

# Tachometer



## Features:

- Provides fast and accurate rpm measurements of rotating objects without contact
- Laser targeting
- Provides Total measurements
- Built-in memory recalls maximum, minimum values as well as last value stored
- Highly visible 5-digit LCD with backlight
- Includes reflective tape, soft carrying case and batteries

## Specifications:

Range: 2 to 99,999 rpm  
 Accuracy:  $\pm(0.05\% \text{ rdg.} + 1 \text{ dgt.})$   
 Resolution: 0.1 rpm: 2 to 999.9 rpm; 1 rpm: >1000 rpm  
 Sampling Time: 0.5 sec over 120 rpm  
 Detection Distance: 50 to 500mm  
 POver supply: Single 9V batteru  
 Dim. Weight: 160 x 58 x 39mm/151g

Model	Description	Price
AT-6	Photo Tachometer	\$99

# Tachometers

## Features:

### MODEL MT-100

- Hand-held, palm-size contact tachometer
- Large LCD displays 14 different units of measure for rate and total revolutions, no conversion necessary
- Direct length measurement when used with the 6" master wheel
- Accessories include cone adapter, funnel adapter, master wheel (6" circ.) and carrying case

### MODEL MT-200

- Non-contact tachometer incorporates a laser for accuracy and ease of use
- Provides contact and non-contact readings up to 99,999 rpm
- Laser targeting accurate up to 6 feet from target
- Multiple units of measure for rate and total revolutions
- Direct length measurements (m, yd, in, ft)
- Accessories include cone adapter, funnel adapter, master wheel (6" circ.) contact adapter, 35 reflective tabs and carrying case



## Specifications:

Model	MT-100	MT-200
Range:	1.0 -25,000 rpm	6.0-99,999 rpm (n-c) 6.0-25,000 rpm (con)
Surface Speed:	0.1-3810 m/min; 0.1-4166 yd/min; 3-99,999 in/min; 0.2-12,499 ft/min	0.1-3810 m/min; 1.0-4166 yd/min; 36-99,999 in/min; 3.0-12,499 ft/min
Length:	0.01-99,999 m; 0.01-99,999 yd; 0.1-99,999 ft; 1-99,999 in	0.2-99,999 m; 0.2-99,999 yd; 0.5-99,999 ft;
Accuracy:	RPM: $\pm 1 \text{ rpm: } < 600 \text{ rpm};$ $\pm 0.006\% \pm 0.5 \text{ dgt}$ $\geq 600 \text{ rpm}$	$\pm 1 \text{ rpm: } < 600 \text{ rpm};$ $\pm 0.006\% \pm 0.5 \text{ dgt}$ $\geq 600 \text{ rpm}$
Length:	$\pm 0.4\% \pm 1 \text{ dgt}$	$\pm 0.4\% \pm 1 \text{ dgt}$
Detection:	Optical coupler	Laser diode
Update Time:	1 second	
Memory:	14 readings (last, amx, min, avg & 10 selectable measurements) retained for 5 min.	
Power Supply:	3 x 1.5V "AA" batteries	
Dimensions:	4.8 x 2.5 x 1.2" (123 x 64 x 32mm)	4.6 x 2.5 x 1.2" (116 x 64 x 32mm)
Weight:	0.37 lb (170g)	0.35 lb (160g)

Model	Description	Price
MT-100	Contact/Non-Contact Tachometer	\$248
MT-200	Laser Tachometer	\$275

# Tachometer



Removable  
Contact Adapter

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## Features:

- Dual function unit with both contact and non-contact capabilities
- Supplied with adapters for rpm and surface speed measurements
- Non-contact function utilizes laser light beam for improved accuracy
- Recalls Max/Min and last values
- Large, easy to read display
- Autoranging with 0.05% accuracy
- Includes battery and carrying case

## Specifications:

Ranges:	Photo: 5 to 99,999 rpm; Contact: 5 to 19,999 rpm; Surface Speed: 0.05 to 1,999 mpm
Resolution:	0.1 rpm
Accuracy:	±(0.05% + 1 digit)
Update Time:	1/second
Display:	5-digit LCD
Dimensions:	6.3 x 2.8 x 1.5"
Weight:	7.9 oz

Model	Description	Price
ST-6236B	Contact/Non-Contact Tachometer	\$179
ST-WHEEL	Replacement Measuring Wheel	\$13
ST-CONE	Replacement Cone Tip	\$3
ST-FUNNEL	Replacement Funnel Tip	\$11
ST-SHAFT	Replacement Extension Shaft	\$13

# Tachometer

## Features:

- Automatically holds last reading for 5 minutes and recalls minimum and maximum readings
- Characters on the 5-digit display reverse direction depending on which measurement mode you are in
- Microcomputer LSI circuitry provides accuracy to 0.05% and permits readings to a resolution of 0.1 RPM in either photo or contact mode
- ABS plastic housing assures years of maintenance free performance
- Designed to fit comfortably in either hand
- Includes 3 contact adapters (2 cones, 1 funnel), surface speed wheel, reflective tape, batteries and hard carrying case



## Specifications:

Reading Range:	Photo Mode: 5 to 99,999 rpm Contact Mode: 0.5 to 20,000 rpm
Surface Speed:	0.05 to 1,999.9 mpm/0.2 to 6,560 fpm
Resolution:	0.1 rpm < 999.9 rpm, 1 rpm > 1000 rpm; 0.1 mpm < 99.99 mpm; 0.1 fpm < 99.99 fpm, 1 fpm > 1000 fpm
Accuracy:	±(0.5% + 1 digit)
Sampling Time:	Photo: 1 sec. > 6 rpm Contact: 1 sec. > 60 rpm
Detecting Distance:	50 to 150 mm (2" to 6") typically; 300 mm (12") max.
Display:	5 digit LCD 10 mm high
Power Supply:	(4) 1.5V L "AA" batteries
Time Base:	Quartz Crystal
System Control:	Single chip micro computer LSI circuit
Operating Temp.:	0° to 50°C
Dimensions:	215 x 65 x 38 mm
Weight:	10.6 oz (300g)

Model	Description	Price
K4010	Contact/Non-Contact Tachometer	\$279
AS-35C	Replacement Measuring Wheel	\$13
CONE	Replacement Cone Tip	\$16
FUNNEL	Replacement Funnel Tip	\$16
EXT-SHAFT	Replacement Extension Shaft	\$17

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# Tachometers

## Features Models DT-105A & DT-107A:

**Multi-mode Speed Selection:** One rotary switch selects specific operating mode for measurement of rotational, linear and surface speeds; per minute, per second, or per hour, as well as *total length* in meters, centimeters, inches, feet and yards.

**Direct Length Measurement:** Offers versatility via added applications.

**Total Revolutions Display:** Enables rotation counting during process analysis.

**Wide Measuring Range:** Maximizes use in limitless applications.

**Expanded Memory Capacity:** Provides 13 readings - gives last reading, maximum, minimum and 10 intermediate speed readings - automatically or by selection to 5 minutes or more.

**Overspeed Protection:** Single-range low inertia drive system results in minimum shaft loading and eliminates the possibility of instrument damage due to overspeed on too low a range setting.

**High Visibility Display:** Oversized 5-digit display. LCD (**DT-105A**) for easy reading in direct sunlight and LED (**DT-107A**) for easy reading in dim environments.

**Extended Battery Life:** Longer life with fewer batteries!

**Rugged Aluminum Construction:** For years of maintenance-free performance.

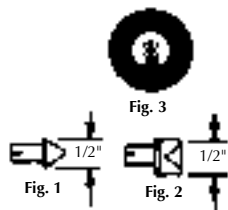
**Accessories Included:** 2 cone adapters, 1 funnel adapter, 3-1/2" extension shaft, 1 measuring wheel (6" circ.), carrying case, and operating instructions.

**Accessories Available:**

Cone Adapter (Fig. 1)

Funnel Adapter (Fig. 2)

Measuring Wheel (Fig. 3) 6" circ.



## Features Models DT-205L & DT-207L:

**Measurement without Contact:** Directly displays RPM measurements sensed from an easy-to-aim visible light beam directed toward a rotating shaft without mechanical contact.

**Laser Accuracy:** New laser beam allows accurate and safe measurement of RPM from distances as great as 14 feet!

**Expanded Measuring Range:** Of up to 99,000 rpm covers a wider range of applications.

**Length and Rate Functions:** Offers expanded measurement capabilities; multi-mode speed selection allows maximum versatility.

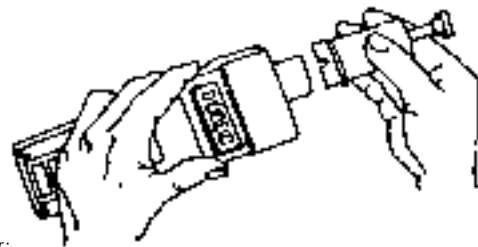
**Expanded Memory Capability:** Ten independent readings plus last, maximum and minimum enables larger quantities of information to be stored.

**High Visibility Display:** Oversized 5-digit display. LCD (**DT-205L**) for easy reading in direct sunlight, and LED (**DT-207L**) for easy reading in dim environments.

**Extended Battery Life:** Permits longer operating time while requiring fewer batteries.

**Added Functions:** Included contact adapter enables the measurement of five additional rate functions (RPM, YPM, mPM, FPM and IPM) as well as four length functions (yards, meters, feet and inches).

**Rugged Aluminum Housing:** Provides exceptional durability.



**Contact Adapter:**

Included with Tachometer:

Slips on photo tachometer over optical eye, converting it for direct contact operation.

Model	Description	Price
DT-105A	Contact Tachometer, LCD	\$357
DT-107A	Contact Tachometer, LED	\$357
CONE	Replacement Cone Tip	\$16
FUNNEL	Replacement Funnel Tip	\$16
FPM-6	6" Measuring Wheel	\$42

Model	Description	Price
DT-205L	Laser Non-contact/Contact Tachometer, LCD	\$390
DT-207L	Laser Non-contact/Contact Tachometer, LED	\$390
TAB-SHEET	1 Sheet Reflective Tabs (35)	\$5

Model	DT-105A	DT-107A	DT-205L	DT-207L
Display Range	0.10 to 25,000 rpm w/ floating decimal		6 to 99,999 rpm	
Accuracy	±0.06 rpm: 0.10 to 999.9 rpm ±0.6 rpm: 1,000.0 to 9,999.9 rpm ±0.006% of reading ±1 digit (or ±2 rpm max.): 10,000 to 25,000 rpm		±1 rpm; 6 to 8,300 rpm ±2 rpm; 8,300 to 25,000 rpm ±0.006% of reading ± 1 digit: (or ±6 rpm max.) 25,000 to 99,999 rpm	
Measuring Units	Revolutions: RPH, RPM; Feet: FPH, FPM; Miles: MPH; Yards: YPH, YPM; Inches: IPM; Meters: mPH, mPM; Length: m, cm, in, ft, yd; Total Revs.		RPM using contact adapter, included YPM, mPM, FPM, IPM & Length: yrd, m, ft & in, using 6" circ. wheel w/ 200L adapter	
Memory System	13 readings are stored in memory and retained for 5 minutes (last, max, min & 10 intermediate readings.)		13 readings are stored in memory and retained for 5 minutes (last, max, min & 10 intermediate readings.)	
Detection	Optical Coupler, 60 pulse/rev.		Laser diode	
Over Range	Flashing numerals		Flashing numerals	
Update Time	Typically 1 second		Typically 1 second	
Operating Temp.	32°F to 113°F (0° to 45°C)		32°F to 113°F (0° to 45°C)	
Display	5-digit 0.47" (12mm) high LCD	5-digit 0.4" (10mm) high LED	5-digit 0.47" (12mm) high LCD	5-digit 0.4" (10mm) high LED
Power Supply	2 1.5V size "AA" batteries		2 1.5V size "AA" batteries	
Battery Life	65 hrs. continuous use typically	40 hrs. continuous use typically	40 hrs. continuous use typically	25 hrs. continuous use typically
Low Voltage	Flashing "LO BAT" display	"B" display	Flashing "LO BAT" display	"B" display
Dimensions	7.2 x 2.4 x 1.8" (182.5 x 60 x 46mm)	7.3 x 2.4 x 1.8" (182.5 x 60 x 46mm)	6.6 x 2.4 x 1.8" (167.5 x 60 x 46mm)	6.6 x 2.4 x 1.8" (167.5 x 60 x 46mm)
Weight	0.9 lb (400 g)	0.9 lb (400 g)	0.8 lb (365 g)	0.8 lb (365 g)

# Tachometer

## Features:

- Photo tachometer and contact tachometer in one precision instrument
- Surface speed measurements in fpm or mpm
- Retains Min/Max and last reading for later recall
- Automatic reverse display direction depending on which measurement mode you are in
- Laser light for improved accuracy at a greater distance in photo mode
- Highly visible LCD readout
- Includes 3 contact adapters (2 cones, 1 funnel), surface speed wheel, reflective tape, batteries and hard carrying case



## Specifications:

Range/Resolution: Photo: 10 to 99,999 rpm/0.1 rpm  
 $\leq 999.9$  rpm, 1 rpm  $> 1000$  rpm;  
 Contact: 0.5 to 19,999 rpm/0.1 rpm  
 $\leq 999.9$  rpm, 1 rpm  $> 1000$  rpm;  
 Surface Speed: 0.05 to 1,999.9 mpm  
 (0.2 to 6560 fpm)/0.01 mpm  
 $\leq 99.99$  mpm, 0.1 mpm  $> 100$  mpm  
 (0.1 fpm  $\leq 999.9$  fpm, 1 fpm  $> 1000$  fpm)

Accuracy:  $\pm(0.05\% + 1 \text{ digit})$

Sampling Rate: Photo: 1 sec. over 60 rpm;  
 Contact: 1 sec. over 6 rpm

Detection Distance: 50 to 2,000mm

Laser: Class 2 red laser diode, 645nm wave-length

Power Supply: 4 x 1.5V "AA" batteries

Dimensions: 8.5 x 2.6 x 1.5" (215 x 65 x 38mm)

Weight: 9.9 oz (280g) with batteries



Model	Description	Price
DT-1236L	Contact/Non-Contact Tachometer w/ Laser	\$295

# Tachometer

## Features:

- Combination contact and non-contact hand-held digital tachometer
- Sophisticated laser beam detection up to 14'
- Simultaneous storage of data in three different measuring modes (USB, Standard and Average)
- Selectable units of measure and display refresh interval
- Graph capability in USB mode
- Automatic calculation of last, max, min, and average readings
- Readings can be set for length and rate measurement
- Smart settings for trigger, max and min limits
- Synchronize time with PC for time stamping
- Multiple data storage in USB mode
- Programmable 1V analog output for chart recorders
- Large 5-digit display
- Expansive memory capacity
- Auto power off
- Rugged aluminum construction
- Standard accessories include reflective tape, 2 cone adapters, funnel adapter, 3-1/2" extension shaft, master wheel (6" circ.) and 200L adapter, USB cable and carrying case



## Specifications:

Non-contact Range: 6 to 99,999 rpm

Contact Range: 0.8 to 25,000 rpm

Accuracy:  $\pm 1$  rpm:  $\leq 8,300$  rpm;  $\pm 2$  rpm: 8301 to 25,000 rpm;  $\pm 0.006\%$  rdg  $\pm 1$  dgt:  $> 25,000$  rpm

Display: 5-digit, 0.47" (12mm) high LCD

Measuring Units: RPM: non-contact up to 14' away;  
 Contact: ypm, mpm, fpm, ipm & length (yd, ft, in, m, linear rate & length using adapter)

Measuring Modes: USB: PC online measuring; STD: Standard; AVE: Average data measuring

Memory: STD: 24 blocks, 10 points/block (240 data total); AVE: 30 blocks (last, max, min, avg in each block); Date & hour of start/finish stored in each block

Analog Output: 1V max.

Display Update: 1 second

Power Supply: 2 x 1.5V "AA" batteries

Battery Life: Approx. 15 hours

Dimensions: 6.6 x 2.4 x 1.8" (168 x 60 x 46mm)

Weight: 0.9 lb (400 g)

Model	Description	Price
DT-209X	Contact/Non-Contact Tachometer	\$586

# Tachometer

**NEW!**

## Features:

- Ideally suited for noncontact rotational speed measurements, as well as contact and linear speed measurements
- 32-function tachometer/ratemeter, totalizer/counter and timer (stop-watch)
- Programmable in both Imperial and metric rates
- Maximum, minimum and last reading memory
- Operates up to 25 feet (8m) from a reflective target using a Class 2 laser light source
- Safe, direct line-of-sight viewing of both the target and the display at the same time
- Two phono plug connectors for optional remote contact assembly or remote sensors
- TTL compatible pulse output to trigger devices like vibration data collectors
- Kit supplied complete with remote contact assembly with 6-ft. cable including concave and convex tips, 10cm linear speed wheel, 5 ft. of reflective tape, latched carrying case



## Specifications:

Measurement Range: Photo: 5 to 200,000 rpm;  
Contact: 0.5 to 20,000 rpm  
Accuracy: Phtot:  $\pm 0.01\%$  rdg.; Contact:  $\pm 0.05\%$  rdg.  
Resolution: 0.001 to 10 rpm (range dependent)  
Rates (w/10cm wheel): 1.969 to 78,740 ipm, 0.164 to 6561.7 fpm,  
0.055 to 21187.2 ypm, 5.000 to 200,000  
cm/m, 0.050 to 2000.0 m/m  
Totalizer: 1 to 999.980 (events or length)  
Timer: 99:59.9 min:sec. tenths  
Operating Range: 2" to 25' (5cm to 7.62m),  $\pm 70^\circ$  from  
perpendicular  
Display: 5-digit alphanumeric LCD  
Power Supply: 2 "AA" 1.5V alkaline batteries  
Battery Life: 30 hours continuous use  
Dimensions: 6.9 x 2.4 x 1.8" (175.8 x 61 x 40.6mm)  
Weight: 7 oz (210g)

Model	Description	Price
6125-011	Contact/Non-Contact Tachometer	\$438

# Tachometer

**NEW!**

## Features:

- Automatic RPM measurements made without contact
- Event counter with elapsed time
- Max/Min/Hold and True Average
- RS232 interface
- Auto power off
- Contact RPM and circumferential speed measurements in one simple adapter (RM-1502)
- Includes reflective tape, RS-232 interface, software and carrying case



RM-1502

## Specifications:

Optical Range: 10.00-99999 RPM; 0.2-2000 Hz  
Resolution: 0.01/0.1/1 RPM; 0.001/0.01/01 Hz  
Accuracy: 0.04%  $\pm 2$  dgts.  
Measuring Distance: 50 to 300mm  
Contact Range: 20.00-29999 RPM; 2.000-2999.9 m/min;  
6.00-10000 fpm; 2.0-3000 ypm  
Resolution: 0.01/0.1/1 RPM; 0.001/0.01/0.1 m/min;  
0.01/0.1/1 fpm; 0.01/0.1/1 ypm  
Accuracy: 0.04%  $\pm 2$  dgts.  
Event Counter Range: 0-99999  
Max. Input Frequency: 10KHz. with 5% duty cycle  
External TTL Input: High > 4.5V  
Display: 5 digits 99999 counts  
Sampling Rate: 0.7 sec. > 60 RPM; > 1 sec. 10 to 60 RPM  
Time Base: 4.0 MHz Quartz Crystal  
Power Supply: Four 1.5V batteries (AA, UM-3)  
Dimensions: 72 x 63 x 36mm (6.8 x 2.5 x 1.5")  
Weight: 190g (6.7 oz.) (including battery)

Model	Description	Price
RM-1501	Non-contact Tachometer	\$236
RM-1502	Contact Adapter	\$48

# Tachometer/Stroboscope

## Features

- Non-contact rpm measurement
- Highly visible, 0.4" high, 5-digit LCD readout gives accurate rpm readings over a wide measuring range
- Last value, max and min values can be stored in memory automatically and recalled at the touch of a button
- For motion analysis, simply locate the actual speed and then turn the dial slowly up or down; this will give a slow motion effect, allowing complete inspection
- Battery-operated
- Includes hard carrying case and batteries



## Specifications:

### STROBOSCOPE

Flash Range: 100 to 100,000 fpm/rpm  
 Resolution: 0.1 fpm/rpm: <1,000 fpm/rpm;  
 1 fpm/rpm: ≥ 1,000 fpm/rpm  
 Flash Adjust Range: Range A: 100 to 1,000 fpm;  
 Range B: 1,000 to 10,000 fpm;  
 Range C: 10,000 to 100,000 fpm  
 Flash Tube: High efficiency orange LED lamp  
 Flash Duration: Approx. 60 to 1,000 msec

### TACHOMETER

Measurement Range: 5 to 99,999 rpm  
 Resolution: 0.1 rpm < 1,000 rpm: 1 rpm ≥ 1,000 rpm  
 Detecting Distance: 50 to 150 mm (2 to 6"); typically 300mm (12") max. depending on ambient light

### GENERAL

Display: 5-digit, 10mm (0.4") high LCD  
 Accuracy: ±(0.1% + 2 digits)  
 Sampling Time: 1 second (≥ 60 rpm)  
 Time Base: Quartz crystal  
 Ambient Conditions: 0 to 50°C (32 to 122°F); < 80% RH  
 Power Supply: 4 x 1.5V "AA" batteries  
 Dimensions: 215 x 65 x 38 mm (8.5 x 2.6 x 1.5")  
 Weight: 300 g (0.66 lb.)

Model	Description	Price
K4040	Photo Tachometer/Stroboscope	\$359

# Stroboscope

## Features:

- Unique one-touch joystick tuning allows for one-hand operation
- Removable, rechargeable battery packs provide extended field use
- Tachometer mode
- Memory recall function
- Rapid x2 and ÷2 of current flash rate
- Remote triggering/pulse output
- Short arc lamp maximizes light output
- Clear digital display with backlight
- Kit includes stroboscope, battery, PR115 charger, spare lamps and latched carrying case



## Specifications: (con'd)

Trigger to Flash Delay: <5µsec  
 External Input: 0-5V TTL compatible (+12V pk max)  
 20µsec min. pulse width

### TACHOMETER MODE

Range: 5 to 250,000 rpm  
 Accuracy: ±0.01% rdg. or 0.1 rpm  
 External Input: 0-5V TTL compatible (+12V pk max)  
 5µsec min. pulse width  
 Display: 6-digit alphanumeric LCD, 0.3" high digits w/ backlight  
 Flash Tube: 140 mJ/flash as bright as 10 watt units  
 Flash Duration: 10-30 msec  
 Output Pulse: 350µsec positive pulse, 5Vdc typical  
 Memory: 6 user-defined presets  
 Power Supply: 6V rechargeable NiMH battery pack  
 Battery Life: 2 hours at 1800 fpm when fully charged  
 Dimensions: 9.34 x 3.04 x 3.0"  
 Weight: 1.4 lb

## Specifications:

### INTERNAL MODE

Flash Range: 100 to 12,500 fpm  
 Resolution: 0.1 fpm  
 Accuracy: ±0.5 fpm or 0.01% rdg.

### EXTERNAL MODE

Flash Range: 5 to 12,500 fpm  
 Accuracy: ±0.2 fpm

Model	Description	Price
6205-040	Portable Stroboscope	\$755
6205-052	Stroboscope Kit	\$909
6280-043	Nylon Holster w/ Battery Pack Pouch	\$49
6280-026	Rechargeable NiMH Battery Pack	\$186
6280-028	Replacement Xenon Lamps (2)	\$119