



Digital Photo/Touch Tachometer

AX-2901

INSTRUCTION MANUAL



INTRODUCTION

This instrument can be used to measure rotation speed (RPM) and surface speed accurately. To perform rotation speed measurement, you can use Photo or Contact mode.

The instrument features wide measurement range, high resolution, and quick measurement. In addition, the memory of the maximum, minimum and last readings is provided. It can be used widely and is a very useful measurement tool.

General Specifications

Display:	LCD	
Measurement Range:		
Rotation speed:	Photo mode:	6~99999RPM
	Contact mode:	1~19999RPM
Surface speed:	0.1~1999.9m/min	
	0.3~6560ft/min	
Resolution:		
Rotation speed:	<1000RPM:	0.1RPM
	≥1000RPM:	1RPM
Surface speed:	<100m/min:	0.01m/min
	≥100m/min:	0.1m/min
	<100ft/min:	0.03ft/min
	≥100ft/min:	0.3ft/min
Accuracy:	±(0.0%5of Reading +1 digit)	
Sampling Time:	1 second (over 60 RPM)	
Range Selection:	automatic	
Data Memory:	LAST/MIN/MAX readings	
Detecting Distance in Photo Mode:	5cm~20cm (depending on ambient light)	



Power Supply:	a. Battery: 1.5V AA or equivalent, 4 pieces b. Using AC Adapter: output voltage of DC6V (Note: You can select “a” or “b” for power supply)
Operating Environment:	0~40°C. < 85%RH
Storage Environment:	-10~50°C, <85%RH
Size:	217 x 84 x 43 mm (main body only)
Weight:	about 265 (including batteries)

Instruction

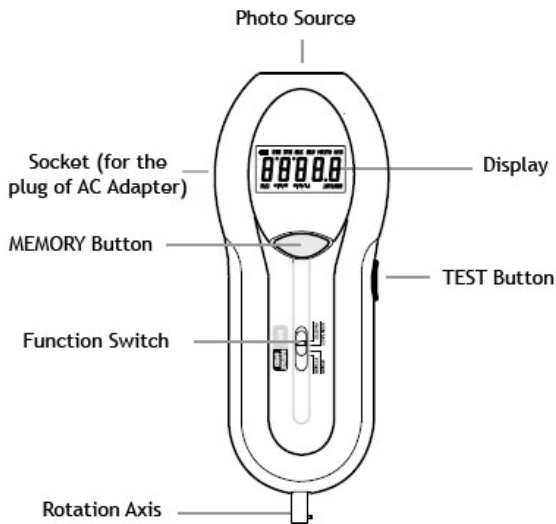


Figure 1

1. Photo Source

It is used only in Photo mode.

2. Display

It shows reading, unit or symbol.



3. TEST Button

Press and keep pressing this button to perform measurement.

4. MEMORY Button

It can be used to recall the last reading, the minimum reading, and the maximum reading of the last measurement.

5. Function Switch

It can be used to select desired measurement:

FT/MIN ----- linear speed measurement, reading unit “ft/min”

M/MIN ----- linear speed measurement, reading unit “m/min”

CONTACT ----- rotation speed measurement in Contact mode, reading unit “RPM”

PHOTO ----- rotation speed measurement in Photo mode, reading unit “RPM”

6. Rotation Axis

The part where to install surface speed test wheel or rotating touch part.

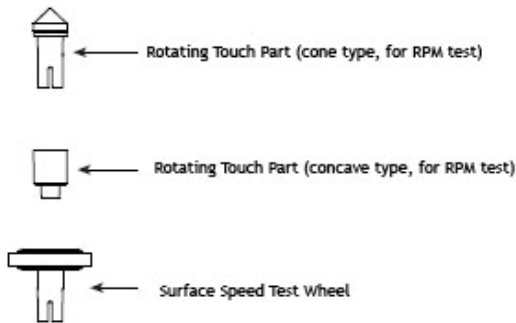


Figure 2



Display Explanation

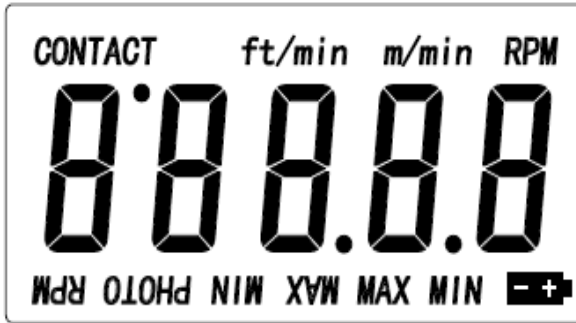


Figure 3

Symbol meanings

	Batteries are low and should be replaced
MAX	Maximum Reading is being displayed
MIN	Minimum Reading is being displayed
RPM	Rotation speed unit (revolutions per minute)
ft/min	Speed unit, feet/minute
m/min	Speed unit, meter/minute
CONTACT	Contact mode symbol
PHOTO	Photo mode symbol

Operation Instruction

1. Using Photo Mode to Measure RPM

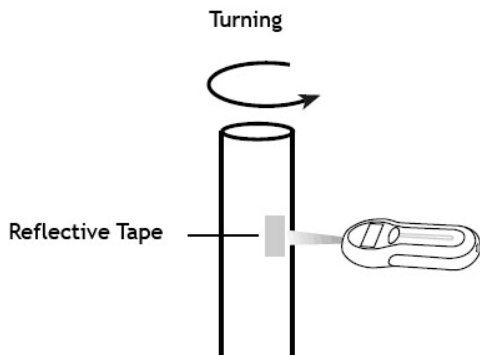


Figure 4



1. Cut and peel adhesive reflective tape of about 2 cm length, attach it onto the object whose rotation speed you want to measure.

Tip: The longer the cut reflective tape, the easier the measurement.

2. Set the function switch to PHOTO range.

3. Point the instrument's photo surface at the reflective tape on the object. Hold the instrument at a suitable distance (from 5 cm and 20 cm depending on ambient light) from the reflective tape.

4. Start the object's turning.

Press and keep pressing TEST button, make sure that the light beam is perpendicular to the reflective tape surface. Several seconds later, a reading will appear on the display. When the reading is stable (or nearly stable), read the reading on the display and then release TEST button. (Figure 4).

Note: If reading can't appear on the display, adjust the instrument in order that the light beam is perpendicular to the reflective tape surface.

Adjust the distance between the instrument and the reflective tape surface if necessary.

NOTE:

1. The non-reflective area must be larger than the reflective tape area.

2. If the object under test is normally reflective, it should be covered with black tape or paint before you attach the reflective tape.

3. Before you attach the reflective tape, make sure that the object surface is clean and smooth.

4. To avoid hurting eye, don't point the light beam to person's eye. To avoid injury, don't touch any moving object with hand, body or clothing.

5. To perform very low RPM measurement (<60RPM), we suggest the user to attach more reflective tapes averagely. Then divide the reading by the number of reflective tapes to get the actual RPM of the object (Figure 5)



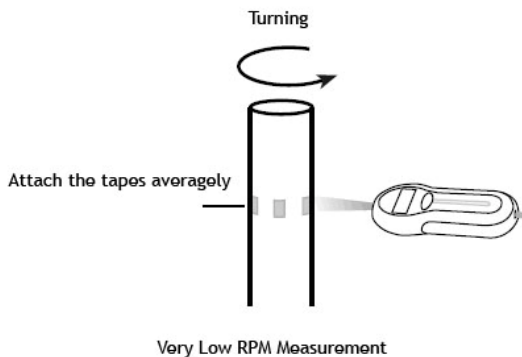


Figure 5

2. Using Contact Mode to Measure RPM

- a. Select a suitable rotating touch part, and install it to the rotation axis properly, make sure the rotating touch part will not slide out during measurement.
- b. Set the function switch to CONTACT range.
- c. Lightly press the rotating touch part against the center of the turning object (Figure 6), press and keep pressing the TEST button. Read the reading when it is stable.
- d. Release the TEST button.

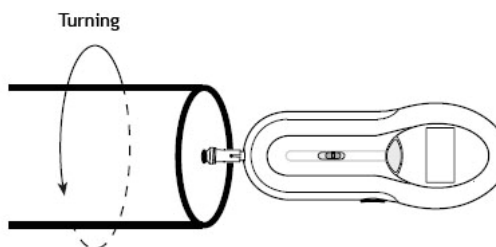


Figure 6

NOTE:

- a. The rotating touch part must be placed at the center of the turning object to be tested. (Figure 6)
- b. The rotating touch part must turn synchronistically with the turning object when you perform measurement.



c. To avoid injury, don't touch any turning object with hand (or part of body), or clothing.

Wear an eye protector while using this instrument.

3. Performing Linear Speed Measurement.

a. Install the surface speed test wheel to the rotation axis properly, make sure the surface speed test wheel will not slide out during measurement.

b. Set the function switch to "M/MIN" or "FT/MIN" range position.

c. Lightly press the surface speed test wheel against the surface of the turning object (Figure 7), press and keep pressing the TEST button. Read the reading when it is stable

d. Release the TEST button.

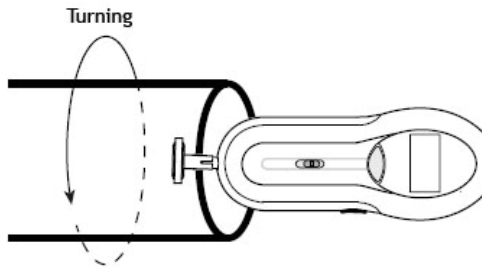


Figure 7

NOTE:

a. The surface speed test wheel must turn synchronistically with the turning object when you perform measurement.

b. To avoid injury, don't touch any turning object with hand (or part of body), or clothing.

Wear an eye protector while using this instrument.

5. Recalling the Recorded Data


The MEMORY button can be used to recall the last reading, the minimum reading and the maximum reading of the last measurement.

After TEST button is released, the maximum, minimum and last readings of the last measurement are stored in the instrument.

Repeat the "press and hold down MEMORY button and then release it" procedure to step through the last reading, the minimum reading (symbol "MIN" appears), and the maximum reading (symbol "MAX" appears).



Battery Replacement

When the low battery indicator “” appears, it is necessary to replace the batteries immediately. To replace the batteries, remove the screw on the battery cover, carefully and gently remove the battery cover, replace exhausted batteries with four new batteries of the same type (1.5V AA or equivalent). To avoid damage to the instrument, make sure that the polarity connections are correct. Reinstall the battery cover and the screw.

Note:

1. Don't discard battery into fire.
2. Don't short battery's terminals.
3. Keep battery and this instrument out of reach of infant and child.

Accessories

1. Manual - a piece
2. Measurement Part - a set
3. Reflective Tape - a piece
4. AC Adapter (optional)

Declaration

1. This manual is subject to change without notice.
2. Our company will not take the other responsibilities for any loss.
3. The content of this manual can not be used as the reason to use the instrument for any special application.

DISPOSAL OF THIS ARTICLE

Dear Customer,

If you At some point intend to dispose of his article, then please keep In mind that many of its components consist of valuable materiale, chich can be recycled. Please do not discharge it in the garbage bin, but check with your local council for recycling facilities in your area.

