**STICK-KE1**

*Sunlite Touch Sensitive Intelligent Control Keypad*

**Overview**

This complete stand alone wall-mounted DMX controller is the perfect answer to interior lighting control expectations. Along with a state of the art design, the product comes with amazing features such as 1024 DMX channels, touch sensitive panel, clock/calendar, remote control, Ethernet facilities, and much much more....

The lighting levels, color and effects can be programmed from a PC, Mac, Android, iPad or iPhone using the included software.

http://www.nicolaudie.com/stick-ke1.htm

**Key Features**

- 8 touch sensitive scene buttons
- Color/dimmer/speed fader
- Touch sensitive buttons. No mechanical parts
- Touch sensitive fader allows for accurate color selection
- Multi-zone microSD memory
- Multi-room control with 200 scenes, 5 zones
- 1024 DMX channels. Control 340 RGB fixtures
- USB & Ethernet connectivity for programming and control
- RS232, Dry Contact Ports and an Infra Red input port
- Clock and calendar with Sunrise/Sunset triggering
- Network communication. Control lighting remotely
- Catalog of designs including black and white frame
- OEM customization
- Windows/Mac software to set dynamic colors/effects
- iPhone/iPad/Android remote and programming apps

**Technical Data**

- **Input Power**: 6-9V DC 0.6A
- **Output Protocol**: DMX512 (x2)
- **Programmability**: PC, Mac, Tablet, Smartphone
- **Available Colors**: Black / White
- **Connections**: USB, Ethernet, RS232, Clock, 8 dry contact ports, Output Relay
- **Memory**: microSD card
  - 4GB max, FAT16 or 32
- **Temperature**: -10 °C to 50 °C
- **Mounting**: Single or double gang wall socket
- **Dimensions**
  - Complete Package: 168x128x11.5mm
  - 250x150x55mm
- **Weight**: 200g
- **Standards**: EC, EMC, ROHS, ETL

**Optional Accessories**

- **POWER4M**: 6V ACDC power supply

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### EASY INSTALLATION

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 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)
   - Ethernet cable

   The front panel is mounted by clipping the 2 tabs along the top edge to the back plate and then arcing down. 1 screw should then be attached underneath to hold the controller in place. A bottom cover plate can also be attached with 2 screws to cover the sockets and switches.

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**CHECK PIN CONFIGURATIONS. APPLYING POWER TO THE DMX INPUT WILL DAMAGE THE CONTROLLER**

#### 2x10 pins EXTENSION socket

- **DMX CHIP replacement**
- **DMX universe #1**
- **DMX universe #2**
- **Ref: SP485ECN-L MAX485 CSA**

**EXTENSION socket**

```
<table>
<thead>
<tr>
<th>Pin</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>RS232 TX</td>
</tr>
<tr>
<td>2</td>
<td>GND_DMX</td>
</tr>
<tr>
<td>3</td>
<td>DMX1-</td>
</tr>
<tr>
<td>4</td>
<td>DMX1+</td>
</tr>
<tr>
<td>5</td>
<td>DMX2-</td>
</tr>
<tr>
<td>6</td>
<td>DMX2+</td>
</tr>
<tr>
<td>7</td>
<td>PORT1</td>
</tr>
<tr>
<td>8</td>
<td>PORT2</td>
</tr>
<tr>
<td>9</td>
<td>PORT3</td>
</tr>
<tr>
<td>10</td>
<td>PORT4</td>
</tr>
<tr>
<td>11</td>
<td>PORT5</td>
</tr>
<tr>
<td>12</td>
<td>PORT6</td>
</tr>
<tr>
<td>13</td>
<td>PORT7</td>
</tr>
<tr>
<td>14</td>
<td>PORT8</td>
</tr>
<tr>
<td>15</td>
<td>PORT9</td>
</tr>
<tr>
<td>16</td>
<td>PORT10</td>
</tr>
<tr>
<td>17</td>
<td>PORT11</td>
</tr>
<tr>
<td>18</td>
<td>PORT12</td>
</tr>
<tr>
<td>19</td>
<td>PORT13</td>
</tr>
<tr>
<td>20</td>
<td>PORT14</td>
</tr>
</tbody>
</table>
```

**Compatible header connectors:**
- WURTH ELEKTRONIK ref: 61301021121
- MCLEX 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

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## Connections

![Connections Diagram](image_url)

### SPECIFICATIONS / CONNECTIONS

<table>
<thead>
<tr>
<th>Feature</th>
<th>Built-in FEATURES</th>
<th>screw-terminal rear connector (9 pins)</th>
<th>extension socket rear connectors (2x10 pins)</th>
<th>front access connections (open cover)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Supply</td>
<td>6V DC 0.65A, supplied</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>DMX Output #1</td>
<td>First universe, 512 channels DMX512 output</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>DMX Output #2</td>
<td>Second universe, 512 channels DMX512 output (*)</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>USB</td>
<td>USB 2.0 communication for PC/software</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Ethernet</td>
<td>Advanced networking features</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Ports 1,2,3,4</td>
<td>4 Contact closure inputs, connect to ground for operating</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Ports 5,6,7,8</td>
<td>4 Contact closure inputs, connect to ground for operating</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>User Interface</td>
<td>14 buttons, 1 fader, 28 leds (Touch-sensitive keypad)</td>
<td>•</td>
<td>power/data leds</td>
<td>•</td>
</tr>
<tr>
<td>SDCARD</td>
<td>Micro sd card for stand alone memory use (supplied)</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>RESET</td>
<td>Push button for reset operation</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>RS232</td>
<td>RS232 Serial communication for external synchronisation</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Output relay</td>
<td>Automatic Stand by 5V signal</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Clock</td>
<td>Real time clock and calendar</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
<tr>
<td>Infrared receiver</td>
<td>Easy learning triggering from any 36Khz remote control</td>
<td>•</td>
<td>•</td>
<td>•</td>
</tr>
</tbody>
</table>

### 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:
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.*
Setting up the Controller

Dry Contact Port Triggering
It is possible to start scenes using the input ports (contact closure). To activate a port, a brief contact of at least 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.

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 on.

Example of relay:

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 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

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

Infrared Control
The controller works with the official IR remote control. By default, this function is disabled on the controller.

To enable IR control:
1. Load HardwareManager (included with software) & connect to controller
2. Click Settings
3. Under Triggering, Set IR to Enabled (default configuration)
4. Click Store Settings

IPhone/iPad/Android Control
The controller can be used with one of 3 different apps.

Lightpad
Designed to work seamlessly with the controller, Lightpad provides an easy way to control your lights over a local WiFi network. Use the slider to change the dimmer, color or speed, and the 8 scene buttons to select scenes and effects just like the wall panel.

Easy Remote
Create an entirely customized remote controller 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.

Arcolis (Android only)
The Arcolis application is a comprehensive tool allowing you to directly control and re-program the controller from your smartphone or tablet. This is a simple application which can be used by just about everyone in any situation. Mobile, easy to use and powerful, Arcolis is the ideal controller for dimming or switching traditional, LED and RGB color mixing DMX lighting fixtures. Program static and dynamic lighting scenes and effects.

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

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 port 2430

Programming the Controller
The controller be programmed from a PC, Mac, Tablet or Smartphone using the software available on our website. Refer to the corresponding software manual for more information. The firmware can be updated using the Hardware Manager which is included with the programming software.

http://www.nicolaudie.com/smartisan-tablet-apps.htm

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Some functions are available directly from the controller keypad using the SELECT button.

### Select + 1: View time

Example: view 2:45pm = 14:45 = 1445

- Example: view 2:45pm (USA) = 1445
- Example: view 2:45pm (Europe) = 1445

### Select + 2: View date

Example: view 6 SEP. 2009 = 060909

- Example: September 6th 2009 = 060909

### Select + 3: Set time

Example: set 3:30pm = 15:30 = 1530

- Example: set 3:30pm (Europe) = 1530

### Select + 4: Set date

Example: set 5 DEC 2008 = 051230

- Example: set 5 DEC 2008 = 051230

### Select + 5: Set Fade time

Example: set 01:32 fade time = 1 minute and 32 seconds = 0132

### Select + 6: Lock function

This function locks the keypad (disabled by default). Use the TOOLS program to enable it and set the 4-digit code.

### Select + 9: Set IR

Example: assign an IR key to Scene #2

### Select + 0: Firmware version

Example: view 1.02 firmware version = 0102

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Troubleshooting

Fixtures / lights 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 HardwareManager (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
- We strongly recommend the use of a DMX Tester with our interfaces with any problem solving
- No DMX output? There could be a faulty DMX chip. The Stick1 has 2 x DMX chips labelled UDMX1 and UDMX2 which are user-replacable (see pg2). Try swapping the chips over to test if one is faulty. Use a flat head screw driver to pry them gently from the socket

8 scene and standby LEDs flashing
There is no SD card detected
- Check the SD card is properly inserted
- Try formatting the SD card to FAT16/32 in the computer
- Try re-writing the show file
- Try replacing the SD memory card (Max 4Gb)

8 scene LEDs are flashing
There is no show file detected on the SD memory card
- Try formatting the SD card in the computer
- Try re-writing the show file
- Try writing the standalone demo show using HardwareManager
- Try replacing the SD memory card

8 scene LEDs cycling constantly
The interface is constantly restarting. There could be several causes:
- Corrupt show files. Remove SD card and backup contents. Use the HardwareManager Standalone screen to write the demo show. If this solves problem, rewrite your show using the dmx programming software and .arc or .dlm from your backup.
- Corrupt Firmware. Load HardwareManager and update the firmware. If not detected, try Bootloader Mode.
- Faulty power supply. Use a multimeter to check the power supply. The Stick-KE1 requires 6v and the older Stick-KU1 requires 9v. Power supplies do lose the ability to supply voltage over time. If below spec, replace power supply.

All 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 HardwareManager
- Try slow formatting SD to FAT16/32 or replacing the card

The controller is not detected by the computer
- Be sure that the latest software version is installed
- Make sure you are using Windows 7, 8 & 10 or OS X 10.8+
- Connect by USB and open the HardwareManager (found in the software directory). If it's detected here, try to update the firmware
- If not detected by HardwareManager, the firmware could be corrupted. This can be solved by forcing a firmware update in Bootloader Mode
  - Load HardwareManager
  - Connect the BootLoader solder points on the back and ...
  - Plug-in the USB cable at the same time. If successful the interface will appear in HardwareManager with the suffix ‘.BL’
  - Update the firmware

- Fixtures / lights not responding
- All LEDs on the controller are flickering
- The controller is not detected by the computer

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