

H|H



INSTALL AMPLIFIER

QUICK START GUIDE



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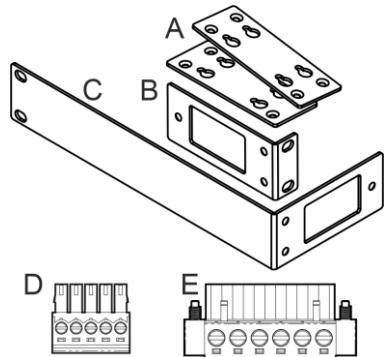
A full user manual including full information is available on the HH Audio website. Go to HHAUDIO.COM, or scan the QR code:



WHAT'S INCLUDED

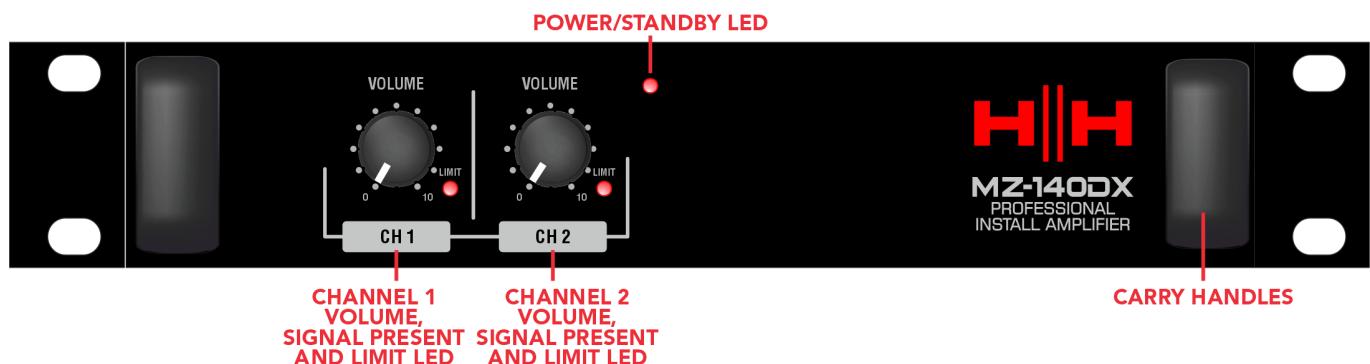
As well as your MZ device, the box will also contain:

- IEC Mains Lead (Country specific).
- User Manual download card and safety warning information.
- A: 2 x Joining /Wall Mounting Plates
- B: 1 x Small Rack Wing
- C: 1 x Large Rack Wing
- D: 2x 3 Way 3.5mm Euro Plug
- E: 1x 6 Way 5.08mm Euro Plug
- 10x M4 x 10mm - CSK Head - Cross - Machine Screw - Black

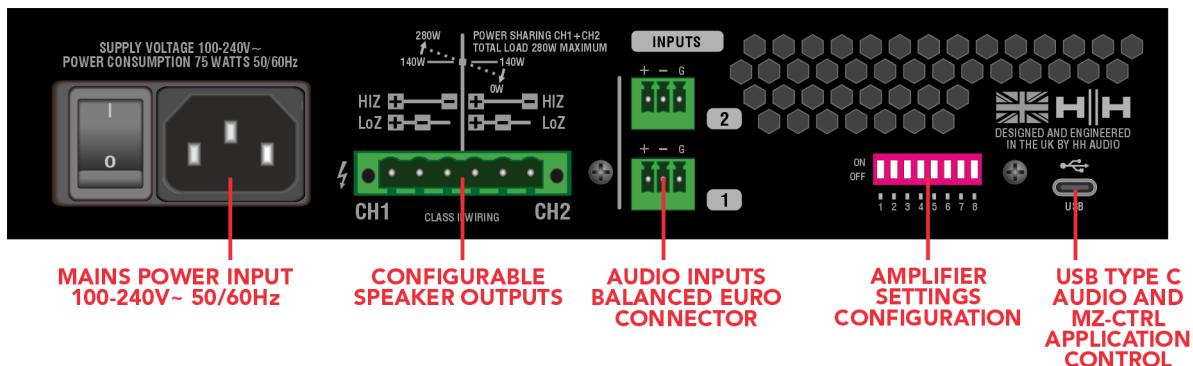




FRONT PANEL



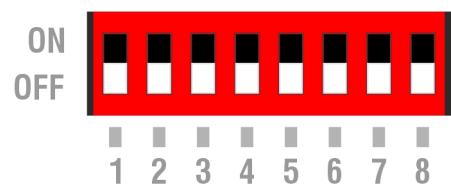
REAR PANEL



INSTALLATION NOTES

- High or low impedance speaker connection options can be configured using the DIP switches independently for each output.
- Analogue Input sensitivity, limiters, EQ and other settings can be adjusted independently for each channel via the MZ-CTRL™ Control application available on the HH website.
- Ensure there is adequate air flow when installed and that vents are not covered. MZ are designed for ambient temperatures of 35 degrees
- DIP Options

• ON	OFF
• CH1-HIZ MODE	CH1 LoZ MODE
• CH1 HIZ 70V / 4 OHM	CH1 HIZ 100V / 8 OHM
• CH2 HIZ MODE	CH2 LoZ MODE
• CH2 HIZ 70V / 4 OHM	CH2 HIZ 100V / 8 OHM
• POWER SAVING MODE ON	POWER SAVING MODE OFF
• FRONT PANEL LOCK ON	FRONT PANEL LOCK OFF
• INPUT 1:ALL	INPUT 1:1, 2:2
• N/A	



POWER RATINGS

The table below should be used for reference when working out the total power ratings of speakers:

HIZ / LOZ MODE	MZ-140DX POWER RATING
4 Ohm	95W
8 Ohm	140W*
70V	140W*
100V	120W

*130W max when running from a 120V mains voltage

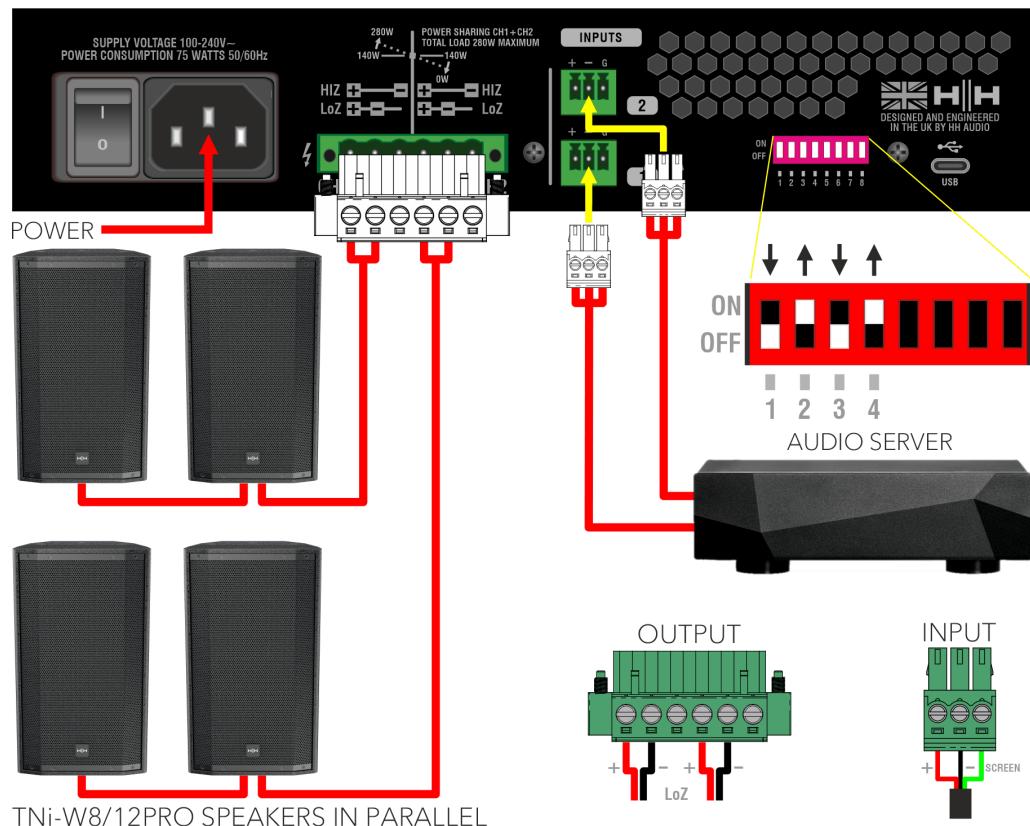
The Power Sharing feature (enabled in the MZ-CTRL app) allows the unit to use all available system power increasing the available audio output power from CH1. This will provide an impressive 240W into a 4 Ohm or 280W into an 8 Ohm load. Please note, for this output to be achieved, the output from CH2 must be 0W.

You can download the free **MZ-CTRL** app from the HH Audio website. Goto HHAUDIO.COM, or scan the QR code:



TYPICAL SETUP EXAMPLE AND PROCEDURE

The example below is a stereo, 4 Ohm low impedance setup. Special care should be taken when setting the DIP switches.





SPECIFICATIONS

Model	MZ-140DX
System type	2 CHANNEL INSTALL POWER AMPLIFIER
Analogue Inputs	2x Balanced 3.5mm Euroblock connectors (Configurable 1:1 or 1:ALL via dip switches)
Digital Inputs	USB Type C Class Compliant Audio streaming @ 48kHz
Output Channels	2
Total System Power Output	280W
Power Per Output Channel @ 4/8Ω	140W RMS* into 8Ω. 95W into 4Ω. (*130W max when running at 120V mains voltage)
Power Per Output Channel @ 70/100V	140W RMS* into 70V. 120W into 100V (*130W max when running at 120V mains voltage)
Power Output Channel 1 Only @ 4/8Ω	Up to 280W achievable on Channel 1 when system power does not exceed 280W total. (User configurable via MZ-CTRL Application)
Minimum Drive Impedance	4Ω
Output Limiter	Per Channel, PEAK and RMS (User configurable via MZ-CTRL Application)
Frequency response	20-20KHz ±0.25dBu
Input Sensitivity CH1 & 2	+4dBu Default (User configurable via MZ-CTRL Application)
Maximum Input Level	+21dBu
Input Impedance	10KΩ
THD+N	< 0.01% @ 1KHz 0dBu in, maximum volume.
Crosstalk	< -98dB crosstalk between channels, maximum volume.
Noise Floor (A-weighted)	< -70dBu (unmuted) < -110dBu (standby)
SNR (A-weighted)	> 108dB
Cooling	Thermally controlled 40x20mm low noise brushless dual bearing fan for reliable performance in high ambient temperatures.
Output Connectors (Amplifier)	1x 5.08mm 6-Way Euroblock connector.
Controls	Each amplifier output features master volume controls. Rear panel includes front panel lock, input routing and per-channel amplifier mode options via dip switches.
EQ	Available in the MZ-CTRL Application.
Indicators	Power/Standby, all outputs feature signal present and amp clip LEDs.
AC Power	Universal AC 100-240V~ 50/60HZ. IEC C14 Inlet
Power Consumption	17W Idle, 150W Typical, <0.5W Standby.
Standby Modes	Individual channel standby and power saving mode, both with signal override. Energy Star & ErP 1275/2008/EC Compliant.
App	Dedicated MZ-CTRL application available for Windows® and MacOS®
Dimensions	
Unit dimensions (HWD)	44 x 220.5 x 350 mm, (1.7" x 8.7" x 13.8")
Net Weight	2.8Kg, 6.2 lbs
Carton dimensions (HWD)	145 x 470 x 305 mm, (5.7" x 18.5" x 12") (0.021 M3)
Gross Weight	3.7Kg, 8.2 lbs
Master Carton dimensions (HWD)	325 x 490 x 320 mm (12.8" x 19.3" x 12.6") (0.051 M3) (2pcs)
Gross Weight	8.1Kg, 17.9 lbs
Accessories	Rack Mounting Kit included. Country specific mains Lead included. 2x 3.5mm 3-way, 1x 5.08mm 6-way Euro Plugs included.
EAN13	5060109459593

Safety and Warnings

MANUFACTURER: HEADSTOCK DISTRIBUTION LTD. STEELPARK ROAD, COOMBS WOOD BUSINESS PARK WEST, HALESOWEN, B62 8HD, UK

To take full advantage of your new product and enjoy long and trouble-free performance, please read this owner's manual carefully, and keep it in a safe place for future reference.

- 1) Unpacking: On unpacking your product, please check carefully for any signs of damage that may have occurred whilst in transit from the HH factory to your dealer. In the unlikely event that there has been damage, please re-pack your unit in its original carton and consult your dealer. We strongly advise you to keep your original transit carton, since in the unlikely event that your unit should develop a fault, you will be able to return it to your dealer for rectification securely packed.
- 2) Amplifier Connection: To avoid damage, generally it is advisable to establish and follow a pattern for turning on and off your system. With all system parts connected, turn on source equipment, mixers, effects processors etc, BEFORE turning on your amplifier. Many products have large transient surges at turn on and off which can cause damage to your speakers. By turning on your amplifier LAST and making sure its level control is set to a minimum, any transients from other equipment should not reach your loudspeakers. Wait till all system parts have stabilised, usually a couple of seconds. Similarly, when turning off your system always turn down the level controls on your amplifier and then turn off its power before turning off other equipment.
- 3) Cables: Never use shielded or microphone cable for any speaker connections as this will not be substantial enough to handle the amplifier load and could cause damage to your complete system. Use good quality shielded cables everywhere else.
- 4) Servicing: The user should not attempt to service these products. Refer all servicing to qualified service personnel.
- 5) Heed all warnings.
- 6) Follow all instructions.
- 7) Do not use this apparatus near water.
- 8) Clean only with a dry cloth.
- 9) Do not block any of the ventilation openings. Install in accordance with manufacturer's instructions.
- 10) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 11) An apparatus with Class I construction shall be connected to a mains socket outlet with a protective connection. 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 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.
- 12) Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point they exit from the apparatus.
- 13) Only use attachments/accessories provided by the manufacturer.
- 14) Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 15) The mains plug or appliance coupler is used as the disconnect device and shall remain readily operable. The user should allow easy access to any mains plug, mains coupler and mains switch used in conjunction with this unit thus making it readily operable. Unplug this apparatus during lightning storms or when unused for long periods of time.
- 16) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when 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.
- 17) Never break off the ground pin. Connect only to a power supply of the type marked on the unit adjacent to the power supply cord.
- 18) If this product is to be mounted in an equipment rack, rear support should be provided.
- 19) Note for UK only: If the colours of the wires in the mains lead of this unit do not correspond with the terminals in your plug, proceed as follows:
 - o The wire that is coloured green and yellow must be connected to the terminal that is marked by the letter E, the earth symbol, coloured green or coloured green and yellow.
 - o The wire that is coloured blue must be connected to the terminal that is marked with the letter N or the colour black.
 - o The wire that is coloured brown must be connected to the terminal that is marked with the letter L or the colour red.
- 20) This electrical apparatus should not be exposed to dripping or splashing and care should be taken not to place objects containing liquids, such as vases, upon the apparatus.
- 21) Exposure to extremely high noise levels may cause a permanent hearing loss. Individuals vary considerably in susceptibility 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: According to OSHA, any exposure more than the above permissible limits could result in some hearing loss. Earplugs or protectors to the ear canals or over the ears must be worn when operating this amplification system to prevent a permanent hearing loss, if exposure is more than the limits as set forth above. To ensure against potentially dangerous exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of producing high sound pressure levels such as this amplification system be protected by hearing protectors while this unit is in operation.
- 22) If your appliance features a tilting mechanism or a kickback style cabinet, please use this design feature with caution. Due to the ease with which the amplifier can be moved between straight and tilted back positions, only use the amplifier on a level, stable surface. DO NOT operate the amplifier on a desk, table, shelf or otherwise unsuitable non-stable platform.
- 23) Symbols & nomenclature used on the product and in the product manuals, intended to alert the operator to areas where extra caution may be necessary, are as follows:

Duration Per Day in Hours	Sound Level dB _A , slow response
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4 ou inférieur	115

 CAUTION:	<p>Intended to alert the user to the presence of uninsulated 'Dangerous Voltage' within the products enclosure that may be sufficient to constitute a risk of electrical shock to persons.</p> <p>Ce symbole est utilisé pour indiquer à l'utilisateur de ce produit de tension non-isolée dangereuse pouvant être d'intensité suffisante pour constituer un risque de choc électrique.</p> <p>Este símbolo tiene el propósito de alertar al usuario de la presencia de '(voltaje) peligroso' que no tiene aislamiento dentro de la caja del producto que puede tener una magnitud suficiente como para constituir riesgo de corriente.</p> <p>Dieses Symbol soll den Anwender vor unisolierten gefährlichen Spannungen innerhalb des Gehäuses warnen, die von ausreichender Starke sind, um einen elektrischen Schlag verursachen zu können.</p>
 WARNING:	<p>Intended to alert the user of the presence of important operating and maintenance (Servicing) instructions in the literature accompanying the product.</p> <p>Destiné à alerter l'utilisateur de la présence d'instructions importantes d'exploitation et de maintenance (entretien) dans la documentation accompagnant le produit.</p> <p>Este símbolo tiene el propósito de la alertar al usuario de las presencias de instrucciones importantes sobre la operación y mantenimiento en la literatura que viene con el producto.</p> <p>Dieses Symbol soll den Benutzer auf wichtige Instruktionen in der Bedienungsanleitung aufmerksam machen, die Handhabung und Wartung des Produkts betreffen.</p>
CAUTION: ATTENTION : PRECAUCION: VORSICHT:	<p>Risk of electrical shock - DO NOT OPEN. To reduce the risk of electrical shock, do not remove the cover. No user serviceable parts inside. Refer servicing to qualified personnel.</p> <p>Risques de choc électrique - NE PAS OUVRIR. Afin de réduire le risque de choc électrique, ne pas enlever le couvercle. Il ne se trouve à l'intérieur aucune pièce pouvant être réparée par l'utilisateur. Confier l'entretien à un personnel qualifié.</p> <p>Riesgo de descarga eléctrica - NO ABRIR. Para reducir el riesgo de descarga eléctrica, no quite la cubierta. No hay piezas reparables por el usuario en el interior. Remita el servicio a personal calificado.</p> <p>Risiko - Elektrischer Schlag! Nicht offen! Um das Risiko eines elektrischen Schlag zu vermeiden, nicht die Abdeckung entfernen. Es befinden sich keine Teile darin, die vor Anwender repariert werden könnten. Reparaturen nur von qualifiziertem Fachpersonal durchführen lassen.</p>
WARNING: ADVERTISSEMENT : ADVERTENCIA: ACHTUNG:	<p>To prevent electrical shock or fire hazard, do not expose this appliance to rain or moisture. Before using this appliance, please read the operating instructions for further warnings.</p> <p>Afin de prévenir les risques de décharge électrique ou de feu, n'exposez pas cet appareil à la pluie ou à l'humidité. Avant d'utiliser cet appareil, lisez les avertissements supplémentaires situés dans le guide.</p> <p>Para evitar descargas eléctricas o peligro de incendio, no exponga este aparato a la lluvia ni a la humedad. Antes de usar este aparato, lea las instrucciones de funcionamiento para conocer más advertencias.</p> <p>Um einen elektrischen Schlag oder Feuergefahr zu vermeiden, sollte dieses Gerät nicht dem Regen oder Feuchtigkeit ausgesetzt werden. Vor Inbetriebnahme unbedingt die Bedienungsanleitung lesen.</p>
	<p>This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:</p> <ol style="list-style-type: none"> 1) This device may not cause harmful interference. 2) This device must accept any interference received, that may cause undesired operation. <p>Warning: Changes or modification to the equipment not approved by HH can void the user's authority to use the equipment.</p> <p>Note: This equipment has been tested and found to comply with the limits for Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures. Reorient or relocate the receiving antenna. Increase the separation between the equipment and receiver. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. Consult the dealer or an experienced radio/TV technician for help.</p>
	<p>This product conforms to the requirements of the following European Regulations, Directives & Rules: CE Mark (93/68/EEC), Low Voltage (2014/35/EU), EMC (2014/30/EU), RoHS (2011/65/EU), ErP (2009/125/EU)</p> <p>SIMPLIFIED EU DECLARATION OF CONFORMITY</p> <p>Full text of the EU declaration of conformity is available at the following internet address:</p> <p>http://support.hhelectronics.com/approvals</p>
	<p>The object of the declaration described above is in conformity with the relevant statutory requirement Electrical Equipment (Safety) Regulations 2016, Electromagnetic Compatibility Regulations 2016, The Restriction of the use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulation 2012, The Ecodesign for Energy-Related Products and Energy Information, (Amendment) (EU Exit) Regulations 2012</p>
	<p>In order to reduce environmental damage, at the end of its useful life, this product must not be disposed of along with normal household waste to landfill sites. It must be taken to an approved recycling centre according to the recommendations of the WEEE (Waste Electrical and Electronic Equipment) directive applicable in your country.</p>

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**IN THE INTEREST OF CONTINUED DEVELOPMENT, HH RESERVES THE RIGHT TO AMEND PRODUCT SPECIFICATION
WITHOUT PRIOR NOTIFICATION**