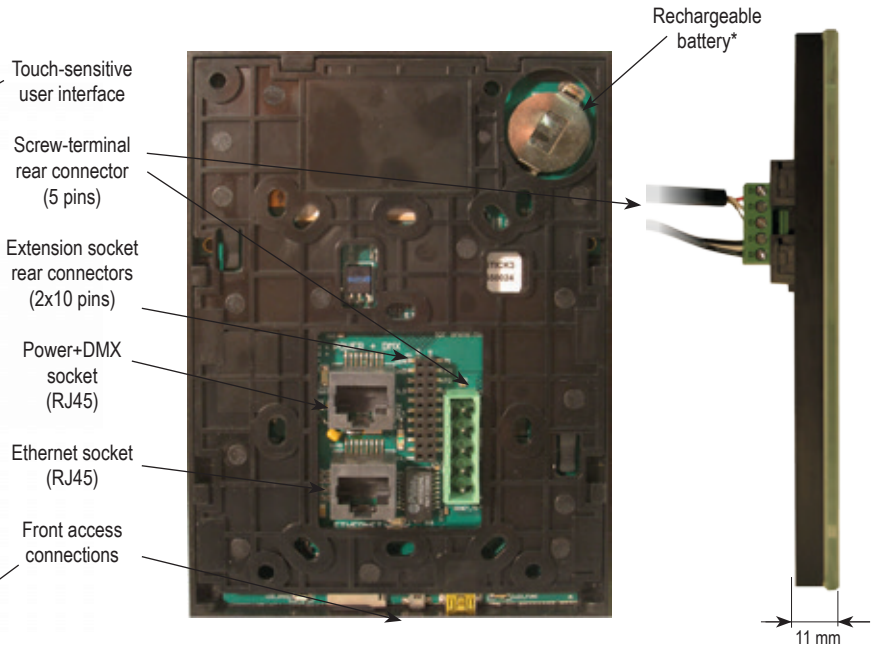
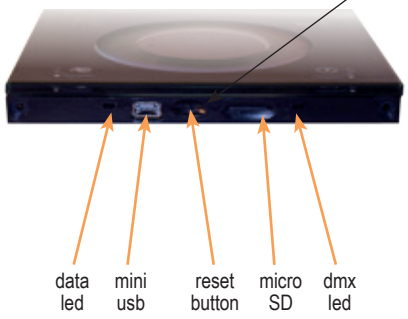
ART 500

Touch-sensitive Intelligent Control Keypad		Ref. ART500	Page 1/4
Technical datasheet	Revision date 25 Mar. 2014		Version 1.02





Package	Interface, sdcard, datasheet, cdrom, usb cable
Software	ESA + ESA PRO on PC/Windows, ESA2 on PC + MAC
Mobile Apps	DMX Lightpad 3 + ARCOLIS on iPhone/iPad/Android
Available colors	Black frame, various front panel design
Options	See the OPTIONS table
Standards	EC, EMC, ROHS, ETL, UL (some are in process)
Temperature	-10ºC to 45ºC
Dimensions	146x106x11 mm Complete package 177x146x48 mm
Weight	247 g 8.71 oz Complete package 492 g 17.4 oz

CONNECTION SPECIFICATIONS		Built-in features	Screw-terminal rear connector (5 pins)	Extension socket rear connectors (2x10 pins)	Power+DMX socket (RJ45)	Ethernet socket (RJ45)	Front access connections
Power Supply	6V DC 0.6A, optional. 5.5v max with USB		•		•		USB
DMX Output #1	First universe, 512 channels DMX512 output		•	•	•		
DMX Output #2	Second universe, 512 channels DMX512 output			•	•		
USB	USB communication for PC/Mac software						•
Ethernet	Advanced networking features					•	
Ports 1,2,...,8	8 Contact closure inputs, connect to ground for operating			•			
User interface	10 buttons, 1 wheel, 1 color display, 5 leds (Touch-sensitive keypad)	•					power/data leds
SD card	Micro sd card for stand alone memory use (supplied)						•
RESET	Push button for feet operation						•
RS232	RS232 serial communication for external synchronisation			•			
Output relay	Automatic standby 5V signal			•			
Clock	Real-time clock and calendar	•					

*To replace the Li-Ion rechargeable battery on the DE3 :

1. You need a rechargeable 3.6v LIR 2032 replacement battery
2. Remove the back panel by pulling down and sliding it out.
3. Using a paper clip push the battery from the bottom so it slides out of its cage.
4. Slide the replacement battery in from the top, making sure the positive side is facing up.
5. Replace the back panel by pushing it up into place.

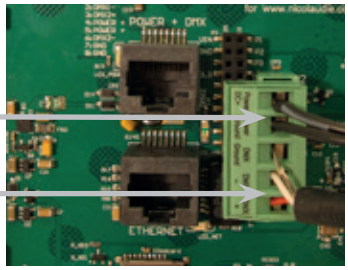
EASY INSTALLATION

1. Mount an electrical box inside the wall

The ART 500 controller can be installed in any standard electrical backbox. If you use a double size box, you can insert the power supply inside.

2. Connect the wires

POWER: Connect a 5.5V or 6V DC 0.6A.
Be sure to not invert the + and the ground.
DMX: Connect the DMX cable to the lighting receivers (Leds, Dimmers, Fixtures..)
(for XLR: 1=ground 2=dmx- 3=dmx+)

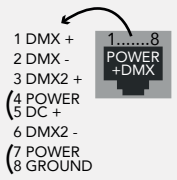


3. Mount the interface on the wall

First, mount the back side of the interface on the wall with 2 or more screws
Secondly, plug the connectors :
- DMX and power (connector block or RJ45)
- Ethernet cable

POWER+DMX WITH THE CONNECTOR BLOCK

POWER+DMX WITH THE RJ45 CABLE

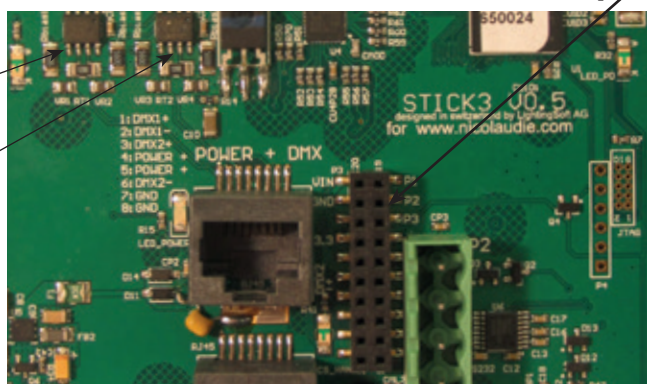


DMX CHIPS can be replaced here

DMX universe #1

DMX universe #2

Ref: SP485ECN-L
MAX485 CSA



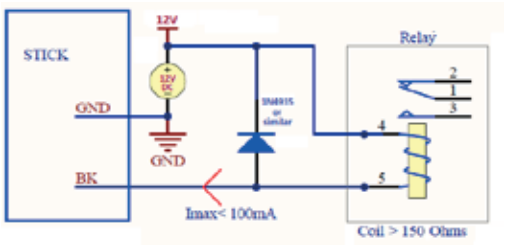
2x10 pins EXTENSION connector

VIN	20	19	PORT1
GND	18	17	PORT2
IR_RX	16	15	PORT3
3.3V	14	13	PORT4
Relay	12	11	PORT5
DMX2+	10	9	PORT6
DMX2-	8	7	PORT7
DMX1+	6	5	PORT8
DMX1-	4	3	RS232 RX
GND_DMX	2	1	RS232 TX

Compatible connectors:
WURTH ELEKTRONIK ref: 61301021121
MOLEX ref: 10-89-7202
TE Connectivity ref: 1-87227-0
FCI ref: 77313-101-20LF
HARWIN ref: M20-9981046
SAMTEC ref: TSW-110-xx-T-D
FARNELL ref: 1841232
RS ref: 763-6754 673-7534 251-8165
MOUSER ref: 538-10-89-7202
DIGIKEY ref: WM26820-ND

BLACKOUT relay (energy saving) using the 2 pins : BK and G (GND)

Example of relay : FINDER
Ref. 22.23.9.012.4000
http://www.findernet.com/fr/products/profiles.php?serie=22&lang=en



RS232 triggering

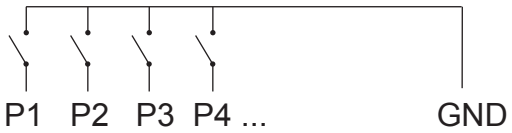
Make a cable using the 3 pins : TX, RX and G (GND)
Set the RS232 parameters to : 9600bds 8 bits, no Parity, 2 Stop bits
(x = scene number)

- To play a scene, send 3 bytes : **1 x 255**
- To stop a scene, send 3 bytes : **2 x 255**
- To pause a scene, send 3 bytes : **3 x 255**
- To release a pause, send 3 bytes : **4 x 255**
- To reset a scene, send 3 bytes : **5 x 255**

Note: the scene number (x) can be from 1 to 40. For instance, 11 means Page B Scene #3

PORT triggering

It is possible to start scenes using the input ports (contact closure). To activate a port, a brief contact must be established between the ports (1...8) and the ground (GND). This is a contact closure so there is no need to hold the connection, it acts like a basic switch.



INTERNAL MENU (hardware configuration)

To access the settings menu, hold the on/off button for 3 seconds.

Mode (M): Manages the on/off button and the 4 modes (dimmer, speed, color, scene)
- M OFF enable: enables/disables the use of the on/off button so that the controller is permanently on
- M Dimm. enable: when enabled, scenes can be made brighter or darker
- M Color. enable: when enabled, the color of a scene can be changed
- M Speed. enable: when enabled, dynamic scenes can be made faster and slower
- M Scene. enable: when enabled, the scene can be changed
- M Auto mode: when enabled, the controller will revert to the default mode after it has been left for a specified period of time
- M Auto time: the amount of time the controller will wait before reverting to the default mode
- M Default: the default mode which the controller will revert to after a certain amount of time
- M Dimmer 100%: when enabled, the dimmer mode will adjust between 0% and 100% without saturating to white between 100% and 200%
- M Lock Control: Locks all buttons. Hold the dimmer button for 5 seconds to enable/disable. Automatically activated after 120 seconds

Arrows (A): Allows you to adjust which modes can be controlled by the arrows
- A Dimmer enable: allows for the Dimmer mode to be controlled by the arrows
- A Color enable: allows for the Color mode to be controlled by the arrows
- A Speed enable: allows for the Speed mode to be controlled by the arrows
- A Scene enable: allows for the Scene mode to be controlled by the arrows
- A Default: Specifies the default mode to jump to if the selected mode does not use the arrows

Pallet (P): Allows you to adjust which modes can be controlled by the palette wheel
- P Dimmer enable: allows for the Dimmer mode to be controlled by the palette wheel
- P Color enable: allows for the Color mode to be controlled by the palette wheel
- P Speed enable: allows for the Speed mode to be controlled by the palette wheel
- P Scene enable: allows for the Scene mode to be controlled by the palette wheel
- P Default: Specifies the default mode to jump to if the selected mode does not use the palette

Scene (S): Scene management
- S 0(off) enable: displays an empty off scene before scene 0 in each area
- S Pause enable: allows a scene to be paused if the scene mode button is held for 1 second
- S Stop enable: allows a scene to be stopped if the scene mode button is held for 4 seconds
- S Fade enable: forces a fade time between each scene
- S Fade time: the time of the automatic fade between scenes
- S Auto reset: when enabled, any color, dimmer or speed overrides will be reset each time the scene is changed
- S Trigger:
  - Auto: scenes are triggered as soon as they are selected
  - Time Delay: adds a short delay each time a new scene is triggered, allowing scenes to be scrolled through without triggering
  - Scene Butt: Scenes will not be triggered until the scene button is pressed

First Start (F): Default settings when the unit is first powered up
- F Scene Nr.: specify a default scene number
- F Scene Recover : if the controller loses power, the previously running scene will be activated the next time it is switched on
- F Display Time: when enabled, the time will be displayed on the screen at startup
- F Display Firm: when enabled, the time will be displayed on the screen at startup

Trigger (T): Manages the controllers external triggering properties
- T Time enable: enables the clock triggering
- T Ports enable: enables the 8 dry contact ports
- T RS232 enable: enables scene triggering by RS232
- T IR enable: enables the infra red port (disabled by default to prevent interference)
- T UDP enable: allows the controller to send and receive UDP messages required for network control

Ethernet (E): Enables the Ethernet socket on the controller
- Dynamic IP Addr: enables dynamic IP addressing (DHCP) which allows the controller to obtain an IP address from a router
- Sync BlackOut: Synchonizes the blackout button with other controllers on the network
- Enable NTP: Enables the network time protocol which synchronises the controllers clock with the internet depending on the location set in the Date/Time menu
- NTP Server: The IP address of the server used to take the date/time
- Device's IP Add/Mask/Default Gateway: the controllers static IP address settings it will use if DHCP is not enabled
- MAC Address: The unique ID of the Ethernet chip inside the controller

Date/Time (D): Manages the date and time stored inside the controller
- Date: the controllers date
- Time: the controllers clock time
- Latitude/Longitude: The coordinates of the location used to calculate sunrise/sunset times
- UTC-GMT: The current time difference. This is calculated automatically based on the set location
- Country name: Used to automatically calculate latitude/longitude values
- City Zip: Used to automatically calculate more precise latitude/longitude values
- Weekday Winter: The day of the week when the clocks go back
- Month Winter: The month when the clocks go back
- Week Num Winter: The week of the month when the clocks go back
- Date Winter: The next calculated date when the clocks with go back. If the date is the same each year, this can be overridden by editing the date
- Weekday, Month, Week Num, Date Summer: Same as above except these settings manage when the clocks go forward

Graphics (G): Screen management
- G Image enable: allows for images to be shown for each scene if they have been assigned in the programming software
- G Image full: when enabled, the image will be displayed in full screen and the scene and area will not be visible
- G Image time: the time it takes before the image is displayed in full screen
- G Sleep enable: when enabled, the screen brightness will dim after a certain amount of time
- G Sleep time: the amount of time to wait before sleeping
- G Bright normal: the % brightness when the controller is not sleeping
- G Bright sleep: the % brightness when the controller is sleeping
- G Bright LED: the % brightness of the mode and reset LEDs

DMX Output (X): Manage the timings of the DMX output messages and the page priorities (advanced function!)
- X MBB: Mark Before Break- the time to wait between sending each 512 channel DMX message (or 'packet')
- X Break: Break- the time to wait just before sending a new packet, resetting the DMX line
- X MAB: Mark After Break- the message which tells your receiver to begin reading data
- X MBS: Mark Between Slots- the delay time between sending each DMX channels data within the DMX packet
- Univ-1/Univ-2: each timing can be set differently depending on the universe number
- X Alphab Mode: if the same scene is triggered in the global area and a second area, the area with the highest letter will take priority
- X LTP Mode: f the same scene is triggered in the global area and a second area, the latest scene triggered takes priority

Sensitive (S): Manage the touch sensitivity settings
- S USB Init: reset the touch sensitivity when the USB is connected and disconnected
- S Auto Time: the time to wait before automatically resetting the touch sensitivity
- S High Sense: when enabled, the sensitivity will be increased
- S See Values: see each touch sensitive button number and palette value

Language (L): change the language of the text which appears on the screen
About: check the firmware release date and version number and assign a name for the controller
Reset: reset all settings to the factory default

SOFTWARE and LINKS

ARCOLIS sofware (Touch Lighting Editor app for iPhone/iPad, Android)
DMX Lightpad 3 (Remote application for iPhone/iPad, Android*)*
=>download your application from Google Play or the App Store