

SEEKCY TECHNOLOGY

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## BLT5 Positioning Terminal Instructions for Use V1.2

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## I . Preface

### Preface

Thank you very much for choosing Seekcy Technology BLT5 series products.

In order to help you quickly understand and skillfully use the related products of the Taizhun positioning system, we have compiled the "Taizhun positioning system" series of product instruction manuals. Please be sure to read this instruction manual carefully before using the product. It will help you solve problems you may encounter during use.

This manual mainly introduces the BLT5 Positioning Terminal, mainly including product technical parameters, instructions for use, product list, and after-sales services . It introduces the product functions, technical parameters, detailed operating instructions and after-sales support of the terminal in detail, striving to solve your worries. This manual is only for BLT5 series terminals.

We have tried our best to cover everything you may want to know, and Seekcy Technology will strive to provide you with complete after-sales service and technical support!

Seekcy Technology official website : [www.seekcy.com](http://www.seekcy.com)



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## II. Product Introduction

### 2.1 Function Introduction

The BLT5 Positioning Terminal is a card-type positioning terminal used in the AOA positioning system. BLT5 Positioning Terminals are small in size and have long-lasting standby. They are widely used for precise positioning of people and objects. Some terminals meet explosion-proof requirements.

The entire series is equipped with a 780mAh rechargeable lithium battery, combined with unique low-power positioning technology, which can achieve ultra-long standby in different scenarios. It supports 2 Pin universal magnetic interface charging, making charging more convenient and faster.

The BLT5 Positioning Terminal has a built-in standard 13.56MHz RFID chip (ISO14443A), which can replace existing RFID cards and be used in access control, parking lots, and consumer scenarios.

The BLT5 Positioning Terminal supports one-click alarm/help, which can quickly initiate an alarm/help request to the base station to ensure the safety of positioning personnel.



figure 1 BLT5 appearance picture (Some models are black)

## 2.2 Technical Parameters

Table 1 Basic parameters of BLT5 Positioning Terminal

Taizhun <sup>®</sup> positioning terminal	
Device model	BLT5
Version	st.s.g.c.x
Supporting protocol	BLE 4.0 协议 BLE 4.0 protocol, iBeacon protocol , AOA protocol , Taizhun <sup>®</sup> protocol
Power supply solution	780mAh lithium battery
Charging solution*	5V/1A ; Magnetic contact charging
Battery life**	Work 8 hours a day, 1 month battery life
Reporting interval	The working state can be configured from 1 second to 10 minutes; the sleeping state can be configured from 1 second to 30 minutes.
Protection level***	IP67
Working temperature	-20℃~60℃
Working humidity	Not more than 90%
Size	87.8mmx57mmx7.6mm(LxWxH)
weight	39 grams
RFID standards	13.56MHz , ISO14443A
Mobile phone OTA upgrade	Support
iBeacon whitelist	Support
Accelerometer	Support
Indicator function	Support charging indication, communication success indication, power indicator
Alarm function	One-click alarm
Other properties	Judgment of movement and stillness

Features	Badge shape, long standby time, used for locating people and items
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\*It is recommended to use 5V/1A standard charger. 5V/2A charger is also available. Support 5-7V wide voltage charging.

\*\*The battery life is laboratory data and is for reference only. It depends on the actual scenario.

\*\*\*It supports IP67 dust-proof and water-proof. It is splash-proof, water-proof and dust-proof under normal use. It has been tested under controlled laboratory conditions and in accordance with GB/T 4208-2017 (domestic) / IEC 60529 (overseas), it reaches IP67 level. Splash-proof, water-proof, and dust-proof functions are not permanently effective, and the protective performance may decrease due to daily wear and tear. Do not charge when wet.

## III. Instructions for Use

### 3.1 On/Off

The BLT5 positioning terminal is powered on by default and cannot be powered off.

### 3.2 Activation and Deactivation

Activation and deactivation are two working states of the positioning terminal. The Taizhun terminal in the activated state will communicate with its Taizhun base station belonging to the same network, while the positioning terminal in the deactivation state works in low-power mode and will not communicate with any base stations.

Activation and deactivation can be achieved through a professional activator or through a Taizhun station. The method is as follows:

#### 3.2.1 Use of Activator

**Method 1:** Use the magnetic charging clip to manually trigger activation/deactivation. The steps are as follows:

Preparation: The activator (BLA1) needs to be configured. For configuration, please refer to the activator manual.

1. Turn on the activator BLA1 and the blue light will turn on.
2. Insert the terminal's standard charging clip + magnetic charging cable U port into the corresponding interface of the activator BLA1.

3. Place the Taizhun terminal to be activated within 50cm of the activator and insert the magnetic base plugged into the adapter into the terminal.

Immediately unplug the magnetic charging clip within 5 seconds to trigger the activation and deactivation mode of the terminal.

4. The blue LED of the terminal flashes slowly twice, indicating that the activation and deactivation operation is triggered, waiting 1~5S.

5. After activation/deactivation is successful, the blue light will flash continuously for 1~2 seconds and the buzzer will beep briefly for 5 seconds.

6. After activation/deactivation fails, the blue light flashes three times quickly and the buzzer beeps for 2 seconds.

7. Unplug the terminal if activation/deactivation is successful. If activation/deactivation fails, you can repeat the above steps and try again.

#### **Method 2: Batch automatic activation**

Batch activation requires the activator (BLA1) version to be 11.A1\_3.5.2.4 or above. Please first confirm whether the activator version supports it.

Place Taizhun terminal to be activated within a range of 50cm around Taizhun activator BLA1, and wait for the activation signal broadcast by Taizhun terminal regularly to complete automatic activation. As shown below:



Figure 2 BLT5 multi-sensor auxiliary height measurement version charging effect diagram

1. After activation is successful, the blue indicator light of Taizhun terminal (BLT5) continues to flash rapidly for ten minutes. You can also manually cancel the LED flashing (press the SOS button).
2. 1. Activation fails. If the activation fails, the blue light flashes three times quickly and goes out. You can activate according to method 1.

**Matters needing attention :**

1. The batch automatic activation function can only take effect when the terminal is in an inactive state. This function is generally only applicable to the first activation after leaving the factory.
2. Batch mode only supports activation operations and does not support batch cancellation.



### 3.2.2 Use of Taizhun base station

The steps for activating and deactivating Taizhun terminals (BLT5) using Taizhun base stations are as follows:

1. Select the Taizhun base station you want to use on the open platform (the base station needs to be online), and configure the base station.

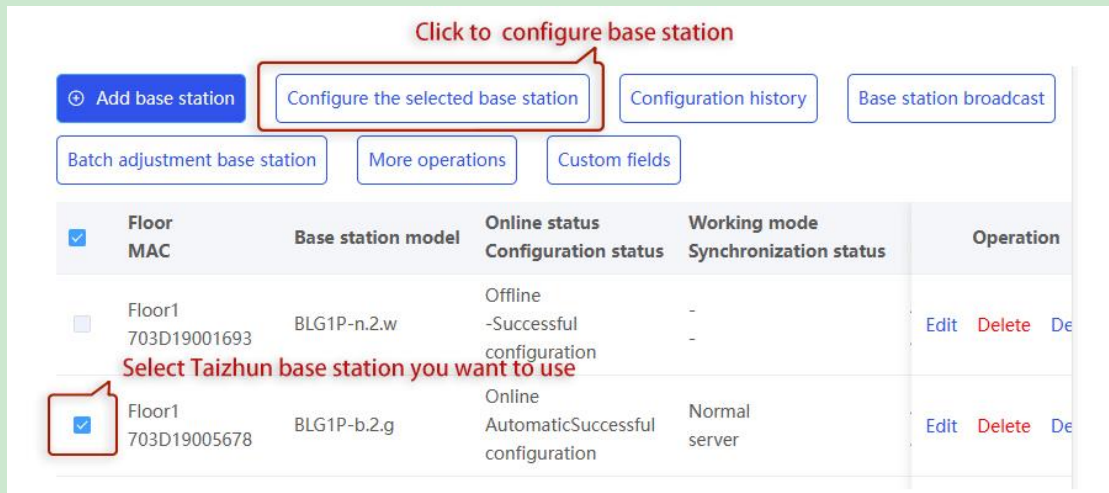


Figure 3 BLT5 multi-sensor auxiliary height measurement version charging effect diagram

2. In the base station configuration window, select "Working Mode Configuration" and check "Activate" to configure the base station in active mode. If you perform a deactivation operation, check "deactivation" to configure.

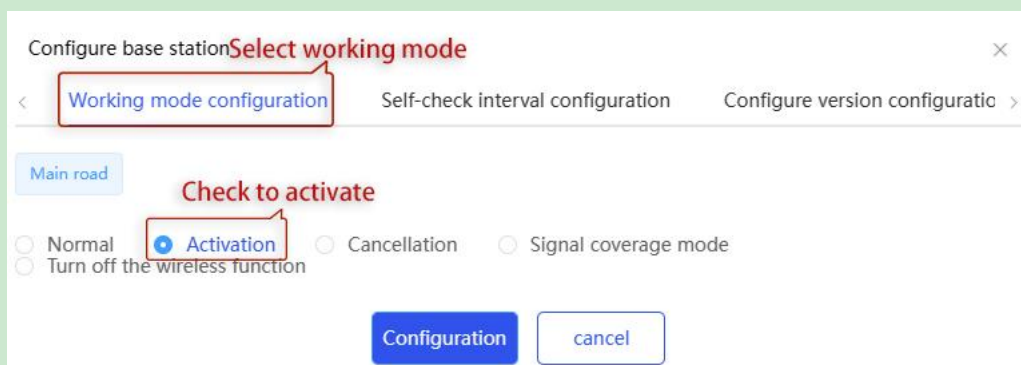


Figure 4 BLT5 multi-sensor auxiliary height measurement version charging effect diagram

3. Insert the terminal into the magnetic charging clip and quickly unplug it

within 5 seconds. And bring the terminal close to the base station. At this time, the blue LED indicator light of the terminal flashes twice, indicating that the terminal has triggered the activation operation. Wait for 1~5S, the terminal flashes rapidly for 1~2S, and the buzzer beeps briefly for 5 seconds, indicating that the terminal is activated/logged off successfully.

4. Configure the base station back to normal mode. At this time, the terminal can establish data communication with the base station. Query the status of the corresponding terminal to indicate that it is online.

### 3.3 Charge

The BLT5 positioning terminal has an external 2-pin magnetic charging interface, which can be charged through a magnetic charging cable and a 5V charger.

Table 2 BLT5 positioning terminal charging parameters

Charging Interface	Charger Parameters	Charging Time	Charging Indicator
2pin magnetic interface	5V/1A	Around 3 hours	When charging, the red light is on and the green light is off; When fully charged, the green light turns on and the red light turns off.

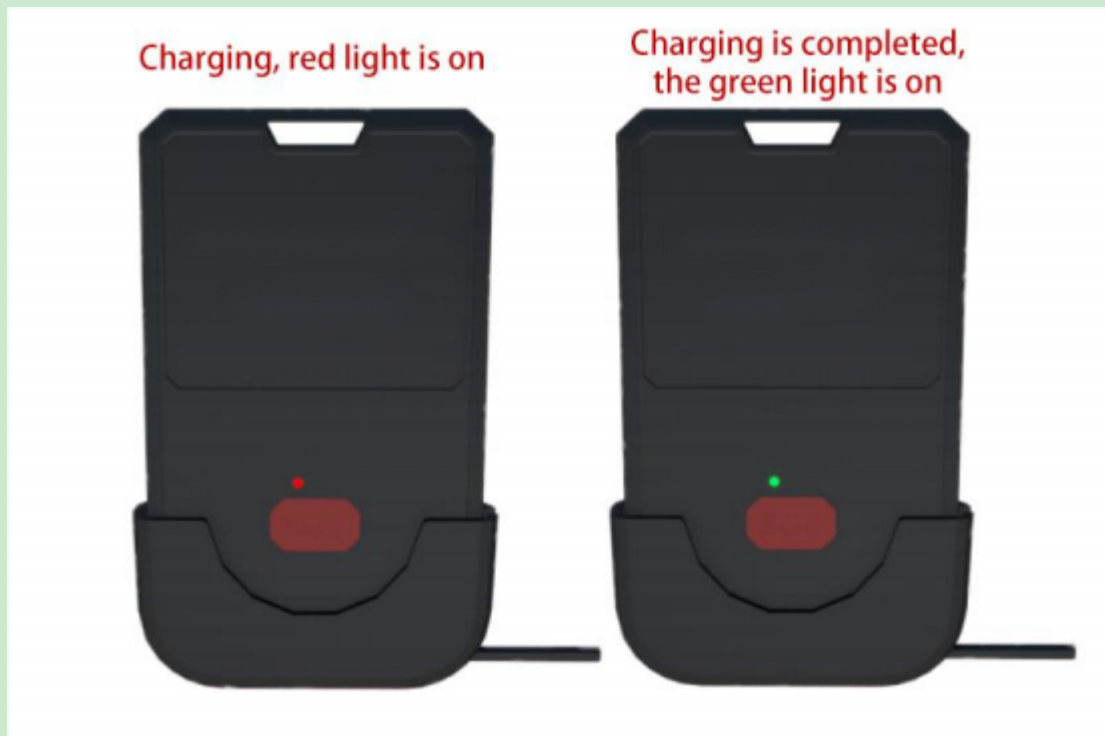


Figure 5 BLT5 charging effect diagram

Note : 1. It is recommended to use a 5V standard charger with a minimum current of not less than 500mA to ensure the charging time.

2.If the voltage is too high, the red light may not go out completely when the battery is fully charged on some models.

3.The terminal should be charged regularly, and it is recommended to charge it at least once every 4 weeks, depending on the frequency of use.

4.When the terminal is not used for a long time, it should be fully charged and stored. It is also recommended to charge it once every two months. If the device is stored or used when the battery is completely exhausted, the battery may fall into a deep discharge state, resulting in the inability to recharge.

5.During use, if you find a low battery reminder, you should charge it in time.

### 3.4 Indicator Light

The BLT5 positioning terminal has four indicator lights: red, green, blue and orange. The corresponding functions are as shown in Table 3.

Table 3 BLT5 positioning terminal indicator light function description

	Function
Red indicator light	<b>Charging indicator:</b> lights up when charging, goes out when fully charged
Green indicator light	<b>Charging indicator:</b> lights up when fully charged, goes out in other states

Blue indicator light	<b>Communication instructions:</b> Flashes once if communication succeeds once.*
	<b>One-click alarm (help) instructions :</b> Press the "SOS" button three times within 5 seconds, and the blue light will start to flash slowly. At this time, the card will start to send a one-click alarm (help) signal. After the alarm is successful, the blue light will start to flash quickly*. If it communicates with the base station during the Interrupted, it will turn to slow flashing again.
	<b>Activation/logout:</b> Instructions for activation/logout operation, please refer to the activation instructions above for details.
Orange indicator light	<b>Power Indicator*:</b> When the battery is sufficient, it will flash once every 15 seconds. When the battery is low, it will flash three times every 3 seconds. If it does not light up for 15 seconds, it means the device is not running.

\*This function can be turned on/off through background configuration. If you want to use it, please turn on the corresponding function first.

### 3.5 One-click Alarm (Help)

BLT5 positioning terminal supports one-key alarm function.

How to use the one-key alarm function is:

1. Press the red SOS button on the front of the card three times within 1.5 seconds. **If the blue light flashes slowly, it means that the terminal has started to send an alarm signal.**
2. After the terminal responds, it will report the alarm information to the base station as soon as possible. If the report is successful, the blue indicator light will change from slow flashing to fast flashing. Fast flashing indicates that the terminal alarm is successful.
3. In the alarm state (slow flashing or fast flashing), if you need to cancel the alarm, press the red SOS button on the front of the card three times within 5 seconds. The blue light stops flashing and the alarm is cancelled.



Figure 6 Schematic diagram of one-key alarm



For terminals that support the one-key alarm function, you can configure the opening/closing of the one-key alarm function through the background. If the one-key alarm function is turned off in the background, the terminal's one-key alarm function will be disabled.

### 3.6 RFID Function

The BLT5 positioning terminal has a built-in standard RFID chip and supports RFID functions\*. It can replace existing RFID cards and be used in access control, parking lots, and consumer scenarios. The chip parameters are shown in Table 4:

Table 4 RFID chip parameters

Parameters	Value
frequency band	13.56MHz
standard	ISO14443A

The BLT5 positioning terminal supports double-sided card swiping. The specific operation is shown in Figure 5.

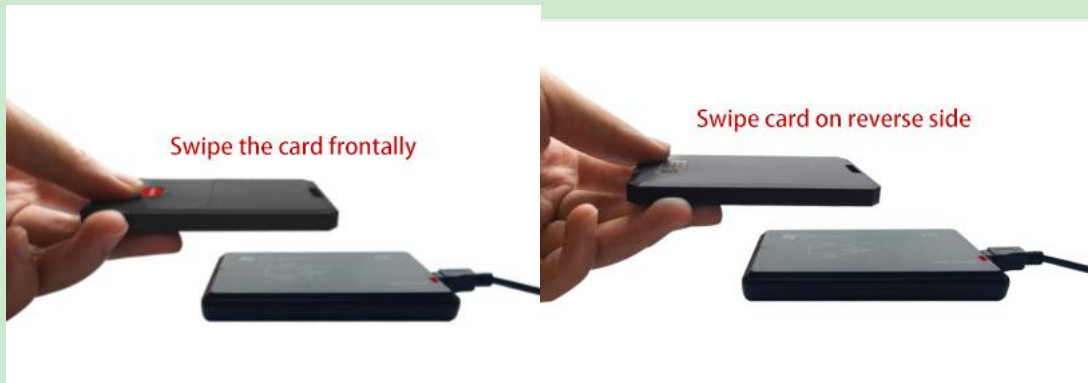


Figure 7 Schematic diagram of RFID card swiping

\*\*The BLT5 positioning terminal only physically integrates the RFID chip. If you need to complete specific functions such as payment and access control, you need to use it with the corresponding software system.

### 3.7 Matters Needing Attention

1. The protection level of BLT5 positioning terminal is IP67. Please use the equipment according to this protection level.
2. It is recommended to use original charging cables and standard chargers for charging. It is strictly prohibited to use non-standard chargers and charging cables to charge the terminal. Equipment damage caused by illegal charging will be borne by the user.
3. The terminal is a wireless communication device. Try to avoid contact with high voltage and strong magnetic fields to avoid affecting normal functions and damaging the equipment.
4. Please do not subject this product and its accessories to strong impact or vibration to avoid damage to the product and its accessories.

### 3.8 Phenomenon and Malfunction analysis

Table 6 phenomenon and malfunction analysis

Phenomenon	Malfunction Analysis
After plugging in or unplugging the magnetic charging cable of the BLT5 positioning terminal, the blue indicator light stays on for a few seconds.	The terminal has a charging reset function. The terminal will be reset after unplugging the charging cable, which is normal.
The blue indicator light of the BLT5 positioning terminal flashes once regularly.	If the BLT5 positioning terminal is communicating with the Taizhun base station and the background indicator light function is turned on, the BLT5 will communicate with the Taizhun base station on the same network and report, and the blue indicator light will flash once for each report. The frequency of flashing is the reporting interval. This is normal.
The blue indicator light of the BLT5 positioning terminal does not flash for a long time.	<p>Possible reasons:</p> <p>( 1 ) The BLT5 positioning terminal is out of power or inactive (logged out).</p> <p>( 2 ) The background indicator light function is not turned on.</p> <p>( 3 ) There is no Taizhun base station (belonging to the same network as BLT5) coverage in the area or the coverage is very poor.</p> <p>If the above reasons can be eliminated, it is a fault.</p>
BLT5 positioning terminal one-button alarm light does not light up after pressing	<p>Possible reasons:</p> <p>( 1 ) The BLT5 positioning terminal is out of power or inactive (logged out)</p> <p>( 2 ) The one-click alarm function in the background is not turned on.</p> <p>( 3 ) There is no base station (belonging to the same network as BLT5) coverage in the area or the coverage is very poor. If the above reasons can be eliminated, it is a fault.</p>
When charging: the lights are on at the same time, neither is on, and	( 1 ) The lights are on at the same time because the charging voltage is too high. Please confirm whether the charging voltage of the charger is 5V. This is normal, but

the blue light is on. The red light does not go out after a certain period of time.	<p>it is recommended to use a standard voltage charger and original charging cable for charging.</p> <p>( 2 ) If lights are neither green nor green, but the blue light is always on, please confirm whether the charger and charging cable are faulty. It is recommended to use original accessories to confirm. If the charger and charging cable are confirmed to be normal, it is a fault.</p>
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## IV Product List

Each BLT5 positioning terminal contains the following product list:

Table 7 Product list

Name	Quantity	Parameters
<b>Positioning terminal card</b>	1	
<b>Easy-pull buckle lanyard</b>	1	
<b>Charging clip + magnetic charging cable</b>	1	
<b>Product certification</b>	1	

Note :The product list is for reference only and is subject to change without further notice. The actual product shall prevail.

## V After-sales Service

If the product has a performance failure that is not caused by human damage and is confirmed by after-sales testing, it can enjoy a 1-year free warranty for the host and a 3-month warranty for accessories (charging cables, easy-pull buckle lanyards).

When the product you purchased has a fault condition in the fault analysis and you need to handle returns, exchanges and warranty services, please contact the dealer.



**FCC Caution :**

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.

Any Changes or modifications 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 has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.