D A S 12A Series Vantec Active User Manual

Contents

D A S 12A Series Vantec Active

Specifications:

- **Model:** Vantec active series
- **Amplifier**: Yes

Product Usage Instructions

Safety Precautions

- Before operating the device, please read the Safety Precautions section of this manual.
- Retain this manual for future reference.
- The lighting and arrowhead symbol warn 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 main cord for your country.
- 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.
- If action loudspeakers are used outdoors on a sunny day, place the loudspeakers in a shaded or covered area.
- The loudspeaker amplifiers have protection circuits that temporarily shut the loudspeaker off when extremely high temperatures are reached. This can happen on hot days when the loudspeaker is in direct sunlight.
- The outer wiring connected to the device requires installation by an instructed person or the use of a flexible cable already prepared.
- 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.
- Unplug this apparatus during lightning storms, earthquakes or when unused for long periods.
- Do not place loudspeakers in proximity to devices sensitive to magnetic fields such as television monitors or

data storage magnetic material.
- For enclosures with tripod sockets, the maximum safety height from floor to bottom of the enclosure when mounting on a TRD-2 tripod, with legs spread 55cm from the central pole, is:

Configurations:

- 2 x vantec 12A (wireless audio)
- 2 x vantec 12A
- 2 x vantec 15A
- 2 x vantec 12A (vantec 15A)+
- 1 x vantec 18A
- 2 x vantec 15A (vantec 12A) + 2 x vantec18A
- 2 x vantec 15A (vantec 12A) + 1 x vantec 18A+ 1 x DSP
- 2 x vantec 215A + 2 x vantec 18A

Line Drawings

Please refer to the user manual for detailed line drawings.

Amplifier

The product is equipped with an amplifier.

Troubleshooting

If the apparatus has been damaged in any way, such as the 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, servicing is required. Refer all servicing to qualified service personnel.

Cleaning and Reselling

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

Rigging System

The appliance should be flown only from the rigging points and by qualified personnel. Do not suspend the box from the handles.

Line Connections

The manual provides information on line connections, including unbalanced and balanced options.

Warranty

Please refer to the warranty section of the user manual for details.

Declaration of Conformity

Please refer to the Declaration of Conformity section of the user manual for details.

Introduction

Please refer to the introduction section of the user manual for an overview and introduction to the product.

FAQ

- **Q:** Can I use the Vantec active series speakers outdoors?
- **A:** Yes, you can use the speakers outdoors. However, it is recommended to place them in a shaded or covered area on sunny days to prevent overheating.
- **Q:** Can I connect the Vantec active series speakers to devices sensitive to magnetic fields?
- **A:** It is not recommended to place the loudspeakers in proximity to devices sensitive to magnetic fields such as television monitors or data storage magnetic material.
- **Q**: What should I do if the apparatus has been damaged?
- **A:** If the apparatus has been damaged in any way, such as the 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, servicing is required. Refer all servicing to qualified service personnel.
- **Q**: How should I clean the Vantec active series speakers?
- **A**: Clean the product only with a dry cloth. Do not use any solvent-based cleaners.
- **Q:** Can I resell the Vantec active series speakers?
- **A:** 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.

Safety Precautions

-  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 may cause radio interference 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. Do not remove the main connector ground, it is dangerous and illegal. Class I device.
-  The lighting and arrowhead symbol warn 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 main cord for your country.
  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.
  If action loudspeakers are used outdoors on a sunny day, place the loudspeakers in a shaded or covered area.

The loudspeaker amplifiers have protection circuits that temporarily shut the loudspeaker off when extremely high temperatures are reached. This can happen on hot days when the loudspeaker is in direct sunlight. 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.

-  This symbol on the product indicates that this product should not be treated as household waste. Instead, it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. 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). If the fuse needs to be replaced, please pay attention to correct type and ratings. The outer wiring connected to the device requires installation by an instructed person or the use of a flexible cable already prepared. 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. Unplug this apparatus during lightning storms, earthquakes or when unused for long periods.
-  Do not place loudspeakers in proximity to devices sensitive to magnetic fields such as television monitors or data storage magnetic material. For enclosures with tripod sockets, the maximum safety height from floor to bottom of the enclosure when mounting on a TRD-2 tripod, with legs spread 55cm from the central pole, is:
- Vantec 12A->115 cm|
  Vantec 15A –>105 cm|
- 

The appliance should be flown only from the rigging points and by qualified personnel. Do not suspend the box from the handles. 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 a 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. Clean only with a dry cloth. Do not use any solvent-based cleaners. 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 recale.

WARRANTY

All D.A.S. products are warrantied against any manufacturing defect for 2 years from the 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 centres. To claim a warranty repair, do not open or intend to repair the product. Return the damaged unit, at shipper risk and freight prepaid, to the nearest service centre with a copy of the purchase invoice.

DECLARATION OF CONFORMITY

D.A.S. Audio, S.A.

C/ Islas Baleares, 24 – 46988 – Pol. Fuente del Jarro – Valencia. España (Spain).

Declares that vantec series:

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:** 2011/65/CE
- **Directiva RAEE (WEEE):** 2002/96/CE

In accordance with Harmonized European Norms:

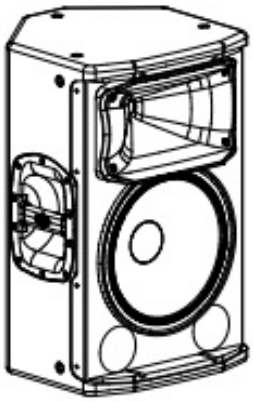
- **EN 60065:2002:** Audio, video and similar electronic apparatus. Safety requirements.
- **EN 55103-1:2009:** Electromagnetic compatibility.
  - Product family standard for audio, video, audiovisual and entertainment lighting control apparatus for professional use. Part 1:Emission.
- **EN 55103-2:2009:** Electromagnetic compatibility.
  - Product family standard for audio, video, audiovisual and entertainment lighting control apparatus for professional use. Part 2:Immunity.

INTRODUCTION

The Vantec series inherits the exceptional sound quality and rugged build that have made D.A.S. professional systems an international sound reinforcement standard. Designed from “real-world” experience.
hey, offer users outstanding performance, absolute reliability, and unparalleled convenience. Whether it is in a high-profile venue or on the stage of a major event, the Vantec series will provide the power and definition needed to make your performance a success.

Features

vantec 12A

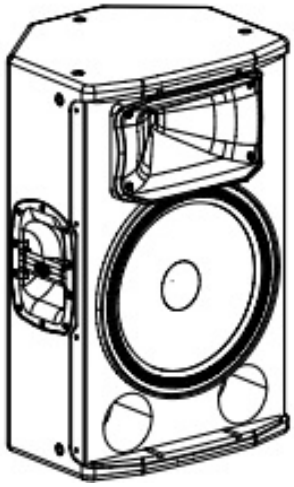


- Two-way powered system.
- 12” bass loudspeaker.
- Compression driver with titanium diaphragm.
- Symmetric enclosure design for stage monitor use.

- Built-in rigging points (eyebolt based).
- Stand mountable / Dual angle.

The vantec 12A is a powered loudspeaker (2 channel Class D amplifier), that utilizes a 12” low frequency transducer and a 1” exit compression driver. The multi-angle cabinet is constructed of Birch plywood protected by an environmentally friendly black paint finish. Two bar handles and a steel grille are provided. A 35mm tripod socket allows for stand mounting with two possible angles 0º or -10º.

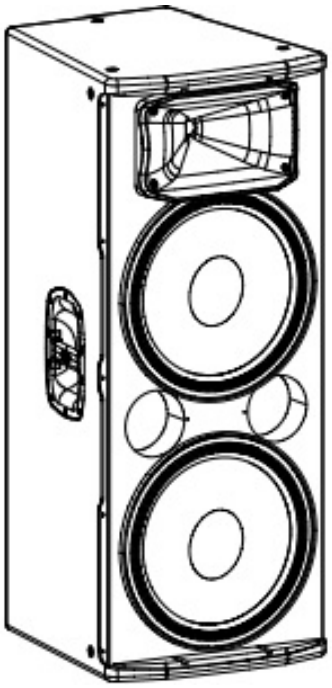
vantec 15A



- Two-way powered system.
- 15” bass loudspeaker.
- Compression driver with titanium diaphragm.
- Symmetric enclosure design for stage monitor use.
- Built-in rigging points (eyebolt based).
- Stand mountable.

The vantec 15A is a powered loudspeaker (2 channel Class D amplifier), that utilizes a 15” low frequency transducer and a 1” exit compression driver. The multi-angle cabinet is constructed of Birch plywood protected by an environmentally friendly black paint finish. Two bar handles and a steel grille are provided. A 35mm tripod socket allows for stand mounting with two possible angles 0º or -10º.

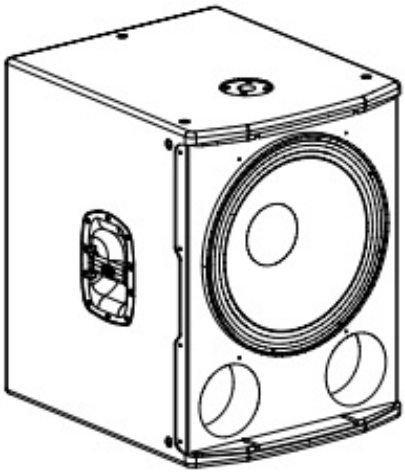
vantec 215A



- 3-way powered system
- 2 x 15″ bass loudspeaker working in a “dual band” configuration (2.5 ways)
- Compression driver with titanium diaphragm
- Two steel-reinforced handles

The vantec 215A is a powered loudspeaker (3 channel Class D amplifier), that utilizes two 15” bass loudspeakers for extra low frequency punch and higher SPL in a “dual band” configuration where each speaker works in a specific frequency range. High frequencies are handled by a 1”exit compression driver with titanium diaphragm. The trapezoidal cabinet is constructed using Birch plywood and protected with a hardwearing black paint finish. Two bar handles and a steel grille sealed against corrosion using a polyamide powder coat finish are provided. Rigging points provide a safe and simple way to fly the action 215A cabinets.

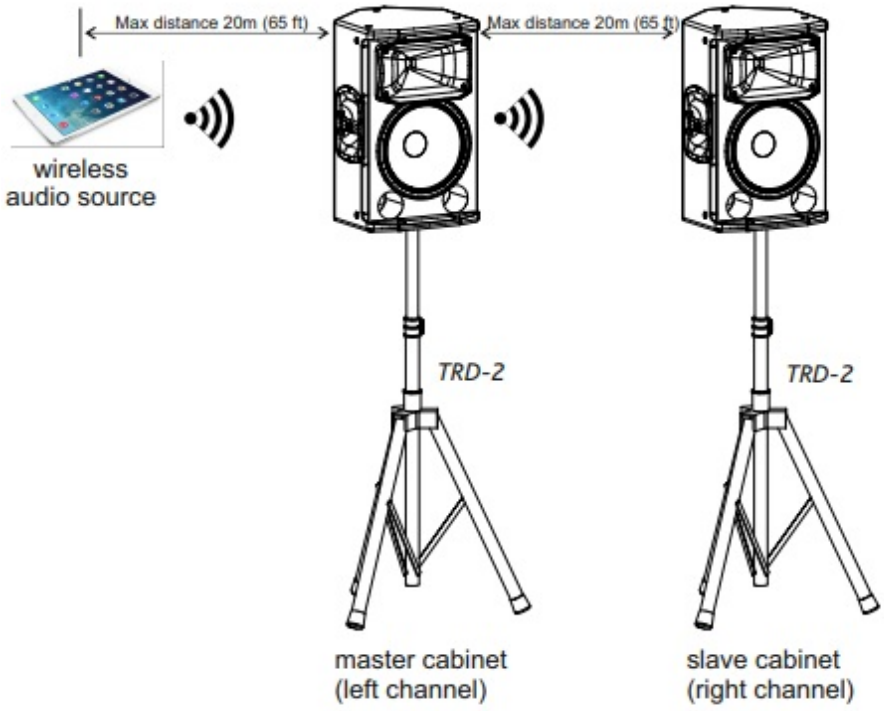
vantec 18A

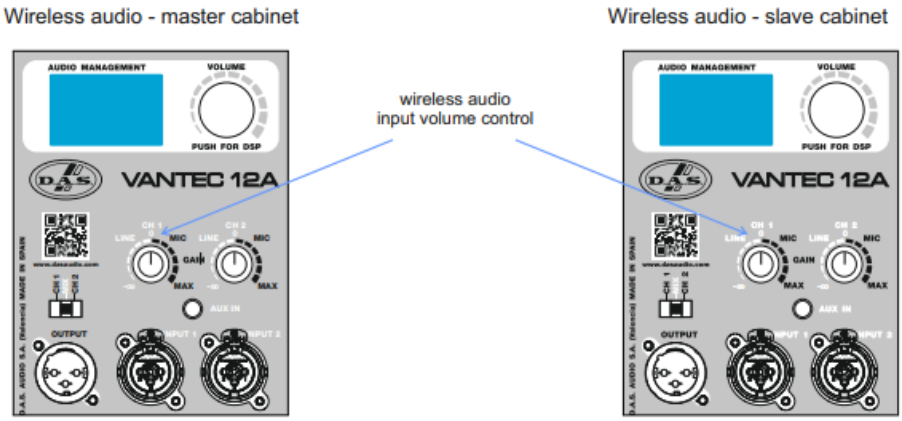


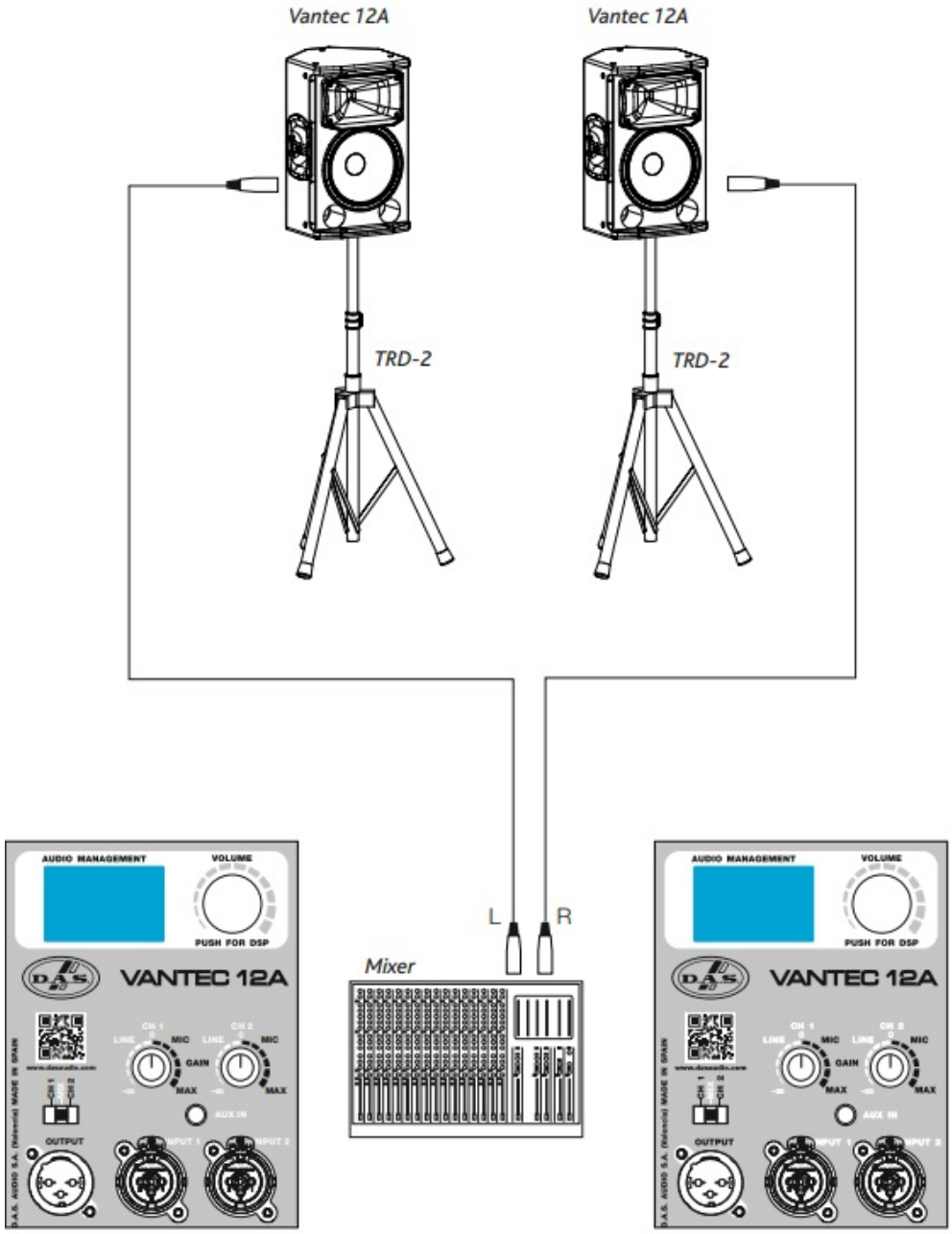
- Bass-reflex powered subwoofer system
- 18″ low frequency transducer
- Precise and powerful bass reproduction
- Top located pole mount socket

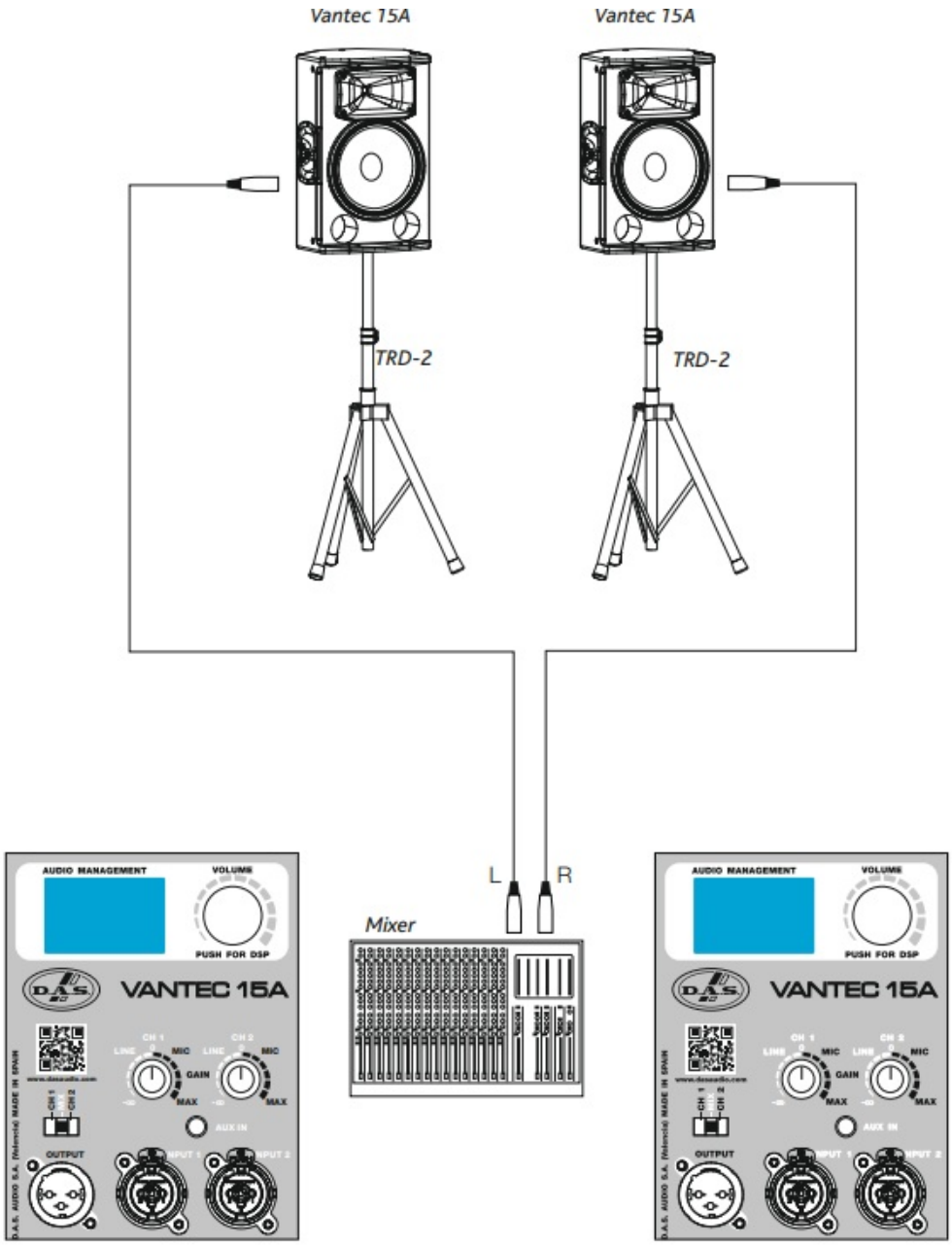
The vantec 18A bass powered system (Class D amplifier) incorporates a 18” low frequency transducer with a 4 ” voice coil mounted as a direct radiator into a bassreflex cabinet. The loudspeaker is protected by a perforated steel grille, sealed against corrosion using a powder coat finish. The vantec 18A is designed for use in biamped systems. A top located pole-mount socket permits mounting full-range systems above the vantec 18A and two bar handles makes moving easy.

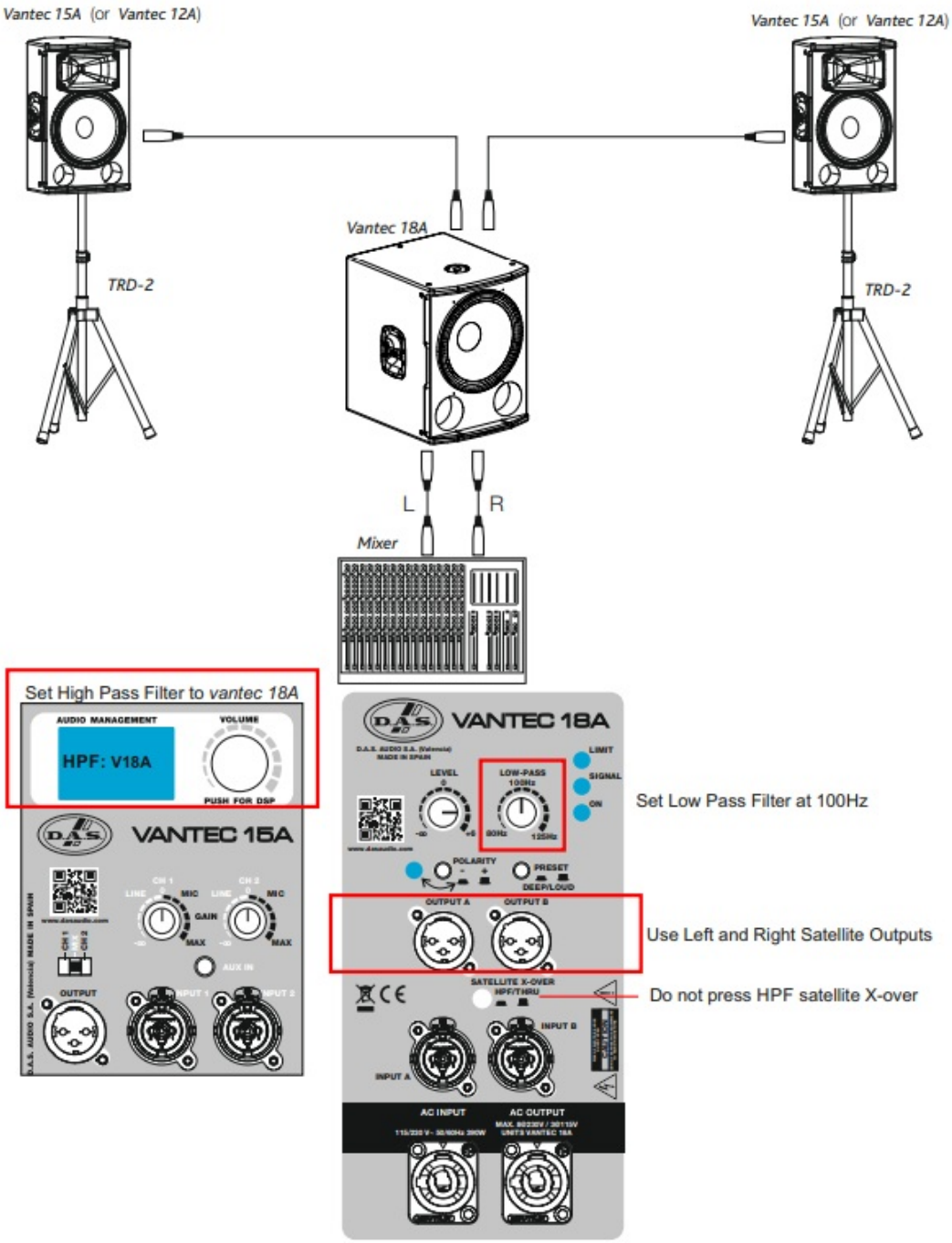
CONFIGURATIONS

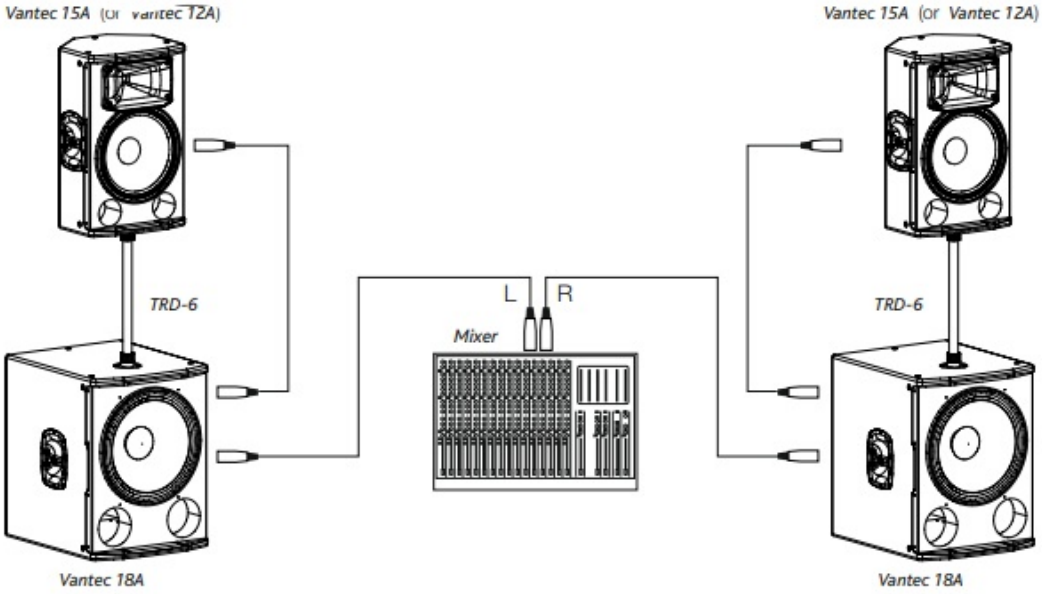


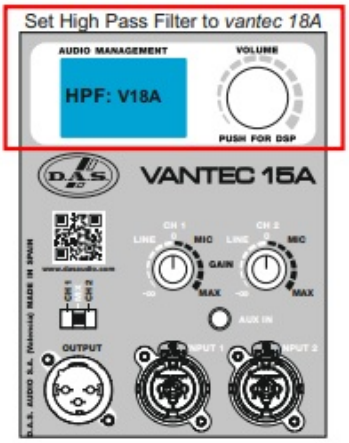


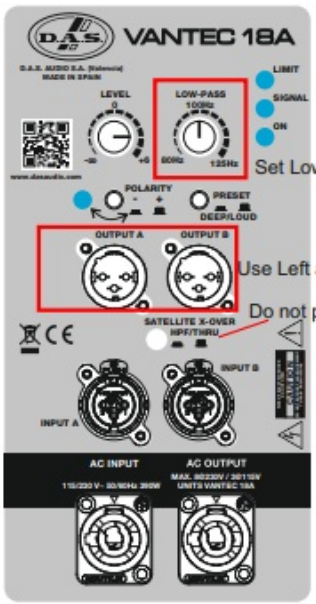

Vantec 12A
Vantec 12A
TRD-2
TRD-2
L
R
Mixer
AUDIO MANAGEMENT
VOLUME
PUSH FOR DSP
VANTEC 12A
GAIN
AUX IN
OUTPUT
AUDIO MANAGEMENT
VOLUME
PUSH FOR DSP
VANTEC 12A
GAIN
AUX IN
OUTPUT


Vantec 15A
Vantec 15A
TRD-2
TRD-2
L
R
Mixer
AUDIO MANAGEMENT
VOLUME
PUSH FOR DSP
VANTEC 15A
GAIN
AUX IN
OUTPUT
AUDIO MANAGEMENT
VOLUME
PUSH FOR DSP
VANTEC 15A
GAIN
AUX IN
OUTPUT


Vantec 15A (or Vantec 12A)
Vantec 15A (or Vantec 12A)
Vantec 18A
TRD-2
TRD-2
L
R
Mixer
Set High Pass Filter to vantec 18A
AUDIO MANAGEMENT
VOLUME
HPF: V18A
PUSH FOR DSP
VANTEC 15A
VANTEC 18A
LEVEL
LOW-PASS
100Hz
LIMIT
SIGNAL
ON
POLARITY
PRESET
DEEP/LOUD
OUTPUT A
OUTPUT B
SATELLITE X-OVER
HPF/THRU
INPUT A
INPUT B
AC INPUT
AC OUTPUT
Set Low Pass Filter at 100Hz
Use Left and Right Satellite Outputs
Do not press HPF satellite X-over







Set Low Pass Filter at 100Hz

Use Left and Right Satellite Outputs

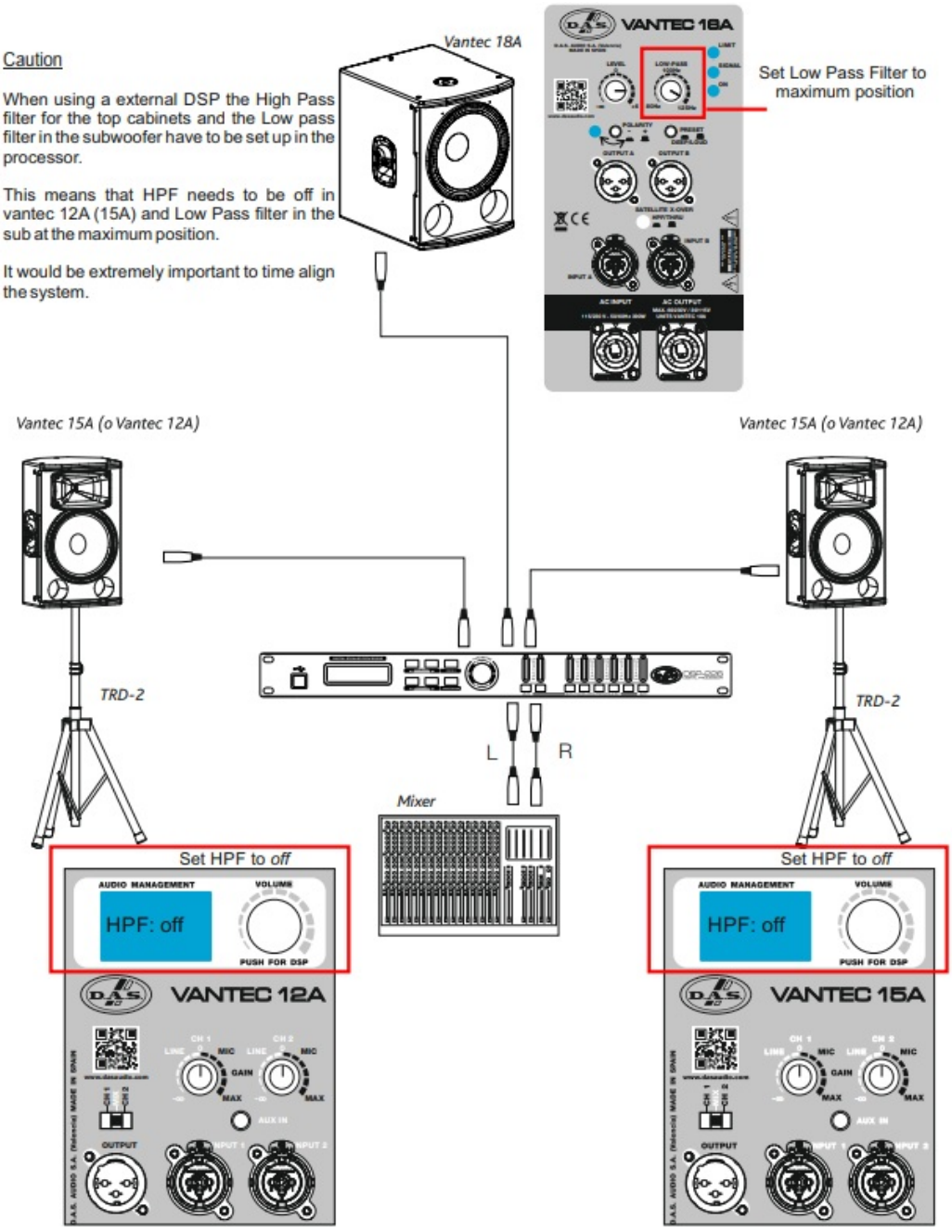
Do not press HPF satellite X-over

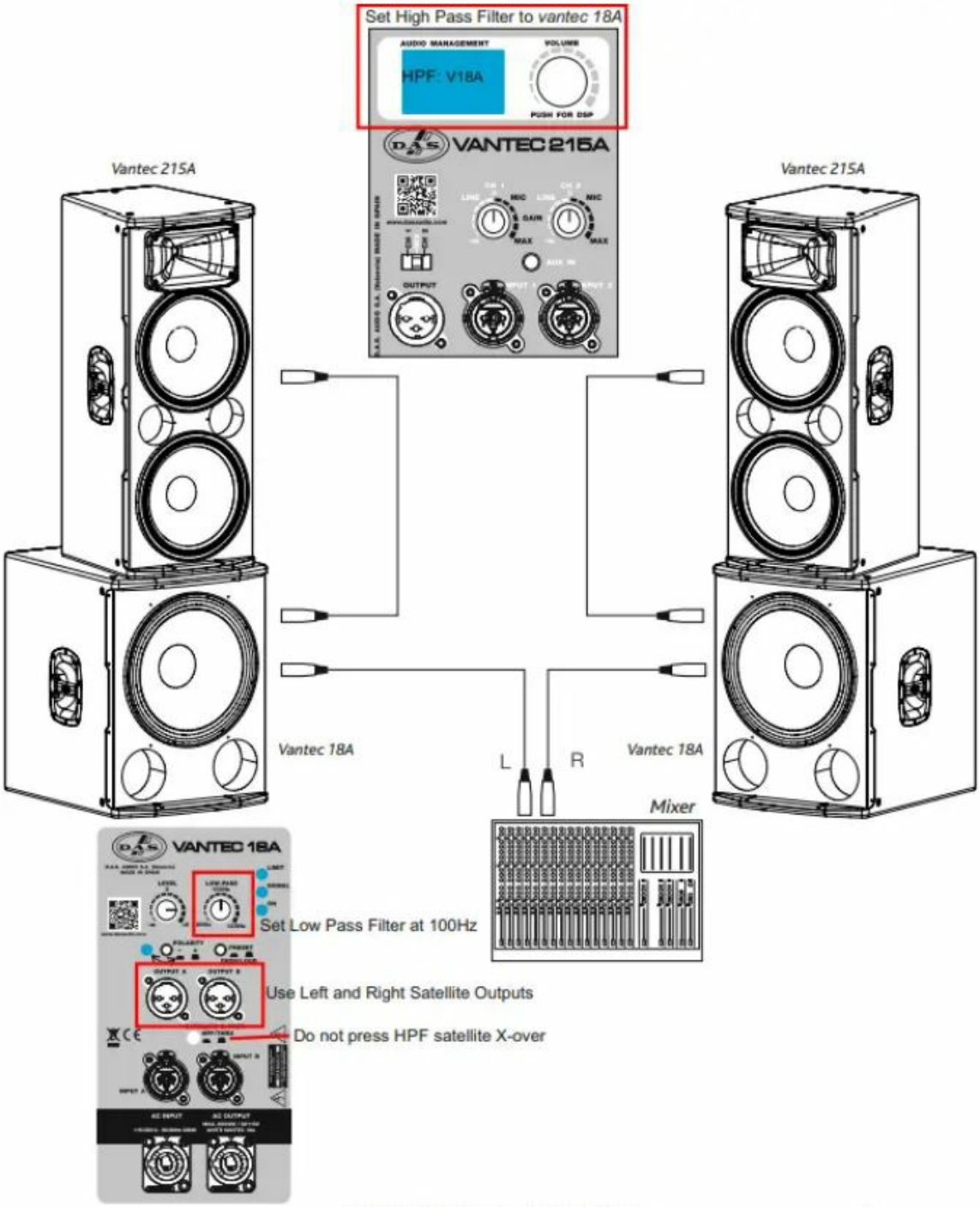
Caution

When using a external DSP the High Pass filter for the top cabinets and the Low pass filter in the subwoofer have to be set up in the processor.

This means that HPF needs to be off in vantec 12A (15A) and Low Pass filter in the sub at the maximum position.

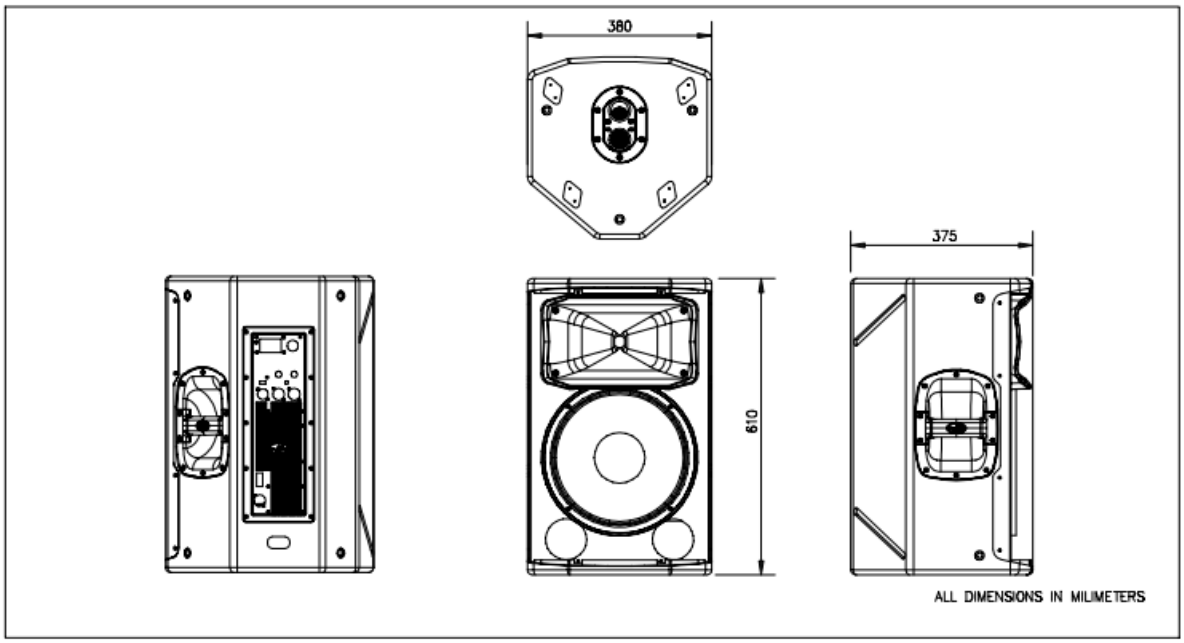
It would be extremely important to time align the system.



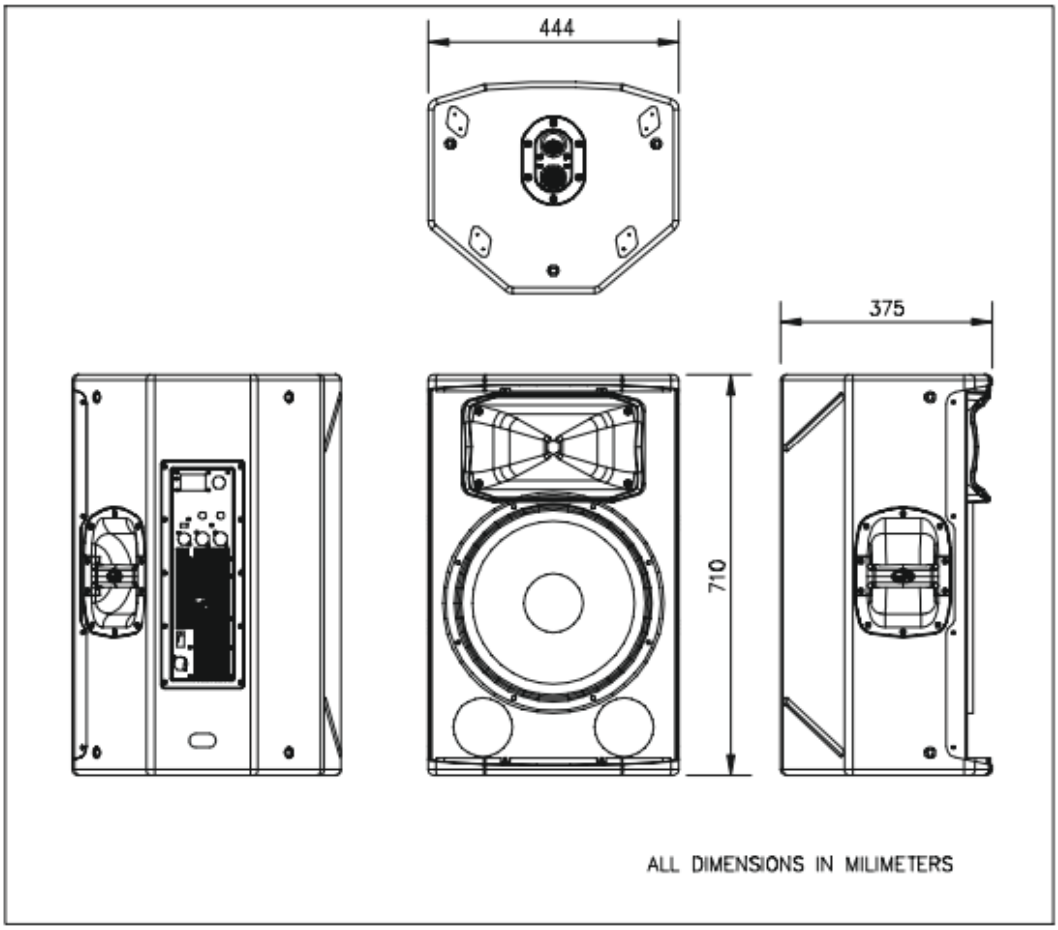


LINE DRAWINGS

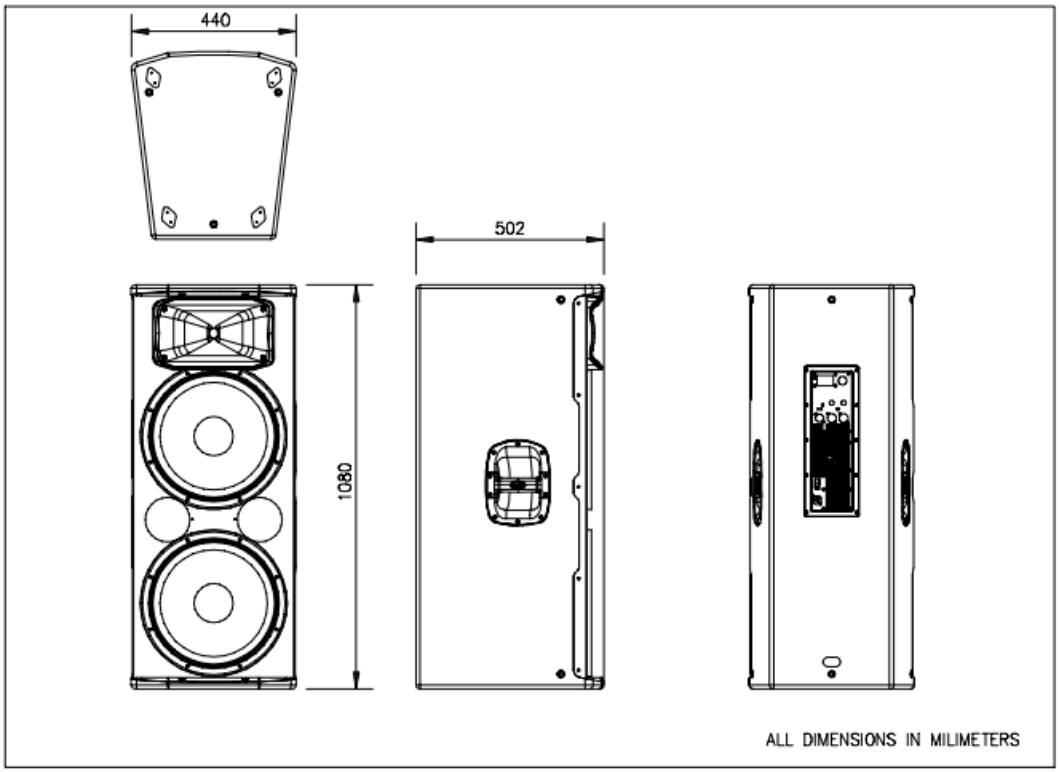
vantec 12A



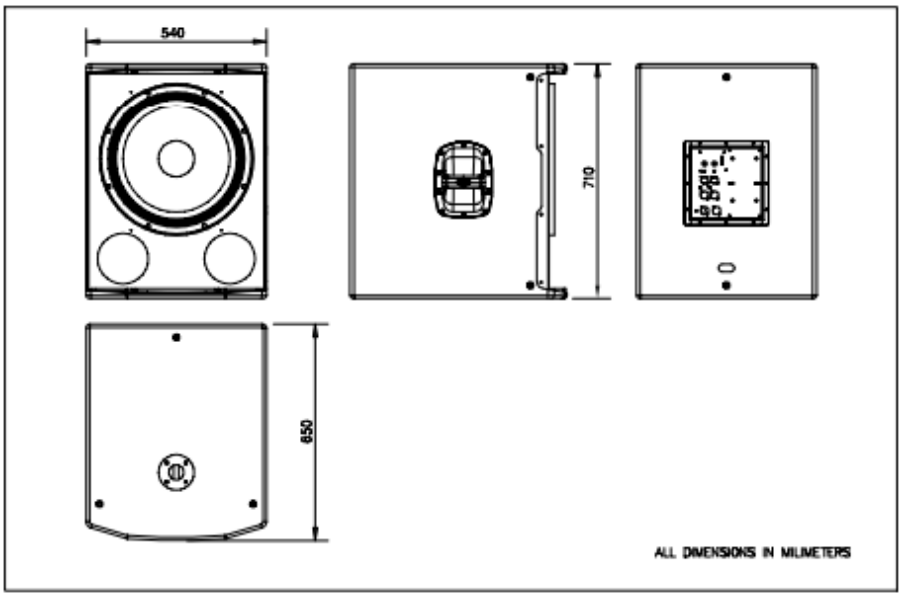
vantec 15A



vantec 215A



vantec 18A



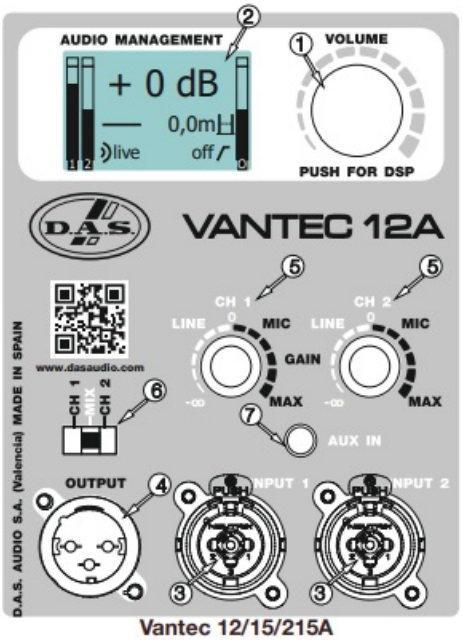
SPECIFICATIONS

Model	vantec 12A	vantec 15A	vantec 215A	vantec 18A
Power Amplifier	1500 W (Class D Bi-amplified)	1500 W (Class D Bi-amplified)	2250 W (Class D Tri-amplified)	1500 W (Class D mono amplified)
Input Type	Balanced Differential Line	Balanced Differential Line	Balanced Differential Line	Balanced Differential Line
Input Impedance	Line: 20 kohms	Line: 20 kohms	Line: 20 kohms	Line: 20 kohms
Sensitivity	Line: 3V (+12dBu)	Line: 3V (+12dBu)	Line: 3V (+12dBu)	Line: 1.95V (+8dBu)
Frequency Range (-10 dB)	60 Hz - 20 kHz	45 Hz - 20 kHz	40 Hz - 20 kHz	Loud: 35 Hz - 125 Hz Deep: 30Hz - 125Hz
HF Horn Coverage Angles (-6 dB)	90° x 50°	90° x 50°	90° x 50°	90° x 50°
Maximum Peak SPL at 1m	135 dB	135 dB	138 dB	135 dB
Transducers/ Replacement Parts	LF: 12F4 / GM 12F4 HF: M-28 / GM M-28	LF: 15F4 / GM 15F4 HF: M-28 / GM M-28	LF: 2 x 15F4 / GM 15F4 HF: M-28 / GM M-28	LF: 18LX / GM 18LX
Wireless Audio	Yes	Yes	Yes	No
Enclosure Material	Birch Plywood	Birch Plywood	Birch Plywood	Birch Plywood
Color/Finish	Black ISO-flex Paint	Black ISO-flex Paint	Black ISO-flex Paint	Black ISO-flex Paint
Connectors	INPUT: Female XLR 1/8" mini jack (3.5mm) Aux input LOOP THRU: Male XLR AC INPUT: PowerCon NAC 3 FCA	INPUT: Female XLR 1/8" mini jack (3.5mm) Aux input LOOP THRU: Male XLR AC INPUT: PowerCon NAC 3 FCA	INPUT: Female XLR 1/8" mini jack (3.5mm) Aux input LOOP THRU: Male XLR AC INPUT: PowerCon NAC 3 FCA	INPUT: Female XLR LOOP THRU: Male XLR AC INPUT: PowerCon NAC 3 FCA
AC Power Requeriments	115V, 2.4A, 50 Hz / 60 Hz 230V, 1.2A, 50 Hz / 60 Hz	115V, 3A, 50 Hz / 60 Hz 230V, 1.5A, 50 Hz / 60 Hz	115V, 3A, 50 Hz / 60 Hz 230V, 1.5A, 50 Hz / 60 Hz	115V, 3A, 50 Hz / 60 Hz 230V, 1.5A, 50 Hz / 60 Hz
Dimensions (H x W x D)	61 x 38 x 37.5 cm 24 x 15 x 14.8 in	71 x 44.4 x 37.5 cm 28 x 17.5 x 14.8 in	108 x 44.4 x 50.2 cm 42.5 x 17.5 x 19.8 in	71 x 44.4 x 37.5 cm 28 x 17.5 x 14.8 in
Weight	21 kg (46.2 lb)	24 kg (52.8 lb)	41 kg (90.2 lb)	24 kg (52.8 lb)
Accessories	ANL-2 Eye Bolt TRD-2 Speaker Stand TRD-6 Pole Mount	ANL-2 Eye Bolt TRD-2 Speaker Stand TRD-6 Pole Mount	ANL-2 Eye Bolt	ANL-2 Eye Bolt TRD-6 Pole Mount

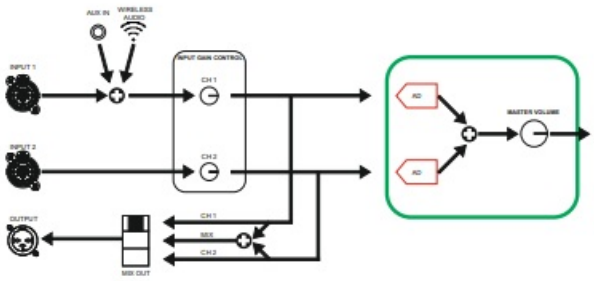
D.A.S. Audio S.A. continuously strives to enhance its products through investigation and development. All specifications are subject to change without prior warning.

AMPLIFIER

Description: Vantec 12A/15A/215A



Vantec 12/15/215A


Block diagram of Mixer
(only Vantec 12/15/215A)

1. MASTER VOLUMEN AND DSP CONTROL:
    - Use the encoder to select the desired output volume and push/hold it to access to the different DSP and cabinet settings.
2. MAIN SCREEN:
    - In the main screen all selected parameters and settings are shown. Besides this, there are two input level indicators on the left , one output level indicator on the right and the center area is reserved to display messages as Input Clip or Limit.
3. INPUT connectors:

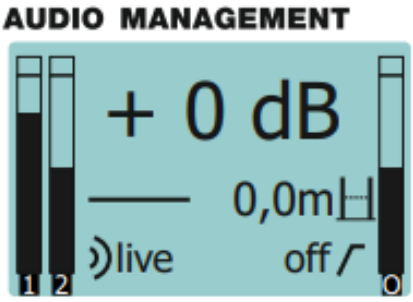
1/4” Jack+XLR combined socket-type input signal connectors. This is a balanced connector just like the LOOP THRU connector with the following pin assignments:

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

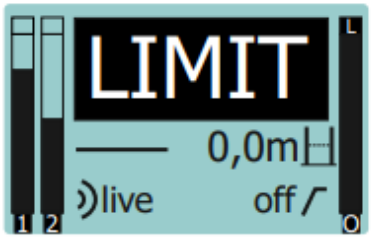
4. OUTPUT
    - XLR-type output signal connector for connecting several units together and sending them all the same signal.The user can select the signal going out; can be Ch1, Ch2 or MIX (see 6).
5. INPUT GAIN CONTROL:
    - For channels 1, 2 and AUX IN, gain control, line and microphone.
    - **Note:** Wireless Audio Signal is controlled with gain knob 1.
6. OUTPUT mix selector:
    - It allows the user to select which input channel signal to be sent to other cabinets. User can select Ch1, Ch2 or both (Mix).
7. AUX in:
    - 3.5 mm audio jack input for connecting external audio media devices, such as MP3 players. The input source is controlled with Gain control 1.

ADJUSTING THE LEVELS:

By default the state of the screen is the following:



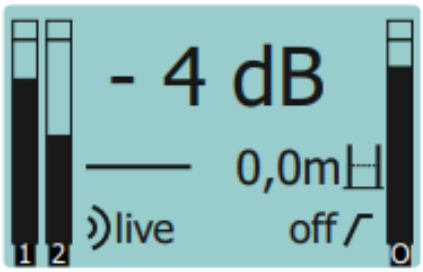
Once the input source (s) have been connected to the amplifier´s cabinet, the user has to adjust the levels. For the two input channels (1 and 2), two independent gain controls are available. Be careful when setting the input volume and do not exceed the maximum level shown on the meters: (input clip shown on channel one)



Exceeding the limits may cause speaker failure!!

After having set the input volume values under the maximum level, user has to adjust output volume with the master control. The level is shown in the right meter of the screen. As with the inputs be careful not exceeding the limit: (LIMIT shown)

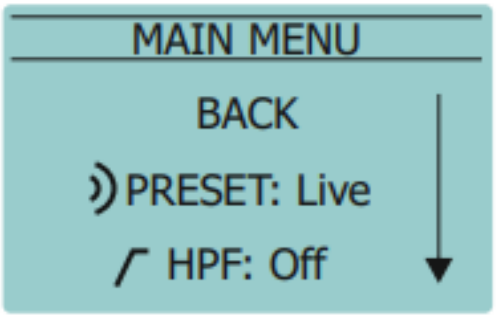
After these two volume adjustments the screen will show something like this (when having the input sources ON):



It is highly recommendable working with output volume below 0dB. If maximum level is required user should increase the output level (higher than 0dB)

MAIN MENU:

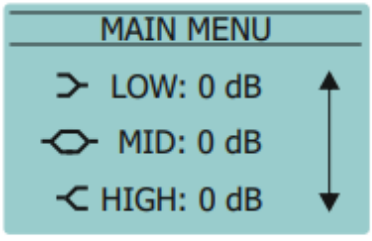
As stated previously by pushing the encoder the user can access to the following options in the MENU:

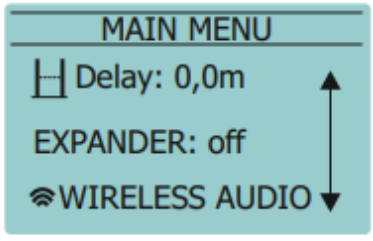


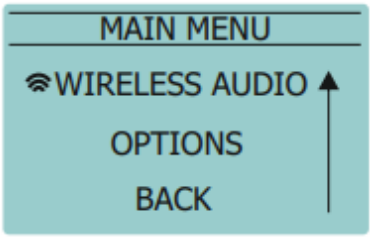
Note: to enter and select and option always push the encoder. For going back in the menu, the user has to select Back on the screen and press the encoder or just pushing the encoder.

- After 30 seconds without using the unit it will go back to the main screen automatically.

By scrolling down the encoder more options appear:

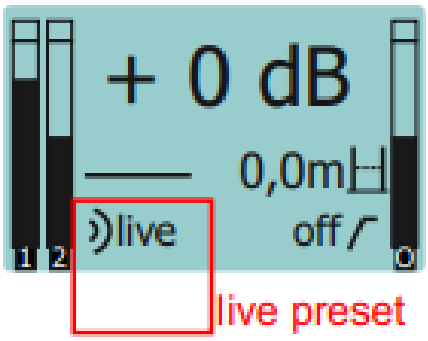




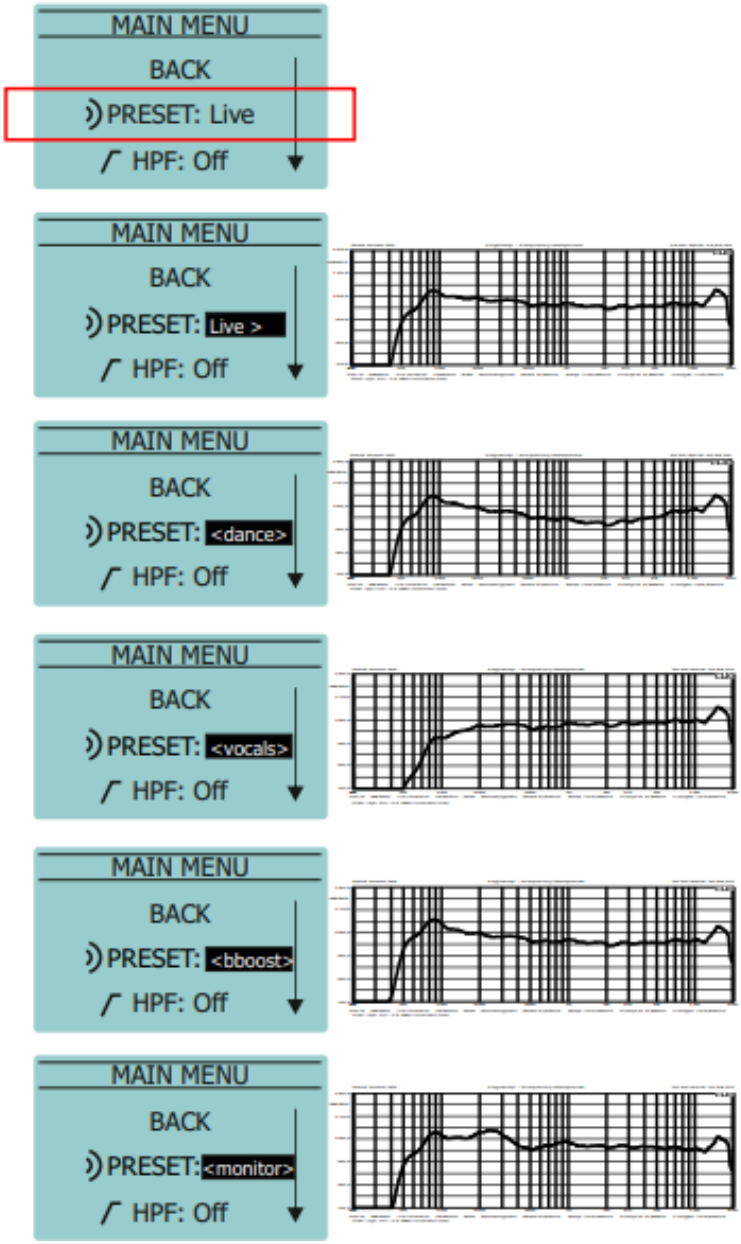


PRESETS:

Five factory settings (live, dance, vocals, boost, monitor) depending on the type of music/use that has been configured inside the unit:

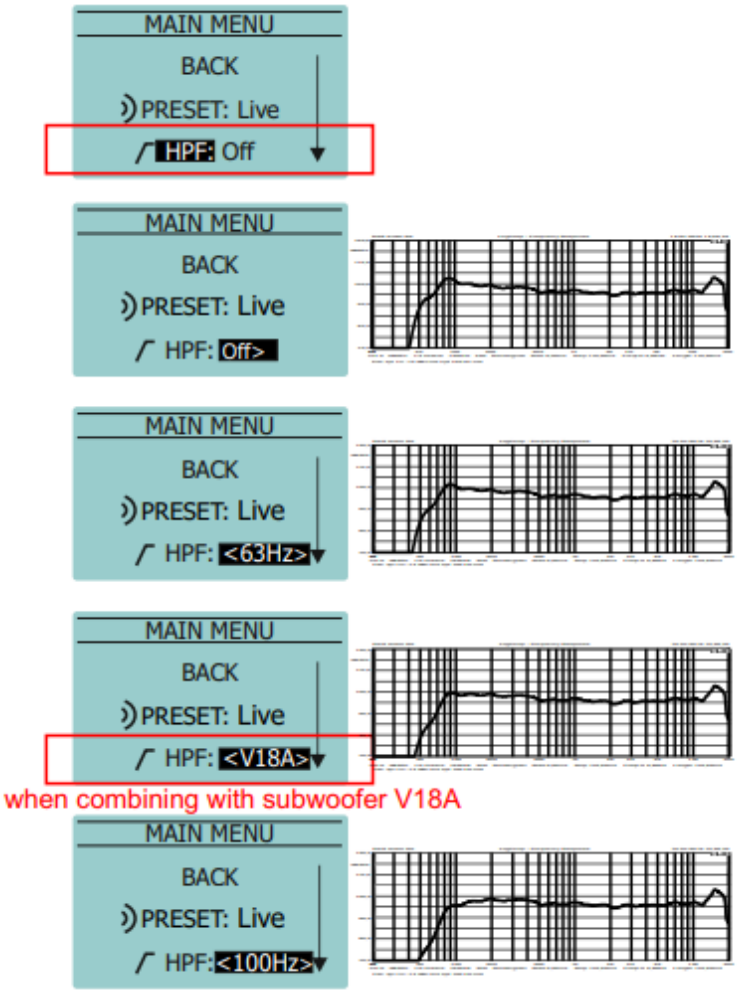


With the encoder go to Preset Sub-menu and press the knob to access to the different options:



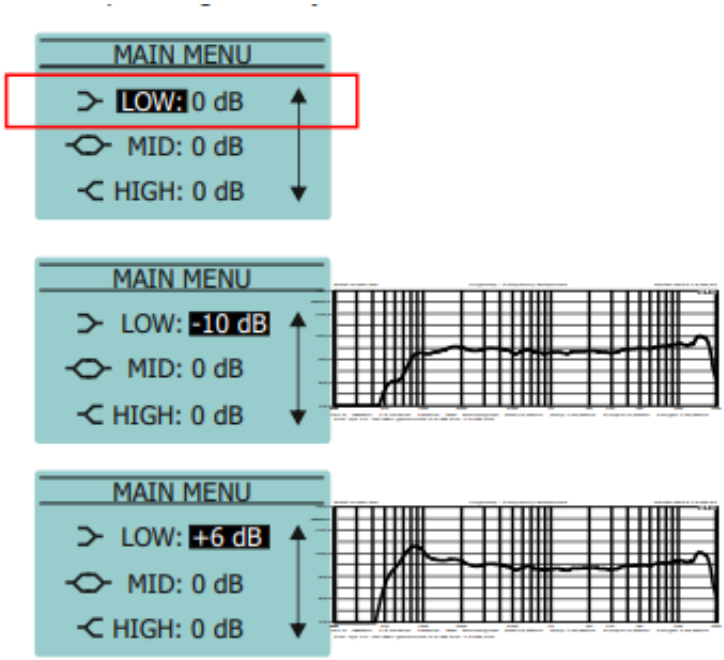
HPF (High Pass Filter):

Four options are available for the cabinets. Go to the HPF Sub-menu and press the encoder. Options appear:

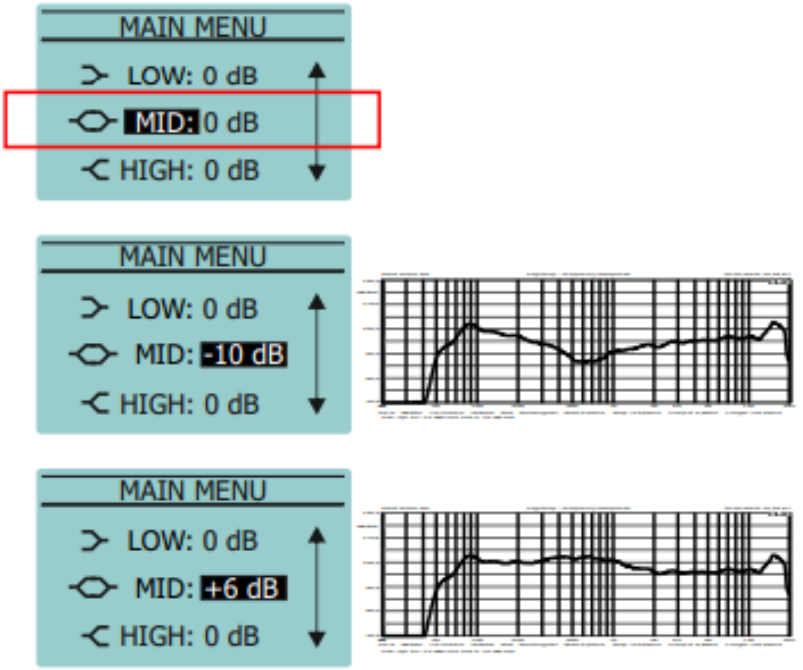


LOW

Boosting the energy in the low end is possible by the use of this parameter, Besides the user can remove energy. The scale goes from -10dB to +6dB. As with the previous options use the encoder to move in the main menu till the LOW sub menu. Then press again and you will enter the dB selector:



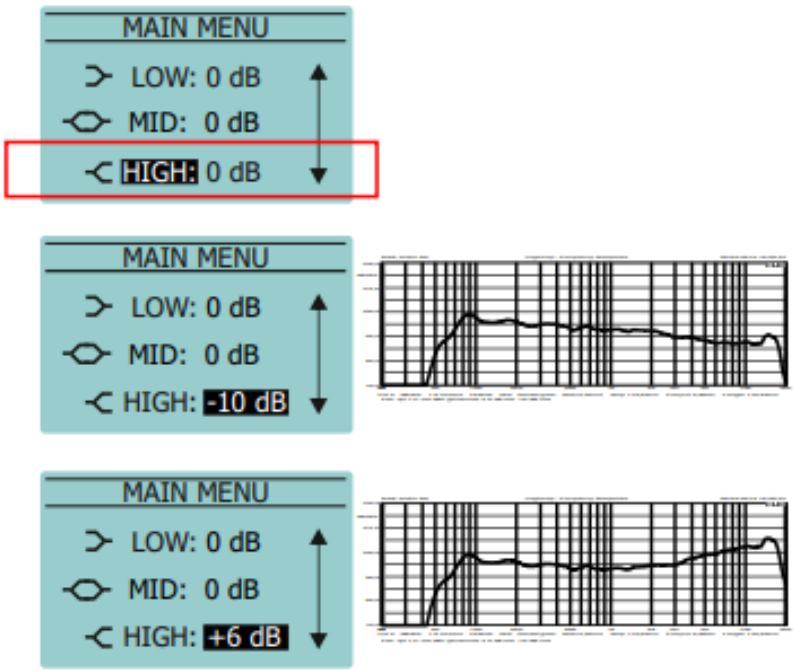
MID



Boosting the energy in the mid range end is possible by the use of this parameter. Besides the user can remove energy. The scale goes from 10dB to +6dB. As with the previous options use the encoder to move in the main menu till the MID sub menu. Then press again and you will enter the dB selector. The EQ is a parametric Bell at 630Hz with a Q of 0.75

HIGH

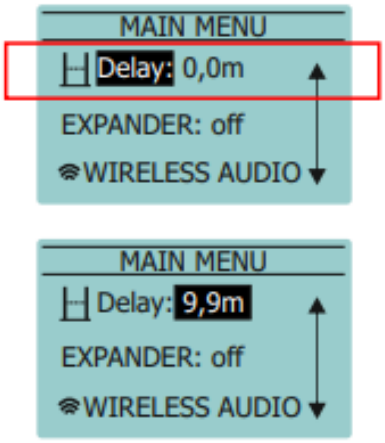
Boosting the energy in the high end is possible by the use of this parameter, Besides the user can remove energy. The scale goes from -10dB to +6dB. As with the previous options use the encoder to move in the main menu till the HIGH sub menu. Then press again and you will enter the dB selector:



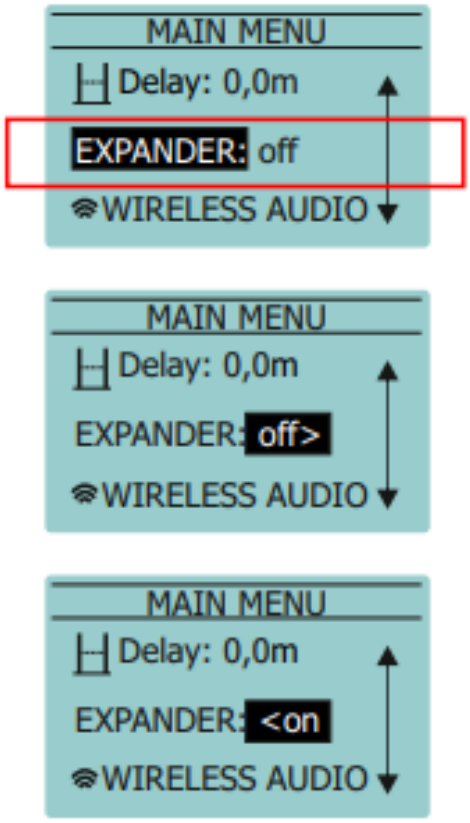
DELAY:

The user can set up a delay in the cabinets by using the delay Sub-menu; from 0 to 9.9m in 0.1m steps.

Delay units can be selected between meters or feet:

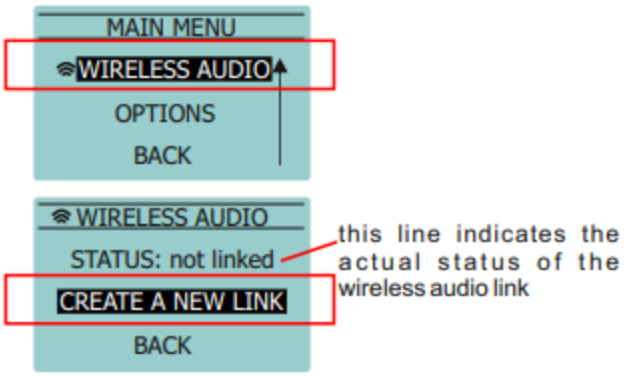


EXPANDER:



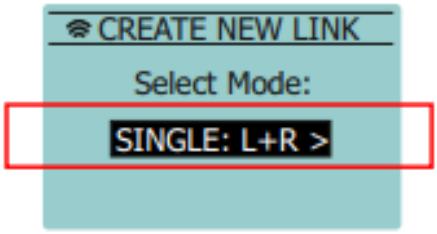
When the cabinet has to be used in very silent environments the expander acts as a noise gate but with a more progressive behavior. By default this option is not engaged.

WIRELESS AUDIO:



- This functionality allows the user to connect a device such as a tablet or smart phone to send audio to the speakers (up to 2) without using cables.
- Go to the Wireless Audio Menu and push the encoder to enter.

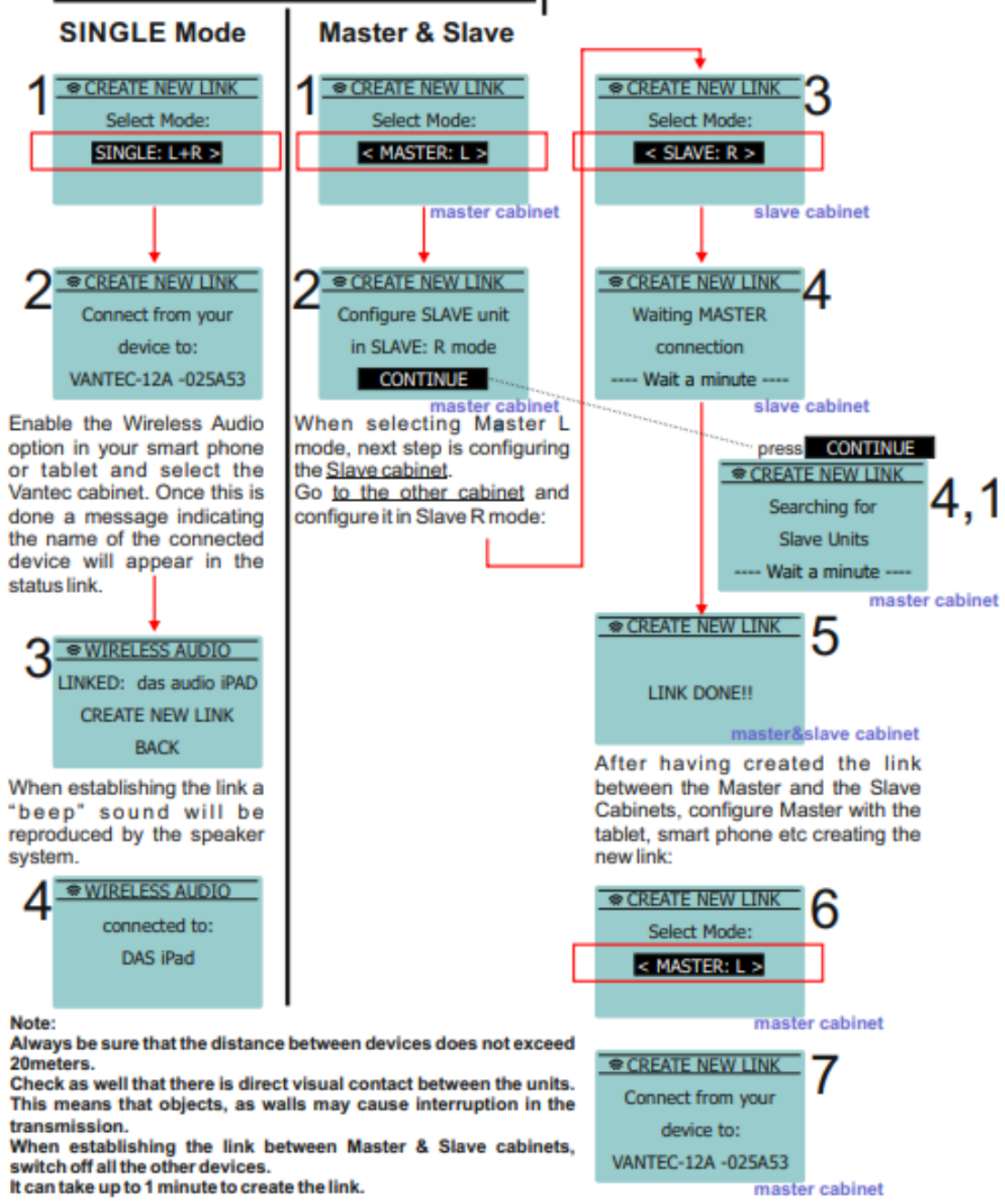
When creating a new link, the user has to select if just one cabinet is going to be connected to the audio source (select SINGLE L+R), or a pair of cabinets are going to be linked (stereo).



If a pair of cabinets is going to be used, one will be the Master unit connected to your tablet and other the Slave will receive audio from the Master. Master will reproduce Left audio channel and Slave Right channel.

If a pair of cabinets is going to be used, one will be the *Master* unit connected to your tablet and other the *Slave* will receive audio from the *Master*. *Master* will reproduce *Left* audio channel and *Slave Right* channel.

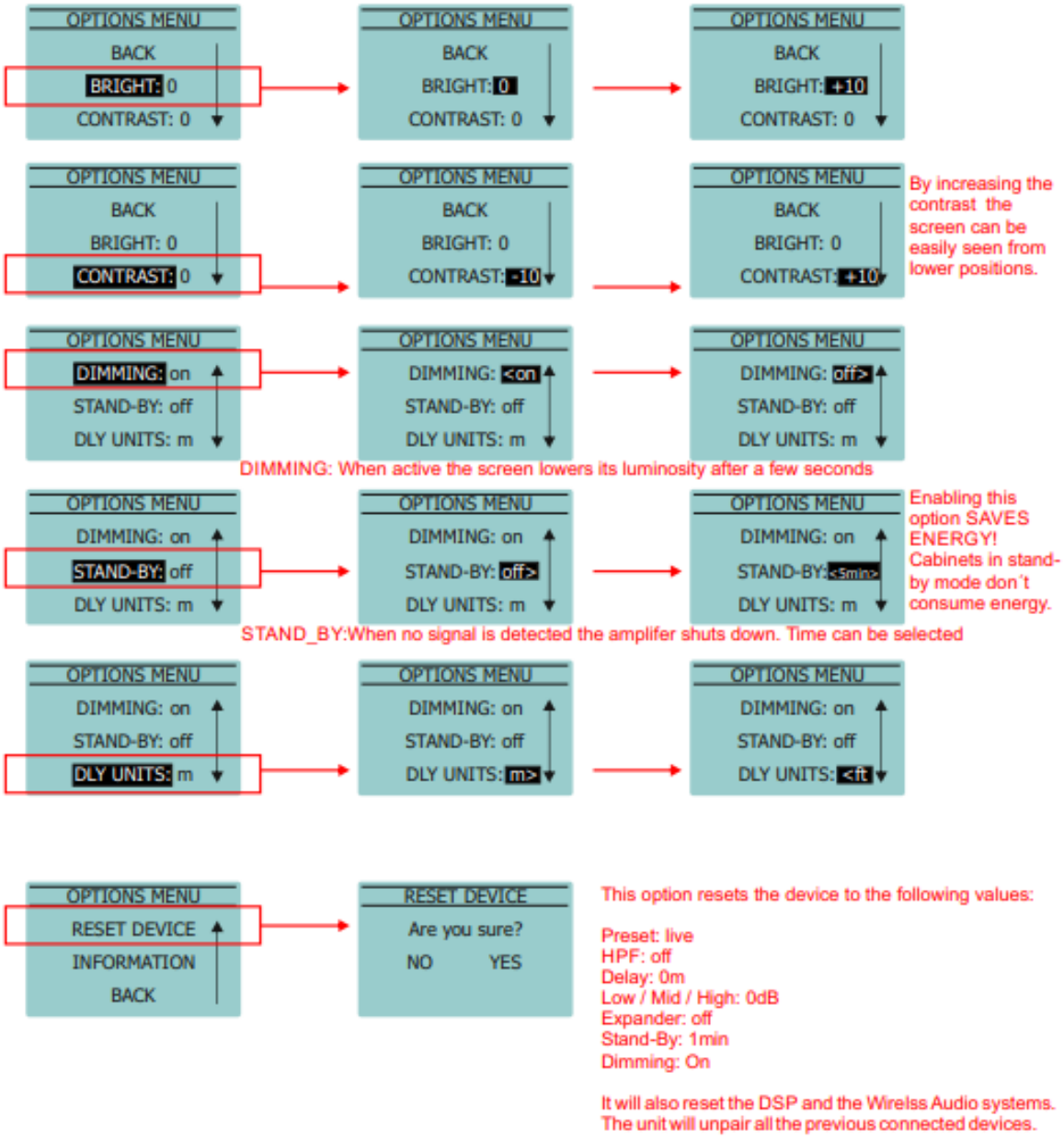
Note: when doing a master-slave connection ONLY one possible slave cabinet should be connected (power). Switch off all the rest of the units.



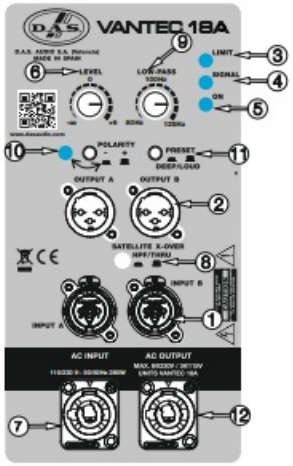
Note:
Always be sure that the distance between devices does not exceed 20meters.
Check as well that there is direct visual contact between the units. This means that objects, as walls may cause interruption in the transmission.
When establishing the link between Master & Slave cabinets, switch off all the other devices.
It can take up to 1 minute to create the link.

OPTIONS:

In this sub-menu the user can configure all the non-audio related options. Remember that in order to access each parameter it is necessary to push the encoder:



Description: Vantec 18A



1. INPUT connectors :
    - 1/4" Jack+XLR combined socket-type input signal connectors. 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. 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. AC INPUT :
    - Standard PowerCon NAC3FCA mains connector (inserted, rotated and locked for ON). Only use this equipment with an appropriate mains cord.
8. THRU/HPF :
    - 'SATELLITE OUTPUT' selector to switch between full range signal or pass filter with cut-off frequency of 100 Hz.
9. LOW-PASS CROSSOVER :
    - Button for adjusting the upper cut-off frequency for the subwoofer unit. We recommend a cut-off frequency of 100 Hz for vantec series use.
10. PHASE :
    - Switch for inverting the phase of the unit.
11. PRESET DEEP/LOUD
    - Button for switching between two types of frequency response, DEEP or LOUD.
12. AC OUTPUT:
    - PowerCon NAC3FCB connector for AC loop thru allows up to 8 units when using a 230V version (see unit's label)). Only use this equipment with an appropriate mains cord.

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 selfpowered 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 PowerCon NC3FCA connector. Always disconnect the device by removing the mains connector from the mains socket before detaching the mains cable at the 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 LED indicator (Vantec 18A)

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.

Overload Screen indicators (Vantec12/15/215A)

- In the main screen when input signal levels are too high on the left side the meters will display “input clip”.
- If the input levels are in between the limits but the output level gain is too much the right meter will display “limit”.

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.

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.

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.
- Therefore the current consumed by a 115V version is double the 230V version to achieve the same acoustic power level.

Pink Noise Mains 230 Vrms	1/3 Power
vantec 12A	1.8A
vantec 15A	1.8A
vantec 215A	2.2A
vantec 18A	2.7A

TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
No sound from the unit. The input meters on the screen do not show any signal presence.	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. LIMIT message never appears on the screen.	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. LIMIT message is not shown.	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 is displayed in the screen.	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 screen 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.

RIGGING

Warnings

This manual contains needed information for flying D.A.S. Audio cabinets, description of the elements and safety precautions. To perform any operations related to flying the system, read the present document first, and act on the warnings and advice given. The goal is to 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. The working load limits in this manual are the results of tests by

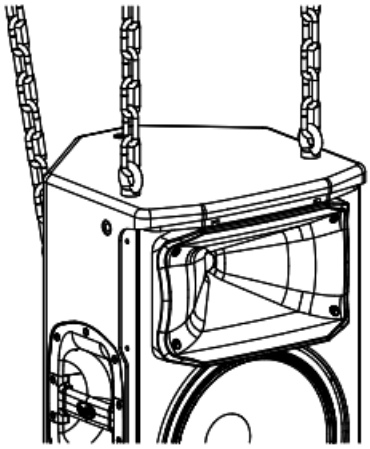
independent laboratories. It is the user's responsibility to stay within safe limits. It is the user's responsibility to follow and comply with safety factors, resistance values, periodical supervision and warnings given in this manual. Product improvement by means of research and development is on going at D.A.S. Specifications are subject to change without notice.

To this date, there is no international standard regarding the flying of acoustic systems. However, it is common practice to apply 5:1 safety factors for enclosures and static elements. For slings and elements exposed to material fatigue due to friction and load variation the following ratios must be met; 5:1 for steel cable slings, 4:1 for steel chain slings and 7:1 polyester slings. Thus, an element with a breaking load limit of 1000 kg may be statically loaded with 200 kg (5:1 safety factor) and dynamically loaded with 142 kg (7:1 safety factor).

When flying a system, the working load must be lower than the resistance of each individual flying point in the enclosure, as well as each box.Hanging hardware should be regularly inspected and suspect units replaced if in doubt. This is important to avoid injury and absolutely no risks should be taken in this respect. It is highly recommended that you implement an inspection and maintenance program on flying elements,including reports to be filled out by the personnel that will carry out the inspections. Local regulations may exist that, in case of accident,may require you to present evidence of inspection reports and corrective actions after defects were found.

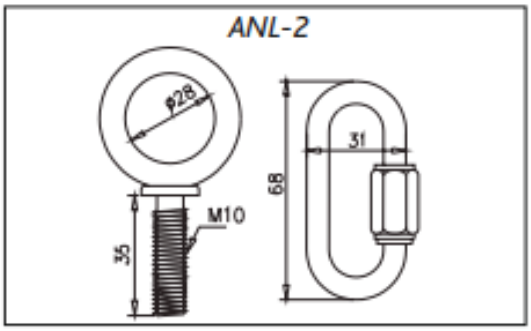
Absolutely no risks should be taken with regards to public safety. When flying enclosures from ceiling support structures, extreme care should be taken to ensure the load-bearing capabilities of the structures so that the installation is absolutely safe. Do not fly enclosures from unsafe structures. 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.

Introduction



Flyable vantec series models feature 6 internal steel angles, with 2 mounting threads each, so that 12 flying points are available (2 on each side, 3 on the top panel and 3 on the bottom panel and 2 on the rear panel). Eyebolt flying points are factory sealed with M10 screws, which are replaced with eyebolts on the flying points as required. Flying with eyebolts is very economical and safe, and is specially recommended for fixed installations where the boxes are permanently fixed. The illustration shows the internal metal hardware of an enclosure with eyebolt flying.

Flying with eyebolts

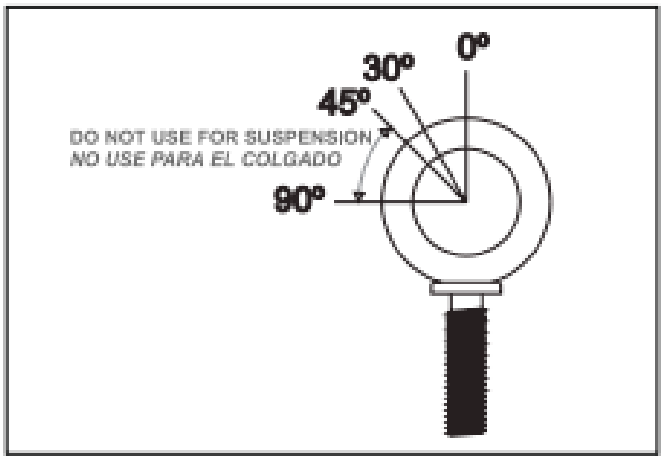


The Allen-head screws must be removed and replaced by M10 eyebolts on one side of the enclosure. Each rigging point has 200 kg (440 lb) working load limit. Then choose the slings or chains of required load resistance and length, bearing in mind that the length difference between the front and back slings or chains will determine the vertical orientation. Alternatively, the back bottom eyebolt points can be used to provide vertical orientation. The ANL-2 set is an optional set of four eyebolts and four carabiners. (Dimensions are in milimetres).

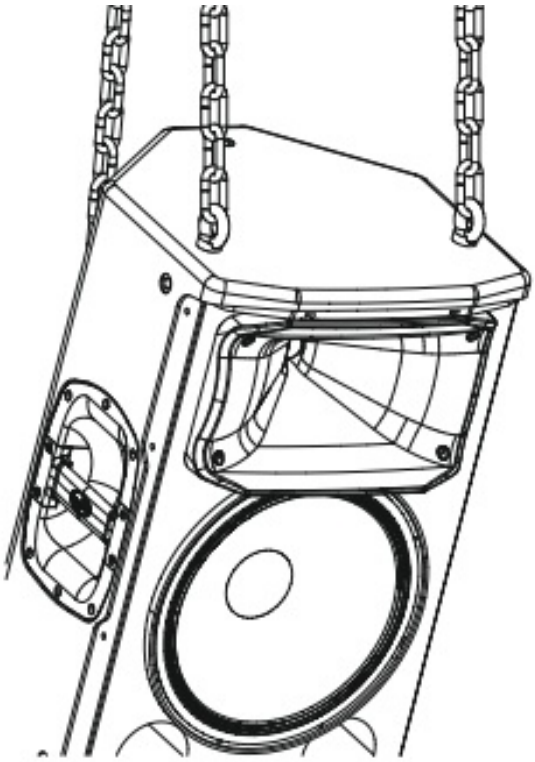
Each ANL-2 eyebolt has a rated working load of 200 kg. (440 lb). Each ANL-2 carabiner has a working load of 330 kg (726 lb). If using other hardware, make sure it is rated to handle the required load.

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-2 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%



The following illustrations show different views on eyebolt flying for a single box. The length of the back cables or chains determines the vertical angle of the box.



APPENDIX

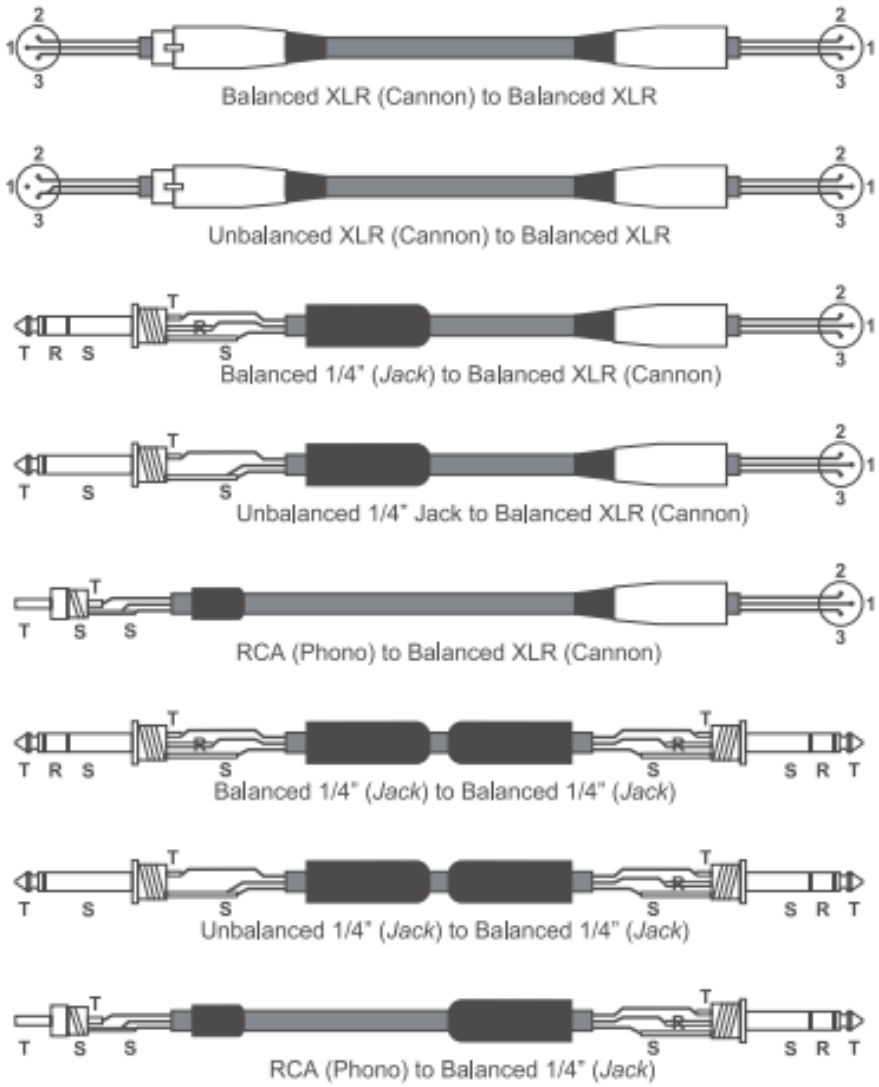
APPENDIX: Line connections: unbalanced and balanced

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.



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Documents / Resources

	D A S 12A Series Vantec Active [pdf] User Manual 12A Series Vantec Active, 12A Series, Vantec Active, Active

References

- Sistemas de sonido profesional | ¿Necesitas asesoramiento? - DAS Audio
- Manual-Hub.com - Free PDF manuals!
- User Manual