

PRX700

S E R I E S

User's Guide

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Preliminary



PRX700

S E R I E S

WARRANTY INFORMATION

The JBL Limited Warranty on PRX700 is in effect for three years from the date of the first consumer purchase.

Who Is Protected By This Warranty?

Your JBL Warranty protects the original owner and all subsequent owners so long as: A.) Your JBL product has been purchased in the Continental United States, Hawaii or Alaska. (This Warranty does not apply to JBL products purchased elsewhere except for purchases by military outlets. Other purchasers should contact the local JBL distributor for warranty information.); and B.) The original dated bill of sale is presented whenever warranty service is required.

What Does The JBL Warranty Cover?

Except as specified below, your JBL Warranty covers all defects in material and workmanship. The following are not covered: Damage caused by accident, misuse, abuse, product modification or neglect; damage occurring during shipment; damage resulting from failure to follow instructions contained in your Instruction Manual; damage resulting from the performance of repairs by someone not authorized by JBL; claims based upon any misrepresentations by the seller; any JBL product on which the serial number has been defaced, modified or removed.

Who Pays For What?

JBL will pay all labor and material expenses for all repairs covered by this warranty. Please be sure to save the original shipping cartons because a charge will be made if replacement cartons are requested. Payment of shipping charges is discussed in the next section of this warranty.

How To Obtain Warranty Performance

If your JBL product ever needs service, write or telephone us at JBL Incorporated (Attn: Customer Service Department), 8500 Balboa Boulevard, PO. Box 2200, Northridge, California 91329 (818/893-8411). We may direct you to an authorized JBL Service Agency or ask you to send your unit to the factory for repair. Either way, you'll need to present the original bill of sale to establish the date of purchase. Please do not ship your JBL product to the factory without prior authorization. If transportation of your JBL product presents any unusual difficulties, please advise us and we may make special arrangements with you. Otherwise, you are responsible for transporting your product for repair or arranging for its transportation and for payment of any initial shipping charges. However, we will pay the return shipping charges if repairs are covered by the warranty.

Limitation of Implied Warranties

ALL IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE LENGTH OF THIS WARRANTY.

EXCLUSION OF CERTAIN DAMAGES

JBL'S LIABILITY IS LIMITED TO THE REPAIR OR REPLACEMENT, AT OUR OPTION, OF ANY DEFECTIVE PRODUCT AND SHALL NOT INCLUDE INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS AND/OR DO NOT ALLOW THE EXCLUSION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS AND EXCLUSIONS MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS, WHICH VARY, FROM STATE TO STATE.

CONTACT INFORMATION

Mailing Address:

JBL Professional
8500 Balboa Blvd.
Northridge, CA 91329

Shipping Address:

JBL Professional
8500 Balboa Blvd., Dock 15
Northridge, CA 91329

(Do not return product to this address without first obtaining prior authorization from JBL)

Customer Service:

Monday through Friday
8:00am - 5:00pm
Pacific Coast Time in the U.S.A.
(800) 8JBLPRO (800.852.5776)
www.jblproservice.com

On The World Wide Web:

www.jblpro.com

Professional Contacts, Outside the USA:

Contact the JBL Professional Distributor in your area.
A complete list of JBL Professional international distributors is provided at our U.S.A. website: www.jblpro.com

Product Registration:

Register your product online at www.jblpro.com/registration

Hum or Buzz that increases or decreases when the mixer level controls are moved	Improper A/C ground or faulty equipment connected to mixer input	Disconnect or mute channels one at a time to isolate the problem. Refer to the owner's manual of the faulty equipment for troubleshooting help.
	Faulty cable between source equipment and mixer	Substitute a known-good cable for the suspected faulty cable.
Hum or Buzz	Improper A/C grounding, ground loops	<ul style="list-style-type: none"> • "Telescope" the audio ground by using an XLR/F to XLR/M adapter on one end. • Re-route audio cable away from AC power and lighting cables.
	Excessively long unbalanced cable run	<ul style="list-style-type: none"> • Use the balanced outputs (if available) of your mixer or source equipment to drive your EON speakers. • Use a "DI" (direct injection) box to convert your unbalanced equipment output to a balanced output.
	Improper system gain structure	<p>Review the Owner's Manual for your system setup and adjust controls as needed.</p> <ul style="list-style-type: none"> • Input sensitivity (gain)
Speakers feedback and howl when the microphone volume is turned up	Microphones are pointed into the speakers	Move the speakers so they do not point to the microphone's pickup pattern.
	Equalizer settings are incorrect	Locate the feedback frequency and reduce it using the mixer EQ or an external equalizer.
	Excessive gain	Reduce the gain at the mixer and move the microphone closer to the sound source.
Too much low frequencies when playing back prerecorded music	Recorded music with excessive low frequencies	Switch the EQ switch to "flat."

TROUBLESHOOTING

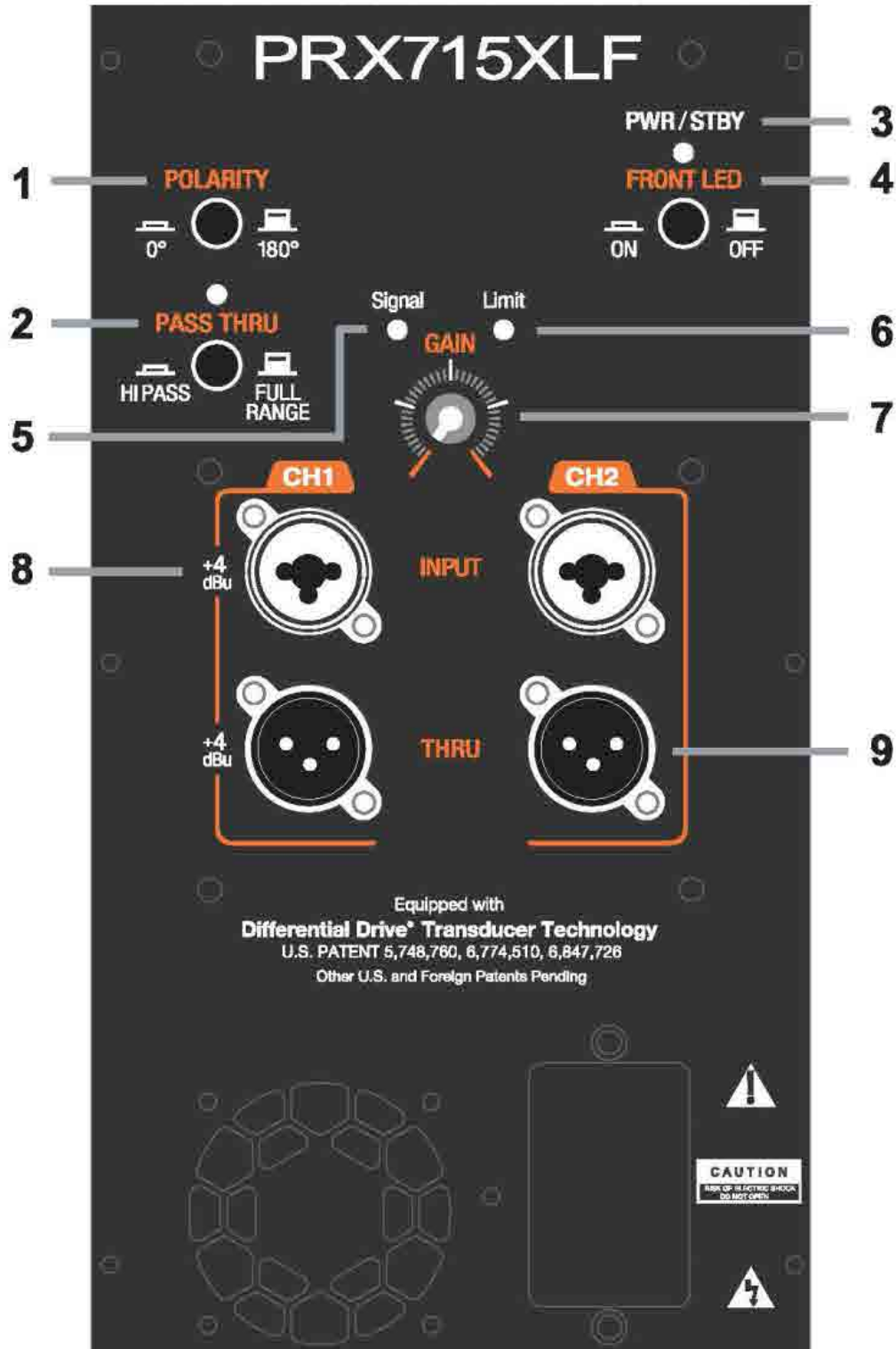
Symptom	Likely Cause	What to do
No sound	Speaker not connected to active AC power	Verify that speaker is connected and that circuit is on. Switch on power and verify that illuminated logo is on. <ul style="list-style-type: none"> • Re-seat the power cable at both ends. • Substitute a known-good power cable.
	Speaker power cable is faulty or improperly connected	
No sound, speaker is connected to working AC power but won't come on.	Blown fuse	<ul style="list-style-type: none"> • Replace the fuse with the specified value and type. • Take your speaker to a competent service center.
	Signal source (mixer, instrument, etc.) is not active	
No sound. Speaker comes on.	Faulty cables and connections	<ul style="list-style-type: none"> • Check VU meters on the source mixer. • Verify that the CD/MP3 is playing. • Use headphones to verify that the instrument is actually sending an audio signal. • Disconnect and re-seat signal cables. • Replace suspected cable with a known-good cable.
No sound with microphone connected directly to the MIC input.	Microphone requires 48V phantom power	The PRX700 speakers do not supply phantom power. Switch to a dynamic microphone, use a battery in the microphone (if possible), use an external phantom power supply. Check cable.
	Faulty microphone cable	
Signal sounds distorted and very loud, OVERLOAD light is lit most of the time.	Excessive input signal, trying to exceed the capabilities of the speakers	<ul style="list-style-type: none"> • Reduce the output level of the source. • Turn down the level controls on the speaker.
Signal sounds distorted even at moderate volumes, OVERLOAD light is not lit.	Mixer or other source is overdriven (clipping)	Review the Owner's Manual for your system setup and adjust controls as needed. <ul style="list-style-type: none"> • Input sensitivity (gain) • Check gain structure of signal chain
Noise or hiss heard at output	Noisy Source Device	Disconnect the devices that are connected to your speaker one at a time. If the noise goes away, the problem is with the source or the connecting cable.

FEATURES

- 1. POLARITY Button** – This push button allows you to choose between 0° (Normal) or 180° (Inverse Polarity). The correct polarity setting will produce the best blend between the subwoofer and the full-range speaker and the strongest perceived bass response at the listening position. If the bass response seems weak, try inverting the polarity.
- 2. PASS THRU Button** – This push button determines whether the signal coming out of the THRU connector is unaltered (FULL RANGE) or has a high-pass filter (HI PASS) applied to it. If HI PASS is selected, a 120Hz 24dB/Octave high-pass filter is applied to the signal coming out of the THRU connector. Engaging the high-pass filter allows for a smooth transition between the subwoofer and full-range speaker that is connected to the output connector.
- 3. PWR/STBY LED** – This LED illuminates when the "Power Switch" has been turned to the on position. It will illuminate BLUE when the system has power and is ready to pass audio. It will illuminate RED when the system is in power save mode and not passing audio.
- 4. FRONT LED** – This push button allows you to turn on/off the Power LED on the front of the speaker. The front LED will illuminate BLUE when the system has power and is ready to pass audio. When the front LED turn RED that means the system is in power save mode and not passing audio.
- 5. SIGNAL Indicator** – There is one GREEN LED that will illuminate when signal is present.
- 6. LIMIT Indicator** – There is one YELLOW LED indicator that will illuminate when peak output has been reached and the DSP limiter is acting.
- 7. GAIN Knob** – This gain knob is for setting the input level. The 12 o'clock position is a good starting point for most uses. Once the full-range system has been connected the level can be varied to match and deliver the desired balance.
- 8. XLR Inputs** – Female balanced XLR and 1/4 inch phone jack combo input connectors.
- 9. THRU Connectors** – Male balanced XLR output connector. This connector provides a FULL RANGE or HI PASS signal depending on the setting of the PASS THRU button. In addition to connecting a full-range system to the output, it's also possible to daisy chain subwoofers together.

SYSTEM SET UP - SUBWOOFERS

PRX700 Amplifier Input Configuration for
PRX715XLF and PRX718XLF:



FEATURES

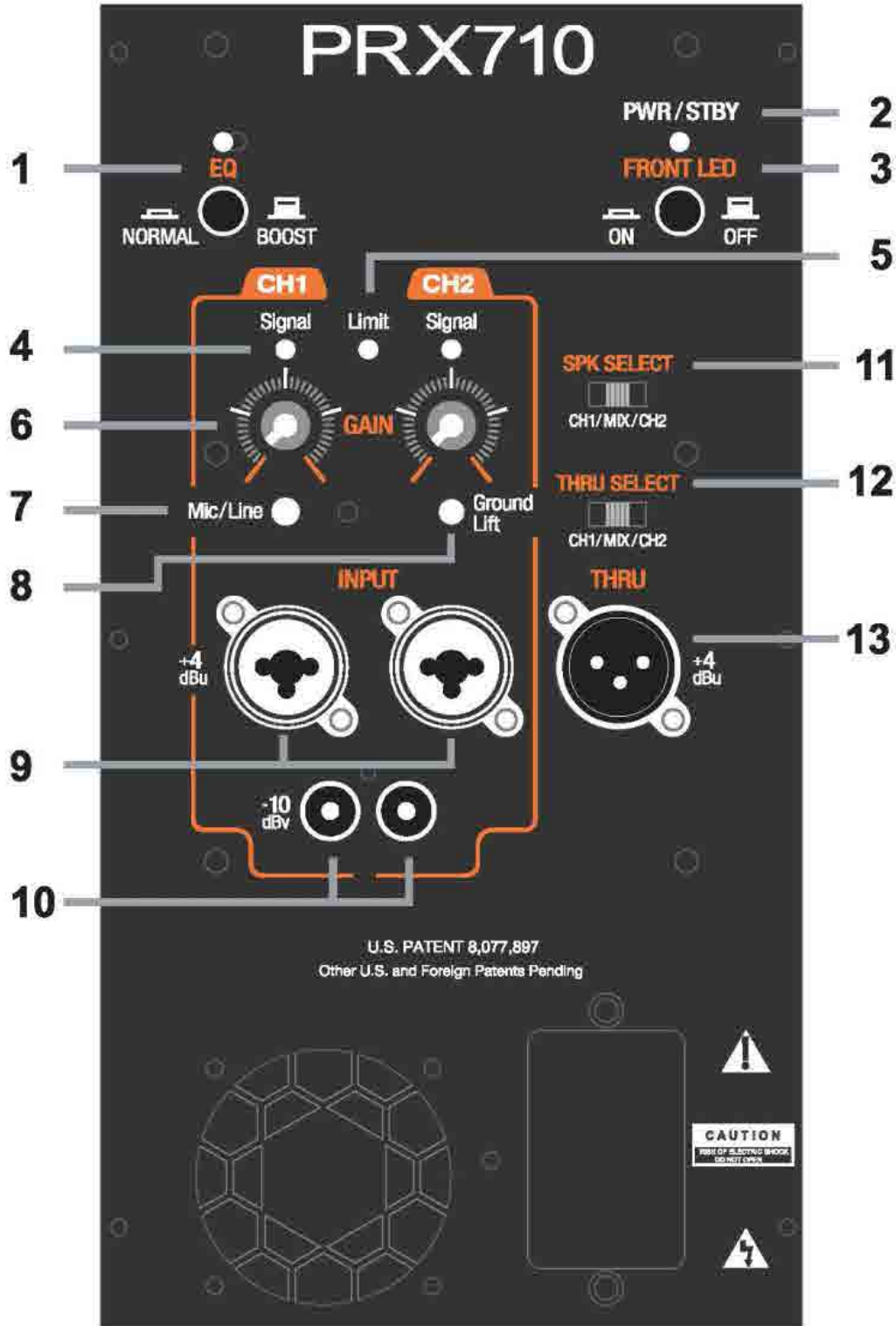
1. Selectable System EQ

- a. **Normal and Boost** (PRX710, PRX725, & PRX735 only) – When set in the “Normal” position, frequency response is linear and unaltered. When “Boost” is selected, internal equalization is applied to enhance low frequency and high frequency response. “Normal” will provide greater accuracy of reproduced music and higher speech intelligibility. “Boost” is particularly useful at lower levels to enhance the low and high frequencies of pre-recorded music. This feature provides flexibility without the need to use an external equalizer. The LED will illuminate GREEN when NORMAL is selected and YELLOW when BOOST is selected.
- b. **Main and Monitor** (PRX712 & PRX715 only) – Switching between “Main” and “Monitor” optimizes the system for use as either a main full-range system or a stage monitor. The LED will illuminate GREEN when MAIN is selected and YELLOW when MONITOR is selected.

2. **PWR/STBY LED** – This LED illuminates when the “Power Switch” has been turned to the on position. It will illuminate BLUE when the system has power and is ready to pass audio. It will illuminate RED when the system is in power save mode and not passing audio.
3. **FRONT LED** – This push button allows you to turn on/off the Power LED on the front of the speaker. The front LED will illuminate BLUE when the system has power and is ready to pass audio. When the front LED turns RED that means the system is in power save mode and not passing audio.
4. **SIGNAL Indicator** – There are two LED indicators (one for each channel) that will illuminate GREEN when signal is present at the input connector.
5. **LIMIT Indicator** – There is one YELLOW LED indicator that will illuminate when peak output has been reached and the DSP limiter is acting.
6. **GAIN Knobs** – This gain knob is for setting the input level of CH1 and CH2.
7. **MIC/LINE Button** – This push button allows you to choose between MIC or LINE level on CH1 only. CH2 is always line level.
8. **GROUND LIFT Button** – This push button allows you to lift the ground on CH2 only reducing unwanted hum and buzz caused by ground loops in the system.
9. **XLR Inputs** – Female balanced XLR and 1/4 inch phone jack combo input connectors.
10. **RCA Inputs** – Female unbalanced RCA input connectors.
11. **SPK SELECT Switch** – This switch determines which inputs are fed through to the amplifier. If CH1 is selected only the audio on CH1 will pass through to the speaker. If CH2 is selected only the audio on CH2 will pass through to the speaker. If MIX is selected, the audio on both CH1 and CH2 will pass through to the speaker.
12. **THRU SELECT Switch** – This switch determines which inputs are sent out of the THRU connector. If CH1 is selected, only the audio on CH1 will be sent out via the THRU connector. If CH2 is selected, only audio on CH2 will be sent out via the THRU connector. If MIX is selected, the audio on both CH1 and CH2 will be sent out via the THRU connector at a 50/50 mix. The signal sent out of the THRU connector is before the GAIN knob so any change in level via the GAIN knob will not be reflected on the signal that is sent out.
13. **THRU Connector** – Male balanced XLR output connector. This connector provides a full-range signal which can be daisy chained to another speaker.

SYSTEM SET UP - FULL RANGE MODELS

PRX700 Amplifier Input Configuration for
PRX710, PRX712, PRX715, PRX725 and PRX735:



SYSTEM SPECIFICATIONS

Subwoofers

	PRX715XLF	PRX718XLF
SYSTEM SPEC		
System Type:	Self powered 15", bass-reflex	Self powered 18", bass-reflex
Max SPL Output:	131 dB	134 dB
Frequency Range (-10 dB):	37 Hz - 113 Hz	30 Hz - 103 Hz
Frequency Response (±3 dB):	44 Hz – 91 Hz	35 Hz - 87 Hz
Input Connectors:	Two Balanced female XLR/ 1/4" combo connectors	Two Balanced female XLR/ 1/4" combo connectors
Input Impedance:	20K Ohms (balanced)	20K Ohms (balanced)
Signal Indicators:	Limit: Yellow LED indicates peak output has been reached and dsp limiter is acting Signal: Green LED indicates signal present Power/Standby: Blue indicates system has power and ready to pass audio, Red indicates system has power but is in a power saving mode and will not pass audio.	Limit: Yellow LED indicates peak output has been reached and dsp limiter is acting Signal: Green LED indicates signal present Power/Standby: Blue indicates system has power and ready to pass audio, Red indicates system has power but is in a power saving mode and will not pass audio.
EQ:	n/a	n/a
Dynamic Control (Input):	dbx Type IV™ limiter circuit	dbx Type IV™ limiter circuit
Crossover Frequency:	Internal: 90 Hz DSP controlled 48 dB filter slope	Internal: 90 Hz DSP controlled 48 dB filter slope
AMPLIFIER		
Design:	Class-D	Class-D
Power Rating:	1500W	1500W
SPEAKER		
LF:	1 x JBL 2275H 15 in woofer	1 x JBL 2278G 460 mm (18 in) woofer
MF:	n/a	n/a
HF:	n/a	n/a
Coverage Pattern:	n/a	n/a
Directivity Index (DI):	n/a	n/a
Directivity Factor (Q):	n/a	n/a
Enclosure:	Rectangular, 18 mm & 25mm, plywood	Rectangular, 18 mm, plywood
Suspension/Mounting:	n/a	n/a
Transport:	2 x Injection molded handles with backing cup	2 x injection molded handles with backing cup
Finish:	Obsidian DuraFlex™ finish	Obsidian DuraFlex™ finish
Grille:	Powder coated, Obsidian, 16 gauge perforated steel with acoustical transparent black cloth backing.	Powder coated, Obsidian, 16 gauge perforated steel with acoustical transparent black cloth backing.
Dimensions (mm) (H x W x D) (In):	547.1 x 445 x 580 21.54 x 17.52 x 22.48	690.4 x 523.2 x 723.9 27.18 x 20.6 x 28.5
Net Weight:	25.4 kg (56 lb)	36.8 kg (81 lb)

SYSTEM SPECIFICATIONS

Full-Range Models

	PRX710	PRX712	PRX715	PRX725	PRX735
SYSTEM SPEC					
System Type:	Self powered two-way 10" woofer 1" exit compression driver, bass reflex	Self powered two-way 12" woofer 1" exit compression driver, bass-reflex	Self powered two-way 15" woofer 1" exit compression driver, bass-reflex	Self powered two-way 15" woofer 1" exit compression driver, bass-reflex	Self powered three-way, 15" woofer, 6.5" midrange, 1" exit compression driver, bass-reflex
Max SPL Output:	Normal: 133 dB Boost: 133 dB	Normal: 135 dB Boost: 135 dB	Normal: 136 dB Boost: 136 dB	Normal: 139dB Boost: 139 dB	Normal: 136 dB Boost: 136 dB
Freq Range (-10 dB):	Normal: 50 Hz -19.6 kHz Boost: 42.9 Hz -20 kHz	Main: 44.8 Hz -19.6 kHz Monitor: 44.8 Hz -19.5 kHz	Main: 42.9 Hz -19.5kHz Monitor: 43.6 Hz -19.3kHz	Normal: 42 Hz -18.5 kHz Boost: 40 Hz -18.5 kHz	Normal: 35 Hz -20 kHz Boost: 34 Hz -20 kHz
Freq Response (±3 dB):	Normal: 63.5 Hz -18.5 kHz Boost: 53 Hz -18.6 kHz	Main: 55.7 Hz -18.2 kHz Monitor: 56.5 Hz -17.7 kHz	Main: 58.1 Hz -17.2kHz Monitor: 60.7 Hz -16.7kHz	Normal: 49 Hz -17 kHz Boost: 46 Hz -17 kHz	Normal: 42 Hz -20 kHz Boost: 39 Hz -20 kHz
Input Connectors:	2 x Balanced XLR / ¼" input, 2 x unbalanced RCA input	2 x Balanced XLR / ¼" input, 2 x unbalanced RCA input	2 x Balanced XLR / ¼" input, 2 x unbalanced RCA input	2 x Balanced XLR / ¼" input, 2 x unbalanced RCA input	2 x Balanced XLR / ¼" input, 2 x unbalanced RCA input
Input Impedance:	20K Ohms (balanced), 10K Ohms (unbalanced)	20K Ohms (balanced), 10K Ohms (unbalanced)	20K Ohms (balanced), 10K Ohms (unbalanced)	20K Ohms (balanced), 10K Ohms (unbalanced)	20K Ohms (balanced), 10K Ohms (unbalanced)
Signal Indicators:	Limit: Yellow LED indicates peak output has been reached and dsp limiter is acting Signal: Green LED indicates signal present Power/Standby: Blue indicates system has power and ready to pass audio, Red indicates system has power but is in a power saving mode and will not pass audio.	Limit: Yellow LED indicates peak output has been reached and dsp limiter is acting Signal: Green LED indicates signal present Power/Standby: Blue indicates system has power and ready to pass audio, Red indicates system has power but is in a power saving mode and will not pass audio.	Limit: Yellow LED indicates peak output has been reached and dsp limiter is acting Signal: Green LED indicates signal present Power/Standby: Blue indicates system has power and ready to pass audio, Red indicates system has power but is in a power saving mode and will not pass audio.	Limit: Yellow LED indicates peak output has been reached and dsp limiter is acting Signal: Green LED indicates signal present Power/Standby: Blue indicates system has power and ready to pass audio, Red indicates system has power but is in a power saving mode and will not pass audio.	Limit: Yellow LED indicates peak output has been reached and dsp limiter is acting Signal: Green LED indicates signal present Power/Standby: Blue indicates system has power and ready to pass audio, Red indicates system has power but is in a power saving mode and will not pass audio.
EQ:	Presets for Normal and Boost	Presets for Main and Monitor	Presets for Main and Monitor	Presets for Normal and Boost	Presets for Normal and Boost
Dynamic Control (Input):	dbx Type IV™ limiter circuit	dbx Type IV™ limiter circuit	dbx Type IV™ limiter circuit	dbx Type IV™ limiter circuit	dbx Type IV™ limiter circuit
Crossover Frequency:	1.9 kHz	1.8 kHz	1.7 kHz	2.4 kHz	480 Hz, 2.0 kHz
AMPLIFIER					
Design:	Class-D	Class-D	Class-D	Class-D	Class-D
Power Rating:	1500W (2 x 750W)	1500W (2 x 750W)	1500W (2 x 750W)	1500W (2 x 750W)	1500W (2 x 750W)
SPEAKER					
LF:	1 x JBL M110-4 250mm (10 in) woofer	1 x JBL 272G 305mm (12") woofer	1 x JBL 275G (15 in) woofer	2 x JBL 275 (15 in) woofer	1 x JBL 275G 380mm (15 in) woofer
MF:	n/a	n/a	n/a	n/a	1 x JBL 196H 165mm (6.5 in) horn-loaded midrange transducer
HF:	1 x JBL 2408H-2 37.5 mm (1.5") annular polymer diaphragm, neodymium compression driver	1 x JBL 2408H-2 37.5 mm (1.5") annular polymer diaphragm, neodymium compression driver	1 x JBL 2408H-2 37.5 mm (1.5") annular polymer diaphragm, neodymium compression driver	1 x JBL 2408H-2 37.5 mm (1.5") annular polymer diaphragm, neodymium compression driver	1 x JBL 2408H-2 37.5 mm (1.5") annular polymer diaphragm, neodymium compression driver
Coverage Pattern:	100° x 60° nominal	90° x 50° nominal	90° x 50° nominal	90° x 50° nominal	90° x 50° nominal
Directivity Index (DI):	9 dB	10.2 dB	10.2 dB	10.4 dB	10.5 dB
Directivity Factor (Q):	8	10.4	10.4	11	11.2
Enclosure:	Trapezoidal, 18 mm, plywood	Asymmetrical, 18 mm, plywood	Asymmetrical, 18 mm, plywood	Trapezoidal, 18 mm, plywood	Trapezoidal, 18 mm, plywood
Suspension/Mounting:	Single 36 mm pole socket, 8 x M10 Suspension Points, 1 x M10 pull back point	Dual 36 mm pole socket, 12 x M10 Suspension Points	Dual 36 mm pole socket, 12 x M10 Suspension Points	8 x M10 Suspension Points, 1 x M10 pull back point	12 x M10 Suspension Points
Transport:	1 x integrated handle with injection molded backing cup	1 x injection molded handles with backing cup	1 x injection molded handles with backing cup	2x injection molded handle with backing cup	2x injection molded handle with backing cup
Finish:	Obsidian DuraFlex™ finish	Obsidian DuraFlex™ finish	Obsidian DuraFlex™ finish	Obsidian DuraFlex™ finish	Obsidian DuraFlex™ finish
Grille:	Powder coated, Obsidian, 16 gauge perforated steel with acoustical transparent black cloth backing.	Powder coated, Obsidian, 16 gauge perforated steel with acoustical transparent black cloth backing.	Powder coated, Obsidian, 16 gauge perforated steel with acoustical transparent black cloth backing.	Powder coated, Obsidian, 16 gauge perforated steel with acoustical transparent black cloth backing.	Powder coated, Obsidian, 16 gauge perforated steel with acoustical transparent black cloth backing.
Dimensions (mm): (H x W x D) (in):	498.720 x 335.617 x 322.280 (19.63 x 13.21 x 12.69)	612.4 x 384.6 x 341.4 24.11 x 15.14 x 13.44	714.4 x 445. x 358.7 28.13 x 17.52 x 14.12	1070.4 x 445 x 538 42.14 x 17.52 x 21.18	952.5 x 445 x 538 37.5 x 17.52 x 21.18
Net Weight:	16.4 kg (36 lb)	19.4 kg (42.5 lb)	21.6 kg (47.5 lb)	37.19 kg (82 lb)	34.9 kg (77 lb)

Powered Speaker Systems

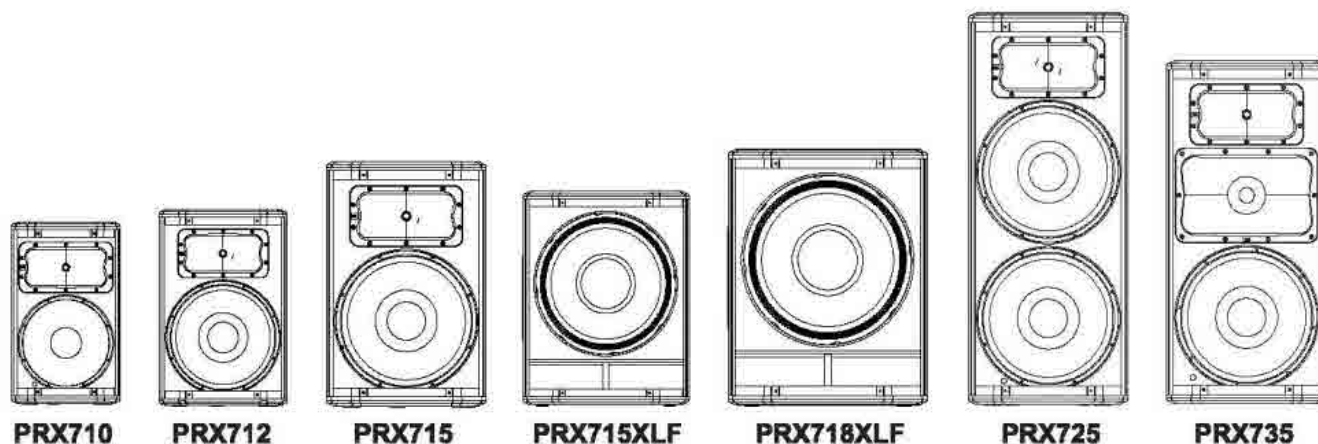
A Closed System Architecture...

There is much confusion these days in the world of powered speakers especially when it comes to defining "performance". What constitutes "exceptional performance"? Is it wattage ratings, driver dimensions, cabinet dimensions, sound pressure levels, tone? It can get very confusing when you're confronted with a barrage of specifications from manufacturers all claiming to have the "best performance". A self powered speaker is really a "system" unto itself – it's a "closed system". Unlike a passive speaker, amplifier and signal processing chain where components can be interchanged or upgraded, the powered speaker is a "closed system" that operates as a single unit. Properly designed, all of the components are chosen to work together, complementing each other to create an environment where the whole is greater than the sum of the parts. The cabinet volume needs to support the mechanical performance of the speaker which is impacted by the power amplifier's performance which, if there is Digital Signal Processing on the input, is affected by the DSP programming. Some manufacturers simply stick an amplifier on an existing speaker cabinet and call it a "powered speaker" (technically correct) while more experienced companies, like JBL, spend hundreds of man hours optimizing the relationship between the components in order to maximize amplifier and speaker efficiency, spectral balance, tone and dependability. Here at JBL we not only work hard on the system but on our proprietary components as well. Products like Differential Drive® speakers for example are patented designs born from years of dedicated research and development into acoustical and transducer science. No one else has access to this technology and Differential Drive® speakers have been tested on worldwide concert tours for years.

Harman Professional "Green Edge™" Mission

At Harman Professional we understand and respect that we have a duty to serve our customers and our employees by serving the planet. We accept that responsibility and strive to be energy efficient and environmentally minded in our everyday business. When we design, produce, and deliver our products we look for opportunities to do so more efficiently and sustainably. We're committed to a healthier planet and healthier life for every living thing. JBL is proud that PRX700s have been certified "Green Edge" compliant by Harman Professional. We've not only lowered our Carbon Footprint, but the CF of any one who purchases them.

Introduction to the PRX700 Series



Thank you for choosing the JBL PRX700 series self-powered PA loudspeakers. The PRX700 Series represent an evolutionary step in the efficient use of amplifier power, rugged durability and enhanced versatility in a self-powered loudspeaker. The speakers were designed from the ground up to perform in the real world of sound reinforcement where challenging audio environments, high ambient noise levels and loud volumes are the norm. And we've built these speakers to last a lifetime using our tested technology that's reliable and trustworthy. Knowing you can rely on your system to deliver everything you need gives you the freedom to deliver your best. That's performance you can trust. With the PRX700 Series, as always, JBL delivers with precision and care. Properly maintained, your PRX700 series speaker will provide you with many years of flawless performance. To ensure you are always receiving optimum performance we encourage you to review this user's guide completely before hooking up your new system.

The PRX700 Series is a platform technology that allows you to create the system you need from an intelligent range of models. While each model was designed to excel at a specific application, the PRX Series integrate seamlessly with one another offering a multitude of choices when tailoring a system to fit your specific needs. Whether you need a single speaker on a stand for public address situations, a full-range stereo set up with two top cabinets and a sub-woofer for live performance or DJ applications, or multiple cabinets for a scalable, highly professional sound reinforcement situation, the PRX700 Series offers the solutions. In fact, you can even suspend any of the top cabinets for use in a commercial installation or House of Worship. If versatility, scalability, portability and affordability are what you're looking for in a system, PRX700s are the intelligent choice.

Road Tough

All PRX700 cabinets are built from a combination of 25mm (on the top and bottom for added rigidity) and 18mm, strong, lightweight poplar plywood made structurally sound with tongue and groove joints. All PRX700 Series cabinets are protected by JBL's four proven DuraFlex™ finish. We make our grilles from dent-resistant 16 gauge steel and our handles are made from lightweight glass-filled nylon for added durability. All M10 suspension points are constructed from 14 gauge steel and the M10 suspension points have been tested with a yield-strength of 1000 lbs. each.

Differential Drive Transducers

Extended frequency response, high power output and low distortion are hallmarks of all JBL transducers. Our four tested, four proven and patented Differential Drive® technology delivers all this performance in a dramatically lighter package than traditional transducer designs.

The PRX700 Series Power Amplifier

AC Power Requirements

Standard PRX700 series speaker systems are equipped with a multi-channel Class-D power amplifier and loudspeaker specific DSP electronics and require appropriate AC power. Before plugging a PRX700 speaker into an outlet ensure that it is able to provide the appropriate AC power as required by the speaker.

A robust AC supply is necessary for maximum performance. If the supply is too weak the bass performance may be affected and if it sags (drops) too much the system may self-mute to protect itself. As soon as the appropriate

AC supply is restored it will continue to operate. Plugging multiple systems into the same outlet and long extension cord runs may affect the AC supply to the systems.



In compliance with safety agency criteria and proper system operation, it is critical that the system installer observe all electrical safety practices at all times and provide proper earth grounding for all AC Power connections.

Powering Up

The main power switch is located on the input panel on the back of the enclosure. Always ensure that the speaker system is the last thing you power up, and the first thing to turn off when operating your complete PA system. If speaker systems are daisy chained together always turn off the last system in the chain first. Power "on" is indicated by the illumination of the blue LED on the front of the enclosure.

Operating Temperature

The design of the amplifier is such that it is very energy efficient and as a result does not get really hot. In the rare event that it does get too hot it will automatically shut down to protect itself. When its temperature has returned to within its operating range it will turn back on. A condition under which this may occur is when the system is operated in very high ambient temperatures or the rear of the enclosure is in direct sunlight. Always ensure adequate cooling and appropriate shade.

PRX700 Series Speakers Declaration of Conformity

Safety and EMC Compliance Specifications

EN 55103-1:1997 Electromagnetic Compatibility - Product Family Standard for Audio, Video, Audio-Visual and Entertainment Lighting Control Apparatus for Professional Use, Part 1: Emissions

EN 55103-1:1997 Magnetic Field Emissions-Annex A@ 10 cm and 20 cm

EN 55022:2003 Limits and Methods of Measurement of Radio Disturbance Characteristics of ITE: Radiated, Class B Limits; Conducted, Class A

EN 55103-2:1997 Electromagnetic Compatibility - Product Family Standard for Audio, Video, Audio-Visual and Entertainment Lighting Control Apparatus for Professional Use, Part 2: Immunity

EN 61000-4-2: A2:2001 Electrostatic Discharge Immunity (Environment E2-criteria B, 4 kV Contact, 8 kV Air discharge)

EN 61000-4-3:2003 Radiated, Radio-frequency, Electromagnetic Immunity (Environment E2, criteria A)

EN61000-4-4:2005 Electrical Fast Transient/Burst Immunity (criteria B)

EN 61000-4-5:2001 Surge Immunity (criteria B)

EN 61000-4-6:1996 Immunity to Conducted Disturbances Induced by Radio-Frequency Fields (criteria A)

EN 61000-4-11:2004 Voltage Dips, Short Interruptions and Voltage Variation

UL 6500 2nd Edition 1999 Audio/Video and Musical Instruments Apparatus for Household, Commercial, and Similar General Use

CAN/CSA-E60065-00 Audio, video and similar apparatus - Safety requirements

UL Compliance Specifications

CUL 60065 7th Ed. IEC 60065(ed.7), IEC 60065(ed.7);am1,
IEC 60065(ed.7);am2 EN 60065:2002/A1:2006/A11:2008/A2:2010/A12:2011

FCC Compliance Notice

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 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 instruction manual, may cause harmful interference to radio communications. However there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio and television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to collect 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.

SUSPENSION OF LOUDSPEAKER SYSTEMS



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 products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



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 product.

Resources

Adaptive Technologies Group

562.424.1100
1635 E. Burnett Street
Signal Hill, CA 90755
www.adapttechgroup.com

McMaster Carr

Various locations in the USA
For a location near you, visit
them at www.mcmaster.com

JBL Professional - Tech Note Vol. 1 No. 14

"Basic Principles for Suspending Loudspeakers"
www.jblpro.com/catalog/support/getfile.aspx?docid=296&doctype=3

Safe Rigging

JBL suspendable version loudspeakers are supplied with built-in internal brackets. The systems are designed to facilitate the suspension of the loudspeaker by a qualified person familiar with rigging hardware and industry practices. Improper installation may result in damage, injury or death.

If you are unfamiliar with Safe Rigging Practices you will need to consult with a qualified person familiar with rigging hardware and industry practices.

Working Load Limit

Working Load Limit for M10 Suspension Points:

The working load limit (WLL) of the JBL PRX700 Series loudspeakers utilizing M10 attachment points will be maintained with a safety factor of 5:1, provided no more than 470lbs/213kg from 2 points equally loaded, or no more than 235lbs/106kg maximum from a single suspension point, is utilized in conjunction with industry recognized safe rigging practices and the guidelines established within this manual.

For permanent installation applications utilizing the M10 suspension points order JBL 229-00009-01. This kit includes three M10 x 35 mm forged shoulder steel eyebolts with washers.

WARNING

Suspension of JBL loudspeakers must employ a minimum of two attachment points. When "bridling" a JBL loudspeaker system, two legs of equal length must be used. The rear attachment points are pull-back points and are intended only for use in adjusting the down-angle of the speaker enclosure. Only the top and bottom attachment points are intended for use as suspension points.

Hearing Damage, Prolonged Exposure To Excessive SPL

PRX700 series loudspeakers are easily capable of generating sound pressure levels (SPL) sufficient to cause permanent hearing damage to performers, production crew and audience members. Caution should be taken to avoid prolonged exposure to SPL in excess of 90 dB.

SUSPENSION OF LOUDSPEAKER SYSTEMS

Are You New to Rigging?

If you are new to rigging, you should do the following:

- Read and study JBL Technical Note Volume 1, Number 14: Basic Principles for Suspending Loudspeaker Systems (available at <http://www.jblpro.com/catalog/support/getfile.aspx?docid=296&doctype=3>).
- Know the rules for safe rigging.
- Attend a safe rigging seminar, such as that presented by professionals like Rigging Seminars™ or by Chain Motor Hoist manufacturers like Columbus McKinnon Corp. (manufacturers of the C/M Lodestar).
- Meet and establish a relationship with a licensed mechanical or structural engineer. Get in the habit of asking them questions instead of guessing about their answers. Learn from what they tell you.
- Meet and discuss this aspect of your business with your Insurance Agent.
- Research and understand the codes, practices, and requirements in the venues where you intend to operate your sound system.

General Hardware Information

Any hardware used in an overhead suspension application must be load rated for the intended use. Generally, this type of hardware is available from rigging supply houses, industrial supply catalogs and specialized rigging distributors. Local hardware stores do not usually stock these products. Hardware that is intended for overhead suspension will comply with ASME B30.20 and will be manufactured under product traceability controls. Compliant hardware will be referenced with a working load limit (WLL) and a traceability code.

Attachment to Structures

A licensed Professional Engineer must approve the placement and method of attachment to the structure prior to the installation of any overhead object. The following performance standards should be provided to the Professional Engineer for design purposes; Uniform Building Code as applicable, Municipal Building Code as applicable, and Seismic Code as applicable.

The installation of the hardware and method of attachment must be carried out in the manner specified by the Professional Engineer. Improper installation may result in damage, injury or death.

Inspection & Maintenance

Suspension systems are comprised of mechanical devices and, as such, they require regular inspection and routine maintenance to insure proper function ability. JBL suspendable loudspeakers must be inspected for fatigue at least annually or, if there has been significant seismic activity, immediately thereafter. The inspection shall include a visual survey of all corners and load bearing surfaces for signs of cracking, water damage, de-lamination, or any other condition that may decrease the strength of the loudspeaker enclosure. Accessory suspension hardware provided with or for the JBL loudspeakers must be inspected for fatigue at least annually. The inspection shall include a visual survey of the material for signs of corrosion, bending or any other condition that may decrease the strength of the fastener. Additionally, any eyebolts shall be checked for possible spin-out of the enclosure.

For all other hardware and fittings, refer to the hardware manufacturer's inspection and maintenance guidelines for process.

JBL is not responsible for the application of its products for any purpose or the misuse of this information for any purpose. Furthermore, JBL is not responsible for the abuse of its products caused by avoiding compliance with inspection and maintenance procedures or any other abuse.

Prior to suspending the system, an expert, trained and experienced in suspending speaker systems should inspect all rigging parts and components.



The PRX700 series speakers covered by this manual are not intended for use in high moisture environments. Moisture can damage the speaker cone and surround and cause corrosion of electrical contacts and metal parts. Avoid exposing the speakers to direct moisture. Keep speakers out of extended or intense direct sunlight. The driver suspension will prematurely dry out and finished surfaces may be degraded by long-term exposure to intense ultra-violet (UV) light. PRX700 series speakers can generate considerable energy. When placed on a slippery surface such as polished wood or linoleum, the speaker may

move due to its acoustical energy output. Precautions should be taken to assure that the speaker does not fall off a stage or table on which it is placed.

Stand Mounting Safety Precautions

Some PRX700 series models include a 36 mm receptacle cup to allow mounting on tripod stands or on a pole over subwoofers. When using stands or poles, be sure to observe the following precautions:

- Check the stand or pole specification to be certain the device is designed to support the weight of the speaker. Observe all safety precautions specified by the manufacturer.
- Always verify that the stand (or subwoofer/pole) is placed on a flat, level and stable surface and be sure to fully extend the legs of tripod type stands. Position the stand so that the legs do not present a trip hazard.
- Route cables so that performers, production crew, and audience will not trip and topple the speakers over.
- Inspect the stand (or pole and associated hardware) before each use and do not use equipment with worn, damaged or missing parts.
- Do not attempt to place more than one PRX700 series speaker on a stand or pole.
- Always be cautious in windy, outdoor conditions. It may be necessary to place additional weight (i.e. sandbags) on the base of the stand to improve stability. Avoid attaching banners or similar items to any part of a speaker system. Such attachments could act as a sail and topple the system.
- Unless you are confident that you can handle the weight of the speaker, ask another person to help you get it onto the tripod stand or pole.
- JBL highly recommends that no more than 80 lbs of weight be placed on a speaker pole that is mounted to a PRX715XLF or PRX718XLF.

Suspension of Loudspeaker System

Before attempting to suspend your JBL loudspeakers, read and understand the following safety information.

IMPORTANT SAFETY WARNING!

The information in this section has been assembled from recognized engineering data and is intended for informational purposes only. None of the information in this section should be used without first obtaining competent advice with respect to applicability to a given circumstance. None of the information presented herein is intended as a representation or warranty on the part of JBL. Anyone making use of this information assumes all liability arising from such use. All information presented herein is based upon materials and practices common to North America and may not directly apply to other countries because of differing material dimensions, specifications, and/or local regulations. Users in other countries should consult with appropriate engineering and regulatory authorities for specific guidelines. Correct use of all rigging hardware is required for secure system suspension. Careful calculations should always be performed to ensure that all components are used within their working load limits before the array is suspended. Never exceed the maximum recommended load ratings. Before suspending any speaker system always inspect all components (enclosure, rigging frames, pins, eyebolts, track fittings, etc.) for cracks, deformations, corrosion, missing, loose or damaged parts that could reduce strength and safety of the array. Do not suspend the speaker until the proper corrective action has been taken. Use only load-rated hardware when suspending JBL suspendable loudspeaker models.

IMPORTANT SAFETY INSTRUCTIONS

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 dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's 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 is 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. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. 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.
15. If Service Instructions are included in the Owner's Manual: "CAUTION - THESE SERVICING INSTRUCTIONS ARE FOR USE BY QUALIFIED SERVICE PERSONNEL ONLY. 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."
16. To completely disconnect this apparatus from the AC mains, disconnect the power supply cord plug from the AC receptacle.
17. "WARNING – TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE."
18. Do not expose this equipment to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the equipment.
19. The main plug of the power supply cord shall remain readily operable.



Care And Cleaning

PRX700 series systems may be cleaned with a dry cloth. Do not get moisture into any of the openings in the system. Ensure that the system is unplugged from the AC outlet before cleaning. In the event the DuraFlex finish is damaged a touch up kit can be obtained from JBL Professional (part number 363972-001).

THIS APPARATUS CONTAINS POTENTIALLY LETHAL VOLTAGES. TO PREVENT ELECTRIC SHOCK OR HAZARD, DO NOT REMOVE CHASSIS, INPUT MODULE OR AC INPUT COVERS. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

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