

MRX500

S E R I E S

User's Guide

MRX512M

MRX515

MRX525

MRX518S

MRX528S



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Explanation of Graphic Symbols



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



The lightning flash with the arrowhead symbol, within an equilateral triangle, is to alert the user to the presence of insulated "dangerous voltage" within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to humans.



CAUTION: TO REDUCE THE RISK OF ELECTRONIC SHOCK - DO NOT REMOVE COVER. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED PERSONNEL.



ATTENTION: POUR EVITER LES RISQUES DE CHOC ELECTRIQUE, NE PAS ENLEVER LE COUVERCLE. AUCUN ENTRETIEN DE PIECES INTERIEURES PAR L'USAGER. CONFIER L'ENTRETIEN AU PERSONNEL QUALIFIE. AVIS: POUR EVITER LES RISQUES D'INCENDIE OU D'ELECTROCUTION, N'EXPOSEZ PAS CET ARTICLE A LA PLUIE OU A L'HUMIDITE.

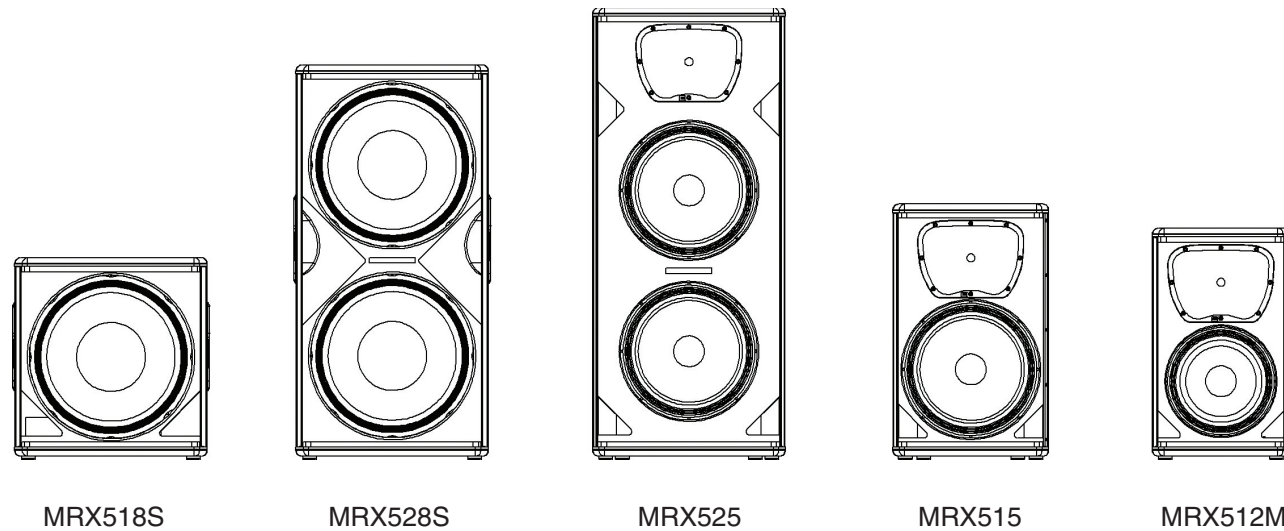


The IEC fuse symbol pictured at the left represents an approved user replaceable fuse. When replacing a fuse, make sure to replace with only the correct type and fuse rating.

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 a dry cloth.
7. Do not block any ventilation openings. Install in accordance with manufacturers instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus 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 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 your outlet, consult a 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 the apparatus.
11. Only use attachments / accessories specified by the manufacturer.
12. Use only with a cart, stand, 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 un-used for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when a apparatus has been damaged in any way, such as power-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. To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

BEFORE YOU BEGIN



The MRX500 speakers covered by this manual are not intended for fixed installation in outdoor or 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.

MRX500 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 MRX500 models include a 35 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 MRX500 speaker on a stand or pole.
- ▶ Always be cautious in windy, outdoor conditions. It may be necessary to place additional weight (i.e. sand bags) 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.

Hearing damage, prolonged exposure to excessive SPL

MRX500 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.

SPECIFICATIONS

MRX512M - 12", two-way, bass-reflex, utility / monitor speaker

Frequency Range (-10 dB):	60 Hz - 20 kHz
Frequency Response (±3 dB):	90 Hz - 20 kHz
Coverage Pattern:	70° x 70° nominal
Crossover Mode:	Passive
Crossover Frequency:	1.7 kHz
Power Rating:	400 W / 800 W / 1600 W, 2 hrs ¹
(Continuous / Program / Peak)	350 W / 700 W / 1400 W, 100 hrs ¹
Maximum SPL:	123 dB SPL continuous (129 dB SPL peak) ²
System Sensitivity (1w @ 1m):	97 dB SPL
LF Driver:	1 x JBL 262H 305 mm (12 in) Differential Drive® woofer
HF Driver:	1 x JBL 2408H 37.5 mm (1.5 in) annular polymer diaphragm, neodymium compression driver
Nominal Impedance:	8 ohms
Enclosure:	Symmetrical stage monitor, 15/18 mm, plywood.
Suspension/Mounting:	Dual-angle (0° or -10°), 35 mm pole socket
Transport:	Integrated handle / input cup
Finish:	Black DuraFlex™ finish
Grille:	Powder coated, black, 16 gauge perforated steel with acoustically transparent black screen backing.
Input Connectors:	Neutrik® Speakon® NL-4 (x2), one on each end
Dimensions (H x W x D):	645 mm x 380 mm x 345 mm (25.25 in x 15.0 in x 13.5 in)
Net Weight:	14.9 kg (33 lb)
Optional Accessories:	SS2-BK: Tripod speaker stand SS3-BK: Satellite speaker pole

¹ IEC standard, full bandwidth pink noise with 6 dB crest factor for specified period

² Calculated based on power rating and sensitivity

MRX515 - 15" two-way, bass-reflex

Frequency Range (-10 dB):	52 Hz - 20 kHz
Frequency Response (±3 dB):	65 Hz - 20 kHz
Coverage Pattern:	70° x 70° nominal
Crossover Mode:	Passive
Crossover Frequency:	1.7 kHz
Power Rating :	400 W / 800 W / 1600 W, 2 hrs ¹
(Continuous / Program / Peak)	350 W / 700 W / 1400 W, 100 hrs ¹
Maximum SPL:	124 dB SPL continuous (130 dB SPL peak) ²
System Sensitivity (1w @ 1m):	98 dB SPL
LF Driver:	1 x JBL 265H 380 mm (15 in) Differential Drive® woofer
HF Driver:	1 x JBL 2408H 37.5 mm (1.5 in) annular polymer diaphragm, neodymium compression driver
Nominal Impedance:	8 ohms
Enclosure:	Trapezoidal, 15/18 mm, plywood
Suspension/Mounting:	Dual-angle (0° or -10°) 35 mm pole socket
Transport:	2 x die-cast handles with backing cup
Finish:	Black DuraFlex™ finish
Grille:	Powder coated, black, 16-gauge perforated steel with acoustically transparent black screen backing.
Input Connectors:	Neutrik® Speakon® NL-4 (x2)
Dimensions (H x W x D):	700 mm x 435 mm x 470 mm (27.25 in x 17.5 in x 18.5 in)
Net Weight:	19.5 kg (43 lb)
Optional Accessories:	SS2-BK: Tripod speaker stand SS3-BK: Satellite speaker stand

¹ IEC standard, full bandwidth pink noise with 6 dB crest factor for specified period

² Calculated based on power rating and sensitivity.

SPECIFICATIONS

MRX525 - Dual 15", two-way, bass-reflex

Frequency Range (-10 dB):	40 Hz - 20 kHz
Frequency Response (±3 dB):	57 Hz - 20 kHz
Coverage Pattern:	70° x 70° nominal
Crossover Mode:	Passive
Crossover Frequency:	1.8 kHz
Power Rating:	800 W / 1600 W / 3200 W, 2 hrs ¹
(Continuous / Program / Peak)	700 W / 1400 W / 2800 W, 100 hrs ¹
Maximum SPL:	129 dB SPL continuous (135 dB SPL peak) ²
System Sensitivity (1w @ 1m):	100 dB SPL
LF Driver:	2 x JBL 265H 380 mm (15 in) Differential Drive [®] woofers
HF Driver:	1 x JBL 2408H 37.5 mm (1.5 in) annular polymer diaphragm, neodymium compression driver
Nominal Impedance:	4 ohms
Enclosure:	Trapezoidal, 15/18 mm, plywood
Transport:	2 x die-cast handles with backing cup
Finish:	Black DuraFlex™ finish
Grille:	Powder coated, black, 16-gauge perforated steel with acoustically transparent black screen backing.
Input Connectors:	Neutrik® Speakon® NL-4 (x2)
Dimensions (H x W x D):	1240 mm x 535 mm x 460 mm; (48.75 in x 21.0 in x 18.0 in)
Net Weight:	38.2 kg (84 lb)

¹ IEC standard, full bandwidth pink noise with 6 dB crest factor for specified period

² Calculated based on power rating and sensitivity

MRX528S - Dual 18" bass-reflex subwoofer

Frequency Range (-10 dB):	35 Hz - 250 Hz
Frequency Response (±3 dB):	40 Hz - 250 Hz
Input Connection Modes:	Internally configurable, +1/-1 or +2/-2
Recommended Crossover Frequencies:	80-120 Hz, 24-48 dB/octave
Power Rating:	1000 W / 2000 W / 4000 W, 2 hrs ¹
(Continuous / Program / Peak)	800 W / 1600 W / 3200 W, 100 hrs ¹
Maximum SPL:	133 dB SPL continuous (139 dB SPL peak) ²
System Sensitivity (1w @ 1m):	97 dB SPL; 103 dB SPL ²
LF Driver:	2 x JBL 2044H 457 mm (18 in) woofers
Nominal Impedance:	4 ohms
Enclosure:	Rectangular, 18 mm, birch plywood
Finish:	Black DuraFlex™ finish
Grille:	Powder coated, black, 16 gauge perforated steel with acoustically transparent black screen backing.
Input Connectors:	Neutrik® Speakon® NL-4 (x2)
Dimensions (H x W x D):	1095 mm x 535 mm x 700 mm (43 in x 21 in x 27.5 in)
Net Weight:	55 kg (121 lb)

¹ 40 Hz to 400 Hz pink noise with 6 dB crest factor for specified period

² Calculated on half space condition

SPECIFICATIONS

MRX518S - 18" bass-reflex subwoofer

Frequency Range (-10 dB):	40 Hz - 200 Hz
Frequency Response (±3 dB):	45 Hz - 200 Hz
Input Connection Modes:	Internally configurable, +1/-1, +2/-2
Recommended Crossover Frequencies:	80-120 Hz, 24-48 dB/octave HPF
Power Rating :	500 W / 1000 W / 2000 W, 2 hrs ¹
(Continuous / Program / Peak)	400 W / 800 W / 1600 W, 100 hrs ¹
Maximum SPL:	127 dB SPL continuous (133 dB SPL peak) ²
System Sensitivity (1w @ 1m):	94 dB SPL, 100 dB SPL ²
LF Driver:	1 x JBL 2044G 457 mm (18 in) woofer
Nominal Impedance:	4 ohms
Mounting:	Top mounted 35 mm socket for optional SS3-BK pole
Enclosure:	Rectangular, 18 mm, plywood
Finish:	Black DuraFlex™ finish
Grille:	Powder coated, black, 16 gauge perforated steel with acoustically transparent black screen backing.
Input Connectors:	Neutrik® Speakon® NL-4 (x2)
Dimensions (H x W x D):	560 mm x 535 mm x 700 mm (22 in x 21 in x 27.5 in)
Net Weight:	32.5 kg (72 lb)
Optional Accessories:	SS3-BK; Satellite speaker pole

¹ 40 Hz to 400 Hz pink noise with 6 dB crest factor for specified period

² Calculated on half space condition

Recommended Amplifier Power

Model	Recommended Amplifier Power	Infrasonic Filter Settings
	Full-Range / Parallel	HPF 24dB/octave
MRX512M	800 to 1,600W@8Ω	63 Hz
MRX515	800 to 1,600W@8Ω	50 Hz
MRX525	1,600 to 3,200W@4Ω	40 Hz
MRX518S	1,000 to 2,000W@4Ω	31 Hz
MRX528S	2,000 to 4,000W@4Ω	31 Hz

Infrasonic Filter Settings

It is a good practice to use a High Pass Filter (HPF) to prevent frequencies below the system tuning frequency from reaching the speaker. Inputting these frequencies to the speaker will not result in any appreciable acoustic output but will put needless mechanical stress on the woofer and reduce available amplifier headroom. A High Pass Filter will protect your MRX500 system from excess infrasonic energy with little, if any loss of significant program content. Refer to the above chart for infrasonic filter settings.

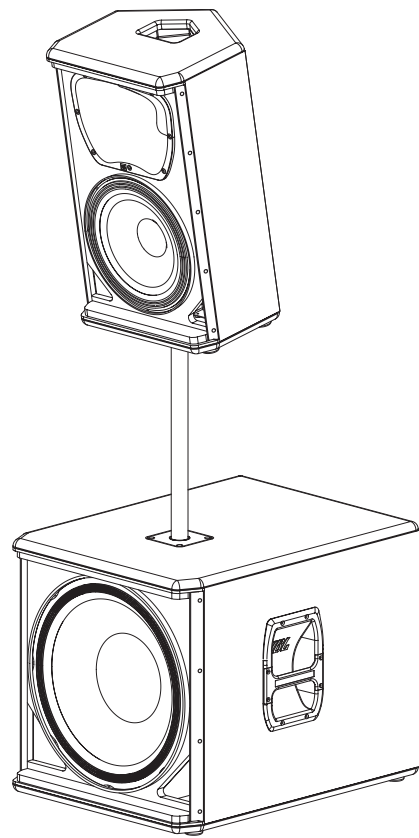
DuraFlex™ Finish

The DuraFlex finish used on your MRX500 series speakers is one of the most rugged finishes ever applied to a speaker. However, all speaker finishes are subject to damage. Should the DuraFlex finish require repair, a touch-up kit (Part Number 16677) is available from JBL Professional Parts.

Single Box On Pole Coverage

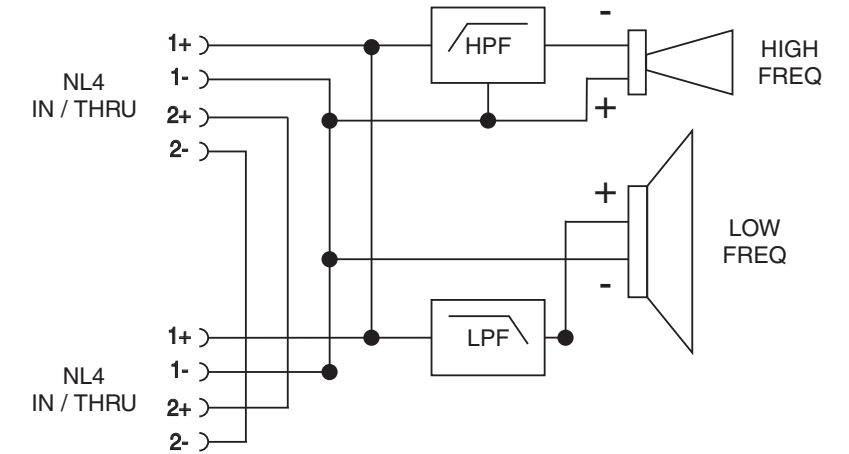
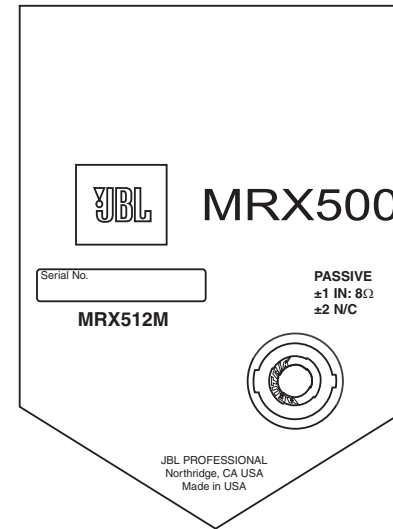
The dual angle pole socket on the MRX512M and MRX515 provides flexibility in aiming the speaker. As a general rule, the speaker should be positioned so that the audience cannot see the top or bottom panels of the speaker. When using stands or poles, be sure to observe the following precautions:

- 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.
- Be certain that the surface on which the system is to be stacked is flat, stable and solid.
- Route cables so that performers, production crew and audience will not trip and topple the speakers.
- Inspect the stand (or pole and assorted hardware) before each use and do not use equipment with worn, damaged or missing parts.
- Always be cautious when deploying the system outdoors. Unexpected winds may topple a system. 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 the 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 stand or pole.



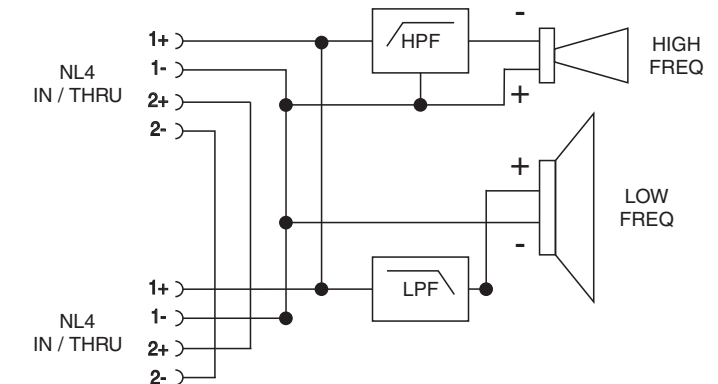
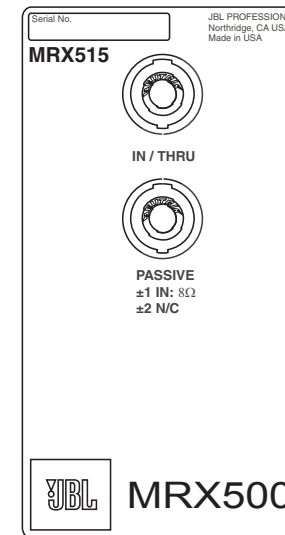
MRX500 SERIES BLOCK DIAGRAMS

MRX512M



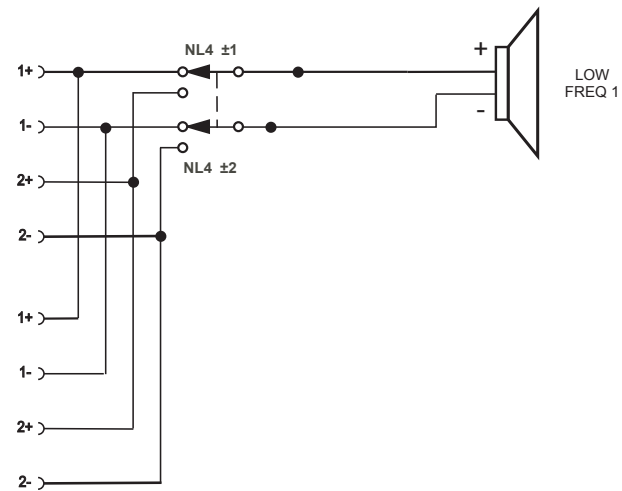
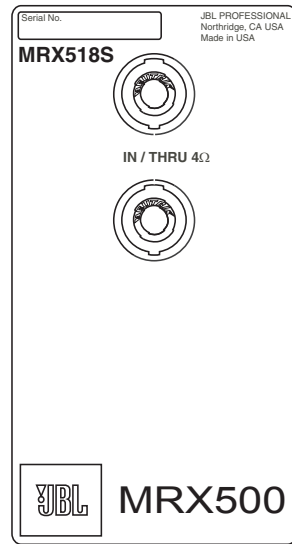
*MRX512M: Input panels are located at either end of the enclosure.

MRX515

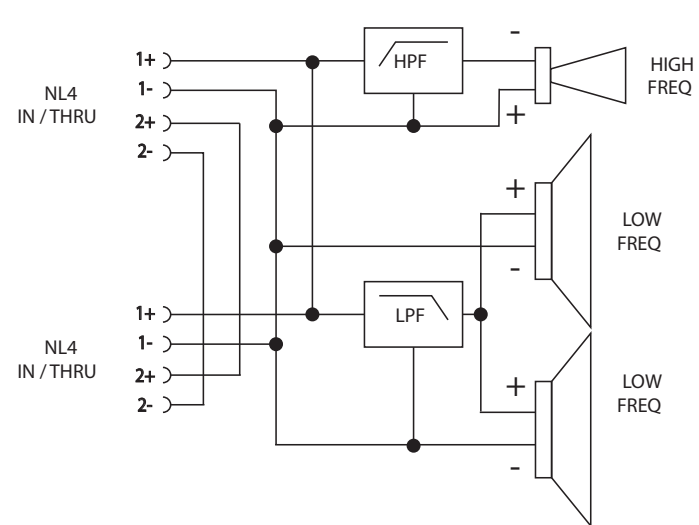
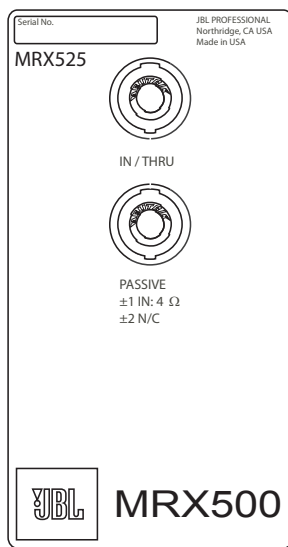


MRX500 SERIES BLOCK DIAGRAMS

MRX518S

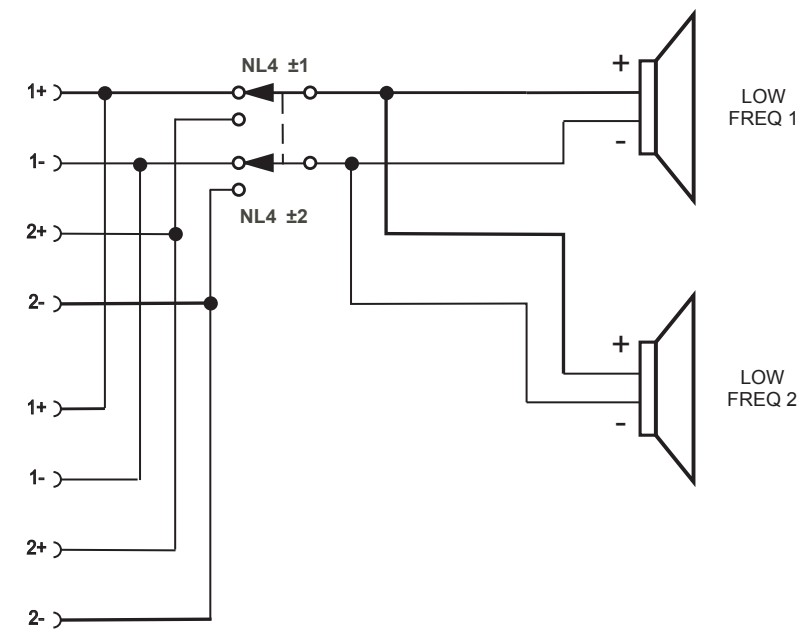
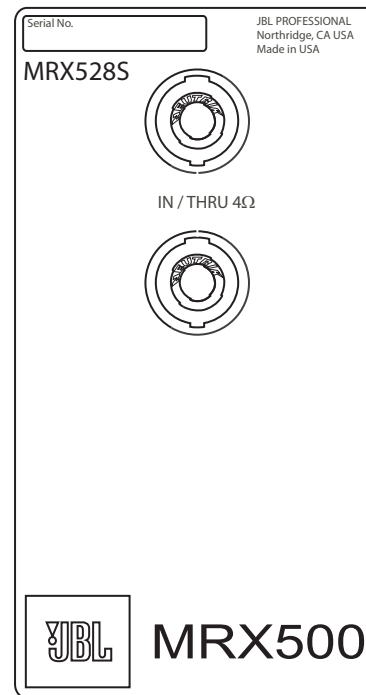


MRX525

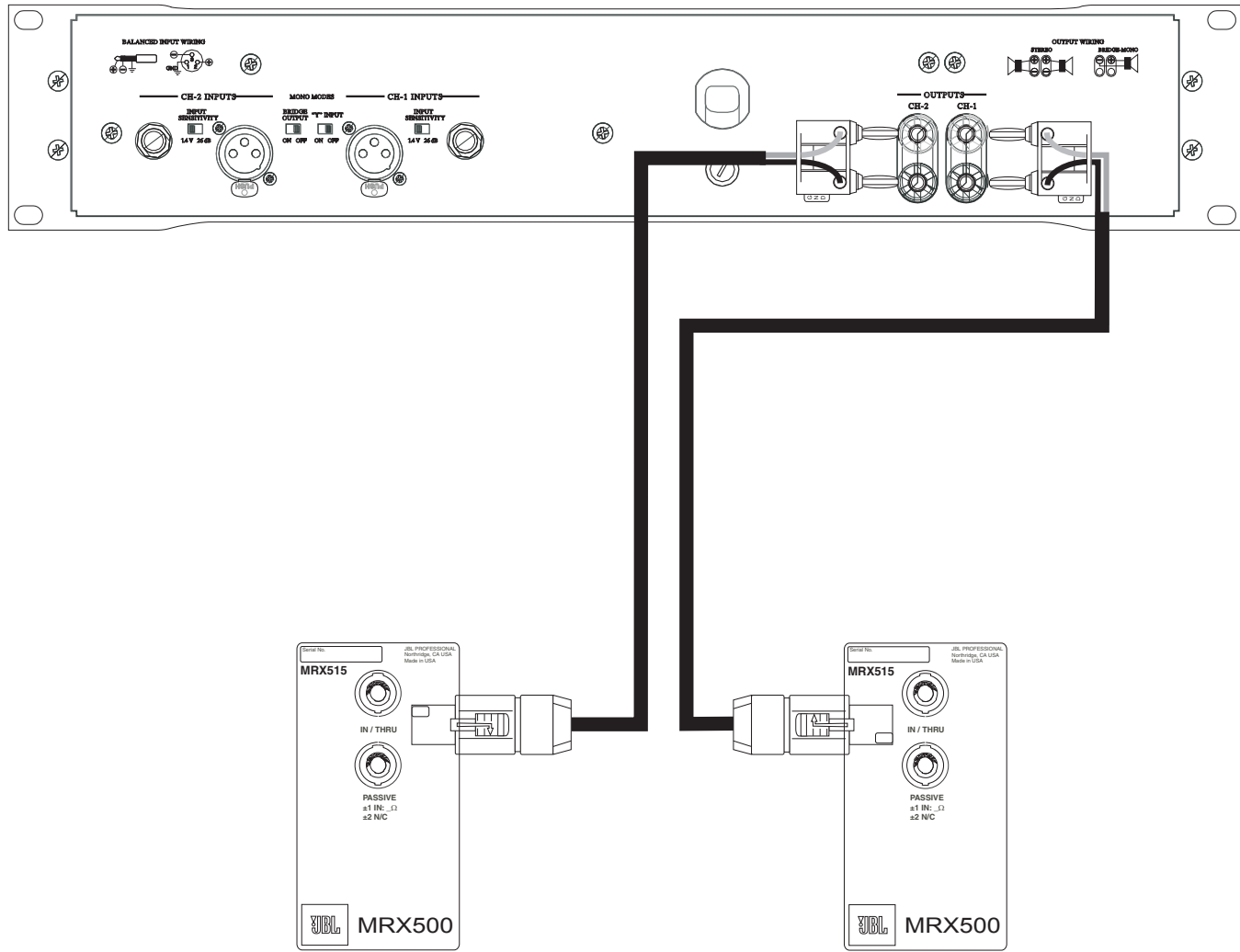


MRX500 SERIES BLOCK DIAGRAMS

MRX528S

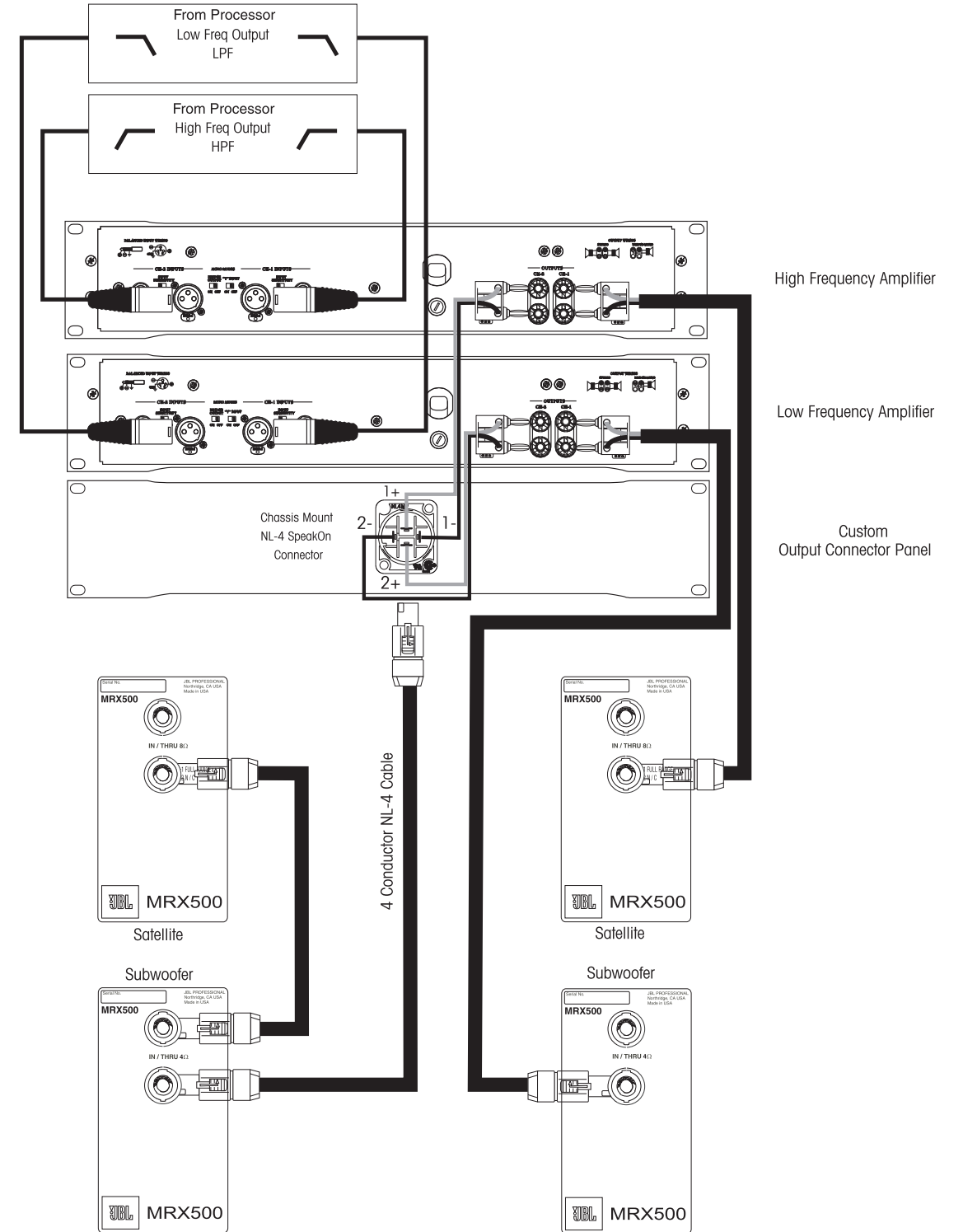


BASIC CONFIGURATION



*MRX512M: Input panel has the same number of connectors, but are located at either end of the enclosure.

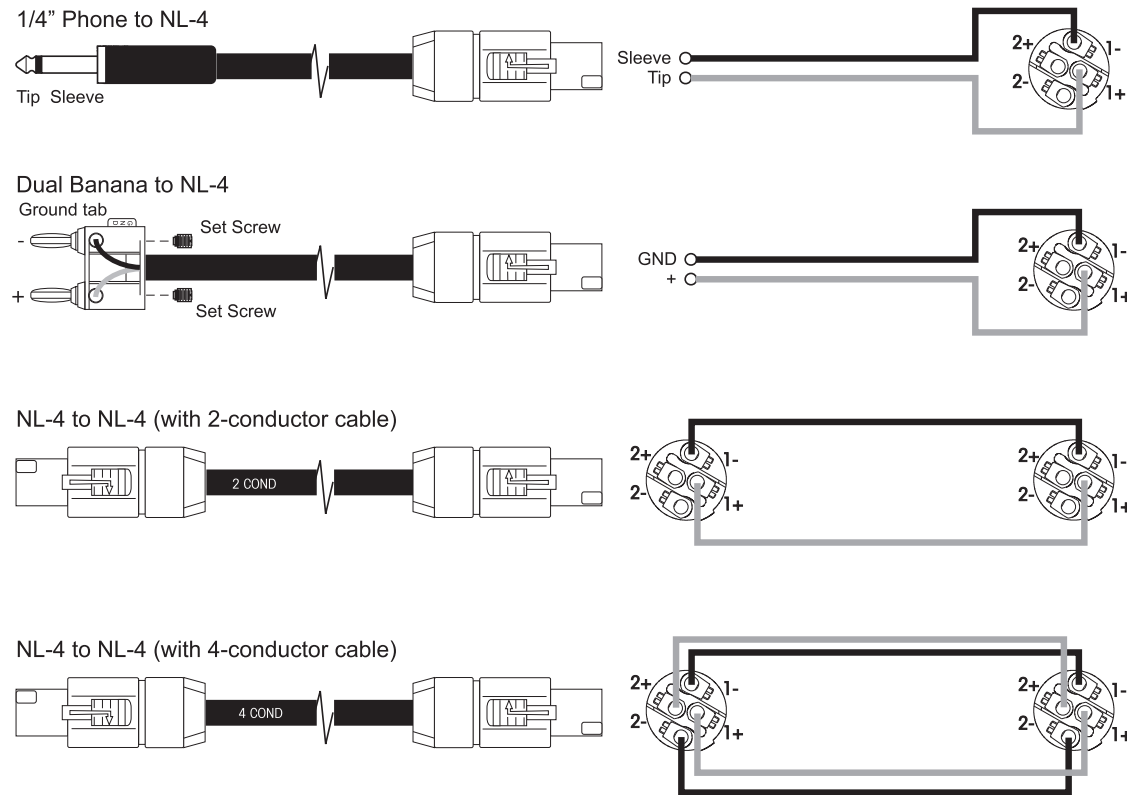
SUB/SAT WIRING



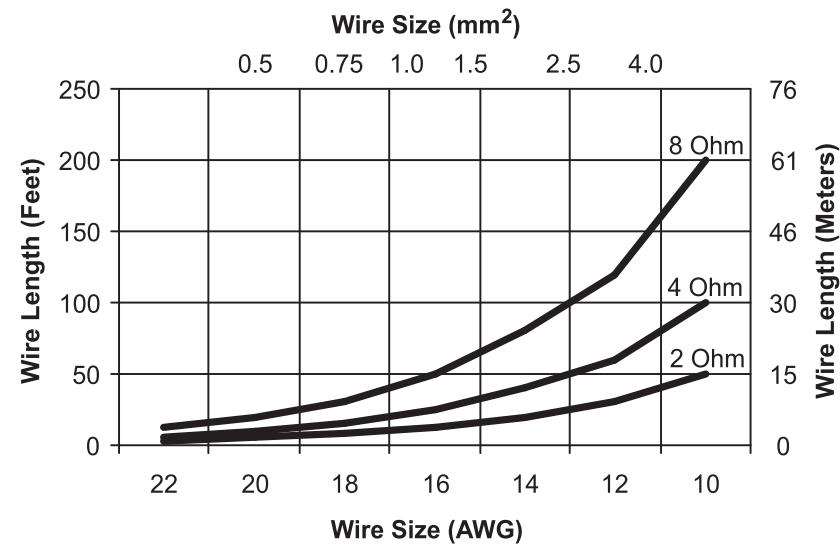
Using 4-Conductor Cable,
Subwoofer configured for Pins 2±.
(See Block Diagram)

Using 2-Conductor Cable,
Subwoofer configured for Pins 1±.
(See Block Diagram)

Speaker Cables



Minimum Wire Size for 0.5 dB Loss



JBL LIMITED WARRANTY

The JBL Limited Warranty on professional loudspeaker products (except for enclosures) remains in effect for five years from the date of the first consumer purchase. JBL amplifiers are warranted for three years from the date of original purchase. Enclosures and all other JBL products are warranted for two years from the date of original 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.

JBL PROFESSIONAL CONTACTS

Mailing Address:

JBL Professional
8500 Balboa Blvd.
Northridge, CA 91329

Shipping Address:

JBL Professional
8370 Balboa Blvd., Dock D
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

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

Notes

Notes

Notes


MRX500

S E R I E S

Part Number: 362053-001

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