

QM20 Quick Measure Distance Meter

User Guide



Introduction

Thank you for choosing the Spectra Precision QM20 from the Trimble family of precision products. This easy-to-use distance measuring tool will allow you to measure distances quickly, accurately and reliably.

Before using the Quick Measure, read this operator's manual carefully. Included is information about operation, safety and maintenance.

Ensure that the operating instructions are with the laser distance meter when it is given to other persons.

Your comments and suggestions are welcome; please contact us at:

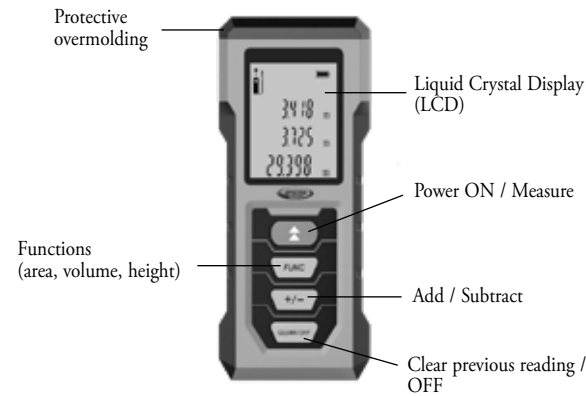
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 Phone: +1 (937) 203-4419
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www.spectralasers.com



Features

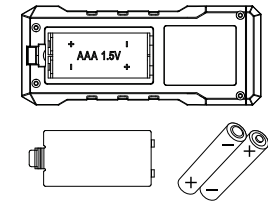


Included with the QM20: Pouch, unit, batteries, user guide.



Batteries - Installation

1. Open the battery compartment using fingers or a coin.
 2. Remove the batteries from the packaging and insert them in the tool.
- NOTE** When installing batteries note the positive (+) and negative (-) markings on the housings
3. Close the battery compartment cover.



Battery disposal - Some areas have regulations regarding the disposal of batteries. Be sure to dispose of discharged batteries properly.

CAUTION: The batteries should be removed when storing the laser more than 30 days.

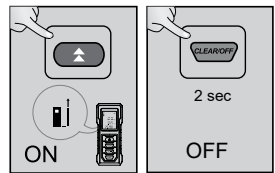
- 2 -

- 3 -

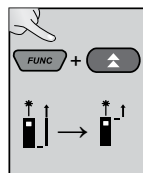
- 4 -

Quick Start Guide

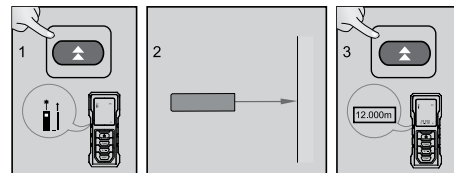
Power ON/OFF



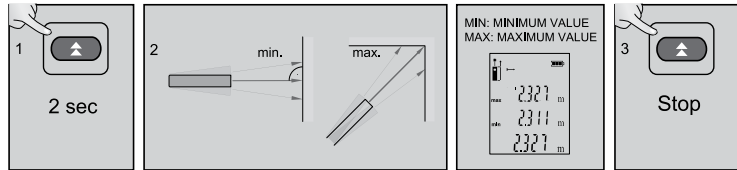
Reference - Front / Rear



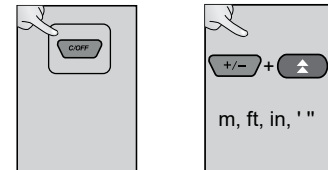
Measure Single Distance



Continuous Measure

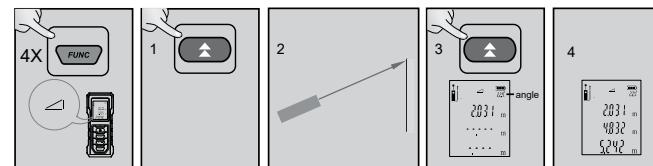


Clear / Undo Units Conversion

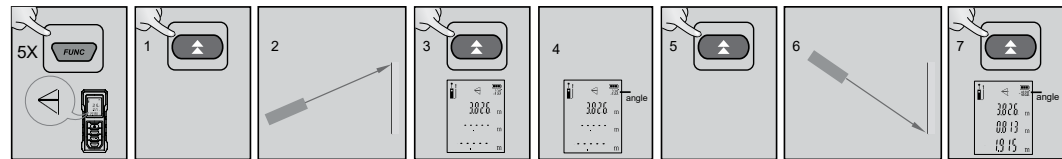


Quick Start Guide

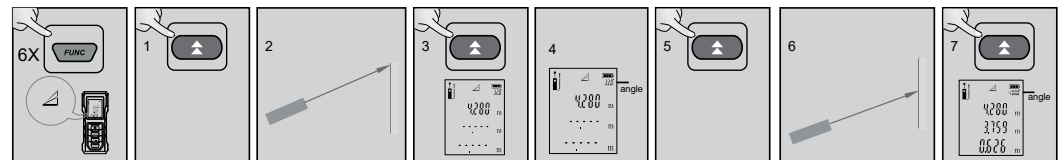
Height Measurement 1



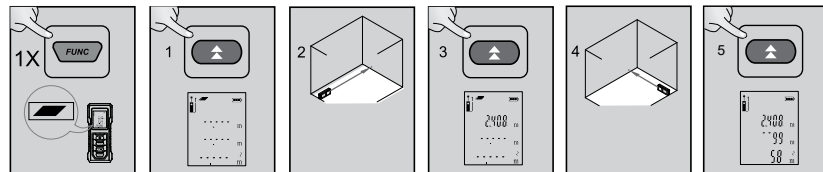
Height Measurement 2



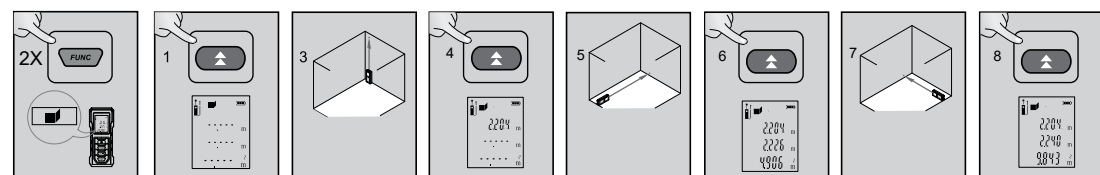
Height Measurement 3



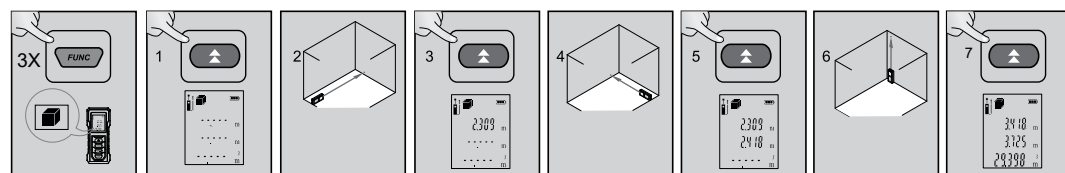
Area Measurement



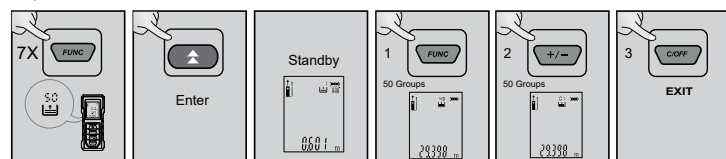
Area Plus Measurement



Volume Measurement



Storage / Recall



General Operation

Single distance measurement

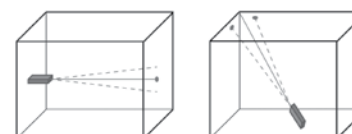
- 1) Switch on the device by pressing the ON button.
- 2) Press the ON button again to activate the laser.
- 3) Aim the laser do to the surface to be measured, and press the ON button again. The measurement will be shown in the display
- 4) Press and hold the C/OFF Button to switch off.

Continuous measurement

- 1) With the device on, press and hold the ON Button for 2 seconds until the continuous measure icon appears to activate continuous measuring mode. The tool beeps during continuous measure mode.
 - 2) Press the Measure Button again to stop continuous measure.
- When continuous measure is stopped, the display will show:

- Maximum distance
- Minimum distance
- Last distance

Continuous measure can be useful to find the shortest distance to a wall or longest distance to a corner as shown.



Clear button

Press the C/OFF button to clear the last reading or command. During area and volume measures, the C/OFF button clears the most recent measure, but preserves previous measures.

Change reference

Default measure reference is the back of the unit. With the device on, press the FUNC and ON button to change to front. The icon will show the current selection.

Setting unit of measure

With the device on, press and hold ON and +/- buttons until the units of measure changes. Press again to change to next unit of measure. Unit of measure options are: m, ft, in, fractional inch (").

Addition and Subtraction

- + The next measure is added to the previous one
- The next measure is subtracted from the previous one

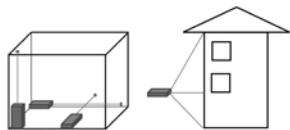
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FUNCTIONS - Area, Volume, Indirect Measure (Pythagorean Theorem)



1) Press the FUNC button and cycle through the symbols until you arrive at the desired function as shown in this figure.



- 2) Press the ON button to activate the laser and take first measure
- 3) Press the ON button to activate the laser and take second measure
- 4) Press the ON button to activate the laser and take third measure (if required)

The display will indicate which measure is being taken as per the following chart.

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General Care, Safety And Storage

General safety rules

- a) Check the condition of the tool before use.
- b) The user must check the accuracy of the tool after it has been dropped or subjected to other mechanical stresses.
- c) Although the tool is designed for the tough conditions of jobsite use, as with other measuring instruments it should be treated with care.

Do not use prisms or mirrored surfaces

Distances can be measured from all stationary targets without a highly reflective surface, i.e. concrete, stone, wood, plastic, paper, etc. The use of prisms or other highly reflective targets is not permissible and, if attempted, may falsify the results.

Calibration Check

It is recommended to occasionally check the calibration of the tool.

- 1) Select a known measure distance about 1 to 5 meters (3 to 15 ft) that does not change over time.
- 2.) Measure the distance 10 times. Calculate the mean deviation from the actual distance. The measured mean deviation should be less than the typical accuracy tolerance of ± 2.0 mm ($\pm 1/12$ in)

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Laser Safety

Use of this product by people other than those trained on this product may result in exposure to hazardous laser light.

- Do not remove warning labels from the unit.
- The QM20 is a Class 2M (620-690 nm) laser product .
- Never look into the laser beam or direct it to the eyes of other people.
- Always operate the unit in a way that prevents the beam from getting into people's eyes.



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FUNCTIONS - Area, Volume, Indirect Measure

| Measurement Function | Icons | Measurement Sequence |
|----------------------|-------|----------------------|
| Single Measurement | | |
| Area Measurement | | |
| Volume Measurement | | |
| Indirect Measurement | | |

The result will be displayed along with the individual measures.

Storage and Recall of Measurements

The QM20 will automatically store the previous 50 measurements.

- 1) To retrieve these measures: press the FUNC button seven times.
- 2) Press the ON button then press the FUNC button.
- 3) The higher number indicates the most recent measurement taken.

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Cleaning and drying

1. Blow dust off the lens.
2. Do not touch the lens with the fingers.
3. Use only a clean, soft cloth for cleaning. If necessary, moisten the cloth slightly with pure alcohol or a little water.

NOTE Do not use any other liquids as these may damage the plastic components.

Storage

The temperature limits for storage of your equipment must be observed, especially in winter / summer.

Remove the tool from its pouch if it has become wet. The tool, its carrying case and accessories should be cleaned and dried (at maximum 40°C). Repack the equipment only once it is completely dry. Check the accuracy of the equipment before it is used after a long period of storage or transportation.

Transport

Use the original packaging or packaging of equivalent quality for transporting or shipping your equipment.

CAUTION

Always remove the batteries before shipping the tool.

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Warranty

Trimble warrants the Quick Measure QM20 to be free of defects in material and workmanship for a period of 2 years. This warranty period is in effect from the date the system is delivered by Trimble or its authorized Dealer to the purchaser, or is put into service by a Dealer as a demonstrator or rental component.

Any evidence of negligent or abnormal use, or any attempt to repair equipment by other than factory-authorized personnel or Trimble certified or recommended parts, automatically voids the warranty.

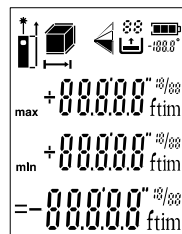
The foregoing states the entire liability of Trimble regarding the purchase and use of its equipment. Trimble will not be held responsible for any consequential loss or damage of any kind.

This warranty is in lieu of all other warranties, except as set forth above, including an implied warranty. Merchantability of fitness for a particular purpose is hereby disclaimed.

Customers should send products to the nearest authorized Factory, Dealer or Service Center for warranty repairs, freight prepaid. In countries with Trimble Service Subsidiary Centers, the repaired products will be returned to the customer, freight prepaid.

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Features - LCD Detail



2nd prior measure

Previous measure

Current measure

| Icon | Name | Description |
|--------------|-------------------|--|
| | Laser on | Shows that laser is activated |
| | Measure reference | Indicates measure reference from front or back |
| | Functions | Indicates functions: area, volume, indirect measurement |
| | Battery indicator | More bars indicate more battery power remaining Flashing indicates it is time to change batteries |
| | Data storage | Indicates historical reading being displayed. Highest number is most recent. 1 is the oldest. |
| Er000 | Error Code | See Chart |

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Trouble Shooting

| Message Code | Possible cause | Remedy |
|--------------|---------------------------------------|--|
| err101 | Battery too low | Change batteries |
| err154 | Out of range | Measure target within distance of 0.1 and 50 m (0.3 to 165 ft) |
| err156 | Received signal too weak | Use target plate |
| err194 | Exceeding the numerical display range | |

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Service Request

To locate your local dealer or authorized Trimble Service Center outside the U.S.A. for service, accessories, or spare parts, contact one of our offices listed below.

North-Latin America
Trimble / Spectra Precision Division
5475 Kellenburger Road
Dayton, Ohio 45424
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Fax +49-06301-32213

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Trimble Navigation Singapore PTE Ltd.
80 Marine Parade Road, #22-06
Parkway Parade
Singapore, 449269
+65 6348 2212 Phone
+65 6348 2232 Fax

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Specifications

| | |
|-------------------------|--|
| Measuring Range | 0.1 m to 50 m (0.3 to 165 ft) |
| Accuracy | ± 2.0 mm typical ($\pm 1/12$ in) |
| Functions | Measure, Area, Volume, Pythagoras theorem, memory 50 measures |
| Measure reference | Front, Rear |
| Automatic shut off | Laser - 1 minute Product - 10 minutes |
| Battery life (alkaline) | 8000+ measures |
| Power supply | 2 x AAA x 1.5V |
| Power indication | LCD 3 segments |
| Operating temperature | -10°C to +40°C (14°F to 104°F) |
| Storage temperature | -20°C to +65°C (-4°F to 149°F) |
| Laser Safety | Class II as per EN 60825-1:2007; IEC 60825-1:2007 CFR 21 § 1040 (FDA) |
| Laser Type / Power | 620-690 nm visible red / <1 mW max |
| Dimensions | 48 x 24 x 116 mm (1.9 x 0.9 x 4.6 in) |
| Weight | 79 g (2.8 oz) without batteries |

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Declarations

We declare, on our sole responsibility, that this product complies with the following directives and standards:

EN 50081-1, EN 61000-6-2, 2004/108/EC.

Designation: Laser range meter

Type: QM20

