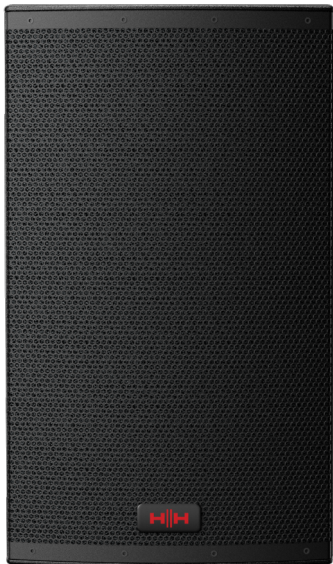
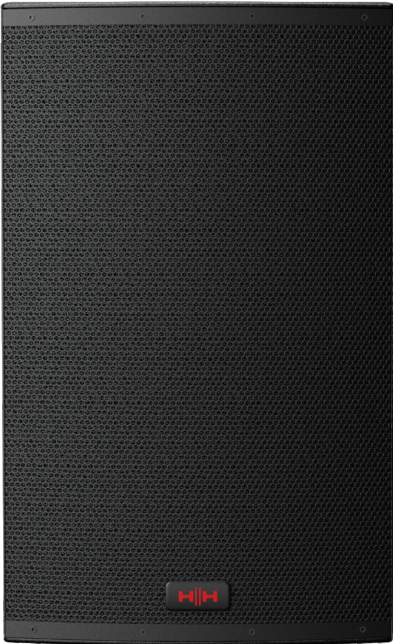


**TENSOR**

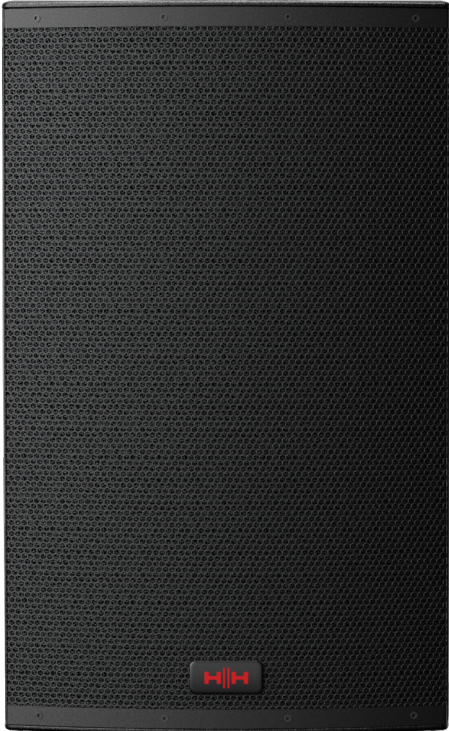
**ACTIVE LOUDSPEAKERS  
USER MANUAL**



**TRE-1001**



**TRE-1201**






















**TRE-1501**



**DESIGNED AND ENGINEERED IN THE UK  
[WWW.HHELECTRONICS.COM](http://WWW.HHELECTRONICS.COM)**

**CONTENTS / CONTENU / INHALT / CONTENIDO / CONTEÚDO / 内容 / 내용물**

1.	COVER PAGE
2.	CONTENTS
3.	SAFETY WARNINGS
4.	 GENERAL INSTRUCTIONS
5.	 INTRODUCTION/GETTING STARTED
6.	 REAR PANEL CONTROLS
7.	 REAR PANEL CONTROLS CONTINUES
8.	 DAISY CHAINED
9.	 SAMPLE SETUP
10.	 SAMPLE SETUP CONTINUES
11.	 SETUP CONFIGURATIONS
12.	 FITTING EYE BOLTS
13.	 BLOCK DIAGRAM/ FREQUENCY RESPONSE
14.	 SPECIFICATION: TRE-100I
15.	 SPECIFICATION: TRE-120I
16.	 SPECIFICATION: TRE-150I
17-20.	 TRADUCTION
21-24.	 ÜBERSETZUNG
25-28.	 TRADUCCIÓN
29-32.	 TRADUÇÃO
33-36.	 中文翻译
37-40.	 한국어 번역





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.

Ce symbole est utilise pur indiquer a l'utilisateur de ce produit de tension non-isolee dangereuse pouvant etre d'intensite suffisante pour constituer un risque de choc electrique.

Este simbolo tiene el proposito 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 corrientazo.

Dieses Symbol soll den Anwender vor unisolierten gefahrlichen Spannungen innerhalb des Gehauses warnen, die von Ausreichender Starke sind, um einen elektrischen Schlag verursachen zu konnen.



Intended to alert the user of the presence of important operating and maintenance (Servicing) instructions in the literature accompanying the product.

Dieses Symbol soll den Anwender vor unisolierten gefahrlichen Spannungen innerhalb des Gehauses warnen, die von Ausreichender Starke sind, um einen elektrischen Schlag verursachen zu konnen.

Este simbolo tiene el proposito de la alertar al usuario de la presencis de instrucccones importantes sobre la operacion y mantenimiento en la literatura que viene conel producto.

Dieses Symbol soll den Benutzer auf wichtige Instruktionen in der Bedienungsanleitung aufmerksam machen, die Handhabung und Wartung des Produkts betreffen.

**CAUTION:**

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.

**ATTENTION:**

Risques de choc electrique - NE PAS OUVIRIR

Afin de reduire le risque de choc electrique, ne pas enlever le couvercle. Il ne se trouve a l'interieur aucune piece pouvant etre reparee par l'utilisateur. Confier l'entretien a un personnel qualifie.

**PRECAUCION:**

Riesgo de corrientazo - no abra

Para disminuir el risego de carrientazo, no abra la cubierta. No hay piezas adentro que el pueda reparar. Deje todo mantenimiento a los tecnicos calificadod.

**VORSICHT:**

Risiko - Elektrischer Schlag! Nicht offen!

Um das Risiko eines elektrischen Schlages zu vermeiden, nicht die Abdeckung entfernen. Es befinden sich keine Teile darin, die vom Anwender repariert werden Konnten. Reparaturen nur von qualifiziertem Fachpersonal durchfuhren lassen.

**WARNING:**

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.

**ADVERTISSEMENT:**

Afin de prevenir les risques de decharge electrique ou de feu, n'exposez pas cet appareil a la pluie ou a l'humidite. Avant d'utiliser cet appareil, lisez les advertissements supplementaires situes dans le guide.

**ADVERTENCIA:**

Para evitar corrientazos o peligro de incendio, no deja expuesto a la lluvia o humedad este aparato Antes de usar este aparato, lea mas advertcias en la guia de operacion.

**ACHTUNG:**

Um einen elektrischen Schalg oder Feuergefahr zu vermeiden, sollte dieses Gerat nicht dem Regen oder Feuchtigkeit ausgesetzt werden. Vor Inbetriebnahme unbedingt die Bedienungsanleitung lesen.

**EARTH or  
GROUND  
GREEN/YELLOW**  
**NEUTRAL - BLUE**  
**LIVE - BROWN**



After unpacking your amplifier check that it is factory fitted with a three pin 'grounded' (or earthed) plug. Before plugging into the power supply ensure you are connecting to a grounded earth outlet.

If you should wish to change the factory fitted plug yourself, ensure that the wiring convention applicable to the country where the amplifier is to be used is strictly conformed to. As an example in the United Kingdom the cable colour code for connections are shown opposite.



**GENERAL INSTRUCTIONS**

In order 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:** In order to avoid damage, 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, tape decks, cd players, 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 bass amplifier LAST and making sure its level control is set to a minimum, any transients from other equipment should not reach your loud speakers. 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 bass 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.

**4) Servicing:** The user should not attempt to service these products. Refer all servicing to qualified service personnel.

**FCC COMPLIANCY STATEMENT**



This device complies with Part 15 of the FCC rules Operation is subject to the following two conditions:

- 1) This device may not cause harmful interference
- 2) This device must accept any interference received, that may cause undesired operation.

Warning: Changes or modification to the equipment not approved by HH Electronics Ltd. can void the user's authority to use the equipment.

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.

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).



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.

<http://support.hhelectronics.com/approvals>

1. Read these instructions.
2. Keep these instructions safe.
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 of the ventilation openings. Install in accordance with manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.
9. 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.
10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point they exit from the apparatus.
11. Only use attachments/accessories provided by the manufacturer.
12. 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.
13. 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.
14. 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.
15. 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.
16. If this product is to be mounted in an equipment rack, rear support should be provided.
17. 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:
  - a) 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.
  - b) The wire that is coloured blue must be connected to the terminal that is marked with the letter N or the colour black.
  - c) The wire that is coloured brown must be connected to the terminal that is marked with the letter L or the colour red.
18. 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.
19. 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 in excess of 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 in order to prevent a permanent hearing loss, if exposure is in excess of 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.
20. 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:
 

Intended to alert the user to the presence of high 'Dangerous Voltage' within the products enclosure that may be sufficient to constitute a risk of electrical shock to persons.

Intended to alert the user of the presence of important operating and maintenance (Servicing) instructions in the literature accompanying the product.

Duration Per Day in Hours	Sound Level (dBA, 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

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.

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.



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.



## INTRODUCTION

The HH Tensor Series Engineered in the UK to deliver power, performance and reliability.

The Class-D Bi-Amplifier delivers impressive output performance in an ultra-lightweight enclosure.

On-board DSP provides audio enhancements depending on audio source and includes overload protection. Four acoustically tuned audio modes are provided for flexibility for use in a multitude of situations.

Whether that's for a DJ, live band, monitoring or announcements, the Tensor has it covered with the press of a button.

High-quality integrated two channel mixer gives multiple options for input sources. Each input has HH designed low-noise preamps with combo XLR/TRS connectors for both Line Level and microphone gain levels.

All this contained in a multi-angle enclosure that includes three moulded carry handles, pole mount socket and four M8 suspension points.

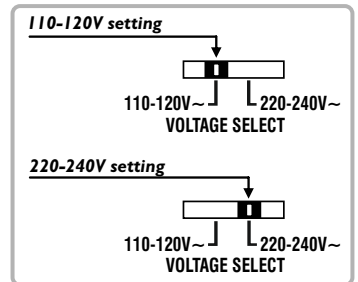
The HH Tensor – delivering performance and reliability.

## GETTING STARTED

This manual contains important information regarding correct and safe operation of your Tensor system. Please read it thoroughly in order to get the best performance and reliability from your HH product.

### VOLTAGE SELECT SWITCH

Although every effort has been made to select the correct voltage for the region of use, please check before powering up for the first time. **Damage could occur if the voltage is incorrectly set.** If necessary, use a suitable tool to slide the Voltage Selector Switch to the required setting.



### POWER CYCLE

Many products have large transient surges at turn on and off which can cause damage to your speakers. Following the sequence below for power-up and the reverse for power down will prevent this from occurring.

<p><b>1</b></p> <p><b>POWER SWITCH - OFF</b></p>	<p><b>2</b></p> <p><b>CONNECT POWER</b></p>	<p><b>3</b></p> <p><b>SET VOLUME TO MINIMUM</b></p>
<p><b>4</b></p> <p><b>CONNECT INPUT SIGNAL</b></p>	<p><b>5</b></p> <p><b>POWER SWITCH - ON</b></p>	<p><b>6</b></p> <p><b>SET VOLUME AS REQUIRED</b></p>



**REAR PANEL CONTROL PANEL - THIS IS THE SAME FOR ALL MODELS.**

**1 & 2. INPUTS:** A Combi Input allows for the use of both XLR and 1/4" Jacks and accepts balanced and unbalanced signals.

*Note:* a stereo signal on TRS lead cannot be connected directly, and must be split to two mono connectors.

**GAIN:** Use to set the channel level.

*Note:* Set the Gain control to minimum before connecting an audio signal.

Once the system is powered up, we recommend that the Gain set to midway is a good starting point.

**3. MASTER VOLUME:** Controls the overall level of your Tensor system.

*Note:* Set this control to minimum when switching the unit ON or Off.

**LIMIT:** The Tensor cabinets are equipped with an onboard limiter to prevent overload to the power amplifiers and loudspeakers. The Limit led will illuminate when the Limiter is active. Occasional blinking of the Limit led is ok, but continuous illumination could result in damage to the system and Main Volume should be reduced.

**4. MIX OUT:** A signal feed which can be used to connect a second Tensor cab (daisy chained - see page 8), active wedge monitor, house PA or recording console for example. The MIX OUT signal level is not affected by the VOLUME CONTROL.

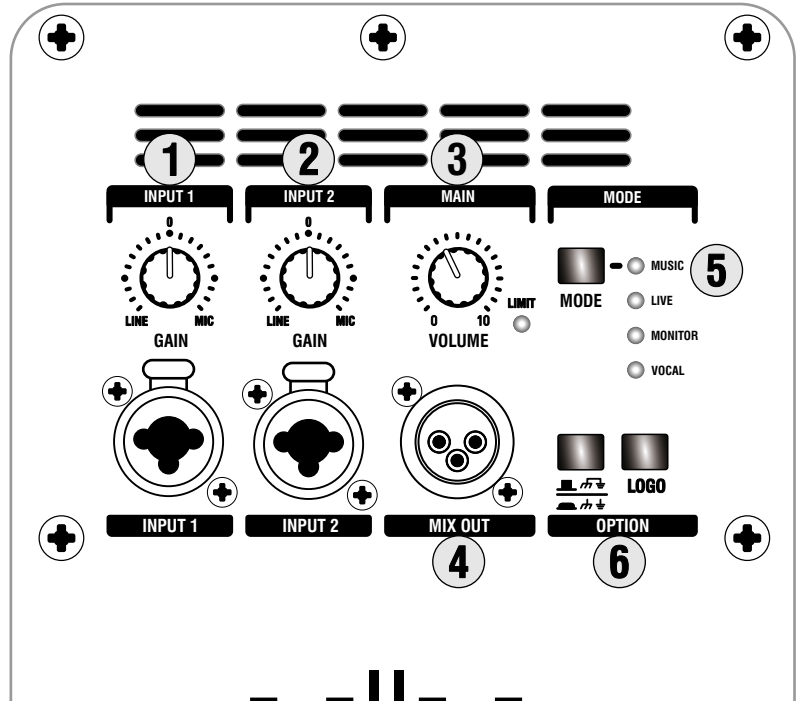
**5. EQUALISATION:** Four presets are included to optimise the response of the cabinet to suit your needs. Cycle through them using the Mode button.

- MUSIC:** A bass lift with a flat mid to high response.
- LIVE:** Similar to the 'MUSIC' response with the LF lift frequency shifted.
- MONITOR:** A LF and HF roll-off with a with a slight mid band cut for clarity.
- VOCAL:** A bass roll-off with flat mid and upper frequencies.

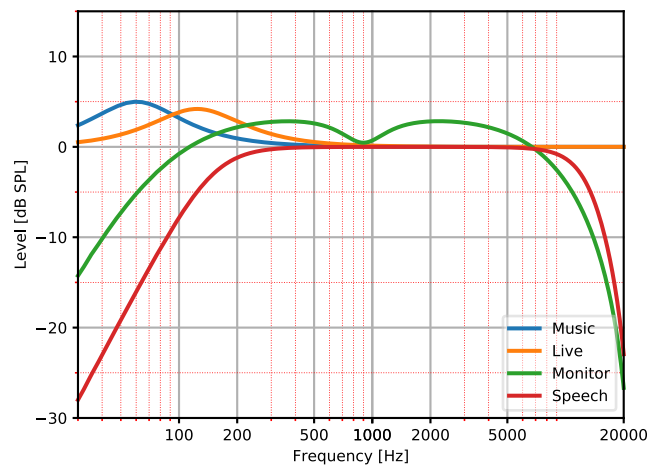
The EQ setting is stored and recalled following a power cycle. Please note the unit is shipped with the EQ mode set to "MUSIC."

**6. OPTION:** A Ground lift has been provided to reduce the potential problem of earth loops when connecting to other equipment. This control is to be used in conjunction with the MIX OUT.

The Cabinets front logo illumination can be turned ON/Off with the Logo control.



DESIGNED AND ENGINEERED IN THE UK  
WWW.HHELECTRONICS.COM



**REAR PANEL CONTINUED**

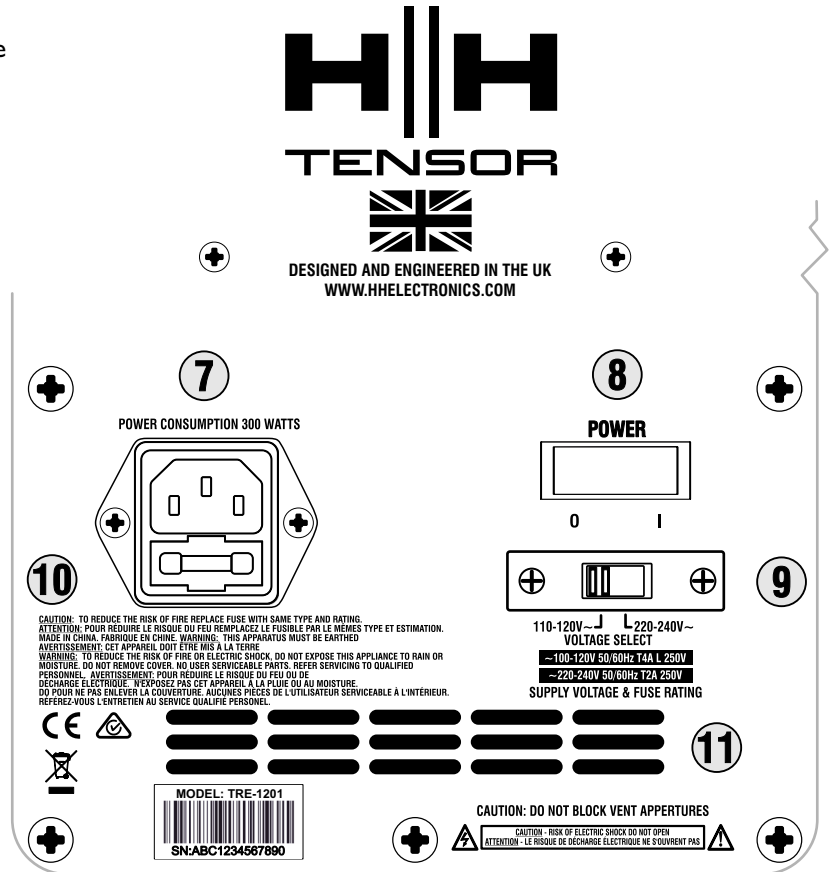
**7. MAINS INLET SOCKET AND FUSE:** IEC input for connection of an appropriate mains lead. Only replace the fuse with the type indicated on the rear panel.

**8. MAINS SWITCH:** Turns the system on and off. Ensure the Volume control is set to minimum when switching on and off.

**9. VOLTAGE SELECT SWITCH:** Although every effort has been made to select the correct voltage for the region of use. Please check the voltage setting is correct before powering up for the first time. **Damage could occur if the voltage is incorrectly set.**

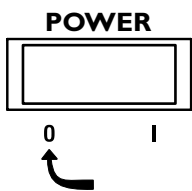
**10. INFORMATION:** Area relating to the amplifier: Serial Number, operational information, power rating, etc.

**11. AIR VENTS:** These are critical for the longevity and reliability of the amplifier - **DO NOT BLOCK**. The same applies to the vents at the top of the control panel.

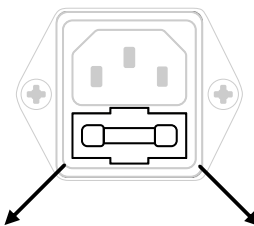


**FUSE REPLACEMENT**

**SWITCH OFF AND DISCONNECT THE POWER CORD BEFORE PROCEEDING!**



**FUSE REPLACEMENT**



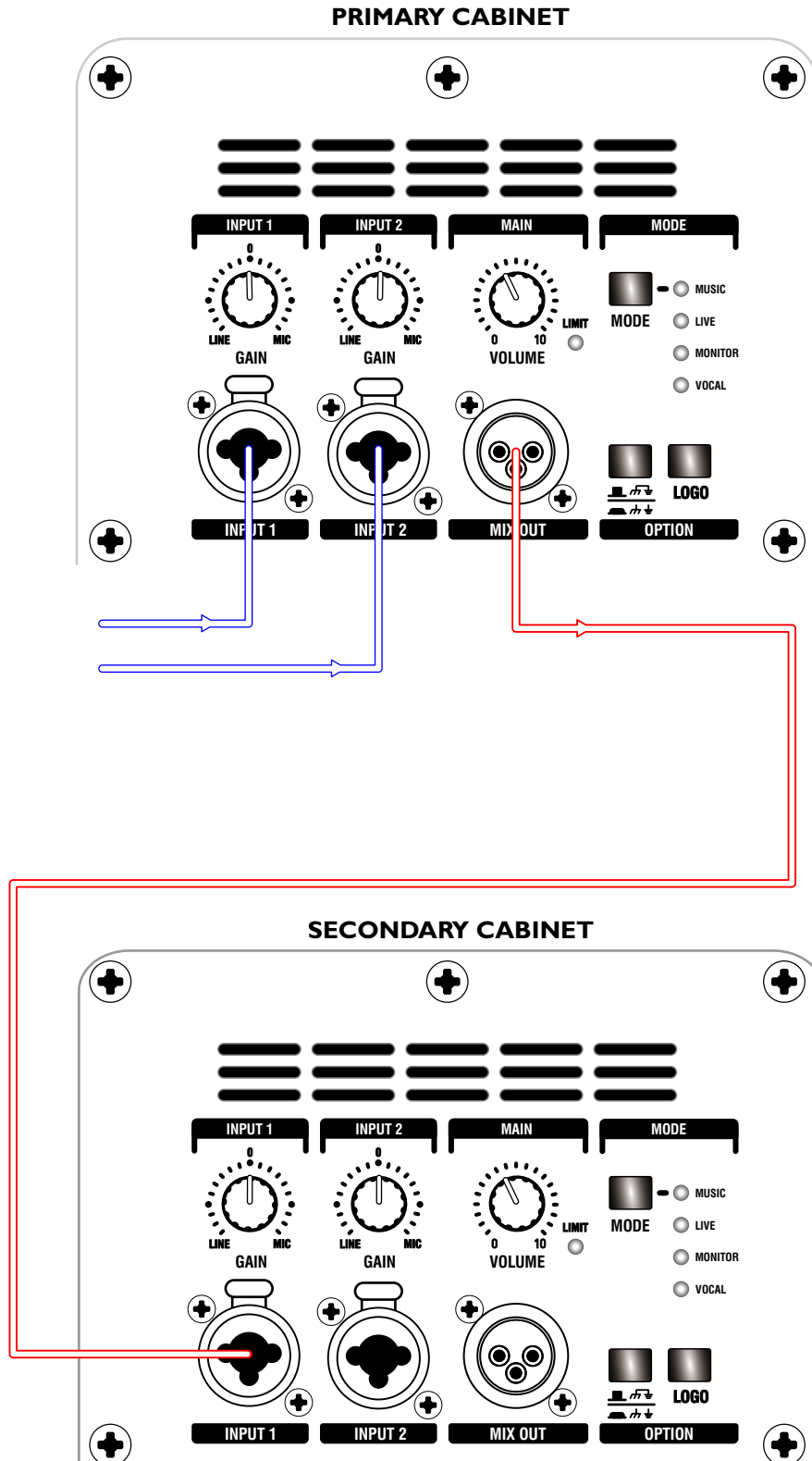
1. Slide out the fuse holder tray.
2. Only replace fuse with the same type and power rating as specified on the rear panel.

~100-120V 50/60Hz T6.3A L 250V  
~220-240V 50/60Hz T3.15A 250V  
SUPPLY VOLTAGE & FUSE RATING



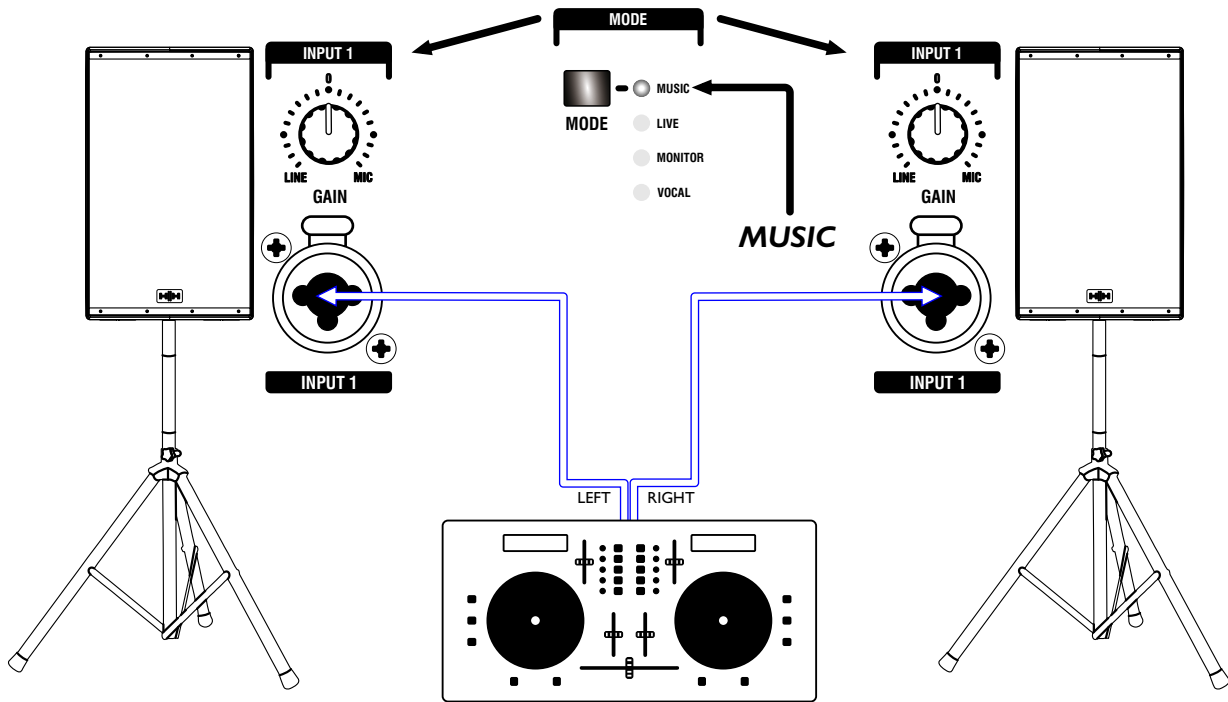
**EXAMPLE 1 - Daisy chained**

If additional cabinets are required in the signal chain, simply connect the Mix Out of the primary cabinet to the Input of the Secondary cabinet.

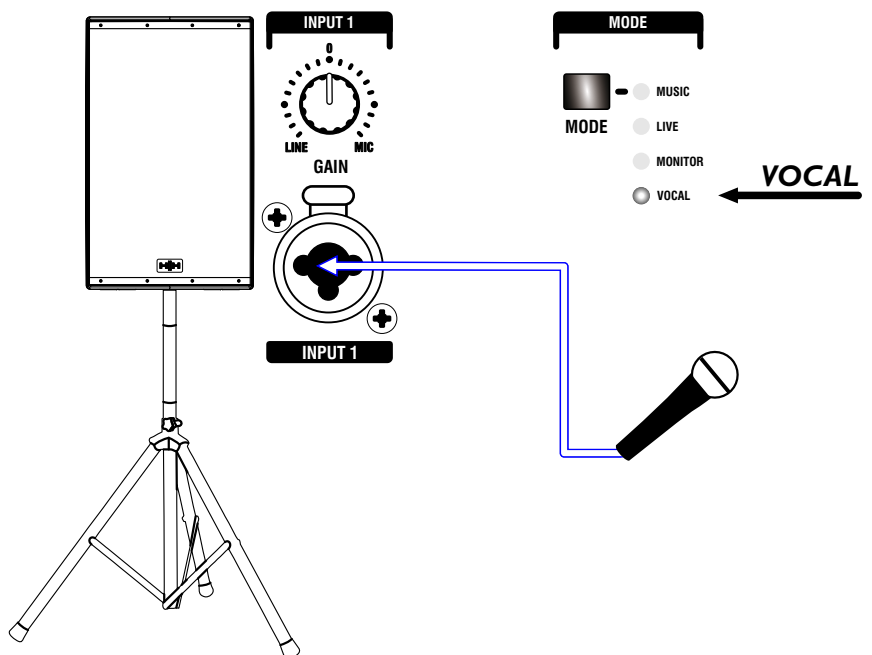




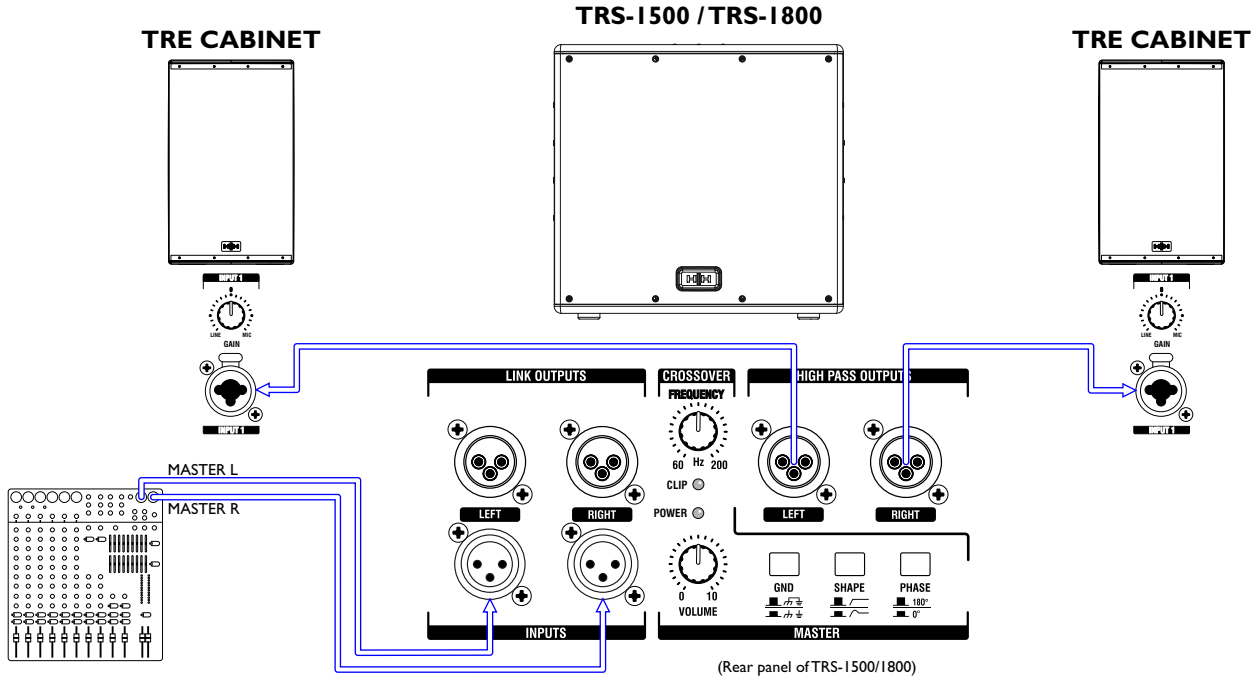
**EXAMPLE 2 - A DJ setup:**



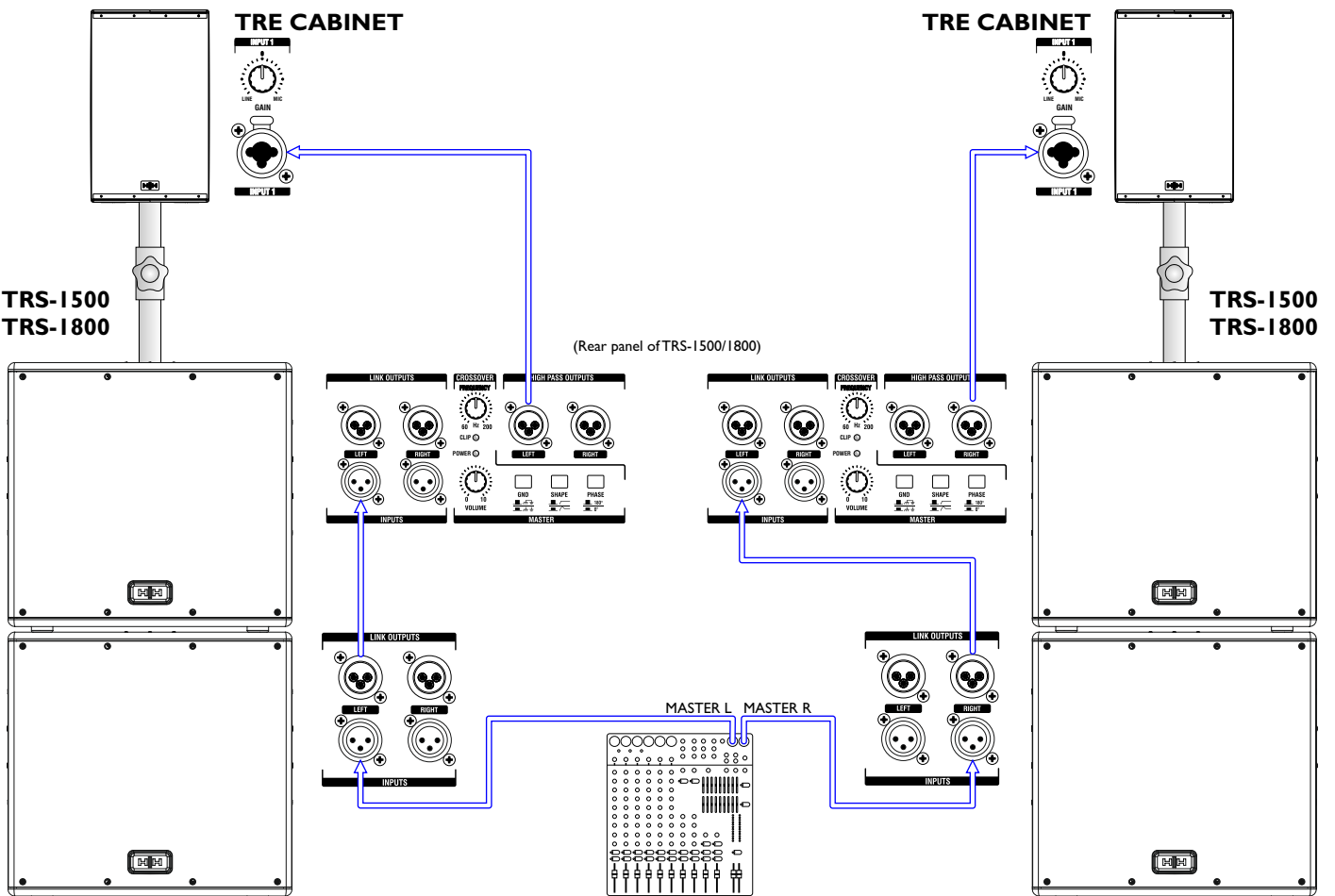
**EXAMPLE 3 - A mono microphone setup:**



**EXAMPLE 4 - Stereo setup with mono bass:**



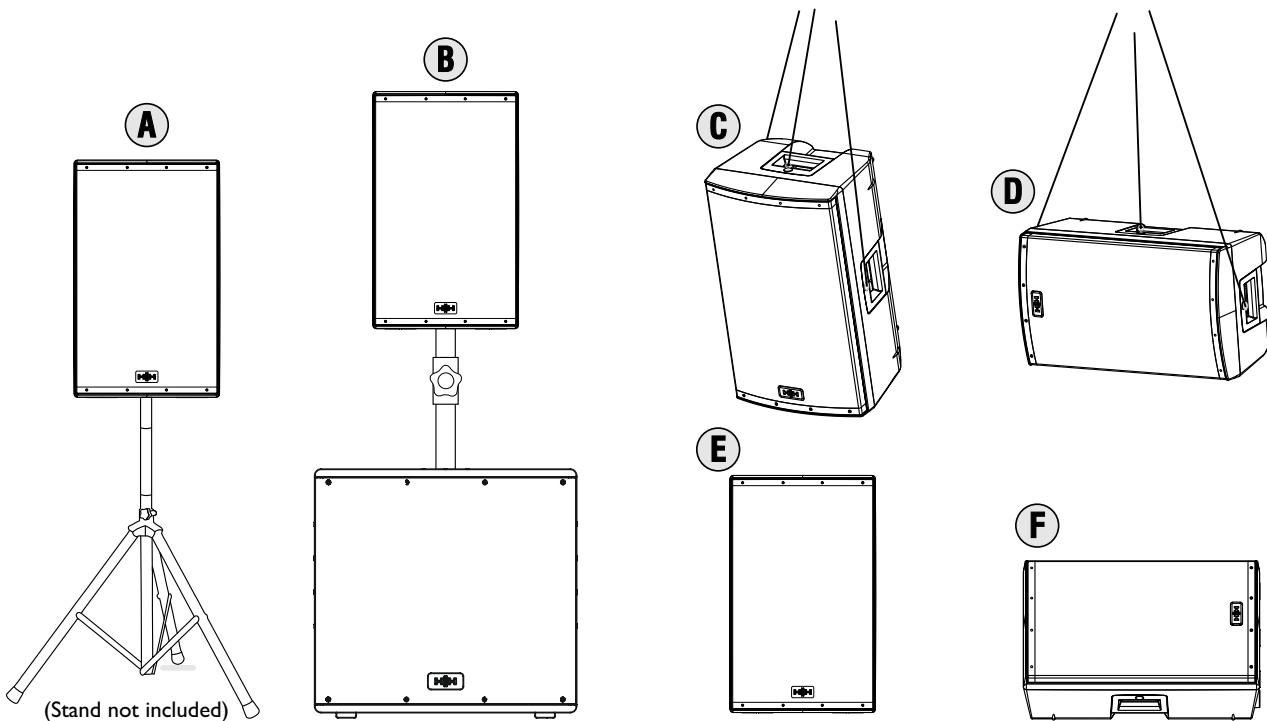
**EXAMPLE 5 - Full stereo setup:**



## CONFIGURATIONS

The intuitive design of the Tensor cabinets provide user flexibility and a product that will serve in many situations:

- A:** Tripod/pole mounting - via the 35mm pole socket.
- B:** Pole on sub.
- C:** Flown vertically.
- D:** Flown horizontally.
- E:** Freestanding - on the ground.
- F:** Monitor mode - the cabinets shape allows for horizontal/angled position on stage.



## IMPORTANT

**POLE MOUNT:** Don't over-extend poles/tripods; ensure at least 4 x the pole diameter is still inside the outer pole. Make sure the legs have a good splay on tripods, but do not obstruct doorways or other access-ways. Make sure that the thumb screw on the cabinet is tight.

## SUSPENDED

**WARNING:** The suspension or 'flying' of cabinets should be performed only by properly qualified persons, in compliance with all local laws.

The position of installation is also bound by laws and regulations so must be taken into account in the initial planning stages.

Hardware used must be fully approved for its intended use and be rated to support weights greater than that of the cabinet.

All installation equipment used is subject to regular safety checks which must be strictly adhered to.

If any of the hardware shows any signs of wear or damage, it should be replaced immediately.

Failure to do so could result in serious injury or death!



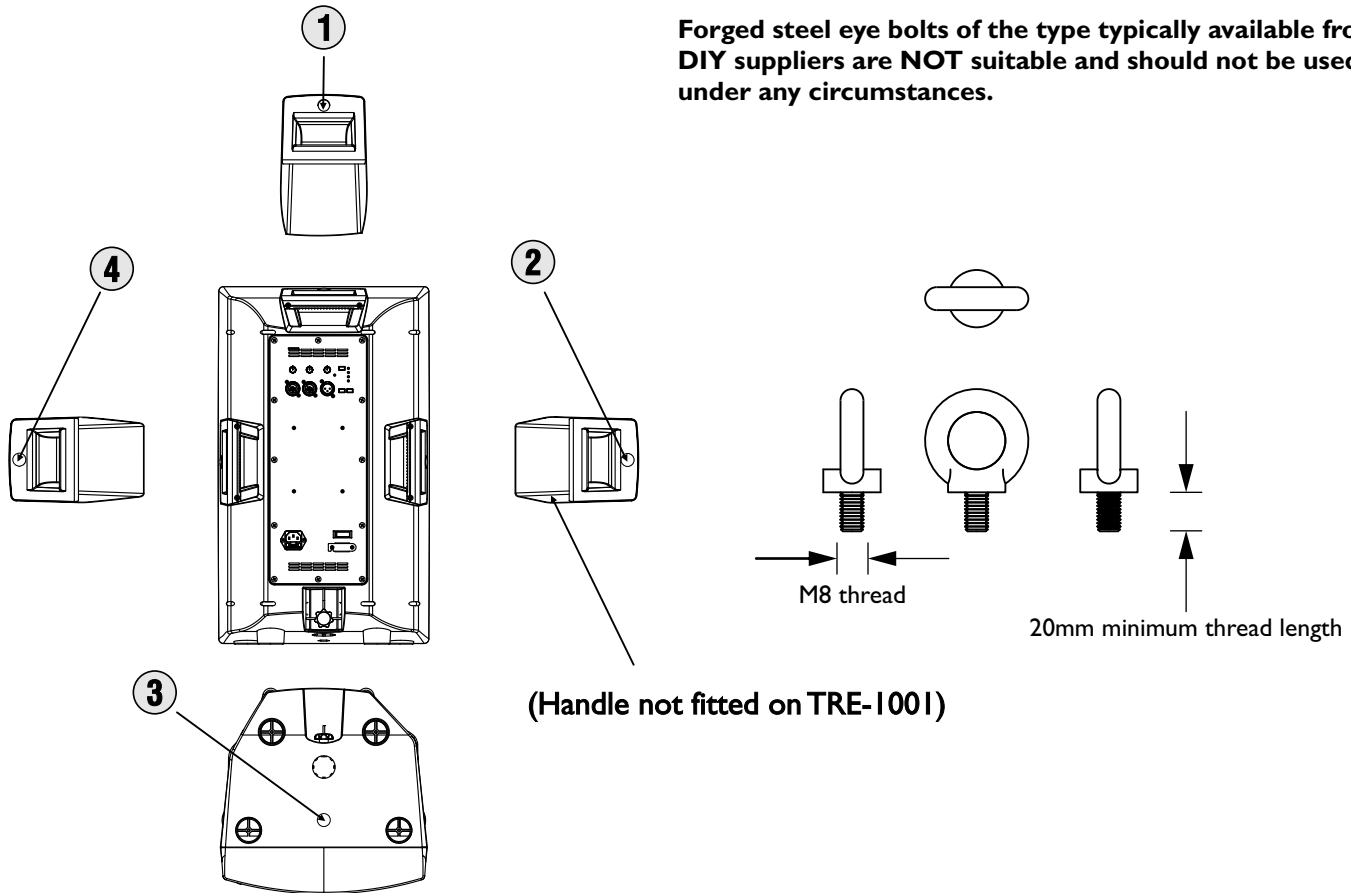
**FITTING EYE BOLTS**

**A:** To fit the eye bolts, first locate and remove the four rubber protection caps (positions shown below).

**B:** Replace with a suitable eye bolt. Ensure thread is fully engaged into the insert.

Note that eye bolts for flying systems must be cast, shouldered fittings rated for the purpose.

**Forged steel eye bolts of the type typically available from DIY suppliers are NOT suitable and should not be used under any circumstances.**

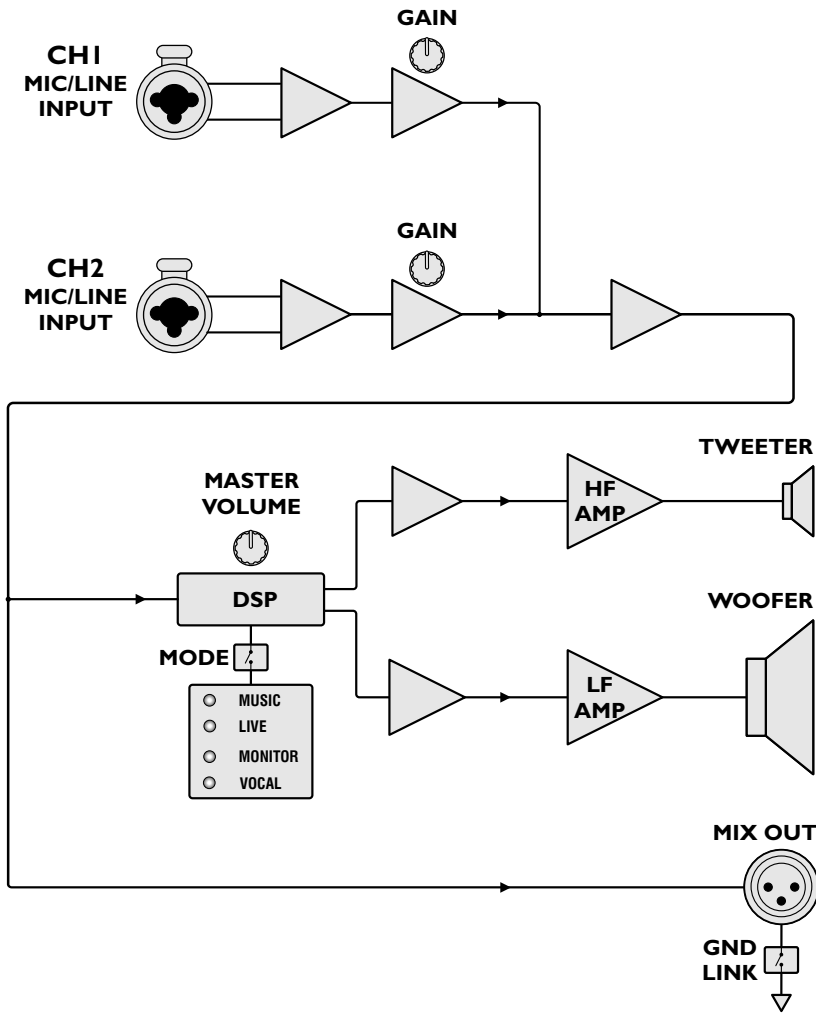


**QUICK TIPS**

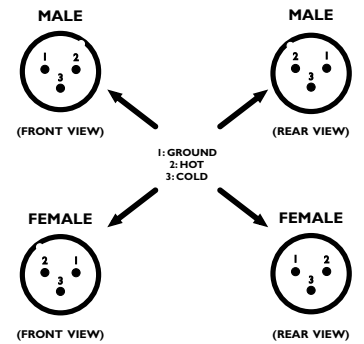
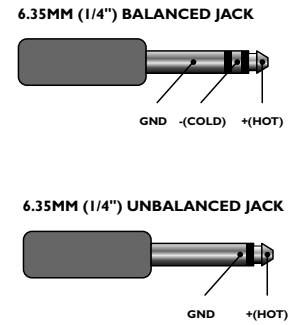
- Use electronic safety devices such as circuit breakers.
- Master volume should be at zero for switch on and off.
- Use input gain to set maximum signal level without distortion.
- Set up microphone levels first, and adjust other equipment to match.
- Avoid very high onstage levels from back-line amps.
- Avoid damp environments and extremes of temperature for storage and use of all audio equipment.
- Look after your cables. Do not stand equipment on, or run cases over them, do not tie knots in them and always use them for the correct application (a signal lead is NOT a speaker lead). Coil and secure with cable ties before storing.
- Ensure your equipment is properly loaded and cannot move around during transit.
- Keep lights away from speakers; heat can cause fires/speaker damage.
- Don't run cables across access-ways; if you have to, run them above doors or use approved cable covers.
- Be aware of total power usage. Overloading a mains socket is potentially dangerous, and likely to cause a power out during use.
- Keep power and signal cables apart.



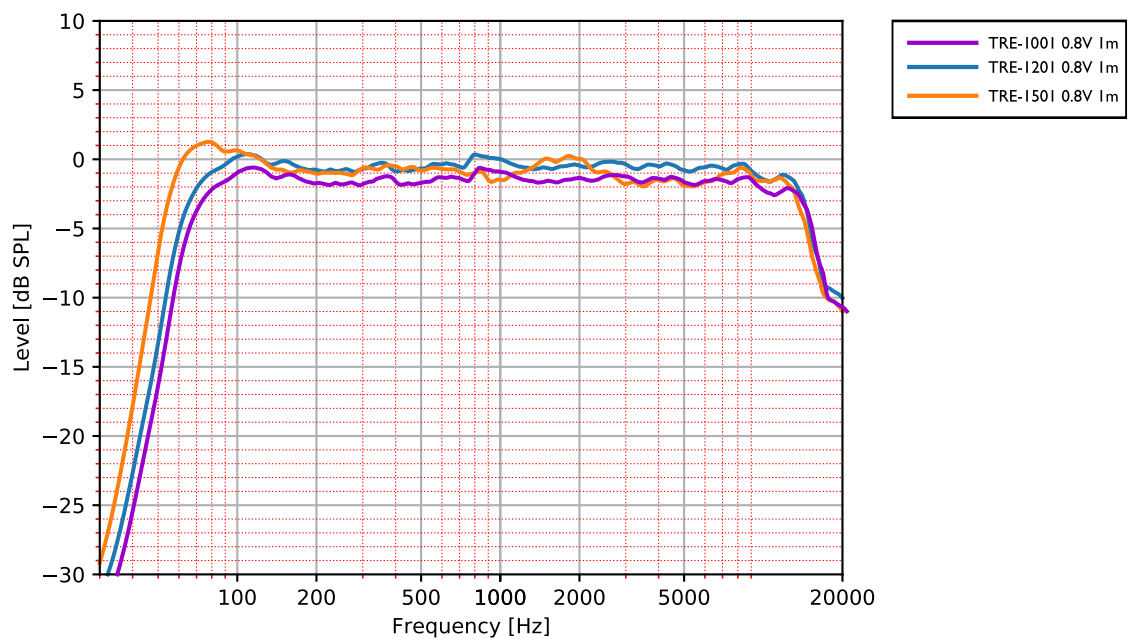
**BLOCK DIAGRAM**



**I/O CONNECTOR WIRING**



**FREQUENCY RESPONSE**



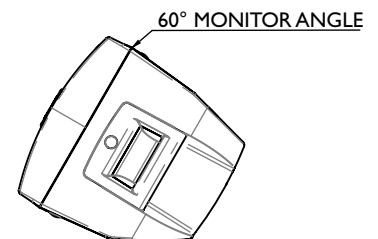
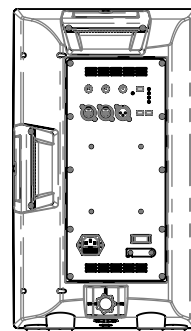
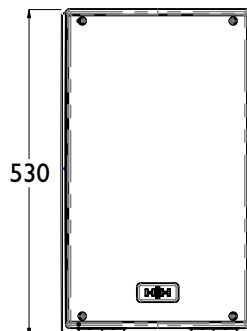
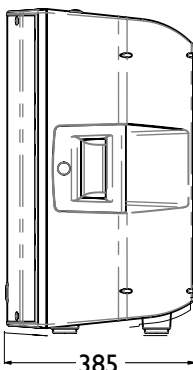
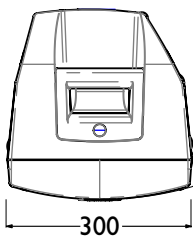
**SPECIFICATION: TRE-100I**

System type	2 way active 10" loudspeaker, Bass reflex
Power Rating	1400W Peak, 700W Continuous
Frequency response	48Hz-20KHz
Max SPL (1M) (Peak)	129 dB SPL
<b>Speaker</b>	
LF Driver	10" HH designed professional low mid driver featuring imported glass reinforced cone
HF Driver	1" Compression Driver
Coverage	90°H X 60°V
Crossover Frequency	2.5KHz
<b>Features</b>	
Input Connectors	2x Balanced Combi XLR/1/4" Jack connectors
Output Connectors	1x Balanced XLR Mix Output
Indicators	Power, Clip Indicator, EQ Mode, Front illuminated logo
EQ	User selectable performance presets for Music, Live, Monitor, Vocal
DSP	Crossover, EQ, Dual Band Limiters, Phase and Time Optimisation
Protection	Comprehensive protection and clip free limiting + clip indicator
Controls	2x channel gain, Master Volume, logo on/off, Ground Lift, EQ Mode
AC Power	User Switchable 100-120V~ or 220-240V~ 50/60HZ
AC Power Consumption	300W Typical
<b>Enclosure</b>	
Cabinet	Robust polypropylene cabinet with two handles and monitor angle
Finish	Black
Grille	Heavy Gauge powder-coated steel, Black with acoustic foam backing
Other	35mm Distance Pole Socket
Flying points	4 x M8 Mounting Points
Unit dimensions (HWD)	530 x 300 x 310 mm 20.9" x 11.8" x 12.2"
Unit weight	11.6Kg, 25.6 lbs
Carton dimensions (HWD)	61.5 x 390 x 385 mm 2.4" x 15.4" x 15.2" (Shipping Volume 0.01 M3)
Packed weight	13.6Kg, 30 lbs
EAN13 Code	5060109457551

In the interest of continued development, HH Electronics reserves the right to amend product specification without prior notification.

For polar plots, EASE modelling files, 2D and 3D drawings files, please check [www.hhelectronics.com](http://www.hhelectronics.com)

- 1 Measured in Full space (4π) conditions
- 2 Calculated maximum SPL based on rated power handling
- 3 AES standard, pink noise with 6 dB crest factor, free air.



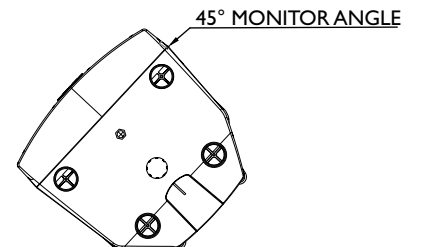
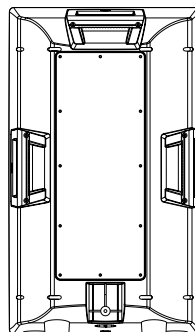
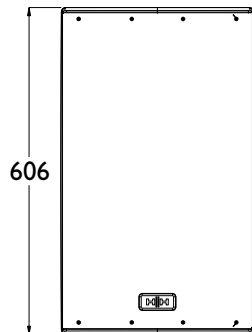
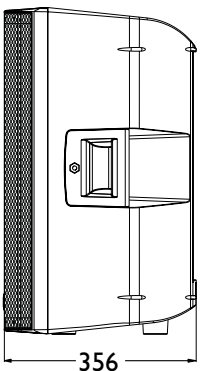
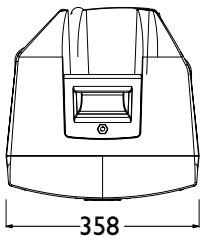
**SPECIFICATION: TRE-1201**

System type	2 way active 12" loudspeaker, Bass reflex
Power Rating	1400W Peak, 700W Continuous
Frequency response	45Hz-20KHz
Max SPL (1M) (Peak)	130 dB SPL
<b>Speaker</b>	
LF Driver	12" HH designed professional low mid driver featuring imported glass reinforced cone
HF Driver	1" Compression Driver
Coverage	90°H X 60°V
Crossover Frequency	2.5KHz
<b>Features</b>	
Input Connectors	2x Balanced Combi XLR/1/4" Jack connectors
Output Connectors	1x Balanced XLR Mix Output
Indicators	Power, Clip Indicator, EQ Mode, Front illuminated logo
EQ	User selectable performance presets for Music, Live, Monitor, Vocal
DSP	Crossover, EQ, Dual Band Limiters, Phase and Time Optimisation
Protection	Comprehensive protection and clip free limiting + clip indicator
Controls	2x channel gain, Master Volume, logo on/off, Ground Lift, EQ Mode
AC Power	User Switcheable 100-120 or 220-240V~ 50/60HZ
AC Power Consumption	300W Typical
<b>Enclosure</b>	
Cabinet	Robust polypropylene cabinet with three handles and monitor angle
Finish	Black
Grille	Heavy Gauge powder-coated steel, Black with acoustic foam backing
Other	35mm Distance Pole Socket
Flying points	4 x M8 Mounting Points
Unit dimensions (HWD)	610 x 357 x 356 mm 24" x 14.1" x 14"
Unit weight	14.4Kg, 31.7 lbs
Carton dimensions (HWD)	685 x 440 x 440 mm 27" x 17.3" x 17.3"
Packed weight	16.8Kg, 37 lbs
<b>Accessories</b>	
	SC-TRE12 - Transport cover for TRE-1201

In the interest of continued development, HH Electronics reserves the right to amend product specification without prior notification.

For polar plots, EASE modelling files, 2D and 3D drawings files, please check [www.hhelectronics.com](http://www.hhelectronics.com)

- 1 Measured in Full space (4π) conditions
- 2 Calculated maximum SPL based on rated power handling
- 3 AES standard, pink noise with 6 dB crest factor, free air.



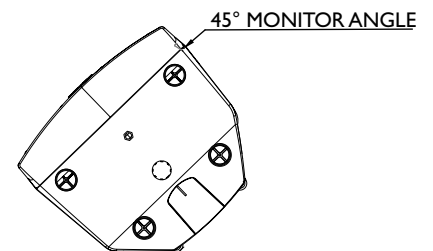
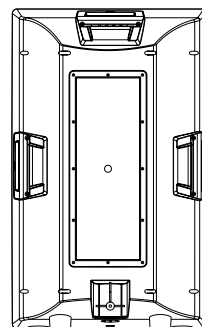
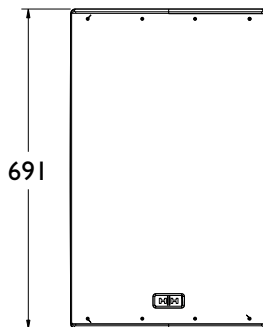
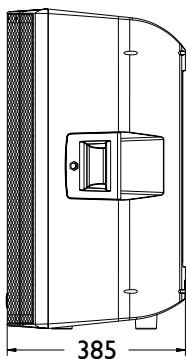
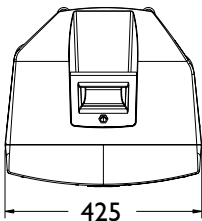
**SPECIFICATION: TRE-1501**

System type	2 way active 15" loudspeaker, Bass reflex
Power Rating	1400W Peak, 700W Continuous
Frequency response	41Hz-20kHz
Max SPL (1M) (Peak)	131 dB SPL
<b>Speaker</b>	
LF Driver	15" HH designed professional low mid driver featuring imported glass reinforced cone
HF Driver	1" Compression Driver
Coverage	90°H X 60°V
Crossover Frequency	2.5kHz
<b>Features</b>	
Input Connectors	2x Balanced Combi XLR/1/4" Jack connectors
Output Connectors	1x Balanced XLR Mix Output
Indicators	Power, Clip Indicator, EQ Mode, Front illuminated logo
EQ	User selectable performance presets for Music, Live, Monitor, Vocal
DSP	Crossover, EQ, Dual Band Limiters, Phase and Time Optimisation
Protection	Comprehensive protection and clip free limiting + clip indicator
Controls	2x channel gain, Master Volume, logo on/off, Ground Lift, EQ Mode
AC Power	User Switcheable 100-120 or 220-240V~ 50/60HZ
AC Power Consumption	300W Typical
<b>Enclosure</b>	
Cabinet	Robust polypropylene cabinet with three handles and monitor angle
Finish	Black
Grille	Heavy Gauge powder-coated steel, Black with acoustic foam backing
Other	35mm Distance Pole Socket
Flying points	4 x M8 Mounting Points
Unit dimensions (HWD)	694 x 420 x 385 mm 27.3" x 16.5" x 15.2"
Unit weight	18Kg, 39.7 lbs
Carton dimensions (HWD)	775 x 500 x 465 mm 30.5" x 19.7" x 18.3"
Packed weight	21.4Kg, 47.2 lbs
<b>Accessories</b>	
	SC-TRE15 - Transport cover for TRE-1501

In the interest of continued development, HH Electronics reserves the right to amend product specification without prior notification.

For polar plots, EASE modelling files, 2D and 3D drawings files, please check [www.hhelectronics.com](http://www.hhelectronics.com)

- 1 Measured in Full space (4π) conditions
- 2 Calculated maximum SPL based on rated power handling
- 3 AES standard, pink noise with 6 dB crest factor, free air.





**CONSIGNES DE SÉCURITÉ IMPORTANTES**

ATTENTION: L'utilisation de tout appareil électrique doit être soumise aux précautions d'usage incluant:

1. Lisez ces instructions
2. Gardez ce manuel pour de futures références.
3. Prêtez attention aux messages de précautions de ce manuel.
4. Suivez ces instructions.
5. N'utilisez pas cet appareil à proximité de plans d'eau.
6. N'utilisez qu'un tissu sec pour le nettoyage de votre appareil.
7. N'obstruez pas les systèmes de refroidissement de votre appareil et installez votre appareil en fonction des instructions de ce manuel.
8. Ne positionnez pas votre appareil à proximité de toute source de chaleur.
9. Un appareil avec la construction de la classe I sera relié à une prise munie d'une liaison à la terre. Branchez toujours votre appareil sur une alimentation munie de prise de terre utilisant le cordon d'alimentation fourni.
10. Protégez les connecteurs de votre appareil et positionnez les câblages pour éviter toutes déconnexions accidentelles.
11. N'utilisez que des fixations approuvées par le fabricant.
12. Lors de l'utilisation sur pied ou perche de support, assurez dans le cas de déplacement de l'ensemble enceinte/support de prévenir tout basculement intempestif de celui-ci.
13. La fiche secteur est utilisée pour couper l'alimentation de l'appareil et doit rester facilement accessible. Débranchez cet appareil pendant les orages ou s'il est inutilisé pendant de longues périodes.
14. Seul un technicien agréé par le fabricant est à même de réparer/contrôler votre appareil. Celui-ci doit être contrôlé s'il a subi des dommages de manipulation, d'utilisation ou de stockage (humidité, ...).
15. Ne déconnectez jamais la prise de terre de votre appareil.
16. Si votre appareil est destiné à être monté en rack, des supports arrière doivent être utilisés.
17. Note pour le Royaume-Uni : Si les couleurs des fils du câble d'alimentation ne correspondent pas aux fiches de la prise secteur, procédez comme suit:

- a) Le fil vert et jaune doit être branché sur la borne repérée par la lettre E, ou le symbole de terre, ou par les couleurs vert ou verte et jaune.
- b) Le fil bleu doit être branché sur la borne repérée par la lettre N, ou par la couleur noire.
- c) Le fil marron doit être branché sur la borne repérée par la lettre L, ou par la couleur rouge.

18. Cet équipement électrique ne doit en aucun cas être en contact avec un quelconque liquide et aucun objet contenant un liquide, tels qu'un vase ou autre récipient.
19. Une exposition à de hauts niveaux sonores peut entraîner des dommages irréversibles de l'audition. La sensibilité au bruit varie considérablement d'un individu à l'autre, mais la majorité de la population ressentira une perte d'audition après une exposition à une forte puissance sonore pendant une durée prolongée.

L'organisme de la santé américaine (OSHA) a produit le guide ci-dessous en rapport à l'exposition autorisée aux niveaux de bruit:

Durée par Jour (heures)	Niveau sonore moyen (dBA)
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4 ou inférieur	115

D'après les études menées par l'OSHA, toute exposition au delà des limites décrites ci-dessous entraînera des pertes de audition chez la plupart des sujets. Le port de système de protection (casque, oreillette de filtrage, etc...) doit être observé lors de l'utilisation de cet appareil sans quoi des dommages irréversibles peuvent être occasionnés. Le port de ces systèmes doit être observé par toutes personnes susceptibles d'être exposées à des conditions au delà des limites décrites ci-dessous.

20. Symboles utilisés sur les produits et dans les manuels des produits, destinés à alerter l'opérateur des zones ou des précautions supplémentaires pouvant être nécessaires:



Ce symbole est utilisé pour prévenir l'utilisateur de la présence d'une tension non isolée dangereuse à l'intérieur du boîtier de l'appareil, et pouvant être suffisante pour constituer un risque de choc électrique.

Ce symbole est utilisé pour prévenir l'utilisateur de la présence d'instructions d'utilisation et de maintenance dans le mode d'emploi accompagnant l'appareil.

Risque de choc électrique – NE PAS OUVRIR Afin de réduire les risque de choc électrique, ne pas ouvrir le capot. Il n'y a aucune pièce à l'intérieur pouvant être réparée par l'utilisateur. Veuillez confier la maintenance à un personnel qualifié.

Afin de prévenir tout risque de choc électrique et d'incendie, n'exposez pas cet appareil à la pluie ou à l'humidité. Avant d'utiliser cet appareil, lisez attentivement les instructions d'utilisation de ce mode d'emploi.

Si votre appareil est équipé d'un mécanisme de basculement ou si son boîtier est conçu comme retour, veuillez utiliser cette caractéristique avec prudence. En raison de la facilité avec laquelle l'amplificateur peut être basculé entre les positions droite et inclinée, utilisez uniquement l'amplificateur sur une surface plane et stable. NE PAS faire fonctionner l'amplificateur sur un bureau, une table, une étagère ou autre plate-forme inappropriée.



**PANNEAU DE CONTRÔLE**

**1 & 2. ENTRÉES:** Ces entrées polyvalentes permettent de brancher soit une fiche XLR, soit une fiche Jack 6,35mm et acceptent des signaux symétriques ou asymétriques.  
 Note : Une fiche TRS avec signal stéréo ne peut pas être branchée directement mais doit être séparée en deux fiches mono.

**GAIN:** Contrôle le niveau du canal.

**Note:** Tournez le contrôle du gain au minimum avant de brancher un signal audio.

**3. VOLUME GÉNÉRAL:** Contrôle le niveau général de votre système Tensor.  
 Note : Tournez le contrôle du volume général au minimum avant de mettre en marche et d'arrêter l'appareil.

**LIMITEUR:** Les enceintes Tensor sont équipées d'un limiteur interne empêchant une surcharge de l'ampli de puissance ou des haut-parleurs. Le voyant "LIMIT" s'allume lorsque le limiteur est actif. Un clignotement occasionnel du voyant "LIMIT" est acceptable mais s'il s'allume en permanence ou très souvent, il faut diminuer le Gain ou le Volume.

**4. SORTIE:** Cette sortie permet d'envoyer le signal mélangé vers une autre enceinte Tensor, un moniteur actif, un sono ou une table de mixage par exemple. Le niveau "MIX OUT" est indépendant du volume général.

**5. ÉGALISATION:** Quatre préréglages sont prévus pour optimiser la réponse de l'enceinte active et correspondre à vos besoins. Le bouton "MODE" permet de passer d'un réglage à l'autre.

**6. OPTION:** Un interrupteur de terre permet de réduire les problèmes potentiels de boucle de masse lorsque vous reliez l'enceinte à d'autres appareils. Il peut être utile avec la sortie "MIX OUT".  
 Le voyant avant de l'enceinte peut être allumé ou éteint avec le bouton "LOGO".

**MUSIC:** Augmentation des graves avec une réponse plate pour les médiums et aigus.

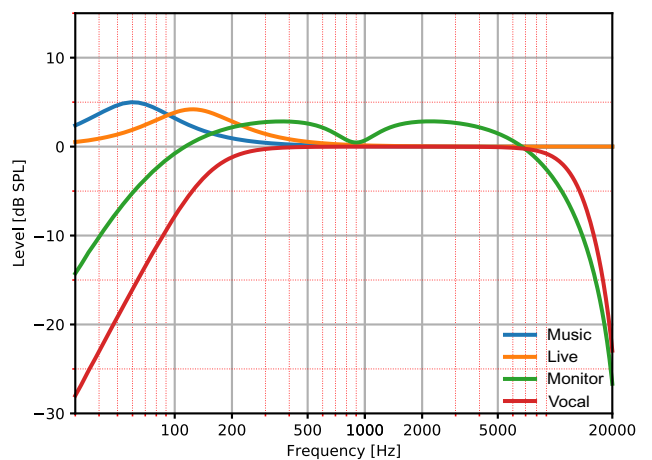
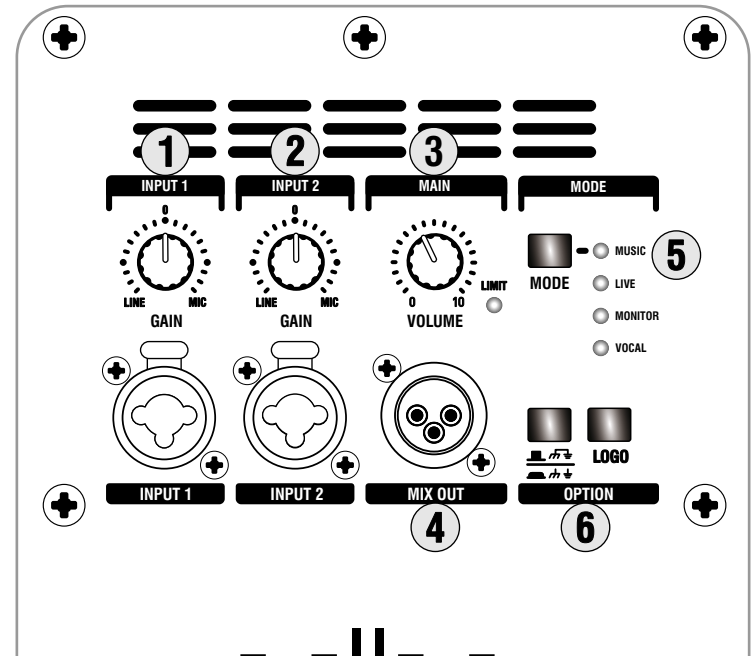
**LIVE:** Identique à MUSIC mais avec une augmentation décalée des graves.

**MONITOR:** Diminution des graves et aigus avec une fréquence de coupure autour de 900Hz.

**VOCAL:** Diminution des graves et des aigus avec une réponse plate dans les médiums

Le réglage d'égalisation est mémorisé et est rappelé lorsque vous rallumez l'enceinte.

Note : L'enceinte est livrée avec le réglage en position MUSIC.



**7. PRISE D'ALIMENTATION & FUSIBLE:** Prise standard

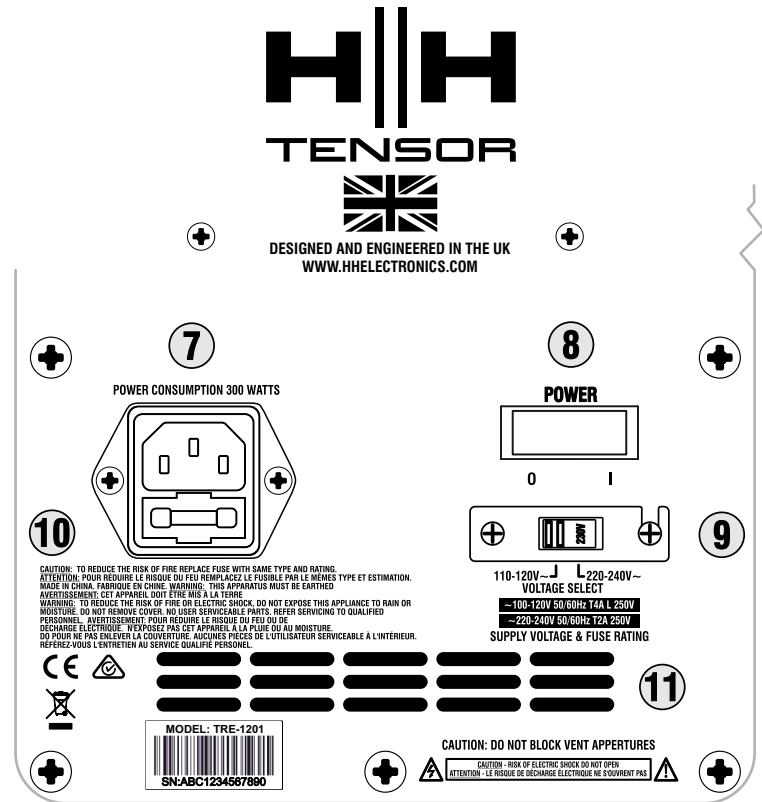
IEC pour brancher le câble d'alimentation. Ne remplacer le fusible qu'avec le type indiqué sur le panneau arrière.

**8. INTERRUPTEUR PRINCIPAL:** Permet de mettre en marche et d'arrêter votre appareil. Assurez-vous que le volume général est au minimum avant de mettre en marche ou d'arrêter l'enceinte.

**9. SÉLECTEUR DE TENSION:** Bien que nous ayons fait le maximum pour faire correspondre la tension de service à votre région, veuillez la vérifier avant la première mise en marche. Des dégâts peuvent être occasionnés si la tension n'est pas correcte. Veuillez consulter la section suivante pour plus d'information.

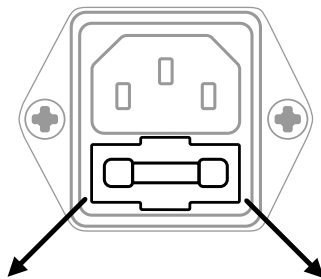
**10. INFORMATION:** Plaquette d'information de l'ampli : numéro de série, information de fonctionnement, puissance, etc.

**11. FENTES DE VENTILATION:** Ces ouvertures sont critiques pour la longévité et la fiabilité de l'ampli – NE PAS LES OBSTRUER. Cette consigne est identique pour les fentes au sommet du panneau de contrôle.



**ARRÊTEZ L'ENCEINTE ET DÉBRANCHEZ LE CÂBLE D'ALIMENTATION AVANT DE CONTINUER.**

**REMPACEMENT DU FUSIBLE**



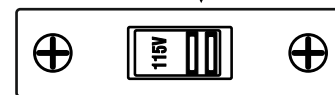
1. Sortez le tiroir du porte-fusible.
2. Remplacez le fusible par un fusible de même type et de même calibre comme indiqué sur le panneau arrière.

~100-120V 50/60Hz T4A L 250V  
~220-240V 50/60Hz T2A 250V

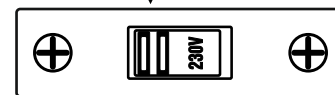
Tension d'alimentation et calibre du fusible

**SÉLECTEUR DE TENSION**

Réglage pour une tension d'alimentation de 110 à 120V



Réglage pour une tension d'alimentation de 220 à 240V



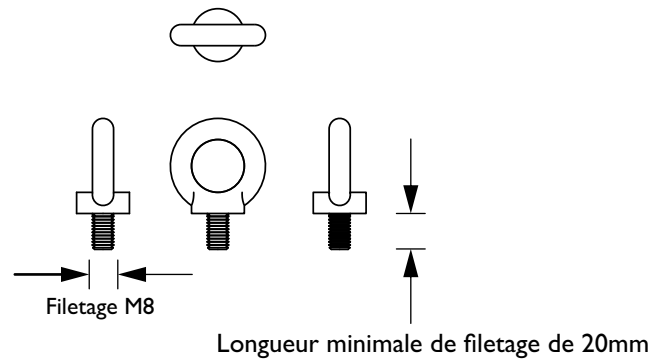
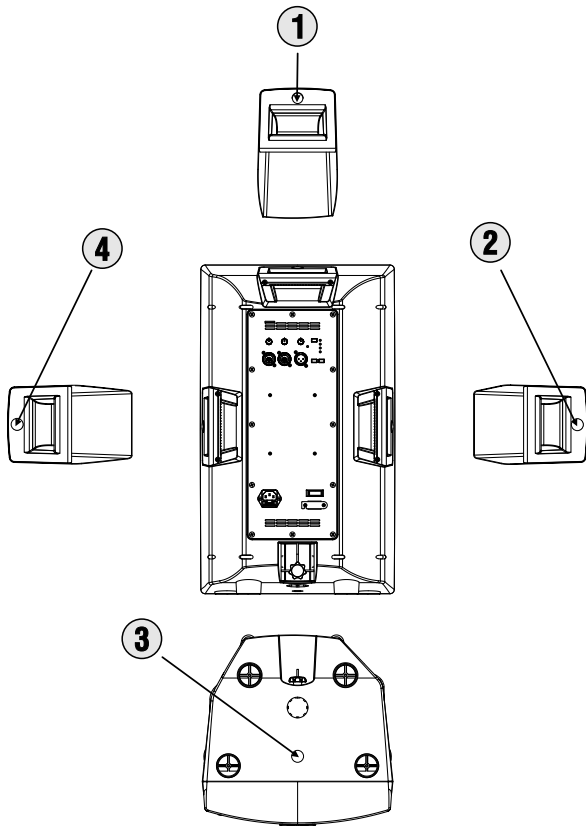
A l'aide d'un outil adéquat, glissez le sélecteur de tension vers la position appropriée.



**A:** Pour monter les pitons, enlevez au préalable les 4 capuchons en caoutchouc de protection (les positions sont indiquées ci-dessous).

**B:** Remplacez chaque capuchon par un piton fileté. Assurez-vous que la partie filetée est bien engagée dans l'insert.

Veillez noter que les pitons filetés pour les suspensions doivent être moulés avec un épaulement et prévus pour cet usage.



Les pitons filetés similaires, de contre-façon, disponibles dans les magasins de bricolage, ne sont PAS conformes et ne doivent être utilisés en aucun cas.

## IMPORTANT

**MONTAGE SUR PIED:** Ne pas trop surélever le support ou trépied ; assurez-vous qu'il y ait toujours au minimum 4 fois le diamètre du pied à l'intérieur du support inférieur. Vérifiez que les trépieds soient bien écartés mais n'obstruez jamais les passages d'entrée ou autres accès. Contrôlez le bon serrage de la molette de l'enceinte.

**SUSPENSION:** L'enceinte Tensor est équipée de points de fixation M8 pour une installation en suspension.

**Note:** Le montage en suspension de l'enceinte ne doit être effectué que par du personnel qualifié, en accord avec la législation locale et avec du matériel approprié.

Si vous n'êtes pas qualifié, confiez ce montage aux personnes compétentes. Un mauvais montage peut entraîner des blessures, voire la mort!

Le montage en suspension de ces enceintes peut exposer le public à de graves dangers de blessure, voire de mort. N'essayez, en aucun cas, de faire le montage si vous n'êtes pas entièrement qualifié et certifié par une autorité locale ou nationale. Toutes les règles de sécurité en cours doivent être suivies. Si vous n'êtes pas suffisamment qualifié ou si vous ne connaissez pas la législation en vigueur, veuillez consulter du personnel qualifié pour avoir de l'aide et des conseils.



**WICHTIGE SICHERHEITSHINWEISE**

**ACHTUNG:** Beim Einsatz von Elektrogeräten müssen u.a. grundlegende Vorsichtsmaßnahmen befolgt werden:

1. Lesen Sie sich diese Anweisungen durch.
2. Bewahren Sie diese Anweisungen auf.
3. Beachten Sie alle Warnungen.
4. Befolgen Sie alle Anweisungen.
5. Setzen Sie dieses Gerät nicht in der Nähe von Wasser ein.
6. Reinigen Sie es nur mit einem trockenen Tuch.
7. Blockieren Sie keine der Lüftungsöffnungen. Führen Sie die Installation gemäß den Anweisungen des Herstellers durch.
8. Betreiben Sie das Gerät nicht neben Wärmequellen wie Heizungen, Heizgeräten, Öfen oder anderen Geräten (auch Verstärkern), die Wärme erzeugen.
9. Verwenden Sie nur Kaltgeräte-Netzkabel aus dem Fachhandel.
10. Schützen Sie das Netzkabel, sodass niemand darauf tritt oder es geknickt wird, insbesondere an Steckern oder Buchsen am Gerät.
11. Verwenden Sie nur die vom Hersteller erhältlichen Zubehörgeräte oder Zubehörteile.
12. Verwenden Sie nur einen Wagen, Stativ, Dreifuß, Träger oder Tisch, der den Angaben des Herstellers entspricht oder zusammen mit dem Gerät verkauft wurde. Wird ein Wagen verwendet, bewegen Sie den Wagen mit dem darauf befindlichen Gerät besonders vorsichtig, damit es nicht umkippt und möglicherweise jemand verletzt wird.
13. Der Netzstecker bzw. Gerätestecker wird zum Trennen vom Stromnetz verwendet und muß immer leicht zugänglich sein.  
Der Benutzer sollte auf einfachen Zugang zu allen Netzsteckern, Gerätesteckern und Netz-Schaltern achten  
Ziehen Sie den Netzstecker bei Gewitter heraus oder wenn das Gerät längere Zeit nicht benutzt wird.
14. Lassen Sie sämtliche Wartungsarbeiten von qualifizierten Kundendiensttechnikern durchführen. Eine Wartung ist erforderlich, wenn das Gerät in irgendeiner Art beschädigt wurde, etwa wenn das Netzkabel oder der Netzstecker beschädigt wurden, Flüssigkeit oder Gegenstände in das Gerät gelangt sind, das Gerät Regen oder Feuchtigkeit ausgesetzt wurde, nicht normal arbeitet oder heruntergefallen ist.
15. Schließen Sie das Gerät nur an eine Stromquelle an, die am Gerät neben dem Netzkabel angegeben ist.
16. Wenn dieses Produkt in ein Geräte-Rack eingebaut werden soll, muss eine Versorgung über die Rückseite eingerichtet werden.

Dauer pro Tag in Stunden	Geräuschpegel dBA langsame Reaktion
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4 oder weniger	115

18. Dieses Gerät darf nicht ungeschützt Wassertropfen und Wasserspritzern ausgesetzt werden und es muss darauf geachtet werden, dass keine mit Flüssigkeiten gefüllte Gegenstände, wie z. B. Blumenvasen, auf dem Gerät abgestellt werden.

19. Belastung durch extrem hohe Lärmpegel kann zu dauerhaftem Gehörverlust führen. Die Anfälligkeit für durch Lärm bedingten Gehörverlust ist von Mensch zu Mensch verschieden, das Gehör wird jedoch bei jedem in gewissem Maße geschädigt, der über einen bestimmten Zeitraum ausreichend starkem Lärm ausgesetzt ist. Die US-Arbeitsschutzbehörde (Occupational and Health Administration, OSHA) hat die folgenden zulässigen Pegel für Lärmbelastung festgelegt:

Laut OSHA kann jede Belastung über den obenstehenden zulässigen Grenzwerten zu einem gewissen Gehörverlust führen. Sollte die Belastung die obenstehenden Grenzwerte übersteigen, müssen beim Betrieb dieses Verstärkungssystems Ohrenstopfen oder Schutzvorrichtungen im Gehörgang oder über den Ohren getragen werden, um einen dauerhaften Gehörverlust zu verhindern. Um sich vor einer möglicherweise gefährlichen Belastung durch hohe Schalldruckpegel zu schützen, wird allen Personen empfohlen, die mit Geräten arbeiten, die wie dieses Verstärkungssystem hohe Schalldruckpegel erzeugen können, beim Betrieb dieses Geräts einen Gehörschutz zu tragen.

20. Symbole und Nomenklatur, die auf dem Produkt und in den Handbüchern stehen, sollen den Bediener auf die Bereiche, in denen besondere Vorsicht notwendig sein kann, alarmieren und sind wie folgt:

Sollen den Benutzer auf das Vorhandensein von "gefährlicher Hoch- Spannung" im Gerätegehäuse hinweisen, um die Gefahr eines elektrischen Schlages für Personen zu vermeiden..



Sollen den Benutzer auf das Vorhandensein wichtiger Betriebs-und Wartungsanweisungen in der beigelegten Dokumentation aufmerksam machen.

**CAUTION:** Gefahr eines elektrischen Schlags - NICHT ÖFFNEN. Um die Gefahr eines elektrischen Schlags zu reduzieren, darf die Abdeckung entfernen. Keine zu wartenden Teile im Inneren. Überlassen Sie die Wartung qualifiziertem Fachpersonal.

**WARNING:** Gefahr eines elektrischen Schlags - NICHT ÖFFNEN. Um die Gefahr eines elektrischen Schlags zu vermeiden, darf die Abdeckung nicht geöffnet werden.. Überlassen Sie die Wartung qualifiziertem Fachpersonal.

Wenn Ihr Gerät über einen Kippmechanismus oder eine "Tilt-back"- Funktion verfügt, benutzen Sie diese Funktion mit Vorsicht. Aufgrund der Leichtigkeit, mit der der Verstärker zwischen geraden und schrägen Rücken Positionen bewegt werden kann, verwenden Sie nur den Verstärker auf einer ebenen, stabilen Oberfläche. NICHT den Verstärker auf einem Schreibtisch, Tisch, Regal oder sonst eine ungeeignete nicht stabile Plattform stellen.



**BENUTZEROBERFLÄCHE**

**1 & 2. INPUTS:** Ein Multicon-Eingang ermöglicht die Verwendung von XLR- und 1/4"-Buchsen und akzeptiert symmetrische und unsymmetrische Signale. Hinweis: Ein Stereosignal an TRS-Leitung kann nicht direkt angeschlossen werden und muss in zwei Mono-Anschlüsse aufgeteilt werden.

**GAIN:** Verwenden Sie diese, um die Kanalebene festzulegen.

Hinweis: Stellen Sie die Gain-Steuerung auf ein Minimum ein, bevor Sie ein Audiosignal anschließen.

**3. MASTER VOLUME:** Steuert die Gesamtebene Ihres Tensor-Systems.

Hinweis: Stellen Sie dieses Steuerelement beim Schalten des Geräts ON oder OFF auf ein Minimum.

**LIMIT:** Die Tensor-Lautsprecher sind mit einem On-Board-Limiter ausgestattet, um eine Überlastung der Leistungsverstärker oder Lautsprecher zu verhindern. Die Begrenzungs-LED leuchtet, wenn der Limiter aktiv ist. Gelegentliches Blinken der Grenze led ist akzeptabel, aber im Falle einer häufigen oder kontinuierlichen Beleuchtung, schalten Sie die Gain oder Volume-Steuerung.

**4. MIX OUT:** Ein Signal, das z.B. zum Anschluss einer zweiten Ten-Sor, eines aktiven monitors, einer Haus-PA oder einer Aufnahmekonsole verwendet wird. Der Mix Out-Signalpegel wird von der Hauptlautstärkeregelung nicht beeinflusst.

**5. EQUALISATION:** Vier Voreinstellungen sind enthalten, um die Reaktion des Lautsprechers auf Ihre Bedürfnisse zu optimieren. Die Schaltfläche Modus wird verwendet, um durch die EQ-Presets zu fahren.

**MUSIK:** Ein Basslift mit einer flachen mittleren bis hohen Reaktion.

**LIVE:** Similar to the 'Music' response with the LF lift frequency shifted.

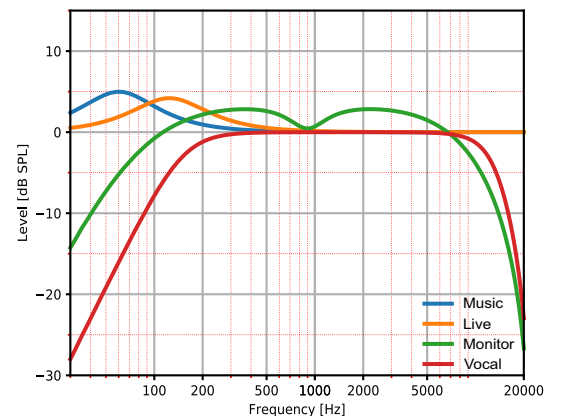
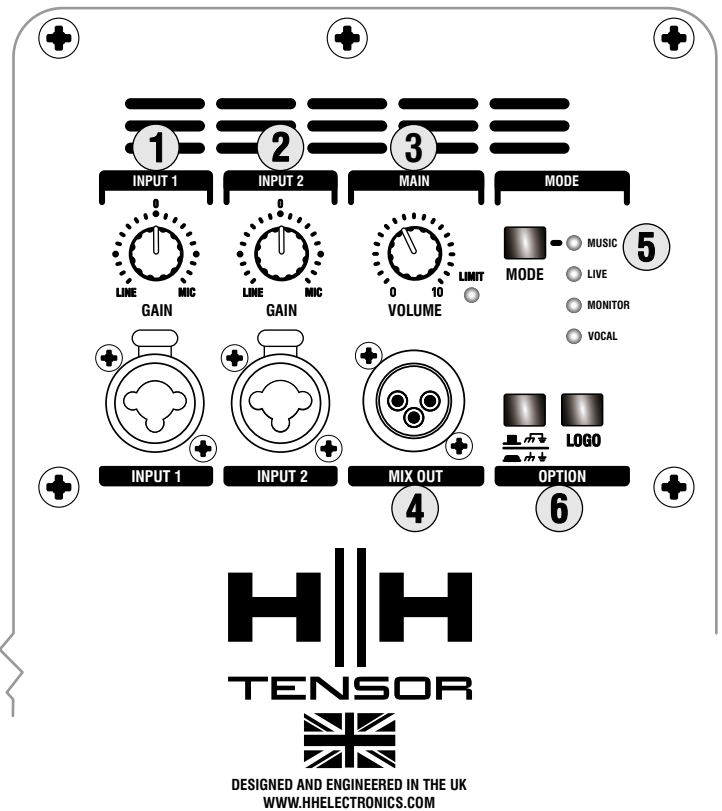
**MONITOR:** A LF and HF roll-off with a cut around 900Hz.

**VOCAL:** Ein Bass-Roll-off mit flachen mittleren und oberen Frequenzen.

Die EQ-Einstellung wird gespeichert und abgerufen, so dass es so sein wird, wie Sie es nach einem Energiezyklus verlassen haben. Bitte beachten Sie, dass das Gerät mit dem EQ-Modus auf MUSIC ausgeliefert wird.

**6. OPTION:** Es wurde ein Groundlift bereitgestellt, um das potenzielle Problem von Erdschleifen beim Anschluss an andere Geräte zu reduzieren. Dieses Steuerelement ist in Verbindung mit dem Mix Out zu verwenden.

Die Vorder-Logo-Beleuchtung der Lautsprecher kann mit der Logo-Steuerung ein-/ausgeschaltet werden.



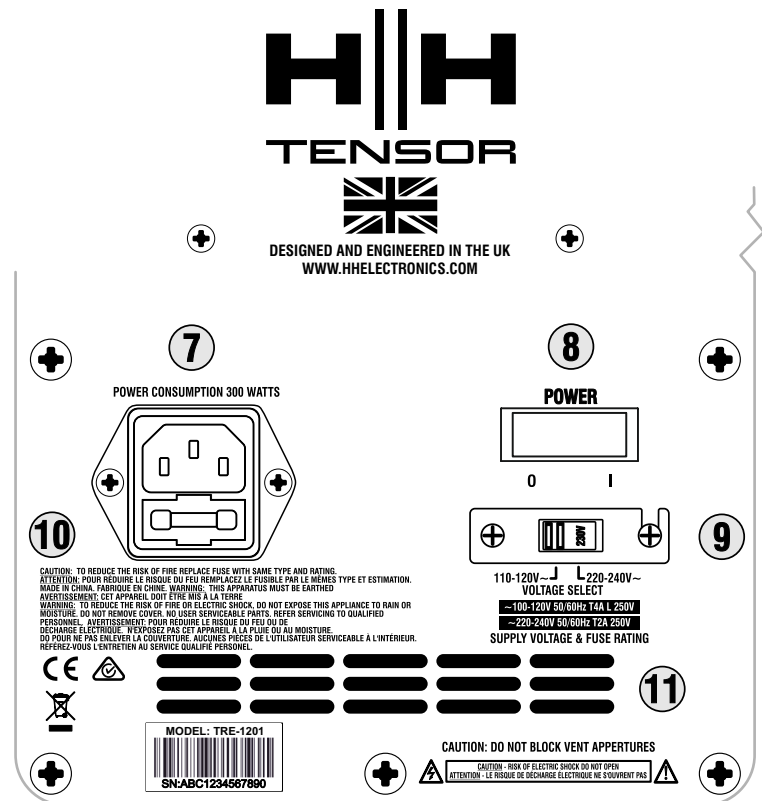
**7. MAINS INLET SOCKET AND FUSE:** IEC-Eingang zum Anschluss eines geeigneten Netzleiters. Ersetzen Sie die Sicherung nur durch den auf der Rückseite angegebenen Typ.

**8. MAINS SWITCH:** Schaltet das System ein und aus. Stellen Sie sicher, dass die Lautstärkeregelung beim Ein- und Ausschalten auf ein Minimum eingestellt ist.

**9. VOLTAGE SELECT SWITCH:** Obwohl alle Anstrengungen unternommen wurden, um die richtige Spannung für den Einsatzbereich auszuwählen, überprüfen Sie bitte, bevor Sie sich zum ersten Mal einschalten. Schäden können auftreten, wenn die Spannung falsch eingestellt ist. Weitere Informationen finden Sie weiter unten.

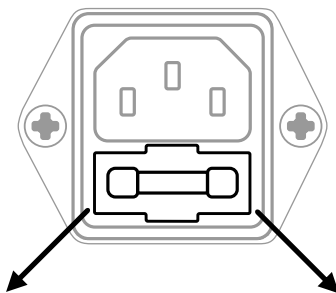
**10. INFORMATION:** Bereich, der sich auf den Verstärker bezieht: Seriennummer, Betriebsinformationen, Nennleistung usw.

**11. AIR VENTS:** Diese sind entscheidend für die Langlebigkeit und Zuverlässigkeit des Verstärkers - NICHT BLOCK. Dasselbe gilt für die Belüftungsöffnungen oben im Bedienfeld.



**SCHALTEN SIE DAS NETZKABEL AUS, UND TRENNEN SIE ES, BEVOR SIE FORTFAHREN.**

**SICHERUNG AUSTAUSCHEN**



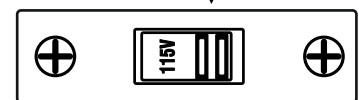
1. Schieben Sie das Sicherungshalterfach heraus.
2. Ersetzen Sie die Sicherung nur durch den gleichen Typ und die gleiche Nennleistung, wie auf der Rückseite angegeben.

~100-120V 50/60Hz T4A L 250V  
~220-240V 50/60Hz T2A 250V

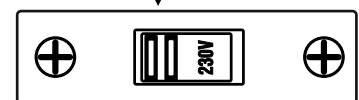
**SUPPLY VOLTAGE UND FUSE RATING**

**SPANNUNGS-AUSWAHL**

**110-120V Einstellung**



**220-240V Einstellung**

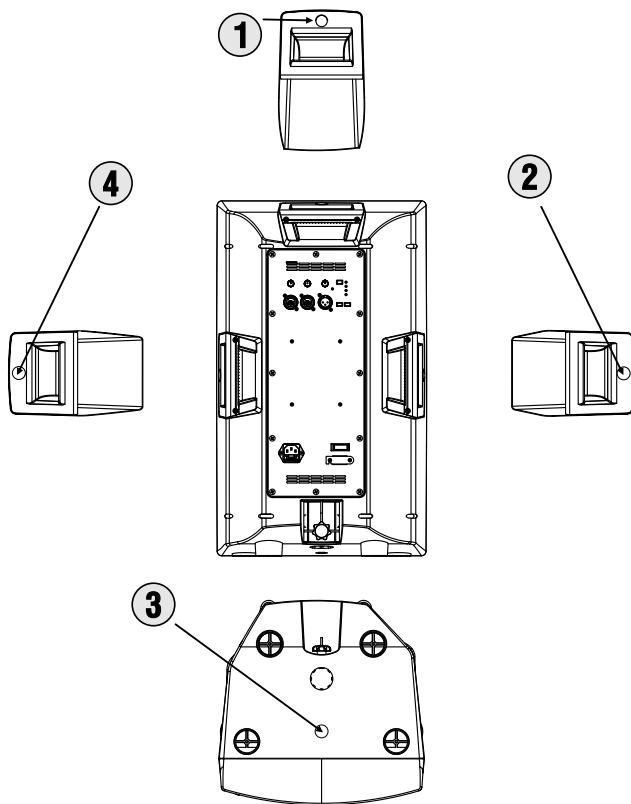


Schieben Sie den Spannungswahlschalter mit einem geeigneten Werkzeug auf die gewünschte Betriebsspannung.



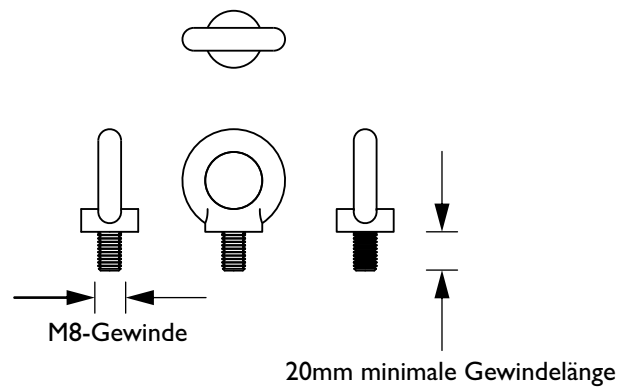
**FITTING EYE BOLT**

**A:** Um die Augenschrauben zu montieren, lokalisieren und entfernen Sie zuerst die vier schützenden Gummikappen (Positionen unten).



**B:** Ersetzen Sie dies durch eine geeignete Augenschraube. Stellen Sie sicher, dass der Thread vollständig in den Einsatz eingebunden ist.

Beachten Sie, dass Augenschrauben für fliegende Systeme gegossen werden müssen, Schulterbeschläge für den Zweck bewertet werden.



Geschmiedete Stahl-Augenschrauben der Art, die typischerweise von DIY-Lieferanten erhältlich sind, sind NICHT geeignet und sollten unter keinen Umständen verwendet werden.

**WICHTIG**

**POLE MOUNT:** Überdehnen Sie die Pole/Stative nicht; stellen Sie sicher, dass sich mindestens 4 x der Poldurchmesser noch im äußeren Pol befindet. Stellen Sie sicher, dass die Beine ein gutes Splay auf Stativen haben, aber nicht Türen oder andere Zugänge versperren. Stellen Sie sicher, dass die Daumenschraube am Schrank fest ist.

**SUSPENDED:** Tensorschränke sind mit M8-Flugpunkten für den Einbau und den Schwebeseinsatz ausgestattet.

Hinweis: Die Aussetzung oder das "Fliegen" von Schränken sollte nur von entsprechend qualifizierten Personen durchgeführt werden, in Übereinstimmung mit allen lokalen Gesetzen und mit zugelassener Hardware.

Si vous n'êtes pas qualifié, confiez ce montage aux personnes compétentes. Un mauvais montage peut entraîner des blessures, voire la mort !

Die Manipulation oder aufgehängte Montage dieser Lautsprecher kann die Öffentlichkeit ernsthaften Gesundheitsrisiken oder sogar dem Tod aussetzen. Unter keinen Umständen versuchen Sie, dieses System zu manipulieren, auszusetzen oder anderweitig zu montieren, es sei denn, Sie sind voll qualifiziert und zertifiziert, dies von den zuständigen lokalen, staatlichen und nationalen Behörden zu tun. Alle einschlägigen Sicherheitsvorschriften müssen eingehalten werden. Wenn Sie nicht ausreichend qualifiziert sind oder keine einschlägigen Vorschriften kennen, wenden Sie sich an qualifiziertes Personal, um Rat und Unterstützung zu erhalten.





## INSTRUCCIONES IMPORTANTES DE SEGURIDAD

**CUIDADO:** Cuando use productos electrónicos, debe tomar precauciones básicas, incluyendo las siguientes:

1. Lea estas instrucciones.
2. Guarde estas instrucciones.
3. Haga caso de todos los consejos.
4. Siga todas las instrucciones.
5. No usar este aparato cerca del agua.
6. Limpiar solamente con un trapo seco.
7. No bloquear ninguna de las salidas de ventilación. Instalar de acuerdo a las instrucciones del fabricante.
8. No instalar cerca de ninguna fuente de calor como radiadores, estufas, hornos u otros aparatos (incluyendo amplificadores) que produzcan calor.
9. Un aparato con la construcción de clase I deberá conectarse a una toma de corriente que disponga una conexión con protección. No retire la patilla protectora del enchufe polarizado o con conexión a tierra. Un enchufe polarizado tiene dos clavijas, una más ancha que la otra. Un enchufe con toma de tierra tiene dos clavijas y un tercer diente de tierra. La clavija ancha (la tercera) se proporciona para su seguridad. Si el enchufe proporcionado no encaja en su toma de red, consulte a un electricista para que se reemplace por la obsoleta.
10. Proteja el cable de alimentación para que no sea pisado o pinchado, particularmente en los enchufes, habitáculos y el punto de salida del aparato.
11. Usar solamente componentes y accesorios proporcionados por el fabricante.
12. Usar solamente un carro, pie, trípode, o soporte especificado por el fabricante, o vendido junto al aparato. Cuando se use un carro, tenga cuidado al mover el conjunto carro/aparato para evitar que se dañe en un vuelco.
13. El cable de alimentación o conector del aparato se usa como dispositivo de desconexión y debe permanecer accesible. El usuario debe permitir un acceso fácil a cualquier entrada principal, interruptor haciéndolo así más operativo. Desenchufe este aparato durante tormentas eléctricas o cuando no se use en largos períodos de tiempo.
14. Para cualquier reparación, acuda a personal de servicio cualificado. Se requieren reparaciones cuando el aparato ha sido dañado de alguna manera, como cuando el cable de alimentación o el enchufe se han dañado, algún líquido ha sido derramado o algún objeto ha caído dentro del aparato, el aparato ha sido expuesto a la lluvia o la humedad, no funciona de manera normal, o ha sufrido una caída.
15. Nunca retire la patilla de Tierra. Conecte el aparato sólo a una fuente de alimentación del tipo marcado al lado del cable de alimentación.
16. Si este producto va a ser instalado en una unidad de rack, use algún tipo de apoyo trasero.
17. Nota para el Reino Unido solamente: Si los colores de los cables en el enchufe principal de esta unidad no corresponden con los terminales en su enchufe, proceda de la siguiente manera:
  - a) El cable de color verde y azul debe ser conectado al terminal que está marcado con la letra E, el símbolo de Tierra (earth), coloreado en verde o en amarillo.
  - b) El cable coloreado en azul debe ser conectado al terminal que está marcado con la letra N o el color negro.
  - c) El cable coloreado en marrón debe ser conectado al terminal que está marcado con la letra L o el color rojo.
18. Este aparato eléctrico no debe ser sometido a ningún tipo de goteo o salpicadura y se debe tener cuidado para no poner objetos que contengan líquidos, como vasos, sobre el aparato.
19. La exposición a altos niveles de ruido puede causar una pérdida permanente en la audición. La susceptibilidad a la pérdida de audición provocada por el ruido varía según la persona, pero casi todo el mundo perderá algo de audición si se expone a un nivel de ruido suficientemente intenso durante un tiempo determinado. El Departamento para la Salud y para la Seguridad del Gobierno de los Estados Unidos (OSHA) ha especificado las siguientes exposiciones al ruido permisibles:  
De acuerdo al OSHA, cualquier exposición que exceda los límites arriba indicados puede producir algún tipo de pérdida en la audición. Protectores para los canales auditivos o tapones para los oídos deben ser usados cuando se opere con este sistema de sonido para prevenir una pérdida permanente en la audición, si la exposición excede los límites indicados más arriba. Para protegerse de una exposición a altos niveles de sonido potencialmente peligrosa, se recomienda que todas las personas expuestas a equipamiento capaz de producir altos niveles de presión sonora, tales como este sistema de amplificación, se encuentren protegidas por protectores auditivos mientras esta unidad esté operando.

Duración por Día en Horas	Nivel de Sonido dBA, Respuesta Lenta
8	90
6	92
4	95
3	97
2	100
1 ½	102
1	105
½	110
¼ ou inférieur	115

20. Símbolos y nomenclatura utilizada en el producto y en los manuales de producto, destinado a alertar al usuario de las áreas donde la precaución adicional pueden ser necesarias, son las siguientes:



La intención de alertar al usuario de la presencia de importantes de operación y mantenimiento (servicio) en la literatura que acompaña al producto.

Riesgo de choque eléctrico - NO ABRIR. Para reducir el riesgo de descarga eléctrica, no retire la cubierta. No hay piezas que el usuario pueda reparar. Solicite la revisión al personal cualificado.

Para evitar descargas eléctricas o incendios, no exponga este aparato a la lluvia ni a la humedad. Antes de usar este aparato, por favor lea las instrucciones de funcionamiento.

Si el aparato cuenta con un mecanismo de inclinación o un gabinete estilo de contragolpe, por favor use esta característica con precaución. Debido a la facilidad con que puede ser que el amplificador se mueva entre las posiciones recta e inclinada, utilice sólo el amplificador sobre una superficie nivelada y estable. NO haga funcionar el amplificador en un escritorio, mesa, estantería o plataforma no estable o no apta.



**PANEL DE CONTROL**

**ENTRADAS 1 & 2:** Las entradas tipo Multicon permiten el uso de conectores XLR y de 1/4" y acepta señales balanceados y no balanceados.

Nota: una señal estéreo en un conector TRS no puede ser conectada de forma directa. Es necesario dividirla en dos cables con conectores tipo mono.

**GANANCIA:** Use para ajusta el nivel del canal.

Nota: Ajuste el control de Ganancia al mínimo antes de conectar una señal de audio.

**3. VOLUMEN MASTER:** Controla el volumen general de su sistema Tensor.

Nota: Ajuste este control al mínimo siempre al prender o al apagar este producto.

**LIMIT:** Las cajas Tensor se encuentran equipadas con un Limitador que previene la sobrecarga del amplificador o altavoces. El indicador LED se ilumina cuando el Limitador se encuentra activo. Un parpadeo ocasional del indicador LED es aceptable, pero caso se prenda constantemente o de manera continua, baje el ajuste del control de Ganancia o el Volumen.

**4. SALIDA MIX OUT:** Esta es una salida de señal para alimentar una segunda caja Tensor, un monitor activo, una consola de PA o de grabación u otro amplificador de PA. La señal de la salida Mix Out no es afectada por el control de Volumen.

**5. ECUALIZACIÓN:** Cuatro ajustes fijos se encuentran incluidos para la mejor respuesta de la caja a sus necesidades. El botón de MODE es utilizado para circular por los ajustes de EQ.

**MUSIC:** Ideal para Musica – Un poco más de bajas con las medias y altas planas.

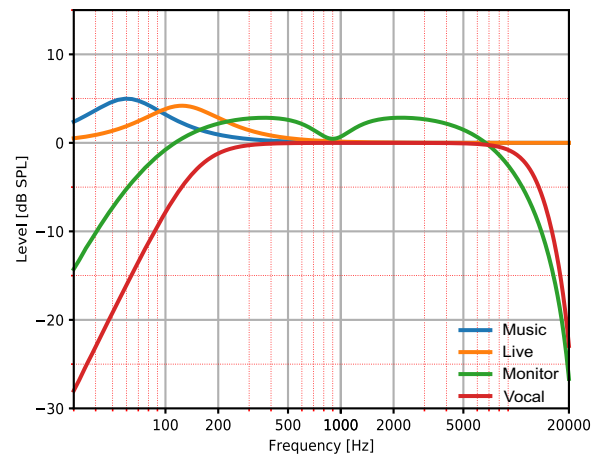
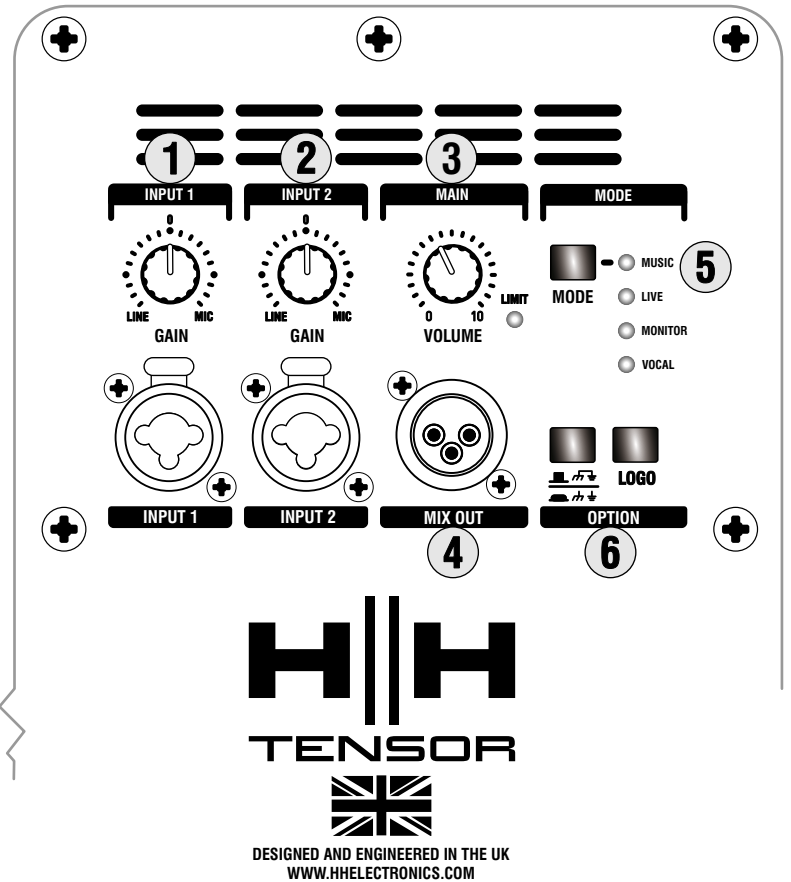
**LIVE:** Ajuste para música en vivo - Similar al ajuste de 'Music' pero con el aumento de bajas alternado.

**MONITOR:** Un comienzo gradual, caída al plano y aumento con nueva caída y corte cerca de 900Hz.

**VOCAL:** Un aumento gradual de bajas con medias y altas planas.

Los ajustes de EQ son almacenados y recargados, entonces al prender el equipo nuevamente tras apagar, el ajuste seleccionado antes es cargado. Por favor, note que el equipo sale de fabrica con el ajuste en MUSIC.

**6. OPTION:** Un selector de aterramiento se encuentra disponible para reducción del problema potencial con realimentación de tierra al conectarse con otros equipos. Este botón debe ser usado en conjunto con la salida Mix Out. La iluminación frontal de la caja puede ser prendida o apagada con el botón LOGO.



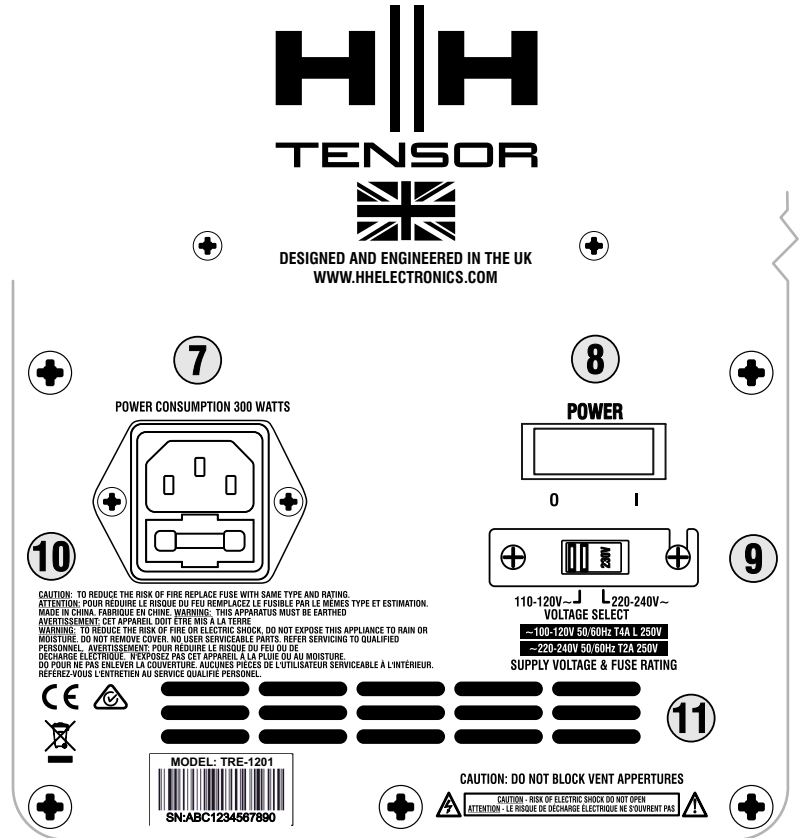
**7. CONECTOR DE CABLE DE ENERGIA Y CAJA DE FUSIBLE:** Conector tipo IEC para la conexión de un cable de energía apropiado. Solamente cambie el fusible por uno del mismo tipo que el indicado en el panel trasero.

**8. LLAVE DE PRENDER/APAGAR:** Prende y apaga el equipo. Siempre coloque el control de Volumen al mínimo antes de usar esta llave, sea para prender o apagar.

**9. SELECTOR DE VOLTAJE:** A pesar de todo el esfuerzo que hacemos para ajustar el voltaje correcto para su región, por favor, siempre mire este ajuste antes de prender el equipo por primera vez. Daños severos pueden ocurrir si este selector se encuentra en posición incorrecta. Vea abajo para más información.

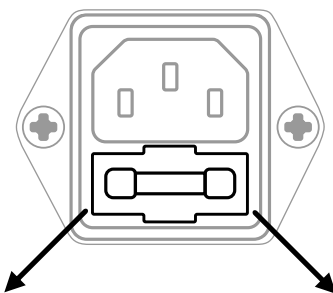
**10. INFORMACIÓN:** Área relativa al amplificador: Numero Serial, informaciones de operación, potencia, etc.

**11. APERTURAS DE VENTILACIÓN:** Las aperturas de ventilación son cruciales para una larga vida y para la confiabilidad del amplificador. – NO OBSTRUIR. Lo mismo se aplica a las aperturas en la parte de arriba del panel de control.



**APAGUE EL EQUIPO Y DESCONECTE EL CABLE DE ENERGÍA ANTES DE PROSEGUIR.**

**CAMBIO DEL FUSIBLE**



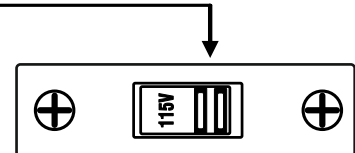
1. Deslizar la bandeja de soporte del fusible.
2. Solamente reemplazar el fusible con otro de la misma especificación encontrada en el panel trasero.

~100-120V 50/60Hz T4A L 250V  
~220-240V 50/60Hz T2A 250V

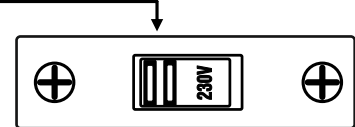
**VOLTAJES Y TIPO DE FUSIBLES**  
(siempre use el fusible correcto para no anular la garantía)

**SELECCIONANDO EL VOLTAJE**

**Ajuste para 110-120V**



**Ajuste para 220-240Vg**



Usando una herramienta correcta, deslizar el selector hacia el voltaje operacional deseado.

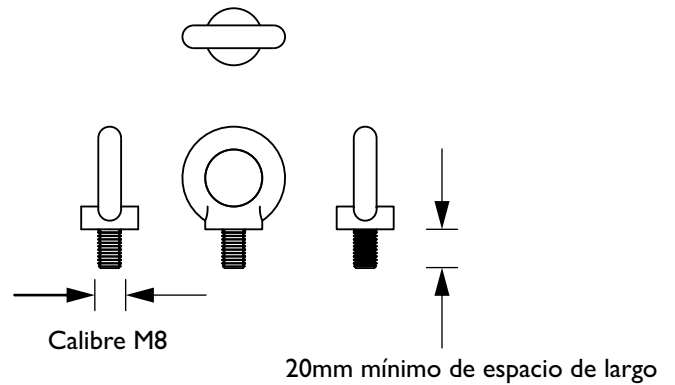
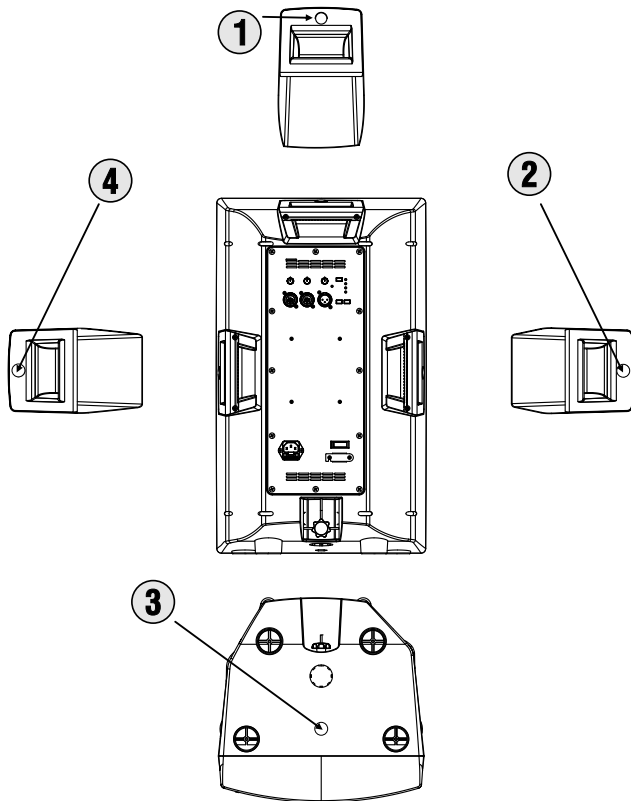


**PRENDIENDO EL TORNILLO DE SEGURIDAD**

**A:** Para prender el tornillo de seguridad, primero encuentre y remueva las cuatro capas de goma protectoras (las posiciones mostradas en el dibujo abajo).

**B:** Coloque un tornillo de seguridad compatible. Tenga seguridad que este bien puesto en su lugar y calibre correcto.

Note que los tornillos para este propósito deben tener calibre y diámetros aprobados para este fin.



Tornillos de acero forjado del tipo que se encuentra en locales de herramientas domesticas NO son correctos y NO deben ser usados bajo ninguna situación.

**IMPORTANTE**

**MONTAJE EN TRIPODES O POSTE:** No sobre extienda postes o trípodes; tenga seguridad de que al menos 4 veces el diámetro del poste se encuentre todavía dentro. Fije bien las piernas en trípodes, pero nunca impida puertas, o por donde hay pasaje de personal. Tenga seguridad de que el tornillo en el equipo este bien apretado y seguro.

**MONTAJE SUSPENSA:** Los gabinetes Tensor se encuentran equipados con puntos de montaje M8 para instalaciones y uso suspenso.

**Nota:** La suspensión o “hacer volar” los gabinetes debe ser solamente ejecutado por profesionales preparados y cualificados usando herramientas y soportes permitidos y homologados por leyes locales.

Caso usted no sea cualificado, contrate el servicio de un profesional para evitar daños y posibles accidentes con riesgo de muerte.

El montaje suspenso de estas cajas puede exponer personas en la audiencia a un severo riesgo, inclusive con riesgo de muerte, caso el equipo se caiga. En ninguna circunstancia trate de colgar o montar estas cajas suspensas sin tener autorización de agentes de gobierno locales. Todas las regulaciones de seguridad deben ser seguidas. Si usted desconoce la legislación o reglas oficiales a respecto de colgar equipos, busque ayuda en la agencia de seguridad de su región o con personas calificadas para poder ayudar.



## INSTRUÇÕES DE SEGURANÇA

**AVISO:** Ao usar produtos eléctricos, adverte básica devem ser sempre seguidas, incluindo as seguintes:

1. Leia estas instruções.
2. Guarde estas instruções de segurança.
3. Preste atenção a todos os avisos.
4. Siga todas as instruções.
5. Não use este aparelho perto da água.
6. Limpe apenas com um pano seco.
7. Não bloqueie qualquer uma das aberturas de ventilação. Instale de acordo com as instruções do fabricante.
8. Não instale perto de fontes de calor, como radiadores, aquecedores, fogões ou outros aparelhos (incluindo amplificadores) que produzem calor.
9. Um aparelho com a construção de classe I devem ser conectado a uma tomada eléctrica com ligação de protecção. Não anule a finalidade de segurança da ficha polarizada ou do tipo terra. Uma ficha polarizada possui duas lâminas, uma mais larga que a outra. Uma ficha do tipo terra tem duas lâminas e um terceiro pino de aterramento. A lâmina larga ou o terceiro pino são fornecidos para sua segurança. Se a ficha fornecida não encaixar na sua tomada, consulte um electricista para a substituição da tomada obsoleta.
10. Proteja o cabo de alimentação de pisadelas ou apertos, especialmente nas fichas, receptáculos de conveniência e no ponto de saída do aparelho.
11. Utilize apenas ligações / acessórios fornecidos pelo fabricante.
12. Use somente com o carrinho, estrutura, tripé, suporte, ou mesa especificados pelo fabricante ou vendidos com o aparelho. Quando utilizar um carrinho, tenha cuidado ao mover o conjunto carrinho / dispositivo para evitar danos provocados pela queda.
13. A ficha da tomada ou aparelho forem utilizados como dispositivo de desconexão e deve estar sempre acessível. O usuário deve permitir o acesso fácil a qualquer ficha, acoplador de alimentação e interruptor de rede usada em conjunto com esta unidade, assim, tornando-o acessível. Desligue o aparelho durante tempestades com raios ou quando não for utilizado por longos períodos de tempo.
14. Solicite a assistência de pessoal qualificado. A manutenção é necessária quando o aparelho tiver sido danificado de qualquer maneira, como quando o cabo de alimentação ou a ficha estiverem danificados, líquido foi derramado ou objetos caídos dentro do aparelho, o aparelho tenha sido exposto à chuva ou umidade, não operar normalmente, ou se tiver caído.
15. Nunca quebre o pino terra. Ligue apenas a uma fonte de energia do tipo marcadas na unidade adjacente ao cabo de fornecimento de energia.
16. Se este produto for para ser montado em um bastidor de equipamentos, o suporte traseiro deve ser fornecido.
17. Nota para o Reino Unido:  
Se as cores dos fios do cabo de alimentação da unidade não correspondem com os terminais na ficha, faça o seguinte:
  - a) O fio que é colorido verde e amarelo tem de ser ligado ao terminal que está marcada com a letra E, o símbolo de terra, de cor verde ou colorido em verde e amarelo.
  - b) O fio é de cor azul, que tem de ser ligado ao terminal que está marcada com a letra N ou a cor preta.
  - c) O fio que é castanho deve ser ligado ao terminal que está marcada com a letra L ou a cor vermelha. Aparelhos eléctricos.
18. This não deve ser exposto a respingos e os cuidados devem ser tomados para não colocar objetos que contenham líquidos, tais como vasos, sobre o aparelho.
19. A exposição a níveis de ruído extremamente alta pode causar uma perda permanente da audição. Os indivíduos variam consideravelmente a susceptibilidade ao ruído induzido perda de audição, mas quase todo mundo vai perder alguma audição se expostos a ruído suficientemente intensa durante um tempo suficiente.  
Segurança do Trabalho do governo dos EUA e Administração de Saúde (OSHA) especificou os seguintes exposições de nível de ruído admissíveis: de acordo com OSHA, a exposição em excesso dos limites admissíveis acima poderia resultar em alguma perda de audição. Tampões ou protectores para o canal auditivo ou sobre as orelhas, deve ser usada quando se opera este sistema de amplificação de modo a evitar a perda permanente da audição, se a exposição for superior a dos limites tal como descrito acima.  
Para garantir contra a exposição potencialmente perigoso para elevados níveis de pressão de som, recomenda-se que todas as pessoas expostas a um equipamento capaz de produzir níveis elevados de pressão sonora, como este sistema de amplificação de ser protegidos por protetores auditivos enquanto esta unidade está em operação.
20. Símbolos e nomenclatura utilizados no produto e nos manuais de produtos, destinados para alertar o operador para as áreas onde o cuidado extra pode ser necessário, são os seguintes:

duração por Dia em Horas	DBA Nível de som, resposta lenta
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4 or less	115

Com a intenção de alertar o utilizador para a presença de "tensão perigosa" alto dentro do recinto produtos que poderá ser suficiente para constituir um risco de choque eléctrico para as pessoas.



Com a intenção de alertar o usuário da presença de importantes de operação e manutenção (assistência) na literatura que acompanha o produto.

Risco de choque eléctrico - NÃO ABRA. Para reduzir o risco de choque eléctrico, não remover a tampa. Não existem peças no interior. Consulte um técnico qualificado.

Para evitar choque eléctrico ou risco de incêndio, não exponha este aparelho à chuva ou umidade. Antes de utilizar este aparelho, leia atentamente as instruções de operação.

Se o seu aparelho possui um mecanismo de inclinação ou um armário estilo propina, por favor, use esse recurso de design com cautela. Devido à facilidade com que o amplificador pode ser movida entre as posições de costas rectas e inclinada, usar apenas o amplificador numa superfície plana e estável. NÃO operar o amplificador em uma escrivaninha, mesa, prateleira ou de alguma forma inadequada plataforma nonstable.



**PAINEL DE CONTROLE**

**ENTRADAS 1 & 2:** As entradas tipo Multicon permitem o uso de conectores XLR e de 1/4" e aceita sinais balanceados e não balanceados.

Nota: um sinal estéreo em um conector TRS não pode ser conectado de forma direta. É necessário dividir em dois cabos com conectores monos.

**GANHO:** Use para ajustar o nível do canal.

Nota: Ajuste o controle de Ganho no mínimo antes de conectar o sinal de áudio.

**3. VOLUME MASTER:** Controla o volume geral de seu sistema Tensor.

Nota: Ajuste este controle no mínimo sempre ao ligar ou desligar este produto.

**LIMIT:** As caixas Tensor se encontram equipadas com um Limitador que previne a sobrecarga do amplificador ou dos alto-falantes. O indicador LED se ilumina quando o Limitador se encontra ativo. Uma piscada ocasional do indicador LED é aceitável, mas, caso ele fique aceso constantemente ou de maneira contínua, reduza o nível de ganho ou volume.

**4. SAÍDA MIX OUT:** Esta é uma saída do sinal usada para alimentar uma segunda caixa Tensor, um monitor ativo, um console do PA ou gravação ou outro amplificador de PA. O sinal da saída Mix Out no é afetada pelo controle de Volume.

**5. EQUALIZAÇÃO:** Quatro ajustes fixos se encontram inclusos para uma melhor resposta da caixa de acordo com suas necessidades. A tecla MODE é utilizada para alternar entre os ajustes de EQ.

**MUSIC:** Ideal para Música – Um pouco mais de graves com o médio e agudos em resposta plana.

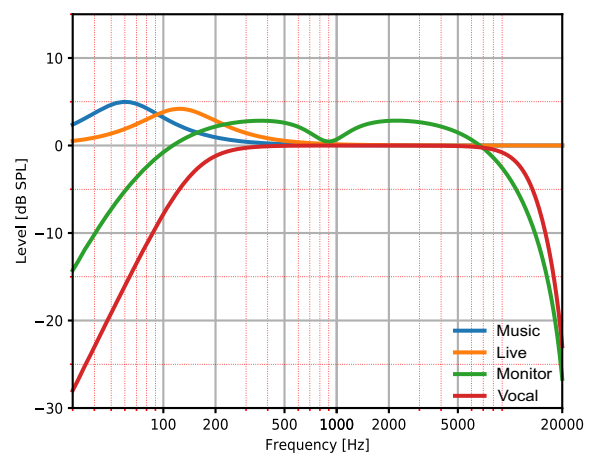
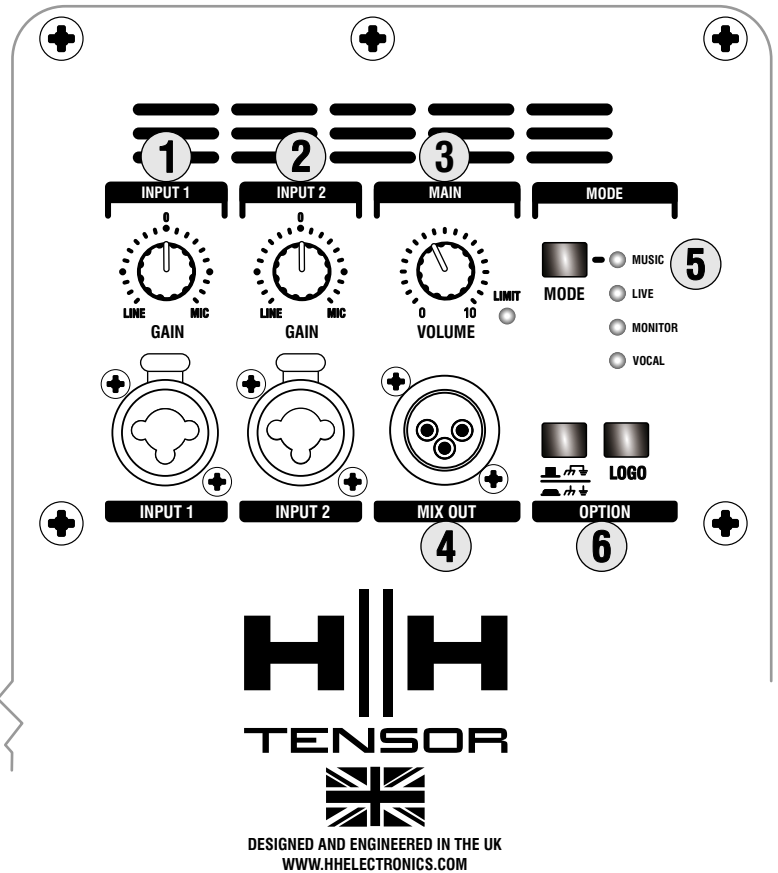
**LIVE:** Ajuste para música ao vivo - Similar ao ajuste de 'Music', mas, com aumento dos graves alternado.

**MONITOR:** Graves começam gradualmente, sobem, voltam para o plano, sobem de novo e caem com corte perto de 900Hz.

**VOCAL:** Um aumento gradual dos graves com os médios e agudos planos.

Os ajustes de EQ são armazenados e recarregados, portanto, ao ligar o aparelho depois de desligá-lo, o ajuste anteriormente selecionado será carregado. Por favor, note que a caixa sai de fábrica ajustada em MUSIC.

**6. OPTION:** Um seletor de aterramento se encontra disponível para a redução do problema potencial de aterramento ao conectar esta caixa a outros equipamentos. Esta tecla deve ser usada em conjunto com a saída Mix Out.



A iluminação frontal do logo da caixa pode ser ligada e desligada usando a tecla LOGO.



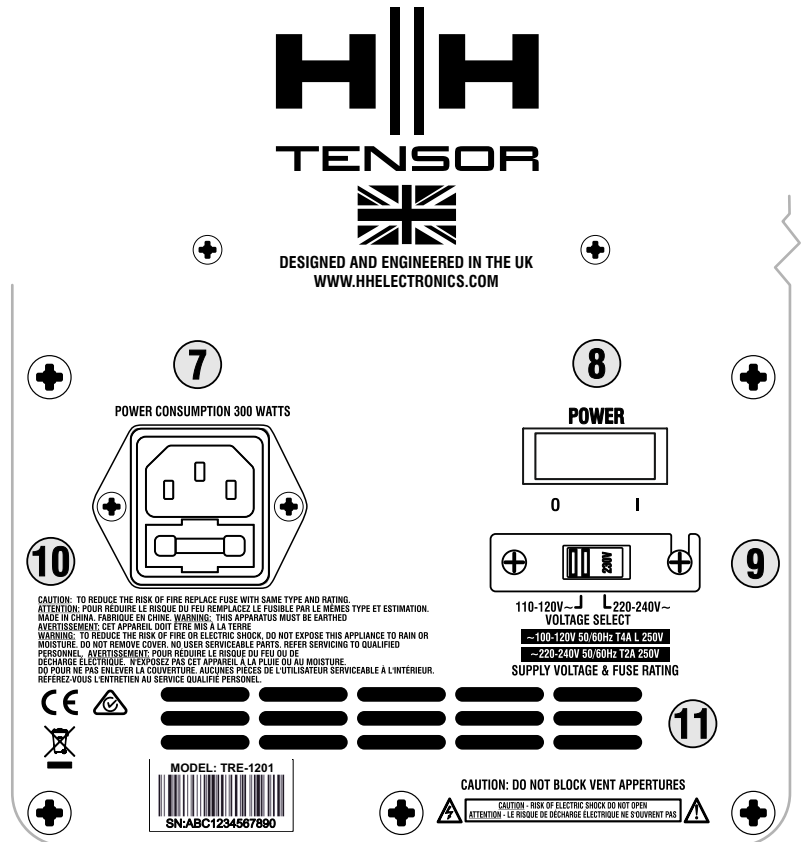
**7. CONECTOR DE CABO DE ENERGIA E CAIXA DE FUSÍVEL:** Conector tipo IEC para a conexão de um cabo de energia apropriado. Somente troque o fusível por outro com as mesmas especificações apontadas no painel traseiro.

**8. CHAVE LIGA / DESLIGA:** Liga e desliga o aparelho. Sempre coloque o controle de Volume no mínimo antes de usar esta chave, seja para ligar ou desligar.

**9. SELETOR DE VOLTAGEM:** Apesar de todo o esforço que fazemos para ajustar a voltagem para sua região, por favor, sempre verifique este ajuste antes de ligar o produto pela primeira vez. Danos severos podem ocorrer se este seletor se encontra na posição incorreta. Veja abaixo para mais informação.

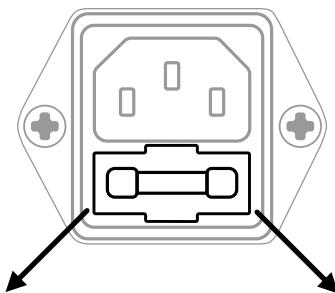
**10. INFORMAÇÃO:** Área relativa ao amplificador: Número Serial, informações de operação, potência etc.

**11. RANHURAS DE VENTILAÇÃO:** As ranhuras de ventilação são cruciais para uma longa vida e para a confiabilidade do amplificador. – NÃO OBSTRUIR. O mesmo se aplica para as ranhuras na parte superior do painel de controle.



**DESLIGUE O APARELHO E DESCONECTE O CABO DE FORÇA ANTES DE PROSSEGUIR.**

**TROCA DO FUSÍVEL**



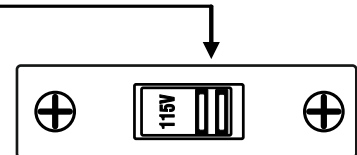
1. Deslize a bandeja de suporte do fusível.
2. Somente troque o fusível por outro com as mesmas especificações encontradas no painel traseiro.

~100-120V 50/60Hz T4A L 250V  
~220-240V 50/60Hz T2A 250V

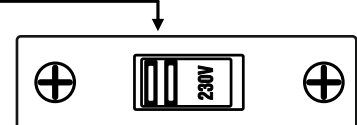
**VOLTAGENS E TIPO DE FUSÍVEIS**  
(sempre use o fusível correto para não anular a garantia)

**SELECIONANDO A VOLTAGEM**

**Ajuste para 110-120V**



**Ajuste para 220-240V**

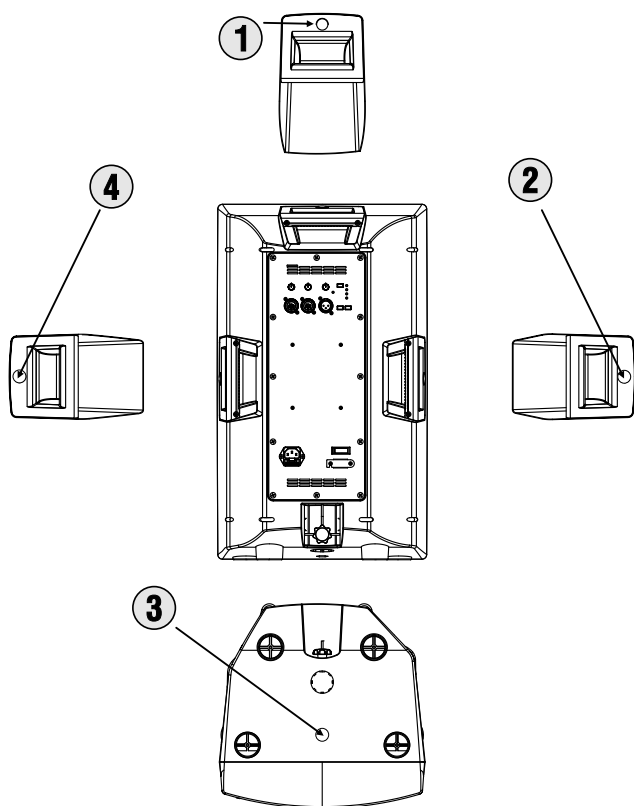


Usando uma ferramenta correta, deslize o seletor na direção com a voltagem operacional desejada.



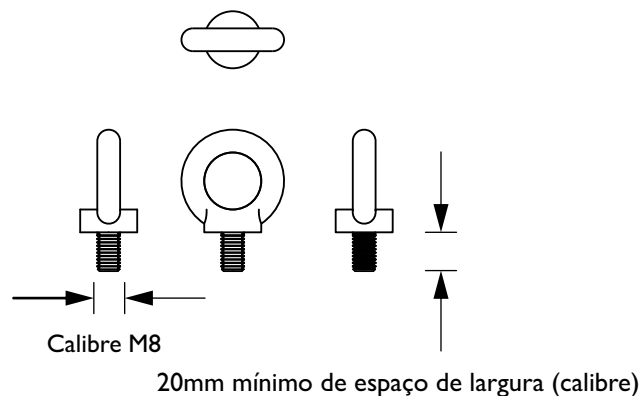
## PRENDENDO O PARAFUSO DE SEGURANÇA

**A:** Para prender o parafuso de segurança, primeiro encontre e remova as quatro capas protetoras de borracha (as posições se encontram no desenho abaixo)..



**B:** Coloque um parafuso de segurança compatível. Tenha certeza que este esteja bem colocado e apertado respeitando a largura e calibre correto.

Note que os parafusos para este propósito devem ter largura de calibre y diâmetros aprovados e compatíveis.



Parafusos de aço forjado do tipo que se encontra em lojas Faça Você Mesmo, NÃO são corretos e NÃO devem ser usados sob nenhuma situação.

**MONTAJE EN TRIPÉS OU POSTE:** Não estenda demais postes ou tripés; assegure-se que ao menos 4 vezes o diâmetro do poste se encontre embutido. Fixe bem as patas dos tripés e nunca impeça portas ou rotas de passagem. Assegure-se que o parafuso de fixação esteja muito bem apertado e seguro.

**MONTAGEM SUSPENSA:** As caixas Tensor se encontram equipadas com furos para montagem padrão M8 para uso em instalações e uso suspenso.

**Nota:** Pendurar ou “fazer voar” as caixas, deve ser somente executado por profissionais preparados e autorizados para tal fim, e usando ferramentas próprias e suportes permitidos e homologados pelas autoridades locais.

Caso você não seja qualificado, contrate alguém que seja para evitar danos e riscos de acidente inclusive com risco de morte.

A montagem suspensa destas caixas pode expor pessoas do público a um severo risco, inclusive morte, quando mal executada. Sob nenhuma circunstância tente pendurar ou montar estas caixas sem ter a autorização das autoridades locais. Todas as regulações de segurança devem ser seguidas. Se você desconhece a legislação ou regras oficiais a respeito de pendurar equipamentos, busque ajuda com um profissional gabaritado ou na autoridade local de sua região para ajuda.





## 重要安全说明

警告：使用电器产品时，应始终遵循基本的注意事项，包括以下各项：

1. 阅读这些说明。
2. 确保此类说明放置于安全处。
3. 注意所有警告。
4. 请遵守所有说明。
5. 请勿在近水处使用该电器。
6. 仅可用干布清洁该电器。
7. 请勿堵塞该电器上的任何通风口。根据制造商的说明进行安装。
8. 请勿将该电器安装在靠近热源，如散热器、热风机、炉子或其他发热设备（包括功率放大器）。
9. 与 I 类建筑设备连接时，应连接到带保护的电源插座上。不要忽视极性 or 接地类型插头的安全作用。极性插头具有两个片状电极，其中一个较宽。接地类型插头具有两个片状电极和第三只接地脚。宽片状电极或第三只接地极用于保证使用者及电器的安全。如所提供的插头不适用于插座，须请专业人员更换，切勿自行更换电源插座。
10. 保护电源线，不被踩踏或挤压，尤其在插头、插座以及电源线的连接处。
11. 仅可采用制造商提供的附件或配件。
12. 仅可使用制造商指定的、或与该电器一同出售的货车、台架、三脚架、支架或台桌。使用货车，及移动货车/搬运该电器时，须注意，避免倾翻产生损坏。
13. 电源插头或该电器的转接插头，应保持其易操作性。用户应使用与该电器匹配的电源插头、连接器和电源开关，应易于操作。在雷雨或长时间不使用时，拔下该电源插头。
14. 当该电器受到任何方式的损坏时，如：电源线或插头被损坏、液体泼溅或物体落入电器内、该电器放置于有雨水或潮湿处、及该电器坠落后，无法正常运行，需进行检修时，必须请有资格认证的维修人员进行维修。
15. 请勿折断电源插头上的接地极。仅可连接到在插头的片状电极旁边已标注符号的极性上。
16. 如此电器须安装在设备架上，应提供后部支架。
17. 仅适用于英国的注意事项。如该电器的电源线中电缆颜色与插头片状电极不相符，请按照以下步骤进行操作：
  - a) 黄绿色电缆须连接至标有字母“E”的电极，为接地符号。颜色为黄绿色或绿色。
  - b) 蓝色电缆须连接至标有字母“N”的电极，颜色为蓝色或黑色。
  - c) 棕色电缆须连接至标有字母“L”的电极，颜色为棕色或红色。
18. 该电器不能放置于有水滴或有水溅出的地方，须注意，不要将盛有液体的容器，如花瓶放在该电器上。
19. 如果有人处于极高噪音级中可能会造成永久失聪。每个人受噪音导致听力损害的差异很大。然而若长时间处于极高噪音中，任何人几乎都会造成不同程度的听力损害。美国政府职业安全健康管理局（OSHA）指定了以下允许范围内的噪音级别，见右表：根据 OSHA，任何超出上述允许的极限范围可导致不同程度的听力损害。在运行该电器时，人体处于超出了以上设定的限制，须佩戴耳塞或配备耳朵的保护装置，以预防永久性听力损害。为避免可能处于强声压程度的危险，该电器运行时，建议处于强声压程度下的所有人均配备听力保护装置。
20. 用于产品和说明书上的符号和术语是为了提醒操作人员注意需要额外注意的地方，具体如下：

每天持续时间 (小时)	噪声程度 (dBA) 缓慢反应
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4 或更少	115



旨在提醒使用者小心产品空箱内的未绝缘“危险电压”，这可能足以对人构成触电危险。

旨在提醒使用者与产品一起提供的说明书中的重要操作和维护（保修）说明。小心触电-不能打开

为了降低触电风险，请不要打开盖子。里面不含任何用户可用的配件。请将维修交于被许可的人员。

为避免触电或火灾，请不要将本产品置于雨中或潮湿环境中。在使用本产品前，请仔细阅读操作说明。



21. 该产品仅适用于海拔2000m以下地区安全使用



该产品仅适用于非热带气候条件下安全使用

如果你的产品是倾斜的结构或是后倾款式的箱体，请小心使用该设计特征。由于功放可以在直立和后倾方式之间转换，请在平坦、牢固的表面使用该产品。请不要在桌子、架子或其它不适合、不牢固的平台上使用该功放。



## 音箱使用界面

1 & 2. 输入：复合输入接口可以使用卡侬以及1/4插孔，并且可以接受平衡和非平衡信号

备注：TRS导线上的立体声信号不能直接连接，必须分为两个单声道接口

增益：用于调整通道声音大小

备注：在输入音频信号之前，将增益控制设置为最小值

3:总音量旋钮：控制系统的整体音量

备注：在打开或关闭装置时，将这个旋钮调到最小值

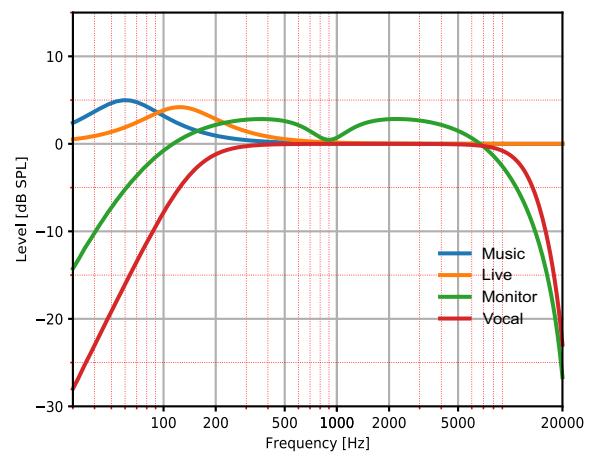
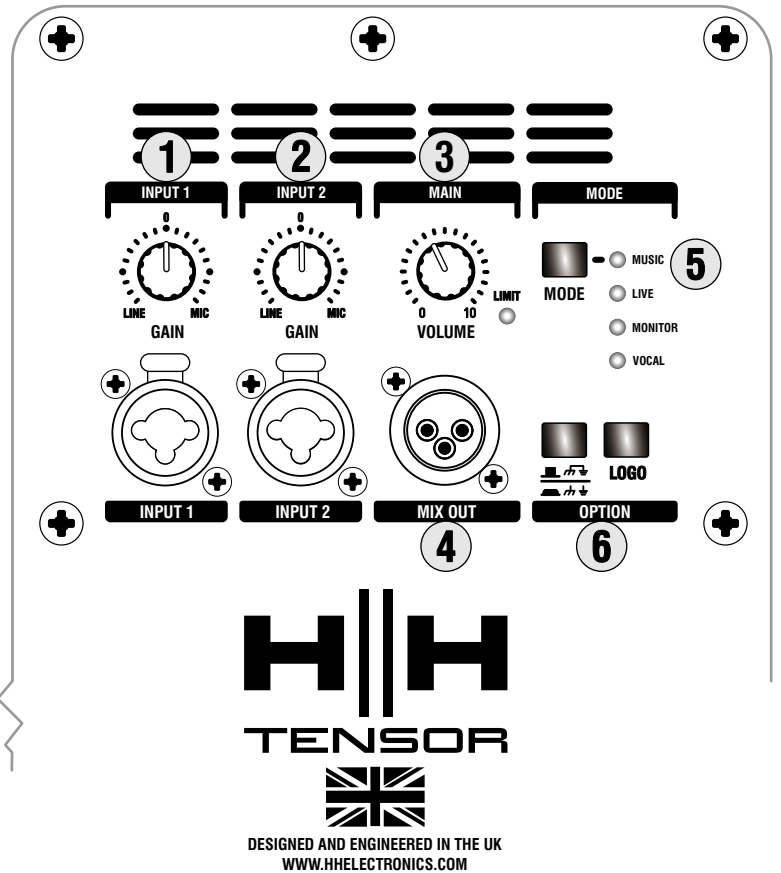
限幅器：混音器上配有一个限幅器，以防止功率放大器或扬声器过载。限制器激活时，led将会点亮。led偶尔闪烁是可以接受的，但在频繁或连续照亮的情况下，请降低增益或音量控制。

4: 混合信号输出：一种信号源，例如可用于连接第二个混音器、监听音箱、室内扩音器或录音控制台。混合信号电平不受主音量控制的影响。

5:选项设置：已提供接地开关，以减少与其他设备连接时接地回路的潜在问题。此控件将与“混合”一起使用  
使用标签logo控件可以打开/关闭音箱的logo照明  
(Music) (音乐：低音下沉且带有平坦的中高响应)  
(Live) 现场：类似于低频提升、频率偏移的音乐“响应”  
(Monitor)监听：低频和高频滚降，低切约为900Hz  
(Vocal) 人声：低音滚降，中高音平缓。

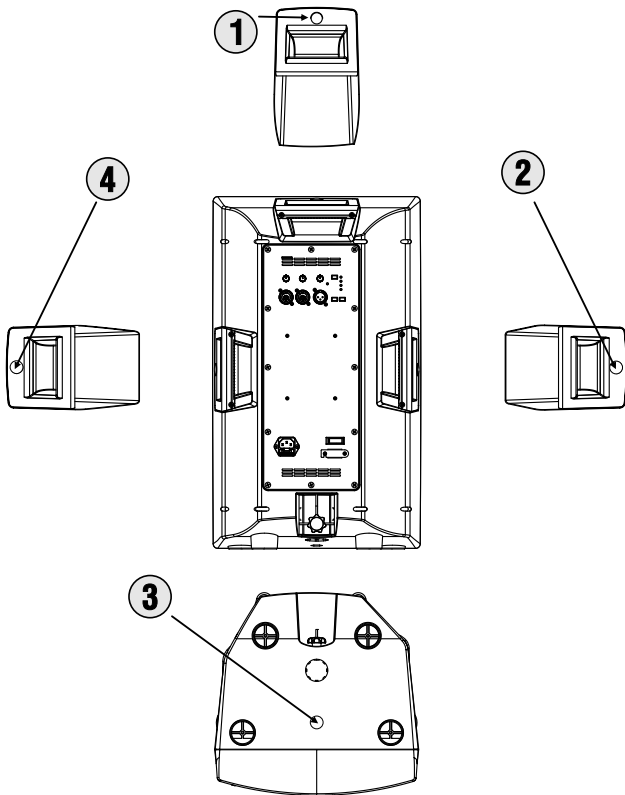
均衡器设置是有存储和切换使用的，每次断电之后，重新打开仍是之前设置好的均衡器，出厂设置时均衡器模式时音乐模式。

6: 选项设置：已提供接地开关，以减少与其他设备连接时接地回路的潜在问题。此控件将与“混合”一起使用  
使用标签logo控件可以打开/关闭音箱的logo照明



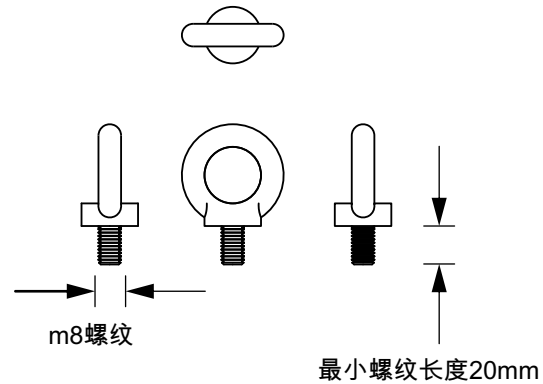
## 装配吊环螺栓

A: 要安装吊环螺栓，请首先找到并卸下四个保护性橡胶盖（如下所示的位置）。



B: 更换合适的吊环螺栓。确保螺纹完全插入到插件中。

请注意，用于悬挂系统的吊环螺栓必须制造适合的带肩配件。



DIY供应商通常提供的那种锻钢吊环螺栓不合适，并且在任何情况下都不应使用。

## 重点注意事项

**音箱支架：**不要过度伸展音箱支架/三脚架；确保至少支架孔内有至少4个孔位尺寸深度。确保腿在三脚架上有良好的张开，但不要阻塞门口或其他通道。确保音箱上的指旋螺钉已拧紧。

**悬挂：**音箱上装在m8安装点，用于安装或者悬挂音箱使用。

**备注：**音箱的悬挂只能有适当资格的专业人员执行，并遵守所有当地法律和使用认可的硬件。

如果您不具备资格，则将其交给有资格的人。否则可能会导致严重的人身伤害甚至死亡。

这些扬声器的索具安装或悬挂安装都可能使公众面临严重的健康风险甚至死亡。在任何情况下，除非您完全具备相关地方，州和国家有关部门的资格并得到认证，否则在任何情况下都不要尝试安装，悬挂或以其他方式安装该系统。必须遵守所有相关的安全规定。如果您没有适当的资格或不了解相关法规，请咨询合格的人员以寻求建议和帮助。



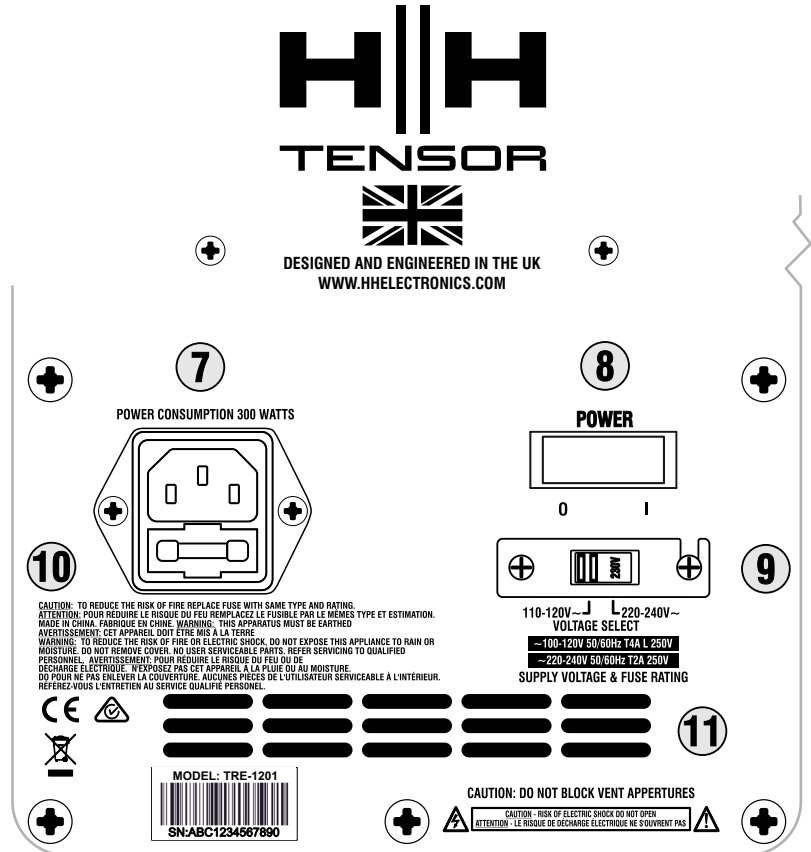
7:电源插座和保险丝：IEC输入，用于连接适当的电源线。只能使用后面板上指示的类型更换保险丝。

8:电源开关：打开和关闭音箱系统。确保在打开和关闭时将“音量”控件设置为最小。

9: 电压选择开关：选择正确的电压，但请在首次通电之前进行检查。如果电压设置不正确，可能会造成损坏。请参阅下面的详细信息

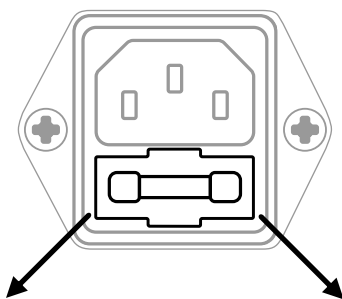
10: 信息：与放大器有关的区域：序列号，操作信息，额定功率等

11: 音箱通风口：这些对于放大器的寿命和可靠性至关重要-不要阻塞。控制面板顶部的通风口也是如此。



在继续以下操作之前，请关闭电源并断开电源线。

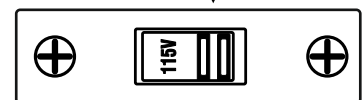
**更换保险丝**



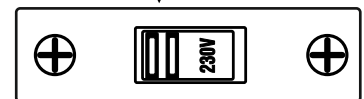
1. 滑出保险丝座托盘。
2. 只能更换与后面板上指定类型和额定功率相同的保险丝。

**电压选择**

110-120V 设定



220-240V 设定



使用合适的工具，将电压选择器开关滑至所需的工作电压。

~100-120V 50/60Hz T4A L 250V  
~220-240V 50/60Hz T2A 250V

电源电压和保险丝额定值



## 중요안전수칙

경고: 전기 제품을 사용하는 경우, 다음과 같은 기본적인 수칙을 항상 준수해야 합니다.

1. 지침을 읽으십시오.
2. 지침을 안전하게 보관하십시오.
3. 모든 경고에 유의하십시오.
4. 모든 지침을 따르십시오.
5. 이 제품을 물 근처에서 사용하지 마십시오.
6. 항상 마른 천으로 청소하십시오.
7. 통풍구를 막지 마십시오. 제조사의 지침에 따라 설치하십시오.
8. 난방기, 열 조절 장치, 스토브 또는 다른 장치(앰프 포함) 등 발열 근처에 설치하지 마십시오.
9. Class I 구조의 제품은 보호 커넥션과 함께 전원 콘센트에 연결해야 합니다. 유극 형 또는 접지 형 플러그의 안전수칙을 준수하십시오. 유극형 플러그는 다른 것보다 넓은 두 개의 날이 있습니다. 접지 형 플러그에는 두 개의 날과 세 번째 접지가닥이 있습니다. 넓은 날이나 세 번째 접지용 가닥은 사용자의 안전을 위해 제공됩니다. 제공된 플러그가 사용자의 콘센트와 맞지 않는 경우에는 전기 기술자에게 콘센트 교체를 문의하십시오.
10. 특히 플러그, 콘센트 및 기기에서 나오는 곳에서 전원모드가 밝히거나 꼬이는 것을 방지하십시오.
11. 제조사가 제공하는 부속 및 액세서리만을 사용하십시오.
12. 제조사가 지정한 카트, 스탠드, 삼각대, 받침대 또는 테이블 그리고 제품과 함께 판매된 것들만 사용하십시오. 카트를 제품과 함께 이동할 때 제품이 뒤집어져 부상을 당하지 않도록 카트 사용시 주의하십시오.
13. 전원 플러그나 기기용 커플러는 분리장치로 사용되며 즉시 작동할 수 있는 상태로 유지해야 합니다. 사용자는 모든 전원 플러그에 쉽게 접근이 가능해야 하며 전원 커플러와 전원 스위치가 이 유닛과 잘 결합하여 쉽게 작동해야 합니다. 천동번개나 장시간 사용하지 않을 경우 장치의 플러그를 뽑으십시오.
14. 자격을 갖춘 서비스 엔지니어에게 모든 서비스를 문의하십시오. 예를 들어 전원 공급 코드나 플러그가 손상되었거나 액체가 제품에 떨어진 경우, 제품에 비 또는 습기에 노출된 경우, 정상적으로 작동하지 않거나 제품을 떨어뜨린 경우에는 서비스가 필요합니다.
15. 그라운드 핀을 억지로 분리하지 마십시오. 전원코드에 인접한 장치에 표시된 유형의 전원에만 연결하십시오.
16. 이 제품을 장비선반에 올릴 경우 뒷면 지지대가 필요합니다.
17. 영국을 위한 노트: 전원 전선의 색상이 사용자 플러그의 터미널과 일치하지 않는다면 다음과 같이 진행하십시오.  
a) 녹색과 노랑색 와이어는 E라고 적힌 녹색이나 노랑색 터미널과 연결되어야 합니다.  
파란색 와이어는 N이라고 적힌 검은색 터미널과 연결되어야 합니다.  
갈색 와이어는 L이라고 적힌 빨간색 터미널과 연결되어야 합니다.
18. 이 전기 제품은 습기나 액체에 노출되지 않아야 하며, 액체를 포함하는 꽃병과 함께 위치하면 안됩니다.
19. 상당히 높은 노이즈 레벨에 노출되면 청력이 손상될 수 있습니다. 상당한 시간 동안 집중적인 노이즈에 노출되면 거의 모든 사람들이 청력을 상실할 수 있습니다.  
미국 정부의 산업안전보건관리 Occupational Safety and Health Administration (OSHA)는 다음과 같은 허용 소음 레벨을 지정하였습니다. OSHA에 따르면 위의 허용 한도를 초과하는 노출은 약간의 청력 손실이 발생할 수 있습니다. 이 앰프 시스템을 작동할 때 노출이 위 명시된 한계를 초과하는 경우, 영구적인 청력 손실을 방지하기 위해선 귀를 보호하기 위한 귀마개 등을 착용해야 합니다. 또한 높은 음압의 잠재적인 위험 노출에 대비하기 위해서는 앰프 같은 높은 음압을 낼 수 있는 기기가 작동되는 동안 귀 보호장비가 필요합니다.
20. 사용자의 주의가 필요한 제품 매뉴얼에서 사용되는 기호 및 명칭은 다음과 같습니다.

하루 평균시간	Sound Level dBA, slow response
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4이하	115



제품에 동봉된 'Dangerous Voltage'는 사람에게 전기적 충격의 위험을 경고하기 위한 것입니다.

제품에 주요 동작 및 유지 보수(서비스) 내용이 포함된 지침서는 사용자를 위한 것입니다.

감전위험- 열지 마십시오. 감전의 위험을 줄이기 위해 커버를 제거하지 마십시오. 자격을 갖춘 엔지니어에게 문의하십시오.

감전이나 화재의 위험을 방지하기 위해서 이 제품을 비나 습기에 노출시키지 마십시오. 이 제품을 사용하기 전에 사용설명서를 읽어보시기 바랍니다.



## 유저 인터페이스

1 & 2. INPUTS: 멀티콘 인풋은 XLR 과 1/4인치 잭 그리고 불규칙 신호들을 잡아줌.

주의: TRS의 스테레오 신호는 직접적으로 연결될 수 없습니다. 반드시 2개의 모노 커넥터로 연결 되어야함.

GAIN: 각 채널 레벨을 설정함

주의: 오디오 신호 설치 전에 GAIN 을 초소로 설정 하시오.

3. MASTER VOLUME: Tensor 시스템의 전반적 레벨을 조정함.

주의: 해당 기기의 전원을 On/Off 시에 항상 최소로 설정 하시오.

LIMIT: 텐서 캐비닛에는 출력 증폭기 또는 확성기의 과부하를 방지하기 위해 온보드 리미터가 장착되어 있다. 리미터가 활성화되면 리드가 켜진다. 리미트 리드선의 간헐적 깜박임은 허용되지만, 빈번하거나 연속적인 조명이 발생하는 경우 GAIN 또는 볼륨 컨트롤을 끄십시오.

4. MIX OUT: 두 번째 Tensor 택시, 액티브 웨지 모니터, 하우스 PA 또는 레코딩 콘솔을 연결하는 데 사용할 수 있는 신호 피드. Mix Out 신호 레벨은 메인 볼륨 컨트롤의 영향을 받지 않는다.

5. EQUALISATION: 4종류의 프리셋이 사용자의 편의를 위해 저장 되어있으며 모드 버튼으로 EQ 프리셋을 조정할 수 있음.

6. OPTION: 다른 장비에 연결할 때 접지 루프의 잠재적 문제를 줄이기 위해 접지 리프트가 제공되었다. 이 조정기는 믹스 아웃과 함께 사용해야 한다.

캐비닛 전면부의 로고등 은 로고 컨트롤 에서 켜거나 끌 수 있음.

MUSIC: 중저음에서 고음까지의 평탄한 응답을 제공하는 베이스 리프트입니다.

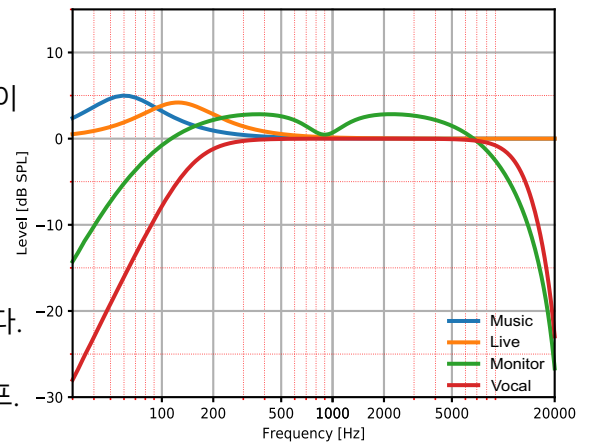
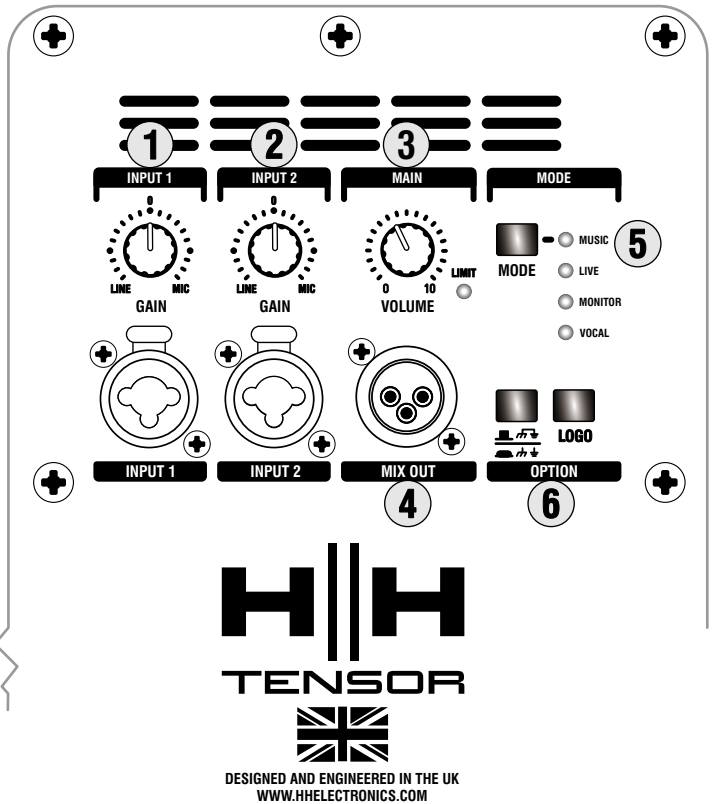
LIVE: LF 리프트 주파수가 이동된 'Music' 응답과 유사합니다.

MONITOR: 900Hz 부근에서 컷이 있는 LF 및 HF 롤오프.

VOCAL: 평평한 중음 및 고음 주파수가 있는 베이스 롤오프.

EQ 셋팅은 설정되어 배송되며, 종료시의 셋팅을 계속 유지함. 배송시 기본 설정은 MUSIC 셋팅임.

6. OPTION: 지면충격이나 타 기기와의 접촉면 문제 등으로 지면 리프트를 추가 가능합니다 유저 인터페이스



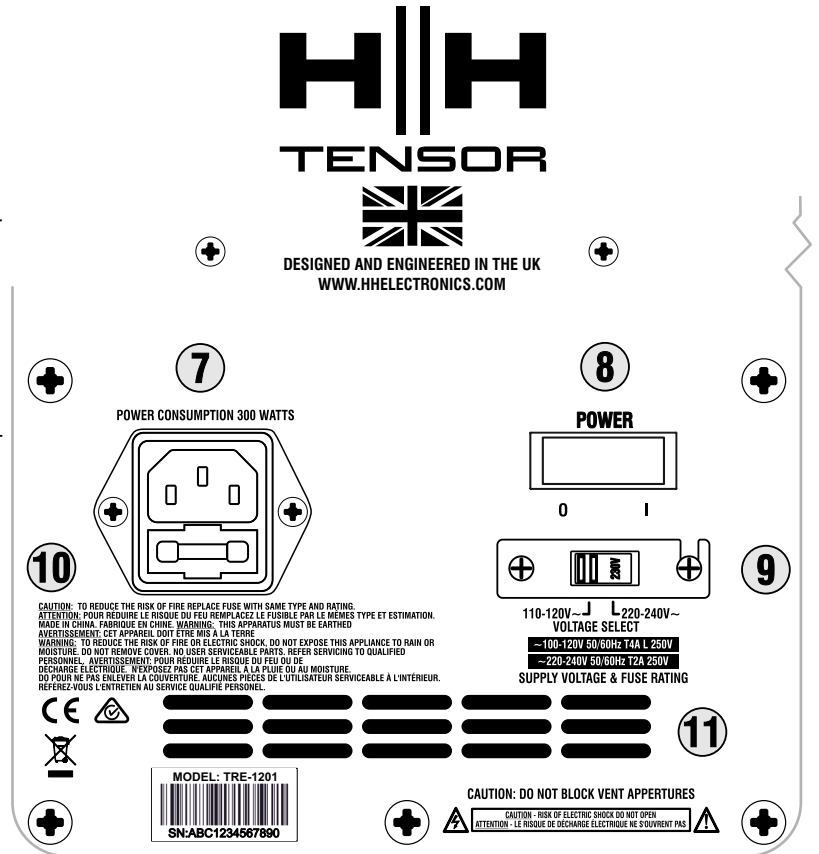
**7. MAINS INLET SOCKET AND FUSE:** 메인 리드 연결을 위한 IEC 입력. 퓨즈를 후면 패널에 표시된 유형으로만 교체하십시오

**8. MAINS SWITCH:** 시스템을 켜거나 끄. 작동할 때 볼륨게이지가 최하로 되어있는지 확인.

**9. VOLTAGE SELECT SWITCH:** 각 지역에 맞춰 그에 따른 설정을 하였지만 처음으로 전원을 켜기 전엔 Voltage setting 을 항상 확인하십시오. 전압 세팅이 잘못되어 있다면 기기의 데미지를 줄 수 있음. 더 자세한 정보를 위해 하기 내용을 확인하십시오.

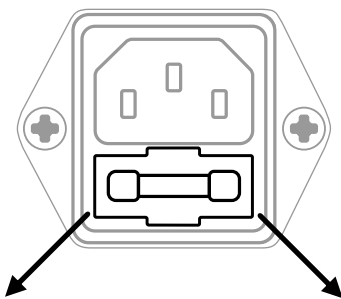
**10. INFORMATION:** 앰프 관련 시리얼 번호, 사용 설명 그리고 정격 전압 등.

**11. AIR VENTS:** 이곳은 앰프의 수명과 품질에 지대한 영향을 줌. 이곳을 막거나 하지마시오(컨트롤 패널 상부의 통풍구 포함).



전원을 종료하고 선을 제거 한 뒤 시작하십시오.

**퓨즈 교체**

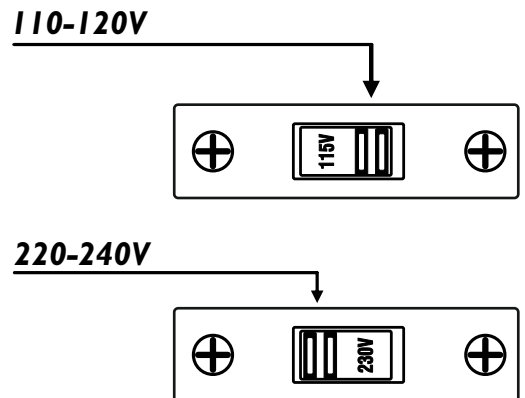


1. 퓨즈 홀더 트레이를 꺼냄
2. 전면 부 패널에 표기된 것과 같은 정격의 퓨즈만 교체하십시오.

~100-120V 50/60Hz T4A L 250V  
~220-240V 50/60Hz T2A 250V

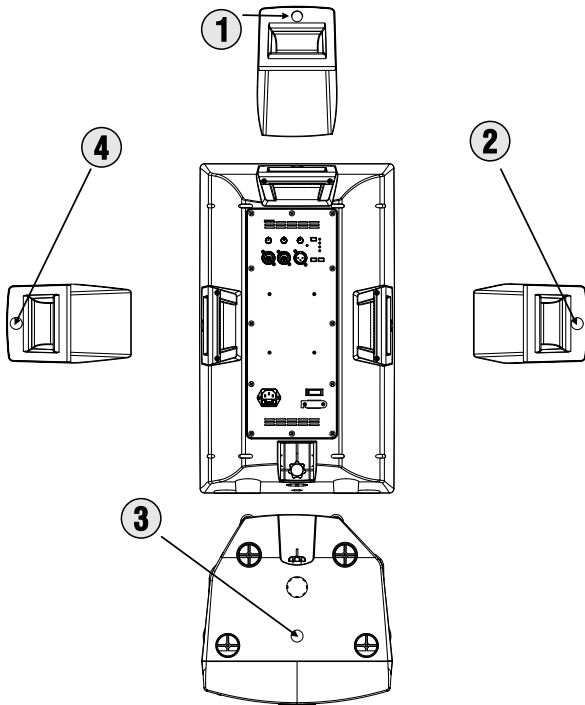
전압과 퓨즈 수치

**전압 선택**

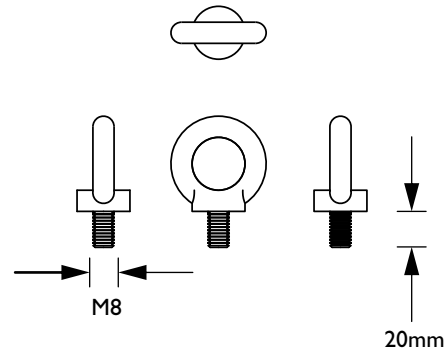


**FITTING EYE BOLT**

A: 아이볼트 설치 시 4방향의 고무캡을 먼저 제거 하시오.



B: 정품 아이볼트로 교체 후 끝까지 잠그시오.



**중요한**

**POLE MOUNT:** 폴/삼각형을 과도하게 확장하지 마십시오. 극 지름이 적어도 4배 이상 바깥쪽 폴 안에 있는지 확인 하십시오. 다리가 삼각대에 잘 맞는지 확인하고, 출입구나 다른 진입로를 방해하지 마십시오. 캐비닛의 엄지 나사가 단단히 조여져 있는지 확인하십시오.

**SUSPENDED:** Tensot 캐비닛은 M8 플라잉 포인트와 맞게 제작되어 있습니다

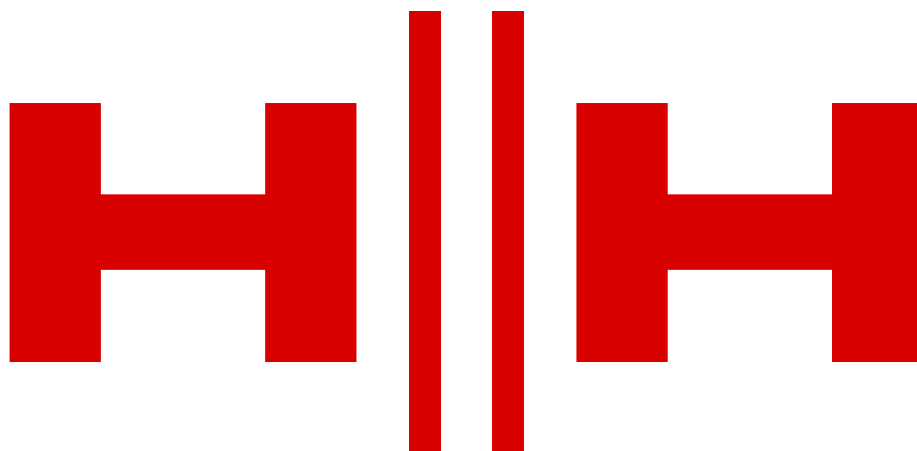
**Note:** 캐비닛의 플라잉 톨 설치하는 자격이 있는 사람의 설치가 기본이며 현지의 규정에 맞게 적절한 장비로 설치되어야 합니다.

비전문자가 설치한다면 큰 사고(사망) 까지 초래할 수 있음

이러한 스피커의 설치 또는 일시 중단은 일반 대중을 심각한 건강 위험 또는 심지어 죽음에 노출시킬 수 있다. 어떤 경우에도 관련 지역, 주 및 국가 기관에 의해 완전히 자격을 갖추고 인증되지 않은 경우 이 시스템을 조작, 일시 중단 또는 탑재하려고 시도하지 마십시오. 모든 관련 안전 규정을 준수해야 한다. 적절한 자격을 갖추지 못하거나 관련 규정을 모르는 경우, 자격을 갖춘 직원에게 조언과 도움을 요청하십시오.







**HHELECTRONICS**



**HHELECTRONICS**



**HHELECTRONICS**



**WWW.HHELECTRONICS.COM**

Model number:

Serial number:

Place of purchase:

Date of purchase: