Handheld Laser Distance Meter

5040A,5060A,5080A,5100A

User Manual

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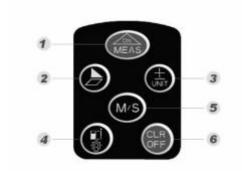Please carefully read this user manual and follow the instructions below.

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 damage to this instrument, affect the measurement accuracy or even physically harm the user or someone else.

2. Do not try to disassemble or repair the instrument by yourself, especially the laser emitter. Do not turn on the laser beam until you need to use this instrument. Do not stare directly at the laser emitter. Take a good care of your instrument and don't place it anywhere within children's reach. This instrument is preferred to be used by professionals only.

3. Don't point the laser beam at yourself or anyone else, especially in the eyes. 4. Don't point the laser beam at highly-reflective object.

5. The electromagnetic radiation from this laser device may interfere with other instrument nearby such as a pacemaker, hearing aid or something like these.

6. Don't use this laser device in an inflammable or 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.
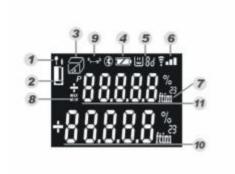
Keyboard:

1. Power On/Single Measurement/Consecutive Measurements Button
2. Area/Volume/ Pythagorean Proposition Indirect Measurement
3. Add/Subtraction/Unit Switch Button
4. Point of Reference Switch/Backlight Button
5. Data Storage
6. Clear/Power Off Button

Screen:

1. Laser beam indicator
2. Point of Reference indicator
3. Area/Volume Calculation indicator
   Pythagorean Proposition Indirect Measurement indicator
4. Battery indicator
5. Record-view indicator
6. Signal Strength indicator
7. Unit indicator

8. Minimum Measurement indicator
9. Distance Measurement indicator
10. Primary Display Area
11. Supplementary Display Area

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).

Start，Menu

Turn on/ Turn off Instrument

Turn on: Press the button ⬚ to turn on the device.

Turn off：Long press the 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 button ![button] to turn on the backlight of the screen.

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

Unit Switch:

Press the button ![button] to switch between different units: m ; in ; ft

Distance	Area	Volume
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 Setup

The default point of reference of this instrument is its bottom. button

![button]

to switch the point of reference between its bottom and head.

Single Measurement

Press the button ![MEAS] to turn on the instrument and the laser beam is turned on simultaneously. Point the instrument at the target and then press this button ![MEAS] again. The measuring result will appear on the primary display area of the screen. The laser beam goes off right after each single measurement. Press ![MEAS] to turn on the laser beam.

Minimum Measurement（**Consecutive Automatic Measurements**）
Under standby mode(right after the instrument is turned on)，long press the button ![MEAS] and enter the Automatic Consecutive Measurements Mode. The instrument automatically starts taking measurements constantly under this mode and the minimum measurement will be displayed on supplementary display area. The current single measurement will appear on the primary display area. Press the button ![CLEAR OFF] to stop automatic consecutive measurements.

Add/Subtract Functions：

Add: Take a measurement, then press the button ![icon], a symbol"+" will appear on the screen. Measure again, and then the summation will

be automatically calculated and displayed on the primary display area. It can continue adding limitless measurements together.

Subtract: Take a measurement, then press the button twice，a symbol "-" will appear on the screen. Measure again, and then the difference will be automatically calculated and displayed on the primary display area. You can continue subtracting limitless measurements.

Area Measurement

Press the button once, a symbol will appear on the screen which stands for area with one side of it keeps blinking. Follow the instructions below：

Press the button to measure the blinking side（Length）

Press the button again to measure the second blinking side （Width）

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

Press the button to cancel the latest single measurement or press

the button to exit "Area Measurement" Mode and enter the Standby Mode.

Volume Measurement

Press the button twice, a symbol will appear on the screen

which stands for volume with one side of it keeps blinking. Follow the instructions below：

Press the button ![MEAS] to measure the 1st blinking side（Length）

Press the button ![MEAS] again to measure the 2nd blinking side（Width）

Press the button ![MEAS] 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 button ![CLEAR OFF] to cancel the latest single measurement or press

the button ![MEAS] to exit "Volume Measurement" Mode and enter the Standby Mode.

Indirect Measurement based on Pythagorean Proposition
This instrument is capable of calculating the distance based on Pythagorean Proposition. This function is designed for some special locations which are inaccessible to the user.

Press this button ![button], a symbol ◁ will appear on the screen with its hypotenuse blinking.

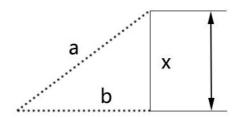Press the button ![MEAS] to measure the hypotenuse（a）.

Press the button ![MEAS] again to measure the blinking straight flange （b）.

The instrument will automatically work out the length of the 2nd straight flange（x）and display it on the bottom.

Measurement Storage

After any single measurement is taken，if the measuring result is valid，
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 button ⊕ to enter the Record-View Mode; Press button

⊕ or button ⊕ or button ⊕ to browse the stored

measurements forward or backward. Press the button ⊕ to exit

Record-View Mode and enter Standby Mode.

Technical Parameters:

Model Number	HP-5040A	HP-5060A	HP-5080A	HP-5100A
Max Measuring Distance	40m	60m	80m	100m
Accuracy	±1.5mm(± 0.06 in)			
Units	m/in/ft			
Laser Type	Class 2　635nm，＜1 mW			
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	-25°C ~ 60°C			

Operation Temperature	0°C ~ 40°C(32°F ~ 104°F)
Battery	1.5V AAA*2
Product Weight	80g(without batteries)
Product Size	43*25*107mm

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 surrounding luminous flux is low or the object is inadequately reflective.

Appendix

Error Codes

Code	Error	Solution
B.L	Low battery	Change batteries
T.L	Low temperature	Take the measurement again in an environment of working temperature
T.H	High temperature	Take the measurement again in an environment of working temperature
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 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 come with this instrument when purchasing.

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