

# SV650/1000 MultiBot User's Guide

## 1.0 Introduction

The MultiBot is a combined Gear Position Indicator, SpeedoHealer, and Voltmeter for the SV650/SV1000. The MultiBot mounts inside the SV gauge, uses the stock gauge LCD for display, and uses the SV gauge Adj button for control. Operation and installation look OEM, there are no external boxes, buttons, or displays. One external wire runs from the gauge plug down to the SV gear position sensor.

## 2.0 Operation

The SV Gauge Adj button is used to control the MultiBot.

**1x press**, or **press-and-hold** = normal SV Adj button operation. The MultiBot does not conflict with normal SV gauge button operation.

**2x press**: Toggles between Engine Temp or Battery Voltage display.

**3x press**: Moves the Gear position indicator from Top position to Bottom, or Off completely.

**4x press**: Enters/exits SpeedoHealer Setup mode. This is a one time setup.

**5x press**: Enters/exits Voltmeter Calibration mode. This is a one time setup.

## 3.0 MultiBot Gear Position Indicator

The MultiBot Gear Position Indicator displays the current gear in the LCD display of the SV gauge. The user can select where to display the Gear Position Indicator readout, either Top, Bottom, or Off.

Press the Adj button 3 times to move the Gear Position Indicator display from Top (uses the hundreds digit of MPH), Bottom (displays at the digit in front of the Engine temp display), or turn Off completely.

The 100's digit of the MPH can not display 4, 5, or 6 since the top left segment of the LCD digit does not exist. In place of 4, 5, or 6, the bottom " \_ ", middle " — " or top " — " horizontal LCD segments of the digit are used instead. See MultiBot video for visual explanation.

*The MultiBot Gear Position Indicator will display "c" if there is no signal from the SV gear position sensor. This is normal and will happen any time the Run/Stop switch is set to Stop (cuts power to the ECM, gear position signal goes to 0v), or if the bike is in gear with the kickstand down. It is equivalent to seeing "CHEC" in the stock SV display.*

## 4.0 MultiBot SpeedoHealer

The SpeedoHealer corrects SV speedometer error. The SV speedometer reads 9% high! Most users will want to set the MultiBot to -9% but a different number can be used to compensate for different front tire size.

To set the speedometer correction factor:

1. Press the Adj button 4 times to Enter SpeedoHealer setup mode.
2. Adjust the correction factor up/down in 1% increments (1 press = increment, 2 press = decrement). *When pressing the ADJ button, pause briefly to allow the number to change (up/down). Once the number changes it is OK to press again.*
3. Press the Adj button 4 times to Exit SpeedoHealer setup mode. Done!

The MultiBot speedohealer only modifies the MPH LCD digits, it does not modify the signal from the speed sensor. This has two affects:

- A. Correcting SV MPH in this manner *does not introduce odometer error*. The stock SV speedo reads 9% high but stock SV odometer error is only 1.2% high (pretty close). Traditional speedohealers fix the speedo error but in doing so cause the odometer to read about 7% low. With the MultiBot, MPH will be accurate, odo calibraion will be unaffected and remain stock, 1.2% high.
- B. The MultiBot speedohealer does not adjust the odometer. If you need to adjust for a different number of speed sensor magnets, say, if you've changed the speed sensor then a traditional speedohealer must be used for that.

## 5.0 MultiBot VoltMeter

Press the ADJ button two times to toggle between Engine Temp or Bike Voltage display. The decimal point does not exist in this area so a reading of, say, 14.2 volts will show as 142.

The MultiBot measures voltage at the gauge, not at the battery. There is roughly a 2v difference between gauge voltage vs battery voltage which the MultiBot compensates for by calibration.

To calibrate the MultiBot voltmeter:

1. Press the Adj button 5 times to Enter Voltmeter calibration mode.
2. Clip a voltmeter to the motorcycle battery terminals, start the engine, hold rpm at 3k.
3. Adjust the MultiBot voltmeter reading until it matches true battery voltage. Adjustment is in 0.1v increments up/down. Calibration is initially set to 22 (2.2v, should be close) but exact setting will depend on the SV model and electrical accessories. (1 press = increment, 2 press = decrement). *When pressing the ADJ button, pause briefly to allow the number to change (up/down). Once the number changes it is OK to press again.*
4. Press the Adj button 5 times to Exit Voltmeter calibration mode. Done!