

Tiny Tach

Operating Instructions

Commercial Gas Model

Tiny Tach, Commercial Gas Model can be used as a complete Service Tracking device for any spark ignited engine. It is programmable for different engine firing orders as well as for tracking two different service intervals. The tach is a "Pulse Meter" and reads the spark pulses from your ignition system.

Note: This **Tiny Tach** model will only display proper RPM's while connected to external electric power and while the engine is running.

The Hour Meter keeps time whenever the engine is running.

Specifications:

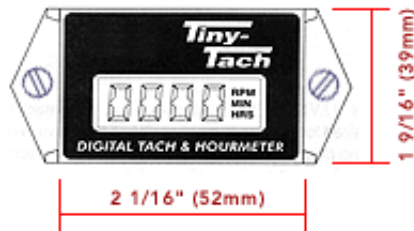
Activation:	Pulses from the ignition trigger the tach. No time is logged when the engine is not running. The pulse pickup wire is shielded to avoid interference from the electrical system. Sampling time; less than 1 sec.
Operating Temp:	-10 to 140 degree F (-20 to 60 degree C)
Display modes:	Total Hours (TOT): Displayed any time the engine is not running and external power is hooked up to the tach. The hours can be manually viewed during operation. Displayed in hours and minutes up to 200 hours. Over 200 hours, only full hours - max 19,999 hours. RPM: Displayed any time the engine is running. The tach can be programmed for different pulses per revolution; 1 spark per revolution (default), 1 spark for every two revolutions and 2 sparks per revolution. Max 20,000 rpm. Max RPM (MAX): Displays the maximum RPM recorded. Display can be manually reset. Job: Indicates the amount of time that has been accumulated since the function was last reset. Displayed in hours and minutes up to 200 hours. Can be manually reset. Service (SVC): Programmable service counter from 0 to 50 hours in 5 hour increments. Default set to 25 hours. Displays how much time remains ("count down") until service. Displayed in hours and minutes. Service2 (SVC2): Programmable service counter from 0 to 250 hours in 10 hour increments. Default set to 50 hours. Displays how much time remains ("count down") until service. Displayed in hours and minutes.

Installation:

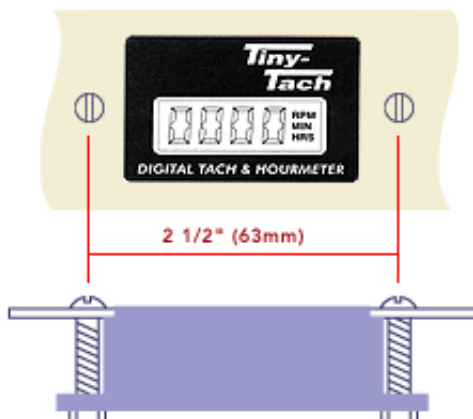
Install the tach at an appropriate location. The design allows for either a flush panel mount or a surface mount. Avoid any hot surfaces.

A general guide line is if you think you can place your hand on the intended mounting surface without discomfort while the equipment is running at full operating temperature it may be a suitable mounting location. **DO NOT MOUNT METER TO ANY FUEL TANK OR CRANKCASE OF AN ENGINE.** If you are unsure about finding a proper location for your meter please contact Design Technology (DTI) for advice.

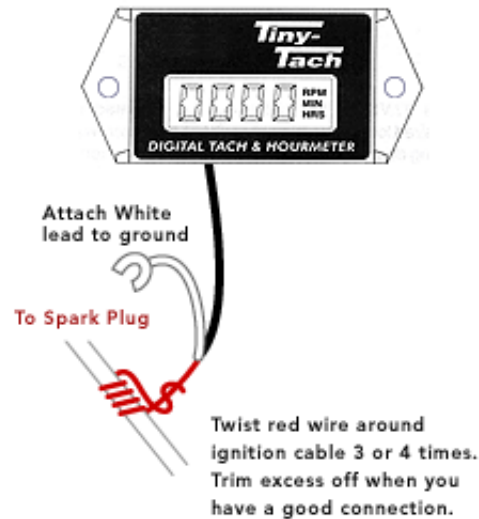
Surface Mounting



Flush Panel Mounting



Wire Hook-up



Tiny Tach

Display Operating Instructions

Commercial Gas Model

INITIAL SETUP: Determine the amount of pulses (sparks) per engine revolution. Most common is 1 spark per revolution - default value. If you are unsure, start the engine and read the display. Ex.: If the idle speed normally is 1200 RPM and the *Tiny Tach* reads 600 RPM, you have 1 spark every second revolution (720).

Adjust as follows:

- Push the SELECT button until SVC2 appears.
- PUSH and HOLD the SELECT button for 5 seconds
- The display will show the following: - Note the word "SET F":
- By pushing the select button again the dial will toggle between 180, 360 and 720.
- After adjustment wait for 30 sec and the display will return to displaying hours.

The *Tiny Tach* will now show proper RPM during operation.

360
SET F

All functions of the *Tiny Tach* are accessible by pushing the "SELECT" button.

360
F

Ex: If the RPM displayed was too, low set the value to "720", If the RPM was too high set the value to "180"



Display Modes:

TOT = Total Hours of operation.

- This is always displayed when the meter is powered externally,
- If no power is available the display turns off. Push SELECT once and the display will show total time for 30 seconds.
- TOT time CANNOT be reset.

3 120

Typical RPM display during operation of the engine
NOTE: All functions of the meter can be accessed during operation by pushing SELECT

JOB = Hours of operation since the timer was reset. (Accessed by pushing the "SELECT" button once)

Reset JOB timer: (Typical procedure for all other functions).

Display indicates "TOT". If the SELECT button is pushed AND RELEASED the next function is will be "JOB".

If the SELECT button is pushed AND HELD DOWN for 5 seconds the display will change to: Alter RESET the display will return to JOB and the display will read - 00:00

00:00
JOB RESET

12:34
JOB

SVC = Hours of operation BEFORE next service. Note: Timer counts down. Resettable in 5 hour increments, 0 - 50 hours. When the preset service time is reached the display will flash.

Reset SVC timer: Push SELECT button until JOB is displayed. Push and HOLD the button once more for 5 seconds. The display will change to:

25:00
SVC RESET

25 hours is the default value.

Programming SVC timer: Proceed as when resetting the timer, HOWEVER, continue to hold the SELECT button for 10 seconds. The display will change to: While the "SET" is displayed the SVC time can be stepped forward until the desired service interval is achieved. The display will reset to normal after 30 seconds.

25:00
SVC SET

MAX = Maximum RPM since the timer was reset.

Reset MAX RPM: Push the SELECT button until SVC is displayed. Push and HOLD the button once more for 5 seconds. The display will change to: Alter RESET the display will return to JOB and the display will read - 0000

0000
MAX RESET

SVC2 = Hours of operation BEFORE next service. Note: Timer counts down. Resettable in 10 hour increments, 0 - 250 hours. When the preset service time is reached the display will flash.

Reset SVC2 timer: Push SELECT button until MAX is displayed. Push and HOLD the button once more for 5 seconds. The display will change to:

50:00
SVC2 RESET

50 hours is the default value.

Programming SVC2 timer: Proceed as when resetting the timer HOWEVER continue to hold the SELECT button for 10 seconds. The display will change to: While the "SET" is displayed the SVC2 time can be stepped forward until the desired service interval is achieved. The display will reset to normal after 30 seconds.

50:00
SVC2 SET

LIMITED WARRANTY: Design Technology, Inc. warrants that for a period of ONE (1) YEAR from the time of purchase it will repair or replace the *Tiny Tach* at no charge, if it fails to function properly due to defect in materials or workmanship. Damage to the wires and cables by improper care or use is expressly excluded from this warranty. All implied warranties are limited to the use of this instrument as directed above and Design Technology, Inc. does not assume or authorize anyone to assume for it any other obligation. The instrument should be returned, prepaid to Design Technology, Inc.



Design Technology, Inc.
768 Burr Oak Drive
Westmont, IL 60559
630.920.1300
(Fax: 630.920.0011)
www.tinytach.com