



**ODY-02-3
TACHOMETER
with trip mileage & high rev warning**

Introduction:

The Odyssey gauge series from Dakota Digital, Inc. incorporates the reliability and quality of our standard gauges, along with several unique features and easy mounting. These features include:

- 300-9990 rpm range with 10 rpm resolution.
- Trip mileage can be displayed on lower display when the 4 pin connector is attached to the ODY-01 speedometer.
- The high rev warning point is user adjustable from 2000 to 9900 rpm.
- Adjustable for 2, 4, 6, and 8 cylinder engines.
- High rev warning point displayed on lower display when not connected to speedometer.
- Microprocessor stabilized readings.
- Night dimming with lens label lighting.
- High Visibility VFD display for sunlight readability.

The Odyssey tachometer will show the current engine speed in revolutions per minute. The lower display is used to show the high rev warning setting and can also be used to display the trip mileage from an ODY-01 speedometer. When the engine rpm exceeds the preset warning, the digital readout will flash and the lower display will show "=====".

The tachometer is adjustable for 2, 4, 6, and 8 cylinder gasoline engines.

Operation:

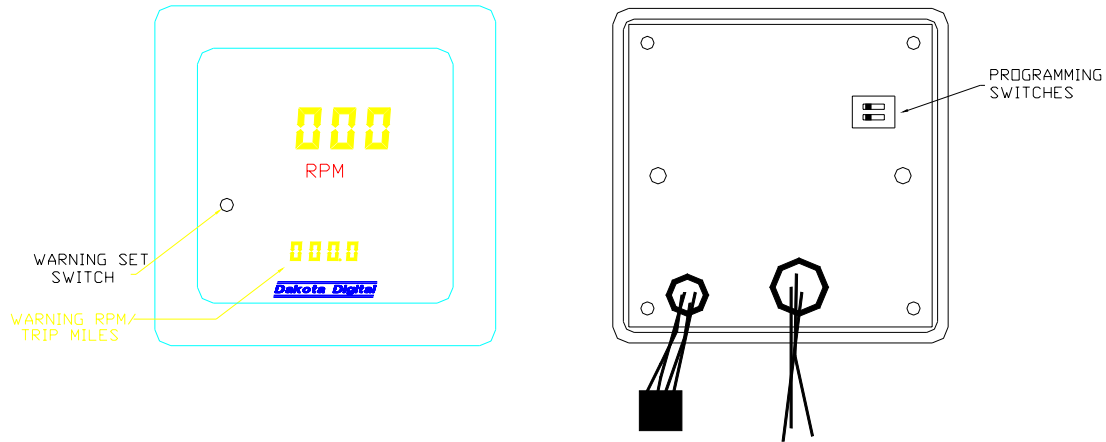
The gauge needs only the red and black wires connected to light up. When the blue wire has 12 volts, it will dim the display to a preset level for night viewing.

When the trip button is pressed and released, the lower display will show the current high rev warning setting for about 4 seconds. If the button is pressed again during this time, the warning setting will decrease by 100 rpm. Each time the button is pressed, the warning setting will decrease until it reaches 2000. It will then go to 9900.

Calibrating the tachometer:

The tachometer can be set for 2, 4, 6, or 8 cylinder engines. The adjustment is made using the 2 programming switches on the back of the unit. The settings are as follows:

- #1 on, #2 on 2 cylinder engine
- #1 off, #2 on 4 cylinder engine
- #1 on, #2 off 6 cylinder engine
- #1 off, #2 off 8 cylinder engine



Connecting to speedometer for trip mileage:

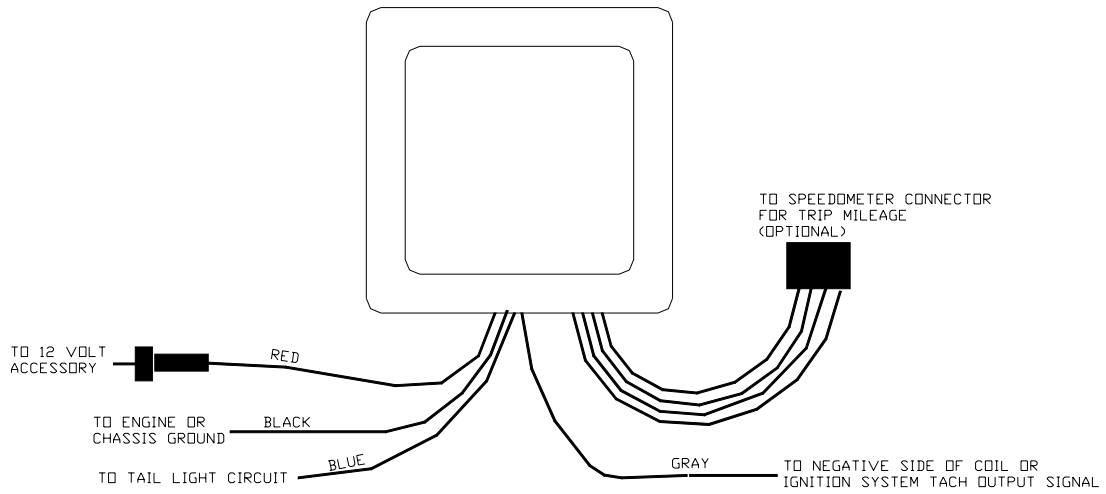
The 4 pin connector coming out of the back of the speedometer is used to display the trip odometer mileage on a compatible tachometer. This will plug into a mating connector coming out of the tachometer. If this feature is not being used, then the 4 pin connector should not be connected to anything.

Connecting to tach signal:

For point or pointless distributors, connect the gray wire for the tach signal to the negative side of the coil. For GM HEI ignition systems, connect the gray wire to the tach output on the distributor. On MSD ignition systems connect to the tach output terminal, if a terminal is not provided, follow the instructions included with the MSD system. With other aftermarket ignition systems, follow the instructions provided with the ignition for a voltage, pulse sensing tachometer. For newer vehicles which already provide a tachometer signal, consult the service manual to determine wire color and location.

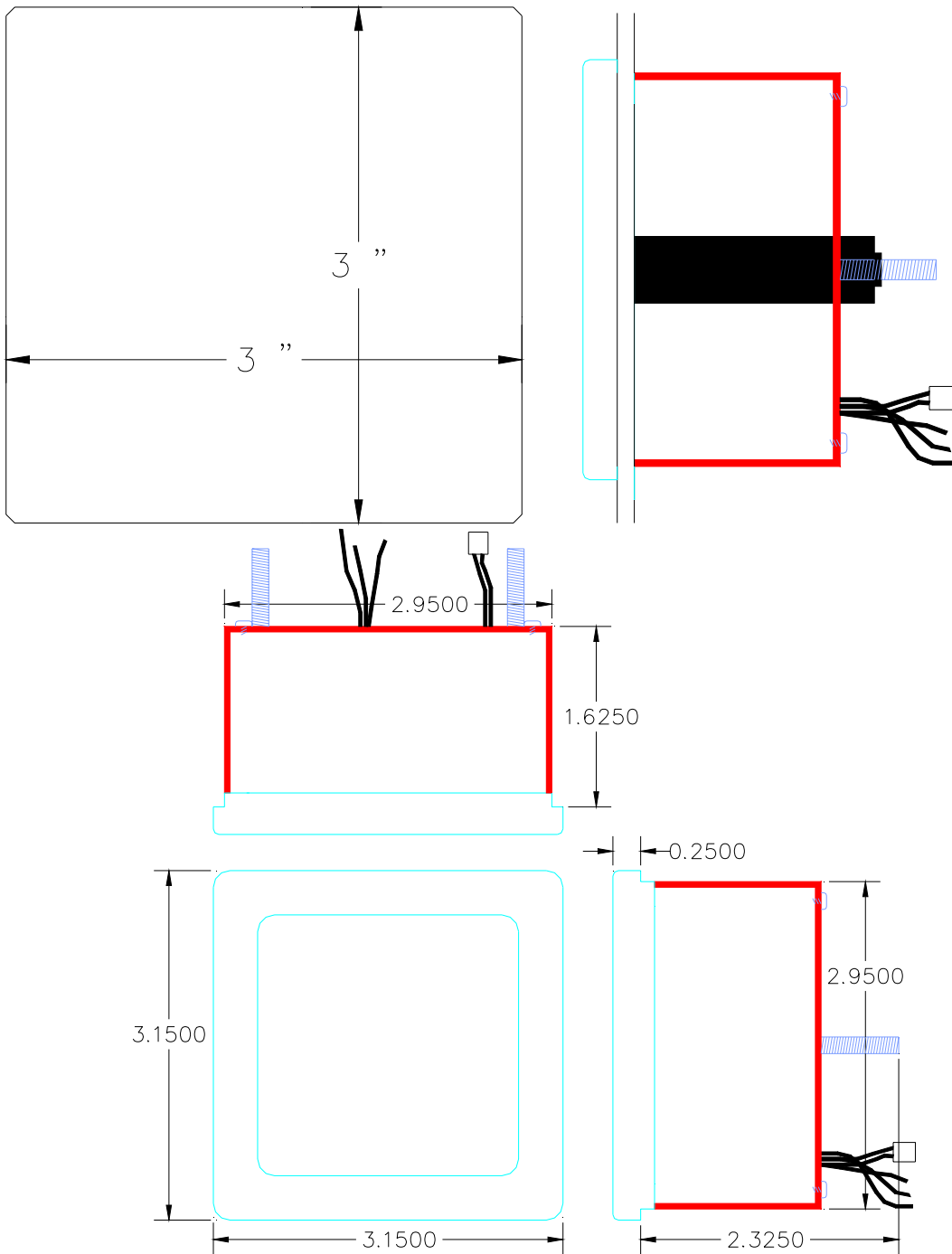
Wiring:

- BLACK - connect to a good ground point in the vehicle.
- RED - connect to a 12V accessory terminal for power.
- BLUE - connect to the tail light circuit.
- GRAY - connect to engine tachometer signal.



Mounting:

The gauge requires a rectangular cut out that is about 2 9/16" x 1 11/16". It should be inserted into the opening from the front and the U-clamp will be installed from the back. Tighten the two nuts on the U-clamp so that the gauge is secure. Figure 2 shows the required cut out for the gauge. Figure 3 shows how the gauge mounts.



Troubleshooting guide.

Problem	Possible cause	Solution
Gauge will not light up	Red wire does not have power. Black wire is not getting a good ground. Fuse is blown. Gauge is damaged.	Connect to a location that has power. Connect ground to a different location. Replace in line fuse. (2 amp) Return gauge for repair. (see instructions)
Gauge lights up, but tach will only show zero.	Gray wire is not connected properly. Gauge is not calibrated correctly	Check connection from gray wire to ignition signal wire. Make sure the programming switches are set for the correct number of cylinders.
Tach reading is erratic or jumps around.	Tach signal wire is loose or broken. Interference from other ignition wires. Poor ground connection.	Check all wire connections and inspect wire for breaks. Keep tach signal wire away from spark plug wires as much as possible. Check ground connection on speedometer and sensor.
Tach reading is incorrect.	Gauge is not calibrated correctly.	Gauge must be set for the number of engine cylinders(see instructions).
Trip mileage will not light up on lower display	4 pin connector is not connected to speedometer. Speedometer is not turned on.	Make sure 4 pin connector is attached to ODY-01 speedometer. Make sure speedometer has power and is lit up.
Gauge will not dim.	Blue wire is not connected correctly.	Check wiring connections. Blue wire should have 12 volts with headlights on.
Gauge remains dim at all times.	Blue wire is getting power all of the time.	Connect blue wire to location that only has power when the headlights are 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 units.

Should you ever need to send the unit back for repairs, please 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 a complete description of the problem, your full name and address (street address preferred), and a telephone number where you can be reached during the day. An authorization number for products being returned for repair is not needed. Do not send any money. We will bill you for the repair charges.

Technical specifications

Minimum operating voltage	-	7 volts
Maximum operating voltage	-	18 volts
(operating at or near maximum rating for an extended time can damage unit)		
RPM range	-	300-9990
RPM resolution	-	10 rpm
RPM update rate	-	2 times per second
High rev range	-	2000-9900
High rev setting resolution	-	100 rpm
High rev update rate	-	2 times per second
Typical current draw (@ 13.8V)	-	0.11 A

ODYSSEY SERIES DIGITAL GAUGE LIMITED WARRANTY

DAKOTA DIGITAL (the Company) 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 the Company's option) without charge for parts or labor directly related to repairs of the defect(s).

To obtain repair or replacement within the terms of this Warranty, the product is to be delivered with proof of warranty coverage (e.g. dated bill of sale), name, address, phone number, and specification of defects, transportation prepaid, to the factory. This Warranty is valid for the original purchaser only and may not be transferred.

This warranty does not cover nor extend to damage to vehicle electrical system. 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 express 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. IN NO CASE SHALL THE COMPANY BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, WHATSOEVER. No person or representative is authorized to assume for the Company any liability other than expressed herein in connection with the sale of this product.

The Company does not warrant that this product cannot be compromised or circumvented. THE EXTENT OF THE COMPANY'S LIABILITY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT PROVIDED ABOVE AND, IN NO EVENT, SHALL THE COMPANY'S LIABILITY EXCEED THE PURCHASE PRICE PAID TO THE PURCHASER FOR THE PRODUCT.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damage so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Dakota Digital

4510 W. 61ST St. N., Sioux Falls, SD 57107
Phone: (605) 332-6513 FAX: (605) 339-4106

www.dakotadigital.com
dakotasupport@dakotadigital.com