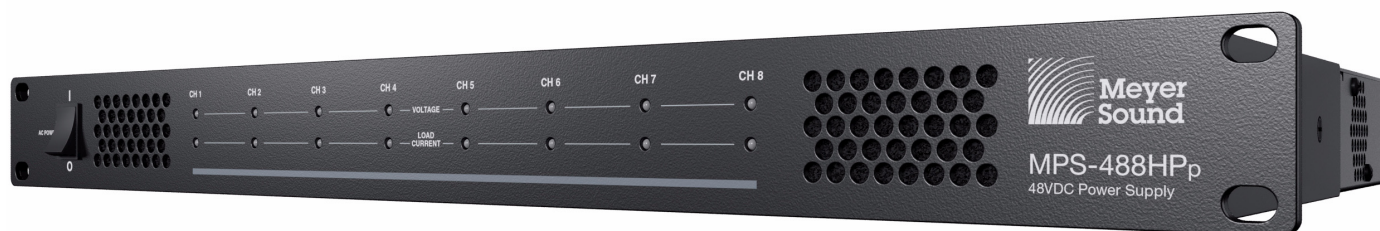


MPS-488HP Power Supply



***Keep these important operating instructions.
Check www.meyersound.com for updates.***

DECLARATION OF CONFORMITY ACCORDING TO ISO/IEC GUIDE 22 AND EN 45014

Manufacturer's Name: Meyer Sound Laboratories Inc.

Manufacturer's Address: 2832 San Pablo Avenue
Berkeley, CA 94702-2204, USA

Declares that the product:

Product Names: MPS-488HP Power Supply

Product Options: All

Conforms to the following Product Specifications:

Safety: EN 60065:2002

EMC: EN55103-1: 1997 emission¹
EN55103-2: 1997 immunity²

This device also complies with EN 55103-1 & -2. 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.

Supplementary Information: The product herewith complies with the requirements of the Low Voltage Directive (LVD) 2006/95/EC and the EMC Directive 2004/108/EC.

Signature:



Ms. Margie Garza
Director of Quality
Meyer Sound Laboratories Inc.
Berkeley, California 94702 USA
Issued December 13, 2010

European Contact:
Your local Meyer Sound dealer or
Meyer Sound Germany, GmbH.

© 2011

Meyer Sound. All rights reserved.





MPS-488HP Operating Instructions, PN 05.205.005.01 A

The contents of this manual are furnished for informational purposes only, are subject to change without notice, and should not be construed as a commitment by Meyer Sound Laboratories Inc. Meyer Sound assumes no responsibility or liability for any errors or inaccuracies that may appear in this manual. Except as permitted by applicable copyright law, no part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, recording or otherwise, without prior written permission from Meyer Sound.


HMS-10, MM-10XP, MM-4XP, UP4-XP, MPS-488HP, and all alpha-numeric designations for Meyer Sound products and accessories are trademarks of Meyer Sound. Meyer Sound and the Meyer Sound wave logo are registered trademarks of Meyer Sound Laboratories Inc. (Reg. U.S. Pat. & Tm. Off.). All third-party trademarks mentioned herein are the property of their respective trademark holders.

SYMBOLS USED

These symbols indicate important safety or operating features in this booklet and on the chassis:

			
Dangerous voltages: risk of electric shock	Important operating instructions	Frame or chassis	Protective earth ground
Pour indiquer les risques résultant de tensions dangereuses	Pour indiquer important instructions	Masse, châssis	Terre de protection
Warnung vor gefährlicher elektrischer Spannung	Wichtige Betriebsanweisung oder Gebrauchsanleitung	Rahmen oder Gehäuse	Masse Schutzleiter
Para indicar voltajes peligrosos	Instrucciones importantes de funcionamiento y/o mantenimiento	Armadura o chasis	Tierra proteccionista

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 Meyer Sound's installation 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 grounding-type plug. A grounding type plug has two blades and a third grounding prong. 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 loudspeaker. The AC mains plug or appliance coupler shall remain readily accessible for operation.
11. Only use attachments/accessories specified by Meyer Sound.
 -  **CAUTION:** Rigging should only be done by experienced professionals.
12. Unplug this apparatus during lightning storms or when unused for long periods of time.
13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when the power-supply cord or plug has been damaged; liquid has been spilled or objects have fallen into the apparatus; rain or moisture has entered the apparatus; the apparatus has been dropped; or when for undetermined reasons the apparatus does not operate normally.

SAFETY SUMMARY

English

- To reduce the risk of electric shock, disconnect the apparatus from the AC mains before installing audio cable. Reconnect the power cord only after making all signal connections.
- Connect the apparatus to a two-pole, three-wire grounding mains receptacle. The receptacle must be connected to a fuse or circuit breaker. Connection to any other type of receptacle poses a shock hazard and may violate local electrical codes.
- Do not install the apparatus in wet or humid locations without using weather protection equipment from Meyer Sound.
- Do not allow water or any foreign object to get inside the apparatus. Do not put objects containing liquid on or near the unit.
- To reduce the risk of overheating the apparatus, avoid exposing it to direct sunlight. Do not install the unit near heat-emitting appliances, such as a room heater or stove.
- This apparatus contains potentially hazardous voltages. Do not attempt to disassemble the unit. The unit contains no user-serviceable parts. Repairs should be performed only by factory-trained service personnel.

Français

- Pour réduire le risque d'électrocution, débrancher la prise principale de l'appareil, avant d'installer le câble d'interface allant à l'audio. Ne rebrancher le bloc d'alimentation qu'après avoir effectué toutes les autres connections.
- Branchez l'appareil dans une prise de courant à 3 dérivation (deux pôles et la terre). Cette prise doit être munie d'une protection adéquate (fusible ou coupe-circuit). Le branchement dans tout autre genre de prise pourrait entraîner un risque d'électrocution et peut constituer une infraction à la réglementation locale concernant les installations électriques.

- Ne pas installer l'appareil dans un endroit où il y a de l'eau ou une humidité excessive.
- Ne pas laisser de l'eau ou tout objet pénétrer dans l'appareil. Ne pas placer de récipients contenant un liquide sur cet appareil, ni à proximité de celui-ci.
- Pour éviter une surchauffe de l'appareil, conserver-le à l'abri du soleil. Ne pas installer à proximité d'appareils dégagant de la chaleur tels que radiateurs ou appareils de chauffage.
- Cet appareil contient des circuits haute tension présentant un danger. Ne jamais essayer de le démonter. Il n'y a aucun composant qui puisse être réparé par l'utilisateur. Toutes les réparations doivent être effectuées par du personnel qualifié et agréé par le constructeur.

Deutsch

- Um die Gefahr eines elektrischen Schlages auf ein Minimum zu reduzieren, das Gerät vom Stromnetz trennen bevor ein Audio Schnittstellen-signal-kabel angeschlossen wird. Das Netzkabel erst nach Herstellung aller Signalverbindungen wieder einstecken.
- Der Gerät nur an eine geerdete Schuko Dose 230 V; "CEE 7/4 oder Type F" anschließen. Die Steckdose muß mit einem geeigneten Abzweigschutz (Sicherung oder Leitungsschutzschalter) verbunden sein. Der Anschluß des Gerätes an einen anderen Steckdosentyp kann zu Stromschlägen führen und gegen die örtlichen Vorschriften verstoßen.
- Das Gerät nicht an einem Ort aufstellen, an dem es mit Wasser oder übermäßig hoher Luftfeuchtigkeit in Berührung kommen könnte.
- Darauf achten, daß weder Wasser noch Fremdkörper in das Innere den Gerät eindringen. Keine Objekte, die Flüssigkeit enthalten, auf oder neben die unterbrechungsfreie Stromversorgung stellen.

- Um ein Überhitzen des Geräts zu verhindern, das Gerät vor direkter Sonneneinstrahlung schützen und nicht in der Nähe von wärmeabstrahlenden Geräten (z.B. Heizgerät) aufstellen.
- Im Inneren dieses Geräts herrschen potentiell gefährliche Spannungen. Nicht versuchen, das Gerät zu öffnen. Es enthält keine vom Benutzer zu reparierende Teile. Reparaturen dürfen nur von ausgebildetem Kundendienstpersonal durchgeführt werden.

Español

- Para reducir el riesgo de descarga eléctrica, desconecte de la red de voltaje el aparato antes de instalar el cable de señal de audio. Vuelva a conectar la alimentación de voltaje una vez efectuadas todas las interconexiones de señalización de audio.
- Conecte el aparato a un tomacorriente bipolar y trifilar con neutro de puesta a tierra. El tomacorriente debe estar conectado a la protección de derivación apropiada (ya sea un fusible o un disyuntor). La conexión a cualquier otro tipo de tomacorriente puede constituir peligro de descarga eléctrica y violar los códigos eléctricos locales.
- No instale el aparato en lugares donde haya agua o humedad excesiva.
- No deje que en el aparato entre agua ni ningún objeto extraño. No ponga objetos con líquidos encima de la unidad ni cerca de ella.
- Para reducir el riesgo de sobrecalentamiento, no exponga la unidad a los rayos directos del sol ni la instale cerca de artefactos que emiten calor, como estufas o calentadores.
- Este aparato contiene niveles de voltaje peligrosos en potencia. No intente desarmar la unidad, pues no contiene piezas que puedan ser reparadas por el usuario. Las reparaciones deben efectuarse únicamente por parte del personal de mantenimiento capacitado en la fábrica.

CONTENTS

Chapter 1: Introduction	7
How to Use This Manual	7
MPS-488HP External Power Supply	7
Chapter 2: MPS-488HP Front and Rear Panels	9
MPS-488HP Front Panel	9
MPS-488HP Rear Panel	10
MPS-488HP Current Draw	13
Safety Issues	13
Chapter 3: Connecting Loudspeakers to the MPS-488HP	15
Appendix A: MPS-488HP Accessories	17
Appendix B: Phoenix and EN3 Cable Assembly	19
Appendix C: MPS-488HP Specifications	25

CHAPTER 1: INTRODUCTION

HOW TO USE THIS MANUAL

Make sure to read these operating instructions in their entirety before configuring a loudspeaker system with MPS-488HP power supplies. In particular, pay close attention to material related to safety issues.

As you read these operating instructions, you will encounter the following icons for notes, tips, and cautions:



NOTE: A note identifies an important or useful piece of information relating to the topic under discussion.



TIP: A tip offers a helpful tip relevant to the topic at hand.



CAUTION: A caution gives notice that an action may have serious consequences and could cause harm to equipment or personnel, or could cause delays or other problems.

Information and specifications are subject to change. Updates and supplementary information are available at www.mebersound.com.

Meyer Sound Technical Support is available at:

- **Tel:** +1 510 486.1166
- **Tel:** +1 510 486.0657 (after hours support)
- **Web:** www.mebersound.com/support
- **Email:** techsupport@mebersound.com

MPS-488HP EXTERNAL POWER SUPPLY

The MPS-488HP external power supply delivers DC power and balanced audio to up to eight Meyer Sound loudspeakers that require an external 48 V DC power supply.



MPS-488HP External Power Supply

The single-space 19-inch rack MPS-488HP can be used with the following Meyer Sound loudspeakers:

- MM-4XP miniature loudspeaker
- UP-4XP ultracompact loudspeaker
- HMS-10 surround loudspeaker.
- MM-10XP miniature subwoofer

Powering loudspeakers from an external source eliminates the need for wiring conduits while still preserving the advantages of self-powered systems. Meyer Sound's externally powered loudspeakers are equipped with onboard amplification and signal-processing circuits that store DC power and tolerate voltage drops (up to 30 percent), thereby accommodating light-gauge cables and lengthy cable runs.

The MPS-488HP receives eight channels of balanced audio from its XLR female Channel Inputs and routes the audio, along with 48 V of DC power, to its eight Channel Outputs. Channel Inputs feature toggle switches that route audio to corresponding outputs only, or to adjacent, contiguous outputs. For example, Channel Input 1 can be routed to Channel Outputs 1 and 2 and Channel Input 3 can be routed to Channel Outputs 3 and 4. Another example would be to route Channel Input 1 to Channel Outputs 1–4 and Channel Input 5 to Channel Outputs 5–8.

The power supply's eight Channel Outputs are equipped with sophisticated microprocessor-controlled current limiting that protects each channel from short circuits and unexpected voltages. The Channel Outputs are available as either Phoenix™ 5-pin male connectors on the MPS-488HPp model, or SwitchCraft® EN3™ 5-pin female connectors on the MPS-488HPe model. Outputs can deliver DC power to loudspeakers at cable lengths up to 150 feet or 300 feet (depending on the loudspeaker model) with just 1 dB of loss in peak SPL using 18 AWG wire. The use of composite mul-

iconductor cables (such as Belden® 1502 or equivalent) allows a single cable to carry both audio and DC power from the MPS-488HP to the loudspeakers. Longer cable lengths are possible for moderate applications that don't drive the loudspeakers to maximum output, as well as for installations with heavier wire gauges.



MPS-488HPp Model with Phoenix Output Connectors



MPS-488HPe Model with EN3 Output Connectors

The MPS-488HP front panel has two LEDs per Channel Output that provide useful feedback on the status of the system. The Voltage LEDs indicate when voltage is present for each Channel Output. The Load Current LEDs indicate when a loudspeaker is connected to a Channel Output, glow brighter as the signal level increases, and flash when a short circuit is encountered.



NOTE: The MPS-488HP external power supply replaces the MPS-488 model, which was originally designed for use with MM-4XP loudspeakers. The MPS-488 is also compatible with the UP-4XP, HMS-10, and MM-10XP, but can only power a maximum of four of these loudspeakers; when powering these loudspeakers with the MPS-488, they should only be connected to Channel Outputs 1, 3, 5, and 7 (do not use the even-numbered Channel Outputs).

CHAPTER 2: MPS-488HP FRONT AND REAR PANELS

MPS-488HP FRONT PANEL

The MPS-488HP front panel includes a power switch and LEDs for monitoring each loudspeaker channel.



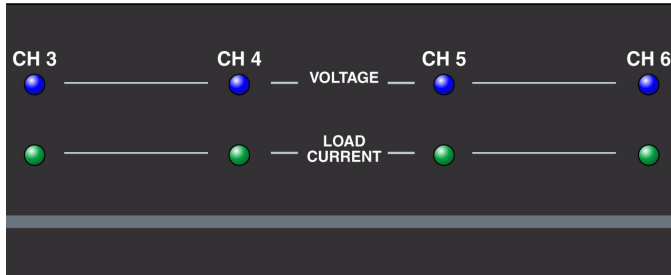
MPS-488HP Power Supply Front Panel

AC Power

The MPS-488HP is powered on and off with the AC Power switch.

Voltage and Load Current LEDs (1–8)

The Voltage and Load Current LEDs are useful for verifying whether each Channel Output has voltage and whether the connected loudspeakers are receiving DC power and audio.



MPS-488HP Channel LEDs

Blue Voltage LEDs (1–8)

The blue Voltage LEDs indicate whether voltage is present for the Channel Outputs. These LEDs should be lit when the MPS-488HP is powered on. The MPS-488HP's intelligent circuit protection shields connected loudspeakers from surges and shorts. When a blue Voltage LED is unlit and its corresponding green Load Current LED is blinking, a surge or short has been detected for the channel. If a surge or short is encountered, power down the MPS-488HP and inspect the loudspeaker cabling for that channel.

Table 1 lists the possible states for the Voltage LEDs.

Table 1: Voltage LEDs

State	Cause	Recommended Action
Unlit (all LEDs)	MPS-488HP not powered on	Verify the MPS-488HP is powered on and verify its power source
Unlit (single LED)	Surge or short encountered for channel (corresponding Load Current LED blinks)	Power down the MPS-488HP and inspect the loudspeaker cabling for the channel
Blinking (all LEDs)	Internal failure encountered	Service required
Blinking (single LED)	Residual voltage detected for channel	Unplug and plug the channel's loudspeaker cable; if the problem persists, verify the loudspeaker cabling
Glows brighter (single LED)	LED glows brighter as channel's voltage level increases	None required

CAUTION: When a blue Voltage LED is unlit and its corresponding green Load Current LED is blinking, indicating a surge or short for the channel, power down the MPS-488HP and inspect the loudspeaker cabling for that channel.

Green Load Current LEDs (1–8)

The green Load Current LEDs indicate whether loudspeakers are connected to the Channel Outputs and receiving power. As a channel’s audio signal increases, its LED glows brighter. If an LED is not lit, check that the channel’s Voltage LED is lit and verify the cable connection to the loudspeaker. The MPS-488HP’s intelligent circuit protection shields connected loudspeakers from surges and shorts. When a green Voltage LED blinks and its corresponding blue Load Current LED is unlit, a surge or short has been detected for the channel. If a surge or short is encountered, power down the MPS-488HP and inspect the loudspeaker cabling for that channel.

Table 2 lists the possible states for the Load Current LEDs.

Table 2: Load Current LEDs

State	Cause	Recommended Action
Unlit (all LEDs)	MPS-488HP not powered on or no loudspeakers connected	Verify the MPS-488HP is powered on and verify its power source; inspect the loudspeaker cabling
Unlit (single LED)	No loudspeaker connected	Power down the MPS-488HP and inspect the loudspeaker cabling for the channel
Blinking (all LEDs)	Internal failure encountered	Service required
Blinking (single LED)	Surge or short encountered for the channel (corresponding Voltage LED is unlit)	Power down the MPS-488HP and inspect the loudspeaker cabling for the channel
Glows brighter (single LED)	LED glows brighter as channel’s audio signal increases	None required

CAUTION: When a green Voltage LED is unlit and its corresponding blue Load Current LED is blinking, indicating a surge or short for the channel, power down the MPS-488HP and inspect the loudspeaker cabling for that channel.

MPS-488HP REAR PANEL

The MPS-488HP rear panel includes an AC Input connector, eight Channel Inputs for receiving source audio, eight Channel Outputs for delivering DC power and balanced audio, and seven Link switches for routing audio from inputs to outputs.



MPS-488HPp Power Supply Rear Panel



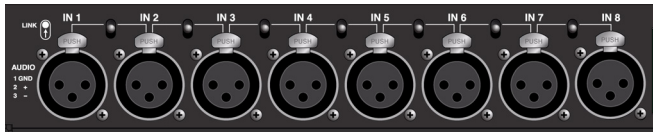
MPS-488HPe Power Supply Rear Panel

AC Input

The MPS-488HP has a PowerCon twist-lock AC Input connector (line, neutral/line, earth). The connector can accept different power cord types for outlets used throughout the world. Make sure to use the correct power cord for the AC power in your area. The MPS-488HP operates at an AC voltage range of 100–240 V at 50–60 Hz.

Channel Inputs

Up to eight channels of balanced audio are received from the MPS-488HP’s eight Channel Inputs. The inputs are equipped with XLR female connectors (pin 1, ground; pin 2, signal positive; pin 3, signal negative). Make sure to use standard balanced XLR cables with all three pins connected on both ends.

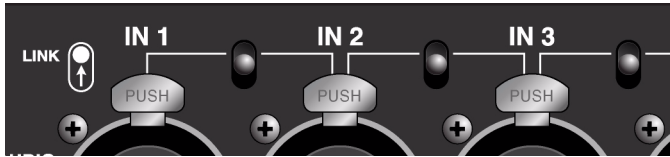


MPS-488HP Channel Inputs

Channel Inputs default to being routed to their corresponding Channel Outputs but can also be routed to adjacent outputs with the Link switches, though this affects their input impedance (see “Input Impedance for Linked Channel Inputs” on page 11).

Link Switches

Link switches determine how Channel Inputs are routed to Channel Outputs. When a Channel Input's Link switch is OFF (set to the down position), the input is only routed to its corresponding output: for example, Channel Input 1 routed to Channel Output 1. When a Link switch is ON (set to the up position), the input is routed to its corresponding output and the next adjacent output: for example, Channel Input 1 routed to Channel Output 1 and Channel Output 2. If multiple, adjacent Link switches are enabled, the input is routed to each adjacent output: for example, Channel Input 1 routed to Channel Outputs 1, 2, and 3.



MPS-488HP Link Switches

NOTE: Channel Inputs are inactive when the Link switch for the preceding Channel Input is enabled. Connections should not be made to inactive Channel Inputs.

Routing Audio Inputs with the Link Switches

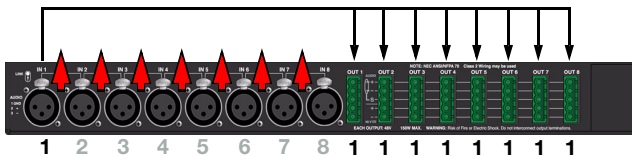
The following examples illustrate several common routing applications for the MPS-488HP.

Routing One Input to Eight Outputs

To route one Channel Input to eight Channel Outputs:

- Set all Link switches to ON.

Link 1	Link 2	Link 3	Link 4	Link 5	Link 6	Link 7
On	On	On	On	On	On	On

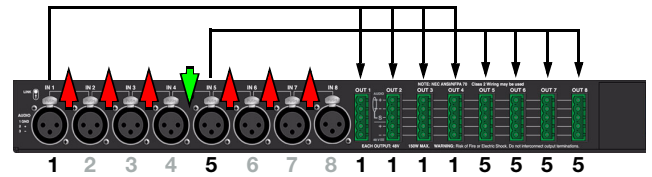


Routing Two Inputs to Four Outputs Each

To route two Channel Inputs to four Channel Outputs each:

- Set the Link 4 switch to OFF and all other Link switches to ON.

Link 1	Link 2	Link 3	Link 4	Link 5	Link 6	Link 7
On	On	On	Off	On	On	On

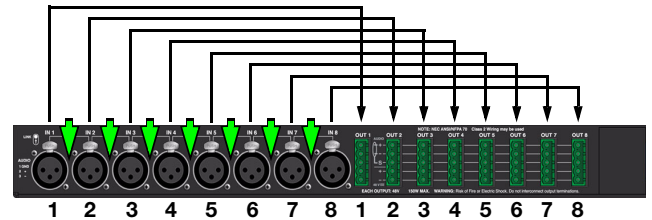


Routing Eight Inputs to Eight Separate Outputs

To route eight Channel Inputs to eight separate Channel Outputs:

- Set all Link switches to OFF.

Link 1	Link 2	Link 3	Link 4	Link 5	Link 6	Link 7
Off	Off	Off	Off	Off	Off	Off



Input Impedance for Linked Channel Inputs

When a Link switch is enabled, the Channel Input's unbuffered source signal is transmitted in parallel to each linked Channel Output. This causes the Channel Input's impedance (normally 10 kOhms for one loudspeaker) to be reduced for each linked output. For example:

- 1 Channel Output, 10 kOhm input impedance
- 2 Channel Outputs, 5 kOhm input impedance
- 4 Channel Outputs, 2500 ohms input impedance
- 8 Channel Outputs, 1250 ohms input impedance

To avoid distortion when linking Channel Inputs, make sure the source device can drive the total load impedance of the linked loudspeakers. The source device must be capable of delivering a minimum of 16 dBV (6.3 V rms into 600 ohms) to yield the maximum peak SPL over the operating bandwidth of the loudspeaker.

NOTE: Most source devices are capable of driving loads no smaller than 10 times their output impedance. To drive eight loudspeakers linked from a single Channel Input, the source device should have an output impedance of approximately 100 ohms or less.

Channel Outputs

The MPS-488HP's eight Channel Outputs deliver DC power (48 V DC) and balanced audio to up to eight loudspeakers. The channel outputs are available as either Phoenix 5-pin male connectors (on the MPS-488HPp model) or EN3 5-pin male connectors (on the MPS-488HPe model).

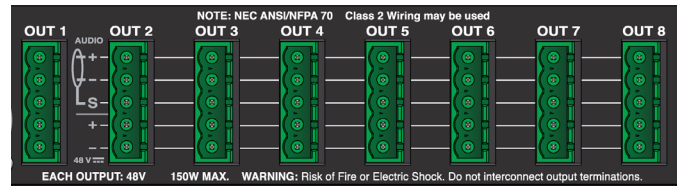
NOTE: For information on cable requirements for your loudspeaker, refer to its operating instructions. For information on cables and cable accessories available from Meyer Sound, see Appendix A, "MPS-488HP Accessories." For information on cable assembly, see Appendix B, "Phoenix and EN3 Cable Assembly."

TIP: A single composite cable (such as Belden 1502 or equivalent) wired for both DC power and balanced audio can be used to connect loudspeakers to Channel Outputs.

CAUTION: When wiring cable connections for MPS-488HP Channel Outputs, it is extremely important that each pin in the connector be wired correctly. Make sure the 48 V DC from the MPS-488HP is wired directly (and only) to the 48 V DC pins on the loudspeaker connector, and that the polarity is observed (negative to negative, positive to positive) to avoid damage to the loudspeaker. In addition, make sure that audio pins are wired correctly; polarity reversals for audio signals affect system performance.

MPS-488HPp Channel Outputs

The MPS-488HPp Channel Outputs are Phoenix 5-pin male connectors with three pins for balanced audio (positive, negative, and shield) and two pins for DC Power (positive and negative). The pins are clearly labeled on the MPS-488HPp rear panel.

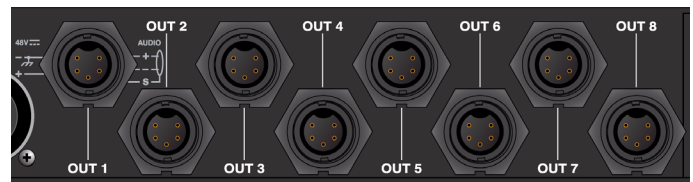


MPS-488HPp Channel Outputs

Each MPS-488HPp comes with eight Phoenix 5-pin female cable connectors for assembling loudspeaker cables.

MPS-488HPe Channel Outputs

The MPS-488HPe Channel Outputs are EN3 5-pin female connectors with three pins for balanced audio (positive, negative, and shield) and two pins for DC Power (positive and negative). The pins are clearly labeled on the MPS-488HPe rear panel.



MPS-488HPe Channel Outputs

Each MPS-488HPe comes with eight EN3 5-pin male cable connectors for assembling loudspeaker cables.

MPS-488HP CURRENT DRAW


The current draw for the MPS-488HP and its connected loudspeakers is dynamic and fluctuates as operating levels change. Since different cables and circuit breakers heat up at varying rates, it is important to understand the following types of current ratings and how they affect circuit breaker and cable specifications.

- **Idle Current** — The maximum rms current during idle periods.
- **Maximum Long-Term Continuous Current** — The maximum rms current during a period of at least 10 seconds. The Maximum Long-Term Continuous Current is used to calculate temperature increases for cables, to ensure that cable sizes and gauges conform to electrical code standards. This current rating is also used as a rating for slow-reacting thermal breakers.
- **Burst Current** — The maximum rms current during a period of around one second. The Burst Current is used as a rating for magnetic breakers. It is also used for calculating the peak voltage drop in long AC cable runs according to the following formula:

$$V_{pk}(\text{drop}) = I_{pk} \times R(\text{cable total})$$
- **Ultimate Short-Term Peak Current** — A rating for fast-reacting magnetic breakers.
- **Inrush Current** — The spike of initial current encountered when powering on.

For current draw values for the MPS-488HP with connected loudspeakers, see Appendix C, “MPS-488HP Specifications.”

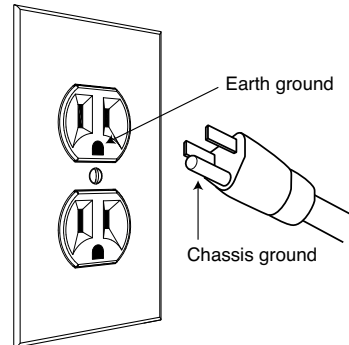
The minimum electrical service amperage required by an MPS-488HP is the sum of the Maximum Long-Term Continuous Current for all loudspeakers connected to the MPS-488HP. An additional 30 percent above the minimum amperage is recommended to prevent peak voltage drops at the service entry.

 **NOTE:** For best performance, the AC cable voltage drop should not exceed 10 V, or 10 percent at 115 V and 5 percent at 230 V. Make sure that even with AC voltage drops that the AC voltage always remains within the operating window.

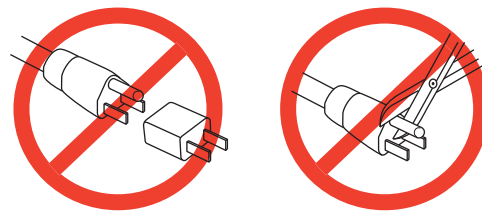
SAFETY ISSUES

Pay close attention to these important electrical and safety issues.

- The MPS-488HP requires a grounded outlet.





- Do not use a ground-lifting adapter or cut the AC cable ground pin.



- Keep all liquids away from the MPS-488HP to avoid hazards from electrical shock.
- Do not operate the unit if the power cables are frayed or broken.


CHAPTER 3: CONNECTING LOUDSPEAKERS TO THE MPS-488HP

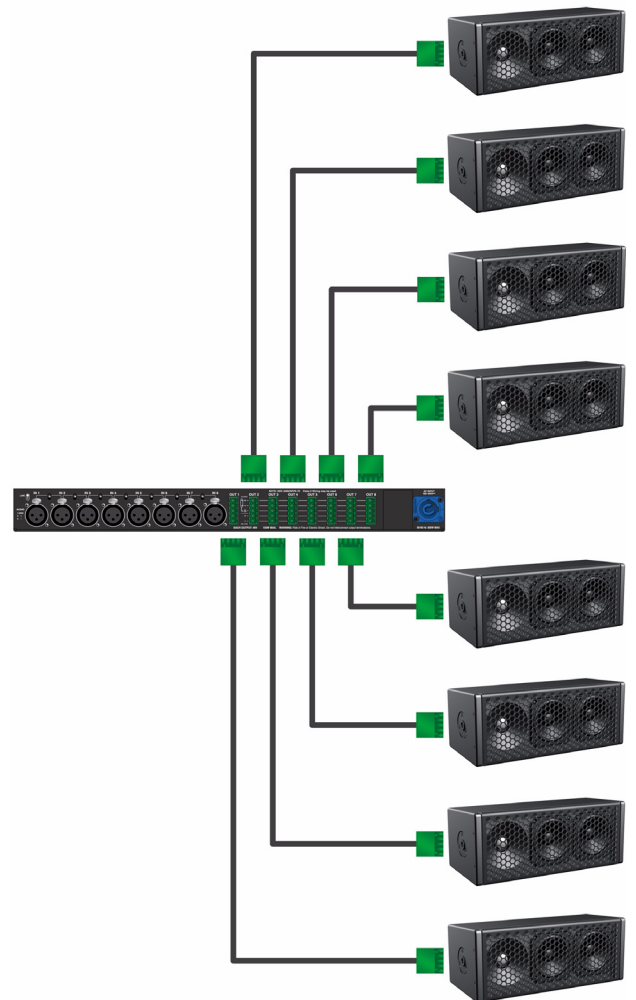
 **NOTE:** For information on cable requirements for your loudspeaker, refer to its operating instructions. For information on cables and cable accessories available from Meyer Sound, see Appendix A, “MPS-488HP Accessories.” For information on cable assembly, see Appendix B, “Phoenix and EN3 Cable Assembly.”

 **CAUTION:** When wiring cable connections for MPS-488HP Channel Outputs, it is extremely important that each pin in the connector be wired correctly. Make sure the 48 V DC from the MPS-488HP is wired directly (and only) to the 48 V DC pins on the loudspeaker connector, and that the polarity is observed (negative to negative, positive to positive) to avoid damage to the loudspeaker. In addition, make sure that audio pins are wired correctly; polarity reversals for audio signals affect system performance.

To connect loudspeakers to the MPS-488HP:

1. Power off the MPS-488HP.
 2. Connect audio sources (from a mixer or processor) to the MPS-488HP Channel Inputs. Use balanced XLR cables.
 3. Use the MPS-488HP Link switches to route Channel Inputs to the desired Channel Outputs (see “Link Switches” on page 11).
 4. Connect the loudspeakers to the MPS-488HP Channel Outputs. Use composite cables (such as Belden 1502 or equivalent) wired for both DC power and balanced audio and outfitted with the appropriate connectors.
- When connecting loudspeakers equipped with Phoenix connectors to the MPS-488HP power supply, use Phoenix 5-pin female to Phoenix 5-pin female cables.

 **TIP:** You can use two separate cables for loudspeaker connections: a 2-conductor cable for DC power and a 3-conductor cable for balanced audio, both attached to a single Phoenix connector on each cable end. This allows you to use a larger gauge for the DC cable so you can achieve longer cable runs.



- When connecting loudspeakers equipped with EN3 connectors to the MPS-488HPe power supply, use EN3 5-pin male to EN3 5-pin female cables.



5. Power on the MPS-488HP and monitor the LEDs on its front panel to verify the connections (see “Voltage and Load Current LEDs (1–8)” on page 9).
6. Check loudspeaker LEDs to verify whether the loudspeakers are ready to reproduce audio.
7. Enable output from the audio sources (from the mixer or processor) connected to the MPS-488HP.

- To join two EN3 cables, one with an EN3 5-pin male cable mount connector to one with an EN3 5-pin female cable mount connector, use an EN3 5-pin female-to-male cable coupler (PN 28.163.033.01).



APPENDIX A: MPS-488HP ACCESSORIES

PHOENIX AND EN3 CABLE CONNECTORS AND ADAPTERS

The following cable connectors and adapters are available from Meyer Sound.

Phoenix and EN3 Cable Connectors and Adapters

Part Number	Connector/Adapter	Use
484.065	Phoenix 5-pin female cable mount connector	Connects to MPS-488HPp Channel Outputs and loudspeakers equipped with Phoenix connectors
468.069	EN3 5-pin female cable mount connector	Connects to loudspeakers equipped with EN3 connectors
468.071	EN3 5-pin male cable mount connector	Connects to MPS-488HPe Channel Outputs
468.072	EN3 5-pin female inline cable adapter	Connects to EN3 5-pin male cable mount connector
468.073	EN3 5-pin male inline cable adapter	Connects to EN3 5-pin female cable mount connectors
28.163.033.01	Cable coupler EN3 5-pin female-to-male (5-inch, 0.12 m)	Joins two cables: one with an EN3 5-pin male cable mount connector to one with an EN3 5-pin female cable mount connector

PHOENIX AND EN3 LOUDSPEAKER CABLES

The following Phoenix and EN3 cables are available from Meyer Sound and can be used to connect loudspeakers to MPS-488HP power supplies.



NOTE: Phoenix and EN3 loudspeaker cables and bulk cable use Belden 1502R (regular) or Belden 1502P (plenum) cable. Belden 1502 is a composite cable comprised of two 18 AWG wires for DC power, two 22 AWG wires for balanced audio, and one 24 AWG wire for audio shield.

Phoenix and EN3 Loudspeaker Cables

Part Number	Cable	Color	Coating	Length
524.014	Bulk (no connectors)	Black	Regular	500 ft spool
524.015	Bulk (no connectors)	White	Plenum	500 ft spool
28.163.009.01	EN3 5-pin female to pigtail	Black	Regular	10 ft
28.163.009.11	EN3 5-pin female to pigtail	White	Plenum	10 ft
28.163.009.21	EN3 5-pin female to EN3 5-pin male	Black	Regular	10 ft
28.163.009.22				20 ft
28.163.009.23				30 ft
28.163.009.24				50 ft
28.163.009.25				100 ft
28.163.009.26				150 ft

Phoenix and EN3 Loudspeaker Cables

Part Number	Cable	Color	Coating	Length
28.163.009.31	EN3 5-pin female to EN3 5-pin male	White	Plenum	10 ft
28.163.009.32				20 ft
28.163.009.33				30 ft
28.163.009.34				50 ft
28.163.009.35				100 ft
28.163.009.36				150 ft
28.163.033.01	Cable coupler EN3 5-pin female-to-male (joins two cables: one with an EN3 5-pin male cable mount connector to one with an EN3 5-pin female cable mount connector)			
28.163.009.41	EN3 5-pin female to Phoenix 5-pin female	Black	Regular	10 ft
28.163.009.42				20 ft
28.163.009.43				30 ft
28.163.009.44				50 ft
28.163.009.45				100 ft
28.163.009.46				150 ft
28.163.009.51	EN3 5-pin female to Phoenix 5-pin female	White	Plenum	10 ft
28.163.009.52				20 ft
28.163.009.53				30 ft
28.163.009.54				50 ft
28.163.009.55				100 ft
28.163.033.01				150 ft

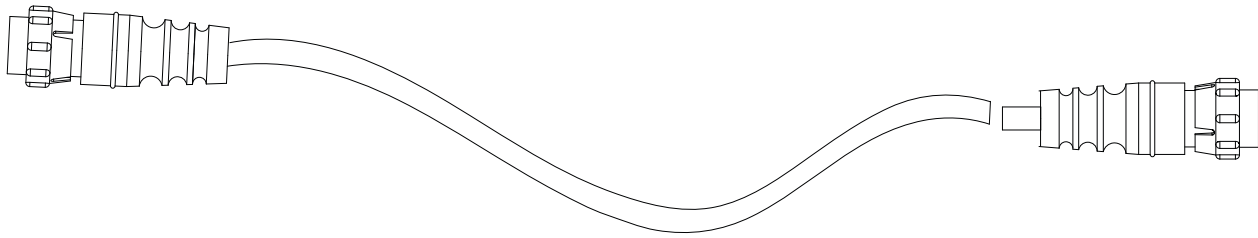
APPENDIX B: PHOENIX AND EN3 CABLE ASSEMBLY

CAUTION: When wiring cable connections for MPS-488HP Channel Outputs, it is extremely important that each pin in the connector be wired correctly. Make sure the 48 V DC from the MPS-488HP is wired directly (and only) to the 48 V DC pins on the loudspeaker connector, and that the polarity is observed (negative to negative, positive to positive) to avoid damage to the loudspeaker. In addition, make sure that audio pins are wired correctly; polarity reversals for audio signals affect system performance.

ASSEMBLING EN3-TO-EN3 LOUDSPEAKER CABLES

When connecting loudspeakers equipped with EN3 connectors to the MPS-488HPe power supply, you need an EN3 5-pin female to EN3 5-pin male cable. The following procedure documents how to assemble this cable. If you are starting with an EN3-to-pigtail cable, you can skip step 5 in this procedure.

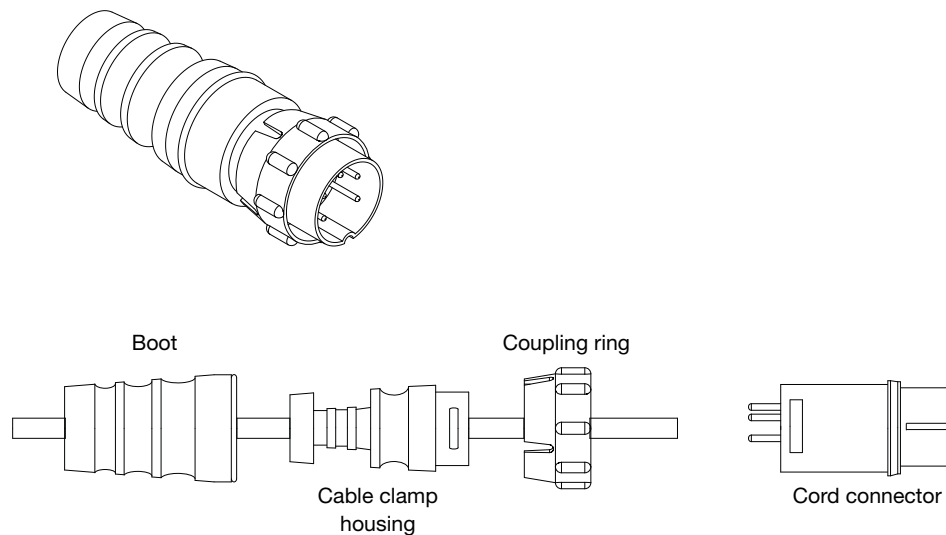
NOTE: Cable mount connectors cannot connect to other cable mount connectors. Cable mount connectors can only connect to panel mount connectors (like those on the MPS-488HPe) or inline connectors. To extend cables with EN3 connectors on both ends you can use an EN3 5-pin female-to-male cable coupler.



Assembled EN3-to-EN3 Cable

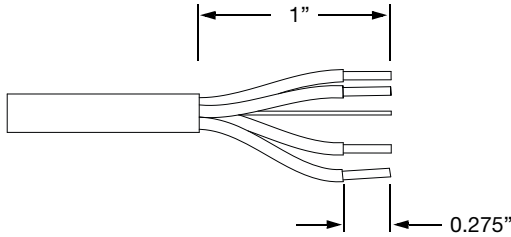
To assemble an EN3-to-EN3 loudspeaker cable:

1. Disassemble the EN3 5-pin male connector and feed one end of the cable through the boot, cable clamp housing, and coupling ring.

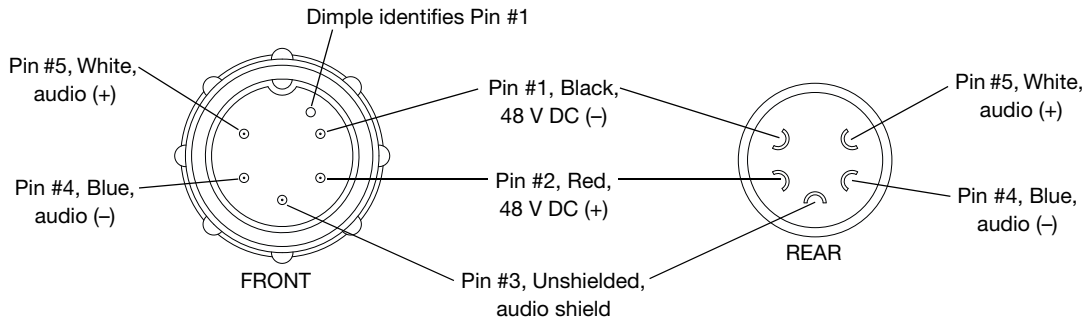


Disassembled EN3 5-Pin Male Cable Mount Connector

2. If the cable has not been stripped, strip the outer shielding 1 inch and then strip the black, red, blue, and white wires .275 inch.



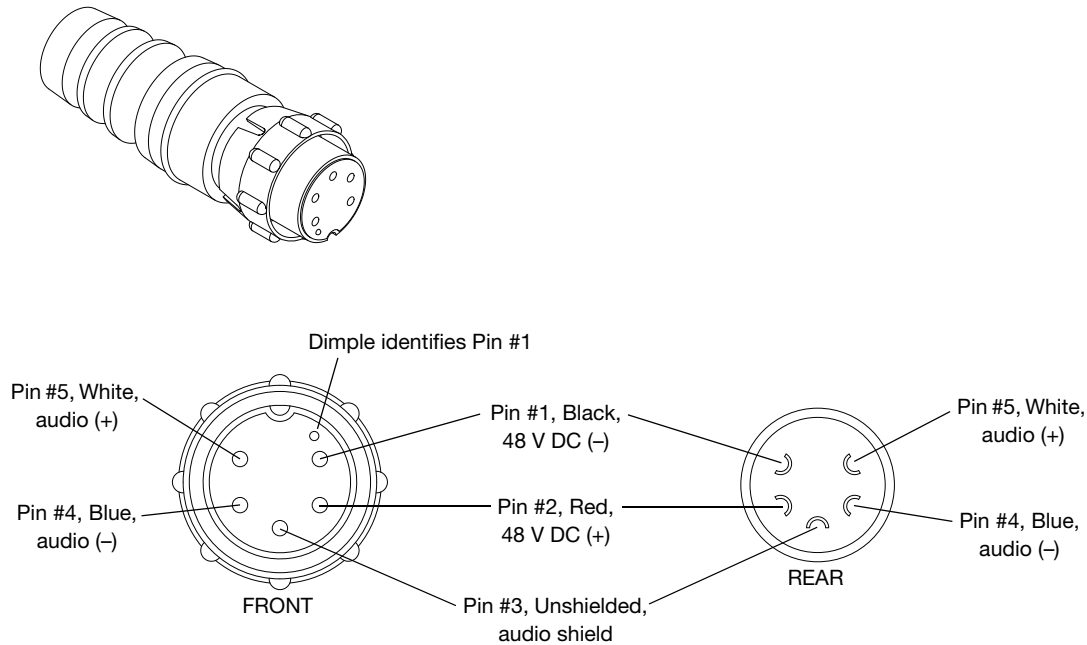
3. Solder the five exposed conductors to the five pins on the EN3 cord connector using the following wiring scheme.



Pin Destinations for EN3 5-Pin Male Cable Mount Connector

4. Reassemble the EN3 5-pin male connector:
 - Align the coupling ring's side notches with the cord connector's side notches and slide the couple ring onto the cord connector.
 - Carefully insert the end of the cable clamp housing into the cord connector until it locks into place. Snap the cable clamps in the cable clamp housing into their compartments.
 - Slide the boot forward so it covers the cable clamp housing completely.

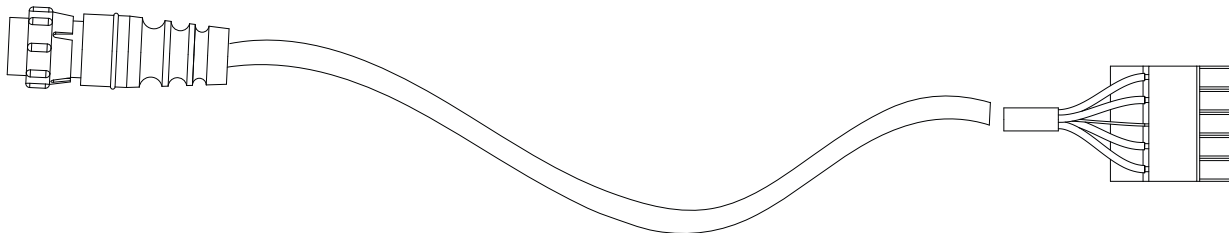
5. Repeat the previous steps to attach the EN3 5-pin female connector to the other end of the cable.



Pin Destinations for EN3 5-Pin Female Cable Mount Connector

ASSEMBLING EN3-TO-PHOENIX LOUDSPEAKER CABLES

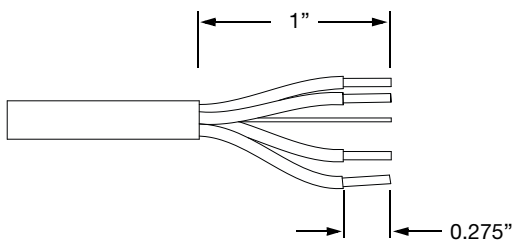
When connecting loudspeakers equipped with EN3 connectors to the MPS-488HP power supply, you need an EN3 5-pin female to Phoenix 5-pin female cable. The following procedure documents how to assemble this cable. If you are starting with an EN3-to-pigtail cable, you can skip steps 4–7 in this procedure.



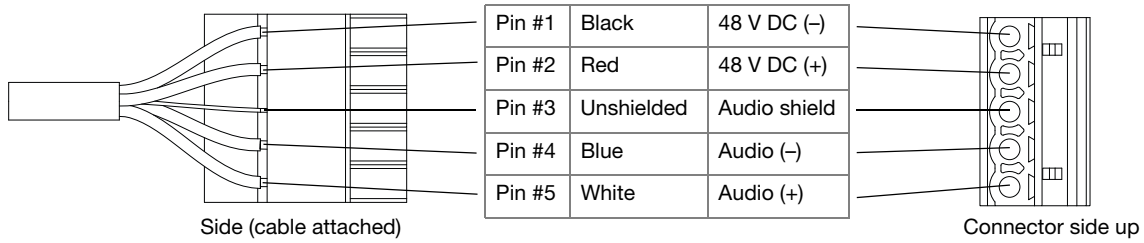
Assembled EN3-to-Phoenix Cable

To assemble an EN3-to-Phoenix cable:

1. If the cable has not been stripped, strip the outer shielding 1 inch and then strip the black, red, blue, and white wires .275 inch.

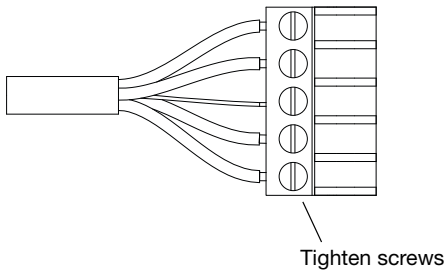


2. Insert the five exposed conductors into the five cable holes in the Phoenix connector using the following wiring scheme.

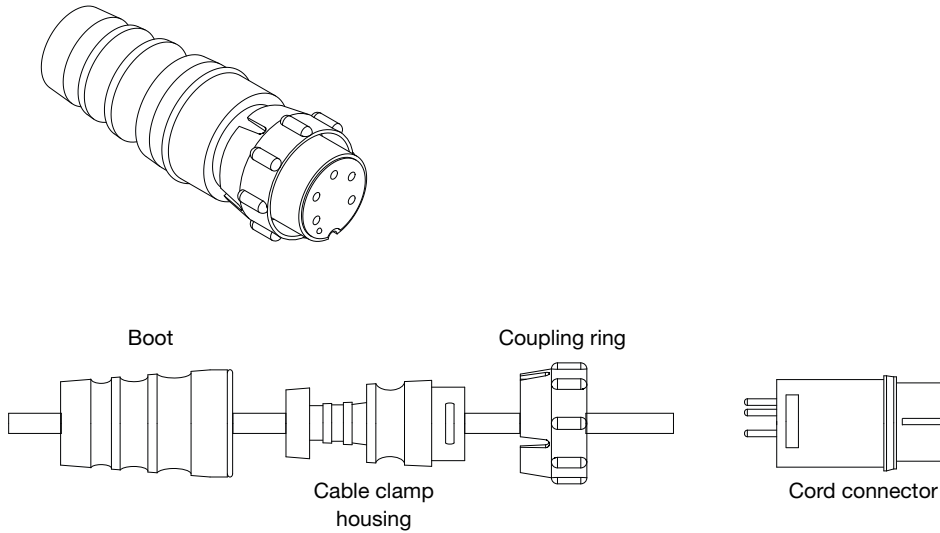


Phoenix 5-Pin Female Cable Mount Connector

3. Secure the conductors by tightening the five screws in the Phoenix conductor.



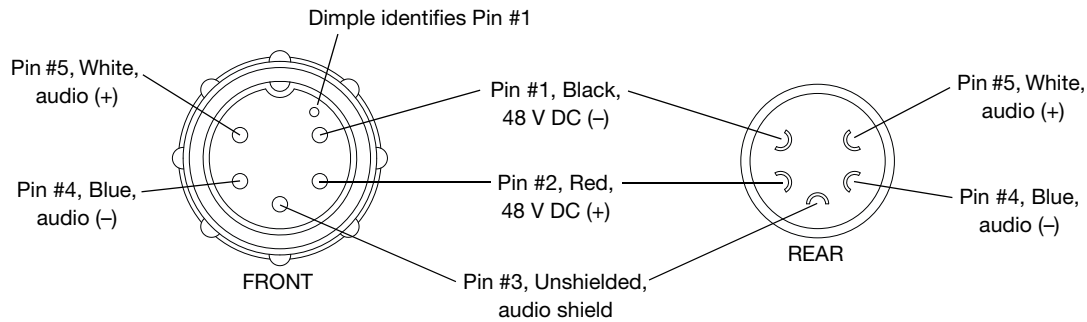
4. Disassemble the EN3 5-pin female connector and feed one end of the cable through the boot, cable clamp housing, and coupling ring.



Disassembled EN3 5-Pin Female Cable Mount Connector

5. If the EN3 end of the cable has not been stripped, strip the outer shielding 1 inch and then strip the black, red, blue, and white wires .275 inch.

6. Solder the five exposed conductors to the five pins on the EN3 cord connector using the following wiring scheme.

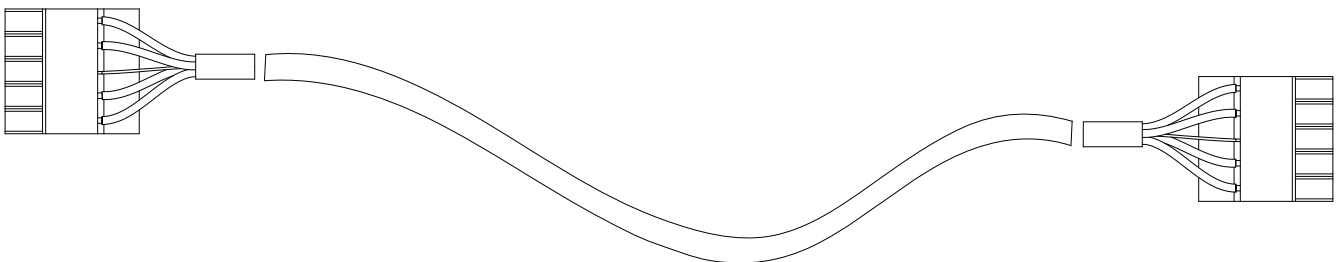


Pin Destinations for EN3 5-Pin Female Cable Mount Connector

7. Reassemble the EN3 5-pin female connector:
- Align the coupling ring's side notches with the cord connector's side notches and slide the couple ring onto the cord connector.
 - Carefully insert the end of the cable clamp housing into the cord connector until it locks into place. Snap the cable clamps in the cable clamp housing into their compartments.
 - Slide the boot forward so it covers the cable clamp housing completely.

ASSEMBLING PHOENIX-TO-PHOENIX LOUDSPEAKER CABLES

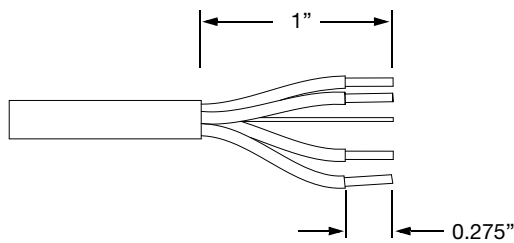
When connecting loudspeakers equipped with Phoenix connectors to the MPS-488HPp power supply, you need a Phoenix 5-pin female to Phoenix 5-pin female cable. The following procedure documents how to assemble this cable.



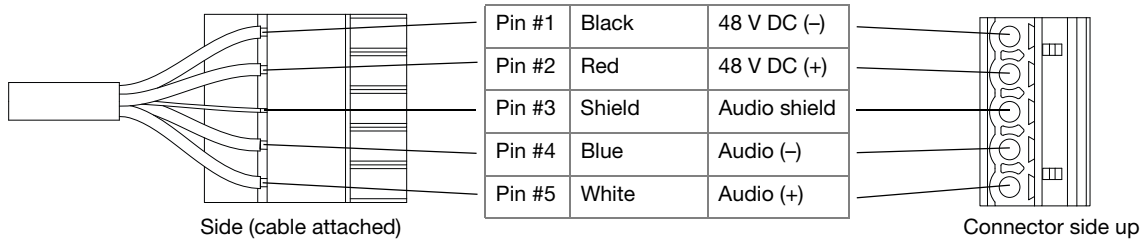
Assembled Phoenix-to-Phoenix Cable

To assemble a Phoenix-to-Phoenix cable:

1. If the cable has not yet been stripped, strip one end of the cable. Strip the outer shielding by 1 inch and then strip the black, red, blue, and white wires by .275 inch.

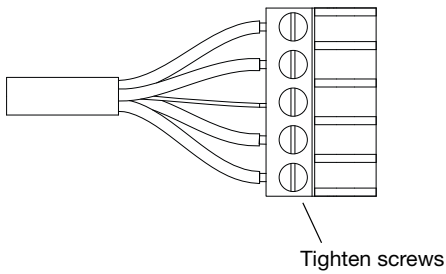


2. Insert the five exposed conductors, from one end of the cable, into the five cable holes in one of the Phoenix connectors. Use the following wiring scheme.



Phoenix 5-Pin Female Cable Mount Connector

3. Secure the conductors by tightening the five screws in the Phoenix connector.



4. Repeat the previous steps and attach the other end of the cable to the other Phoenix connector.
5. Verify the wiring polarity is correct for both connectors.

APPENDIX C: MPS-488HP SPECIFICATIONS

MPS-488HP Specifications

FRONT PANEL	
LEDs	Eight LEDs to indicate output voltage Eight LEDs to indicate load current
REAR PANEL	
Audio Inputs	Eight XLR 3-pin female connectors Link switches to route to outputs
Channel Outputs	On MPS-488HPp model, eight Phoenix 5-pin connectors On MPS-488HPe model, eight EN3 5-pin connectors
Output Voltage	48 V DC per channel (with intelligent circuit protection against surges and shorts)
AC POWER	
AC Connector	PowerCon
Voltage Selection	Automatic
Safety Agency Rated Operating Voltage	100–240 V AC; 50/60 Hz
Current Draw with Eight MM-4XP Loudspeakers	
Idle Current	0.73 A rms (115 V AC); 0.60 A rms (230 V AC); 0.82 A rms (100 V AC)
Maximum Long-Term Continuous Current	2.19 A rms (115 V AC); 0.99 A rms (230 V AC); 2.48 A rms (100 V AC)
Burst Current	5.94 A rms (115 V AC); 2.98 A rms (230 V AC); 6.62 A rms (100 V AC)
Ultimate Short-Term Peak Current	6.87 A peak (115 V AC); 5.32 A peak (230 V AC); 9.10 A peak (100 V AC)
Inrush Current	20.0 A peak (115 V AC); 20.0 A peak (230 V AC); 20.0 A peak (100 V AC)
Current Draw with Eight UP-4XP Loudspeakers	
Idle Current	1.02 A rms (115 V AC); 0.68 A rms (230 V AC); 1.18 A rms (100 V AC)
Maximum Long-Term Continuous Current	4.15 A rms (115 V AC); 2.03 A rms (230 V AC); 4.83 A rms (100 V AC)
Burst Current	6.24 A rms (115 V AC); 2.32 A rms (230 V AC); 6.29 A rms (100 V AC)
Ultimate Short-Term Peak Current	10.18 A peak (115 V AC); 5.46 A peak (230 V AC); 9.49 A peak (100 V AC)
Inrush Current	20.0 A peak (115 V AC); 20.0 A peak (230 V AC); 20.0 A peak (100 V AC)
Current Draw with Eight HMS-10 Loudspeakers	
Idle Current	1.23 A rms (115 V AC); 0.74 A rms (230 V AC); 1.53 A rms (100 V AC)
Maximum Long-Term Continuous Current	8.39 A rms (115 V AC); 4.44 A rms (230 V AC); 10.37 A rms (100 V AC)
Burst Current	11.98 A rms (115 V AC); 6.87 A rms (230 V AC); 12.19 A rms (100 V AC)
Ultimate Short-Term Peak Current	14.84 A peak (115 V AC); 10.59 A peak (230 V AC); 15.71 A peak (100 V AC)
Inrush Current	20.0 A peak (115 V AC); 20.0 A peak (230 V AC); 20.0 A peak (100 V AC)

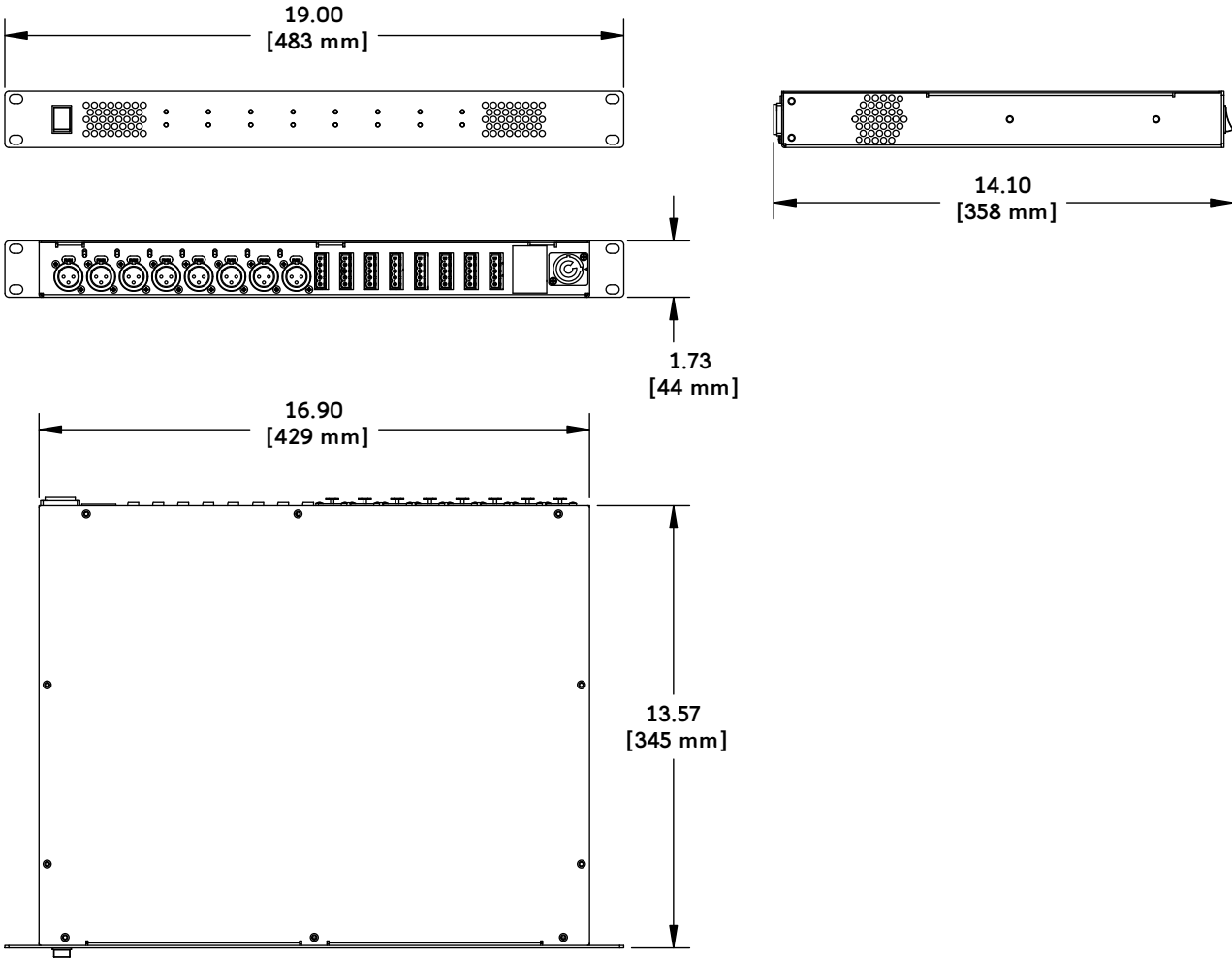
MPS-488HP Specifications

Current Draw with Eight MM-10XP Subwoofers	
Idle Current	0.74 A rms (115 V AC); 0.54 A rms (230 V AC); 0.81 A rms (100 V AC)
Maximum Long-Term Continuous Current	3.08 A rms (115 V AC); 1.49 A rms (230 V AC); 3.46 A rms (100 V AC)
Burst Current	5.48 A rms (115 V AC); 3.21 A rms (230 V AC); 5.57 A rms (100 V AC)
Ultimate Short-Term Peak Current	9.56 A peak (115 V AC); 4.96 A peak (230 V AC); 10.28 A peak (100 V AC)
Inrush Current	20.0 A peak (115 V AC); 20.0 A peak (230 V AC); 20.0 A peak (100 V AC)
PHYSICAL	
Dimensions	1RU high 19.00" W x 1.73" H x 13.57" D (482.60 mm x 43.94 mm x 348.78 mm)
Weight	15.5 lbs (6.6 kg)
ENVIRONMENTAL	
Operating Temperature	0° C to +45° C
Non operating Temperature	<-40° C or >+75° C
Humidity	To 95% at 35° C
Operating Altitude	To 4600 m (15,000 ft)
Non Operating Altitude	To 95% at 35° C
Shock	30 g 11 msec half-sine on each of 6 sides
Vibration	10 Hz – 55 Hz (0.010 m peak-to-peak excursion)

MPS-488HP Compliance

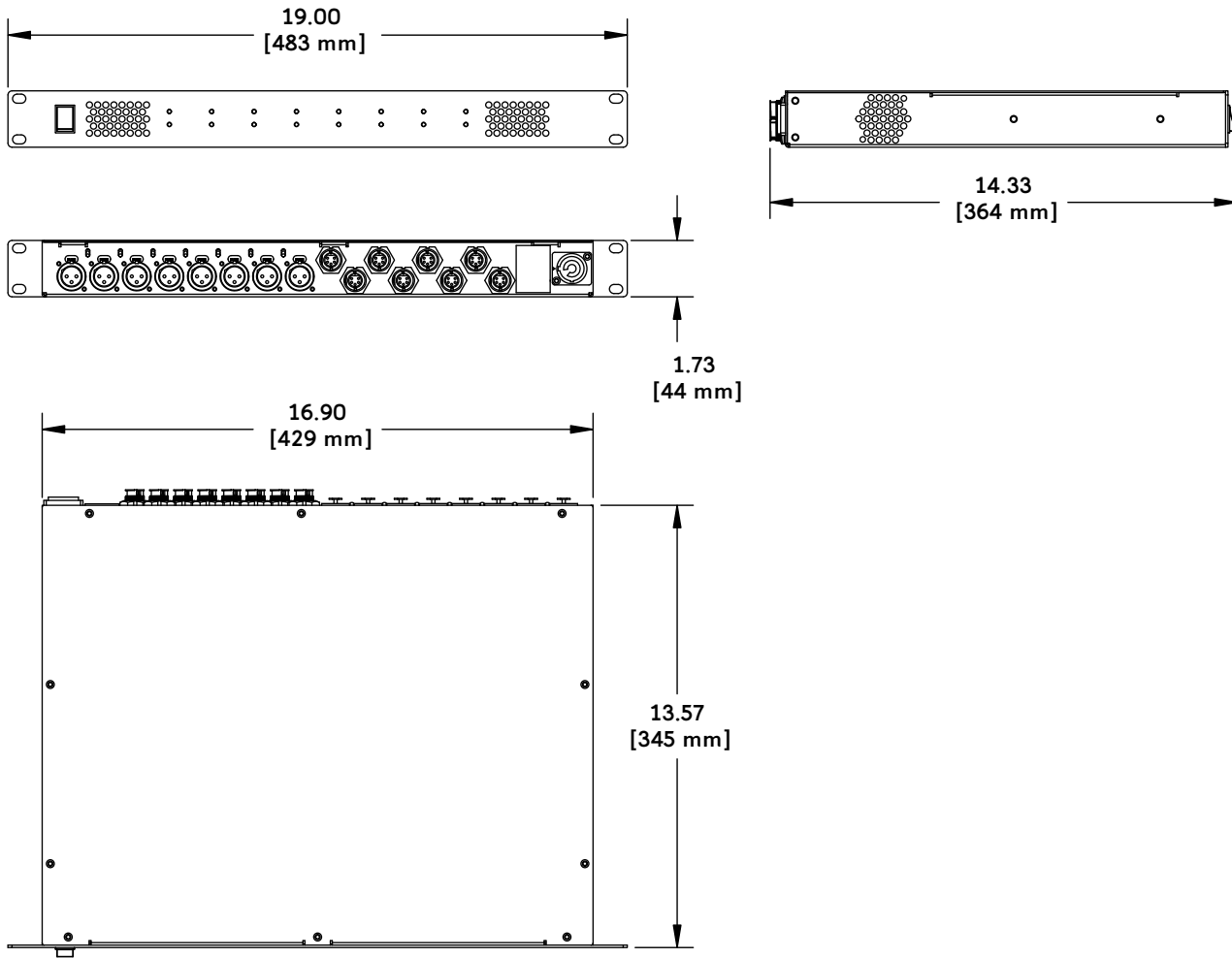


MPS-488HPp DIMENSIONS



MPS-488HPp Dimensions

MPS-488HPe DIMENSIONS



MPS-488HPe Dimensions









Meyer Sound Laboratories Inc.
2832 San Pablo Avenue
Berkeley, CA 94702

www.meyersound.com
T: +1 510 486.1166
F: +1 510 486.8356

© 2011
Meyer Sound. All rights reserved.
MPS-488HP Operating Instructions, PN 05.205.005.01 A