

AERT 30/ ERT 60

- › IP TO RS422 Interface control



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 20 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 27 product patents, have presence in over 45 countries with products and solutions in more than 20,000 installations.

It will be our pleasure to work with you, designing your unique 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.

Technology serving Design



Thank you for purchasing an ARTHUR HOLM product.

Our product range has been designed to create the perfect meeting room, where the screens are a part of the interior design as well as essential communication tools.

Please read these installation and operation instructions carefully and keep them in a safe place for future reference.

We remain at your disposal if you have any suggestions that would help us improve our products.

Henrik Holm
General Manager

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**ATTENTION: Do not disassemble or modify the device in any way**

This symbol warns of the presence of dangerous non-insulated voltages inside some of the components, which are high enough to cause risk of electric 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.

Safety instructions

PLUGS

Do not dismantle any part of the monitor power connector.

Disconnect the power plug from the AC outlet when the monitor is not going to be used for a long period.

POWER AND EXTENSION 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 trip or walk over the cord.



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



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

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
- › Areas 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 30mm to ensure good ventilation.

Never place any sources of flames, such as lighted candles, etc, above the device.

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 any damage, the equipment must be firmly anchored to the surface, as the installation instructions state.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the

equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

System description

All the Arthur Holm and Albiral motorized units, has an open source AHnet protocol to external control the units using a RJ45 RS422 bus.

The ERT interface unit, is an Ethernet IP to RS422 interface, in order to use the local network to send AHnet commands to the Arthur Holm or Albiral units. Just only opening an IP ERT port, the system can send AHnet commands by network, and the ERT will send the commands to both of the two RS422 RJ45 buses. You can connect up to 60 units in one ERT, using the two RS422 ports (30 units on each RS422 port)

Note: ERT-30 model has only one AHNet RS422 port. You can control up to 30 units

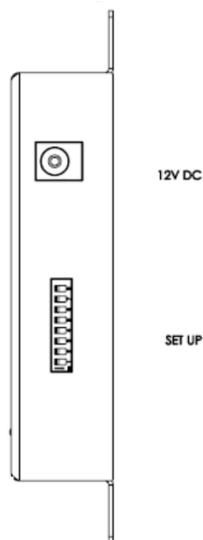
The ERT interface Unit and AHnet Communication Protocol have been developed to control, configure and diagnose Arthur Holm units, such as, motorized monitors, motorized microphones, motorized cables, motorized connection box....

Box Contents

Before the installation of your ERT unit, please check the contents of the shipping box, it must contain the following items::

- › ERT unit
- › Power cord
- › User manual
- › Power supply 100-240Vac, 50-60Hz. Output 12V.

Controls and connectors



12VDC: Power input connector. Plug the power supply supplied

SETUP: Eight deep switches to control and setup the unit

DIP1: Activates the radio signal to control the unit using AHlink APP

DIP2: Activates the automatic AHnet ID configuration on the RS422 bus

DIP3: Not used

DIP4: Activates the firmware upgrade

DIP5: Not used

DIP6: Configures the factory IP address

IP: 192.168.0.128

MASK: 255.255.255.0

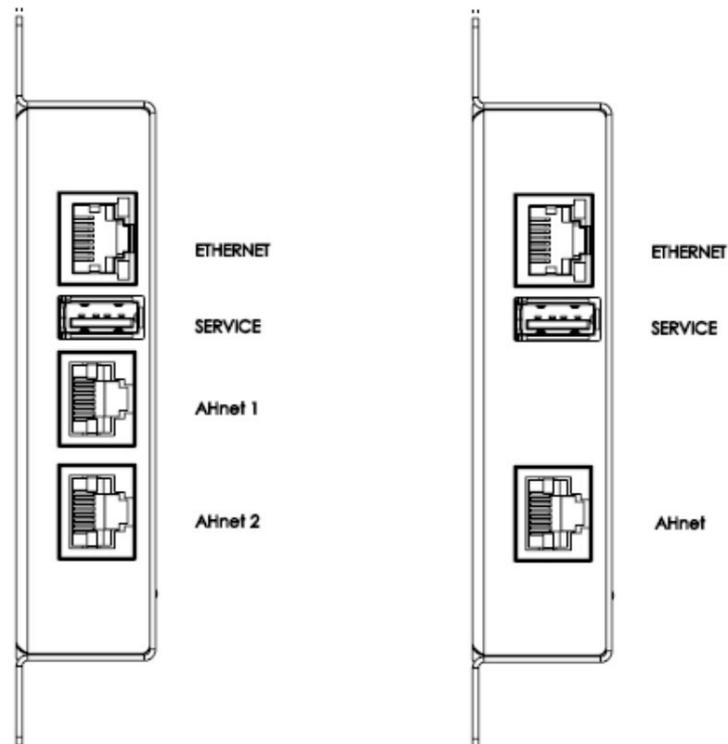
GATEWAY: 192.168.0.3

MAC: 70:B3:D5:49:70:00

DIP7: Not used

DIP8: Not used

Controls



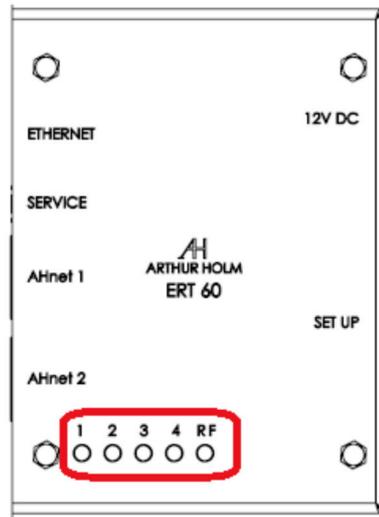
ETHERNET: RJ45 network connector. Connect the ERT to your local network, to open the 2002 port and send AHnet commands to the units connected to the RS422 ports (AHnet 1 and AHnet2)

SERVICE: USBA connector used only to firmware upgrade

AHnet1: RJ45 RS422 port. Connect the Arthur Holm or Albiral units to control using AHnet commands

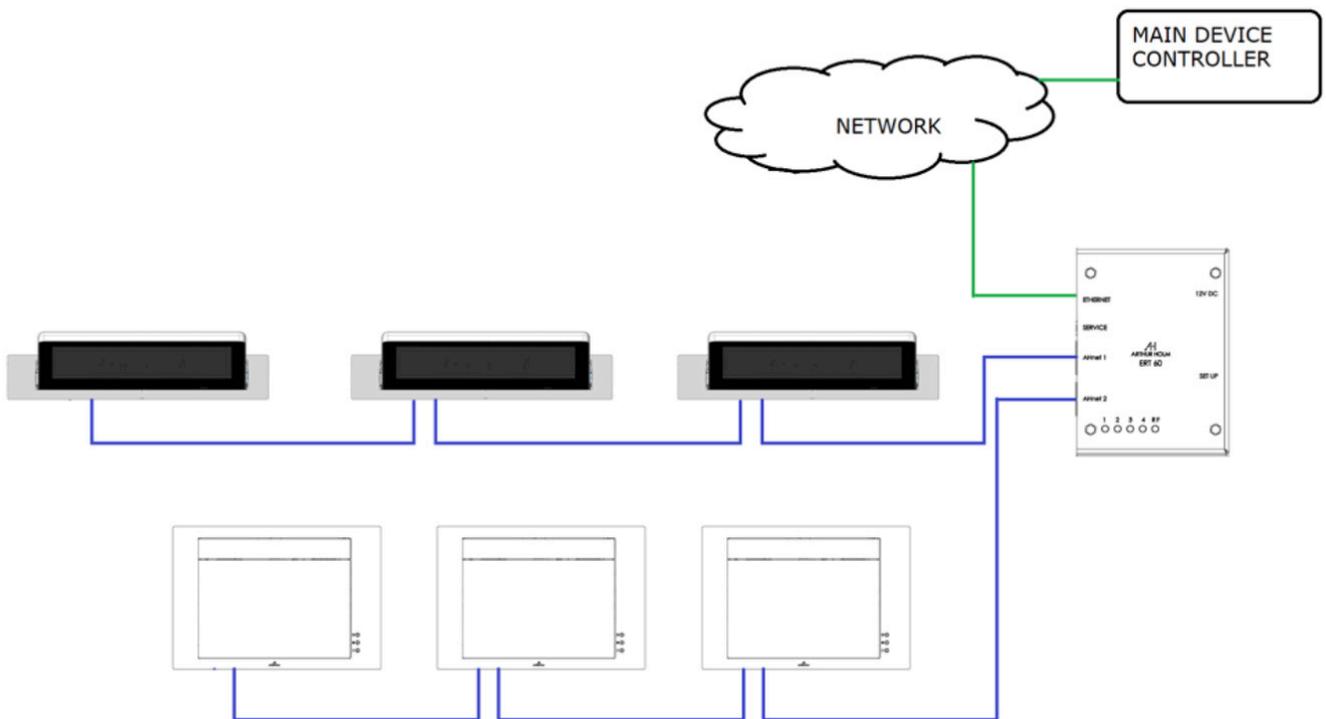
AHnet2: RJ45 RS422 port. Connect the Arthur Holm or Albiral units to control using AHnet commands

Note: ERT-30 has only one AHNet RS422 port connector. With and ERT-30 you can control up to 30 devices, and with an ERT-60, you can control up to 60 devices using the two AHNet port connectors (30 devices connected on each port)

LEDs sytem indicators

1. LED1: Change the state when an AHnet command is received from the two RS422 ports (AHnet1 or AHnet2)
2. LED2: Change the state when the unit receives data from the local network port (ETHERNET)
3. LED3: Not used
4. LED4: Change the state when the unit send an AHnet command when the automatic AHnet ID configuration is activated (DIP2). The ERT interface sends commands to the units connected on AHnet1 and AHnet2 to automatic configure the AHnet ID on each unit
5. RF: Brighths when a mobile or tablet is connected to the unit to control and configure the ERT using the AHlink APP

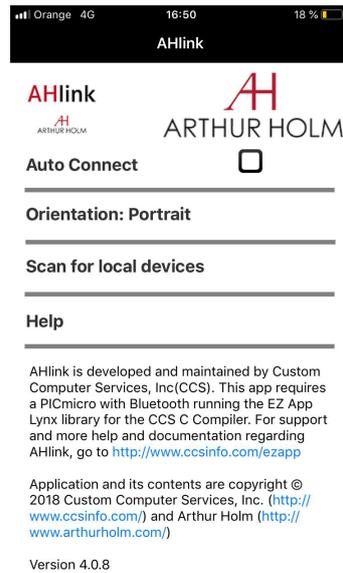
Use the ETHERNET unit port to connect the ERT to your local network area. Using this port, opens the 2002 ERT IP port, and send AHnet commands to control the devices connected to RS422 ERT ports (AHnet1 and AHnet2). The Arthur Holm or Albiral units, has an AHnet IN and AHnet OUT port to easily install a RS422 BUS. Next figure shows a schematic connection diagram.



The main device controller connects to the ERT interface using the local network area. Just opening the 2002 ERT port, the main device controller can send AHnet commands to the ERT interface, and the ERT sends the AHnet commands to the units by the RS422 ports.

You can connect up to 60 units to the ERT using the two RS422 RJ45 buses (30 units on each bus). Please, follow the respective user manual to configure the AHnet address on each unit and to connect the unit to the RS422 bus.

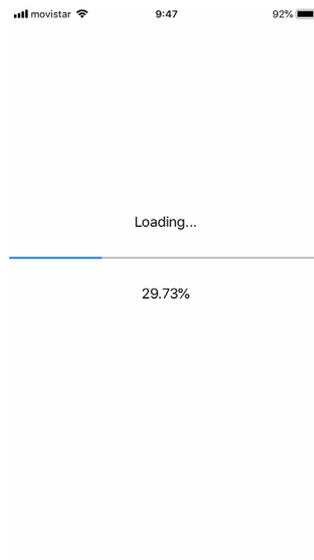
To configure the ERT IP address, do you need to download the AHlink APP. First, do you need to activate the radio signal. Activate DIP1 on SETTINGS device, and power the ERT unit. To control and configure the unit using AHlink APP, download "AHLink" from App Store (IOS system) or from Google Play (Android system). The App is free. Execute the "AHLink" on your mobile phone.



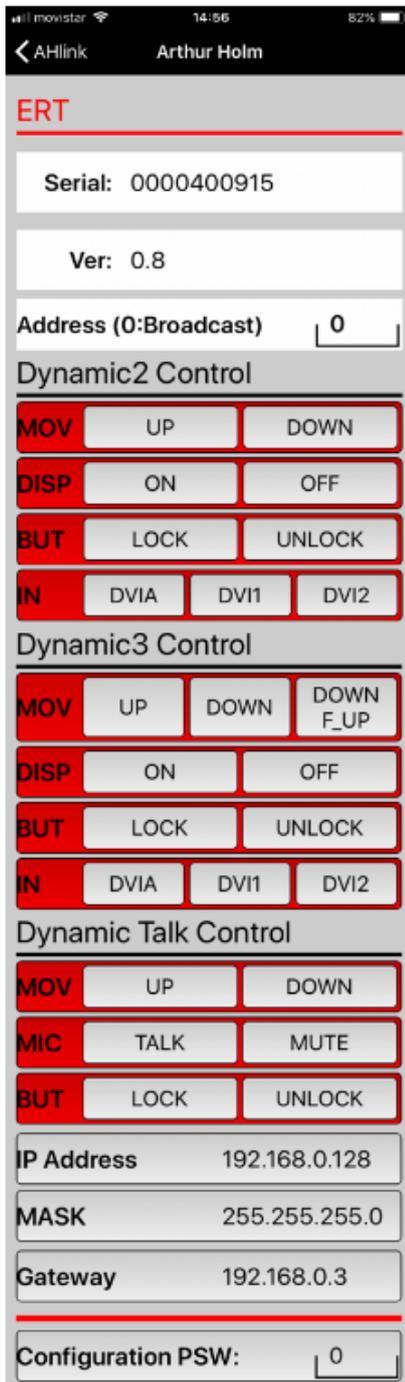
On App options, is recommended not select “Auto Connect” and select “Portrait” on “Orientation”. To connect to the device, selects “Scan for local devices”



The name always begins by “ERT” characters and the fourth last MAC radio address. Select the device to control and configure the unit



Selecting the device, the first page is upload on the mobile phone. This page is used to check the device. When the mobile APP is connected to the unit the RF LED brights



First line, shows the model name of the device

Serial: Serial number of the unit

Ver: Firmware version

Address: Configure the AHnet Address to send the command. Use address 0 to broadcast the command instruction

Dynamic2 Control: Send basic commands to Dynamic2 monitors family. Select the AHnet address to send the command, and press the function to send to AHnet RS422 BUS

Dynamic3 Control: Send basic commands to Dynamic3 monitors family. Select the AHnet address to send the command, and press the function to send to AHnet RS422 BUS

Dynamic talk Control: Send basic commands to Dynamic talk microphone family. Select the AHnet address to send the command, and press the function to send to AHnet RS422 BUS

IP Address: Shows the actual ERT IP address. Note that if the DIP6 is active, the unit is configured with the factory IP and this IP information should be different

MASK: Shows the actual ERT MAK address

Gateway: Shows the actual ERT gateway address

Configuration PSW: Enter 4006 password to configure the ERT IP address. Next page shows the ERT network configuration

movistar 14:58 82%

< AHlink Arthur Holm

ERT

Serial: 0000400915

Network configuration

IP[1]	192
IP[2]	168
IP[3]	0
IP[4]	128
<hr/>	
MASK[1]	255
MASK[2]	255
MASK[3]	255
MASK[4]	0
<hr/>	
Gateway[1]	192
Gateway[2]	168
Gateway[3]	0
Gateway[4]	3
<hr/>	
NETWORK INI	

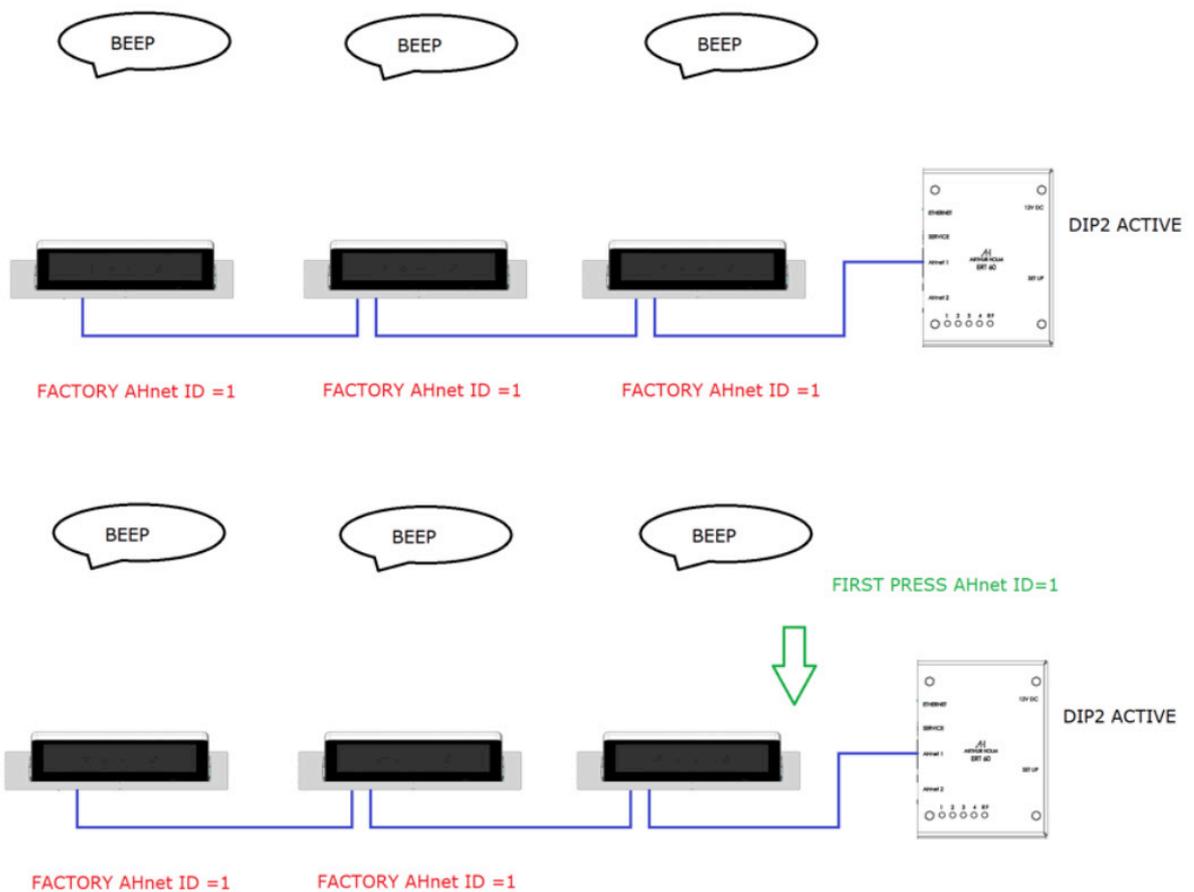
Network configuration: Change the network configuration and press “NETWORK INI” button to update the new network settings

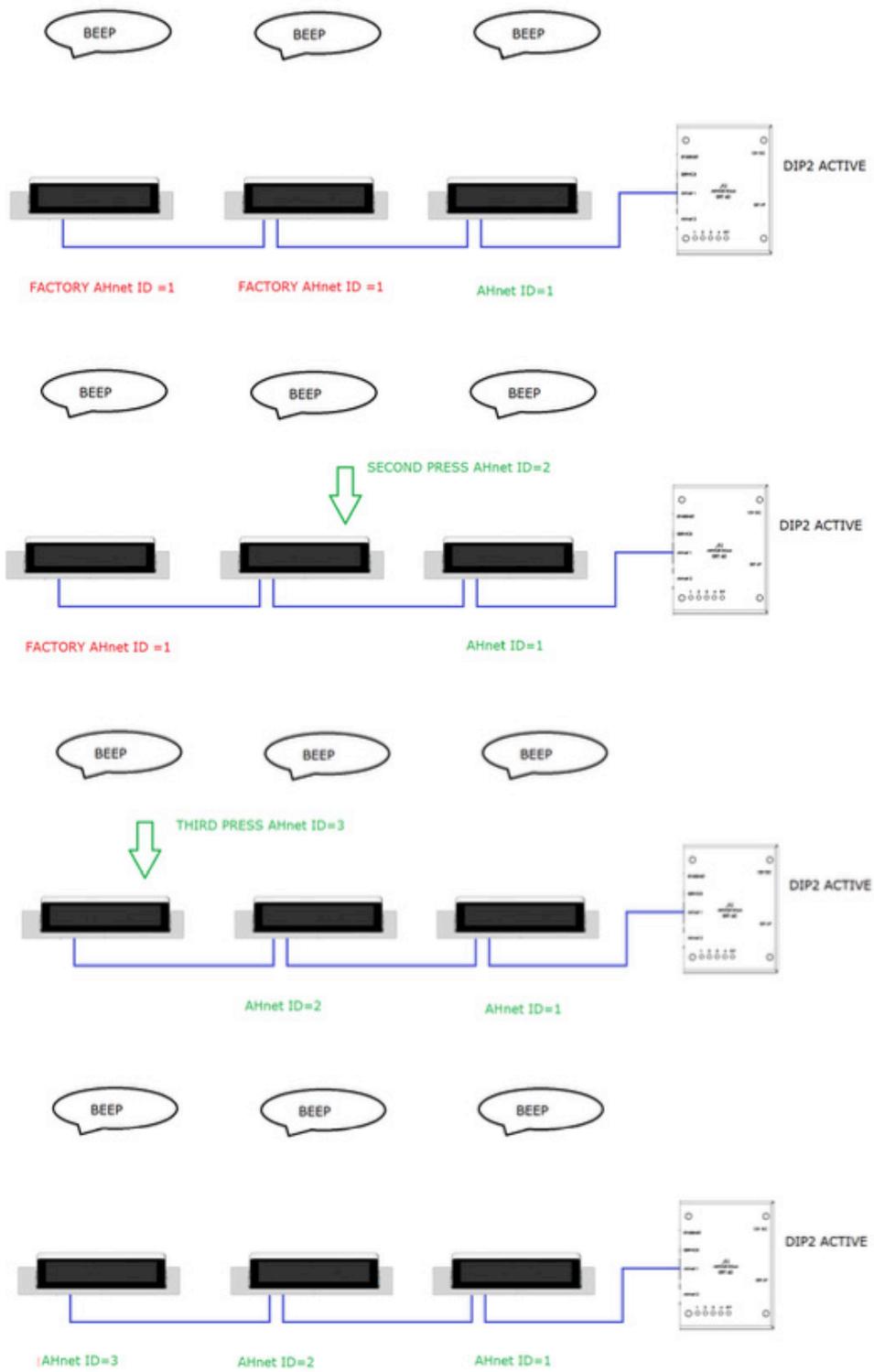
AHnet address configuration

There is an ERT functionality that helps the users to configure the AHnet address. To send AHnet commands to a unit, first do you need to configure the AHnet address to individually send commands. Installing the unit (monitor, microphone or other device), do you need to configure a different AHnet address on each unit. The ERT has a utility that helps the assignation of the AHnet address task

First of all, note that this utility it is only available on devices that has LCD screen configuration. The devices that has AHnet address rotary switches, don't have this functionality

To activate this function, activate DIP2 on SETTINGS ERT switches, and power the unit. The ERT will periodically send a special AHnet command to configure the AHnet address on each unit. When the units receive the special AHnet address configuration command, you hear a BEEP sound. Pressing the UP button on unit cover plate, the unit configures her new AHnet address. The configuration is incremental. First unit that the user pres the UP button, gets AHnet address 1. Second, AHnet address 2.....





AHnet Protocol:

Using 5 bytes to communication:

BYTE 0	START BYTE
BYTE 1	ADDRESS BYTE
BYTE 2	COMMAND BYTE
BYTE 3	VALUE 1
BYTE 4	VALUE2

BYTE 0 is the header and should always FA in HEX mode

BYTE 1 is the unit AHnet address to send the command. To send the command to all the devices, there are special AHnet address used as broadcast. Please, refer to the user manual unit as there are different family broadcast addresses

BYTE 2 is the function to execute on the unit

BYTE 3 first value of the function

BYTE 4 second value of the function. In some functions this value is not used and should be "00"

Below, there is some AHnet commands used to control the different devices family. You will found more AHnet commands on the particular user manual

Dynamic2 family

COMMAND	DESCRIPTION	RESPONSE
FA XX 01 01 00	GO UP	FB XX 01 01 00
FA XX 01 00 00	GO DOWN	FB XX 01 00 00
FA XX 02 01 00	SCREEN ON	FB XX 02 01 00
FA XX 02 00 00	SCREEN OFF	FB XX 02 00 00
FA XX 03 01 00	DVI-A SELECTION	FB XX 03 01 00
FA XX 03 00 00	DVI 1 SELECTION	FB XX 03 00 00
FA XX 03 03 00	DVI 2 SELECTION	FB XX 03 03 00
FA XX 04 01 00	BUTTON LOCK	FB XX 04 01 00
FA XX 04 00 00	BUTTON UN LOCK	FB XX 04 00 00
FA XX 15 00 00	ASK BACKLIGHT LEVEL	FB XX 15 00 ZZ
FA XX 15 01 ZZ	SET BACKLIGHT LEVEL	FB XX 15 01 ZZ
FA XX 16 00 00	ASK CONTRAST LEVEL	FB XX 16 00 ZZ
FA XX 16 01 ZZ	SET CONTRAST LEVEL	FB XX 16 01 ZZ
FA XX 17 00 00	ASK BRIGHTNESS LEVEL	FB XX 17 00 ZZ
FA XX 17 01 ZZ	SET BRIGHTNESS LEVEL	FB XX 17 01 ZZ

ZZ Value (0-99Dec)

XX AHnet address

Broadcast XX=F9

Dynamic 3 family

COMMAND	DESCRIPTION	RESPONSE
FA XX 01 01 00	GO UP	FB XX 01 01 00
FA XX 01 00 00	GO DOWN CLOSED	FB XX 01 00 00
FA XX 01 02 00	GO DOWN SCREEN UP	FB XX 01 02 00
FA XX 02 01 00	SCREEN ON	FB XX 02 01 00
FA XX 02 00 00	SCREEN OFF	FB XX 02 00 00
FA XX 03 01 00	DVI-A SELECTION	FB XX 03 01 00
FA XX 03 00 00	DVI 1 SELECTION	FB XX 03 00 00
FA XX 03 03 00	DVI 2 SELECTION	FB XX 03 03 00
FA XX 04 01 00	BUTTON LOCK	FB XX 04 01 00
FA XX 04 00 00	BUTTON UN LOCK	FB XX 04 00 00
FA XX 15 00 00	ASK BACKLIGHT LEVEL	FB XX 15 00 ZZ
FA XX 15 01 ZZ	SET BACKLIGHT LEVEL	FB XX 15 01 ZZ
FA XX 16 00 00	ASK CONTRAST LEVEL	FB XX 16 00 ZZ
FA XX 16 01 ZZ	SET CONTRAST LEVEL	FB XX 16 01 ZZ
FA XX 17 00 00	ASK BRIGHTNESS LEVEL	FB XX 17 00 ZZ
FA XX 17 01 ZZ	SET BRIGHTNESS LEVEL	FB XX 17 01 ZZ

ZZ Value (0-99Dec)

XX AHnet address

Broadcast XX=F8

Dynamic Talk

COMMAND	DESCRIPTION	RESPONSE
FA XX 01 01 00	GO UP	FB XX 01 01 00
FA XX 01 00 00	GO DOWN	FB XX 01 00 00
FA XX 02 01 00	MUTE (PA)	FB XX 02 01 00
FA XX 02 00 00	TALK (PA)	FB XX 02 00 00
FA XX 04 01 00	BUTTONS LOCK	FB XX 04 01 00
FA XX 04 00 00	BUTTONS UNLOCK	FB XX 04 00 00

XX: AHnet address

Broadcast XX=F7

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 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 to 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 other 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

Our Product Patents

- › MU 1996 ES00
- › MU 16997 ES00
- › MU 17180 ES00
- › MU 17301 ES00
- › MU 17322 ES00
- › MU 17376 ES00
- › MU 1741 ES00
- › MU 17445 ES00
- › P 248121 DEEP
- › P 24821 ESEP
- › P 24821 FREP
- › P 24821 GBEP
- › P 24821 ITEP
- › P 24821 RUPC
- › P 24821 USPC
- › P 27178 EPPC
- › P 27178 RUPC
- › P 27178 USPC
- › P 2784 EPPC
- › P 2784 RUPC
- › P 2784 USPC
- › P 27715 EPPC
- › P 28089 EP00
- › P 28089 PCEP
- › P 28090 EP00
- › P 28090PCEP
- › P 28495 ES00

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This manual can be modified without previous notice

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Albiral
Display
Solutions ^{since} 1994