

# WHELEN<sup>®</sup>

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## Installation Guide: PCCS9N Power Control Center

# Automotive: Sirens/Switches

### Safety First

This document provides all the necessary information to allow your Whelen product to be properly and safely installed. Before beginning the installation and/or operation of your new product, the installation technician and operator must read this manual completely. Important information is contained herein that could prevent serious injury or damage.

- **Proper installation of this product requires the installer to have a good understanding of automotive electronics, systems and procedures.**
- **If mounting this product requires drilling holes, the installer MUST be sure that no vehicle components or other vital parts could be damaged by the drilling process. Check both sides of the mounting surface before drilling begins. Also de-burr any holes and remove any metal shards or remnants. Install grommets into all wire passage holes.**
- **If this product is mounted with tape or Velcro™, clean the mounting surface with a 50/50 mix of isopropyl alcohol and water and dry thoroughly.**
- **Do not install this product or route any wires in the deployment area of your air bag. Equipment mounted or located in the air bag deployment area will damage or reduce the effectiveness of the air bag, or become a projectile that could cause serious personal injury or death. Refer to your vehicle owners manual for the air bag deployment area. The User/Installer assumes full responsibility to determine proper mounting location, based on providing ultimate safety to all passengers inside the vehicle.**
- **For this product to operate at optimum efficiency, a good electrical connection to chassis ground must be made. The recommended procedure requires the product ground wire to be connected directly to the NEGATIVE (-) battery post.**
- **If this product uses a remote device to activate or control this product, make sure that this control is located in an area that allows both the vehicle and the control to be operated safely in any driving condition.**
- **Do not attempt to activate or control this device in a hazardous driving situation.**
- **It is recommended that these instructions be stored in a safe place and referred to when performing maintenance and/or reinstallation of this product.**
- **FAILURE TO FOLLOW THESE SAFETY PRECAUTIONS AND INSTRUCTIONS COULD RESULT IN DAMAGE TO THE PRODUCT OR VEHICLE AND/OR SERIOUS INJURY TO YOU AND YOUR PASSENGERS!**

## **WARNING!**

**DISCONNECTING THE VEHICLE BRAKE LAMP CIRCUIT USING ANY SIRENS WITH RELAY OUTPUTS OR SWITCH CONTROLLERS COULD CAUSE VEHICLE OR PROPERTY DAMAGE, SERIOUS INJURY OR EVEN DEATH.**

**DISABLING THIS CIRCUIT IS A VIOLATION OF THE FEDERAL MOTOR VEHICLE SAFETY STANDARD FOR THE THIRD BRAKE LIGHT, AS WELL AS REAR BRAKE LIGHTS.**

**FUNCTIONS THAT BLACK OUT THE REAR BRAKE LIGHTS (SOMETIMES CALLED “BRAKE LIGHT CUT OUT”) MAY INTERFERE WITH THE BRAKE SHIFT LOCK MECHANISM, AND CAUSE THE VEHICLE TO MOVE UNEXPECTEDLY AND DANGEROUSLY.**

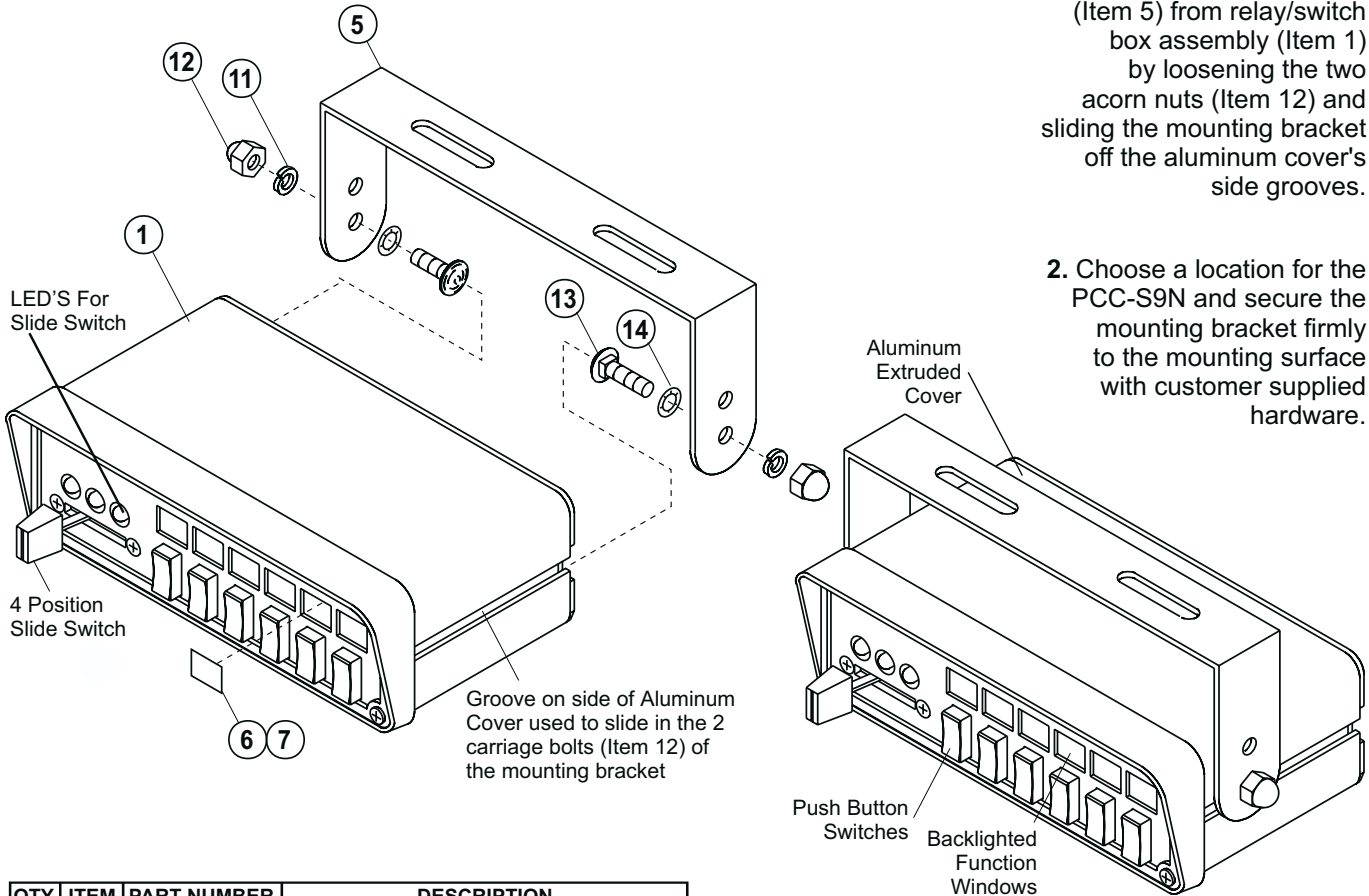
**DISCONNECTING THE BRAKE LIGHTS IN ANY WAY IS AT YOUR OWN RISK AND IS NOT RECOMMENDED BY WHELEN.**

The Model PCC-S9N Power Control Center is designed exclusively to control Whelen Models 9000 and ADVANTAGE Series Lightbars equipped with a Relay Matrix Board.

## INSTALLATION RECOMMENDATIONS

1. Remove Mounting Bracket (Item 5) from relay/switch box assembly (Item 1) by loosening the two acorn nuts (Item 12) and sliding the mounting bracket off the aluminum cover's side grooves.

2. Choose a location for the PCC-S9N and secure the mounting bracket firmly to the mounting surface with customer supplied hardware.



QTY.	ITEM	PART NUMBER	DESCRIPTION
-	-	01-0881326-00	FINAL ASSEMBLY
1	1	01-0285547-00	RELAY/SWITCH BOX ASSEMBLY
1	-	10-0121114-01	LABEL, SERIAL NUMBER
1	-	10-0320776-00	LABEL, MADE IN THE U.S.A., FLAG
1	4	01-0481326-00	INSTALLATION KIT PCC-S9N
REF	5	07-241559-000	MOUNTING BRACKET, S9N
REF	6	10-0340730-01	LABEL, FUNCTION (W/ WHITE LETTERS)
REF	7	10-0340731-01	LABEL, FUNCTION (W/ WHITE LETTERS)
REF	8	46-0725500-00	POWER INPUT PIGTAIL KIT
REF	9	46-0725628-00	CONN. ASSY. MODEL PCDS9N
REF	11	16-1031060-04	#10 SPLIT LOCKWASHER
REF	12	13-104320-120	#10-24 ACORN NUT S/S
REF	13	14-104069-080	#10-24 X 1/2" CARRIAGE BOLT
REF	14	16-1011320-20	WASHER, #10 EXTERNAL TOOTH SS

PART OF ITEM 4

PART OF ITEM 4

**NOTE:**  
The Mounting Bracket may be installed in any position, as long as the relay/switch box assembly can slide in and out from the mounting bracket, and all switches are easily accessible.

3. Wire the unit (See Pg. 2) and slide the unit into position inside the mounting bracket. Finally, tighten the two acorn nuts (Item 12) located on each side of the PCC-S9N

## I: INTRODUCTION

The PCC-S9N is designed to operate any EDGE 9000® or ADVANTEDGE® lightbar if equipped with an internal relay/matrix board. In addition to controlling lightbar functions, the PCC-S9N has a siren turn-on feature. This feature gives the operator true single lever control over both primary warning light and siren functions on slide switch position 3 (See pages 3 and 4). The PCC-S9N is designed to operate on a 12 volt D.C. vehicular electrical system.

## II: MOUNTING

(Also, pg. 1) When choosing a mounting location for the PCC-S9N consider the following: The PCC-S9N should be located so that the driver can operate the controls without taking his eyes off the road. Interconnecting cables should be easily accessible to facilitate installation. The PCC-S9N is supplied with a universal mounting bracket that may be attached either above or below the switch housing. Determine which holes in the mounting bracket are to be used, then loosely assemble the bracket and bracket hardware (See page 1). Slide the head of the carriage bolt into the slot in the side of the switch housing. Position the PCC-S9N in the desired mounting location and trace the outline of the mounting bracket. Remove the mounting bracket from the switch housing. Align the mounting bracket with the outline traced in the previous step, and trace the outline of the mounting slots. Positioning the mounting hardware (customer supplied) in the center of each mounting slot, for maximum side to side adjustment. Attach mounting bracket, and when in position tighten the acorn nuts.

## III: WIRING.

The PCC-S9N is supplied with two wire harnesses exiting the rear of the switch housing. Before attempting any wiring, make sure all switches are in the "OFF" position. The slide switch must be in the full left position and all push buttons must be in fully extended position.

**A.** The nine wire harness is designed to plug directly into the end of an EDGE® or ADVANTEDGE® lightbar cable equipped with a mating connector. If retro-fitting a lightbar not supplied with a mating connector, crimp AMP pins (Whelen part number 39-0501316-04) on the wire ends and insert them into an AMP nine pin connector (Whelen part number 39-0409313-04). Make sure the wire colors match up when the connectors are mated.

**B.** The four wire harness from the switch housing has a mating harness supplied in kit form. The loose black/white wire and the white/green wire should only be inserted into the connector if their functions are used (see page 3).

1. The black/white wire is the +12 VDC (positive) output from push button switch #6 and is rated at 250 mA. An

external relay (not supplied) is recommended for the use of this circuit. If you wish to use this feature, insert the loose black/white wire into the connector in position #4. For ON-OFF operation use Bosch relay 0 332 014 150 (Whelen part number 30-1712001-08) or equivalent. For HORN/SIREN operation use Bosch relay 0 332 204 150 (Whelen part number 30-2612021-08) or equivalent. (Pg. 3 wiring)

2. The supplied white/green wire assembly is an auxiliary output from the slide switch position #3 (red led indicator). Its purpose, when connected to a Whelen siren amplifier, is to turn on both the siren and a primary warning light function when the slide switch is operated in position #3. The siren tone is determined by the setting of the siren function control knob. Refer to your siren amplifier's installation manual to learn how to utilize this feature.

3. Connect the black wire to a good electrical ground (NEGATIVE).

4. The red wire is the power feed for switches 2 through 7, as well as the red/green led indicators for these switches. This wire should be connected to the vehicle fuse block "ACCESSORY OUTLET". This circuit is fused on the relay board at 5 amps with fuse F1. (See page 5). Failure to use the "ACCESSORY OUTLET" will cause the led indicators to remain on, and drain the vehicle battery.

## IV: OPERATION

With all electrical connections made, and the vehicle accessory outlet "ON", the PCC-S9N will display the following characteristics: Slide switch LED indicators will be off, and green LED indicators will be lit behind the function windows located above the push button switches. As the slide switch is moved progressively to the right, the green, yellow and red LED indicators will turn on in sequence, as well as the corresponding lightbar functions. As each push button switch is depressed, the green LED indicator will change to red and the corresponding lightbar function will turn on.

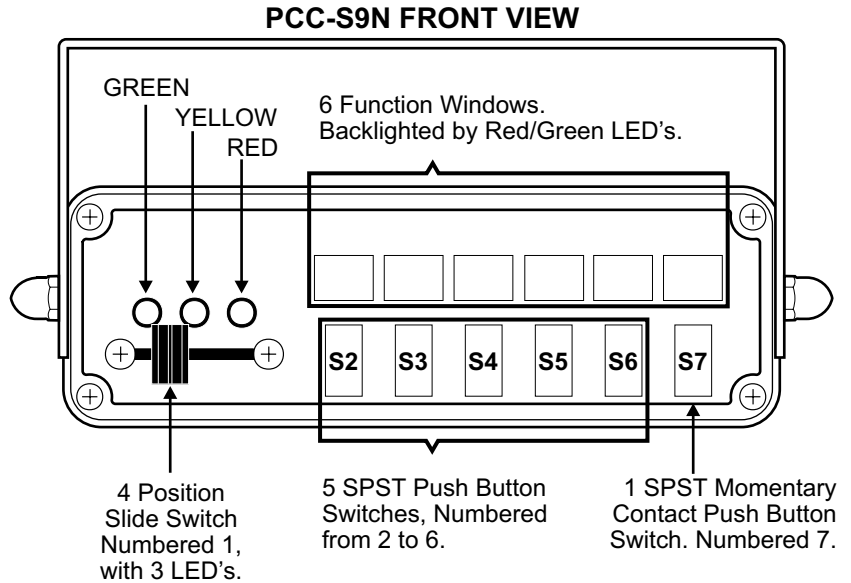
**NOTE:** Switch #7 is a momentary contact switch for strobe low power, and will work only if the lightbar strobe lights are operating. Switch #7 will display a red indicator only while pressed in, however the strobe lights will operate in low power until the power to the strobe lights is turned off. Turning the strobe lights off and then on, will reset the high power function.

## V: FUNCTION LABELS:

The PCC-S9N is supplied with an assortment of commonly used function labels. Verify the function of each switch. Peel the labels from the backing sheet and stick on the front of the appropriate switch function window.

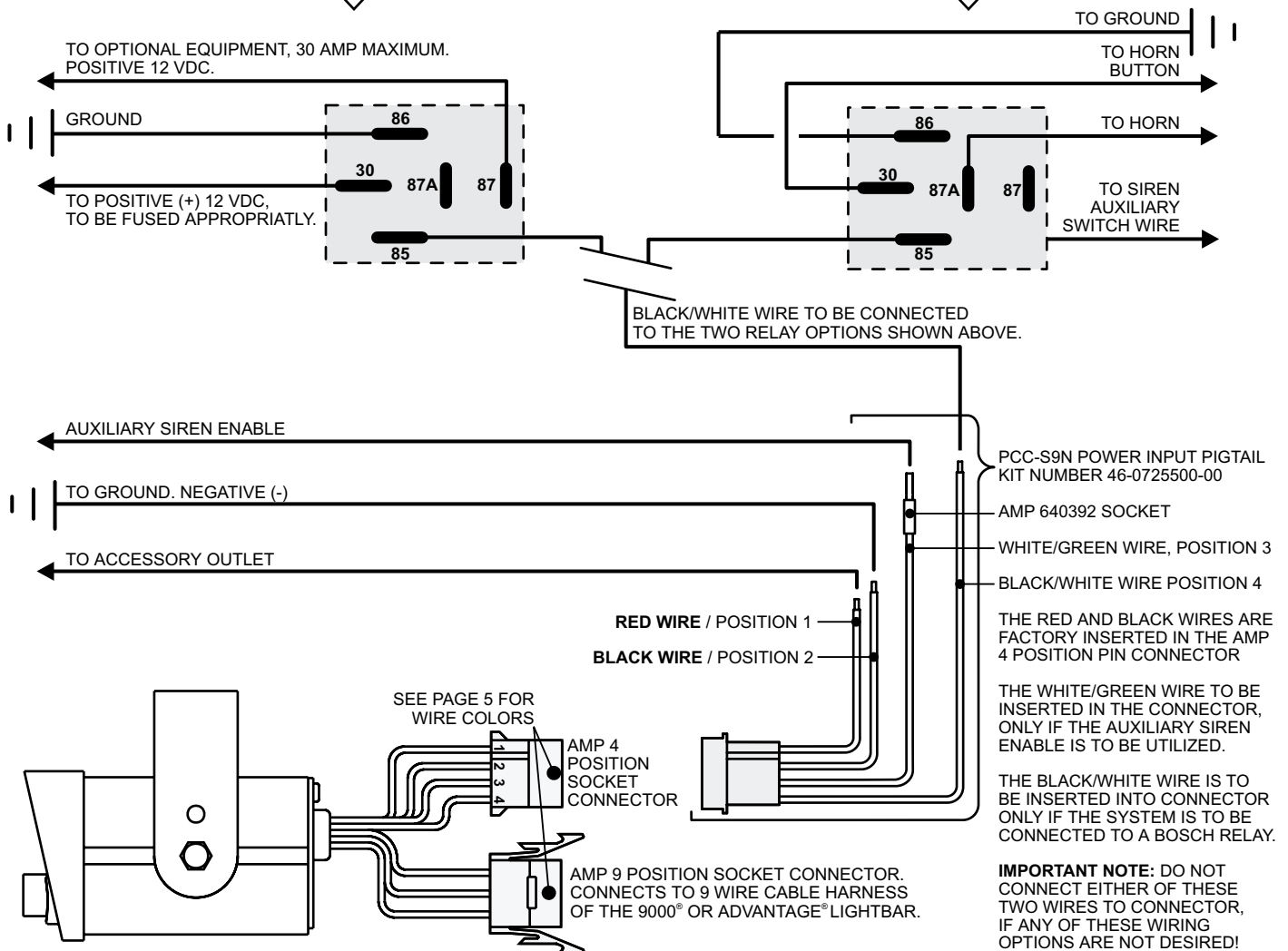
# WIRING for the PPC-S9N POWER CONTROL CENTER with CONTROL OPTIONS

Whelen Engineering recommends you return the PPC-S9N Power Control Center to our Repair and Service Department if it malfunctions. The slide switch and the six push button switches are protected by two separate 5 amp fuses soldered into position on the PC board, F1 and F2 (See Pg. 5). Unauthorized field repairs and/or the substitution of original parts with unauthorized repair parts, may cause further damage and *VOID THE WARRANTY*.



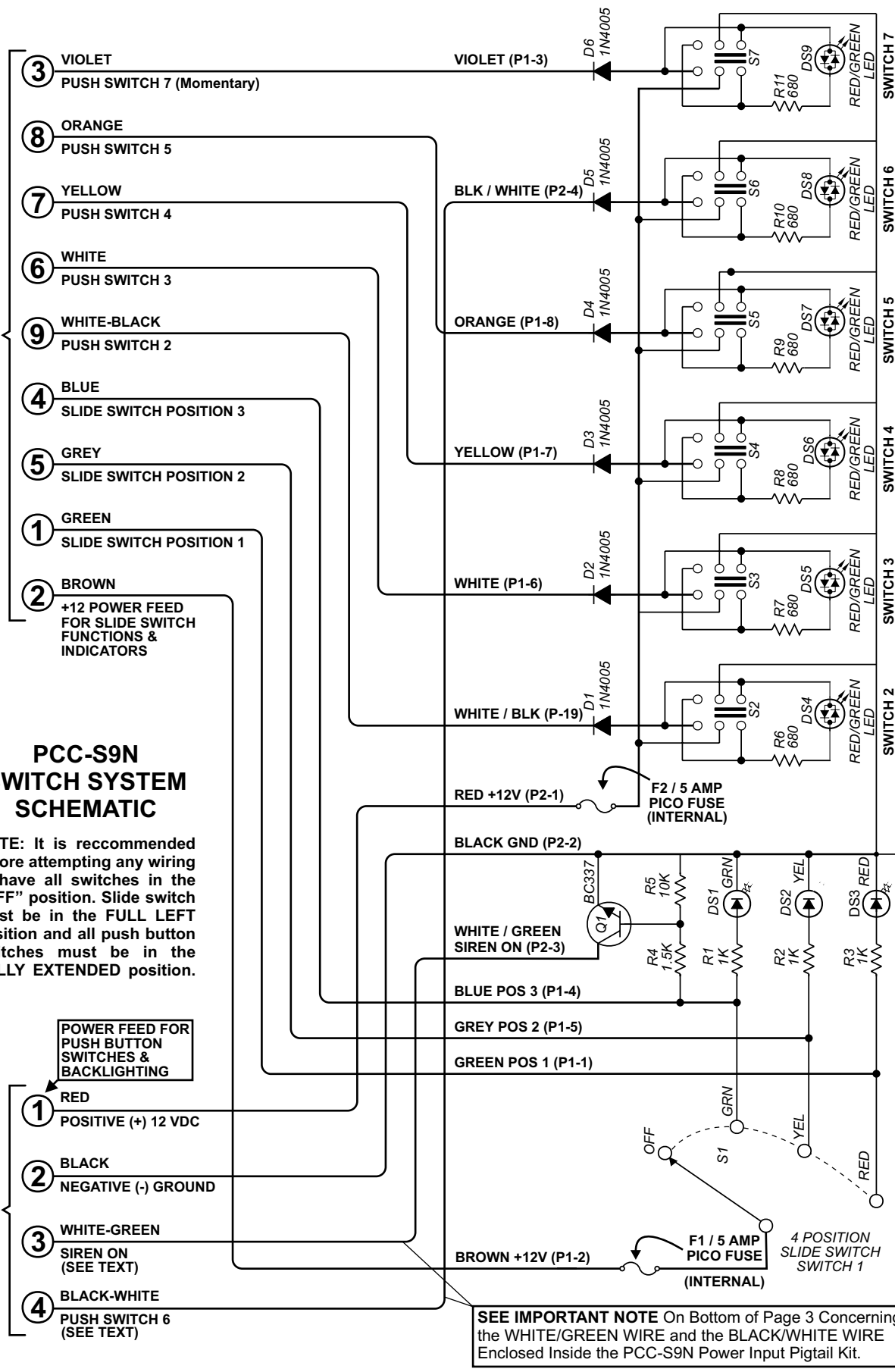
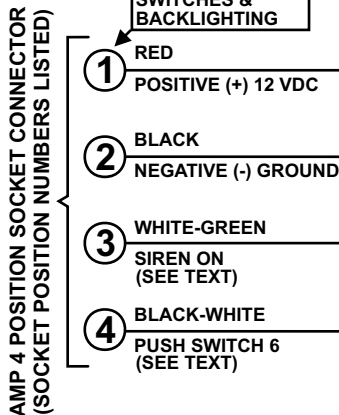
**CONTROL OPTION "A"** SPDT BOSCH RELAY, PART # 0332 014 150  
BLACK/WHITE WIRE IS USED FOR ON-OFF OPERATION.  
CONTROLLED BY SWITCH #6.

**CONTROL OPTION "B"** SPDT BOSCH RELAY, PART # 0332 204 150  
BLACK/WHITE WIRE IS USED FOR HORN/SIREN OPERATION.  
CONTROLLED BY SWITCH #6.



## PCC-S9N SWITCH SYSTEM SCHEMATIC

NOTE: It is recommended before attempting any wiring to have all switches in the "OFF" position. Slide switch must be in the FULL LEFT position and all push button switches must be in the FULLY EXTENDED position.



6 RED/GREEN LEDs LOCATED BEHIND THE FUNCTION WINDOWS, ON THE FACE PLATE OF THE UNIT, ABOVE THE 6 SPST PUSH BUTTON SWITCHES.

NOTE: UNLESS OTHERWISE SPECIFIED, RESISTORS ARE IN OHMS, 1/4W +/- 5%.

3 LEDS LOCATED ABOVE THE 4 POSITION SLIDE SWITCH

SEE IMPORTANT NOTE On Bottom of Page 3 Concerning the WHITE/GREEN WIRE and the BLACK/WHITE WIRE Enclosed Inside the PCC-S9N Power Input Pigtail Kit.