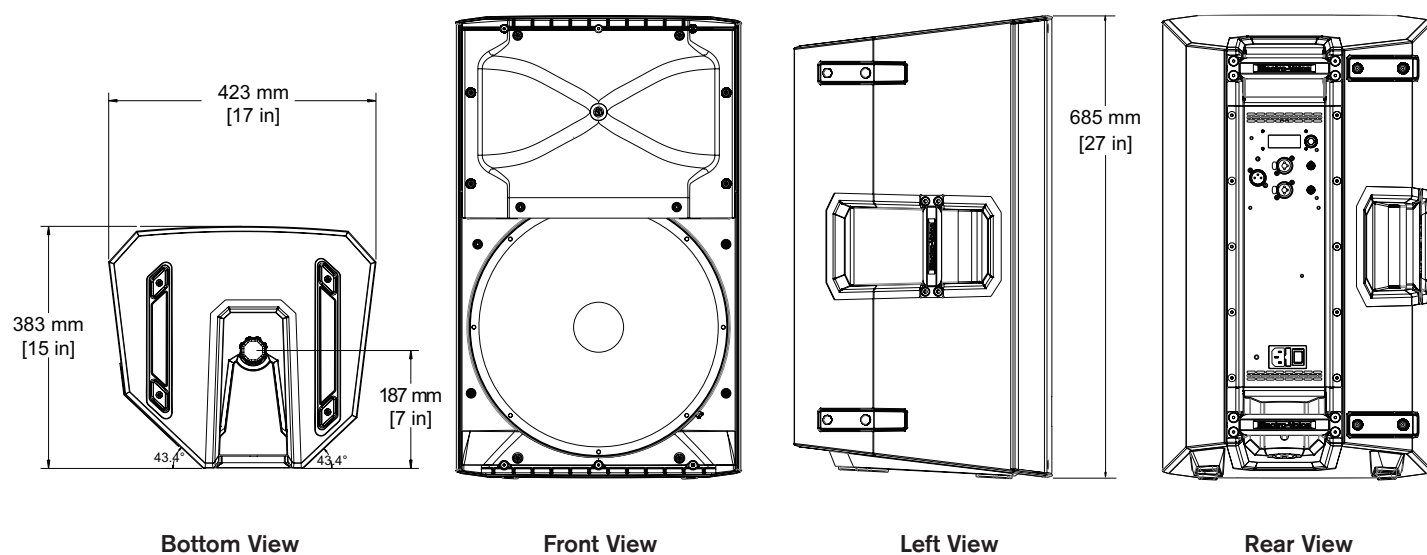
² Full Space Measurement, will have low frequency extension when mounted on floor or wall.

Dimensions—ZLX Powered

ZLX-12P

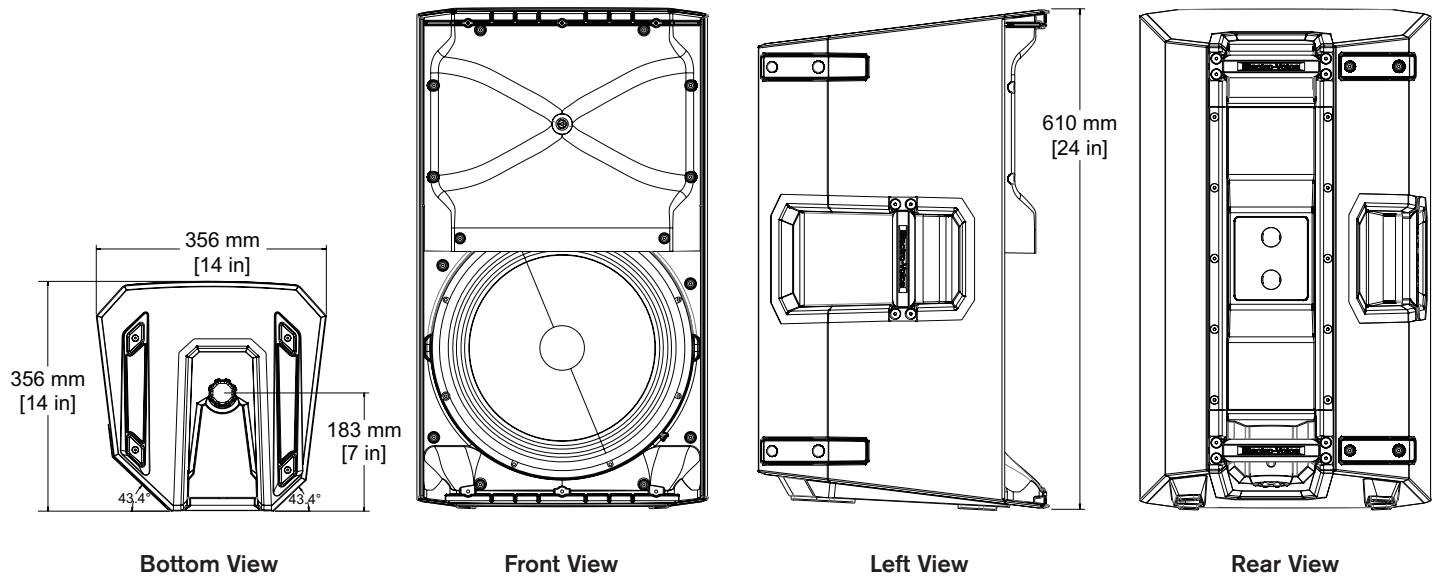


ZLX-15P

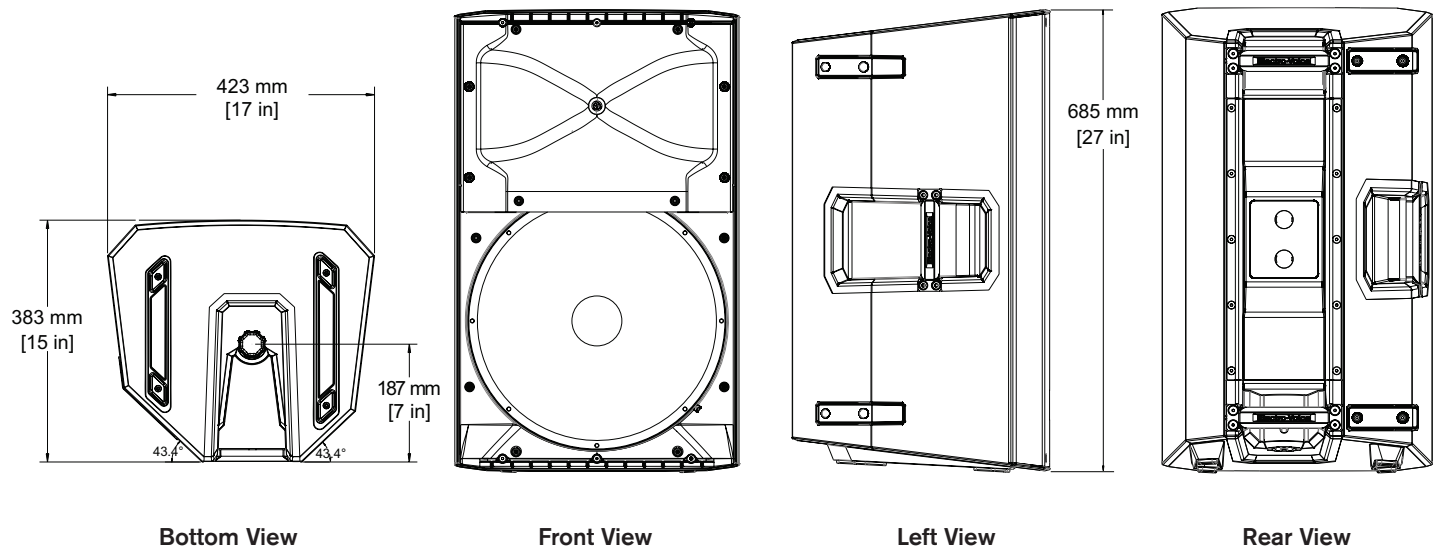


Dimensions—ZLX Passive

ZLX-12

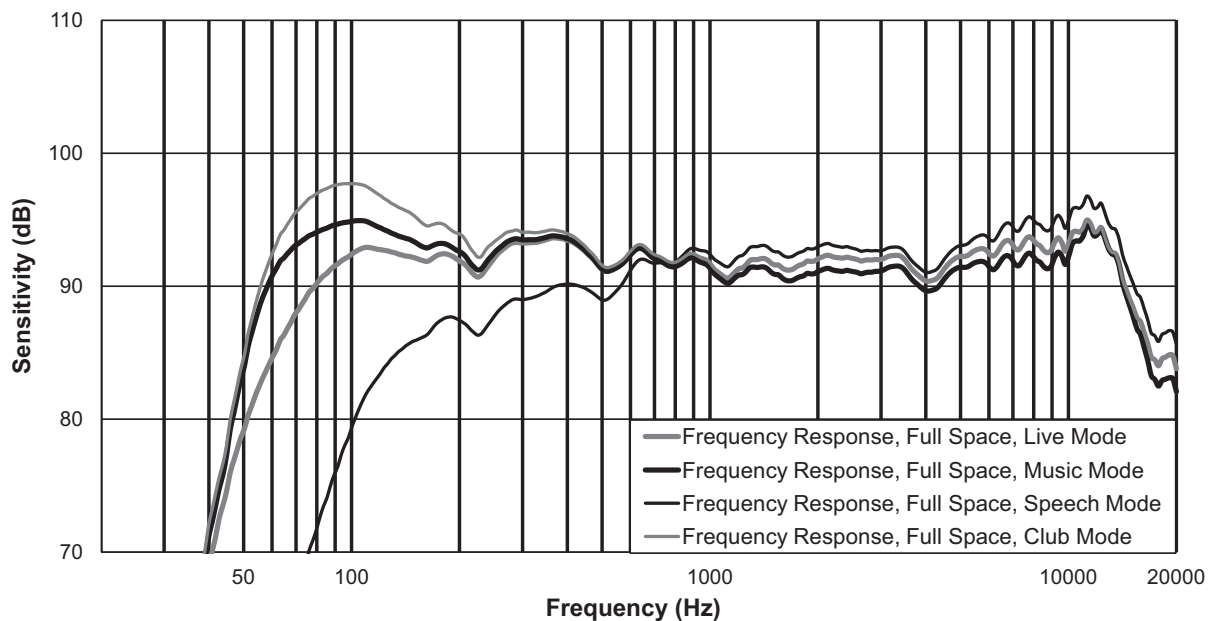


ZLX-15

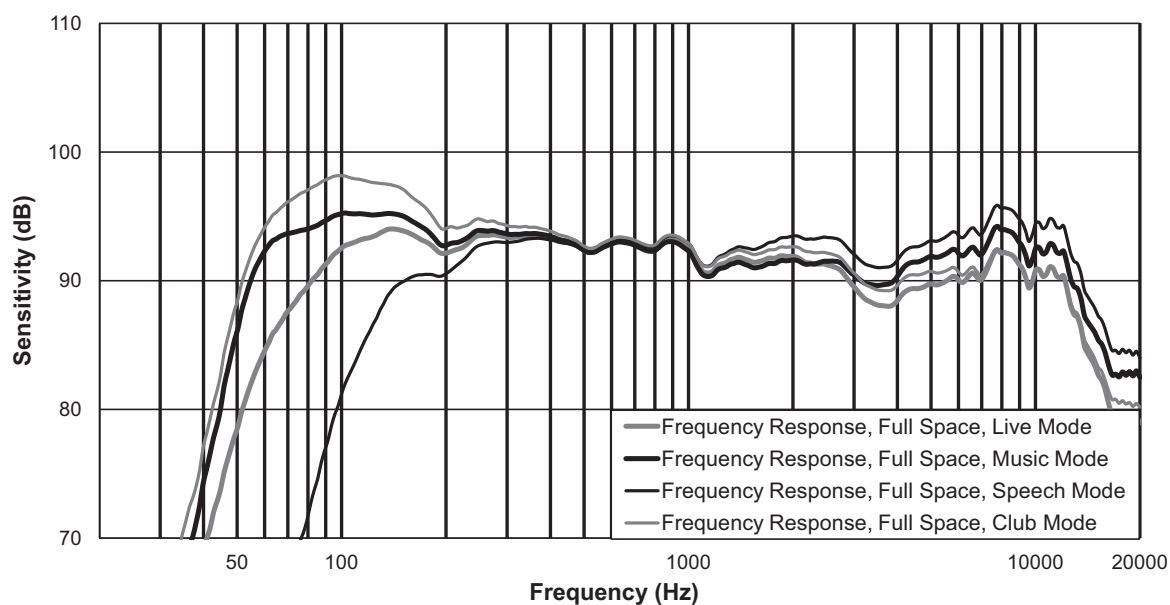


Frequency Response Graphs—ZLX Powered

ZLX-12P

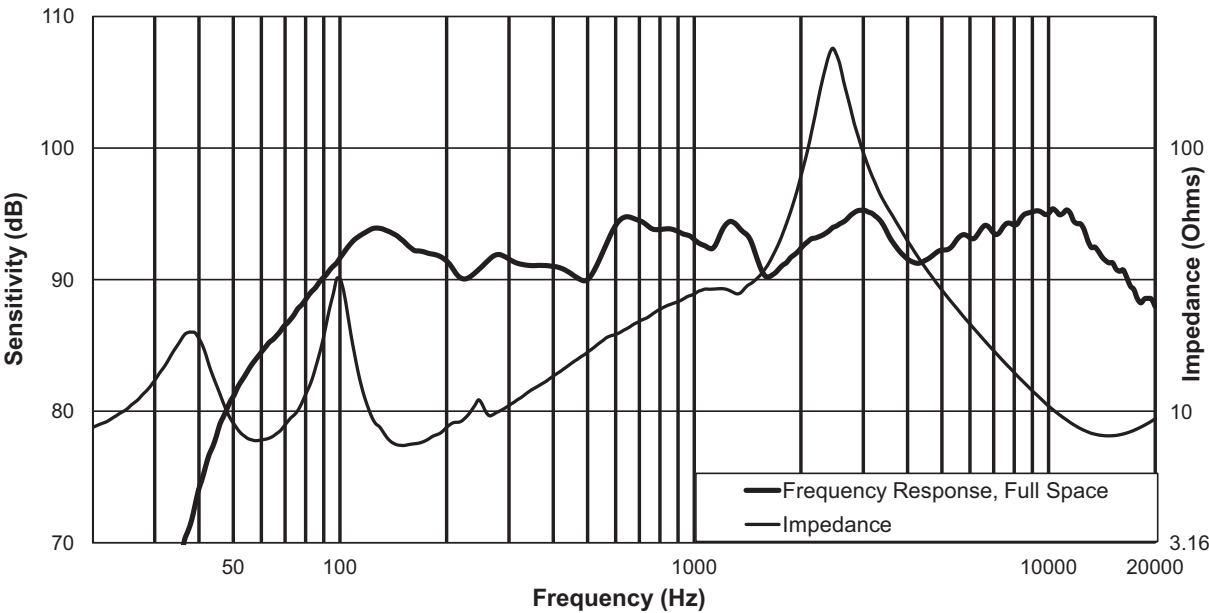


ZLX-15P

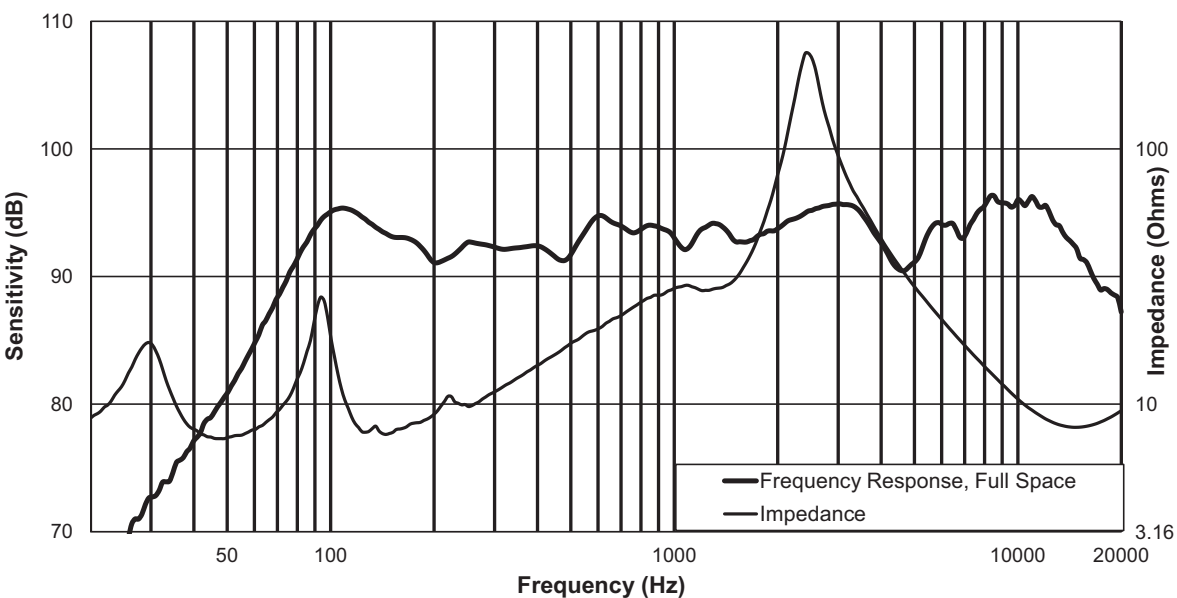


Frequency Response Graphs—ZLX Passive

ZLX-12



ZLX-15





ZLX Series Model Reference Table

Commercial Code	Description	Finish
ZLX-12P-US	12" Two-Way Powered Loudspeaker	Black
ZLX-12P-EU	12" Two-Way Powered Loudspeaker	Black
ZLX-15P-US	15" Two-Way Powered Loudspeaker	Black
ZLX-15P-EU	15" Two-Way Powered Loudspeaker	Black
ZLX-12	12" Two-Way Passive Loudspeaker	Black
ZLX-15	15" Two-Way Passive Loudspeaker	Black
ZLX-BRKT	ZLX Wall Mount Bracket	Black
ZLX-12-CVR	ZLX Padded Cover for ZLX-12/P -EV Logo	Black
ZLX-15-CVR	ZLX Padded Cover for ZLX-15/P -EV Logo	Black

Warranty Information

Visit www.electrovoice.com for warranty information.

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 an MP3 device). 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	WITH SUB menu-cross-over frequency activated	Select the OFF position if no subwoofers are used with this system. For further information, see the LCD DSP Controls.
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.
4. Constant noise such as buzzing, hissing, or humming	Defective source 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.
	Incorrect gain structure	Verify level controls of the source are properly structured by using the VU meter indicator on the LCD screen. If the VU meter bar is solid or the system indicates LIMIT the input or source level is too high. For further information, see the Quick Setup.
5. No sound produced with microphone connected to INPUT 1 or INPUT 2	Microphone requires phantom power	Use a dynamic microphone that does not require phantom power. If using a microphone that requires phantom power, an external phantom power source will be needed.
	Input gain knob is not in the MIC position	Slowly increase the input gain knob level to engage the microphone pre-amp.
6. Sound is distorted front LED is OFF, LCD screen LIMIT is ON.	Excessive input level	Reduce the input level or loudspeaker level knobs to prevent limit.
	Incorrect gain structure or source input (mixing console/preamp) is overdriven	Verify level controls of the source are properly structured by using the VU meter indicator on the LCD screen. If the VU meter bar is solid or the system indicates LIMIT the input or source level is too high. For further information, see the Quick Setup.
8. Microphone produces acoustic feedback when input level is amplified.	Incorrect gain structure	Reduce the microphone levels at the mixing console or input source. If the microphone is connected directly to the speaker reduce the input level on the speaker. Positioning the microphone close to the sound source will increase gain-before-feedback. See Problem 6.
	MODE is set to MUSIC or CLUB	Change the MODE to LIVE or SPEECH. For further information, see LCD DSP Controls.
	Microphone position is too close to the front of the speaker	Whenever possible setup the speakers so the microphone is behind them. If using the speakers in a monitor position aim the speaker to the back of the microphone.
If these suggestions do not solve your problem, contact your nearest Electro-Voice dealer or Electro-Voice distributor.		

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Part Number F01U275181 Rev 01

11/2012

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