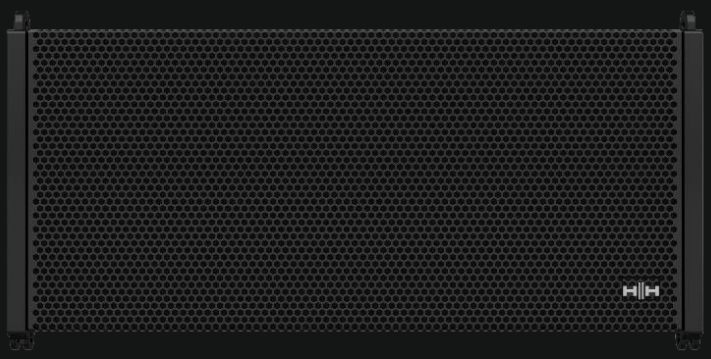

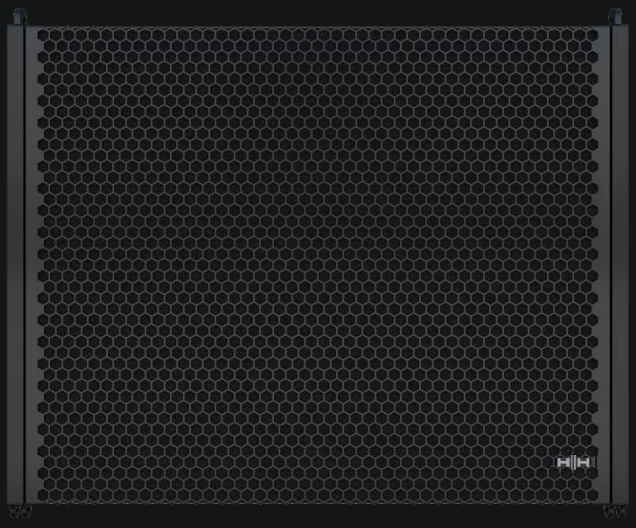

PRINCE

SERIES

LA10D & S18-H

User Manual

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Warning!

Please read this owner's manual carefully and keep it in a safe place for future reference.

HH Audio will not assume any responsibility for incorrect installation and/or use of this product.

Risk of Falling / Crushing Hazard: Loudspeakers can be heavy. Always use appropriate lifting techniques and handle with care. Avoid stacking units unless properly secured.

Use Only Approved Rigging Hardware: Always follow relevant standards such as (but not limited to) EN 60598-2-17, DIN 56950, and BGV C1, where applicable for flown or stage-mounted loudspeakers. If suspending or flying the loudspeaker, always use manufacturer-approved brackets, frames or rigging kits. Follow all local regulations (e.g. Machinery Directive 2006/42/EC, Regulation EU 2023/1230 or other applicable local laws).

OVERVIEW

The LA10D line array system consists of two 10-inch low-frequency units, which optimize the coupling characteristics between the units through symmetrical phase alignment technology to improve the efficiency and reliability of the system. A 3-inch magnesium alloy diaphragm high-frequency unit with an all-neodymium structure has extremely high conversion efficiency, transient and analytical power, and with HH phase plug technology, it achieves precise directivity control.

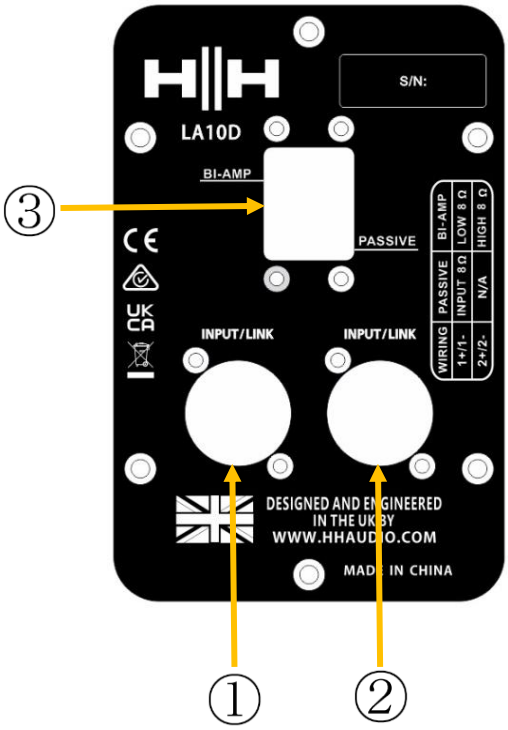
Better performance, greater practicality, designed to provide better speaker systems for theatres, auditoriums, and auditoriums.

S18-H is a mobile performance version, with hanging connectors on the cabinet, which can be used for hanging installation and connecting line array speakers, as an effective supplement to the low frequency of the prince linear array system, S18-H uses an 18-inch low-frequency unit reinforced by nano-coating, and the unit diaphragm has better rigidity, so that it can maintain low distortion in the state of high power and still have continuous energy output.

Applications and Uses:

- Portable sound reinforcement system
- Small-scale tours and concerts
- Small and medium-sized theatres and opera houses
- Medium chapel
- Small club
- Live music venue
- Corporate audiovisual events
- Medium-sized conference hall

LA10D Input Panel



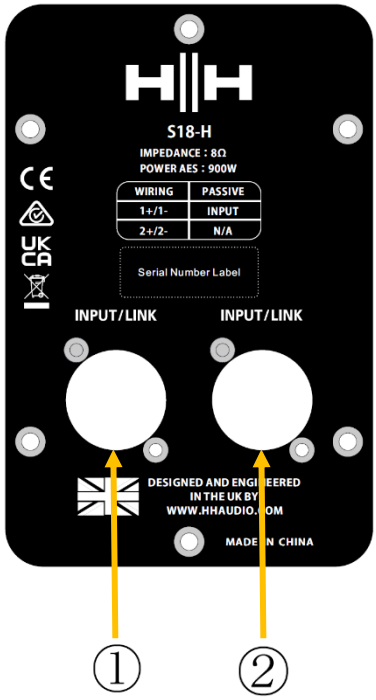
(1) Input Panel: Connected to the output of the power amplifier. Check the technical specifications of the amplifier to ensure its driving capabilities and output power are suitable. (NL4 Twist Lock Connector, **Bi-Amp Mode**: 1+/-: LF, 2+/-: HF; **PASSIVE mode**: 1+/-: FULL, 2+/-: N.A.).

(2) Link Interface: Connected in parallel with the INPUT connector, allowing additional cabinets to be added to the speaker chain. (NL4 Twist Lock Connector, **Bi-Amp Mode**: 1+/-: LF, 2+/-: HF; **Passive mode**: 1+/-: FULL, 2+/-: N.A.).

(3) Bi-Amp/Passive Switch:

1. **Bi-Amp:** Active two-way mode
2. **Passive:** Passive frequency division mode

S18-H Input Panel



(1) Input Panel: Connected to the output of the power amplifier. Check the technical specifications of the amplifier to ensure its driving capabilities and output power are suitable. (NL4 Twist Lock Connector, 1+/-:LF, 2+/-:N.A.).

(2) Link Panel: Connected in parallel with the INPUT connector, allowing additional cabinets to be added to the speaker chain. (NL4 Twist Lock Connector, 1+/-: LF, 2+/-: N.A.).

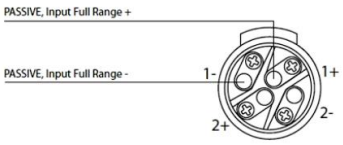
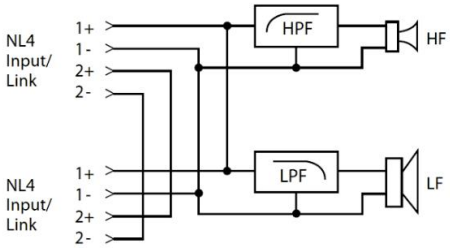
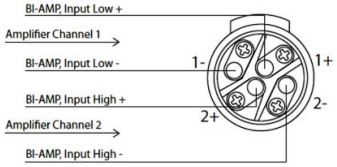
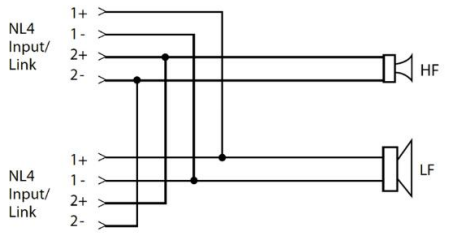
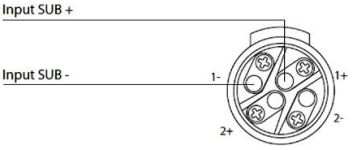
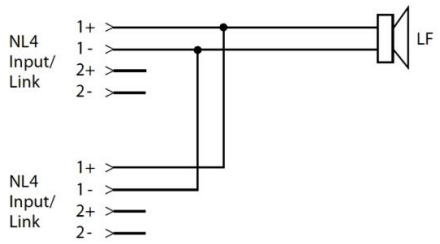
Amplifier Considerations

DSP Presets for LA10D and S18-H are available at hhaudio.com. There are a variety of configurations, with pre-programmed limiters, crossover points, correction component time alignment, and equalization to ensure optimal sound quality and long-term reliability. PRINCE ARRAY Series speaker cabinets should be driven by a high-quality power amplifier designed for true professional use. It is essential to avoid using an underpowered amplifier, as a severely clipped signal can cause permanent damage to the speaker. For the low- and mid-range segments of subwoofers, passive crossovers, and multi-channel active crossover speakers, the amplifier should be able to deliver twice the continuous rated power at the specified nominal impedance. For the high-frequency section of a multi-channel active crossover speaker, the amplifier should be able to deliver power equal to ten times the continuous rated power at the specified nominal impedance.

Type	LA10D (Bi-Amp Mode)	LA10D（Passive Mode)	S18-H
Impedance (Ω)	LF: 8Ω, HF: 16Ω	8Ω	8Ω
Power handling	LF: 600W continuous, 2400W peak HF: 75W continuous, 300W peak	675W continuous, 2700W peak	900W continuous, 3600W peak
Recommended amplifier power	LF: 1800W-2400W @ 4Ω HF: 225W-300W @ 4Ω	2100W-2700W @ 4Ω	1800W @ 8Ω

Note: Each amplifier channel powers 2 x LA10D or 1 x S18-H.

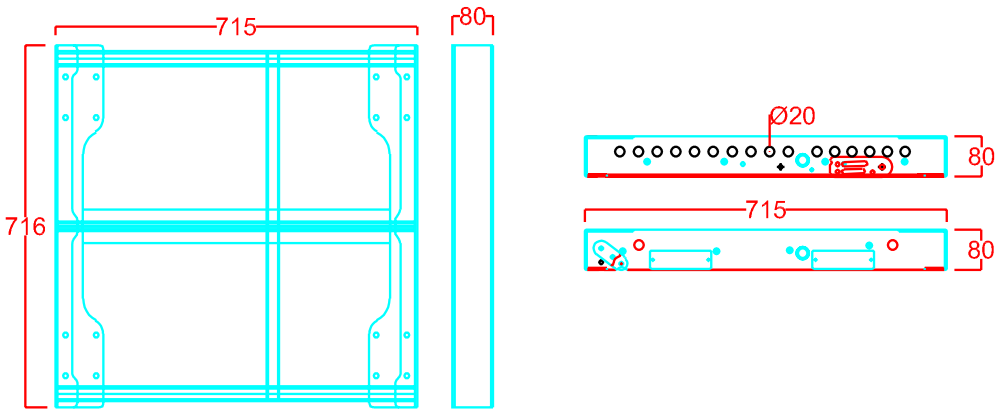
LA10D Connection Diagram

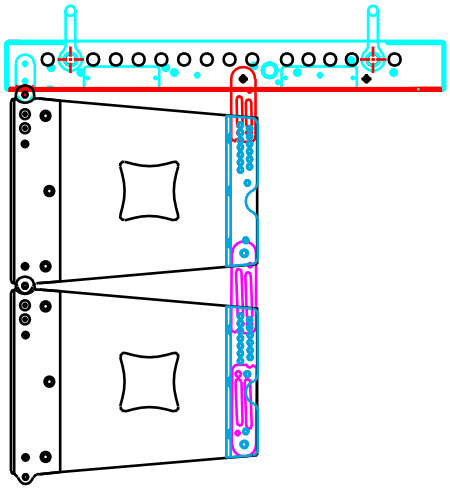
Model	Connector	Schematic
LA10D - Passive	speakON NL4 PASSIVE, Input Full Range + PASSIVE, Input Full Range - 	
LA10D - BI-AMP	speakON NL4 BI-AMP, Input Low + Amplifier Channel 1 BI-AMP, Input Low - BI-AMP, Input High + Amplifier Channel 2 BI-AMP, Input High - 	
S18-H	speakON NL4 Input SUB + Input SUB - 	

Flying Bracket

Safety Warning:

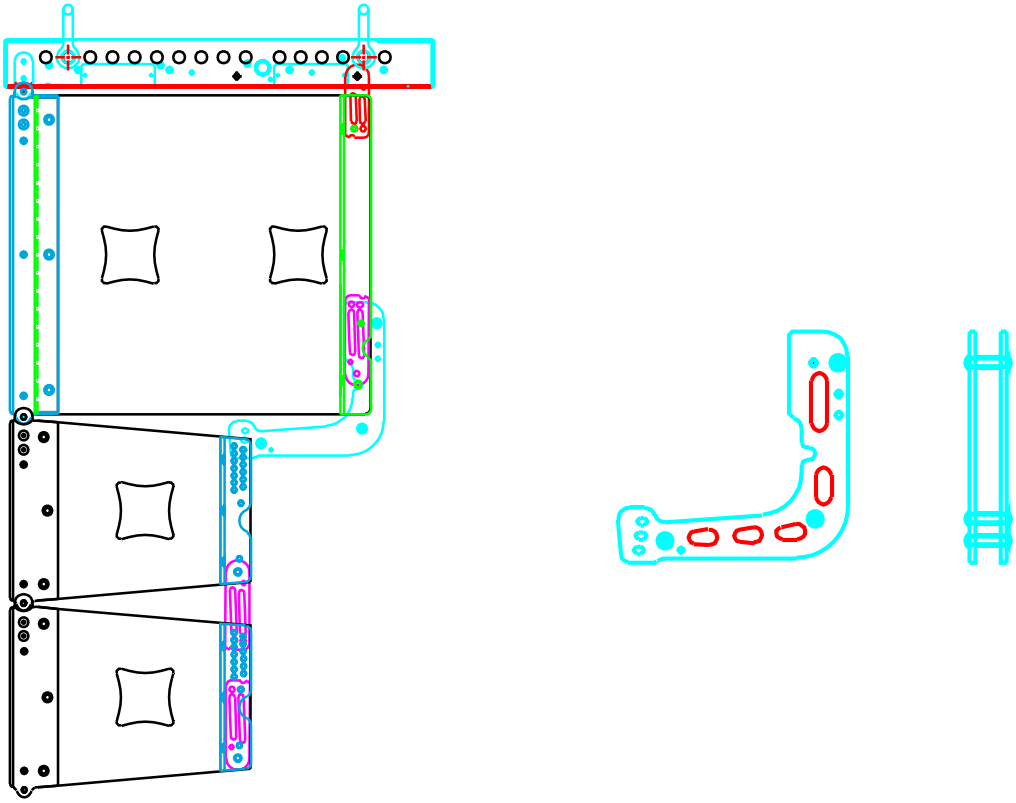
Only authorized and certified personnel should use the LA10D-S18-FLB hanger or purchase rigging and install suspension configurations from an official HH authorized party. Failure to follow these instructions can result in death or permanent injury.





The example shows 2 LA10D speaker arrays.

The LA10D-S18-FLB hanger is mounted on top.

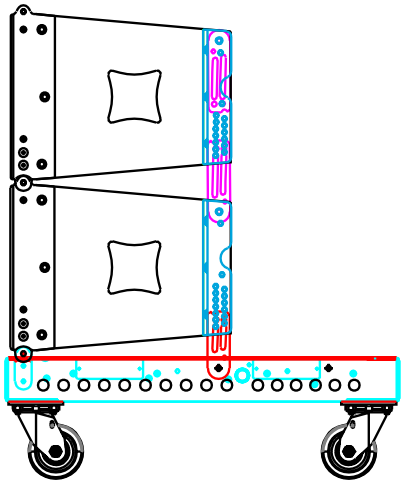


The example shows 2 LA10D and S18-H speaker arrays.

The LA10D-S18-FLB hanger is installed on the top, and the S18-H needs to be connected with a conversion connecting rod to fix the LA10D when it is used as the main crane.

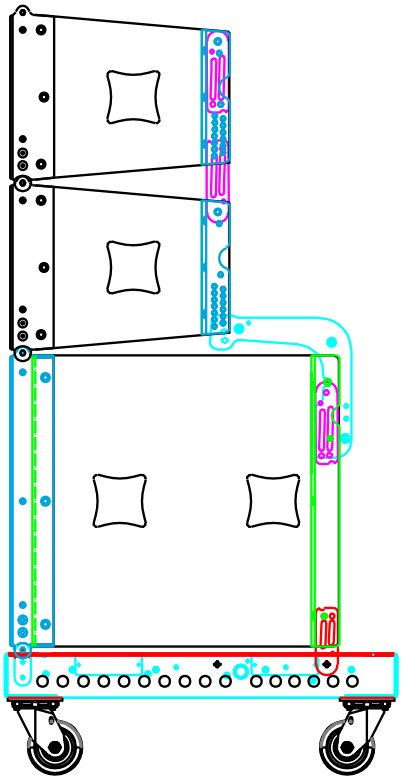
Ground stacking

Safety Warning: Only authorized and certified personnel may use the LA10D-S18-FLB flying bracket. The flying bracket must be purchased from an official HH dealer or distributor. Failure to follow these instructions can result in death or permanent injury.



The example shows 2 LA10D speaker arrays.

The LA10D-S18-FLB hanger is at the bottom, and casters can be installed under the LA10D-S18-FLB hanger to serve as a wheel truck.



The example shows 2 LA10D and S18-H speaker arrays.

The LA10D-S18-FLB hanger is installed at the bottom, and the S18-H needs to be connected with a conversion link to fix the LA10D when it is used as the bottom, and the casters under the LA10D-S18-FLB hanger can be used as a wheel truck.

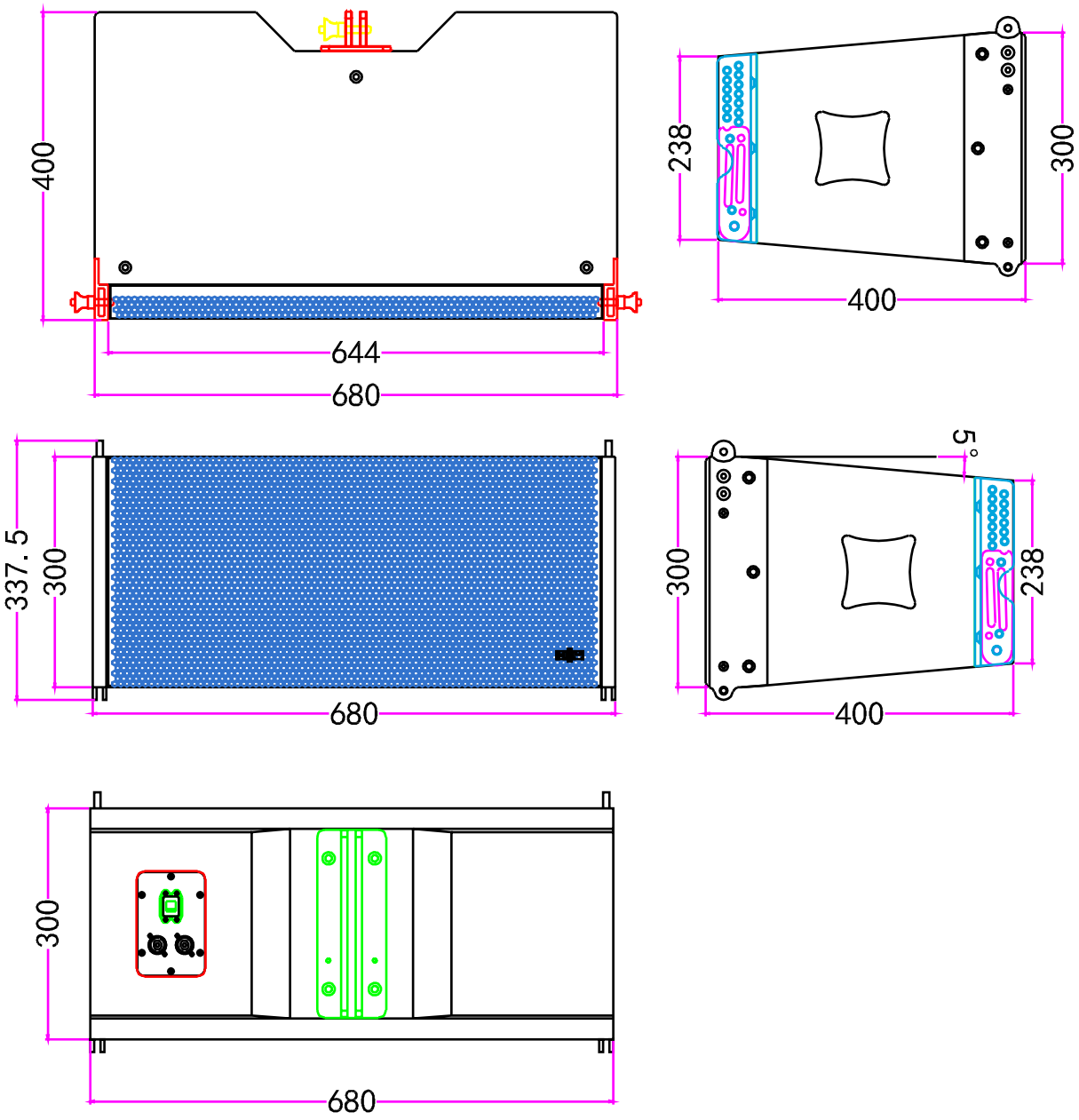
Specifications

LA10D	
Drive unit	2×10" low-frequency driver, 1×3" high-frequency compression driver
Drive mode	Two-channel drive or single-channel drive (Switchable)
Frequency response	61Hz–20kHz (±3dB) 52Hz–21kHz (-10dB)
Horizontal Coverage Angle	90°
Vertical Coverage Angle	10°
Power	Bi-amp mode: LF: 600W continuous, 2400W peak, HF: 75W continuous, 300W peak Passive mode: 675W continuous, 2700W peak
Maximum SPL	131dB continuous, 137dB peak
Sensitivity	LF:102dB (1W@1m), HF:112dB (1W@1m)
Nominal impedance	Bi-amp: LF:8Ω, HF: 16Ω Passive: 8Ω
Flying Bracket	LA10D-S18-FLB
Connectors	2 x speakON NL4
Dimensions (H/W/D)	300×680×400mm
Weight	31kg

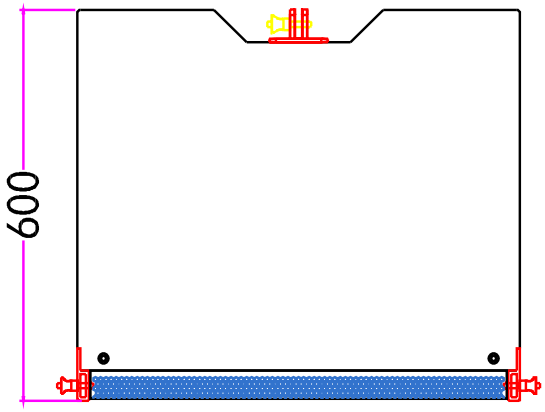
S18-H	
Drive unit	1×18" low-frequency driver
Drive mode	Single-channel drive
Frequency Response	39Hz–290Hz (±3dB) 31Hz–350Hz (-10dB)
Power	900W Continuous, 3600W Peak
Maximum SPL	132dB Continuous, 138dB Peak
Sensitivity	102dB (1W@1m)
Nominal impedance	8Ω
Flying Bracket	LA10D-S18-FLB
Connectors	2 x speakON NL4
Dimensions (H/W/D)	530×680×600mm
Weight	41kg

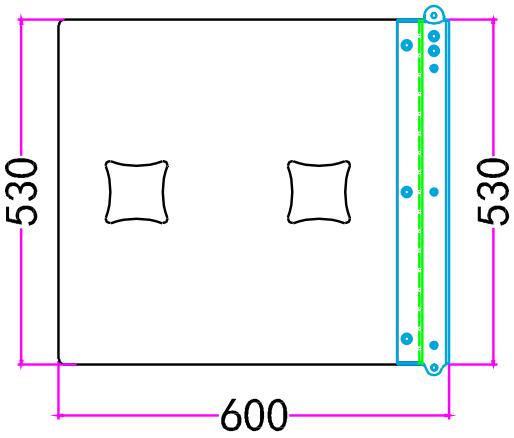
Dimensions

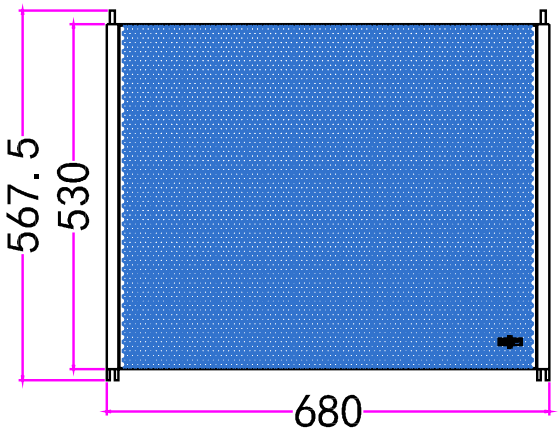
LA10D

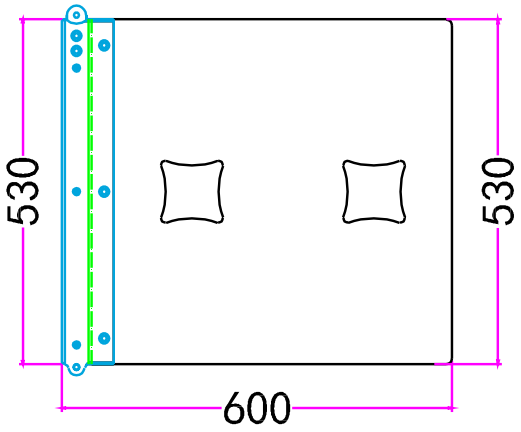


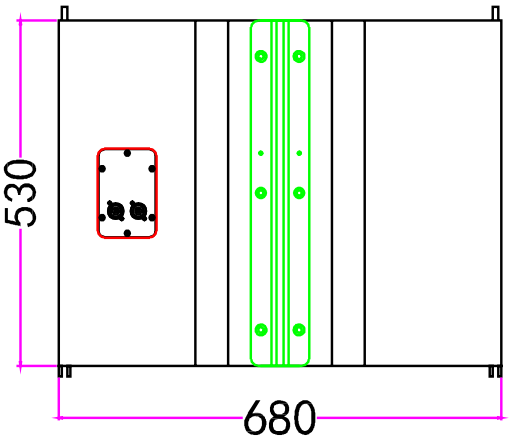
S18-H











SAFETY AND WARNINGS

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

1) Unpacking: On unpacking your product, please check carefully for any signs of damage that may have occurred whilst in transit from the HH factory to your dealer. In the unlikely event that there has been damage, please re-pack your unit in its original carton and consult your dealer. We strongly advise you to keep your original transit carton, since in the unlikely event that your unit should develop a fault, you will be able to return it to your dealer for rectification securely packed.
2) Amplifier Connection: To avoid damage, generally it is advisable to establish and follow a pattern for turning on and off your system. With all system parts connected, turn on source equipment, mixers, effects processors etc, BEFORE turning on your amplifier. Many products have large transient surges at turn on and off which can cause damage to your speakers. By turning on your amplifier LAST and making sure its level control is set to a minimum, any transients from other equipment should not reach your loudspeakers. Wait till all system parts have stabilised, usually a couple of seconds. Similarly, when turning off your system always turn down the level controls on your amplifier and then turn off its power before turning off other equipment.
3) Cables: Only use appropriately rated speaker 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.
5) Heed all warnings.
6) Follow all instructions.
7) Avoid Contact with Water: Do not expose this apparatus to rain, liquids, or excessive moisture unless rated for outdoor use (e.g. IP-rated enclosures).
8) Clean only with a dry cloth.
9) Do not block any of the ventilation openings. Install in accordance with manufacturer's instructions.
10) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
11) Only use attachments/accessories provided by the manufacturer.
12) Risk of Falling / Crushing Hazard: Loudspeakers can be heavy. Always use appropriate lifting techniques and handle with care. Avoid stacking units unless properly secured.
13) Use Only Approved Rigging Hardware: Always follow relevant standards such as (but not limited to) EN 60598-2-17, DIN 56950, and BGV C1, where applicable for flown or stage-mounted loudspeakers. If suspending or flying the loudspeaker, always use manufacturer-approved brackets, frames or rigging kits. Follow all local regulations (e.g. Machinery Directive 2006/42/EC, Regulation EU 2023/1230 or other applicable local laws).
14) Surface Placement: Ensure the loudspeaker is placed on a level and stable surface. Do not place on elevated platforms or shelves where vibration could cause movement or falls.
15) 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.
16) Exposure to extremely high noise levels may cause a permanent hearing loss. Individuals vary considerably in susceptibility to noise-induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a sufficient time. The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the following permissible noise level exposures: According to OSHA, any exposure more than the above permissible limits could result in some hearing loss. Earplugs or protectors to the ear canals or over the ears must be worn when operating this amplification system to prevent a permanent hearing loss, if exposure is more than the limits as set forth above. To ensure against potentially dangerous exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of producing high sound pressure levels such as this amplification system be protected by hearing protectors while this unit is in operation.

Duration Per Day in Hours	Sound Level dBA, slow response
8	90
6	92
4	95
3	97
2	100
1 ½	102
1	105
½	110
¼ ou inférieur	115

In the EU, exposure is regulated under Directive 2003/10/EC. Prolonged exposure above 85 dB(A) can cause hearing damage. Hearing protection must be used when operating equipment capable of producing high sound pressure levels.
In the UK, the Control of Noise at Work Regulations 2005 apply.
Use hearing protection when operating loudspeakers at high volumes.
17) Always keep speaker output levels within safe exposure limits.
18) 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.
19) Surface Placement: Ensure the loudspeaker is placed on a level and stable surface. Do not place on elevated platforms or shelves where vibration could cause movement or falls.
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:

CAUTION:	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 utilisé pur indiquer a l'utilisateur de ce produit de tension non-isolée dangereuse pouvant être d'intensité suffisante pour constituer un risque de choc électrique. Este símbolo tiene el propósito de alertar al usuario de la presencia de '(voltaje) peligroso' que no tiene aislamiento dentro de la caja del producto que puede tener una magnitud suficiente como para constituir riesgo de corrientazo. Dieses Symbol soll den Anwender vor unisolierten gefährlichen Spannungen innerhalb des Gehäuses warnen, die von ausreichender Starke sind, um einen elektrischen Schlag verursachen zu können.
WARNING:	Intended to alert the user of the presence of important operating and maintenance (Servicing) instructions in the literature accompanying the product. Destiné à alerter l'utilisateur de la présence d'instructions importantes d'exploitation et de maintenance (entretien) dans la documentation accompagnant le produit. Este símbolo tiene el propósito de la alertar al usuario de las presencias de instrucciones importantes sobre la operación y mantenimiento en la literatura que viene con el producto. Dieses Symbol soll den Benutzer auf wichtige Instruktionen in der Bedienungsanleitung aufmerksam machen, die Handhabung und Wartung des Produkts betreffen.
CAUTION: ATTENTION : PRECAUCION: VORSICHT:	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. Risques de choc électrique - NE PAS OUVRIR. Afin de réduire le risque de choc électrique, ne pas enlever le couvercle. Il ne se trouve a l'intérieur aucune pièce pouvant être réparée par l'utilisateur. Confier l'entretien a un personnel qualifié. Riesgo de descarga eléctrica - NO ABRIR. Para reducir el riesgo de descarga eléctrica, no quite la cubierta. No hay piezas reparables por el usuario en el interior. Remita el servicio a personal calificado. Risiko - Elektrischer Schlag! Nicht offen! Um das Risiko eines elektrischen Schlages zu vermeiden, nicht die Abdeckung entfernen. Es befinden sich keine Teile darin, die vor Anwender repariert werden konnten. Reparaturen nur von qualifiziertem Fachpersonal durchführen lassen.
WARNING: ADVERTISSEMENT : ADVERTENCIA: ACHTUNG:	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. Afin de prévenir les risques de décharge électrique ou de feu, n'exposez pas cet appareil a la pluie ou a l'humidité. Avant d'utiliser cet appareil, lisez les avertissements supplantais situes dans le guide. Para evitar descargas eléctricas o peligro de incendio, no exponga este aparato a la lluvia ni a la humedad. Antes de usar este aparato, lea las instrucciones de funcionamiento para conocer más advertencias. Um einen elektrischen Schlag oder Feuergefahr zu vermeiden, sollte dieses Gerat nicht dem Regen oder Feuchtigkeit ausgesetzt werden. Vor Inbetriebnahme unbedingt die Bedienungsanleitung lesen.
FC	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 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.
CE	Declaration of Conformity (Simplified) This product conforms to the requirements of the following European Regulations, Directives & Rules: CE Mark (93/68/EEC), RoHS (2011/65/EU), General Product Safety Directive (2001/95/EC), WEEE Directive (2012/19/EU) Full text of the EU declaration of conformity is available at the following internet address: http://support.hhaudio.com/approvals
UK CA	The object of the declaration described above is in conformity with the relevant statutory requirement Electrical Equipment (Safety) Regulations 2016, Electromagnetic Compatibility Regulations 2016, The Restriction of the use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012, The Ecodesign for Energy-Related Products and Energy Information, (Amendment) (EU Exit) Regulations 2012
	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.

HH AUDIO
STEELPARK ROAD, COOMBSWOOD BUSINESS PARK WEST, HALESOWEN, B62 8HD
HH AUDIO PART OF HEADSTOCK GROUP
FOR THE LATEST INFORMATION PLEASE VISIT

WWW.HHAUDIO.COM

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