



User Guide



DynamicSpeaker

Motorised loudspeakers for integration in desks

Technology Serving Design

Danish craftsmanship
Mediterranean soul


ARTHUR HOLM

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WELCOME

Thank you for purchasing an ARTHUR HOLM product.

Please, read this installation and operating instructions carefully and keep them in a safe place for future reference.

We remain at your entire disposal if you have any suggestions.

Henrik Holm

General Manager

hholm@albiral.com

ABOUT US

The Company

Arthur Holm has its origins in the Danish furniture designer Jorgen Alex Jensen, who was active during the sixties and the seventies. His design inspiration and his concept of ergonomics have been continued by his family, the design force behind Arthur Holm product range. The result of combining Scandinavian design tradition with Mediterranean creativity, flexibility and emotion is a wide product range built on more than 25 years of craftsmanship.

Arthur Holm offers a professional product range where tomorrow's technology is shaped into valued materials with design flexibility and customisation, specially created to enhance communication and collaboration in reception, conference and meeting areas.

The art of customisation

Arthur Holm offers a range of ingenious products whose designs are based on quality materials and the latest technology. Products which endow meeting and conference rooms with silent, ergonomic, innovative and aesthetic solutions that integrate into the furniture, hang from the walls as works of art or are used as interactive points of information.

The world of Arthur Holm

Arthur Holm offers a selection of unique, elegant, versatile, flexible and ergonomic products that are being used in meeting and conference rooms, reception areas, auditoriums and public zones of leading companies throughout the world.

The numbers speak for themselves! We currently own 33 product patents, have presence in over 45 countries with products and solutions in more than 25,000 installations.

It will be our pleasure to work with you, designing your unique and personalised environment. Our broadcast electronic engineers will provide the latest technology while our design team will offer you the most exclusive appearance.

Our team puts its heart, passion and pride in all our designs.

REGULATIONS AND SECURITY



ATTENTION: Do not disassemble or modify the device in any way. This symbol warns of the presence of dangerous un-insulated voltages inside some of the components, of sufficient magnitude to expose people to risk of electronic shock.



This symbol draws attention to important use and maintenance instructions in the manual that accompanies the unit.



This symbol indicates that the equipment conforms to the norms established by the European Community.



This symbol indicates D.C. current.

SAFETY INSTRUCTIONS

Plugs

- Do not dismantle any part of the device power connector.
- Disconnect the power plug from the AC outlet when the device is not going to be used for an indefinite period of time.

Power and extensions cords

- Use the appropriate power cord with the correct plug type.
- Do not overload wall outlets or power cords.
- Make sure the total ampere passed through an extension cord does not exceed the maximum allowed by the cable used.
- Do not place anything on the power cord.
- Do not locate this product where a person may walk or trip over the cord.

SAFETY INSTRUCTIONS



Wiring connected to hazardous voltage requires installation by qualified personnel or the use of ready-made flexible cables.



For your security, your equipment must be connected to an electrical outlet with grounding connection protection.

Since the plug is used to disconnect the device, the operating electrical outlet must be in an easily accessible place.

Environment

- Install the equipment on an elevated, flat surface.
- Install the equipment in a ventilated area.
- Avoid exposing the equipment to:
 - Rain or water
 - Excessive heat, cold or humidity
 - Area exposed to direct sunlight
 - Dirty areas
 - Equipment generating strong magnetic fields
- Avoid placing open containers of liquid, near the equipment.
- Keep a minimum distance of 30 mm in order to have good ventilation.
- Never place above the device any sources of flames such as lighted candles, etc.
- If you are using the device in extreme weather conditions and/or tropical climates, the equipment should be installed in a room which ensures a reasonable level of temperature and humidity.
- To prevent damage the equipment must be firmly anchored to the surface, as shown on the installation instructions.

SYSTEM DESCRIPTION

General

Our new motorised loudspeaker for desk and furniture integration brings flexibility and impressive audio quality with enhanced speech intelligibility to the meeting room or other rooms where quality audio is needed in a magical movement. The compact, omnidirectional 360 degrees active speaker has a twin 36W Class-D integrated amplifiers and a two-way coaxial transducer that brings the audio to the dedicated area with its acoustic diffuser through its integrated DSP technology, the system can be controlled using the AHnet and its wireless AHlink App for control and set-up. The Arthur Holm dynamicSpeaker is designed to be hidden when not in use with a smooth magical and elegant movement done without disturbing the audience.

Highlights

- Natural sound direction
- Speech intelligibility
- High gain before feedback
- Limited audio pollution
- 360 degrees loudspeaker
- 4" 2-Way coaxial speaker, bass reflex
- 2 x 36W class-D bi-amplifier integrated
- Acoustic omnidirectional diffuser
- DSP integrated Balanced line input
- RS-422 controllable
- Near field audio reproduction
- Speech intelligibility enhancement
- Remotely controllable
- Wooden speaker enclosure

SYSTEM DESCRIPTION

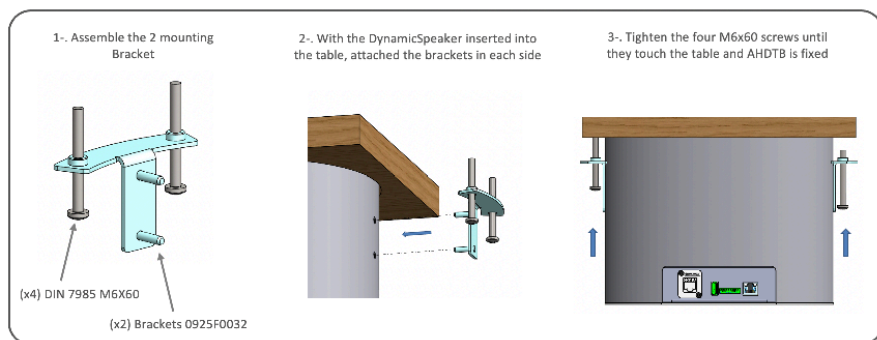
Available Models

MODEL	DESCRIPTION
AHDSR42W	Motorised loudspeaker for furniture integration. 4" coaxial loudspeaker. Class-D 2way bi-amplified. RMS power 2 x 36.5W. 360° dispersion. Balanced analogue audio input. Adjustable gain through AHnet (RS422 Protocol). Mute function through AHnet (RS422 Protocol). Cover plate made of stainless steel. USB Port for software updates. XLR-4 input. Capacitive touch sensor on cover plate for up and down control.
AHDSR42W UI (Underneath Installation)	Motorised loudspeaker for furniture integration. 4" coaxial loudspeaker. Class-D 2 way bi-amplified. RMS power 2 x 36.5W. 360° dispersion. Balanced analogue audio input. Adjustable gain through AHnet (RS422 Protocol). Mute function through AHnet (RS422 Protocol). USB Port for software updates. XLR-4 input. Prepared for underneath installation, to be veneered.

Options

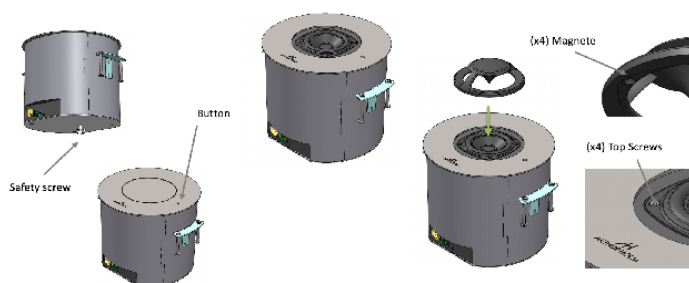
AHDSR42W
CPSK Painted

MOUNTING INSTRUCTIONS



DIFFUSER MOUNTING GUIDE

1. After unpacking the equipment and removing the safety screw for transport, install the equipment and connect to the power.
2. Then press the button to turn the DynamicSpeaker to open position.
3. Put together the diffuser matching the 4 magnets with the 4 top anchor screws. It will detect a "click" when the diffuser is in the correct position.



MOUNTING GUIDE AHDSR42W UI

Pattern Hole

Pattern hole dimensions for milling are specified in the corresponding drawing. The milling of the furniture has to be done from below.

Attention

Manipulation of the product should be avoided, no stress should be applied to the product except from the instructions given in this document. Cutting, drilling, soldering, adding of electrical and mechanical components can cause danger and should be avoided by all means. Not complying with these directions will result in a loss of the Arthur Holm warranty.

Albiral Display Solution S.L. shall not be held liable for any loss or injury incurred as a result of modifications made to goods by anyone other than the supplier or the supplier's authorised representative without the supplier's written permission. Such modifications shall be deemed to terminate any further guarantee obligations.

MOUNTING GUIDE AHDSR42W UI

The DynamicSpeaker is available in a special version that is prepared to be mounted from below the table with a veneer finishing on the lid of the device to match the table. This special version is supplied without stainless steel cover plate and buttons.

Included in this version are all necessary brackets.

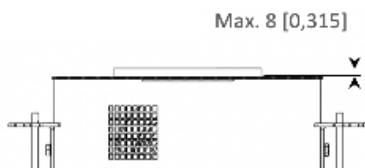
Is controlled by means of AHnetT or AHlink.



Veneer

To veneer the lid of the DynamicSpeaker the dimensions are specified in the document Pattern Hole.

Different materials can be used to veneer the unit. Maximum thickness of the veneer: 8mm [0,315"]. Maximum weight: specified in the Pattern Hole document (veneer thickness + glue < 8).

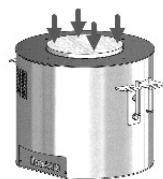


Fixation

Veneer can be glued or taped to the lid.

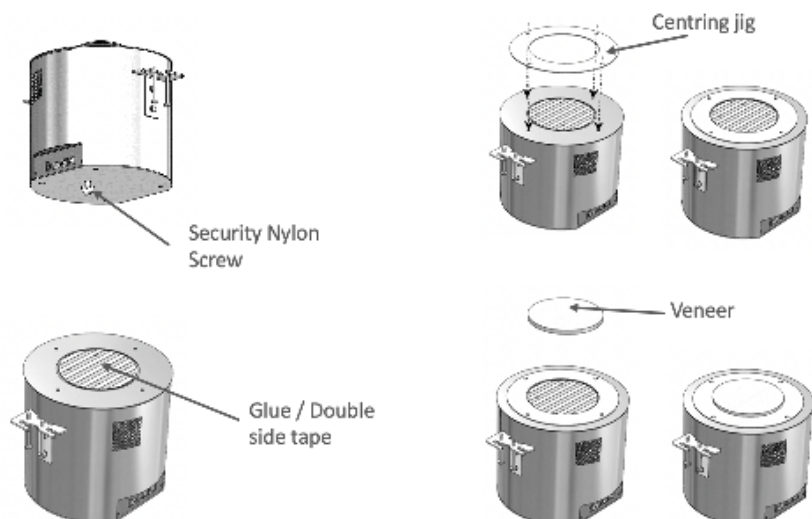
When veneering the device the pressure applied must not exceed 1.5 Kg evenly distributed on lid surface.

- Use glue or tape depending on the mechanical properties of the materials to be joined (lid and veneer). The lid is made in painted steel.
- Surface energy, dilation, temperature and humidity are factors must be considered to choose the best option.
- Double sided tapes 3M VHB family are recommended (check the compatibility between the materials to tape / glue).



MOUNTING GUIDE AHDSR42W UI

Veneer Centring and Fixation



IMPORTANT: Don't remove the Security Nylon screw until finishing the installation into the table.

Use the centring jig to join the veneer in it's correct position.

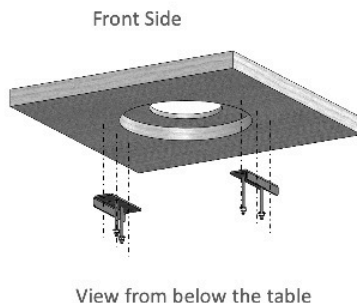
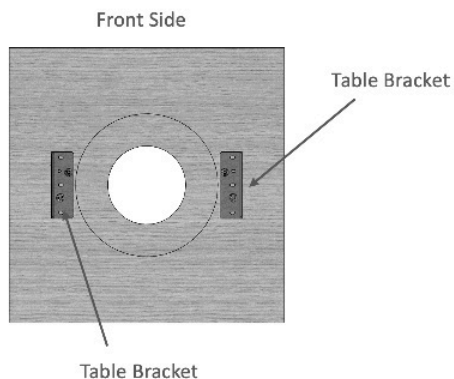
The top plate is just the base where the veneer is going to be added. The base can not be necessary centred with the jig.

Look at page 3 "fixation" for glue or tape instructions.

MOUNTING GUIDE AHDSR42W UI

Mounting table brackets

View from below the table:



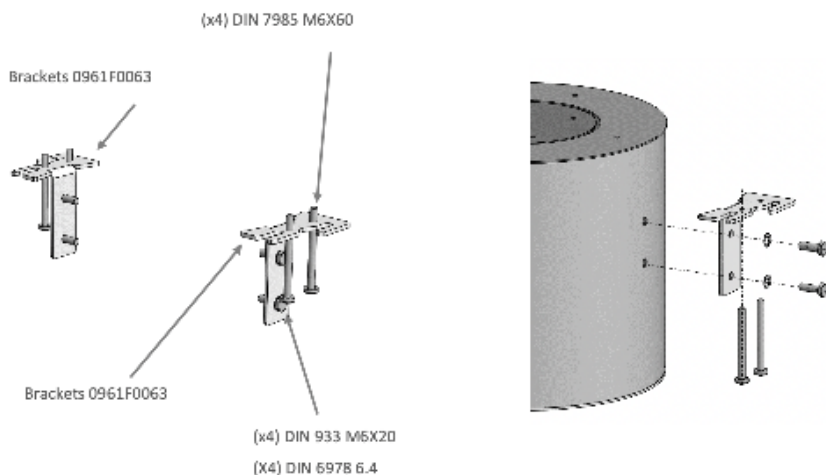
Mount the table brackets below the table using the holes indicated on pattern hole drawing.

The screws (x6) depend on the table material; the weight of the unit is up to 10Kg.

PAY ATTENTION THAT THE BRACKETS ARE MOUNTED IN THEIR CORRESPONDING SIDE.

MOUNTING GUIDE AHDSR42W UI

Mounting the DynamicSpeaker brackets

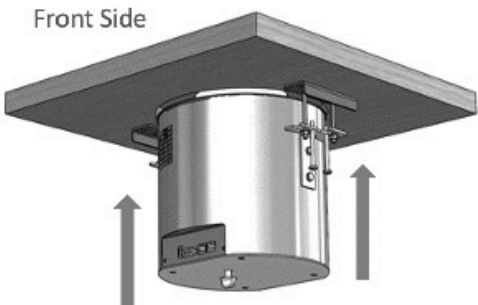
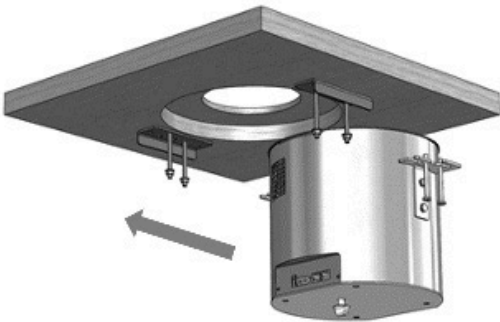


Mount the unit brackets on their corresponding side by screwing the screws (2+2 M6x20) into the lateral threads.

Mount the vertical adjustment screws (2+2 M6x60) on to the unit bracket so that the tip of the screw is flushed with the upper side of the unit bracket.

MOUNTING GUIDE AHDSR42W UI

Hanging the unit



Mount 2+2 nuts on to both table brackets as indicated on the drawing.
Slide the unit on to the table bracket nuts.

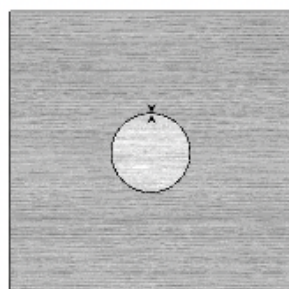
MOUNTING GUIDE AHDSR42W UI

Centring of the unit



Front Side

Max. 1,75 [0,069]



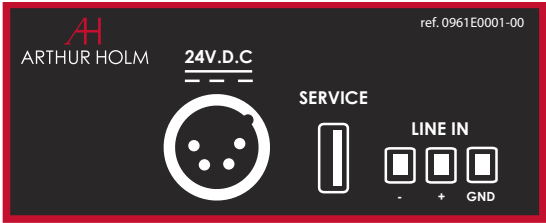
View from
above the
table

Front Side

Tighten each nut gradually until the monitor surface is levelled with the table surface.

Dimension between rear edge of lid and table must not be less than 1,75mm [0,069]. Otherwise lid will come in contact with the table opening and be damaged

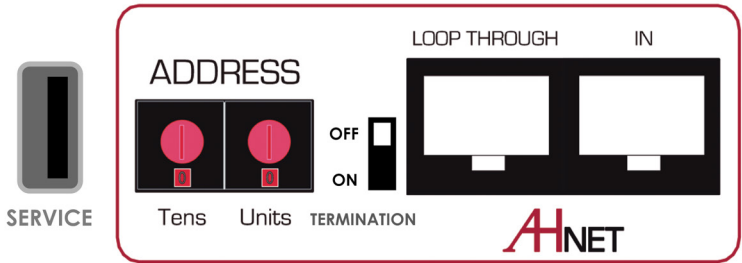
POWER AND CONTROL



24V D.C.: Power supply input connector.

Service: USB to be used only for service.

Line in: Audio input.



Termination: Activate (ON) the termination. Only on the last unit of the RS422 bus.

AHnet: RJ45 CAT6 connector for addressable RS422 control. There is a loop through connector to use as signal RS422 output. Up to 30 devices can be connected on the same RS422 bus.

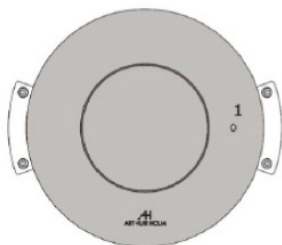
Service: USB to be used only for service.

Address: AHNet address for the addressable AHNet command protocol. Address 00 is reserved for service.

CONTROLS AND AUDIO FEATURES

Remote control

1. Touch button to open and close the unit



Audio features

- 4" coaxial loud speaker
- Class-D 2 way bi-amplified
- RMS power 2 x 36.5 W
- 360° dispersion
- Balanced analogue audio input. Level line +4dB
- Internal DSP
- Frequency response : 70Hz – 20KHz (-10dB)

AHNET PROTOCOL

Communications protocol

COMMUNICATION	RS422
CONNECTION	RJ45
WIRING	CAT-6

Speed and configuration

BAUD RATE	38400
DATA BITS	8
PARITY	NONE
STOP BITS	1

Wiring Diagram

1. Data TX +
2. Data TX –
3. Data RX +
4. NC
5. NC
6. Data RX –
7. NC
8. NC



RJ-45

Connection

PINS 1 & 2	The units respond
PINS 3 & 6	The units receive instructions

Protocol to control the device by addressable RS422 bus.
You can connect up to 30 units on the same RS422 bus.
You can use an AH Interface Ethernet, to control the RS422 bus.
The units should have a set address and the address must start by 1.
Maximum cable length between ends: 500 m/1 640 ft.

AHNET PROTOCOL

AHnet protocol

Uses 5 bytes communication:

BYTE 0	START BYTE
BYTE 1	ADDRESS BYTE
BYTE 2	COMMAND BYTE
BYTE 3	VALUE 1
BYTE 4	VALUE 2

Commands

COMMAND	DESCRIPTION	RESPONSE
FA XX 01 01 00	OPEN	FB XX 01 01 00
FA XX 01 00 00	CLOSE	FB XX 01 00 00
FA XX 04 01 00	BUTTON LOCK	FB XX 04 01 00
FA XX 04 00 00	BUTTON UNLOCK	FB XX 04 00 00
FA XX 09 01 00	MUTE	FB XX 05 00 00
FA XX 09 01 00	UNMUTE	
FA XX 09 02 NN	AUDIO GAIN NN=(00:0dB, 46:-	
FA XX 14 00 00	INQUIRY CONTROL BYTE	FB XX 14 CB1 CB2

XX Number of the device address. Up to 30 devices for each RS422 BUS

CB1 Response in 8 bites of the device status

CB2 Response in 8 bites of the device status

AHNET PROTOCOL

CB1

BITE	7	6	5	4	3	2	1	0
CLOSED							1	0
OPENED							0	1
PROTECT	1							
NO PROTECT	0							
BUT_EN						0		
BUT_DIS						1		

To send an order to all the devices, you must use the address:
F7 Hex. (Byte1)

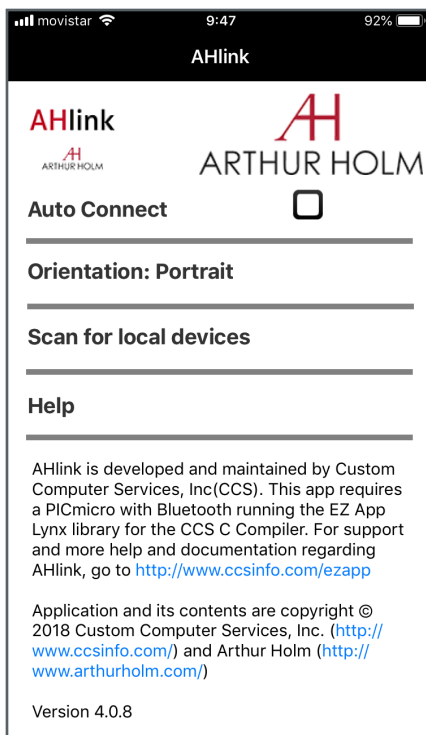
In this case, the units do not send a reply.

AHLINK

AHlink is used to control and set-up the unit.

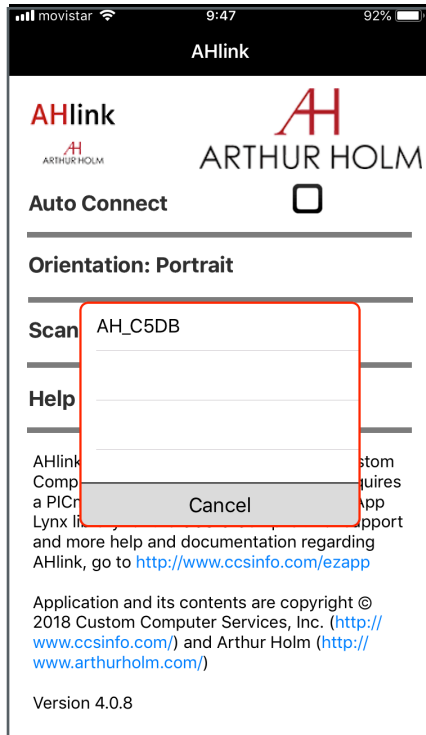
Activate the AHlink function by pressing the open/close button on the cover plate during 3 seconds.

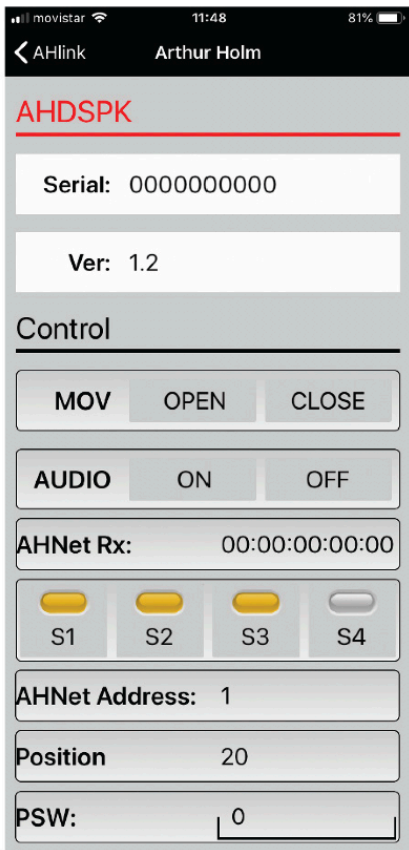
Using a mobile phone, download the "AHLink" app from the App Store (IOS system) or Google Play (Android system). This App is cost free. Execute the EZ App Lynx on your mobile phone.



AHLINK

Select the "Scan for local devices" option and your AH device will appear on screen. The name of the device is "AH" + 4 character Bluetooth MAC address.





SERIAL
Serial number of the unit

VER
Firmware version

MOV
Control to open/close mechanical functions

AUDIO: Mute audio control

AHnetRCX: Last AHnet command received

SENSOR STATUS: Sensor status information

- S1, S2: Not used
- S3: Open/Close sensor switch. The sensor is Off while pressing the Open/Close button on the cover plate
- S4: Mechanical close sensor. The sensor is On when the device is closed

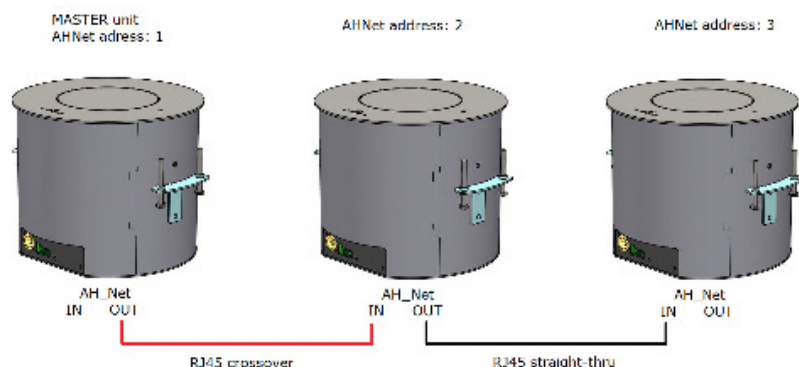
AHNET ADDRESS: AH address settings

POSITION: Current position on the mechanics

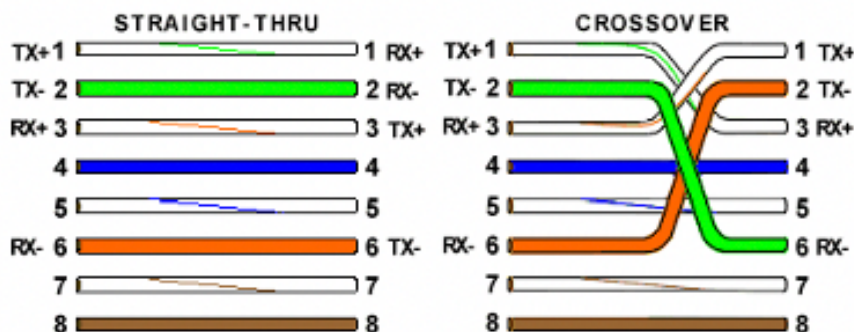
PSW CONFIGURATION: Only for Technical Service

MASTER CONFIGURATION

Configuring a MASTER unit, allows to control using the AHlink application, all the units installed in the same room. When the unit is configured as MASTER, the AHlink signal is always active and you can control all the signals installed. First, do you need to link the units using RJ45 cables connected in the AHnet ports. The cable connected to the MASTER unit, have to be crossover in order that the MASTER unit can send the AHnet commands to the rest of the units. Refer to next figure to connect all the units to be controlled by the MASTER unit.



RJ45 crossover and straight-thru information



MASTER CONFIGURATION

Use the AHLink application to connect to the MASTER unit and control all the units connected to the MASTER as shown on previous figure.



OPEN/CLOSE: Controls the open and close mechanical function in all units connected to the MASTER

AUDIO ON/OFF: Controls the audio mute function in all units connected to the MASTER

-/+ /SAVE: Controls the volume level in all units connected to the MASTER. Pressing SAVE button the level will be saved in memory

Sound level: Shows the actual gain level

INFORMATION ON DISPOSAL FOR USERS OF WASTE ELECTRICAL & ELECTRONIC EQUIPMENT



This symbol on the products and/or accompanying documents means that used electrical and electronic products should not be mixed with general household waste.

For proper treatment, recovery and recycling, please take these products to the designated collection points, where they will be accepted on a free of charge basis. Alternatively, in some countries, you may be able to return your products to your local retailer upon the purchase of an equivalent new product.

Disposing of this product correctly will help save valuable resources and prevent any potential negative effects on human health and the environment, which could otherwise arise from inappropriate waste handling. Please contact your local authority for further details of your nearest designated collection point.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

For business users in the European Union

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

Information on disposal in countries outside the European Union

This symbol is only valid in the European Union. If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

WARRANTY TERMS AND CONDITIONS

Albiral Display Solutions warrants this product against manufacturing defects and workmanship for a period of two (2) years from the date of purchase, subject to the conditions below.

1. Electrical, electronic boards, accessories and power supply are warranted against manufacturing defects and workmanship for a period of two (2) years from the date of purchase
2. Labour costs: Albiral Display Solutions covers the labour costs to replace any defective parts during the validity of this warranty.
3. Transport costs:
 - 5.1. In the case that a manufacturing defect occurs within 90 days after the purchase date, both freight and insurance costs will be paid by Albiral Display Solutions.

Although Albiral Display Solutions S.L. pays for freight and insurance costs, Albiral Displays Solutions will not be responsible for any damages caused by the transportation of the goods if the customer does not inform in writing when receiving the goods.

- 5.2. After 90 days of the purchase date, the beneficiary of the warranty will pay both freight and insurance costs.

Albiral Display Solutions S.L. will not be responsible for any damages caused by transportation, when this one is paid by the customer.

4. This warranty does not cover the labour costs of handling, diagnose, removal, replacement, reinstall and/or program any product.
5. This warranty does not apply if the fault has been caused by misuse, improper handling, electrical or mechanical abuse, abnormal operation conditions, non-authorized modifications, and inadequate transportion or as a result of atmospheric phenomenons.

WARRANTY TERMS AND CONDITIONS

6. The warranty is not valid if people other than authorised Service Centre have handled the product and if the product has been manipulated or warranty seals are removed or manipulated.
7. The beneficiary of the warranty will have to return the product with the original packaging to warranty there are no damages during transportation.
8. The warranty is not valid if the beneficiary of the warranty does not include a RMA form and a copy of the purchasing invoice.

Please note that laws vary from country to country, and the same provisions of this warranty may not apply to you.

If you have any doubts concerning the terms of this warranty, please contact:

business@albiral.com

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Patents

MU17180ES00	P27178ITEP
MU17301ES00	P27178RUPC
MU17322ES00	P27178USPC
MU17413ES00	P27284DEEP
MU17445ES00	P27284EPPC
MU17854ES00	P27284ESEP
MU17868DEPC	P27284GBEP
MU17868RUPC	P27284RUPC
P24821DEEP	P27284USPC
P24821ESEP	P27715ESEP
P24821GBEP	P28089DEEP
P24821USPC	P28089ESEP
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