

# **Bluetooth Door Access Controller**

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## **User Manual**

(Please read carefully before using the device)

Product model: ITL-6MJ-B

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# Chapter 1 Product Profile

## 1.1 Brief Introduction

The device utilizes Bluetooth 4.0(BLE). Bluetooth data communicates with mobile APP to realize the function of controlling the door access contro device.



Figure 1.1 Appearance Drawing  
(Only for reference)

## 1.2 Technical Parameter

- Power Supply DC10~15V, Working Current <100mA,  
(Do not include the current driving the electric lock.)
- Working Temperature: -10~60°C.  
Relative humidity: 20%~90% no condensation.
- Storage Temperature: -20--70°C.

Relative humidity: 20% ~ 90% no condensation.

- Applicable System: Android4.3+, IOS7.0+.
- Communication Distance: 0~10M.  
(Deviation will be exist in different environment)
- Response Time: For IOS 0~3S;For Android:Due to the variety of equipment, there are differences in different mobile phones, there is no uniform standard.
- Dimension: L72\*W49.5\*H17mm.

## Chapter 2 Introduction of Hardware

### 2.1 P1—Power Input Port

The port has polarity reverse connection protection and short-circuit protection. As explained below:

P1	Description
1 (Yellow)	NO: Spare switch output
2 (Blue)	COM: Spare switch output
3 (Black)	GND: Power input negative pole
4 (Red)	12V: Power input positive pole

**Note:** The wrong power supply connection may cause damage to the protective device.

### 2.2 P2— Electric lock control and input detection port

The port is used for electric lock controller and input detection:

P2	Description
1 (White)	LOCKB: Electric lock control signal (switch) output
2 (White)	LOCKA: Electric lock control signal (switch) output
3 (Gray)	BUT: Exit button Input
4 (Black)	GND: Ground
5 (Orange)	PST: Door magnetic detection
6 (Black)	GND: Ground

#### Connection instructions:

- Door access control device connected with heavy current electric lock (suitable for pulse electric lock):  
Cut off PST and GND, for JP1,select NO-COM
- Door access control device connected with low current electric lock (Electric/magnetic lockect,ect.):
  - (1) Power-off unlocked: JP1,select NO-COM.
  - (2) Power-on unlocked:JP1, select NC-COM.
- Door access control device connected with exit button:  
BUT and GND connect with the button.

### 2.3 JP1—Normal open/close switch jumper

For selecting the character of the swich Signal (LOCKA, LOCKB enabling signal) outputting by the door access controller.

**Note:** The type of the access control electric lock should be set by the debugging APP.

- If the electric lock is set as heavy current electric lock (pulse electric lock), the signal outputting by LOCKA

and LOCKB as below:

JP1	Power Off	Power On	Status after App opening the door
NO-COM	Output open-circuit signal	Output open-circuit signal	Recovery after closing 0.2S
NC-COM	Output closed signal	Output closed signal	Recovery after opening 0.2S

**Note:** For the electric lock which unlocked by closure, to prevent burning the lock, it is strongly recommended that do not use NC-COM to short circuit.

- If the electric lock is set as low current electric lock (Electric/magnetic lockect),the signal outputting by LOCKA and LOCKB as below:

JP1	Power Off	Power On	Status after App opening the door
NO-COM	Output open-circuit signal	Output closed signal	Recovery after opening a while
NC-COM	Output closed signal	Output open-circuit signal	Recovery after closing a while

**Instructions:** If the electric lock is the low current electric lock (Electric/magnetic lockect),magnetic signal will be detected when the door access controller is power

on (If PST and GND are not closed, LOCKA and LOCKB status would be the same as the status when power off . Only close the PST and GND, the LOCKA and LOCKB output will be contrary to the output when it is power off).

Magnetic signal will also be detected when unlock the door by using APP: if the magnetic is not closed, the unlock signal will be output all the time when opening the door by APP. Only close the magnetic , the lock will be locked.

**Note:** Because of the various electric locks, high voltage pulses generated from the power supply when open or close the electric lock are also different. It is strongly suggested that the separated power supply should be used for the electric lock and door access sensor!

## **2.4 JP2—Initialization jumper**

The initialization operation will clear or restore the following information to the default state: key and the project information, machine number, lock type, and unlock delaying time.

Specific operation: JP2 shorted for a while (more than hundreds milliseconds), then cut off it, the buzzer will bleep once, it stands for initializing successfully.

**Note:** JP2 must be cut off after finishing initialization!

## **2.5 LED—Indicator light instruction**

LED indicator light is the status indicator light, specific instruction as below:

LED	Status Instruction
Flash quickly (100ms/times)	Unauthorized device or abnormal device
Flash slowly (1S/times)	Work normally
Always light, no flash(0~3S)	App is being operated

## Chapter 3 User APP Instruction

BLE 4.0 is applied for the Bluetooth door access controller. It is suitable for the smartphone system version: Android4.3+ ,IOS7.0+. Please download the APP that work with the device via scan the following QR code or APP store by searching “Jia-R”.



Figure 3.1 Jia-R QR Code

## Chapter 4 Operation instruction

After installation, power on the device, then initialize the device, set the machine number and lock type, download the corresponding parameters.

### Device authorization and setting of operating parameters

First use or after initialization, the corresponding parameters should be set via debug APP before working. Technical support will be provided by ITLONG

Parameters as below:

- Key and project informations: the key for certificating and project informations which be used when the door access controller works.
- Machine number: it is the same as the number of the device which corresponding to the user's APP. The default machine number is 0.
- Lock type: Electric lock and downward mortise lock (including electric downward mortise lock , magnetic lock). Lock type settings need to be consistent with the lock on the site. The default lock type is electric lock.
- Opening delay: Output the open signal duration.The default opening delay is 5S.

**Note:** Initialization will clear the above parameters, the device will restore to the default factory state.

### Download and Register APP

After finishing the download, open the APP to register.Registration requires the mobile phone number



and SMS verification. It is recommended that users use the current phone number to register.

## **Administrator issues authorization**

For the registered users, the authorized devices will be displayed after the administrator issuing the authorization in the background management center and synchronizing user authorization informations to the mobile terminal through the cloud. If the authorized device is not displayed after issuing the authorization ,please sign out and try to sign in again.

## **User Access**

Support 3 methods to access: Manual click,Sense automatically,Shake mobile. Sign in the APP, then enter Door Open Setting to choose or modify the method.

- **Manual Click:** The words of the available device name will become black color when the user closes to the device and the device is detected by the APP. Then click the available device icon, the door will be opened after the device checking the authorization.
- **Sense automatically:** If the user selects sense automatically mode, the APP would issue a command of opening the door automatically when detced the available device.

**Note:** Every time when the users enter into the detection zone, the door will be opened automatically for one time. If the users need to open again, please click the device icon or shake the mobile.

- **Shake mobile:** The mode is familiar with the manual click. Just the Trigger mode is changed from click to

shake.

## Chapter 5 Installation and Debugging

### 5.1 Attention

- Please do remark when threading cable must be put in the joint of terminal box, if ignore this aspect, it may cause some troubles for installation, debugging.
- In the same system, all the wires must be the same type.
- Please Note that the access control device can not be installed in the metal surface, because the metal surface and confined environment will interfere with the Bluetooth.
- The connection of the controller and electric lock: using 4-core power cord (named as electric lock and magnetic cable). If the electric lock do not have magnetic signal wire, the 2-core power cord could be used, the diameter of it should be equal or more than  $0.5\text{mm}^2$ ,  $\text{RVV}2*0.5\text{mm}^2$ . If the electric lock and magnetic cable and the access control device cable in the same pipe, 4-core shielded wire should be used,  $\text{RVVP}4*0.5\text{mm}^2$ .
- The connection of the controller and exit button: using 2-core power cord, the diameter of it should be equal or more than  $0.5\text{mm}^2$ ,  $\text{RVV}2*0.5\text{mm}^2$ .
- The connection of the controller and power supply: the diameter of the cord should be equal or more than  $0.75\text{mm}^2$ ,  $\text{RVV}2*0.75\text{mm}^2$ .

Please strictly abide by the above instructions when

cabling and designing the location for the device. If not, there will be explicit or implicit errors, even inexplicable errors, until then, there will be no way to solve it except rework.

## 5.2 Device installation location

- The device can be installed in the exposed position, it can also be concealed installation. It depends on the construction site and customer requirements. It is strongly recommended to install close to the gate.
- Exit button installation location: The button should be installed indoors. The height is depended on the customer requirements.
- The electric lock location: electric control lock catch and electric clamp lock should be installed on the side of the door frame ; magnetic lock and electric bolt lock should be installed at the top of the door frame ; shear lock should be installed at the bottom of the door frame.
- Power supply installation location: The device uses specialized power supply,the power supply is generally installed in the indoor ceiling or weak wells.

## 5.3 Connection and debugging

- Machine number setting.  
**Note: the machine numbers of the devices can not be repeated.**
- Choose the jumper to set the electric lock drive mode (normal open,normal close).The jumper is determined by the power supply mode of the electric lock.
- When the power is on, if the indicator light (red light)

flash quickly (once every 100ms), the device can work only after being authorized by the management APP, and the indicator light will flash slowly (once a second).

- Open the door via APP, the buzzer bleep once, and the door will be open. If the buzzer bleep several times, it indicates that the APP authorization is wrong.
- Open the door via exit button, the door would be closed automatically a few moments later.

## Chapter 6 Common trouble shooting

Here are some common faults and simple ways to check them. Please cut off the power while conducting operation on hardware device.

**Common Fault 1:** App can not search the device normally.

### **Possible Causes and solutions:**

- First please confirm that the device whether is authorized. If not, the indicator light will flash quickly.  
**Solution:** Issue the authorization via debugging APP.
- The phone system version is too low, the compatibility with Bluetooth 4.0 is poor.  
**Solution:** Change a phone to try again.
- Bluetooth signals are interfered or blocked by the environment.  
**Solution:** Replace the device installation location or close to the device to search the device

**Common Fault 2:** Fail to open the door via manual click

**Possible Causes and solutions:**

- Unauthorized device  
**Solution:** please confirm to click the current device
- The device is not in the available detection zone (the words color is gray).  
**Solution:** Please close to the device. If the device is detected, the words color will become black.
- The phone system version is too low, the compatibility with Bluetooth 4.0 is poor.  
**Solution:** Change the phone to try again.
- Other solution: reboot the phone

## Chapter 7 Regulatory

**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

**Caution:**Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**Warning:**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.