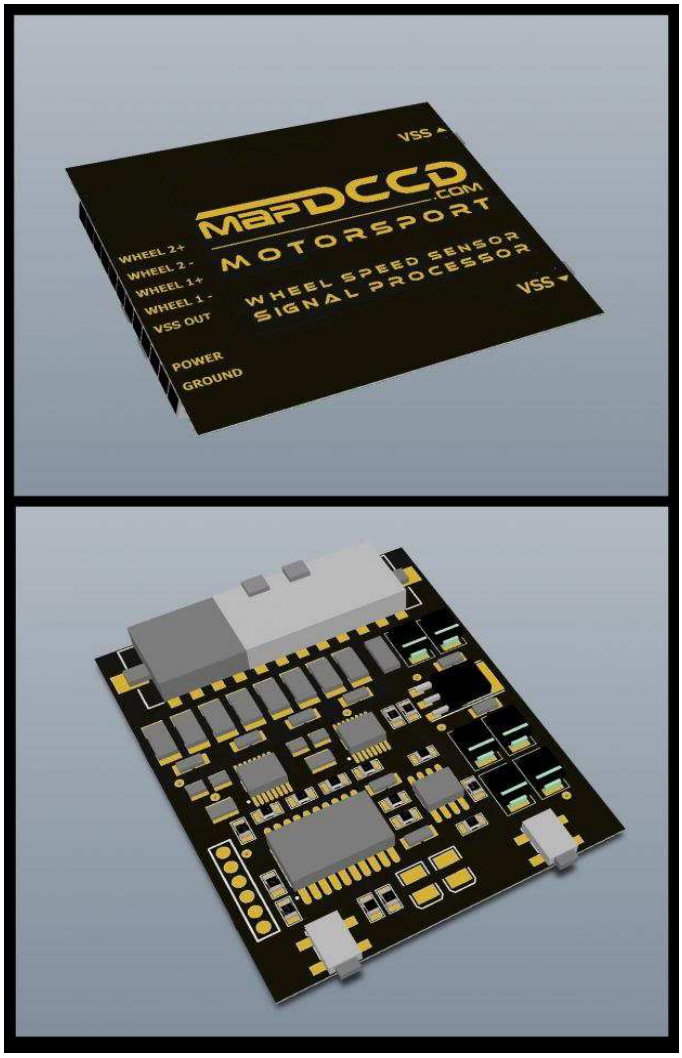
MapDCCD wheel speed sensor signal processor Installation and user guide

There are two versions of the processor module:

1. **<u>Basic version</u> – available now (www.mapdccd.com)**
   - One or two WSS inputs, VSS output
2. **<u>Advanced version</u> – available late 2014**
   - Up to four WSS inputs, VSS output, Slip output



Feature Overview – Basic version

- One or two wheel speed sensor (WSS) inputs are connectable to generate a vehicle speed sensor (VSS) output

- Two input sensing improves VSS accuracy and reliability under a wide range of driving conditions

- Integrate with existing ABS sensors without affecting ABS operation

- Digitally adjustable VSS output to calibrate for various tire sizes

- Advanced hardware provides extreme immunity to noise and highly accurate readings even from worn sensors

- Lightweight and small size: Approximate dimensions are 60 x 45 mm (2½" x 1 ¾")

MAPDCCD
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Hardware - Connections

Pin	Function	Unit	Specifications
1	Ground	All	Sensor ground
2	Power	All	7 – 18V input
3	Slip out	Advanced version only	0 – 5V output
4	VSS out	All	Pulsed signal
5	Wheel 1 +	All	ABS wheel speed sensor
6	Wheel 1 -		
7	Wheel 2 +	All	ABS wheel speed sensor
8	Wheel 2 -		
9	Wheel 3 +	Advanced version only	ABS wheel speed sensor
10	Wheel 3 -		
11	Wheel 4 +	Advanced version only	ABS wheel speed sensor
12	Wheel 4 -		

Connection guide

Power

The power connection should be connected to a switched ~12V source. We recommend a power source at or near your ECU.

Ground

The ground connection should be connected to any ground connection. We recommend a ground at or near your ECU.

VSS out

The VSS signal output should be connected to a VSS input signal at your ECU, your MapDCCD differential controller and any other devices in your car requiring a normal vehicle speed input signal.

The VSS output hardware is amplified and can supply the VSS signal to many devices simultaneously without being overloaded.

Wheel speed sensor inputs

Each WSS input has two connections for connection two each of the two wires on a wheel speed sensor. The order of the wires does not matter.

The wire extending from the module to the sensor (or to where you connect to the OEM wiring) should be:

- a twisted pair – two wires twisted together
- shielded wire – a pair of wires

At least one wheel speed signal input is required to generate the VSS signal.

Two wheel speed signal inputs are possible and will produce a more accurate and reliable VSS signal. For example, when a single sensor input is used, locking the sensed wheel will cause a zero speed reading that may compromise the performance of your DCCD controller. One wheel speed input is perfectly adequate for general use.

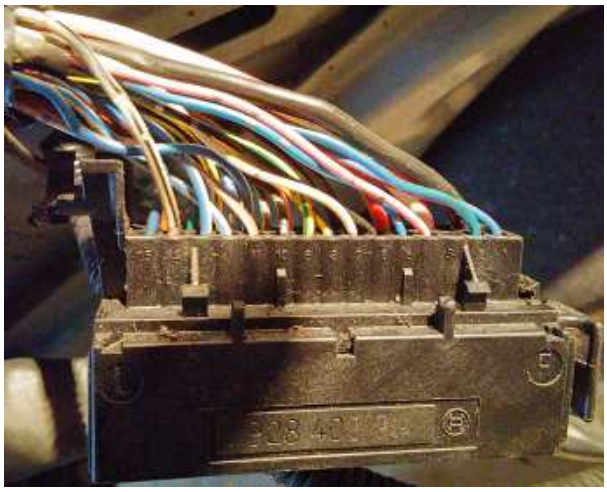
We recommend using a combination of a front and rear wheel for the best result.

Important: all unused wheel speed signal input pairs should be connected together.

The second WSS input may be preconfigured by us to already connect together to null the input. If so, and a second WSS signal inputs is desired to be used, cut these connections.

Wheel speed sensor signal connections

Our recommended position for connecting to the wheel speed signals in an OEM configuration is at the ABS computer located on the side of the ABS pump unit in the engine bay. All of OEM wheel speed sensors connect here.



ABS connector (MY03/04 shown)

The wheel speed sensor signal wires can be identified by each being a tightly twisted pair of wires. Further, each of the sensor signal wires typically emerge from shielded wires approx 3" from where they termiate to the connector plug.

Pins are as follows **as labelled by the embossment on the OEM connector as shown**. (Note the FSM labels these pins in a different order).

Pin 1 – Blue/red stripe – Right rear wheel +

Pin 2 – Blue/green stripe – Right rear wheel -

Pin 3 – blank

Pin 4 – Pink – Front right wheel +

Pin 5 – Blue – Front right wheel -

Pin 6 – White – Front left wheel +

Pin 7 – Black – Front left wheel -

Pin 8 – Yellow/red stripe – Left rear wheel +

Pin 9 – Yellow/green stripe – Left rear wheel -

Verifying connection

The module has two indication LEDs:

- Green – power LED
- Orange – WSS signal LED

The Green power LED will light when the module has good power.

The orange WSS signal LED will flash when a WSS pulse is successfully received. When your car is driving, this LED may appear to be on solid. This is normal.

Calibrating the VSS signal

The MapDCCD wheel speed signal processor module has two buttons for adjusting the VSS speed higher or lower.

We recommend having a passenger monitor GPS speed and adjust the VSS speed using the buttons until your dash speedometer matches the GPS speed.

The initial calibration is for a tire diameter of 2 metres (approximately a 225/45 R17 tire diameter).

Help

Please email info@mapdccd.com

Included hardware with your purchase:

One MapDCCD wheel speed signal processor module

One loom that includes:

- 0.5m wire for power, ground and VSS signal
- 1.5m twisted/shielded WSS signal wires