Speed Unit for the Corsa B+C PSA ECU

The **Corsa Power Steering Assistance (PSA) Speed Unit** can convert your vehicles existing speed pulses into a signal that the Corsa Power Steering Assistance ECU expects to see. This gives the PSA ECU the ability to run different assistant levels depending on the vehicle speed:

<15MPH	**High Power Assistance**
15-35MPH	**Medium Power Assistance**
>35MPH	**Low Power Assistance**

 To do this the Speed Unit needs a 5 to 12V pulse from your speed sensor, so it would need either a proximity sensor, or a hall sensor that detects a bolt, toothed wheel, etc. If you have a VR sensor (abs style) then this needs converting to a 12V pulse before it can feed the Conversion Unit.

1) Program Mode:

To program the Speed Unit you will need to drive along and press the test button at the 2 speeds you want the unit to switch at.

1a) Program Mode - Get a passenger to hold the **"Program Button"** down for 3 Seconds with the Speed Unit powered on. (The Status LED will flash at a rate of 1/Sec indicating you are in **"Program Mode"**

1b) Mid Speed Point - *Speed that the PSA ECU swaps from High Assistance to Medium Assistance (Suggested 15-20MPH)*
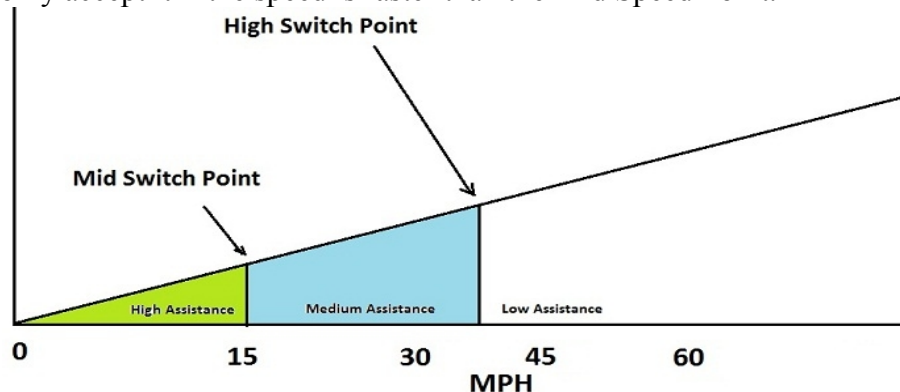**This MUST be the first set point entered and you must be in "Program Mode" (See 1a)**
Once you have reached the Mid Speed Point hold the "Program Button" down. The Status LED will flash faster to show it has accepted this as the Mid Speed Point. (2 /Sec)

1c) High Speed Point – *Speed that the PSA ECU swaps from Medium assistance to Low Assistance (Suggested 35-45MPH)*
This MUST be done immediately after the Mid Speed point has been entered and you must still be in "Program Mode" (See 1a)
Get up to the speed you desire for the Hi Speed Point switchover and press the "Prog Mode" button again. The Status LED was flashing at 2/Sec, now it will go back to being solid to indicate it has accepted the Hi Speed Point. It will only accept it if the speed is faster than the Mid Speed Point.

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2) **Wiring:**

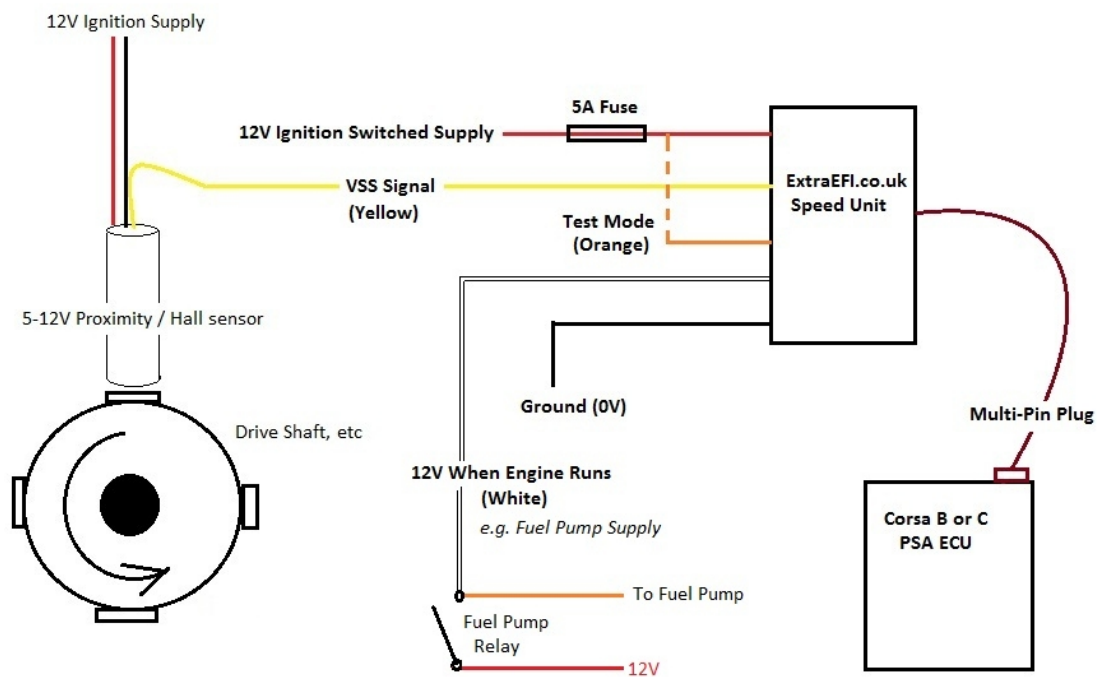**12V Power (Red)** - The Speed Unit needs an Ignition switched 12V supply.

VSS input (Yellow) – This needs to switch between 12V (5Vminimum) and 0V, this would be from the Speed Sensor from the vehicle. E.g. Prop shaft, wheel, electronic speedo input etc.

Test Mode (Orange) – Connect this to the 12V ignition switched supply if you want to run in the *Medium Assistance* mode (No VSS for example)

Engine Run input (White) – Connect to a 12V supply which switches on when the engine is running. E.g. Fuel pump wire. (If nothing available then connect to the 12V ignition supply)

Ground (Black) – Connect to a good clean ground away from any electrical interference.

Multi-pin Plug – This is to plug into the Corsa B or C PSA ECU socket.

3) LEDs
The Status LED - Solid when the power is applied to the Speed Unit.
Flashes at 1/Sec when entered into Program Mode
Flashes at 2/Sec after entering Mid Speed Point,
 awaiting Hi Speed Point
The Speed LED – Off when in High Assistance Mode
Solid when in Medium Assistance Mode.
Flashing when in Low Assistance Mode.

4) Specifications:

Input Voltage = 14Vdc to 9Vdc

Max Input Frequency = 5000Hz
Max Pulses / Mile depends on your max speed - Max Input Frequency is the limiting factor. *(5000hz)*
e.g. 120,000 Pulses / Mile allowing speeds of 150MPH
150,000 Pulses / Mile allowing speed of 120MPH
                    If in doubt please email us!