

# SAI Series Illuminated Monument Sign

120-277VAC Power and RS485 or RS232 Communications Wiring and Configuration

## Voltage

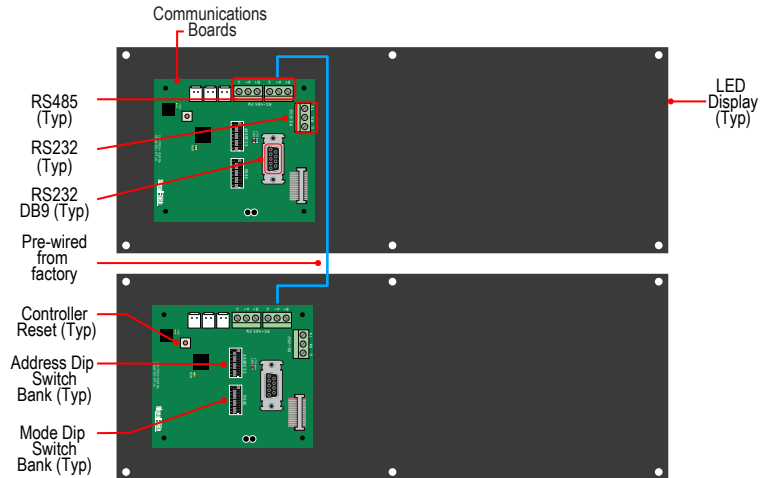
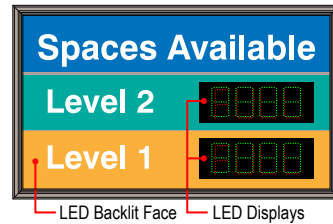
This sign operates within an input range of 120-277VAC

## Power & Communications

Bring input power and communications through the bottom or back of cabinet, using separate conduit for each. Weather proof all connections made through the cabinet.

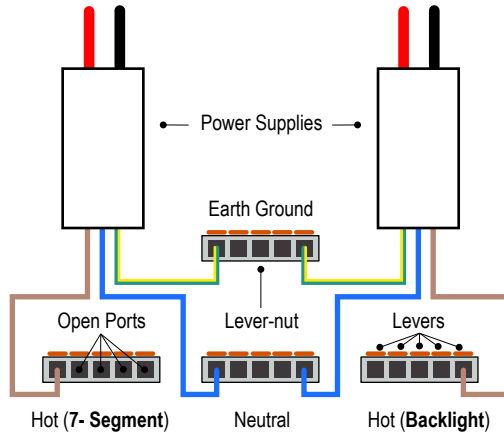
**IMPORTANT:** Separate inputs are provided for the seven segment display and the backlit face.

**Fig. 1: Board Locations**



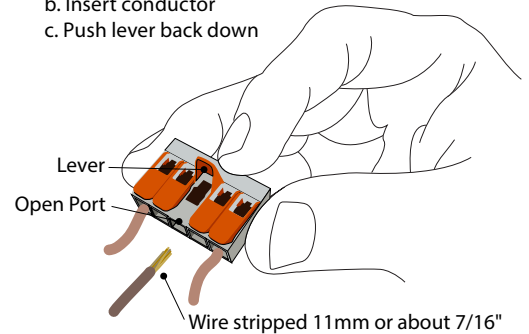
## Power Wiring Connections

1. Turn off incoming power prior to starting installation.
2. All terminations should be made using the provided 5-conductor lever-nuts. (No additional wire nuts required.)
3. Two Hot inputs (Brown Wires) are provided, as indicated by the labels on the lever-nuts.
  - a. 7-Segment Displays (Labeled "7-Segment")
  - b. Backlit Face (Labeled "Backlight")
4. Common Neutral (Blue Wires)
5. Earth Ground (Green/Yellow Wires)



## Lever-nut Instructions

1. Strip the ends of your input wire to 11mm, using the guide on the side of one of the lever-nuts.
2. To make a connection, use the wiring scheme pictured to find the correct lever-nut.
  - a. Pull up on lever of an open port
  - b. Insert conductor
  - c. Push lever back down



## Communications Wiring Connections

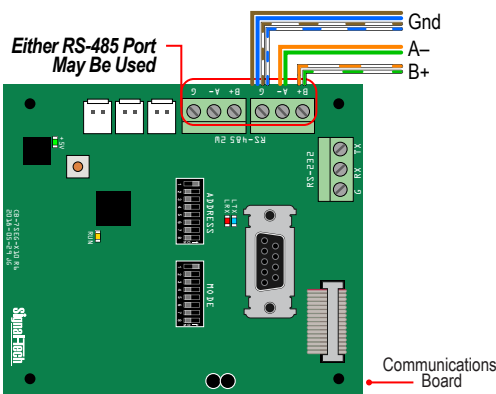
1. Connect the display to the network using RS485 (Figure 4), or RS232 (Figure 5).

### Note for RS485 installations:

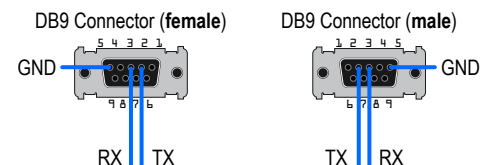
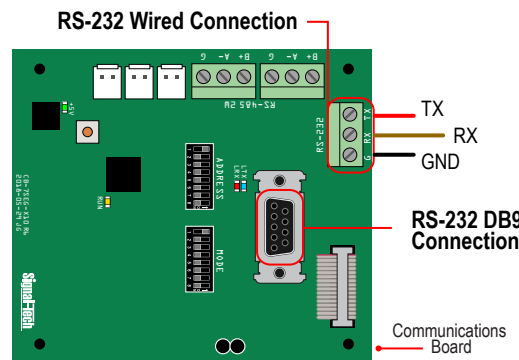
There are two ports to simplify daisy-chain wiring when two or more signs are used in series, either of which can be used.

2. Connect Ground wire as shown to ensure data integrity.
3. Communication settings: Follow guidelines in LED Count Display Protocol.

**Fig. 4: RS-485 2-Wire Communications Wiring**



**Fig. 5: RS-232 Alternative Communications Wiring**



Display (female)	Computer (male)
Pin 5 - GND	Pin 5 - GND
Pin 3 - RX	Pin 3 - RX
Pin 2 - TX	Pin 2 - TX

# Setting the LED Display Sign ADDRESS

## For Space Available Signs being integrated with a RedStorm™ System

Each LED Display needs an address to ensure it receives and displays the intended data. Refer to the Transition Point List that ships with your RedStorm System for the system address for the sign.

Typically, the factory default address is 01. To change the display address, use the Address DIP Switch Bank on the back of the display board. Refer to Figure 7 for DIP Switch settings for addresses from 01-10.

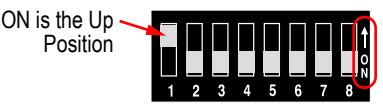
## For Space Available Signs being integrated with a third-party system

Please refer to the third-party documentation for setup and configuration instructions.

### DIP Switch Bank Settings

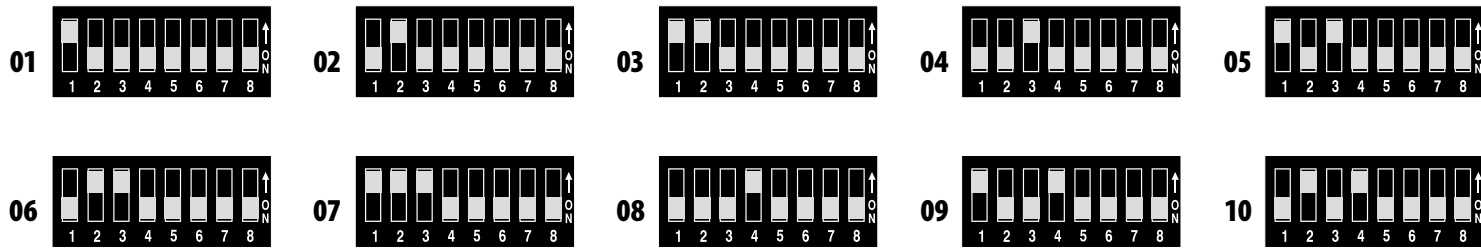
There are two DIP Switch Banks on the sign, one is for setting the ADDRESS and the other is for setting the Operating MODE. The "ON" position is UP as shown in Figure 6 and 8.

Fig. 6: DIP Switch ON Position



**Note:** The Address DIP Switch Bank uses a binary system to assign values. We recommend using a DIP Switch calculator for addresses greater than 10.

Fig. 7: Address DIP Switch Settings

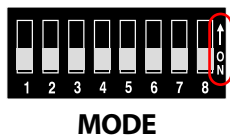


# Setting the LED Display Sign MODE

## Mode DIP Switch Bank

The factory default settings for the Mode DIP Switch are noted with an asterisk (\*). Changes can be made as needed in the field.

Fig. 8: Factory Default Settings



Switch	Position	Description
4	ON*	FULL message displays in Green LEDs
	OFF	FULL message displays in Red LEDs
5	ON	Enable Test Mode. Requires controller reset.
	OFF*	Normal operating mode

\* Factory default setting  
† Not available on all models



### Warning Statements

- Note:** Make appropriate wiring connections per local code.
- Note:** Any holes drilled into sign cabinet **MUST** be sealed. Failure to do so may cause a short and void warranty.
- Note:** This unit contains a built-in CLASS 2 LED driver.

**Note:** This sign is intended to be installed in accordance with the requirements of Article 600 of the National Electric Code and/or other applicable local codes. This includes proper grounding and bonding of the sign.



**WARNING:** Risk of Fire or Electric Shock. Do Not interconnect output terminations.

**AVERTISSEMENT:** Risque d'incendie ou de choc électrique. Ne pas interconnecter les terminaisons de sortie.