

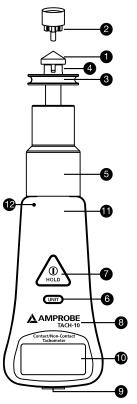


**TACH-10**Contact / Non-Contact
Tachometer

**Users Manual** 

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- 1). Cone (Convex) contact tip
- 2). Funnel (Concave) contact tip
- 3). Wheel (w/ O-ring) for linear Surface
- 4). Contact adaptor
- 5). Non-contact rotation speed sensor
- 6) Unit select key
- 7). Power & Hold key
- 8). Battery cover (rear side)
- 9). Power on/off (bottom)
- 10). Front Panel & LCD display
- 11). Junction screw (rear side)
- 12). Mode switch



- 1). Rotation/Surface speed display
- 2). Unit of rotation speed
- 3). Unit of surface speed
- 4). To freeze the latest display
- 5). Low battery indicator



# POWER /HOLD KEY:

- To turn on the meter
  Push and hold for more than 3 seconds to turn off the meter.
- In normal mode, push to freeze the readings.

# UNIT UNIT KEY:

- Activated only while in "Contact" rotation measure mode.
- In normal contact measure mode, push to display different unit in turns: RPM, M/Min, Ft/Min, Yd/Min.

# **D** POWER KEY:

- To turn on the meter
- $\bullet\;$  Push more than 3 seconds to turn off the meter.



+ (UNIT) or (1) + (UNIT)

 To disable the sleep mode, hold down POWER and UNIT keys simultaneously to turn on the meter. First, release POWER key, and it shows "  $\bf n$  " on the LCD . Then release UNIT key and it enters measuring mode in non-sleep status.

# **Tach-10 Contact/Non-Contact Tachometer**

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### **SYMBOLS**

Δ	Caution! Refer to the explanation in this Manual
C	Conforms to relevant Australian standards
C€	Complies with European Directives
<u>\$</u>	Do not dispose of this clamp meter as unsorted municipal waste. Contact a qualified recycler for disposal.

# **△WARNING** and **PRECAUTIONS**

- The meter is accurate at low and mid-range air speeds. Consistent use at very high speeds., ie, From the window of a fast-moving car will damage the impeller's bearing and cause inaccuracy
- When you program the meter and then restart the meter, it will default to the last mode and unit used.
- You can remove the transparent protection film of the LCD if you feel the display is blurred.

### **UNPACKING AND INSPECTION**

Your shipping carton should include:

- 1 TACH-10 meter
- 1 9V battery
- 1 Cone & funnel contact tips
- 1 Reflective tape

If any of the items are damaged or missing, return the complete package to the place of purchase for an exchange.

### INTRODUCTION

Congratulations on your purchase of TACH-10 Contact / Non-Contact Tachometer. A convenient instrument to measure rotation or surface speed via contact or non-contact method.

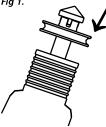
### **Features**

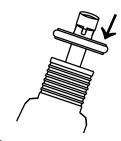
- Compact and handy size design
- 2 in 1 Contact and Non-contact measurement
- Three easy steps to switch measurement mode
- Two ways to power on/off
- Clear display with 4 selectable units for contact mode
- Auto power off
- Sleep mode can be disabled
- Low battery indicator

# **OPERATION**

- 1. Switch the measurement mode to contact or  $% \left\{ 1,2,\ldots ,n\right\}$ non-contact per demanding.
- 2. To take contact measurement, select the suitable contact tip (Convex or Concave) and mount it on the adaptor (Fig.1).







- Push either POWER key to turn on the meter.
- Fit the tip into the rotating object and the readings are displayed on the LCD.
- For rotating wheels or belts with flat surface, let the O-ring on the meter make contact with the surface.
- Push HOLD/POWER key briefly to hold the last reading on the display.
- Push UNIT button to switch from rotation speed(RPM) to surface speed M/Min or Ft/Min or Yd/Min.
- 3. Push POWER key for more than 3 seconds to turn the meter off.
- 4. To take non-contact measurement, follow the following steps:

Step 1: Unscrew the junction.



Step 2: Remove the contact part.



**Step 3:** Attach the reflective tape to the surface of the rotating object.

 $\mbox{\bf Step 4:}$  Push and hold the MODE SWITCH key to set the meter to RPM.



**Step 5:** Hold the meter and point it toward the rotating object targeting the reflective tape. Keep the targeting distance within 5 to 30 cm (2 to 13 inch).

NB> Readings in M/Min, Ft/Min, Yd/Min are not available in non-contact mode

#### **Auto Power Off**

The meter turns OFF automatically after 20 minutes of inactivity. To disable the sleep mode, hold down POWER and UNIT keys simultaneously to turn on the meter. First, release POWER key, and it shows " n " on the LCD (Fig. 3). Then release UNIT key and it enters measuring mode in non-sleep status.



Fig 3.

### **SPECIFICATIONS**

#### **MEASURING RANGES:**

 Rotation (non-contact)
 10.0~99999RPM

 Rotation (contact)
 10.0~19999RPM

 Surface speed (contact)
 1.0000~9999.9M/Min

 3.0000~30000Ft/Min

1.0000~10000Yd/Min

RESOLUTION:

RPM unit 0.001/0.01/0.1/1
M/Min unit 0.0001/0.001/0.01/0.1
Ft/Min unit 0.0001/0.001/0.01/0.1
Yd/Min unit 0.0001/0.001/0.01/0.1

ACCURACY: +/-(0.1% of rdg.+2 digit)
Operating temp. 0 to  $50^{\circ}$ C ( $32^{\circ}$  to  $122^{\circ}$ F)
Operating RH% Humidity < 80%

 Storage temp.
 -10 to 50°C (14° to 122°F)

 Storage RH%
 Humidity < 90%</td>

 Dimension
 165(L)x51(W)x32(H)mm

(6.5 x 2 x 1.26 IN)

Weight ~90g (0.2 lb) **Battery** 9V battery

15(H)x33(W)mm (0.6 x 1.3 IN) LCD size **Power consumption** 5uA(Idle), 18mA(measurement)

Time base 4.0Mhz Quartz Crystal Sampling time 1 second (>60RPM),

>1 second (10~60RPM)

Measure distance 5~30cm / 2~13 IN (non-contact)

# **C €** - **EMC**: Conforms to EN61326-1.

This product complies with requirements of the following European Community Directives: 89/ 336/ EEC (Electromagnetic Compatibility) and 73/23/EEC (Low Voltage) as amended by 93/68/EEC (CE Marking). However, electrical noise or intense electromagnetic fields in the vicinity of the equipment may disturb the measurement circuit. Measuring instruments will also respond to unwanted signals that may be present within the measurement circuit. Users should exercise care and take appropriate precautions to avoid misleading results when making measurements in the presence of electronic interference.

### **MAINTENACE AND REPAIR**

Make sure the electrode is clean! Between measurements, rinse the electrode with deionised water. If the eletrode has been exposed to a solvent immiscible with water, clean it with a solvent miscible with water e.g. ethanol or acetone and rinse carefully with water. Store the electrode carefully! Before storing, rinse it carefully in deionized water and store WET. Do not contact measure rotating speed exceeds the measuring ranges. It may cause physical injury or meter damage.

### **Battery Replacement**

Replace your battery when low battery icon appears on LCD. To replace the battery:

- 1. Open the battery compartment cover
- 2. Remove the old battery and replace it with a new 9V battery
- 3. Close the battery compartment cover

### **TROUBLESHOOTING**

### 1. Power on but no display

- a) Make sure the time of pressing power key is > 0.2 second.
- b) Check the battery is in place with good contact & correct polarity.
- c) Replace battery or move away the battery for one minute and re-install.

# 2. Display disappear

- a) Replace a new battery.
- b) Disable the auto power off function before power on for long time using.