MASTECH® MS6460

Laser Distance Meter
User's Manual

CE

⚠ 📖 CE 🔳2 🚯

Safety Regulations

Please read carefully safety regulations and guidance before initial use.

⚠ Before using the meter, please read all instructions and safety regulations in this manual carefully. It may result in meter damage, affecting the measurement accuracy, body injury to the user or others without following the operation methods in this manual.

⚠ Do not open or repair the meter by yourself in any way. Do not retrofit illegally or change meter laser transmitter performance. Please keep the meter properly, do not place it in places where children may touch, avoid being used by unrelated persons.

⚠ Don't make the meter's laser device radiate eyes or other body parts of you or others. Don't make the laser device radiate high reflective object surface.

⚠ Electromagnetic radiation of the meter may interfere with others equipments and devices. Do not use it nearby aircraft or medical equipment. Do not use it under flammable and explosive environment.
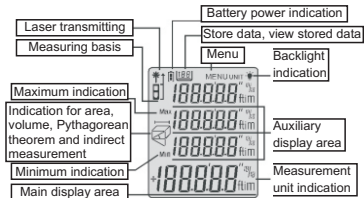
⚠ If the meter has any quality issue, or you have any doubt on the meter, please contact your local dealer or Sndway factory, we will solve for you as soon as possible.

Install battery, display and keyboard Install and replace battery
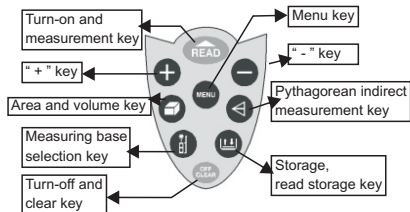

- Open battery door at the back of the meter, put into battery in accordance with correct polarity of the meter, then close the battery door.
- Only 1.5V AAA alkaline battery can be used for the meter.
- When the meter is not used for a long time, please remove the battery to avoid the battery corroding the meter's main engine.

Display

- Battery power indication
- Laser transmitting
- Store data, view stored data
- Measuring basis
- Menu
- Backlight indication
- Maximum indication
- Indication for area, volume, Pythagorean theorem and indirect measurement
- Auxiliary display area
- Minimum indication
- Measurement unit indication
- Main display area

Key

- Turn-on and measurement key
- Menu key
- " + " key
- " - " key
- Area and volume key
- Pythagorean indirect measurement key
- Measuring base selection key
- Storage, read storage key
- Turn-off and clear key

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Turn on meter, menu setting
Turn on and off meter

In the Off mode, press 🔘 key, the meter and laser will start at the same time, the meter enters test mode.
In the On mode, long press 🔘 key for 3 seconds to turn off the meter. The meter will automatically turn off if there is no any operation within 150 seconds.

Unit setting

Press 🔘 key, MENU and MENU→UNIT will display on the screen. There are four units for choice from UNIT. 🔘🔘 key can be used for MENU→UNIT mode. Under the MENU, long press 🔘 key to save current setting and quit setting state. Or press 🔘 key to quit setting state. The following units can be chose on the meter:

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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

Backlight setting

Press 🔘 key, MENU→UNIT will display on the screen, press 🔘 key again, ON/OFF will display on the main display area of the screen, 🔘🔘 key can be used for turning on/off the backlight, long press 🔘 key to save and quit current setting, press 🔘 to quit the setting mode. Backlight is on by default.

Measuring basis setting

Press 🔋 key to exchange front basis and end basis, it is end basis by default.

Distance measurement, area, volume, Pythagorean indirect measurement, add/subtract function

Single measurement:

In the Test mode, press 🔘 key to radiate laser, lock measurement point. Press 🔘 key again for single distance data measurement, measurement result will display in the main display area.

Continuous measurement:

In the Test mode, long press 🔘 key to enter the continuous measurement state, the maximum measurement value and the minimum measurement value will display on the screen during the continuous measurement. Current measurement value will display in the main display area, short press 🔘 key to quit the continuous measurement mode.

Area measurement:

Press 🔲 key, 🔲 will display on the screen, one edge of rectangular is flashing, complete the following operations according to prompts: Press 🔘 key to measure the first edge (Length) Press 🔘 key to measure the second edge (Width) The meter will automatically make area calculation, the result will display in the main display area.

Press 🔘 key to clear the previous result, measure it again

Area measurement:

Press ⬜ key, ▱ will display on the screen, one edge of cube is flashing, complete the following operations according to prompts

Press 🔘 key to measure the first edge (Length) Press 🔘 key to measure the second edge (Width)

Press 🔘 key to measure the third edge (Height) The meter will automatically make volume calculation, the result will display in the main display area.

Press 🔘 key to clear the previous result, measure it again

Indirect measurement with Pythagorean theorem

In the meter, there are three default modes to measure single distance of triangle with Pythagorean theorem. Users can make indirect measurements easily in specific complex environment. ◁ can be used for mode selection:

1) Press ◁ key. On the screen: ◺ hypotenuse is flashing
   Press 🔘 key, measure the length of the hypotenuse with dotted line according to prompts on the screen (a)
   Press 🔘 key to measure the length of the leg with dotted line (b)
   The meter will automatically calculate the length of the leg with solid line (x)

2) Press ◁ key twice. On the screen:
△ erect side is flashing.
Press 🔘 key, measure the length of
one of legs with dotted line according
to prompts on the screen (a)
Press 🔘 key to measure the length
of another leg with dotted line (b)
The meter will automatically calculate
the length of the hypotenuse with
solid line (x)

3) Press ◁ three times. On the screen:
△ hypotenuse is flashing
Press ◁ key, measure the length of
one of hypotenuses with dotted line
according to prompts on the screen
(a)

Press 🔘 key to measure the length of
the hypotenuse with dotted line in the
figure (b)
Press 🔘 key to measure the length of
another hypotenuse with dotted line in
the figure (c) The meter will automatically
work out the length of the leg with solid
line (x)
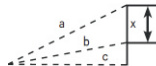
In the Pythagorean measurement mode,
leg length should be less than hypotenuse
length, the meter would
calculate, otherwise, the device will
show error signal prompt.

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In the Pythagorean measurement mode, to ensure measurement accuracy, it should ensure to measure from the same starting point, and measure in hypotenuse, leg order.

Add/subtract measurement function:

Cumulative or inverse cumulative operation can be done for single distance measurement with add/subtract operation.

Press ⊕ key, "+" will display in the main display area, enter the cumulative measurement mode. Accumulated value of the last measurement value and the current measurement value will display on the screen.

Press ⊖ key, "-" will display in the main display area, enter the inverse cumulative measurement mode. Difference value of the last measurement value and the current measurement value will display on the screen.

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Store and browse:
Store recordings

If the current data is valid in the measurement mode, long press 🔲 key for 3 seconds, the current measurement data will be automatically stored in the meter memory. MS6460 can store 20 pcs at most.

Browse recordings:

Short press 🔲 key to search the stored measurement data, use ⊕ key or ⊖ key to move forward or backward for browsing. Or long press 🔘 to clear all stored recordings.

Prompt messages:

In the course of using the meter, the following messages may display in the main display area

Message	Cause	Solutions
Err1	Too poor signal	Measure target point with strong reflectance capacity
Err2	Too strong signal	Measure target point with poor reflectance capacity
Err3	Too low battery voltage	Replace battery
Err4	Out of operating temperature range	Use the meter under the specified environment
Err5	Pythagorean measurement violation	Measure again, to ensure that the hypotenuse is greater than the leg
Err6	Storage damage	Please contact with your dealer

Technical parameters

Item	MS6460
Maximum measurement distance	60m/164ft
Distance measurement accuracy	±2mm
Continuous measurement function	Present
Measurement unit selection	mm/in/ft
Area measurement function	Present
Volume measurement function	Present
Pythagorean measurement function	Full mode
Add and subtract measurement functions:	Present
Maximum/minimum value	Present
Maximum storage	20pcs
Backlight	Present
Key tone	Present
Laser grade	II
Laser type	635nm,<1mW
Automatic cutting laser	20S
Automatic power-off	150S

Maximum battery life	Single measurement for 4000 times
Storage temperature range	-20°C-60°C
Operating temperature range	0°C-40°C
Storage humidity	RH85%
Battery	1.5V 3*AAA
Weight (include battery)	160g
Outside measurement	28*54*118mm

Note: In harsh environments, such as: too strong sunshine, too large ambient temperature fluctuation, weak reflection effect of reflective surface, low battery, measurement result would have large error.

Daily maintenance of meter

• Do not place the meter in hot and humid environment to store for long time. If the meter is not used for long time, please remove the battery and place the meter into the included meter case in a cool and dry place.

• Keep the meter surface clean. Use soft damp cloth to wipe dust on the surface. Don't use corrosive liquid to clean the meter. Laser device window and focus lens can be cleaned according to the method for cleaning optical device.

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Packing list

When purchasing the meter, please carefully check the following list to see whether all attachments of the meter are complete ?

Item	Name	Unit	Quantity
1	Main engine	Pc	1
2	Portable bag of meter	Pc	1
3	String	Pc	1
4	AAA Battery	Pc	3
5	User Manual	Pc	1
6	Certificate of Approval	Pc	1
7	Gift box	Pc	1