

# *Loca/Safe*

## Anti-collision alarm system

### Instruction Manual

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can it replace the supervision system and measures in the operation management. During the use of this product, please do not reduce your safety awareness by using this product.

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The data in this specification are theoretical values, all obtained from the internal laboratory of the Research in a specific test environment. In actual use, it may be slightly different due to individual differences, software versions, use conditions and environmental factors, please refer to the actual use.

Our company reserves the right to change product design and specifications, and is subject to changes in product design, function and technical indicators without further notice.

If you have any questions, please contact our company for repair or replacement, contact information: info @ tsingol.com.

### **safety instruction**

The purpose of this content is to ensure that correctly use the product to avoid danger or property damage. Please read this manual carefully and keep it for future reference.

Preventive measures are divided into two parts: "warning" and "attention". Ignoring the warning items can result in death or serious injury. Ignoring precautions and may result in injury or property damage.

warn:

- Use a power supply that meets SELV (safe ultra low voltage) and 24V DC per IEC60950\_1 to Limited Power Source (restricted power) (see the specification for power supply requirements).
- If the equipment is not working properly, please contact the manufacturer and do not disassemble or modify the equipment in any way (responsible for problems caused by unauthorized modification or maintenance).

- This installation shall be performed by professional service personnel and in accordance with local regulations.

- Easy-to-use power-off equipment shall be included in the building installation assembly line.

pay attention to:

- Before the base station runs, please check whether the power supply is correct.

- Please avoid falling or knocking this product hard.

- Please avoid placing it in wet, dusty, extremely hot and extremely cold places.

- Ensure that the installation position is kept at sufficient distance from the surrounding electromagnetic sensitive equipment to avoid possible electromagnetic interference.

- Ensure that there is no electromagnetic shielding / jamming equipment (such as mobile phone shield / jammer, WiFi shield / jammer around the installation location).

- Avoid heat accumulation and keep the ventilation around the positioning base station smooth.

- Do not allow water and any liquid to flow into the base station when using it.

## **FCC Statement**

### **—、 for all devices ,basic FCC statement need to be added in User manual**

Warning: Changes or modifications to this unit not expressly approved by the party responsible

for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the

following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

The device must not be co-located or operating in conjunction with any other antenna or transmitter.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions : (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**\*RF warning for Mobile device:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

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# 1. Product introduction

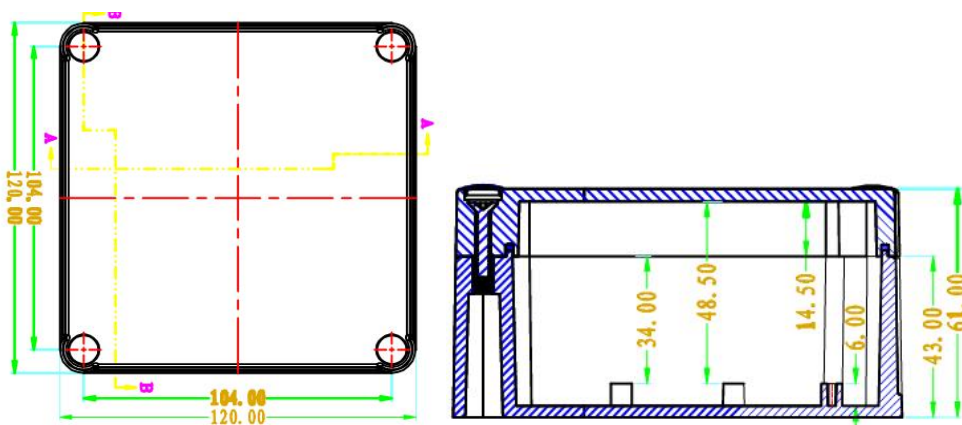
## 1.1. Product overview

*LocalSafe®* The ranging alarm system is the world's leading high-precision distance protection system, with the highest ranging accuracy up to 10cm. The system includes:

- Labels (Tag), worn on pedestrians;
- Alarm (Alarm), make a warning sound to prevent pedestrians from approaching;
- Connect the cable (Wire) to connect all parts of the system;

## 1.2. Host size

Note: The following dimensional tolerance is 1mm;

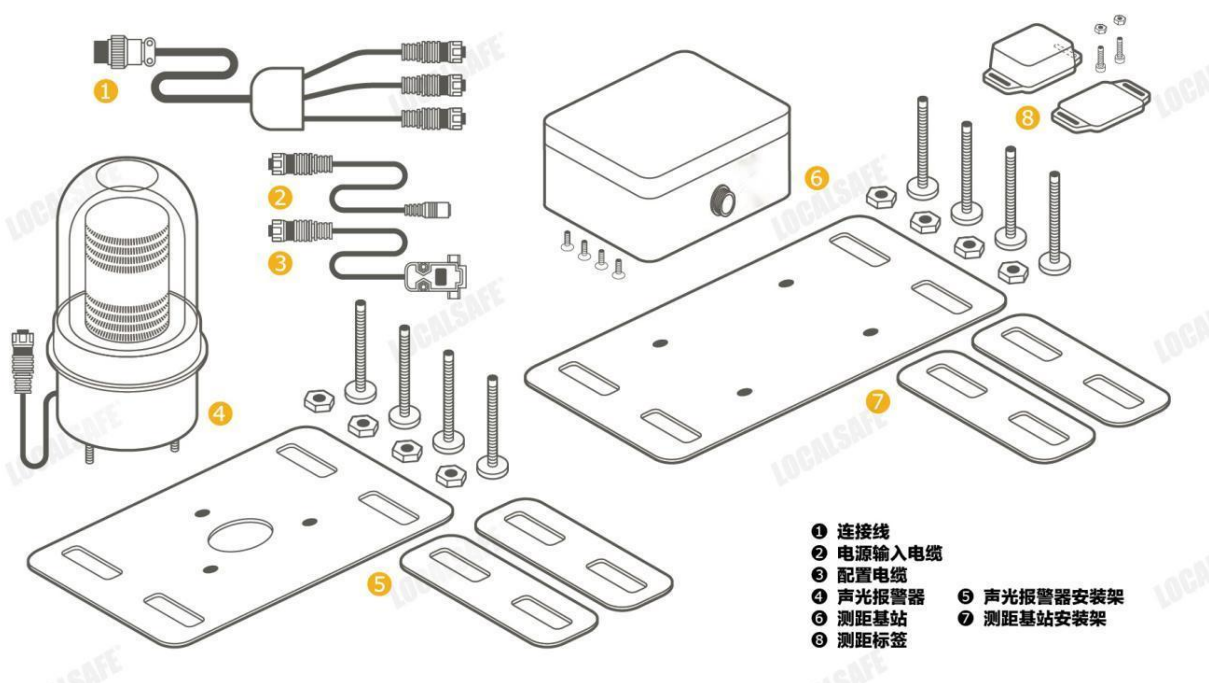


## 1.3. The interface description

main engine	
rated voltage	24V – 48V DC
Dimensions / weight	120 x 120 x 61(mm) / 270g
working temperature	0 °C - 60° C
Frequency range / effective range	UWB(Ch5)-----6489.6MHz
	Range: 0.5-32 m
Tags limit	Up to simultaneous detection: 30 labels
antenna	built-in
Case material	ABS, waterproof, with metal bottom plate
install	Install horizontally at the top , using a matching wire.

## 2. Instructions

## 2.1. Parts



## 2.2. Line order

The connection system is shown in the figure below. Please use the power input cable connecting the cable to correctly connect the battery according to the positive and negative signs identified by the cable. The serial port interface line will be used when the alarm area is required; when the configuration is completed, it is recommended to remove the serial port interface line and save it separately.



## 2.3.

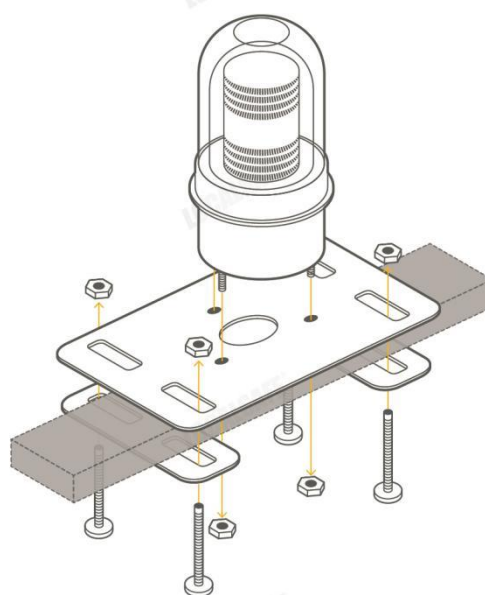
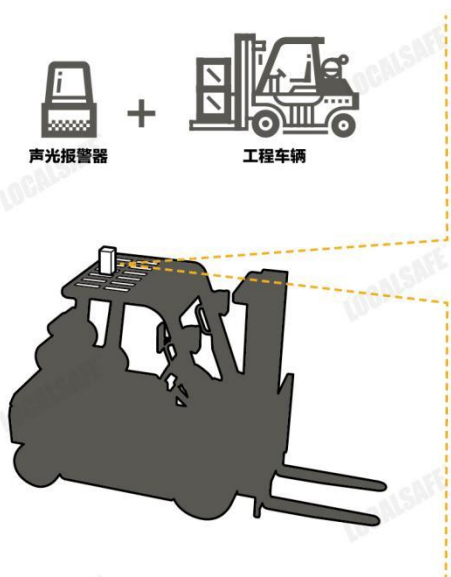
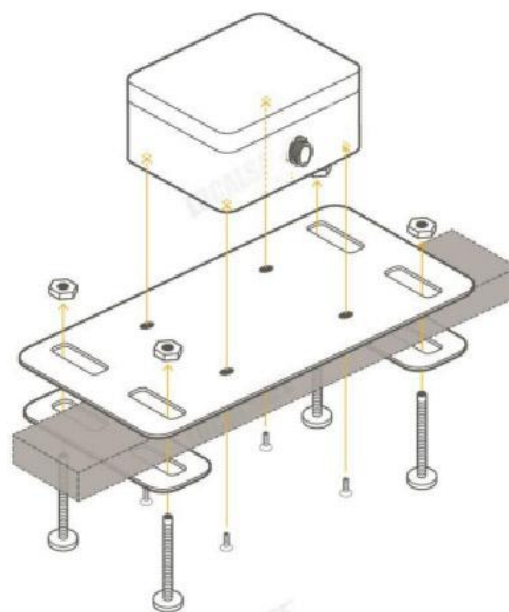
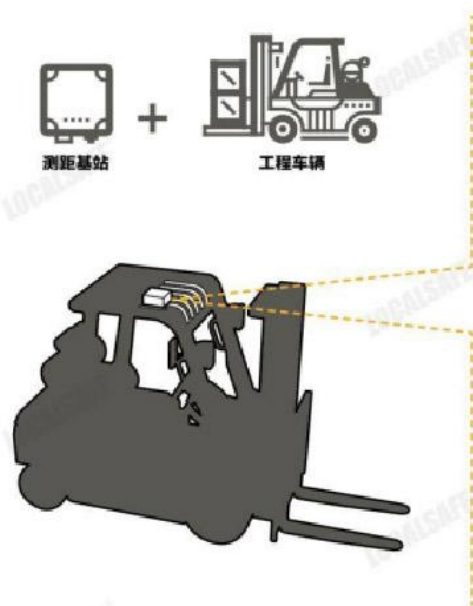
### Installation

#### 2.3.1. Installation of the host

1) The host machine has installed the metal bottom plate before leaving the factory. In use, the main engine shall be horizontally mounted to the top or front beam. Note that after installation, the host can not be blocked by metal objects, otherwise it will affect the detection distance and accuracy of the equipment;

2) Use the "power input line" to connect the 24-48VDC power supply ;

3) Install and connect the alarm device;



### 2.3.1. Installation of the labels

Please to the instructions for use of each label.

### 3. Adjust the alarm range

LocalSafe® Provide two methods to adjust the alarm range:

- Adjust the knob on the base station;
- Use the adjustment software for the system configuration;

#### 3.1. Knob adjustment (for knob version only)

It is easy to adjust the alarm distance with the knob. As shown in the figure, the knob has 8 gears, with each gear pointing to a preset alarm distance. In the foreign version of this product, the alarm distance from 1 to 7 gears is 10 feet to 70 feet, and the eighth gear is the software configuration file; in the domestic version, the alarm distance of 1 to 6 gears is 1m / 2m / 4m / 8m / 16m / 32m, the seventh gear is neutral, and the 8th gear software configuration file. After the knob gear rotates 5S, the alarm distance corresponding to the new gear begins to take effect.



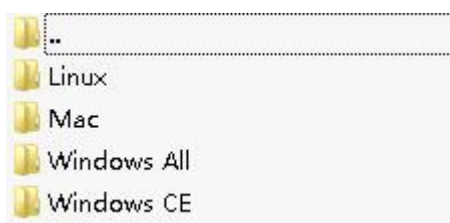
For example, rotating the gear to "50" means that the alarm distance is changed to 50 feet. When effective, any label is within 50 feet of the alarm host. Turn the knob to "10" and change the alarm distance to 10 feet after 5 seconds. Any label near the alarm host to within 10 feet will trigger an alarm host alarm. The 8th gear (the "CON" gear is shown) indicates that the knob gear setting is ignored and the alarm is made using the configuration of the configuration software.

### 3.2. Adjust the alarm distance by using the configuration software

If you want to set the alarm distance to a distance with no preset gear (or the device itself), such as "35 ft", then you need to use the configuration software configuration. First, adjust the knob to the 8th gear, and then connect the alarm host and PC in the figure below.

In the figure above, since the notebook does not have DB9 serial port interface and only USB interface, we used USB turn serial port controller to connect the alarm host and PC together. When using the USB serial port, the first need to install the USB serial port, the driver of the controller.

***Unzip the USB2COM\_Driver. The zip file, in the driver folder, looks for files suitable for your operating system.***



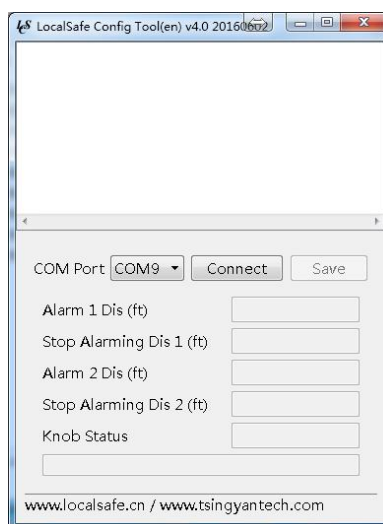
After the installation, restart your system to allow the drive installation to take effect.



Before using the configuration software, reconfirm that the following conditions are met:

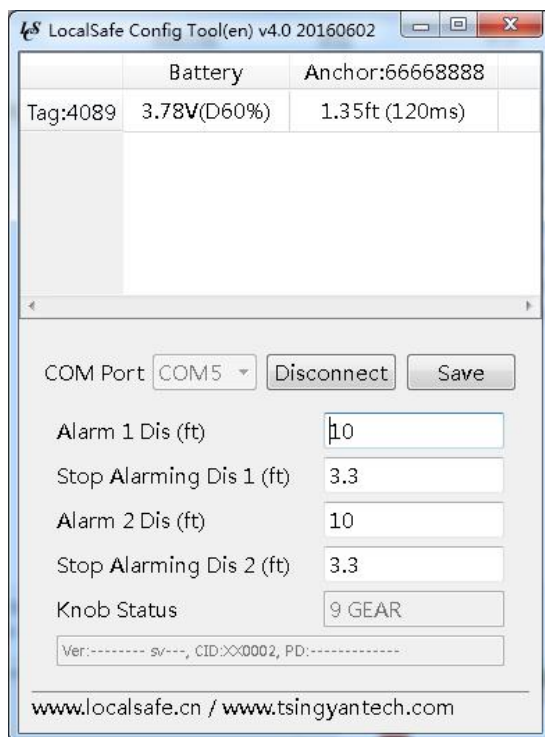
- **main engine.** Connect the PC and the host machine, use the USB turn serial port, the controller, and correctly install the controller drive on the PC;
- Host power supply is normal;
- The knob on the main engine is selected to the eighth gear (CON gear);

Open the LocalSafe software folder, and double-click: LocalSafe\_ConfigTool\_V4\_0 ".

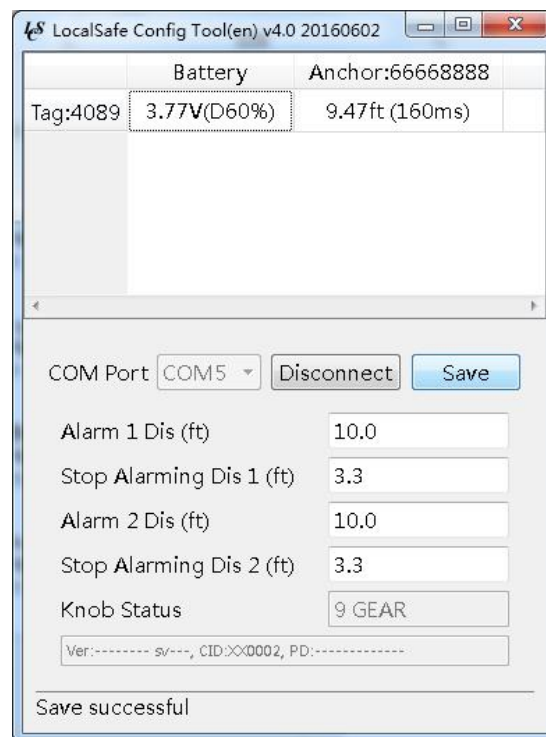


If you have successfully installed the driver of the USB transfer serial port controller, then the software will automatically identify the "COM Port (serial port, port number)". Click the "Connect (Connection)" button, and the software

will display the available information about the host, as shown in Figure 4-1 below.



graph 4-1



graph 4-2

Set the alarm distance 1 (m) / 2 (m) to the distance you need to trigger the alarm, and set the alarm distance 1 (m) / 2 (m) to the distance you need to avoid the alarm. Note that in the general system, the distance set of "alarm distance 1 (m) / alarm distance 2 (m)" is the same; the setting of "no-report distance 1 (m) / no-report distance 2 (m)" must be less than the "alarm distance 1 (m) / 2 (m)", which can be set to 0.

parameter	explain
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Alarm distance: 1 (m)	<p>The distance where you want to trigger the alarm.</p> <p>For general systems, this parameter should be set to coincide with the value of "alarm distance 2 (m)". This parameter controls the distance value that triggers the alarm 1.</p>
1 (m)	<p>If the label is particularly close to the Anchor, the label is likely to be worn by the driver and you may not want to call the police again. Therefore, this distance is generally set to 1~2m, because the range of the driver to the Anchor is such.</p> <p>For general systems, this parameter should be set to the value of "no distance 2 (m)". This parameter controls the distance value that triggers the alarm 1.</p>
Alarm distance: 2 (m)	<p>The distance where you want to trigger the alarm.</p> <p>For general systems, this parameter should be set to coincide with the value of "alarm distance 1 (m)". This parameter controls the distance value that triggers the alarm 2.</p>

2 (m)	<p>If the label is particularly close to the Anchor, the label is likely to be worn by the driver and you may not want to call the police again. Therefore, this distance is generally set to 1~2m, because the range of the driver to the Anchor is such.</p> <p>For general systems, this parameter should be set to the value of "no distance 1 (m)". This parameter controls the distance value that triggers the alarm 1.</p>
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## 4. ST

After the setup completes, the necessary tests must be performed. For example, you have set the following parameters:

Alarm distance 1 (m) = 15; free distance 1 (m) = 2;

Alarm distance 2 (m) = 15; no-report distance 2 (m) = 2;

The area that actually triggers the alarm is shown in the red area below

If the label enters the Alarm Area, the primary opportunity drives the alarm, and if all of the labels leave the Alarm Area, the primary opportunity stops the alarm.

## 5. tending

In order to ensure the long-term and effective operation of the system, regular maintenance of the LocalSafe ranging alarm system is required.

### 5.1. Label maintenance

The label can be maintained by reference to the instructions for use of the label

### 5.2. Label host maintenance

The main engine is installed on the top , and the user needs to regularly check whether the base station is still working normally. The easiest way is to put a label into the screen area and then see if the host alarms properly.

- Avoid placing the product in an extremely hot, extremely cold, strong magnetic, corrosive environment, do not put the product close to other heat sources and electromagnetic sensitive equipment.
- Do not hit or hit the equipment, do not use hard puncture or scratch the equipment.
- This product is recommended to be protected in factory packaging.

## 6. Precautions

Note: This tip is only for professional maintenance for reference.

Common cases	probable cause	solve the problem
After installation, the label enters the alarm area, but there is no alarm.	<p>The connection cable is disconnected;</p> <p>The connection cable is not plugged in;</p> <p>Host damage;</p> <p>The label has no electricity;</p> <p>The label is dormant;</p> <p>Label damage;</p>	<p>Tighten the plug-in;</p> <p>Up and down again;</p> <p>Change a cable;</p> <p>Change to an alarm host;</p> <p>Charge the label;</p> <p>Change a label;</p> <p>Wake up the label by vibration;</p>
After installation, only one way alarm light works, and the other way does not work.	<p>The alarm is not plugged in;</p> <p>Damaged connection cable;</p> <p>Damage to alarm;</p> <p>Host damage;</p>	<p>Tighten the alarm interface;</p> <p>Change a line;</p> <p>Change it to an alarm;</p> <p>Change a base station;</p>

No label is in the alarm range, but the host machine alarms	There may be a label on the charge, being within the alarm range, but not being noticed.	Store the charging tag separately and stay away from the screen area.
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## 7. Warranty instructions

The warranty period of this product is 1 year. From the purchase date, the fault of the product under normal use.

### **Non-warranty regulations:**

Unauthorized maintenance, misuse, collision, negligence, abuse, fluid injection, accident and alteration;

Incorrect use of accessories not used in the product;

Man-made surface damage, such as scratches, dents, dents, etc.;

Damage caused by force majeure.