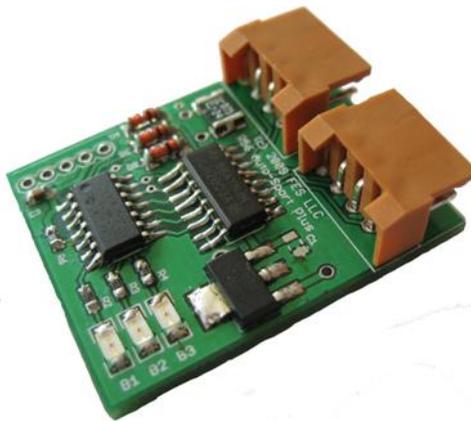




Auto Sportplus Circuit



Installation and Set-Up Guide

325 Sharon Park Blvd. #652

Menlo Park, CA 94025

(650) 241-1161

www.fes-auto.com

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CHAPTER 1 DISCLAIMER

USE AT YOUR OWN RISK - USE OF THE PRODUCT MIGHT NOT BE ALLOWED ON PUBLIC STREETS. IT'S THE USER'S RESPONSIBILITY TO USE THE PRODUCT IN ACCORDANCE WITH THE LOCAL LAWS AND RESTRICTIONS.

Do not use this product until you have carefully read the following agreement. This sets forth the terms and conditions for the use of this product.

The installation of this product indicates that the buyer has read and understands this agreement and accepts the terms and conditions.

DISCLAIMER OF LIABILITY

FES, LLC (hereafter SELLER) shall in no way be responsible for the product's proper use and service. THE BUYER HEREBY WAIVES ALL LIABILITY CLAIMS.

The BUYER acknowledges that he/she is not relying on the SELLER's skill or judgment to select or furnish goods suitable for any particular purpose and that there are no liabilities which extend beyond the description on the face hereof and the BUYER hereby waives all remedies or liabilities, expressed or implied, arising by law or otherwise, (including without any obligations of the SELLER with respect to fitness, merchantability, and consequential damages) or whether or not occasioned by the SELLER's negligence.

The SELLER disclaims any warranty and expressly disclaims any liability for personal injury or damages. The BUYER acknowledges and agrees that the disclaimer of any liability for person injury is a material term for this agreement and the BUYER agrees to indemnify the SELLER and to hold the SELLER harmless from any claim related to the item of the equipment purchased. Under no circumstances will the SELLER be liable for damages or expenses by reason of use or sale of any such equipment.

The SELLER assumes no liability regarding the improper installation or misapplication of its products. It is the installer's responsibility to check for proper installation and if in doubt, contact the manufacturer.

LIMITATION OF WARRANTY

FES, LLC (hereafter "SELLER") gives Limited Warranty as to description, quality, merchantability, fitness for any product's purpose, productiveness, or any other matter of SELLER's product sold herewith. The SELLER shall be in no way responsible for the product's open use and service and the BUYER hereby waives all rights other than those expressly written herein. This Warranty shall not be extended or varied except by written instrument signed by SELLER and BUYER.

The Warranty is Limited to one (1) year from the date of sale and limited solely to the parts contained in within the product's kit. All products that are in question of Warranty must be returned shipping prepaid to the SELLER and must be accompanied by a dated proof of purchase receipt. All Warranty claims are subject to approval by FES, LLC.

Under no circumstances shall the SELLER be liable for any labor charged or travel time incurred in diagnosis for defects, removal or reinstallation of this product, or any other contingent expenses. If the BUYER sends back a failed unit that is out of warranty and chooses to buy a refurbished unit, the refurbished unit will only carry a 60 day warranty. If the BUYER purchases a new unit at a predetermined discounted rate, it will have the standard 1 year warranty.

Under no circumstances will the SELLER be liable for any damage or expenses insured by reason of the use or sale of any such equipment.

IN THE EVENT THAT THE BUYER DOES NOT AGREE WITH THIS AGREEMENT: THE BUYER MAY PROMPTLY RETURN THIS PRODUCT, IN A NEW AND UNUSED CONDITION, WITH A DATED PROOF OF PURCHASE, TO THE PLACE OF PURCHASE FOR A FULL REFUND.

THE INSTALLATION OF THIS PRODUCT INDICATES THAT THE BUYER HAS READ AND UNDERSTANDS THIS AGREEMENT AND ACCEPTS ITS TERMS AND CONDITION

CHAPTER 2 WELCOME!

The Auto Sportplus circuit adds auto sport-mode, track-mode DSC control, and auto start/stop mode control to the R55, R56 and R57 2nd gen new MINIs. This circuit solves the annoyance of having to use the buttons in front of the shifter every time you start the car to get into your favorite driving configuration.

1.1 FEATURES

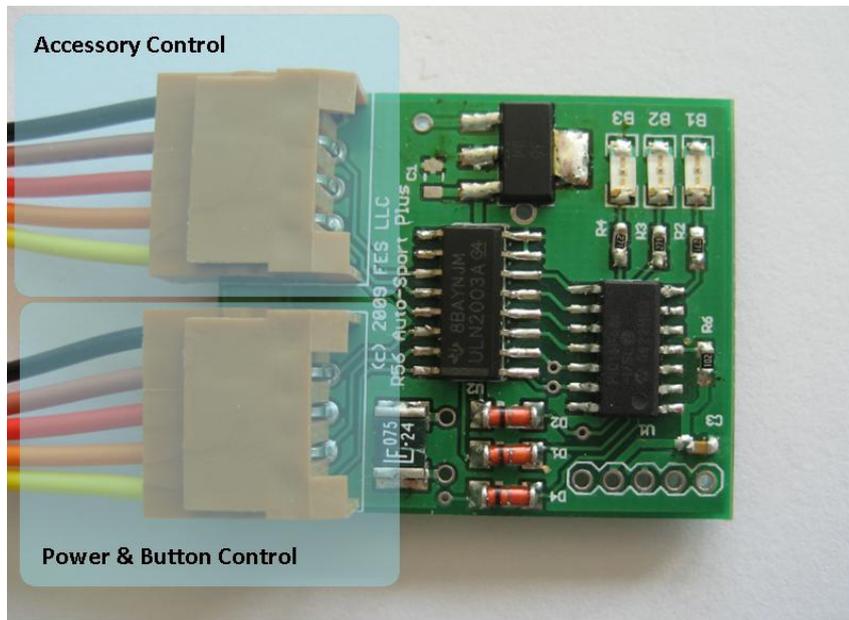
- Once the "**Auto Sport Mode**" feature has been enabled, the car will enter sport mode a few seconds after the engine is started.
- The "**Track Mode DSC control**" will set your desired DSC mode shortly after starting the car. This is compatible with all the new modes of DSC operation including dynamic traction control (DTC) and electronic differential lock control (eDLC).
- The "**Auto Start/Stop Mode Control**" can disable auto start/stop mode shortly after start-up.
- This circuit contains a new FES only feature, "**Stealth Mode Accessory Control.**" Stealth mode accessory control allows accessories to be controlled with the factory push-buttons. Two quick tap on any of the buttons will turn any of the three accessory control channels on or off.
- All the factory function can still be used just like normal, and all features can be enabled or disabled via the factory buttons. Once installed, just leave it and forget it! No need to access the unit to get to toggle switches or trim pots.

1.2 WHAT'S IN THE BOX

- 1 Auto Sportplus circuit.
- 1 5 wire harness with power spade and ground lug.
- 1 5 wire harness for accessory control.
- 3 Posi-Tap[®] connectors.
- 1 Automotive Mini Fuse tap.

1.3 WIRE HARNESS PIN-OUT

The circuit comes equipped with two wire harness. The upper is used for the "Stealth Mode Accessory Control". The lower is where the power and the inputs from the buttons are connected:



1.3.1 POWER & BUTTON CONTROL:

- **Red:** Power Input (+12V)
- **Black:** Ground
- **Yellow:** DSC Button Signal
- **Orange:** Sport Button Signal
- **Brown:** Start-Stop Button Signal

Note: The control logic for the sport and start/stop button is the same. You can use the brown or orange cable for one of the buttons

1.3.2 STEALTH MODE ACCESSORY CONTROL

- **Red:** Power Output (+12V) to the relay module
- **Black:** Ground
- **Yellow:** Relay Output 1
- **Orange:** Relay Output 2
- **Brown:** Relay Output 3

1.4 REQUIRED TOOLS

- Torx® 50 driver (for R56 and R57, not required for R55)
- 10 mm nut driver

1.5 ESTIMATED INSTALLATION TIME

The required time for the installation is approximately 30 minutes.

CHAPTER 3 INSTALLATION IN YOUR CAR

The installation is done in the following steps:

- 1) Remove the panel to get access to the fuse box
- 2) Connect the *Auto Sportplus* circuit
- 3) Test
- 4) Optional: Connect your relay module for additional accessory control
- 5) Put it all back together

3.1 PANEL REMOVAL

First remove the carpet pad from the front right foot well. This isn't a "have to do", but makes the job a bit easier. Next remove the cover for the fuse access panel. If you have an R56 or R57, use a Torx® 50 driver to remove the seatbelt anchor bolt (because the panels are different on the Clubman, this is not required for this model).



Raise the seat to its highest position and slide it to the rear to gain some access. Now pull the panel toward the center of the car.



The panel is held on with 5-8 little white snap-fit connectors. Don't worry if some stay attached to the body shell, they are easily removed by hand or by using some pliers and just slide back into slots on the plastic panel. Work the panel free and set it aside.

3.2 POWER HEADER CONNECTION.

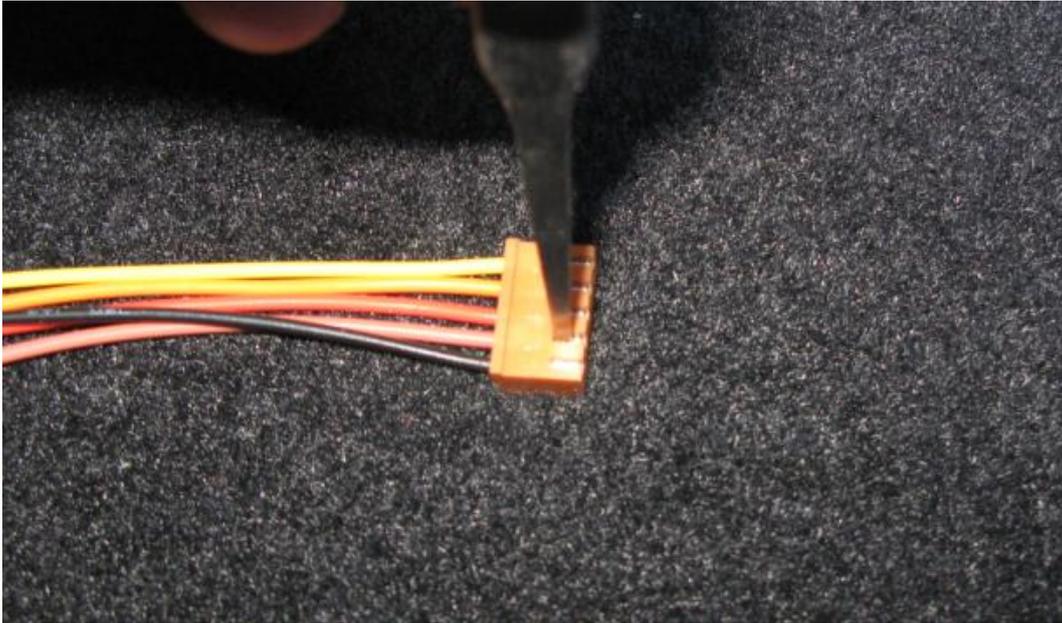
The power header connects up to the car in three different ways:

- The power for the unit is taken from fuse #32 in the fuse panel.
- The grounding is done by attaching a lug to one of the junction box's mounting nuts.
- The button control is done by tapping into the control wires with the included Posi-Tap[®] connectors.

All three of these connections are made at the junction box shown below.

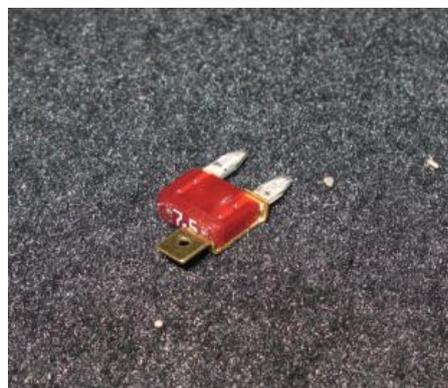
3.2.1 IF ONLY 2 CHANNELS ARE REQUIRED (OPTIONAL)

US model cars don't have the Auto Start/Stop mode. Removing the extra wire from the power harness cleans up the installation a bit. To remove the extra wire, depress the tab on the pin and pull the wire out of the connector. Since this installation is on a US model 08 Clubman, one of the wires was removed from the power harness.



3.2.2 POWER CONNETION

Remove fuse #32 (the small 7.5 amp fuse) from the fuse panel, attach the fuse tap and replace the fuse. **Make sure that the fuse tap is attached to the side of the fuse closest to the large fuses!** The red wire on the power harness has an insulated female spade connector to attach to the fuse tap. Attach the spade connector and bend it down flush with the top of the fuses.





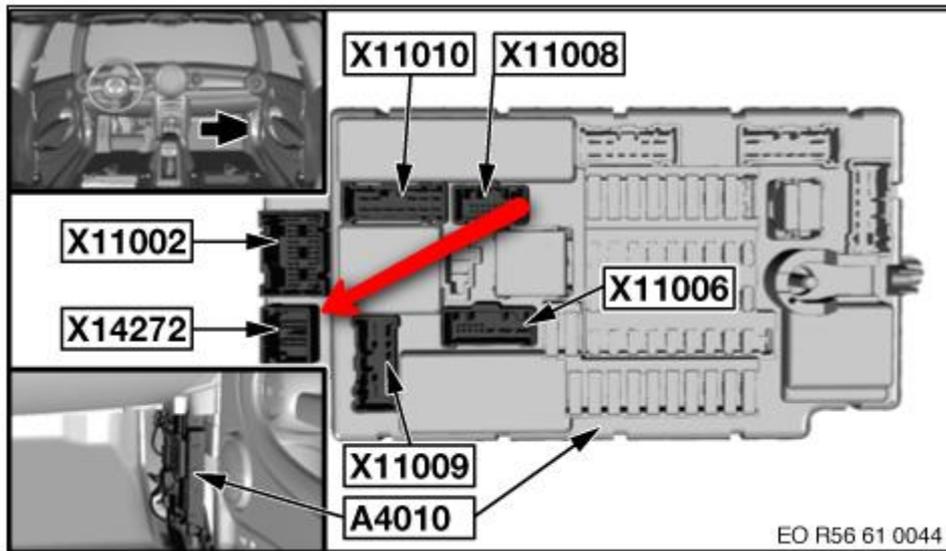
3.2.3 GROUND CONNECTION

Remove the 10mm nut from the bottom of the junction box. Place the black ground wire with the lug attached onto the stud and re-attach the nut.



3.3.4 SIGNAL CONNECTIONS

Connector X14272 is the one we want:

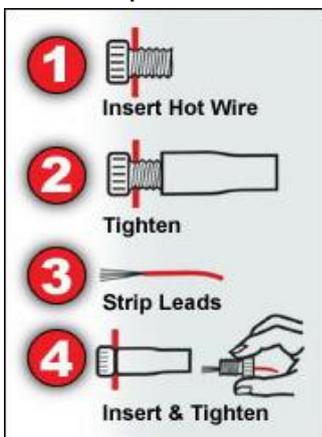


It is locked in place with a latching mechanism. Unlock the latch and remove the connector to gain access to the connector wiring. Use the Posi-Tap[®] connector to attach the wire from the harness to the wire from the connector.

Here are the color codes of the signals you need to connect to:

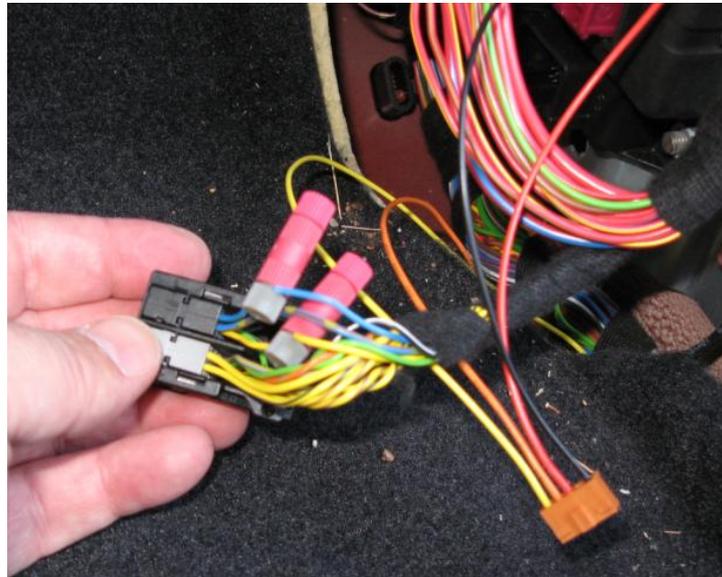
X14272 Connector	Auto Sportplus Wire Harness
Yellow (DSC)	Yellow
Blue (Sport)	Orange
Black (Start/Stop)	Brown

Posi-Tap[®] connectors are easy to use. Unscrew the base of the Posi-Tap[®]

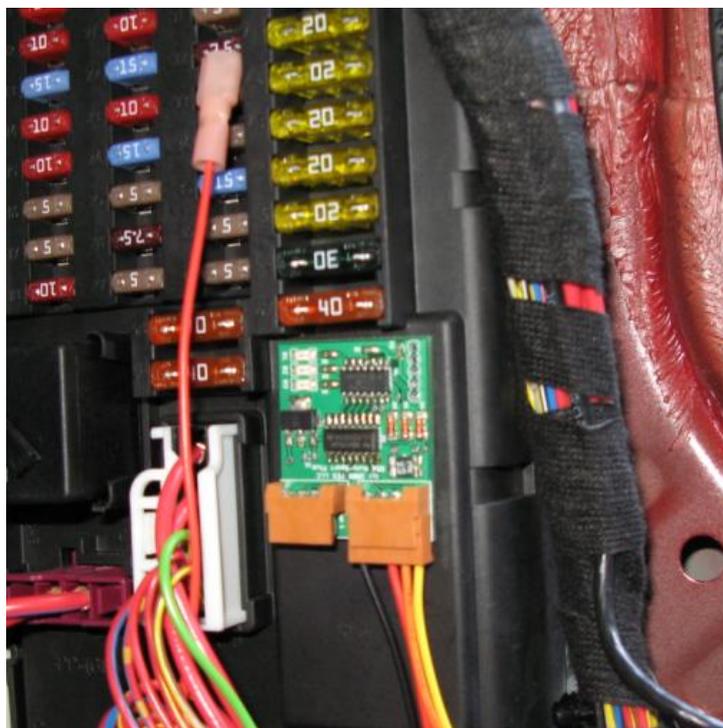


from the main body. Slide the wire from the harness into the slot in Posi-Tap[®] base. Screw the body onto the base and the needle point will penetrate the insulation and make contact with the connector. Unscrew the top of the Posi-Tap[®] connector from the main body. Insert the wire so that the stripped part of the wire from the Auto Sportplus emerges from the top. Screw the top of the Posi-Tap[®] into the main body and the wire will be held against the conductor in the main body. That's it!

This is the DSC button wire. Using the Posi-Tap® connectors, attach the two remaining control wires to the blue (Sport button wire) and the black (Start/Stop button wire).



Re-attach connector X14272 to the junction box and all power connections are complete. Place the Auto Sportplus circuit onto the location shown and connect the power harness.



Installation is now complete.

3.3 TESTING

3.3.1 TESTING BASIC POWER CONNECTIONS

Attach the power header to the circuit. Position the circuit so that you can see the three LEDs. Start the engine and watch the LEDs. They should light in sequence, one on, then two on, then all three on. Then they flash. This sequence indicates that the unit is receiving power.

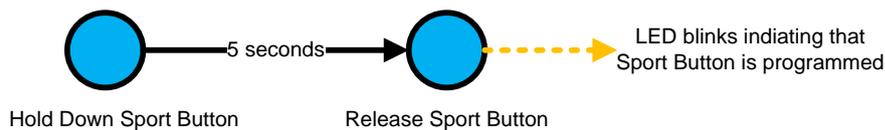
3.3.2 TESTING AUTO-SPORT AND STOP/START

To test the Auto-Sport function, hold down the Sport button for more than 5 seconds. When the button is released, one of the LEDs will light up. This indicates that the Auto-Sport function is enabled. Turn off the engine. Restart the engine. The 1-2-3 sequence will display and after a few seconds, the car should enter sport mode. Hold down the Sport button for more than 5 seconds again, and the LED should turn off, indicating the Auto-Sport feature is not enabled.

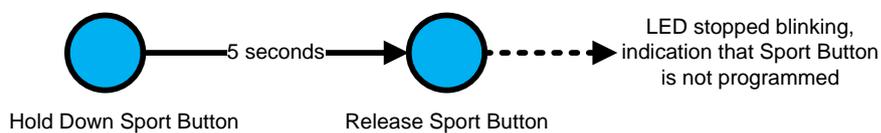
Testing the Auto-Start/Stop function is the same as the Auto-Sport mode, proceed identically.

3.3.3 PROGRAMMING EXAMPLES:

Programming the Sport Button



Un-programming the Sport Button:



3.3.3 TESTING DSC FUNCTIONS

Because of the newly introduced dynamic traction control (DTC) mode and electronic differential lock control (eDLC), the DSC system has up to 3 operational modes:

- **Normal** (dynamic stability control enabled),
- **DTC** (dynamic traction control enabled)
- **eDLC** (electronic differential lock control mode).

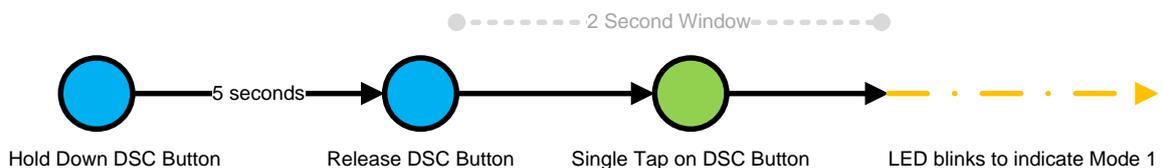
Programming and testing this mode is different than the other two. Programming mode is entered by holding down the DSC button for five seconds. When the button is released, one of the indicator LEDs will flash rapidly for a two second programming window. Press the DSC button during the rapid flashing once to select mode 1, and twice to select mode 2. If the button isn't pressed at all during the programming window, the Auto Sportplus DSC control is turned off.

Auto Sportplus DSC Mode	Off	Mode 1	Mode 2
DSC Only Mini	DSC On	DSC Off	DSC On
DSC/DTC Mini	DSC On	DTC Mode	All Off
eDLC Mini	DSC On	DTC Mode	eDLC

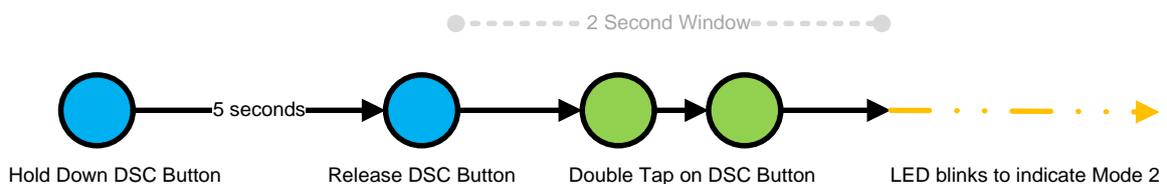
After selecting the proper mode, start the car and confirm that the proper DSC mode is automatically selected.

3.3.5 DSC PROGRAMMING EXAMPLES

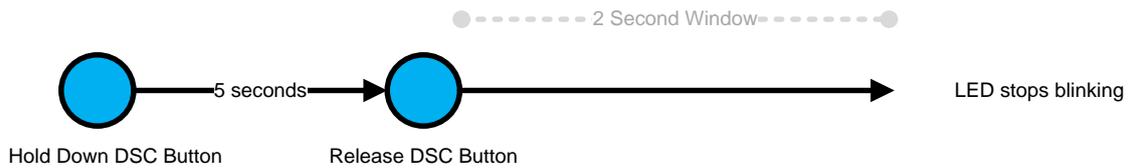
Selecting Mode 1



Selecting Mode 2



Un-programming



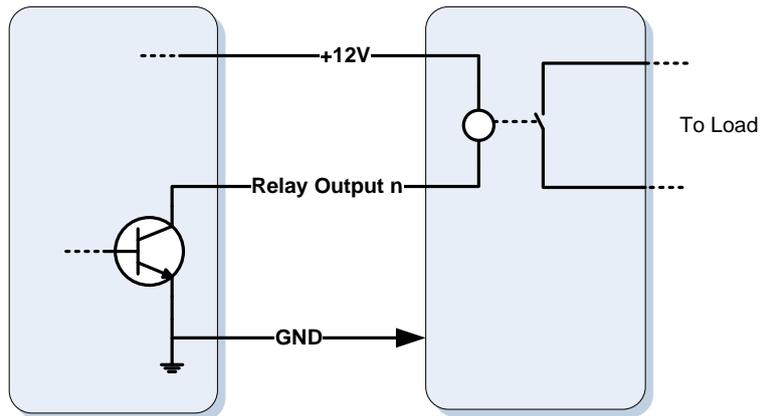
3.4 ACCESSORY CONNECTION (OPTIONAL)

Power (red) and ground (black) are supplied via the accessory connector. Each accessory channel is controlled by the corresponding button. So a quick double tap on the DSC button will toggle the yellow wire on the accessory connector. Below the connections to the TrackCoach™ ProShift 4-Channel Relay Module are shown.



3.4.1 CONNECTING A THIRD PARTY RELAY MODULE

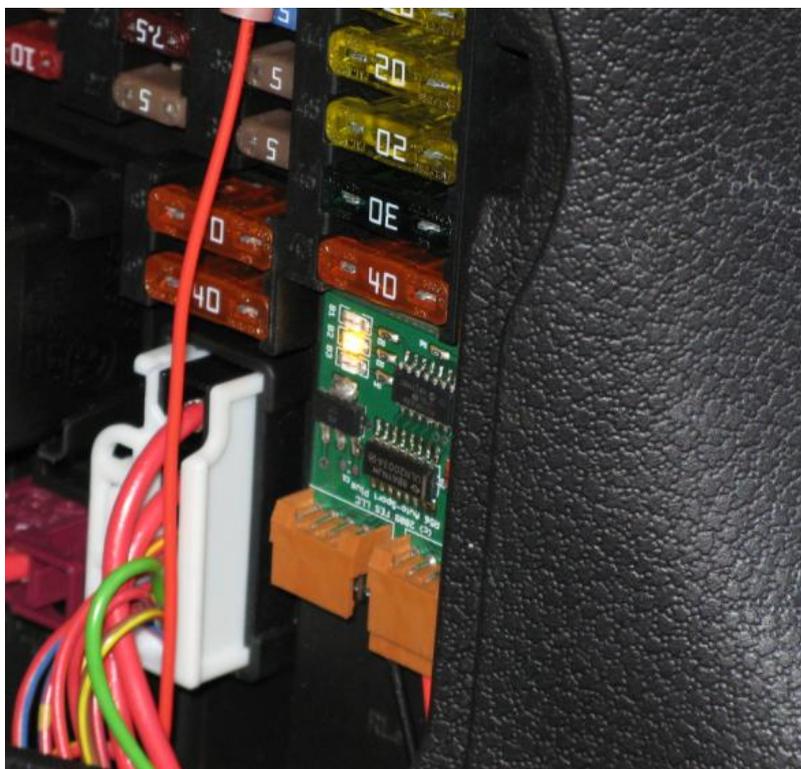
The relay outputs are open collector and can drive up to 70mA per channel. Use a setup like this to drive higher current loads:



3.5 PANEL INSTALLATION

Before re-installing the plastic panel, check to make sure that all the plastic fasteners are in the panel. If some didn't come out when the panel was removed, they can be taken out by hand with a little effort.

Panel installation is the opposite of removal; just take a little time to make sure the white fasteners line up with the mounting holes. If one needs to confirm LED indicator status or check programming operation, the Auto Sportplus is visible through the fuse panel door.



CHAPTER 4 TROUBLESHOOTING & SUPPORT

The circuit functionality is all programmed into firmware. It has a resettable fuse built in, so even shorts in the accessory control outputs will not damage the car or the circuit.

If the circuit does not function properly, first re-check all power, control and accessory connections. If the circuit still does not function properly, contact FES directly via one of the contact methods listed below.

4.1 CONTACT INFORMATION

Support can be obtained by contacting us via:

Phone: (650) 241-1161

E-Mail: support@fes-auto.com

Web: www.fes-auto.com/support