Programmable Tachometer

IS0343
Rev. A ecr 8845 10/2012

Operations Manual

This tachometer can be programmed to function with 1, 2, 4, 6 and 8 cylinder gasoline engines or with diesel engines, and can be used with most ignition coils including Alternator and Mag pickup inputs.

Caution

Disconnect the battery during installation. Tighten nuts on the back clamp only slightly more than you can tighten with your fingers. Six inch-pounds of torque are sufficient. Over tightening may result in damage to the instrument and may void your warranty. Use stranded, insulated wire not lighter than 18 AWG.

Be certain wire insulation is not in danger of melting from engine or exhaust heat or interfering with moving mechanical parts.

Parts

QTY	Description	
1	Tachometer	
1	Mounting Bracket	
1	Hardware	
	8	#10 Brass Nut (3/8”)
	5	#10 Brass Flat Washer
	5	#10 Split Washer

Installation

1. Location: Some interference (erratic operation) may be noticed on the tachometer during radio transmissions. This will neither damage a Faria® tachometer nor affect accuracy when not transmitting.
2. Cut a 3-3/8” (85 mm) dia hole in the dash and mount the tachometer with the backclamp supplied.
3. Connect a wire to the tachometer stud marked “BAT” (battery) and secure with a nut and lock washer.

   Connect the opposite end to a 12VDC circuit that is activated by the ignition switch. It is recommended that insulated wire terminals, preferably ring type, be used on all connections to the tachometer, except the light, which requires a 1/4” insulated female blade terminal.
4. Connect a wire to the tachometer stud marked “SIG” (signal) and secure with a nut and lock washer.

   Connect the opposite end to a terminal or wire originating from the unrectified side of the alternator or signal source. Tachometer plug-in harnesses are sometimes available from the engine manufacturer to simplify the hook-up.
5. Connect a wire to the tachometer stud marked “GND” (ground) and secure with a nut and lock washer.

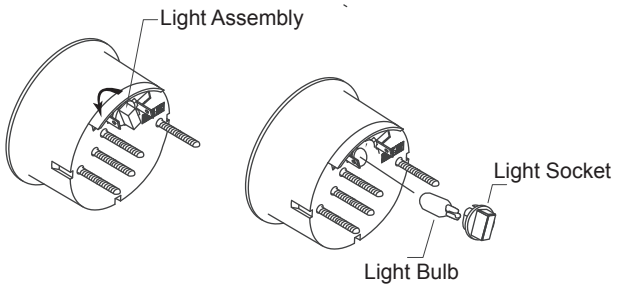
   Connect opposite end to the electrical ground, generally available in several locations at or near the instrument panel.
6. Connect the blade terminal adjacent to the twist-out light assembly to the positive “+” side of the instrument lighting circuit.

   No separate ground is required for lighting.
7. Connect an external button to the stud marked for external button and secure with a nut and lock washer.

   This button should be a momentary switch which connects to ground when pressed. This will allow the user to operate the programmable functions when available.
8. Reconnect the battery.

Light bulb replacement

To change light bulb, twist out black socket assembly one-eighth turn counterclockwise until it pops out. Bulb pulls straight out of assembly. It is a GE No. 194 instrument lamp.



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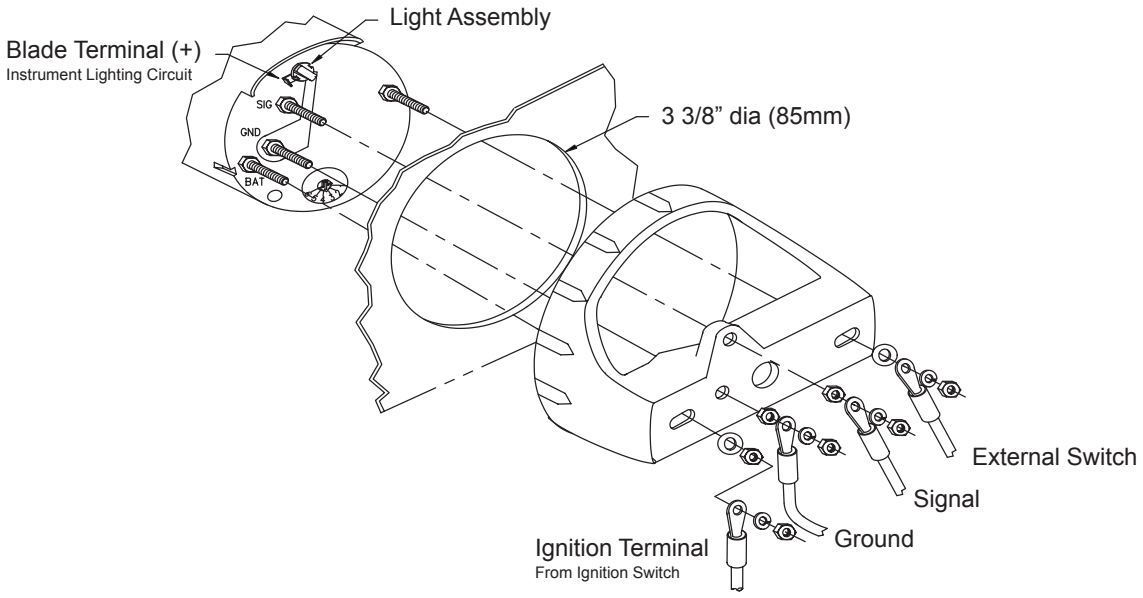
Wire Diagram



Operation

When the Tachometer is turned on the LCD display indicates the Tachometer is performing a Self Test. There is no operator interaction.

When complete the Tachometer enters the "NORMAL" mode.

The Tachometer has two modes "NORMAL" and "SETUP".

"NORMAL" operation displays engine hours. When the Tachometer enters the "NORMAL" mode the LCD displays "E HrS" and then changes to show the hours recorded by the tachometer.

There is no way to change the hours recorded on the Tachometer.

Setup

To get into "SETUP" mode, ***hold the button down while powering up until the display shows*** "SEt UP".

In the "SETUP" menu, a short button push will cycle through the selections; "CAL", "SIGnAL" and "PrG". A long push will select the function shown in the display.

CAL

"CAL" will allow you to set the Pulse Per Revolutions (PPR).

Press the button with a short push. The display shows "SEt".

After 3 seconds the display changes and shows the Pulse Per Revolutions display.

Each digit will flash and a short push will increment it. Wait 3 seconds and the next digit will flash. This will continue for all digits and start over.

Note: Check with your engine manufacturer for the correct number of pulses per revolution data.

When you are done setting the PPM, a long button press will save it and return to the main "CAL" menu.

SIGnAL

"SIGnAL" will allow you to set the Tachometer input sensitivity, low ("LO A"), medium ("b") or high ("HIGH C").

Note - Setting "b" is appropriate for most applications

A short button push will cycle through the three options and a long push will save the setting and return to the main "SIGnAL" menu.

PrG (Program)

"PrG" displays the current software revision. A long button push display a numerical value of the program.

A long button push will return to the main "PrG" menu.

When finished with the "SETUP" menu, cycle power to restart the speedometer in "NORMAL" mode.

Environmental

Programmable Tachometer with Hourmeter

Calibration:	Tachometer: 0-4000 RPM accurate to within ±1% of full scale Engine Hour Meter 0-999999.9 accurate to within ±1% of reading
Environmental: Required Specs	The electric Tachometer meets the requirements of SAE J1455 as specified below.
Temperature	
Operating	-20˚C - +85˚C
Storage	-40˚C - +85˚C
Voltage:	
Normal Operating	13 to 15 VDC at 25° ± 3 ° C.
Extreme variations	11.5 to 16 VDC at 25° ± 3° C.
Abnormal Voltage Conditions:	
Over Voltage	18VDC for 60 minutes
Reverse Polartiy	The instrument can withstand reversed battery terminal polarity indefinitely without damage or permanent shift of calibration.
Shock	50 +/- 2 G and a half sine duration of 11 +/- 2 ms. per MIL-STD-202, Method 213
Vibration	4 G peak, 10 to 2000Hz SAE J1455 Appendix A
Salt Spray	Front is Corrosion resistant per ASTM B117-73
Water Leakage	Gauge is sealed from water entry from the front of gauge.
Weather Resistance	Gauge has been tested to resist weather conditions.

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