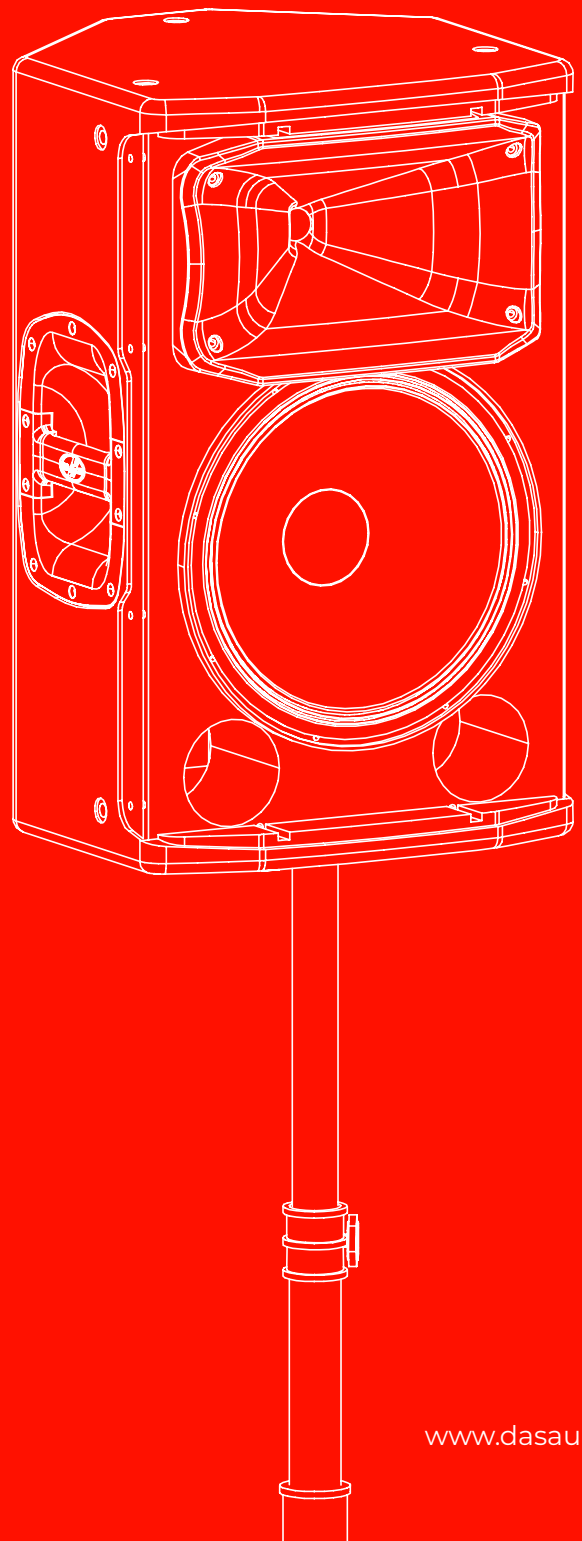
Vantec series

VANTEC-12A / VANTEC-15A / VANTEC-215A
VANTEC-18A / VANTEC-218A



D.A.S.
SOUND WITH SOUL

www.dasaudio.com



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

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- 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 VANTEC-18A
- 2 x VANTEC-15A (VANTEC-12A) + 1 x VANTEC-18A+ 1 x DSP
- 2 x VANTEC-215A + 2 x VANTEC-18A

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- 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 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.
- Do not remove mains connector ground, it is dangerous and illegal. Class I device. The product must be connected to a mains socket outlet with protective earth connection. Only use this equipment with an appropriate mains cord for your country.



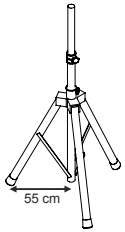
- The lightning and arrowhead symbol warns about the presence of uninsulated dangerous voltage. To reduce the risk of electric shock, do not remove the cover.
- Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus that produce heat. The circulation of air through the heatsink must not be blocked.
- 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 appicable collection point for the recycling of electrical and electronic equipment.
- Working temperature ranges from 15°C to 45°C with a relative humidity of 95%, with ±10% of the rated main voltage value indicated on the rear label (according to IEC 60065). 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.



- To disconnect the device, you should use the mains plug. Unplug this apparatus during lightning storms, earthquakes or when unused for long periods of time.
- 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 socket, the maximum safety height from floor to bottom of enclosure when mounting on a TRD-2 tripod, with legs spread 55cm from the central pole, is:

  VANTEC-12 ⟶ 115 cm
  VANTEC-15 ⟶ 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 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.

All our 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.

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

Declares that VANTEC-18A / VANTEC-218A:

Abide by essential objectives relating Directives:

- Low Voltage Directive 2014/35/UE
- RoHS 2011/65/UE
- RAEE (WEEE) 2012/19/UE

In accordance with Harmonized European Norms:

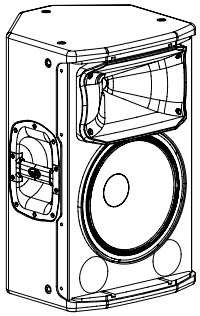
- EN 60065:2014.- Audio, video and similar electronic apparatus. Safety requirements.
- EN 55032:2012.- Electromagnetic compatibility of multimedia equipment. Emission requirements.
- EN 55103-2:2009.- Electromagnetic compatibility. Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use. Part 2:Immunity.
- EN 50581:2012.- Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances.

The Vantec Series inherits the exceptional sound quality and rugged build that have made DAS professional systems an internacional sound reinforcement standard. Designed from “real-world” experience, they 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.

VANTEC-12A

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 0° or -10°.

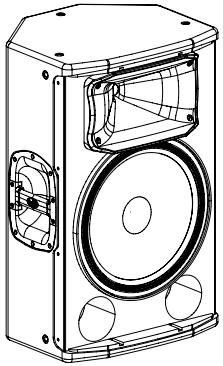
- Two-way powered system.
- 12” bass loudspeaker.
- Compression driver with titanium diaphragm.
- Symmetric enclosure design for stage monitor use.
- Built-in rigging points (eyebolt based).
- Stand mountable / Dual angle.



VANTEC-15A

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 0° or -10°.

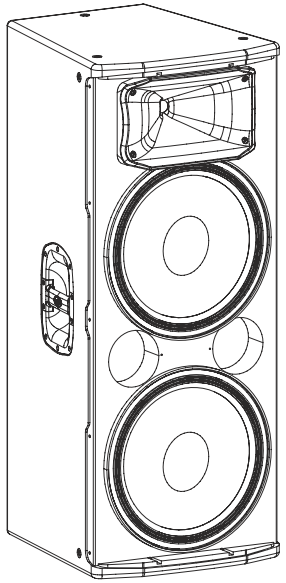
- Two-way powered system.
- 15” bass loudspeaker.
- Compression driver with titanium diaphragm.
- Symmetric enclosure design for stage monitor use.
- Built-in rigging points (eyebolt based).
- Stand mountable.



VANTEC-215A

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 hard-wearing 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 VANTEC-215A cabinets.

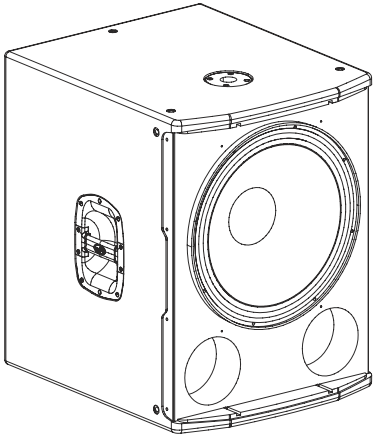
- 3-way powered system
- 2 x 15" bass loudspeaker working in a “dual band” configuration (2.5 ways)
- Compression driver with titanium diaphragm
- Two steel-reinforced handles



VANTEC-18A

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 bass-reflex 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.

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



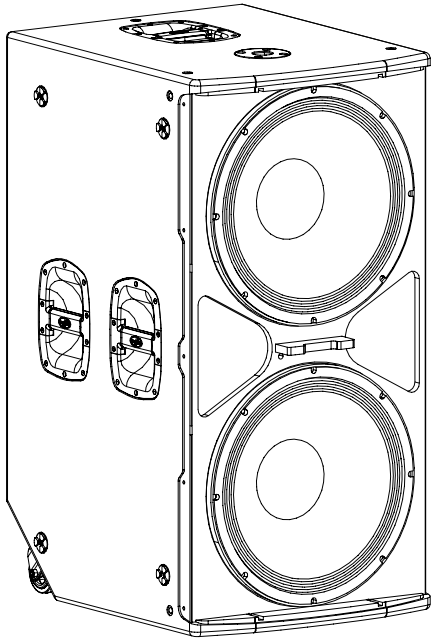
VANTEC-218A

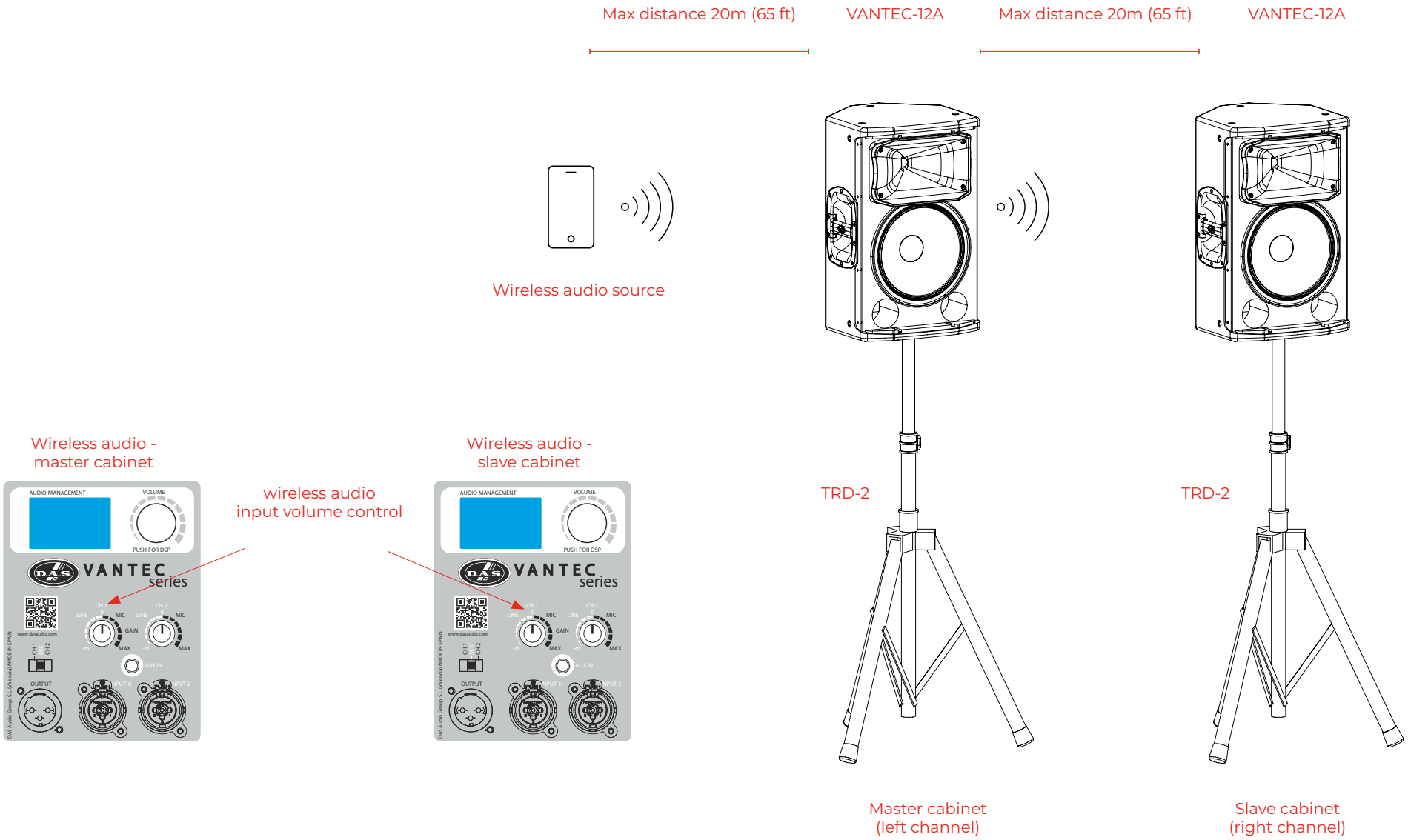
The VANTEC-218A is a powered bass subwoofer system designed to provide extended bass response for the Vantec full-range cabinets. A powerful amplifier drives dual DAS 18LX long excursion bass loudspeakers incorporating 4" voice coils and massive magnet structures provide high power handling and impressive output.

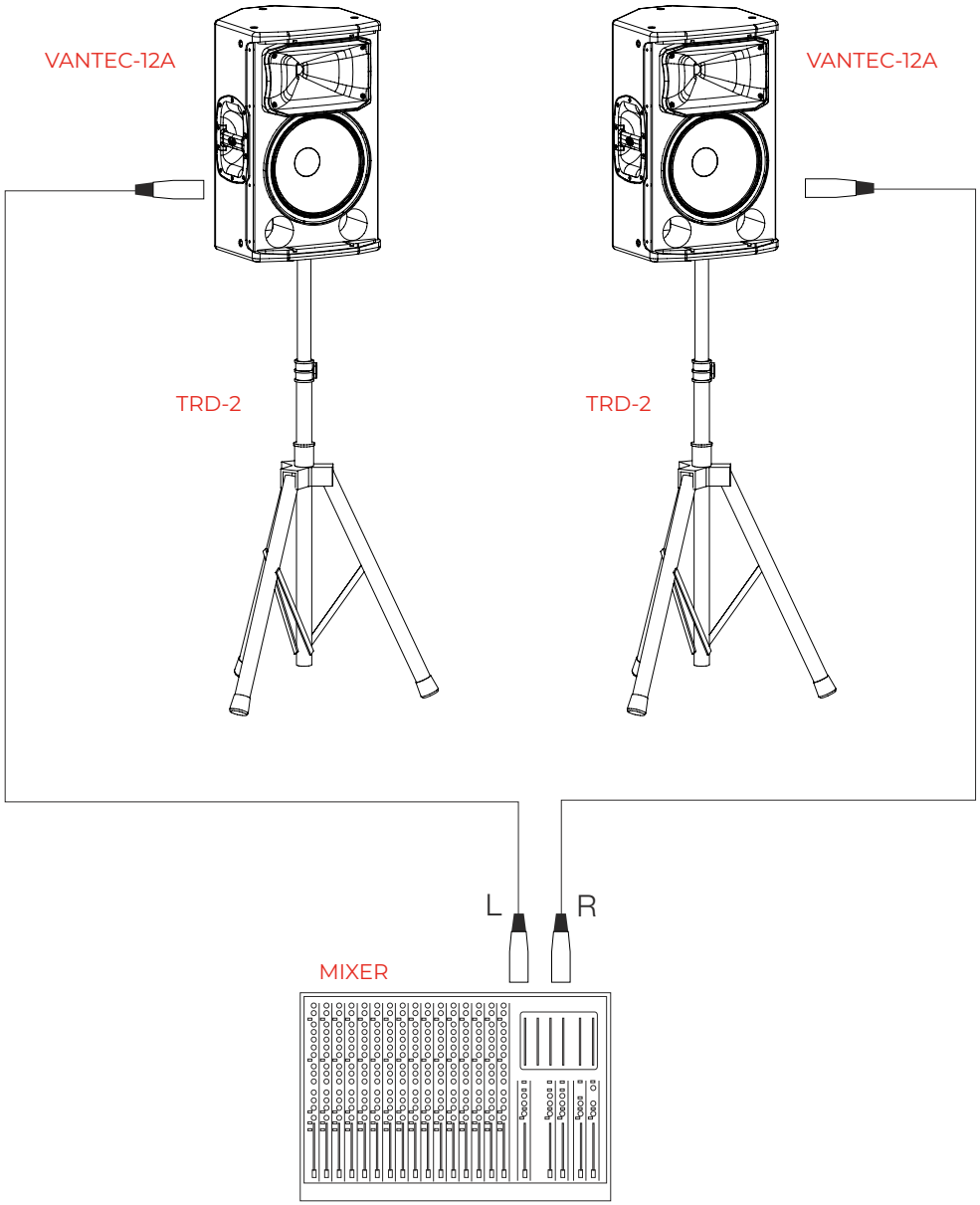
The VANTEC-218A is powered by a Class D amplifier with switch mode power supply and a 4000 Wpeak power rating. The system includes two balanced inputs (A-B) with stereo HPF filtered output connections for satellite systems. Defeating the HPF filter offers stereo “loop thru” connections. The variable LPF crossover ranges from 80 Hz-125 Hz. A gain control and polarity reverse feature increase user control over the system.

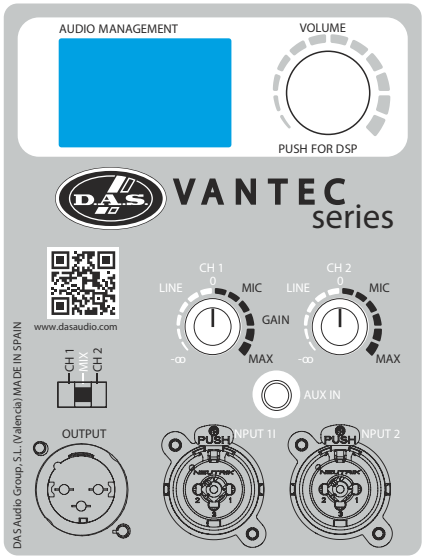
The compact VANTEC-218A cabinet is manufactured using birch plywood and is finished with a coating of the highly resistant ISO-flex black paint for durability. The powder-coated steel front grille protects the DAS components. Handles on the sides and the rear of the cabinet along with two rear located wheels make moving the box easier.

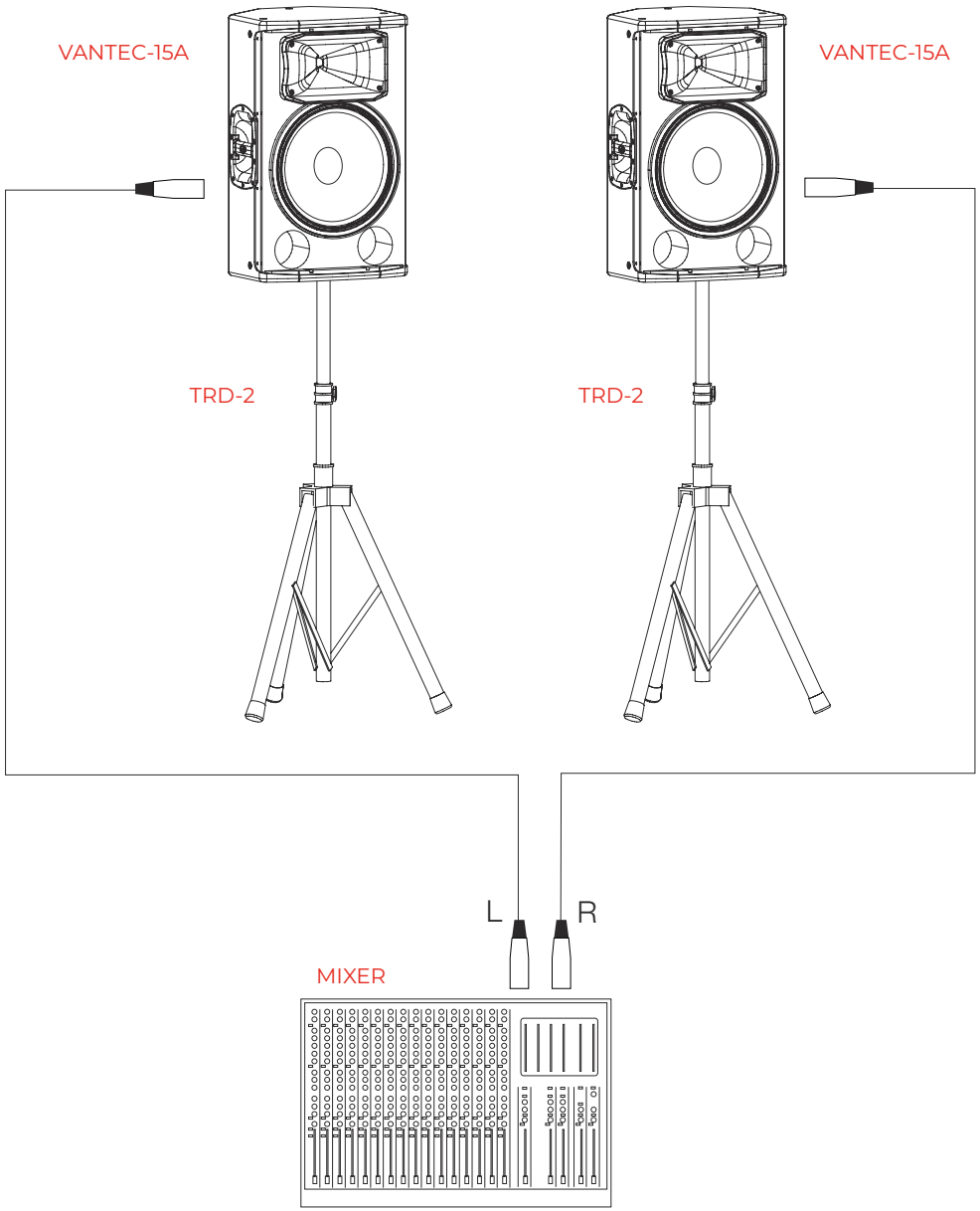
- Powered subwoofer system
- 4000 Wpeak Class “D” amplifier
- EQ Presets: Deep, Loud
- Variable Low Pass Filter
- Sub level gain control, polarity reverse
- Front logo on/off switch
- Rigging points
- Rear located wheels for easy movement

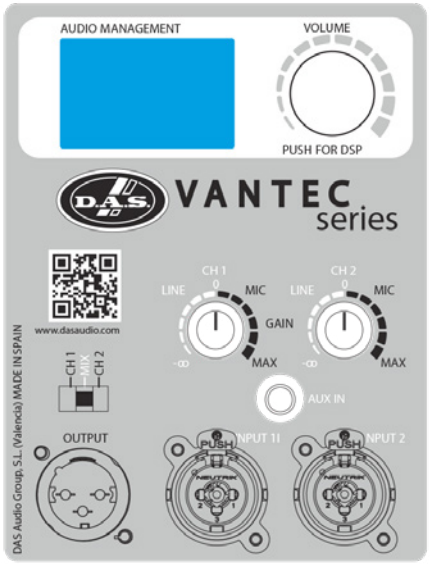


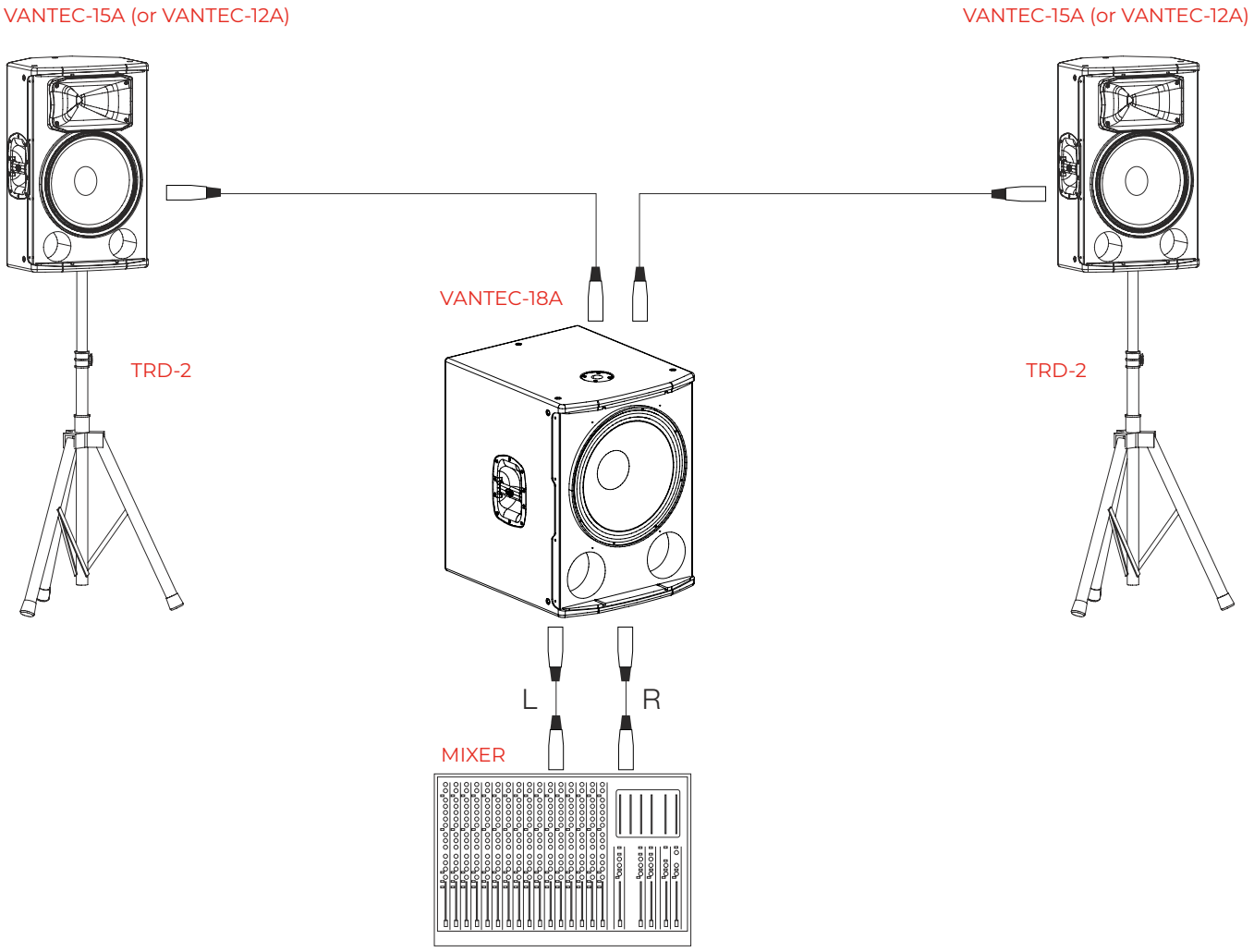

Max distance 20m (65 ft)
VANTEC-12A
Max distance 20m (65 ft)
VANTEC-12A
Wireless audio source
Wireless audio -
master cabinet
wireless audio
input volume control
Wireless audio -
slave cabinet
AUDIO MANAGEMENT
VOLUME
PUSH FOR DSP
VANTEC
series
TRD-2
TRD-2
Master cabinet
(left channel)
Slave cabinet
(right channel)

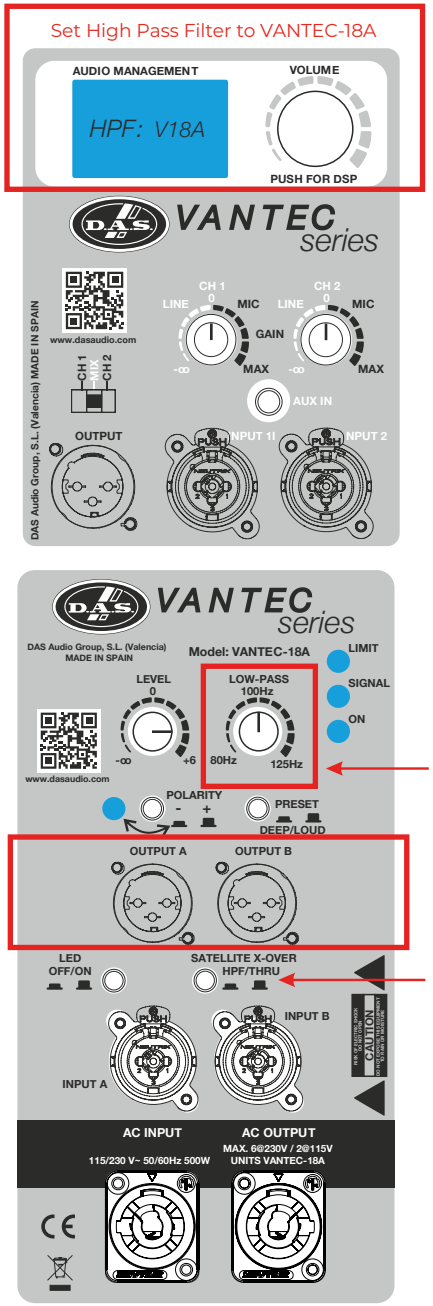

VANTEC-12A
VANTEC-12A
TRD-2
TRD-2
L
R
MIXER

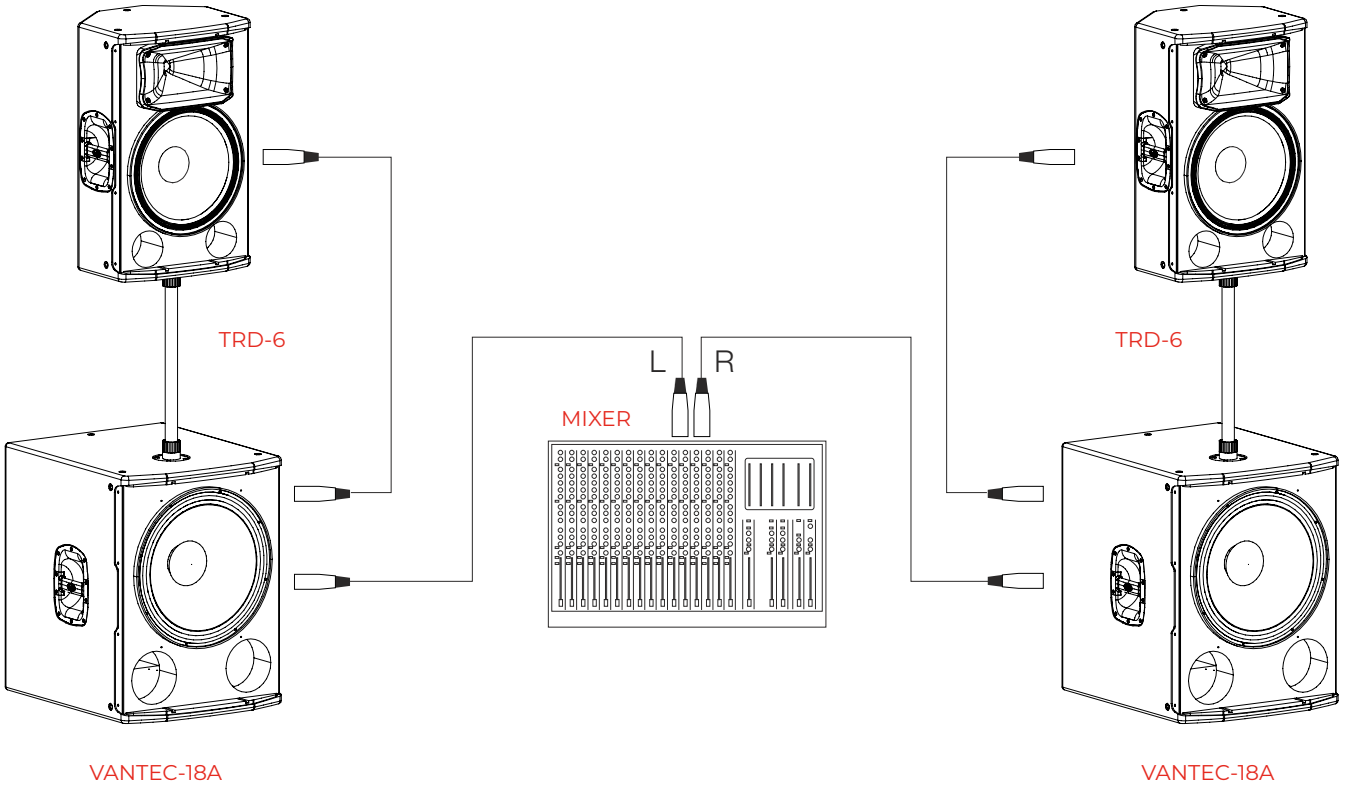

AUDIO MANAGEMENT
VOLUME
PUSH FOR DSP
VANTEC series
www.dasaudio.com
CH 1
LINE
MIC
GAIN
MAX
CH 2
LINE
MIC
MAX
CH 1
CH 2
AUX IN
OUTPUT
INPUT 1
INPUT 2
PUSH
PUSH
DAS Audio Group, S.L. (Valencia) MADE IN SPAIN

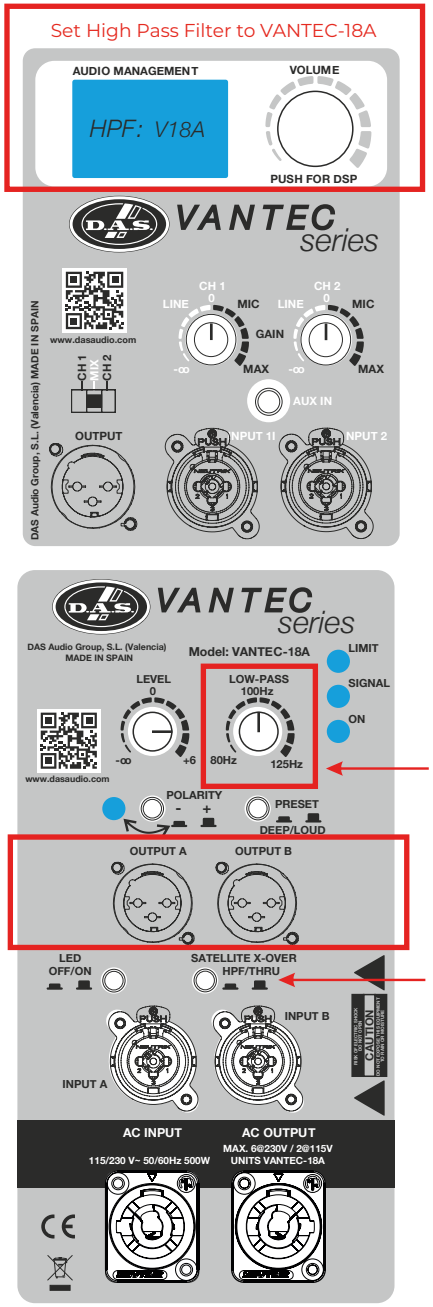

VANTEC-15A
VANTEC-15A
TRD-2
TRD-2
L
R
MIXER


AUDIO MANAGEMENT
VOLUME
PUSH FOR DSP
VANTEC series
www.dasaudio.com
CH 1
LINE
MIC
GAIN
MAX
CH 2
LINE
MIC
MAX
CH 1
CH 2
AUX IN
OUTPUT
PUSH
PUSH
DAS Audio Group, S.L. (Valencia) MADE IN SPAIN


VANTEC-15A (or VANTEC-12A)
VANTEC-15A (or VANTEC-12A)
TRD-2
VANTEC-18A
TRD-2
L
R
MIXER


Set High Pass Filter to VANTEC-18A
AUDIO MANAGEMENT
HPF: V18A
VOLUME
PUSH FOR DSP
VANTEC series
DAS Audio Group, S.L. (Valencia) MADE IN SPAIN
www.dasaudio.com
CH 1
CH 2
LINE
MIC
GAIN
MAX
AUX IN
OUTPUT
INPUT 1
INPUT 2
VANTEC series
DAS Audio Group, S.L. (Valencia)
MADE IN SPAIN
Model: VANTEC-18A
LIMIT
SIGNAL
ON
LEVEL
LOW-PASS
100Hz
80Hz
125Hz
POLARITY
PRESET
DEEP/LOUD
OUTPUT A
OUTPUT B
LED
OFF/ON
SATELLITE X-OVER
HPF/THRU
INPUT A
INPUT B
AC INPUT
115/230 V~ 50/60Hz 500W
AC OUTPUT
MAX. 6@230V / 2@115V
UNITS VANTEC-18A
Set Low Pass Filter at 100Hz
Use Left and Right Satellite Outputs
Do not press HPF satellite X-over

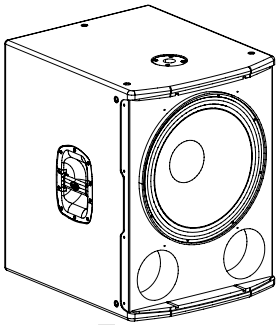

VANTEC-15A (or VANTEC-12A)
VANTEC-15A (or VANTEC-12A)
TRD-6
TRD-6
L
R
MIXER
VANTEC-18A
VANTEC-18A


Set High Pass Filter to VANTEC-18A
AUDIO MANAGEMENT
HPF: V18A
VOLUME
PUSH FOR DSP
VANTEC series
DAS Audio Group, S.L. (Valencia) MADE IN SPAIN
www.dasaudio.com
CH 1
CH 2
LINE
MIC
GAIN
MAX
AUX IN
OUTPUT
INPUT 1
INPUT 2
VANTEC series
DAS Audio Group, S.L. (Valencia)
MADE IN SPAIN
Model: VANTEC-18A
LIMIT
SIGNAL
ON
LEVEL
LOW-PASS
100Hz
80Hz
125Hz
POLARITY
PRESET
DEEP/LOUD
OUTPUT A
OUTPUT B
LED
OFF/ON
SATELLITE X-OVER
HPF/THRU
INPUT A
INPUT B
AC INPUT
115/230 V~ 50/60Hz 500W
AC OUTPUT
MAX. 6@230V / 2@115V
UNITS VANTEC-18A
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.

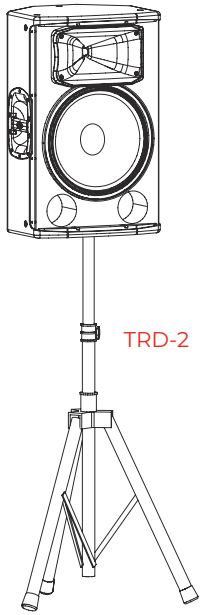
This means that HPF needs to be off in VANTEC-12A (VANTEC-15A) and Low Pass filter in the sub at the maximum position. It would be extremely important to time align the system.



VANTEC-18A

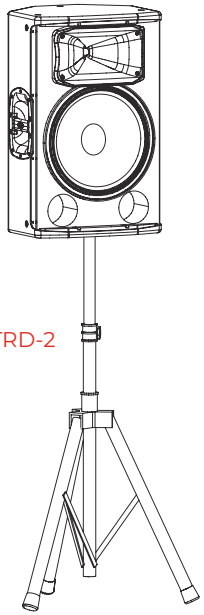
VANTEC-15A (or VANTEC-12A)

VANTEC-15A (or VANTEC-12A)



TRD-2

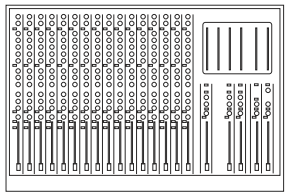


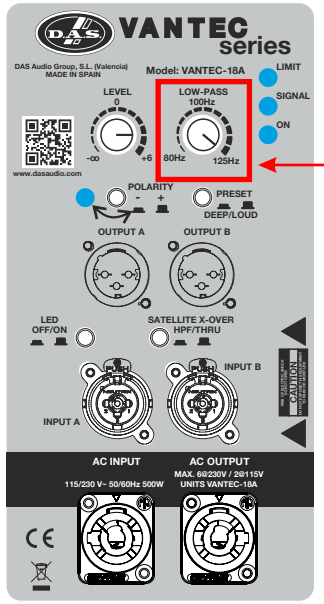


TRD-2

L R

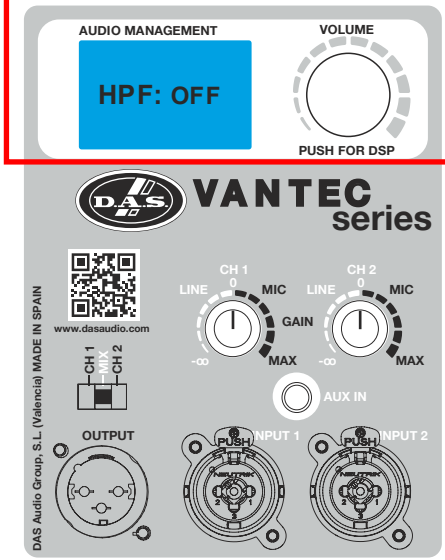
MIXER

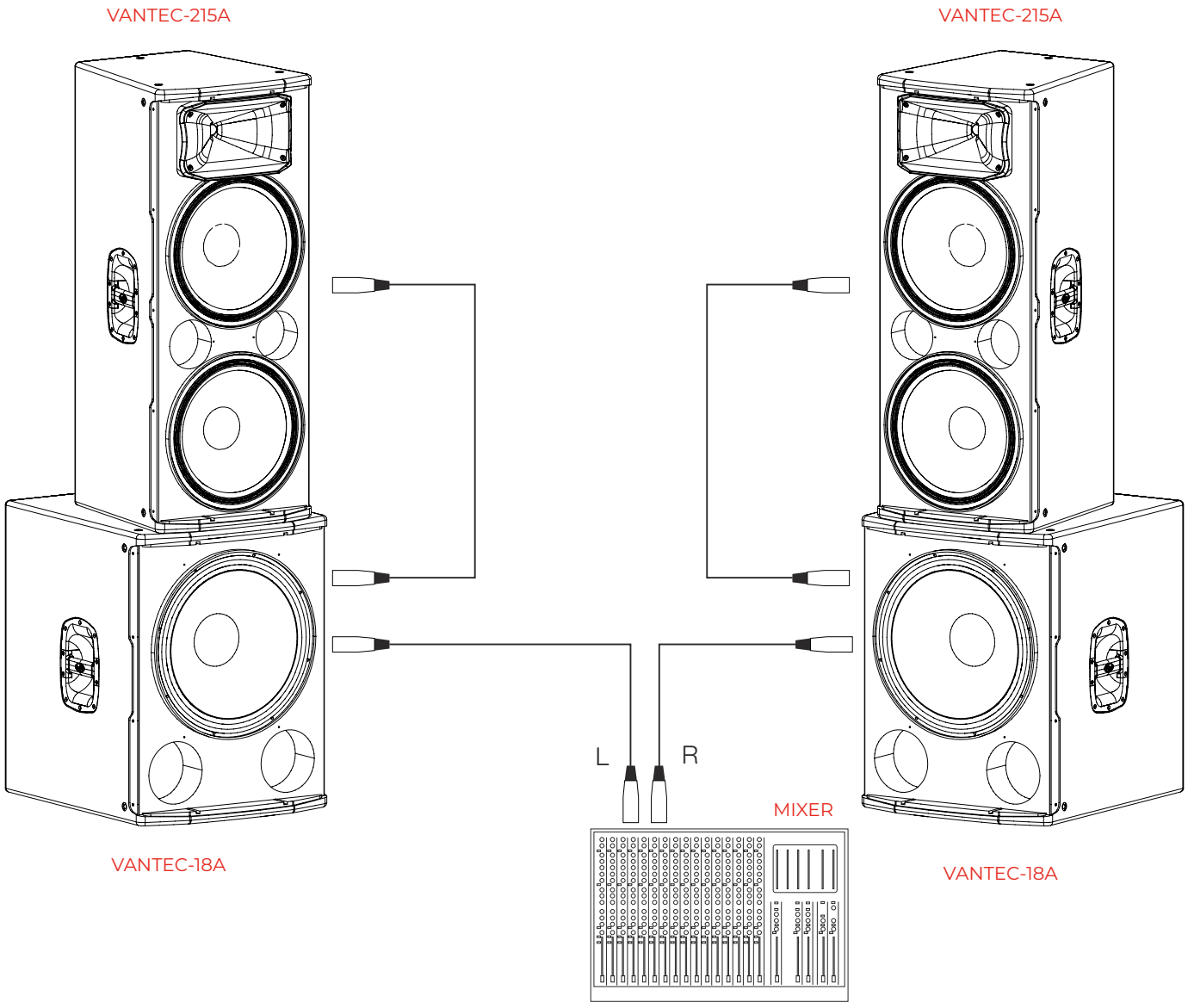


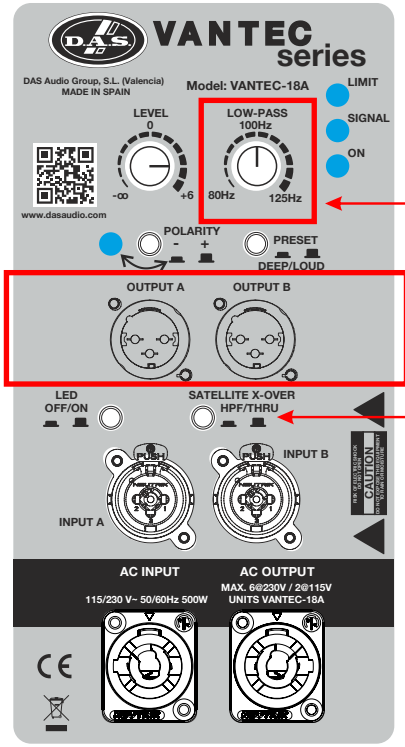


Set Low Pass Filter to maximum position

Set HPF to off





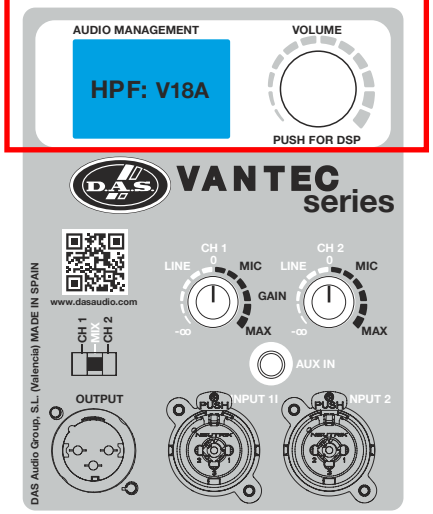


Set Low Pass Filter at 100Hz

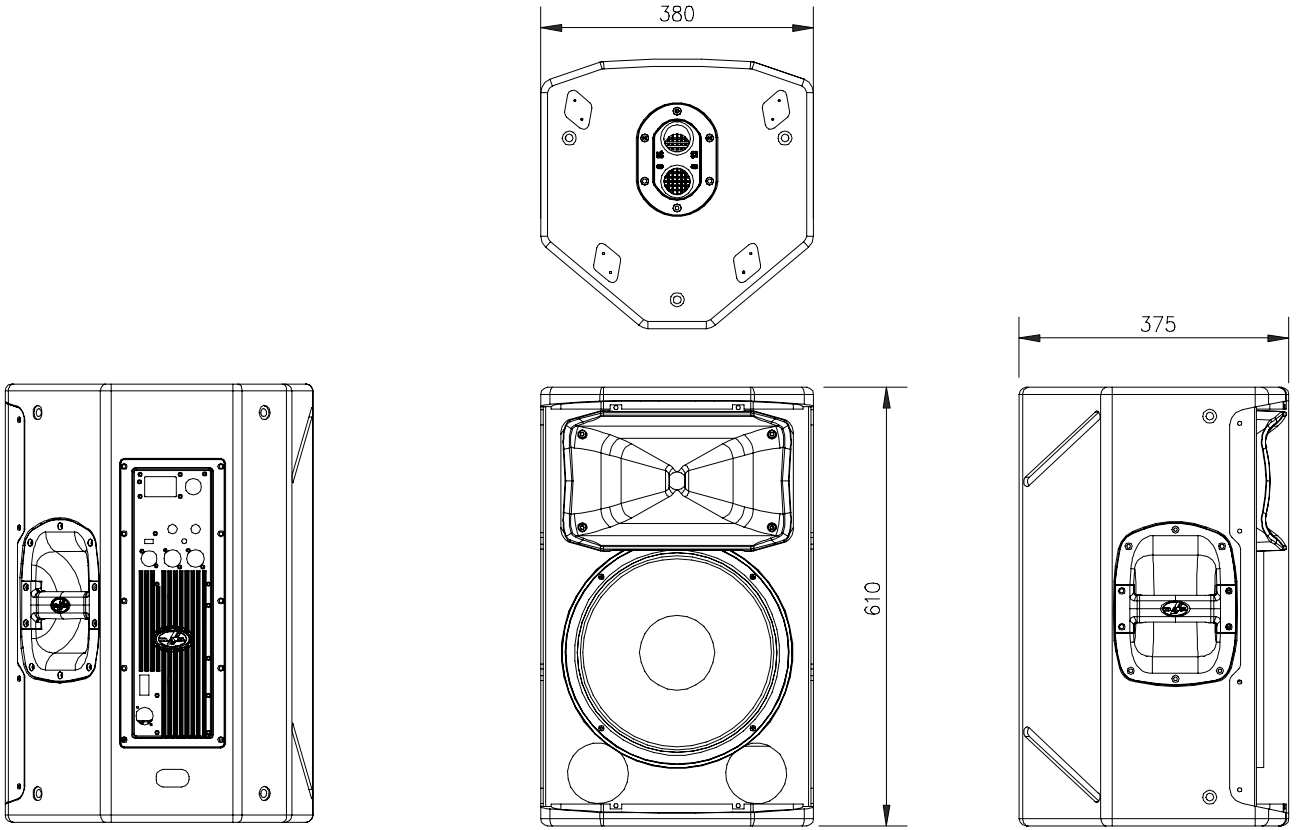
Use Left and Right Satellite Outputs

Do not press HPF satellite X-over

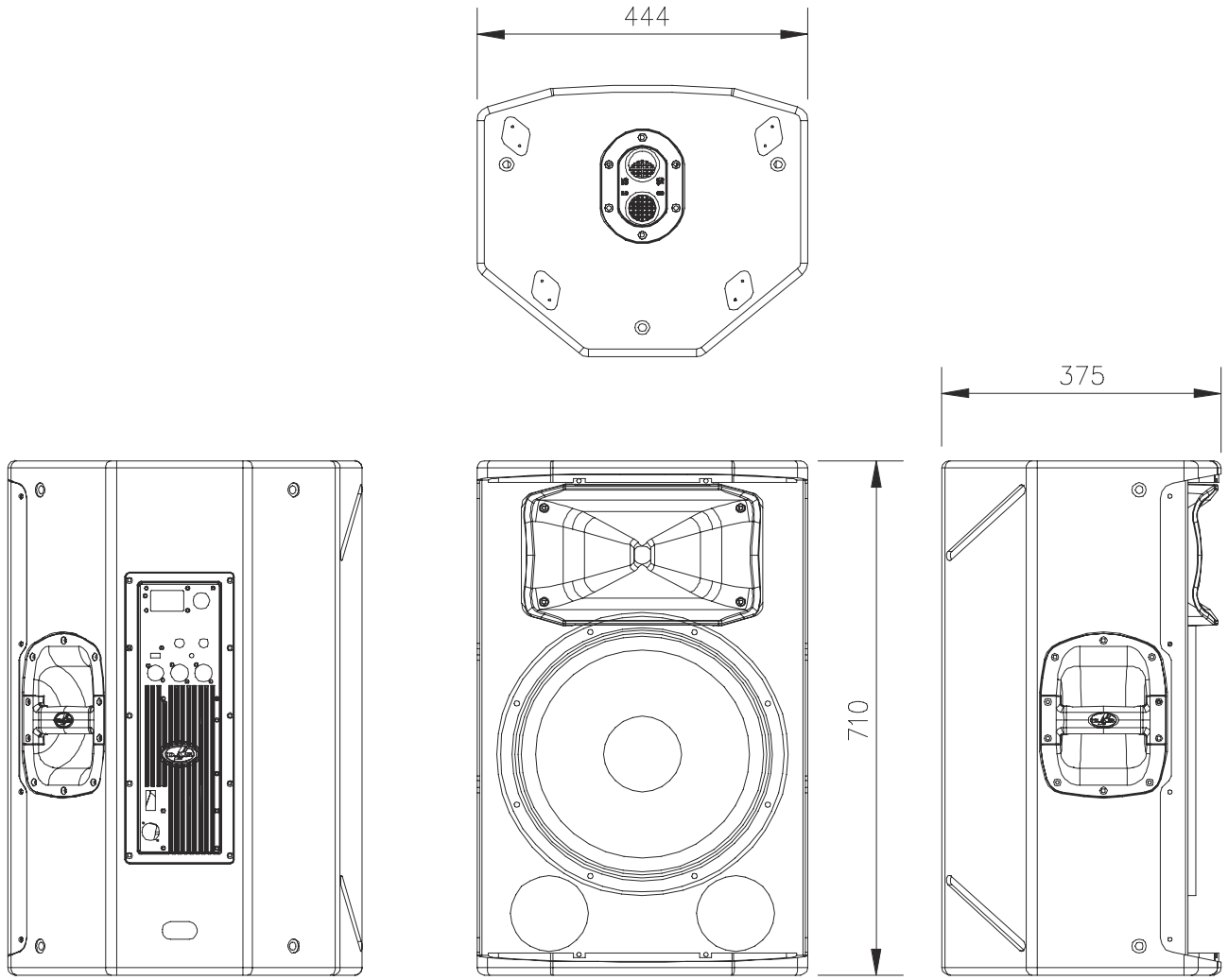
Set High Pass Filter to VANTEC-18A



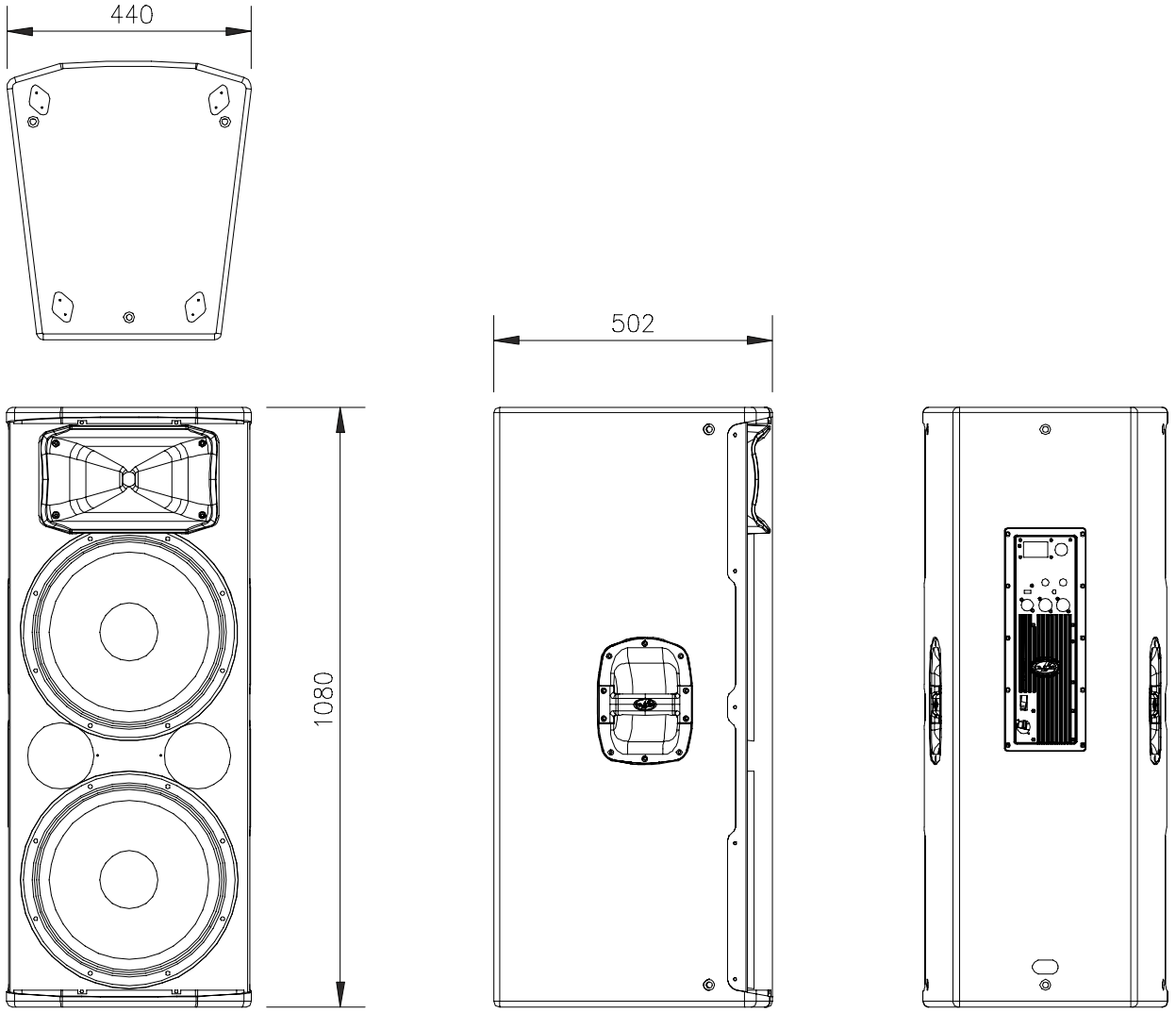
VANTEC-12A



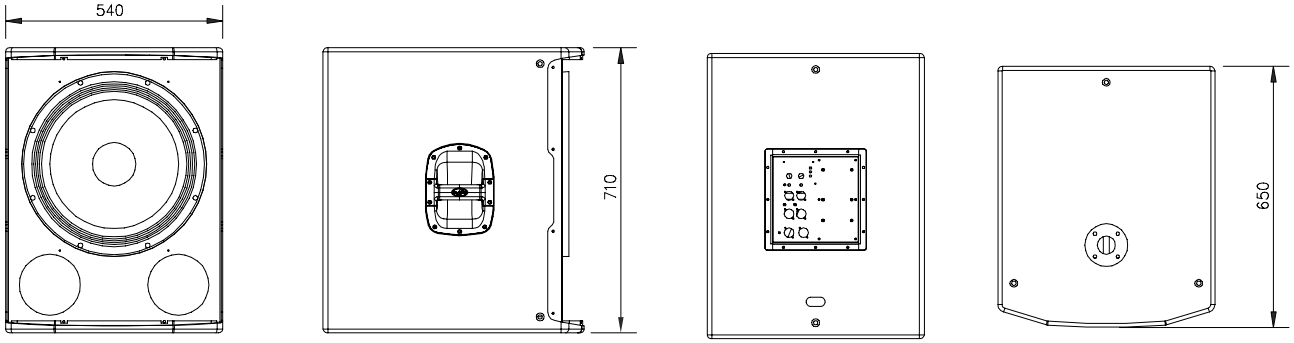
VANTEC-15A



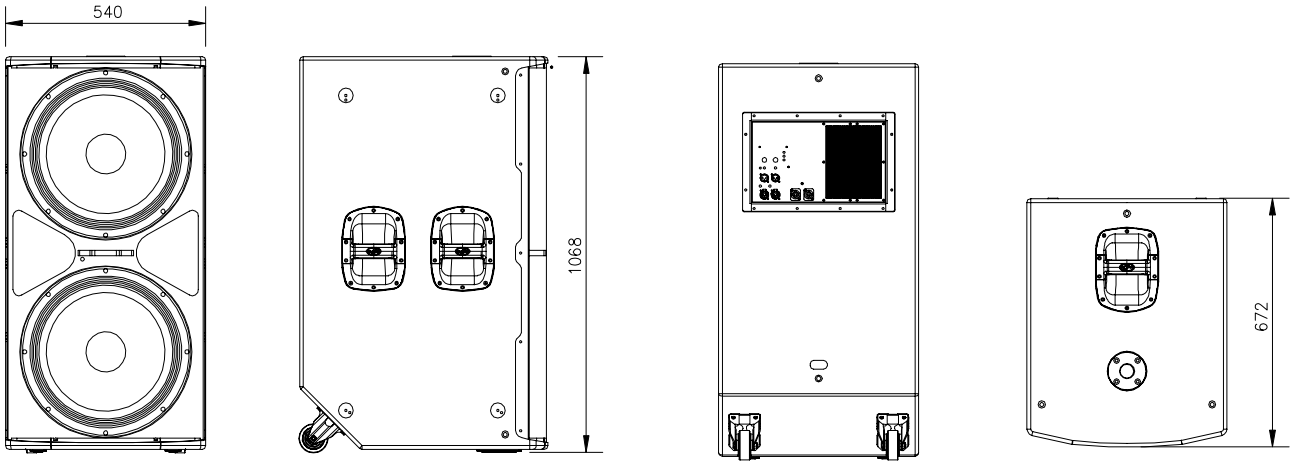
VANTEC-215A



VANTEC-18A



VANTEC-218A

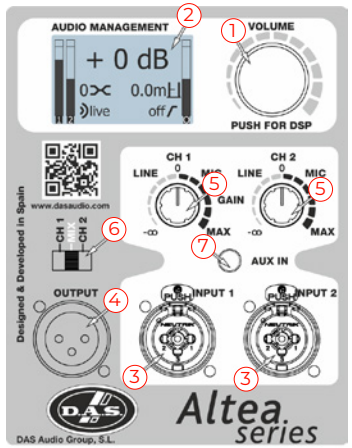


Vantec Series | **Specifications**

Model	VANTEC-12A	VANTEC-15A	VANTEC-215A	VANTEC-18A	VANTEC-218A
Power Amplifier	1500 Wpeak 750 Wcontinuous (Class D Bi-amplified)	1500 Wpeak 750 Wcontinuous (Class D Bi-amplified)	2250 Wpeak 1125 Wcontinuous (Class D Tri-amplified)	2000 Wpeak 1000 Wcontinuous (Class D)	4000 Wpeak 2000 Wcontinuous (Class D)
Input Type	Balanced Differential Line	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	Line: 20 kohms
Sensitivity	Line: 3V (+12dBu)	Line: 3V (+12dBu)	Line: 3V (+12dBu)	Line: 3V (+12dBu)	Line: 3V (+12dBu)
Frequency Range (-10 dB)	60Hz-20kHz	45Hz-20kHz	40 Hz - 20 kHz	Loud: 35 Hz - 125 Hz Deep: 30Hz - 125Hz	Loud: 35 Hz - 125 Hz Deep: 30Hz - 125Hz
HF Horn Coverage Angles (-6 dB)	90° x 50°	90° x 50°	90° x 50°	-	-
Maximum Peak SPL at 1m	135 dB	135 dB	138 dB	134 dB	140 dB
Transducers/ Replacement Parts	LF: 12F4 / GM-12F4 HF: M-28 / M-28	LF: 15F4 / GM-15F4 HF: M-28 / M-28	LF: 2x 15F4 / GM-15F4 HF: M-28 / M-28	LF: 18LX / GM-18LX	LF: 2x 18LX / GM-18LX
Wireless Audio	Yes	Yes	Yes	No	No
Enclosure Material	Birch Plywood	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	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: 2x Female XLR LOOP THRU: 2x Male XLR AC INPUT: PowerCon NAC 3 FCA AC OUTPUT: PowerCon NAC 3 FCB	INPUT: 2x Female XLR LOOP THRU: 2x Male XLR AC INPUT: PowerCon NAC 3 FCA AC OUTPUT: PowerCon NAC 3 FCB
AC Power Requeriments	115V, 2.4A, 50 Hz / 60 Hz 230V, 1.2A, 50 Hz / 60 Hz	115V, 3A, 50Hz / 60Hz 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	115V, 6A, 50 Hz / 60 Hz 230V, 3A, 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	106 x 54 x 67 cm 41.7 x 21.3 x 26.4 in
Weight	21 kg (46.2 lb)	24 kg (52.8 lb)	41 kg (90.2 lb)	24 kg (52.8 lb)	72 kg (158.4 lb)
Accessories	ANL-2 Eye Bolt TRD-2 Speaker Stand TRD-6 Pole Mount FUN-VT12 Cover	ANL-2 Eye Bolt TRD-2 Speaker Stand TRD-6 Pole Mount FUN-VT15 Cover	ANL-2 Eye Bolt FUN-VT215 Cover	ANL-2 Eye Bolt TRD-6 Pole Mount FUN-VT18 Cover	ANL-2 Eye Bolt TRD-6 Pole Mount

DAS Audio Group, S.L. continuously strives to enhance its products through investigation and development. All specifications are subject to change without prior notice.

VANTEC-12A / 15A / 215A



Description: VANTEC-12A / 15A / 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:

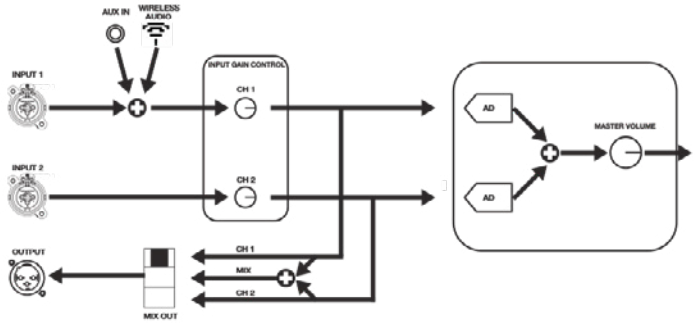
For channels 1, 2 and AUX IN, gain control, line and microphone.
Note: Wireless Audio Signal is controlled with gain knob 1.

6. OUTPUT MIX-SELECTOR:

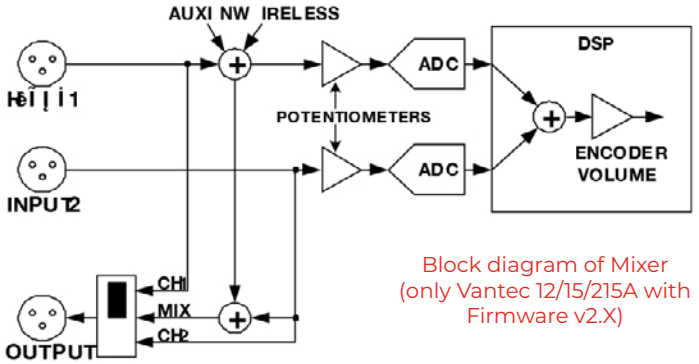
It allows the user to select which input channel signal to be sent to other cabinets. User can select Ch1, Ch2 or both (Mix).

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.



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



Block diagram of Mixer
(only Vantec 12/15/215A with
Firmware v2.X)

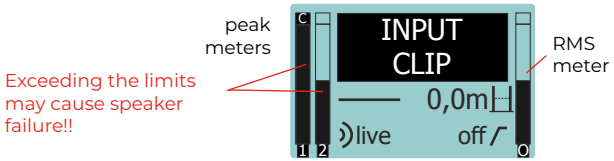
ADJUSTING THE LEVELS:

By default the state of the screen is the following:

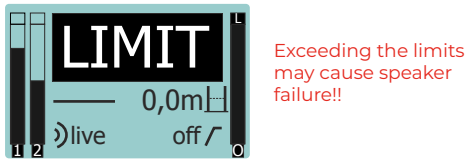


Once the input source (s) have been connected to the amplifier´s cabinet, the user has to adjust the levels.

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)



After having set the input volume values under the maximum level, user has to adjust ouput 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)



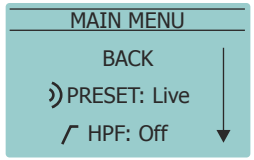
After these two volume adjustments the screen will show something like this (when having the input sources ON):



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

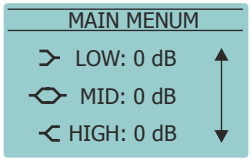
MAIN MENU:

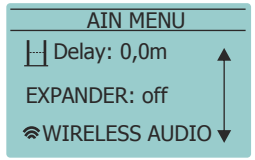
As stated previously by pushing the encoder the user can access to the following options in the MENU:

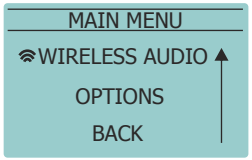


Note: to enter and select and option always push the encoder. For going back in the menu, the user has to select Back on the screen and press the encoder or just pushing the encoder. After 30 seconds without using the unit it will go back to the main screen automatically.

By scrolling down the encoder more options appear:

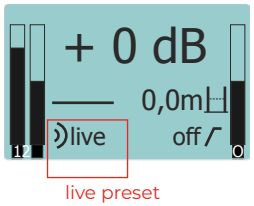






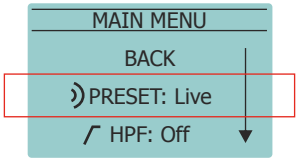
PRESETS:

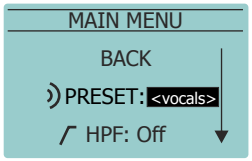
Five factory settings (live, dance, vocals, bboost, monitor) depending on the type of music/ use that has been configured inside the unit:

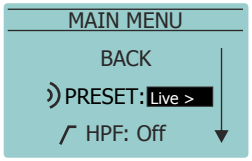


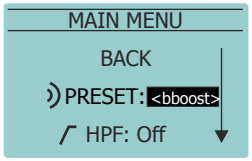
live preset

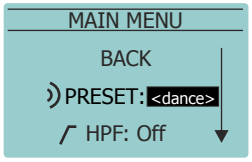
With the encoder go to Preset Sub-menu and press the knob to access to the different options:

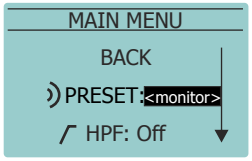






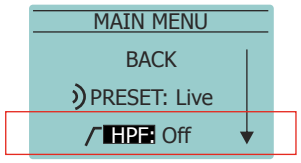


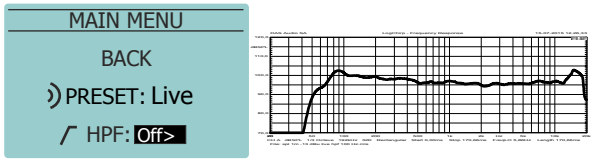


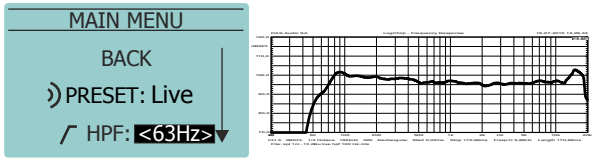


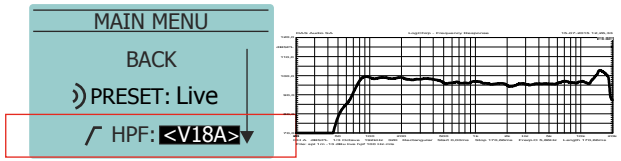
HPF (High Pass Filter):

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

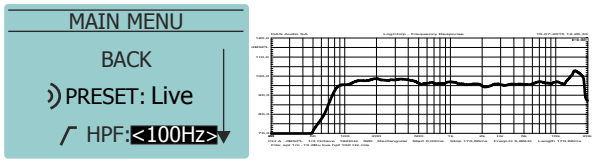








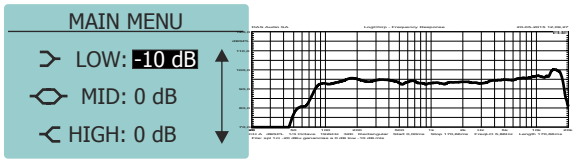
When combining with subwoofer V18A

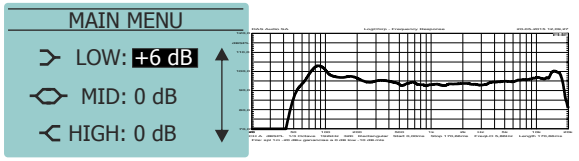


LOW:

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:



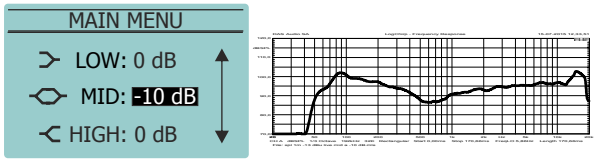


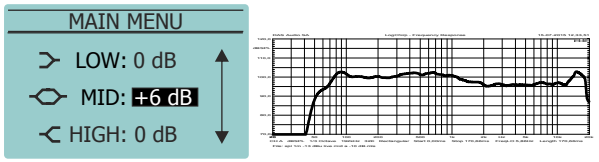


MID:

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

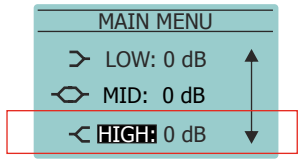


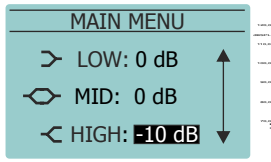


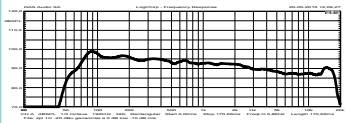


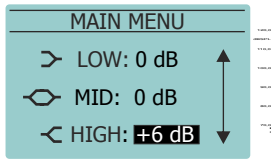
HIGH:

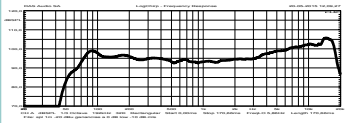
Boosting the energy in the high end is possible by the use of this parameter, Besides the user can remove energy. The scale goes from -10dB to +6dB. As with the previous options use the encoder to move in the main menu till the HIGH sub menu. Then press again and you will enter the dB selector:





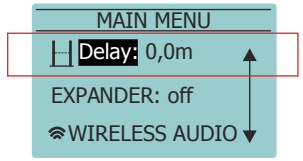


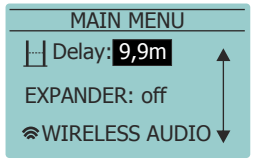




DELAY:

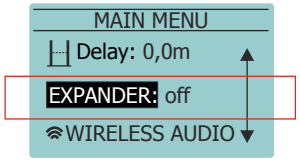
The user can set up a delay in the cabinets by using the delay Sub-menu; from 0 to 9.9m in 0.1m steps. Delay units can be selected between meters or feet:

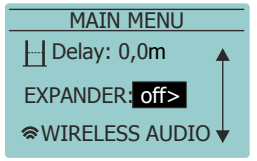


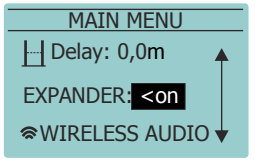


EXPANDER:

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.

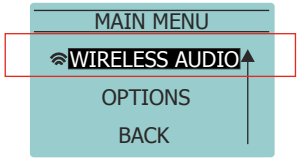


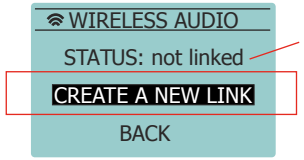




WIRELESS AUDIO:

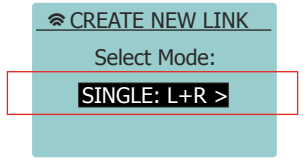
This functionality allows the user to connect a device such as a tablet or smart phone to send audio to the speakers (up to 2) without using cables. Go to the Wireless Audio Menu and push the encoder to enter.





this line indicates the actual status of the wireless audio link

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.

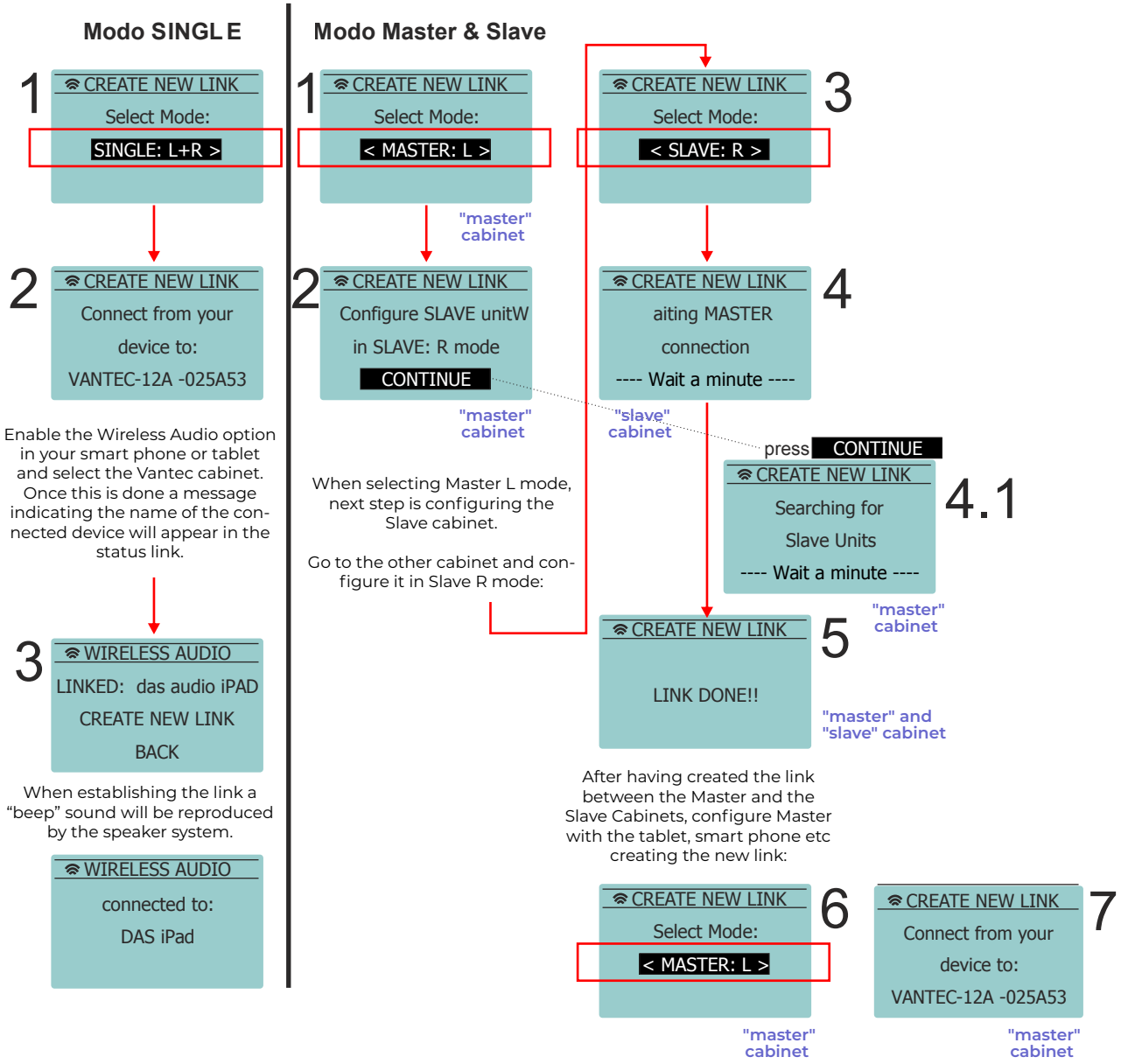
Note:
When doing a master-slave connection ONLY one possible slave cabinet should be connected (power). Switch off all the rest of the units.

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.

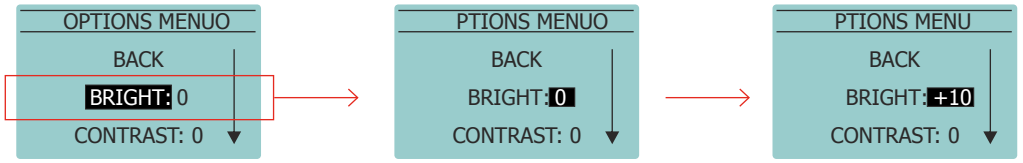
When establishing the link between Master & Slave cabinets, switch off all the other devices.

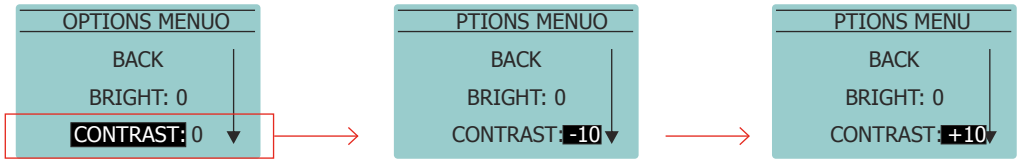
It can take up to 1 minute to create the link.



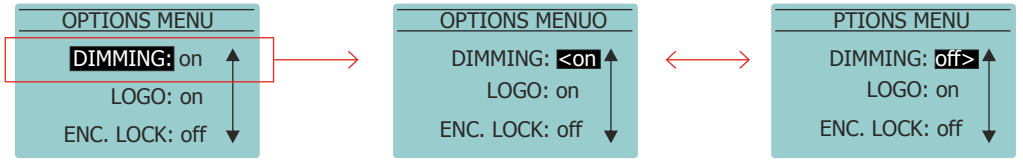
OPTIONS:

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:

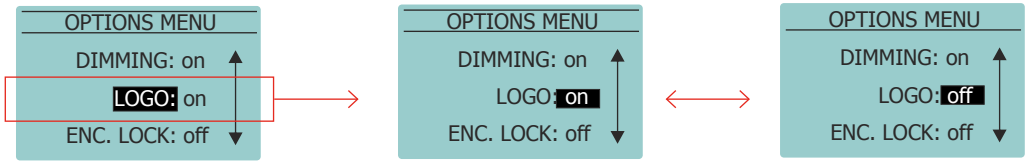




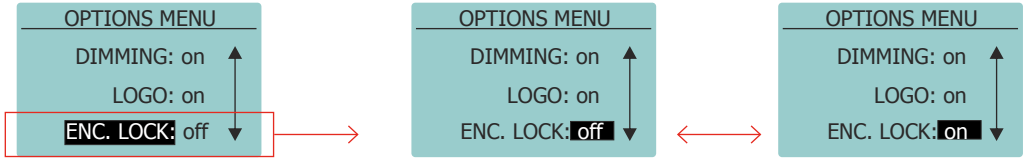
By increasing the contrast the screen can be easily seen from lower positions.



DIMMING: When active the screen lowers its luminosity after a few seconds. Default is "on"



LOGO (from firmware v2.0): Default is "on"

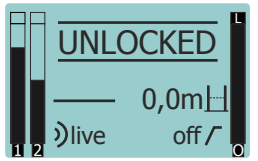


ENC.LOCK (from firmware v2.1): Default is "off"

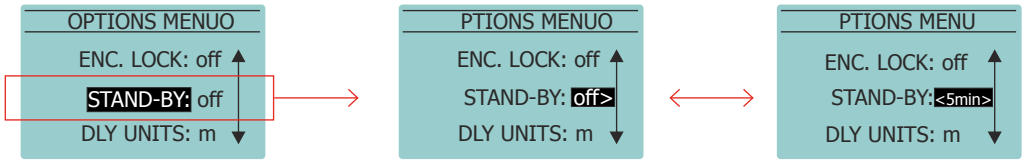
If ENC.LOCK is "on" when the encoder is rotated it shows:



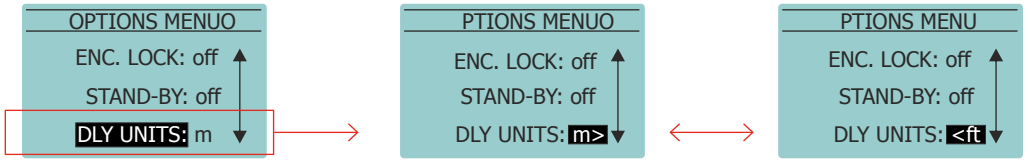
Then, if the encoder is pushed it shows: Now, the unit is unlocked

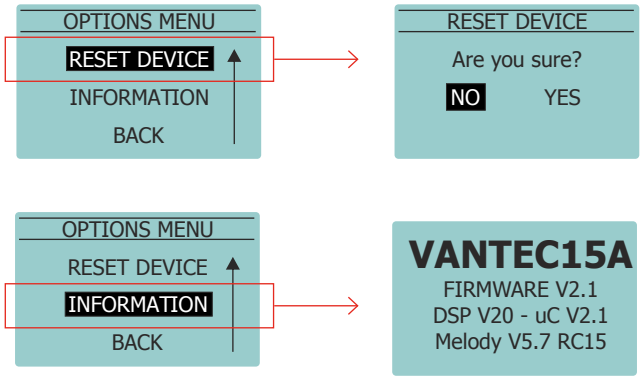


If the encoder does not move for 10 seconds, the unit will re-turn to be blocked, until we select ENC.LOCK to "off"



STAND_BY:When no signal is detected the amplifer shuts down. Default is 1 min.
Enabling this option SAVES ENERGY! Cabinets in stand-by mode don´t consume energy.
The possible values are: off, 30s, 1min, 2min, 5min, 10min.





This option resets the device to the following values:

Preset: live
HPF: off
Delay: 0m
Low / Mid / High: 0dB
Dimming: On
Logo: On
ENC.LOCK: Off
Stand-By: 1min

It will also reset the DSP and the Wirelss Audio systems. The unit will unpair all the previous connected devices.

MODEL
Version of FIRMWARE
Version of DSP
Version of Wirless Audio

Description of VANTEC-18A

1. INPUT:
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.

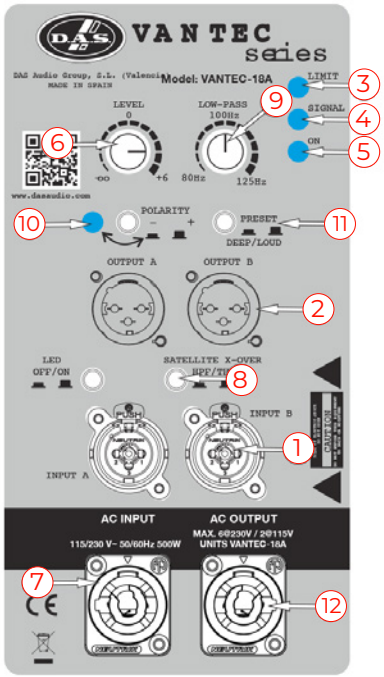
8. THRU/HPF:
'SATELLITE OUTPUT' selector to switch between full range signal or pass filter with cut-off frequency of 100 Hz.

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.

10. 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 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 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 (VANTEC-12A / 15A / 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	1.2A
VANTEC-15A	1.5A
VANTEC-215A	1.5A
VANTEC-18A	1.5A
VANTEC-218A	3.0A

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.

Warnings

This manual contains needed information for flying DAS 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 supervisions and warnings given in this manual. Product improvement by means of research and development is on going at DAS. Specifications are subject to change without notice.

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).

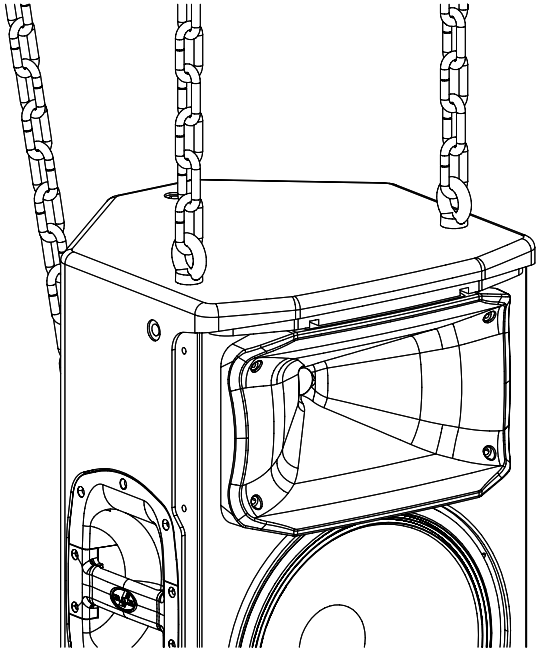
When flying a system, the working load must be lower than the resistance of each individual flying point in the enclosure, as well as each box. Hanging hardware should be regularly inspected and suspect units replaced if in doubt. This is important to avoid injury and absolutely no risks should be taken 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 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 DAS 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.

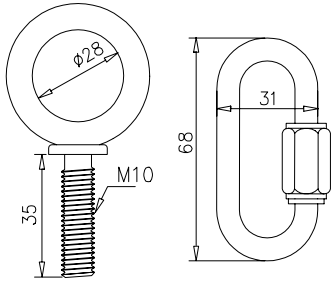


Flying with eyebolts

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).

ANL-2

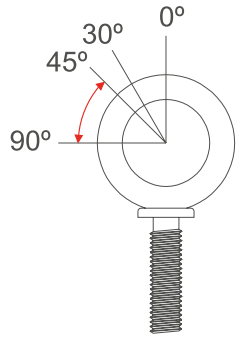


Each ***ANL-2*** eyebolt has a rated working load of 200 kg. (440 lb). Each ***ANL-2*** carabiner has a working load of 330 kg (726 lb). If using other hardware, make sure it is rated to handle the required load.

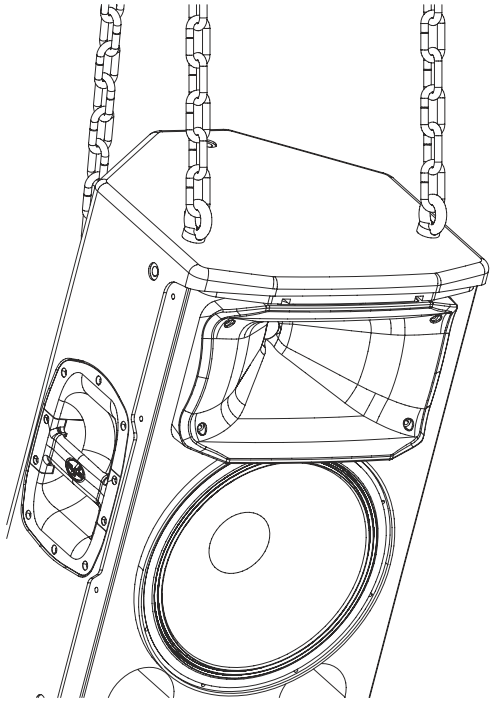
When using eyebolts it is important to bear in mind that the rated working load is only true for a load applied in the plane of the eye, and is significantly reduced for other angles. The drawing illustrates the concept. The table shows the variation of the working load as a function of the load angle. 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%

DO NOT USE FOR SUSPENSION
NO USE PARA EL COLGADO



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.



Line connections: unbalanced and balanced

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

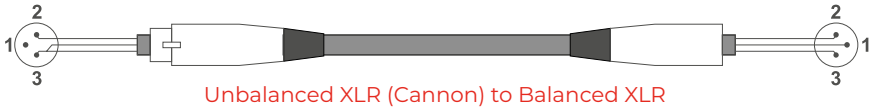
Unbalanced line: Utilising a two conductor cable, it transports the signal as the voltage between them. Electromagnetic interference can get added to the signal as undesired noise. Connectors that carry unbalanced signals have two pins, such as RCA (Phono) and ¼" (6.35mm, often referred to as jack) mono. 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.

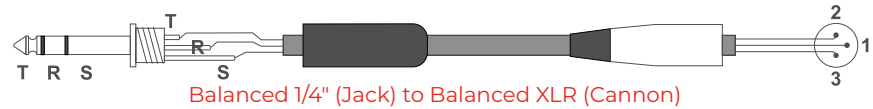
The graphs that follow show the recommended connection with different types of connectors to balanced processor or amplifier inputs. The connectors on the left-hand side come from a signal source, and the ones on the right hand side go to the inputs of the processor or amplifier. Note that on the unbalanced 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



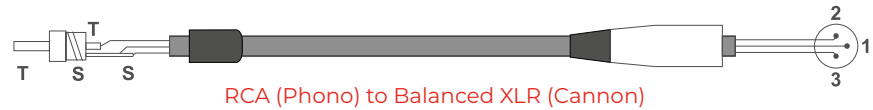
Unbalanced XLR (Cannon) to Balanced XLR



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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