

Instruction Manual HT5002 Hand Tachometer

Manual Number: 702467-0001

Revision: None

Date: September 10, 2002

DANAHER CONTROLS

1675 Delany Road

Gurnee, IL 60031

Ph: (847) 662-2666 Fax: (847) 662-6633



Attention

Please note that misuse of this device may lead to injury to the user or damage to the device.

Thank you for purchasing our hand tachometer. Please read this instruction manual carefully before using to ensure the correct usage of this device.

Please keep this instruction manual for future reference.

Safety Precautions

For safe usage of this device, please observe all statements regarding precautions and warnings in this instruction manual.



Attention

- Do not use this device near machines that emit strong electromagnetic fields or objects that store static electricity.
- Do not drop this device or submit it to strong impact.
- Do not use or store the device where it can be exposed to direct sunlight, dust, high temperature and high humidity.
- Inspect the device before conducting measurements.
- See the battery case markings to ensure that the battery is properly installed.
- Remove the battery when the device will not be used for a long period of time.
- Do not attempt to disassemble or modify this device.

1. Preparation

1. Installing the batteries

- a) Press and slide down the battery compartment cover at the back side of the unit.
- b) Install the four batteries (AAA 1.5V) noting the polarity as indicated inside the battery compartment.
- c) After installing the batteries, replace the cover.

2. Using the reflective tape (for non-contact measurement)

- a) For proper adhesion, the surface must be clean. Wipe off oils or stains from the surface where the reflective tape will be attached.
- b) Cut off a 1 to 3 cm. length of the reflective tape. Remove the paper backing and adhere the reflective tape as near as possible to the outer edge of the object whose rotational speed is to be measured.

3. Installing the In-contact Adaptor (for contact type)

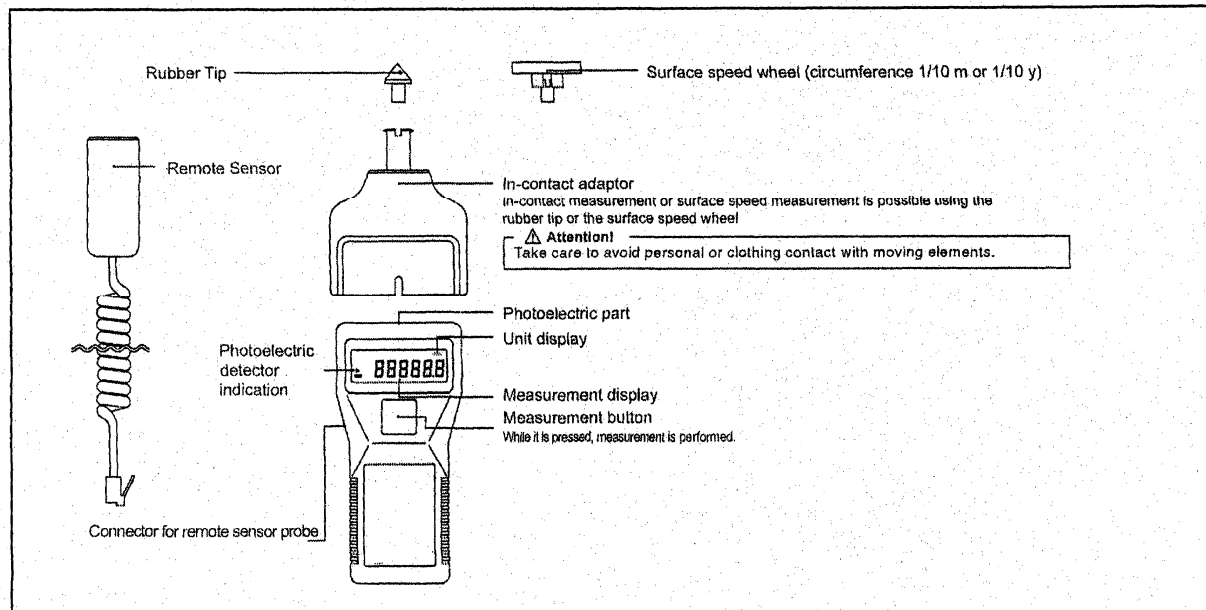
Loosen the lock screw at the back of the unit, insert the in-contact adaptor to the upper side of the main unit and tighten the lock screw using a screw driver. Use a coin if a screw driver is not available. The lock screw must be tightened securely to ensure that the in-contact adaptor does not fly off while in use.

4. Installing the remote sensor

Set the switch, located in the battery compartment, to the OFF position. Reinstall the battery cover after using the switch. Insert the connector of the remote sensor to the modular telephone style connector on the unit's left hand side.

Be sure to move the switch back to the ON position before using the tachometer without the remote sensor.

2. Components and Functions



3. Measurements

- Press the measurement button to turn the unit on, the LCD will then light up.
- To measure, press the measurement button for at least 1 second.
- When measuring using the reflective tape, the "(((" mark will appear confirming that the photosensor is working.
- If the measurement is out of range, the "----" mark will appear.

Non-contact type measurement

- The distance between reflective tape and tachometer main unit (or remote sensor) is 5 to 30 cm. and the angle of incidence of the light is within +/- 30 degrees
 - Press the measurement button, confirm that the "(((" mark is displayed on the screen, then read the rotational speed.
 - When the measurement button is released, the display is held for about 3 mins. The unit automatically turns off after 3 mins. of inactivity.
- * Note:** Measurement errors can occur when strong light from a stroboscope unit and/or fluorescent lamp reaches the photoelectric sensor and reflective tape. Before starting rotation of the object under test, please operate the tachometer while pointed at the reflective tape and confirm that the measurement is 0.0 rpm. If the measurement is affected by external light, change the position of the unit.

Contact type measurement

- Use the rubber tip correctly by touching it perpendicular to the center of the axle of the rotating object under test. To measure the peripheral speed of the items such as belts, replace the rubber tip with the surface speed wheel. Individual wheels are provided for the measure of meters or yards.
- To attach the surface speed wheel, remove the rubber tip and press the surface speed wheel axle so that the boss of the wheel axle is inserted into the slit of the adaptor axle. Push until it snaps into place. Confirm that it is secured by gently pulling up on the surface speed wheel.
- When measuring the circumferential velocity, the surface speed wheel should touch the measured object so that the surface speed wheel turns in parallel with it.

Auto-power off

After the measurement button is released, the display is held for about 3 minutes then the unit automatically turns OFF if no further measurements are made during that time.

4. Battery Replacement

Low battery condition is indicated by a flashing indicator at the left side of the screen. Replace the batteries when this occurs. Refer to '1.1 Installing the Batteries' for the battery replacement procedure. Replace all batteries with new ones, being careful not to mix different types of batteries - i.e. manganese batteries and alkaline batteries.

● SPECIFICATIONS (MAIN UNIT)	
Model	
Measuring Range	0.0~99999.9 rpm
Resolution	0.1 rpm
Accuracy	±0.01% ±1 digit rpm•m/min (for other units, the conversion accuracy is ±0.05% ±1 digit)
Sampling Time	1.0~10.0 seconds
Display	Display : 6 digits, 7 segment LCD Battery alarm : ■ mark Reflective light : (((mark
	Display unit : r/min
Auto Power-off	After 3 mins. from last measurement or key operation
Data Hold Time	Measurement data: until the next data is defined
Measuring Method	Non-contact measurement using the main unit or with remote sensor (use with reflective tape) Contact measurement using the in-contact adaptor (use with rubber tip, surface speed wheel)
Measuring Distance	50~300mm(using reflective tape)
Power Supply	4 pcs. of AAA alkaline battery(continuous measurement of 20 hrs.)
Operating Temperature	5~40°C no condensation
Storage Temperature	-10~60°C no condensation
Dimension/Weight	122(H) x 58(W) x 28(D)mm 140g

Model No.	Description
HT50 02	Hand Tachometer System (Includes: Hand Tachometer; In-Contact Adaptor; Rubber Tips (3 pcs.); Reflective Tape (10 sheets); Surface Speed Wheels (1/10 m/min and 1/10 yd/min); Carrying Case; Dry Batteries (4—AAA size, 1.5 V); Instruction Manual
605830-0001	Accessory Remote Probe
0576008-394	Replacement Rubber Tip for In-contact Adaptor
0576008-395	Replacement 1/10 Yard Wheel
0576008-396	Replacement 1/10 Meter Wheel
605831-0002	Replacement In-contact Adaptor
0616483-001	Reflective Tape (Replacement)

DANAHER CONTROLS

1675 Delany Road

Gurnee, IL 60031

Ph: (847) 662-2666 Fax: (847) 662-6633

Email: dancon@dancon.com Web: www.dancon.com