



# User's Guide



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## HHT12

### Pocket Tachometer

## **SAFEGUARDS AND PRECAUTIONS**



**WARNING** - This product emits a visible beam of red LED light. Avoid exposure. The use of optical viewing aids (binoculars, for example) may increase the ocular hazard. (This is not a laser product.)

**CAUTION** - The red LED beam should not be intentionally aimed at people or animals.



**Read and follow all instructions in this manual carefully, and retain this manual for future reference.**

**Do not use this instrument in any manner inconsistent with these operating instructions or under any conditions that exceed the environmental specifications stated.**

**This instrument is not user serviceable. For technical assistance, contact the sales organization from which you purchased the product.**

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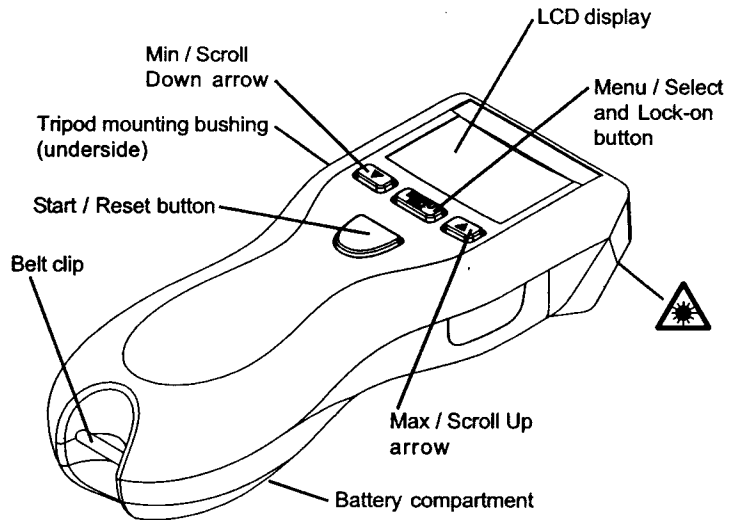
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## 1.0 OVERVIEW

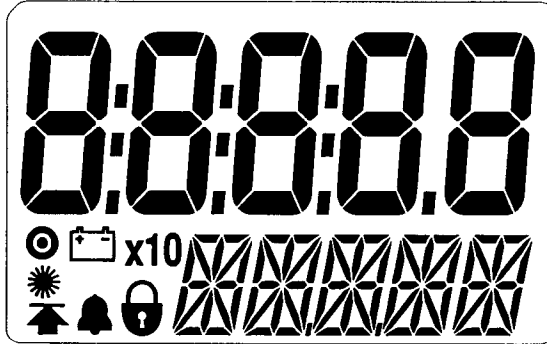
The HHT12 is a hand-held precision optical tachometer designed to make non-contact measurements of rotational speeds from 5 to 99,999 RPM at a distance of up to 36 inches (91.44 cm) from a reflective target and at an angle of up to 30° off perpendicular. The unit has the ability to recall maximum and minimum values. The unit can be tripod mounted and locked on for continuous measurements.





## 2.0 FEATURE LOCATIONS



**CAUTION - Red LED light emitted from this aperture. (This is not a laser product.)**

### 3.0 LCD DISPLAY SYMBOLS



-  On Target indicator. Blinks on whenever there is an input signal. Will appear to be solid on at higher frequencies.
-  Low Battery icon. Indicates that the batteries are low and need to be replaced.
- x10** Times Ten icon. Indicates that the value shown is ten times that which is displayed.
-  **LED Indicator.** Red LED is on when this indicator is illuminated.
-  Lock icon. Indicates that the unit is "Locked" on and making continuous measurements (Lock-on mode).

## 4.0 HHT12 SPECIFICATIONS

<b>Speed Range:</b>	5 to 99,999 RPM
<b>Accuracy:</b>	$\pm 0.01\%$ of reading or $\pm 1$ digit
<b>Resolution:</b>	0.001 RPM to 1 RPM
<b>Operating Range:</b>	36" (91.44 cm) up to 30 degrees off perpendicular
<b>Display:</b>	5 Digits, 5 Alpha-numeric LCD
<b>Light Source:</b>	Red LED
<b>Batteries:</b>	2 "AA" 1.5 V $\text{---}$ (DC) alkaline included (Note: Batteries are NOT rechargeable)
<b>Battery Life:</b>	60 hours continuous typical with provided batteries
<b>Dimensions:</b>	6.92" (17.58 cm) H x 2.4" (6.10 cm) W x 1.6" (4.06 cm) D
<b>Weight:</b>	approx. 7 oz. (210 g)

This product is designed to be safe for indoor use under the following conditions (per IEC61010-1).

**Installation Category II** per IEC 664

**Pollution Degree Level II** per IEC 664

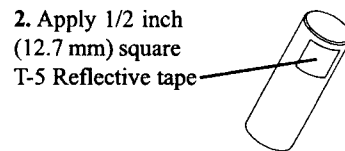
**Temperature:** 40 °F to 105 °F (5 °C to 40 °C)

**Humidity:** Maximum relative humidity of 80% for temperatures up to 88 °F (31 °C) decreasing linearly to 50% relative humidity at 100 °F (40 °C). Humidity non-condensing.

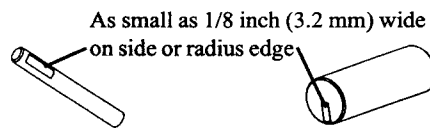
**Specifications subject to change without notice.**

## 5.0 NON-CONTACT MEASUREMENTS





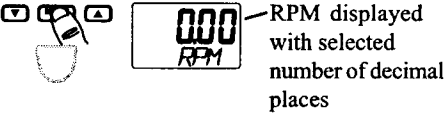
### 5.1 Preparation for Measurement



For Small Shafts:



## 5.2 Setup







1. Turn Power ON 
- 1a. To toggle Lock On/Off 
2. Enter Setup (decimal place selection) 
3. Select decimal places 
4. Save and exit - Ready to measure 


Unit will remember these settings (including lock on/off) even if turned off and back on.




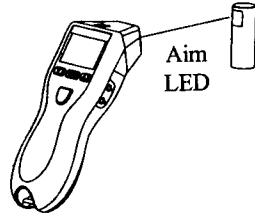
### 5.3 Operation

Measure

   OR   


 Press and hold

 Lock on




Recall Max



 Max Speed

Recall Min



 Min Speed

If unit Locked on:



Resets Max/Min

Power OFF



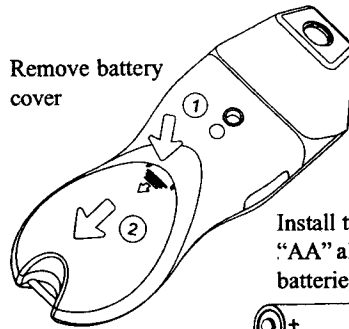
OR Automatic after 90 seconds if unit not Locked on

## 6.0 BATTERIES

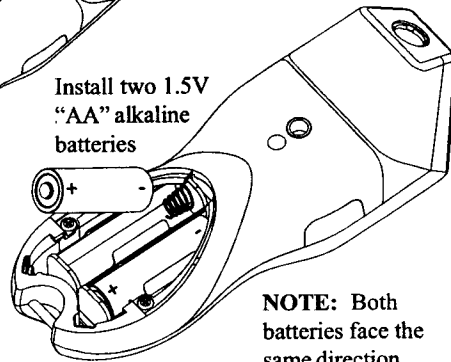
When displayed, replace batteries.



Remove battery cover



Install two 1.5V  
"AA" alkaline  
batteries



**NOTE:** Both  
batteries face the  
same direction.

## 7.0 CLEANING

To clean the instrument, wipe with a damp cloth using mild soapy solution.

## **8.0 OPTIONS / ACCESSORIES**

**HHT-RT-5** Reflective Tape, 5 foot [1.5 m] roll, ½ inch [13 mm] wide

**HHT13-CC10** Padded Nylon Carrying Case



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OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of 12 months from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal one (1) year product warranty to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components which wear are not warranted, including but not limited to contact points, fuses, and traces.

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**RETURN REQUESTS / INQUIRIES**

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.  
 PATENT NOTICE: U. S. Pat. No. 6,074,088; 6,485,838 / Canada 2,228,333; 2,116,055 / UK GB 2,321,712 / Holland 1008153 / Israel 123052 / France 2 787 908 / EPO 0414184. Other patents pending.

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 1. Purchase Order number under which the product was PURCHASED,  
 2. Model and serial number of the product under warranty, and  
 3. Repair instructions and/or specific problems relative to the product.

FOR NON-WARRANTY REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:  
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 2. Model and serial number of the product, and  
 3. Repair instructions and/or specific problems relative to the product.

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