PRX700
SERIES

PRX710

PRX712

User's Guide

PRX715

PRX715XLF

PRX718XLF

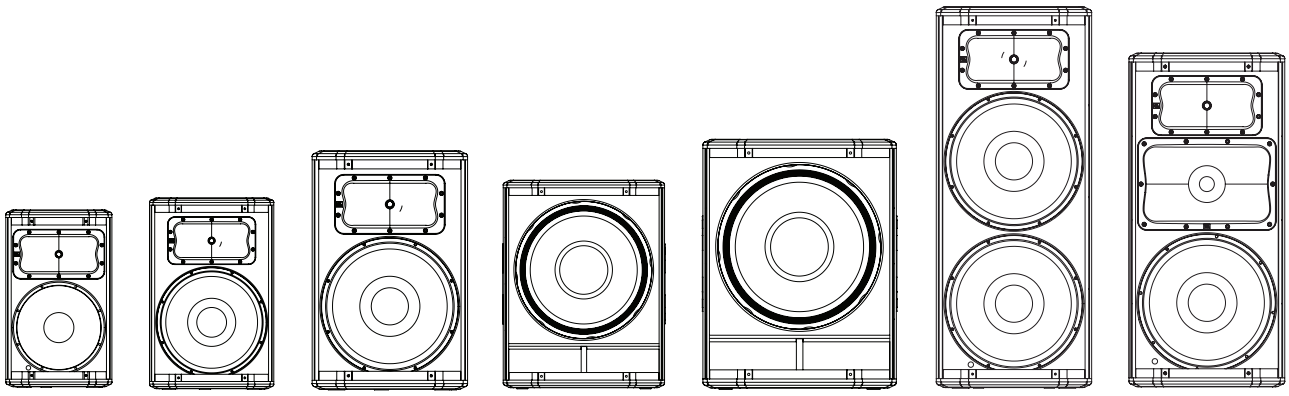
PRX725

PRX735

Preliminary

JBL PROFESSIONAL by HARMAN

Introduction to the PRX700 Series



PRX710 PRX712 PRX715 PRX715XLF PRX718XLF PRX725 PRX735

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 tour 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 tour 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 tour tested, tour proven and patented Differential Drive® technology delivers all this performance in a dramatically lighter package than traditional transducer designs.

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.

SYSTEM SPECIFICATIONS
Full-Range Models

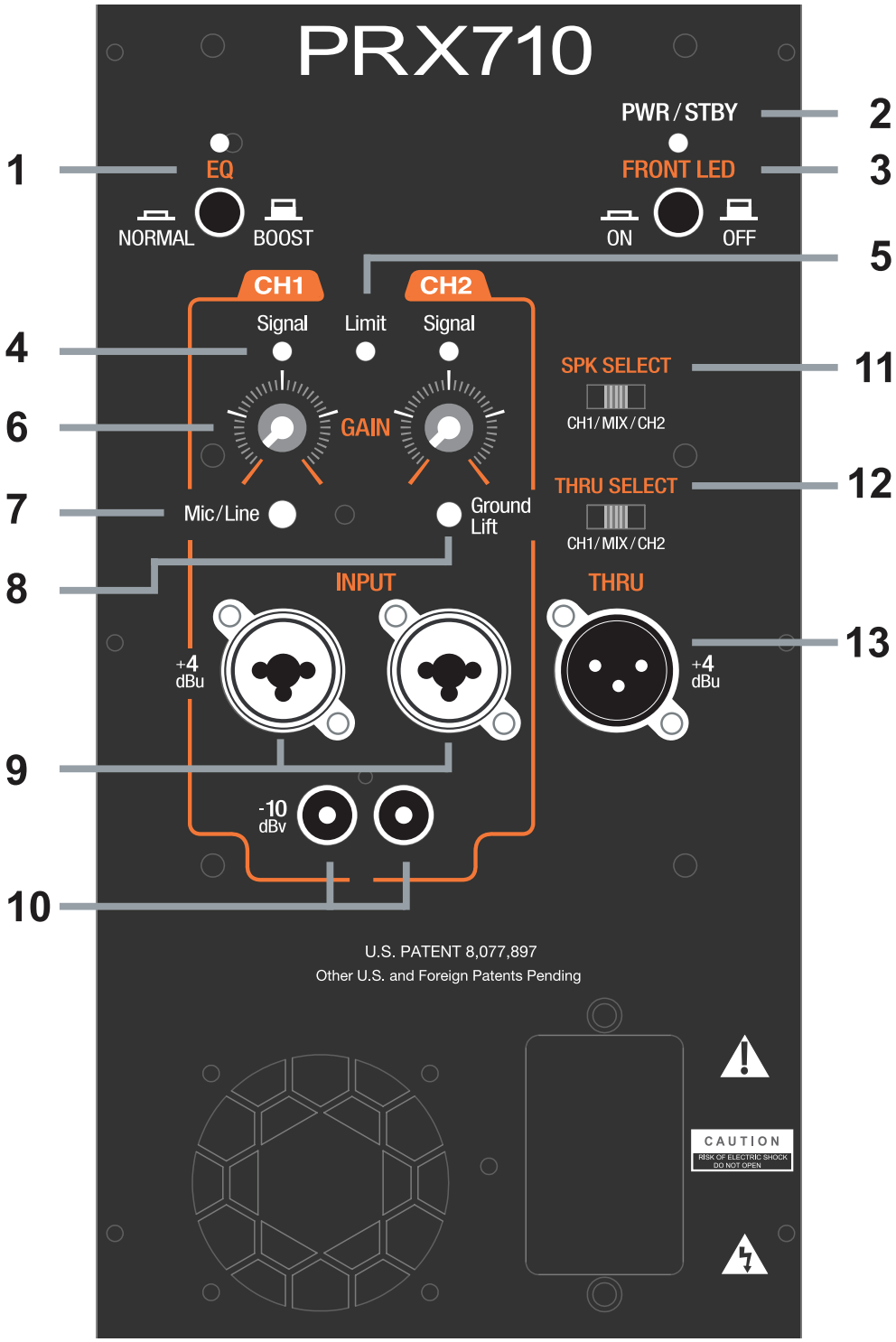
	PRX710	PRX712	PRX715	PRX725	PRX735
SYSTEM SPEC					
System Type:	Self powered two-way 10" woofer 1" exit compression driver, bass reflex	Self powered two-way 12" woofer 1" exit compression driver, bass-reflex	Self powered two-way 15" woofer 1" exit compression driver, bass-reflex	Self powered two-way 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 kHzBoost: 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:	100º x 60º nominal	90º x 50º nominal	90º x 50º nominal	90º x 50º nominal	90º x 50º 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 24.11x 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)

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 SET UP - FULL RANGE MODELS

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



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 turn 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.

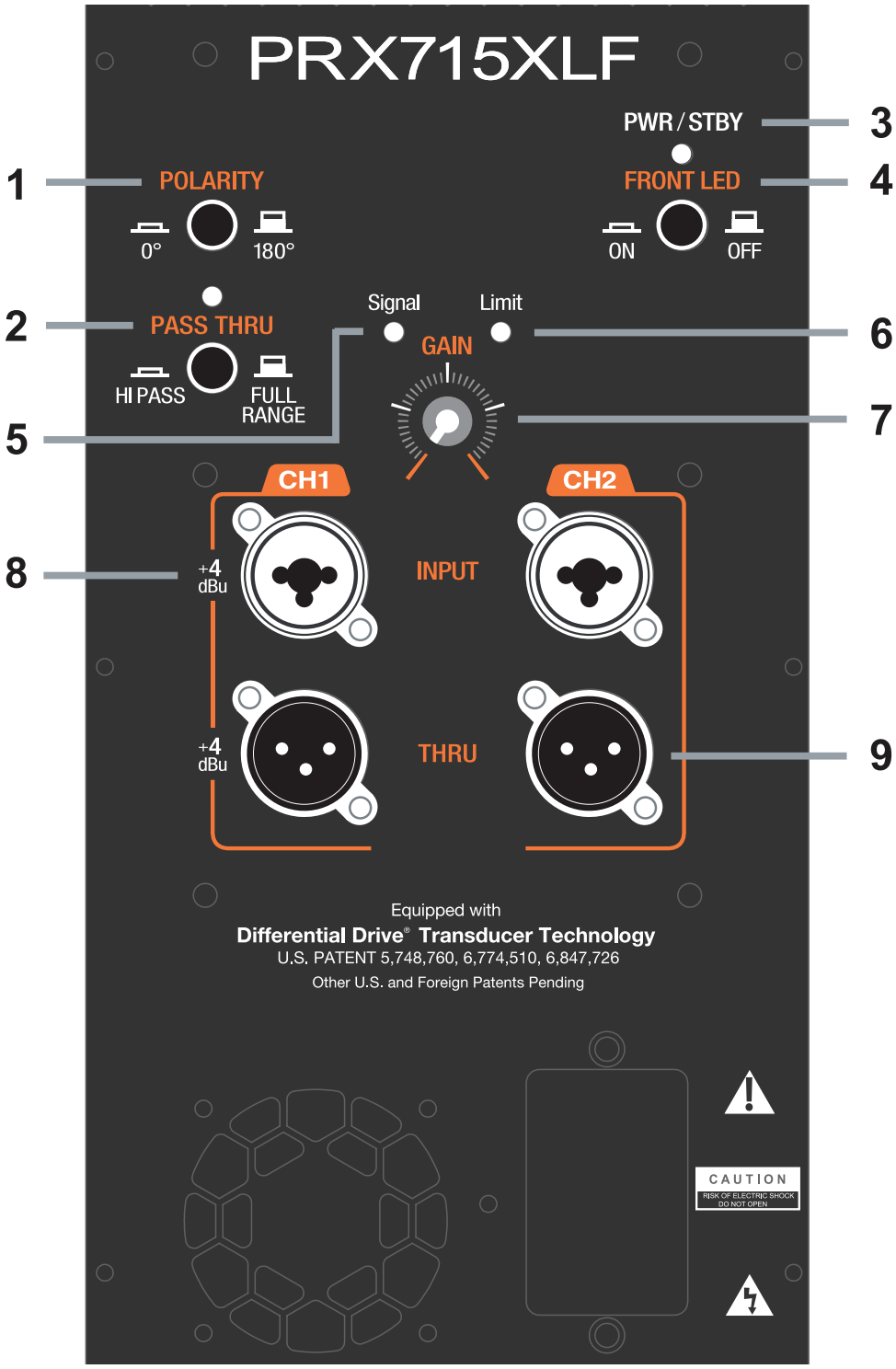
11. **SPK SELECT Switch** – This switch determines which inputs are fed through to the amplifier. If CH1 is selected only the audio on CH1 will pass through to the speaker. If CH2 is selected only the audio on CH2 will pass through to the speaker. If MIX is selected, the audio on both CH1 and CH2 will 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 - SUBWOOFERS

PRX700 Amplifier Input Configuration for
PRX715XLF and PRX718XLF:



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.

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. • 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	• 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	• 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 Faulty microphone cable 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	• 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. • 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.

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	• "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	• 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	Review the Owner's Manual for your system setup and adjust controls as needed. • 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."

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

PRX700

S E R I E S

Part Number: 5032132 7/13 8500 Balboa Boulevard Northridge, CA 91329 USA www.jblpro.com

JBL® PROFESSIONAL by HARMAN