



hear
TECHNOLOGIES®



hear back PRO[®]

16-CHANNEL PERSONAL MIXER SYSTEM

PRO Mixer Distro

user guide

ENGLISH

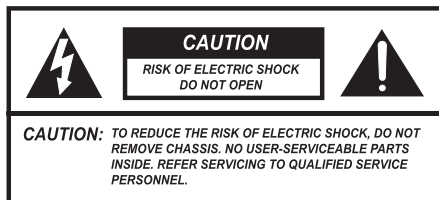
Danger

Exposure to extremely high noise levels may cause a permanent hearing loss. Individuals vary considerably to noise induced hearing loss but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a sufficient time.

The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the following permissible noise level exposures:

DURATION PER DAY (HOURS)	8	6	4	3	2	1
SOUND LEVEL (dB)	90	93	95	97	100	103

According to OSHA, any exposure in the above permissible limits could result in some hearing loss. Ear plugs or protectors in the ear canal or over the ears must be worn when operating this amplification system in order to prevent a permanent hearing loss. If exposure in excess of the limits as put forth above, to insure against potentially harmful exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of inducing high sound pressure levels, such as this amplification system, be protected by hearing protectors while this unit is in operation.



AVIS: RISQUE DE CHOC ELECTRIQUE-NE PAS OUVRIR.



THIS SYMBOL IS INTENDED TO ALERT THE USER TO THE PRESENCE OF NON-INSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.



THIS SYMBOL IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE UNIT.

IMPORTANT SAFETY INSTRUCTIONS

1. Read all safety and operating instructions before using this product.
2. All safety and operating instructions should be kept for future reference.
3. Read and understand all warnings listed on the operating instructions.
4. Follow all operating instructions to operate this product.
5. This product should not be used near water, i.e. bathtub, sink, swimming pool, wet basement, etc.

6. Only use dry cloth to clean this product.
7. Do not block any ventilation openings. It should not be placed flat against a wall or placed in a built-in enclosure that will impede the flow of cooling air.
8. Do not install this product near any heat sources; such as, radiators, heat registers, stove or other apparatus (including heat producing amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord being walked on or pinched, particularly at plugs, convenience receptacles and the point where they exit from the apparatus. Do not break the ground pin of the power supply cord.
11. Only use attachments specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Care should be taken so that objects do not fall and liquids are not spilled into the unit through the ventilation ports or any other openings.
15. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way; such as, power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
16. WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
17. The apparatus shall be connected to a mains socket outlet with a protective earthing connection.
18. Mains plug is used as the disconnect device. It shall remain readily operable and should not be obstructed during intended use.
19. WARNING: To prevent injury, this apparatus must be securely attached to a rack in accordance with the installation instructions.
20. Detailed installation instruction in user manual.

FRENCH

Danger

L'exposition a des niveaux eleves de bruit peut provoquer une perte permanente de l'audition. Chaque organisme humain reagit differemment quant a la perte de l'audition, mais quasiment tout le monde subit une diminution de l'acuite auditive lors d'une exposition suffisamment longue au bruit intense. Les autorites competentes en reglementation de bruit ont defini les expositions tolerees aux niveaux de bruits:

DURE EN HEURES PAR JOUR	8	6	4	3	2	1
NIVEAU SONORE CONTINU EN dB	90	93	95	97	100	103

Selon les autorites, toute exposition dans les limites citees ci-dessus, peuvent provoquer certaines pertes d'audition. Des bouchons ou protections dans l'appareil auditif ou sur l'oreille doivent etre portes lors de l'utilisation de ce systeme d'amplification afin de prevenir le risque de perte permanente de l'audition. Dans le cas d'expositions superieures aux limites precitees il est recommande, afin de se premunir contre les expositions aux pressions acoustiques elevees potentiellement dangeereuses, aux personnes exposees aux equipements capables de delivrer de telles puissances, tels ce systeme d'amplification en fonctionnement, de proteger l'appareil auditif.



CE SYMBOLE A POUR BUT D'AVERTIR L'UTILISATEUR DE LA PRESENCE DE VOLTAGE DANGEREUX NON-ISOLE A L'INTERIEUR DE CE PRODUIT QUI PEUT ETRE DE PUISSANCE SUFFISAMMENT IMPORTANTE POUR PROVOQUER UN CHOC ELECTRIQUE AUX PERSONNES.



CE SYMBOLE A POUR BUT D'AVERTIR L'UTILISATEUR DE LA PRESENCE D'INSTRUCTIONS D'UTILISATION ET DE MAINTENANCE DANS LES DOCUMENTS FOURNIS AVEC CE PRODUIT.

IMPORTANTES INSTRUCTIONS DE SECURITE

1. Lire avec attention toutes les recommandations et precautions d'emploi avant d'utiliser ce produit.
2. Toutes les recommandations et precautions d'emploi doivent etre conservees afin de pouvoir s'y reporter si necessaire.
3. Lire et comprendre tous les avertissements enumerés dans les precautions d'emploi.
4. Suivre toutes les precautions d'emploi pour utiliser ce produit.
5. Ce produit ne doit pas etre utilise pres d'eau, comme par exemple baignoires, eviers, piscine, sous-sol humides...etc.
6. Utiliser exclusivement un chiffon sec pour nettoyer ce produit.
7. Ne bloquer aucune ouverture de ventilation. Ne pas placer le produit tout contre un mur ou dans une enceinte fermee, cela generait le flux d'air necessaire au refroidissement.

8. Ne pas placer le produit pres de toute source de chaleur telle que radiateurs, arrivees d'air chaud, fourneaux ou autres appareils generant de la chaleur (incluant les amplificateurs producteurs de chaleur).
9. Ne pas negliger la securite que procure un branchement polarise ou avec raccordement a la terre. Un branchement polarise comprend deux fiches dont l'une est plus large que l'autre. Un branchement a la terre comprend deux fiches plus une troisieme reliee a la terre. Si la fiche secteur fournie ne s'insert pas dans votre prise de courant, consulter un electricien afin de remplacer votre prise obsolete.
10. Protéger le cordon d'alimentation de tout écrasement ou pincement, particulièrement au niveau des fiches, des réceptacles utilisés et à l'endroit de sortie de l'appareil. Ne pas casser la fiche de terre du cordon d'alimentation.
11. Utiliser uniquement les accessoires spécifiés par le constructeur.
12. Utiliser uniquement avec le chariot de transport, le support, le trépied, la console ou la table spécifiés par le constructeur ou vendus avec l'appareil. Lors de l'utilisation d'un chariot, bouger avec précaution l'ensemble chariot/appareil afin d'éviter les dommages d'un renversement.
13. Débrancher cet appareil lors d'orages ou s'il n'est pas utilisé pendant une longue période.
14. Des précautions doivent être prises afin qu'aucun objet ne tombe et qu'aucun liquide ne se répande à l'intérieur de l'appareil par les orifices de ventilation ou n'importe quelle autre ouverture.
15. Pour toutes interventions techniques s'adresser à un technicien qualifié. L'intervention technique est nécessaire lorsque l'appareil a été endommagé de n'importe quelle façon, comme par exemple si le cordon secteur ou sa fiche sont détériorés, si du liquide a coulé ou si des objets sont tombés à l'intérieur de l'appareil, si l'appareil a été exposé à la pluie ou à l'humidité, s'il ne fonctionne pas normalement ou s'il est tombé.
16. ATTENTION: Pour réduire le risque d'incendie ou de choc électrique ne pas exposer l'appareil à la pluie ou à l'humidité.
17. L'appareil sera relié à un socle principal d'électricité muni d'une mise à terre protectrice.
18. Le cordon d'alimentation est utilisée comme dispositif de débranchement. Il restera aisément fonctionnelle et ne devrait pas être obstrué pendant l'utilisation prévue.
19. AVERTISSEMENT Pour raison de sécurité, cet appareil doit être solidement fixé à un rack selon les instructions d'installation.
20. Instruction d'installation détaillée à l'intérieur du manuel d'utilisateur.

ELECTROMAGNETIC COMPATIBILITY

This device complies with part 15 of the FCC Rules and the Product Specifications noted on the **Declaration of Conformity**. Operation is subject to the following two conditions:

- this device may not cause harmful interference, and
- this device must accept any interference received, including interference that may cause undesired operation.

Operation of this unit within significant electromagnetic fields should be avoided.

- use only shielded interconnecting cables.

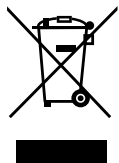
WARNING

The Hub unit produces heat while powered, and therefore requires adequate ventilation to ensure the internal temperature stays within maximum operating temperatures (0° C to 54.5° C, or 32° F to 130° F).

Please ensure that these clearances are met:

- 0.85 inches of clearance on either side of Hub
- 1 inch of clearance in front of Hub
- 11 inches of clearance in back of Hub

Care should be taken so that the Mixer's ventilation holes remain unblocked, allowing adequate airflow through both sides of the unit.



If you want to dispose this product, do not mix it with general household waste. There is a separate collection system for used electronic products in accordance with legislation that requires proper treatment, recovery and recycling.

Private household in the 25 member states of the EU, in Switzerland and Norway may return their used electronic products free of charge to designated collection facilities or to a retailer (if you purchase a similar new one).

For countries not mentioned above, please contact your local authorities for a correct method of disposal.

By doing so, you will ensure that your disposed product under goes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health.

DECLARATION OF CONFORMITY

Manufacturer's Name: Hear Technologies
Manufacturer's Address: 991 Discovery Dr.
Huntsville, AL 35806, USA

Declares that the product:

Product Name: Hear Back PRO
Product Option: All (requires Class II power adapter that conforms to the requirements of EN60065, EN60742, or equivalent.)

Conforms to the following Product Specifications:

Safety: IEC 60065 -01+Amd 1
EMC: EN 55022:2010
55024:2010
FCC Part 15

Supplementary Information:

The product herewith complies with the requirements of the:
Low Voltage Directive 2006/95/EC
EMC Directive 2004/108/EC
RoHS Directive 2002/95/EC
WEEE Directive 2002/96/EC
EC Regulation 278/2009

With regard to Directive 2005/32/EC and EC Regulation 1275/2008 of 17 December 2008, this product is designed, produced, and classified as Professional Audio Equipment and thus is exempt from this Directive.

Nason Tackett
Senior Design Engineer
Hear Technologies
991 Discovery Drive
Huntsville, AL 35806, USA
Date: August 15, 2014

A FEW NOTES ABOUT THE SYSTEM

- Do not share the network with any other devices.
 - High-quality, low-latency audio requires a constant stream of large amounts of data; therefore, other devices on the same network could compromise the quality of the audio.
- The system is designed to work with suitable CAT6 cable complying with the National authorities (cable with an outer jacket or sleeving rated VW-1 or better). Note, using low-quality cables may result in the Mixers refusing to link with the Hub.
- Don't use those old, gray, flat telephone cables (ISDN cables) as those are not gigabit Ethernet cables.
- The ground and power rails of the Mixer are totally isolated from the Hub, meaning no more ground loops to worry about.
- This system is compatible with most off-the-shelf Gigabit PoE+ network switches.
 - Network switch must be PoE+ (30 watts) because the Mixer may otherwise periodically lose power at high volumes, due to it sourcing slightly more power than standard POE switches provide (15 watts).
 - Since a constant stream of data is required for audio, not all network switches will work with this system due to a function known as EEE (Energy Efficient Ethernet), which restricts the free-flow of data, sending bursts of data instead.
- Mixer faceplate can be labeled by using a Dry Erase marker, label maker, or by writing on a removable Mixer overlay. Please note that using permanent markers results in permanent labels!

Network Switches known to WORK with the Hear Back PRO	Network Switches known to NOT work with the Hear Back PRO
<ul style="list-style-type: none">• D-Link DGS-1008G• Cisco 300 Series• Netgear GS108	<ul style="list-style-type: none">• Netgear GS105

*If you're unsure if EEE is enabled on your Gigabit POE+ network switch, contact the switch's manufacturer.

LIMITED WARRANTY

Hear Technologies warrants the equipment against defects in materials and labor for a period of one year from the original date of purchase. The duration of this warranty is limited to claims made to Hear Technologies within the periods stated with respect to parts and labor from the date of purchase. During the warranty period, defective equipment will be replaced or repaired to the general condition as received, at the discretion of Hear Technologies.

All transportation is the responsibility of the purchaser or owner. Equipment should be shipped in the original shipping box.

This warranty applies only to defects in materials and workmanship and does not cover failure or damage due to shipping loss or damage, abuse, misuse, misapplication, incorrect or varying power line voltages, lack of proper maintenance, natural disasters, acts of God, or unauthorized modifications, repairs, or any alterations done without the expressed

written consent by Hear Technologies. Hear Technologies shall not be liable for any loss of use of the equipment, or consequential damages, including damages to other parts of the installation in which the equipment is a part.

Hear Technologies does not make any warranty, express or implied, other than the warranty contained herein. No agent, representative, or employee has the authority to increase or alter the liability, obligations, and terms of this warranty or sale of the equipment. NOTE: It is strongly recommended that any equipment returned to Hear Technologies be properly packaged and insured for its full value in case of loss, handling or shipping damage.

Hear Technologies shall not be responsible for damage or loss of equipment during shipment.

The following are registered trademarks of Hear Technologies:

Hear Technologies, Hear Back, Control Your Mix, Talk Back, Extreme Extender, Hearbuds, HearBus, and the "Jack" logo.

All names and marks of other companies belong to those respective companies.

hear back PRO

16-CHANNEL PERSONAL MIXER SYSTEM

PRO Mixer Distro



SCAN
CODE
FOR USER
GUIDE

OVERVIEW

The PRO Mixer Distro provides power and digital audio to up to eight (8) Hear Back PRO mixers using standard CAT6 cables. The PRO Mixer Distro allows the same 8-port Network Card that goes in the Hear Back PRO Hub to be used stand-alone. Durable anodized aluminum housing protects the Hear Back PRO Network Card and allows it to stand up to years of abuse in the studio or on the road. The Distro also uses the same 4-pin XLR power connector that the Hear Back PRO Hub uses. This allows the same standard Hear Back PRO power supply to be used with the Distro. A ninth RJ45 Ethernet connector is provided for connecting to another Distro or to the HBUS output or mixer network card on a Hear Back PRO Hub.

A yellow LED next to the power port indicates the presence of 48 volts. LEDs under each of the 8 mixer ports indicate link/activity (green) and PoE power (yellow). LEDs under the 9th (input) port indicate link (green) and activity (yellow).

Because of the isolated power needed to comply with PoE standards and also to provide electrical isolation, use only the Hear Back PRO power supply provided.

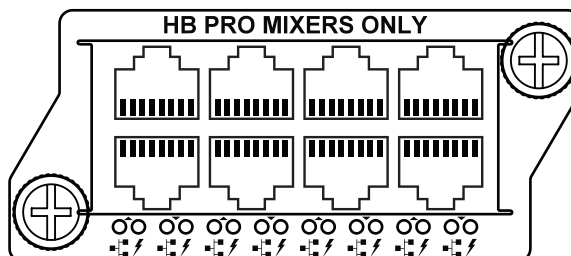
The Distro's RJ45 pin-outs are the same as standard gigabit Ethernet RJ45 pin-outs, as shown below:

Pin	Pair	Description	Suggested Termination Color Scheme (568B)***
1	A+	Power over Ethernet (PoE) 48v**	white/orange
2	A-	Power over Ethernet (PoE) 48v**	orange
3	B+	Power over Ethernet (PoE) GND**	white/green
4	C+		blue
5	C-		white/blue
6	B-	Power over Ethernet (PoE) GND**	green
7	D+		white/brown
8	D-		brown

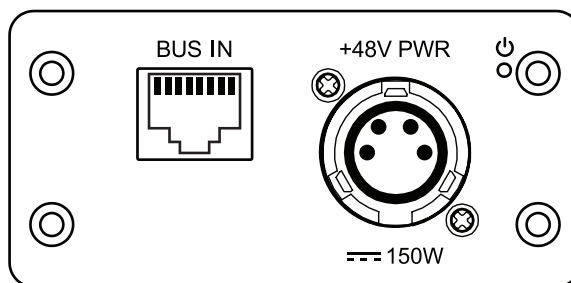
**Gigabit PoE uses a transformer on the data pairs to allow power and data to share the same pairs similar to how phantom power works on microphones.

***Color Scheme 568A is also acceptable, but do not crossover from 568A to 568B.

Each Mixer output on the network card has a power supervisor circuit that will only power the port if a valid PoE device is detected. In the event of a shorted cable or broken Mixer, the power supervisor circuit will disconnect the load, permitting other Mixers to function while protecting the power supply from the faulty output.



Connects up to (8) PRO Mixers



Provides Data and Power

ADVANTAGES / FEATURES

- Small form factor
- Heavy duty stage-worthy design
- Daisy-Chainable for unlimited network sizes
- 1 input, 8 outputs
- Works with any 10/100/1000 Base-T Ethernet equipment
- 30 watt PoE+ power on 8 output ports
- Auto-crossover on every port (no crossover cables needed)
- Energy Efficient Ethernet (EEE) disabled (interferes with network audio)



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