



TRIPLETT

LazerTape 160

*Lazer Distance Meter
Instruction Manual*

 **TRIPLETT**
Test Equipment & Tools

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The **Triplet LazerTape 160** is a compact feature loaded Laser Distance Meter specifically designed for indoor applications. With it, one person can measure distance in seconds with high accuracy and repeatability. Housed in a rugged overmolded case, with durable soft touch buttons and backlit LCD display, the **LazerTape 160** offers convenient and reliable performance. Built-in features include Addition, Subtraction, Area, and Volume measurement and calculation.

Useful to Installers, Estimators, Contractors, Realtors, Technicians, Electricians, Plumbers, Painters, Carpenters, Flooring specialists, Handymen, Appraisers, and many other Tradesmen and DIY'ers, the **LazerTape 160** is a great addition to anyone's tool pouch.

1. Safety Instructions

- Do not use this instrument before reading this instruction manual.
- Do not use the instrument beyond its stated limits.
- Do not modify this instrument.
- Do not open this instrument. There are no user serviceable parts inside.
- Do not remove warning labels from this instrument.
- Do not point the laser into anyone's eyes, including your own.
- Do not use the product in situations where the laser may cause anyone's distraction or injury.
- Do not aim directly into the sun.
- Store in a location where children may not gain access

Laser Classification

The LazerTape 160 uses a Class 2 laser that emerges from the front of the instrument when the product is in use. Do not stare into the laser or direct it towards other people. Although the laser is low power, and is usually harmless, it should never be purposely directed into anyone's eyes.



WARNING:

Looking directly into the laser with magnifying lenses (e.g. binoculars, telescopes) can be hazardous. Injury to the eye may result.




CAUTION:

Looking into the laser may be hazardous to the eyes. Never stare into the beam or direct the beam towards other people.

2. Start-Up

Inserting/Replacing Batteries (See Figure A)

- 1) Remove battery cover (a small screwdriver is required)
- 2) Insert batteries, observing correct polarity.
- 3) Replace battery cover.
 - Replace batteries when this symbol “” appears permanently in the display.
 - Use alkaline batteries only.
 - Remove the batteries if the unit is unused for several weeks or longer.

Keypad (See Figure B)

- | | |
|--|--------------------------|
| 1- ON/MEASURE button | 8- Reference button |
| 2- Area/Volume button | 9- Backlite/UNITS button |
| 3- Indirect measurement button | 10- Clear/Off button |
| 4- Single/Continuous, MAX/MIN measurement button | |
| 5- Plus (+) button | |
| 6- Minus (-) button | |
| 7- Memory button | |

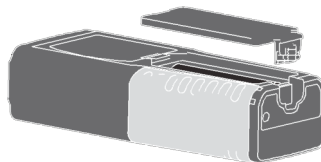


Figure A

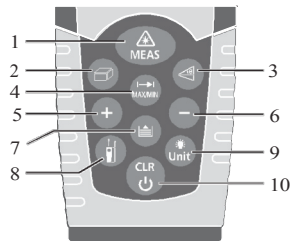






Figure B

LCD Display (See Figure C)

- 1- Laser active
- 2- Reference location (front)
- 3- Reference location (rear)
- 4- Various measurement symbols
 -  Area measurement
 -  Volume measurement
 -  Indirect measurement
 -  Indirect (second) measurement
- 5- Single measurement
- 6- Battery status
- 7- Memory (memories used, memory selected)
- 8- Error symbol
- 9- Continuous & MAX / MIN measurement
- 10- First value display line
- 11- Second value display line
- 12- Last measurement or calculation result

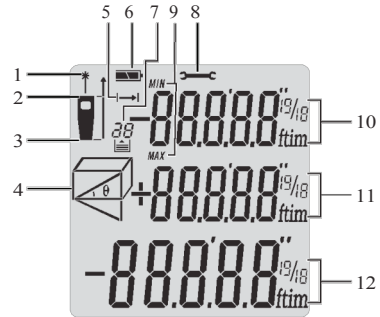


Figure C

3. Initial Operation and Settings

Refer to Figure B for the locations of the following buttons

ON / MEASURE Button



Press to turn the instrument on, or to take another measurement.

CLEAR / OFF Button




Press and hold to turn the instrument off. The instrument will turn off automatically after 3 minutes of inactivity.

Press and release to cancel the last action or to clear the data display. To clear the memories, press the Memory button and Clear /Off button simultaneously.

Reference Location (See Figure D)

The default Reference Location is from the rear of the instrument.

Press this button  to take the selection from the front edge .

A beep sounds whenever the reference setting is changed. Press the button repeatedly to change from the front to the rear or vice versa. When the instrument is turned off and back on, the reference location defaults automatically to the rear of the instrument.

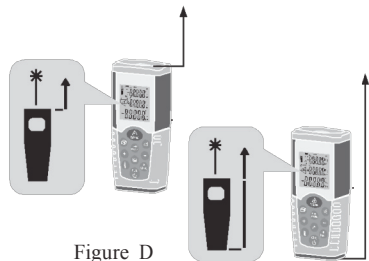


Figure D

LCD Backlite



Momentarily press and release this button to turn the backlite on or off. The backlite will turn off automatically in 30 seconds.

Units of measure



Press and hold this button for several seconds, then release, to change the measuring UNITS.

4. Measuring

Single Distance Measurement



Press to activate the laser. Point the laser at the target to be measured. Press again to trigger the distance measurement. The distance is displayed in several seconds on the LCD. The laser turns off.

Continuous Measurement & Max and Min Measurement (See Figure E)

The continuous measurement function can be used to find a specific distance from a target. When activated, a series of 100 measurements is taken every 0.5 seconds, the latest being displayed on the 3rd line (12) of the LCD. The MAX and MIN values are captured and displayed on the LCD. This feature can be used to find the shortest or longest distance to a surface (like at inside and outside corners).

To activate, press and hold the MAX/MIN button until MAX and MIN appear in the LCD. To cancel, press the MEAS or CLEAR button.

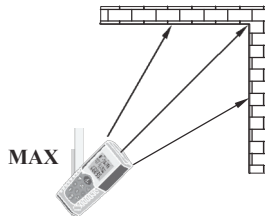
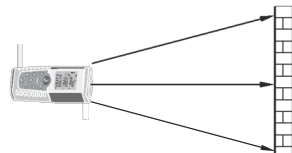







Figure E

5. Functions

Addition / Subtraction

-  Press so that the next measurement is added to the previous measurement.
-  Press so that the next measurement is subtracted from the previous measurement.
-  Press to cancel the last operation.
-  Press to return to Single Measurement mode.

Area Measurement


Press the Area/Volume button once. The  symbol appears in the display.




Press  button to take the first length measurement (i.e. length).

Press  again to take the second length measurement (i.e. width).

The result is displayed in the 3rd line, the individually measured values are displayed in lines 1 and 2.

Volume Measurement


For volume measurements, push Area/Volume button twice until the  indicator for volume measurement appears in the display.

-  Press to take the first distance measurement (i.e. length)
-  Press to take the second distance measurement (i.e. width)
(Area displays on the 3rd line)
-  Press to take the third distance measurement (i.e. height). The Volume is displayed on the 3rd line. The two previously measured values appear on lines 1 and 2.

Indirect Measurement - Determining a Distance Using 2 Measurements (See Figure G)

A height that cannot be measured directly can be calculated from 2 indirect measurements.

Press this button  once, the display  shows. The distance to be measured (1) flashes in the symbol.

 Aim at the upper point (1) and trigger the measurement.

After measurement (1), move the LazerTape to point at the base of the unknown height (establish a right angle).

 Press to measure distance (2).

The 3rd line with the display the calculated height.

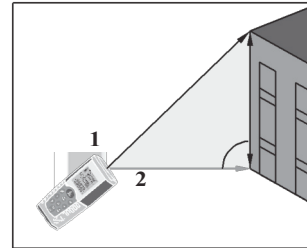






Figure G

Indirect Measurement - Determining a Distance Using 3 Measurements (See Figure H)

Press this button  twice; the display shows the double pythagorean symbol . The distance to be measured (1) flashes in the symbol.

 Aim at point (1) and trigger the measurement. After the first measurement, point at (2), establishing a right angle.

 Press to measure point (2). Aim laser at point (3)

 Press to measure point (3).

The total height is displayed on the 3rd line.

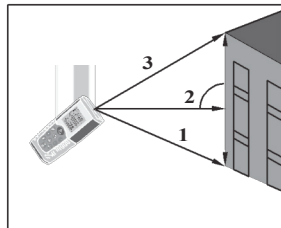





Figure H

Historical Storage

 Press to review the previous 20 records. Press button repeatedly to cycle through the memory, or use  or  buttons to navigate through the records.

All of the records can be cleared by pressing the Memory and Clear buttons simultaneously.

6. Specifications and Features

Technical Specifications	Model: LazerTape 160 (TLT-160)
Range	0.16 ft to 164 ft* (0.05 to 50 m*)
Measuring accuracy up to 30ft (2σ , standard deviation)	Typically: ± 0.06 in** ± 1.5 mm**
Measuring units	Meters, Inches, Feet
Laser Class	Class II
Laser Type	635 nm, <1mW
Area, Volume Calculations	•
Indirect measurement using Pythagoras	•
Addition/Subtraction	•
Continuous Measurement	•
Min/Max Distance Tracking	•
Display illumination and multi-line display.	•
Beep indication	•
Dust Protect/Splash proof	IP 54
Memories	20

Keyboard Type	Super Soft-Touch (Long life)
Operating Temperature	32°F to 104°F (0°C to 40°C)
Storage Temperature	14°F to 140°F (-10°C to 60°C)
Battery Life	up to 4 0 0 0 measurements
Batteries	Type AAA, 2 x 1.5V
Auto laser time out	after 0.5 min
Auto instrument time out	after 3 min
Dimension	4.4 x 1.9 x 1.1" (115 x 48 x 28 mm)
Weight	5.3 oz (150g)

*Use target plate to increase measurement range in brightly lit conditions (daylight)

** With good measuring conditions. With poor conditions (bright light, poor surface, high temperature, high humidity, etc) accuracy can degrade by +/- 0.0018 in/ft.

7. Troubleshooting – Causes and Corrective Measures

Code	Cause	Corrective measure
204	Calculation error	Repeat procedure
208	Received signal too weak, measurement time too long. Distance greater than 160ft	Use target plate Reduce distance
209	Received signal too strong	Target too reflective (use target plate)
252	Temperature too high	Cool down instrument
253	Temperature too low	Warm up instrument
255	Hardware error	Switch on/off the device several times, If the code still appears, please contact your dealer for assistance.

8. Measuring Conditions

Measuring Range

The range is limited to 160ft.

When ambient lighting is reduced, such as at nighttime or dusk, the measuring range without a target plate may be increased. Use a target plate to increase the measurement range during daylight or if the target has poor reflective properties.

Misc

Measurement errors occur if measurement through liquids or glass is attempted. Styrofoam or similar semi-permeable surfaces can also cause measurement errors. Aiming at high gloss surfaces may reflect the laser and lead to measurement errors. Non-reflective or dark surfaces may cause the measuring time to increase. Moisture or dust in the atmosphere can also cause measurement errors.

Care

Do not immerse the instrument in water. Wipe off dirt with a damp, soft cloth. Do not use aggressive cleaning agents or solutions. Handle the instrument as you would a telescope or camera.

9. Triplet Product Return Instructions

In the unlikely event that you must return your Triplet equipment for repair, the following steps must be taken.

- 1) Call 1-800-TRIPLETT to obtain a Return Material Authorization (RMA) number from Customer Service.
- 2) Enclose a copy of the original sales receipt showing date of purchase.
- 3) Clearly print the RMA number on the outside of the shipping container.
- 4) Return to: Triplet / Jewell Instruments
850 Perimeter Road
Manchester, NH 03103
ATTN: Repair Dept.

10. Warranty

Triplett Three Year Limited Warranty

Triplett Warrants instruments and test equipment manufactured by it to be free from defective material or workmanship and agrees to repair or replace such products which, under normal use and service, disclose the defect to be the fault of our manufacturing, with no charge within three years of the date of original purchase for parts and labor. If we are unable to repair or replace the product, we will make a refund of the purchase price. Consult the Instruction Manual for instructions regarding the proper use and servicing of instruments and test equipment. Our obligation under this warranty is limited to repairing, replacing, or making refund on any instrument or test equipment which proves to be defective within one year from the date of original purchase.

This warranty does not apply to any of our products which have been repaired or altered by unauthorized persons in any way so as, in our sole judgment, to injure their stability or reliability, or which have been subject to misuse, abuse, misapplication, negligence, accident or which have had the serial numbers altered, defaced, or removed. Accessories, including batteries and fuses, not of our manufacture used with this product are not covered by this warranty.

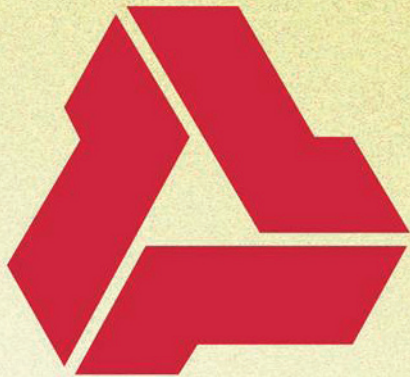
To register a claim under the provisions of this warranty, contact Triplett's Customer Service Department for a Return Authorization Number (RMA) and return instructions. No returned product will be accepted without an RMA number. Upon our inspection of the product, we will advise you as to the disposition of your claim.

ALL WARRANTIES IMPLIED BY LAW ARE HEREBY LIMITED TO A PERIOD OF ONE YEAR FROM DATE OF PURCHASE, AND THE PROVISIONS OF THE WARRANTY ARE EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES EXPRESSED OR IMPLIED.

The purchaser agrees to assume all liability for any damages and bodily injury which may result from the use or misuse of the product by the purchaser, his employees, or others, and the remedies provided for in this warranty are expressly in lieu of any other liability Triplett may have, including incidental or consequential damages.

Some states (USA ONLY) do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. No representative of Triplett / Jewell Instruments or any other person is authorized to extend the liability of Triplett in connection with the sale of its products beyond the terms hereof.

Triplett reserves the right to discontinue models at any time, or change specifications, price or design, without notice and without notice and without incurring any obligation. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.



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