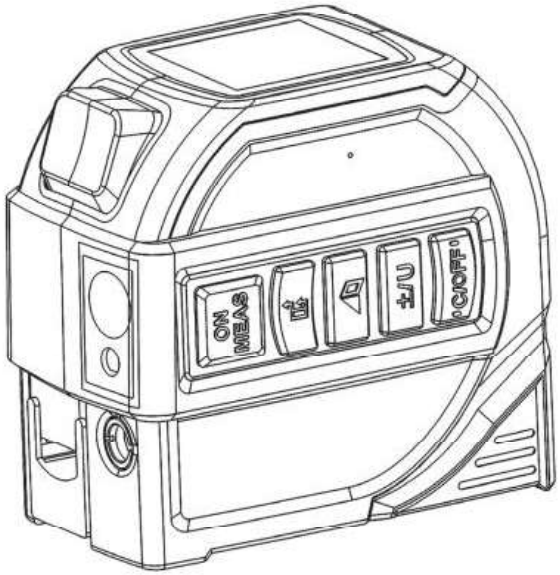
Laser Tape Measure User's manual



Laser Tape Measure User's manual

Thank you for purchasing our laser tape measure products.

Please read the safety terms and instructions carefully before using this product for the first time.

I.Safety Clause

Please carefully read all the terms and operating instructions in this manual before using this product. Failure to follow these safety provisions and operating instructions may lead to dangerous laser radiation injury ,electric shock or personal injury.

Do not try to change the performance of the laser in any way,which will lead to laser exposure and danger.Only turn on the laser when using this instrument, Do not look directly at the laser.Please keep your instrument properly to avoid the use of irrelevant personnel.

- Do not irradiate others wish laser deliberately or in the dark.
- Do not irradiate the laser beam on object with high refleetive surface.
- Do not place it where children can reach.

Do not repair this instrument without authorization.If the instrument is damaged , please contact with your local dealer.

Electromagnetic radiation may cause interference to local equipment and devices (such as pacemakers or hearing aids and other medical instruments).

- Do not use this instrument in flammable and explosive environment.
- Do not use this instrument near equipment.
- Do not use this instrument on the aircraft.

Please dispose of discarded instruments according to the laws and regulations of your location.

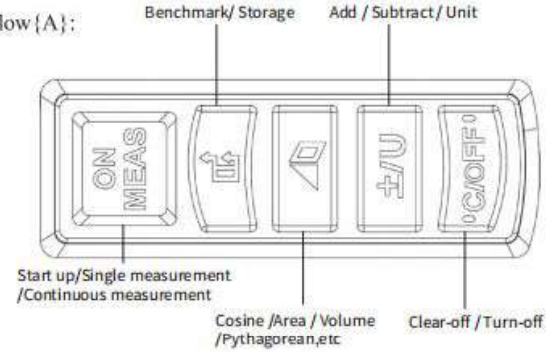
Special Statement:

Our company does not assume legal responsibility for any derivative results of using this product; Our company reserves the right to make changes to product design, upgrades, and user manuals. Any changes are subject to no prior notice!

II.Overview

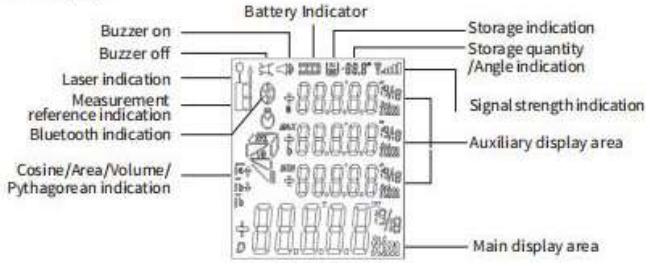
⌘ Keyboard

See the figure below{A}:



⌘ Screen

See the figure below{B}:



III.Operations

⌘ Turn on / Turn off

Press and hold the ON MEAS , after about two seconds,the instrument is powered on and started. The instrument enters the mode to be tested.

Press the 'C/OFF' after about two seconds,the instrument is turn off.

⌘ Clear key

'C/OFF' Cancel the last instruction.For a single measurement (area or volume, etc.) within the same function, you can use the clear key to clear the measurement result and re-measure.

⌘ Datum edge

The default reference edge of the instrument is the rear end of the instrument.

Press this key briefly to switch the datum edge.Restore the default settings after shutdown. The instrument currently supports two kinds of benchmarks: front benchmark and rear benchmark.

Front Benchmark: Measure the distance with the front of the instrument as the starting point.
Rear Benchmark： Measure the distance with the rear end of the instrument as the starting point.

⌘ Set unit

±/U Long press this key to switch the required units. Alternative units:

Voice version		
Length	Area	Volume
0.000 m	0.000 m^2	0.000 m^3
0.00 ft	0.00 ft^2	0.00 ft^3
0.0 in	0.00 ft^2	0.00 ft^3

	Non voice version	
Length	Area	Volume
0.000 m	0.000 m^2	0.000 m^3
0.00 ft	0.00 ft^2	0.00 ft^3
0' 0" 1/16	0.00 ft^2	0.00 ft^3
0.0 in	0.00 ft^2	0.00 ft^3
0 in1/16	0.00 ft^2	0.00 ft^3

⌘ Battery power indication

When the segment code in the battery box is displayed, it means that the battery is in a full state, and the number of displayed segments is reduced, which means that the power is relatively reduced. When only the battery box is displayed, it should be ready for charging in time.

⌘ Self-calibration function

In the "shutdown" mode, press and hold the [ON MEAS] key for about 5 seconds until "boot" flashes on the main screen, and then press and hold the [ON MEAS] key , until "CAL.0" is displayed on the main screen,and then press the [ON MEAS] key for adjustment.The adjustment range is -7~7mm. After calibration, press the ['C/OFF'] key to save the setting.

⌘ Electronic angle self calibration function

The electronic angle has been calibrated before leaving the factory. If the user wants to calibrate the angle themselves, the operation method is to hold down the key while in the "shutdown" mode, and press and hold the [ON MEAS] key for about 3 seconds until "AG.CAL" is displayed on the main screen, indicating that the instrument has entered the angle

calibration mode. Then, place the instrument on a horizontal surface and let it rest for about 6 to 10 seconds to complete the angle calibration.

⌘ Turn on and off sound

In the "shutdown" mode, press and hold the [ON MEAS] key for about 5 seconds until "boot" flashes on the main screen, and then press and hold the [ON MEAS] key until "CAL.0" is displayed on the main screen, and then press and hold the [ON MEAS] key again until "bP.on" is displayed on the main screen, and then press the [ON MEAS] key to adjust between "bP.on" and "bP.oFF". After the adjustment is completed, press the ['C/OFF'] key to save the setting.

bP.on：Sound on.

bP.oFF：Sound off.

⌘ Signal strength indication

When all signal segment codes are displayed, it indicates that the measured echo signal strength is high, and the number of displayed segments is reduced, indicating that the measured echo signal strength is relatively reduced.

IV.Measurement

⌘ Single measurement

When the laser is off, briefly press the [ON MEAS] key to turn on the laser. At this time, the laser mark on the display screen will flash. Briefly press the [ON MEAS] key again for measurement. The instrument will automatically save the normal measurement results.

⌘ Continuous measurement

Short press the [ON MEAS] key to turn on the laser, long press this key for about 2 seconds to start continuous measurement. To stop continuous measurement, briefly press this key again. During continuous measurement, the main display area displays the real-time measured values, and the auxiliary display area displays the maximum and minimum values in the measurement process.

V .Functions

⌘ Add/Subtract

Single segment distance, area and volume measurement can be accumulated or reduced through addition / subtraction operation. Short press [±/U] to switch addition or subtraction, and the operation symbol will be displayed in front of the main display. After selecting the operation method, in the distance measurement mode, the calculation will be carried out automatically after the measurement is completed, and the results will be displayed in the main display area and the measured values in the auxiliary display area; In the area and volume mode, after completing the area or volume measurement, press [±/U] to calculate, and the results are displayed in the main display area, and the latest measured value is in the auxiliary display area.

⌘ Cosine measurement

Briefly press the  key until  is displayed on the display. Press [ON MEAS] to complete the bevel measurement, and then the instrument will automatically calculate the other two right angle edges and display them on the screen. In cosine measurement mode, there is also an angle measurement function: the measured angle can be displayed in the auxiliary display area for viewing and recording. The operation method is: In cosine measurement mode, short press [±/U] ,When the main display area displays "HoLd" character, the auxiliary display area displays

the measured angle. Short press [±/U] again to return to the normal cosine measurement mode.

Note: this function is only available for laser tape measure with electronic angle function.

⌘Area

Briefly press the key until  is displayed on the screen. Press [ON MEAS] to complete the measurement of the first edge, and then press [ON MEAS] to complete the measurement of the second edge. The area calculation will be carried out automatically, and the results will be displayed in the main screen area.

⌘Volume

Briefly press the key until  is displayed on the display. Press [ON MEAS] to complete the measurement of three edges respectively, and the volume calculation will be carried out automatically. The results will be displayed in the main display area, and the relevant information will be displayed in the auxiliary display area.

⌘ Pythagorean

Pythagorean measurement is mainly used to measure the distance that cannot be measured directly because the measured object has occlusion or no effective reflecting surface. Only when the laser beam forms a right angle with the measured target can the accurate measurement value be obtained.

Pythagorean measurement 1: briefly press the key until  is displayed on the display screen. According to the prompt on the screen, press [ON MEAS] to complete the measurement of oblique edge and right angle edge respectively, and then the Pythagorean operation will be

carried out automatically. During the measurement, ensure that the right angle edge is perpendicular to the measured surface. The results are displayed in the main screen area.

Pythagorean measurement 2: briefly press the key until  is displayed on the display screen. According to the prompts on the screen, press [ON MEAS] to complete the measurement of the three edges respectively. When measuring the second edge, it should be vertical to the target edge. The calculation results are displayed in the main display area.

Pythagorean measurement 3: briefly press the key until  is displayed on the display screen. According to the prompts on the screen, press [ON MEAS] to complete the measurement of the three edges respectively. When measuring the third edge, it should be vertical to the target edge. The calculation results are displayed in the main screen area.

- When measuring in the Pythagorean mode, the length of the right angle side must be less than the length of the beveled side, otherwise the instrument will display a prompt message number.
- When measuring in the Pythagorean mode, it must be ensured that the measurement starts from the same starting point; Beveled edge --- right angle edge mode, and ensure that the right angle edge is perpendicular to the measured surface.

⌘Biaxial electron angle

Short press the key until two angles are displayed on the display screen, indicating that the dual axis electronic angle mode has been entered.

For the convenience of users to view and record angles, they can use the angle retention function. The operation method is: in this mode, short press [±/U], when the "HoLd" character is displayed in the main display area, the auxiliary display area maintains the measured angle. Short press [±/U] again to return to normal measurement mode.

Note: this function is only available for laser tape measure with electronic angle function.

⌘ Data storage view

Press and hold key until is displayed on the display screen, indicating that the storage mode is entered. Press ON MEAS key and key to cycle through the stored data. Press the 'C/OFF' key to return to the measurement mode.

VI.Other functions

⌘ Laser crosshair

In power-on mode, hold the key for about 2 seconds until the laser crosshair is released and the laser crosshair can be turned on. Press and hold the key again for about 2 seconds until the laser crosshair is turned off and you can turn it off.

Angle keeping function: In this mode, the angles of the two axes will be displayed on the screen to facilitate the user's judgment of the horizontal and vertical status of the laser crosshair. For the convenience of users to view and record angles, they can use the angle retention function. The operation method is: in this mode, short press ±/U , when the "HoLd" character is displayed in the main display area, the auxiliary display area maintains the measured angle. Short press ±/U again to return to normal measurement mode.

Note: This function is only available with a laser tape measure with a laser crosshair function.

⌘ Bluetooth

Bluetooth is turned on automatically after power on. After shutdown, Bluetooth will also be turned off.

In the power on mode, use the mobile app to search for and connect devices with ZB-XX

Bluetooth name. Please refer to the app instructions for the use of the app.

Note: this function is only available for laser tape measure with Bluetooth function.

VII.Prompt code and solution

Message	Reason	Solution
Er.BL	Battery voltage too low.	Charge as soon as possible.
Er.TL	Temperature too low.	Instrument temperature rise.
Er.TH	Temperature too high.	Instrument cooling.
Er.DH	Data overflow.	Remeasure.
Er.DE	Pythagorean measurement error.	The measured edge and edge length are wrong, please check.
Er.SL	The signal is too weak.	Measure the target point with strong reflection target or use the reflector.
Er.SH	The signal is too strong.	Measure the target point with weak reflection target or use the reflector.
Er.HF	Hardware error.	Restart the machine many times, but the problem still hasn't been solved. Please contact your dealer.

VIII.Technical parameter

Specification and model	A-30/A-40/A-60/A-80/A-100
Measurement accuracy	±(2mm+5•10^{-5}•D) D:Distance
Display accuracy	1 mm
Unit	m/in/ft
Measuring range	0.05~30/40/60/80/100m

Measuring time	0.3~4S
Laser level	Class II
Laser type	630~670 nm,<1mW / 500 -540 nm,<1mW
Turn off the laser	15S
Backlit screen	√
Measurement reference switching	√
Data clear	√
Power display	√
Signal strength indication	√
Single measure	√
Continuous measure	√
Add/Subtract	√
Area/Volume/ Pythagorean	√
Data storage	√
Data storage quantity	50
Electronic angle	Version with electron angle only
Cosine measure	Version with electron angle only
Voice	Version with voice function only
Laser crosshair	Version with laser crosshair only
Bluetooth	Version with Bluetooth only
Battery capacity and life	200mah/500mah(With Bluetooth, Laser crosshair, version), 3000times
Product size	83*49*80mm
Weight	A-30/A-40:271g A-30/A-40 (Bluetooth version):273g A-30/A-40 (Laser crosshair version):278g A-30/A-40 (Laser crosshair and Bluetooth version):280g A-60/A-80/A-100:272g A-60/A-80/A-100 (Bluetooth version):274g A-60/A-80/A-100 (Laser crosshair version):279g A-60/A-80/A-100 (Laser crosshair and Bluetooth version):281g

Operating temperature range	0℃~40℃
Storage temperature range	-25℃~60℃

* In the case of poor measurement conditions, such as too strong outdoor or ambient light, too large temperature fluctuations, too weak reflection of the measurement surface or too rough surface, etc., large measurement errors will occur.
* Under bad measurement conditions (such as too strong ambient light, too large or too small diffuse reflection coefficient of the measured point, and too large temperature difference), there will be large errors in measurement accuracy: ± 1 mm+40PPM.
* In case of strong sunlight or poor reflection of the target, please use the reflector or corresponding tools.

IX.Maintenance

It is forbidden to immerse the instrument in water. Wipe the dust on the surface with a wet soft cloth. Do not use an etching lotion. Wipe the surface of optical components (including laser exit window and signal receiving lens) by wiping the camera lens.

X .Service

In order to better serve customers, our company immediately has a warranty card. Please keep it properly to enjoy our service.Since the date of purchase, the product has not been disassembled and repaired in normal operation, and it will enjoy warranty service within one year. The following conditions are not covered by the free warranty.

- The instrument is damaged due to abuse or man-made.
- The instrument is damaged due to excessive vibration during transportation.

If the user does not have a warranty card, he will charge as appropriate.
When users need maintenance, please fill in the warranty card carefully and send it back to our company.

Made in China

Laser Tape Measure

Warranty Card

Instrument name:		instrument model:
Purchase channel:		
Invoice code or order code:		
User information	User name:	
	User telephone:	
	User address:	
Dealer name, address and telephone		
Fault description		
Note: when the product needs warranty, please tear off this page and send it back with the product.		