



MLX-3000

3 3/8" Speedometer/Tachometer
1995-2003 Sportster and 1995-2005 Dyna (non-fuel injected models)

Included parts:

MLX-3000 display



Indicator harness



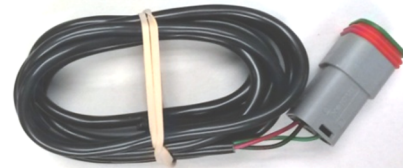
MBM harness



Main/power harness



Speed harness



IMPORTANT NOTE! This gauge has an odometer preset option that is only available for the first 100 miles (160km) of operation. See "preset odometer" on page 7 for instructions.

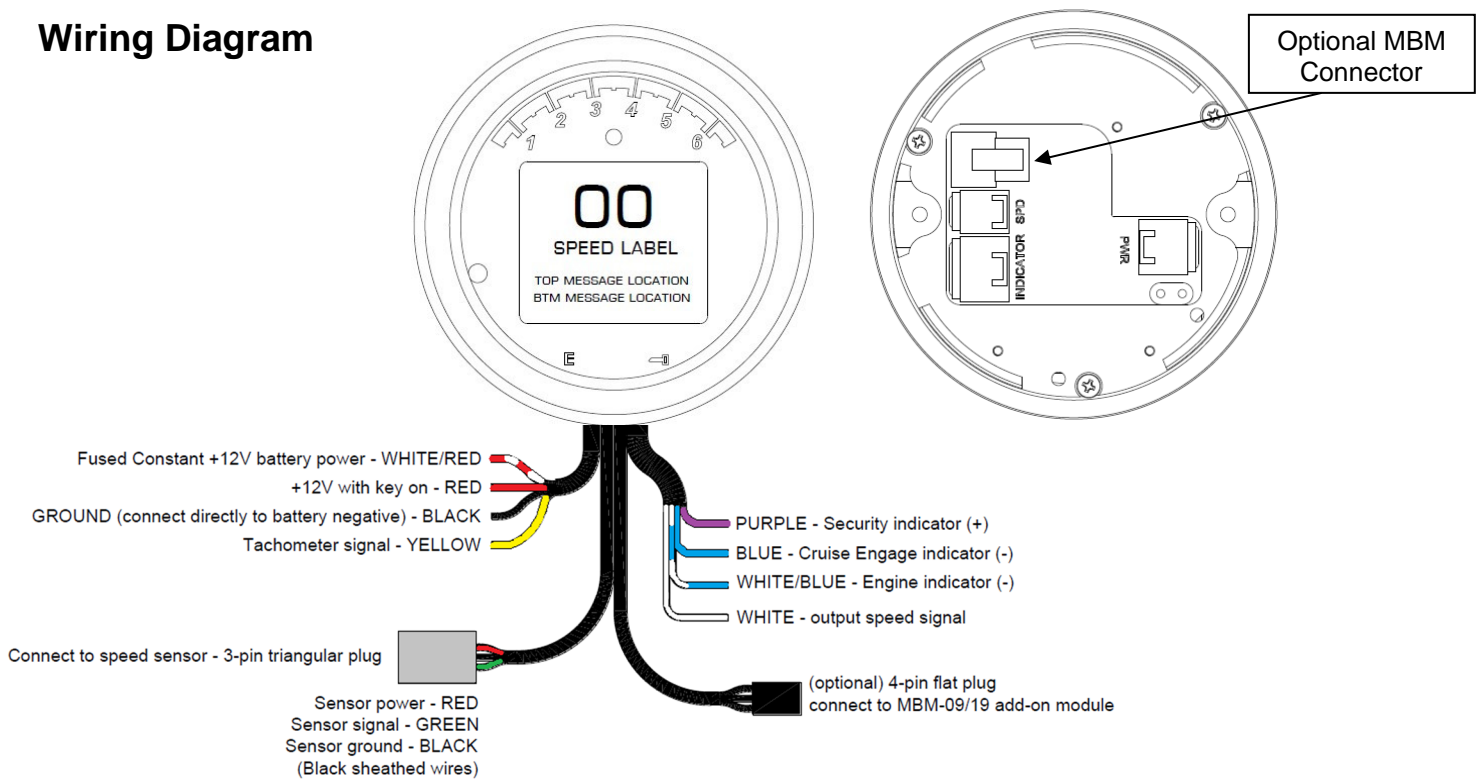
Installation

The MLX-3000 is a direct-fit replacement and uses the original housing, gaskets and screws.

1. On tank-mount models, begin by removing the dash. All models: remove the two screws on the back of the gauge housing, then unplug the factory gauge, noting the position of the rubber gaskets; one on the front between the gauge bezel and housing and (on handlebar-mount applications) one on the back between the housing and the back plate.
2. Transfer the original gaskets to the MLX-3000; connect the supplied power, indicator and speed harnesses. Also connect the optional MBM harness if readings for compass, boost or air pressure are desired. Route the MBM harness under the seat.
3. Secure the new gauge using the original screws.



Wiring Diagram



Installation: wiring

STATUS AND WARNING INDICATORS

The MLX-3000 features several indicators which are triggered by signal wires in the bike's wiring harness. Use a service manual to locate and safely splice the supplied harness into the bike's main harness. Available indicators include security (red key symbol), check engine (red 'E'), ABS (red 'ABS'), low fuel (amber fuel pump symbol). Some of which may not be active on your motorcycle.

SECURITY SYSTEM INDICATOR

The security system indicator is a red light that is activated by 12 volts to the purple wire. It will light up whether the gauge is powered or not.

CRUISE INDICATOR

When a ground signal is applied to the blue wire, the cruise indicator will activate.

ENGINE INDICATOR

The check engine indicator is activated by a ground signal on the white/blue wire.

SPEEDOMETER

The stock, transmission-mounted speed sensor can be used; the supplied, three-wire speed harness connects the transmission speed sensor to the speedometer. This instrument will also accept most aftermarket inductive, Hall-effect, or ground switch sensors.

For three wire Hall-effect sensors, refer to the installation instructions for the sensor to determine wire color code. Most three wire sensors use the following color code: RED – power, BLACK – ground, WHITE – speed signal. Connect the sensor signal wire to the MLX-3200 3-wire harness green wire, connect the sensor power wire to the red wire from the 3-wire harness, and connect the sensor ground wire to the black wire from the 3-wire harness.

For a speed sensor integrated into a vehicle wiring harness, consult a service manual to determine the color code and location of the speedometer signal. **If the factory harness supplies +5V to the sensor, please utilize the factory connection in place of the white/purple power wire.**

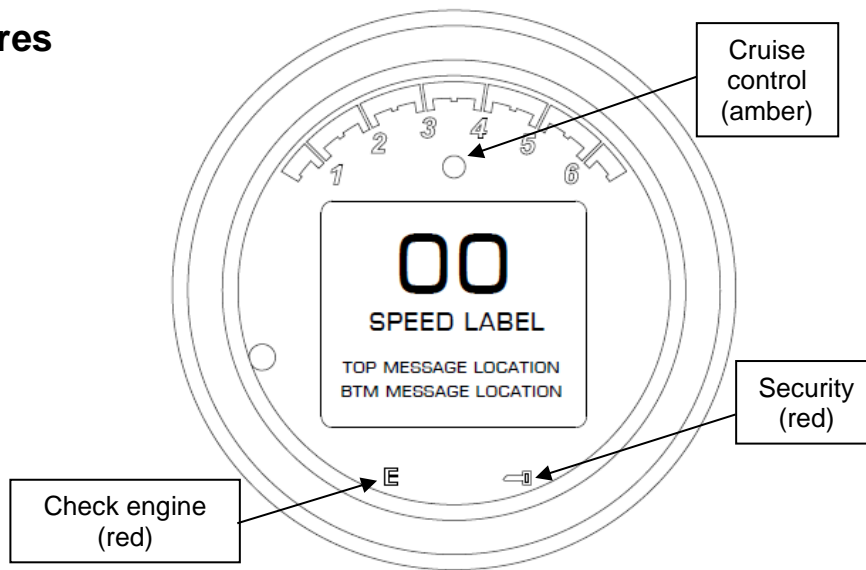
TACHOMETER

The tachometer is activated by connecting the yellow wire from the main harness to the negative side of the coil or an ignition module tach output. The tachometer input is adjustable for 1-16 cylinders. The 1 cylinder setting is used for single-fire ignition systems without a buffered tach output.

For carbureted models, connect to the pink wire to the negative side of the coil and set the tach for 2 cylinders; for fuel injected models connect to either the blue/orange or yellow/blue under the seat in the harness along the right side frame rail and set the tach for 1 cylinder. For tach signals integrated into a vehicle wiring harness, consult a service manual to determine the color code and location of the tachometer signal.

System features

INDICATORS



LOCATIONS

There are two message locations available to display additional information under the speedometer. They are labeled Top and Bottom Message Location, respectively. You can program what you want in each location as well as turn readings off. Each location can have multiple readings assigned to it; simply tap the function switch to scroll to the next reading in that location. See function switch operation on page 4.

The main speedometer reading ranges from 0-250MPH/400km/H while the arching bar graph tachometer offers a 0-6500 RPM reading.

Information readings

Information readings	Description
ODOMETER	Odometer reading (0-999,999)
TRIP A	Trip A odometer reading (0-9999.9)
TRIP B	Trip B odometer reading (0-9999.9)
SERVICE (when enabled)	Distance to next service (0-7500.0 or ---- when "SERVICE DUE")
TRIP HR	Hours gauge has been on with engine running HH:MM (00:00 to 99:59)
SPEED km/h	Alternate speed unit conversion
RPM	Digital RPM reading (0-9,999)
VOLTS	System voltage (including low voltage warning)
GEAR/CLOCK	Gear position and 12 hour clock display

Performance readings

HIGH SPEED (MPH – km/h)	High speed recall
0-60 TIME	0-60 mph time in seconds
Quarter mile speed/time	Speed at end of ¼ mile (trap speed) and ¼ mile time from standing start
HIGH RPM	High RPM recall

MBM (Motorcycle Bus interface Module)

MBM displays (optional)	Readings for connected modules
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Programming, clock set

FUNCTION SWITCH

The factory trip reset switch on the side of the dash panel or back of the gauge cup is used as the main function switch. During normal operation the function switch allows access to information including mileage, RPM, and performance information which is located within two message locations on the gauge. The message locations have arrows indicating which message location is currently selected, or in focus. Press and release the function switch to change the displayed information.

If you would like to change focus to another location, press and hold the function switch; you'll see a status bar labeled "MOVE LINE" filling. Once the status bar is filled, "RELEASE TO MOVE" will be displayed below; if the data in the selected location can be reset, such as a tripmeter, the bar will be emptying with "HOLD TO CLEAR" displayed above. Release the switch before the bar empties and the next line of information will be in focus, illustrated by arrows on each side. Focus alternates top and bottom.

To clear or reset information such as Trip A, Trip B or performance readings, press and hold the function switch until you see the status bar filling. Continue to hold the switch as the bar empties and then displays "HOLD TO CLEAR". Hold until you see "RELEASE" displayed above the status bar. The information will now be reset.

If the function switch is pressed while the key is in the off position, the clock and odometer will be displayed.

SETTING THE CLOCK

The clock uses a 12 hour format and can be set by holding the function switch while the focus arrow is next to the clock. If the clock is not shown, tap the function switch until it appears; keep in mind you may need to move to another message location.

Hold the switch until "RELEASE" is displayed; the hours will begin flashing. Tap switch to change the hours, hold the switch to move to the minute set and the minutes will begin flashing. Tap the switch to change the minutes; hold the switch to save and exit the clock set mode.

FACTORY RESET

In the event you would like to start over with your settings, preferences and display locations, there is a reset option which will revert all settings back to the out-of-the-box configuration. This includes message locations, color selections and speedometer calibration but DOES NOT include the odometer.

SETUP MENU

To simplify the setup procedure, please download our IOS or Android app 'Dakota Digital Motorcycle'

The function switch is used to enter setup mode. To get into setup, press and hold the function switch while turning the key on. Press and release the switch to advance through the menus below, press and hold to enter each menu.

Main Menu	Sub Menu	Description
BLUETOOTH	STATUS CHECK	Bluetooth ID and current connection status
	OFF	Disable Bluetooth connections
	SETUP ONLY	Allow Bluetooth connections only while in setup
	ALWAYS ON	Allow Bluetooth connections when key is on
LIGHTING COLOR	COLOR THEMES	Set factory defined color themes
	SET ALL COLOR	Set all areas to one color
	DISPLAY COLOR	Set speed digit color
	LABEL COLOR	Set speed label color
	MESSAGE COLOR	Set message location 1 and 2 color
	BAR COLOR	Set tach/fuel bar color
	WARNING COLOR	Set tach high warning color
	DIMMING	Set dimming method
	SUNLIGHT	Set sunlight brightness method
	RESET	Returns all colors and settings to factory default
SPEED	ADJUST	Adjust speed reading up or down while riding
	AUTO	Drive one mile (or km) to calibrate speed
	UNIT	Select MPH or km/h unit
	SERVICE RESET	Set miles to service reset value or turn off
	ODO PRESET	Odometer preset (Can only be set within the first 100 miles)
TACH	INPUT	Set cylinder count and input type
	HIGH WARNING	Set high RPM warning point
TEMP	UNIT	Set temperature unit for use with MBM-17
VOLT	LOW WARNING	Set low warning point (default warning limit is 11.0V)
DISPLAYS	TOP MESSAGE	Show/hide performance readings in Speed Top Message location
	BTM MESSAGE	Show/hide performance readings in Speed Bottom Message location
	MBMS	Show connected MBM's and set warning points
GEAR	PRESET	Turn gear display off (factory reset)
	LEARN	Learn gears based on speed and RPM
FACTORY RESET		Resets all settings except odometer to factory defaults
VERSION		Displays software codes of each controller
EXIT SETUP		Exit

Setup

PRESS AND HOLD FUNCTION SWITCH WHILE TURNING IGNITION ON. Release the switch.

For speed calibration: HOLD THE FUNCTION SWITCH WHILE STARTING THE BIKE

Press and release the switch to move through the different setup menus.

Press and hold the switch to enter a setup menu.

Press and hold to save an option, also.

Current selections within a sub menu are denoted with an asterisk (*).

Exiting Setup

At the end of every setup section, steps must be taken to properly exit the setup and return to normal operation.

When a section in this manual says "**Exit setup**", please refer to these steps.

- Press and release the function switch until you see ">BACK".
- Press and hold the switch until you see "RELEASE", and release the switch.
- Press and release the function switch until you see ">EXIT MENU".
- Press and hold the function switch until you see "RELEASE", then release the switch.

BLUETOOTH Bluetooth menu

- This is diagnostic section when using the app for your smartphone or tablet.
- The app can aid in setup and also read real time data on your smartphone or tablet.
- When ">BLUETOOTH" is displayed, hold until "RELEASE" is displayed, and release the switch.
 - Under the word SETUP the Bluetooth ID will be shown.
 - For Android users, this is the ID that you pair to, in Settings/Bluetooth, prior to opening the app.
- The Bluetooth menu options are: "STATUS CHECK", "OFF", "SETUP ONLY", "ALWAYS ON", "RESET", "BACK, and "EXIT".
- STATUS CHECK: Shows the unit is either "WAITING" for connection or "CONNECTED" with the app.
- OFF: turns off the Bluetooth.
- SETUP ONLY: Bluetooth is only active in setup.
- ALWAYS ON: default mode, works for setup and for real time readings on your smartphone or tablet.
- RESET: resets the Bluetooth options to default, useful if pairing is a problem.

LIGHTING Lighting menu for color changes

- When ">LIGHTING" is displayed, press and hold the switch until "RELEASE" is displayed, and release the switch.
- The color menu options are "COLOR THEMES", "SET ALL COLOR", "DISPLAY COLOR", "LABEL COLOR", "MESSAGE COLOR", "BAR COLOR", "WARNING COLOR", "DIMMING", "SUNLIGHT", "RESET" or "BACK".
- Since the color options are so expansive the selection process is the same in all sections.
 - Press and release the switch to change the selection.
 - Hold the function switch to enter the selected setup menu, until "RELEASE", and release the switch.
 - The display will show the available options. Press and release the switch to move through the available options.
 - An asterisk* will appear next to the option indicating it's set as the current setting.
 - Press and hold to select an option, until "RELEASE" is displayed.
 - Exit setup.
- COLOR THEMES: offers preset colors for the LCD color, label colors, message colors, tach bar, and tach warning.
- SET ALL COLOR: can set the entire gauge to one of 31 color choices.
- DISPLAY COLOR: independently sets the speed color to one of 31 color choices.
- LABEL COLOR: independently sets the MPH or km/h label color to one of 31 color choices.
- MESSAGE COLOR: independently sets the message area, (below the speed readout), color to one of 31 color choices.
- BAR COLOR: independently sets the color of the tach bar, up to the warning point, to one of 31 color choices.
- WARNING COLOR: independently sets warning point (high RPM) color to one of 31 color choices.
- DIMMING: offers two options, AUTOMATIC night dimming, or "OFF".
- SUNLIGHT: special feature to enhance viewing of the TFT LCD in *bright daylight* with a high contrast display.
This works independently from the night dimming
If enabled, this will temporarily override the color choices made, to offer a visible display during the day.
The color will revert back when the sunlight is less intense, (light overcast days can trigger this mode).
 - NORMAL: in daylight the background will stay black as the speed and messages will turn white.
 - INVERT: in daylight the background will turn white as the speed and messages will turn black.
 - OFF: your color choices will not change.
- RESET: This will reset all color choices and options back to original factory colors.

SPEED Speed setup menu

- **>> Speed calibration requires holding the function switch, THEN starting the engine. <<**
- When ">SPEED" is displayed hold until "RELEASE" is displayed, and release the switch.
- The selectable options are "ADJUST", "AUTO", "UNIT", "SERVICE RESET", "PRESET ODO", or "BACK".
- Press and release the switch to change the selection. Press and hold the switch to select it.

ADJUST Selection

- **This requires riding a known speed with a GPS, or following another vehicle at a known speed.**
- When ">ADJUST" is displayed, press and hold the switch until "RELEASE" is displayed - release the switch.
- The options will be "FASTER", and "SLOWER", to adjust the speed.
- Press and release the switch to choose "FASTER" to increase speed, or "SLOWER" to decrease speed.
- Press and hold the switch until "RELEASE" is displayed to begin adjusting.
- When riding a known speed, the speedometer will display a speed reading.
- While the display shows ">TAP TO INCREASE (DECREASE)", tap the switch to adjust speed.
- When your speed is correct, hold the switch until "RELEASE" is displayed, release the switch.
- If you go past your target speed, enter ">ADJUST" again and repeat the process until correct.
- Exit setup.

AUTO Selection

- **This requires riding a one mile (or kilometer) distance, which must be determined before starting.**
- When ">AUTO" is displayed, hold until "RELEASE" is displayed, and release the switch.
- The display will show ">BEGIN". You should be at the beginning of your measured distance to ride.
- When ready, hold the switch until "RELEASE" is displayed, and release the switch.
- When you see "PPM", you may ride the distance at any speed, and may stop and start.
 - The PPM numbers will increase while riding. If they remain at 000000 please check your speed sensor wiring.
- When you reach the end of the distance, press and release the switch.
- Exit setup.

UNIT MPH / km/h Selection

- **It is very important to set the speed unit PRIOR to setting the odometer!**
- When ">UNIT" is displayed, press and hold the switch until "RELEASE" is displayed, release the switch.
- The display will show UNIT and ">*MPH" for miles and "km/h" for kilometers.
- MPH is default. Press and release the switch to choose between MPH or km/h.
- Hold the switch until you see "RELEASE" and release the switch.

SERVICE RESET miles or km to next service setup

Service is a countdown odometer. The service odometer display can be disabled or can be set to count down from 500 – 7500 miles, (800 to 12,000 kilometers). If the service odometer is enabled and display reaches 0 miles/km, it will display "SERVICE DUE" each time the key is turned on.

- When ">SERVICE RESET" is displayed, press and hold the switch until "RELEASE" is displayed and release the switch.
- The current setting will be displayed. The default is ">*OFF", but it could be a value in miles or kilometers.
- The miles begin at 500 and go up to 7,500 miles in 500 mile increments.
- The kilometers begin at 800 and go up to 12,000 KM in 800km increments.
- To change the service odometer, press and release the switch until the desired setting is displayed.
- Hold the switch until you see "RELEASE", and release the switch.
- Exit setup.

PRESET ODO Odometer preset

- ✓ The odometer starts at zero, but can be preset by the customer within the first 100 miles (161 km) of riding.
- ✓ After riding more than 100 miles (161 km), the menu option will no longer be displayed.
- ✓ Correctly select the units to be either MPH or km/h **FIRST**, as the odometer will be set in the selected units.
- ✓ The preset is in full miles or kilometers only, **no** tenths
- ✓ The odometer preset can be reset multiple times within the first 100 miles (161 km) of riding.
- When ">PRESET ODO" is displayed, press and hold the switch until "RELEASE" is displayed and release the switch.
- The current miles will be displayed with the left most digit flashing.
- To change the flashing number, press and release the switch to the desired number.
- Press and hold the switch until "RELEASE" is displayed, then release the switch.
- Repeat the process of until the right most digit has been set.
- With the far right number flashing, press and hold the switch and the display will show ">SAVE ODO? NO".
- Verify the small odometer at the bottom is what you want set.
 - If incorrect hold the button until "RELEASE" is displayed, then release the switch.
 - You can now step through the process again and correct your readings.
 - Turning the key off at any time will discard any attempted odometer settings.
- If the odometer is correct at the ">SAVE ODO? NO" screen, press and release the switch to change the display to "SAVE ODO? YES".
- When ">SAVE ODO? YES" is displayed, press and hold the switch until "RELEASE" is displayed and release the switch.
- Exit setup.

TACH Tachometer warning setup

- When ">TACH" is displayed, then press and hold the switch until "RELEASE" is displayed, and release.
- The selectable options are "INPUT", "HIGH WARNING", and "BACK".
- Press and release the switch to change the selection; press and hold the switch to select it.

INPUT Signal input setup

- This may be required to be changed for some low voltage ECM tach signals.
- When ">INPUT" is displayed, press and hold the switch until "RELEASE" is displayed, release the switch.
- The selections are "CYLINDER", "TYPE", and "BACK".
- Press and release the switch to change the selection: press and hold the switch to select it.

CYLINDER Cylinder count setup

- When ">CYLINDER" is displayed, press and hold the switch until "RELEASE" is displayed, and release.
- The cylinder options range from 1 to 16.
- Press and release the switch to change the cylinder count.
- Press and hold the switch until "RELEASE" is displayed, and release.
- Exit setup.

TYPE Signal type setup

- When ">TYPE" is displayed, press and hold the switch until "RELEASE" is displayed, and release.
- The options are ">*12V HIGH", "5V LOW" and "BACK".
- Press and release the switch to change the voltage input range.
- Press and hold the switch until "RELEASE" is displayed, and release.
- Exit setup.

High warning (shift light) setup

- When ">HIGH WARNING" is displayed, press and hold the switch until "RELEASE" is displayed, and release.
- The display will show the current high RPM warning with a *.
- The default is 5,500 RPMs but is selectable from 2,200 to 8,200 RPMs.
- Press and release the switch to change the RPM warning point.
- Press and hold the switch until "RELEASE" is displayed, and release.
- Exit setup.

TEMP temperature unit setup menu

- For use with MBM-17 module and optional ambient temp sender.
- When ">TEMP" is displayed, press and hold the switch until "RELEASE" is displayed, and release.
- The options are "F", "C" or "BACK".
- Press and release the switch to change the selection between "F" or "C".
- Press and hold the switch until "RELEASE" is displayed, and release.

VOLT Low voltage warning setup

- When ">VOLT" is displayed, press and hold the switch until "RELEASE" is displayed, and release.
- The low voltage warning points will range from 9.0 to 12.1 volts.
- Press and release the switch to change the low voltage warning point.
- Press and hold the switch until "RELEASE" is displayed, and release.
- Exit setup.

DISPLAYS Message display option menu

Refer to graphic on **page 3** for indicator and message locations.

- When ">DISPLAYS" is displayed, press and hold the switch until "RELEASE" is displayed, and release.
- The display will show "MESSAGE TOP", "MESSAGE BTM", "MBMs", or "BACK".
- Press and release the switch to change the selection, press and hold the switch until "RELEASE" is displayed, and release.

MESSAGE TOP Top message screen information

- When ">MESSAGE TOP" is displayed, press and hold the switch until "RELEASE" is displayed, and release.
- The selectable options are "PERFORM HIDE", "PERFORM SHOW", and "BACK".
- Push and release the switch to select the option, press and hold the switch until "RELEASE" is displayed, and release.
- PERFORM HIDE: does not allow any performance option displays to be show while riding.
- PERFORM SHOW: turns all the following options that can be toggled through while riding.
 - HIGH Speed (MPH – km/h), 0-60 time, ¼ mile speed with ¼ mile time, and HIGH RPM.
- Press and release the switch to change the change the option.
- Press and hold the switch until "RELEASE" is displayed, and release.
- Exit setup.

BTM MESSAGE Bottom message screen information

- When ">MESSAGE BTM" is displayed, press and hold the switch until "RELEASE" is displayed, and release.
- The selectable options are "PERFORM HIDE", "PERFORM SHOW", and "BACK".
- Push and release the switch to select the option, press and hold the switch until "RELEASE" is displayed, and release.
- PERFORM HIDE: does not allow any performance option displays to be show while riding.
- PERFORM SHOW: turns all the following options that can be toggled through while riding.
 - HIGH Speed (MPH – km/h), 0-60 time, ¼ mile speed with ¼ mile time, and HIGH RPM.
- Press and release the switch to change the change the option.
- Press and hold the switch until "RELEASE" is displayed, and release.
- Exit setup.

MBMS Display which MBMs are connected and adjust warnings

If a pressure or boost sensor is not connected or failed, the display will show "FAIL", "TOO LOW".

If no MBM is attached but the display shows a blank value, click through the displays to remove it.

- When ">MBMs" is displayed, press and hold the switch until "RELEASE" is displayed, and release.
- The screen display what MBM modules are attached and more than one input if it exists.
- The screen will show "NONE" if there are no MBMs present.
- Press and release the switch to move through the MBMs attached.
- Press and hold the switch until "RELEASE" is displayed on the MBM setting to modify.
 - See the separate MBM manual for additional details.
- Exit Setup.

GEAR Gear indicator setup

Optional gear readout can be displayed to the left of the clock only. Nothing will show until programming is done.

The gear programming cannot take place until the speed is calibrated.

The gauge can 'learn' the gear ratios based on speed and RPM, no additional sensors are needed.

It will work with various transmissions up to seven speed models.

To program the gear positions, you will need a stretch of road to gradually reach highway speeds with no interruptions.

Each gear will need the speed to be held steady, until instructed to speed up and shift up.

- **>> Gear programming requires holding the function switch, THEN starting the engine <<**
- Once the engine is running, release the switch.
- Press and release the switch until "GEAR" is displayed.
- Press and hold the switch until "RELEASE" is displayed, then release the switch.
- The display will show "PRESET", "LEARN", or "BACK".
 - "PRESET" will turn the indicator off.
 - "LEARN" starts the learning process of speed and RPMs to calculate your gear reading.
- To reset the gear to not be displayed select ">PRESET".
 - Press and hold the switch until "RELEASE" is displayed, then release the switch.
 - Press and hold again to return to Gear menu.
- To start learning gears, press and release the switch until ">LEARN" is displayed, then press and hold the switch.
 - The message will show "NO RPM" if the engine RPM is below 1500.
 - The message could also say "LOW SPEED" if the vehicle speed is below 5 MPH.
- Begin riding in 1st gear. The display should show "WAIT 1".
- Ride at a steady speed and steady RPM until the message changes to "SHIFT TO 2".
- It should only take about 20 seconds if the speed and RPMs are steady.
 - *Optional: If the message continues to say "WAIT 2", you can manually override and jump to the next gear by pressing and releasing the switch to store the gear position quicker.*
- Upshift to 2nd gear and ride at a steady speed. The display should change to "WAIT 2".
- Ride until the message changes to "SHIFT TO 3". Shift to 3rd gear.
 - *Optional: If the message continues to say "WAIT 3", you can manually override and jump to the next gear by pressing and releasing the switch to store the gear position quicker.*
- Repeat this through each gear.
- When you are done, come to a complete stop.
 - You may also press and hold the switch, while riding, until the display shows "MOVE LINE" and then release it.
- The gears will now show up to the left of the clock display only.

***When downshifting, the gear position may jump up momentarily as the RPM is higher than expected.**

Also, the gear position reading may drop to "N" or a "0" when you pull the clutch in coming to a stop.

The position will begin reading as the bike begins to move in gear.

FACTORY RESET

- In the event you would like to start over with your settings, preferences and display locations, this will reset all settings back to the out-of-the-box configuration.
- This includes message locations, color selections and speedometer calibration but **DOES NOT** include the odometer.
- When you see ">FACTORY RESET", press and hold the switch until "RELEASE" then release the switch.
- The options will be "NO" and "YES".
- By pressing and holding on ">NO" it will exit the reset menu.
- When you select ">YES", press and hold the switch until "RELEASE" is displayed, then release the switch.
- The screen will "YES" and "RESET". Tap the switch once to return to the main menu.

VERSION

- For technical support assistance, this screen can display the model number, and the software versions loaded for the two processors.

EXIT SETUP

- Exits the setup menu and returns to normal gauge operation.

Troubleshooting guide

Problem	Possible cause	Solution
Gauge will not light up	Red wire does not have power. White/Red wire does not have power. Black wire is not getting a good ground. Gauge is damaged.	Connect to a location that has power with the key on Connect to a location that has constant, battery power. Connect ground to a different location. Return gauge for repair. (see instructions)
Gauge lights up, but speed will only show zero.	Speed sensor not grounded properly. Sensor is not sending a speed signal.	Move ground to different location, preferable close to the speedometer ground. Check for a damaged or malfunctioning speed sensor.
PLEASE – SET – SPEED	Speedometer not calibrated	Gauge must be calibrated to your vehicle (see instructions)
Speed reading is erratic or jumps around.	Speed sensor wire is loose or broken. Cable is loose or broken. Poor ground connection. Ignition Interference	Check all wire connections and inspect wire for breaks. Check cable between sensor and transmission. Check ground connection on speedometer and sensor. Check for tachometer wires routed with VSS signal wires. Check for VSS signal wires routed near ignition coils Check for poor ignition system ground Use suppression spark plug wires
Speed reading is incorrect.	Gauge is not calibrated correctly.	Gauge must be calibrated (see instructions).
Gauge lights up, but tach will only show zero.	Yellow wire is not connected properly. Ignition system not grounded properly. Gauge is not grounded properly. Tach signal type is not set correctly. Gauge is not calibrated	Check connection from yellow wire to tach signal wire. Check engine and ignition system grounds. Check gauge and engine grounds. Change the tach signal type (see instructions). Gauge must be recalibrated (see instructions).
Tach reading is erratic or jumps around.	Tach signal wire is loose or broken. Poor ground connection.	Check all wire connections and inspect wire for breaks. Check ground connection on tachometer, engine, and ignition system.
Tach reading is incorrect.	Gauge is not calibrated correctly.	Gauge must be calibrated (see instructions).
Gear indicator isn't displayed	Gears not programmed.	Program gear indicator in setup. (see instructions)
Security indicator does not work	Loose or incorrect connection to indicator wire.	Check that the appropriate indicator wire has about 0 volts when the indicator should be off and about 12 volts when the indicator should be on.
Engine indicator does not work.	Loose or incorrect connection to indicator wire.	Check that the appropriate indicator wire has about 12 volts when the indicator should be off and about 0 volts when the indicator should be on.

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



4510 W. 61st St. North
Sioux Falls, SD 57107
www.dakotadigital.com
dakotasupport@dakotadigital.com

Phone (605) 332-6513
Fax (605) 339-4106

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