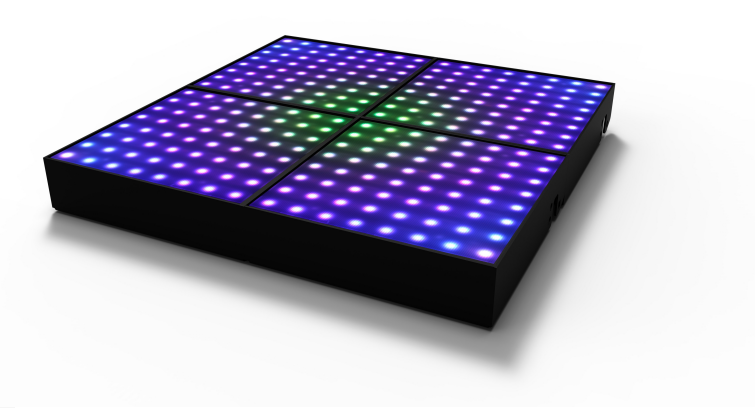
ALEPH *MATRIX1*

64 RGB PIXEL PANEL SYSTEM FOR EFFECT LIGHTING AND SIGNAGE

MATRIX1 USB transmitter driver



Array of four MATRIX1 pixel panels

Back Panel

⚠ PLEASE MAKE SURE THE POWER PASS-THROUGH CURRENT DOES NOT EXCEED 10 AMPS

Features

- 20 mm pitch RGB stackable panels
- Versatile: great variety of possible effects and configurations
- Greater flexibility of positioning: can be connected together in any shape to create standard rectangular walls or any other configuration
- Lightweight design
- Low power consumption (17W) per MATRIX1 pixel panel
- High colour definition
- Easy to assemble
- Up to 100 MATRIX1 pixel panels can be daisy-chained using only one USB interface
- Simple to commission
- Different diffusers available

- Cost effective Control : using a dedicated USB interface and CAT5 link, the MATRIX Handler software will accept any Art-Net input source from all major pixel mappers. Perfect partner with MADRIX
- Low maintenance: fan-less, removes the need for regular maintenance

Safety

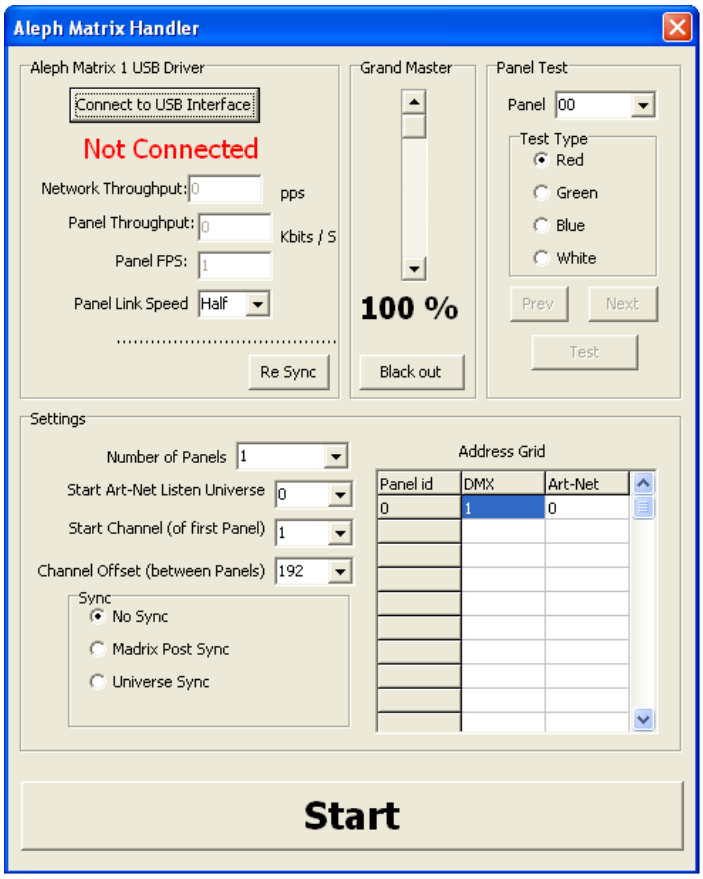
- Do not expose the ALEPH MATRIX1 to weather, moisture environment, doing this will void your warranty
- Do not spill water or other liquids
- Check that the local power outlet matches that of the required voltage (120 → 250V AC)
- Make all the connections before you power the unit
- Do not open the product under any condition. There are no user serviceable parts inside
- Never plug the panels in to a dimmer pack
- Do not attempt to operate any unit, if it becomes damaged
- Always mount the panels in safe and stable matter
- Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them
- Avoid placing the system close to high temperature sources

Software

For MATRIX1 system to operate, the following components will be required:

- PC running Windows XP or superior with an available USB 2.0 port
- Aleph Matrix Handler software. The application can be downloaded from www.alephlighting.com
- Aleph Matrix USB interface connected to the PC via USB 2.0 and to the first MATRIX1 pixel panel through a standard straight CAT5 cable
- At least one ALEPH MATRIX1 pixel panel, powered up through a standard IEC mains lead

Once Matrix Handler software has been installed, please open it and you will see the main window:



Select the desired "Panel Link Speed" depending on the number of panels, length and quality of the data cables, then plug in the Matrix USB interface and once windows has finished installing the drivers, please click in "Connect to USB Interface" button. The "Not Connected" text will change to "Connected" and the "Re Sync" button could be used at any time in case there are link problems or the "Panel Link Speed" needs to be changed. The next step will be defining all the DMX and Art-Net settings making sure that they match the configuration and patching of the chosen Art-Net source software as follows:

Number of Panels: Please select the desired number of MATRIX1 pixel panels to be handled. Once you select a number, the Address Grid will fill up automatically with the Panel ID, DMX and Art-Net values.

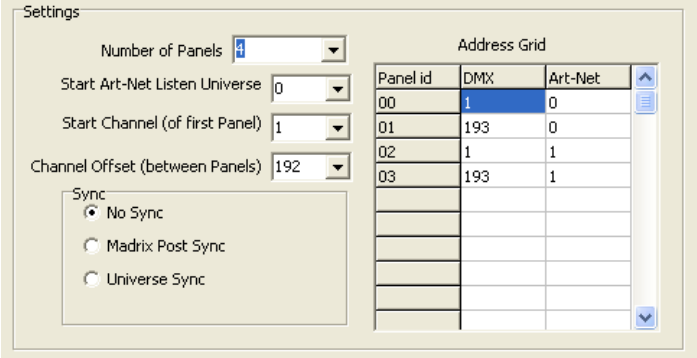
Start Art-Net Listen Universe: Select the first Art-Net universe where the handler will start listening to the data.

Start DMX Channel (of first Panel): Select the initial DMX address for the first panel (out of two per universe), Notice that two MATRIX1 panels can be fitted in each

DMX512 universe as each one uses 192 DMX channels, so 128 channels will not be used per universe.

Channel Offset (between Panels): This parameter in conjunction with the "Start DMX Channel" allows the user to spread 128 available channels as desired through the DMX512 grid on each universe.

E.g. handling 4xMATRIX1 panels, leaving the available channels at the end of the DMX grid and starting from universe zero, the settings will be as follows:



This configuration will assign DMX range 1-192 to the first panel on each universe and 193-384 to the second panel on each universe and 385-512 will be available for other devices if desired.

Please refer to the ALEPH MATRIX1 Quick Start (document PN: 50346) to find out how to address the individual panels following the "panel id" column generated in the handler software grid.

Sync: When the number of MATRIX1 pixel panels starts increasing, data might need to be synchronised so that all the panels will change at the same time after receiving a sync signal, when a complete data buffer is ready. This feature will avoid individual panels to change their output in discordance with others and you can ether deactivate it or use one of the following options:

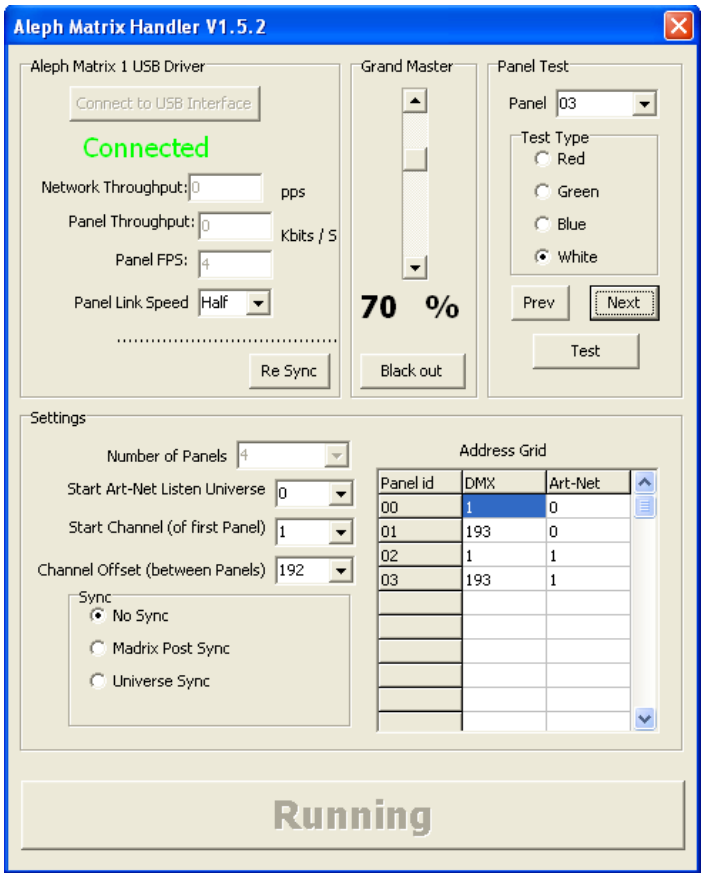
- *Madrix Post Sync* will use a feature of the particular MADRIX software package where a special sync packet is sent once a whole data buffer is ready and can be updated on all the panels at the same time
- *Universe Sync* will send the sync signal once the system reaches the selected universe

Once all the parameters are set up as desired please click in the "Start" button to begin the data listening (from any active Art-Net source) and transmission through the Aleph Matrix USB interface.

Grand Master: The grand master slide bar allows the user for dimming the master intensity of the light output in all the handled panels when 0% will be a black-out or OFF stage and 100% will set the panels to full power. The feature can be used any time during operation when the user desires to adjust the brightness of the whole system.

Black out: The black out button brings all lighting output to zero or OFF.

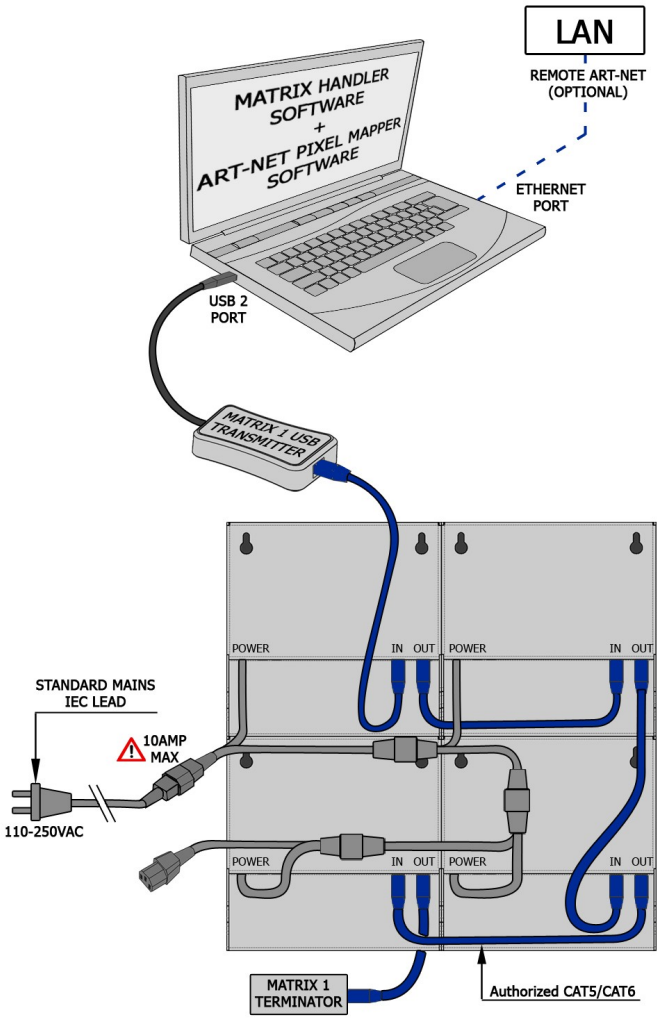
Panel Test: The panel test section will allow the user to select a particular panel by clicking in its ID from the scroll box and turn it on setting the desired colour by clicking in the "Test" button. The colour can be changed eve after you have clicked in the "Test" button and the selected panel is already ON by selecting an option from the "Test Type" group and clicking in the "Test" button again. Navigating through the array of MATRIX1 panels is also easy by using the "Prev" and "Next" buttons.



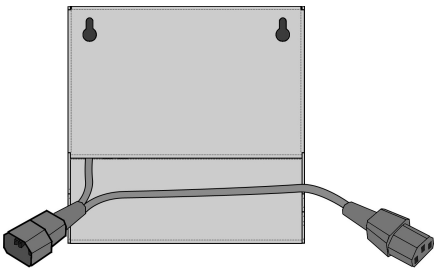
To stop the system from listening, transmitting or change the number or panels the software needs to be closed and restarted.

System Typical Installation

A typical ALEPH MATRIX1 installation will involve either control and mains power daisy-chained wiring combined with the mechanical aspect. Please consider the following aspects when installing a MATRIX1 system:



- Limitation of 100 panels connected in a daisy-chain row
- Maximum of 10 Amps total current load per row, so depending on your local input voltage the maximum could be:
  - 100 panels for 240V input
  - 75 panels for 120V input
- No extra mains cables will be required for daisy-chaining if the panels are ad close to each other since a mains in/out cable is inbuilt in each panel



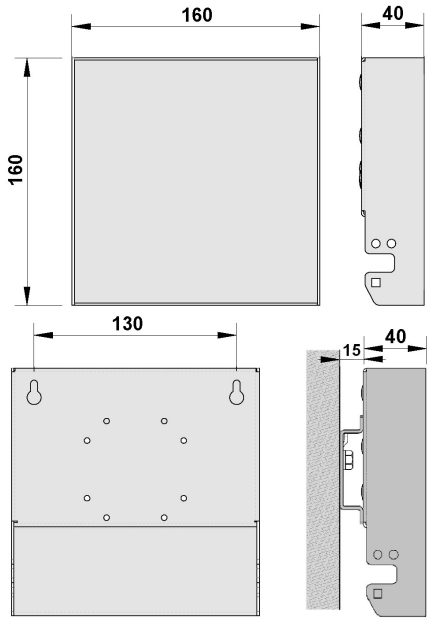
- Only ENTTEC authorised CAT5 or CAT6 cables must be used to maintain control signal quality
- An ALEPH MATRIX1 Terminator must be used on the last panel of each row to ensure control signal integrity
- For mechanical mounting brackets please refer to MATRIX1 Holding Bracket instruction sheet document (document PN: 50376) which can be found in www.alephlighting.com
- If using MADRIX software, the MATRIX1 fixture library can be downloaded form the ALEPH LIGTHING website for ease of configuration and patching.

Specifications

Item	MATRIX1 Pixel Panel	USB Transmitter Interface
Pixel Pitch	20mm	
Pixel Quantity	64 RGB LED pixels	
Panels Mullion	3.5mm	
Weight (Kg)	0.54	
Weight (Pounds)	1.2	
Input Voltage	110 – 250V AC	5V DC (From USB)
Input Frequency	50/60Hz	
Max Input Power	17 Watts	1.5 Watts
Diffuser	Y5 Acrylic Refractor	
Viewing Angle	150°	
Control Input	AlephM Datalink	Art-Net (via software
Max Pass-through Mains Current	10 Amps	
Protection Rate	IP20	IP20

Due to continuous improvements and innovations of all ENTTEC products, specifications and features are subject to change without notice.

Dimensions



Ordering Information

Item	Part Number
ALEPH MATRIX1 8x8 LED DISPLAY PACK	70901
ALEPH MATRIX 1 USB TRANSMITTER	70902
ALEPH MATRIX 1 TERMINATOR	70903
ALEPH MATRIX 1 - Spare front frost Acrylic	73600
ALEPH MATRIX 1 - BACK SUPPORT 10 UNITS	73601

ENTTEC PTY LTD
Head office: 17/5 Samantha Court
Knoxfield VIC 3180 Australia
Tel: +61 3 9763 5755
Fax: +61 3 9763 5688
www.enttec.com

ENTTEC AMERICAS
604A Cornerstone Ct.
Hillsborough NC 27278 USA
Tel & Fax: (888) 454-5922
email: sales@enttec.com