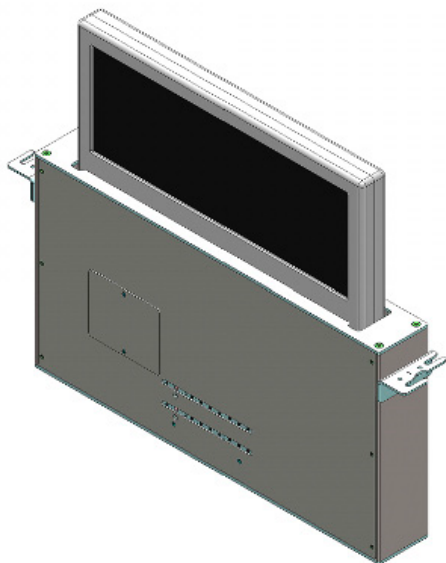# /AH

User Guide

DynamicSignatureDisplay

Aluminium retractable double sided motorised solution for digital labelling

Technology Serving Design

Danish craftmanship
Mediterranean soul

/AH
ARTHUR HOLM

TABLE OF CONTENTS

WELCOME

Thank you very much for purchasing an Arthur Holm product.

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

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, who is 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 in reception, collaboration, 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, huddle rooms, control rooms, 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 inmore 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 monitor power connector.
- Disconnect the power plug from the AC outlet when the monitor 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

DynamicSignatureDisplay is a retractable digital labelling monitor for auditoriums, meeting and conference rooms, institutions and public communication spaces. The product consists of a vertically motorised retractable double side stretched screen and a Linux based software, which allows a simple display of a picture and a name (or any digital content) in full colour. Two screens are placed back to back in a compact, anodised aluminium frame, displaying different information on each one. The side facing the audience will display the picture and name of the conference participant, and the information in the other side allows the attendee to identify the seat. The system is ideal for name tagging applications over a single Ethernet connection per monitor.

DynamicSignatureDisplay is equipped with a Linux based player, with TCP/IP interface for control, configuration and content upload and management.

The system needs a dedicated network to operate. It is necessary to add a server and the management software is pre- installed and configured from factory.

Highlights

- Double sided motorised monitor
- Internal embedded computer Software provided
- Interactive Setup Display Maintenance free
- Safety system
- AH-AMMC Auto mechanical movement calibration
- Wireless connectivity for setup and control

Box Contents

Before the installation of your retractable monitor, please check the contents of the shipping box, it must contain the following items:
- Monitor
- Power cord
- Remote control (1 per 5 monitors)
- Power supply 100-2 40Vac, 50-60Hz. Output 12V

SYSTEM DESCRIPTION

Available Models

| MODEL	DESCRIPTION
AH19DSDA2F	HDCP compliant vertically retractable double half Full HD 18,5" monitor to be integrated into furniture. Solid aluminium monitor housing in natural anodised finish and up-table cover plate made of brushed stainless steel. DVI-I and DVI-D inputs per each monitor (2). Interactive Setup Display allowing the control, setup and diagnose of the monitors. Monitors provide RS-422 I/O allowing the remote control of movements, speeds, safety settings, brightness, contrast and backlight. The monitors are equipped with AH-AMMC: an auto mechanical movement calibration system. 2 Embedded PCs. Linux based software.

Options

AH19DSDA2F
AHDSServer Server system

CONTROLS

Monitor movement controls

On the upper cover plate, there are two buttons to control the UP and DOWN monitor movements.

1. UP BUTTON CONTROL
2. DOWN BUTTON CONTROL
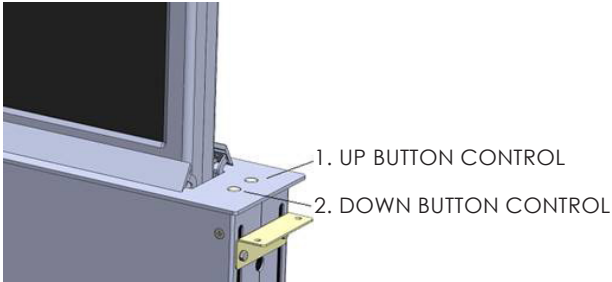
1. Raising the monitor:

To rise up the monitor display, press the button (1) on the right hand side of the cover plate.
Please, make sure that no objects are located on top of the monitor.

2. Retracting the monitor:

To retract the monitor display, press the button (2) on the right hand side of the cover plate.
Please, make sure that no objects are located on top of the monitor.

CONTROLS

Remote control

POWER   Switch ON/OFF the monitor

MENU   Activates the OSD menu on screen

UP   Control up on the OSD menu

DOWN   Control down on the OSD menu

LEFT   Control left on the OSD menu

RIGHT   Control right on the OSD menu

OK   Selects the function on the OSD menu. When the OSD menu is not active on screen, selects the input source
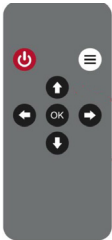
OSD MENU

Accessing the menu system

• With the OSD off, push the MENU button to activate the main OSD menu.

• Press the UP and DOWN buttons to move from one function to another. Please refer to the following sections below to view a complete list of all the functions available for the monitor.

• Press the OK button to confirm.

• When a function is selected, press the LEFT and RIGHT buttons in order to change the parameter of the function.

Press the MENU button to access to the main menu.

Picture

Picture Mode: Adjusts the mode of the image
· Dynamic
· Standard
· Mild
· User: Contrast - Brightness - Colour - Sharpness - Tint

Colour Temperature: Adjusts the colour of the image
· Cool
· Medium
· Warm
· Use: Red - Green - Blue

Aspect Ratio: Adjusts the image aspect on screen
· 4:3
· 16:9
· Just scan

OSD MENU

Noise Reduction: Adjusts the image noise filter
- Off
- Low
- Medium
- High
- Default

Screen: (Only for analogue signals)
- Auto Adjust
- Horizontal Position
- Vertical Position
- Size
- Phase

Backlight: Adjusts the backlight screen's level

Colour Range: Adjusts the colour range
- 0 - 255
- 16 - 235

OSD MENU

Option

Language: OSD language selection

Restore Factory Default: Adjusts the parameters to the initial factory parameters

Blending: OSD window transparency
· Low
· Medium
· High
· Off

OSD Duration: Adjusts the time that the OSD menu window remains on the screen

Software Update (USB): Port to use for firmware's upgrade.

Mirror:
0. Image with no flip
1. Vertical flip
2. Horizontal flip
3. Rotate

ISD MENU

The Interactive Setup Display is an LCD screen located at the monitor casing inside the desk that allows the setup and provides useful diagnose and historical data of the device.

NEO ISD (Interactive Setup Display)
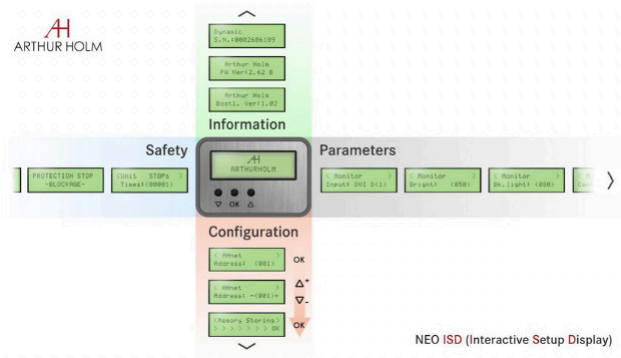
- To start using it -

· **WELCOME DISPLAY & DATA :**

1) Bootloader Version

The display will show a Bootloader Version message (example: Bootl. Ver: 1.01). Bootloader is a program which allows the system to be able to update itself. The ISD has a Bootloader and therefore is capable of updating to new versions in order to constantly improve the user experience.
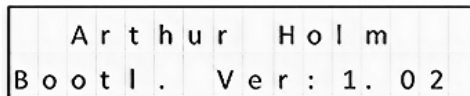
ISD MENU

2) FirmWare

Data that refers to the firmware version (FW) of the equipment (example: FW Ver = 1.32). If you wish to update the FW version, please contact us.

```
  A r t h u r    H o l m
F W   V e r :   1 . 2 6
```

3) Serial Number

Serial number of the device (example: serial number of the device = 02658748). The serial number is stored inside each device.

```
D y n a m i c _ 2
  S . N . :  0 1 2 3 4 5 6 7 8 9
```

The serial number can also be obtained via AHnet and AHlink.

- OSD MENU -

· **AHNET (GENERAL PROTOCOL)**

CONTROLS

· The ISD will show the AHnet address which will be accompanied by an acoustic signal "BEEP" (example: Address: (001)). Once the signal has been heard, the "UP & DOWN" buttons will allow the user to scroll through all the variety of menus that the device contains. To enter into any specific menu, simply press the "OK" button.

```
<   A H n e t                >
A d d r e s s :      ( 0 0 1 )
```

· How to modify the values within each menu? The values can be selected through the "UP & DOWN" buttons. To save the selected value, press the "OK" button or wait 3 seconds for it to be automatically saved.

```
<   A H n e t                >
A d d r e s s :    - ( 0 0 1 ) +
```

The connection through RS422 allows the control of up to 30 devices per line. The last device (an only the last one) needs to have the termination activated.

ISD MENU

· **MENUS GENERAL INFORMATION**

1) AHnet - Adress

The address must be set from 1 to 60.

```
< AHnet                    >
Address:        ( 0 0 1)
```
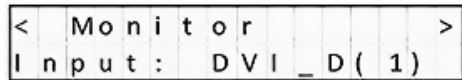
2) VIDEO INPUT SELECTION

The device provides the following inputs:

DVI1 = DVI-I (DVI-A and DVI1-D)
DVI2= DVI-D (DVI-2D)
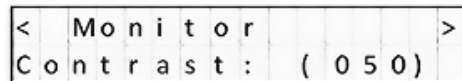
This menu allows the selection of 1 of these 3 inputs.

```
< Monitor                  >
Input:    DVI _ D ( 1)
```

3) MONITOR BRIGHTNESS

Brightness level (0 – 100).

```
< Monitor                  >
Bright:         ( 0 5 0)
```
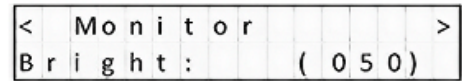
4) MONITOR CONTRAST

Contrast level (0 – 100).

```
< Monitor                  >
Contrast:    ( 0 5 0)
```

ISD MENU

5) MONITOR BACKLIGHT

Backlight level (0 – 100).

```
< Monitor              >
Bk.light:    ( 050)
```

6) POSITION

It is a diagnostic option that informs about the position of the device.

```
< Monitor              >
  Position: ( 023)
```

7) SENSORS INFORMATION

It is a diagnostic option that informs about the internal state of the sensors.

```
S 1I  2I  3I  4I  5I  6I  7I  8
I 0I  1I  1I  1I  1I  1I  1I  1
```

8) AHnet - INFORMATION

This menu is useful for programing and diagnose.

It provides information about the AHnet command that has been received by the device.

Example: AHnet = 0 (FA) 1 (01) 2 (01) 3 (01) 4 (00)

```
AHnet: 0( FA) 1( 01)
2( 01) 3( 01) 4( 00)
```

ISD MENU

9) UNIT OPENS

It is a diagnostic option that provides historical data.

It is very useful to analyze how the device has been used during its lifecycle and it provides information about how many movements the device has done.

```
< U n i t   O p e n i n g s    >
  T i m e s : ( 0 0 0 0 0 )
```

10) UNIT STOPS

It is a diagnostic option that provides historical data. It is very useful to analyze how the device has been used during its lifecycle.

It provides information about the number of times that the device has been protected and made emergency stops.

```
< U n i t       S T O P s     >
  T i m e s : ( 0 0 0 0 0 )
```

11) SERIAL NUMBER

Provides the device's serial number.

```
< S e r i a l   N u m b e r   >
  S . N . : 0 1 2 3 4 5 6 7 8 9
```

The serial number can also be obtained via AHnet and AHlink.

12) MONITOR DOWN

Only use this function as per manufacturer advice.

```
< M o n i t o r   D O W N     >
 O n l y   f o r   S E R V I C E
```
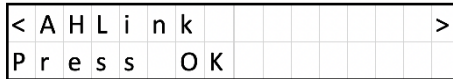
ISD MENU

13) AUTO ADJUST

Auto Mechanical Movement Calibration (AH-AMMC).

```
< A u t o   A d j u s t       >
P r e s s   O K
```
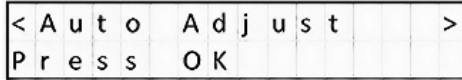
Protocol activation: the device will make a consecutive movements series that must not be interrupted. The system will calibrate the speed and protection thresholds.

14) AHLink

Activates AHlink.

```
< A H L i n k               >
P r e s s   O K
```

FIRMWARE UPDATE

To update the FW version.

To start the update, connect a PC with the APP AH_FW (Device Setting Tool) to the device through the USB port.

Proceed with the following steps:

-Unplug the PSU
-Wait for 1 minute
-Press and hold the "OK" button
-Plug in the PSU
- A message will appear on the LCD screen when the connection is ready
-Start updating the AH_FW

How are you doing? Easy, right?

Now you just have to start enjoying your device ☺

INPUT CONNECTORS
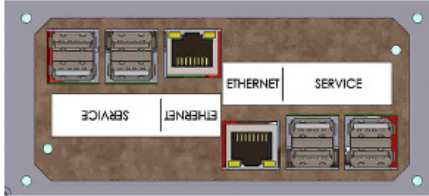
12V D.C. ▬ ▬ ▬ : Power supply input connector. XLR-4 connector.
- 1,2: Ground
- 3,4: 12Vdc

GPI: Monitor external contact close control. SubD9 female.
1. GPI1 +
2. GPI1 −
3. GPI2 +
4. GPI2 −
5. GPI3 −
6. GPI3 +
7. N.C.
8. +12Vdc (600mA max.)
9. Ground:
- Use GPI1 (1:12Vdc, 2: Ground) to open the monitor
- Use GPI3 (6:12Vdc, 5: Ground) to close he monitor

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 monitors can be connected on the same RS422 bus.

USB: PC USB connectors. Connect the keyboard and mouse to PC configuration.

Service: Used for firmware's upgrade.

ETHERNET: PC network connection.

⚠️ Connect the network cable before powering the monitor in order that the PC activates the network port.

IP CONFIGURATION

Each internal PC needs a different IP address to receive the content to show from the Name Tag Server. Please, refer to the Name Tag Server user manual to configure the system and the contents to show on the screens.

To configure the IP, connect an external keyboard and mouse to the USB connectors.

Note that each monitor has two different internal PCs, one for each screen.

To configure the IP address, press "F1" key to access to the IP Changer window. Change the last IP number and click on "SET NUMBER" to update the IP network.

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 monitor by addressable RS422 bus.
You can connect up to 30 monitors on the same RS422 bus.
You can use an AH ERT interface, 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/1640 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	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 04 01 00	BUTTON LOCK	FB XX 04 01 00
FA XX 04 00 00	BUTTON UNLOCK	FB XX 04 00 00
FA XX 13 00 00	FAILURE OFF	FB XX 13 CB1 CB2
FA XX 14 00 00	INQUIRY CONTROL BYTE	FB XX 14 CB1 CB2

XX   Number of the monitor address. Up to 30 monitors for each
        RS422 BUS

CB1   Response in 8 bites of the monitor status

CB2   Response in 8 bites of the monitor status

AHnet PROTOCOL

CB1

BITE	7	6	5	4	3	2	1	0
CLOSED			1	1	0	1		
OPENED			0	1	0	1		
SCREEN ON							1	
SCREEN OFF							0	
PROTECTION STOP								1
MONITOR OK								0

CB2

BITE	7	6	5	4	3	2	1	0
BUTTON LOCK								1
BUTTON UNLOCK								0

AHnet PROTOCOL

Picture Commands

COMMAND	DESCRIPTION	RESPONSE
FA XX 15 00 00	ASK FOR BACKLIGHT LEVEL	FB XX 15 00 ZZ
FA XX 16 00 00	ASK FOR CONTRAST LEVEL	FB XX 16 00 ZZ
FA XX 17 00 00	ASK FOR BRIGHTNESS LEVEL	FB XX 17 00 ZZ

XX   Number of the monitor address.
            Up to 30 monitors for each RS422 BUS

ZZ   Level of the function selected (00 – 99 Dec)

COMMAND	DESCRIPTION	RESPONSE
FA XX 15 01 ZZ	SET BACKLIGHT LEVEL	FB XX 15 01 ZZ
FA XX 16 01 ZZ	SET CONTRAST LEVEL	FB XX 16 01 ZZ
FA XX 17 01 ZZ	SET BRIGHTNESS LEVEL	FB XX 17 01 ZZ

XX   Number of the monitor address.
            Up to 30 monitors for each RS422 BUS

ZZ   Level of the function selected (00 – 99 Dec)

To send an order to all the monitors, you must use the address:
249 Dec. (Byte1)
F9 Hex. (Byte1)

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

DATABASE MANAGEMENT

Creating a new database

To create a new database, click on New DB
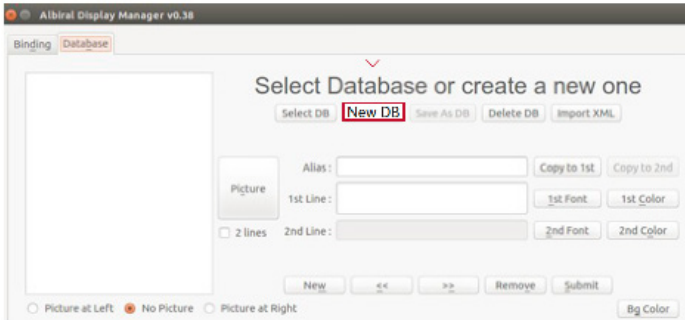
Give a name to the new database. In this example, we have chosen
"geniusesOfMankind". To complete, click on Create DB

The new database name is then displayed
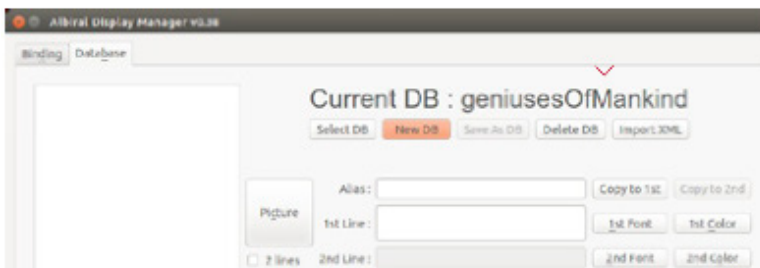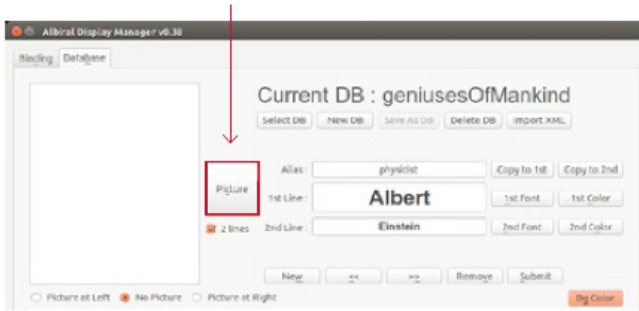
DATABASE MANAGEMENT

Click on "1st Font" button to select the font and size for the first line.
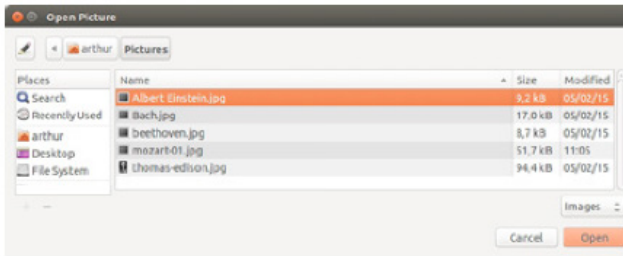Click on "1st Color" button to choose the font color for the 1st line.
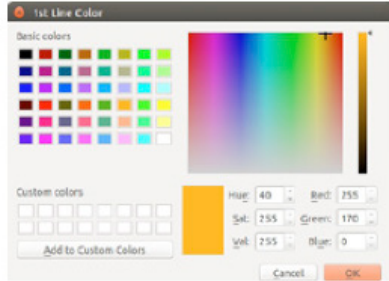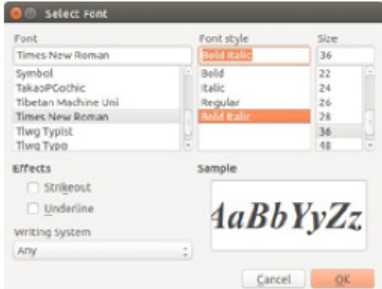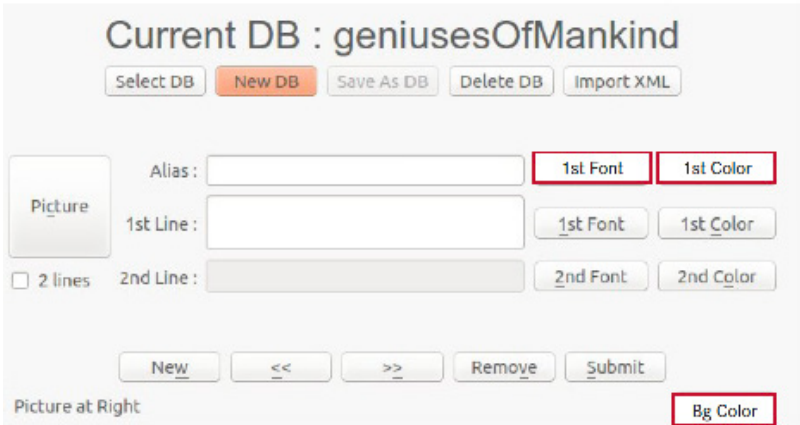
The second line can be enabled by checking the "2 lines" checkbox.

Repeat the same procedure to choose a font and a colour for the 2nd line.

DATABASE MANAGEMENT

Click on the "Picture" button to select a picture

This opens the Picture window to allow us to select a picture

A miniature of the picture selected is shown in the "Picture" button

DATABASE MANAGEMENT

Click on "New" to make a new entry. Fill in the Alias field using a unique name with no spaces or special characters (numbers, "-" and "_" are allowed).

Continue filling in the 1st Line, 2nd Line etc as previously.
Continue making new entries as explained above.
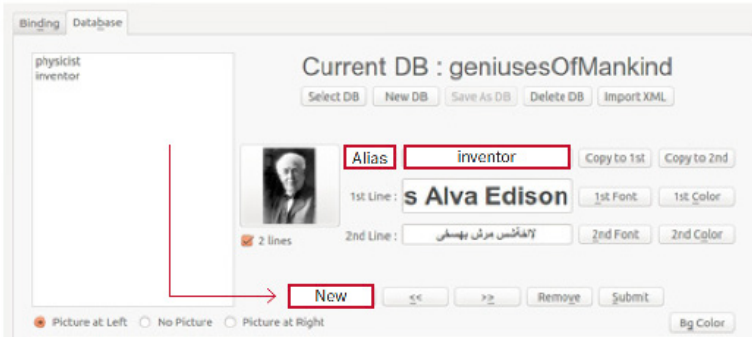
You can browse the alias list by clicking on the individual aliases in the alias list (top left of the window) and also using the buttons << >> .

To select an existing database, click on "Select DB". To delete an existing database, except the currently loaded database, click on "Delete DB".
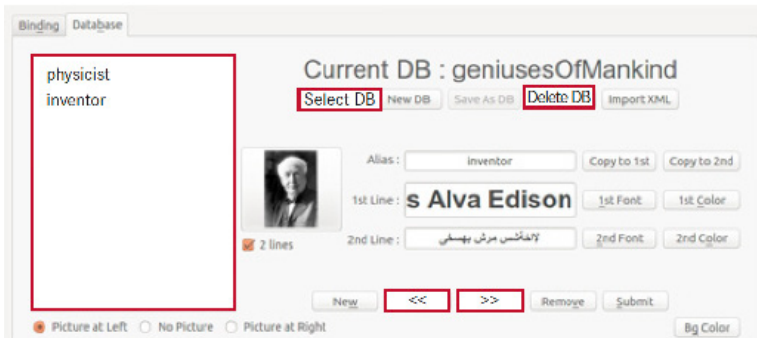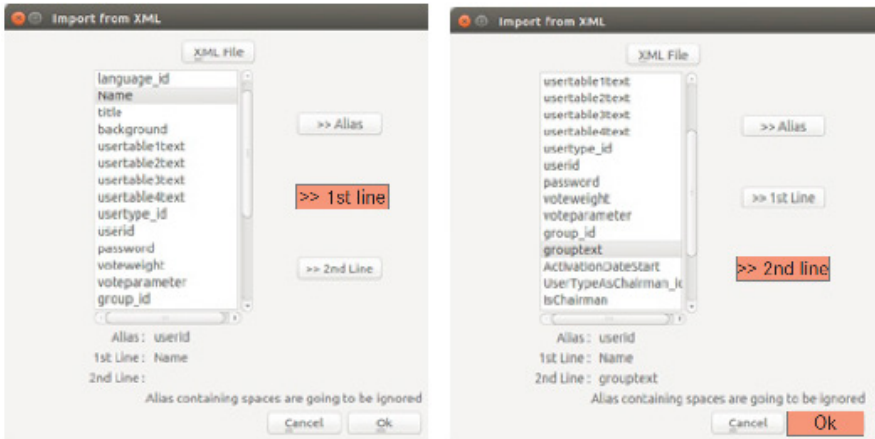
DATABASE MANAGEMENT

In the window "import from XML" select an alias with unique content and with no spaces or special characters.
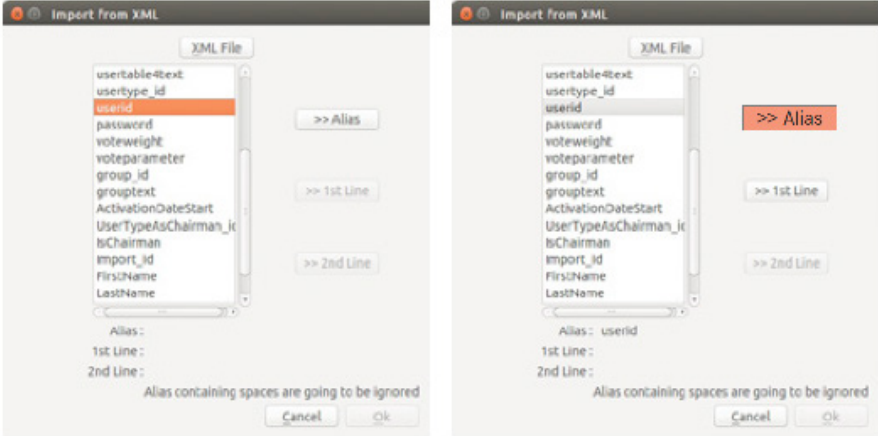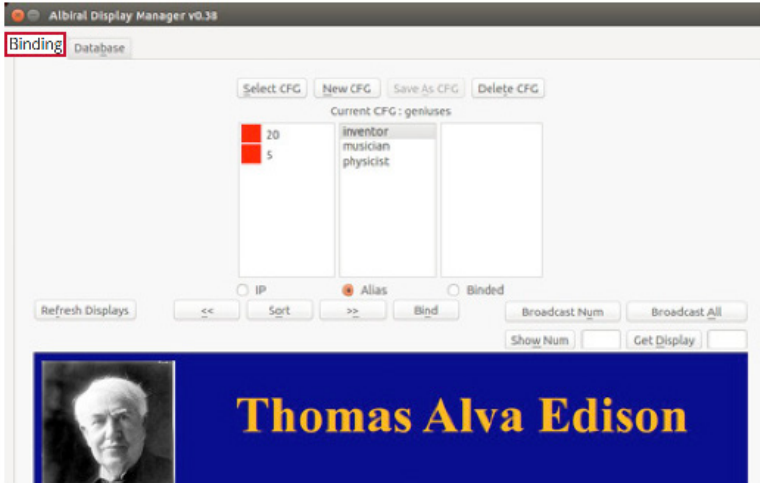

Select content for 1st line and 2nd line as required.


When ready, press "Ok".

BINDING MANAGEMENT

Once a database has been selected or created, click on the "Binding" tab to display this window. It shows 3 columns.

– The left column "IP" is a list of every display connected to the local network (every device has two displays).
– The centre column "Alias" is a list of all members of the selected database.
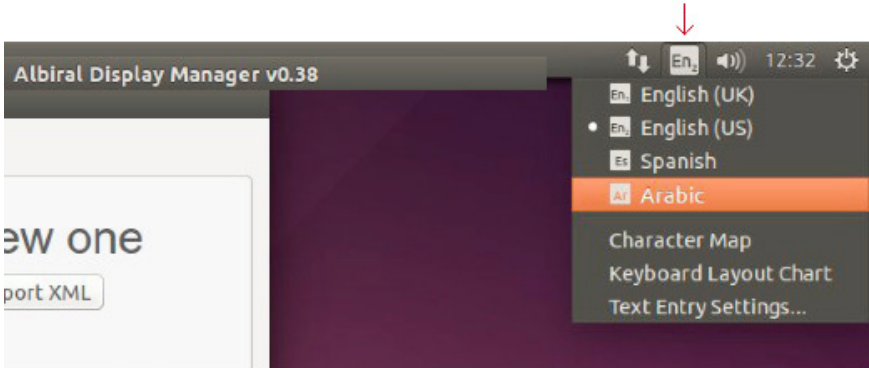– The right column shows Binded pairs ID / aliases.

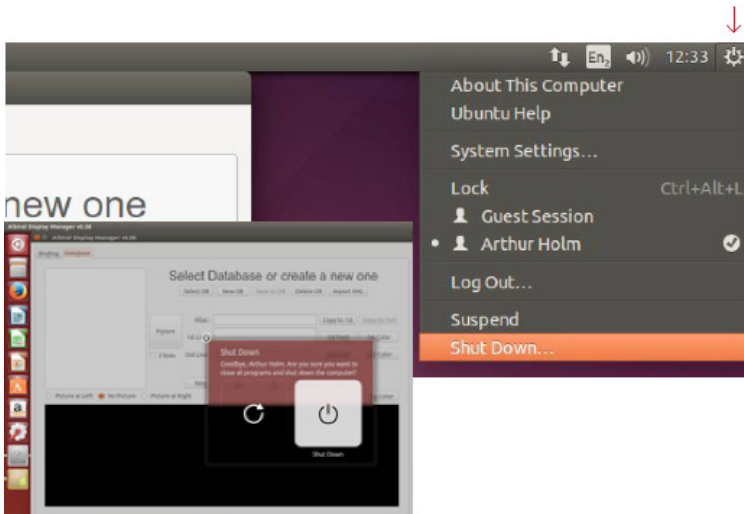Choose to select an existing configuration file or create a new one.
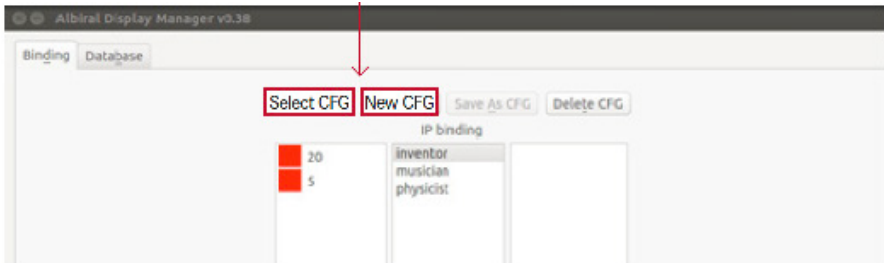
OTHER OPERATIONS

SWITCHING BETWEEN ROMAN & ARABIC KEYBOARDS

In the operating system, there is a menu on the top right corner.
Choose the desired keyboard configuration in the pull down menu.

SHUTTING DOWN THE SERVER COMPUTER

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 five (5) years from the date of purchase, subject to the conditions below.

1. Mechanical parts: The engine and the product's mechanical parts are warranted against manufacturing defects and workmanship for a period of five (5) years from the date of purchase.

2. LCD panel, inverter, controller, 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.

3. LCD panels that present more than 3 defective pixels (15-19") and more than 4 defective pixels (20-24") will be replaced under warranty.

4. Labour costs: Albiral Display Solutions covers the labour costs to replace any defective parts during the validity of this warranty.

5. 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.

6. This warranty does not cover the labour costs of handling, diagnose, removal, replacement, reinstall and/or program any product.

WARRANTY TERMS AND CONDITIONS

7. This warranty does not apply if the fault has been caused by misuse, improper handling, electrical or mechanical abuse, abnormal operation conditions, non-authorised modifications, and inadequate transportation or as a result of atmospheric phenomenons.

8. 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.

9. The beneficiary of the warranty will have to return the product with the original packaging to warranty there are no damages during transportation.

10. The warranty is not valid if the beneficiary of the warranty does not include an 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
+34 938 502 376

ARTHUR HOLM

Albiral Display Solutions

This manual can be modified without previous notice. ENG – November 2020

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