Handheld Laser Distance Meter

5040B,5060B,5080B,5100B

User Manual

Thank you for purchasing our handheld laser distance meter.
Please carefully read this user manual and follow the instructions below.

Warning:

1. Before using this product, please read the safety precautions and instructions carefully. Failure to follow the instructions mentioned in the user manual may cause damages to this instrument, affect the measurement accuracy or even physically harm the user or anyone else.

2. Do not try to disassemble or repair the instrument by yourself, especially the laser transmitter part which is highly sensitive. Take a good care of your instrument and don't place it anywhere within the children's reach. This instrument is preferred to be used by professionals only.

3. Never point the laser beam at yourself or someone else, especially in the eye. Of course, don't stare at the laser beam either

4. Don't point this laser device at highly-reflective object.

5. The electromagnetic radiation from this laser device may interfere with other instrument nearby such as a pacemaker and hearing aid.

6. Don't use this laser device in an inflammable and explosive environment.

7. Dispose the broken instrument and used batteries properly and discreetly. Don't mix them up with other normal household garbage. Follow the related government regulations during disposal.

Keyboard:

1. Power On/Single Measurement/Consecutive Measurements Button
2. Add Button
3. Subtraction Button
4. Area/Volume Calculation Button
5. Backlight/Point of Reference Switch Button
6. Pythagorean Proposition Indirect Measurement Button
7. Unit Switch Button
8. Record-view Button
9. Clear/Power Off Button

Screen:

1. Laser beam indicator
2. Point of Reference indicator
3. Area/Volume Calculation indicator
4. Pythagorean Proposition Indirect Measurement indicator
5. Battery indicator
6. Record-view indicator
7. Signal Strength indicator
8. Unit indicator
9. Max. Measurement indicator
10. Min. Measurement indicator
11. Distance Measurement indicator
12. Primary Display Area
13. Supplementary Display Area
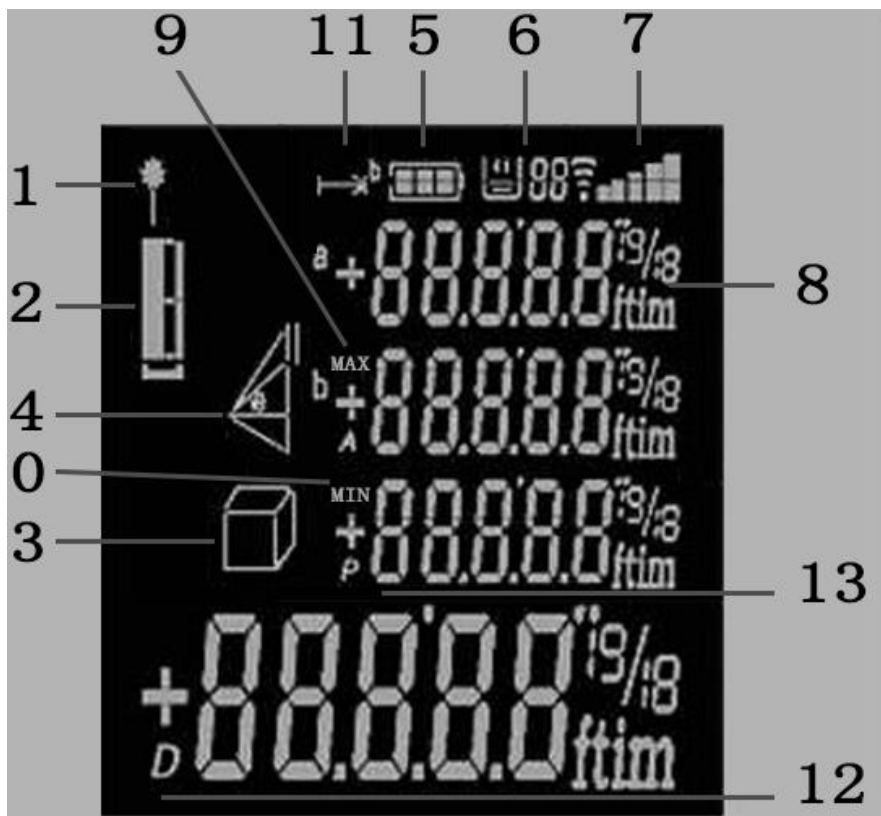
OD Outdoor Mode:

After the device is turned on, long press the Area/Volume Calculation Button for 3 seconds to temporarily activate or deactivate OD Outdoor Mode. It returns to default setting after the device is turned off.

Inserting/Replacing Batteries

Open the battery compartment and insert the batteries in it and then shut the compartment with the lid.

When battery is low，a battery indicator icon will be displayed on the screen to remind you to replace the batteries.

·Pay attention to the polarity symbols marked inside of the compartment.

· Only 1.5V AAA alkaline battery is allowed.

·Remove the batteries if you are not going to use the instrument in a long time(to avoid leak of erosive chemical substance from the batteries).

Turn on/ Turn off Instrument

Turn on: Press the ON/MEAS Button to turn on the device.

Turn off：Long press the Clear Off Button to turn off the device.

Clear Off Button

Press the "Clear Off" Button to delete the latest measurement. For

indirect measurement,（such as Area/Volume measurement）, you can
delete the measurements one by one and measure them again.

Screen Illumination

Long press the Unit Button to turn on the backlight of the screen.

Long press it again to turn it off. The backlight automatically goes off too if
no button is pressed within 60 seconds. After the device is turned off(or
auto power-off), the backlight goes off too.

Unit Switch:

Press the Unit Button to switch between different units: m ; in ; ft

0.000m	0.000m2	0.000m3
0.00m	0.000m2	0.000m3
0.00ft	0.00ft2	0.00ft3
0.0in	0.00ft	0.00ft3

Point of reference setting

The default point of reference of this meter is its bottom. Press the Point of

Reference Button to switch the point of reference between its bottom

and head.

Distance measurement，Add/Subtract，Area，Volume，Pythagorean proposition

indirect measurement

Single Measurement

Press the"Power on/Measure"Button to activate the laser beam.

Point the meter at the target and then Press this button again, the

measuring result will appear on the primary display area of the screen.

Max/Min Measurement（Consecutive Automatic Measurements）

Under standby mode(right after the device is turned on)，long press the "Power

on/Measure" button and enter the Automatic Consecutive

Measurements mode. The meter automatically starts taking measurements

constantly under this mode and the Max/Min measurements will be displayed

on the top of the screen. The latest single measurement will appear in the

primary display area. Press the "Clear/Power Off" Button to stop

automatic consecutive measurement.

Add/Subtract Functions：

After single measurements，you can add/subtract 2 measurements

First, take a measurement, then press the "Add" Button , a symbol"+" will appear in the primary display area which means the instrument has entered the Accumulation Mode. Take another measurement, then the summation of the last 2 measurements will be displayed on the screen.

First, take a measurement, then press the "Subtract" Button , a symbol "-" will appear in the primary display area which means the instrument has entered the Subtraction Mode. Take another measurement, then the difference of the last 2 measurements will be displayed on the screen.

Area Measurement

Press the "Area/Volume" button once, a symbol ☐ will appear

on the screen which stands for Area, while one side of it keeps blinking.
Follow the instructions below：

Press the "Power on/Measure" button to measure the blinking side

(Length)

Press the "Power on/Measure" button again to measure the second blinking side

（Width）

The meter will automatically work out the area based on these 2 measurements and display it on the primary display area.

Press the "Power on/Measure" button to delete the latest

measurement so you can take measurements again.

Volume Measurement

Press the "Area/Volume" button ![icon] twice, a symbol ![icon] will appear on the screen which stands for volume, while one side of it keeps blinking. Follow the instructions below：

Press the "Power on/Measure" button ![icon] to measure the 1st blinking side（Length）

Press the "Power on/Measure" button ![icon] again to measure the 2nd blinking side（Width）

Press the "Power on/Measure" button ![icon] again to measure the 3rd blinking side（Height）

The meter will automatically work out the volume based on these 3 measurements and display it on the primary display area.

Press the "Power on/Measure" button ![icon] to delete the latest measurement so you can take measurements again.

Pythagorean Proposition Indirect Measurement

This meter is capable of calculating the distances based on Pythagorean Proposition. This function is designed for some special locations which are inaccessible to the user. There are 3 measurement modes and you can press this button ![icon] to switch between them：
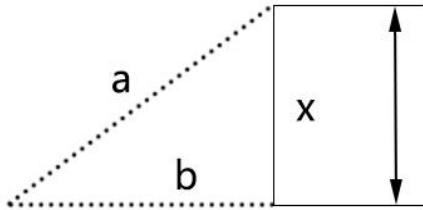
1》Press this button ![icon] once，a symbol ![icon] will appear on the screen with its hypotenuse blinking.

Press the "Power on/Measure" button to measure the hypotenuse
（a）.

Press the "Power on/Measure" button again to measure the blinking
straight flange （b）.
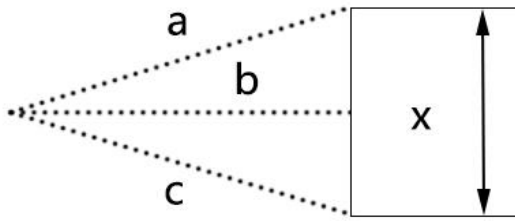The meter will automatically work out the height of the 2nd straight flange
（x）.

2》Press this button twice，a symbol will appear on the screen
with the upper hypotenuse blinking.

Press the "Power on/Measure" button to measure this blinking
hypotenuse （a）.

Press the "Power on/Measure" button again to measure the blinking
straight flange in the middle （b）.

Press the "Power on/Measure" button again to measure the lower
blinking hypotenuse （c）.
The meter will automatically work out the height of the straight flange （x）.

3》 Press this button three times, a symbol will appear on the screen with its hypotenuse blinking.

Press the "Power on/Measure" button to measure this blinking hypotenuse（a）.

Press the "Power on/Measure" button again to measure the 2nd blinking hypotenuse in the middle（b）.

Press the "Power on/Measure" button again to measure the 1st blinking straight flange （c）

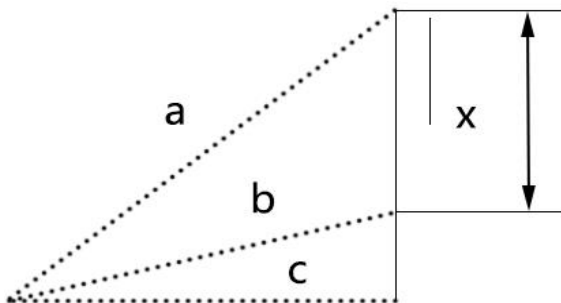The meter will automatically work out the height of the 2nd straight flange（x）

For this Pythagorean Proposition Indirect Measurement，the straight flange has to be shorter than the hypotenuse in the same triangle，otherwise the meter is unable to do the calculation and an "Error" message will appear on the screen. In order to guarantee the accuracy，please make sure to take all these measurements from the same point and measure the hypotenuse，straight flange in sequence.

Laying Off:

Under standby mode(right after the device is turned on)，long press

Area/Volume button to enter Laying Off mode. The value displayed in the supplementary display area is the initial value of "a" while the value being displayed in the primary display area is the initial value of "b".

First, set a value to "a". The second digit in the primary display area is blinking. Press "+"or "-" button to set the value. For example, press the "+" button once to add 1 to the current value. The value circulates from 0-9. Press

Measure button move the blinking cursor. For example, press the Measure button once, the cursor moves to the next digit towards right. The

cursor circulates from left to right. Long press the Measure button to conclude the value-setting and enter the measurement mode under Laying Off

mode. Under this measurement mode, press the Measure button to end the measurement. The original values of "a" and "b" remains on the screen.

While you are setting a value to "a", press Area/Volume button to switch to value-setting of "b"; while you are setting a value to "b", press

Area/Volume button to end the value-setting and enter the Measurement mode.

After the device entering the Measurement mode under Laying Off mode, the supplementary display area displays the distance(1) between the measuring target and the closest point where the first object should be laid. The primary display area displays the distance(2) between the device itself and this closest point. If distance(2) is plus, it means the position of the device itself exceeds distance(1); if distance(2) is minus, it means the position of the device itself falls short of distance(1). When the distance(2) falls within 0.1m, the buzzer begins buzzing.(If the buzzer is off, then it does not buzz.) There is a significant change in the buzzing when the position of the device falls exactly on this closest point. The distances between the measuring target and these points are a+bxn(n represents all natural numbers except 0).

Measurement Storage and View

Measurement Storage
Under the Single Measurement Mode，if the current data is valid，the it will be automatically stored in the internal memory of this meter. The internal memory can hold up to 20 measurements.

View the Stored Measurements

Press the "Storage" button to enter the Record-View Mold; Press the

"Add" button or "Subtract" Button to browse forward or backward. You can view the latest 20 measurements which will be displayed on the screen（the latest single measurement will be displayed on the top）. Press the "+" button or "-" button to locate any measurement.

Technical Parameters:

Model Number	HP-5040B	HP-5060B	HP-5080B	HP-5100B
Max. Measuring Distance	40m	60m	80m	100m
Accuracy	±1.5mm(± 0.06 in)			
Units	mm/in/ft			
Laser Type	Class 2　635nm，<lm W			
Consecutive Measurements	Yes			
Area Measurement	Yes			
Volume Measurement	Yes			
Pythagorean Proposition Indirect Measurement	Yes			
Add/Subtract functions	Yes			
Max/Min Measurement Display	Yes			
Backlight	Yes			
Buzzer Indicator	Yes			
Splash Proof/Dust Proof	Yes			
Measurement Storage	20			
Battery Life Time	4000 times of single measurements			
Storage Temperature	-10°C ~ 60°C(14°F ~ 140°F)			
Operation Temperature	0°C ~ 40°C(32°F ~ 104°F)			
Battery	1.5V 3*AAA			
Product Size	110mm*47mm*27mm			

Unfavorable conditions such as strong sunlight, highly-reflective or low-reflective object may affect the accuracy of the measurements to a large extent. Use a reflective board to make the measurements more accurate when the sunlight is poor or the object is inadequately reflective.

Error Codes

Code	Error	Solution
B.L	Low battery	Change batteries
T.L	Low temperature	Heat the instrument
T.H	High temperature	Cool off the instrument
D.H	Data overflow	Measure again
S.L	Too weak signal	Choose another measuring target which is more reflective or use reflective board
S.H	Too strong signal	Choose another measuring target which is less reflective or use reflective board
H.F	Hardware glitch	If this error remains after you restart the device multiple times, contact your supplier for help

Maintenance

DON'T immerse this device into the water! Remove the batteries if you are not going to use it in a long time; Keep the instrument in a cool, dry environment.

Please keep the surface of the instrument clean. You can wipe the surface with some wet soft cloth. Don't try to clean the instrument with any corrosive liquid. You can wipe the laser emitter window and the focusing mirror the way you wipe other objects such as spectacles and camera lens.

Packing List

Check if all the accessories came with this device when purchasing.

Item	Name	Quantity
1	Distance meter	1
2	Pouch	1
3	Hanging rope	1
4	Battery	1
5	Use manual	1