

# CORTEX EBC

## 2018-2022 Mustang GT Specific Instructions

Rev 1.0.0

### WIRING

RPM and vehicle speed signals are required for boost by gear applications. Because the 2018-2022 Mustang does not have a vehicle speed signal that can be connected directly to the Cortex EBC a CB-2 CAN Bus Interface is required for installation. The CB-2 CAN Interface generates both RPM and vehicle speed signals for the Cortex EBC.

The CB-2 CAN Interface can be connected to the CAN system at the OBD2 Port / Data Link Connector (DLC) module, which is below the dash on the driver side of the vehicle.

### DLC MODULE LOCATION

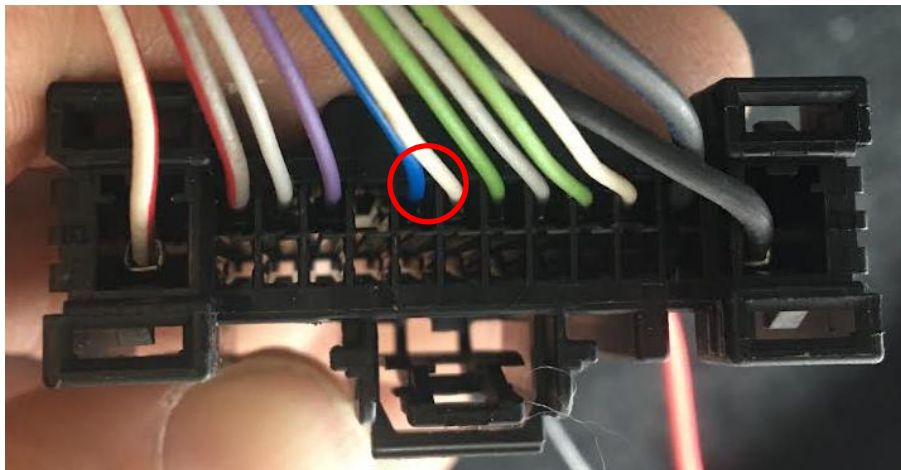


On the back of the DLC module there is a wiring connector that contains the required CAN signals for the CB-2 CAN Interface. The CB-2 should be connected to the DLC module as outlined in the following table.

### CB-2 TO DLC CONNECTIONS

CB-2 SIGNAL	CB-2 WIRE COLOR	DLC MODULE SIGNAL	DLC MODULE WIRE COLOR
CAN High	Yellow	HS1 CAN +	Blue
CAN Low	Blue	HS1 CAN-	White

### DLC MODULE WIRING CONNECTOR WITH CAN LINES HIGHLIGHTED



The Cortex EBC wiring harness should be connected to the CB-2 CAN Interface as outlined in the following table.

#### **CORTEX EBC TO CB-2 CONNECTIONS**

<b>CORTEX SIGNAL</b>	<b>CORTEX WIRE COLOR</b>	<b>CB-2 SIGNAL</b>	<b>CB-2 WIRE COLOR</b>
Engine Speed	Pink	RPM	Green
Vehicle Speed	Green	Speed Pulse	Orange

If desired, a throttle position signal can be accessed at the wiring connector on the accelerator pedal assembly.

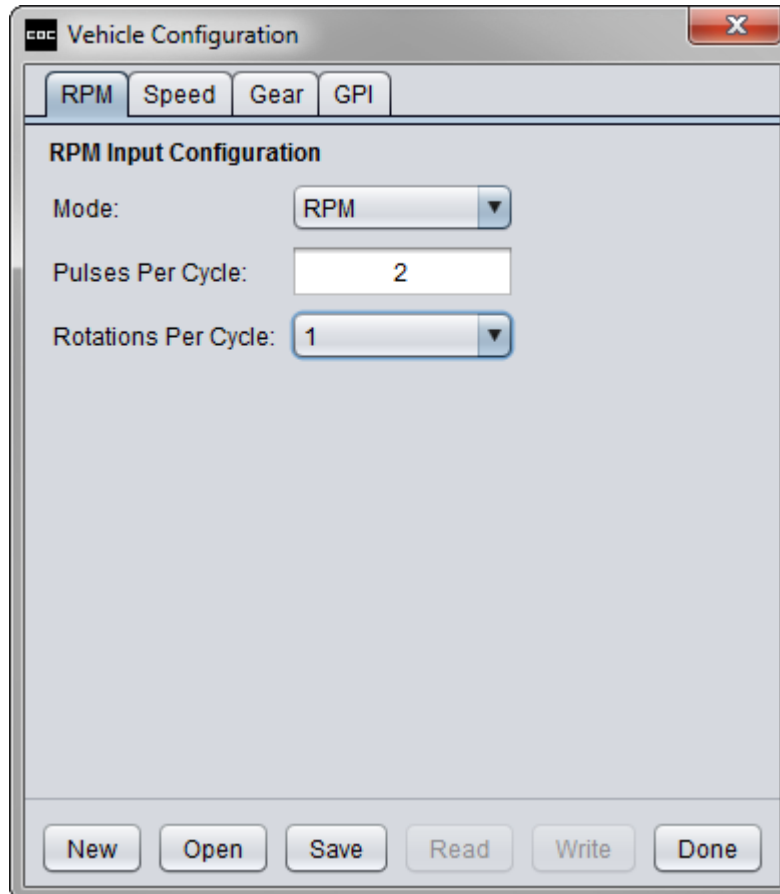
#### **CORTEX EBC TO ACCELERATOR PEDAL CONNECTIONS**

<b>CORTEX SIGNAL</b>	<b>CORTEX WIRE COLOR</b>	<b>ACCELERATOR PEDAL CONNECTOR SIGNAL</b>	<b>ACCELERATOR PEDAL CONNECTOR WIRE COLOR</b>
General-Purpose	Orange	Accelerator Pedal Position 1	Yellow / Orange

# VEHICLE CONFIGURATION SETTINGS

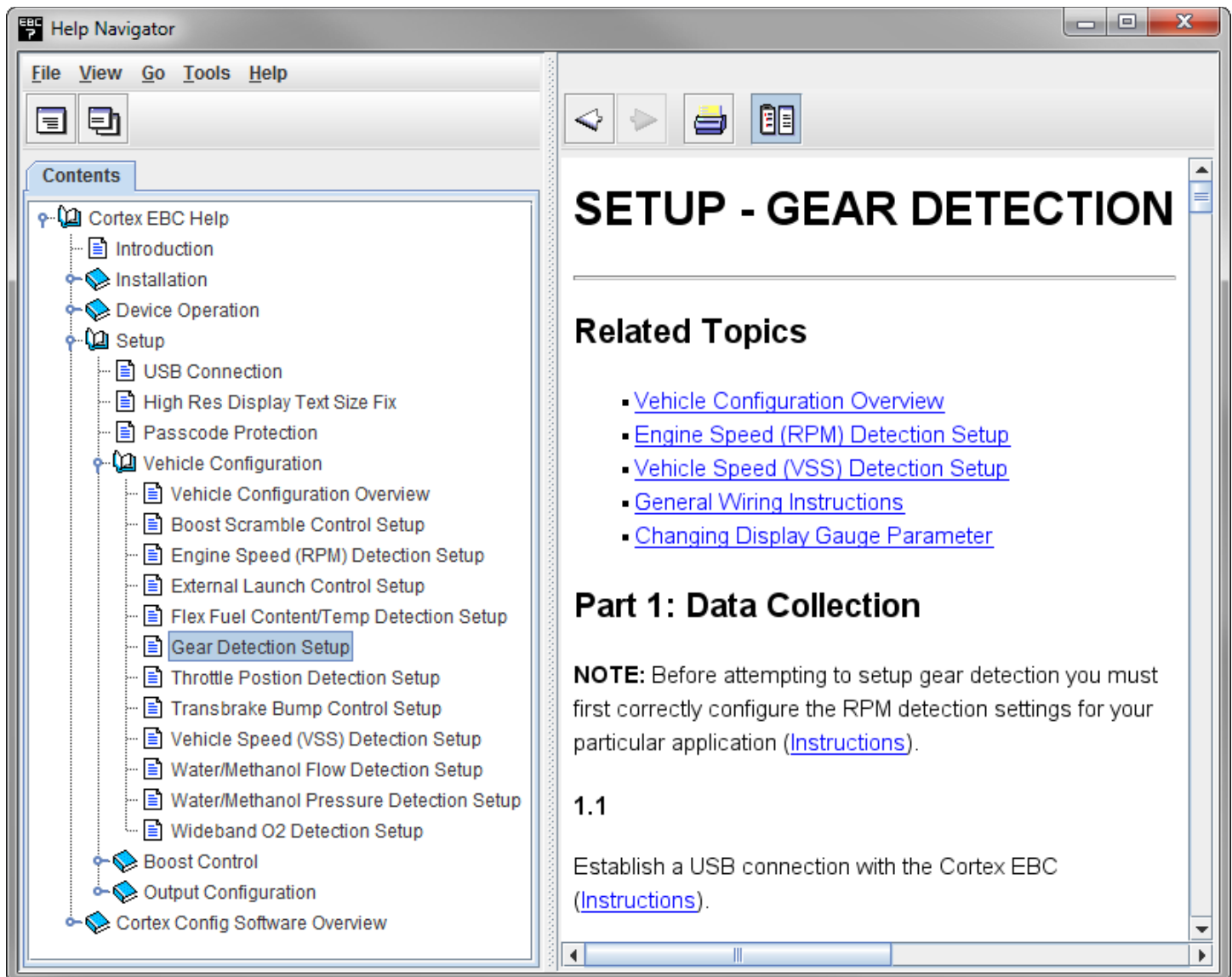
## RPM DETECTION:

- Mode: RPM
- Pulses Per Cycle: 2
- Rotations Per Cycle: 1



## GEAR DETECTION:

- Follow the steps in the **Setup – Gear Detection** section of the Help utility to determine the correct EVS ratio settings for gear detection.



The screenshot shows the Cortex EBC Help Navigator application window. The title bar reads "EBC 7 Help Navigator". The menu bar includes "File", "View", "Go", "Tools", and "Help". The "Contents" pane on the left lists the following items:

- Cortex EBC Help
  - Introduction
  - Installation
  - Device Operation
  - Setup
    - USB Connection
    - High Res Display Text Size Fix
    - Passcode Protection
    - Vehicle Configuration
      - Vehicle Configuration Overview
      - Boost Scramble Control Setup
      - Engine Speed (RPM) Detection Setup
      - External Launch Control Setup
      - Flex Fuel Content/Temp Detection Setup
      - Gear Detection Setup**
      - Throttle Position Detection Setup
      - Transbrake Bump Control Setup
      - Vehicle Speed (VSS) Detection Setup
      - Water/Methanol Flow Detection Setup
      - Water/Methanol Pressure Detection Setup
      - Wideband O2 Detection Setup
    - Boost Control
    - Output Configuration
  - Cortex Config Software Overview

The main content area displays the title "SETUP - GEAR DETECTION" and a section for "Related Topics" with the following links:

- [Vehicle Configuration Overview](#)
- [Engine Speed \(RPM\) Detection Setup](#)
- [Vehicle Speed \(VSS\) Detection Setup](#)
- [General Wiring Instructions](#)
- [Changing Display Gauge Parameter](#)

Below this is the section "Part 1: Data Collection".

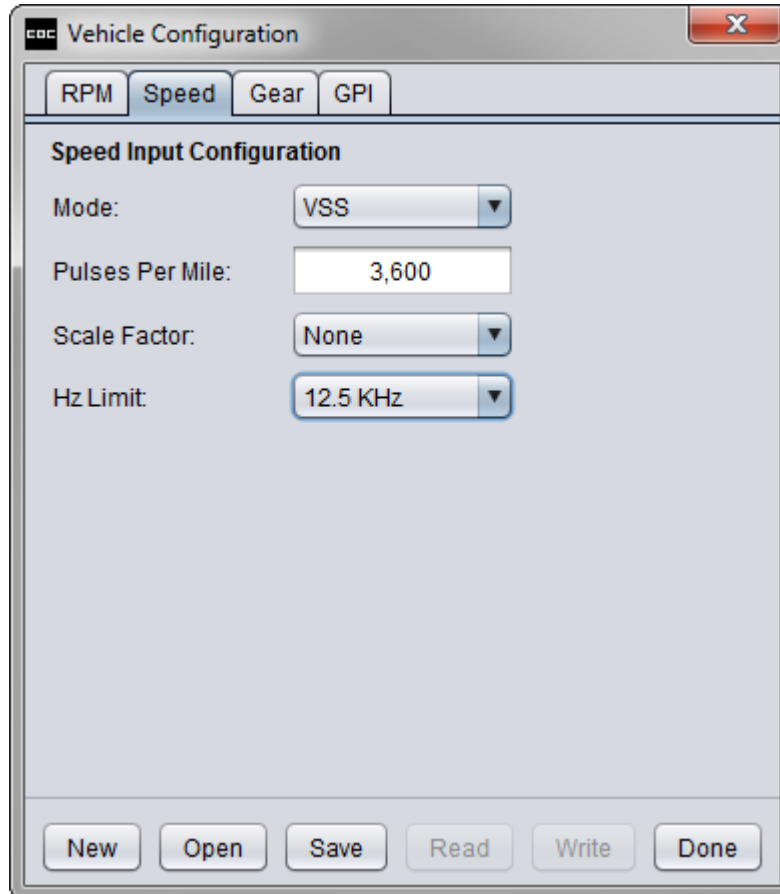
**NOTE:** Before attempting to setup gear detection you must first correctly configure the RPM detection settings for your particular application ([Instructions](#)).

**1.1**

Establish a USB connection with the Cortex EBC ([Instructions](#)).

### SPEED DETECTION:

- Mode: VSS
- Pulses Per Mile: 3,600
- Scale Factor: None
- Hz Limit: 12.5 KHz



## THROTTLE POSITION DETECTION:

- Follow the steps in the **Setup – Throttle Position Detection** section of the Help utility to determine the correct Closed TPS Voltage and Open TPS Voltage settings.

