The Light Tower Interface module is designed to fill the gap between communication center equipment and status indicating light towers.
The **Light Tower Controller** can control 3rd party Light Towers with one, two, three or four indicators. Your Light Tower should contain LED lights - not incandescent. There may be insufficient power to operate a Light Tower with incandescent bulbs. Contact **US Digital Designs** directly if you wish to operate an incandescent Light Tower.

Prior to use, read the maximum voltage and power specification provided by the manufacturer of your Light Tower. US Digital Designs can not be held liable for equipment failure or damage due to incompatible Light Towers.

---

**Light Tower Controller I/O**

The **Light Tower Controller** can operate a Light Tower with up to 4 lights. Your Light Tower should have LED type lights. The diagram right graphically illustrates the **Light Tower Controller** inputs and outputs.

Note: There may be insufficient power to operate a Light Tower with incandescent bulbs. Contact **US Digital Designs** directly if you wish to operate this type of Light Tower.

Check your product’s specification page for the maximum voltage and power that can be supplied to your Light Tower.

---

Your Light Tower easily connects to the **Light Tower Controller** removable four-position connector, shown here.
**Power Up Self Test**

When power is applied to the **Light Tower Controller** the 4 outputs will turn on and off in sequence and then all 4 will stay on for 3 seconds. You can observe this by watching the LED indicators under the LT OUTPUT connector. This allows you to quickly determine if the **Light Tower Controller** is operating correctly. If your Light Tower is physically connected you can use this self-test to verify wiring and to test for any non-functioning lights on your Light Tower.

**Dry Inputs**

There are 4 dry contact inputs for each of the 4 outputs (shown below). They are labeled **Red**, **White**, **Blue** and **Green**. Each input is optically isolated from the rest of the circuitry. The **Light Tower Controller** provides a low 24V, 20mA excitation current which flows when the input is active. Typically, toggle switches, push button switches, PPT outputs, and “off hook” indicators are wired to the inputs. Each input has a indicator LED that glows when that input is active. When an input becomes active, the corresponding output becomes active a short time later. There is a built in debounce time of approximately 50ms to prevent false tripping of the outputs.

**Example**

If you short across the **RED** input, you will see the **RED** input LED turn on. Almost immediately you will see the “R” output LED on the LT OUTPUT connector turn on. Look at the photo below. Note that the Red and White inputs are on and the R and W outputs on. If a Light Tower had been connected to the LT OUTPUT connector the White and **RED** LEDs on the Light Tower would be on.
The Light Tower Controller includes an 8 position dip switch that allows the user to configure several options. Each light on your Light Tower can be set to flash On/Off, versus constantly On. Each input can be set to be Normally Closed (NC) or Normally Open (NO). Typically when an input is closed the output will activate. However, if the NO/NC dip switch is set the output will activate when the input is *not* closed and will clear when the output *is* closed.

**Examples**

In the photo below, note that Dip switches 3 and 5 are “On”. Dip Switch 3 is the NO/NC select for the Blue output to your Light Tower. When the Blue input is closed the Blue LED on the Light Tower will turn off. When the input is not closed the Blue LED on your Light Tower will turn on.

Dip switch 5 is the “Flash” dip switch for the Red LED on your Light Tower. When the Red input is active, the Red LED on your Light Tower will flash on and off approximately two times per second.

The programming port allows the firmware in the Light Tower Controller to be updated in the field without opening the enclosure. Contact US Digital Designs if you need custom programming in your Light Tower Controller.
DIP Switch Programming

<table>
<thead>
<tr>
<th>DS</th>
<th>ON</th>
<th>OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Normally Closed</td>
<td>Normally Open</td>
</tr>
<tr>
<td>2</td>
<td>Normally Closed</td>
<td>Normally Open</td>
</tr>
<tr>
<td>3</td>
<td>Normally Closed</td>
<td>Normally Open</td>
</tr>
<tr>
<td>4</td>
<td>Normally Closed</td>
<td>Normally Open</td>
</tr>
<tr>
<td>5</td>
<td>Constantly Lit</td>
<td>Flashing Light</td>
</tr>
<tr>
<td>6</td>
<td>Constantly Lit</td>
<td>Flashing Light</td>
</tr>
<tr>
<td>7</td>
<td>Constantly Lit</td>
<td>Flashing Light</td>
</tr>
<tr>
<td>8</td>
<td>Constantly Lit</td>
<td>Flashing Light</td>
</tr>
</tbody>
</table>

Features

- Four optically isolated dry contact inputs
- Four outputs: 50mA: 24vdc
- User selectable Normally Open / Normally Closed inputs
- User selectable Flashing Light / Steady On outputs
- Extruded aluminum laser-etched, flange mount case
- LED indicators for all inputs and outputs
- 110 VAC / 0.25 amp power input
- Integrated 24vdc power supply
- Self-contained programming port
- Pluggable wiring connectors
- 1 year standard warranty

The information contained in this document is subject to change without notice. US DIGITAL DESIGNS makes no warranty of any kind with regard to this material, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. US DIGITAL DESIGNS shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance or use of this material.