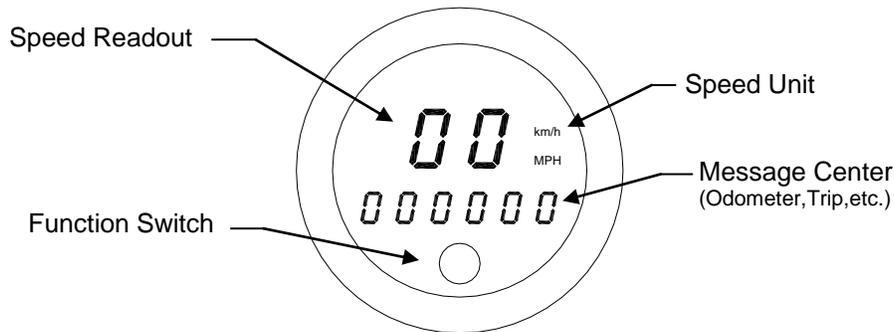




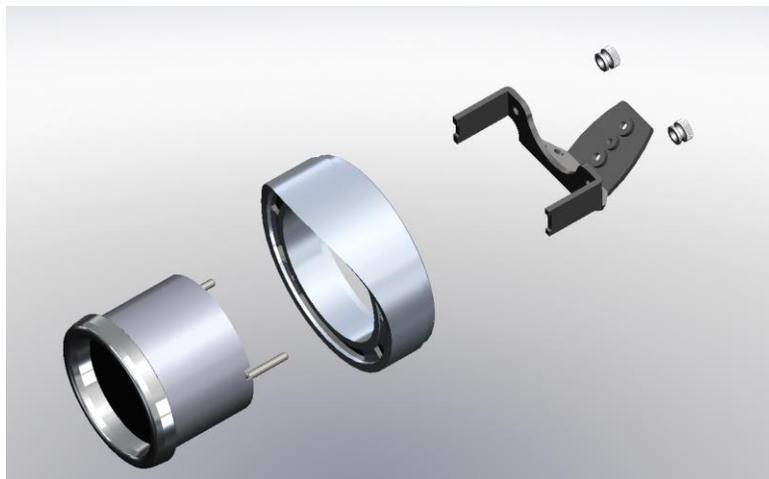
### BD-140 Big Dog digital speedometer



**IMPORTANT NOTE!** This gauge has an odometer preset option that is only available for the first 100 miles (160km) of operation. See “preset odometer” for instructions.

#### Mounting

Remove the speedometer cup from the handle bars. Remove the screw on the bottom of the cup to separate the front ring from the cup. Unplug the factory 3-pin harness. Remove the two nuts from the back of the speedometer to release it from the front ring. Install the new speedometer into the front ring and use the original clamp and the supplied thumb nuts to secure it. Connect factory 3-pin harness into the new speedometer. Reinstall the front ring into the cup and replace the screw into the bottom of the cup. Reinstall the cup onto the handle bars.



*Note: On some models with tank mounted speedometer it may be necessary to trim the mounting studs on the back of the gauge for proper clearance and fit.*

#### Wiring

The three pin plug on the back of the gauge mates into the factory speedometer wiring harness. Simply unplug the stock gauge and plug in the new Dakota Digital BD-140.

- Black - Ground
- Green - Speed signal in
- Red - Power +12V key on

## SPEEDOMETER

**Failure to calibrate the speedometer may cause your odometer mileage to increase very rapidly.**

The speedometer has been factory calibrated to a nominal speed signal which should be accurate on most cycles. The speedometer is adjustable to allow for tire and gearing changes. The speed reading should be verified by following another vehicle or checking time over a known distance. Speedometer calibration is described on the following pages.

## FUNCTION SWITCH

The push button function switch on the lower front face of the speedometer allows access to all of the mileage, and performance information. Pressing and releasing the function switch toggles through the different displays. Pressing and holding the switch for about 2 seconds will reset the current display. The display sequence is as follows:

### SPEED MENU

000000 odometer mileage  
A 000.0 trip meter mileage A  
b 000.0 trip meter mileage B  
5 0000 count down to service (if programmed)  
===== Speedometer will show km/h (or MPH if metric)

### PERFORMANCE MENU

H I 00 high speed recall  
60 00.0 0-60mph time (0-100kph)  
25 00.0 quarter mile time  
25 00 quarter mile speed

The 0-60 and ¼ mile timers are zeroed by pressing and holding the switch while that timer is displayed. The timer will not restart until the speed reaches zero and then you start driving again.

## SPEEDOMETER SETUP

Press and hold the function switch on the front of the speedometer while turning the key on to enter the speedometer setup.

<u>Menu</u>	<u>Description</u>
Auto	select speed unit and auto calibrate speed
Adjust	select speed unit and adjust calibrate speed
n Ight	set night dimming level
5 Set	miles to service setting
PERF	enable/disable performance readings
Info	display software revision
- odometer	one-time odometer preset (only shown while odometer has less than 100 miles)

## SPEED CALIBRATION

When performing speedometer calibration, enter the speed setup mode by pressing and holding the function switch while turning the key on and starting the bike, once the bike is running, release the switch. This avoids any problems with the battery voltage dropping during engine cranking.

There are two methods for calibrating the speedometer, auto cal and adjust. Either one can be used. Auto cal requires that you have one measured mile marked out (km for metric), this is the best method to start with if your speedometer needs a lot of correction. Adjust requires you to follow another vehicle going at a set speed, time your self over a mile to determine your speed, or use a hand held GPS with speed indication.

### **Auto Auto Cal**

- Press and release the switch until "Auto" is displayed, then press and hold the switch until " - " is displayed.
- Release the switch. The display will switch to "unit" and light up the current speed unit (MPH or km/h).
- Press and hold the switch to keep the current unit or press and release the switch to change the unit.
- Next the speedometer will display "CAL" and the message display will show zeroes. You should now begin driving the measured mile. The message display will count the number of pulses received from the sensor. The message display cannot be used to determine when a mile has been driven. Once you reach the end of your marked mile, press and release the switch again. The calibration is now done.

### **Adjust Adjust**

- Press and release the switch until "Adjust" is displayed, then press and hold the switch until " - " is displayed.
- Release the switch. The display will switch to "unit" and light up the current speed unit (MPH or km/h).
- Press and hold the switch to keep the current unit or press and release the switch to change the unit.
- Next the system will restart with "Adjust" on the message display. The speedometer will show the speed reading. Begin driving at a known speed. When the switch is pressed, the speedometer reading will begin increasing until the switch is released. The next time the switch is pressed, the reading will begin decreasing until it is released. When the speedometer is correct you can release the switch. The new calibration will be saved if no adjustments are made for 10 seconds.

## **Ⓝ 19HŁ NIGHT DIMMING**

Your display system has a dimming feature that dims the display intensity automatically at night. Normally the system is at full brightness for daytime viewing. To have the system at full brightness all of the time, go into the setup menu as described above and select “Ⓝ9Ł” (night). Press and release the function switch to select “OFF” instead of “ⓃⓃ”. Press and hold the function switch to save the new setting.

- Press and release the switch until “Ⓝ 19HŁ” is displayed, then press and hold the switch until “ - ” is displayed.
- Release the switch. The current setting will be displayed. (OFF, OFF).
- Press and release the switch until the desired setting is displayed.
- Press and hold the switch until “ - ” is displayed to save the setting.

## **5 5EŁ Miles to Next Service setup**

The service mileage is a countdown mile meter. The service mile display can be disabled or can be set to count down from 500 – 7500 miles. If the service mileage is enabled and it gets to 0 miles it will display “5 -dŁE” each time the key is turned on. If the push button switch is pressed and held while “5 -dŁE” or “5” and a mileage is displayed, the service miles will be reset to your preset value.

- Press and release the switch until “5 5EŁ” is displayed, then press and hold the switch until “ - ” is displayed.
- Release the switch. The current setting will be displayed, “OFF” or a mileage from 400 – 6200.
- Press and release the switch until the desired setting is displayed.
- Press and hold the switch until “ - ” is displayed.

## **PErF Performance menu setup**

The performance readings can be turned on or off. When they are turned off the odometer will only toggle through the mileage readings.

- Press and release the switch until “PErF” is displayed, then press and hold the switch until “ - ” is displayed.
- Release the switch. The current setting will be displayed (ⓃⓃ or OFF).
- Press and release the switch until the desired setting is displayed.
- Press and hold the switch until “ - ” is displayed.

## **ⓃdŁŁ Odometer preset**

The odometer can be preset by the customer within the first 100 miles. Once the odometer has more than 100 miles the menu option will no longer be displayed. Make sure you have correctly selected the units to be either MPH or km/h first. The odometer will be set in the selected units. Once you have preset the miles you cannot change it again.

**WARNING!!: This only allows setting odometer to the nearest mile. Do not use tenths! For example a mileage of 65432.1 should be set to “065432” using this method. If the tenths digit is used, the odometer will read 10 times too high.**

- Press and release the switch until “-ⓃdŁŁ” is displayed, then press and hold the switch until “ - ” is displayed.
- The current miles will be displayed with the left most digit flashing.
- Press and release the switch to increment the digit. Press and hold the switch to move to the next digit to the right.
- Continue until the right most digit has been set. Press and hold the switch and the speed display will show “ⓃⓃ”.
- Press and hold the switch while “ⓃⓃ” is displayed to go back and continue changing the odometer display. Turn the key off to cancel any changes.
- Press and release the switch to change to speed display to “ŁE5”. Press and hold the switch while “ŁE5” is displayed to save the current odometer reading.

## Troubleshooting guide.

<b>Problem</b>	<b>Possible cause</b>	<b>Solution</b>
Gauge will not light up	Red wire does not have power.	Connect to a location that has power.
	Black wire is not getting a good ground.	Connect ground to a different location.
	Gauge is damaged.	Return gauge for repair.
Gauge lights up, but displays "E-3"	Speed calibration is invalid	Gauge must be recalibrated.
Gauge lights up, but speed will only show zero.	Harness is not connected properly.	Check connection from speed harness to speed sensor and gauge.
	Speed sensor not grounded properly.	Move ground to different location, preferably close to the speedometer ground.
	Sensor is not sending a speed signal.	See speed sensor voltage checks listed below.
	Gauge is not calibrated	Gauge must be calibrated, see instructions on page 2.
Speed reading is erratic or jumps around.	Speed sensor wire is loose or broken.	Check all wire connections and cables for breaks.
	Poor ground connection.	Check ground on speedometer and sensor.
	Poor power connection.	Check that power is not connected to a noisy source such as ignition coil power.
Speed reading is incorrect.	Gauge is not calibrated correctly.	Gauge must be calibrated.

## **SERVICE AND REPAIR**

DAKOTA DIGITAL offers complete service and repair of its product line. In addition, technical consultation is available to help you work through any questions or problems you may be having installing one of our products. Please read through the Troubleshooting Guide. There, you will find the solution to most problems. **Should you ever need to send the unit back for repairs, please call our technical support line, (605) 332-6513, to request a Return Merchandise Authorization number.** Package the product in a good quality box along with plenty of packing material. Ship the product by UPS or insured Parcel Post. Be sure to include the RMA number on the package, and include a complete description of the problem with RMA number, your full name and address (street address preferred), and a telephone number where you can be reached during the day. Any returns for warranty work must include a copy of the dated sales receipt from your place of purchase. Send no money. We will bill you after repair.

## **Dakota Digital 24 Month Warranty**

DAKOTA DIGITAL warrants to the ORIGINAL PURCHASER of this product that should it, under normal use and condition, be proven defective in material or workmanship within 24 MONTHS FROM THE DATE OF PURCHASE, such defect(s) will be repaired or replaced at Dakota Digital's option.

This warranty does not cover nor extend to damage to the vehicle's systems, and does not cover removal or reinstallation of the product. This Warranty does not apply to any product or part thereof which in the opinion of the Company has been damaged through alteration, improper installation, mishandling, misuse, neglect, or accident.

This Warranty is in lieu of all other expressed warranties or liabilities. Any implied warranties, including any implied warranty of merchantability, shall be limited to the duration of this written warranty. Any action for breach of any warranty hereunder, including any implied warranty of merchantability, must be brought within a period of 24 months from date of original purchase. No person or representative is authorized to assume, for Dakota Digital, any liability other than expressed herein in connection with the sale of this product.

**⚠ WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)



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