AIREA
ABX-5

AIREA BREAK OUT EXTENSION

Please read this user manual through carefully before putting the system into operation and keep it for future reference.

EN

Contents

1. Introduction and General Instructions

Congratulations on the purchase of your **ABX-5 AIREA BREAK OUT EXTENSION**. Due to demand, this module has been specially developed as a compact, easy to use interface for the Dante™ audio network.

1.1 Important Safety Instructions

Please read the following safety instructions in their entirety before putting this device into operation. Keep these instructions near the device at all times. Reading the user manual does **not** replace the need for awareness of and compliance with currently applicable national safety regulations and standards, or the observance of safe on-site working methods.

All information and technical specifications published here are based on data that was available at the time of publication. We expressly reserve the right to make any changes.

1.1.1 Explanation of Terms

Danger
This signal word indicates a hazard with a high risk level, which, if not avoided, could result in death or serious injury.

Warning
This signal word indicates a hazard with a medium risk level, which, if not avoided, could result in death or serious injury.

Caution
This signal word indicates a hazard with a lower risk level, which, if not avoided, could result in minor to moderate injury.

1.1.2 General Safety Instructions

Danger:
To avoid danger to life or limb, please ensure that all personnel involved in installing or dismantling this equipment have read and understood the contents of this manual.

The information presented here should, however, be regarded as accompanying advice and it does **not** affect the ultimate responsibility of the user to ensure safe on-site operation of a **FOHHN** system.

Warning:
To prevent injury caused by a fallen system,

- this device must be securely mounted in accordance with the assembly instructions and current safety guidelines. Only use the specially designed **FOHHN** mounting accessories or components, which are explicitly specified in the assembly instructions.
- this device must be regularly inspected for any signs of wear or loosening of the load-bearing connections.

- it is necessary to ensure that the mounting points on a building or structure have sufficient load-bearing capacity and are structurally viable.
- all components of a hung (i.e. "flown") device must be visually inspected before installation. Any part showing signs of deformity, cracks, rust, fractured welds or other signs of wear must not be used under any circumstances.
- the load limit of any component that will be used for system suspension (including shackles, chains and hoists) must not be exceeded. In order to comply with local safety regulations, these load limits may, in certain circumstances due to underlying safety factors (operating ratios), need to be recalculated and, if necessary, reduced.

All components required for the mounting or suspension of a **FOHHN** system have been designed and constructed in accordance and compliance with the following regulations that are applicable in Germany: BGV-C1, BGI 810-3, DIN EN 1993-1-1, DIN EN 1999-1-1 and DIN 18032-2. The safety factor (operating ratio) is therefore equal to or better than 10:1. If the system is to be used in countries that have stricter requirements, the permissible load capacity must be reduced accordingly.

To avoid injury, the device must be stored, installed and operated well away from children.

To avoid injuries, this device must be taken out of operation, marked appropriately and protected against accidental use if it

- shows visible signs of damage
- appears to contain loose parts
- is not working correctly
- has been subjected to unfavourable conditions (e.g. moisture) for a prolonged period
- has been subjected to poor transportation conditions (e.g. with unsuitable packaging or damp/humidity).

If necessary, please contact your FOHHN® dealer and the transportation company immediately.

1.1.3 Electrical Safety Information

AIREA BREAK OUT/IN EXTENSIONS are Protection Class 3 appliances. They are built and certified in accordance with the VDE safety measures for electronic devices and, safety-wise, leave our factory in perfect condition. The devices comply with all currently applicable EMC directives, confirmed by the attached CE marking.

The relevant guidelines can be found in the appendix to this user manual!

Warning:
To minimize the risk of electric shock,

- the mains plug grounding pin must never be separated and under no circumstances should the plug be taped up.
- the device must **only** be connected to a professionally tested shockproof socket.
- the device housing must never be opened. The device does not contain any components that can be repaired by the user. In the unlikely case of a defect, please consult qualified service personnel and/or the dealer from whom you purchased the system.

Please also ensure that the local mains supply voltage matches the power supply voltage specified on the device.

To minimize the risk of an electric shock or fire,

- the device must not be subjected to moisture.
- containers filled with liquid (e.g. beverage containers) must not be placed on the device.
- ventilation slots must not be covered with objects (e.g. protective rain covers).
- the device must not be subjected to excessive heat, sunshine, fire or similar.
- no open sources of flame (e.g. pyrotechnics) must be placed on the device.

Caution:
To avoid damaging the device, do not leave the power cable plugged in if the device is not going to be used for a while. (Remove the plug from the mains socket in order to completely disconnect the device!)

1.1.4 Acoustic Safety Information

FOHHN systems are capable of generating very high sound pressure levels, which can cause irreparable damage to hearing.

Warning:
To avoid potential hearing impairment, never stand in close proximity (1 metre or less) to a system while it is in operation.

To prevent both hearing impairment and damage to the device, avoid the following while the device is in operation:

- acoustic feedback
- high powered, permanently distorted signals
- impulse noises, which can occur when a device is switched on or off, connected or disconnected from the system.

1.1.5 Connections and Cabling

Please note the following when wiring up your system:

- Check that your cable is working faultlessly and only use cables with a sufficient cross section.
- Only use cabling- and connector materials that meet professional standards.
- Only use properly shielded cables and plugs for the audio and data connections.
- Only use power cables with a fully intact grounding pin and make sure that the device's mains plug is accessible at all times so that it can be quickly removed from the mains supply in the event of a malfunction.
- Lay and secure the cabling so that it cannot be damaged by tools, or through being trapped by the device or by a fixing bracket.
- Protect any laid cables from mechanical damage, or unnecessary traction.
- Avoid excessive tightening of the screws on connection terminals! (This only applies to fixed installation systems.)

The wiring up of loudspeaker systems should only be carried out by suitably qualified personnel!

1.2 Operating Conditions

Please note the following when operating your system:

- The permitted ambient temperature of the device during operation ranges from 0 °C to +40 °C. A short period of use outside this temperature range is possible, but not advisable.
- The device is intended for use in a dry environment with normal levels of dust and humidity in the air.
- If any moisture has formed on the back of the device, either during transportation or storage, allow it to acclimatise for approximately two hours before use.
- Never expose the device to any aggressive chemical fluids or vapours.
- Always make sure that heat can be dissipated via the outer surface of the device enclosure.
- Always make sure that the device is well ventilated. In order to ensure adequate cooling, the device must not be covered with towels or cloths. Avoid letting the enclosure become hot through exposure to sunlight or strong spotlights.
- Never expose the device to strong vibration.

1.2.1 Information on Abnormal Operation

The device should be immediately inspected by a **Fohhn Audio AG** approved service partner if

- a foreign body or liquid has got into the interior of the device,
- the device has been exposed to rain,
- the device is not working normally i.e. it is showing marked differences in performance,
- the device is damaged (e.g. after a fall).

1.3 Storage and Transportation

Please note the following:

- The device should only be transported in its original packaging.
- Store the device in a dry environment, with a constant ambient temperature, in order to avoid condensation.
- The permitted ambient temperature range for storing the device is -10 °C to +70 °C.
- Due to fluctuations in temperature during transportation and storage, condensation may start to build up on the surface of the device. Before operating the device, examine its surface for any signs of moisture. If this is the case, allow the unpacked device to acclimatise for two hours in the environmental temperature before using it.

2. The Product

2.1 Product Description

The **ABX-5** can be used in two ways:

1. As an interface between Dante™ audio networking and the modular active **FOHHN FOCUS VENUE** loudspeaker system. In this situation, the **ABX-5** does not need an additional external power supply.
2. As a Dante™ to AES/EBU Breakout module and **FOHHN-NET** Ethernet adapter.

In both cases **FOHHN-NET** control signals will be transmitted via Ethernet.

The **ABX-5** is equipped with a Dante™ Brooklyn II module. It has a Dante™ Primary and Secondary port for redundant applications.

2.2 Items Delivered

Every product is examined in accordance with the highest quality and safety standards prior to despatch.

Please check your product carefully for any signs of transport damage and, in the event of any damage having occurred, inform your dealer and the transportation company immediately. Please also check that the packaging contains all the components belonging to the device.

Your **ABX-5** system is delivered with the following:

- 1 × **ABX-5 AIREA BREAK OUT EXTENSION**
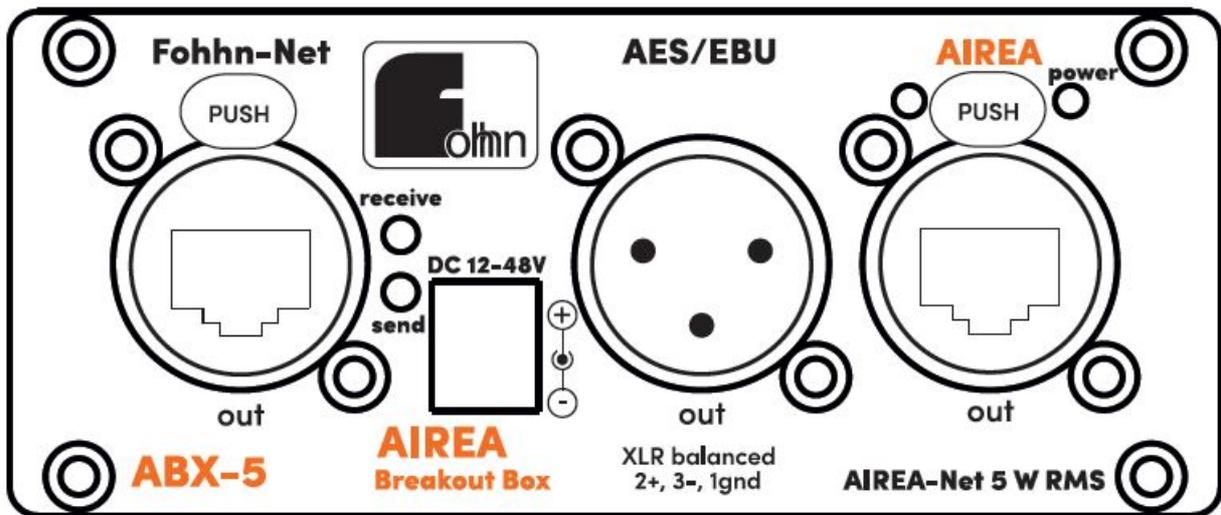- 1 × wall wart power supply

If the delivery does not appear to be complete, please contact your Fohhn® dealer!

2.3 Unpacking

When unpacking the product, we recommend the following procedure:

1. Open the packaging and take out the product.
2. Examine the product for any visible signs of transport damage.
   If the product has been damaged, inform the transportation company immediately. A claim for transport damage can only be made by the recipient (that is to say, you). Keep the packaging for examination by the transportation company.
3. As a general rule, always retain the packaging. Despatch the product in appropriate outer packaging or in a suitable flightcase.

3. Connections and Status Messages

FOHHN-NET out
This RJ-45 output is intended for **FOHHN-NET** control signals.

receive LED
The green LED lights up when **FOHHN-NET** control signals are received.

send LED
The yellow LED lights up when the **ABX-5** is sending **FOHHN-NET** control signals.

DC 12-48 V
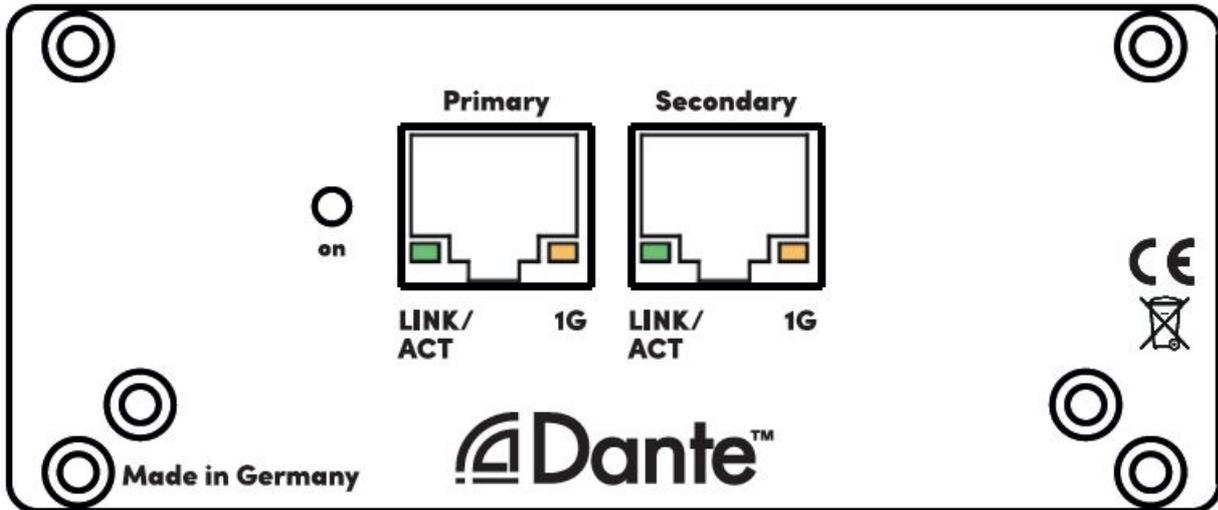An external 12 - 48V wall wart power supply can be connected to this DC socket.

AES/EBU out
This RJ-45 output is intended for digital AES/EBU signals.

AIREA-NET out
This RJ-45 output is intended for the AES/EBU signal and the FOHHN-NET control signals. The **ABX-5** can also be supplied with power via this socket **(see Section 4.1 "Use with a FOCUS VENUE system").**

power LED
The green LED lights up when a supply voltage is present.

on LED
The green LED lights up when a supply voltage is present.

Dante™ Primary
Digital audio signals (Dante™) and remote control signals (**FOHHN-NET**) can be fed via this RJ-45 input (1000 Base-T Ethernet).
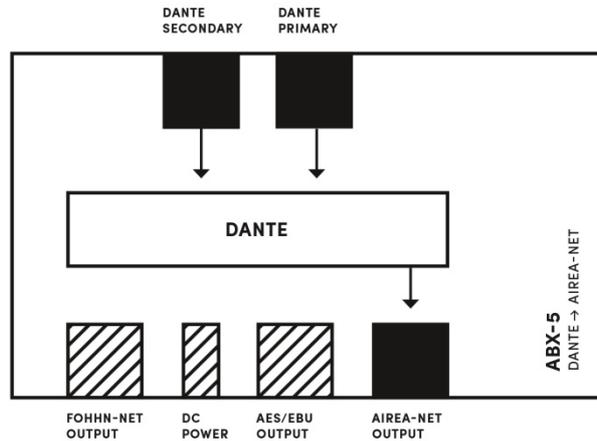
Dante™ Secondary
This RJ-45 input (1000 Base-T Ethernet) is exclusively used for redundant cabling.

4. Operating modes

4.1 Use with a FOCUS VENUE system

The **ABX-5** can be directly used with a stack of **FOCUS VENUE** loudspeaker modules. In this situation, the **AIREA-NET** output of the **ABX-5** will be connected to the **AIREA-NET** input of the top loudspeaker module in the stack.
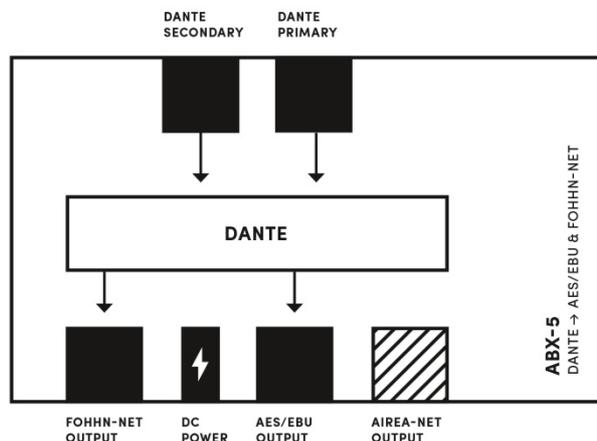

Only use one ABX-5 unit per FOCUS VENUE stack!

The connected **ABX-5** will be supplied with power via the **FOCUS VENUE** loudspeaker module – the Focus Venue module must therefore be switched on via its power switch.

When the ABX-5's AIREA-NET output is in use, the DC socket, AES/EBU output and the FOHHN-NET output must not be connected to anything.

4.2 Use as a Dante™ Breakout Module (AES/EBU + FOHHN-NET)

The **ABX-5** can also be used as a general Dante™ to AES/EBU breakout module and **FOHHN-NET** Ethernet adapter. Here, the device must be used with an external wall wart power supply.

In this operating mode, the AIREA-NET output must not be connected to anything!
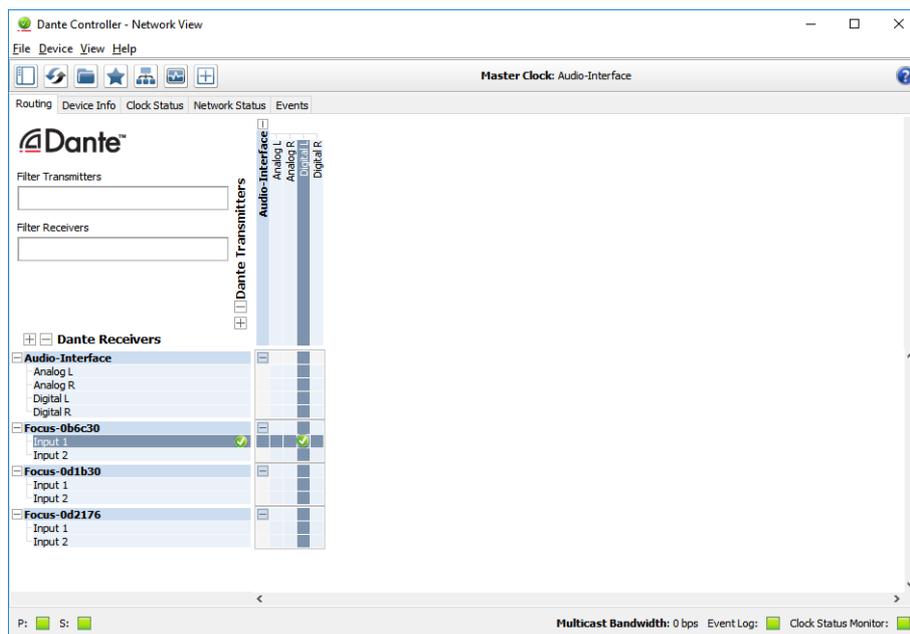
5. Setting up

Using the **FOHHN-NET** network, you can remotely control and monitor the functionality of the integrated digital signal processors (DSP) in active **FOHHN** loudspeaker systems. For this you will need a Windows PC with **FOHHN AUDIO SOFT** software (Version 5.0.3 or later) installed.

When using an **ABX-5,** connection to the **FOHHN-NET** is via an Ethernet switch to which an appropriate Dante™ device will also be linked. For control via PC, Audinate's **Dante Controller** software is required in addition to **FOHHN AUDIO SOFT**.

You can download the Dante Controller software for free here:
https://www.audinate.com/products/software/dante-controller

5.1 Firmware Update for the ABX-5

To update the Dante™ Firmware on an **ABX-5,** the **Dante Firmware Update Manager** software is required. You can download this for free via the following URL:
https://www.audinate.com/products/firmware-update-manager

Dante Firmware files have the extension **.dnt** and can be downloaded here:
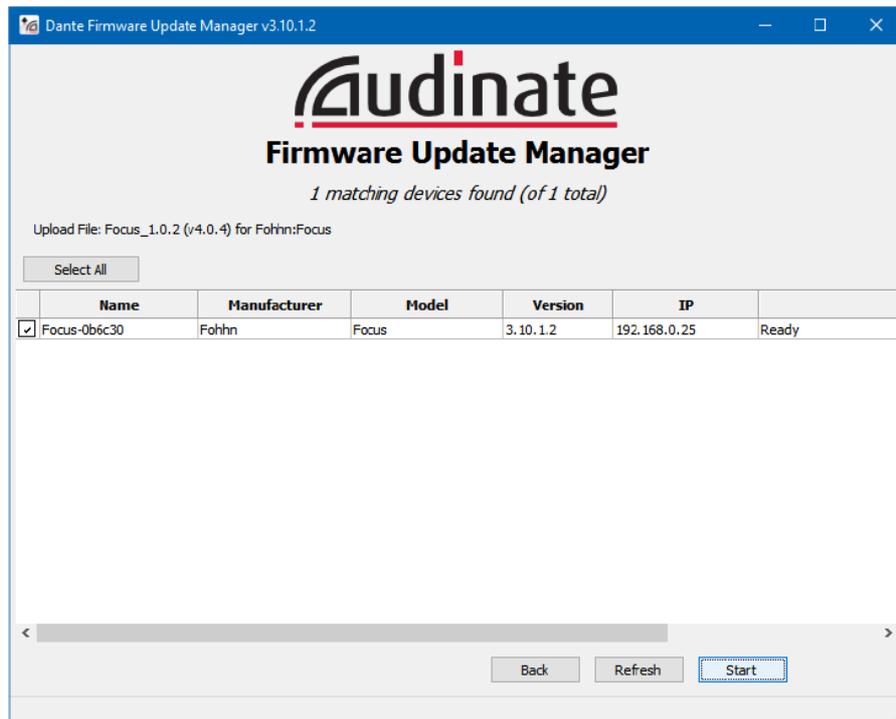https://www.fohhn.net/download/dante/

Example: **Focus_1.0.2.dnt** for **FOCUS-SERIES** Dante™ devices (e.g. **FOCUS VENUE**).

Perform the update as follows:

1. Start the **Dante Firmware Update Manager**.

2. Select the appropriate network interface and confirm your choice with *Next.*

3. Select *Update Dante Firmware*.

4. Select the appropriate **.dnt** file and confirm your choice with *Next.*

5. Select the listed Dante™ device that is to be updated and click on *Start*.

6. After a full update, the **Dante™** device should be restarted by switching off/on.

Here you can find all the Dante™ technical documentation from Audinate:
https://www.audinate.com/resources/technical-documentation

Here you can find a helpful introduction to identifying a Dante™ device if the IP address is not known:
https://www.audinate.com/faq/how-can-i-locate-dante-device-static-ip-address-unknown-subnet

6. Technical Specifications

Electronic Features

Audio inputs	Dante Primary/Secondary
Audio outputs	AES/EBU 24 Bit / 48 kHz, AIREA-NET
Power supply	wall wart 12 V – 48 V DC / 5 W, AIREA-NET 48 V
Power consumption	4 W, AIREA-NET Load max. 5 W

Connections

AIREA-NET	1 x RJ-45 out
FOHHN-NET	1 x RJ-45
AES/EBU output	1 x XLR male
Dante™ input	2 x RJ-45 (1000Base-T Ethernet Port)
DC input	DC input for wall wart power supply

Display LEDs

Power on	green = on (front and back)
FOHHN-NET receive	green
FOHHN-NET send	yellow

7. Service and Repair

Servicing and/or repairs should only be undertaken by suitably qualified, **FOHHN**-trained personnel. Do not carry out any servicing or any repairs to the device beyond what is listed in the **"Maintenance Measures"** section below.

For details of a **FOHHN** Service provider in your area, please contact us at the address on the final page of this manual.

Keep the packaging for your device so that, in the event of any problem occurring, it can be returned in its original packaging. This will minimize the risk of any potential damage during transportation.

7.1 Maintenance Measures

- To clean your **ABX-5**, only use a dry or slightly damp, well wrung out towel.
- Do not use any aggressive cleaning agents, waxes or solvents (such as cleansing alcohol or paint thinner), as these could spoil the appearance of the device and/or affect the paintwork on the enclosure.
- There are no user-serviceable parts within the device.
- The device must only be repaired by suitably qualified personnel.

8. Appendix

8.1 Environmental Information

Please note that this product must not be disposed of in general household waste. It must be taken to a disposal centre for electrical/electronic waste. Please also note any applicable national or local regulations. Further information on these and on appropriate waste disposal facilities can be obtained from your city/town council as well as from your local distribution partner.

8.2 CE Marking and Declaration of Conformity

This device complies with the currently applicable conditions of EMC law and as such, carries the CE marking.

$C\,\epsilon$

The relevant Declarations of Conformity are available on request from

Fohhn Audio AG, 72622 Nürtingen

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