DCCDPro.com - Universal Controller (Spiider) Installation Manual

Thank you for your purchase!

Technical Details:

- Advanced microprocessor based system
- Dual axis high resolution g-sensor
- Custom firmware with driver adaptive capability
- Internal modes switch on the fly automatically (hands free)
- Using advanced algorithms instead of unintelligent “static mapping” or “lookup tables”
- Unique Left Foot Braking input to override the system using right foot throttle

Installation:

Installation is recommended to be performed by a licensed auto mechanic.

4 conductor 18 AWG heavy wire:

- Red = 12v positive (**switched power**) ***Note: Do not connect to “always on” power***
- Green = 0v negative (ground)
- Black = DCCD “B128 pin 1 (Black wire in transmission harness to DCCD)”
- White = DCCD “B128 pin 4 (Green wire in transmission harness to DCCD)”

3 conductor 22 AWG thin wire:

- Red = Ebrake cutout wire (ground this to stop DCCD activity)
- Black = Foot brake for Left Foot Braking option (12V when braking, float when released)
- Green = TPS: (Download appropriate Subaru ECM Schematic from website)
  Cable throttle = “B135 pin B7”
  Drive by wire <2006MY = “B136 pin B18”
  Drive by wire 2006MY+ = “B134 pin B18”

STi gage cluster lighting:

- White = Auto mode led
- Green = 0% output led
- Yellow = 20% output led
- Orange = 40% output led
- Red = 60% output led
- Blue = 80% output led
- Brown = Lock led
- Black = 12v supply (used to power DCCD display on old dash clusters, not used on new clusters)

Notes / Suggestions:

The suggested location for installation of the control module is behind the dashboard in the knee crash pad area, there is a large open area behind the metal bars there. Switched power and ground are also available nearby at the fuse panel to tap into.
Due to the differences in swap wiring you will have to source these wires yourself with a multimeter. It is recommended to have at least a 10 amp fused circuit powering the DCCD. The heated seat circuit is perfect if it is not already used, or try the reserve circuit for the rear wiper which is usually empty in North American cars.

I would also suggest running an extension if needed for the two DCCD wires to the top passenger side of the center diff tailpiece where you can solder in the two wires you need on the B128 DCCD connector.

Use 18 AWG stranded wire and liquid electrical tape or silicone caulking to keep everything sealed up after soldering the wires at the DCCD plug since they are exposed under the vehicle.

A suggested location for installation of the dual axis g-sensor is on the horizontal metal surface under the center console. ~1 meter of wire between the control module and the sensor is provided for this purpose. Any other level horizontal surface will do as long as the sensor case can be attached firmly using epoxy or other strong adhesive. Do not use 2 sided tape, or foam carpet tape, use a 2 part epoxy or contact cement made for plastics. Note the orientation arrow, and install the sensor with its arrow pointed toward the front of the car! (The wires exit the g-sensor module towards the front of the car and the label faces upward)

The Ebrake cutout installation is simply to attach the red wire (on 3 wire 22 AWG cable) to your Ebrake circuit such that the Ebrake will ground the wire when pulled.

Operational Details:

The hardware and firmware were designed to work together to be as "driver transparent" as possible. Our philosophy is that the less you need to adjust or monitor while driving the more you can concentrate on the road / race.

The control knob for the system is used to scale the DCCD “aggressiveness”, which will bias the car towards an under-steer condition when cornering.

Fully CCW turns the unit essentially “off” which will heavily bias the rear wheels, full CW gives it full “aggressiveness” maximizing traction and thus increasing under-steer. In this setting the system will attempt to give you maximum traction at all times by trying to maximize the amount of DCCD lock at all times.

The system is infinitely variable between these two extremes. Start at lower settings (over-steer) and increase the knob setting until you find the car handles the way you would like it to in the corners. You can alter the setting at any time and on the fly as conditions change.

The Auto/Man switch is used to switch between manual and auto mode. If you have the STi interface option the “Mode” light is passed back and forth between the switch (for manual mode) and the bottom led of the gauge cluster (for auto mode). The additional lighting in the cluster is used to tell you what the current output level is. Each led represents approximately 20% of total output.

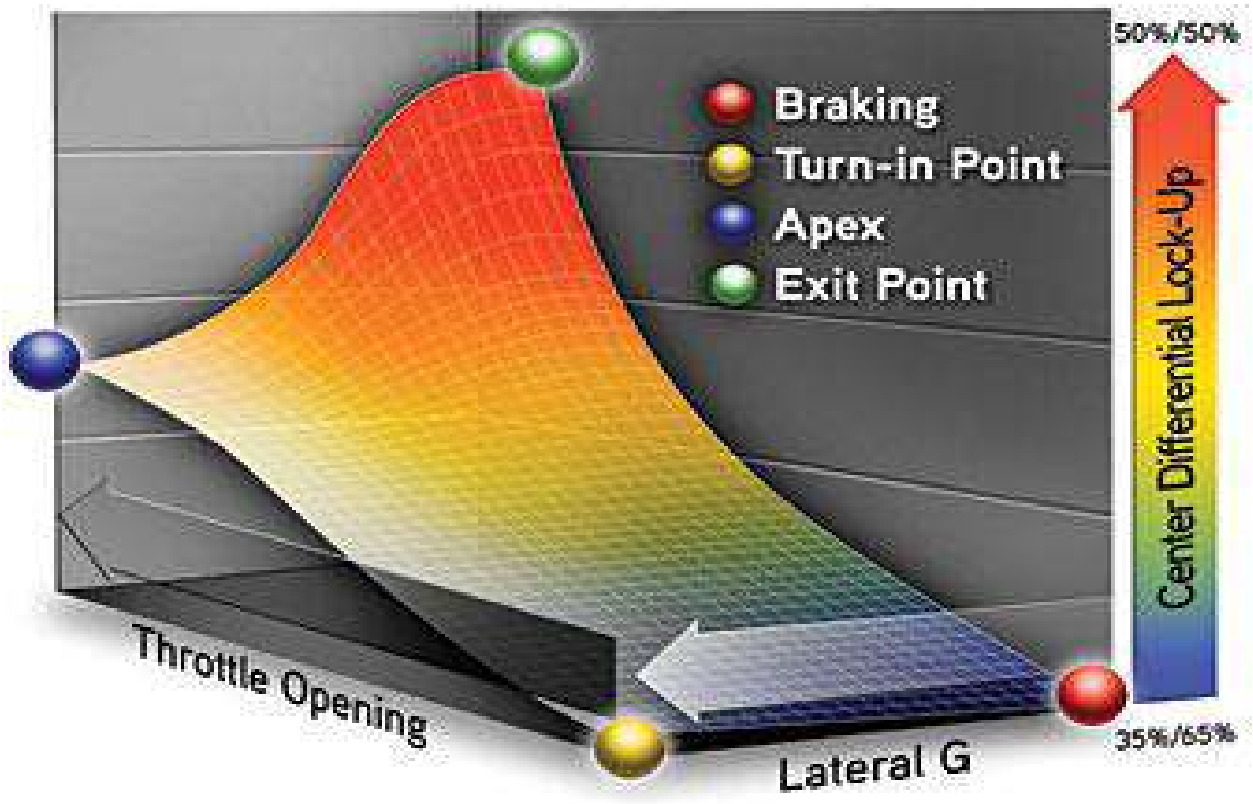
If you do not have the STi interface option, the two modes are both displayed on the switch led. In manual mode the knob will directly control the diff and the light will be steady in relation to the knob setting. In auto mode the led will change brightness in sync with the output to the diff.

Manual mode = steady led, auto mode = ever changing led brightness.

This DCCD controller constantly and frequently monitors the attached sensors, updating the DCCD output based on how the car is behaving in reaction to driver inputs. It features several firmware modes that it switches between on the fly. Without going into a detailed explanation of the firmware formulas, the system automatically switches between formula appropriate for "parking lot / highway cruise”, "aggressive cornering", "aggressive straight line", and "stuck in snow/mud" based on what information it receives from the sensors. It monitors the output level as well as the speed at which the various sensors change. For example it can differentiate between slow gradual throttle application vs. rapid throttle acceleration and respond accordingly.

The internal firmware formulas try to mimic the behavior of the OEM STi DCCD auto mode. (See illustration below.)

DCCD Firmware Response Illustration:



Warning:

For Off-road use only
Installation of the controller indicates your acceptance of responsibility for risk and peril to yourself and / or your vehicle.

Use at your own risk. If you disagree with the above statements please return the uninstalled product for full refund.

Limited warranty

The 60 day warranty is limited to the repair, replacement or refund of the purchase price to be determined upon receipt and analysis of returned product. Shipping and handling, installation and removal fees and/or damage to the vehicle will not be covered under any circumstances.