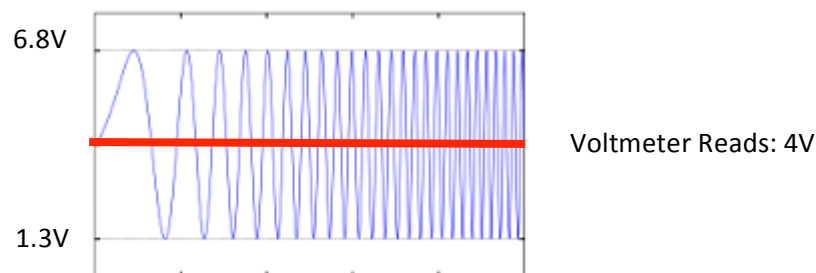


Cab Control Module (CCM) Radar Diagnostics

Explanation

The radar input into the Cab Control Module (CCM) is a frequency type signal consisting of expected high and low voltages. The CCM defines a voltage greater than 6.2V as expected high voltage and a voltage lower than 1.5V as expected low voltage. In order for the CCM to correctly identify the speed which the radar is sending, the pulses must go from below to 1.5V to above 6.2V. While driving, a Voltmeter will read the average of the expected high and low voltages.

A typical example of radar signal while driving is shown below. The blue line shows what a scope instrument would read, the Red line shows what a Voltmeter would read.



Diagnostics

A voltmeter set to DC volts checking between signal and ground can be used to diagnose radar issues. Below are the expected voltage specifications.

While sitting still: **Less than 1.5V or Greater than 6.2V**

While driving at constant speed: **Greater than 3V and Less than 6.2V**

If the measurement read at speed is **less than 3V**, the CCM will not detect the input pulses.

Common causes for lower voltages are:

- Multiple monitors receiving signal from the same radar. In this is the case, a radar signal amplifier can be used to boost the signal <http://www.sensor-1.com/ProductDetails.asp?ProductCode=DJ-4%2F1Adapter>
- Radar being powered at less than 12V
- A damaged radar harness or adapter causing resistance, pinching, or a short.