

Dissolved Oxygen Meter



Model : HI 9142



Model : HI 9143



Model : HI 9141 and HI 91410

Features

- ATC, Automatic Temperature Compensation
- Waterproof casing (HI 9142 & HI 9143)
- Automatic calibration (HI 9141, HI 91410, HI 9143)
- Salinity compensation, 0-40g/L (HI 9143, HI 9141, HI 91410)
- Printing (HI 9141), Printing & Logging (HI 91410)

Technical Specifications

Ref. No Model	HN13 B001 HI 9142	HN13 B002 HI 9143	HN13 B003 HI9141	HN13 B004 HI91410
Range : Mg/L O ₂	0.0 – 19.9	0.00-45.00	0.00-19.99	0.00-19.99
% O ₂	-	0-300	-	-
°C	-	0.0-50.0	0.0-50.0	0.0-50.0

Chemical Oxygen Demand Meter



Ref. No : HN13 C001
Model : C 99

C 99 chemical oxygen demand meter is a new compact photometer operates in three different ranges to cover virtually every application; 0-150 mg/L, 0-1500 mg/L and 0 -15000 mg/L. The C 99 meets the design requirements of USEPA 410.4, guaranteeing high quality measurements to be used for reporting purposes. C 99 measures up to 36 of the most important water quality parameters.

List Of Parameters

Test	Range	Test	Range
Aluminum	0.00 to 1.00mg/L	Hydrazine	0 to 400µg/L
Ammonia HR	0.00 to 9.99mg/L	Iodine	0.0 to 12.5mg/L
Ammonia LR	0.00 to 3.00mg/L	Iron HR	0.00 to 5.00mg/L
Bromine	0.00 to 8.00mg/L	Iron LR	0 to 400µg/L
Free Chlorine *	0.00 to 2.50mg/L	Manganese HR	0.0 to 20.0mg/L
Total Chlorine *	0.00 to 3.50mg/L	Manganese LR	0 to 300µg/L
Chlorine Dioxide	0.00 to 2.00mg/L	Molybdenum	0.0 to 40.0mg/L
Chromium VI HR	0 to 1000µg/L	Nickel HR	0.00 to 7.00g/L
Chromium VI LR	0 to 300µg/L	Nitrate	0.0 to 30.0mg/L
COD LR	0 to 150 mg/L	Nitrite HR	0 to 150mg/L
COD MR	0 to 1500 mg/L	Nitrite LR	0.00 to 0.35mg/L
COD HR	0 to 15000 mg/L	Dissolved Oxygen	0.0 to 10.0mg/L
Color	0 to 500PCU	pH	6.5 to 8.5pH
Copper HR	0.00 to 5.00mg/L	Phosphate HR	0.0 to 30.0mg/L
Copper LR	0 to 990µg/L	Phosphate LR	0.00 to 2.50mg/L
Cyanide	0.000 to 0.200mg/L	Phosphorus	0.0 to 15.0mg/L
Cyanuric Acid	0 to 80mg/L	Silica	0.00 to 2.00mg/L
Fluoride	0.00 to 2.00mg/L	Silver	0.000 to 1.000mg/L
Ca Hardness	0.00 to 2.70mg/L	Zinc	0.00 to 3.00mg/L
Mg Hardness	0.00 to 2.00mg/L		

* For chlorine measurements, liquid reagents are also available

Test Tube Heater for COD

C 9800 thermo-reactor is constructed of durable materials with a vial capacity to perform up to 25 digestions simultaneously.

- Selectable temperature : Select the 150 °C range for COD and total phosphorus digestions or 105 °C for total nitrogen analysis.
- Built-in timer & auto Shut-off

Ref. No : HN13 C002

Model : C 9800

pH Tester**Features**

- ATC
- Waterproof
- Temperature in °C or °F
- Replaceable pH electrode cartridge
- Battery level indicator
- Stability indicator
- Automatic calibration
- Automatic shut-off

pH Meter**Features**

- ATC
- Auto buffer recognition
- Simple 2-points auto calibration pH 7.01, 4.01, 10.01
- Measures pH, mV and temperature

Model : HI8424**Technical Specifications**

Ref. No	HN14 B001	HN14 B002	HN14 B003
Model	HI 98127 (pHep 4)	HI 98128 (pHep 5)	HI8424
Range :			
pH	0.0 to 14.0	0.00 to 14.00	0.00 to 14.00
Temperature	0.0 to 60.0°C or 32.0 to 140.0°F		0.00 to 100.0°C

Waterproof pH Meter

Ref. No : HN14 B004
Model : HI 991001

Features

- Extended pH range to pH 16
- ATC
- Perform self-check
- Auto 1 or 2 points calibration (pH4.01, pH7.01, pH10.01 or pH4.01, pH6.86, pH9.18)

Technical Specifications

Range	
pH	- 2.00 to 16.00
ORP	-
Temperature	- 5.0 to 105.0°C or 23.0 to 221.0°F

Bench pH Meter**Features**

- Calibration check
- Electrode condition & response time on LCD Display
- Calibration alarm time out

Technical Specifications

Ref. No	HN14 B005	HN14 B006
Model	HI 221	HI 223
Range:		
pH	-2.00 to 16.00	-2.00 to 16.00 or -2.000 to 16.000
mV	±699.9; ±2000	±999.9; ±2000
°C	-20.0 to 120.0	-20.0 to 120.0
Logging	100 points	500 points

Delta 320**Technical Specifications**

Measuring range	: 0.00 to 14.00 pH
Temp Compensation	: 0 to 100 °C
Calibration	: 2 points
Input	: BNC/ATC probe

Ref. No : MT14 B007
Model : Delta 320

EC/TDS Tester



Features

- Waterproof
- Replaceable graphite conductivity electrode
- Battery level indicator
- Stability indicator
- Automatic calibration
- Automatic shut-off

Ref. No : HN14 C001

Model : HI 98311 (DIST 5)

Conductivity Meter



Features

- 4-ring probe
- ATC (HI 8733)

Technical Specifications

Ref. No Model	HN14 C001 HI 98311 (DIST5)	HN14 C002 HI8633	HN14 C003 HI8733
Range EC	0 to 3999 S/cm	-	-
TDS	0 to 2000 ppm	-	-
Temperature	0.0 to 60.0 °C or 32.0 to 140.0°F	-	-
µS/cm	-	0.0-199.9/0-1999	0.0-199.9/0-1999
ms/cm	-	0.00-19.99	0.00-19.99
ms/cm	-	0.0-199.9	0.0-199.9

Portable Printing Conductivity Meter



Features

- 4-ring probe
- ATC
- Printing

Ref. No : HN14 C004

Model : HI 933301

Bench Conductivity Meter



Features

- Platinum probe easy to clean
- Wide measurement range
- ATC

Ref. No : HN14 C005

Model : EC 215

Technical Specifications

Ref. No Model	HN14 C004 HI 933301	HN14 C005 EC215
Range :		
µS/cm	0.0-150.0	0.0-199.9
µS/cm	150-1500	0-1999
ms/cm	1.50-15.00	0.00-19.99
ms/cm	15.0-199.9	0.0-199.9
Temperature Compensation	0.0 to 60.0 °C	0.0 to 50.0 °C

Multi-Range Total Dissolved Solids Meter

Ref. No : HN14 D001
Model : HI 8734

Features

- 4-ring probe
- 3 different ranges of measurement

Technical Specifications

Ref. No Model	HN14 D001 HI 8734	HN14 D002 HI9034
Range: mg/L	0.0 to 199.9	0.0 to 199.9
mg/L	0 to 1999	0 to 1999
g/L	0.00 to 19.99	0.00 to 19.99
Calibration	Manual single point through trimmer	

Waterproof Multi Range TDS Meter

Ref. No : HN14 D002
Model : HI9034

Features

- 4-ring probe
- ATC
- Waterproof

Turbidity**Portable Turbidity Meter with RS 232 and Log-on-demand**

Ref. No : HN14 E002
Model : HI 93703

Features

- Measures turbidity, free & total chlorine (C114)
- Constant emission and long life infrared LED
- Data memory & RS232 interface (HI93703-11, LP 2000-11)

Technical Specifications

Ref. No Model	HN14 E001 C114	HN14 E002 HI 93703	HN14 E003 LP 2000
Range :			
Turbidity	0.00-9.99 NTU 10.0-50.0 NTU	0.00-50.00 FTU 50-1000 FTU	0.00-50.00 FTU 50-1000 FTU
Free chlorine	0.00-2.50 mg/L	-	-
Total chlorine	0.00-3.50 mg/L	-	-

Bench Turbidity Meter

Ref. No : HN14 E003
Model : LP 2000

Free and Total Chlorine Meter



Chlorine is the most commonly used water disinfectant. Applications vary from treatment of drinkingwater and wastewater to pool and spa sanitization and food processing to sterilization. The easy-to-read digits on the tilted LCD take guess work out of chlorine measurements. Simple, quick, inexpensive and effective with 0.01 mg/L increments, many times better than the most sophisticated test kits.

Ref. No
HN14 F001
HN14 F002

Model
HI 93711
HI 93734

Technical Specifications

Ref. No	HN14 F001	HN14 F002
Model	HI 93711	HI 93734
Range	0.00 to 2.50 mg/L (Free CL ₂)	0.00 to 9.99 mg/L (Free CL ₂)
Resolution:	0.00 to 3.50 mg/L (Total CL ₂)	0.00 to 9.99 mg/L (Total CL ₂)
Accuracy (@20°C/68°F)	0.01 mg/L	
Typical EMC Deviation	±0.03 mg/L ±3% of reading	
Light Source	Light Emitting Diode @ 555nm	
Light Life	Life of the instrument	
Light Detector	Silicon Photocell	
Battery Type/Life	1 x 9V/approx. 40 hours of continuous use. Auto-off after 10 minutes of non-use	
Environment	0-50°C (32 - 122°F); RH 95%	
Dimensions	180*83*46mm (7.1 * 3.3 * 1.8)	
Weight	290g (10 oz.)	
Method	Adaptation of the EPA recommended DPD method 330.5. The reaction between chlorine and the DPD reagent causes a pink tint in the sample.	

Multiparameter Ion Specific Meter



Ref. No : HN14 F003
Model : C200

Ion Specific Meters is applying the principle of photometric analysis, where many substances react with each other and form a color which can indicate the concentration of the substance to be measured. The mixture is then measured with LED and converted to desired units. Meter available in single parameter or multiparameter model

Technical Specifications

Substance ions that can be tested with Ion Specific Meters.

- | | | |
|-------------------------|--------------------------|---------------|
| - Aluminium | - Ammonia | - Bromine |
| - Chlorine (free/total) | - Chlorine Dioxide | - Chromium VI |
| - Color | - Copper | - Cyanide |
| - Fluoride | - Hardness (Ca/Mg/Total) | - Hydrazine |
| - Iodine | - Iron | - Manganese |
| - Molybdenum | - Nickel | - Nitrate |
| - Nitrite | - Oxygen (dissolved) | - Phosphate |
| - Phosphorus | - Potassium | - Silica |
| - Silver | - Sulfate | - Zinc |

pH/ORP Controller Meter



Ref. No : HN14 G001
Model : HI504

Process Instrumentation is mainly instruments installed in a process to provide continuous monitoring and controlling as to achieve optimum process operating condition.

Instruments in this range:

- Dosing pumps
- Panel mounted pH, ORP, Conductivity controllers
- Wall mounted pH, ORP, Conductivity controllers
- Chlorine process analyzers
- Transmitter
- MEADOS controller / pumps
- Level controllers

Features

- Versatile Analyzer: pH or ORP in one instrument. BNC Connector probe
- Two analog outputs: Data registration or PID dosage control
- Two different types of control: either ON/OFF or PID for an efficient and precise dosing control
- Logging of the last 100 events
- Automatic temperature compensation (with Pt100 or Pt1000 probe)

Accessories

GSM cellular module, HI 504900, used for sending SMS alarm messages. The SMS message reports a clearly and immediately understandable phrase that expresses the nature of the alarm in course, for example:

- pH probe damaged
- high set point exceeded
- temperature probe damaged
- broken pH probe
- pH/ORP controller meter



TES-1350A - Sound Level Meter



Features

- 0.1dB Resolution
- Maximum hold function
- AUX OUTPUT JACKS

Technical Specifications

Range :

A LO (Low) Weighting : 35 ~ 100dB
 A HI (High) Weighting : 65 ~ 130dB
 C LO (Low) Weighting : 35 ~ 100dB
 C HI (High) Weighting : 65 ~ 130dB

Frequency : 31.5Hz ~ 8KHz
Dynamic : 65dB
Display : 4 digital
Accuracy : ± 2 dB

Ref. No : TS15 B001

Model : TES 1350A

TES-1351 - Sound Level Meter



Features

- 0.1dB Resolution
- Maximum hold function
- AUX OUTPUT JACKS
- Standard: IEC 60651 Type 2

Technical Specifications

Range :

A LO (Low) Weighting : 35 ~ 90dB
 A HI (High) Weighting : 75 ~ 130dB
 C LO (Low) Weighting : 35 ~ 90dB
 C HI (High) Weighting : 75 ~ 130dB

Frequency : 31.5Hz ~ 8KHz
Dynamic : 55dB
Display : 4 digital
Accuracy : ± 1.5 dB

Ref. No : TS15 B002

Model : TES 1351

TES-1357 -

Precision Sound Level Meter



Features

- 0.1dB Resolution
- 4 selectable ranges
- Bargraph indication
- Standard : IEC60651 Type 2, ANSI S1.4 Type 2

Technical Specifications

Range :

Level A Weighting : 30dB ~ 130dB
 Level C Weighting : 35dB ~ 130dB
 Level Range : 30 ~ 80dB, 50 ~ 100dB, 60 ~ 110dB, 80~130dB

Frequency : 31.5Hz to 8KHz
Accuracy : ± 1.5 dB
Analog AC/DC output : 2Vrms (at full scale), 10mVDC/dB

Ref. No : TS15 B003

Model : TES 1357

TES-1352A - Programmable Sound Level Meter



Features

- Auto ranging
- RS-232 interface
- 16000 records data logging function
- Real time clock with calendar
- Standard : IEC60651 Type 2, ANSI S1.4 Type 2

Technical Specifications

Frequency : 31.5Hz ~ 8KHz
A/C weighting : 6 ranges in 10dB step, 30-80dB/40-90dB, 50-100dB/60-110dB/ 70-120dB/ 80-130dB
Auto Range : 30-130dB
Dynamic Range : 50dB
Display : 4 digit LCD
Accuracy : ± 1.5 dB

Ref. No : TS15 B004

Model : TES 1352A

TES-1353 - Integrating Sound Level Meter



Features

- RS-232 interface
- SPL, Leq, SEL, MaxL, MinL
- Wide linearity range of 100dB
- 32000 Records Data logging function
- Standard : IEC60651 Type 2, ANSI S1.4 Type 2, IEC 804 Type 2

Technical Specifications

Function : SPL, Leq, SEL, MaxL, MinL
Frequency : 31.5Hz ~ 8KHz
Level A/C weighting : 30dB ~ 130dB
Display : 4 digit LCD, 0.1dB resolution, updated every 0.5s
Accuracy : ± 1.5 dB

Ref. No : TS15 B005

Model : TES 1353

TES-1354 - Noise Dosi-Meter



Features

- Real Time Clock with Calendar
- RS-232 interface (TES-1355)
- Measures % Noise Dose/ Exposure Time/Sound Level
- Standard : ANSI S1.25 – 1978

Technical Specifications

Range : 70 ~ 140dBA (± 1.5 dB)
Digital Display : 0~1999% DOSE
Criterion level : 80 ,84, 85, 90dB
Threshold level : 70~90dB (1dB step)
Exchange rate : 3dB, 4dB, 5dB or 6dB

High Level

Detector : 115dBA
Peak Flag : 140dB

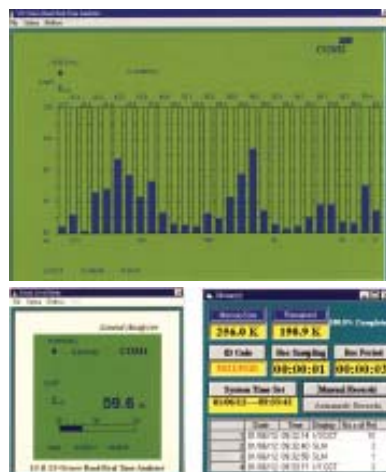
Ref.No

TS15 B006
 TS15 B007

Model

TES 1354
 TES 1355

TES-1358 Sound Analyzer

**Features**

- For delicate sound improvement (Sound Effect/Sound Environment)
- Real Time 1/1 (9 bands) & 1/3 (27 bands) octave analysis
- Wide Linearity range of 100dB
- Large LCD display with backlighting
- Real time clock with calendar
- Memory Max. 12,280 records of Lp data
- Software with RS-232 interface

Technical Specifications

Applicable standards	: IEC 60651 Type2, IEC 60804 Type2, BS EN 6065, 1994, IEC 1260-1995
Microphone	: ½ inch electret condenser microphone
Accuracy	: ±(1.5dB (ref 94dB @ 1 KHz))
Measurement range	: 30dB to 130dB
Measurement function	: Lp, Leq, LE, Lmax, Lmin
Frequency range	: 25Hz ~ 10KHz
Frequency weighting	: A, C, Flat
Time weighting	: Fast, Slow

Ref. No : TS15 B008

Model : TES 1358

Sound Level Calibrator

TES-1356 - Sound Level Calibrator

**Features**

- 94dB and 114dB Sound Calibration at 1KHz
- Fits 1", 1/2" or 1/4" diameter microphone
- Conforms to ANSI S1.40-1984 and IEC942 1988 Class 2
- Standard : ANSI S1.40-1984 and IEC942 1988 Class 2

Technical Specifications

Output sound-Pressure levels	: 114dB and 94dB re 20 uPa under reference conditions
Output frequency	: 1000Hz±4%
Reference condition	: Temperature ->20°C(68°F)
Atmospheric Pressure	: 1013 mbar (760mm par Hg)
Relative humidity	: 65%
Accuracy	: ±0.5dB

Ref. No : TS15 B009

Model : TES 1356

Automatic Level



Model : AT-G1



Model : AT-G6



Optical Micrometer

In one kilometer of double run levelling, accuracy is improved to $\pm 0.4\text{mm}$ for optical micrometer.

Technical Specifications

Ref. No Model	TC16 B001 AT-G1	TC16 B002 AT-G2	TC16 B003 AT-G3	TC16 B004 AT-G4	TC16 B005 AT-G6	TC16 B006 AT-G7N
Telescope						
Length (mm/in.)	229/9	229/9	230/9	192/7.7	193/7.7	193/7.7
Image	Erect	Erect	Erect	Erect	Erect	Erect
Magnification	32×	32×	30×	26×	24×	22×
Objective lens (mm/in.)	45/1.8	45/1.8	40/1.6	30/1.2	30/1.2	30/1.2
Relative brightness	1.98	1.98	1.78	1.33	1.56	1.86
Field of view	1°20'	1°20'	1°30'	1°30'	1°30'	1°30'
Resolving power	2.5"	2.5"	3.0"	3.5"	4.0"	4.0"
Minimum focus (m/ft.)	1.0/3.2	1.0/3.2	0.5/1.6	0.5/1.6	0.5/1.6	0.5/1.6
Stadia constant (m)	0	0	0	0	0	0
Stadia ratio	100	100	100	100	100	100
Circular Level						
Sensitivity (/2mm)	8'	8'	8'	8'	8'	10'
Automatic Leveling						
Setting accuracy	$\pm 0.3''$	$\pm 0.3''$	$\pm 0.3''$	$\pm 0.3''$	$\pm 0.3''$	$\pm 0.5''$
Compensating range	$\pm 15'$	$\pm 15'$	$\pm 15'$	$\pm 15'$	$\pm 15'$	$\pm 15'$
Accuracy 1km Double Run Level						
w/o optical micrometer (mm)	± 0.7	± 0.7	± 1.5	± 2.0	± 2.0	± 2.5
With optical micrometer (mm)	± 0.4	± 0.4	± 1.0	-	-	-
Horizontal Circle						
Diameter (mm/in.)	90/3.5	117/4.7	117/4.7	117/4.7	117/4.7	117/4.7
Minimum division	10'(0.1g)	1°(1g)	1°(1g)	1°(1g)	1°(1g)	1°(1g)

Digital Theodolite



Technical Specifications

Telescope

Length	: 149mm
Objective lens	: 40mm
Magnification	: 26×
Field of view	: 1°30'
Minimum focus	: 0.9m/2.9ft
Resolving power	: 3"
Stadia constant	: 0
Stadia ratio	: 100

Angle Measurement

Reading method	: Incremental reading
Minimum reading	: 20" (5mgon)
Accuracy	: 10" (standard deviation based on DIN18723)
Display	: Single side, LCD 8 segments

Level Sensitivity

Plate level	: 60"/2mm
Circular level	: 10'/2mm

Plummet Telescope

Magnification	: 2.2×
Field of view	: 5°
Focusing range	: 0.5m~∞(DT-106), Fixed focus 1.3m (DT-106P)

Ref. No	
TC16 C001	
TC16 C002	

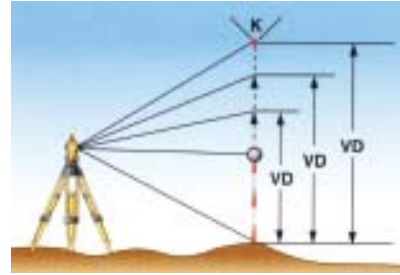
Model	
DT-106	
DT-106P	

Electronic Total Station



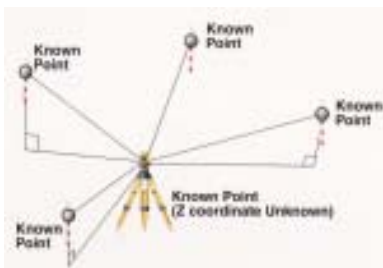
GTS-220 Series has memory up to 8,000 points for data collection, or up to 16,000 points for layout work.

Application Measurement



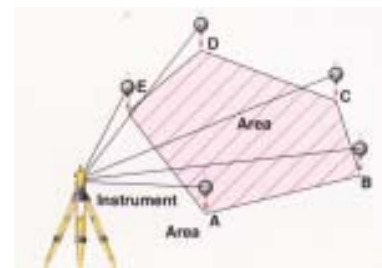
Remote Elevation Measurement (REM)

This feature measures the height where a prism cannot be placed directly. Measurement can be extended along the plumb line as the height is continuously displayed.



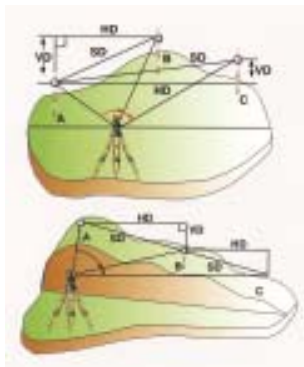
Z Coordinate of Occupied Point (Benchmark Elevation)

Z coordinate and direction angle of the instrument can be calculated and reset by measuring Z coordinate of known points (Max. 10 points)



Area calculation

Area can be calculated using measured data or file data (Coordinate data)



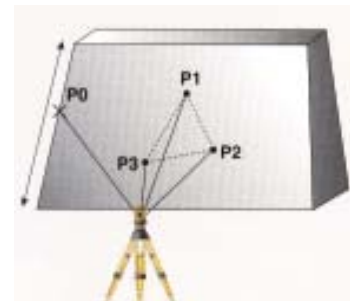
Missing Line Measurement (MLM)

Multiple lines can be drawn between:

1. the first point and the last point.
2. the last 2 points

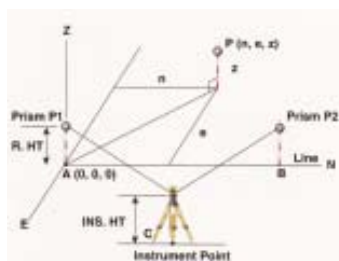
Horizontal distance, difference in height and slope distance are calculated.

Coordinate file data and manual input data are available to be used.



Plane Offset Measurement

Coordinates can be calculated for points where direct measurements to a prism cannot be taken, for example measurements to points on a wall or plane. Three random points (P1,P2,P3) on the plane will be measured first to determine the measured plane and their angles and distances temporarily stored. Then sight the unknown point on the plane and the instrument calculates and displays coordinates and distance values of desired point.



Point to line measurement

Create a new coordinate by measuring to two points. The 1st point becomes the origin and the 2nd point becomes the N axis direction.

Technical Specifications

Ref. No Model	TC16 D001 GTS-223	TC16 D002 GTS-225	TC16 D003 GTS-226	TC16 D004 GTS-229
Telescope				
Length	150mm			
Objective lens diameter	45mm (EDM: 50mm)			
Magnification	30×			
Image	Erect			
Field of view	1°30'			
Resolving power	2.5"			
Minimum focusing distance	1.3m			
Distance Measurement				
Condition 1				
1 prism	3,000m (9,900ft)			2,000m (6,600ft)
3 prisms	4,000m (13,200ft)			2,700m (8,900ft)
9 prisms	5,000m (16,400ft)			3,400m (11,200ft)
Condition 2				
1 prism	3,500m (11,500ft)			2,300m (7,500ft)
3 prisms	4,700m (15,400ft)			3,100m (10,200ft)
9 prisms	5,800m (19,000ft)			4,000m (13,200ft)
Condition 1 : Slight haze with visibility about 20km (12.5miles) moderate sunlight with light heat shimmer				
Condition 2 : No haze with visibility about 40km (25miles), overcast with no heat shimmer				
Accuracy	±(2mm + 2ppm×D)m.s.e			±(3mm+3ppm×D)m.s.e
	D: Measuring distance (mm)			
Least count in measurement				
Fine mode	1mm (0.005ft.)/0.2mm (0.001ft.)			
Coarse mode	10mm (0.02ft.)/1mm (0.005ft.)			
Tracking mode	10mm (0.02ft.)			
Measurement display	11 digits: max. display 9999999.9999			
Measuring time				
Fine mode	1mm: 1.2sec./(Initial 4sec.) 0.2mm: 2.8sec./(Initial 5sec.)			
Coarse mode	0.7sec. (Initial 3sec.)			
Tracking mode	0.4sec. (Initial 3sec.)			
	(The initial time will be different by a condition)			
Atmospheric correction range	-999.9 to +999.9ppm (By 0.1ppm)			
Prism constant correction range	-99.9 to +99.9mm (By 0.1mm)			
Angle Measurement				
Method	Absolute reading			
Detecting system	H: 2 sides	V: 1 side	H: 1 side	V: 1 side
Minimum reading	1"/5" (0.2mgon/1mgon)			5"/10" (1mgon/2mgon)
Accuracy	3"(1mgon)	5"(1.5mgon)	6"(1.8mgon)	9"(2.7mgon)
Measuring time	Less than 0.3 sec.			
Diameter of circle	71mm			
Tilt correction (automatic index)				
Tilt sensor	Dual axis		Single axis	
Method	Liquid type			
Compensating range	±3'			
Correction Unit	1" (0.1mgon)			
Others				
Instruments height	176mm (6.93in)			
Level Sensitivity				
Circular level	10"/2mm			
Plate level	30"/2mm		40"/2mm	
Optical Plummet telescope				
Magnification	3×			
Focusing range	0.5m to infinity			
Image	Erect			
Field of view (at 1.3m)	5° (114mmø)			

Laser Distance Meter

Disto™ Lite⁵Disto™ Classic⁵

Indirect height measurement
The heights or lengths of facades can be remotely measured using the Pythagorean function.

Disto™ Pro⁴/Pro⁴aTechnical Specifications

Ref. No Model	LC16 E001 Lite ⁵	LC16 E002 Classic ⁵	LC16 E003 Pro ⁴	LC16 E004 Pro ⁴ a
Technical Data				
Measuring accuracy typ. (Display units as off 100m:1cm)	±3 mm/0.1 in	±3 mm/0.1 in	±3 mm/0.1 in	±1.5 mm/0.06 in
Range (target plate selection depends on range requirements and surface characteristics)	0.2 to 200m 0.7 to 650ft	0.2 to 200m 0.7 to 650ft	0.3 to over 100m 1.0 to over 330ft	0.3 to over 100m 1.0 to over 330ft
Time for a measurement	0.5 to about 4 seconds			
DistanceTracking	0.16 to about 1 second			
Units of measure	mm, ft in 1/16	mm, cm, ft, ft in 1/16, in, in1/16	mm, cm , ft, ft in 1/32, in, in 1/32	
Distance in m/ft	10, 50, 100 m/32, 164, 328 ft			
Diameter of laser dot in mm/in	6, 30, 60 mm/0.2, 1.2, 2.4 in			
Distance, area, volume measurement	*	*	*	*
Time delay release	*	*	*	*
Tracking	*	*	*	*
Min./max. distance tracking	*	*	*	*
Pythagoras function	*	*	*	*
Calculator	*	*	*	*
Calculations, functions total	2	7	14	14
Changes, stores constants	0	10	9	9
Recall last 15 values	*	*	*	*
Stores 800 measured values	*	*	*	*
RS232-interface	*	*	*	*
Leica DISTO™ online software	*	*	*	*
Keyboard	Standard	Soft-Touch	Alphanumeric	Alphanumeric
Multiple line segment display	*	*	*	*
Display	*	*	*	*
Illuminated LCD	*	*	*	*
Multifunctional end piece	*	*	*	*
Positioning bracket	*	*	*	*
Adapter	*	*	*	*
Built-in telescopic viewer	*	*	*	*
Built-in bubble	*	*	*	*
Hand loop	*	*	*	*
Hoister	*	*	*	*
Measurements	Up to 10,000	Up to 10,000	Over 3,000	Over 3,000
Splash proof/dust proof (IP54)	*	*	*	*

Ultrasonic Distance Meter



Features

- Calculating area and volume
- Adding/subtracting stored measurement
- Display backlight

Technical Specifications

Range : 3 to 60 ft (0.91 to 18.288m)

Accuracy : 0.5 % (± 1 digit)

Ref. No : SR16 E001-E005

Model : CB-1005

GPS Receivers



Technical Specifications

Navigation features

Waypoints/icons : 500 with name and graphic symbol

Tracks : Automatic track log; 10 saved tracks let you retrace your path in both directions.

Trip computer : Current speed, average speed, time of sunrise/sunset, resettable maximum speed, trip timer and trip distance

Map datums : More than 100

Position format : Lat/Lon, UTM/UPS, Maidenhead, MGRS, Loran TDs (Venture, Legend and Vista only) and other grids.

GPS performance

Receiver : WAAS enabled (Venture, Legend, Vista only), 12 parallel channel GPS receiver continuously tracks and uses up to 12 satellites to compute and update your position

Acquisition times:

Warm : Approximately 15 seconds

Cold : Approximately 45 seconds

AutoLocate™ : Approximately 5 minutes

Update rate : 1/second, continuous

GPS accuracy:

Position : < 15 meters, 95% typical*

Velocity : 0.05 meter/sec steady state

DGPS (USCG) accuracy:

Position : 3-5 meters, 95% typical

Velocity : 0.05 meter/sec steady state

DGPS (WAAS) accuracy:

Position : < 3 meters, 95% typical

Velocity : 0.05 meter/sec steady state

Dynamics : 6g's

Interfaces : RS232 with NMEA 0183, RTCM 104 DGPS data format and proprietary GARMIN.

Optional : MapSource CD-ROMs

Electronic compass feature (eTrex Summit and Vista only)

Accuracy : ± 2 degrees with proper calibration (typical); ± 5 degrees extreme northern and southern latitudes

Resolution : 1 degree

Barometric altimeter feature (eTrex Summit and Vista only)

Accuracy : 10 feet with proper calibration (user and/or automatic calibration)

Resolution : 1 foot

Range : -2,000 to 30,000 feet

Elevation computer : Current elevation, resettable minimum and maximum elevation, ascent/descent rate, total ascent/descent, average and maximum ascent/descent rate

Pressure : Local pressure (mbar/inches HG), 12-hour automatic pressure trend recording

Ref. No Model	GM16 F001 eTrex	GM16 F002 eTrex Venture	GM16 F003 eTrex Legend	GM16 F004 eTrex Summit	GM16 F005 eTrex Vista
WAAS enabled	Not available	WAAS enabled	WAAS enabled	Not available	WAAS enabled
Database or map	None	City point database	Detailed basemap	None	Detailed basemap
Display resolution	64 × 128 pixels	160 × 288 pixels	160 × 288 pixels	64 × 128 pixels	160 × 288 pixels
Routes	1 reversible	20 reversible	20 reversible	20 reversible	20 reversible
Battery life	22 hours	20 hours	18 hours	16 hours	12 hours
Sensors	None	None	None	Electronic compass, barometric altimeter	Electronic compass, barometric altimeter

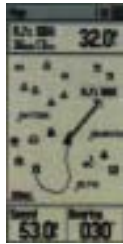
MapSource™ compatibility

eTrex Limited – able to transfer waypoints, routes and tracks between PC and GPS
eTrex Venture Some – accepts 1 MB data from the Points of Interest CD**
eTrex Legend Extensive – accepts 8 MB of downloaded map detail from a variety of MapSource™ CDs**
eTrex Summit Limited – able to transfer waypoints, routes and tracks between PC and GPS
eTrex Vista Extensive – accepts 24 MB of downloaded map detail from a variety of MapSource™ CDs**

** These units are also able to transfer waypoints, routes and tracks between the PC and GPS using MapSource™.



eTrex
Mark waypoint page



eTrex Venture
Map page



eTrex Legend
Map page (shown with optional MapSource Fishing Hot Spots® details)



eTrex Summit
Compass page



eTrex Vista
Elevation page



eTrex Vista
Map page (shown with optional MapSource Topo details)

Straight Precision Level

Straight Precision Level



Square Precision Level

Technical Specifications

Ref. No	Dimension	Sensitivity (mm/1m)	Height × Evaluation Dimension (mm)	Weight (kg)
RK16 G001	100	0.02	38 × 36	1
RK16 G002	100	0.05	38 × 36	1
RK16 G003	100	0.1	38 × 36	1
RK16 G004	150	0.02	45 × 48	1.6
RK16 G005	150	0.05	45 × 48	1.6
RK16 G006	150	0.1	45 × 48	1.6
RK16 G007	200	0.02	45 × 48	2
RK16 G008	200	0.05	45 × 48	2
RK16 G009	200	0.1	45 × 48	2
RK16 G010	250	0.02	45 × 48	2.5
RK16 G011	250	0.05	45 × 48	2.5
RK16 G012	250	0.1	45 × 48	2.5
RK16 G013	300	0.02	45 × 48	3
RK16 G014	300	0.05	45 × 48	3
RK16 G015	300	0.1	45 × 48	3
	Dimension	Sensitivity (mm/1m)	Evaluation Dimension (mm)	Weight (kg)
RK16 G016	100	0.02	37	1.5
RK16 G017	100	0.05	37	1.5
RK16 G018	100	0.1	37	1.5
RK16 G019	150	0.02	40	3.5
RK16 G020	150	0.05	40	3.5
RK16 G021	150	0.1	40	3.5
RK16 G022	200	0.02	42	7
RK16 G023	200	0.05	42	7
RK16 G024	200	0.1	42	7
RK16 G025	250	0.02	46	9
RK16 G026	250	0.05	46	9
RK16 G027	250	0.1	46	9
RK16 G028	300	0.02	47	10
RK16 G029	300	0.05	47	10
RK16 G030	300	0.1	47	10

Digital Level**Technical Specifications**

Ref. No : SP16 G031

Model : PRO-3600

Range : 360° (90° × 4)
Accuracy : ±0.055° (0-10) ±0.1° (80-90°) ±0.2° (10-80°)
Resolution : 0.01°; 0-9.99°; 0.1°; 10°-99°
Description : To check surface level.

Digital Tachometer



Features

- 5 Digits LCD Display
- Auto Range, from 10.00 to 99,999 RPM
- Measuring Distance 50 to 300 mm
- Combination for non-contact & contact measurements
- Event Counter (0-99999)
- RS-232 (RM-1501)
- Resolution: 0.01/0.1/1 RPM

Technical Specifications

Range

Speed (Non-contact)	Accuracy: 0.04% $\pm$ 2dgt RPM : 10.00-99999 Rps (Hz): 0.2-2000
Speed (Contact)	Accuracy: 0.04% $\pm$ 2dgt RPM : 10-29999
Event counter (RM-1502)	0-99999

Ref. No

TS17 B001

TS17 B002

TS17 B003

Model

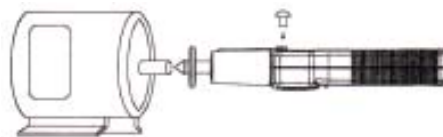
RM 1500

RM 1501

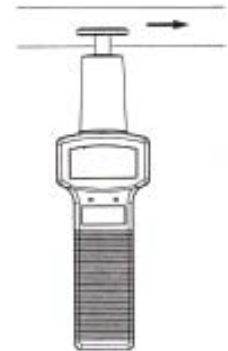
RM 1502



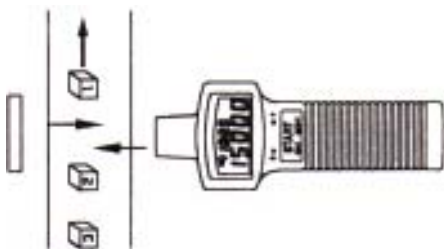
1. Point the photoelectric probe at the object. Press the START button once and confirm that the red emitting LED lamp lights up.



2. Using the Mechanical Adaptor (Option RM 1502)



3. Mechanical Adaptor (Option RM 1502)
Measurement of Surface Speed (m/min, ft/min, yd/min)



4. Use as an Event Counter with Internal Red LED



5. Digital Pulse Single Output (RM 1501)
Users can output digital pulse signal to oscilloscope

CT 100 O / CT 100 C



To measure linear and rotative velocity

Technical Specifications

Ref. No Model	KI17 B004 CT 100 O	KI17 B005 CT 100 C
Optical Tachometer	60 to 50,000 rpm	60 to 50,000 rpm
Contact Tachometer	Option	30 to 20,000 rpm or 4 - 2500 m/min
Accuracy	$\pm 0.5\%$ rdg ± 1 tr/min	$\pm 2\%$ rdg ± 1 m/min
Resolution	1 tr/min	0.1 m/min

Stroboscope

Digital Stroboscope



When the stroboscope flash is aimed at a revolving object or moving parts and the flash rate is set to the same speed, the object will appear standstill. Stroboscope enables operator to visually inspect the moving object while reading actual speed.

Technical Specifications

Range	: 60 ~ 30000 R.P.M.
Resolution	: 0.1 PRM / FRM 2000 RPM 1 RPM / FPM (> 2000 RPM)
Display Readout	: 10mm LED 5 digit
Accuracy	: $\pm 0.01\%$
Power	: AC 100V 50/60Hz

Ref. No : TC17 C001
Model : TMS-791