# CP1-FRD1

Introduction and Features

The CP1-FRD1 is a factory matched plug & play harness for use with the CANPRO CP1-S CAN-Bus Interface Module for select Ford Model applications using the 8pin data harness for connection at the Steering Column Control Module (SCCM). The harness and module allow a simple and safe way to access vehicle information, status and triggers from the CAN-Bus for a wide range of aftermarket uses such as radar detectors, camera activation, sound system upgrades, lighting and more!

Important Notes

1. Any unused outputs should be insulated to prevent shorting.
2. The outputs of the CANPRO are low current (250mA) and require the use of a separate relay if additional current is required.
3. The vehicle should be in a resting state prior to opening connection to the 8pin data harness. See Installation note for further information.

Wiring Connection Chart
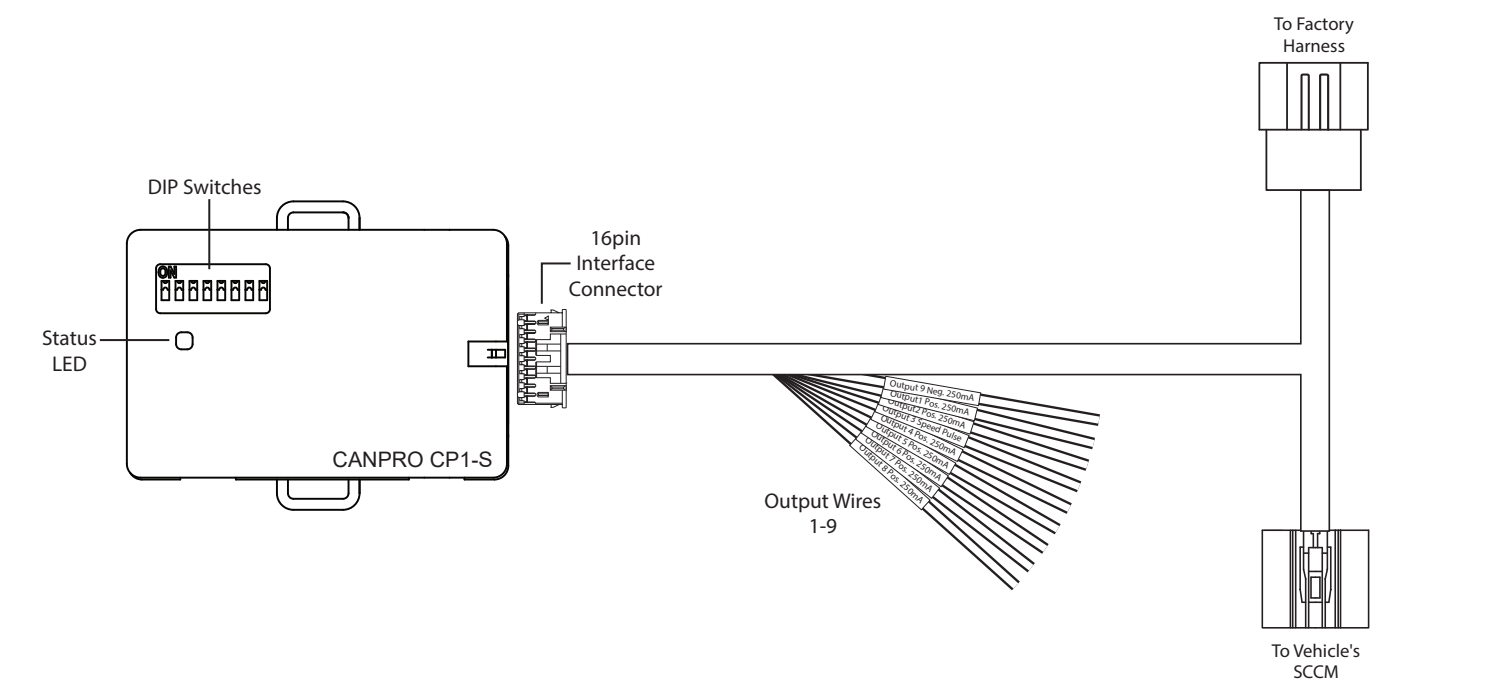
Outputs

	Description	Polarity	Wire Color
Output 1	Accessory	+ Positive (250mA)	White-Red
Output 2	Illumination	+ Positive (250mA)	Blue
Output 3	Speed Pulse	Pulse	Green-Black
Output 4	Reverse	+ Positive (250mA)	Violet-Black
Output 5	Ignition*	+ Positive (250mA)	Yellow-Black
Output 6	Left Turn Signal	+ Positive (250mA)	Red-Black
Output 7	Right Turn Signal	+ Positive (250mA)	Gray-Red
Output 8	High Beam	+ Positive (250mA)	Blue-Black
Output 9	Parking Brake	- Negative (250mA)	Brown-Black

* In Electric Vehicles, Output 5 provides a positive output when the vehicle is in a "Ready to Drive" state.
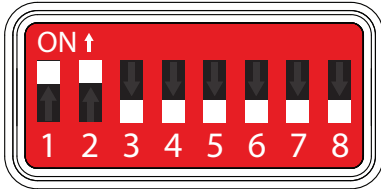
Installation

> **NOTE! Verify the vehicle is off prior to disconnecting the 8pin vehicle harness and do not turn on the accessory or ignition until the 8pin male and female connectors from the CP1-FRD1 are connected.**

1. Set the DIP switches on the CP1-S as shown in below.

2. To access the vehicle's CAN data harness, the steering column shroud must be removed. Remove the two screws (7mm or 9/32") from the underside of the shroud. (FIG A)*
3. Pull downward along the bottom edge of the shroud to release the retaining clips and pull towards the rear of the vehicle to remove the bottom portion of the shroud. (FIG B)*
4. Ensure the vehicle is Powered Off and unplug the 8pin CAN data harness pictured. (FIG C)*
5. Connect one end of the CP1-FRD1 harness to the matching connector in the vehicle. Connect the remaining vehicle connector from the CP1-FRD1 to the other end of the vehicle harness and route the CP1-FRD1 harness along the OEM harness toward the bottom of the dash.(FIG D)*
6. Determine a mounting location for the CANPro module in a place where it does not interfere with the movement of any vital vehicle equipment and secure the module.
7. Connect the 16pin CP1-FRD1 connector into the CANPro and lengthen and route any Output wires needed. Insulate any unused Output wires!
8. After wire connections and testing are complete, secure the CP1-S module and reinstall the console panels.

*2021 Ford Mustang Mach-E used for photos. Other CP1-FRD1 applications may vary slightly. For instance the Lightning has a third screw holding the bottom shroud in place that needs to be removed.
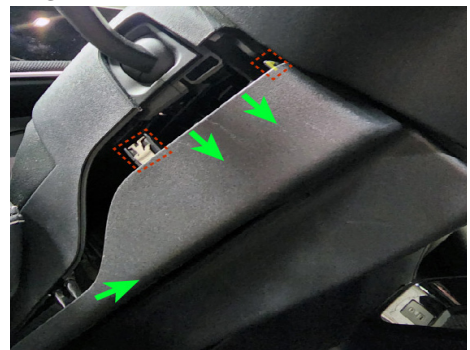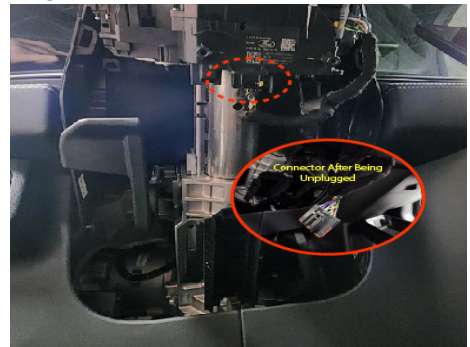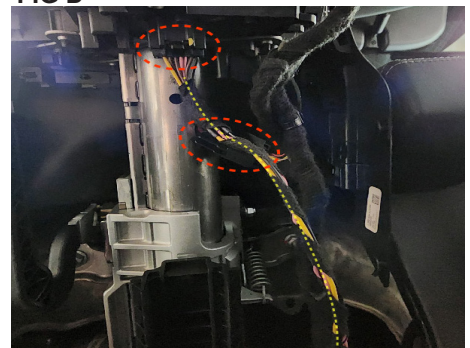
FIG A

FIG B

FIG C

FIG D

LED Status Information

ACTION/COLOR	Description
Fast Flashing RED	Update mode, for updating of the application or resource files.
Slow Flashing (0.5sec) GREEN	Normal Operation
Slow Flashing (0.5sec) GREEN, plus additional 0.5sec RED	System Fault. The number of times the interface flashes RED indicates the channel (output) with a fault condition. For example, if the LED flashes GREEN, then flashes RED twice, then back to Green, Channel 2 has a fault condition. To check the fault, see Troubleshooting section below.

Troubleshooting

1. No LED activity: Disconnect and reconnect the CP1, does the LED flash? If not, check the 3 amp fuse in the fuse-holder that is located 2 inches from the 16pin connector on the Yellow wire.
2. No Outputs: Verify the DIP switch setting is correct (Installation section, FIG A). If the DIP switch setting needs to be changed, unplug the CP1, change the DIP setting and then reconnect. If the LED is flashing green, test the outputs using a multimeter. If the multimeter is showing the proper output, add a relay to the output to increase current capability.
3. System Fault: Disconnect the faulty output (1-9), disconnect and reconnect the 16pin connector to the CP1 so that it loses and gains back power and ground, does it stop flashing red? Check wiring to faulty output to make sure it is not shorted to ground, or add a relay.

Technical Support

Email: support@PAC-audio.com
Phone: 727-592-5991
Chat: PAC-Audio.com

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