



Smart Control Bridge Quick Start Guide

Table Of Contents

Preparation	2
Smart Control Bridge Overview	3
Smart Control Bridge Power Wiring.....	4
Smart Control Bridge RS485 Wiring.....	5
Smart Control Bridge RJ-45 Wiring	6
Smart Control Bridge LED Wiring..	7
Smart Control Bridge Button Wiring..	8
Smart Control Bridge RS485 Termination Dip Switches.	9
Smart Control Bridge Option Dip Switches	9
Setting the Smart Control Bridge Address	10
Troubleshooting Guide	11
Frequently Asked Questions.....	12

Preparation

Unpack the items and inspect the contents for damaged or missing parts. If any problems arise, please contact Touch-Plate at 260.426.1565 for assistance.

Precautions

The Bridge hardware is designed to be in environments that have a temperature range of 0-60°C (non-condensing atmosphere). Installing in an environment outside of these parameters will shorten the life span of the hardware.

Touch-Plate recommends the use of 18 to 22 AWG wire for low voltage wiring of contact closure products and 18 AWG wire for all 24V power connections.

All 120VAC wiring must use wire as specified by National Electric Code for load size and wire length.

Compatible Hardware

The Bridge product was designed to be compatible with the following products:

- Contact Closure Switches (5000, Genesis, Classic, Eclipse, Industrial, Mystique, Royal, and/or Ultra Series)
- Master Controllers (Time-Keeper or ZoneZ Master)

Warranty

Touch-Plate warrants this product against defects in materials or workmanship, under normal use, for a period of ONE (1) year from date of shipment. If a defect arises and a valid claim is received within the Warranty Period, Touch-Plate will repair or replace the product at no charge.

This warranty does not apply to:

- a. Damage to unit(s) caused by accident, acts of God, inappropriate installation, faulty installation, or any negligent use;
- b. Unit(s) which have been subject to being taken apart or otherwise modified;
- c. Unit not used in accordance with instructions;
- d. The finish on any portion of the product, such as surface and/or weathering, as this is considered normal wear and tear;
- e. Non-Touch-Plate hardware installed by the user;
- f. Damage caused by Non-Touch-Plate products;
- g. Damage caused by operating the product outside the permitted or intended uses described by Touch-Plate;
- h. -or- Specific plans or Specific application requirements, unless the plans and specifications have been forwarded to Touch-Plate and Touch-Plate has approved and accepted the plans in writing.

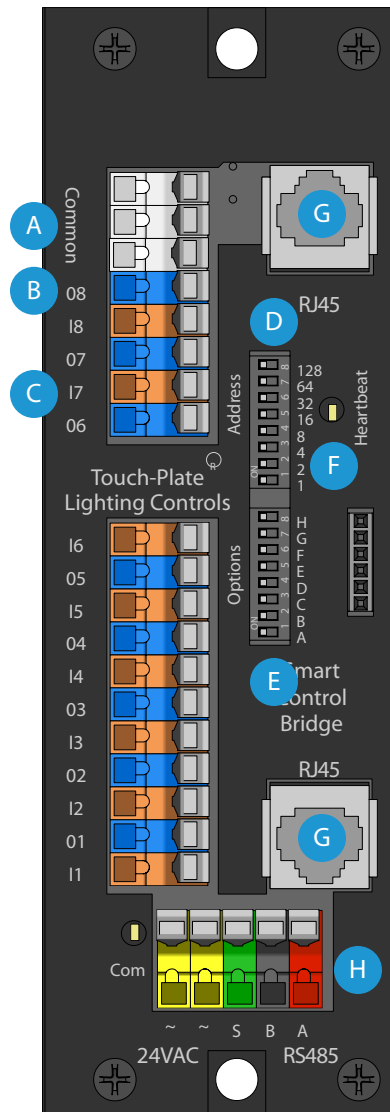
EXCEPT AS PROVIDED IN THIS WARRANTY, TOUCH-PLATE IS NOT RESPONSIBLE FOR DIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR CONDITION, INCLUDING BUT NOT LIMITED TO, INSTALLATION OR REPLACEMENT LABOR COSTS.



Smart Control Bridge Overview

The Smart Control Bridge allows for currently installed or new Contact Closure Switches to be turned into “Smart Switches.” Each Smart Control Bridge has the capacity to have up to eight (8) buttons and LEDs wired to it.

Board Items	Options	Board Position	Page #
Contact Closure Inputs	Common Inputs	A	7 & 8
	LED Inputs (Blue)	B	7
	Button Inputs (Orange)	C	8
DIP Switches	RS485 Termination DIP Switches	D	9
	Option DIP Switches	E	9
	DMX Address DIP Switches	F	10
Other Connections	RJ-45 Connections	G	6
	Power/Data Connection	H	4 & 5

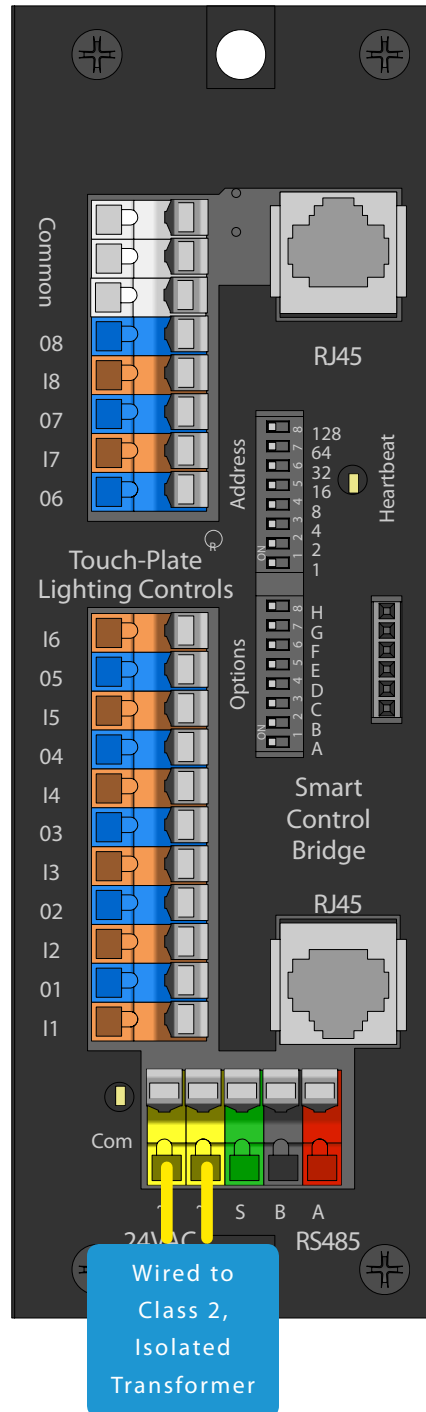


Smart Control Bridge Power Wiring

To correctly bring power to the Smart Control Bridge, use the wiring diagram below.

Power must be a Class 2, Isolated Transformer, with a rating of 24 VDC.

This typically comes from the factory pre-wired.

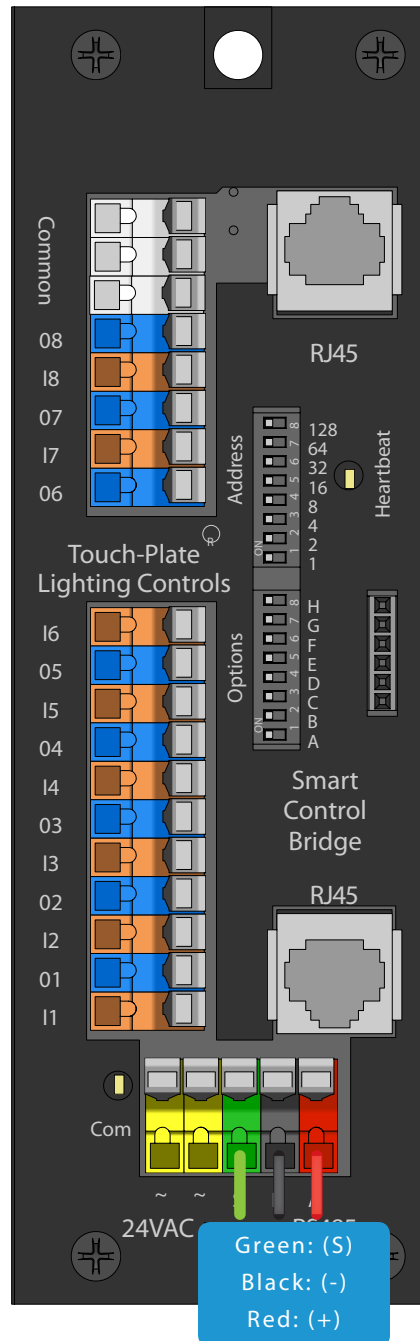


Smart Control Bridge RS485 Wiring

To correctly wire the RS485 connection to the Smart Control Bridge, use the wiring diagram below.

- **Shield or Ground for RS485 connection must be isolated from the ground on the power supply. Using the same ground will create a direct short across the diode bridge and damage the unit!**

Wire must be Liberty 18/2C SHLD or an equivalent wire.

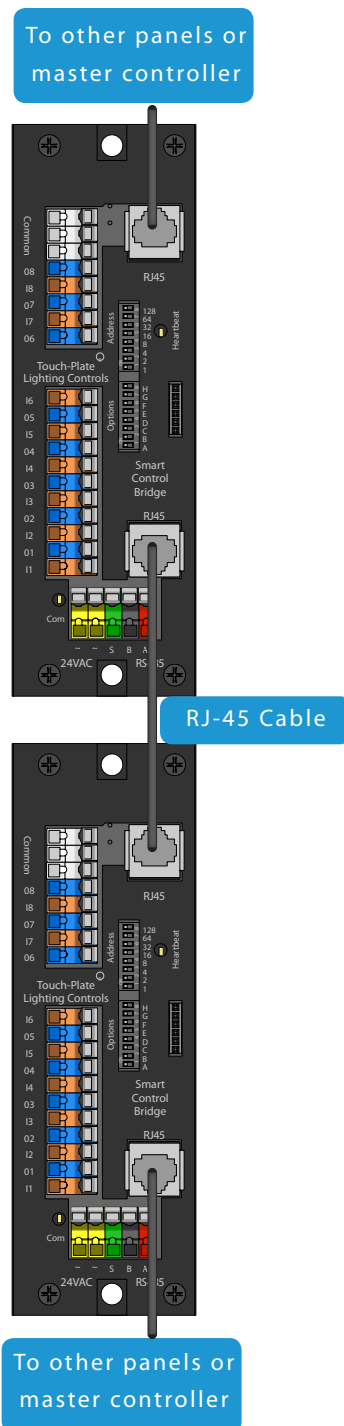


Smart Control Bridge RJ-45 Wiring

To correctly wire the RJ-45 connection to the Smart Control Bridge, use the wiring diagram below. Cable must be Cat5e or an equivalent cable. The RJ-45 cable can pass data and power through it when connected to other Touch-Plate boards.

Typical items wired via the RJ-45 connection are as follows:

- Touch-Plate master controllers (Nexus and Time-Keeper)
- Other Smart Control Bridge Boards



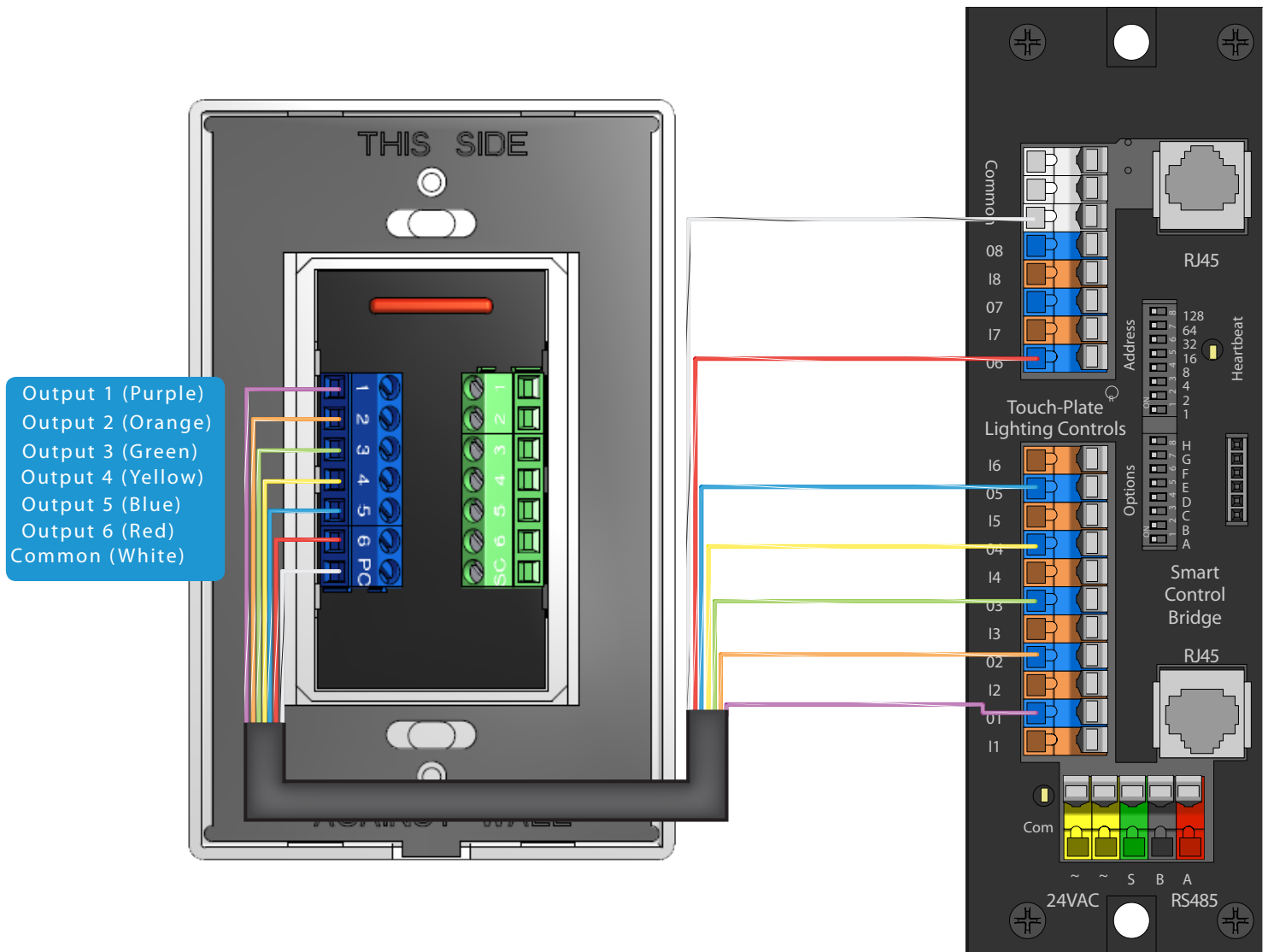
Smart Control Bridge LED Wiring

To correctly wire LEDs to the Smart Control Bridge, use the wiring diagram below.

- **Touch-Plate recommends that if multiple Smart Control Bridges are in a system, common wires should be jumped together. Jumping could be from Smart Control Bridge to Smart Control Bridge or to one common terminal.**

LEDs will be wired directly into the terminal of the corresponding input.

For example, the wire for LED 1 should be brought into the terminal labeled 'O1'.



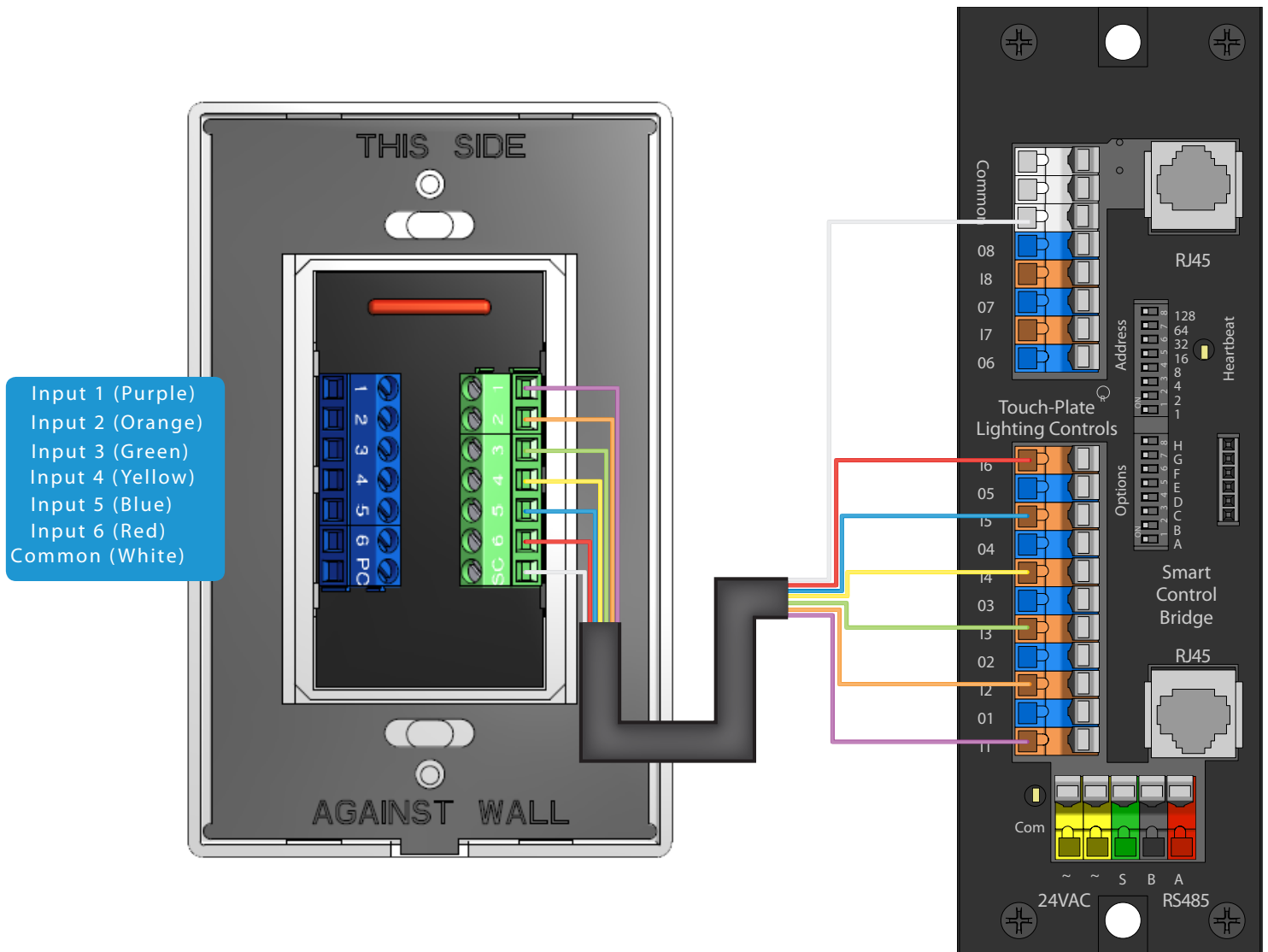
Smart Control Bridge Button Wiring

To correctly wire Buttons to the Smart Control Bridge, use the wiring diagram below.

- **Touch-Plate recommends that if multiple Smart Control Bridges are in a system, common wires should be jumped together. Jumping could be from Smart Control Bridge to Smart Control Bridge or to one common terminal.**

Buttons will be wired directly into the terminal of the corresponding input.

For example, the wire for Button 1 should be brought into the terminal labeled 'I1'.



Smart Control Bridge RS485 Termination Dip Switches

The RS485 Termination Dip Switches are used to set RS485 terminations.

Option	1	2	3
RS485 Termination (Non-Inverting Input Pull Up; 510 Ohms)	ON	OFF	OFF
RS485 Termination (Inverting Input Pull Up; 510 Ohms)	OFF	ON	OFF
RS485 Termination (Line to Line Termination; 120 Ohms)	OFF	OFF	ON

Smart Control Bridge Option Dip Switches

The Option Dip Switches are used to change and/or enable certain functions on the Smart Control Bridge.

DO NOT CHANGE ANY OF THESE DIP SWITCHES UNLESS DIRECTED BY TOUCH-PLATE.

Option	A	B	C	D	E	F	G	H
	ON	-	-	-	-	-	-	-
	-	ON	-	-	-	-	-	-
	-	-	ON	-	-	-	-	-
	-	-	-	OFF	-	-	-	-
	-	-	-	-	OFF	-	-	-
	-	-	-	-	-	ON	-	-
	-	-	-	-	-	-	ON	-
	-	-	-	-	-	-	-	ON



Setting the Smart Control Bridge Address

The Address Dip Switches are used to set the Address.

Normally, these Dip Switches come from the factory pre-programmed to Address #1.

When there are multiple Smart Control Bridges in a system, the first Smart Control Bridge is addressed to Address 1. The following Smart Control Bridge is addressed to Address 2.

Use the setting diagram to change the Address if needed. Note that for the address changes to take effect, a power cycle needs to occur.

Address	1	2	3	4	5	6	7	8
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	ON
3	ON	ON	OFF	OFF	OFF	OFF	OFF	ON
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON
5	ON	OFF	ON	OFF	OFF	OFF	OFF	ON
6	OFF	ON	ON	OFF	OFF	OFF	OFF	ON
7	ON	ON	ON	OFF	OFF	OFF	OFF	ON
8	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON
9	ON	OFF	OFF	ON	OFF	OFF	OFF	ON
10	OFF	ON	OFF	ON	OFF	OFF	OFF	ON
11	ON	ON	OFF	ON	OFF	OFF	OFF	ON
12	OFF	OFF	ON	ON	OFF	OFF	OFF	ON
13	ON	OFF	ON	ON	OFF	OFF	OFF	ON
14	OFF	ON	ON	ON	OFF	OFF	OFF	ON
15	ON	ON	ON	ON	OFF	OFF	OFF	ON
16	OFF	OFF	OFF	OFF	ON	OFF	OFF	ON
17	ON	OFF	OFF	OFF	ON	OFF	OFF	ON
18	OFF	ON	OFF	OFF	ON	OFF	OFF	ON
19	ON	ON	OFF	OFF	ON	OFF	OFF	ON
20	OFF	OFF	ON	OFF	ON	OFF	OFF	ON
Valid Addresses vary based on the Master Controller								

Valid addresses for: Time-Keeper from 1 to 96, Nexus from 1 to 16. Addresses are set using the nine Address Dip Switches, with each having a value noted in the chart below.

Address Dip Switch	1	2	3	4	5	6	7	8
Value	1	2	4	8	16	32	64	ON

The values of all switches in the ON position are added together and the total is equal to the address. See the examples below:

Address 1: Turn on switch 1 only, and leave all other Address switches off.

Address 13: Turn on switches 1, 3 and 4. The value of those switches are $1 + 4 + 8 = 13$.



Troubleshooting Guide

If no response occurs when the system is powered up, use the following steps to identify the problem.

1. Remove the diecut from the ZoneZ Lite low voltage controller.
2. Look for the LED indicator to be blinking on it.
 - a. For the indicator to be blinking, power has to be correctly brought to the system. If the LED indicator is blinking, move on to step 3.
 - b. If the LED indicator is not blinking, confirm power connections and then contact the factory for assistance.
3. Verify that the line voltage has been fed to all the necessary relays.
4. Verify that each light fixture is connected to the switched leg.
5. Verify that 120 VAC has been connected to the transformer on the relay board.
6. Take a piece of wire (both ends need to be stripped) and hold one end to any of the terminals labeled 'Common'.
7. Take the other end of the wire and tap it to the conductive metal of each of the six switch wire inputs. Each tap should energize the relay and change its state. The lights should go ON and OFF when the terminal is touched.
8. If the lights do not respond, use a meter on the line voltage relay outputs to see if the voltage switches from 0 to 120 VAC.
9. If these steps do not solve the problem, please contact the factory for assistance.

If button presses are not working, use the following steps to identify the problem.

1. Take a piece of wire (both ends need to be stripped) and hold one end to any of the terminals labeled 'Common'.
2. Take the other end of the wire and tap it to the conductive metal of each of the six switch wire inputs. Each tap should energize the relay and change its state. The lights should go ON and OFF when the terminal is touched.
3. If the lights do not respond, use a meter and hold one lead to any of the terminals labeled 'Common'.
4. Hold the other meter lead to any of the six switch wire inputs. The meter should give a reading of 20VDC when energized and 26VDC when not energized.
5. If these steps do not solve the problem, please contact the factory for assistance.



Frequently Asked Questions

1. How many control stations can be wired to each Smart Control Bridge?
 - a. There can be up to eight (8) buttons and LEDs wired to each Smart Control Bridge. This could be a control station with a single button or one eight (8) button control station.
 - b. It can also be any combination of control stations, with a maximum of eight (8) buttons and LEDs total.
2. How is the Smart Control Bridge programmed with a Time-Keeper or Nexus?
 - a. It will program the exact same as a smart switch.
 - b. Please see the Time-Keeper or Nexus manual for further programming instructions.





Touch-Plate Smart Control Bridge
Quick Start Guide
Revision: 2.0a

