



MONARCH INSTRUMENT

Instruction Manual

Pocket Tach 99 (PT99) Non-Contact Tachometer



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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.




In order to comply with EU Directive 2012/19/EU on Waste Electrical and Electronic Equipment (WEEE): This product may contain material  which could be hazardous to human health and the environment. DO NOT DISPOSE of this product as unsorted municipal waste. This product needs to be RECYCLED in accordance with local regulations; contact your local authorities for more information. This product may be returnable to your distributor for recycling; contact the distributor for details.

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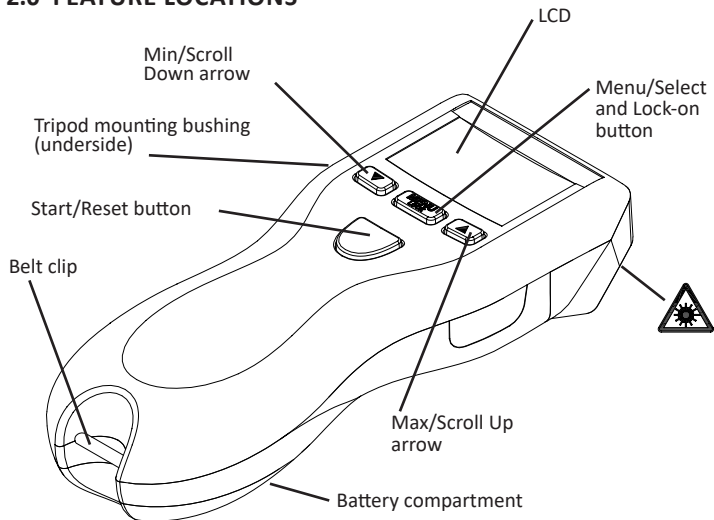
Monarch Instrument's Limited Warranty applies.
See www.monarchinstrument.com for details.

Warranty Registration and Extended Warranty Coverage information is available
online at www.monarchinstrument.com.

1.0 OVERVIEW

The Pocket Tach 99 is a handheld 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.

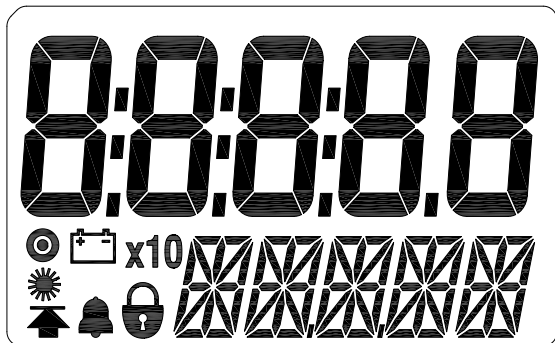
2.0 FEATURE LOCATIONS



CAUTION

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

3.0 LCD 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



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

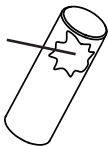


Lock icon — indicates that the unit is locked on and making continuous measurements (Lock-on mode)

4.0 NON-CONTACT MEASUREMENTS

4.1 Preparation for Measurement

1. Clean shaft

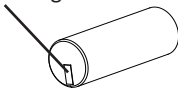


2. Apply 1/2 inch [12.7 mm] square T-5 Reflective tape



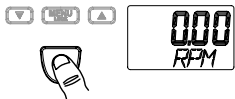
For Small Shafts:

As small as 1/8 inch [3.2 mm] wide on side or radius edge



4.2 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



RPM displayed with
selected number of
decimal places

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

4.3 Operation

Measure:



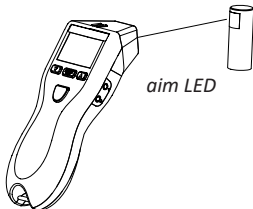
OR



press and hold



Lock on



aim LED

Recall Max:



Max Speed

Recall Min:



Min Speed

If unit Locked on: 

resets Max/Min



Power OFF:



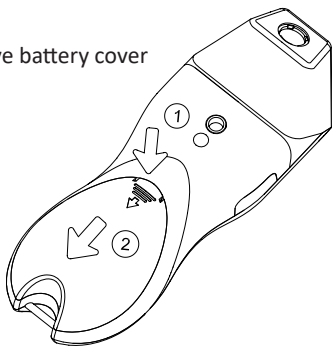
OR Automatic after 90 seconds
if unit not Locked on

5.0 BATTERIES

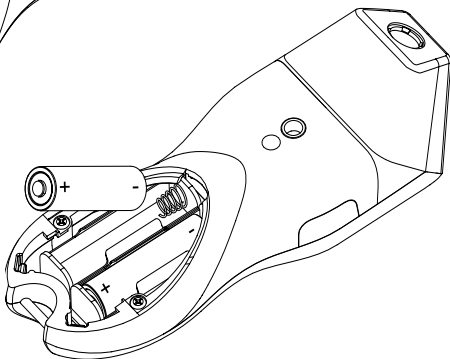
When Low Battery icon is displayed, replace batteries.



1. Remove battery cover



2. Install two 1.5 V AA
alkaline batteries




Note: Both batteries face the same direction.

6.0 CLEANING

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

7.0 SPECIFICATIONS

Specifications*	PT99 Tachometer
Speed Range	5 to 99,999 RPM
Accuracy	±0.01% of reading or ±1 digit
Resolution	Auto-ranging: 0.001 RPM to 1.0 RPM
Operating Range	≤ 36 in. [91.44 cm] at ≤ 30° off perpendicular
Memory	Maximum, Minimum, and Last Reading
Display	5 digits, 5 alphanumeric LCD
Light Source	Red LED
Batteries	2 AA 1.5 V  (DC) alkaline (included) Note: batteries are not rechargeable
Battery Life	60 hours continuous typical with provided batteries
Dimensions (HxWxD)	6.92 in. x 2.4 in. x 1.6 in. [17.58 cm x 6.10 cm x 4.06 cm]
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 are subject to change without notice.

8.0 OPTIONS/ACCESSORIES

T-5 Reflective Tape 5 feet [1.5 m] roll, ½ inch [13 mm] wide;
PN: 6180-070 additional lengths available

CC-10 Padded carrying case with belt loop
PN: 6180-047

CC-11 Latching carrying case for PT99 and accessories
PN: 6180-048

Mini Tripod Miniature tripod for use with Monarch
PN: 6180-040 tachometers and stroboscopes

CAL-NIST NIST Traceable Certificate of Calibration
PN: 6109-010-CAL (include with order or obtain RMA#)



T-5 Tape
PN: 6180-070



CC-10
PN: 6180-047



CC-11
PN: 6180-048



Mini Tripod
PN: 6180-040

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The Professional's Choice

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