

12oClockLabs® SpeedoDRD V4 Installation & Setup Guide

MADE IN USA and trusted by motorcycle OEM's as well as customers around the world for over a duodecennial.
Most reliable, most features, and highest accuracy speedometer calibrator device on the market today.

Installation

- Watch our setup video to get an idea of how it works...
12oclocklabs.com/sdrd_video.htm
- Make sure vehicle is OFF and locate speed sensor (engine, transmission, sprocket cover, rear or front wheel)
- To ensure you selected the correct sensor plug. Unplug and drive the vehicle at least 10mph. The speedometer should read zero.
- Connect the SpeedoDRD unit in-between the speed sensor connectors. NOTE: many sensor plugs use the same connectors as the speed sensor, but are not the speed sensor plug.
- If you have other devices connected to your speed sensor, connect the SpeedoDRD last (near the ECU). Example: (Speed Sensor -> Other Devices -> SpeedoDRD -> Motorcycle Harness)
- See "SpeedoDRD Main Menu" item 8, to make sure you installed the unit to the correct sensor plug.
- Read "Product Care & Precautions" to ensure you select a good mounting location for SpeedoDRD.
- Make sure to mount the SpeedoDRD far away from spark plug wires and coils (at least 6 inches away)
- Once the SpeedoDRD is installed & tested, you're ready to program it, see "Quick Setup Guide".

Quick Setup Guide

- If installing on a KTM or CRF450L change your input impedance to HI. "SpeedoDRD Main Menu" item 9
- If using a GPS as your method of calibration comparison; before programming the device take a test drive and compare your speedometer with the GPS device. Hold your speed steady for at least 5 seconds during the comparison, for best accuracy compare at a speed of 60mph or 100kph.
- Watch video: 12oclocklabs.com/sdrd_video.htm
Use setup tool: 12oclocklabs.com/sdrd_calc.htm
- If you need to make additional adjustments, you must take into account any value already programmed into the SpeedoDRD; For example: If the SpeedoDRD already has -10.0% programmed, and you take another test drive and find out you still need -1.0% of adjustment. You must program the SpeedoDRD with -11.0%
- If you made a mistake during programming and the speedometer is way off from what is expected or it reads zero, then you might have accidentally enabled multiplier/divider mode. To correct the issue follow these steps.
[1] Perform a programming reset, see "SpeedoDRD Main Menu" menu item 10
[2] Test drive the motorcycle immediately after reset, DO NOT REPROGRAM YET!
[3] After successful test drive start over at the beginning of quick setup guide.
[4] If test drive still showed 0mph, check for bent pins on connectors.

Product Care & Precautions:

Mount SpeedoDRD away from extreme Heat. Close engine and exhaust contact should be avoided. Mount SpeedoDRD in a relatively dry area, though the unit is weather proofed, it is a good idea to avoid frequently wet areas. Make sure to mount the SpeedoDRD in a location where it will not be crushed. Make sure to mount SpeedoDRD away from spark plug coil and wires, minimum distance is at least six inches. For troubleshooting help see 12oclocklabs.com/sdrd_help.htm

SpeedoDRD Main Menu

With vehicle ON (engine NOT running). HOLD the SpeedoDRD button for a specific number of blinks to access a menu item. If you missed a selection, just keep holding the button and wait, after the max blinks, there will be a one second pause, and the blinking will start over. If a menu item is selected that requires additional input, you will see a rapid Red/Green flashing pattern called the *Alt Pattern*, it signified the SpeedoDRD is ready for additional input. After entering the last value in any menu item that saves data, you will see 1 Orange Blink confirming the setup was saved to memory. **NOTE:** During an Alt Pattern, you can skip entering a value by holding down the button until the Alt Pattern stops, then quickly release the button before any blinks occur. This skips inputting any data and causes a default value to be entered. The default for KPH Conversion setup is "No Conversions", Positive/Negative is "Negative", and for numerical values is "Zero". This feature provides a quick way to skip a data input section; and select its most commonly used value. Also, when an instruction says "Hold 0 blinks" you can either hold the button for 10 blinks, or you can Hold the button until the Alt Pattern stops and quickly release before any blinks occur. Both methods enter a zero value.

0) Display SpeedoDRD Version (blinks version number on led)

Example value 400: Hold button 0 blinks & release. You see 4 quick flashes, 1 long flash, 1 long flash.

1) Display Max Speed for 5 seconds (on your Speedometer Gauge)

Example: Hold button for 1 red blink and release. The max recorded speed will appear on your speedometer for 5 seconds. Max speed is only activated after the vehicle has been moving for about 25 seconds. After activated the Max Speed is only saved when the vehicle has stopped and the speedometer reads zero for 3 seconds. Only the highest recorded speed is saved. (Which can be erased with menu option 10)

2) Display Correction Percentage (Red=Negative number, Green = positive number, Long Blink = 0)

Example -3.0: Hold button 2 blinks & release. You will see 3 quick red flashes, a pause, and 1 long red flash.

3) Display Multiplier & Divider (Red=Divider Enabled, Green=Multiplier Enabled, Long Blink = 0)

Example divider 3.0: Hold button 3 blinks & release. You see quick 3 red flashes, a pause, and 1 long red flash.

4) Display KPH Conversion Value (GREEN=MPH to KPH / RED=KPH to MPH / ORANGE=No Conversion)

No Conversion Example: Hold button for 4 blinks then release. The SpeedoDRD blinks ORANGE.

5) Enter SETUP for Correction Percentage (3 digits with leading zeros [00.0] last digit is decimal digit)

Example -1.3 Hold button 5 blinks. Hold button & release at RED. Hold 0 blinks. Hold 1 blink. Hold 3 blinks.

6) Enter SETUP for Multiplier & Divider (3 digits with leading zeros [00.0] see "How to Enter a Number Value" Example divider 1.3 Hold button 6 blinks. Hold button & release at RED. Hold 0 blinks. Hold 1 blink. Hold 3 blinks.

7) Enter SETUP for KPH Conversion (ORANGE=None, GREEN=MPH to KPH, RED=KPH to MPH)

Only use this if you are importing or exporting a vehicle and need to convert the gauge to read differently than it was setup from the factory. Example: I am importing a vehicle from Canada to USA. Hold button 7 blinks and release. Hold button again and release when the color is RED. KPH to MPH Conversion has been selected.

8) Generate Test Frequency (Hz levels; 8, 16, 32, 64, 128, 256, 512, 1024) press button to increment frequency

Example: Hold button 8 blinks and release. The LED is now blinking and output is 8Hz. Press again to increase to 16Hz. The LED is now blinking a different color and output is 16Hz. I can continue to do this until a Speedometer reading appears on the screen. Turn off ignition when finished.

9) Select Input Impedance (GREEN=LO, RED=HI) [most vehicles are LO, CRF450L & KTM motorcycles are HI]

Example: I have a CRF450L and need HI impedance. Hold button 9 blinks and release. Hold button & release at RED. When vehicle is turned ON, the SpeedoDRD color blinked at power up is the currently selected impedance.

10) Reset Menu (ORANGE=Reset All Memory, GREEN=Reset Programming, RED=Reset Max Speed)

Example: To reset all SpeedoDRD memory to default. Hold button 10 blinks. Hold button & release at ORANGE.

Disclaimer: By using this product you agree to assume all risk and liability therein, and not hold responsible 12oclockLabs for any mishap (either foreseeable or unforeseeable) that may arise from using or misusing this product; this includes all items sold or distributed by 12oClockLabs. All electronic devices are subject to possible failure during normal usage, and by using this product you agree to assume the risk and liability for such a possible failure.