AUDIOFOCUS
ARES12

PRELIMINARY
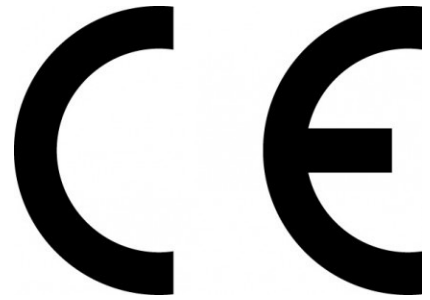# USER'S MANUAL V1.0

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2 SECURITY STATEMENT

2.1 NORMS

LDC,EMC,RoHS and CE guidelines

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

declare that the Ares12 and Ares12 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 Manager

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

Ares12 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 12 line array.

This user manual contains essential information about deploying ARES 12 elements to their full capability. Carefully read this document in order to become familiar with the system. Please refer to rigging manual for rigging instruction.

Whether you're using 4 elements or 24, laid or lifted, we're sure you will find the ARES12 to be highly versatile units in your professional sound reinforcement inventory.

3.2 ARES12

ARES12 is a three way speaker-dual 12", eight 3'' with two 1" driver- line array system is suitable for a wide range of sound reinforcement applications from medium to large scale concerts or theatres where sound quality is crucial.

ARES12 is a real line source respecting all WST criterias.

ARES12 in a Plug & Play version with manufacturer preset

Every powered ARES 12 have a network port that make it easy to fine tune and monitor thru AUDIOFOCUS custom AF manager software.

ARES12 also come in Dante input version (as an option).

3.3 LOW END

The S21 is the recommended subwoofers for the ARES12 line array. Use one S21 for one ARES12 for the best result.

3.4 HARDWARE AND COVER

ARES12 bumper is suitable for a limit of 24 ARES12.

ARES8 can be coupled under ARES12 to take care of first row audience.

The ARES12 transport cover and dolly protect the system while transport and help rigging.

The ARES12 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).

The moving cover protect the system against dust and moisture and small chock.

The ARES12 head flight case protects the system while transport.

4 SETUP
4.1 LED DISPLAY

Limit ON: Output signal is @-3dBspl of the peak

Signal ON: Input signal detected.

Error ON: light up if an error is detected

IN1: analog input

THRU: // signal input 1 (passive-work if speaker is off)

IN2: AES input

PRIM AND SEC D NET: controller input AESOP I/O and link for AFnetwork management and Dante IO if Dante option chosen

Knob: one turn and push all function encoder

LED: display menu and information

The one knob push and turn is an easy way to navigated thru menu and select parameters.

Pushing it will give access to MAIN MENU, which display different sub menu. Turn knobs and push a second time to enter the displayed sub menu parameters.

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VOLUME

Trig the input volume of the amplifier, from -120dB to +10dB (+20dB total group). Turning the knob before entering main menu without pushing is a shortcut to this feature. Recalling a preset (as explain in load preset) will reset the volume to 0db.

DELAY

Trig the input delay of the amplifiers (delay stack or balcony as application example).

at first the delay change as ms. Pushing the knobs will give the triming to 10ms and then samples. turning the knobs change the parameters.

After 3 secondes, the main screen come back.

LOAD PRESET

Recall the preset needed regard the application (go to 4.2 preset selection for information on choosing the right preset).

Turn the knobs till the right name is display, than push the knobs to recall the preset. The firmware go back to main screen automatically.

SET IP

Change the IP address of the amplifier. This is related to the AF network manager software (our dedicate software-remote control of the amplifier with computer). Turning the knobs change the sector number and pushing the knobs selected the next sector.

SOURCE

Selection of the input source of the amplifier. analog (input 1)AES (input2) AESOP.

AESOP

AESOP allow to redirect the AES signal thru RJ45 connector. The first module, receiving signal thru another port than RJ45, should be MASTER and the other should be in SLAVE mode.

TEMP

Display the temperature of the each amp module.

This sub menu don't exit automatically so the temperature can stay on display led screen all the time.

INFO

Display the model, library name Serial mode and mac address.

XLR2

Select the input mode of IN2. It could be AES (by default) but also analog.

DIAG

To be implemented

4.2 PRESET SELECTION

The custom DFM Audiofocus DSP on board of ARES12 take care of the coupling (low end re enforcement goes up with cabinets number) and distance (high end loss with increasing distance).

Warning: ARES12 user have to select the right preset. ARES12 won't change it itself.

User also have to select the right preset whenever doing Easefocus prediction. The presets corrections will be integrated in the simulation.
Please refer to Easefocus guide or our Easefocus quick start guide for more information.

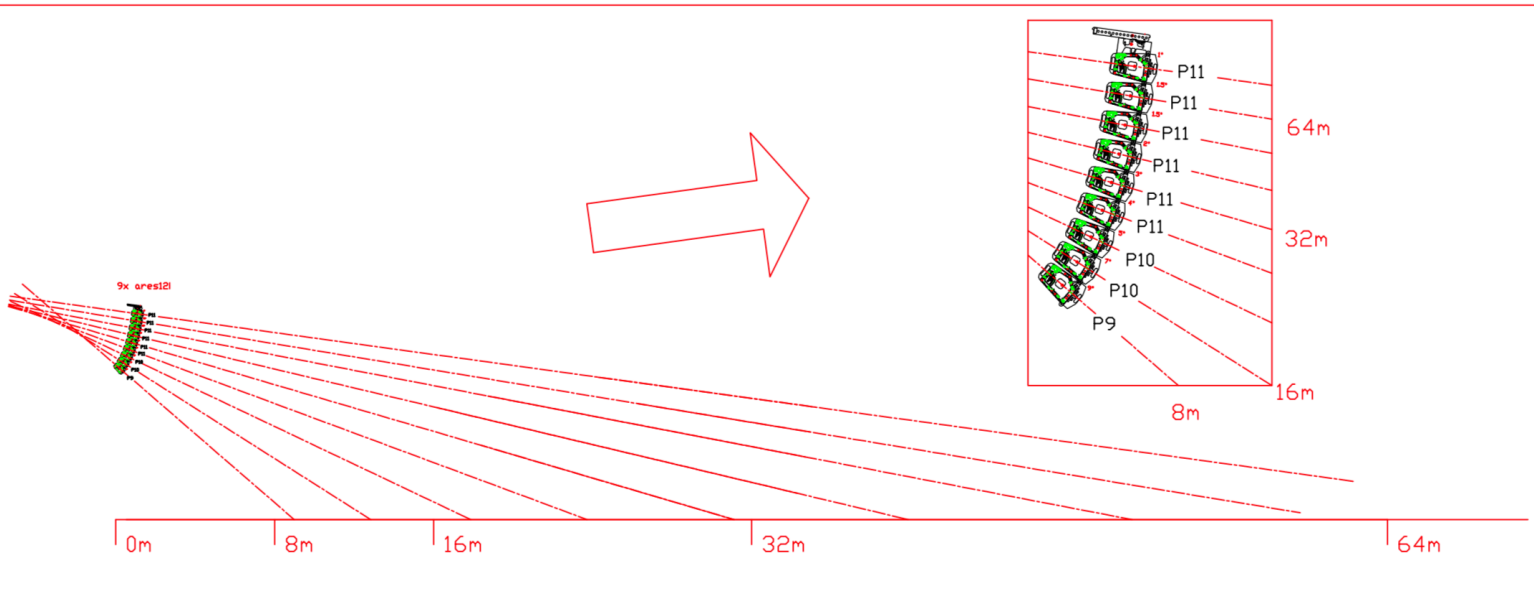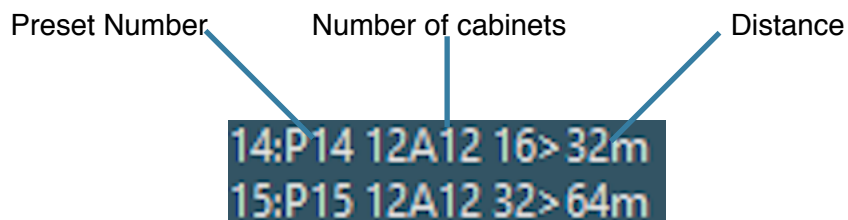Every preset name have the box count and the distance in their file name.

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They are 6 groups of presets:

Preset 1 to 4 :   4 cabinets (stadium configuration too)
Preset 5 to 8 :   6 cabinets
Preset 9 to 12:   8 cabinets
Preset 13 to 16:   12 cabinets
Preset 17 to 20:   16 cabinets
Preset 21 to 24:   24 cabinets

On each group, there are 4 different distance bank regards to the distance from speaker to audience:

8 to 16m
16 to 32m
32 to 64m
64 to more (delays stacks are recommended for more than 100m)

Preset Number   Number of cabinets   Distance

14:P14 12A12 16>32m
15:P15 12A12 32>64m

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4.3 ETHERNET PORT

AF network manager software allows you to change parameters of amplifiers (preset, input delay, input EQ, volume, phase).
AF network manager software run on a windows environment. It connects to amplifier module thru the RJ45 port with CAT6 cable. Secondary port allow to connect following module from one to the other.
AF network manager work on a fixed IP architecture. Please refer to network quick start manual for more information.
RJ45 port can handle both AF network manager, AESOP and Dante (option) at the same time.

4.4 FLOOR AND RIGGING

The ARES12 dolly will guaranty an easy moving of the system.
The dolly is suitable for floor position (stadium configuration). Extend and lock the 4 feet to ensure stability. Lock the wheels.

Please refer to the rigging manual for complete rigging instructions.

4.5 WIRING

AUDIOFOCUS power and signal cables with the appropriate section, length and connectors are recommended.
Make sure the preset, volume are right. Check the signal output before application and lifting.

Ethernet controller In/Out -AES Dante (option)

analog In/Out -AES

Powercon In/Out

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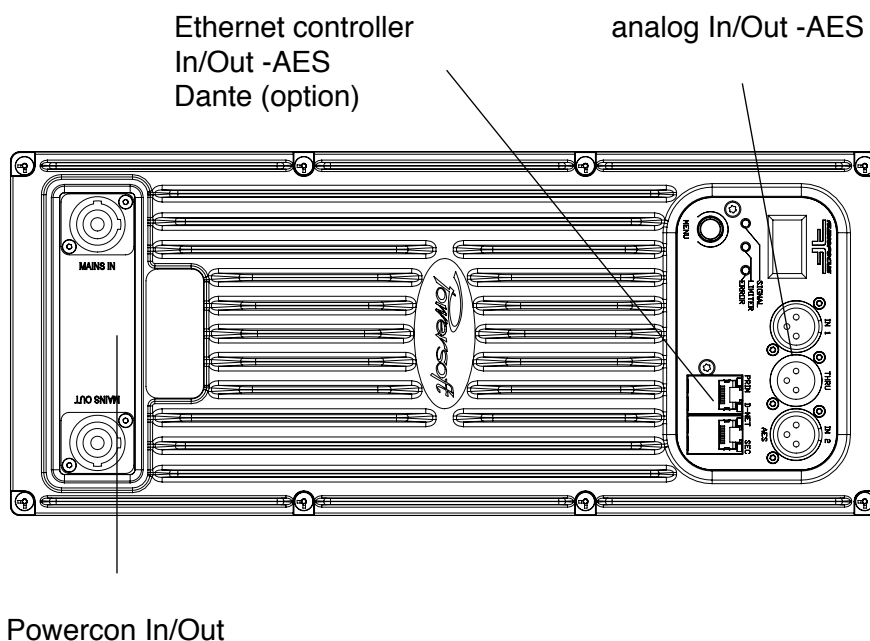
4.6 TIME ALIGNEMENT

We highly recommend to measure the phase alignement with the subwoofer at the cross-over region at 90Hz and phase align the boxes with AFnetwork manager software and a FFT analyser software (like Smaart).

4.7 SET DOWN

Please refer to the rigging manual

4.8 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.
Audiofocus preset upgrade is available on every speaker thru AF Manager software, with a RJ45 connection. See AUDIOFOCUS website for the last upgrade.

5 TECHNICAL SPECIFICATIONS

description
3-way, vented self-powered line array
Usable bandwth (-3dB)
45 Hz - 20 kHz
Power capacity (Wrms)
1200 W (LF) / 340 W (MF) / 140 W (HF)
Peak power
2500 W (LF) / 2500 W (MF) / 2000 W (HF)
Dispersion (h x v)
110° x 7° (average) @-6dB
SPL max / 1m
134 dB (LF) - 143 dB (MF) - 143dB (HF)
Rigging angles
Linear & logarithmic & steering positions
Qty of angles
0 to 5°: 0,5° steps; 5 to 10°: 1° steps
10 to 14°: steering 1° steps
Inputs
Analog, AES, Dante (in option)
DSP + treatment
Shark 96 kHz + possibility of beam steering
Interface
Oled display, 24 presets, easy to use
Dimensions (h x w x d)
370 x 1170 x 620 mm (including pins)
Weight
62 kg (bi-amped) // 65,5 kg (active)
Finish
High resistant Polyurea coating
Materiel
First grade birch plywood 15 & 24 mm
Compatible
AF management software, DSP network
Shooting tool
Ease Focus and GLL viewer
Accessories
Flying frame, dolly with protective cover,
rain cover, coupling frame for ARES 8

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6 CONTACT AND LINK

www.audiofocus.eu

info@audiofocus.eu

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