# CP1-FRD2

CANPRO Harness
for Select Ford Vehicles

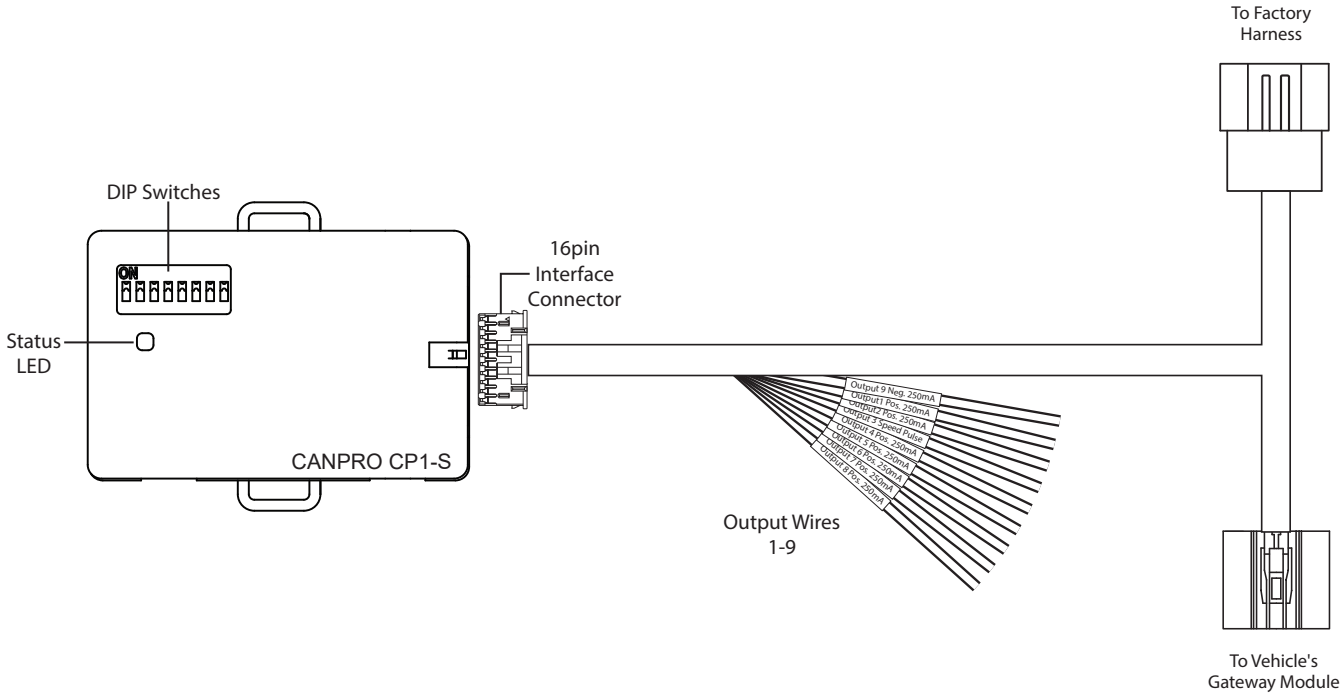
## Introduction and Features

**The CP1-FRD2 is a factory matched plug & play harness for use with the CANPRO CP1-S CAN-Bus Interface Module for select Ford Model applications that use a 24pin data harness for connection at the Gateway Module. 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 24pin Gateway 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.

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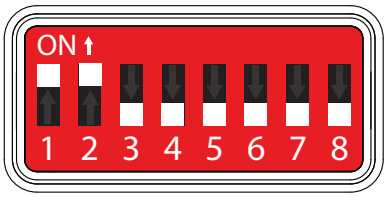
## Installation

**NOTE! Verify the vehicle is off prior to disconnecting the 24pin vehicle harness and do not turn on the accessory or ignition until the 24pin male and female connectors from the CP1-FRD2 are connected.**

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




2. To access the vehicle's CAN data harness, locate the OBDII connector at the bottom of the driver's side of the dash. To simplify installation, remove the two bolts holding the Gateway in place (7mm or 9/32"). (FIG A)*
3. The OBDII connector is part of the vehicle's Gateway module. On the opposite side of the OBDII connector is a 24pin Gateway harness. Photo shows the front of the Gateway after being unbolted from the vehicle. (FIG B)*
4. Ensure the vehicle is Powered Off and unplug the 24pin Gateway CAN data harness.
5. Connect one end of the CP1-FRD2 harness to the matching connector in the vehicle. Connect the remaining vehicle connector from the CP1-FRD2 to the other end of the vehicle's Gateway harness. (FIG C)*
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-FRD2 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 Gateway Module.

*2020 Ford Ecosport used for photos. Other CP1-FRD2 applications may vary slightly.

**FIG A**

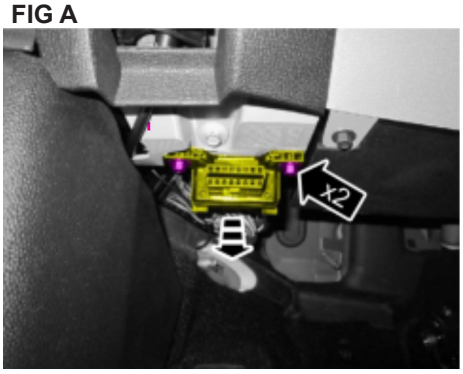
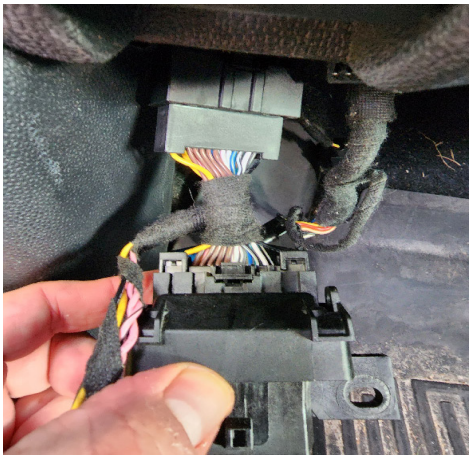



**FIG B**

**FIG C**



## 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.<br>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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