

This document is intended to help technicians/electricians install a ZoneZ-S Relay Panel.

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Preparation

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

Precautions

The ZoneZ-S 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.

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

Compatible Hardware

This product was designed to be compatible with the following items:

Contact Closure Control Stations:

5000 Series

Genesis Series

Classic Series

Eclipse Series

Mystique Series

Ultra Series

Warranty

Touch-Plate® warrants this hardware product against defects in materials or workmanship, under normal use for a period of ONE (1) year from date of shipment. If a hardware defect is to arise 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®;

or

- h. 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.

Introduction to the ZoneZ Relay Boards

The ZoneZ Relay Boards have two (2) options available; electronically and mechanically latching relays.

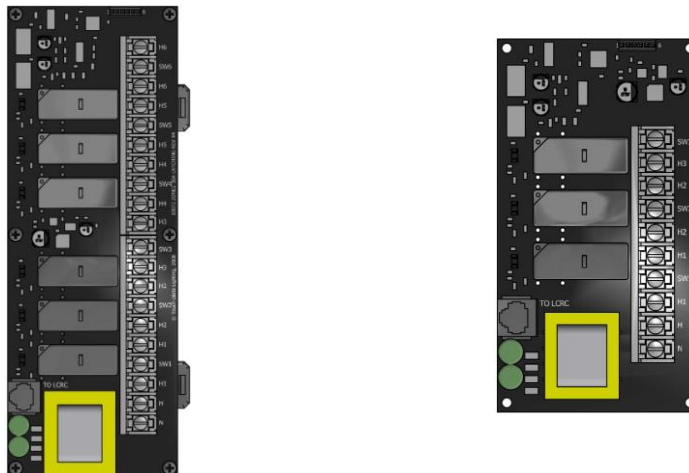
ZoneZ Electronically held Relay Boards

- Z-6R15
 - o 10 AMP rating
 - o 960 Watts per Relay – assuming each relay has a feed from the breaker panel
- Z-6R20
 - o 20 AMP rating
 - o 1920 Watts per Relay – assuming each relay has a feed from the breaker panel
- Z-2R20
 - o 20 AMP rating
 - o 1920 Watts per Relay – assuming each relay has a feed from the breaker panel



ZoneZ Mechanically latching Relay Boards

- Z-6R25L
 - o 25 AMP rating
 - o 2400 Watts per Relay – assuming each relay has a feed from the breaker panel
- Z-3R25L
 - o 25 AMP rating
 - o 2400 Watts per Relay – assuming each relay has a feed from the breaker panel



ZoneZ Relay Board Wiring

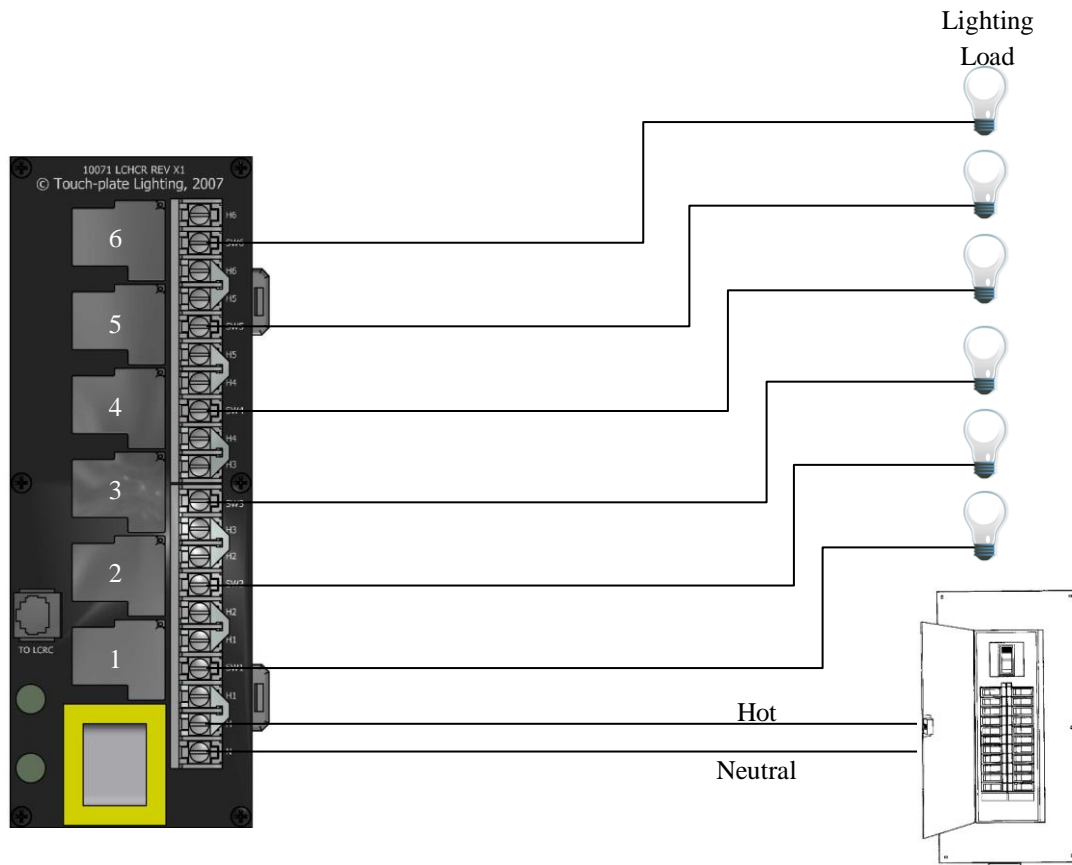
- Each of the ZoneZ Relay Boards will come from the factory with ‘jumpers’
 - o Jumpers allow all relays on a ZoneZ Relay Board to share a single HOT (120V) feed
 - o If more than one (1) HOT feed is needed, the jumpers can be removed

This diagram indicates how the ZoneZ Relay Boards should be wired

Wiring Instructions

1. “H” stands for Hot (120V) and this wire must come from the circuit breaker panel
2. “N” Stands for Neutral and this wire must come from the circuit breaker panel
 - a. Each relay does not need to have its own neutral feed; each light fixture must have a Neutral which terminates at the circuit breaker panel
3. From the Breaker Panel, one (1) Hot – 120V and one (1) Neutral are brought to the ZoneZ Relay Board
4. From the ZoneZ Relay board there will be 6 individual wires going to the lighting loads, commonly referred to as the “switched leg”
 - a. Numbers SW1 through SW6 designate these terminals.

Note: The Relay Board is numbered opposite of the Low Voltage Control Board. The numbers ascend on the Relay Board with Relay # 1 (SW1) as the lowest relay on the board.



Introduction to the ZoneZ-S

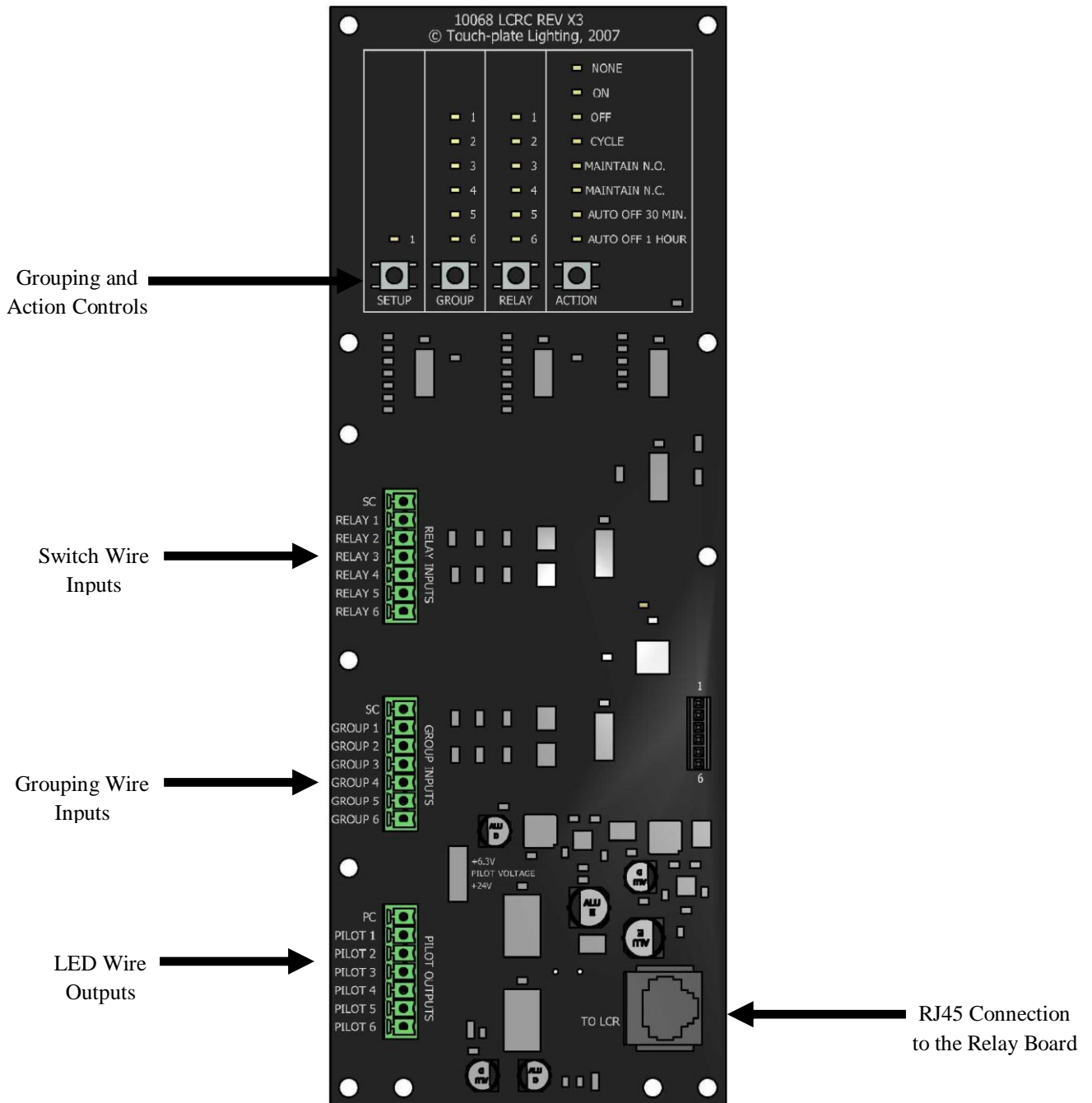
The ZoneZ-S was designed to retrofit existing systems or to provide new installations with a clean, easy solution.

It can control up to six (6) relays and provides Grouping, LED Control, and Action functions.

The ZoneZ-S also has two (2) input ports and one (1) output port.

Ports

- 1st seven (7) position port – Switch Inputs
- 2nd seven (7) position port – Grouping Inputs
- 3rd seven (7) position port – LED Outputs



ZoneZ-S Control Station Wiring (Control Station Inputs Only)

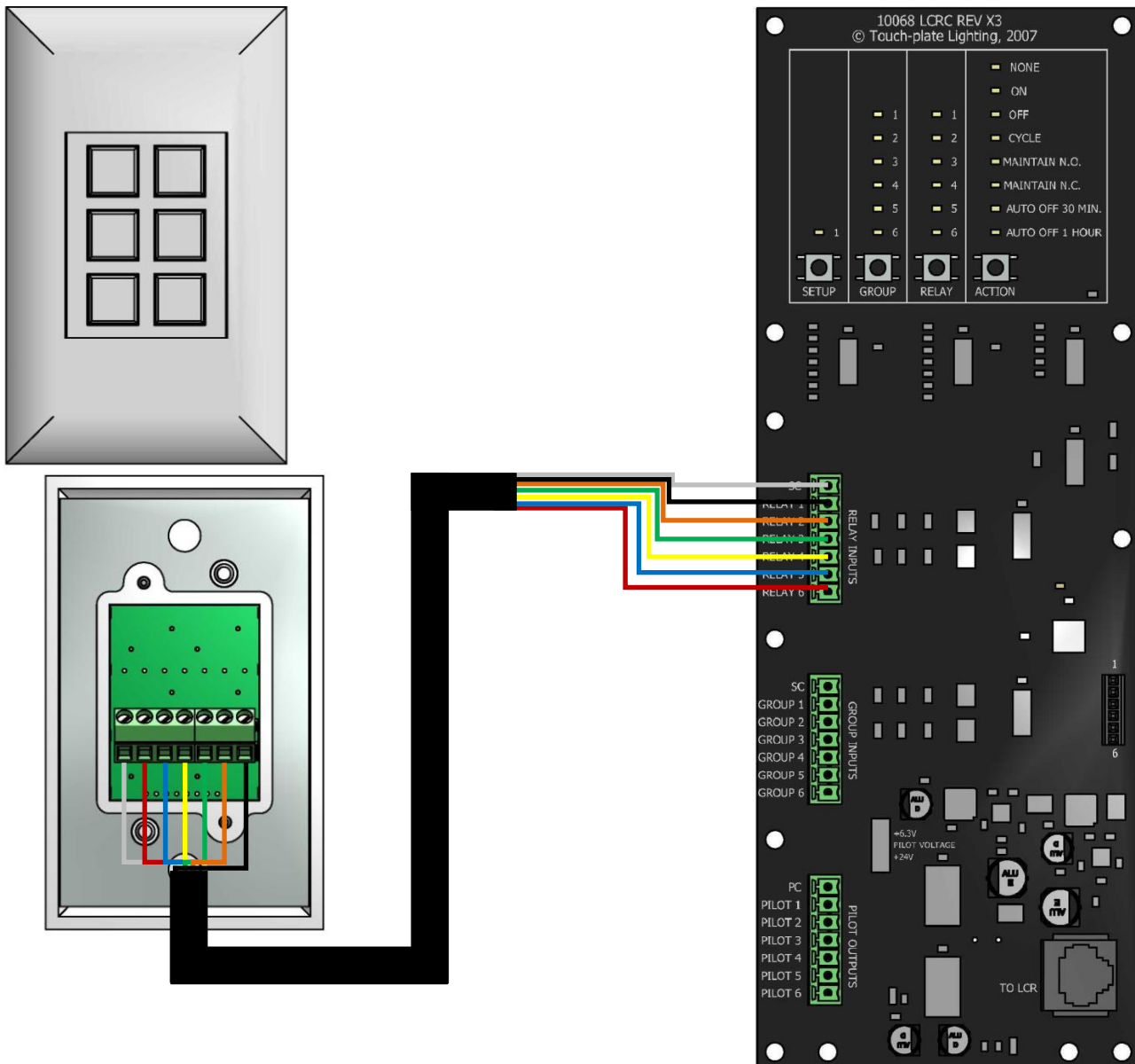
- Descending order is used for the Control Station Inputs

This diagram indicates how a Control Station should be wired to the ZoneZ-S

Wiring Instructions

1. Control Station Input Wiring

- The wire from the switch block position 1 is landed to the position labeled Relay 1
- The wire from the switch block position 2 is landed to the position labeled Relay 2
- The wire from the switch block position 3 is landed to the position labeled Relay 3
- The wire from the switch block position 4 is landed to the position labeled Relay 4
- The wire from the switch block position 5 is landed to the position labeled Relay 5
- The wire from the switch block position 6 is landed to the position labeled Relay 6
- The wire from the switch block position SC is landed to the position labeled SC



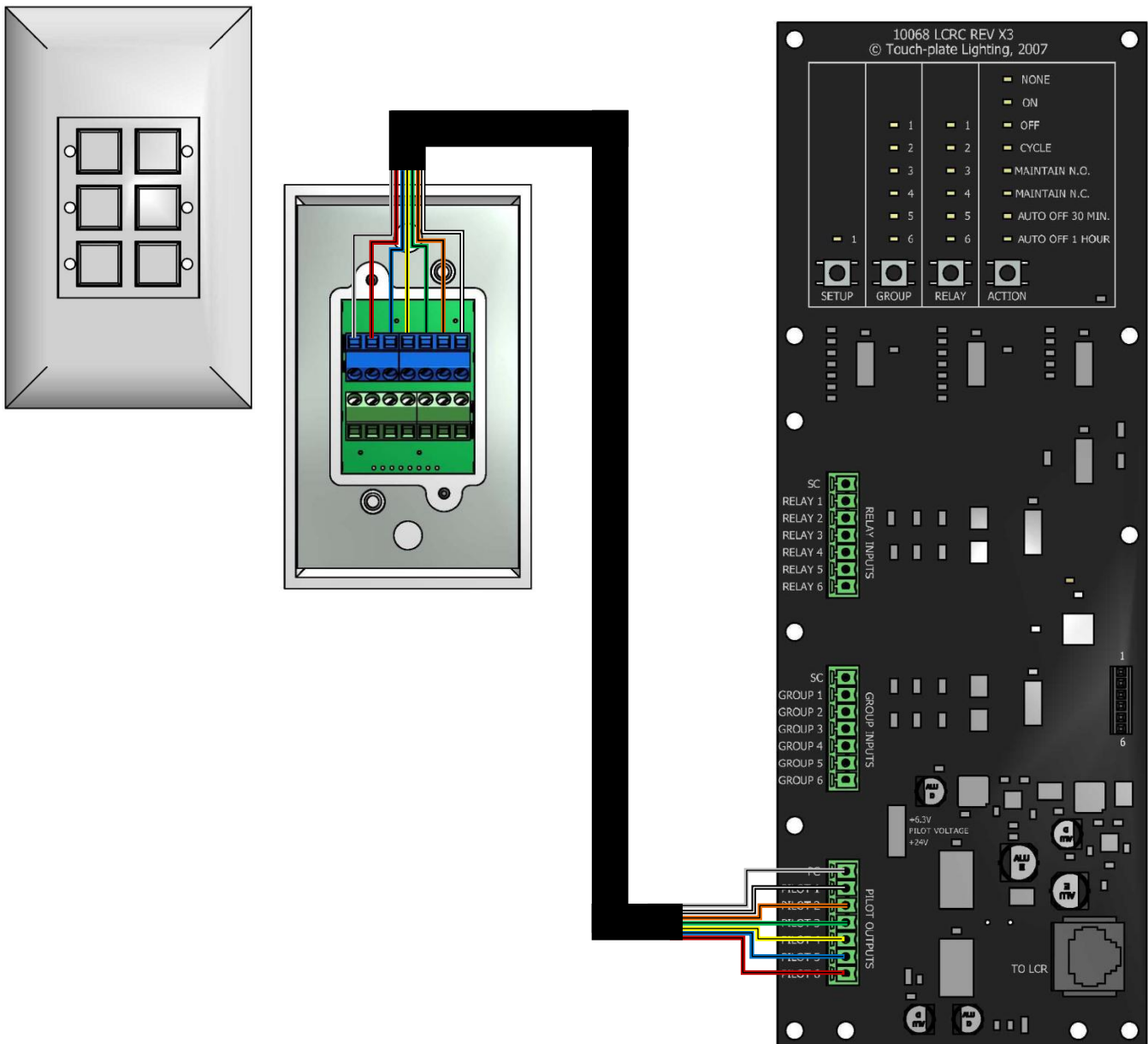
ZoneZ-S Control Station Wiring (LED Outputs Only)

- Descending order is used for the LED Outputs
- LED Outputs are also wired the following way when using the Grouping feature

This diagram indicates how a Control Station (LED Outputs only) should be wired to the ZoneZ-S Wiring Instructions

1. LED Output Wiring

- The wire from the pilot block position 1 is landed to the position labeled Pilot 1
- The wire from the pilot block position 2 is landed to the position labeled Pilot 2
- The wire from the pilot block position 3 is landed to the position labeled Pilot 3
- The wire from the pilot block position 4 is landed to the position labeled Pilot 4
- The wire from the pilot block position 5 is landed to the position labeled Pilot 5
- The wire from the pilot block position 6 is landed to the position labeled Pilot 6
- The wire from the pilot block position PC is landed to the position labeled PC



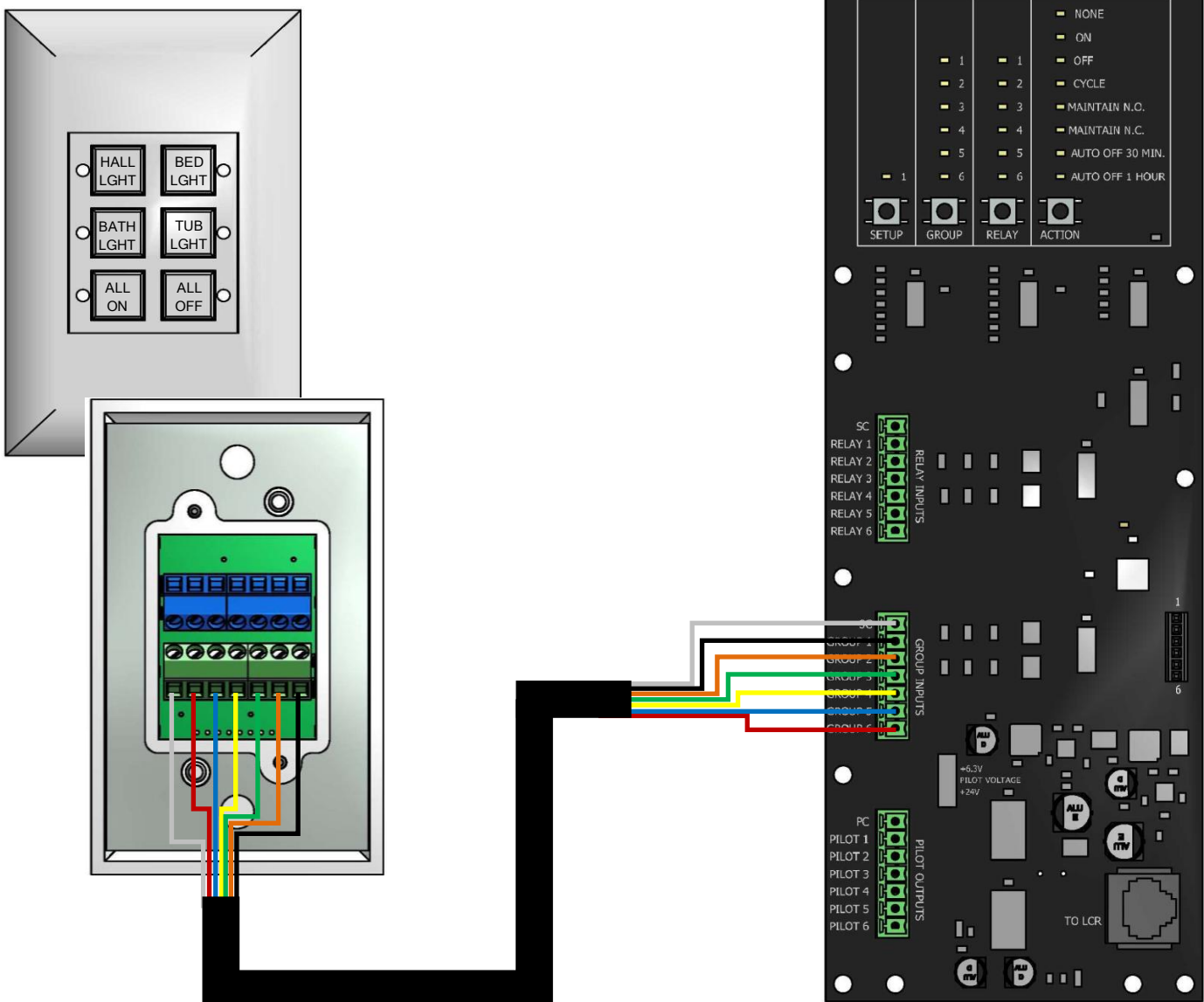
ZoneZ-S Control Station Wiring (Grouping Only)

- Descending order is used for the Grouping Inputs
- Utilize this connector instead of the Control Station Input connector to enable Grouping control
- Programming will need to take place when using Grouping Inputs; see pages 9-11 for information

This diagram indicates how a Control Station (Grouping Inputs only) should be wired to the ZoneZ-S Wiring Instructions

1. Grouping Input Wiring

- The wire from the switch block position 1 is landed to the position labeled Group 1
- The wire from the switch block position 2 is landed to the position labeled Group 2
- The wire from the switch block position 3 is landed to the position labeled Group 3
- The wire from the switch block position 4 is landed to the position labeled Group 4
- The wire from the switch block position 5 is landed to the position labeled Group 5
- The wire from the switch block position 6 is landed to the position labeled Group 6
- The wire from the switch block position PC is landed to the position labeled SC



Programming Keypad Guide

Grouping programming takes place directly on the ZoneZ-S; there is no need for a Master Controller. If the Grouping Inputs are not being used, no programming needs to take place.



Setup

- When the Setup button is pressed once, the Setup Button will light up the LEDs on the ZoneZ-S, which indicates that programming can begin taking place
- When the Setup button is pressed twice, the Group button LED will light up, indicating that LED programming can begin taking place
- When the Setup button is pressed and held, a hard reset of the programming will take place

Group

- This is to select the Input (Control Station Button) that is being programmed

Relay

- This is to select the Relay(s) that are being programmed
- If multiple Relays are being controlled from a single button, each Relay has to have an Action defined before moving on to the next Relay in the Group

Action

- This is to select the Action that is to be performed by the Relay upon the press of a button
- Use the following table for Action Definitions
- If using Maintain N.O. or Maintain N.C. and multiple Inputs are controlling the same Relay, the Maintain option can override other programmed Actions

ACTION	DEFINITION
NONE	Nothing will occur – the Relay will not do anything
ON	The relay will turn ON
OFF	The relay will turn OFF
CYCLE	Normal Function – Turns ON and OFF when the button is pressed
MAINTAIN N.O.	The relay will be Normally Open – Typical for a Motion Sensor
MAINTAIN N.C.	The relay will be Normally Closed – Typical for an Emergency Sensor
AUTO OFF 30 MIN.	The relay will turn OFF after 30 minutes
AUTO OFF 1 HOUR	The relay will turn OFF after 1 hour

Programming Grouping Functions

- Power needs to be brought to the system before programming can take place
- Each Control Station button's Action needs to be determined before programming
- Up to six (6) Groups can be programmed per ZoneZ-S

The following indicates how to program the Grouping function on the ZoneZ-S

Programming Instructions

1. Press the SETUP button once and the LEDs at the top of the ZoneZ-S will light up

SETUP Button



2. Select the Input to be programmed by pressing the GROUP button

- a. Press the GROUP button multiple times to scroll through each of the Inputs

GROUP Button



3. Select the Relay(s) that are to be controlled by pressing the RELAY button

- a. Press the RELAY button multiple times to scroll through each of the Inputs

RELAY Button



4. Select the Action that is to be performed by pressing the ACTION button

- a. Press the ACTION button multiple times to scroll through each of the Actions

ACTION Button



5. Move to the next Group (Control Station Button) by pressing the GROUP button

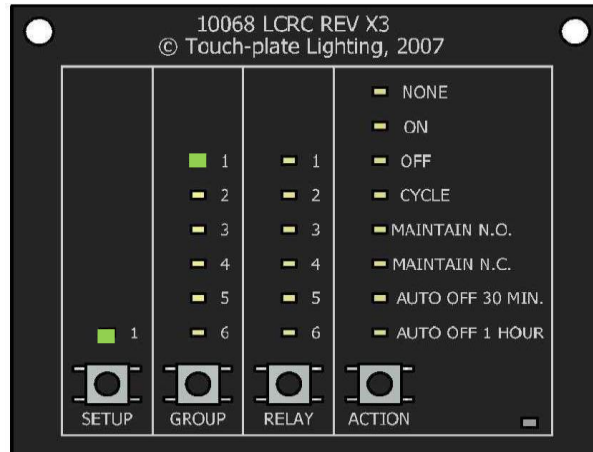
Programming LEDs with Group Functions

- Power needs to be brought to the system before programming can take place

The following indicates how to program the LEDs with Grouping function on the ZoneZ-S

Programming Instructions

1. Press the SETUP button twice and the LED at the top of the Group section will light up



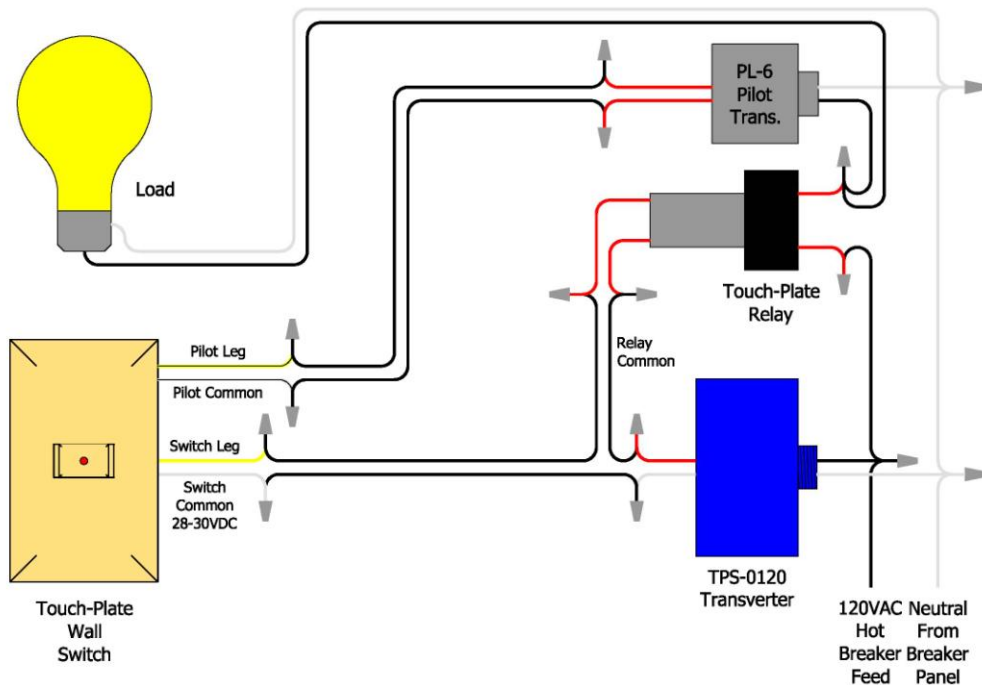
2. Press the GROUP button to select the LED desired to turn ON with each Group
 - a. Each Group is done separately and each LED is set separately
 - b. Press the GROUP button multiple times to scroll through each of the LEDs

Retrofitting an Existing Touch-Plate[®] System with Pilot Lights

- TO RETROFIT A TOUCHPLATE SYSTEM, MAKE SURE THAT THE ENTIRE SYSTEM IS BEING UPDATED.
- BE SURE TO TURN OFF POWER AT THE CIRCUIT BREAKER BEFORE DOING ANYTHING.
- BE SURE TO DISCONNECT & REPLACE ANY EXISTING CONTROL STATION THAT HAVE PILOT LIGHTS BEFORE BRINGING POWER TO THE UPDATED RELAY PANEL.

This diagram indicates how to label, disconnect, and remove existing Touch-Plate components

1. Label the following wires– VERY IMPORTANT AND VITAL FOR A SUCCESSFUL INSTALLATION
 - a. LV Switch Leg – wire from the Control Station to the Relay (1550/2500/3000/4000)
 - b. Common – wire from the Control Station to the Transverter (TVR-1/TPS-0120)
 - c. Common – wire from the Control Station to the Pilot Light Transverter (PL-6/TPS-2001)
 - d. Breaker – wire from the Breaker to the Transverter (TVR-1/TPS-0120)
 - e. Line Voltage Switch Leg – wire from the Breaker to the Lighting Load



2. Disconnect the Transverter (TVR-1 / TPS-0120)
3. Disconnect the Line Voltage from the relay (2 wires from the base of each relay)
 - a. Many times the 'Hot' wires are together
4. Disconnect the Low Voltage from the relay (Red and Brown wire from the coil)
5. Disconnect the Pilot Light Transverter from the Lighting Load and the Control Station(s)
 - a. The line voltage wires connected to the Pilot Light Transverter(s) are no longer needed
6. Remove the enclosure with all Relays, Transverter, and Pilot Light Transverter(s) disconnected
 - a. If re-using the enclosure, only remove the Relays and Transverter

Frequently Asked Questions

1. Why are there so many 'HOTS' and what are 'jumpers'?
 - a. There are many 'HOTS' so power can be fed to all relays on the relay board without using wire nuts. Touchplate desires to make the installation as neat and orderly as possible. Power is fed to all 6 relays via the 'jumpers'. 'Jumpers' are metal inserts that jump the previous 'HOT' to the next 'HOT'.

2. What is Grouping?
 - a. Grouping allows for one (1) button on a Control Station to control multiple relays.
 - i. Example: In most bathrooms there are lights above the sink and above the shower. If both lights are desired to be turned on at the same time with the push of a single button, Grouping provides this.

3. What is 'Pilot Voltage'?
 - a. Pilot Voltage is preset by the factory to ensure that the correct voltage is going to the LEDs on any Control Stations in the home.

4. Are the Switch / Pilot Inputs dry contacts?
 - a. Yes, the Switch / Pilot inputs are dry contacts. Common outputs put out voltage.

5. Can I update just one part of my Touch-Plate System?
 - a. There are several reasons why the existing Touch-Plate system must be replaced entirely. The key reason is due to how the wiring was originally run. Many, if not all, of the fixtures and switches will share the same common wires. The newer systems have transformers that operate on a slightly different voltage. The existing Touch-Plate systems operated on 28 VDC. The newer Touch-Plate systems operate on 24 VDC. Since the commons throughout the home or building are shared, both a 24 VDC and a 28 VDC signal will be sent and this will cause confusion between the two systems. They are not able to work with one another. If connected together, each system is vulnerable to damage from the other. The only way a Touch-Plate system can be upgraded partially is if there are two or more panel locations, each with its own power supply. If a relay panel is completely stand-alone, it can be replaced as it does not share any common wires with other panels.

6. How can switch commons be tracked during a retrofit?
 - a. If the Transverter is still present, the Switch Common wire will have a positive 28 – 31VDC reading. Another way to track the commons is to unscrew a Control Station from the wall and look at what color wire is used for the common. If it is not obvious from the above methods, use a ringer (tone generator and receiver) and tone out the common.