MASTECH® MS6460

Laser Distance Meter
User's Manual

CE

⚠ 📖 CE ⚠2 🔓

Safety Regulations

Please read the safety regulations and operation guide carefully before operating.

⚠ Please read all of the operational guide and safety regulations in this manual before operation . Improper operations without complying with this manual guided could cause damage to the device, influence on measurement result or bodily injury to the user.

⚠ The instrument is not allowed to disassemble or repair in any ways. It is forbidden to do any illegal modification or performance change for laser emitter. Please keep it out of reach of children and avoid using by any irrelevant personnel.

⚠ It is strictly prohibited to shoot eyes or other parts of body with the laser; it is not allowed take the laser to shoot any objects' surface with strong reflecting.

⚠ Due to electromagnetic radiation interference to other equipment and devices, please don't use the meter in the plane or around medical equipment, don't use it in inflammable, explosive environment.

⚠ Discarded batteries or meter device shall not processed just like household garbage, please handle them in line with related law and regulations.

⚠ Any quality issues or any questions on the meter, please contact local distributors or manufacturer in time, we are ready to offer solutions for you.

Installation and replacement of battery

- Discharge the battery door on the back of device, and place battery according to correct polarity, then cover the battery door.
- Only 1.5 V AAA alkaline battery is applied to the meter.
- If not used for a long time, please take out the battery to avoid battery corrosion to meter body.

Display Screen

- Laser emission on
- Measurement
- Maximum instructions
- Instructions of area, Volume, Pythagorean proposition and indirect measurement
- Minimum instructions
- The Lord measurement display
- Battery power instructions
- Store data/check stored data
- Auxiliary display
- Measurement unit instructions
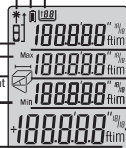
Keyboard

- Laser emission on
- + key
- Area/Volume Measuring key
- Measurement benchmark select key
- Off/Remove key
- Unit Conversion / Backlight Conversion Button
- - key
- Pythagorean proposition indirect measurement key
- Storage/Storied date read key
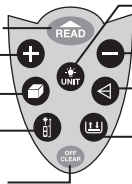
Start and shut off the meter

Under off state, press 🔴 key, instrument and laser get starting simultaneously and stand by for measurement.
Under on state, long press 🔵 key for 3 seconds to make the device off. The instrument will be shut off without any operation for 150 seconds.

Unit setting

Press 🔴 key, reset current unit of measurement, the machine default unit is: 0.000m

Backlight setting

Long press the 🔴 key to set on and off of the backlight

Optional units as below:

Length	Area	Volume
0.000m	0.000m²	0.000m³
0.00m	0.00m²	0.00m³
0.0in	0.00ft²	0.00ft³
0.00ft	0.00ft²	0.00ft³

Measurement benchmark setting

Press 🔴 key to enter into setting of switching between front benchmark and end benchmark . System usually takes end benchmark as default.

Single Measurement:

Press 🔴 key under measuring mode, the laser is emitted to shoot measuring location.
Re-press 🔴 key for single measurement of distance , then the measured results displayed on main display.

Continuous Measurement:

Long press READ key under measuring mode to enter into continuous measurement state, and maximum and minimum measurement results in the process of continuous measurement will display on the screen.

The main display screen indicates the very measured result, press READ key to exit continuous measurement state.

Area measurement:

Press ⏢ key and you will see □, on the display screen, that is Rectangle with one edge flashing. Complete the following operations according to screen tips: Press READ key to measure the first edge(length). Press READ key to measure the second edge(width) Area will be calculated automatically by the meter, and the results showed on main display screen.

Press OFF/CLEAR key to remove previous measured result and get ready for the next measurement.

Volumetric Measurement:

Double press ⏢ key and you will see ▱, on the display screen, that is cube with one edge flashing. Complete the following operations according to tips:
Press READ key to measure the first edge (length).
Pres READ key to measure the second edge(width).
Press key to measure the third edge (height).
Volume will be calculated automatically by the meter, and the results showed on main display screen.
Press OFF/CLEAR key to remove previous measured result and get ready for the next measurement.

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Pythagorean proposition indirect measurement:

There are three kinds of pre-designed measuring mode to get unilateral distance of triangle by ways 66 of Pythagorean proposition. This is convenient for users to do indirect measuring in certain complex environment. Press ◁ key to make mode selection:

1) Press ◁ key and you will see △ on the display screen, that is triangle with hypotenuse flashing.
Press READ key to firstly measure the length (a) of dotted line hypotenuse according to screen prompt
Press READ key to measure the length(b) of the dotted line right side Length (x) of the solid line right side will be calculated automatically by the meter.

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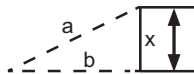
2) Double press ◁ key and you will see △ on the display screen, that is triangle with vertical leg flashing
Press READ key to firstly measure the length (a) of dotted line right side according to screen prompt
Press READ key to measure the length (b) of the other dotted line right side
Length(x) of the solid line hypotenuse will be calculated automatically by the meter.

3) Press ◁ key 3 times and you will see △' on the display screen, that is triangle with hypotenuse flashing.

Press ◁ key to firstly measure the length (a) of dotted line hypotenuse according to screen prompt
Press READ key to measure the length(b) of dotted line hypotenuse (shown as in the figure
Press READ key to measure the length(c) of another dotted line hypotenuse (shown as in the figure)
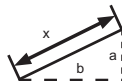Length (x) of the solid line right side will be calculated automatically by the meter.
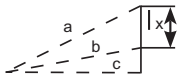
Under Pythagorean proposition measurement mode, length of right side must be shorter than hypotenuse length so that instrument can make out calculation, otherwise the instrument will display error signal.
Under Pythagorean proposition mode, to ensure the accuracy of measurement, it must be measured from the same starting point with a measuring order of first hypotenuse, and then right side.

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Add And Subtract Measurement:

Single distance measurement can be done through adding/subtracting to get accumulated add or subtract operation;

Press ➕ key, and "+"appears on main measurement screen , then enter into accumulated adding measurement mode, accumulative value of previous measured value and the very measurement results will be displayed on the screen.

Press ➖ key, and "-"appears on main measurement screen, then enter into accumulated subtracting measurement mode, differences between previous measured value and the very measurement value will be displaye on the screen.

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Store Measurements

Under measuring mode, as the exiting data is effective, long press 🔲 key for 3 seconds, the very measurement data will be automatically stored into the instrument memory stick.
SW-100 and SW-100 A respectively has maximum storage volume of 30 units.

Browse Measurements

Press 🔲 key to check stored measurement data, Press ➕ key or ➖ key to browse forward or backward. Long press 🔘 , key can remove all stored records.

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Tips:
During operation, tip information may appear on the main display screen as follows:

Information	Cause	Solutions
Err1	Signal too weak	Measure target locations which are with stronger refecting capability
Err2	Signal too strong	Measure target locations which areweaker refecting capability
Err3	Battery voltage is too low	Replace battery
Err4	Beyond working temperature	Carry out measurement with the meter in the specifedscope
Err5	Improper Measure -ment on Pythago -rean proposition	Re-measure, and ensure the length of hypotenuse is longer than that of right-side
Err6	Memory damage	Please contact the supplier

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Technology specifications:

ITEM	LDM-50	LDM-60	LDM-70	LDM-80	LDM-100
Max measured distance	50m	60m	70m	80m	100m
Distance measurement precision	±2mm				
Measurement unit options	mm/in/ft				
Continuous measure-ment function	yes				
Outdoortargetrefection board	no				
Area measuremen function	yes				
Volume measurement function	yes				
Pythagorean proposi-tion measurement function	Full mode				
Add and subtract meas-urement function	yes				
Min/Max value	yes				
Max storage	20 units		30 units		
Automatic backlight	yes				
Buttons/Keys sound	yes				
Laser level	II				
Laser type	635nm,<1mW				

Automatically cut off laser	20s
Automatic shutdown	150S
Storage temperature	-20℃-60℃
Working temperature	0 ℃40℃
Storage humidity	RH85%
Battery	1.5V 3*AAA
Weight(including battery)	180g
Dimension	118*54*28mm

Note: There will be a bit of greater differences of measurement results in harsh environment, such as strong sunlight, excessive temperature fluctuations, weak reflective surface, low battery. As to this, targe treflection board as auxiliary will assist you to get a better result.

Instrument maintenancetions:

- The meter should not be stored in high temperature and strong humidity environment for long-term; if not used for long time, please take out the battery and place the meter in the allocated potable bag and store in cool and dry place.

- Please keep the device surface cleaning. Wet soft cloth is applied to clean dust, but erosion liquid is never allowed to use for the meter maintenance. Laser output window and its focus lens can be maintained according to maintenance procedures for optical device.

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Packing list

Please carefully check instruments and attachments are complete in line with below list.

NO.	Item	Unit	QTY	Note
1	Laser Distance Meter master body	Unit	1	
2	Instrument portable bag	piece	1	
3	Holding rope	piece	1	
4	AAA battery	set	3	
5	Manual	copy	1	
6	Warrantycertifcate	copy	1	
7	Gift box	set	1	
8	Outdoor target refectionboard	set	1	Only LDM-100

Checked by: Date: