Manifold Electronic Gauge

Model: KC-100B

Operation Manual

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OVERVIEW

KC-100B manifold electronic gauge determines the distance to the object through electronic signals quickly and effective, the tool can display the result on the big two-row LCD.The tool with built-in computer chip has the function of key indication and memory, and it can be used in continuous accumulative measurement, automatic areas and volume counting and is an ideal tool for building and decoration industries (for example, land agent, upholstery designer and craftsman, etc.)

The tool has the function of laser orientation, it will send out a line of highlighted red laser beam to make you aim at the object easily when using. The automatic temperature compensation function of the tool can make the measuring result more accurately, and at the same time show the current environment temperature precisely.

KC-100B manifold electronic gauge is the Class II laser tool conforming to EN 60825-1 international safety rule.

SAFETY INSTRUCTIONS

Failure to follow the instructions listed below may cause personal injury.

- Read and understand all instructions prior to any operation.
- Do not remove any labels from the tool.
- Do not operate the tool with the presence of flammable/explosive gases.
- Do not operate the laser tool around the children or allow children to operate the laser tool, failure to do so will injure eyes of children.
- Do not stare into the laser beam.
- Do not project the laser beam directly into the eyes of others.
- Do not set up the tool at eye level or operate the tool on or near a reflective surface, as the laser beam could be projected into your eyes or the eyes of others.
- Do not observe the laser beam by using optical tools such as binoculars and magnifying glass.
- Warning

DANGER
Class II Laser Product
Maximum Power Output< 1mW
Wavelength: 630-660nm
Do not stare into beam!
Avoid direct eye exposure!
This tool emits a laser radiation!

Battery Safety Instructions

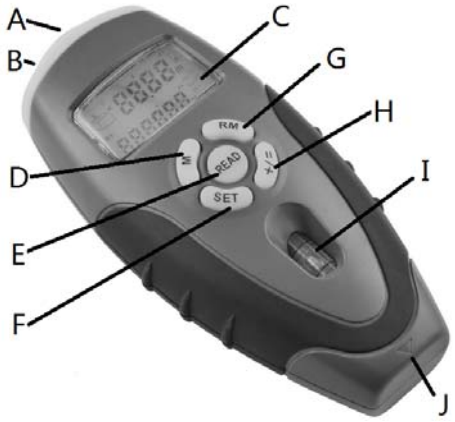
● Please remove the batteries when clean the product in case of the deterioration of battery and its damage to the tool.

● Remove the batteries before long term storage

● Please install the batteries properly as the instructions of the positive and negative charges

● Please dispose the batteries properly. High temperature will cause explosions and do not burn the batteries. Strap insulated tape around the battery charges to avoid unsafe contacts with other objects.Many countries have regulations regarding battery disposal.Please follow the local regulations of battery disposing.

TOOL COMPONENTS



A. Ultrasonic sensor aperture

B. Laser pointer

C. Two row LCD---the data of upper line is the current measuring result, and the data of lower line is the memory/computing result

D. M ---Memory input key: Input the length, area or volume into memory

E. READ --On/read key: Press this key to start the tool and read the measured distance, keep pressing this key and move the tool to read values dynamically

F. SET ---Clear/ Menu: press this key to clear or return back to the menu to select length, area or volume mode

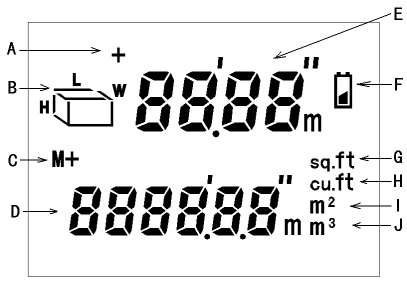
G. RM ---Memory read key: Read out and display the value of length, area or volume that are stored in the last time

H. +/= ---Addition key: Add the measured length, area or volume

I. level vials

J. Measuring reference---distance measurement is counted from end of the tool

ILLUSTRATION OF DISPLAY SCREEN



A．Plus

B．Area/volume （L=length；W=width；H=height）

C．Memory

D．Memory, computing result

E．Current measuring result

F．Display when lack of electric quantity

G．Square foot

H．Cubic foot

I． Square meter

J． Cubic meter

OPERATION GUIDE

Battery installation

Open the battery compartment door on the back of the tool, and plug one 9 Volt block battery onto the battery connector and put the battery back to the compartment and close the door.

Distance measurement

- Make the induction hole of the tool face against the measured object (e.g. the wall) and keep the tool vertical to the measured object; make sure the point of the level vial stands between the two line of the level vial by adjusting the position of the instrument.

- Press the READ key to start the tool, the instrument is ready to work.

- Press the READ key again to get the measured distance and the laser beam indicates the measured surface
- Keep pressing the READ key and move the tool to get the dynamical readings, and the measured distance will be displayed on upper portion of the screen;
- Press the SET key and the READ key together to select the measuring unit as British measurement or metric system. (original measuring unit : Metric measurement).

Tips: A. The measured object must be normatively hard surface and not be blocked by any barriers;

B. Select a smooth hard surface with big area to measure for precise result;

C. If the measured surface is too small and irregular or with soft surface, chipboard can be used on the surface of the measured object;

D. The tool cannot measure through glasses;

E. The tool should be over 2 feet (60cm) away from the measured object when measuring;

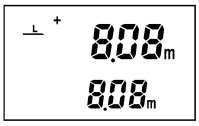
F. To make sure accurate measurement, you should operate when temperature of the unit is same with temperature of the circumstance.

G. The distance measurement should be counted from the end of the tool.

Addition (W/O using M memory)

- Press READ key for measurement and the measured value is displayed on upper portion of the screen;

- Press +/= key to enter the addition mode, and the "+" icon will appear on the display and at the same time, the result is displayed on the lower side of the display (press +/= key again to cancel the add operation);



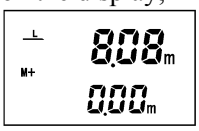
- Press READ key again for second time measurement, the measured value is displayed on upper portion of the screen;

- Press +/= key again to display the sum on the lower portion of the screen;

- Repeat the steps above can continue accumulation.

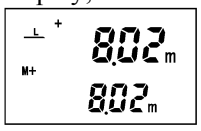
Addition (using M memory)

- Press the M key to save the first measured result, and the "M+" will appear on the display;

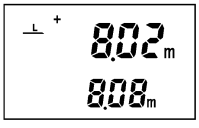


- Press the READ key for new measurement;

- Press the +/= key to enter the addition mode, and the "+" will appear on the display;

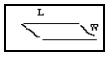


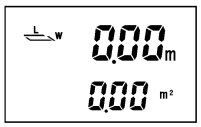
- Press the RM key to recall previous measurement for the addition (displayed on the bottom of the display), and at the same time, the "M+" icon disappears and the stored memories will be automatically eliminated;



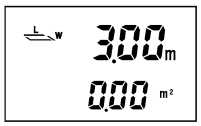
- Press+/= key, the sum is shown on the lower portion of the screen.

Area

- Press SET key to enter area mode, and the  will appear on the display for calculation of a room area;



- The length character "L" on the display will blink showing the length measurement you will be firstly taking. Press READ key to take length measurement that is displayed on upper portion of the screen. (Step 1);



- The width character "W" on the display will blink showing the next measurement to take. Press READ key to take width measurement that is displayed on upper portion of the screen (Step 2);
- Then the area is automatically displayed on the lower portion of the screen;

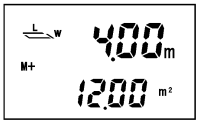
- Press the READ key again will toggle back and forth between the length and width measurement on the upper portion of the screen;
- Press SET key to clear the data on the portion of the screen, then can begin the new calculation of area.
- To choose measurement mode, press SET key again;

Tips:

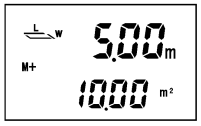
Press the SET key one by one will toggle back and forth between the length, area and volume measurement. If there are datum on the display, first pressing the SET key will clear the current datum, and the mode will be invariable.

Addition of area under area mode:

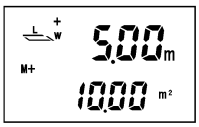
- Press the M key to save the calculated area of first time measurement, at the same time, the "M+" icon appears on the screen;



- Press SET key to clear the current displayed data, then can begin the second time measurement and computation (follow step 1 and step 2 under the area section);

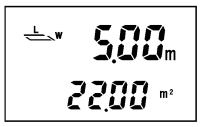


- After getting the desired area of the second time computation, press +/= to enter the addition mode. A "+" icon would appear on LCD.



- Press RM key to recall the first calculated area for the addition. The "M+" icon will disappear and the stored memory will be automatically cleared;

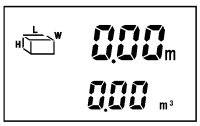
- Press +/= key, the sum of both areas is shown on the lower portion of the screen;



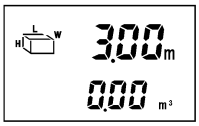
- Repeat the steps above to keep adding the measured area.

Volume

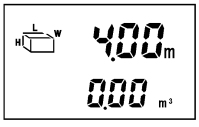
- Press SET key to enter volume mode, and the  will appear on the display for calculation of a room volume;



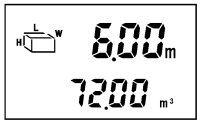
- The length character "L" on the screen will blink showing length measurement will be taking. Press READ key to take length measurement, the result will be displayed on upper portion of screen. (Step 1)



- The width character "W" on the screen will blink showing the next measurement to take. Press READ key to take width measurement, the result will be displayed on upper portion of screen. (Step 2);



- The height character "H" on the screen will blink showing the next measurement to take. Press READ key to take height measurement, the result will be displayed on upper portion of screen. (Step 3);
- Then the volume is automatically displayed on the lower portion of the screen;



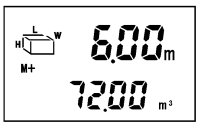
- Pressing the READ key again will toggle back and forth between the length, width and height measurement on the upper portion of the screen;
- Press SET key to clear the data on the portion of the screen, and then can begin the new calculation of volume;
- To choose measurement mode, press SET key again.

Tips:

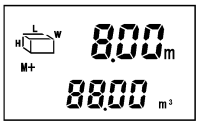
Press the SET key one by one will toggle back and forth between the length, area, volume and length measurement. If there are datum on the display, first pressing the SET key will clear the current datum, and the mode will be invariable.

Addition of volumes under volume mode:

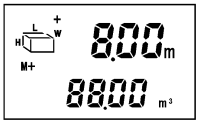
- Press M key to save the calculated volume of first time measurement, and the "M+" icon will appear on LCD;



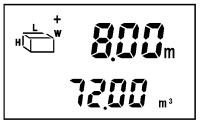
- Press SET key to clear the current displayed data, then can begin the second time measurement and computation (Follow step 1 to 3 under the volume section).



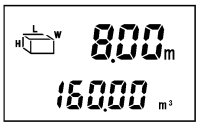
- After getting the calculated volume of second time, press +/= key to enter the addition mode. A "+" icon would appear on LCD;



- Press RM key to recall the first calculated volume for the addition. The "M+" icon will disappear and the stored memory will be automatically cleared;



- Press +/= key, the sum of both volumes is shown on the lower portion of the screen;

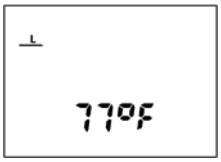


- Repeat the steps above to keep adding the measured volume.

Temperature display

Press and hold SET key and at the same time press the RM key, the environment temperature will appear on the lower portion of screen (the unit is ℃ if the distance unit is M, while the unit

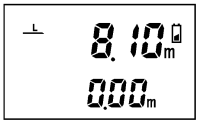
is ℉ if the distance unit is ft/in), and press the READ key again to return the measuring state.



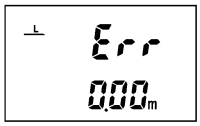
OPERATION INSTRUCTION

Inaccurate measurement may result from the following:

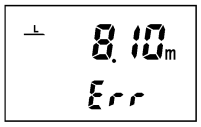
- When the battery runs out: at this time, the " " icon will continuously appear on LCD to remind you to replace the battery.



- When the measured distance is out of the specified range: the effective range is 2′ ~53′ (0.6~16m).



- When the calculated result is out of the specified range: at this time, an error message "Err" will be displayed on the lower line of the screen.



- When addition of different parameters (e.g. length plus area), the "+" will be ignored and the screen will keep the same read as the unit was operated before.
- When another ultrasonic source or high frequency noise is nearby: leave or shut down the noise resource when taking measurement.
- When barriers appear between the tool and the measured surface.
- When the measured surface is not smooth: the measured surface should be smooth, hard and of homogeneity.
- When the measuring environment is not good: the temperature and humidity will affect the accuracy of measurement, and take measurement under environment of no wind, and temperature of the unit should be same with temperature of the circumstance, especially for long distance measuring (between 40' to 53'/ 12m to 16m), the relative humidity should be above 48%, and the size of measured surface should be at least 10ft. by 10ft./3m by 3m.
- When measuring, ultrasonic sensor aperture should straightly face to the measured surface.

Cautions

- Handle with care and do not let the tool drop down.
- Do not disassemble the tool to avoid failure.
- Keep the tool dry and clean.
- Store the tool in the case when not in use.
- Avoid dust and water, which may stain the lens.
- Check battery regularly in case of its deterioration.
- Remove the battery when not in use for an extended period of time.

TECHNICAL SPECIFICATIONS

Name		Manifold electronic gauge
Type		KC-100B
Recommended use		Indoor
Measurement range		2’ to 53’ (0.6 to 16m)
Calculation range	Length	9999’ 11’’ (9999.99m)
	Area	99999.9 sq ft (99999.9 ㎡)
	Volume	999999 cu ft (999999m^3)
Resolution		0.01m
Wavelength of laser		630~660nm
Temperature range		0℃ to +40℃
Laser Class		Class II
Power supply		One 9V battery
Power consumption		<50mA
Automatic off		The tool will be automatically off after 30 seconds disabling.
Operating temperature		0℃ to 40℃
Operating humidity		30%～70%
Storage environment		-20℃～+60℃，≤85%（w/o battery）
Size		142mm×70mm×40mm
Weight		About 110g （w/o battery）

WARRANTY

The product is warranted to be free from defects in materials and workmanship for a period of one year from the date of purchase on the basis of providing relevant card.

Notice:

The warranty does not apply to the following conditions

- Disassembling the laser tool will void the warranty.
- Any damage resulting from, but not limited to wear, water, being dropped or repairs attempted by others.

Tips:Most parts of the product could be recycled, please refer to your local regulations for disposing of them instead of throwing into the dustbin.