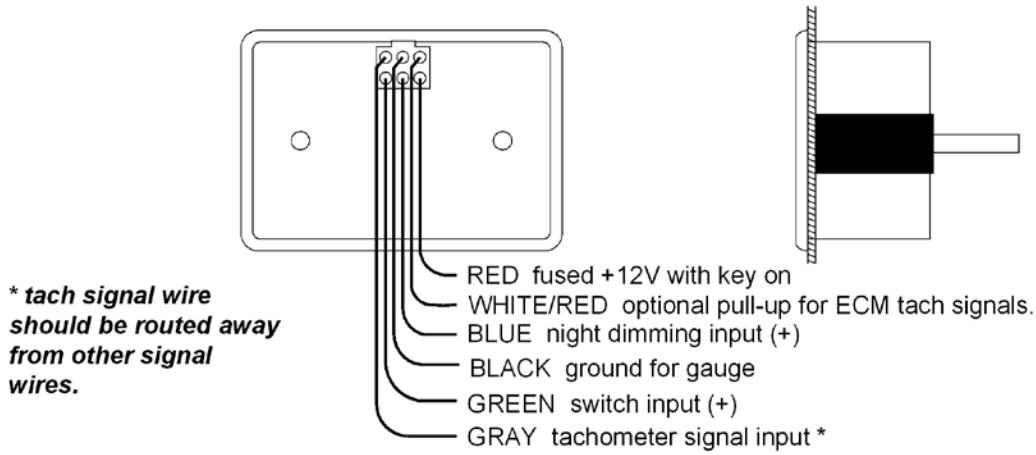
Odyssey
Manufactured by Dakota Digital

Series I
HLY-1027 MINI TACHOMETER rev. C



- 250-18,000 rpm range with 10 rpm resolution. (100 rpm res. above 10,000)
- Adjustable cylinder selection (1-15).
- Adjustable warning point to flash the gauge readout.
- High rpm recall.

Mounting:

The Series I gauge requires a rectangular hole 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. Gauge depth to the back of the case is 1”. Gauge depth including the mounting studs is 1-7/8”.

SETTING THE WARNING LIMITS, CYLINDER SETUP, AND UPDATE SPEED:

The setup is done using the function switch. The tachometer can be calibrated two different ways. The green wire is used to enter and change the warning settings. You will need a switch connected with one side to the green wire and the other side to 12 volts.

1. To enter the set mode, turn the key on with the switch pressed. The gauge will display “SEt”.
2. Release the swtich. The gauge will display “HI” and then change to the current hi rpm warning point. (2800 – 15,200)
3. Each time you momentarily press the switch the warning will increase 200rpm.
4. When the desired warning value is displayed, keep the switch held for about 2 seconds. The gauge will display “CYL”.
5. Release the switch. The gauge will display the current cylinder setting. (1-15)
6. Each time you momentarily press the switch the number will increase by 1.
7. When the desired cylinder setting is displayed, keep the switch held for about 2 seconds. The gauge will display “SPd”.
8. Release the switch. The gauge will display the current update speed. (slow “SLO” or fast “FSt”).
9. Each time you momentarily press the switch the display will change.
10. When the desired update speed is displayed, keep the switch held for about 2 seconds. The gauge will display “--”.
11. Turn the key off.

POWER

Connect the red wire from the main harness to accessory power from the ignition switch.

Never connect this to a battery charger alone. It needs to have a 12 volt battery connected to it. Battery chargers have an unregulated voltage output that will cause the system to not operate properly.

GROUND

The black wire is the main ground for the gauge. A poor ground connection can cause improper or erratic operation.

TACHOMETER

The gray wire connects to the vehicle tach signal. On point type and pointless distributors, connect to the negative side of the coil. This will sometimes be labeled TACH or DIST. On distributorless ignition systems, connect to the tach output wire or to the negative wire of one of the coils. On MSD ignition systems connect to the tach output terminal.

For tach signals integrated into a vehicle wiring harness, consult a service manual to determine the color code and location of the tachometer signal. The tachometer signals from some engine computers require a weak 12 volt pull-up for correct operation of the gauge. Tie the gray and white/red wires together if this is needed.

The tachometer is adjustable from 1 to 15 cylinder signals and calibration is discussed below. Diesel engines will usually require a diesel tach adapter DSL-1 or DSL-2, available from Dakota Digital, Inc.

The gauge displays the engine rpmx10 from 250 – 9990 and rpmx1000 for 10,000 – 18,000. 2500 rpm would be displayed as “250” and 11,400 rpm would be displayed as “11.4”. The decimal point indicates the reading has changed from rpmx10 to rpmx1000.

The gauge can be set for a slow update, which changes the displayed reading every ½ second, or for a fast update, which changes the displayed reading every 1/8 second. The slow update rate is recommended for most applications since rapidly changing numbers can be difficult to read.

FUNCTION SWITCH/RECALL HIGH RPM

The function switch is connected with one wire to a 12 VDC source and the other wire connects to the green wire from the tachometer harness. The function switch is used for calibration and to recall the highest rpm reached since the last reset. Pressing the function switch while the gauge is running will display “HI” and then the current high rpm. This will repeat every 2 seconds. Holding the function switch for 8 seconds will reset the high rpm.

The high rpm recall is updated every 1/8 second regardless of the display update rate. This allows it to catch the highest rpm which might be missed at the slow update rate.

NIGHT DIMMING

Your display system has a dimming feature that reduces the display intensity. Normally the system is at full brightness for daytime viewing. When the blue wire has 12 volts, the display intensity will be reduced. Connect this to a park light or tail light circuit, then whenever the headlights are on the display will dim. To have the system at full brightness all of the time, leave the blue wire disconnected.

TROUBLESHOOTING GUIDE.

Problem	Possible cause	Solution
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 "Er3"	Cylinder setting is invalid.	Gauge must be recalibrated for correct number of cylinders. (see instructions)
Gauge lights up, but displays "Er4"	Gauge update rate is invalid.	Gauge display update must be reset. (see instructions)
Gauge lights up, but displays "Er5"	Gauge warning setting is invalid.	The rpm warning point must be reset. (see instructions)
Gauge lights up, but rpm will only show zero.	Gray wire is not connected properly.	Check connection from gray wire to engine tach signal.
	Pull-up wire needed on tach signal.	Connect White/Red wire and Gray wire together.
	Gauge is not getting a tach signal from the engine.	Check location that the tach signal wire is connected at the ignition system.
	Tach output from ignition module not working.	Check for 4-8 V AC on tach signal wire, Replace ignition module if necessary.
	Gauge is not calibrated	Gauge must be recalibrated (see instructions).
Tach reading is erratic or jumps around.	Tach signal wire is loose or broken.	Check all wire connections and cables for breaks.
	Update rate is too fast.	Reset display update speed to slow.
	Poor ground connection.	Check ground on tachometer and ignition/engine.
Tach reading is incorrect.	Gauge is not calibrated correctly.	Gauge must be calibrated.
Gauge will not dim.	Blue wire is not connected correctly.	Check wiring. Blue wire should have 12 VDC 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.
Gauge will not go into the SETUP mode.	Switch is not being held in during power up.	Press and hold switch while powering the gauge.
	Switch is not connected properly.	Make sure that the switch supplies 12 VDC to the green wire when pressed.
	Switch is defective.	Replace push button switch.
	Blue wire is getting power all of the time.	Disconnect or ground the blue wire while doing the gauge setup.
Gauge will not display the high rpm recall.	Switch is not connected properly.	Make sure that the switch supplies 12 VDC to the green wire when pressed.
	Switch is defective.	Replace push button switch.

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.

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