

*Your excellent helper in laser distance test!*

# LASER DISTANCE METER INSTRUCTION MANUAL



*Your excellent helper in laser distance test!*



NF-273L



NF-274L





**Please read the complete instructions including safety precautions before attempting any testing.**

**⚠** 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 on 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 to 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 process just like household garbage, please handle them in line with related law and regulations.

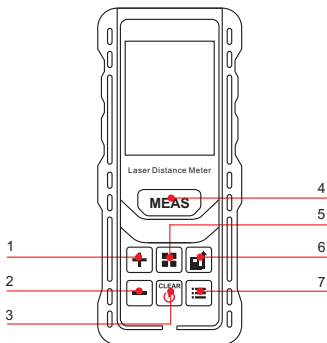
**⚠** Any quality issues or any questions on the meter, please contact local distributors or manufacturer in time, we are ready to offer solutions for you.

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## 1.OVERVIEW

In this series of measuring instruments,NF-273L (red light)/NF-274L (green light) can measure distance,length,height and spacing, and can also calculate the area and volume and Pythagorean measurement, and NF-273L/NF-274L upgrades these basic functions to operate automatic horizontal measurement, automatic vertical measurement, live voice broadcast , angle measurement . For more functions, please read this manual carefully. This measuring instrument issuitable for indoor and outdoor measurements.




1	Add	2	Subtract
3	Power & Back	4	Measure/Comfirm
5	Mode Switch	6	Benchmark
7	Menu		

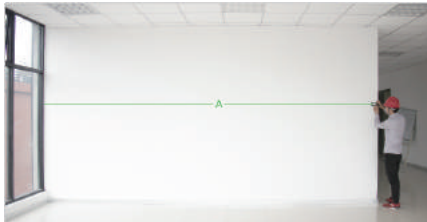
## 2.OPERATION INSTRUCTIONS

### 2.1 Turn on/ Turn off




Press "  " to turn on the device and power off.

### 2.2 Single measurement

Press "  "to turn on the laser and press that button again to single measurement. The result will show you on the screen directly.



### 2.3 Continuous measurement

Press "  " enter Continuous mode, MAX/MIN result will show on the screen. It will stop continuous test if you Short press "  " or "  ".



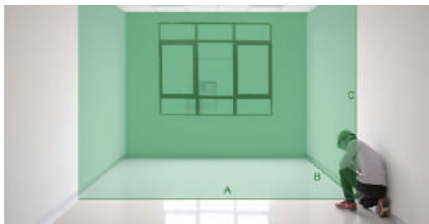
## 2.4 Area measurement

Shortly press "**MEAS**" to enter Area measurement mode if you are not in the Area test menu; and press "**MEAS**" enter the function of Long , width test for the Area.



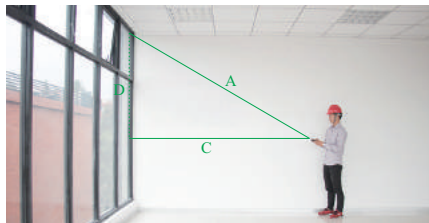
## 2.5 Volume measurement

If you are in the Area function test mode, short press "**MEAS**" one time and will enter the Volume measurement; and you can also short press "**MEAS**" to test the Volume of Long, Width and height.



## 2.6 Pythagorean measurement

Under Volume measurement Mode, short press "**MEAS**" key , Enter the Pythagorean measurement; by short press "**MEAS**" button , Measure the Hypotenuse value (A) and vertical edge value (C) respectively, The can calculate the other vertical side length (D).



## 2.7 Secondary pythagorean measurement ①

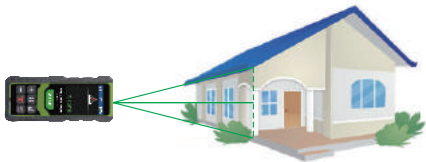
Under the Pythagorean test , short press "**MEAS**" one time and will enter the Secondary Pythagorean test function; and short press "**MEAS**" this button, You can measure the length of the hypotenuse ① and the length of the vertical edge②, and the length of the hypotenuse③, then can calculate the length of another vertical side between ① and ③.



## Secondary Pythagorean measurement ②

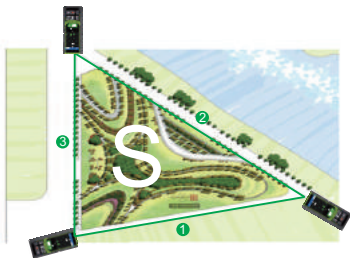
Under the second Pythagorean measurement ①, short press the "MEAS" key 1 time, enter the second Pythagorean measurement; And short Press "MEAS" to measure the length of the hypotenuse- a, The length of the hypotenuse- b and the length of the vertical edge -c are calculated , Then length between B point and C point is displayed on the main line.

**Caution :** It should be under Right triangle to measure.



## 2.8 Triangle area measurement

When you under the mode of Secondary Pythagorean ②, short press "MEAS" one time and will enter the Triangle area measurement; short press "MEAS" this button, Can measure the area of the triangle and show the length of the three sides of the triangle.



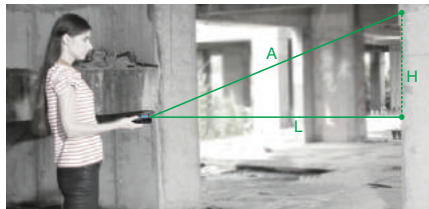
## 2.9 Trapezoidal measurement

When you under the mode of Triangle area measurement, short press "MEAS" one time and will enter the Trapezoidal measurement; short press "MEAS" this button, You can measure the length ① of the vertical side of the trapezoid, the length ② of the horizontal side, and the length of the other side of the vertical ③. Therefore, the length between ① and ③ can be calculated.



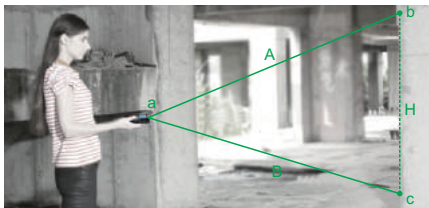
## 2.10 Automatic Horizon measurement

When you under the mode of Trapezoidal measurement, short press "MEAS" one time and will enter the Automatic Horizon Measurement; Short press "MEAS" this button , Measure the length of the hypotenuse, calculate the hypotenuse and level number of angles ( $\alpha$ ), vertical length and horizontal length of the edge degree.



## 2.11 Automatic Vertical measurement

When you under the mode of Automatic Horizon measurement , short press "**MEAS**" one time and will enter the Automatic Vertical Measurement; Short press "**MEAS**" this button, Measure the first hypotenuse of the vertical plane Length A and the length of the second hypotenuse B, measured the angle( $\alpha$ ) between two hypotenuses , then the length point -b and point c Length -H.



## 2.12 Point to Point measurement

When you under the mode of Automatic Vertical measurement, short press "**MEAS**" one time and will enter the Point to Point Measurement ; Short press "**MEAS**" this button, You can get a value ① and ②, then you can get the other side length after this test.



## 2.13 Count-down measurement

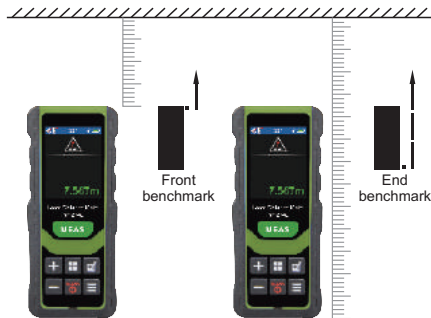
When you under the mode of Point to Point measurement , short press "**MEAS**" one time and will enter the Count-down Measurement; Short press "**+**" / "**-**" button, You can adjust the time. And short press "**MEAS**" to start the measure, When the countdown time is up , the device will automatically measure the length function.

## 2.14 Addition/Subtraction


Only under the mode of Single measurement , Area measurement and Volume measurement , when you get a test result and short press "**+**" / "**-**" button to enter add/subtraction Measurement ; after short press "**MEAS**" this button and calculate another test result, The two test values will be added or subtracted automatically.

## 2.15 Benchmark Switch

Press "**MEAS**" to switch the Benchmark function testing.



## 2.16 Menu

Press  enter the Main menu , the system icon as below:



1.Digital Spirit Level



2.Records Review



3.Audio switch



4. Bluetooth



5.Unit Setting



6 Distance Offset Setting



7.Device Information

## 3.SPECIFICATION

Model	NF-273L	NF-274L
Range	60m/80m/120m	60m/80m/100m
Accuracy	+/- 1.5 mm	
LCD screen	FSNT with backlight	
Wavelength&Output	630~670nm,<1mW	500~535nm,<1mW
Waveleng temperature	0~40°C(32F~104F)	
Storage temperature	-10~60°C (14F~140F)	
Laser Off	30s	
Auto-off	2minutes	
Protecion level	IP54	
Power	750mAh Lithium battery	
Voice broadcast	√	
Degree measurement	√	
Level measurement	√	
Unit switching	m/ft/in/ft+in	
Benchmark switching	√	
Single measurement	√	
Continuous measurement	√	
Area measurement	√	
Volume measurement	√	
Pythagorean measurement	√	
Vertical measurment	√	
Addition & subtraction measurement	√	
Data storage	100 sets	
Size	119*50*26mm	
Weight	110g	

## 4. PACKING LIST

1	Carry bag	1pcs
2	USB cable	1pcs
3	Reflector board(only for 100m)	1pcs
4	Lithium battery(built-in)	1pcs
5	Manual	1pcs
6	Qualification certification	1pcs

## 5.ERROR REASONS AND SOLUTIONS

Code	Reason	Solution
203	High or low temperature	Measure at the required temperature range
220	Low battery	Replace new battery
254	Wrong calculate	Measure again in correct operation
255	Weak signal	Test strong reflection ability of target
256	Strong signal	Don't measure under strong light
257	Out of measure range	Measure within the range
300	hardware error	Restart, or contact dealer if it happens again

## 6.OVERVIEW-LASER DISTANCE METERS



NF-2140



NF-2130L



NF-2100



NF-2050



NF-2330



NF-2030



NF-2240



NF-2260L



NF-271 Series



NF-272L Series



NF-273L Series



NF-274L Series