AUDIOFOCUS ARES8
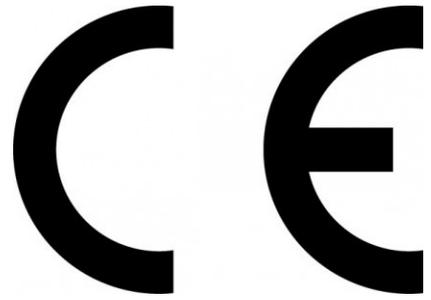

USER'S MANUAL V2.0

AUDIOFOCUS ARES8
USER'S MANUAL

2 SECURITY STATEMENT
2.1 NORMS
LDC,EMC,RoHS and CE guidelines

Audiofocus s.a.
rue du Polissou 17
B-5590 Achêne
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Tel: +32 (0) 83 21 80 54
Fax: +32 (0) 83 21 80 57

declare that the Ares8 and Ares8 hardware are conform to the CE registration.

Tests standard:
IEC60065:2001+A1 and EN60065:2002+A1:2006
EN55013:2001+A1/2003+A2:2006
EN55020:2002=A1:2003+A2:2005
EN61000-3-2:2000+A2:2005
EN61000-3-2:2295+A1:2001+A2:2005

Ing. Xavier Marchal
Audiofocus R&D Director

Maximum load have been tested and approved by Vinçotte, s.a.-CERTEST Products

2.2 HANDLING

Keep the device away from moisture!
AF is not responsible for third party material use, for example foot lift.

2.3 SOUND LEVEL

Ares8 can deliver high sound pressure level that could damage ear permanently. The system has to be used with care for the user and public exposed to sound.

3 SYSTEM COMPONENT
3.1 INTRODUCTION

Thank you for choosing the AUDIOFOCUS ARES 8 line array.

This user manual contains essential information for rigging and deploying ARES 8 elements to their full capability. Carefully read this document in order to become familiar with the system.
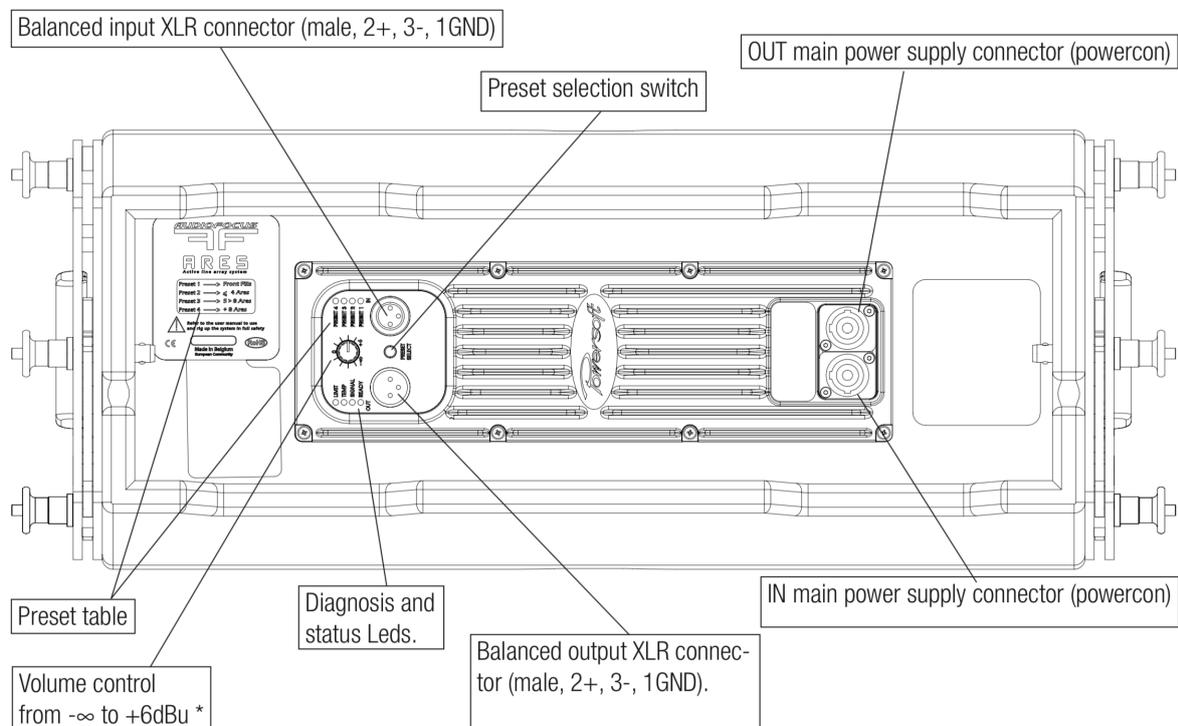
Whether you're using 4 elements or 24, laid, pole mounted or lifted, we're sure you will find the ARES 8 to be highly versatile units in your professional sound reinforcement inventory.
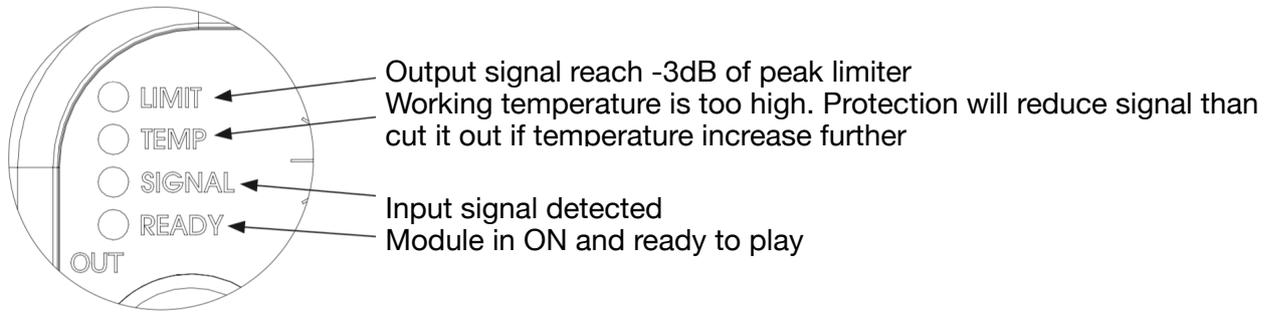
3.2 ARES8

ARES 8 is a two way speaker-dual 8" with 1,4'' driver- line array system is suitable for a wide range of sound reinforcement applications from small to medium scale concerts or theaters where sound quality is crucial.

Ares8 is a real line source respecting all WST criterias. ARES 8 is available in 2 versions to ensure versatility of choice:

Plug & Play version with manufacturer preset:

Balanced input XLR connector (male, 2+, 3-, 1GND)

Preset selection switch

OUT main power supply connector (powercon)

Preset table

Diagnosis and status Leds.

Balanced output XLR connector (male, 2+, 3-, 1GND).

IN main power supply connector (powercon)

Volume control from -∞ to +6dBu *

LIMIT — Output signal reach -3dB of peak limiter

TEMP — Working temperature is too high. Protection will reduce signal than cut it out if temperature increase further

SIGNAL — Input signal detected

READY — Module in ON and ready to play

OUT

The Bi-amplifed version is driven with the recommended Powersoft amplifier with custom presets especially developed for AUDIOFOCUS ARES 8, manage by Armonia.

Armonia constitutes series of new and unique tools for system designers and sound engineers who want to significantly boost sonic performance and system reliability.

ARES8 can be used directly on top of B18 and MTsub218 MKII, creating an high performances plug and play FOH system.

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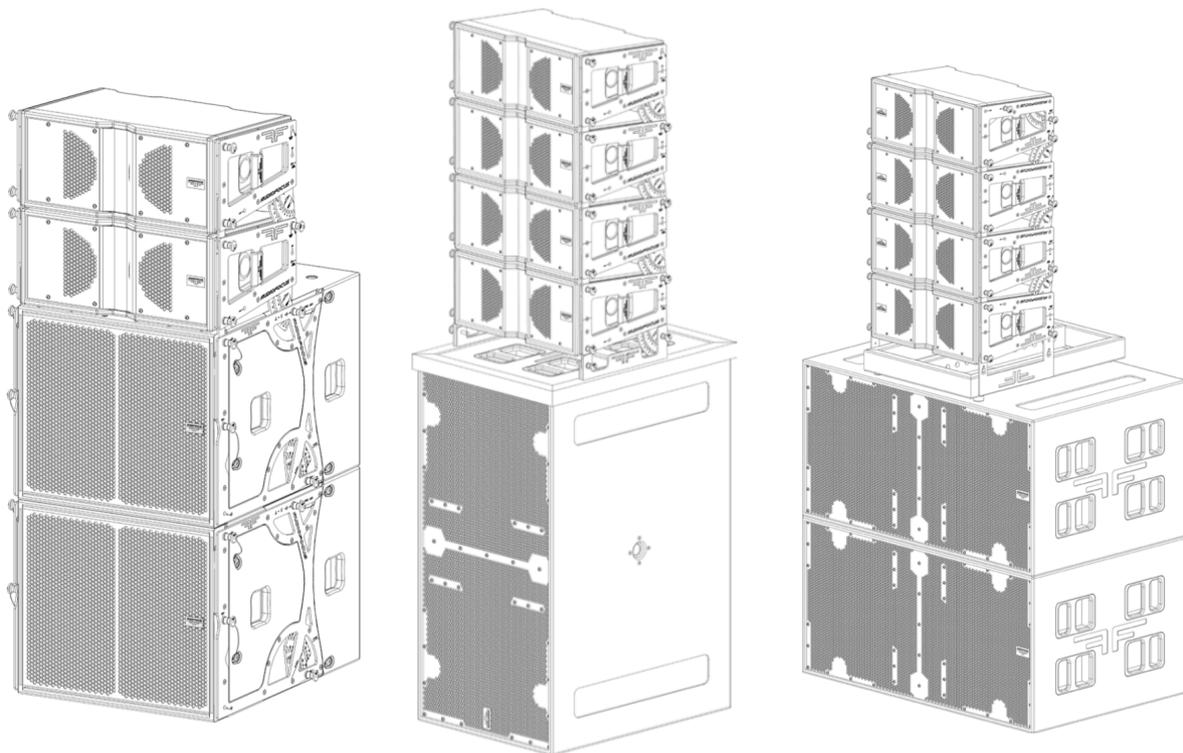
3.3 LOW END

3.3.1 B18

Ares8 can be used with the B18a, self-powered flying bass, lowering the combined system operating range down to 40Hz. The B18a is also suitable to sub array application and short distance sub application.
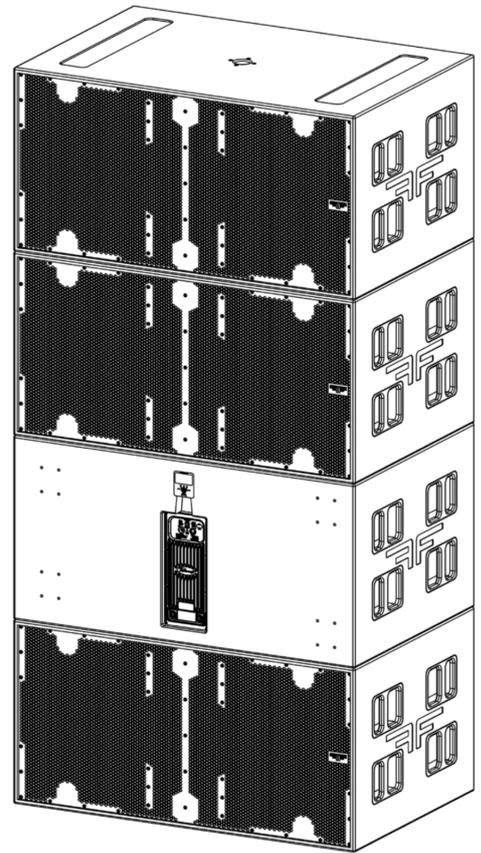
160 cm
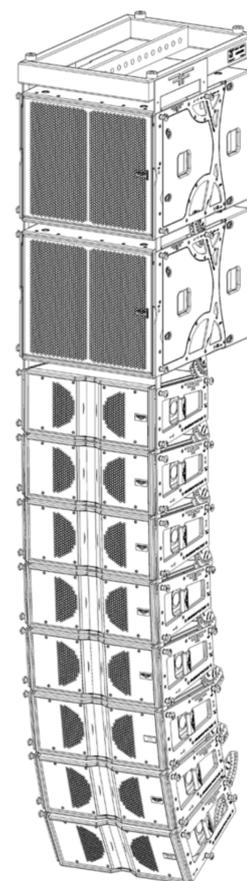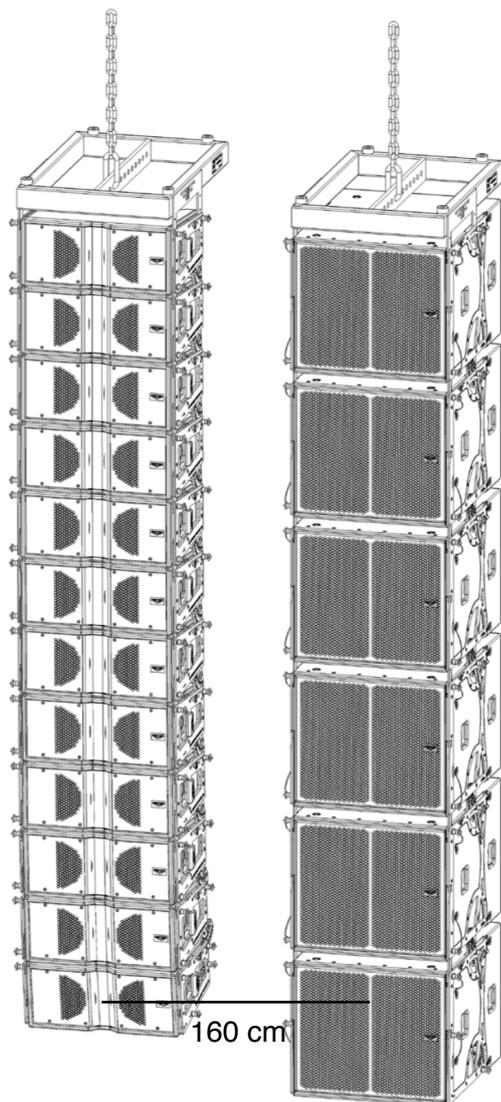
A minimum of four B18 column is needed to control directivity in sub array application.

Distance between Ares8 array and B18 array is maximum 1.6m between both acoustic center.
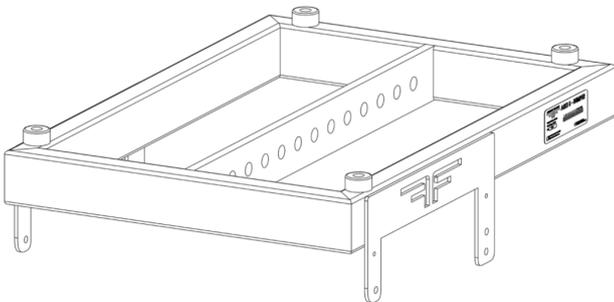
3.3.2 MTsub 218

The MTsub218 mkII is the recommended subwoofer for the Ares8 line array. Use one MTsub218 mkII for two Ares8 for the best result.
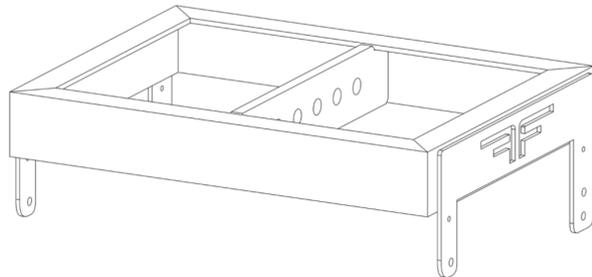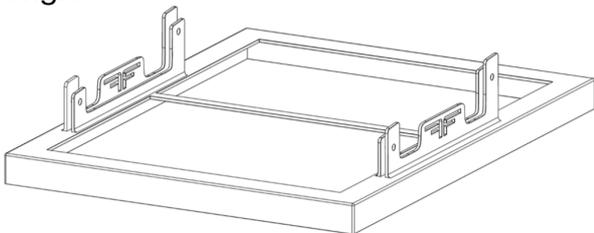

3.4 HARDWARE AND COVER

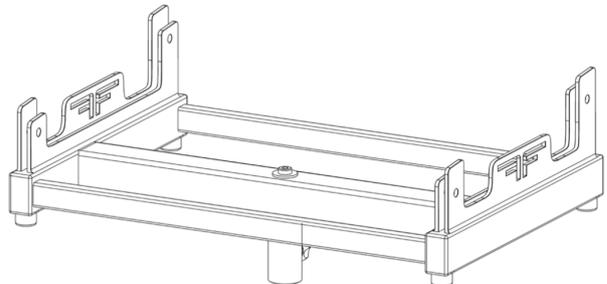Ares8 bumper is suitable for a limit of 24 Ares8


Ares8 mini bump is suitable for a limit of 12 Ares8

The over-hat is suitable for a limit of 6 Ares8 on top of MTsub218mkII, depending on tilt angle
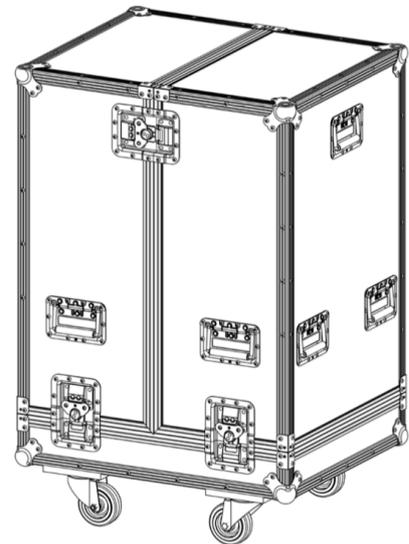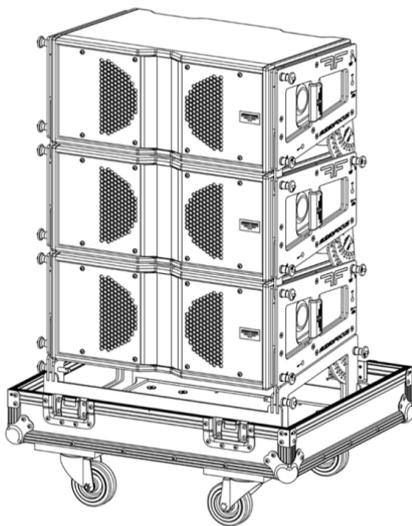

The T-Yoke is suitable for 1 Ares8

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The Ares8 cover protect the system from direct rain an direct sunlight. Ambient temperature and amplifier temperature are related but not the same! (amplifier start limiting at 75°c)
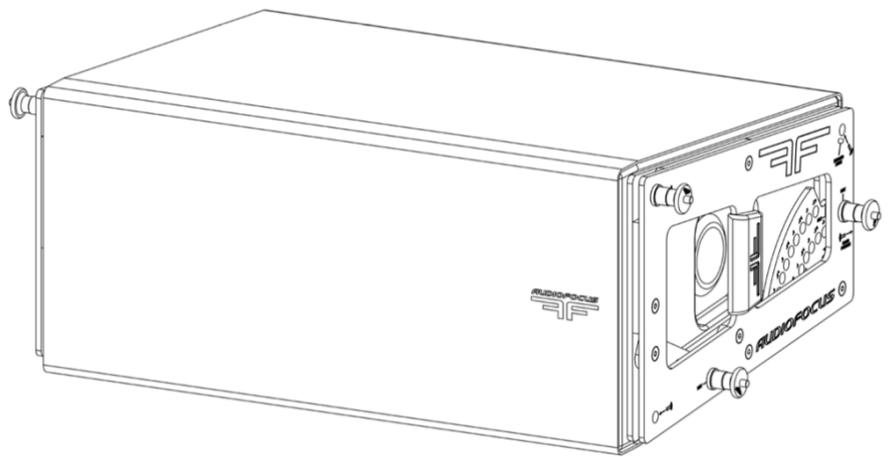
Flightcase for 3 and 4 Ares8+bumper are recommended to ensure a long life to the system

4 SETUP
4.1 PRESET SELECTION

the Ares8 amplifier come with 4 presets choice corresponding to the number of speaker in use.

Preset1:   1 cabinet alone
Preset2:   2=>4 cabinets
Preset3:   4=>8 cabinets
Preset4:   8=> 24 cabinets

Bigger configuration would need an external processor to take care of the different distance and coupling compensations.
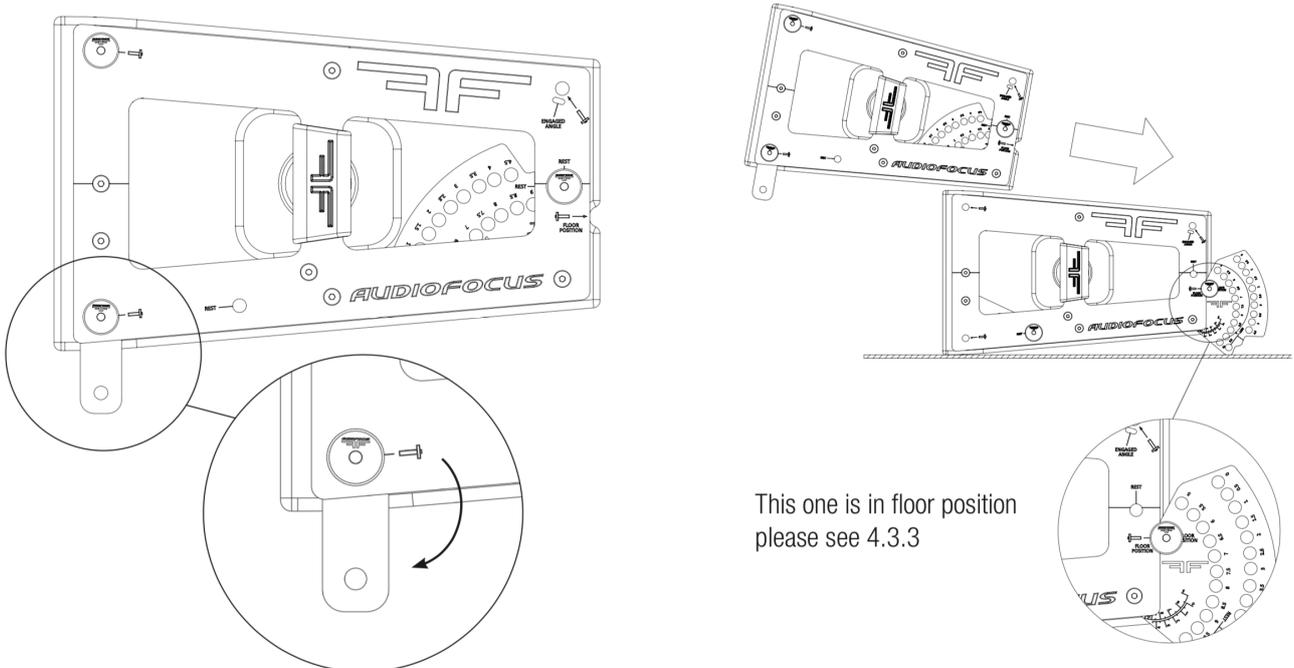
4.2 EASE PREDICTION

Please refer to the Easefocus quick start guide for further prediction and angles selection.

4.3 FLOOR AND RIGGING
4.3.1 FIRST SETUP

The first out of the packaging box setup will go through two simple steps, open the front lug to connect to the next ARES8 and then connect the angle plate.

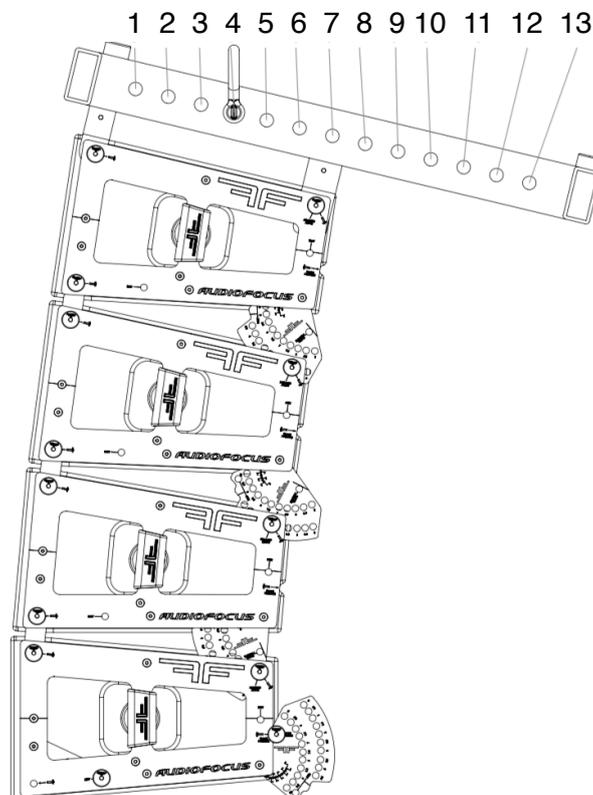This one is in floor position please see 4.3.3

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All the angle can be set at 0° for storage or follow an Easefocus prediction in case of immediate use.
The engaged angle can be seen two way:

Looking at the line on top of the plate

Looking through the angle windows
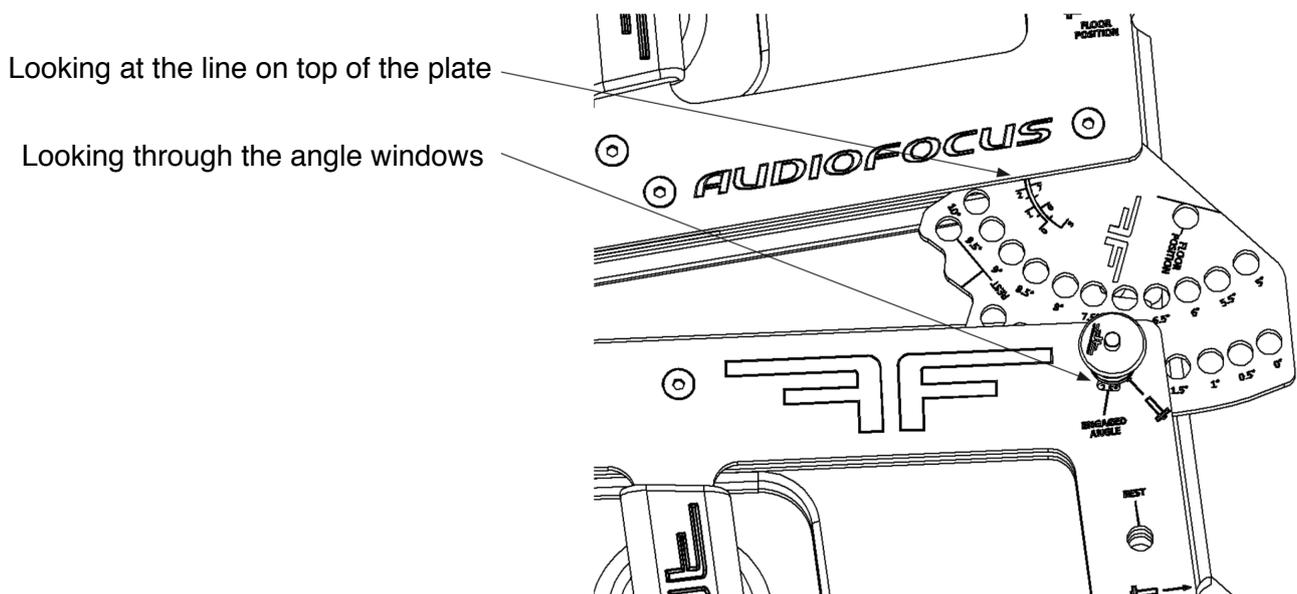
Easefocus will also calculate the right pin point :

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In order to do the first setup in the AUDIOFOCUS ARES8 flight case, the first ARES8 must be connected to it as to another ARES8.
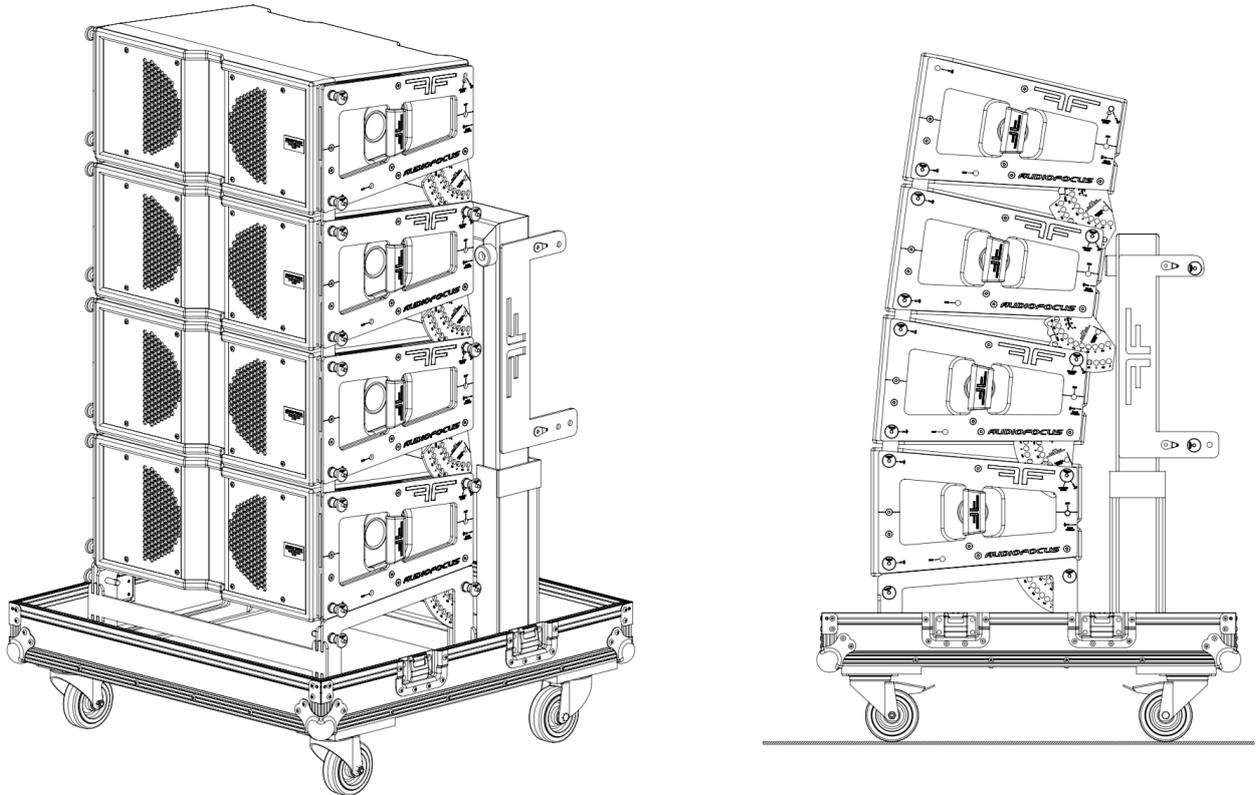
One of the benefits on an AUDIOFOCUS supplied ARES8 flight case is the ability to pre configure your cabinets angle before leaving the warehouse, further minimising on-site rigging time.

4.3.2 RIGGING

The hoist's hook will connect to the right pin point of the bumper as predict by Easefocus. The bumper can be store in the AUDIOFOCUS ARES8 flight case. The bumper can be placed manually on top of ARES8 stack or by using the hoist to minimise man power.

The bumper link to
ARES8 as another
ARES8:

-Lay the bumper on
top of ARES8. It
secure.
-Pin front lug.
-Pin rear according to
Easefocus prediction
(0° or 5°).
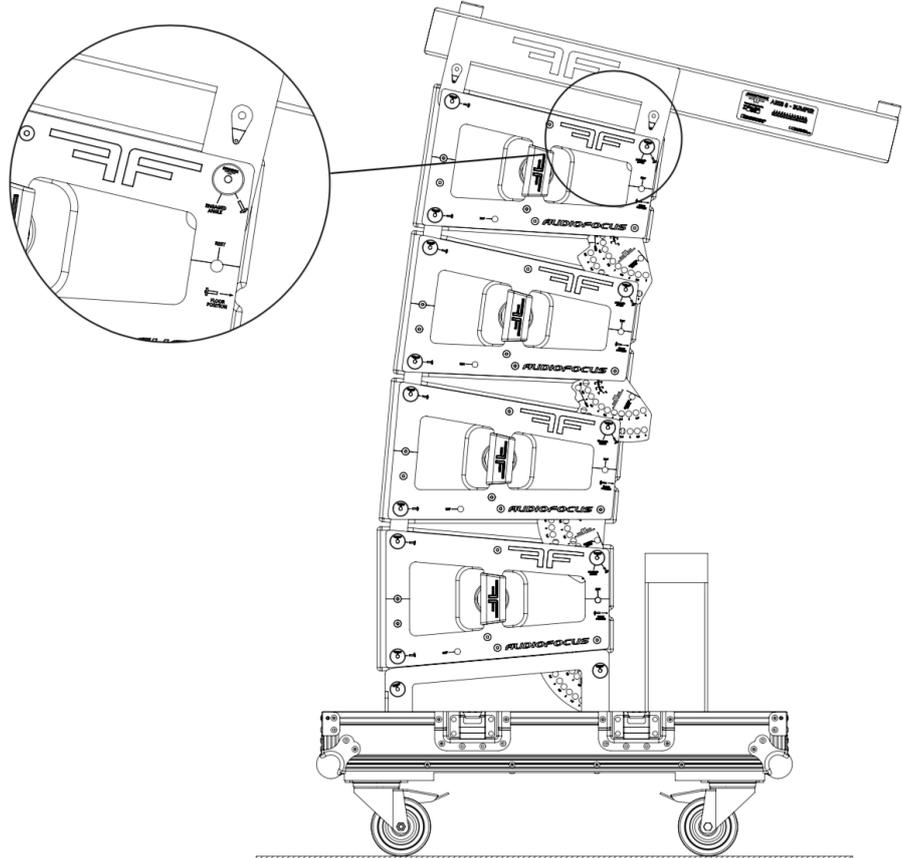
Bottom ARES8 pin has to be remove with a
minimal hoist tension.

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4.3.3 FLOOR POSITION

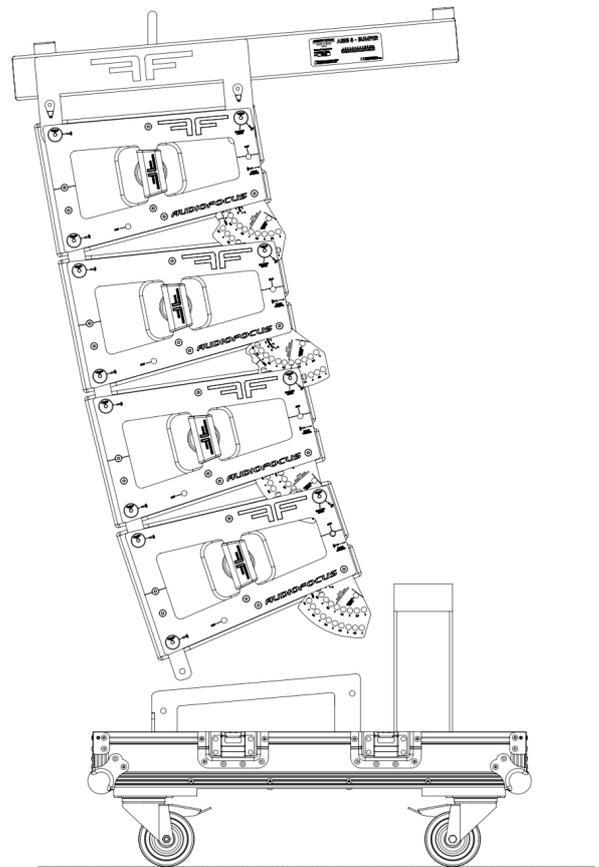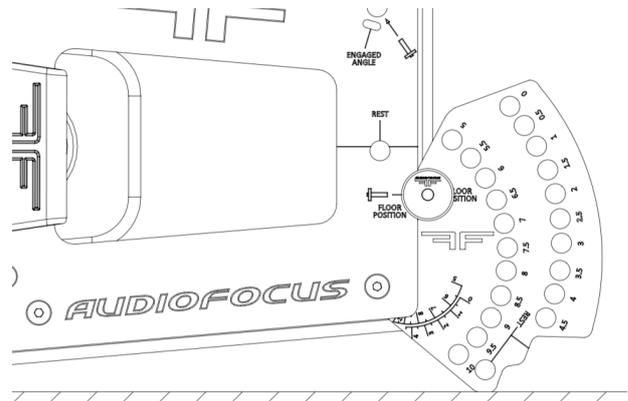Either for a stand alone ARES8 (frontfill…) application or for a complete stack (FOH), ARES8 can be set in floor position with its angle plate. The front grill is then 90° with floor.

Also, easiest way to trigger the angle is compression method by using bottom ARES8 in floor position.

-Let the stack down on floor.
-Remove one angle pin at one time on each side.
-Let the hoist go down and simply let the weight move the ARES8 down till the right angle is reach.

Hoist compression
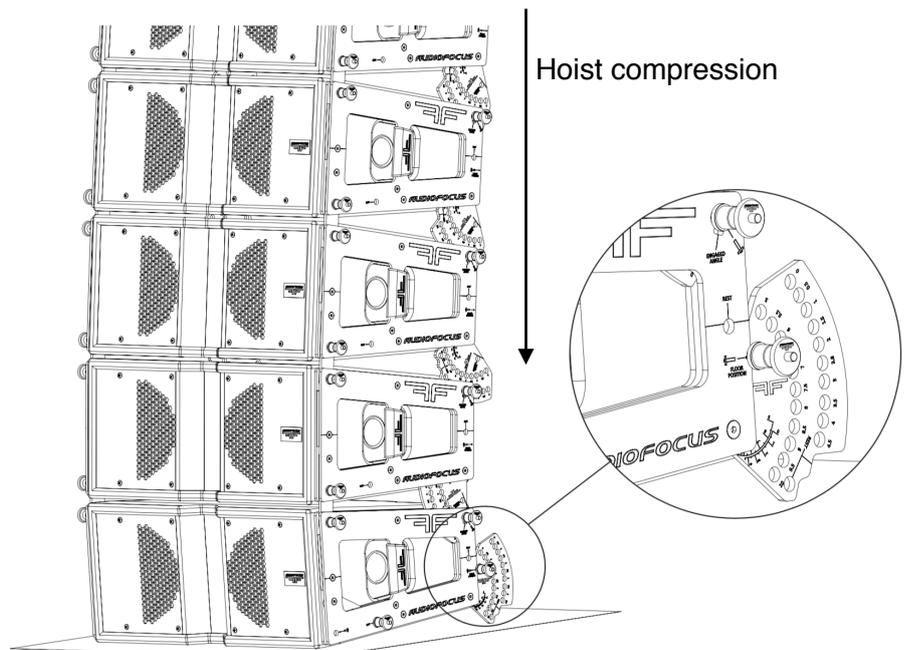
Last step is to lift the ARES8 line source to the proper height as calculated by Easefocus. The preset and level can be adjust easily while the cabinets are at human height. Each cabinet sound and connection can also be check at this time.

4.4 WIRING

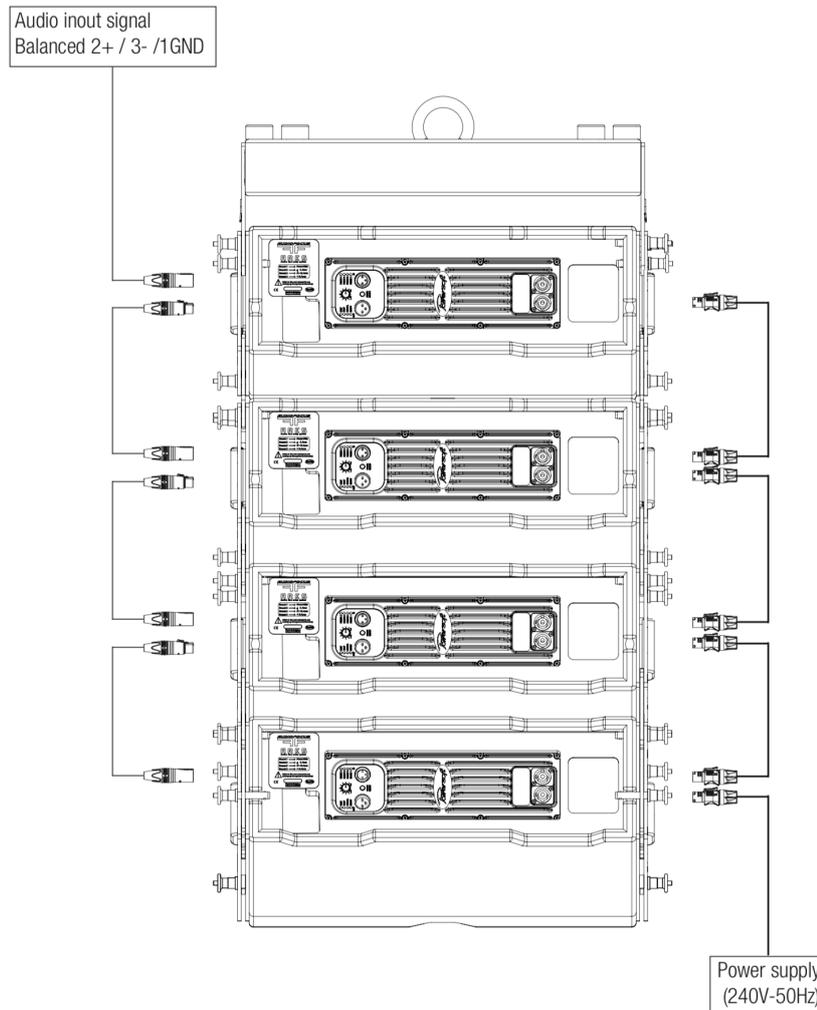Audiofocus power and signal cables with the appropriate section, length and connectors for passive and active speaker are recommended

Connect power and signal cables as describe on the technical drawing. Make sure the preset, volume are right. Check the signal output before application and lifting.


Passive version only have the speakon connector on the back. As it is a two voice speaker, a 4P speakon connector is needed (1+/1- low; 2+/2-high). Powersoft Armonia hold all ARES8 presets as in Powersoft X series or Canalli amplifier. One output can drive up to heigh Serial version of ARES8p and two Parallels version of ARES8p. Use 2.5mm² speaker cable.

4.5 TIME ALIGNEMENT

A plug and play way to time align Ares8 with the mkII218a subwoofer is to physically align the back of the subwoofer with the front center of the Ares8 array at 6m pin point from the ground. It gives a basic fast solution for this setup. However we highly recommend to measure the phase alignement at the cross-over region at 100Hz with FFT software like Smaart or Systuning.
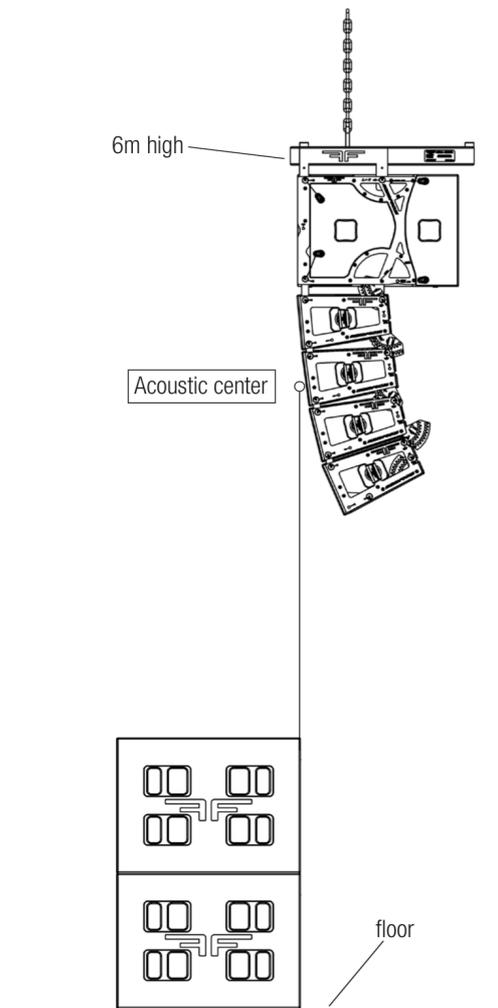
4.6 SET DOWN

Follow the step of lifting the PA in reverse.

4.7 MAINTENANCE

Remove the cover if any liquid hit it, let it dry. If you need to clean it, use no agressive product for synthetic material.
You want to have regular check of the general aspect of the cabinet. Wood paint part can be clean with maintenance furniture product, metal part with a microfiber.

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5 TECHNICAL SPECIFICATIONS

ARES8a (active)

Type
Vented & AF design

Drivers
2 x 8" woofer LF/MF & 1x1,4" Neo driver -1x3" HF voice coil & Titanium diaphragm

Frequency range (1)
70Hz-19,5kHz

Power handling (2)
420W LF / 100W HF

Maximum power handling (3)
540W LF / 200W HF

Nominal Impedance
10kΩ

Dispertion (h x v)
110°x7,5° -6dB

SPL Program @ 1m (4)
133dB

SPL Peak @1m (4)
139dB

Crossover frequency
900Hz

Presets/Angles
4 presets regarding coupling/20x0,5° angle steps

Line Connectors
1IN, 1OUT XLR

Power Connectors
2X Powercon linked

Dimensions (h x w x d)
250 x 645 x 400 mm (including rigging and pins)

Weight
30kg

Finish
Highly resistant polyurea coating

Material
First grade birch plywood 15 & 24 mm

Mounting accessories
M20 + 35 mm standard flange

Compatibility
Powersoft & Easefocus

Accessories
Over-hat, T-yoke, protective cover, transport flight-cases.

(1) Two hours test nominal program power using a 60Hz-20kHz band pink noise test signal.

(2) Two hours according to our standard close to AES standard. Program power rating is measured globally using a 60Hz-20kHz band pink noise test signal with 50% duty cycle (applied for 2 hours).

(3) The peak power rating represents the maximum permitted instantaneous peak level over a maximum period of 10 ms which will be withstood by the bass section without damage and 2 ms which will be withstood by the high section without damage.

(4) Average maximum axial spl @full power, before PPS© is activated.

6 CONTACT AND LINK

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info@audiofocus.eu

www.facebook.com/AudiofocusPage/

www.facebook.com/groups/AUDIOFOCUS/