

BL2000-QKB-V3

Destination Group Control System

User Manual

Ver: 1.6

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1 Introduction

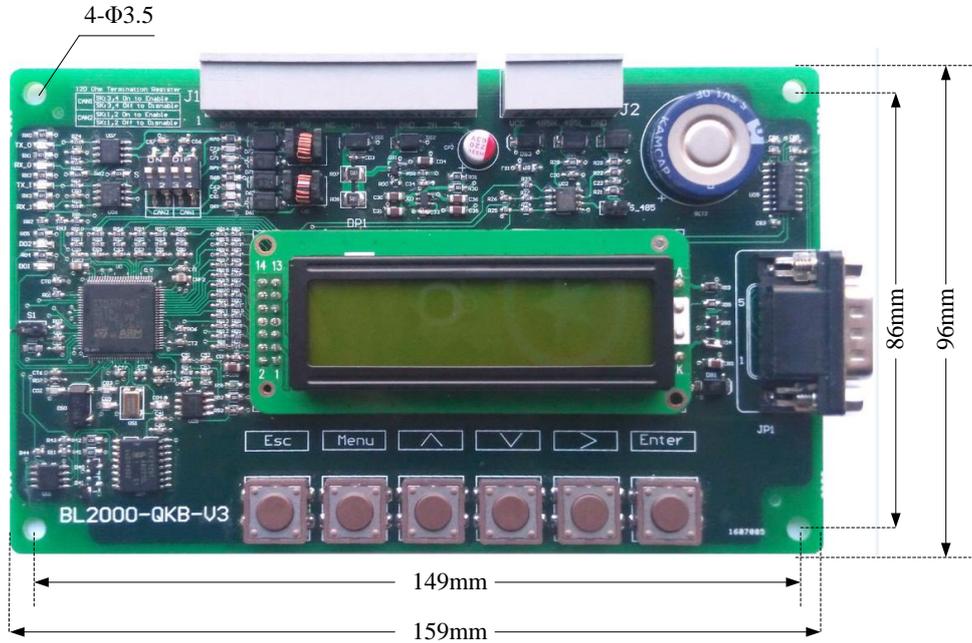


Figure 1.1 Layout and dimension of Group Destination Control motherboard BL2000-QKB-V3

BL2000-QKB-V3 is an advanced and intelligent Group Destination Control System. The advantages of group destination control system are:

1. Prior to assigning the elevator service, the target floors to be reached by the passenger sand the number of passengers is already known, hence, the operational efficiency is improved, and waiting time is reduced.
2. It has great advantage when using centralized scheduling for intensive crowded floors, it can effectively divert passengers and to speed up the dispatching of passengers.
3. Immediately forecast passengers to take the elevator number, guiding passengers to service elevators, delighting the passengers, avoiding passengers always monitor all the elevator to service and the direction of operation and then choose to ride on the elevator.

Group Destination Control System has integrated the expert system and fuzzy logic control system, and other optimization scheduling algorithm, based on CAN bus communication technology to ensure that the Group Destination Control System is always in high efficient and safe operation.

Group Destination Control System has five types of operation modes:

- ❖ On Duty Mode – During the pre-set time, all elevators are given the highest priority to the up-travel hall calls to serve the up-peak traffic effectively.
- ❖ Off Duty Mode – During the pre-set time, all elevators are given the highest priority to the down-travel hall calls to serve the down-peak traffic effectively.
- ❖ Equalization Mode – Optimizing the allocation of the elevator calls as per the principle of the shortest responding time to the hall the calls.
- ❖ Standby Mode – During the Balance Mode operation, if no car call or hall call is made for 3 minutes, the elevators will be assigned to standby at the first floor of each region, this is to increase the efficiency of attending hall call registration.
- ❖ Base Floor Mode – After starting the Base Floor mode, during the equalization mode, if the base floor does not have an elevator, the system will allocate a nearest elevator to the base floor to standby.

The Group Destination Control System is composed of the group control panel and the LCD Floor Selector. The floor selector sends the hall call information to the group control panel, the group control board calculates the shortest time to reach the target floor and delivers the passengers to the destination floor, and then the group control panel will broadcast the allocation of information to the main control panel and LCD floor selector, the LCD floor selector will then prompt the passengers to the assigned elevator number.

2 User Guide for Group Destination Control System

2.1 System Block Diagram

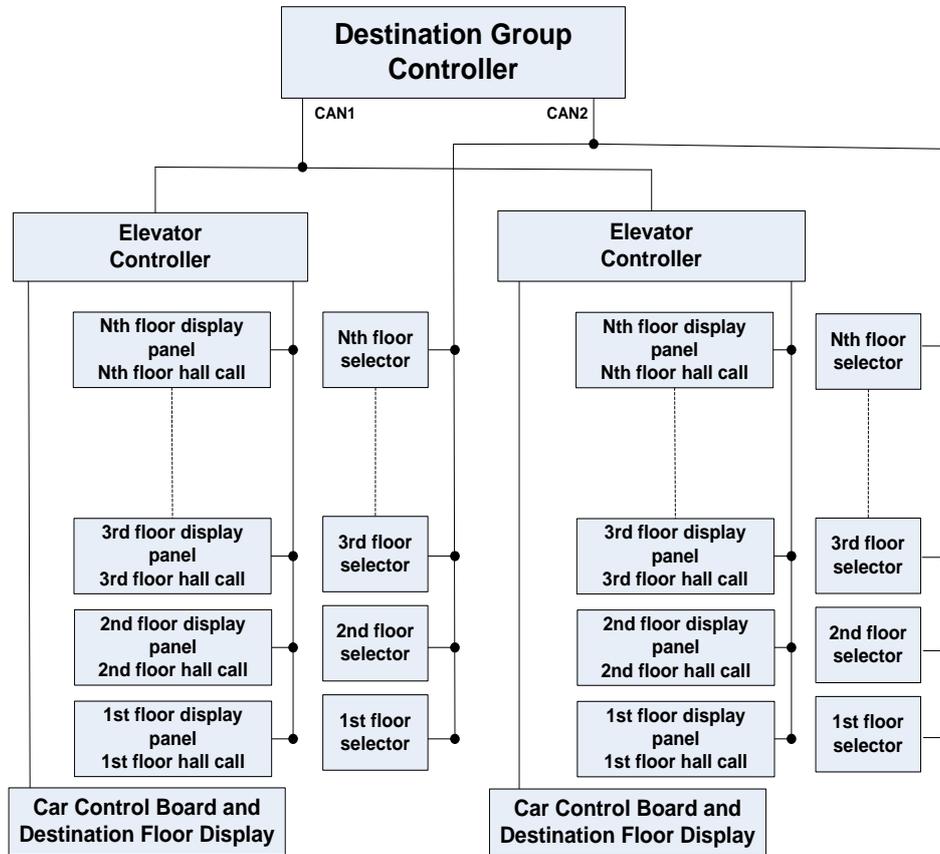


Figure 2.1 Group Destination Controller – Communication Network and System Block Diagram

2.2 System Configuration

2.2.1 Group Control Board

1. Using ST industrial control microcontroller;
2. Using CAN Bus for serial communication;
3. Equipped with RS232 port (connecting to PC through this interface, to check the call response and each elevator status).

2.2.2 LCD Floor Selector

1. Using Philips 32-bit industrial control microcontroller;
2. Using CAN bus for serial communication;
3. Keyboard type of operation and LCD display.

2.2.3 Scope of Application

1. Control method: Elevator selective-collective control, 2 to 8 car group control;
2. Maximum number of floors: 64 floors

2.2.4 Port Definition and Specification of BL2000-QKB-V3

Table 2.1 Group Control Board Port Definition and Specification

Port	Terminal	Position	Definition	Purpose
J1	GND3	J1-1	0V	Power Source and Communication
		J1-2		
	GND3	J1-3	0V	
	5V_IN	J1-4	5V Power Input	
		J1-5		
	H1	J1-6	Communication with main control board group port	
	L1	J1-7		
	GND3	J1-8	0V	
	H2	J1-9	Communication port for destination floor selector	
	L2	J1-10		
2	+5V	J2-1	+5V Power Output	For RS485 (Spare)
	DA+	J2-2	RS485+ Communication	
	DA-	J2-3	RS485- Communication	
	GND3	J2-4	0V	
JP1	+5V	JP1-1	+5V Power Output	For RS232 (Programming)
	RX	JP1-2	Transmitting	
	TX	JP1-3	Receiving	
		JP1-4		
	GND3	JP1-5	0V	
		JP1-6 to J1-9		

5V_IN has maximum load of 200mA.

2.2.5 System Configuration

Table 2.2 System Configuration

Component	Part Name	Configuration
Machine Room		
Group Control Board	BL2000-QKB-V3	Must be configured
Elevator Main Control Board	BL3000-STB or BL6 Integrated	Must be configured
Landing Device		
Destination Floor Selector	SJT-MBC-V1	Must be configured (select from two options*)
Hall Operation Panel		
Hall Lantern and Controller	BL2000-HQK-V9	Optional (recommended)
Arrival Chime		Optional
Destination Landing Dot Matrix Display	BL2000-HBH-N3	Optional
Inside Cabin		
Car Operating Panel		Optional (recommended)
Destination Vertical Dot Matrix Display	BL2000-HBH-N4	Optional (recommended)

***Note:** In destination group control system, it is applicable to use destination floor selector for some floors and use the regular hall operation panel for the rest floors. For the floors that are using destination floor selector, the number of installed destination floor selector is optional. For the floors that are using hall operation panel, one hall operation panel is required for each elevator, and the parameter IO GDCS Floor must be configured, refer to 2.14 for detail.

2.2.6 Group Destination Control System Schematic Diagram

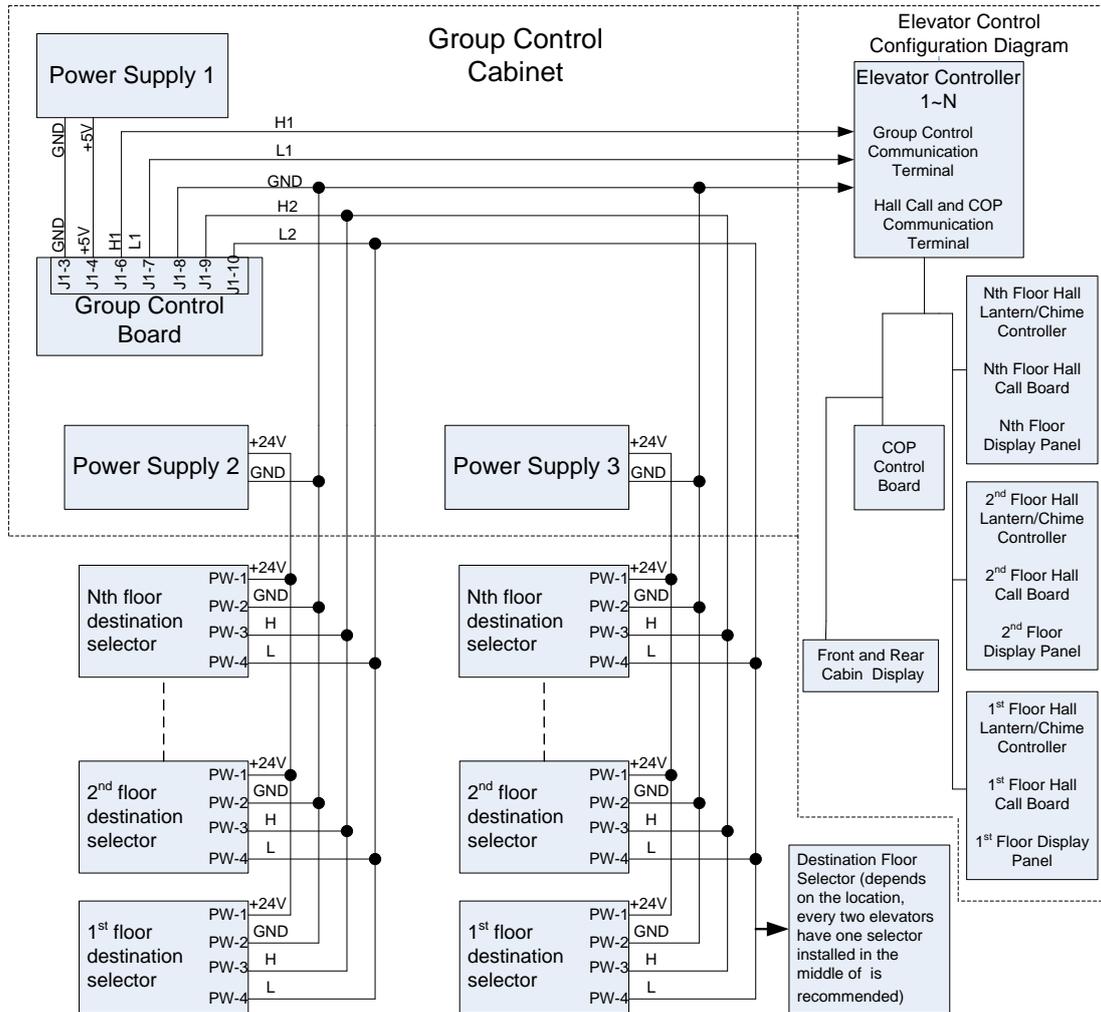


Figure 2.2 Group Destination Control System Schematic Diagram

Remark: If cabin destination display is used, then landing destination display will not be used.

2.3 Keypad Operation Description

LCD Keypad has six keys, the arrangement and definition as below:

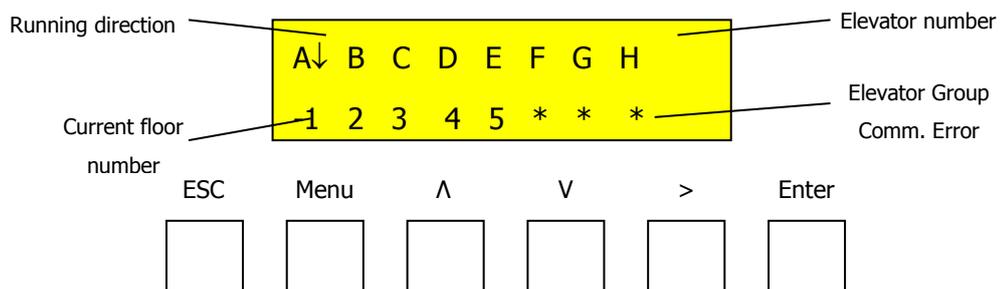


Figure 2.3 Key arrangement and definition

Table 2.3 The functions of the keys

Key	Description
Menu	Unconditionally return to main menu.
Enter	To enter to the next level of menu, to confirm the modified value
Esc	To escape to the upper level of menu or to cancel the amendment.
>	Right scrolling cursor or to view communication or group status in main menu.
^	To scroll up one screen, to increase parameter value by one or to select YES (ON).
v	To scroll down one screen, to decrease parameter value by one or to select NO (OFF).

Group control board (QKB) uses the LCD display and keypad operation to set the group control system operating modes, hall call up and down, car call availabilities, system date and time, On duty and Off duty times, and to view each elevator running status.

2.4 LCD Display Flowchart and Description

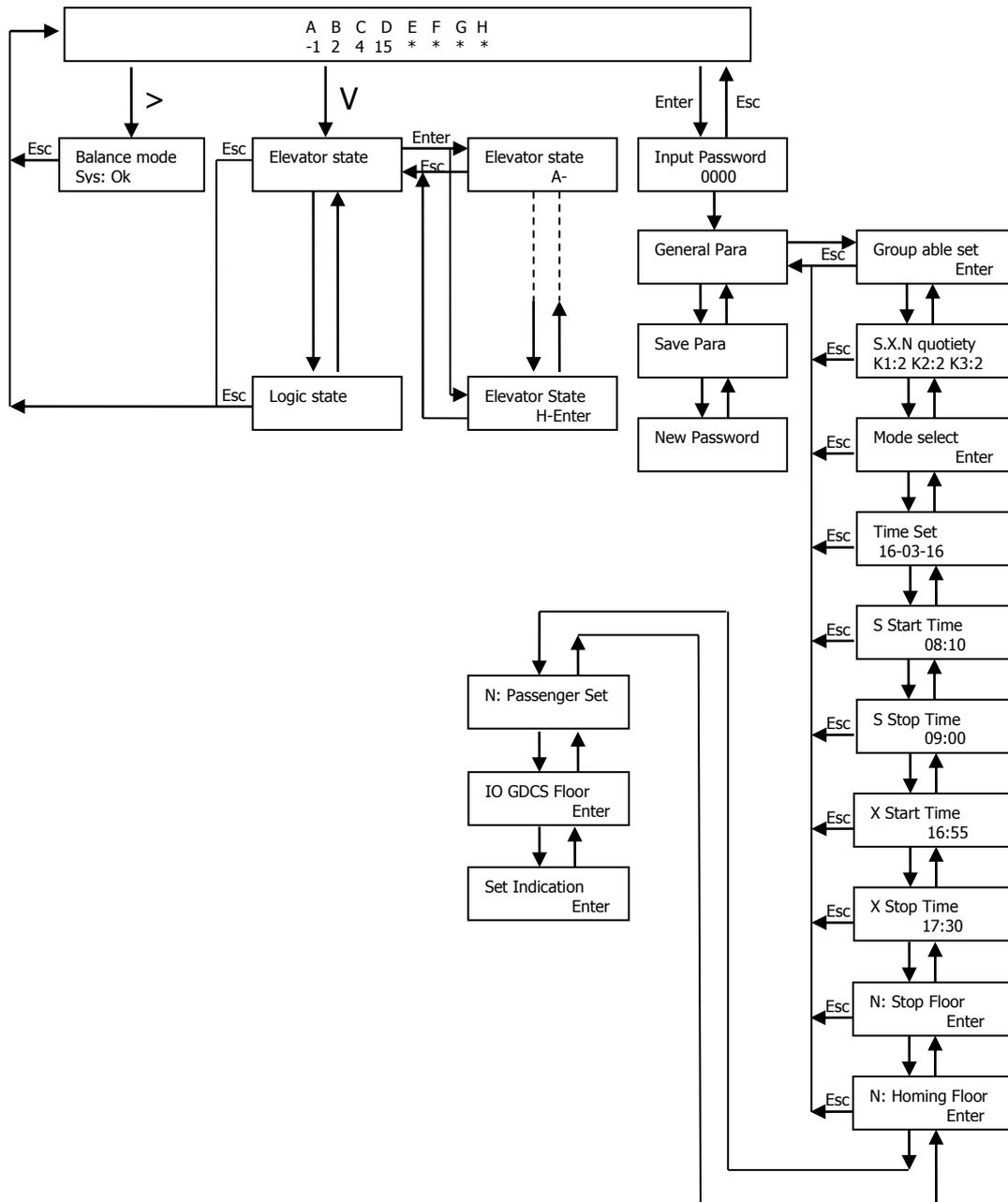
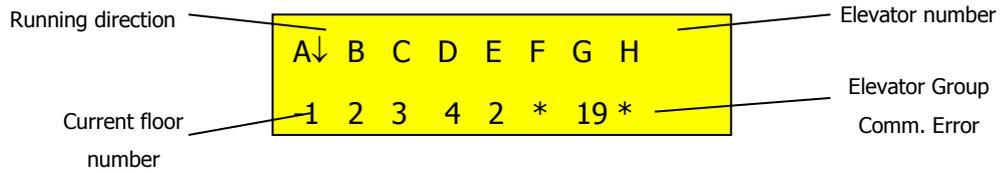


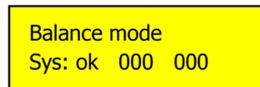
Figure 2.4 LCD Display and Set Flowchart

2.5 LCD Keypad Display Description



A, B, C, D, E, F, G and H are representing the eight elevator numbers within the group control; the arrow beside each is indicating the elevator traveling direction; the number or alphabet below each elevator number is indicating the current actual floor number; if an asterisk (*) is indicated under the elevator number, it means there is communication error or abnormal with the group control, or group control function of the elevator has been set to “NO”, or “Group able set” is set to “NO”.

2.6 Group Control Status and Communication



- Balance mode** : Hall calls are being divided into groups so as to serve the hall call registration as soonest as possible.
- On duty mode** : Elevators are assigned to homing floor to serve up peak traffic during the pre-set time.
- Off duty mode** : One elevator is assigned to serve up traffic, the rest of the elevator in the group are assigned to serve down traffic.
- Sys: ok** : Group control communication is normal.
- Sys: ET** : Group control communication is abnormal.

2.7 Each Elevator Status and Description

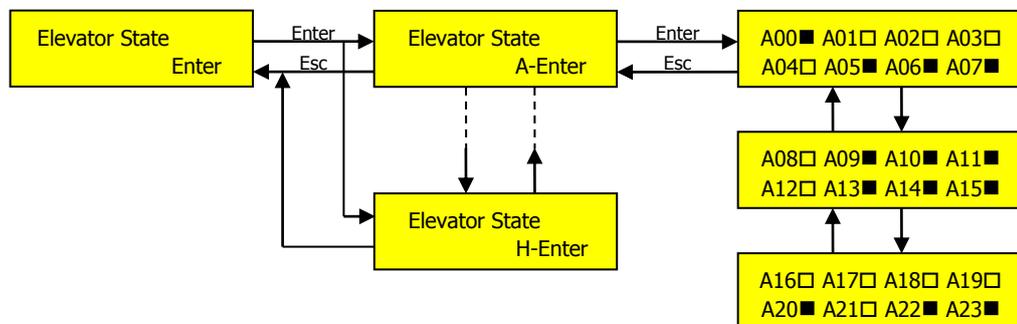


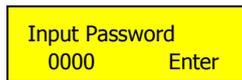
Table 2.4 Elevator Status and Description

Item	Description	Item	Description	Item	Description
X00	Parking	X08	Over Load	X16	Load Weighing Fault
X01	Total Control	X09	Light Load	X17	Car Comm. Fault
X02	Inspection	X10	Full Load	X18	
X03	Door Interlock Contact	X11	Attendant Y/N	X19	Emergency Stop
X04	Speed Change	X12	Fault	X20	Door Zone
X05	Running	X13	Fireman	X21	Door Fault
X06	Down Direction	X14	VIP	X22	Door Open Fault
X07	Up Direction	X15	Buzzer	X23	Door Close Fault

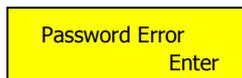
Note: "X" is representing the elevator number from "A" to "H".

2.8 Password Inputting

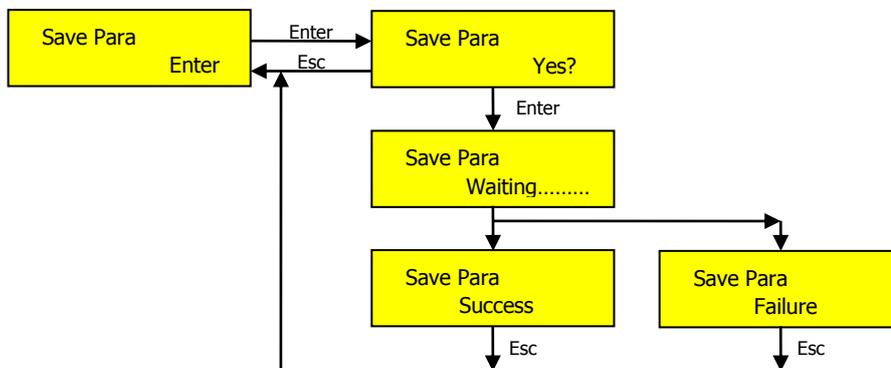
Password (User Level or Factory Level) must be correctly entered in order to enter into Parameter Setting menu.



In the Input Password menu, use "Λ" key to increase the number, or "V" key to decrease the number, use ">" key to scroll the desired password position. Press "Enter" key to enter the correct password, hence, to enter the General Parameter setting menu. Or else it will display:



2.9 Save Parameter

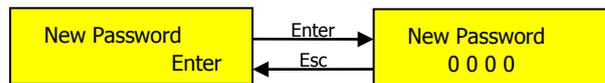


After entering “Save Para” menu, press “Enter” to select “Yes”, the system will automatically save the amended parameter. “Success” will be displayed if the saving is succeeded, or else “Failure” is shown. If the saving is failed, please contact factory for further assistance.

Note: Any changes in parameter setting will be effective immediately, however, if “Save Para” is not performed, when system power is cut off, the changed parameter setting will be reverted to before value.

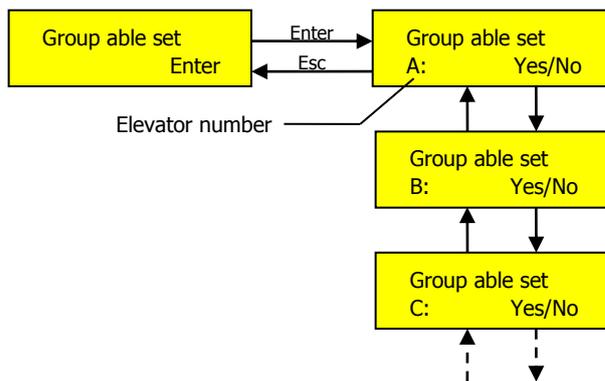
2.10 Password Changing

It is for changing and setting new User Password.



2.11 General Parameter Settings

2.11.1 Group able set



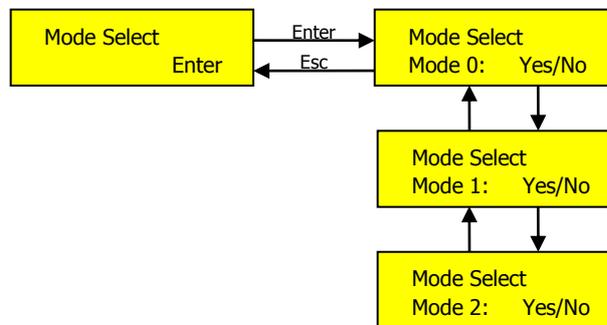
Set “Yes” for each elevator in the group bank. If the elevator communication is normal and meeting the group control condition, then the group control board can control the operation.

2.11.2 S.X.N quotient

S.X.N quotient
K1: 2 K2: 2 K3: 3

The value K1, K2 and K3 are for internal use, do not change the factory setting. (Note: “S” = Up Hall Call, “X” = Down Hall Call and “N” = Car Call)

2.11.3 Mode Select



Mode 0 : Spare, not used.

Mode 1 : On Duty Mode; if “Yes”, during the pre-set “On Duty” time, the Group system will enter the On Duty Mode.

Mode 2 : Off Duty Mode; if “Yes”, during the pre-set “Off Duty” time, the Group system will enter the Off Duty Mode.

When “On Duty Mode” is set to “Yes”, during the prefix start working hours, the group control system will enter On Duty mode; when “Off Duty Mode” is set to “Yes”, during the prefix finish working hours, the group control system will enter Off Duty mode; if “On Duty Mode” is set to “No”, the group control system will never enter On Duty mode; similarly, if “Off Duty Mode” is set to “No”, the group control system will never enter Off Duty mode. If both “On Duty Mode” and “Off Duty Mode” are set to “No”, then the group control system will be operated in averaging running mode.

2.11.4 Set System Time

This is to display and to set the system date & time; YY-MM-DD HH:MM

Set Time 16-03-16 08:18

2.11.5 Set On Duty Time / Off Duty Time

S Start Time 08:20	Start time for On Duty Mode
S Stop Time 09:20	Stop time for On Duty Mode
X Start Time 16:20	Start time for Off Duty Mode
X Stop Time 17:20	Stop time for Off Duty Mode

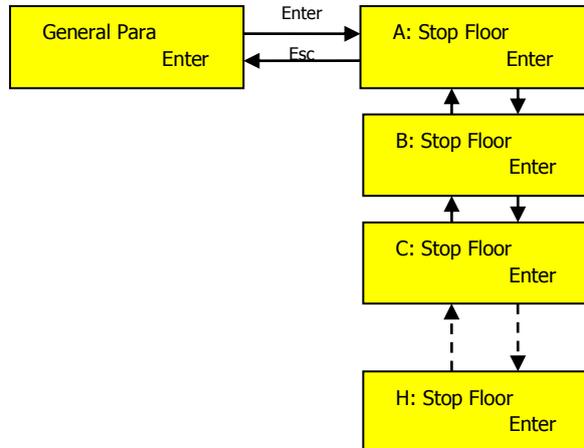
When “On Duty Mode” is set to “Yes”, group control system will enter On Duty mode between the start and stop On Duty mode times.

When “Off Duty Mode” is set to “Yes”, group control system will enter Off Duty mode between the start and stop Off Duty mode times.

When “On Duty Mode” and “Off Duty Mode” have been set to “Yes”, if the system time is greater than “S Start Time” and smaller than “S Stop Time”, the Group system will enter the “On Duty Mode”; If the system time is greater than “X Start Time” and smaller than “X Stop Time”, the Group system will enter the “Off Duty mode”.

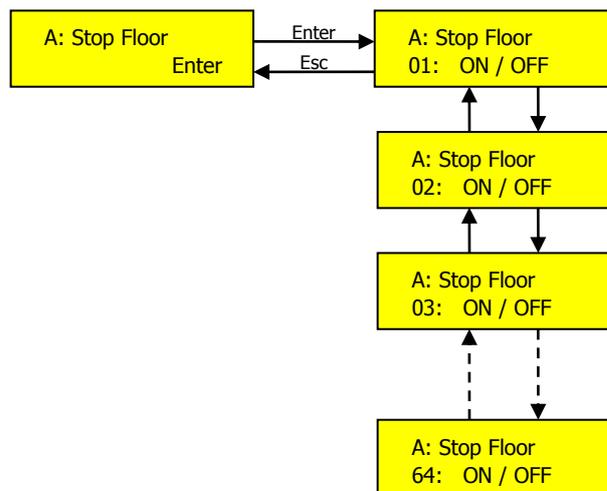
Note: “S” stands for Up Peak On Duty; “X” is stands for Down Peak Off Duty.

2.11.6 Set Non-Stop Floor

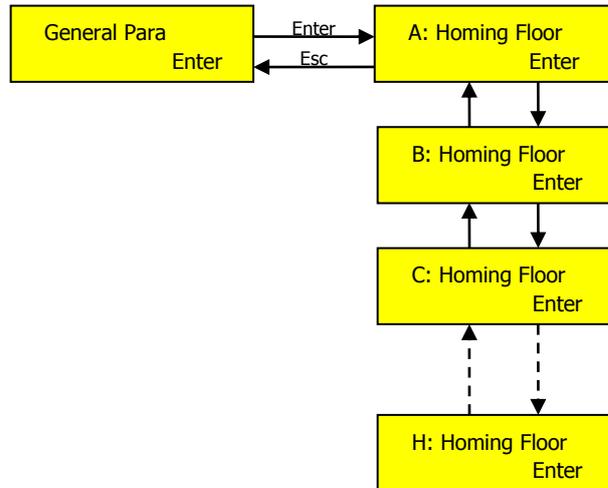


If there are any non-stop floors setting required in the Group control system, the non-stop floor setting in every main control board must be like the setting in Group control system.

Please be noted that the Main control board is using actual floor number(s) in the non-stop floor setup, whereas, the Group control system is using absolute floor number(s) in the non-stop floor setup (Refer to Chapter 2.12 for Group Control Elevator Bottom Floor Setting). If the setup of non-stop floor is wrong (non-stop floor set in Main control board is not corresponding to the non-stop floor set in Group control system), the group control system will not be able to distribute the servicing elevators properly or unable to achieve destination control purposes.



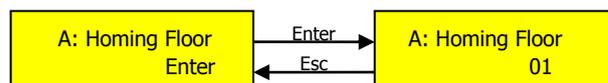
2.11.7 Set Homing Floor



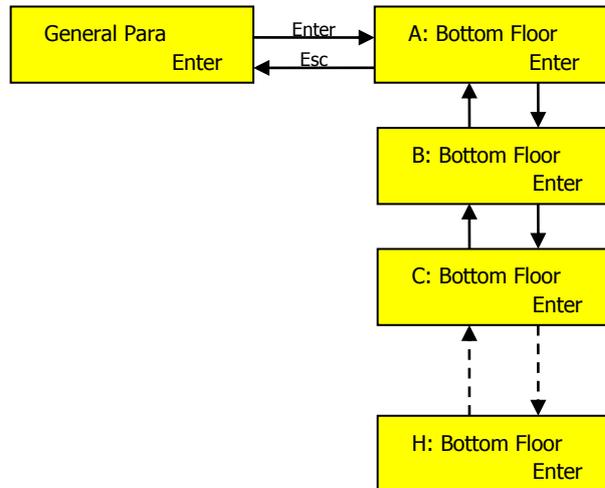
When the elevators in the group control are idle for 5 minutes (no car calls no hall calls), each elevator will be dispatched to pre-set individual Homing Floor for waiting.

Remarks:

- (1) During Group controlling, the Homing Floor setup of each elevator’s main control board will be invalid, the Homing Floor of elevator controller will not be the Homing Floor of group control;
- (2) The Group control system is using absolute floor number in the Homing Floor setup. (“1” = lowest floor, so on and so forth) (Refer to Chapter 2.12 for Group Control Elevator Bottom Floor Setting)

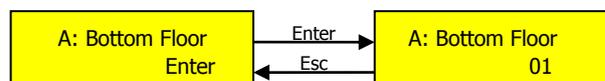


2.12 Group Control Elevator Bottom Floor Setting



The purpose of configuring the Bottom Floor of each elevator is to prevent staggered floor, if elevators A, B, C and D are having the same Bottom Floor, then all settings shall be set to **1**. If there are elevators in a group having different basement floors, then the Bottom Floor shall be correctly set, for example, elevator A floor numbers are B2, B1, G, 1, 2, 3, while elevator B floor numbers are G, 1, 2, 3, then Elevator A has the lowest basement floor, the entire group destination control total floor is 6 floors, therefore:

- ❖ Elevator A's lowest floor B2 is considered as **1** of the group base floor number, and its Bottom Floor shall be set to **1**;
- ❖ Elevator B's lowest floor G is considered as **3** of the group base floor number, and its Bottom Floor shall be set to **3**, and so on the other elevators' Bottom Floor settings.



The following is an example of Bottom Floor setting for Group Destination Control:

There are two elevators, A and B; where, Elevator A has two basement floors, and Elevator B has no basement floor.

Table 2.5 Example of Bottom Floor setting for Group Destination Control

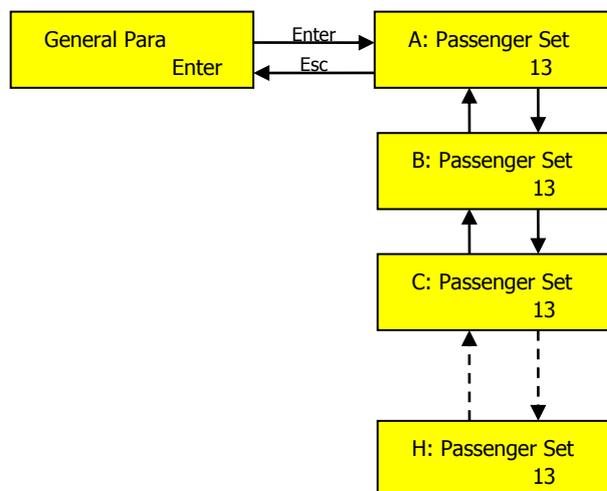
Absolute Floors of Destination Control	1	2	3	4	5	6	7	8	...
Absolute Floors of Elevator A Controller	1	2	3	4	5	6	7 Non-stop	8	...
Floor Numbering of Elevator A	B2	B1	G	1	2	3	4 Non-stop	5	...
Absolute Floors of Elevator B	X	X	1	2	3	4 Non-stop	5	6	...
Floor Numbering of Elevator B	X	X	G	1	2	3 Non-stop	4	5	...

Note:

- “Non-stop” stands for non-stopping floor
- “X” stands for unavailable floor

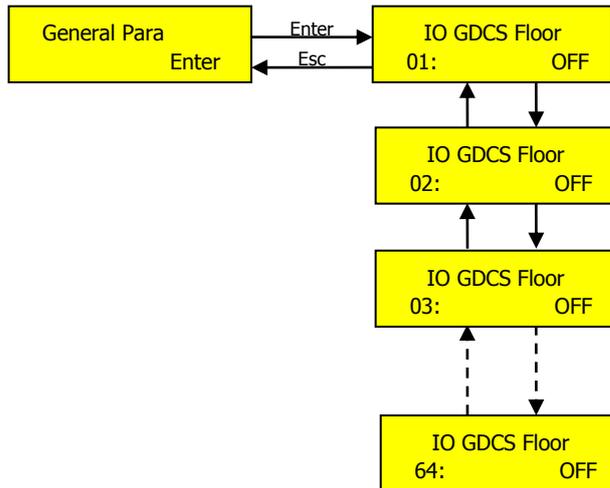
- ❖The absolute floor numbers are used as the basic reference for destination control system.
- ❖The Bottom Floor settings for Elevator A shall be **1**, and Elevator B shall be **3**;
- ❖The Homing Floor setting for Elevator A shall be **3**, and Elevator B shall be **3** in case the Homing Floor is required at G floor. The Homing Floor for each elevator can be set differently.
- ❖The Non-Stop Floor setting for Elevator A shall be **7**, and Elevator B shall be **6**.
- ❖The Floor Indication setting for group control shall be: **1: B2, 2: B1, 3: G, 4: 1, 5: 2, ...**

2.13 Group Control Elevator Passenger Full Setting



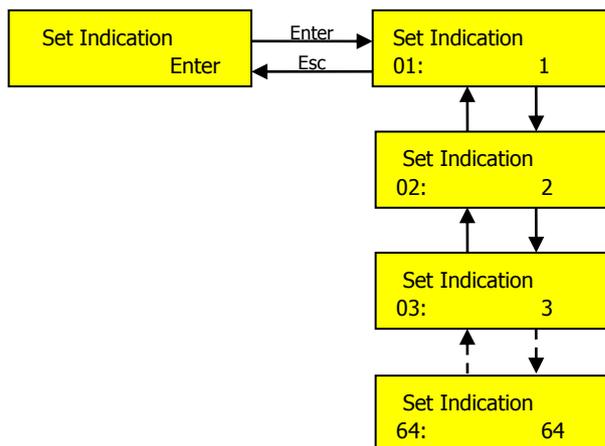
This function is for setting the full load capacity (also known as the rated number of passenger) of each elevator in the group destination control, this will enhance the handling of passenger, and to optimize the distribution of the passengers entering the car according to the current operating range. The default setting is 13 Persons, it must be set according to the actual rated capacity.

2.14 Regular Hall Operation Panel Configuration Option for Each Floor



This function configures whether to use regular hall operation panel for group control hall calling of each individual floor (not using destination floor selector). For every floor that is using regular hall operation panel for group control hall calling, please set the respect floor parameter to ON.

2.15 Setting Group Control Floor Numbering



The setup value of group floor numbering will be distributed to the destination control floor selector after the saving of setting parameter, and it will refresh the floor numbering of every floor display. If there is inconsistent of floor numbering setup, the destination control floor selector will show error message.

If the floor number of the lowest floor 01 is “1”, then set the Floor Indicator as “1”; if the floor number of the lowest floor 01 is “B2”, then set the Floor Indicator as “B2”.

2.16 Setting Requirement for Group Control versus elevator numbers (A, B, C, ...)

- ❖ On every elevator controller of the group control, the setting for fireman “Fire Floor” and “Homing Floor” must be the same;
- ❖ In Group control system (3-car group and above), if the bottom floors are not same (some elevators are having basement floors), the most lowest floor elevator should be set to Elevator A, the second most should be set to Elevator B and so on and so forth; If the bottom floors are same whereas the top floors are not same, hence the highest floor elevator should be set to Elevator A; If none of the above mentioned, elevator numbers can be randomly set.

2.17 Controller Parameter Settings Requirement for Group Control

- ❖ F1-24 Parallel No. (Used to the elevator number of group-controlling as the group controlling is enabled.) 0 to 7 is for the elevator number A to H.
- ❖ F1-25 Twins Control. Set this parameter as 0 to disable the twins controlling.
- ❖ F1-26 Group Control. Set this parameter as 1 to enable the group controlling.

3 Destination Control Floor Selector Installation and Usage

3.1 SJT-MBC-V1 Destination Control Floor Selector Introduction

The following pictures show the photos of the Floor Selector:



Figure 3.1 Floor Selector Physical Map

The Destination Control Floor Selector consists of display board, metal keyboard, and metal casing. Destination Control is an advanced elevator group controlling. By using the Destination Control Floor Selector for the hall call registration, passenger can just enter the target floor number, and then the system will assign an elevator number to serve him or her.

3.1.1 Dimension

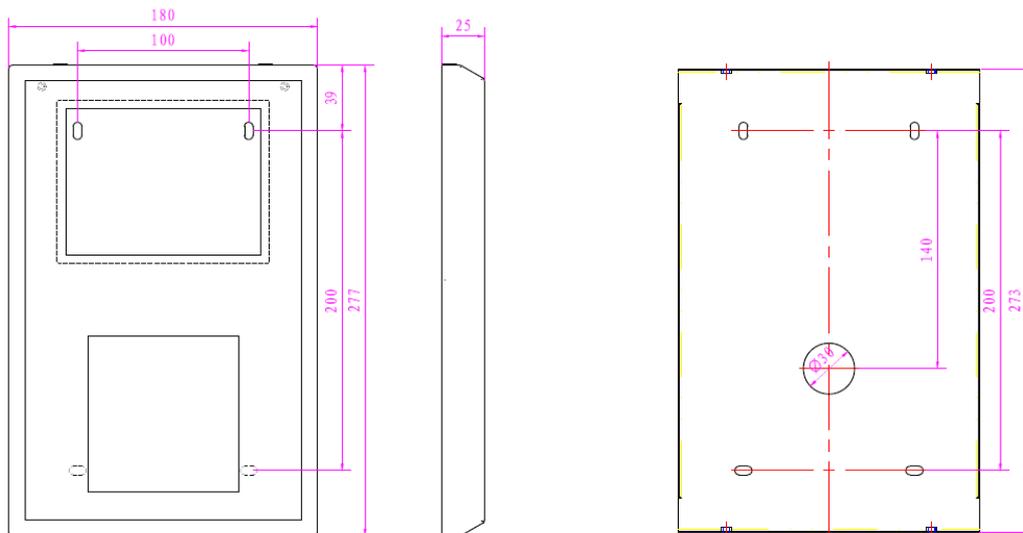


Figure 3.2 Floor Selector Size Diagram

3.1.2 Instruction

3.1.2.1 Interface of Floor Selector without Entering Number of Passenger

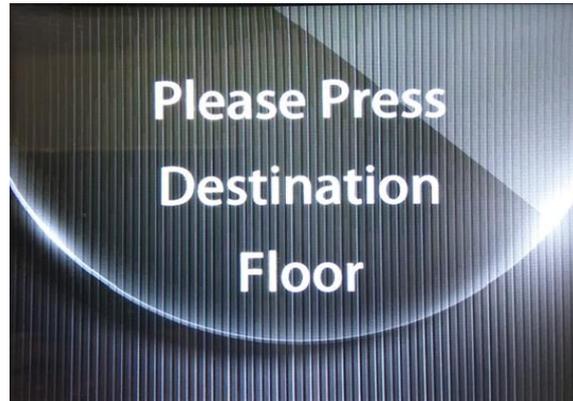


Figure 3.3 Interface of Floor Selector without Entering Number of Passenger

Above picture shows the Destination Control Floor Selector interface **without** the input of Number of Passenger. At this interface, it accepts the passenger to enter the target floor, and to confirm the selection by pressing “Enter” key, then the system will response with it and designate the service elevator by displaying elevator number / character (A, B, C ...).

The floor selection sequences are as the following:



Step.1: Input the target floor Step.2: Waiting for distribution Step.3: Elevator A is assigned, walk to the left.

Figure 3.4 Selection Sequences of Floor Selector without Entering Number of Passenger

3.1.2.2 Interface of Floor Selector with Entering Number of Passenger

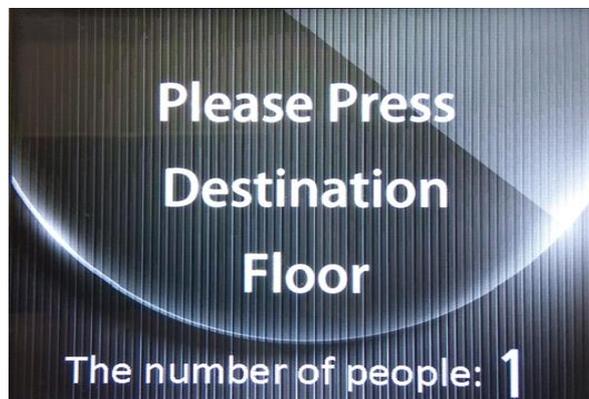


Figure 3.5 Interface of Floor Selector with Entering Number of Passenger

Above picture shows the Destination Control Floor Selector interface **with** the input of Number of Passenger. At this interface, the procedure of entering as follows:

- (1) It accepts the passenger to enter the target floor, and then press “Enter” to confirm, and
- (2) And then input the number of passenger (1 to 9 people) coming along with him/her, and then again pressing “Enter” key to confirm

Then the system will response with it and designate the service elevator by displaying elevator number / character (A, B, C ...).

The floor selection sequences are as the following:



Step.1: Input the target floor Step.2: Input number of passenger Step.3: Elevator B is assigned, walk to the right.

Figure 3.6 Selection Sequences of Floor Selector with Entering Number of Passenger

3.1.2.3 Parameter Setting Interface

Disconnect the power source, short the jumper SZ and then power up, it will enter to Floor Selector parameter setting interface, as shown in the following:

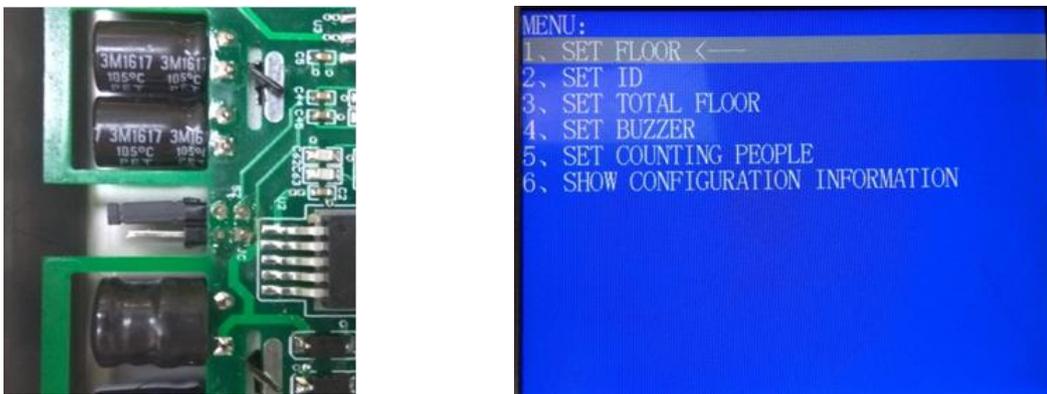


Figure 3.7 Jumper of SZ Parameter Setting Interface

In this interface, user can configure the parameters, through the keyboard buttons “1” to “6” to control the cursor to select various options, press Enter key to select and to enter the sub-menu. In the sub-menu, user can configure the parameters, after modifying, press Enter key to confirm and save the settings; in any sub-menu interface, press Cancel key to return to the previous menu. After completing the setting, remove the jumper, and re-power the device.

Table 3.1 Parameter Configuration Specification

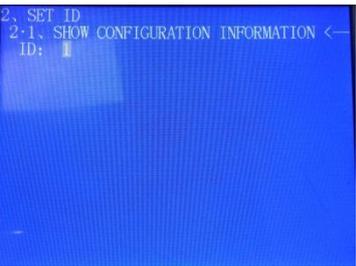
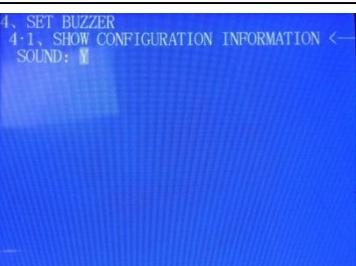
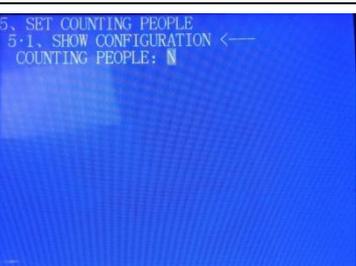
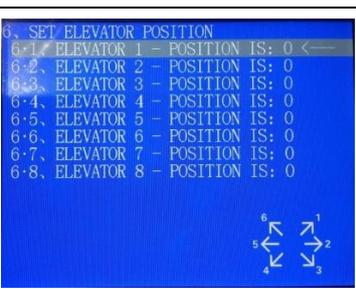
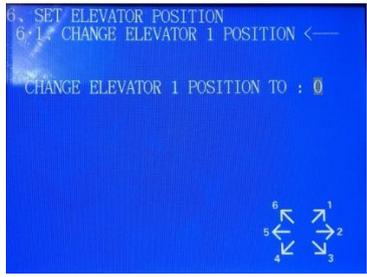
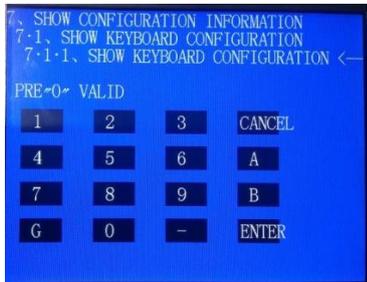
1	Set Floor		<p>To set the address of the current floor of the Floor Selector (setting range 1~64), after setting, press Enter to confirm and save.</p> <p>Note: Set 1 to the lowest level of Floor Selector; set 2 to the upper floor, so on and so forth.</p>
2	Set ID		<p>To set the ID of the Floor Selector (setting range 1~8), after setting, press Enter to confirm and save.</p> <p>Note: There can be more than one Floor Selector in one floor, use different ID to differentiate.</p>
3	Set Total Floor		<p>To set the total number of floor (setting range 1~64), after setting, press Enter to confirm and save.</p>
4	Set Buzzer		<p>To set whether to turn on or turn off the buzzer sound; press "1" key to turn on, press "0" to turn off the buzzer. After setting, press Enter to confirm and save.</p>
5	Set Counting People		<p>To set whether to turn on or turn off the input of number of passengers; press "1" key to turn on, press "0" to turn off the counting. After setting, press Enter to confirm and save</p>
6	Set Elevator Position		<p>To view the elevator position distributed at 1~8 (according to the arrow pointing direction), by using the keyboard "1" to "8" to select the sub-menu, press Enter key to confirm the selection.</p>

Table 3.1 Parameter Configuration Specification (Cont'd)

<p>7</p>	<p>Change Elevator n Position</p> <p>Note: n = 1, 2, 3, 4, 5, 6, 7, 8</p>		<p>To change the elevator position distributed (according to the arrow pointing direction), by using the keyboard “0” to “6” to select different arrow directions, press Enter key to confirm the selection.</p>
<p>8</p>	<p>Show Configuration Information</p>		<p>Press “1” to select Keyboard configuration sub-menu; press “2” to select Floor configuration sub-menu. After selection, press Enter key to enter the sub-menu.</p>
<p>9</p>	<p>Show Keyboard Configuration</p>		<p>It shows the keyboard configuration; the configuration information is stored in the internal Flash as a configuration file and can only be displayed but cannot be changed through this interface.</p>
<p>10</p>	<p>Show Floor Configuration</p>		<p>It shows the floor configuration; the configuration information is stored in the internal Flash as a configuration file and can only be displayed but cannot be changed through this interface.</p> <p>Note: Floor numbering can be set through each group control board; it will automatically update and save the floor display settings of each Floor Selector when saving parameters.</p>

3.1.2.4 Keyboard Checking Interface

Disconnect the power source, short the jumper JC and then power up, it will enter to Floor Selector keyboard checking interface, as shown in the following:

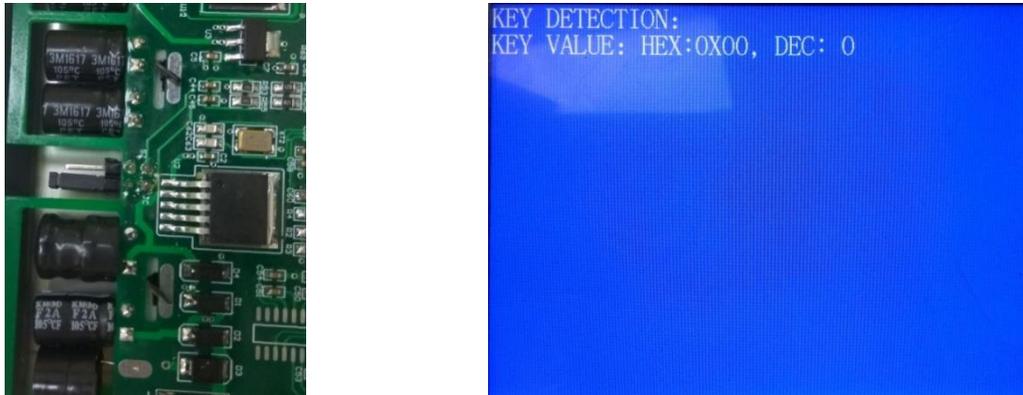


Figure 3.8 Jumper of JC Keyboard Checking Interface

In this interface, user can perform keyboard checking, the display will show the value of the corresponding key being pressed, and the values are as following:

Table 3.2 Key Value Comparison

Key Symbol	Empty	-	0~9	A~Z	Cancel	Enter	Invalid key
Key Value	0	1	2~11	12~37	50	51	60

3.1.2.5 Replacement of Configuration File, Fonts, and Pictures

There are parameters in the internal Flash configuration file, and the fonts used in display, pictures, and other documents.

By modifying the configuration file:

1. To modify the key when the front "0" input valid / invalid;
2. To modify the floor display information;
3. To modify the keyboard function (modify key values);
4. To modify the direction arrow indicating the position of the service elevator.

User can change the style of the display interface of the Floor Selector control panel by modifying the fonts, pictures, and other files.

3.2 SJT-EPAD-097-QK Touch Screen Destination Floor Selector (9.7-inch)

Touch Screen Destination Floor Selector (9.7-inch) is shown as photo below:



Figure 3.9 Photo of Touch Screen Destination Floor Selector

This product requires working with SJT-CAN-232/485-V1 communication protocol translation board, as shown in photo below:

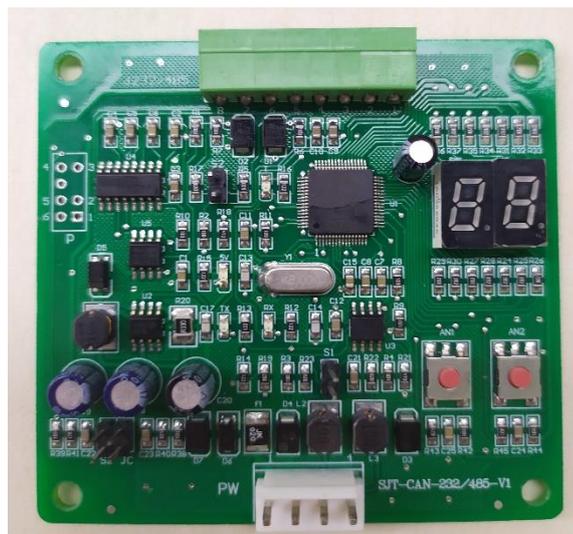


Figure 3.10 SJT-CAN-232/485-V1 Communication Protocol Translation Board

Destination group control system is an advanced elevator group control method. This product is used as hall call board in destination group control system; passengers only need to press a target floor from screen keyboard, then the elevator number that serve this call will be replied on the screen.

3.2.1 Dimension

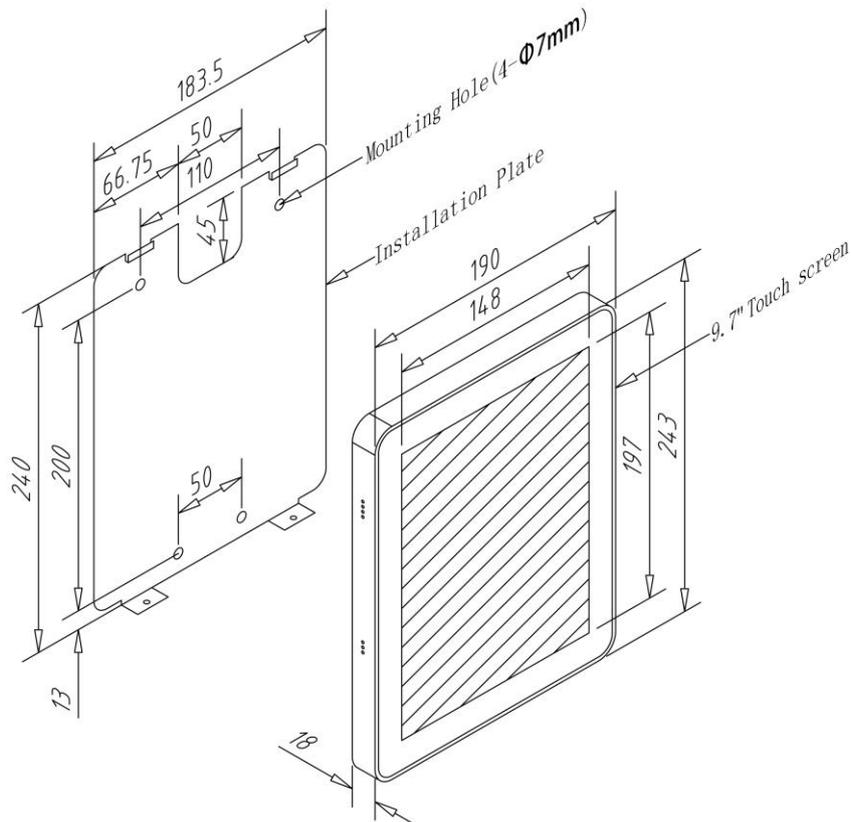


Figure 3.11 SJT-EPAD-097-QK Installation Dimension Diagram

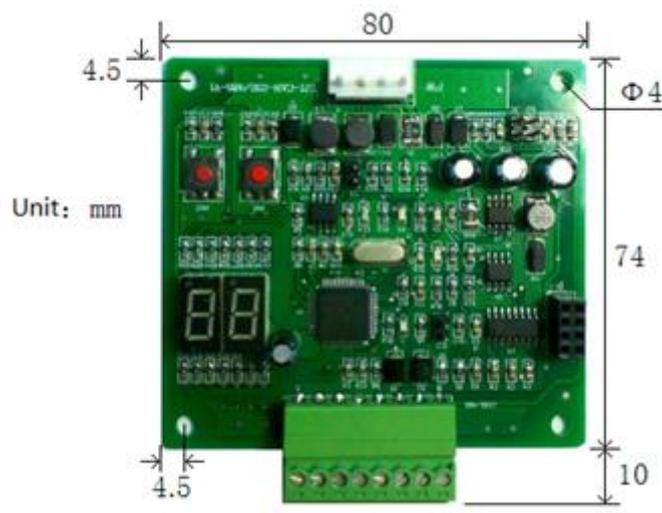


Figure 3.12 SJT-CAN-232/485-V1 Installation Dimension Diagram

3.2.2 Instruction

3.2.2.1 Interface of Floor Selector without Entering Number of Passenger



Figure 3.13 Interface of Floor Selector without Entering Number of Passenger

Above picture shows the Destination Control Floor Selector (9.7-inch) interface **without** the input of Number of Passenger. At this interface, it accepts the passenger to enter the target floor, only need to press the floor number on the screen and to confirm the selection by pressing “Enter” key, then the system will response with it and designate the service elevator by displaying elevator number / character (A, B, C, ...).

The floor selection sequences are as the following:

<p>1. Input the target floor (Enter)</p>	<p>2. Waiting for distribution</p>	<p>3. Elevator A is assigned, walk to the left</p>

Figure 3.14 Selection Sequences of Floor Selector without Entering Number of Passenger

3.2.2.2 Interface of Floor Selector with Entering Number of Passenger



Figure 3.15 Interface of Floor Selector with Entering Number of Passenger

Above picture shows the Destination Control Floor Selector (9.7-inch) interface with the input of Number of Passenger function. At this interface, it accepts the passenger to enter the target floor by simply press the floor number on screen and press “Enter” to confirm. Then input the number of passenger (1 to 9 people) coming along with him/her, and again pressing “Enter” key to confirm. System will response with it and designate the service elevator by displaying elevator number.

The floor selection sequences are as the following:

<p>1.Input the target floor</p>	<p>2. Input number of passengers (Enter)</p>	<p>3. Elevator A is assigned, walk to the right</p>

Figure 3.16 Selection Sequences of Selector with Entering Number of Passenger

3.2.2.3 SJT-EPAD-097-QK Parameter Setting

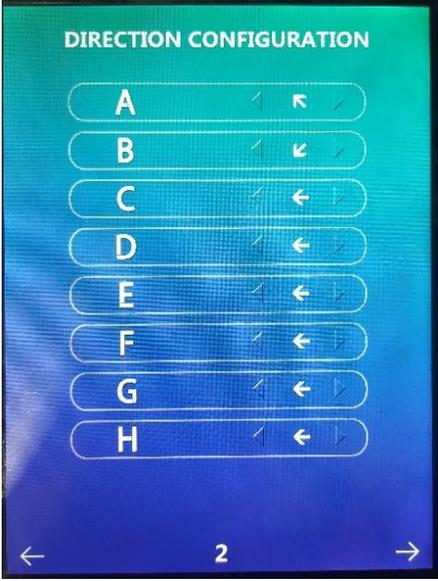
With touch screen destination floor selector (9.7-inch) in floor selecting screen, input password 00010109898 to enter parameter setting interface.



Figure 3.17 Input the password 00010109898 in this interface

Function Configuration Interface as Shown Below:

<p>1. Self config letter display</p>		<p>In this interface, set the display letters for three floor keys (default A, B, G).</p>
--------------------------------------	--	---

<p>2.Elevator location config</p>		<p>In this interface, set the arrow direction of elevator A-H positions (arrow indication of the elevator position when assign an elevator).</p>
<p>3. Language and Passenger Number function setting</p>		<p>In this interface, select the language of Chinese and English. Select whether to enable Passenger Number Input function.</p>

3.2.2.4 SJT-CAN-232/485-V1 (507_99) Parameter Setting

On SJT-CAN-232/485-V1 (507_99) communication protocol translation board, short connect jumper SZ to enter setting mode. The digital tube displays **F0**.

Press buttons **AN1** and **AN2** to set the parameter, details are listed below:

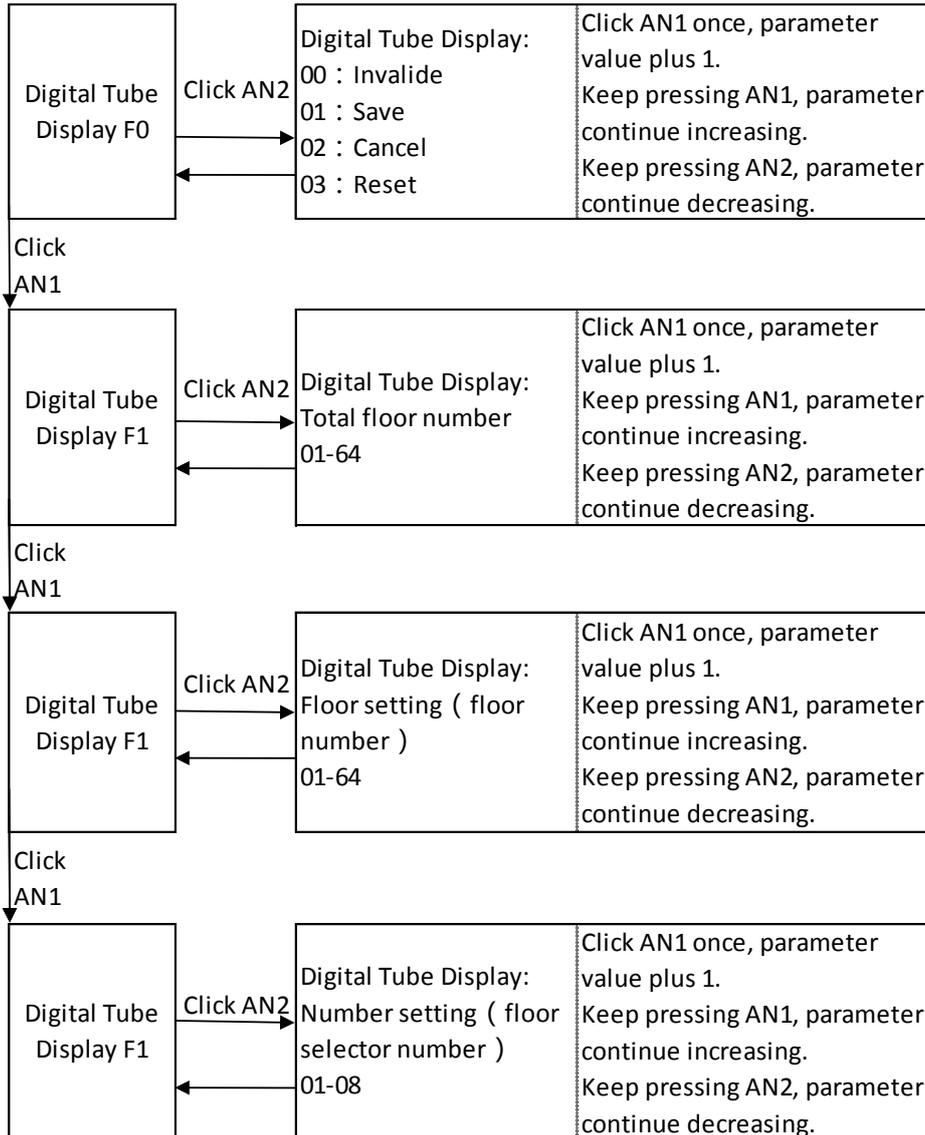


Figure 3.18 SJT-CAN-232/485-V1(507_99) Parameter Setting Procedure

3.2.3 Wiring Description

Connecting SJT-EPAD-097-QK and SJT-CAN-232/485-V1 with control system, the wiring is as below:

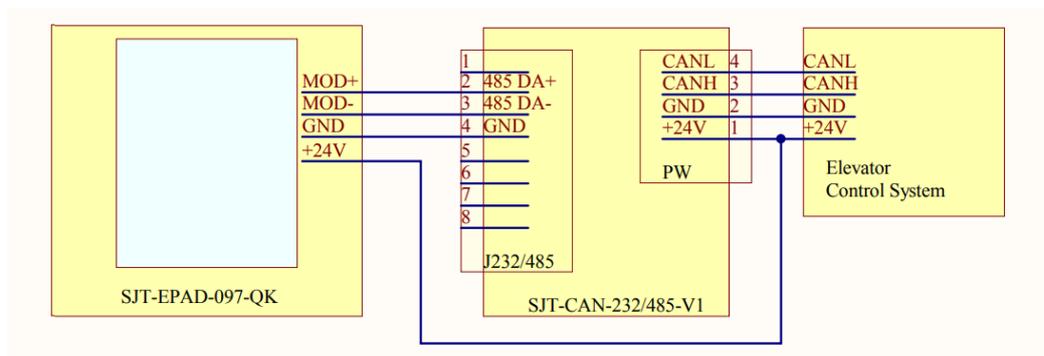


Figure 3.19 System Wiring Diagram

4 Cabin Vertical Display Installation and Description

4.1 Function Description

- ❖ To display targeted floors / designated floors / registered floors
- ❖ To output signal for arrival chime
- ❖ To output signal for lanterns

4.2 Product Appearance and Installation Dimensions



Figure 4.1 Vertical Display Board and Display Board being installed at the Cabin Front Return Panel

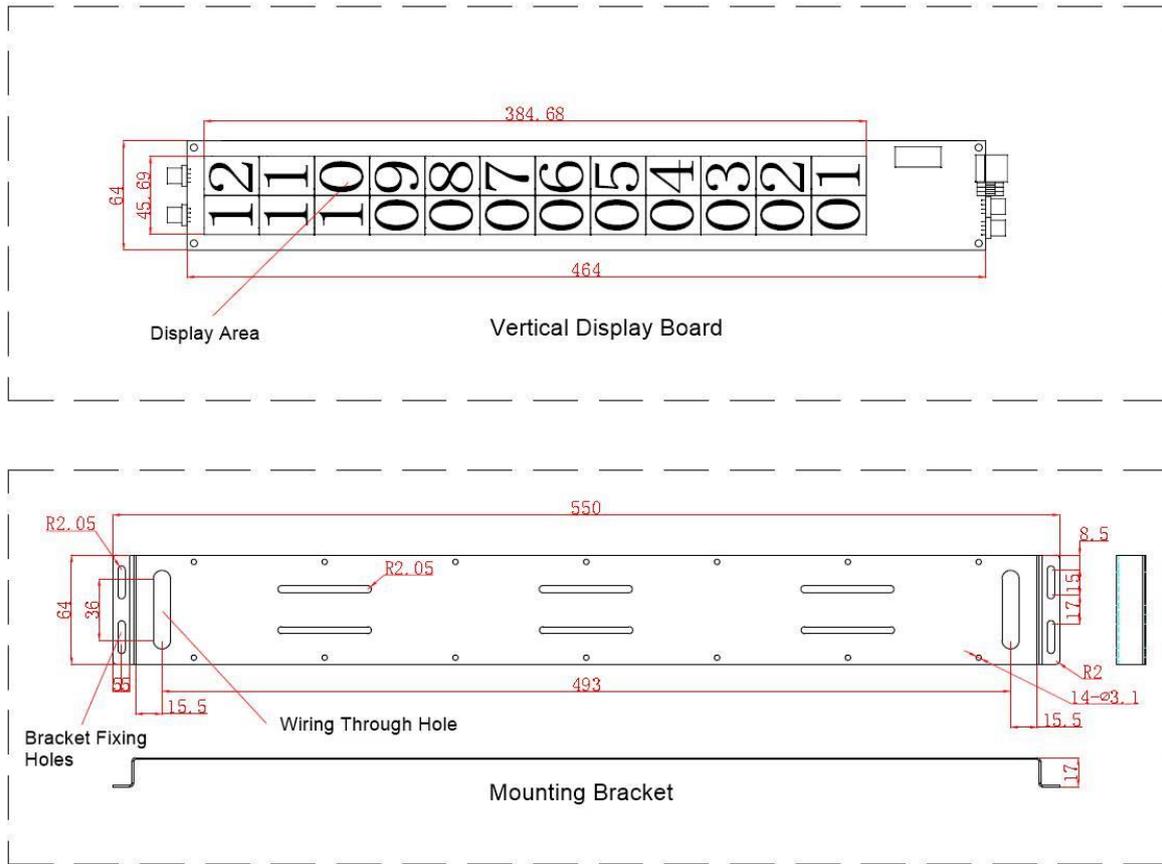


Figure 4.2 Installation dimension drawing

Different models will have different dimensions, please refer to the drawing provided by Technical department.

4.3 Terminal Port Definition and Specification

Table 4.1 Interface definition and specification

Port Name	Position	Definition	Purpose	Technical Specification	
				Port Type	Rating
PW	PW-1	24V Voltage Input	Power and Communication Port		150 mA
	PW-2	24V Voltage Ground			
	PW-3	CAN Bus H			
	PW-4	CAN Bus L			
SH	SH-1	Spare Output 1	Up Landing Call Input and Response Output	Open-collector	DC24 V 20 mA
	SH-2	24V			
	SH-3	24V			
	SH-4	Spare Input 1		Voltage Divider	
XH	XH-1	Spare Output 2	Down Landing Call Input and Response Output	Open-collector	DC24 V 20 mA
	XH-2	24V			
	XH-3	24V			
	XH-4	Spare Input 2		Voltage Divider	
DZ	DZ-1	Up Lantern Output	Arrival Lanterns and Chime Bell Output	Open-collector	DC24 V 20 mA
	DZ-2	Down Lantern Output			
	DZ-3	Arrival Chime Output			
	DZ-4	24V Ground			
BY	BY-1	Spare Input 3	Parking and Fireman Input		
	BY-2	24V			
	BY-3	Spare Input 4			
	BY-4	24V			
S1	CAN Bus Terminated Resistor				
JC	Inspection Jumper				
AN	Floor Setting Button (Spare)				
P	Programming Port				
SZ	Floor Setting Jumper (Spare)				

Note: When the display board is used in elevator cabin, the floor address shall be set to "0".

4.4 Floor Display Setting

Ensuring the elevator has been able to run properly and the floor display setting has been setup accordingly, the vertical display board, which fixed on elevator cabin front return panel, needs to acquire the floor display information from the elevator controller, therefore, the vertical display board will monitor the controller if it is in inspection mode, and travelling from bottom floor to top floor without stopping, the vertical display board will enter “auto-learning” mode to record the floor display information from elevator controller, and to save it when passing each floor, until it reaches to top floor. Please be noted that the saving of record will be aborted if the inspection operation stopped before reaching the top floor.

It requires once inspection travelling from bottom floor to top floor. Normally, it can also be done through hoistway learning process, because hoistway learning is carried out during inspection mode and learning from bottom floor to top floor.)

Note: If the above-mentioned auto-learning process has not been done, the vertical display board may display incorrect floor numbering, the floor information might be different from the elevator controller’s floor display setting. The default floor display numbering is 1, 2, 3, ..., 64.

*** THE END ***