



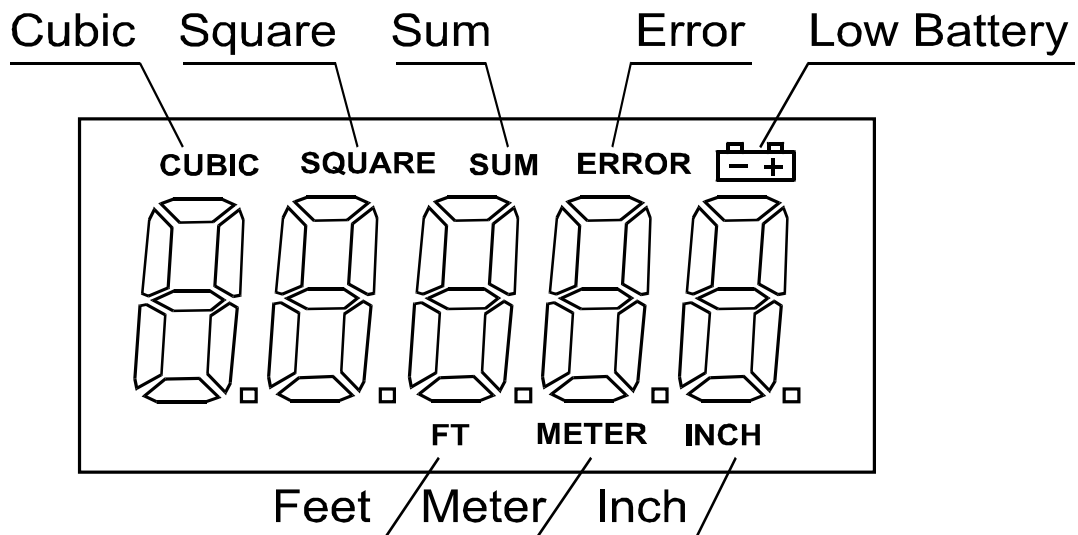
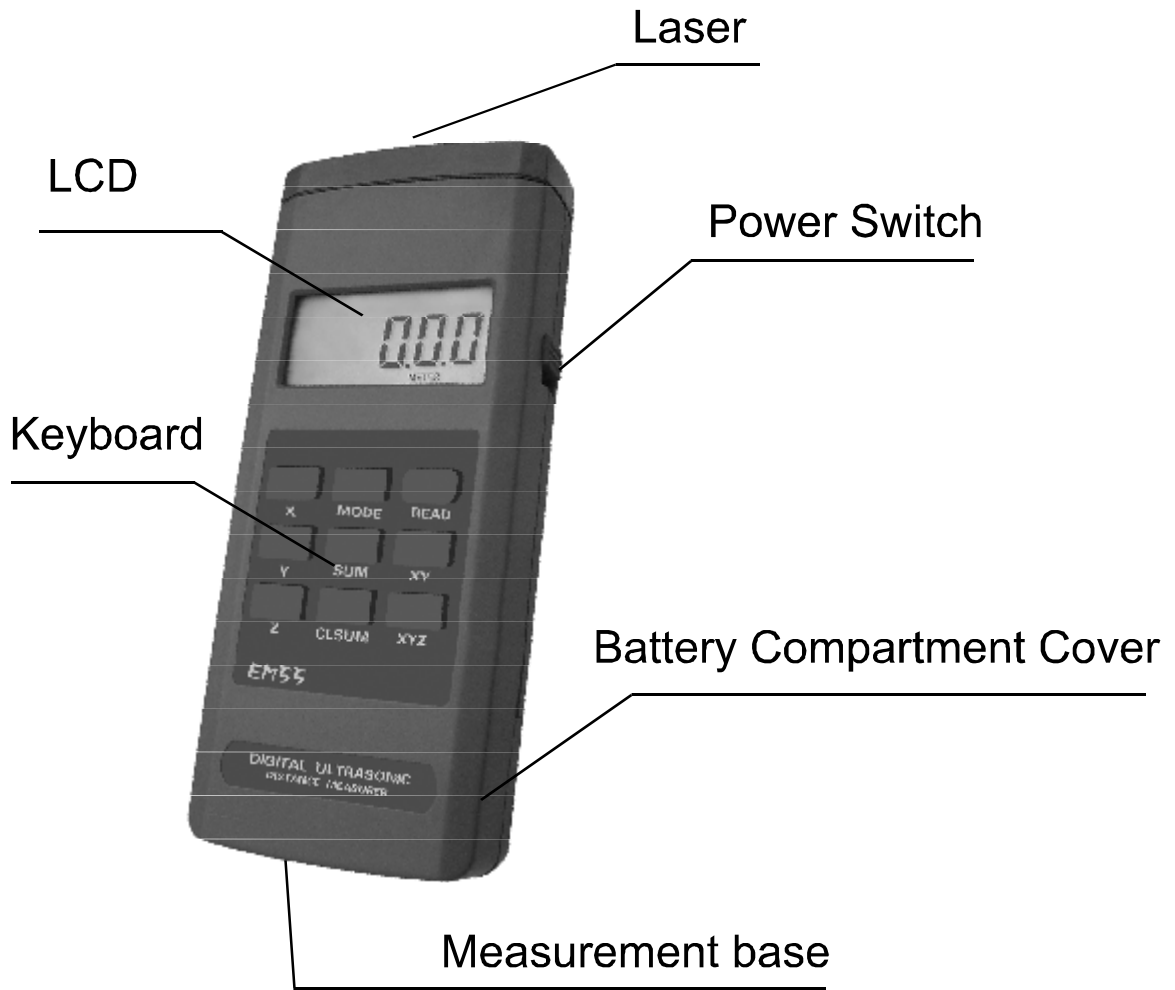
**EM55**

**DIGITAL ULTRASONIC DISTANCE MEASURER**

**OWNER'S MANUAL**

Read this owner's manual thoroughly before use

# Front Panel And Symbols



## Keyboard

**mode** — select imperial or metric system

**sum** — add distance

**clsum** — clear sum

**read** — measure distance

**xy** — calculate  $x*y$

**xyz** — calculate  $x*y*z$

**x** — store or recall distance

**y** — store or recall distance

**z** — store or recall distance

## Features

1. Instant or continuous measurement
2. Direct conversion between imperial and metric systems
3. Memory
4. Computation of area and volume
5. Addition of distance
6. Locating the point by laser

## Specifications:

**Measurement Range:** from 55cm to 12m

( aim the instrument vertically at the hard flat surface)

**Accuracy:**  $\pm(0.5\%+1\text{digit})$ (in still air)

**Resolution:** 0.01m

**Calculation Range:** Length 150.00m

Area  $12 \times 12\text{m}^2$

Volume  $1500.0\text{m}^3$

**Battery:** 9V(6F22) battery or equivalent

**Operating Temperature:**  $0^{\circ}\text{C}$  to  $50^{\circ}\text{C}$

**Storage Temperature:**  $-10^{\circ}\text{C}$  to  $60^{\circ}\text{C}$

**Size:** 14.5cm(L)x 5.8cm(W)x 2.6cm(H)

**Weight:** Approximately 150g

The distance value is based on  
the bottom of the equipment

## OPERATING INSTRUCTIONS:

### 1.Select imperial or metric unit

Press **MODE** key

### 2.Measure distance

Press **READ** key

### 3.Store measure data

a.Press **READ**

b.Press **X**, **Y** or **Z**

### 4.display the stored data

press **X**, **Y** or **Z** again

### 5.Calculate the sum of distance

Press **SUM** → **X** ( **Y** or **Z** ) → **SUM** → **Y** ( **X** or **Z** )

**SUM** → **Z** ( **X** or **Y** ) → **SUM**

### 6.Clear sum of distance

Press **CLSUM**

### 7.Calculate area

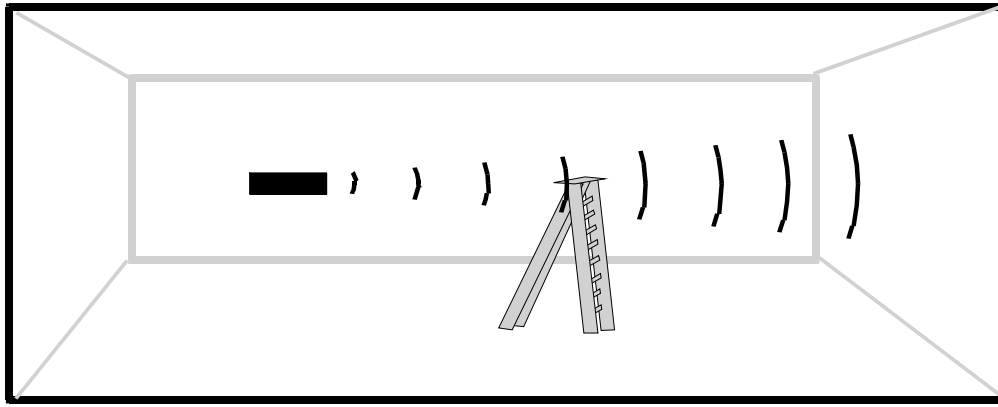
Press **READ** → **X** → **READ** → **Y** → **XY**

### 8.Calculate volume

Press **READ** → **X** → **READ** → **Y** → **READ** → **Z** → **XYZ**

### Note:

- 1.While measuring long distances or narrow spaces,the ultrasonic pulses will touch the nearest object within the cone of  $\pm 7^\circ$ ,the display will indicate the distance of the nearest object.

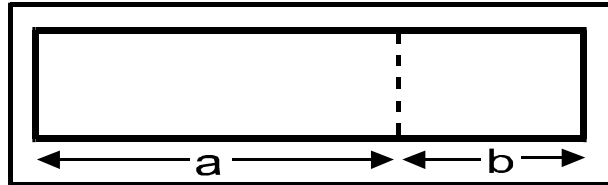


In the figure the distance to the ladder will be measured instead of the wall. The instrument requires a clear view within a cone of  $\pm 7^\circ$

2. Make sure that the laser does not aim at people's eyes.
3. While measuring, point the EM55 vertically to the surface of the measured target.
4. It will affect the results of measuring if the reflected surface of the target is irregular or soft.
5. It will affect the results of measuring if there is another ultrasonic source in the vicinity.
6. It will show the "ERROR" symbol in the following conditions:
  - a. The distance is shorter than 55cm or longer than 12m or the reflected ultrasonic pulses are not strong enough.
  - b. The sum of distance exceeds  $150\text{m}^2$
  - c. The volume value exceeds  $1500.0\text{m}^3$

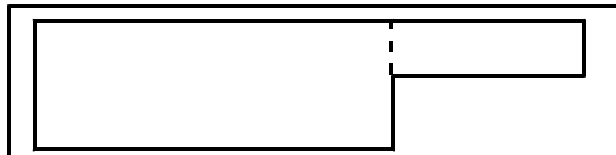
## 7. Measure long distance

When you want to measure a long distance, you can divide it into two parts, and then you can measure the each part, finally, you can add them.



## 8. Calculate irregular area

When you want to measure an irregular area, you can divide it into several regular parts, then you can measure the each part, finally, you can add them.



## **Replace the battery and cleaning**

While the LCD panel displaying the symbol "☹️🔋", it shows that the power of the battery is not enough, please replace it with a new one of the same type. When the equipment will not be used within a long period, please remove the battery out of the equipment. While cleaning, use a soft moist cloth. Never use any solvent.