Installation Instructions

for the RGB DMX Stick 3 Controller

#RGB-DMX-CONT-STICK3

Installing the Controller

1. Mount an electrical box inside the wall

The 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 ACDC supply. 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+)
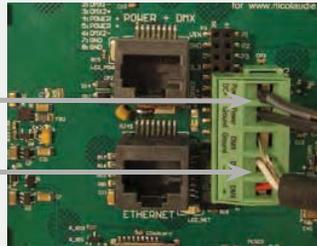
3. Mount the interface on the wall

First, mount the back side of the interface on the wall with 2 or more screws
Secondly, plug the connectors :
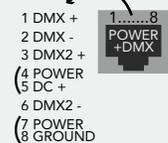 - DMX and power (connector block or RJ45)
 - Ethernet cable
The front panel is mounted by pressing it against the back plate and then sliding down. 2 screws should then be attached underneith to hold the controller in place.

POWER+DMX
WITH THE CONNECTOR BLOCK

POWER DC +
POWER Ground
DMX Ground
DMX -
DMX +

POWER+DMX
WITH THE RJ45 CABLE

1 DMX +
2 DMX -
3 DMX2 +
4 POWER
5 DC +
6 DMX2 -
7 POWER
8 GROUND

1.......8
POWER +DMX

CHECK PIN CONFIGURATIONS. APPLYING POWER TO THE DMX INPUT WILL DAMAGE THE CONTROLLER
MAKE SURE THE CONTROLLER IS MOUNTED WITHOUT TOO MUCH FORCE BEHIND AS THIS CAN PUSH APART THE GLASS
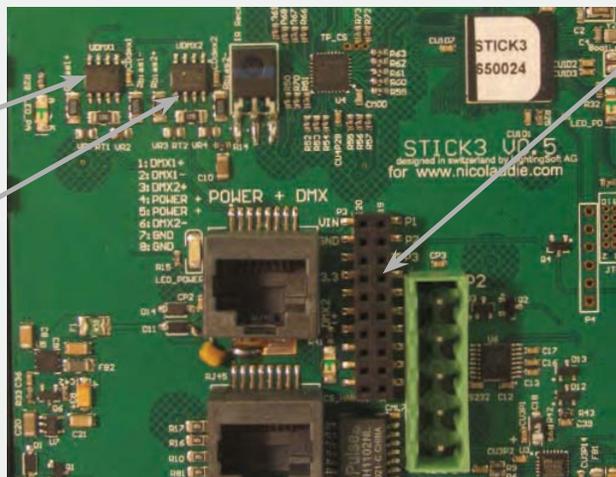
2x10 pins EXTENSION socket

DMX CHIP replacement

DMX universe #1

DMX universe #2
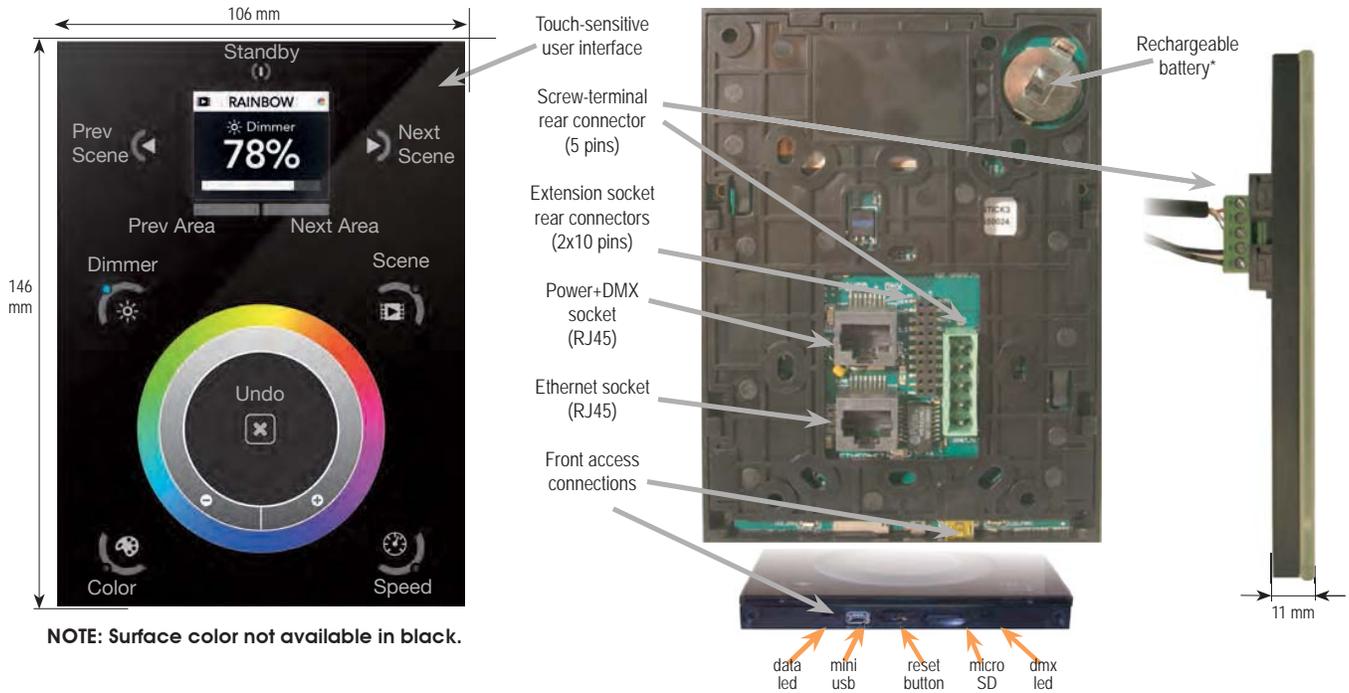
Ref: SP485ECN-L
        MAX485 CSA

EXTENSION socket

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 header 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

Connections & Triggering

106 mm

Standby

RAINBOW

Prev
Scene

Dimmer
78%

Next
Scene

Prev Area   Next Area

Dimmer   Scene

Undo

146
mm

Color   Speed

Touch-sensitive
user interface

Screw-terminal
rear connector
(5 pins)

Extension socket
rear connectors
(2x10 pins)

Power+DMX
socket
(RJ45)

Ethernet socket
(RJ45)

Front access
connections

Rechargeable
battery*

11 mm

data   mini   reset   micro   dmx
led   usb   button   SD   led

NOTE: Surface color not available in black.

Dry Contact Port Triggering

It is possible to start scenes using the input ports (contact closure).
To activate a port, a brief contact of atleast 1/25 second must be
established between the ports (1...8) and the ground (GND). Note:
the scene will not be switched off when the switch is released.

P1   P2   P3   P4 ...   GND
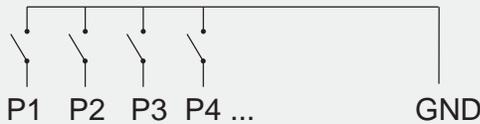
RS232 Triggering

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
- To play a scene, send 3 bytes :   **1   x   y   255**
- To stop a scene, send 3 bytes :   **2   x   y   255**
- To pause a scene, send 3 bytes :   **3   x   y   255**
- To release a pause, send 3 bytes :   **4   x   y   255**
- To reset a scene, send 3 bytes :   **5   x   y   255**
When (y)=0, (x) can be set between 0 and 255
-to stop scene 145, send the command: 2 145 0 255
When (y)=1, (x) can be set between 0 and 243 to trigger scenes 256-499
-to play scene 300, send the command: 1 255 45 255

BLACKOUT Relay (energy saving)

A relay can be connected between the RELAY and GND sockets
of the 20 pin extension socket. This can be used to turn off other
equipment such as lighting drivers. The signal is connected when
the controller is in standby.
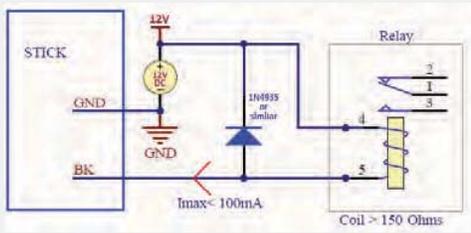
Example of relay :
FINDER Ref.
22.23.9.012.4000

Infra Red

The controller works with the official IR remote control, however there
is no receiver. A 36khz infra red receiver can be connected, such as
the TSOP34836 by Vishay Semiconductors. Farnell ref: 4913127. This
can be attached to the 20 pin connector. It's a good idea to add a
resistor and capacitor to surpress power supply disturbance.
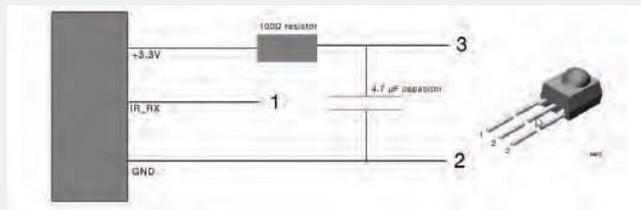
Network Control

The controller can be connected to a local network, allowing it to be
controlled from a smartphone or tablet over WiFi.
•   Connect the controller to a router or switch with an RJ45 cable
•   The controller is set by default to get an IP address from the
    router via DHCP. If the network is not working with DHCP, a
    manual IP address and subnet mask can be set using the
    Hardware Manager
•   If the network has a firewall enabled, allow ports 2430 and 2431

TCP Triggering

The controller can be connected to an existing automation system
over a network and triggered via TCP package on port 2431 or UDP
packets on 2430. Refer to the remote protocol document for more
information.

Setting up the Controller

iPhone/iPad/Android Apps - Limited Programming Capabilities

The controller can be used with one of two different smartphone apps, each available on the App Store and Google Play Store. These apps provide limited programming capabilities (see below for details), but are very easy to use and great for simple customization. If full customization is needed, please refer to the ESA Pro Software (details below).

Lightpad

Designed to work seemlessly with the controller, Lightpad provides an easy way to contol your lights over a local WiFi network. Use the color wheel to change the color, brightness, or speed of an effect. Use the arrows to cycle through scenes and effects, just like the wall panel. Swipe down to reveal quick scene selection buttons.

Easy Remote

Create an entirely customized remote control for your tablet or smartphone. Easy Remote is a powerful and intuitive app allowing you to easily add buttons, faders, color wheels and more. Connect to a WiFi network and the app will find all compatible devices.

ESA Pro Software - Full Programming Capabilities

The controller can be fully programmed from a PC or Mac using the inlcuded ESA Pro software. The ESA Pro software provides in-depth programming, from scene creating and editing, to defining and labeling multi-zoned fixtures. A software CD is included with your controller. The software may also be dowloaded at *https://www. nicolaudie.com/en/esapro.htm*. Video tutorials for the ESA Pro software are also available at *https://www.youtube. com/user/Nicolaudie*.

Firmware Updates

The controller's firmware can be updated using the Hardware Manager, which is included with the ESA Pro software. To view your controller's firmware version, go to the settings menu and scroll to "About" (see the section "Settings Menu" below for further details).

Settings Menu

To access the settings menu, hold the standby button for 3 seconds.
- Use the arrow buttons or palette to scrol through the menus
- Use the area buttons to navigate forwards and backwards
- The 'undo' button can also be used to navigate forwards

Mode (M): Manages the on/off button and the 4 modes (dimmer, speed, color, scene)
Arrows (A): Allows you to adjust which modes can be controlled by the arrows
Pallet (P): Allows you to adjust which modes can be controlled by the palette wheel
Scene (S): Scene management
First Start (F): Default settings when the unit is first powered up
Trigger (T): Manages the controllers external triggering properties
Ethernet (E): Enables the Ethernet socket on the controller
Date/Time (D): Manages the date and time stored inside the controller
Graphics (G): Screen management
DMX Output (X): Manage the timings of the DMX output messages and the page priorities (advanced function!)
Sensitive (S): Manage the touch sensitivity settings
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

Service

Servicable parts include:
• Memory card - used to store the scenes
• Battery - used to store the clock/calendar
• DMX Chips - used to drive the DMX (see p2.)

*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.

Internal Menu

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 : Once this is enabled, you can hold the dimmer button for 5 seconds to enable/disable lock mode. It's automatically activated after 120 seconds. When lock is activated, you'll see a red border around the screen

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 : the mode to jump to when the arrows are pressed, if the arrows are not enabled on the selected mode

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 : the mode to jump to when the palette is pressed, if the palette is not enabled on the selected mode

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 config : manages the fading between scenes
        From Show : the fade time set inside the show file will be used
        Force : the automatic fade time set in the menu will override all fadetimes in the show file
        Force Max : the controller will look at the show file fade time and the menu fade time and use the greatest
        Force Min : the controller will look at the show file fade time and the menu fade time and use the smallest
        Never : the controller will never fade between scenes
    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 : sets the scene triggering mode. Time Delay and Scene Butt allow for scenes to be scrolled through without playing
        Auto : the scene will be triggered as soon as it's selected
        Time Delay : a short delay is added before a scene is triggered
        Scene Butt. : the selected scene will not play 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 Scene Recover : activates the previously playing scene
    F Display Time : when enabled, the time will be displayed on the screen at startup
    F Scene Nr. : enables the triggering of a scene at startup. If disabled, no scene will be triggered

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
    T Blackout port : enables the blackout relay output which is triggered when the stanby putton is touched

Ethernet (E) : Manages the controllers network settings

> **Ethernet :** 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:** when this open is enabled, all other controllers on the network will go into standby when the standby button is pressed
> **Enable NTP :** enables Network Time Protocol. The controller will synchornise the clock with the internet if a connection is available
> **NTP Server :** the IP address of the server to synchronize the clock. The default is 005.135.141.108
> **Device's IP Add :** the controllers static IP address it will use if it does not receive an IP address via DHCP
> **Mask:** the subnet mask of the controller if not set to DHCP. Generally this is 255.255.255.0
> **Default Gateway :** the IP address of the router if not set to DHCP
> **MAC Address :** a unique ID used to identify the controller on the network

Date/Time (D) : Manages the date and time stored inside the controller

> **Date :** the controllers date
> **Time :** the controllers clock time
> **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

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 of the screen's backlight
> **G Bright sleep :** the brightness of the screen's backlight whilst the controller is sleeping
> **G Bright LED :** the brightness of the scene, undo and standby LED's

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 :** If 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

Troubleshooting

The 4 Mode LEDs on the controller are flickering

The controller is in bootloader mode. This is a special 'startup mode' which is run before the main firmware loads.
-Check that there is nothing metallic touching the back of the controller
-Try re-writing the firmware with the latest hardware manager
-Try formatting or replacing the SD card

All LEDs on the controller are flickering except the standby LED

There is no SD card detected.
-Check the SD card is properly connected
-Try formatting the SD card in the computer
-Try re-writing the show file
-Try replacing the SD memory card

The controller is not detected by the computer

-Be sure that the latest software version is installed
-Connect by USB and open the Hardware Manager (found in the software directory). If it's detected here, try to update the firmware

All LEDs on the controller are flickering

There has been no showfile detected on the SD memory card.
-Try formatting the SD card in the computer
-Try re-writing the show file
-Try replacing the SD memory card

The lights are not responding

-Check the DMX +, - and GND are connected correctly
-Check that the driver or lighting fixture is in DMX mode
-Be sure that the DMX address has been set correctly
-Check there are no more than 32 devices in the chain
-Check that the DMX LED is flickering to the right of the SD card
-Connect with the computer and open Hardware Manager (found in the software directory). Open the DMX Input/Output tab and move the faders. If your fixtures respond here, it is possibly a problem with the show file

For additional assistance, please contact LEDI's Design Department at (832) 717-2710, or designs@ledinspirations.com.

Instructions provided by Nicolaudie-Sunlite

Complete System Wiring Diagram

120-277V
AC Power

Electronic Non-Dimmable Driver

RGB DMX Decoder

CAT-5

RGB Hardwire Connector

RGB Tape Light

RGB DMX Stick 3 Controller

CAT-5

120-277V
AC Power

Electronic Non-Dimmable Driver

RGB DMX Decoder

RGB Hardwire Connector

RGB Tape Light

CAT-5

120-277V
AC Power

Electronic Non-Dimmable Driver

RGB DMX Decoder

RGB DMX
Terminator

RGB Hardwire Connector

RGB Tape Light