CE DECLARATION OF CONFORMITY

As Manufacturer:

Monarch Instrument

Division of Monarch International Inc.

15 Columbia Drive, Amherst NH 03031 USA

declares under Monarch's sole responsibility that the product:

Pocket Tach 99

to which this declaration relates is in conformity with the following directives and standards when installed and operated in accordance with the user manual:

Directives:	**EMC 89/336/EEC**
Standards:	**EMC: EN61326:1997** **Electrical Safety: IEC61010-1:2001** **Laser Safety: IEC60825-1:2001**

References: Retlif Testing Laboratories, (Report No. R-4283N)
Technical Construction File PLT-0704 of July 2004

24th June 2004
Manufacturer (Amherst,NH)

Alan Woolfson, VP Engineering (Authorized Signature)

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MONARCH INSTRUMENT

Instruction Manual



Pocket Tach 99 (PT99)

Non-Contact Tachometer

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Website: www.monarchinstrument.com

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 2002/96/EC 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.

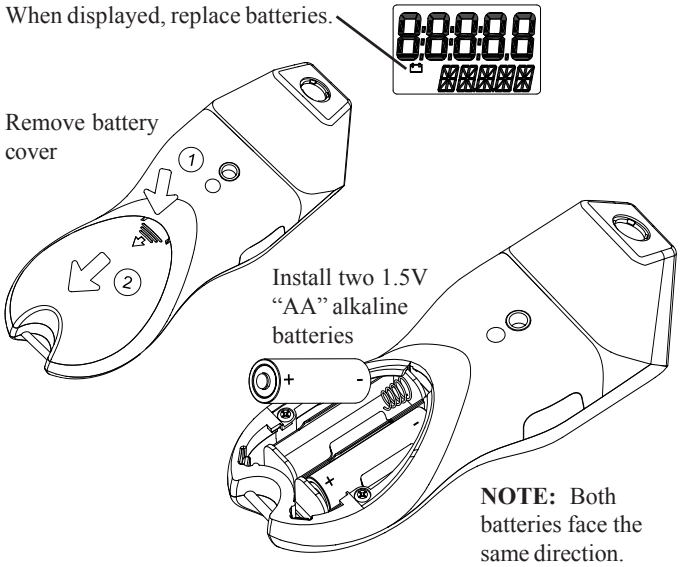
Monarch Instrument's Limited Warranty applies. See www.monarchinstrument.com for details.

Warranty Registration and Extended Warranty coverage available online at www.monarchinstrument.com.

8.0 OPTIONS / ACCESSORIES

T-5	Reflective Tape, 5 foot [1.5 m] roll, ½ inch [13 mm] wide
CC-10	Padded Nylon Carrying Case
CC-11	Latching Carrying Case for Pocket Tach and accessories
CAL-N.I.S.T.	N.I.S.T. Traceable Certificate of Calibration

6.0 BATTERIES



7.0 CLEANING

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

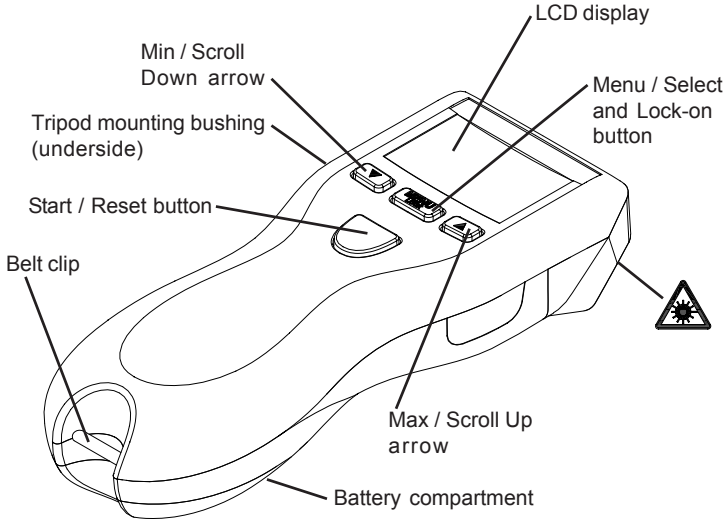
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1.0 OVERVIEW

The Pocket Tach 99 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.

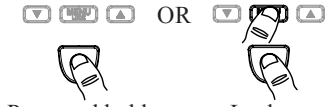
2.0 FEATURE LOCATIONS



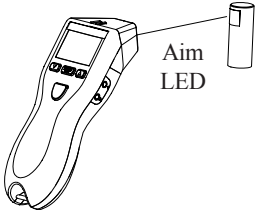
CAUTION - Red LED light emitted from this aperature. (This is not a laser product.)

5.3 Operation

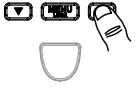
Measure — OR



Press and hold — Lock on



Recall Max





Max Speed

Recall Min





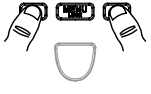
Min Speed

If unit Locked on:



Resets Max/Min

Power OFF



OR Automatic after 90 seconds if unit not Locked on

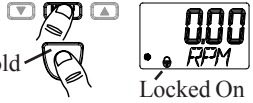
5.2 Setup

1. Turn Power ON



1a. To toggle Lock On/ Off

Press and Hold



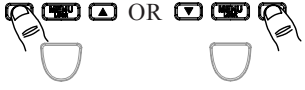
Locked On

2. Enter Setup (decimal place selection)



NONE, *1*, *2* or *3*

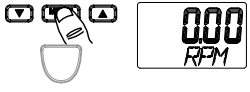
3. Select decimal places



OR

Repeat until desired decimal places displayed

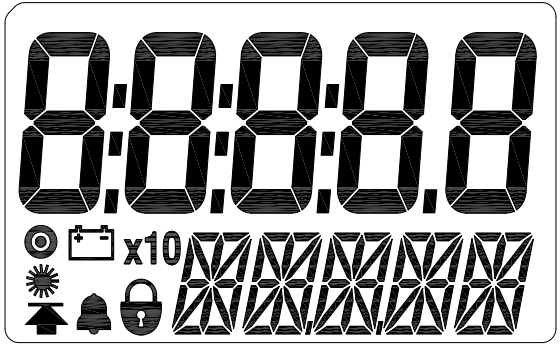
4. Save and exit – Ready to measure



RPM displayed with selected number of decimal places

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

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 PT99 SPECIFICATIONS

Speed Range: 5 to 99,999 RPM

Accuracy: ±0.01% of reading or ±1 digit

Resolution: 0.001 RPM to 1 RPM

Operating Range: 36" (91.44 cm) up to 30 degrees off perpendicular

Display: 5 Digits, 5 Alpha-numeric LCD

Light Source: Red LED

Batteries: 2 "AA" 1.5 V ⎓ (DC) alkaline included
(Note: Batteries are NOT rechargable)

Battery Life: 60 hours continuous typical with provided batteries

Dimensions: 6.92" (17.58 cm) H x 2.4" (6.10 cm) W x 1.6" (4.06 cm) D

Weight: 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

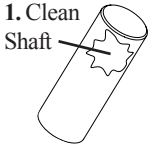
Temperature: 40 °F to 105 °F (5 °C to 40 °C)

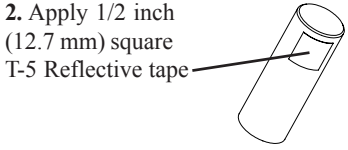
Humidity: Maximum relative humidity of 80% for temperatures up to 88 °F (31 °C) decreasing linearly to 50% relative humidity at 100 °F (40 °C). Humidity non-condensing.

Specifications subject to change without notice.

5.0 NON-CONTACT MEASUREMENTS

5.1 Preparation for Measurement





For Small Shafts:

