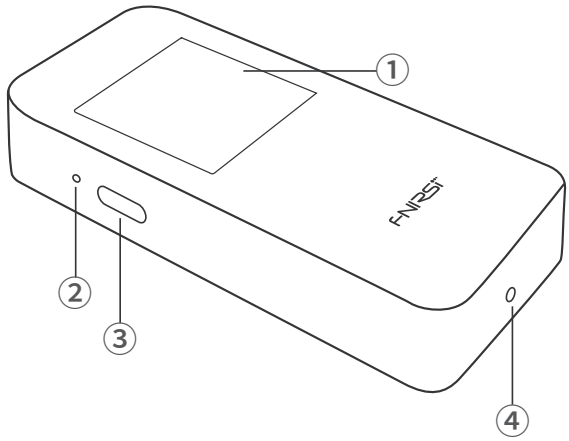
FNIRSI

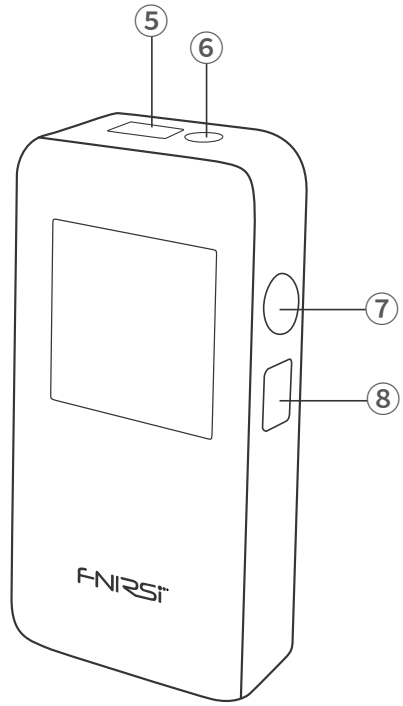
IR40

IR40 SMART RANGEFINDER

【1】Keys and Functions

① LCD display
② Charging indicator
③ Type-C port
④ Reset hole
⑤ Laser receiver lens
⑥ Laser emission lens
⑦ On/Measure key
⑧ Off/Clear key





【2】Parameters

▲ Parameter Analysis

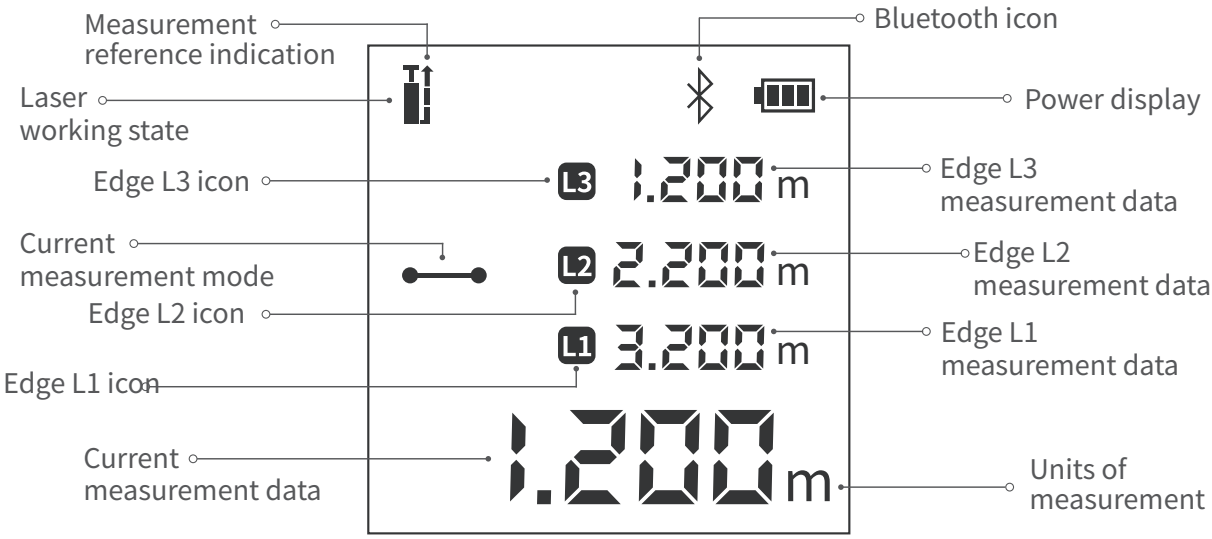
Resolution: 1mm	Laser Class: Class II
Unit: m/ft/in	Laser type: 620-670nm
Measurement time: 0.1~3s	Measurement range: 0.05~40m
Measurement accuracy：±(2mm+5x10^{-5}Dmm)	
Operating temperature range: 0~40 degrees	
Storage temperature range: -20 degrees to 60 degrees	
Executive standard：GB7247.1-2012	

▲ Test Conditions

1. **General Conditions**: General conditions:It refers to the strong reflection ability of the laser irradiation area.(such as painting white walls).The background lighting is dim and the operating temperature is 15°C-35°C.At this time, an error effect of plus or minus 0.05 mm/m should be considered

2. **Disadvantages**: Refers to the weak reflectivity of the laser-irradiated area.(Like black cardboard polished tiles.)The background lighting is strong and the working temperature is <0°C or >45°C.At this time, an error effect of plus or minus 0.15 mm/m should be considered

【3】Show Description



【4】Instructions

▲ Operation Precautions

1. The rangefinder cannot be moved during measurement, it needs to be placed on a fixed support surface

2. Do not block the laser emission hole and the receiving lens during measurement

3. Based on physical principles, errors will occur when measuring on certain surfaces, such as transparent, highly reflective, low reflective or porous surfaces. Aiming targets can be placed on the above objects if necessary to improve measurement accuracy

▲ Power On: Press and hold the "⑦ On/Measure key" for 3 seconds. When the "FNIRSI" LOGO appears on the LCD display, the device is turned on

▲ Power Off: Press and hold "⑧ Off/Clear key" for 3 seconds.When the LCD display turns off, the device is turned off.(When there is no operation after power on: the laser will automatically turn off after 15 seconds, and it will automatically turn off after 5 minutes)

▲ **Reset**: Poke the "④ Reset hole" with a toothpick and the machine will be forced to shut down.Used to handle exceptions.

▲ **Single Measurement**: Single measurement:Single short press "⑦ On/measure key" to start measurement.Short press the "⑦ On/Measure key" again to get the measurement data.The page displays up to 4 sets of measurement data. During measurement, the straight line at the "measurement mode" turns into a dotted line, indicating that the measurement is being performed

▲ **360° Screen Flip**: Built-in gravity sensor chip, the screen can be flipped automatically.Instructions:Long press the power button in the off state, don't let go after power on, and enter the display interface after 3 seconds to switch the adaptive rotation function on/off.

▲ **Unit Switching**: Quickly double-click with "⑦ On/Measure key" to switch the unit. The order of unit switching is meter → feet → inch

▲ **Automatic Calibration**

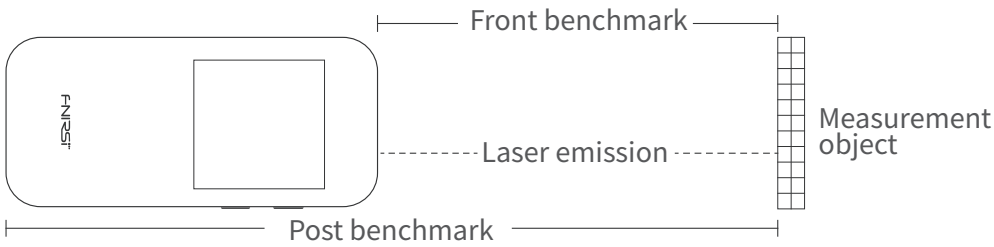
1. In the off state, press and hold the "⑧ Off/Clear key", then press and hold the "⑦ On/Measure key" for 3 seconds, when the screen displays "CAL", it means that the calibration mode is entered
2. Short press "⑦ On/Measure key" to increase the calibration value.Short press "⑧ Off/Clear key" to decrease the calibration value.The calibration range is "-10mm to 10mm". Press and hold the "⑦ On/Measure key" for 2 seconds to indicate that the calibration is complete.Automatically enter the measurement interface

▲ **Clear Function**: Clear function:Short press "⑧ Off/Clear key" to cancel the last command.A single measurement (area or volume, etc.) within the same function.You can use "⑧ Off/Clear key" to clear the last measurement operation and re-measure

▲ **Measurement Reference Switching**

Measurement reference switching: Quickly double-click the "⑧ Off/Clear key" to switch the front and rear benchmarks

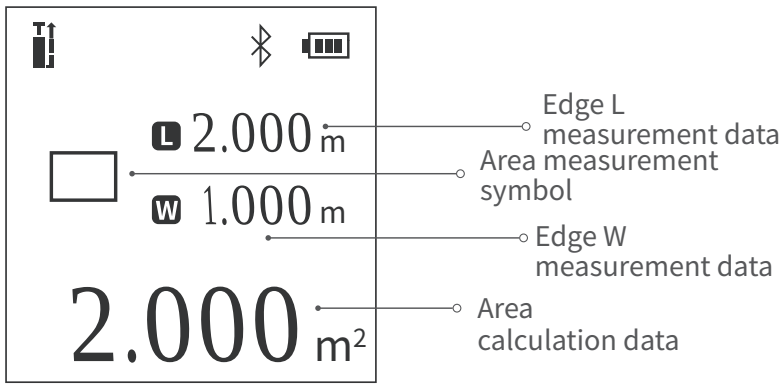
1. “ ”**Front benchmark:** Front datum refers to the measurement starting position from the top of the device
2. “ ”**Post benchmark**: Rear datum refers to taking the bottom of the device as the starting position for measurement, and the device defaults to the rear datum

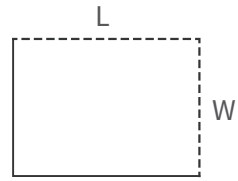


【5】Advanced Measurement

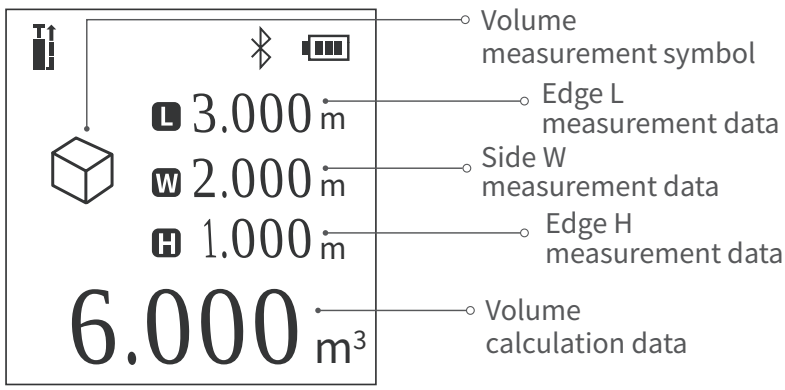
▲ **Measurement Mode Switching**: Long press the "⑦ On/Measure key" to switch the measurement mode cyclically.The order is "Linear Measurement" → "Area Measurement" → "Volume Measurement" → "Pythagorean One" → "Secondary Pythagorean (Data Addition)" → "Secondary Pythagorean (Data Subtraction)"

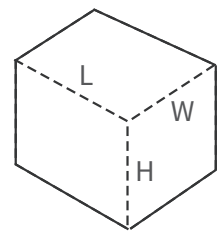
▲ **Area Measurement**: Click "⑦ On/Measure key", and measure the length and width in turn.The dotted line during measurement indicates the edge to be measured.When all sides are measured, the system automatically calculates the area



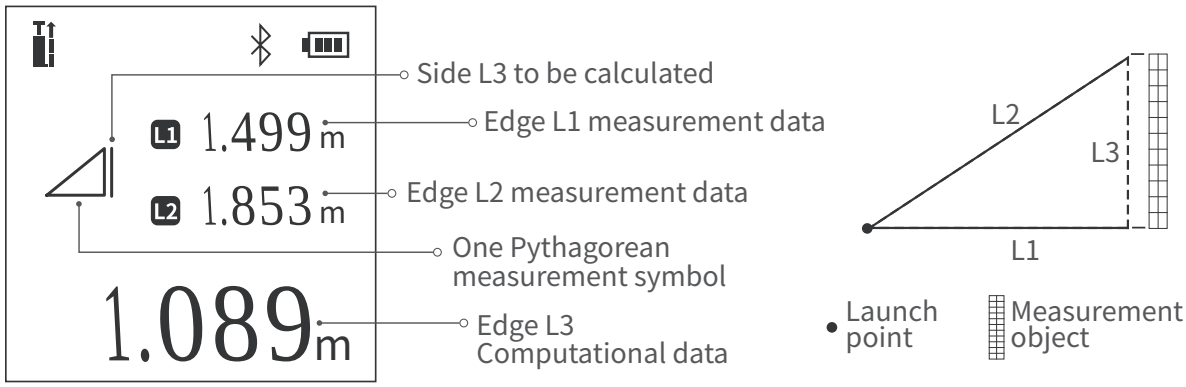


▲ **Volume Measurement**: Click the "⑦ On/Measure key", and measure the length and width in turn.The dotted line during measurement indicates the edge to be measured.When all sides are measured, the system automatically calculates the area



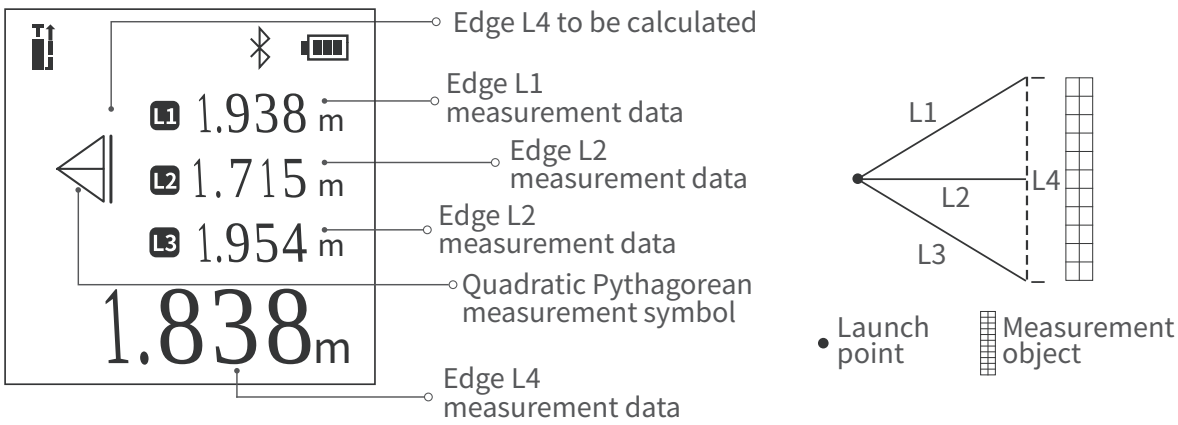


▲ **A Pythagorean**: When the selection interface is not measured, the solid yellow line indicates the edge of the final calculation result.Short press "⑦ On/Measure key" to start measurement.The dotted line during measurement indicates the edge to be measured.Short press again to get measurement data.Measure the data of the right-angled base "L1" and the right-angled hypotenuse "L2" in sequence.At the end of the measurement, the bottom edge L3 data will be automatically calculated



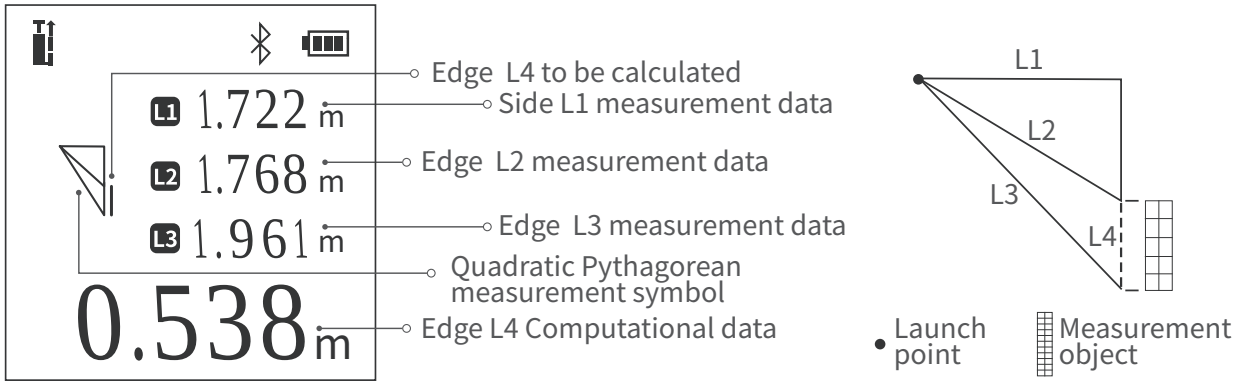
▲ **Quadratic Pythagorean(data addition)**: When entering the interface and not starting the measurement, the yellow solid line indicates the edge of the final calculation result.Short press "⑦ On/Measure key" to start measurement

When measuring, the dotted line indicates the edge to be measured. Short press again to get the measurement data.Measure the triangle hypotenuse L1 data, height L2 data, and hypotenuse L3 data in sequence.At the end of the measurement, the bottom edge L4 data will be automatically calculated



▲ **Quadratic Pythagorean (data subtraction)**: When entering the interface and not starting the measurement, the yellow solid line indicates the edge of the final calculation result.Short press "measurement end will" to start the measurement, the dotted line indicates the edge to be measured during measurement.

Short press again to get measurement data.Measure the right-angle base L1 data, L2 data and right-angle hypotenuse L3 data in sequence.At the end of the measurement, the bottom edge L4 data will be automatically calculated



【6】Bluetooth Status Indication

▲ After power on, the Bluetooth icon at the top of the screen flashes.After the bluetooth connection is successful, the bluetooth icon will no longer flash

【7】Battery Level Indication

▲ **Battery Level Indicator**: When all segments of the battery icon on the LCD display are displayed, it means the battery is fully charged.The number of displayed segments decreases, indicating that the power is relatively reduced.

When only the battery box is displayed, it should be ready to charge in time.When charging, the segment code will flow and the red charging indicator on the left side of the device will light up.When the red light goes out, the battery is fully charged

▲ **Automatic Shutdown When Low Battery**: When the battery is too low, the LCD display will prompt the low battery.And countdown to shutdown

【8】Error Code

ERR01：Hardware malfunction	ERR02：Unstable signal
ERR03：Abnormal temperature	ERR04：Target out of range
ERR05：Invalid measurement result	ERR06：Background light is too strong
ERR07：The signal is too strong or too weak	
ERR30：Does not satisfy the Pythagorean theorem	
ERR60：No light return or hardware failure	

【9】Safety Warning

Warning! Before using the product for the first time.Please read the safety regulations and operating instructions carefully first

▲ Please read all operating instructions and safety regulations in this manual carefully before using the product.Using the product not in accordance with the operating methods in this manual may cause damage to the product, affect the measurement accuracy, and cause personal injury to the user or others

▲ Do not open or repair the product by yourself in any way.It is strictly prohibited to illegally modify or change the performance of the product's laser transmitter.Please keep the product properly, do not place it where children can reach

▲ It is strictly forbidden to use the product laser to irradiate your own or others' eyes and other parts of the body.It is strictly forbidden to irradiate the laser on the surface of highly reflective objects

▲ The electromagnetic radiation of the product may cause interference to other equipment and devices.Please do not use this product near aircraft or medical equipment.Do not use the product in a flammable and explosive environment.

▲ Used batteries and scrapped products replaced by products cannot be disposed of with household waste.Please dispose of used batteries and scrapped products in accordance with relevant national or local laws

【10】 Production Information

Product name: FNIRSI 40m Smart Rangefinder

Brand / Model: FNIRSI / FNIRSI-IR40

Manufacturer: Shenzhen FNIRSI Technology Co., Ltd.

Website: www.fnirsi.cn

Address: Building C, Weihuada Industrial Park, Dalang Street, Longhua District, Shenzhen, Guangdong, China

【11】Connect APP

▲Please search for "RangeFinder" in Google Play (Android) or App Store (IOS) to download the rangefinder APP and install it for authorized use.

Android

IOS

▲On the APP device page "+" to enter the searching page, it will automatically search for nearby devices.

▲When the rangefinder icon appears, select the corresponding device to add and connect successfully, and the Bluetooth icon on the terminal device page is always on.