Manual de Usuario / User's Manual

avant series

Antes de utilizar el equipo, lea la sección "Precauciones de seguridad" de este manual. Conserve este manual para futuras consultas.

Before operating the device, please read the "Safety precautions" section of this manual. Retain this manual for future reference.

avant

avant series

Precauciones de Seguridad
Safety Precautions

Cajas acústicas activas / Self-powered loudspeaker enclosures

El signo de exclamación dentro de un triángulo indica la existencia de importantes instrucciones de operación y mantenimiento en la documentación que acompaña al producto. Conserve y lea todas estas instrucciones. Siga las advertencias.
ATENCIÓN: Es un producto clase A, por lo que en entornos domésticos puede causar radio-interferencias, en cuyo caso el usuario tendrá que tomar las medidas oportunas.
De acuerdo con EN55103-2, usar el equipo sólo en entornos E1, E2, E3 ó E4.

The exclamation point inside an equilateral triangle is intended to alert the users to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product. Heed all warnings. Follow all instructions. Keep these instructions.
WARNING: This is a class A product. In a domestic environment this product my cause radio interferences in which case the user may be required to take adequate measures.
Use this product only in E1, E2, E3 or E4 environments according to EN55103-2.

No desconecte la tierra en el conector de alimentación pues el peligroso e ilegal. Equipo de Clase I.

Do not remove mains connector ground, it is dangereous and illegal. Class I device.

El signo del rayo con la punta de flecha, alerta contra la presencia de voltajes peligrosos no aislados. Para reducir el riesgo de choque eléctrico, no retire la cubierta.
Sólo use este equipo con el cable de red de alimentación adecuado para su país.

The lightning and arrowhead symbol warns about the presence of uninsulated dangerous voltage. To reduce the risk of electric shock, do not remove the cover.
Only use this equipment with an appropriate mains cord for your country.

No instale el aparato cerca de ninguna fuente de calor como radiadores, estufas u otros aparatos que produzcan calor. Debe instalarse siempre sin bloquear la libre circulación de aire por las aletas del radiador.

Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus that produce heat.
The circulation of air through the heatsink must not be blocked.

No exponga este equipo a la lluvia o humedad. No use este aparato cerca del agua (piscinas y fuentes, por ejemplo). No exponga el equipo a salpicaduras ni coloque sobre él objetos que contengan líquidos, tales como vasos y botellas. Equipo IP-20.

Do not expose this device to rain or moisture. Do not use this apparatus near water (for example, swimming pools and fountains). Do not place any objects containing liquids, such as bottles or glasses, on the top of the unit. Do not splash liquids on the unit. IP-20 equipment.

Este símbolo indica que el presente producto no puede ser tratado como residuo doméstico normal, sino que debe entregarse en el correspondiente punto de recogida de equipos eléctricos y electrónicos.

This symbol on the product indicates that this product should not be treated as household waste. Instead it shall be handed over to the appicable collection point for the recycling of electrical and electronic equipment.

Equipo diseñado para funcionar entre 15ºC y 42ºC con una humedad relativa máxima del 95%, con un rango de ±10% de la tensión nominal de alimentación indicada en la etiqueta trasera (según IEC 60065:2001).

Working temperature ranges from 15ºC to 42ºC with a relative humidity of 95%, with ±10% of the rated main voltage value indicated on the rear label (according to IEC 60065:2001).

El cableado exterior conectado al equipo requiere de su instalación por una persona instruida o el uso de cables flexibles ya preparados.

The outer wiring connected to the device requires installation by an instructed person or the use of a flexible cable already prepared.

Si el aparato es conectado permanentemente, la instalación eléctrica del edificio debe incorporar un interruptor multipolar con separación de contacto de al menos 3mm en cada polo.

If the apparatus is connected permanently, the electrical system of the building must incorporate a multipolar switch with a separation of contact of at least 3mm in each pole.

Desconecte este aparato durante tormentas eléctricas, terremotos o cuando no se vaya a emplear durante largos periodos.

Unplug this apparatus during lightning storms, earthquakes or when unused for long periods of time.

No emplace altavoces en proximidad a equipos sensibles a campos magnéticos, tales como monitores de televisión o material magnético de almacenamiento de datos.

Do not place loudspeakers in proximity to devices sensitive to magnetic fields such as television monitors or data storage magnetic material.

El colgado del equipo sólo debe realizarse utilizando los herrajes de colgado recomendados y por personal cualificado. No cuelgue la caja de las asas.
Para las cajas con vaso para trípode, la altura máxima de seguridad desde el suelo a la base de la caja montada sobre trípode modelo ***TRD-2*** con pies a su máxima extensión es:

The appliance should be flown only from the rigging points and by qualified personnel. Do not suspend the box from the handles.
For enclosures with tripod socket, maximum safety height from floor to bottom of enclosure when mounting on a ***TRD-2*** tripod with legs fully open:

***avant** 12A* ---------->115 cm
***avant** 15A* ---------->105 cm

***avant** 12A* ---------->115 cm
***avant** 15A* ---------->105 cm

No existen partes ajustables por el usuario en el interior de este equipo. Cualquier operación de mantenimiento o reparación debe ser realizada por personal cualificado. Es necesario el servicio técnico cuando el equipo se haya dañado de alguna forma, como que haya caído líquido o algún objeto en el interior del aparato, haya sido expuesto a lluvia o humedad, no funcione correctamente, haya recibido un golpe o su cable de red esté dañado.

No user serviceable parts inside. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally or has been dropped.

Limpie con un paño seco. No use limpiadores con disolventes.

Clean only with a dry cloth. Do not use any solvent based cleaners.

La reventa del producto sólo es posible incluyendo el manual de usuario. Cualquier cambio producido en el producto tiene que ser documentado por escrito y aprobado por el comprador en el momento de la reventa.

Reselling of the product is only possible if the user manual is available. Any changes made to the product have to be documented in writing and passed on to the buyer in the event of resale.

GARANTÍA

Todos nuestros productos están garantizados por un periodo de 24 meses desde la fecha de compra.

Las garantías sólo serán válidas si son por un defecto de fabricación y en ningún caso por un uso incorrecto del producto.

Las reparaciones en garantía pueden ser realizadas, exclusivamente, por el fabricante o el servicio de asistencia técnica autorizado.

Otros cargos como portes y seguros, son a cargo del comprador en todos los casos.

Para solicitar reparación en garantía es imprescindible que el producto no haya sido previamente manipulado e incluir una fotocopia de la factura de compra.

WARRANTY

All D.A.S. products are warrantied against any manufacturing defect for a period of 2 years from date of purchase.

The warranty excludes damage from incorrect use of the product.

All warranty repairs must be exclusively undertaken by the factory or any of its authorised service centers.

To claim a warranty repair, do not open or intend to repair the product.

Return the damaged unit, at shippers risk and freight prepaid, to the nearest service center with a copy of the purchase invoice.

DECLARACIÓN DE CONFORMIDAD
DECLARATION OF CONFORMITY

D.A.S. Audio, S.A.
C/ Islas Baleares, 24 - 46988 - Pol. Fuente del Jarro - Valencia. España (Spain).

Declara que serie ***avant***:
Declares that ***avant*** series:

Cumple con los objetivos esenciales de las Directivas:
Abide by essential objectives relating Directives:

- Directiva de Baja Tensión (Low Voltage Directive) 2006/95/CE
- Directiva de Compatibilidad Electromagnética (EMC) 2004/108/CE
- Directiva RoHS 2002/95/CE
- Directiva RAEE (WEEE) 2002/96/CE

Y es conforme a las siguientes Normas Armonizadas Europeas:
In accordance with Harmonized European Norms:

- EN 60065:2002 Audio, video and similar electronic apparatus. Safety requirements.
- EN 55103-1:1996 Electromagnetic compatibility. Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use. Part 1:Emission.
- EN 55103-2:1996 Electromagnetic compatibility. Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use. Part 2:Immunity.

Ref. Certif. No.

KR-KETI0912

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE CERTIFICATS D'ESSAIS DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE
CERTIFICAT D'ESSAI OC

Product Produit	**Subwoofer Amplifier**
Name and address of the applicant Nom et adresse du demandeur	**Elytone Electronic Co., Ltd.** 218, Sec. 2, Chung Cheng Road, San-Hsia 23742, Taipei Hsien, Taiwan.
Name and address of the manufacturer Nom et adresse du fabricant	**D.A.S. AUDIO, S.A.** C/ Islas Baleares, 24 46988 Fuente Del Jarro – Valencia Spain
Name and address of the factory Nom et adresse de l'usine	**D.A.S. AUDIO, S.A.** C/ Islas Baleares, 24 46988 Fuente Del Jarro – Valencia Spain
Ratings and principal characteristics Valeurs nominales et caractéristiques principales	**115/230 V~, 50/60 Hz, 800 W**
Trademark (if any) Marque de fabrique (si elle existe)	Trademark of
Model / Type Ref. Ref. De type	**AVANT-18A**
Additional information (if necessary) Information complémentaire (si nécessaire)	
	PUBLICATION **EDITION**
A sample of the product was tested and found to be in conformity with Un échantillon de ce produit a été essayé et a été considéré conforme à la	IEC 60065_2001 / EN 60065_2002
As shown in the Test Report Ref. No. which forms part of this Certificate Comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat	W09-65-009

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme **National de Certification**

KETI-Korea Electric Testing Institute
692-8 Kumjung-dong, Kunpo-city, Kyunggi-do, 435-050 Korea

Date: 2009-07-02

Signature: Dong-In Youk

KETI

CB TEST CERTIFICATE

Ref. Certificate No.
BE-2025

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

Issued by:	SGS Belgium NV - Division SGS CEBEC		
Product:	Self-powered loudspeaker cabinets		
Applicant:	D.A.S. Audio S.A.	Islas Baleares, 24 46988 FUENTE DEL JARRO. VALENCIA	Spain
Manufacturer:	D.A.S. Audio S.A.	Islas Baleares, 24 46988 FUENTE DEL JARRO. VALENCIA	Spain
Factory:	D.A.S. Audio S.A.	Islas Baleares, 24 46988 FUENTE DEL JARRO. VALENCIA	Spain
Rating and principal characteristics:	50/60 Hz, audio amplifier 500W LF + 100W HF, 115 VAC/230 VAC, 4A/2A, insulation class I		
Trade mark (if any):	D.A.S.		
Model/Type reference:	AERO-12A, AVANT 12A, AVANT 15A, AVANT 215A		
Additional information:	/		
Sample of product tested to be in conformity with IEC:	60065(ed.7);am1	National differences: EU Special National Conditions; AU; CA; DE; DK; FI; GB; IE; IT; KR; NO; NZ; SE; US	
Test Report Ref. No:	585020.01		

This CB Test Certificate is issued by the National Certification Body:

SGS Belgium NV - Division SGS CEBEC
Business Riverside Park, Avenue Internationalelaan 55 Build. D B - 1070
Brussels, Belgium

Signed by: Calogero LANA

Date of issue: 2009-07-24

1/1

CONTENTS

INTRODUCTION

General information

Thank you for purchasing a D.A.S. product. This product represents more than 30 years of expertise in transducer and enclosure design, achieving a series of systems that utilize the most advanced sound reinforcement technology to deliver outstanding audio performance and maximum reliability.

This manual contains the required information to make the best use of the system you have purchased. Please take the time to read it.

Our Web ***www.dasaudio.com*** contains further support information such as enclosure and system drawings, data for modelling software, architectural specifications and specification sheets.

AMPLIFIER DESCRIPTION

avant 12A **amplifier**

1) INPUT :

1/4" Jack+XLR combined socket-type input signal connector. This is a balanced connector just like the LOOP THRU connector with the following pin assignments:

1 or S =GND (ground).
2 or T =(+) Non inverted input.
3 or R =(-) Inverted input.

2) LOOP THRU :

XLR-type output signal connector for connecting several units together and sending them all the same signal.

3) LIMIT :

Red LED indicates amplifier saturation. Amplifier limiter indicator lights.

4) SIGNAL :

Green LED indicates signal presence.

5) ON :

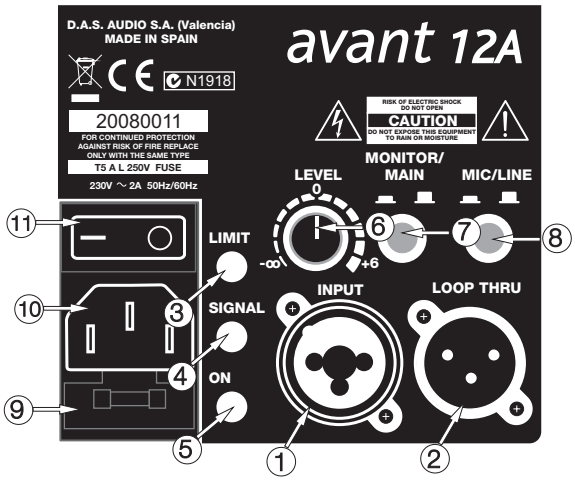
Green LED indicates that the unit is ON (other blue LED at the unit front indicates ON).

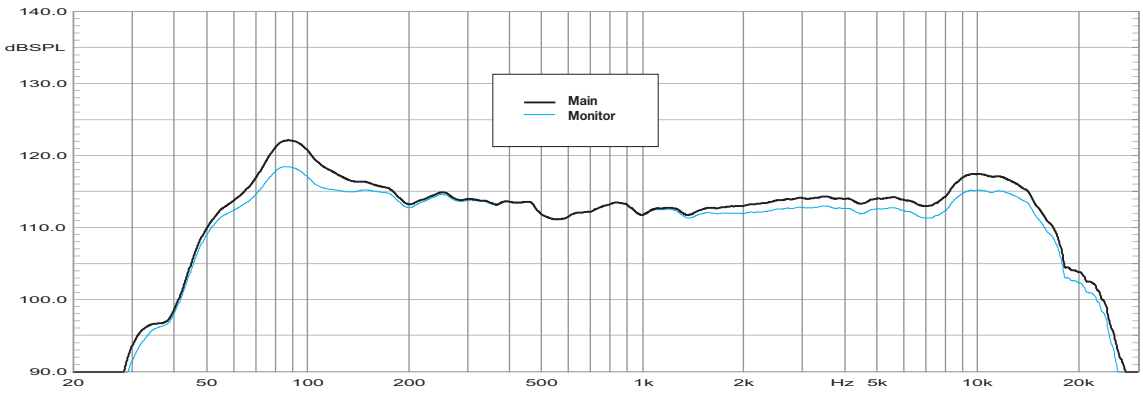
6) LEVEL :

Potentiometer for adjusting the unit level.

7) MONITOR/MAIN :

Button for switching between two types of frequency response (see graphs). Press the button to use the unit as a stage monitor.





8) MIC/LINE :

Button for switching between microphone and line sensitivities. **NEVER PRESS THIS BUTTON WITHOUT FIRST REDUCING THE LEVEL OF THE UNIT TO AVOID EXTREMELY HIGH SPL.**

9) FUSE :

Fuse holder. Use only the recommended fuse type and size.

10) AC INPUT :

Standard IEC-60320 mains connector. **Only use this equipment with an appropriate mains cord.**

avant 15A & *avant 215A* **amplifier**

1) INPUT :

1/4" Jack+XLR combined socket-type input signal connector. This is a balanced connector just like the LOOP THRU connector with the following pin assignments:

1 or S =GND (ground).
2 or T =(+) Non inverted input.
3 or R =(-) Inverted input.

2) LOOP THRU :

XLR-type output signal connector for connecting several units together and sending them all the same signal.

3) LIMIT :

Red LED indicates amplifier saturation. Amplifier limiter indicator lights.

4) SIGNAL :

Green LED indicates signal presence.

5) ON :

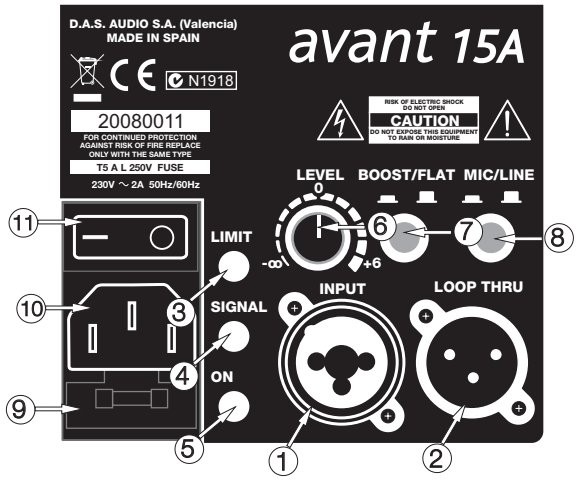
Green LED indicates that the unit is ON (other blue LED at the unit front indicates ON).

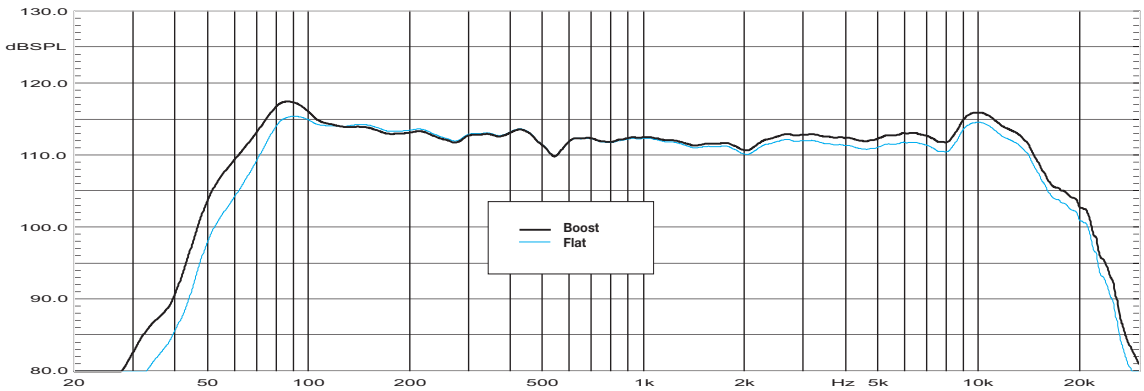
6) LEVEL :

Potentiometer for adjusting the unit level.

7) BOOST/FLAT :

Button for switching between two types of frequency response (see graphs). Press the button to use the unit without subwoofer. Please note that the unit will therefore reach its limits sooner.





8) MIC/LINE :

Button for switching between microphone and line sensitivities. **NEVER PRESS THIS BUTTON WITHOUT FIRST REDUCING THE LEVEL OF THE UNIT TO AVOID EXTREMELY HIGH SPL.**

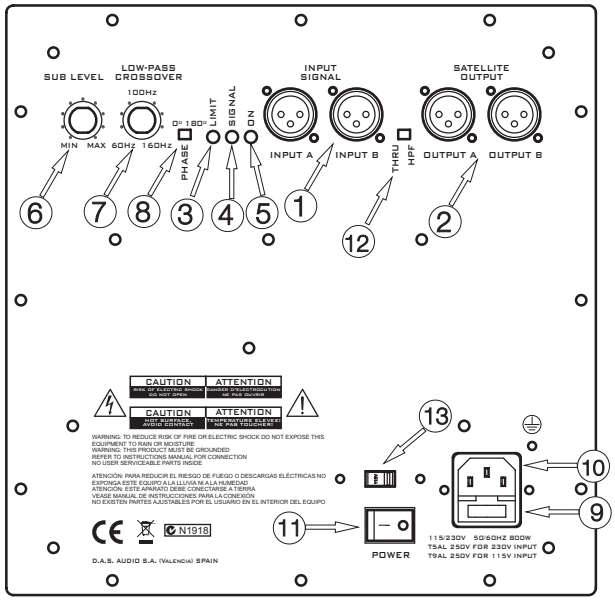
9) FUSE :

Fuse holder. Use only the recommended fuse type and size.

10) AC INPUT :

Standard IEC-60320 mains connector. **Only use this equipment with an appropriate mains cord.**

avant 18A **amplifier**



1) INPUT :

A and B, XLR-type input signal connectors. These are balanced connectors just like the A and B, SATELLITE OUTPUT, connectors with the following pin assignments:

1=GND (ground).
2=(+) Non inverted input.
3=(-) Inverted input.

2) SATELLITE OUTPUT :

A and B, XLR-type output signal connectors for connecting several units together and sending them all the same input signal or filtered signal (by using THRU/HPF).

3) LIMIT :

Red LED indicates amplifier saturation. Amplifier limiter indicator lights.

4) SIGNAL :

Green LED indicates signal presence.

5) ON :

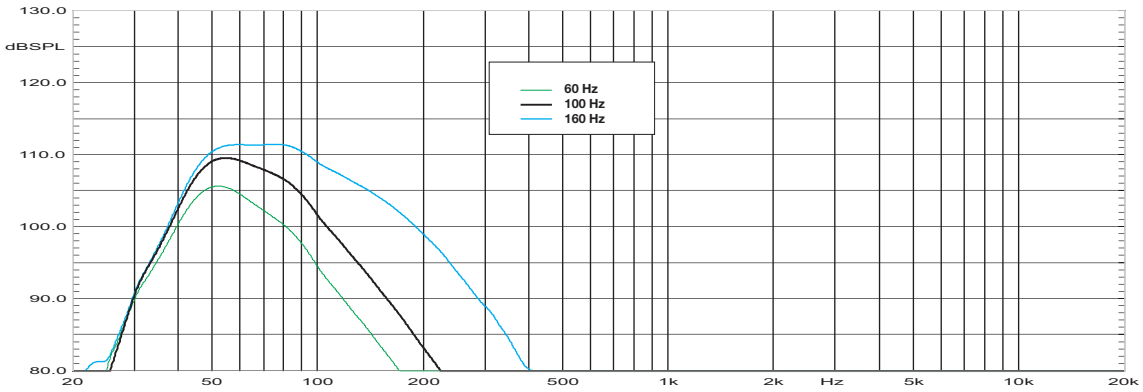
Blue LED indicates that the unit is ON.

6) SUB LEVEL :

Potentiometer for adjusting the unit level.

7) LOW-PASS CROSSOVER :

Button for adjusting the upper cut-off frequency for the subwoofer unit. We recommend a cut-off frequency of 100 Hz (see graphs for 60 Hz, 100 Hz and 160 Hz).



8) PHASE :

Switch for inverting the phase of the unit.

9) FUSE :

Fuse holder. Only use the recommended fuse type and size.

10) AC INPUT :

Standard IEC-60320 mains connector. **Only use this equipment with an appropriate mains cord**.

11) POWER :

Mains power ON/OFF switch.

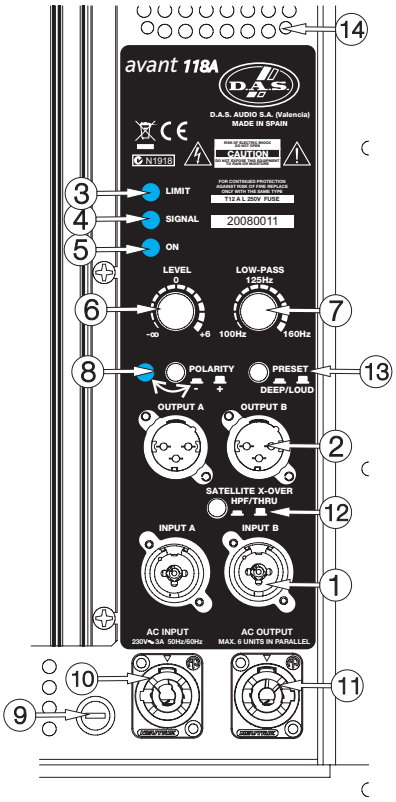
12) THRU/HPF :

'SATELLITE OUTPUT' selector to switch between full range signal or pass filter **with cut-off frequency of 100 Hz**.

13) LINE SELECT :

Mains voltage selector (115V AC or 230 V AC). **Before operating, verify the voltage selection**.

avant 118A **amplifier**



1) INPUT :

A and B, XLR-type input signal connectors. These are balanced connectors just like the A and B, SATELLITE OUTPUT, connectors with the following pin assignments:

1=GND (ground).
2=(+) Non inverted input.
3=(-) Inverted input.

2) SATELLITE OUTPUT :

A and B, XLR-type output signal connectors for connecting several units together and sending them all the same input signal or filtered signal (by using THRU/HPF).

3) LIMIT :

Red LED indicates amplifier saturation. Amplifier limiter indicator lights.

4) SIGNAL :

Green LED indicates signal presence.

5) ON :

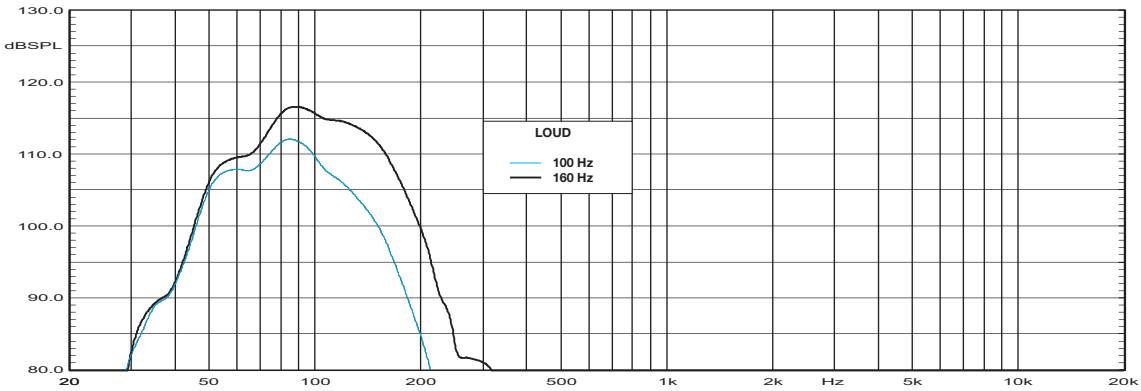
Green LED indicates that the unit is ON.

6) SUB LEVEL :

Potentiometer for adjusting the unit level.

7) LOW-PASS CROSSOVER :

Button for adjusting the upper cut-off frequency for the subwoofer unit. We recommend a cut-off frequency of 100 Hz (see graphs for 100 Hz and 160 Hz).



8) PHASE :

Switch for inverting the phase of the unit.

9) FUSE :

Fuse holder. Only use the recommended fuse type and size.

10) AC INPUT :

PowerCon NAC3FCA connector to turn the unit ON or OFF (inserted, rotated and locked for ON). **Only use this equipment with an appropriate mains cord**.

11) AC OUTPUT :

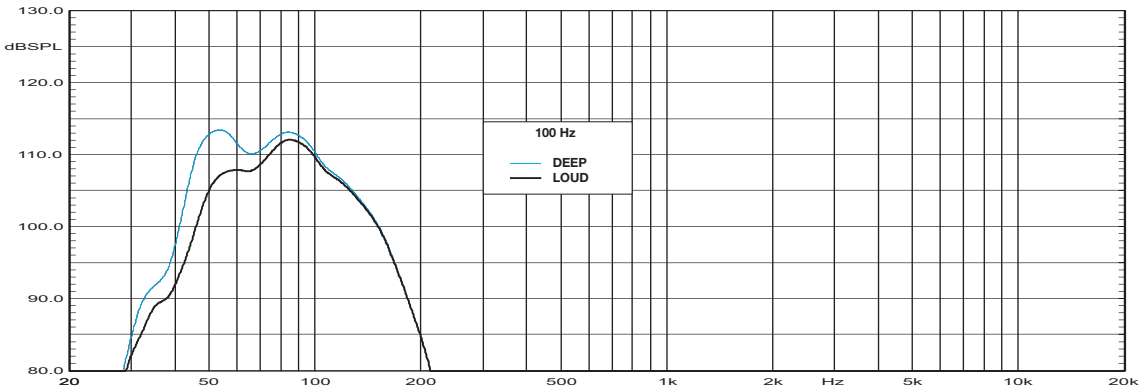
PowerCon NAC3FCBA connector for AC loop thru allows up to 6 units at 230 V (see label of unit)).

12) THRU/HPF :

'SATELLITE OUTPUT' selector to switch between full range signal or pass filter **with cut-off frequency of 100 Hz**.

13) PRESET DEEP/LOUD :

Button for switching between two types of frequency response, DEEP or LOUD (see graphs).

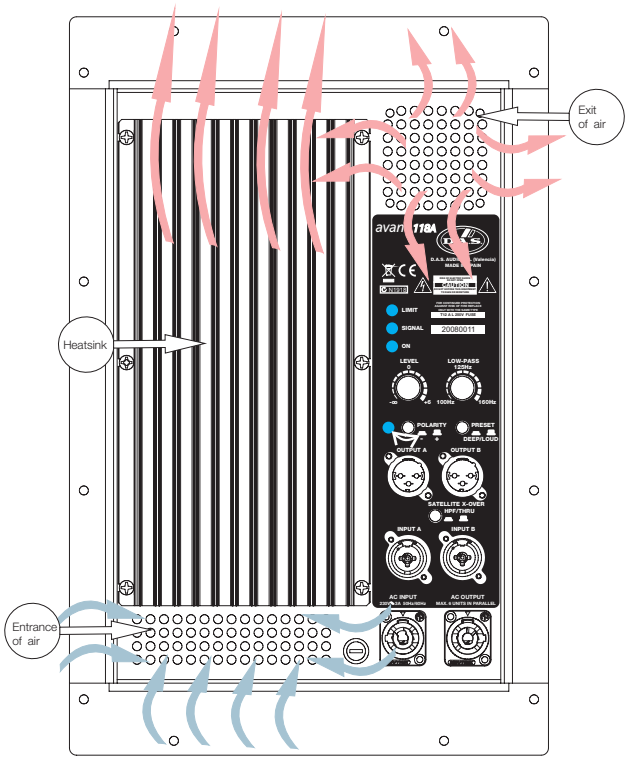


14) Fan :

The unit is equipped with a fan to maintain the correct operating temperature.

Do not block or obstruct in any way the air entrance or exit while the equipment is in use.

HEAT EMISSION



The unit is equipped with fan and heatsink to maintain the correct operating temperature.

Keep grilles clean and dust-free.

Do not block or obstruct in any way the air entrance or exit while the equipment is in use.

Air circulates from the bottom to the top of the amplifier.

USE

Preliminary

This product should only be used in E1, E2, E3 or E4(*) environments, in accordance with standard EN55103-2 (Electromagnetic compatibility. Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use. Part 2: Immunity.)

Do not cover the amplifier's radiator nor obstruct its ventilation.

For consumption reasons, it is important not to connect the equipment to the same line as the lighting systems, thus avoiding interruptions or sudden drops in lighting intensity.

ON / OFF

A sound system should be switched on sequentially. Switch on the self-powered units last in your sound system (switch on the subwoofer before the mid-high system). Switch on the sound sources such as CD players or turntables, then the mixer, then the processors, and finally the self-powered unit. If you have several units, it is recommended that you switch them on sequentially one at a time.

Follow the inverse order when switching off, turning self-powered units off before any other element in the sound system.

Disconnect the device by removing the mains connector from the mains socket. The mains connector and mains socket must always be freely accessible and never covered or blocked in any way. The mains cable can be detached from the device by disconnecting the standard IEC-60320 connector (except ***avant 118A***). Always disconnect the device by removing the mains connector from the mains socket before detaching the mains cable at the standard IEC-60320 connector (except ***avant 118A***).

The ***avant 118A*** uses a power cable equipped with a Neutrik PowerCon NC3FCA connector. Power can be daisy chained via the NC3FCB output connector (see details on product label).

IMPORTANT: Do not disconnect the unit while in use.

Ensure that the device is disconnected from the mains by observing that the ON LED is turned off. Please note that the ON LED can stay on for several seconds after the mains power has been disconnected.

Overload indicator

This device has an indicator (LIMIT LED) that lights when the signal is excessive.

The indicator should not be lit continuously. This distorts the signal (quickly fatiguing your ears) and may damage the speakers. Therefore, it is recommended that you never work with this LED on; at most it should blink only occasionally.

Overheating

This equipment does not normally overheat during normal conditions of use. When overheating occurs, the unit protects itself. You should then find out why and if necessary contact an authorised dealer for technical assistance.

Normally it is enough just to let the unit cool down after you have corrected the problem so that the system functions properly again.

Equalisation

The unit does not need extreme settings of equalisation to produce quality sound. Avoid high levels of gain on the equalisers. Gain values above +3 dB on a console's EQ are not recommended.

Low mains voltage

If mains voltage falls below the shutdown voltage for the unit, it will stop playing. When acceptable levels are regained, the unit will switch back on automatically.

The power supply allows the system to function using two voltage ranges: from 90V to 128V, for 115V AC version, and from 180V to 256V, for 230V AC version.

Therefore the current consumed by the first range (90 to 128V) is double the second to achieve the same acoustic power level.

Pink Noise ***Mains 230 Vrms***	*avant 12A* *avant 15A* *avant 215A*	*avant 18A*	*avant 118A*
Max. Power	2A	1.7A	3.5A
1/3 Power	1.7A	1.5A	2.7A
1/8 Power	0.95A	1.25A	1.3A
Idle	0.2A	0.2A	0.3A

(*)Note

E1.- Residential.
E2.- Commercial and light industrial.
E3.- Urban outdoors.
E4.- Controlled EMC environment and the rural outdoors environment.

RIGGING

The goal is to the allow the user to become familiar with the mechanical elements required to fly the acoustic system, as well as the safety measures to be taken during set-up and teardown. Only experienced installers with adequate knowledge of the equipment and local safety regulations should fly speaker boxes. It is the user's responsibility to ensure that the systems to be flown (including flying accessories) comply with state and local regulations.

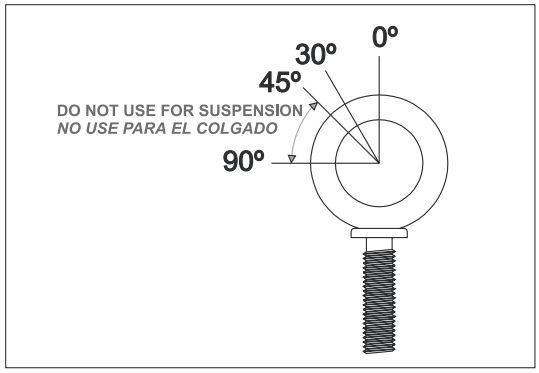
Absolutely no risks should be taken with regards to public safety. When flying enclosures from ceiling support structures, extreme care should be taken to assure the load bearing capabilities of the structures so that the installation is absolutely safe. Do not fly enclosures from unsafe structures. Consult a certified professional if needed. All flying accessories that are not supplied by D.A.S. Audio are the user's responsibility. Use at your own risk.

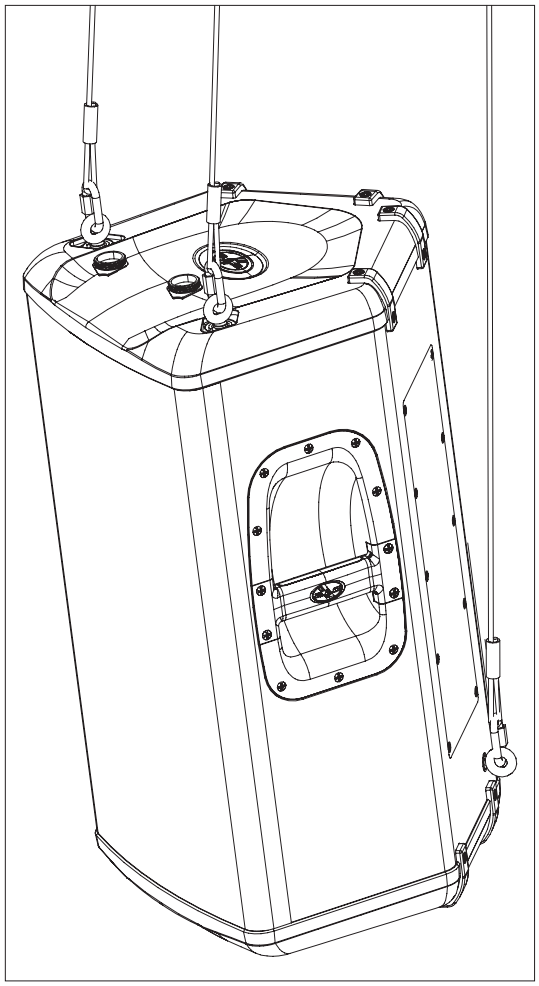
To access the two rigging points on the top side of the enclosure, remove the rubber caps and the allen-head screw beneath it. Also remove the allen-head screw on the backside of the enclosure to free a rigging point. Fix a M10 eyebolt in each point. Note that each rigging point has 200 kg (440 lb) working load limit. Then choose the slings or chains of required load resistance and length, bearing in mind that the length difference between the front and back slings or chains will determine the vertical orientation. Alternatively, the back bottom eyebolt points can be used to provide vertical orientation.

The ***ANL-5*** set is an optional set of three M10 eyebolts and three carabiners.

Each ***ANL-5*** eyebolt has a rated working load of 200 kg. (440 lb). Each ***ANL-5*** carabiner has a working load of 330 kg (726 lb). If using other hardware, make sure it is rated to handle the required load.

When using eyebolts it is important to bear in mind that the rated working load is only true for a load applied in the plane of the eye, and is significantly reduced for other angles. The drawing illustrates the concept. The table shows the variation of the working load as a function of the load angle. In the case of the ***ANL-5*** eyebolt, this means that the 200 kg working load becomes 60 kg at 45 degrees. Do not use eyebolt flying if the load angle is higher than 45 degrees.



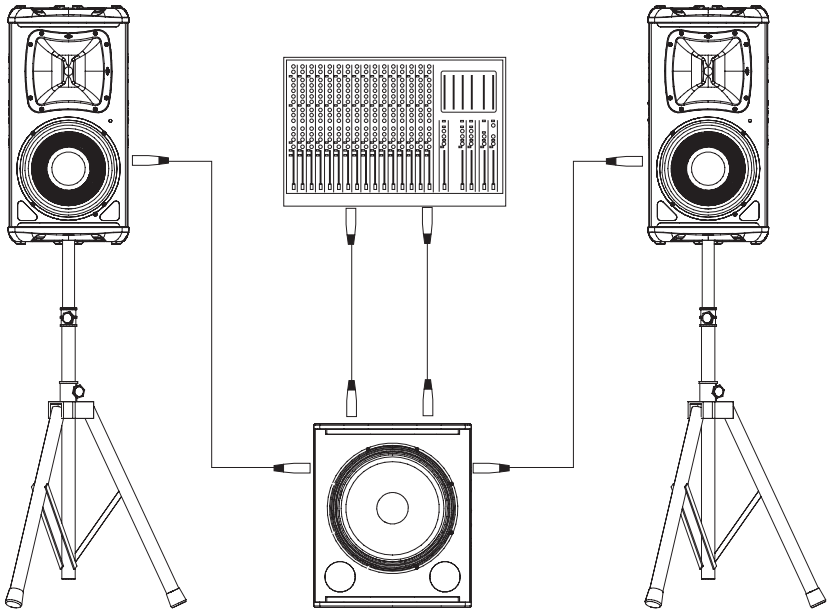


	0 Degrees	30 Degrees	45 Degrees	More than 45 Degrees
% Working load	100%	65%	30%	25%

CONFIGURATIONS

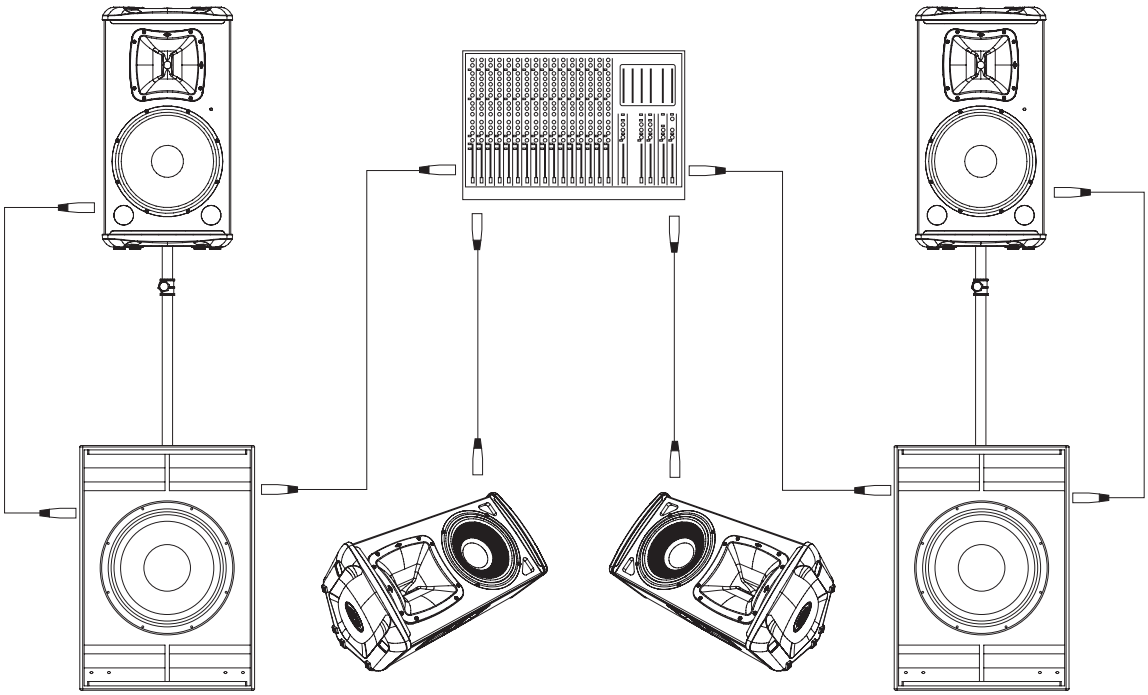
Configuration 1

Basic configuration with two ***avant 12A*** satellite systems and one (or two) ***avant 18A*** subwoofers. This is ideal for applications such as presentations, A/V, etc.



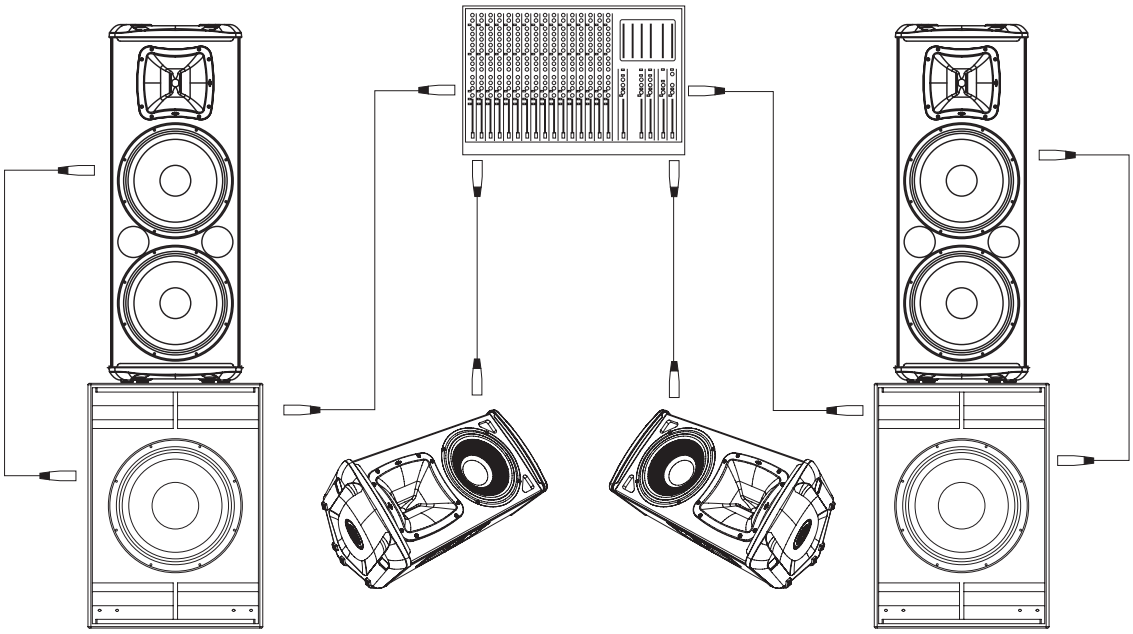
Configuration 2

Basic configuration with two ***avant 12A*** or ***avant 15A***, two ***avant 118A*** subwoofers and two ***avant 12A*** used as stage monitors for use in small scale live events such as bands, DJ´s, etc.



Configuration 3

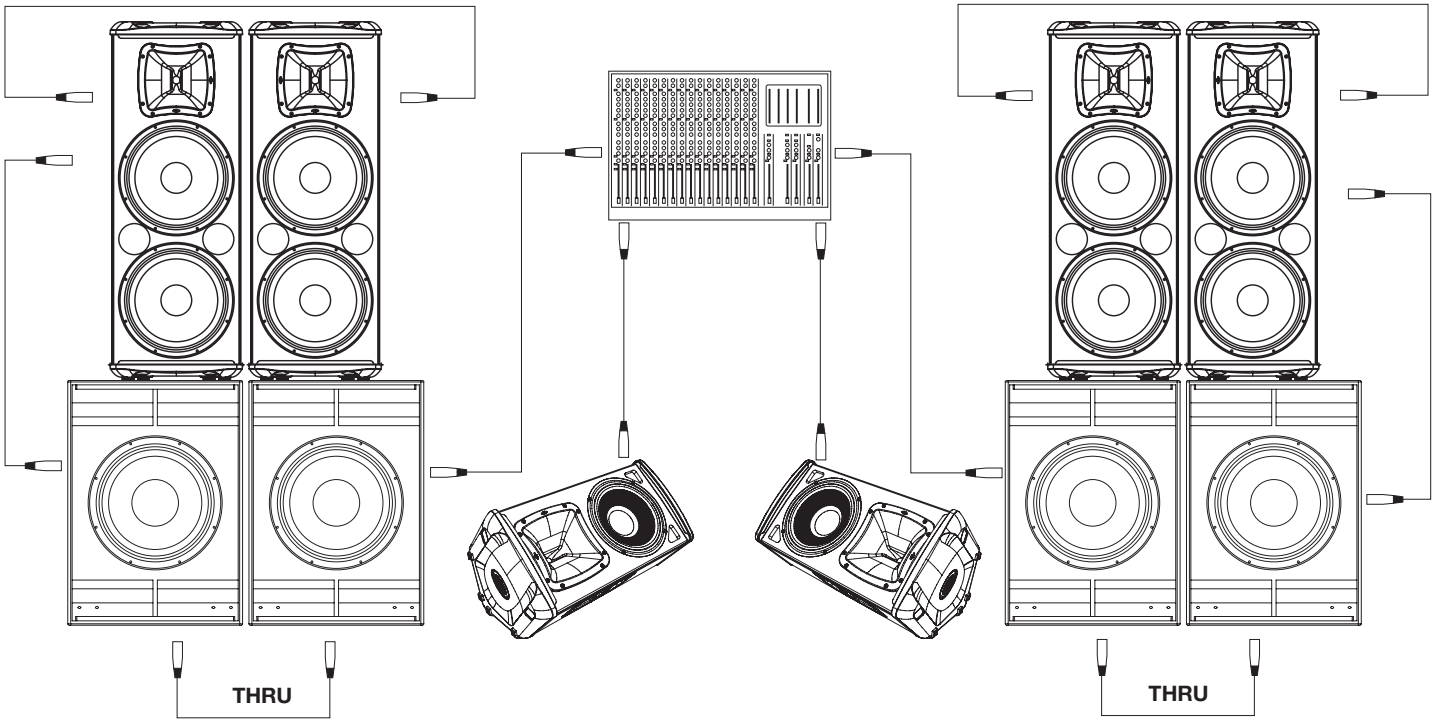
Minimum configuration using two ***avant 215A*** and two ***avant 118A*** subwoofers for portable PA in live events, Dj's, etc.



Configuration 4

Typical configuration using ***avant*** systems for live events.

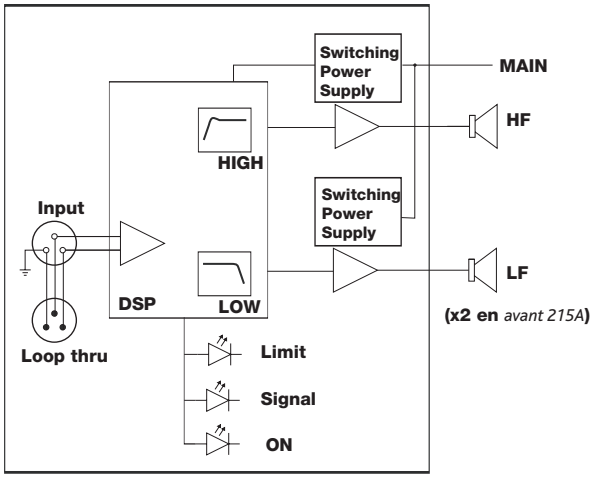
Note: The ***avant 118A*** units should be paralleled using the SATELLITE OUTPUT in the 'THRU' position to avoid filtering of the looped signal.



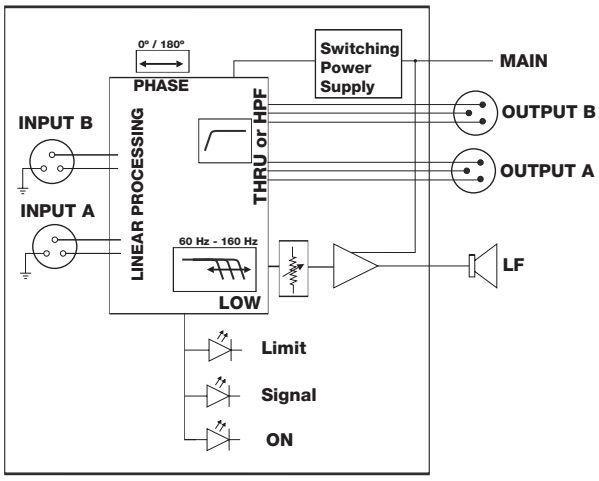
TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
No sound from the unit. The SIGNAL LED does not light up.	1 – The signal source is sending no signal. 2 – Defective cable. 3 - The amplifier has overheated.	1 – Check that the mixer or sound source is sending signal to the UNIT. 2 – Check that the cable from the sound source to the UNIT is connected correctly. Replace the cable if defective. 3 - Allow the unit to cool down for some minutes and it will function again. Check the main output level of the mixer or channel gains since the unit will have been functioning with excessive levels.
Full power cannot be obtained. The LIMIT LED never lights up.	The signal source does not have a hot enough output.	If using a mixer, use the balanced output if available. Use a professional mixer with a hotter output.
Sound is distorted. The LIMIT LED is not on, or only lights up occasionally.	The mixer or signal source is distorting.	Turn mixer channel gains down. Check that none of your signal sources are distorting.
Sound is distorted and very loud and LIMIT LED lights up.	The system is overloaded and has reached maximum power.	Turn down the mixer's output.
Hum or buzz when a mixer is connected to the unit.	1.– The console probably has un-balanced outputs. You may be using an incorrect un-balanced to balanced cable. 2.– The mixer and the powered speaker are not plugged into the same mains outlet. 3.– The audio signal cable is too long or too close to an AC cable	1.– Read the appendix of this manual to make a correct un-balanced to balanced cable. 2.– Connect the mixer and the unit to the same mains outlet. 3.– Use a cable that is as short as possible and/or move the audio signal cable away from mains cables.
Hum or buzz when using lighting controls in the same building.	1.– The audio signal cable is too long or too close to the lighting cable. 2.– On a sound system with three-phase AC, the lighting equipment and the UNIT are connected to the same phase.	1.– Move the audio signal cable away from lighting cables. Try to find out at what point the noise is leaking into the system. 2.– Connect the sound system to a different phase than the lights. You may need the help of an electrician.
The ON LED does not light up when the mains connector is connected and the unit is switched to ON.	1.– Bad or loose AC connection to the UNIT or the mains outlet. 2 – Faulty AC cable. 3 – Blown Fuse. 4 - The mains voltage is out of range.	1.– Check your connections. 2.– Check the cables, connectors and AC power with a suitable mains tester. 3.- Replace the blown fuse for another of the same type and size. 4.- If the multimeter determines that the mains voltage is out the range, you may need the assistance of an electrician to find an appropriate solution.

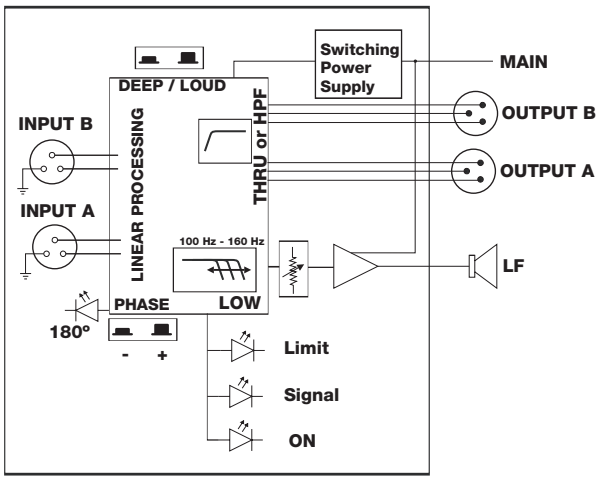
BLOCK DIAGRAM



avant 12A, avant 15A & avant 215A

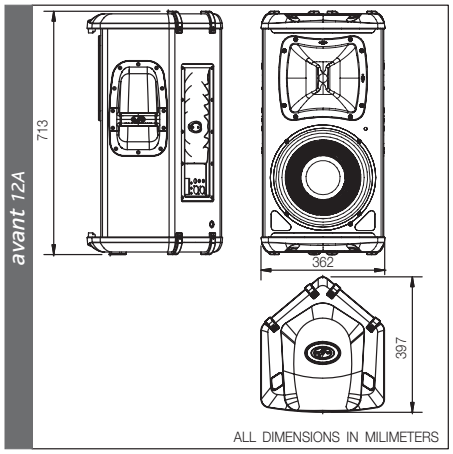


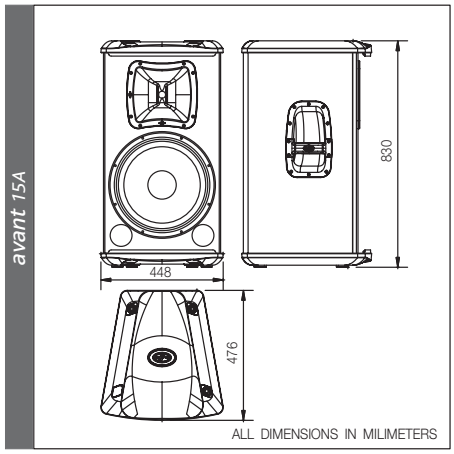
avant 18A

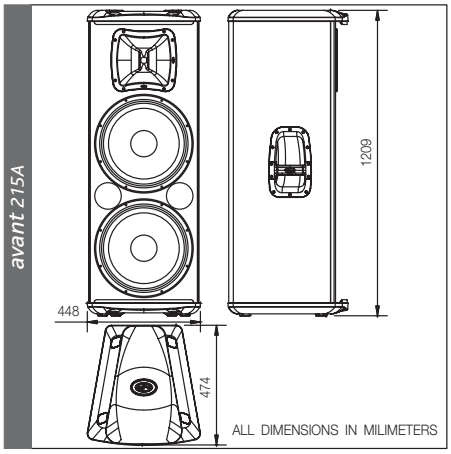


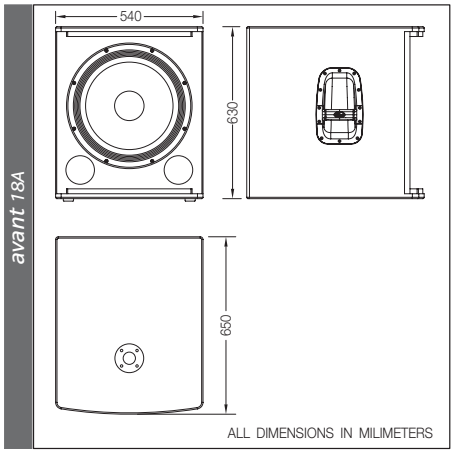
avant 118A

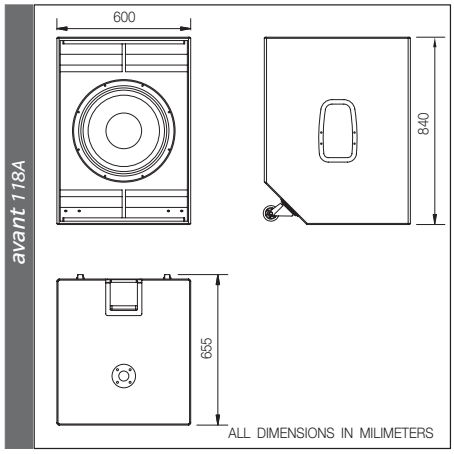
LINE DRAWINGS











SPECIFICATIONS

Model	avant 12A	avant 15A	avant 215A	avant 18A	avant 118A
[1] LF Power Amplifier	500 W (D)	500 W (D)	500 W (D)	750 W (D)	1250W (D)
[1] HF Power Amplifier	100 W (D)	100 W (D)	100 W (D)	---	---
Input Type	Balanced Line	Balanced Line	Balanced Line	Balanced Line	Balanced Line
Input Impedance	Line: 20kohms Mic: 20kohms	Line: 20kohms Mic: 20kohms	Line: 20kohms Mic: 20kohms	Line: 20kohms	Line: 20kohms
[2] Sensitivity	Line: 1.95V (+8 dBu) Mic: 20 mV (-32 dBu)	Line: 1.95V (+8 dBu) Mic: 20 mV (-32 dBu)	Line: 1.95V (+8 dBu) Mic: 20 mV (-32dBu)	Line: 1.95V (+8dBu)	Line: 1.95V (+8dBu)
Frequency Range (-10 dB)	60 Hz - 20 kHz (EQ main)	45 Hz – 20 kHz (EQ flat)	40 Hz – 20 kHz (EQ flat)	35 Hz – 160 Hz (variable X-over)	Loud: 50 Hz - 142 Hz Deep: 45 Hz - 138 Hz
[3] Maximum Peak SPL at 1 m	133 dB	133 dB	136 dB	133 dB	136 dB
HF Horn Coverage Angles (-6dB)	80° x 50° (Rotatable)	80° x 50° (Rotatable)	80° x 50° (Rotatable)	---	---
Enclosure Material	Plywood	Plywood	Plywood	Plywood	Plywood
Finish/Color	Black paint	Black paint	Black paint	Black paint	Black paint
Transducers/Replacement Parts	LF: 12AV4/ GM 12P4 HF: M-50N/ GM M-50	LF: 15AV4/ GM 15P4 HF: M-50N/ GM M-50	LF: 15AV/ GM 15P HF: M-50N/ GM M-50	LF: 18H/ GM 18G	LF: 18LX/ GM 18LX
Connectors INPUT	Female XLR-Jack	Female XLR-Jack	Female XLR-Jack	2 x Female XLR	2 x Female XLR
LOOP THRU	Male XLR	Male XLR	Male XLR	2 x Male XLR	2 x Male XLR
AC INPUT	Male IEC	Male IEC	Male IEC	Male IEC	AC INPUT: PowerCon NAC 3FCA AC OUTPUT: PowerCon NAC 3FCB
Dimensions (H x W x D)	71.3 x 36.2 x 39.7 cm (28 x 14.3 x 15.6 in)	83 x 44.8 47.6 cm (32.7 x 17.6 x 18.7 in)	121 x 44.8 x 47.6 cm (47.6 x 17.6 x 18.7 in)	63 x 54 x 65 cm (24.8 x 21.3 x 25.6 in)	84 x 60 x 65.5 cm (33 x 23.6 x 25.8 in)
Weight	22 kg (48 lb)	30 kg (66 lb)	44 kg (96.8 lb)	39 kg (85.8 lb)	55 kg (121 lb)
Accessories	ANL-5 TRD-5 TRD-2	ANL-5 TRD-5 TRD-2	ANL-5	TRD-5	TRD-6

Notes: 1. Continuous power at driver impedance.
2. Level Control at maximum.
3. Measured maximum peak level.

D.A.S. Audio S.A. continuously strives to enhance its products through investigation and development. All specifications are subject to change without prior warning.
Product specifications, detailed technical sheets, as well as information for the use of EASE and other modelling programs are available at ***www.dasaudio.com*** .

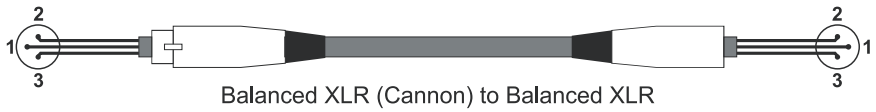
APPENDIX: Line connections: unbalanced and balanced

There are two basic ways to transport an audio signal with microphone or line level:

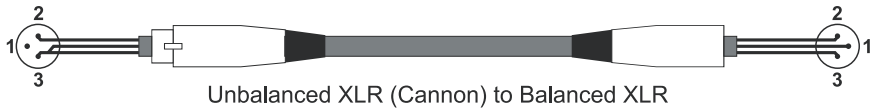
Unbalanced line: Utilising a two conductor cable, it transports the signal as the voltage between them. Electromagnetic interference can get added to the signal as undesired noise. Connectors that carry unbalanced signals have two pins, such as RCA (Phono) and ¼" (6.35mm, often referred to as jack) mono. 3 pin connector such as XLR (Cannon) may also carry unbalanced signals if one of the pins is unused.

Balanced line: Utilising a three conductor cable, one of them acts as a shield against electromagnetic noise and is the ground conductor. The other two have the same voltage with respect to the ground conductor but with opposite signs. The noise that cannot be rejected by the shield affects both signal conductors in the same way. At the device's input the two signals get summed with opposite sign, so that noise is cancelled out while the programme signal doubles in level. Most professional audio devices use balanced inputs and outputs. Connectors that can carry balanced signal have three pins, such as XLR (Cannon) and ¼" (6.35mm) stereo.

The graphs that follow show the recommended connection with different types of connectors to balanced processor or amplifier inputs. The connectors on the left-hand side come from a signal source, and the ones on the right hand side go to the inputs of the processor or amplifier. Note that on the unbalanced connectors on the left-hand side, two terminals are joined inside the connector. If hum occurs with balanced to balanced connections, try disconnecting the sleeve (ground) on the input connector. Note that the illustrations show what should be connected to what, but that pin locations on an actual XLR connector are different. Also, pin 2 hot is assumed on XLR connectors.



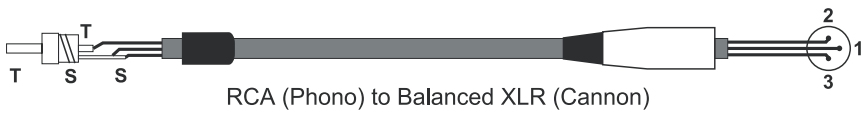
Balanced XLR (Cannon) to Balanced XLR



Unbalanced XLR (Cannon) to Balanced XLR

Balanced 1/4" (*Jack*) to Balanced XLR (Cannon)

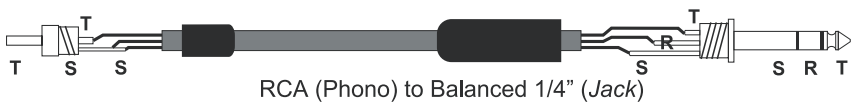
Unbalanced 1/4" Jack to Balanced XLR (Cannon)



RCA (Phono) to Balanced XLR (Cannon)

Balanced 1/4" (*Jack*) to Balanced 1/4" (*Jack*)

Unbalanced 1/4" (*Jack*) to Balanced 1/4" (*Jack*)



RCA (Phono) to Balanced 1/4" (*Jack*)

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