Elevator Control Manual Instruction
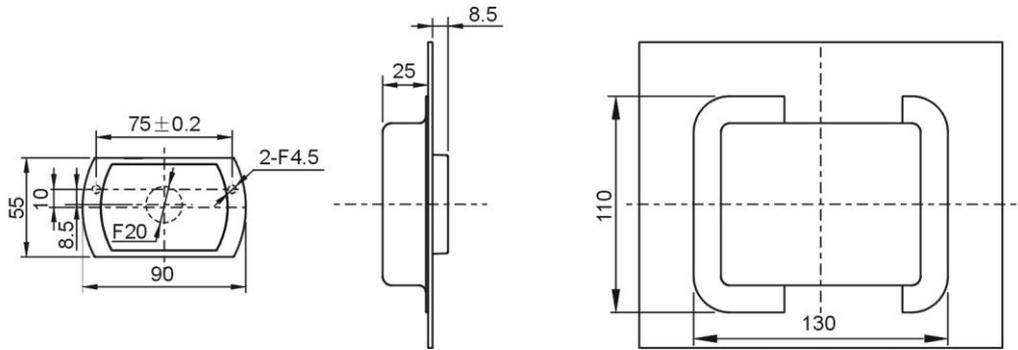
Content
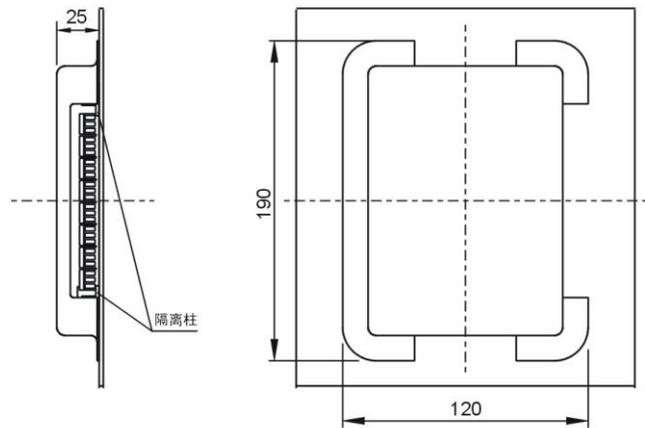
1. Unit Dimensions

1.1. Card reader board

1.2. Relay board

1.3. Relay box (If require)
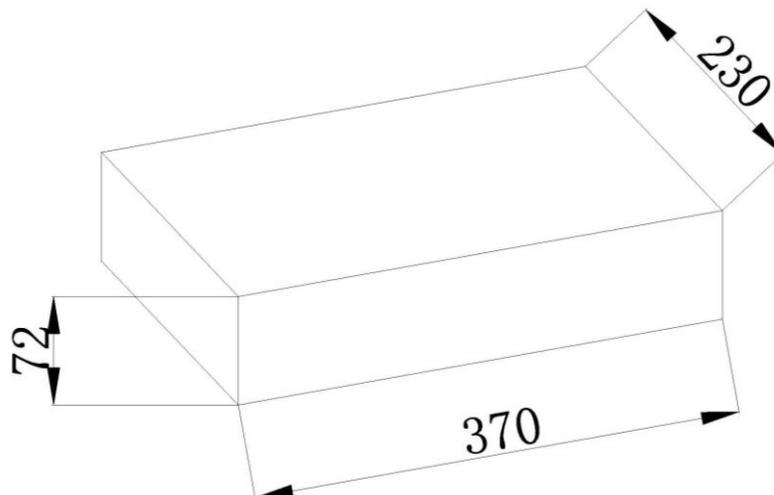
2. **Parameter**

DTM-Z09A	
Working Current	≤750mA
Working Voltage	DC 12V
DTW-Z04A	
Working Current	≤750mA
Working Voltage	DC 12V
12V DC Adapter	
Input Voltage	AC 220V 50 HZ
Output Voltage	DC 12V
Output Current	≤3.0A
Working Voltage	DC 12V

3. **Elevator Functions**

3.1. Automatic function for one floor

Enable to get to the corresponding floor automatically without pressing button when scan the card if only one floor is programmed.

3.2. Pressing floor buttons is necessary when scanning the card if multi floors have been set.

3.3. Emergency switch can be used when elevator is broken.

In case elevator would be broken, the elevator will not be under control when you press emergency switch, elevator floor buttons can be used without scanning a card.

4. **Cable Requirements**

300/500V PVC Insulated Shielded Flexible cable, 6 core 0.3mm copper wire for floor buttons

300/500V PVC Insulated Shielded Flexible cable, 2 core 0.3mm copper wire for emergency switch

NOTE: On long power cable runs, the cable resistance causes a drop in voltage at the end of the cable run. Be sure your power supply provides 12 VDC at the end of the cable run.

## 5. **Installation of requirement for elevator control**

Check with local authorities when installing Elevator Control panels. Your elevator control application must meet all local and national safety codes. The Main or Lobby Floor cannot have access control applied – all people must be able to exit the elevator at all times on at least one common, ground-level access floor.

It is necessary that the Elevator floor buttons are connected by wires (see the picture as below). Otherwise, you need to contact with the elevator company for more technical support if Be-Tech elevator can be installed.
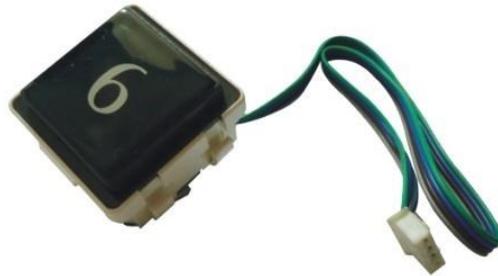
Be-Tech Elevator controller is especially for hotel elevator with purposes of enhancing safety and saving energy for the hotels. It is operated with BIS lock management software to attain the level management and authorization. Only authorized valid cards can access to the elevator up and down, which prevent irrelevant personnel from entering the elevators, and hence protect the hotel safety and extend the service lifetime of elevators.

The elevator controller does not communicate with central controller of elevator itself, so there is no directly mutual control between them. Its function is to control the elevator floor buttons. Therefore, all the existing security features of the elevator itself are not affected.

Note:

If there are two key pads in the elevator car, you need to install two Be-Tech elevator controllers. It means that how many elevator controllers need to be installed depends on how many key pads inside the elevator car.
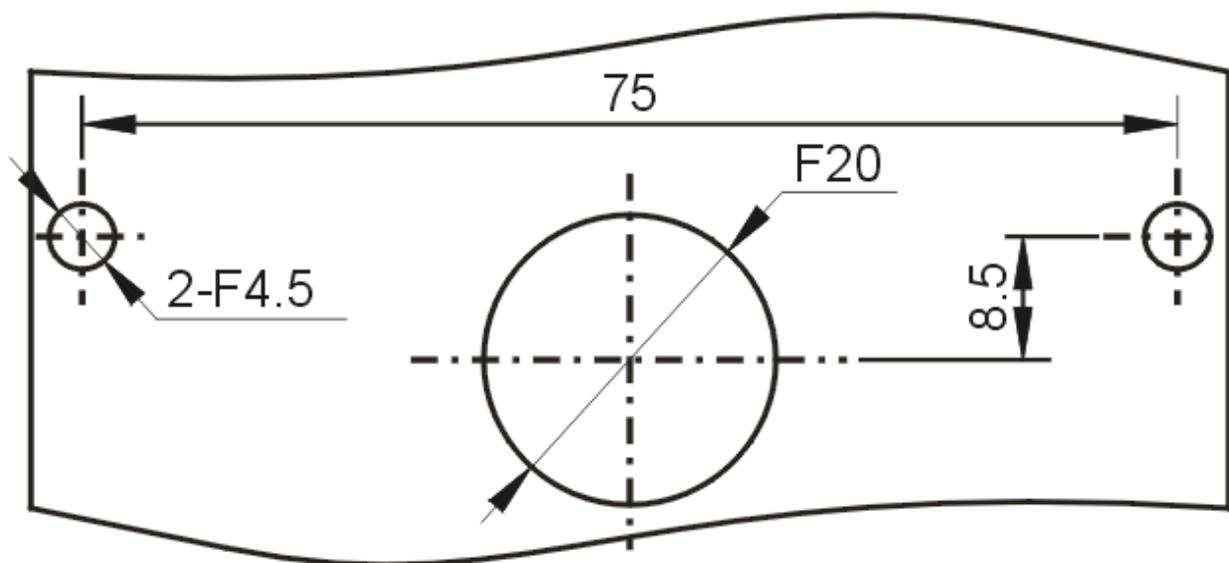
6. **Installation tools**

7. **Preparations：**

1. Set up a computer before testing the devices。

2. Inform Elevator Company to have staff present during installation

3. 10 meters of shielded wire are provided by our company (enough for About 4 floors installation). More wires are needed if there are more floors，the specification of the additional wire should be same with the wires we provided

4. The elevator car must be in a position that staff can climb to the roof of the car。

5. Prepare a universal meter，it is needed to test the elevator control system。

6. Electric drills are required to drill holes for the front reader installation. Required drill bits sizes：4.5m and 16-20mm.
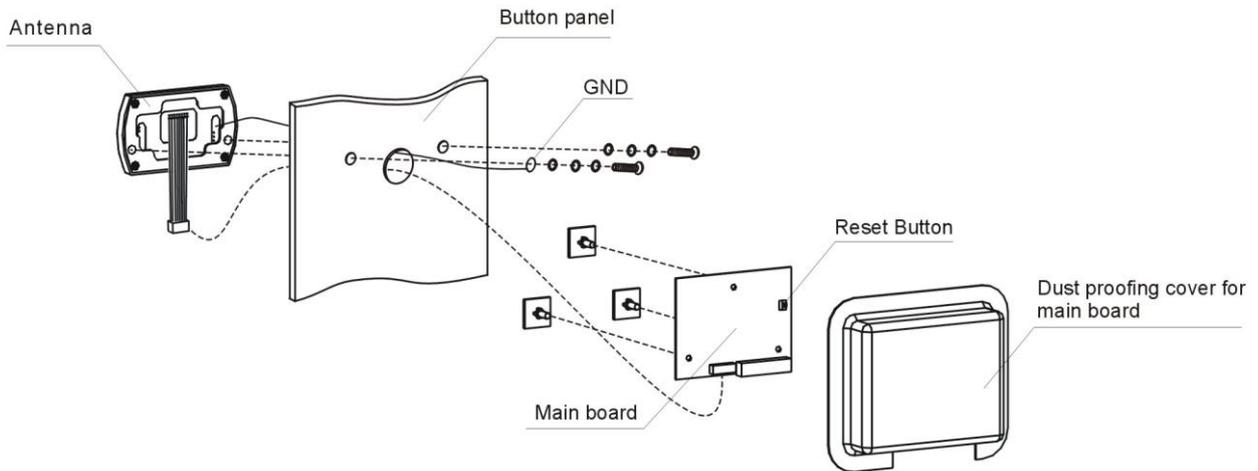
7. Electrical tape and ribbon

8. **Card Reader Front Plate Drilling Diagram**

9. **Installation Position of Elevator Controller**

9.1. Reader installation

Default position of the card reader is next to the floor selection button（Details are based on specific requirements of clients and limitations of the environment）


9.2. Relay board or relay box installation

If the environment of the elevator is allowed, you can install the relay attaching to elevator car near to the reader, it will make you easily to maintain when the elevator control stops working.
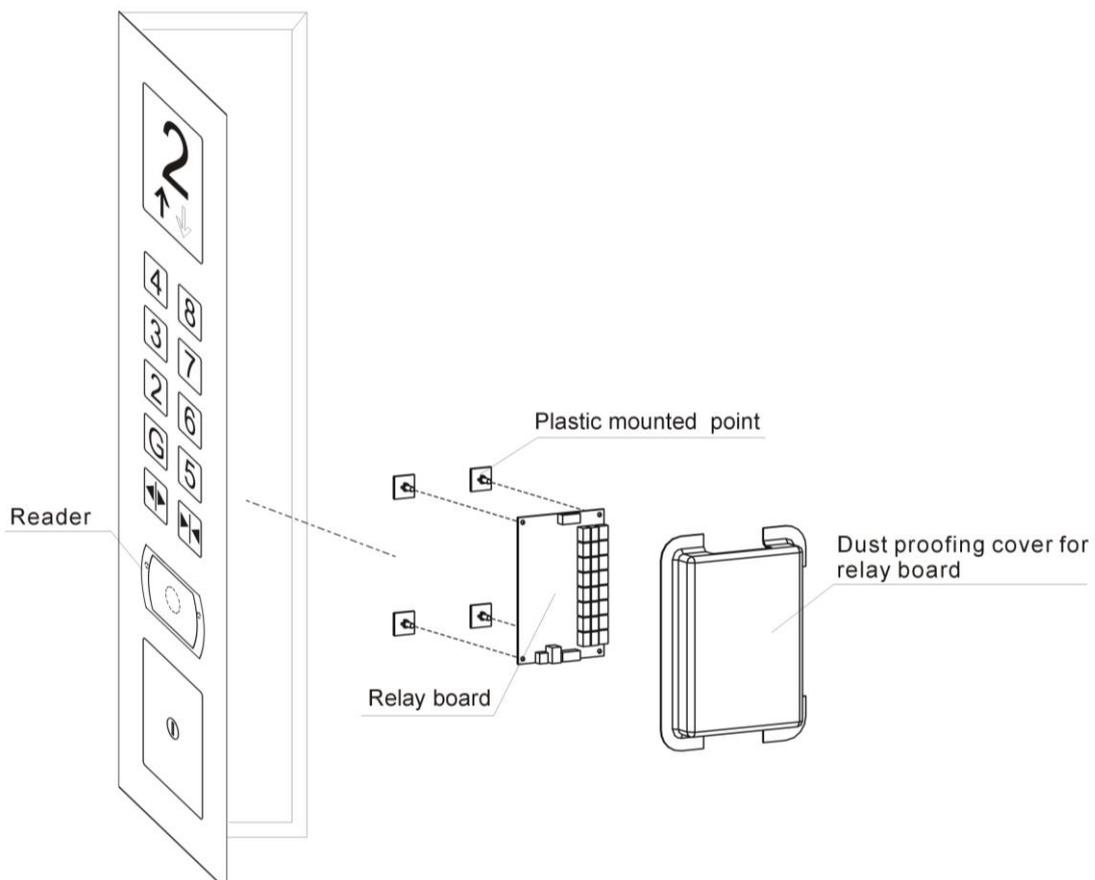
If there is not enough space to install the relay board, you have to install them with a box on the top of the elevator card.

Relay box

Power socket

Elevator floor buttons

Elevator control reader
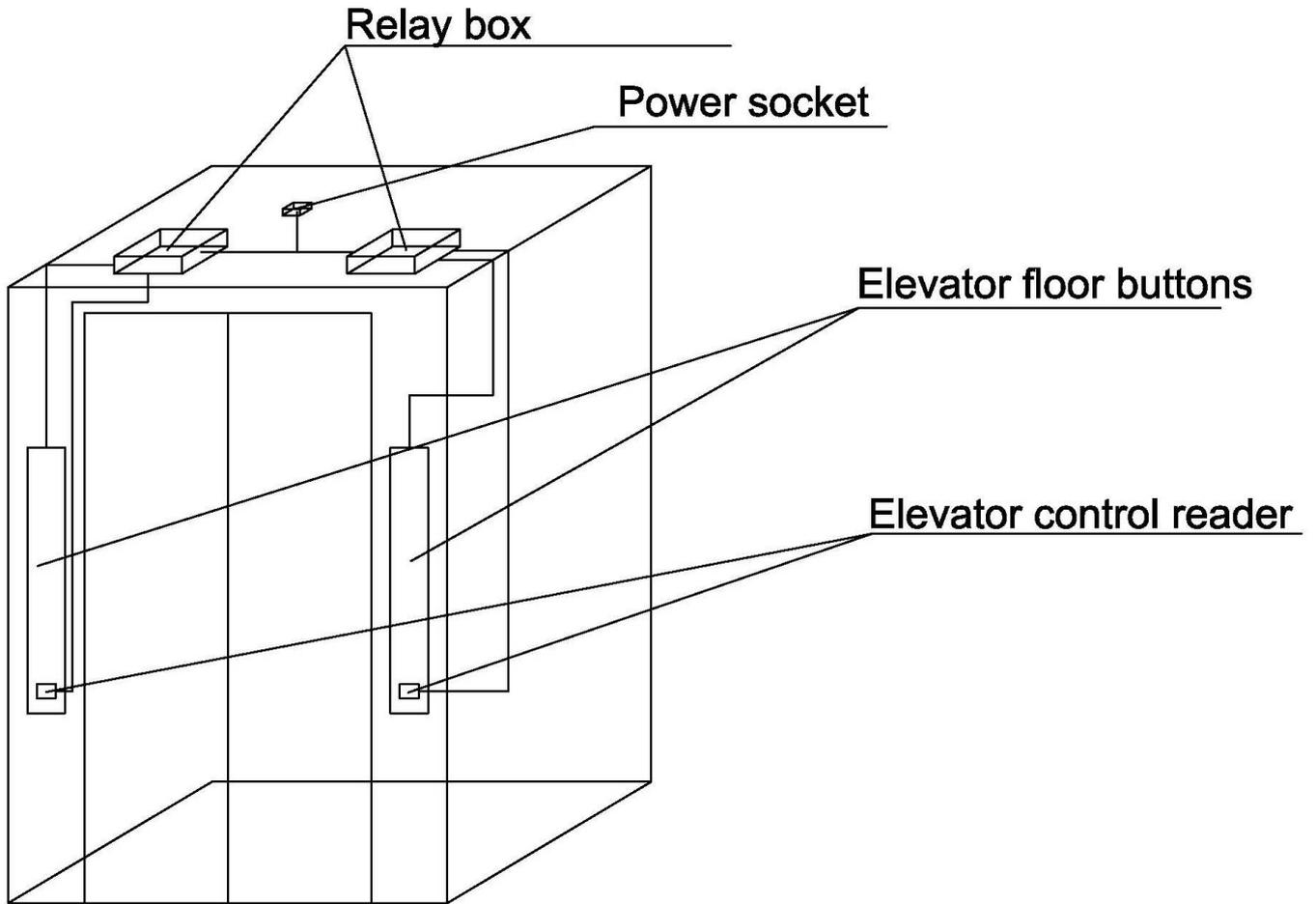
Note: If there are panels of floor buttons, and you want to control both of them, two elevator controllers are required.

# 10. Caution Before Installing Elevator Control

10.1. Power Setting

Preset a 220V power outlet on top of the elevator car.

10.2. Check the integrality of system before installation.（wiring and testing methods are shown below）

Before installation, please check if the controller works properly.

Follow the Diagrams，connect card reader to relay board. Following table shows the corresponding connection ports. **Do not forget to connect the emergency switch and make it get through. (It is a white cable), which is used when controller is broken, press this emergency switch to cut off the power and make the elevator our of control.**

Card Reader	Control Box
POWR	PWR1
GND	GND
T1X	R1X
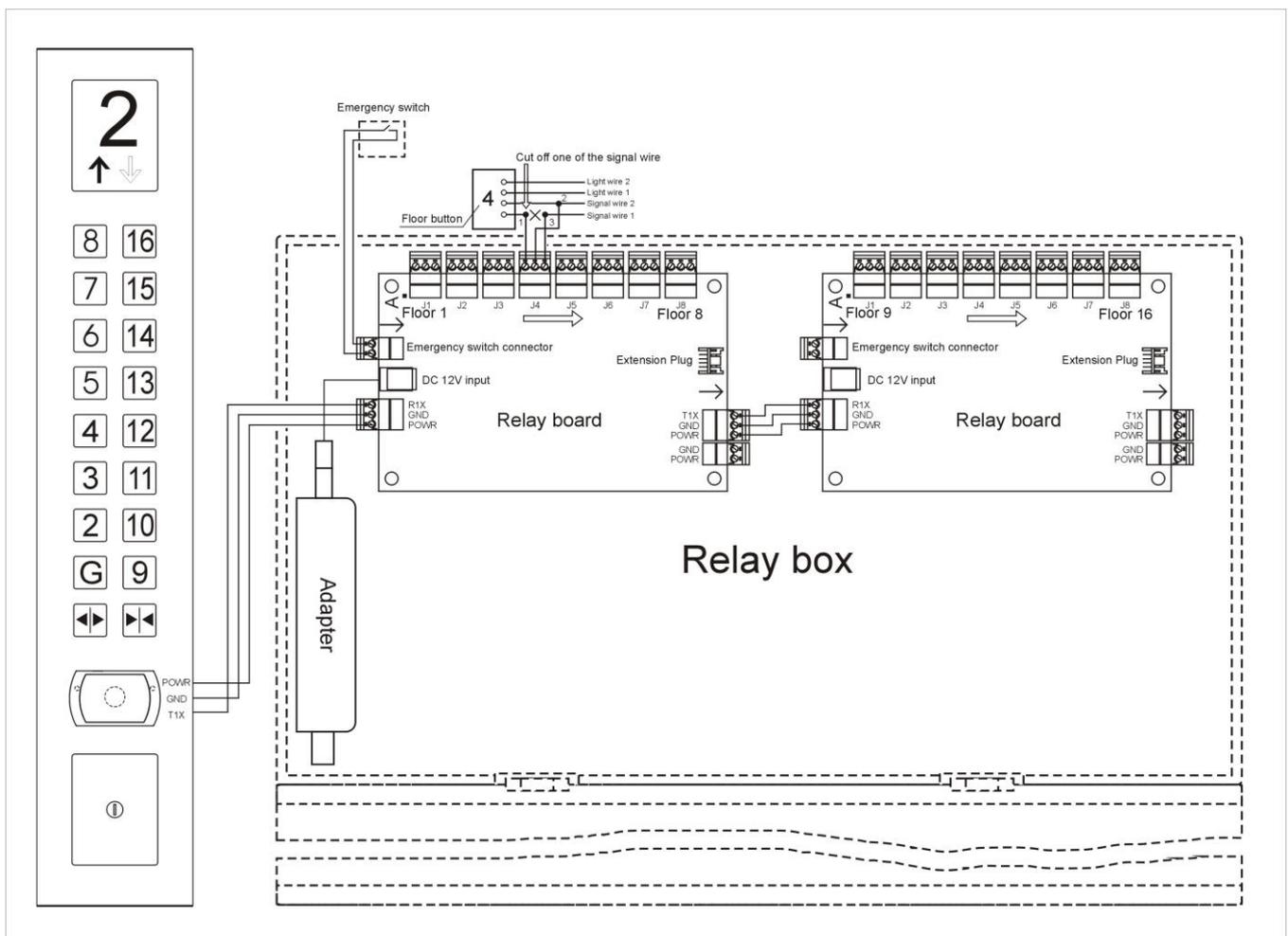
Control Box

10.3. Check If Elevator Control Working Properly

10.3.1. Check if Buttons are correctly connected to relays

If wires are connected correctly, relays are connected when the device is off power, and floors selection buttons are working normally. After disconnect the wires between the floor selection buttons and relays on relay box, the buttons should not respond, otherwise, need to recheck if the connections are correct.

10.3.2. After setting up the Elevator，whether Relays on Control Box Working Properly (Setting Card Test)

After set up elevator with lift setting card，relays on control box will switch from close to open, and buttons can not be used. After setting up the system，if relays are not working and buttons are still functional, please check whether the circuit board has power, and check whether T1X and GND ports on Reader are connected to R1X and GND ports on control box accordingly.

10.3.3. Whether Relays on Control Board are Functional when using Emergency Card

After setting card test success, using emergency card, user can access all floors. If successfully used emergency card, but some of the floor can not be access, which indicates some of relays are broken.

10.3.4. Check Whether Relays on relay Board Working Properly, after Using Control Card

Scanning control card onto card reader, yellow indication light shall turn on, and relays on control board shall switch from open to close. Then, buttons on elevator are not under control, and can be operated freely. Scan the control card to the card reader again, green indication light shall turn on with one beep, then elevator is in controlled mode. Under control mode, all buttons are not functional without using lift enable card.

10.4. How to Find the Elevator Signal Wires

In most cases, staffs from the elevator company will assist Be-Tech installation staffs to locate the signal wires. However, if the elevator company refuse to assist or for some reasons unable to provide assistance, we will take the following steps:

Most elevators have 4 wires for a button, two for the LED light, the other two for signaling. We only need to find out one of the signaling wire.

If we cut a lighting wire, elevator will operate when we press a button, but button light won't turn on

If we cut a signaling wire, when we press a button, button light won't be on and elevator won't operate.

11. **Software Setting Manual for Lift Control**

11.1. Lift Manage Over View

There are 5 function cards in "Lift Manage" item which select from menu.

- Lift Setting Card (MF S50), It is to set the total of controlled floor.

- Lift Record Setting Card   (MF S50), It is to set the total of access record.

- Lift Enable Card   (MF S50), It is to set the lift is in control or not.

- Lift Time Card   (MF S70), It is to set the clock into lift.

- Lift Terminating Card   (MF S70), It is to terminate the card which is lost or useless.

- Lift Visitor Card   (MF S50), It is an opening card for visitor.

11.2. Allow lift function in the software
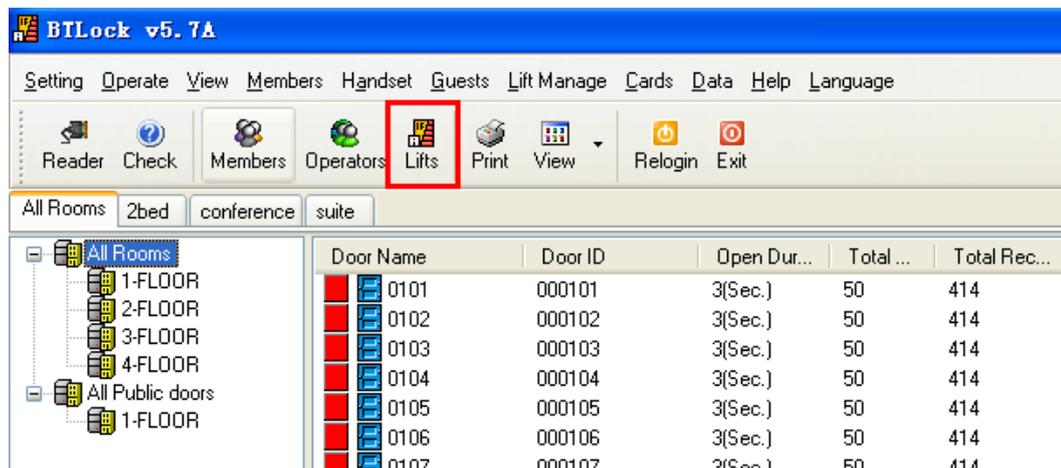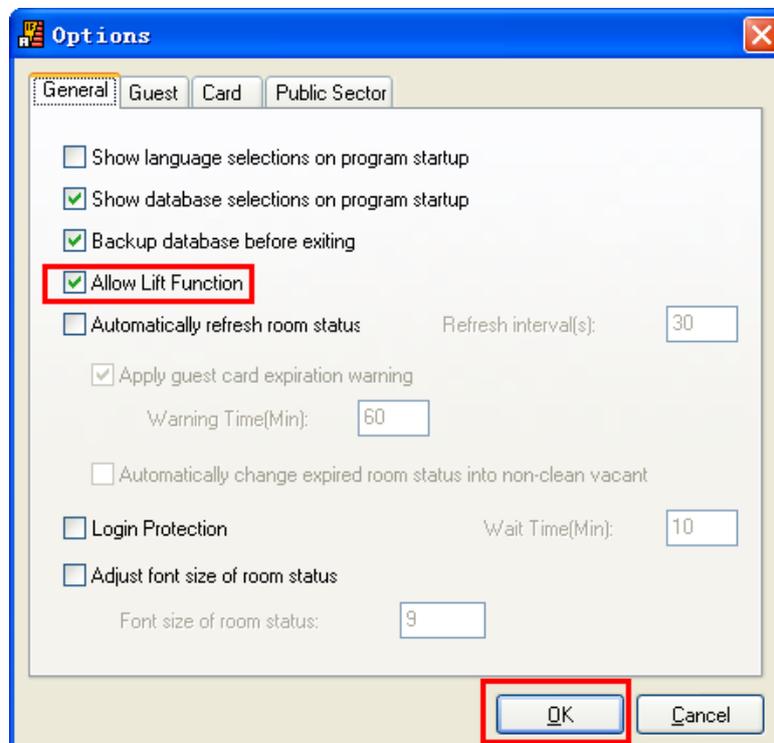
11.3. Setting Procedures

System ID Card ➔ Lift Setting Card ➔ Lift Record Setting Card ➔Lift Time Card

11.3.1. System ID Card
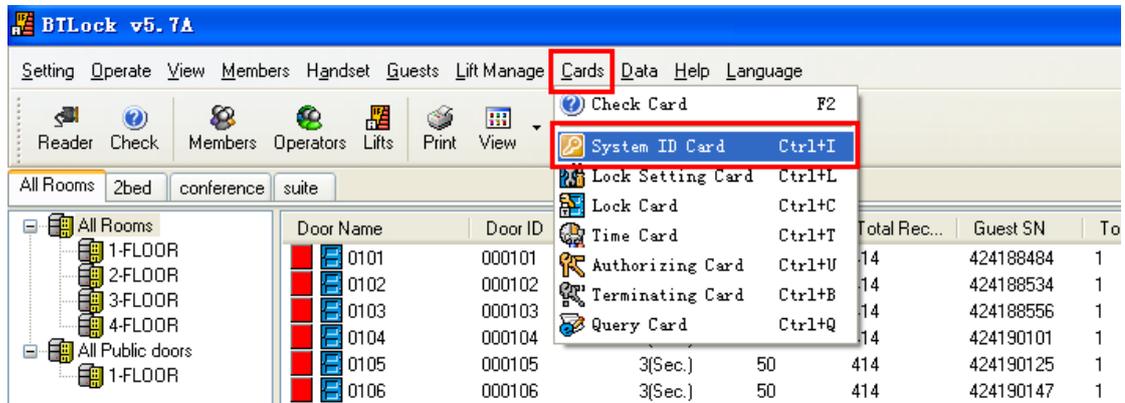
Press "issue" item, and follow the indication.
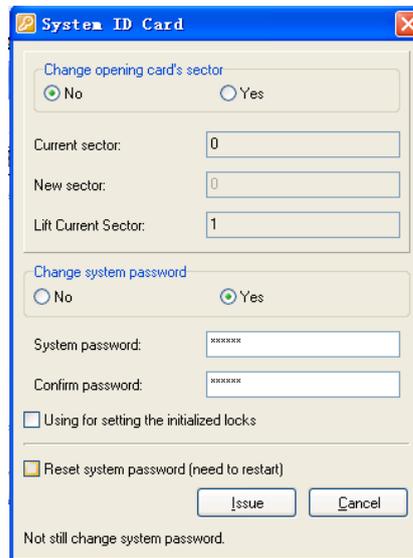
11.3.2. Create lift in software
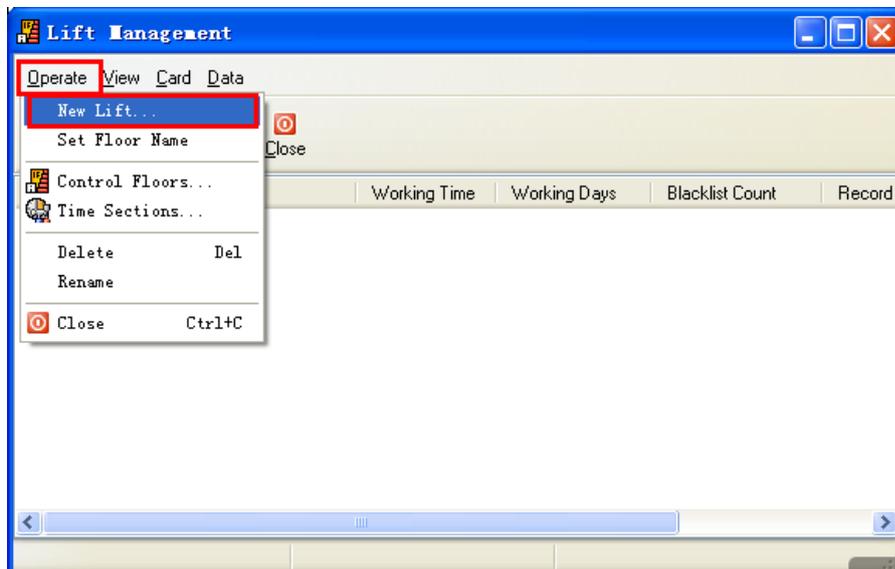
Set the information as like door lock
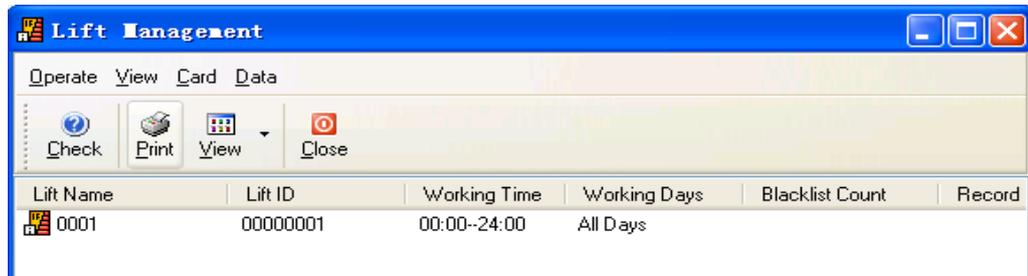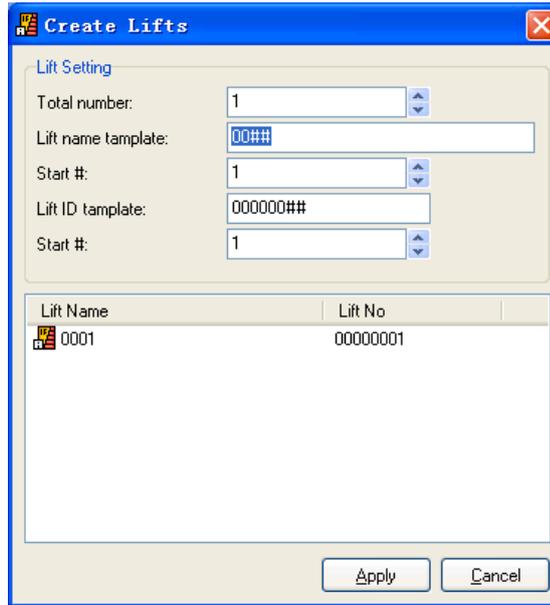
11.3.3. Lift Setting Card

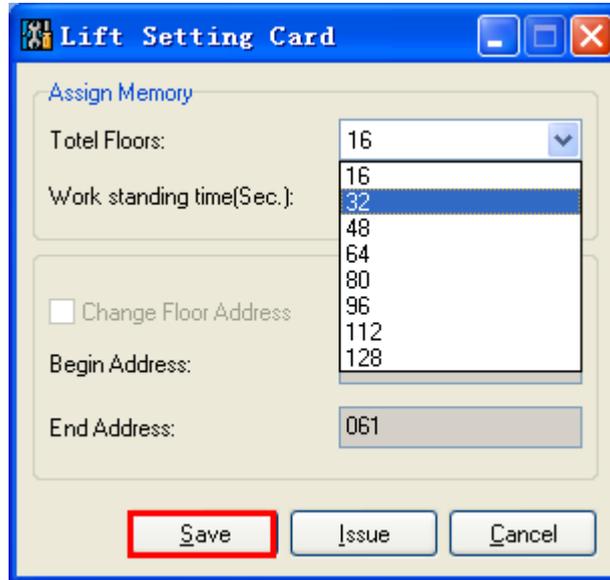Click "Lift Setting Card" in the "Card" item to call next window.
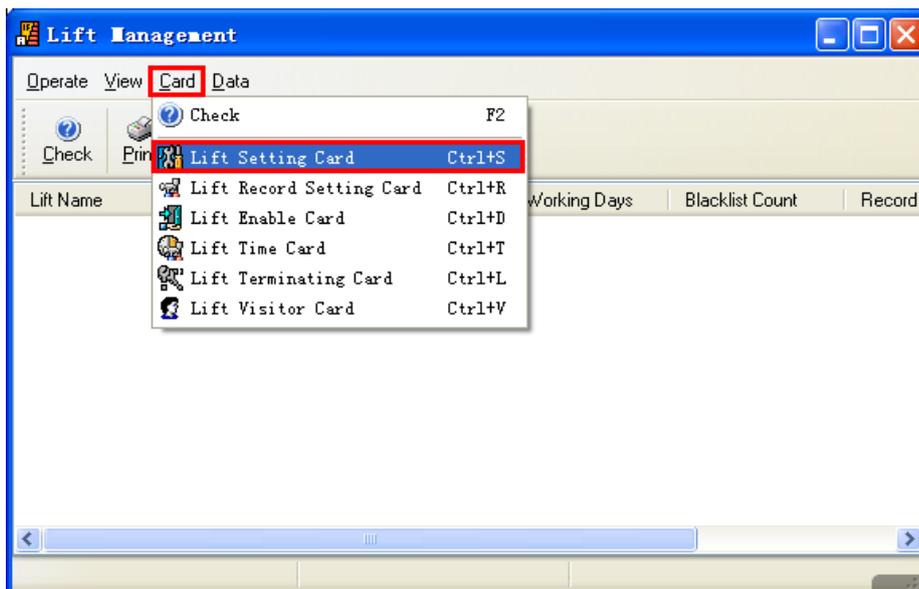
Total Floors:

It is to set 16 floors for a unit. For example, there are 36 floors in the hotel. It should be selected 48

Work Standing Time:

It means how long the floor button is allow to work after touching opening card.

According the fact to set and press "Save"

After issue the "Lift Setting Card", select the new created lift and press right click with mouse to call the menu. Then, select "Control Floors" to call setting window.
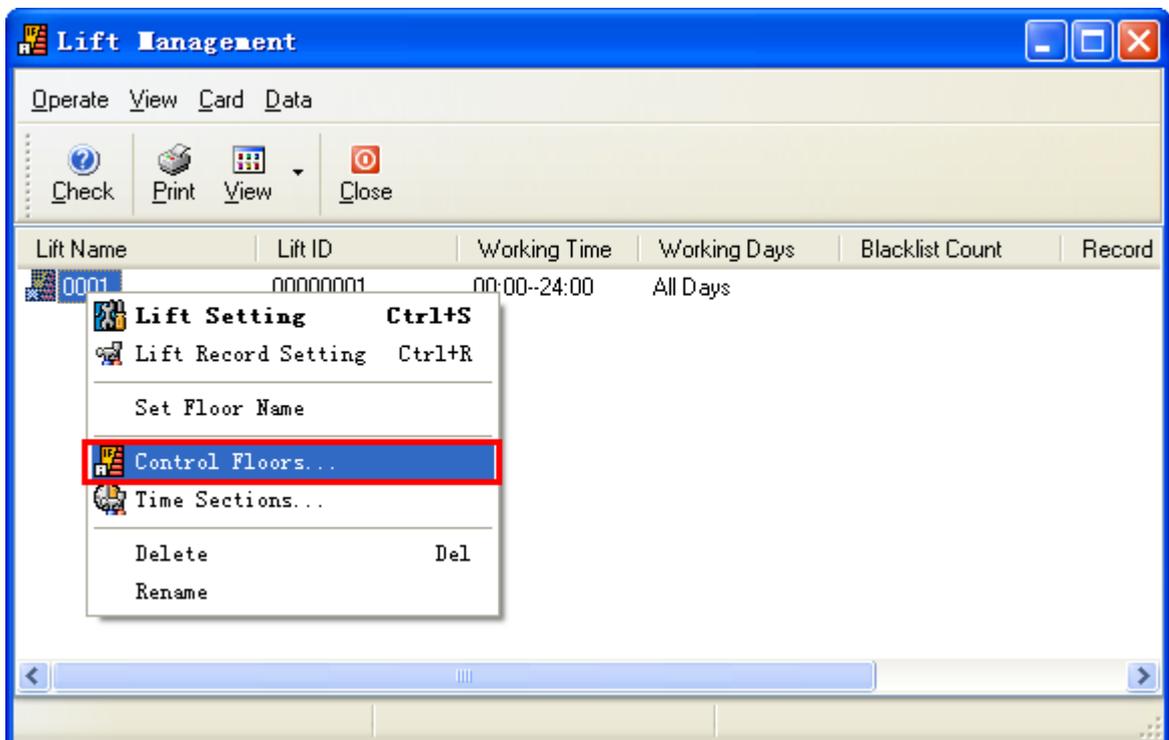
According the fact to choose the floor and press "OK"
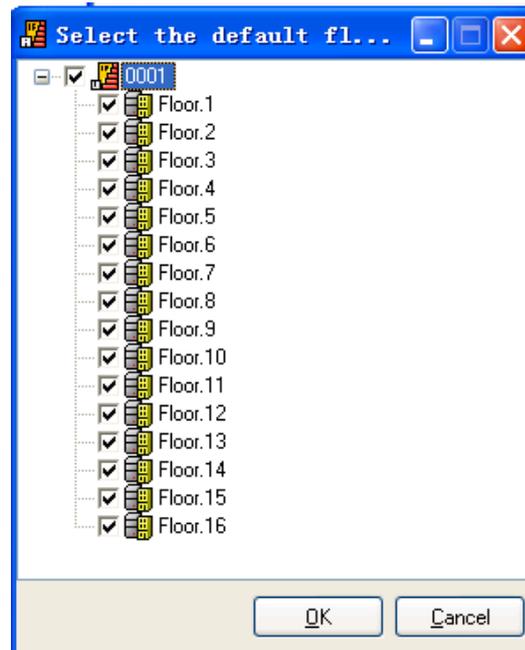
After issue the "Control Floor", select the new created lift and press right click with mouse to call the menu. Then, select "Time Sections" to call setting window.
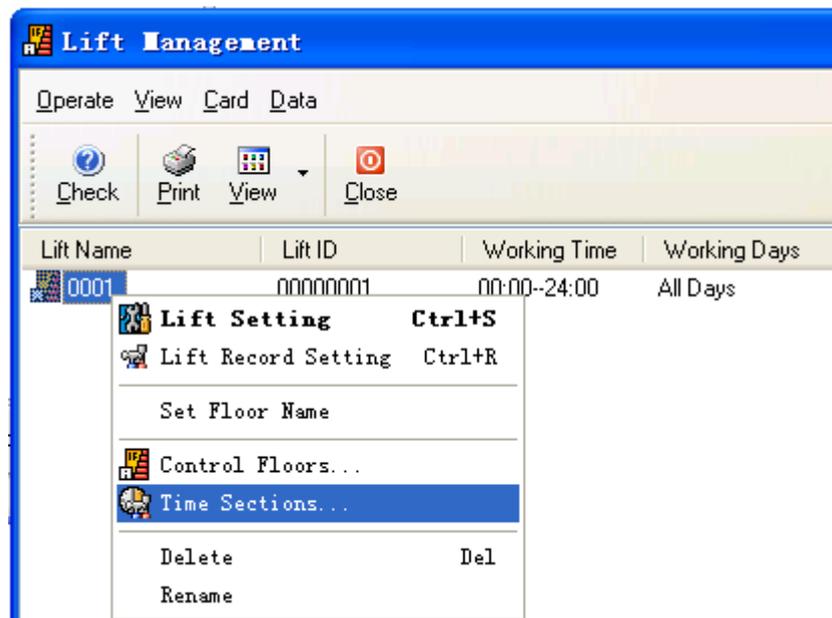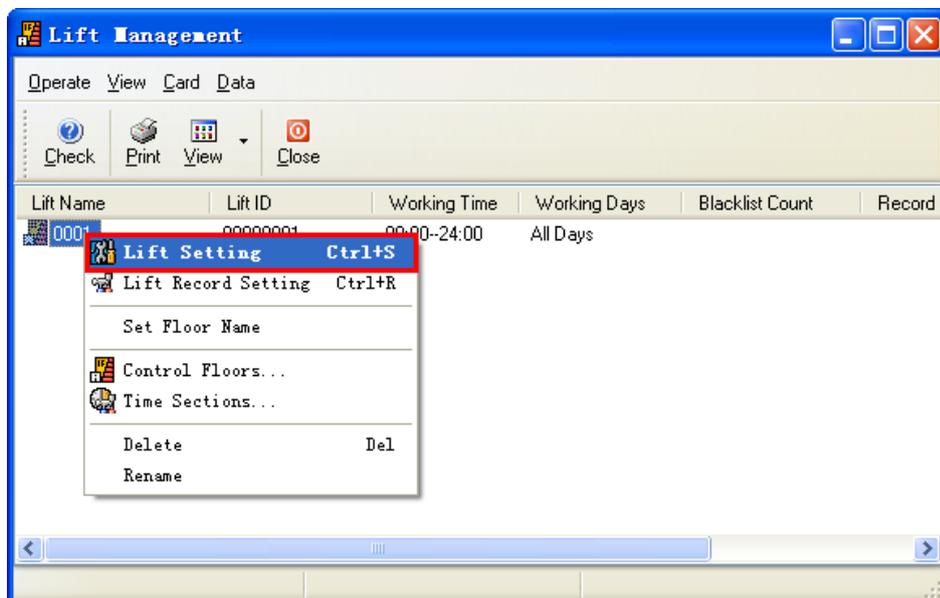

Time Sections

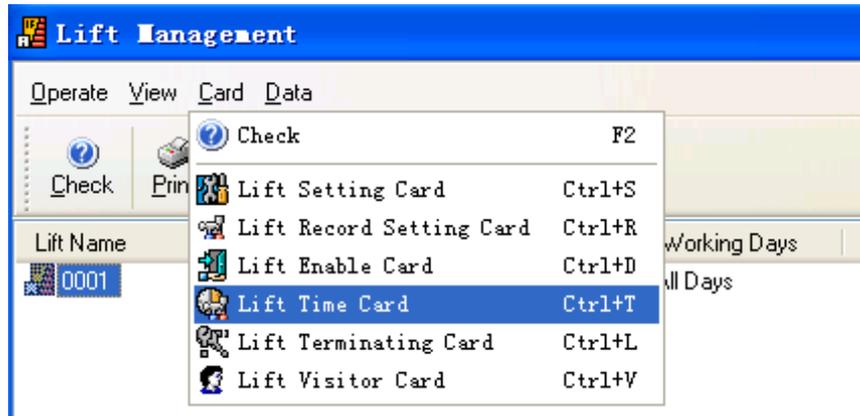It indicates working time when the lift is in control. According the fact to set and press "OK"
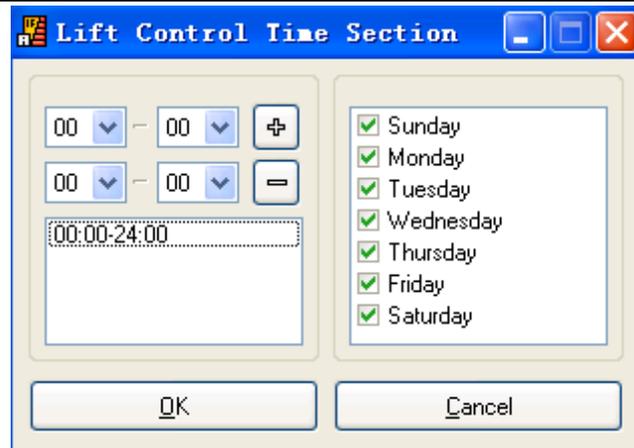
After the above setting, put a MF S50 card on the reader and Issue it to Lift Setting Card.
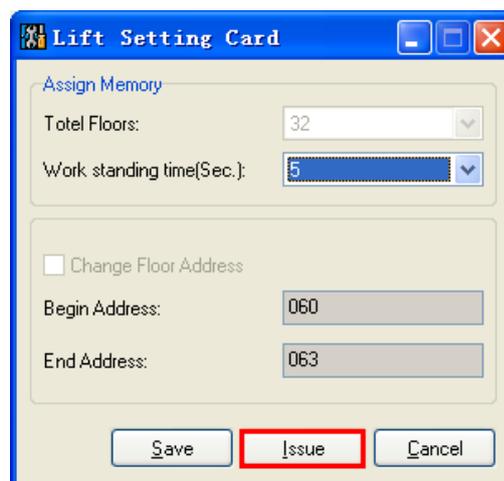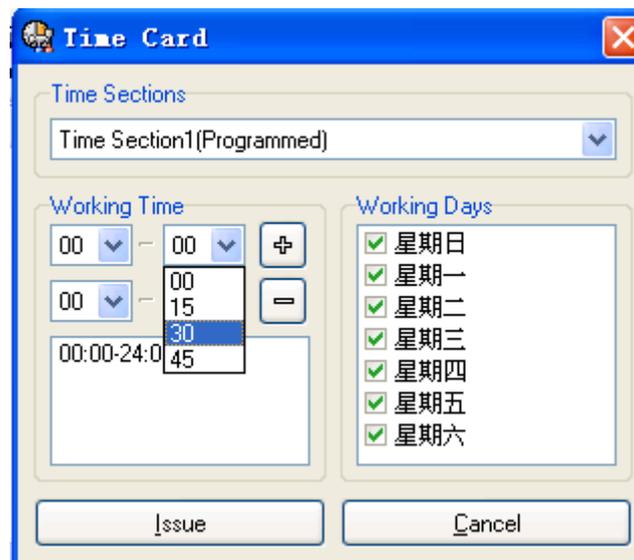

Scan the Lift Setting Card, green light blink once, done.

11.3.4. Time Card

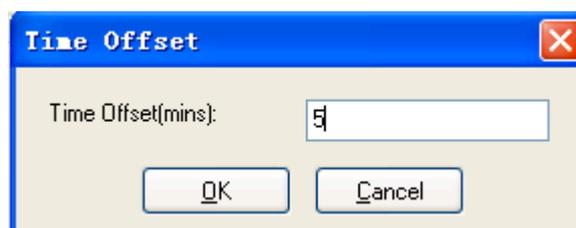Click "Lift Time Card" in the "Card" item to call next window.

There are two parts, to set the time of the lift controller and functional time. Time Card's function is to set a clock into the PCB and the functional time of the device (mean what time the lift is under control, and what time the lift is not under control)
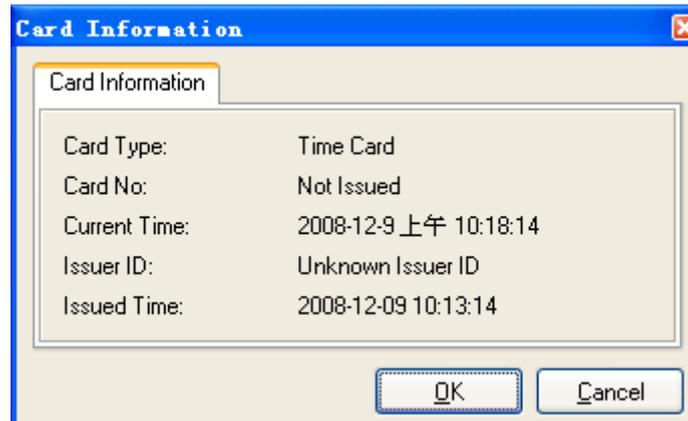
Press "issue" button, it will show "time offset" setting window.

It may take some minutes for user to go to scan the card. Therefore, fill 5 in the blank which means the clock of Time Card delays 5 minutes。

Confirm the information and press "OK".

Scan the Time Card, green light blink once, done.

11.3.5. Lift Record Setting Card

Click "Lift Record Setting Card" in the "Card" item to call next window.
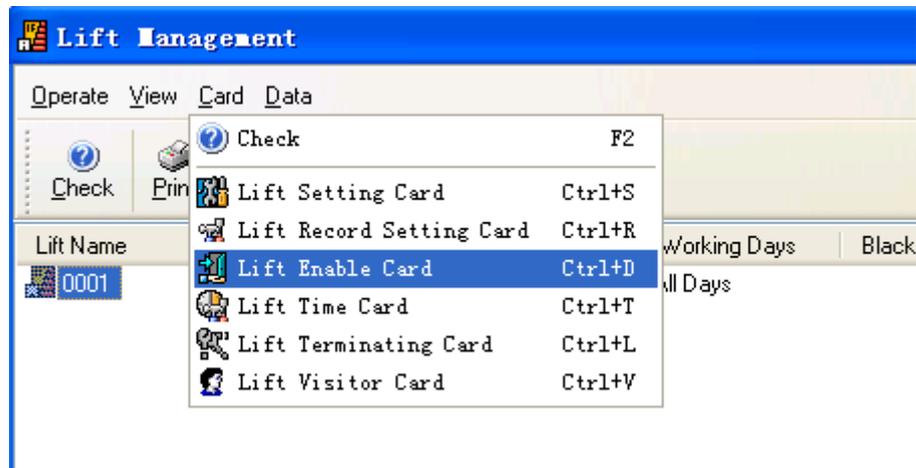

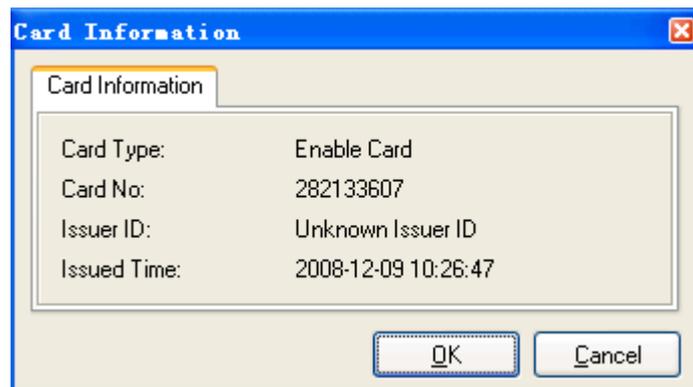The maximum of blacklists is 1600 and the record is 20000. Press "OK" to issue.

Scan the Record Setting Card, green light blinks once, done

11.3.6. Lift Enable Card

Click "Lift Enable Card" in the "Card" item to call next window.

Put a MFS50 card on the reader and Press "OK" button to issue the Enable Card.

Scan the Enable Card; if the yellow light is on, the lift is only controlled by keypad. If the yellow light is off, the lift is controlled by the BE-TECH lift system.

11.3.7. Lift Visitor Card

Click "Lift Enable Card" in the "Card" item to call next window.

The card is an operating card for visitor to set which floor he/she is able to reach and how long he/she is able

to stay.
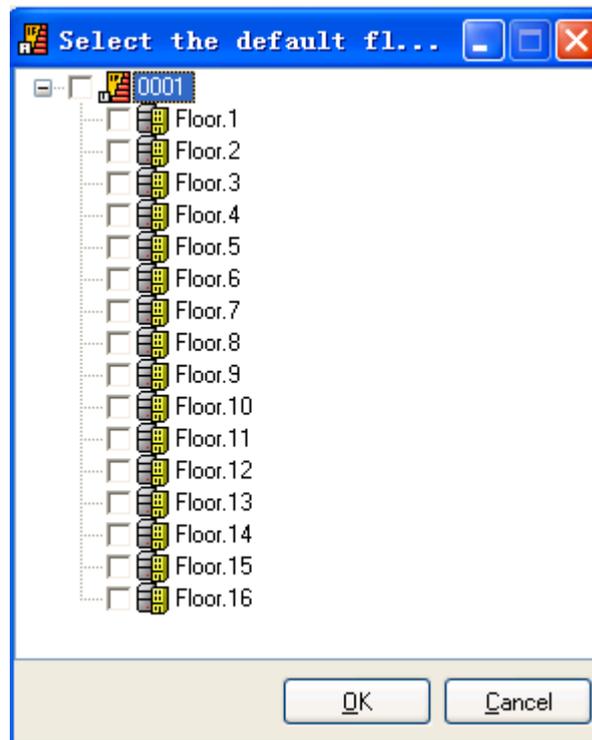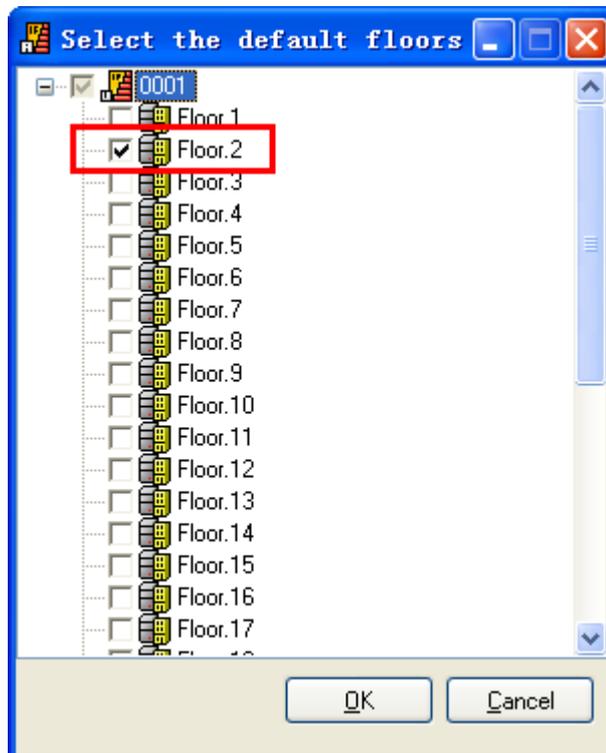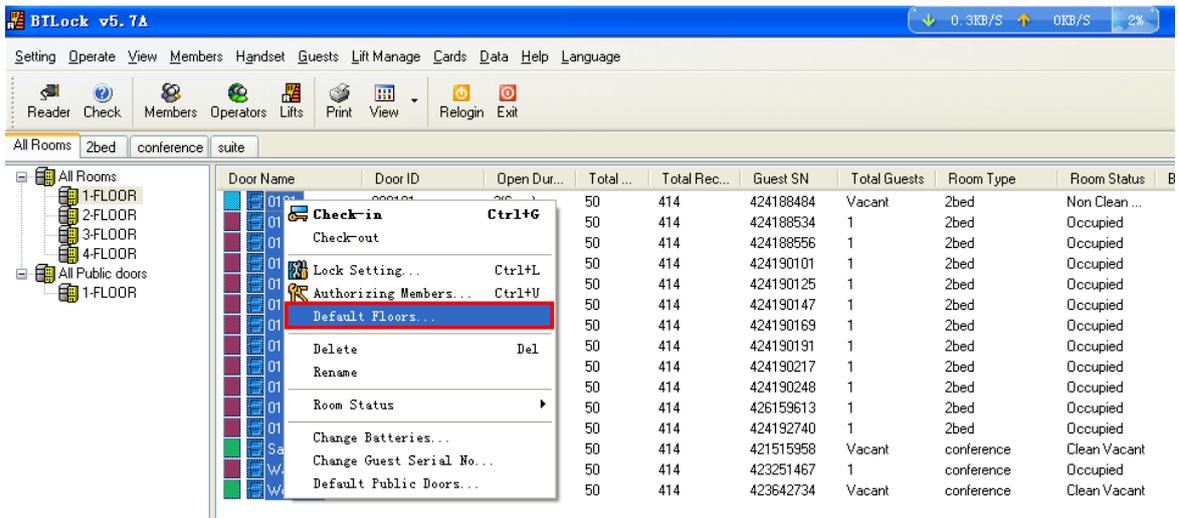

Comfier the information and press "OK" to issue.
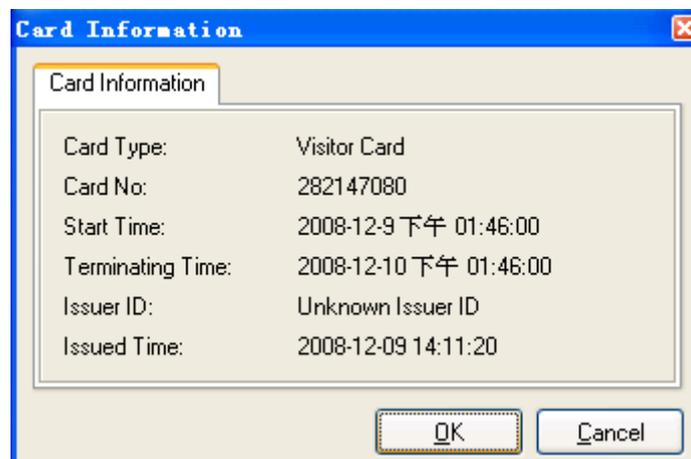
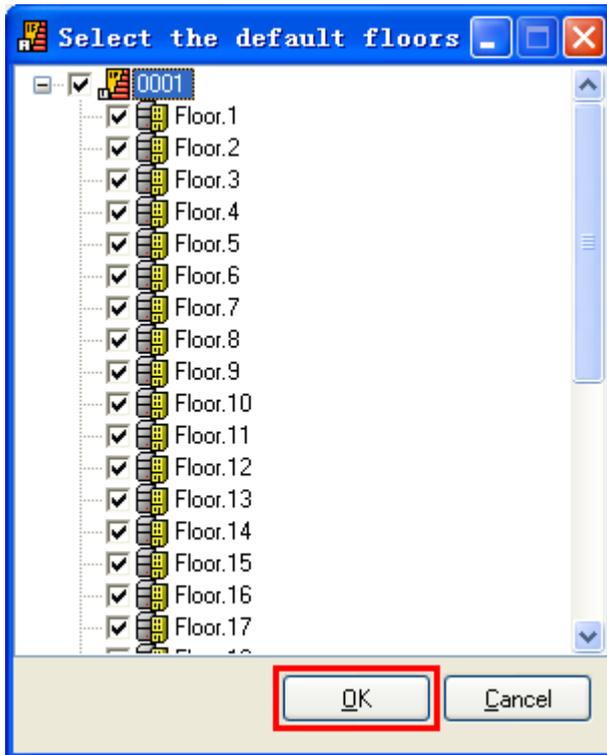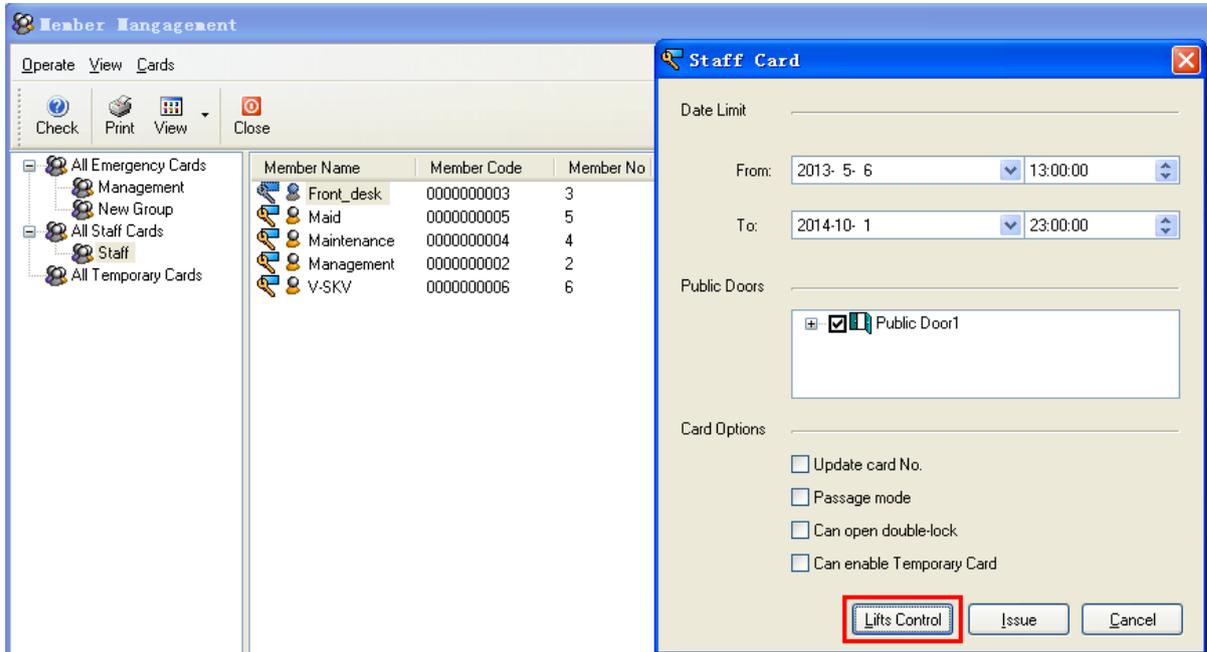### 11.3.8. Build Up the Relationship Between Lift and Room Door.

11.3.8.1. Guest card

You can default the floor to each room, so the lift information will automatically write to the card when the guest check-in.

Select the rooms and default the corresponding floors

11.3.8.2. Staff card with Lift function

After setting up the lift information for staff card, click "Issue" to issue the staff card.