



SP8100 8-Switch Programmable Switch Panel Power System

Parts Included

1	Switch Panel	1	100 amp Power Module
1	Power Module Harness	1	Power Module Mounting Plate
1	Battery Cable w/100A MIDI fuse (Littlefuse Pt.#0498100)	2	Nut w/nylon insert, M6
1	Stainless Mounting Bracket	2	Screw, M6x20
2	Screw, M4x10	2	Nut, M6
4	Washer, M4	1	Red Butt Splice (heat shrinkable)
2	Nut w/nylon insert, M4	1	Tap-a-circuit w/fuse
2	Screw, M4x16	1	Yellow Butt Splice (heat shrinkable)
4	Nut with locking washer, M4	9	Blue Butt Splices (heat shrinkable)
2	Screw, M5x10	1	Each, Red, Blue and Yellow t-taps
2	Nut w/nylon insert, M5	2	Red t-tap Blade Connector
2	Nut w/locking washer, M5	1	Programming Instruction Card
2	Washer, M5	2	Piece Nylon Sleeving
1	Switch Legend Sheet	1	Blue Ignition Wire with TIPM terminal
10	Zip Ties		

Installation

1. Identify which accessories you will be powering with your Switch Panel Power System. Remember that Switches 1-7 are limited to 18 amps, and Switch 8 is limited to 30 amps. Therefore, the accessory with the largest draw should be connected to Switch 8 (lower right corner). Ignition Input, 12V, turns on backlighting and enables ignition programmed switches. Lights input turns on backlighting (dims backlighting, if ignition is on). See panel diagram below for switch numbering. **DO NOT USE THE SP8100 TO CONTROL A WINCH. USE THE WINCH MANUFACTURER'S SUPPLIED DEVICE.**

Switch 1	Switch 3	Switch 5	Switch 7
Switch 2	Switch 4	Switch 6	Switch 8

2. Once your outputs are determined, select the appropriate legends from the Switch Legends sheet, and affix them to the panel. NOTE: The legends are made of polycarbonate and have an industrial grade adhesive backing, making them very difficult to move once adhered. Therefore, it is critical that you center each legend within the embossed rim of each switch when attaching. *Should you need to remove a legend, we suggest you use a straight pin and lift at the upper corner until you can grasp it with your fingers. DO NOT dig at the graphic overlay, as the membrane could be damaged.*

You are now ready to install your hardware. **DO NOT CONNECT POWER TO THE POWER MODULE UNTIL THE 16 PIN CONNECTOR IS PLUGGED INTO THE MODULE AND THE GROUND WIRE IS CONNECTED!**

3. **FOR YOUR SAFETY**, disconnect the negative battery lead from the vehicle's battery before proceeding with installation, and to avoid damage to the electrical system!
4. Attach Power Module to mounting plate, using 2 M4 screws and 2 M4 nuts with locking washer (Figures 1&2) NOTE: on Jeep JK, nuts must be placed on the front of the PM, due to limited clearance on the back side. Other vehicles can have the nut attached on the back side.

Figure 1



Figure 2



5. For Jeep JK, remove plastic 'stud covers' (which are attached to the wire loom running along back wall of engine compartment). Place Mounting Plate/Power Module assembly onto factory wire harness studs, and secure with M6 Nuts with nylon inserts (Figure 3). Place the factory plastic 'stud covers' over the mounting plate studs (Figure 4). All other vehicles can mount the Power Module in any desired place.



Figure 3



Figure 4

6. Next, locate the **Black wire** on the harness with the 16 pin connector. This is your ground wire, and should be connected to the negative terminal on the battery (preferred method), or a nearby ground stud. Plug the 16 pin connector into the connector on the face of the power module. **THIS MUST BE DONE BEFORE CONNECTING POWER TO POWER MODULE!!**
7. Connect the **Yellow wire** light signal input. First, determine where you will get your Light input signal. For Jeep JK, use the white wire with green stripe, which comes from the fender side marker light (instructions for an alternate method are included on pages 4-5 of instruction packet). For all other vehicles, your signal should come from a Parking light or Side marker light signal. Cut the wire to appropriate length, and crimp the supplied red blade connector to the end. Next, attach the supplied red t-tap to the light source wire, and connect the blade connector to the t-tap. **DO NOT use headlights as your light signal source!**
8. Connect the **Blue wire** for the ignition sense signal. This can be any signal that supplies a 12 volt signal when the ignition is on. Switched Accessory outlet signals will also work. We have included a Fuse Tap-A-Circuit for most installations.

For 2007 and newer Jeeps, see pages 4-5 for directions.

9. For Jeep JK, route the Switch Panel harness (4 wires, in expandable nylon sleeve, with 4 pin connector) through the fire-wall pass-through on DRIVER'S SIDE and into the cab to the location where the Switch Panel will be mounted. NOTE: The PASSENGER'S SIDE pass through is not large enough for the connector to fit through. Then, plug the 4 pin female connector into the 4 pin male connector on the switch panel. For all other vehicles, there is typically a rubber plug or access hole on both sides of the engine compartment, which accesses the cab at the sides of the dashboard, and will accommodate the harness connector with out issue.
10. The remaining wires of the 16 pin connector harness, will connect to your outputs. See Figure 5 for diagram. See last page for the 16-pin output wiring diagram.

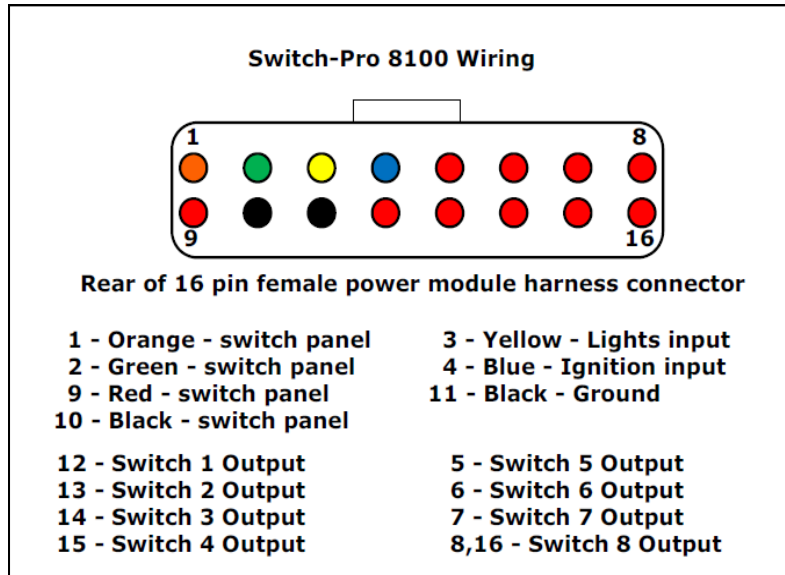


Figure 5

11. For outputs 1-7, use the supplied blue butt splices to connect to the positive side of your load. If utilizing the max amperage of 30 amps for one load on output 8, then tie wires 8 and 16 together using the supplied yellow butt splice. If using two loads (eg. Two separate lights), connect one light to wire 8 and one light to wire 16, using the supplied blue butt splices. Both yellow and blue butt splices are heat shrinkable. Use heat gun to shrink ends for a more secure fit. For all outputs, connect the ground for each load to either the negative terminal of the battery, or any ground stud on the vehicle. **THOUGH OUR SYSTEM DOES NOT REQUIRE RELAYS TO BE USED WHEN POWERING MOST ACCESSORIES, FOR ALL INDUCTIVE LOADS (e.g. air compressors, high current fuel pumps), WE RECOMMEND USING THE RELAY THAT IS EITHER BUILT IN OR SUPPLIED WITH THE ACCESSORY.**
12. Next, mount the Switch Panel in the desired location, using the supplied M4 screws. You may mount the panel directly to your dash, using the M4 screws and the mounting tabs on the panel enclosure. Or, you may want to use the stainless mounting bracket, included in your installation kit. If using the mounting bracket, use the supplied M4 screws and nuts to connect the switch panel to the bracket, and the M5 screws and nuts to mount the bracket to the mounting location.
13. Connecting the **Battery Cable**: Connect the 'long' end of the battery cable to the Power Module. This is the section of the cable which has a longer lead from the fuse to the end lug. Next, connect the 'shorter' end to the POSITIVE terminal on the vehicle's battery stud.

NOTE: NEVER disconnect the 16 pin connector while a load is switched on. This could cause damage to the module. If it is necessary to unplug the connector, disconnect the power cable from the battery first!

In the event that your SP810 system needs to be reset, you may do so in one of the following ways: Press the Programming button four times quickly; Unplug the switch panel four-pin connector harness from the power module harness; or Momentarily disconnect the battery cable from the battery, then reconnect.

Installation of your system is now complete, and you may begin the programming process. This can be done either directly from the Switch Panel, or by Bluetooth connection, using an Android device. Apple app is due out in Spring, 2015.

For programming directly from the Switch Panel, see page 6. For Bluetooth Programming steps, see page 7.

2007 and newer Jeep JK, Ignition and parking light wire connection procedure

There are three different ways to connect the blue ignition wire to an ignition source.

1. The first option is to use the supplied tap-a-fuse connector and tap fuse M6 or M7 in the fuse box (TIPM). Remove the M6 or M7 fuse and place it in the empty slot in the tap-a-fuse. Then insert the tap-a-fuse into the fuse slot. To exit the wire out of the fuse box we recommend drilling a small hole through the side of the enclosure by the power stud and then sealing the wire with silicon RTV. If using the M7 fuse, make sure the fuse is in the ACC position. See figure 1. on the next page.
 2. The second option is to use the supplied blue wire with the TIPM connector terminal. The blue wire with the terminal is inserted into the C6 connector at the M7 cavity, located at the bottom of the TIPM. **If your Jeep has a rear power outlet the empty cavity in the C6 connector will already have a wire in it.** Follow the direction below for this procedure.
 3. If the M7 fuse cavity in the connector is occupied, that wire can be tapped for the ignition/ACC signal. If using the M7 fuse, make sure the fuse is in the ACC position. See figure 1. The blue with pink stripe wire coming out of the C6 connector can also be tapped, it is for the power outlet # 1, fuse M6. It is always Ignition/ACC controlled.
- The yellow parking light wire can also be connected at this time to the white with brown stripe wire coming out of the green connector of the TIPM. This connection can also be made at the side fender marker light, at the white with green stripe wire. See figure 2. on the next page.
 - Disconnect the negative terminal of the battery before starting the procedure.



1. Lift up the TIPM by unlatching the 4 retaining clips, to gain access to the bottom connectors.



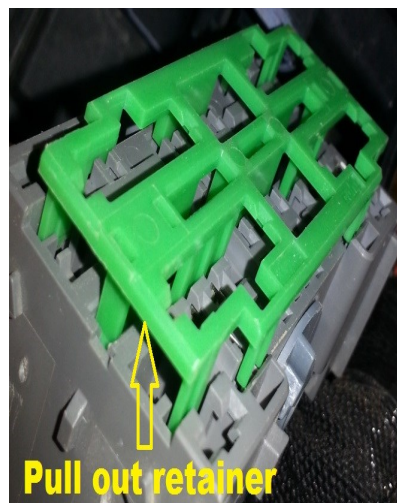
2. Locate C6



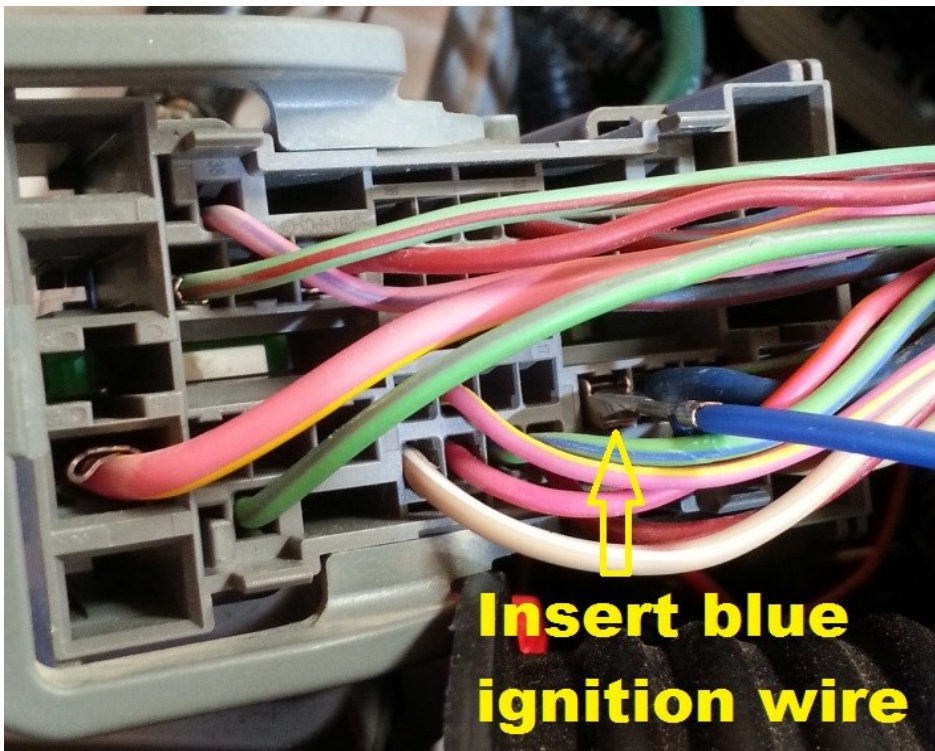
3. Release the lever.



4. Pull back on the lever and remove the connector.



5. With a small screwdriver lift up the green retainer to its stop.



6. Remove the connectors wire cover, then Insert the terminal on the blue wire into the empty cavity next to the large diameter blue wire as shown. Push the wire all the way in until it locks in place. Then push the green pin retainer back in place. Install the connector wire cover and then plug the C6 connector back into the TIPM.



Figure 1. Make sure that the M7 fuse is in the upper position as shown. This is for an accessory/ignition output. In the lower position the output is battery supply. We recommend using the lower amperage fuse that comes with the supplied fuse tap for M7, if inserting the AWG-18 blue wire into the empty cavity in the C6 connector.

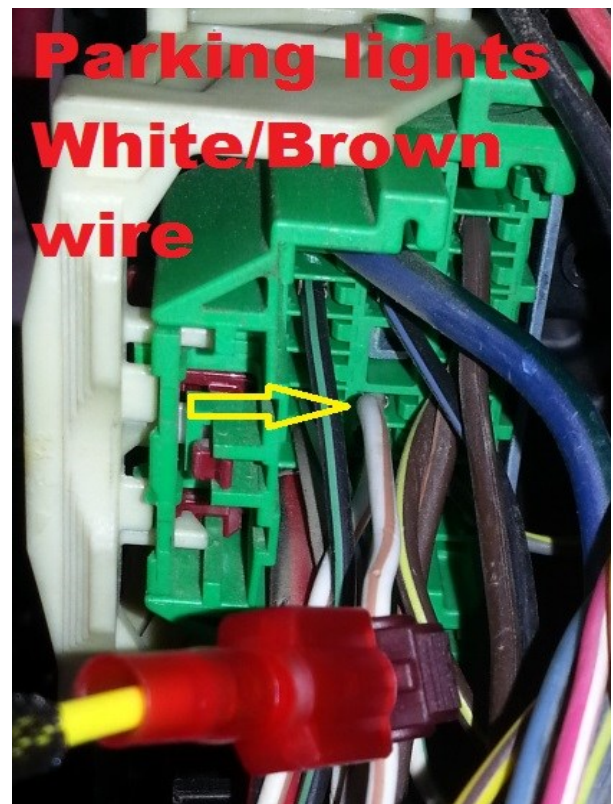


Figure 2. Locate the green connector at the bottom of the TIPM and connect the yellow parking light wire to the white with brown stripe wire using the supplied t-tap. This connection can also be made at the fender marker light, white wire with green stripe.

Programming Your SP8100 8-Switch Power Panel System

Locate the Switch-Pro logo on the face of the switch panel

1. Press and hold for 4 seconds to activate programming mode. The 1st flash indicates you are ready to select which switches should have a Momentary function. (Default for all switches is On/Off). Press Switch-Pro logo to continue programming process.
2. The 2nd flash indicates you are ready to select which switches should be Battery input. Any switch selected during this step will REMAIN ON, even when vehicle ignition is turned off. (Default for all switches is Ignition input, unless selected during this step). Press Switch-Pro logo to continue programming process.
3. The 3rd flash indicates you are ready to select which switches will have a Flash function. This will be used for lighting outputs. Any switch selected during this step will have a secondary Flash function when the switch is double tapped from the Off position. (Default for all switches is Off, or no flash function). Press Switch-Pro logo to continue programming process.
4. The 4th flash indicates you are ready to select which switches will have a Strobe function. This will be used for lighting outputs. Any switch selected during this step will have a secondary Strobe function when the switch is double tapped from the Off position. (Default for all switches is Off, or no Strobe function). Press Switch-Pro logo to continue programming process.
5. The 5th flash indicates you may override the Low Voltage Disconnect function, if desired. If left active, the system will monitor battery voltage and, if it senses voltage at 11.5 volts or lower for 60 seconds, it will shut down. If, after shut down, it sees the voltage raise to 12 volts for 60 seconds, the system is able to be powered on again. However, it will not turn back on automatically. To DISABLE this function, press Switch 7, located at the upper right corner of the panel. (Default for system is On). Press Switch-Pro logo to continue programming process.
6. The 6th flash indicates you are ready to select which switches will have a Memory function. Each switch selected during this step will “remember” to come back on each time the ignition input is sensed. (Default is Off).

Press the Switch-Pro logo to exit the programming process.

To adjust Night-time backlighting and LED indicator brightness:

1. Press the Switch-Pro logo 3 times quickly.
2. Switches 1 and 2 (upper and lower left corners) adjust the LED indicator brightness. Press Switch 1 (upper left) to increase brightness. Press Switch 2 (lower left) to decrease brightness.
3. Switches 7 and 8 (upper and lower right corners) adjust the backlighting brightness. Press Switch 7 to increase brightness. Press Switch 8 to decrease brightness.

Press Switch-Pro logo to exit the programming process.

NOTE: Backlighting and LED brightness is adjustable only for nighttime driving (when headlights are on), and is set at a standard level (nonadjustable) for daytime driving.

Programming Your SP-8100

Using The Bluetooth Function

The SP-8100 app will interface with Apple devices and Android devices running BLE and newer

1. Download the Switch-Pro SP8100 app from the Apple App or Google Play Store.
2. With Power Module connected to the vehicle battery AND with your Android device within communication range, open the app and press Scan For Local Devices. A window will pop up. Press Scan For Devices in that window. Select the listing that reads either NULL or SWITCH-PRO_XXXX. The app will load and establish connection to the Switch Panel. NOTE: On the primary screen, it is best to select Auto Connect and Reset BT Adapter on Connect
3. Once app is open, the Switch Panel is displayed and the blue light will illuminate on the switch panel. This is what you will see on your device screen:

Settings screen: This is where you will program switch functions. For Apple devices, this step is labeled Config Switches.

Set Dimming: This is where you will adjust the Backlighting for the Switches and the Indicator LEDs (for nighttime driving only, as daytime brightness is preset and not adjustable).

Set Switch Names: Tap each switch name to create names for your switches, based on your outputs. Use keyboard to type the switch name, using the space bar (not the return key) to add text for a second line. Your switch name should not exceed two lines.

Set Password: Your new system will come without a password programmed. We highly recommend creating a password (up to 12 characters long) in the programming screen, to avoid your system being activated without your approval.

Exit: To exit the programming function. This will return you to the Switch Panel command screen.

NOTE: The Bluetooth app allows you to program a **Master Switch**, which will control any/all of the other switches on the panel. (e.g. Switch 1 can be programmed to turn on Switch 1, Switch 2 and Switch 3 outputs). **This function is the last step in the Config Switches screen.**

ALSO NOTE: If there is a BT connection established, the Switch Panel in the vehicle will also be functional, regardless of Battery/Ignition Switch programming. This means that if you remove the keys from the vehicle, AND your Bluetooth device is still connected, ALL switches on the switch panel will function, even if they are programmed as Ignition input. If the Bluetooth device is disconnected, then the switches on the switch panel that are programmed for Ignition input will only function with the ignition on.

If Bluetooth connection is lost, or app is closed while outputs are on, outputs will remain ON.

NOTE: Always close the Programming mode on your Bluetooth device before leaving the vehicle location. Failure to do so will leave your SP8100 system searching for it, which will require you to reset your system, and repeat the programming steps.