Table of Contents

Safety Information

1

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK) NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol indicates that dangerous voltage consisting a risk of electric shock is present within this unit.

This exclamation point symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING

To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

WARNING

1. Be sure to use only the standard adapter that is specified in the specification sheet. Using any other adapter could cause fire, electrical shock, or damage to the product.
2. Incorrectly connecting the power supply or replacing battery may cause explosion, fire, electric shock, or damage to the product.

3. Do not connect multiple controllers to a single adapter. Exceeding the capacity may cau se abnormal heat generation or fire.
4. Securely plug the power cord into the power receptacle. Insecure connection may caus e fire.
5. When installing the controller, fasten it securely and firmly. The fall of controller may ca use personal injury.
6. Do not place conductive objects (e.g. screwdrivers, coins, metal parts, etc.) or container s filled with water on top of the controller. Doing so may cause personal injury due to fi re, electric shock, or falling objects.
7. Do not install the unit in humid, dusty, or sooty locations. Doing so may cause fire or el ectric shock.
8. If any unusual smells or smoke come from the unit, stop using the product. In such case, immediately disconnect the power source and contact the service center. Continued us e in such a condition may cause fire or electric shock.
9. If this product fails to operate normally, contact the nearest service center. Never disass emble or modify this product in any way. (SAMSUNG is not liable for problems caused by unauthorized modifications or attempted repair.)
10. When cleaning, do not spray water directly onto parts of the product. Doing so may ca use fire or electric shock.

CAUTION

1. Do not drop objects on the product or apply strong blows to it. Keep away from a locat ion subject to excessive vibration or magnetic interference.
2. Do not install in a location subject to high temperature (over 50°C), low temperature (b elow -30°C), or high humidity. Doing so may cause fire or electric shock.
3. If you want to relocate the already installed product, be sure to turn off the power and then move or reinstall it.
4. Remove the power plug from the outlet when there is a lighting storm. Neglecting to d o so may cause fire or damage to the product.
5. Keep out of direct sunlight and heat radiation sources. It may cause fire.
6. Install it in a place with good ventilation.
7. Avoid aiming the controller directly towards extremely bright objects such as sun.
8. Apparatus shall not be exposed to dripping or splashing and no objects filled with liqui ds, such as vases, shall be placed on the apparatus.
9. The Mains plug is used as a disconnect device and shall stay readily operable at any tim e.

1 IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's ins tructions.
8. Do not install near any heat sources such as radiators, heat registers, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two bla des and a third grounding prong. The wide blade or the third prong is provided for you r safety. If the provided plug does not fit into your outlet, consult an electrician for repla cement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenie nce receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with cart, stand, tripod, bracket, or table specified by the manufacturer, or sol d with the apparatus.
13. Unplug this apparatus when a card is used. Use caution when moving the cart/ apparat us combination to avoid injury from tip-over.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparat us has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been expo sed to rain or moisture, does not operate normally, or has been dropped.

General

2

The **LX007 / LX007SR** is ideal to use for Single Door Access Control and Time & Attendance. The **LX007 / LX007SR** has 4 input ports, 2 Form-C relay outputs, 2 TTL outputs, an RS232/RS485 communication port and an optional TCP/IP communication port to meet various customer requirements.

This user-friendly device allows you to register up to 1,000 Fingerprint Users (Optional 2,000/4,000 Fingerprint Users) and can store up to 10,000 IDs and 20,000 event transactions. All events can be uploaded and saved to the database of the host PC and the software can create a report in MS-Excel, HTML and Text format files for Time & Attendance management purposes.

The **LX007 / LX007SR** has a built-in Fingerprint Module, a proximity card reader with IDC 26 bit Wiegand format and a 24-key keypad (10 numeric keys, 2 control keys and 12 function keys) for a wide range of applications. The **LX007 / LX007SR** controls access of users with any selected combination of fingerprint, Proximity Card/PIN and/or password. The **LX007 / LX007SR** has 4 external input ports to be connected to an exit button, a motion detector, a door contact sensor and an existing alarm system to prevent unauthorized access.

The **LX007 / LX007SR** has 2 relay outputs to control a door lock and an alarm relay that is used to warn errors. The graphic LCD supports multiple languages so that the unit can be operated anywhere in the world.

All system settings can be configured using the front keypad or via the Windows-based software. The **LX007 / LX007SR** is a cost-effective biometrics system that can be used stand-alone or networked. The dual tamper switches prevent unauthorized access.

Features

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- 125KHz(default) Proximity/13.56MHz(optional) Contactless Smart Card, PIN and Finger print Recognition
- Dual function for Access Control and Time & Attendance
- 1:1 Verification and 1:N Identification
- 2 Fingerprint Templates per user
- Auto Touch Sensor for Fingerprint only Identification
- Fingerprint quality display
- 1,000 / 2,000 / 4,000 Fingerprint Users
- 10,000/20,000 ID Users / 20,000/10,000 Event Buffers (Selectable)
- Registration of up to 10 Fingerprint Master IDs
- Operating Mode selectable for Individual IDs
- 4-Level Door Open Time Setting for Individual IDs
- Time Schedule Setting for Individual IDs and for Input Port, Output Port, Voice Message and Reader Mode
- Network Communication via RS232, RS485 and built-in TCP/IP
- 26bit Wiegand Output (34bit for LX007SR)
- Serial Printer Port for event ticket issuing
- Input Cut-off Check
- User Name & Function Key Definition Display on LCD
- ARM/DISARM Function for Alarm Panel
- 2 Men Operation Mode
- Duress Alarm Function
- Graphic LCD of Multi Languages Display
- Voice Guide Programmable for Other Language
- Software Selection: STARWATCH TIME PRO, LX ACCESS PRO II, STARWATCH STANDAR D

Speicification

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Model			LX007
CPU			32bit ARM9, 8bit and 16bit Microprocessor
Memory	Fingerprint Module	Program Memory	128K Byte ROM, 8M Byte SDRAM
		Data Memory	2M Byte / 2+4M Byte Flash Memory
	Controller	Program Memory	256K Byte ROM, 512K Byte SDRAM
		Data Memory	512K Byte Flash Memory
Fingerprint User			1,000 / 2,000 / 4,000 Fingerprint Users
Fingerprint Templates Size			800 Bytes for 2 Fingerprint Templates
ID User			10,000 / 20,000 Users (Selectable)
Event Buffer			20,000 / 10,000 Event Buffer (Selectable)
Range			**LX007** IDC80 / IDC170 : Up to 4 inches (10cm) **LX007SR** IHC80: Up to 2 inches (5cm) ISC80: Up to 4 inches (10cm)
Reading Time (Card)			30ms
Verification Time			Less than 1sec.
Identification Time			Less than 2sec.
Power / Current			DC 12V / Max.650mA
			LX007: 1 Port for Anti-Pass Back (26bit Wiegand, 8bit Burst for PIN) **LX007SR:** 1 Port for Anti-Pass Back

Model		LX007
		(34bit Wiegand, 8bit Burst for PIN)
Communication		RS232 / RS485 (Max.32ch)
		TCP/IP (Internal LAN Converter required / Optional)
Baud Rate		57,600bps (Default) / 9,600bps / 19,200bps / 38,400bps (selectable)
Input Port		4 Ports :Exit Button, Door Sensor, Aux# 1, Aux#2
Output Port		2 Ports :2 FORM-C Relay Output (COM, NO, NC) / DC12V-18V, Rating Max.2A
		2 Ports :TTL Output / DC5V, Rating Max.20mA
LCD		Graphic LCD (128 x 64 dots) 72.5mm x 39.5mm (2.85" x 1.56")
Keypad		24-key Keypad with Back Lighting (12 Function Keys included)
Language	LCD Display	English, Spanish, Portuguese (Selectable) Arabic, Chinese, Korean, Japanese (Optional)
	Voice Output	English(Default), Spanish, Portuguese, Arabic, Chinese, Korean, Japanese (Programmable)
LED Indicator		3 Array LED Indicators (Red, Green and Yellow)
Beeper		Piezo Buzzer
Operating Temperature		0 to +50C (+32 to +122F)
Operating Humidity		10% to 90% relative humidity (non-condensing)
Color / Material		Black, Red Wine, Silver, Dark Gray, Black & Gold Combo / Polycarbonate
Dimension (W x H x T)		192mm x 160mm x 45mm (7.56"x6.29"x1.77mm)
Weight		800g(1.76lbs)
Certification		FCC, CE, KC

Fingerprint Module Specifications

Resolution	500dpi
Capture Image Size	412 X 302 pixels
Extraction Image Size	260 X 300 pixels
Sensing Area	13mm X 15.2mm
Scanner	High Quality Optical Sensor
FAR(False Acceptance Ratio)	0.001%
FRR(False Reject Ratio)	0.1%

ESD(Electro Static Discharge)	15KV
Verification Time	Less than 1 sec.
Identification Time	Less than 2 sec.

Identifying Supplied Parts

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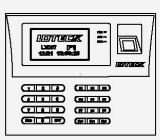
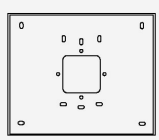
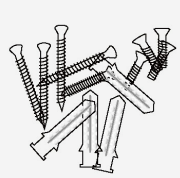
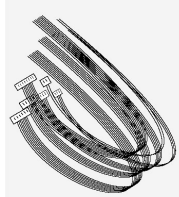
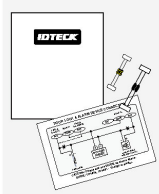
Please unpack and check the contents of the box. If any of these parts are missing, please co ntact a near-by distributor or as soon as possible.

				
Product	Braket	Screw 3.8 x 8 mm (x1) Screw 3.5 x 12 mm (x4) Screw 3.5 x 40 mm (x4) Anchor block 6 x 30 mm (x4)	8Pin Cable (x1) 6Pin Cable (x1) 5Pin Cable (x1) 4Pin Cable (x1) 3Pin Cable (x1) 2Pin Cable (x1)	User Guide (x1) Diode (x 2) 2.2k Register (x4) Lock & Alarm Guide (x1)

Product overview

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1 Features

1.1 Standalone Operation

The **LX007 / LX007SR** is capable of having an external reader (for 1 Door Control). This bio metrics access controller reads card ID numbers and determines whether to allow or deny ac cess to the door. When an input signal is received, for example from a sensor activated or a n exit button pressed, the controller generates and logs an appropriate response. All events are stored into the memory buffers. The access controller is a true standalone device that, in the event of malfunction, will not affect other units when used in conjunction with one anot her.

1.2 Operation with Host PC

All event transactions can be managed via the host PC. The data transmitted from the contr oller can be displayed and stored on the host PC.

1.3 Keypad

If the **LX007 / LX007SR** is not connected to the host PC, the built-in keypad and LCD modul e can be used for the entire operations and configuration process.

1.4 Input / Output

The **LX007 / LX007SR** has 4 built-in input ports and 4 output ports (2 relay outputs and 2 T TL outputs) which can be used to manipulate a wide variety of controls.

1.5 Time Schedule Setup

You can program up to 10 time schedules and assign one time schedule to each user. Each t ime schedule has 8 different time zones from Monday-Sunday (7 time zones) and one holid ay. Each time zone has 5 different time codes so you can program 5 different time codes for each day. You can also program time schedules for individual inputs and outputs. That is, if a time schedule for an input device is activated, that input device will be working only durin g the time assigned by that time code. Each time schedule is linked to one holiday schedule.

1.6 Schedule Setup

Excepting Sunday, you can program 100 holidays to one holiday schedule. Each holiday sche dule is linked to one time schedule which has a time code for holidays. You can program all holidays to a holiday schedule and the time code for holidays is programmed to be the holid ay time zone of time schedule.

Example:	**A.**	schedule 01 linked to time schedule 01,
		schedule 02 linked to time schedule 02
	B.	schedule 02 linked to time schedule 01,
		schedule 01 linked to time schedule 03

1.7 Forced Door Open Alarm

When the door is opened by force, the door contact sensor will be activated. For this applica tion, you have to install the door contact sensor and properly set the door contact time and outputs to the alarm devices. The Forced Door Open Alarm will be generated until the alarm is disconnected.

1.8 Door Open Timeout Alarm

The Door Open Timeout Alarm will be generated when the door is open for longer than a ce rtain time limit, even after the door is opened followed by a normal authentication process. The Overtime Door Open Alarm will continue to ring until the door is closed.

1.9 Anti-pass Back

If an additional proximity reader is used, the Anti-pass back mode can be applied. In the Anti -pass back mode, a user is not allowed to enter or exit when the user violates the one entry/ one exit rule. For example, an identical user won't be able to enter if he or she previously exi ted the door without going through a proper authentication process.

1.10 Duress Alarm

In case of duress, enter the 2-digit Duress Password and press the <ENT> key before the nor mal access process. The door can be opened as usual, but the duress alarm is also generated at the same time. The duress alarm output will be sent to the TTL output and an alarm event will be sent to the host PC.

1.11 ARM / DISARM Function for Alarm Panel

While a device is in the ARM condition, its reader ports are all frozen and inputs to the ports are not processed so that no one can get access to the door. When this mode is applied, the **LX007 / LX007SR** sends signals to other connected security devices so that they can function accordingly.

1.12 Two Men Operation

This feature is used to configure the **LX007 / LX007SR** to allow a certain user (e.g. a visitor) to pass the door only when that user is accompanied by another special user (e.g. a guide). Both of the visitor and the guide should be authorized together for access.

1.13 4 Level Individual Door Opening Time Setting

This feature is used only for setting four different door opening times.

1.14 Name Display

The **LX007 / LX007SR** can display the user name when a user gains access.

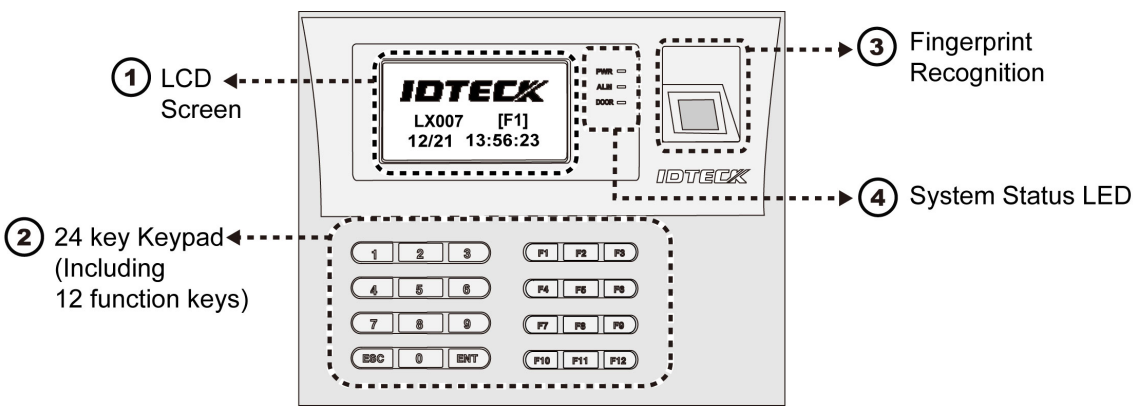
1.15 Function Key Name Display

You can assign names for each function key via software. Using this feature, for example, yo u can give certain keys names like punch-in and punch-out and tell the employees to press o

ne of the function keys according to the nature of their access prior to each access attempt. This way, you will be able to identify punch-in and punch-out events on the software.

2 Product Explanation

2.1 Panel Description



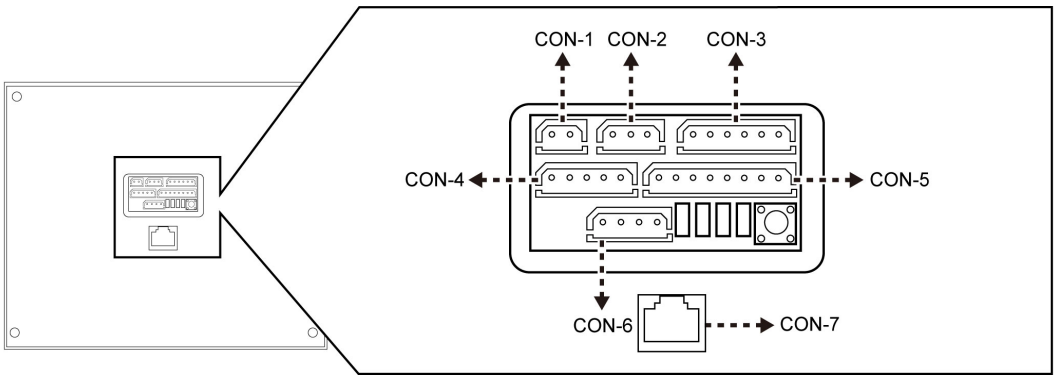
① LCD module : The LCD screen displays the status of the LX007.

② 24-key Keypad : The keypad can be used to manually operate the LX007 with ease.
Function Keys : The LX007 has 12 function keys ([F1] - [F12]).

③ Fingerprint scanner

④ System Operation Status LED:
When the power is applied to the LX007, the red LED is turned on.
When the Relay #1 operates, the green LED is turned on.
When the Relay #2 operates, the orange LED is turned on.

2.2 6.2.2 Connection Layout



2.3 6.2.3 Color Coded & Wring Table

I/O PORT NAME	SIGNAL NAME	WIRE COLOR
CON-1(2PIN CONNECTOR)		
Main Power (+12V)	DC 12V	Red
Power Ground	GND (-)	Black
CON-2 (3PIN CONNECTOR : Serial Printer)		
RS232-RX	RXD	Pink wire with white stripe
RS232-TX	TXD	Cyan wire with white stripe
RS232-GND	GND	Black
CON-3 (6PIN CONNECTOR)		
TTL OUTPUT #1	TTL#1, WD0	Orange wire with white stripe
TTL OUTPUT #2	TTL#2, WD1	Brown wire with white stripe
Aux Input #1	IN#1	Green
Aux Input #2	IN#2	Green wire with white stripe
Wiegand DATA 0	DATA-0	Pink
Wiegand DATA 1	DATA-1	Cyan
CON-4 (5PIN CONNECTOR)		
RS485-RTX(+)	RS485-A(+)	Yellow wire
RS485-RTX(-)	RS485-B(-)	Gray wire
RS232-TX	TXD	Black wire with white stripe
RS232-RX	RXD	Red wire with white stripe
RS232-GND	GND	Black
CON-5 (8PIN CONNECTOR)		
Door RELAY(NC)	NC(1)	Blue wire with white stripe
Door RELAY(COM)	COM(1)	Gray wire with red stripe

I/O PORT NAME	SIGNAL NAME	WIRE COLOR
Door RELAY(NO)	NO(1)	White wire with red stripe
Alarm RELAY(NC)	NC(2)	Purple wire with white stripe
Alarm RELAY(COM)	COM(2)	White
Alarm RELAY(NO)	NO(2)	Purple
Exit Button	EXIT	Orange
Door Sensor	CONTACT	Yellow wire with red stripe
CON-6 (4PIN CONNECTOR : Not Use)		
CON-7: TCP/IP RJ45 CONNECTOR		

Installation Tips & Check Point

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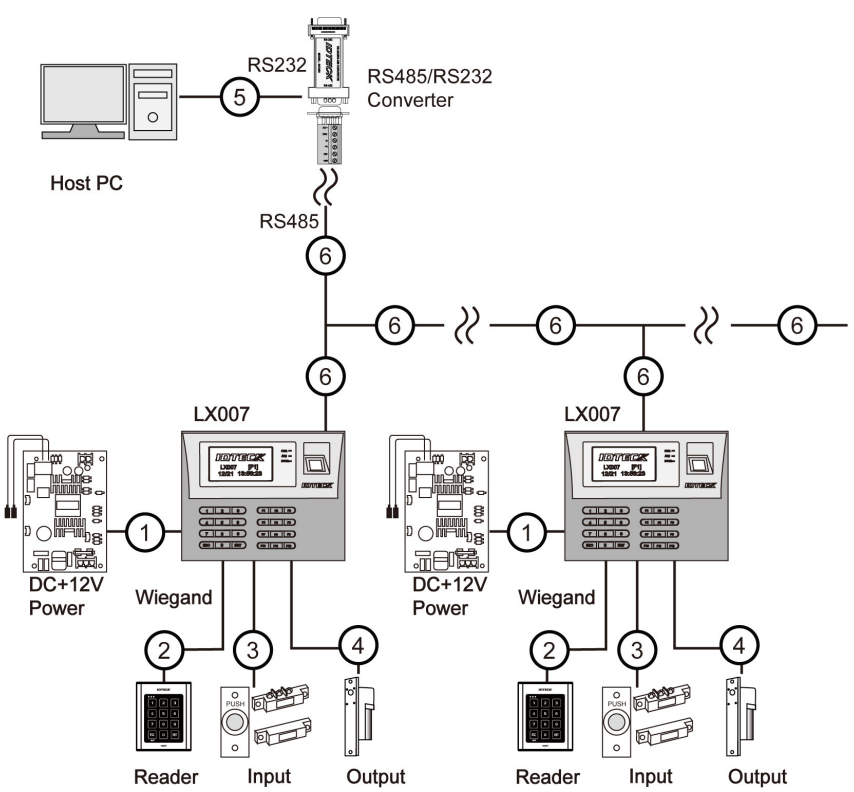
1 Check Points before Installation

1.1 Selection of Cable

The system installation cables should be connected as follows;



1.2 Recommended Cable Type and Permissible Length

Reference	Description	Cable Specification	Maximum Distance
①	LX007 Power (DC12V) DC Power -> LX007	Belden #9409, 18 AWG 2 conductor, unshielded	30m
②*	Reader (Power and Data) Exit Reader -> RF20	Belden #9512, 22 AWG 4 conductor, shielded	150m
		Belden #9514, 22 AWG 8 conductor, shielded	
③	Door Contact Exit Button Sensor Input Input -> LX007	Belden #9512, 22 AWG 4 conductor, shielded	300m
		Belden #9514, 22 AWG 8 conductor, shielded	
④	Door Lock, Alarm Device Lock (Alarm) -> LX007	Belden #9409, 18AWG 2 conductor, unshielded	300m
⑤	RS232 Cable Converter -> Host P.C.	Belden #9829, 24 AWG 2-twisted pair, shielded	15m
⑥	RS485 Cable LX007 -> LX007 LX007 -> Converter	Belden #9829, 24 AWG 2-twisted pair, shielded	1,200m

*** For readers, thicker wires are needed if you connect the reader with high current consumption.**

2 Check Point during Installation

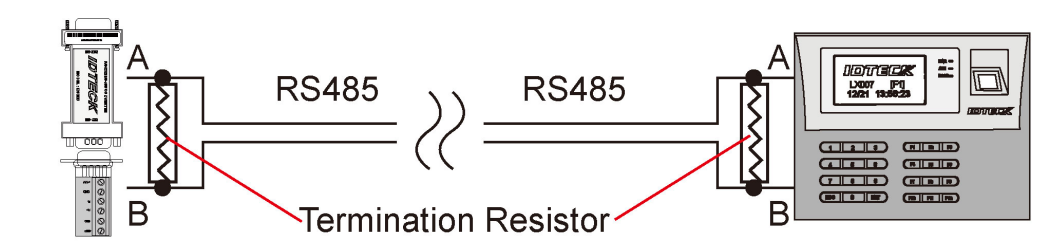
2.1 Termination Resistor

Termination resistors are used to match impedance of the network to the impedance of the transmission line being used. When impedance is mismatched, the transmitted signal is not completely absorbed by the receiver and a portion of signal is reflected back into the transmi ssion line. The decision whether or not to use termination resistors should be based on the c able length and data rate used by the communication system.

For example, if you use 9,600 baud rate and 1,200m length of cable, the propagation veloci ty of cable is 0.66 x speed of light (This value is specified by the cable manufacturer), if we a ssume the reflections will damp out in three round trip up and down the cable length, the tr ansmitted signal will stabilize 18.6us after the leading edge of a bit. Since the data bit is cap tured in the middle of the bit which is approximately 52us after the leading edge of a bit. Th e reflection stabilizing time 18.6us is much before the center of the bit therefore the termin ation resistors are not required.

However, if you install the cable to maximum length, the impedance of cable and network is mismatched and the transmitted signal is overlapped by the reflected signal. In this case, it is recommended to add termination resistors to the end of the receiver lines. A 120Ω resistor c an be used for termination resistor in parallel between the receiver lines “A” and “B” for 2 wir es RS485 system. A termination resistor of less than 90Ω should not be used and no more th an 2 terminations should be used in one network system.

2.2 How to Connect Termination Resistors



RS485/RS232 Converter

The Last LX007

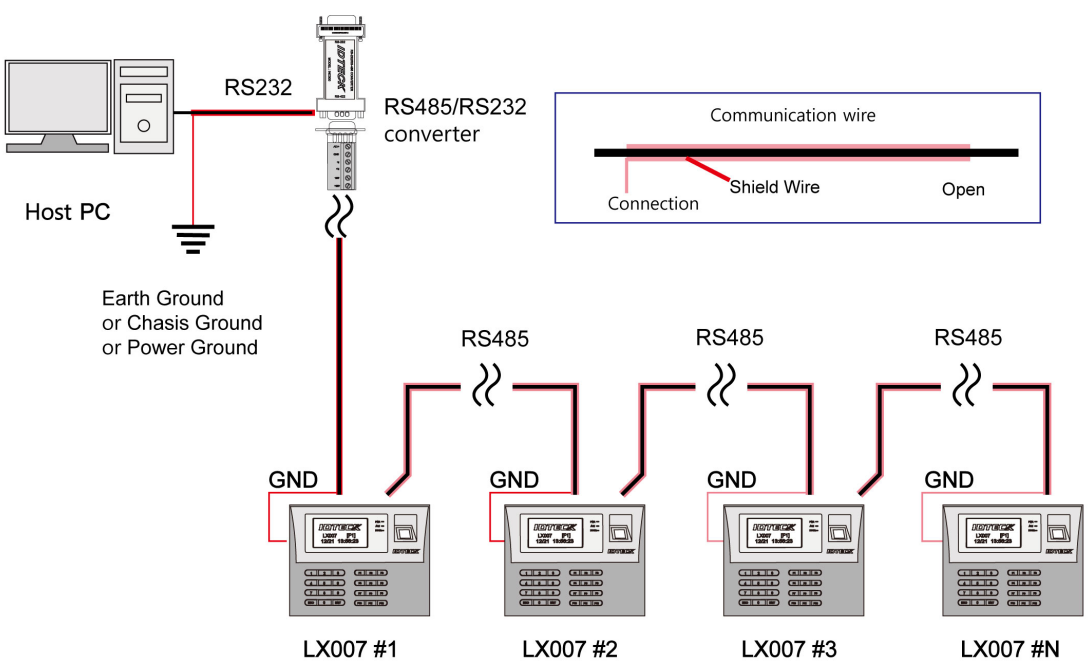
2.3 Grounding System for Communication Cable

We recommend you to use a proper grounding system for the communication cables. The b est grounding method is to put the shield wire of the communication cable to the 1st class e

arth grounding; however bringing the earth ground to the communication cable isn't easy a nd the installation cost increases. There are three grounding points you can find during insta llation;

1. Earth Ground 2. Chassis Ground 3. Power Ground

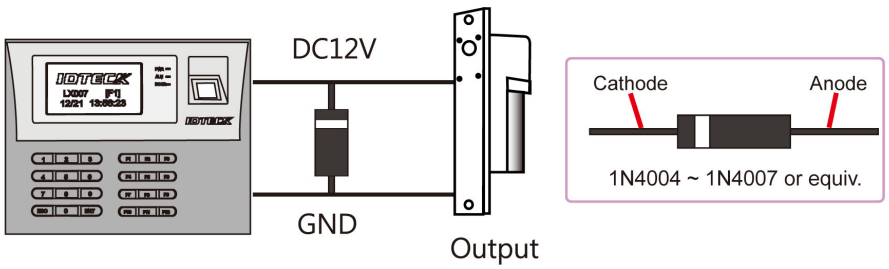
The most important point about grounding system is not to connect both ends of shield wir es to the grounding system; in this case, there will be a current flow through the shield wire when the voltage level of both ends of shield wire is not equal and this current flow will intr oduce some noise and interference to communications. For better grounding, we advise you connect ONLY one end of shield wire of communication cable to the grounding system; If y ou find earth ground nearby, then connect one end of the shield wire to the earth ground; I f you do not have earth ground nearby, then find chassis ground and connect one end of sh ield wire to chassis ground; If you do not find either earth ground or chassis ground, then co nnect one end of shield wire to power ground. (GND of LX007) Note that if the chassis grou nd is not properly connected to the earth and floated from the ground level, then groundin g to the chassis ground will give the worst communication. Therefore, we recommend you u se power ground instead of chassis ground if that is the case.



2.4 Reverse Diode Connection

If you connect an inductor (Door Locks or Alarm device) to the output relays, there will be a high surge voltage created while the inductor is turning on and off. If you do not connect a r everse diode, the surge voltage will transfer and damage the electronic circuit of the controll

er. It is strongly recommended to add a reverse diode between the inductor coils to absorb t his surge voltage.

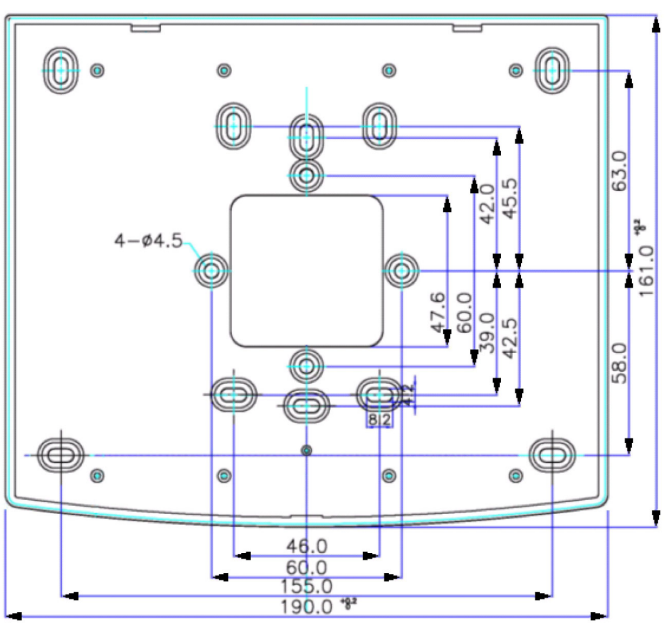


Installation of Product

8

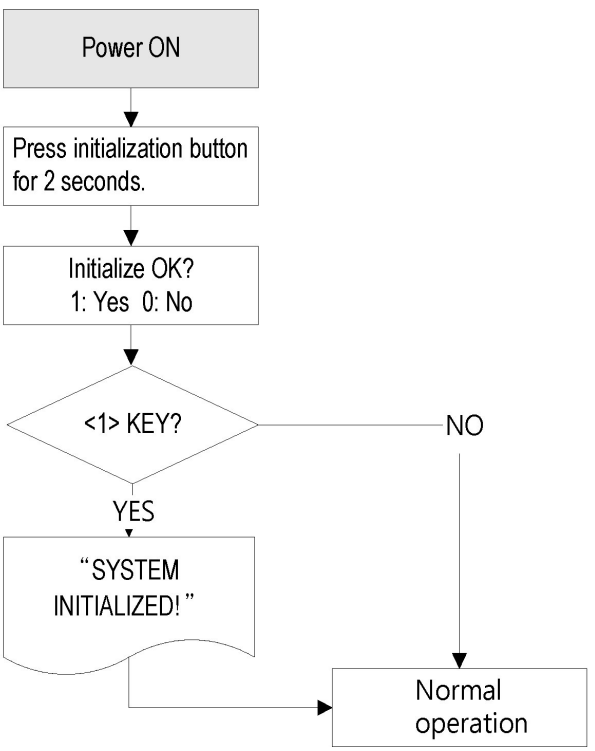
1 Wall Mount

(Unit: mm)



2 System Initialization

After the installation and connections are completed, apply power (DC12V) to the LX007 wi th the initialization button held down. (The initialization button can be found on the back of the LX007.) Then, the LCD will first display "**Initialize OK? 1:Yes 0:No**". Press **<1>** key if you w ant to initialize the system. After all the initialization process is completed, the system will be operating in the normal mode and the LCD will display "**, LX007 [F1], Date Time**".



3 Wall mount installation

1. Position the Wall Mount to the location at which you want to install the unit and mark 4 x drilling positions. Drill 6-32 holes for at least 4 mounting points.
2. Drill a 1/2" hole on the center of the Wall Mount.
3. Using 4 screws, install the Wall Mount to the proper location.
4. Take out the cable through the center hole.
5. After the wiring is done as explained in the next section, put the Main Unit on the Wall

Mount and screw it.

4 Wiring

4.1 Power Connection

1. Connect (+) wire of DC 12V Power Supply to Red wire.
2. Connect GND (-) wire of DC 12V Power Supply to Black wire.

4.2 Input Connection

Exit Button Connection

1. Connect one wire from an Exit Button to wire.
2. Connect the other wire from the Exit Button to GND.

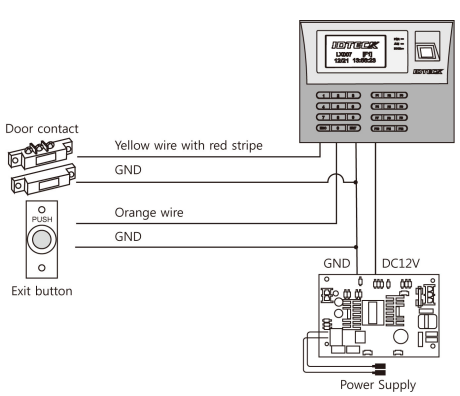
Door Contact Sensor Connection

1. Connect one wire from Door Contact Sensor to Yellow wire with Red stripe.
2. Connect the other wire from Door Contact Sensor to GND.

Auxiliary Input Connection

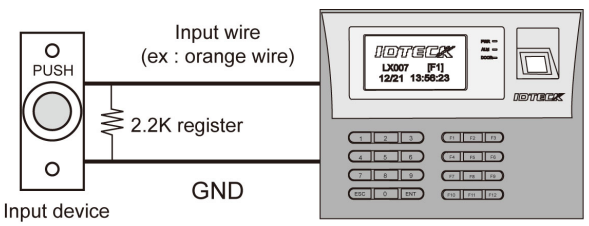
(Applicable to Aux Input #1 (Green wire), Aux Input #2 (Green wire with white stripe))

1. Connect one wire from Auxiliary Input Device to one of Aux Input #1 or Aux Input #2.
2. Connect the other wire from Auxiliary Input Device to GND.



2.2K Resistor Connection for Cut Off Check

You have to connect a 2.2K resistor between the input wire (e.g. Orange wire) and the GND to apply the Cut Off Check feature. First, select whether or not to check the cutoff status of each device from **[F5 SETUP MENU] -> CUT OFF SET**. Second, set the desired output that wil l be generated in the event of a cutoff from **[F5 SETUP MENU] -> CUT OFF ALARM**.



4.3 Output Connection

Door Lock (Power Fail Safe) Connection (Door Relay)

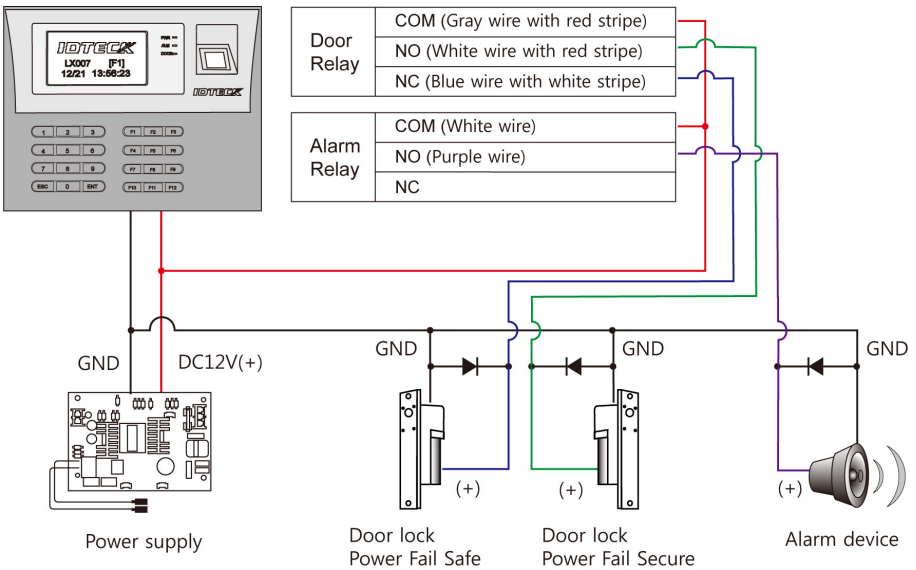
1. Connect COM wire of Door Relay (Gray wire with Red stripe) to +12V.
2. Connect NC wire of Door Relay (Blue wire with White stripe) to (+) wire of Door Lock.
3. Connect GND wire to (-) wire of Door Lock.

Door Lock (Power Fail Secure) Connection (Door Relay)

1. Connect COM wire of Door Relay (Gray wire with Red stripe) to +12V.
2. Connect NO wire of Door Relay (White wire with Red stripe) to (+) wire of Door Lock
3. Connect GND wire to (-) wire of Door Lock.

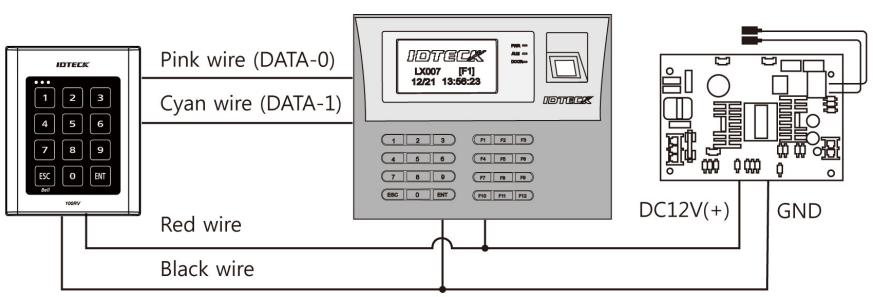
Alarm Device Connection (Alarm Relay)

1. Connect COM wire of Alarm Relay (White wire) to +12V.
2. Connect NO wire of Alarm Relay (Purple wire) to (+) wire of Alarm device.
3. Connect GND port to (-) wire of Alarm device.



You should connect REVERSE DIODES as shown in the diagram above. A desirable DIODE is a Fast Recovery DIODE (current=min. 1A), 1N4004 - 1N4007 or similar.

4.4 External Reader Connection



Proximity Reader Connection

1. Connect (+) wire of the Proximity Reader to DC +12V.
2. Connect (-) wire of the Proximity Reader to GND.
3. Connect Data-0 wire of the Proximity Reader to the Pink wire.
4. Connect Data-1 wire of the Proximity Reader to the Cyan wire.

Compatible Readers (External Reader):

LX007

- Standard 26bit Wiegand Format Proximity Readers
- Standard 26bit Wiegand + 8bit Burst Format Proximity and keypad Reader

LX007SR

- Standard 34bit Wiegand Format Proximity Reader
- Standard 34bit Wiegand + 8bit Burst Format Proximity and keypad Reader

Recommended Readers

LX007

- RF TINY
- RF10/20/30
- RFK101
- FGR006

LX007SR

- SR10/20/30
- SRK101
- FGR006SR

Communication

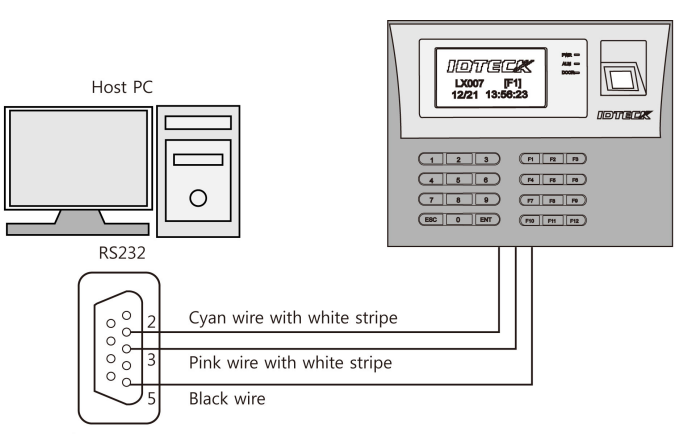
9

1 RS232 Communication Port Connection

A 9-pin connector (Serial communication connector, female) is needed to connect the LX00 7 with a host PC via RS232 communication.

Please follow the steps below.

1. Connect RS232-TX (Black wire with White stripe) to the pin #2 (RXD) of the 9-pin conn ector.
2. Connect RS232-RX (Red wire with White stripe) to the pin #3 (TX) of the 9-pin connect or.
3. Connect GND (Black wire) to the pin #5 of the 9-pin connector.
4. Plug in the 9-pin female connector to of the host PC.
5. Install and run the LX007 Application Software.

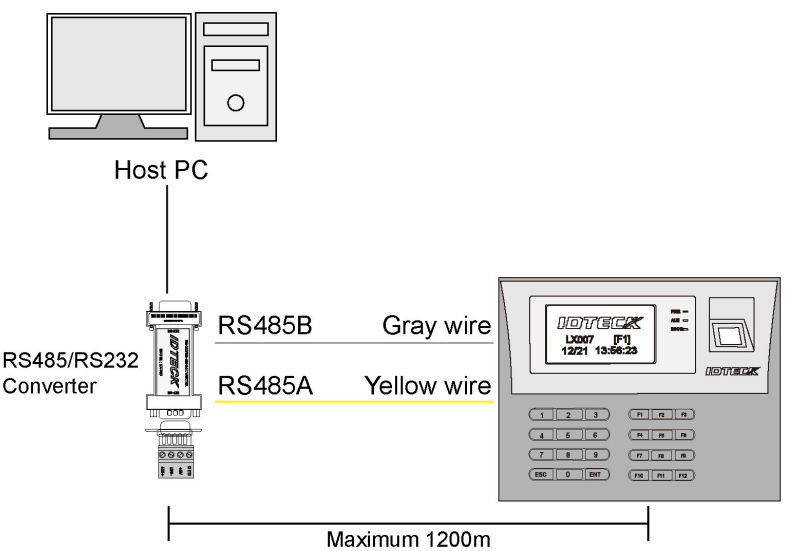


2 RS485 Communication Port Connection

2.1 RS485 Connection (Standalone Unit)

An RS485/RS232 converter is needed to use the RS485 communication between the LX007 and a host PC. Please follow the steps below.

1. Connect RS485-RTX (+) (Yellow wire) to RS485-A port of the converter.
2. Connect RS485-RTX (-) (Gray wire) to RS485-B port of the converter.
3. Plug the 9-pin connector (RS232) of the converter into the of the host PC.
4. Install and run the LX007 Application Software.

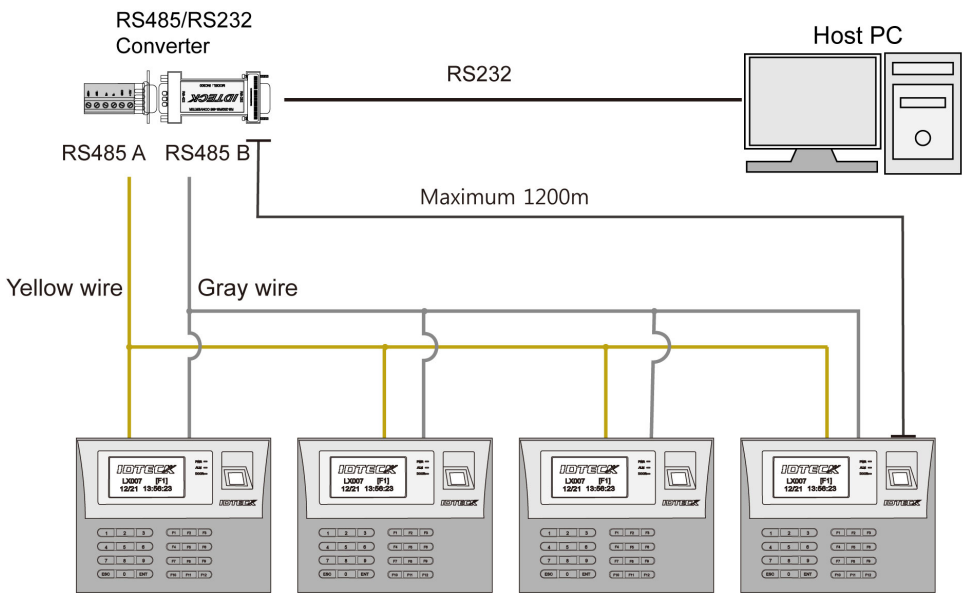


2.2 RS485 Connection (Multiple Units)

An RS485/RS232 converter is needed to use RS485 communication between multiple LX007 units and a host PC. Please follow the instructions below.

1. First, connect all RS485 ports of LX007 units in parallel.
   (Max. of 32 LX007 Units can be connected)
   I. Connect RS485-RTX (+) (Yellow wire) of one LX007 to RS485-RTX (+) (Yellow wire) of another LX007.
   II. Connect RS485-RTX (-) (Gray wire) of one LX007 to RS485-RTX (-) (Gray wire) of another LX007.
   III. Set a unique Communication Address for each LX007.

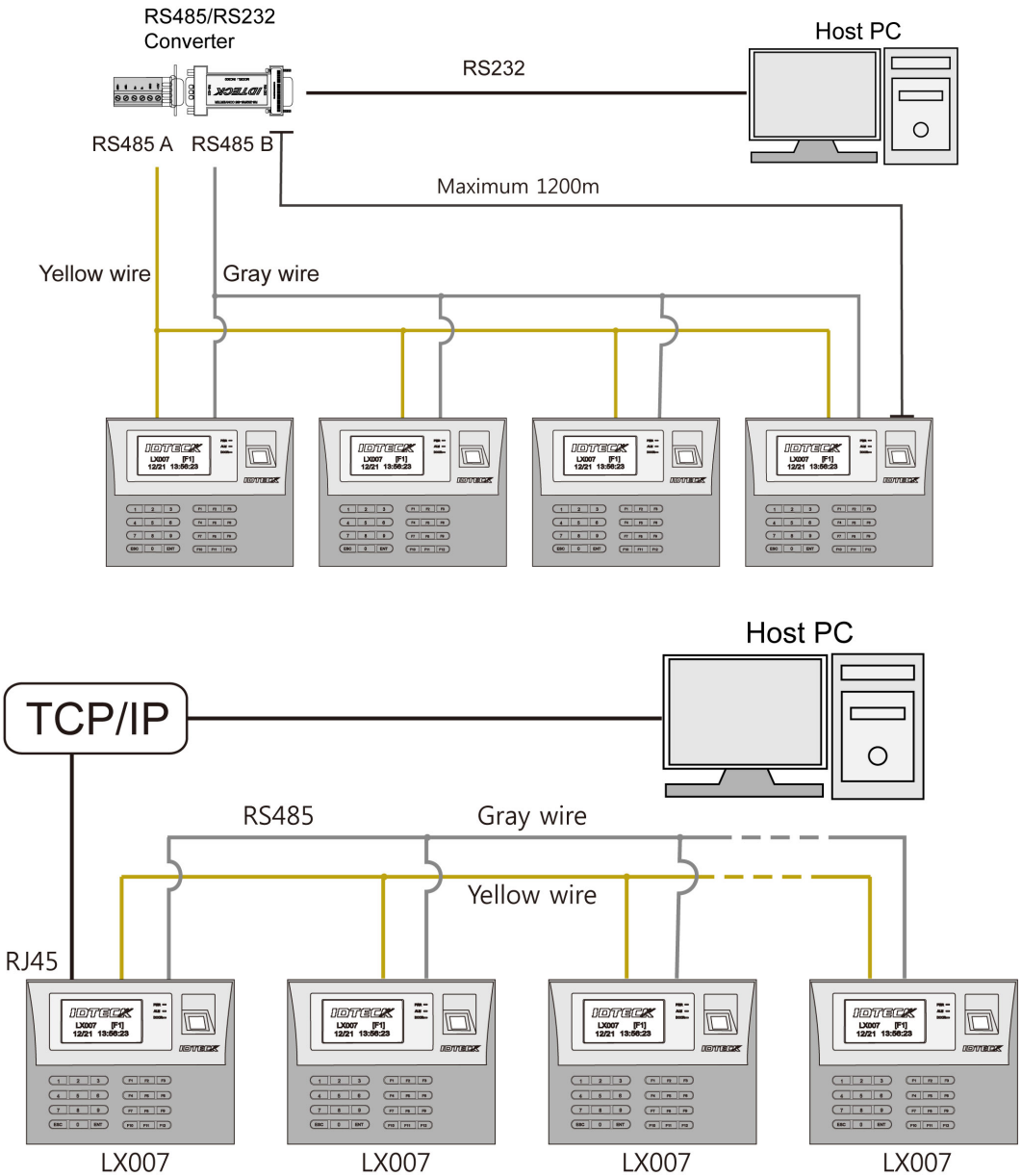
2. Second, connect one of the RS485 ports of the LX007 units to the RS485/RS232 conve rter.
    I. Connect RS485-RTX (+) (Yellow wire) of one LX007 to RS485-A port of the Conve rter.
    II. Connect RS485-RTX (-) (Gray wire) of one LX007 to RS485-B port of the Converter.
    III. Plug the 9-pin connector (RS232) of the Converter into the COM port of the host PC.
    IV. Install and run the LX007 application software.



2.3 Connection (Optional)

An optional TCP/IP Module is needed for TCP/IP communication to the host PC. Follow the next instruction.

1. Connect the LAN cable of the network system to the RJ45 jack of the LX007.
2. If you install multiple LX007 units and only one TCP/IP port is available, you may connec t one LX007 to TCP/IP network and then connect all the LX007 units using the RS485 multiple communication as shown in the diagram below.
3. Set a unique Communication Address for each LX007.
4. Install and run the LX007 Application Software.

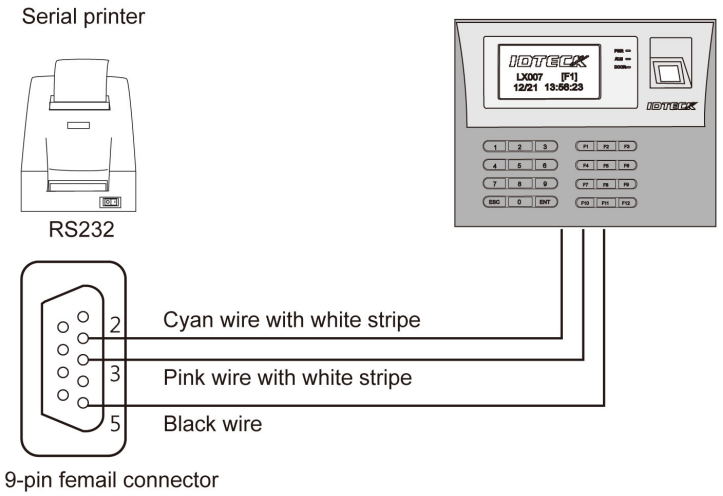


2.4 Serial Printer Connection

A 9-pin connector (Serial communication connector, female) is needed to connect the LX00 7 with a serial printer via RS232 communication. Please follow the steps below.

1. Connect RS232-TX (Cyan wire with White stripe) to the pin #2 (RXD) of the 9-pin conn ector.
2. Connect RS232-RX (Pink wire with White stripe) to the pin #3 (TX) of the 9-pin connect or.
3. Connect GND, Black wire to the pin #5 of the 9-pin connector.

4. Plug in the 9-pin female connector to of the serial printer.
5. Set the **Print Output** setting to ‘Auto Print’ or ‘Manual Print’ from **[F3 SETUP MENU]**.

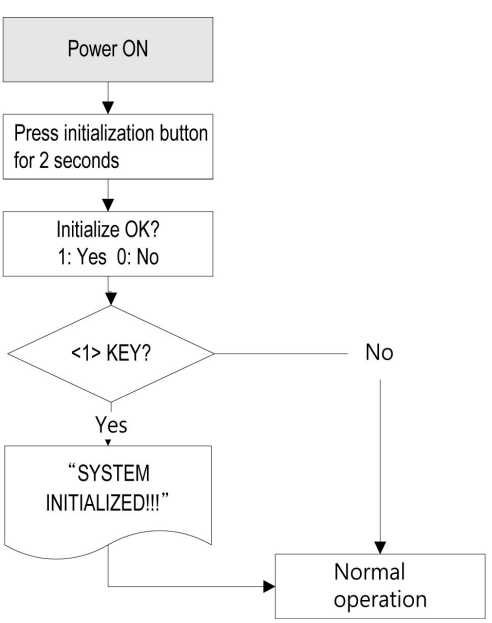


Basic setting

10

1 Initialization of LX007

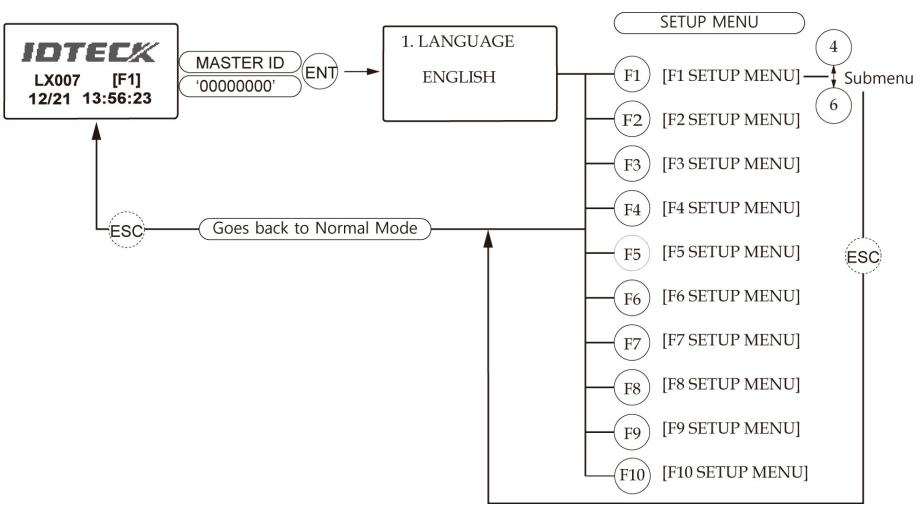
After the installation and connections are completed, apply power (DC12V) to the LX007 wi th the initialization button held down. (The initialization button can be found on the back of the LX007.) Then, the LCD will first display **"Initialize OK? 1:Yes 0:No"**. Press **<1>** key if you w ant to initialize the system. After all the initialization process is completed, the system will be operating in the normal mode and the LCD will display "**, LX007 [F1], Date, Time**".



2 How to Enter the SETUP MENU

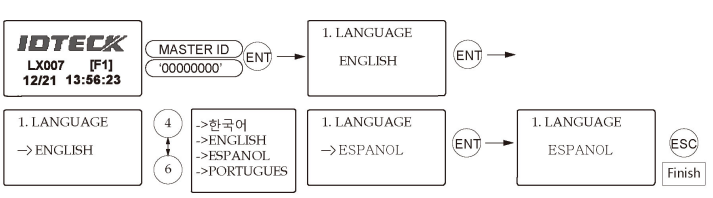
To set up the LX007 or to change the settings, you have to enter the **SETUP MENU** first. To do so, press **〈0〉** key eight (or ten) times and **〈ENT〉** key on the keypad. (The **Default Master ID** is **'00000000'.** For the **LX007SR**, it's **'0000000000'.**)

There are **10 SETUP MENUS** and you automatically enter **[F1 SETUP MENU]** first. You can move to other **SETUP MENUS** by pressing **〈F1〉** to **〈F10〉** keys. For example, if you want to go to **[F2 SETUP MENU]**, then press **〈F2〉** key. To enter **[F5 SETUP MENU]**, press **〈F5〉** key, and so on and on. There are several **SUBMENUS** inside each **SETUP MENU** and you can scroll up and down the **SUBMENU** by pressing **〈4〉** and **〈6〉** key. If you don't press any key within 60 seconds or if you press **〈ESC〉** key, the LX007 will exit the **SETUP MENU** and return to the normal operating mode. You can change the **Master ID** in the **[F7 SETUP MENU]**.



3 Language Setting

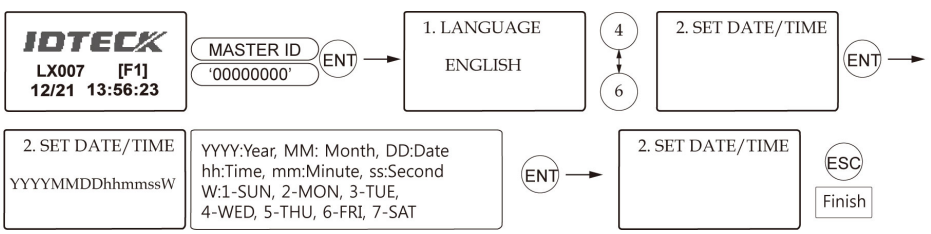
Select [**LANGUAGE**] in [**F1 SETUP MENU**] then press **〈ENT〉** key to select which language to use. The steps below show how to choose Espanol, for example.



4 Date / Time Setting

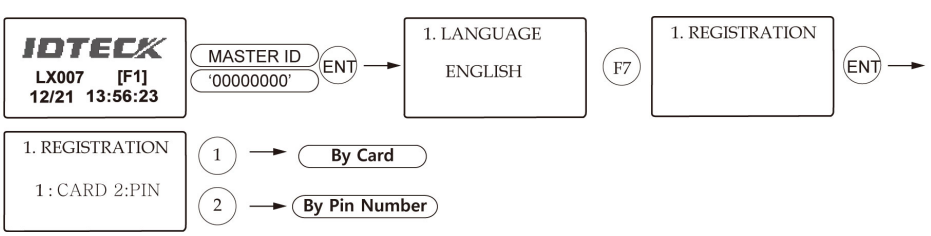
Select **[SET DATE/TIME]** in **[F1 SETUP MENU]** and enter the total of 15 digits (*i.e.* Year / Mo nth / Date / Hour / Minute / Second / Day) as shown below. The LCD will display the new Da te and Time after the time setting is completed, but the year and day will not be displayed.

The LX007 has a 24-hour system. Day codes are 1 for Sunday, 2 for Monday, 3 for Tuesday, 4 for Wednesday, 5 for Thursday, 6 for Friday and 7 for Saturday.

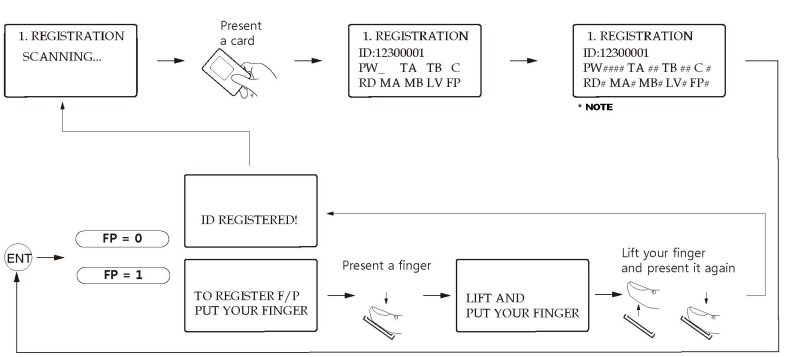


5 ID Registration

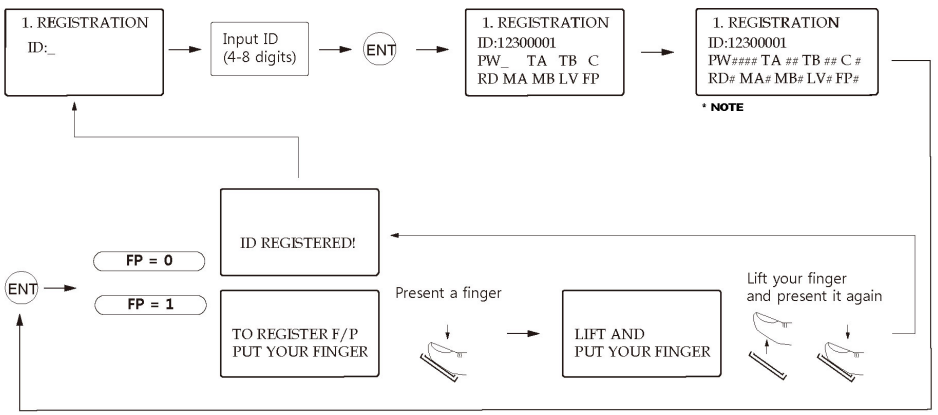
To register a User ID to the LX007, select **[F7 SETUP MENU]** -> **[REGISTRATION]**. You can ch oose to register an ID **a)** using a card or **b)** by entering a PIN.



5.1 Registration by Card



5.2 Registration Using Keypad (PIN)



In case you make a typing mistake during the registration process, you can press th e F1 button to erase the errors.

5.3 Terminology

- Scanning

  Means the reader is waiting for an ID number to be entered. The number of the card wil l appear with a beep sound when you present a card.
- ID

  Refers to a Personal Identification Number (PIN) that consists of 4-8 digits. Enter a 4-8 di git ID number (PIN) and press <ENT> key. (An ID number of the LX007SR consists of 4-1 0 digits.)
- PW

  stands for a password that is required for verification in the ID + Password operating mo de.
- TA

  Refers to the Time Schedule code (‘00’ - ‘10’) for the Reader*1 (i.e. the built-in reader). I f you assign a Time Schedule in this field, the new cardholder can gain access only durin g the assigned Time Intervals. To set the Time Intervals for each Time Schedule code, ref er to the instructions on the Time Schedule Setup in the [F4 SETUP MENU]. If you wish t o give the cardholder unlimited access time, enter the default Time Schedule code '00' f or the value.
- TB

  Refers to the Time Schedule code (‘00’ - ‘10’) for the Reader*2 (i.e. the exit reader). If yo u assign a Time Schedule in this field, the new cardholder can gain access only during th e assigned Time Intervals. To set the Time Intervals for each Time Schedule code, refer to

the instructions on the Time Schedule Setup in the [F4 SETUP MENU]. If you wish to give the cardholder unlimited access time, enter the default Time Schedule code '00' for the value.

- RD

  Refers to the Reader Assignment code for the cardholder. Entering the code ‘0’ and '3' assigns both readers (Built-in Reader and Exit Reader) to grant access to the cardholder that is being registered, code ‘1’ only assigns Reader*1 (Built-in Reader) and code ‘2’ assigns Reader*2 (Exit Reader). If you enter ‘1’ in the RD field(Only Reader*1 assigned) and try to exit through Reader*2 (Exit Reader) then the LX007 generates an error message (“Access Door Error”) on the LCD display.

- C

  Refers to the ID code. Code ‘0’ is default and codes ‘1’ and ‘2’ are codes are used for the TWO MEN MODE. Code ‘3’ is used for the ARM/DISARM function and code ‘4’ is assigned for lost cards.

- MA

  Refers to the Operating Mode that the new cardholder will use on Reader*1 (i.e. the built-in reader). If you enter ‘1’ for MA, for example, this card holder will be able to gain access using his or her ID only.

  - ‘0’ - Depend on System Operating Mode ([F1 SETUP MENU] > [READER*1 MODE])
  - ‘1’ - ID Only Mode
  - ‘2’ - ID + Fingerprint (Password)
  - ‘3’ - ID + Password + Fingerprint

- MB

  Refers to the Operating Mode that the new cardholder will use on Reader*2 (Exit Reader).

  - ‘0’ - Depend on System Operating Mode ([F1 SETUP MENU] > [READER*2 MODE])
  - ‘1’ - ID Only Mode
  - ‘2’ - ID + Password Mode

You cannot apply the ID + Password Mode if Reader#2 does not have a keypad or does not use password verification.

- LV

  Refers to the Output Operating Level for the new cardholder. Output operating time can be set for each user. To define an output operating time for each level, refer to the instructions on Output Setting in [F6 SETUP MENU].

  - ‘0’ or ‘1’ - Level *1
  - ‘2’ - Level *2
  - ‘3’ - Level *3

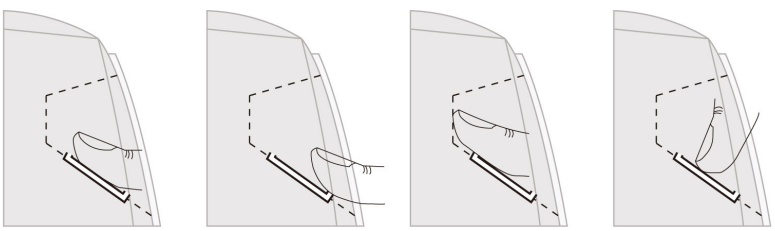
- ‘4’ - Level *4

- FP

  FP is the Fingerprint Usage Flag (1 digit). You can decide whether or not the user will us e a fingerprint.
  - ‘0’ - Not using a fingerprint
  - ‘1’ - Using a fingerprint

5.4 How to Place Your Finger onto the Scanner

When you register or verify your fingerprint, please place your finger onto the scanner corre ctly as shown in the illustration below.



(O) (X) (X) (X)

Operations 11

1 Normal Operation

1.1 Power on

When power is applied to the LX007, the Red LED is lit.

1.2 Reading of registered card

When a registered card (or a PIN) is read and his/her fingerprint is verified, the Door (Relay# 1) will open for 3 seconds (Default) with the Green LED on.

1.3 Exit button

After the Exit Button is pressed, the Door (Relay#1) will stay open for 3 seconds with the Gr een LED on.

1.4 Alarms

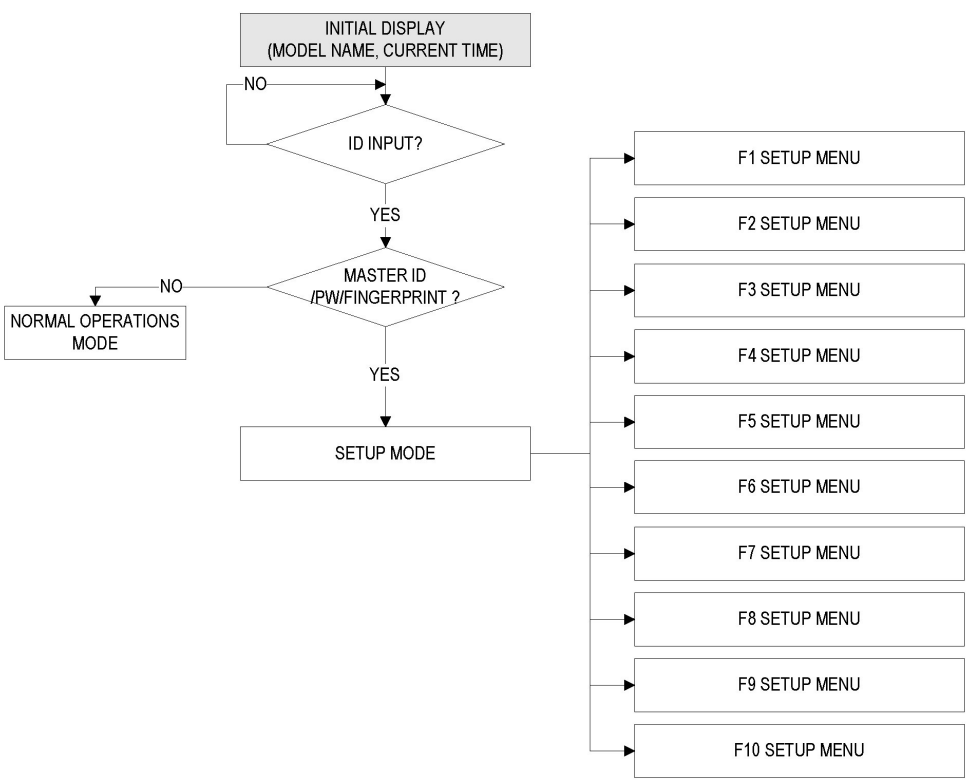
If an unregistered card is read or a user's fingerprint fails to be verified, the access will be de nied and an alarm (Relay#2) will be activated for 3 seconds with the Orange LED on.

2 Default Setting

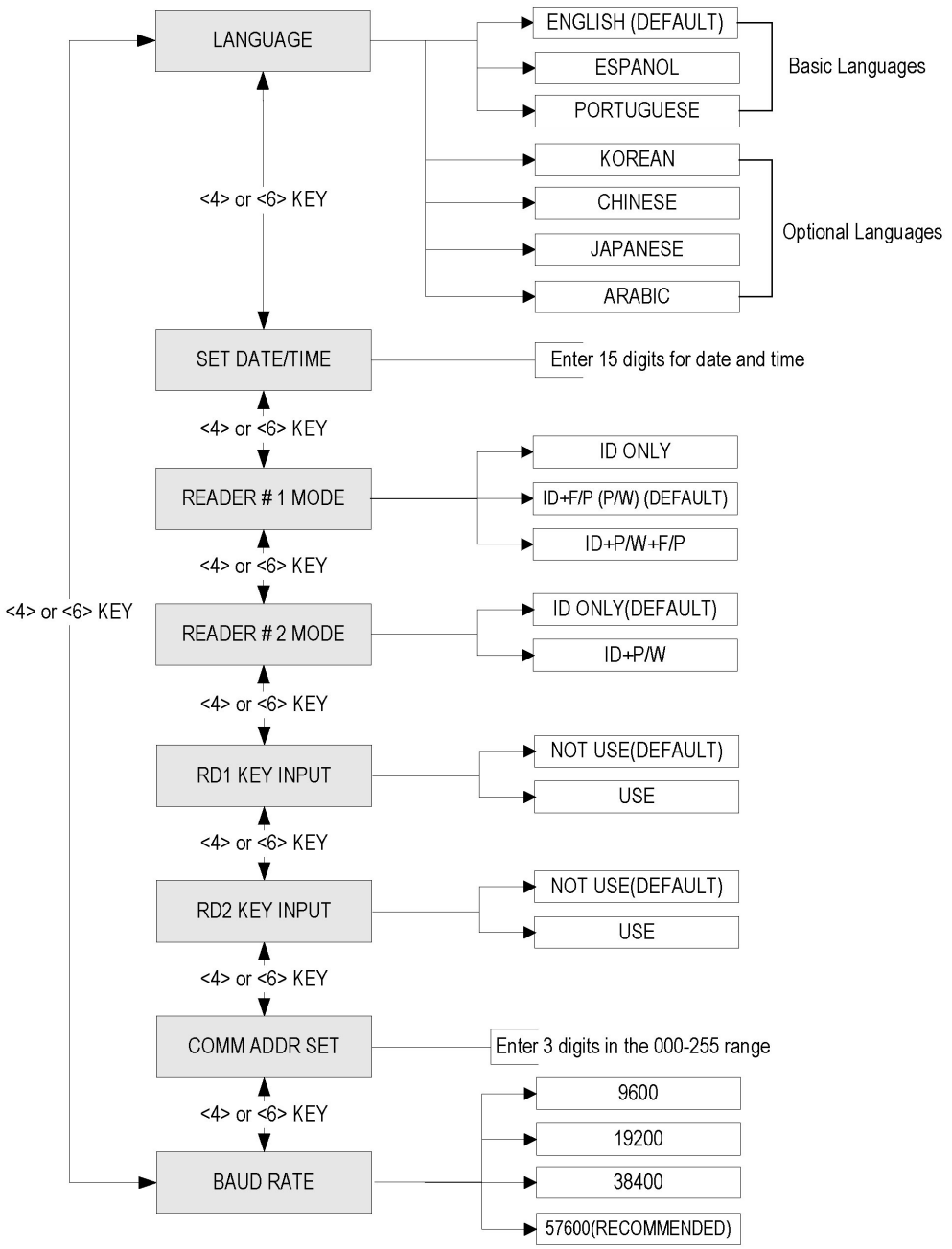
When you operate the system for the first time or after the system has been initialized, the f actory setting values (*i.e.* the default settings) will be restored in the memory. You can chan ge the settings for the desired application.

Setting Changes

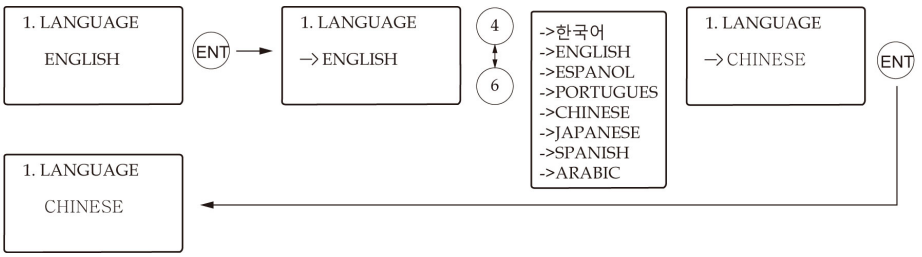
12



1 F1 SETUP MENU

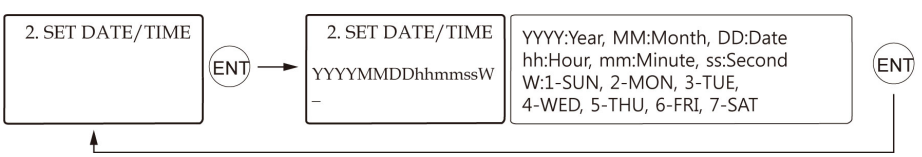


1.1 Language



- The default language is English.
- Supported languages are English, Spanish and Portuguese.
- One optional language of choice(Korean, Chinese, Japanese or Arabic) can be added.
- For addition of an optional language, please contact IDTECK.

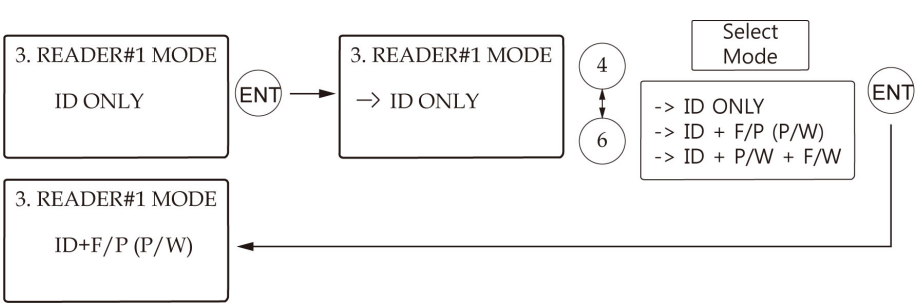
1.2 Date and Time Setting



e.g.

200802101330152 = Feb. 10, 2008, 13:30:15, Monday

1.3 Reader #1 Mode



READER#1 refers to the built-in proximity reader in the unit.

ID(PIN) ONLY

In this mode, users can access the door by simply presenting their card or entering their ID number.

ID+F/P(P/W)

In this mode, users can access the door by presenting their card or entering their ID number and then verifying their identity by a fingerprint. For users who did not reg ister their fingerprints, password verification is used instead of fingerprint verificati on.

ID+P/W+F/P

In this mode, users can access the door by presenting their card or entering their ID number and then verifying their identity by both a fingerprint and a password.

1.4 Reader #2 Mode

The READER#2 MODE setting can be configured in the same way as READER#1 MODE setti ng in the previous section.

NOTE: READER#2 refers to the Exit Reader connected to the LX007.

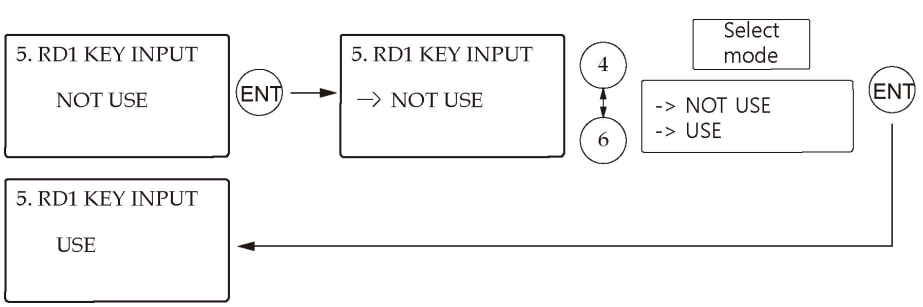
ID ONLY

Select this mode if the Exit Reader is operating without using a password

ID+P/W

Select this mode if the Exit Reader is using password verification.

1.5 Reader #1 KEY Input

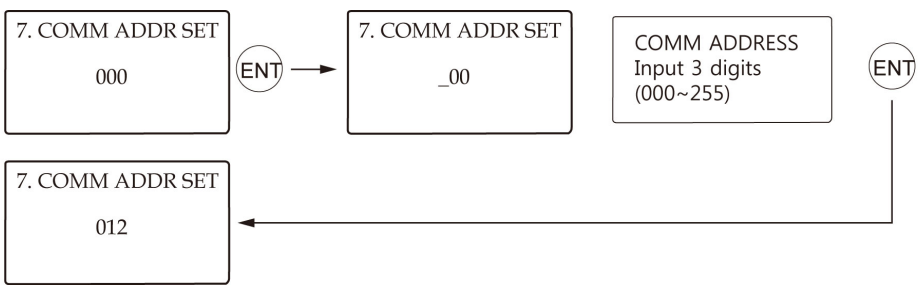


This setting allows you to decide whether to USE or NOT USE the keypad inputs for the Read er#1.The default setting is NOT USE the keypad input. If you want to access the door by ent ering the user ID by keypad, set this mode USE.

1.6 Reader #2 KEY Input

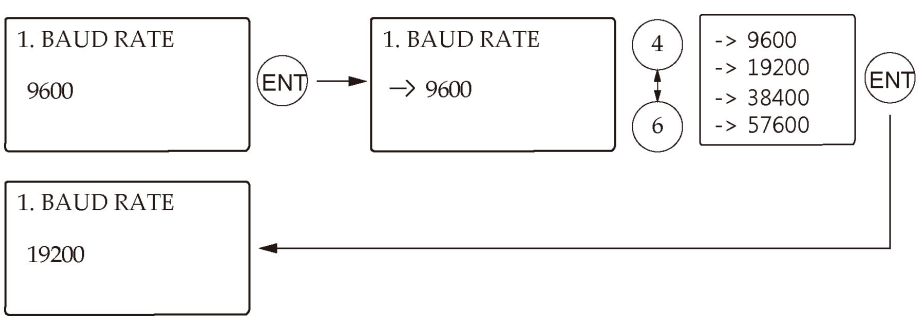
READER#2 KEY INPUT setting can be configured in the same way as READER#1 KEY INPUT setting in the previous Section.

1.7 Communication Address Setting



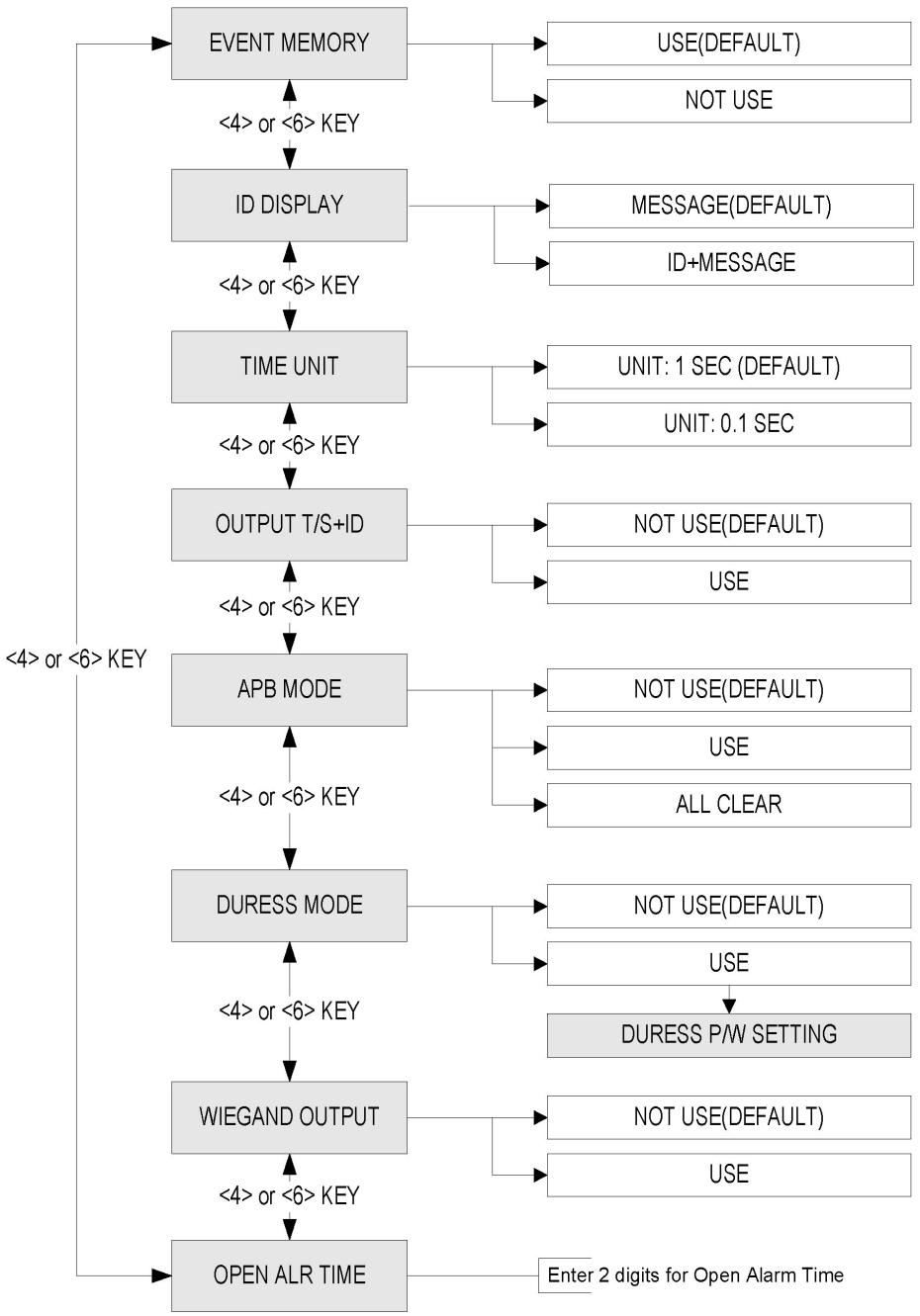
The default Communication Address is “000”.Set a unique Communication Address for each unit in the loop.

1.8 Baud Rate Setting

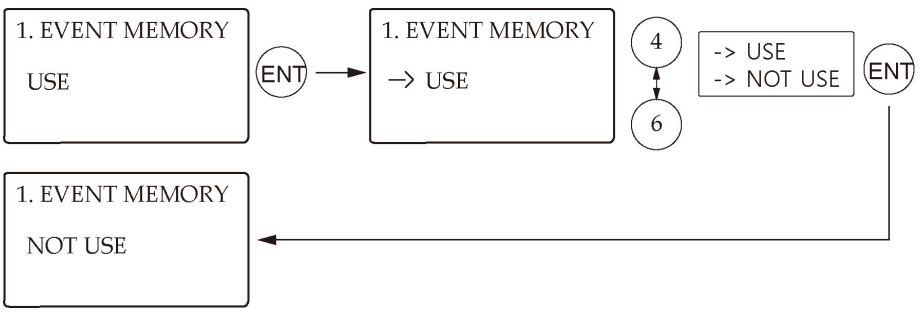


- The LX007 supports different Baud Rates of 9600, 19200, 38400 and 57600bps. The re commended Baud Rate is 57600bps. An incorrect Baud Rate setting will result in comm unication errors. Note that you should always set the same Baud Rate for the same com munication network.
- If you have a communication problem, please check the followings;
  - Check the Communication Address for both the LX007 and the host PC in the Soft ware.- Check the Baud Rate setting of both the LX007 and the host PC software.
  - Check the COM port and the cable.
  - Check the COM port settings of the host PC(Parity Bit: None, Data Bit: 8 bits, Stop B it: 1 bit)

2 F2 SETUP MENU

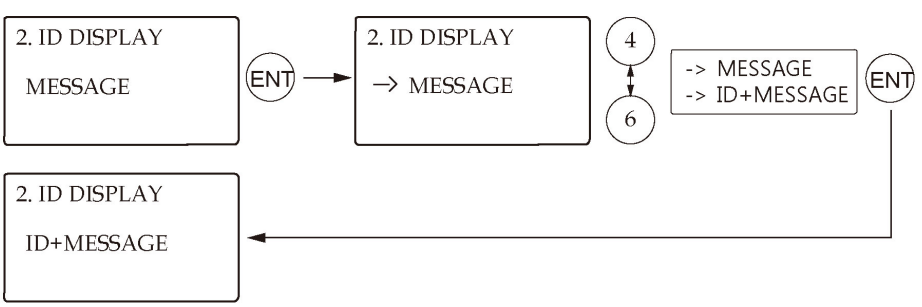


2.1 Event Memory



You can select what action to take after event memory is full. If you set the event memory to USE, the LX007 keeps all event transactions stored in the memory in case the event memory is full. On the other hand, if you select NOT USE, new events will be overwritten into the eve nt buffer. If you use the LX007 in a stand-alone configuration (just for door access), select N OT USE.

2.2 ID Display



If you want to display user ID numbers on the LCD, select ID+MESSAGE.

MESSAGE

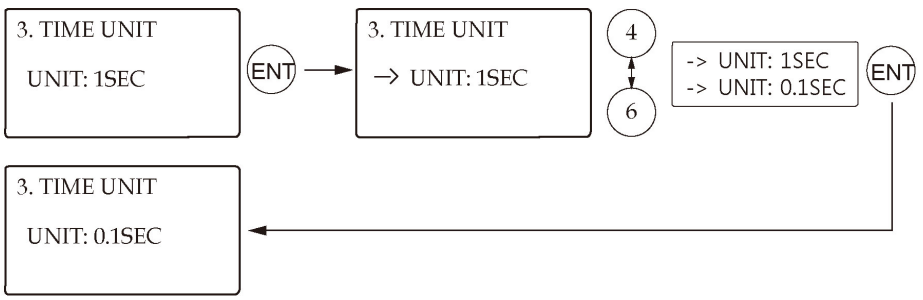
A text message and asterisks "********" will appear and the user ID number won't b e displayed.

ID+MESSAGE

The user ID number will be displayed on the LCD with a text message.

The default setting is '**MESSAGE**'.

2.3 Time Unit Setting



This setting allows you to define the unit of time.

1sec

Output Time is calculated in the time unit of 1 second for the IN/OUT definition.

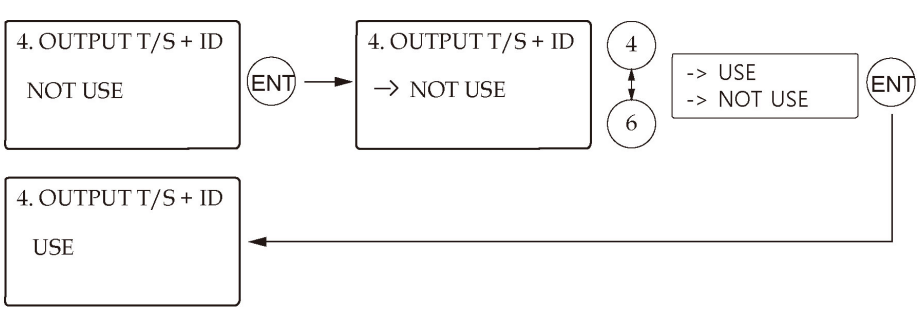
0.1sec

Output Time is calculated in the time unit of 1/10 second (or 100ms) for the IN/OUT definition

e.g.

- If you want to activate the Door Relay (Relay #1, DR) for 3 seconds, appropriate setting values are as follows;
  - The Time Unit should be set to 1 SEC.
  - The Door Relay (DR) Output Time should be set to “03”.
- If you want to activate Door Relay (Relay #1, DR) for 0.5 second, appropriate setting val ues are as follows;
  - The Time Unit should be set to 0.1 SEC.
  - The Door Relay (DR) Output Time should be set to “05”.

2.4 Output T/S + ID



This setting is related to the Output Time Schedule setting of [F5 SETUP MENU]. The Output Time Schedule setting can be used to generate outputs for a certain assigned period of time, for example to keep the door open during that time. By setting this Output T/S + ID setting t o USE, you can delay the output (e.g. door opening) until the first access after the time sche dule period begins. If there is no access during the assigned period, no output will be gener ated.

NOT USE

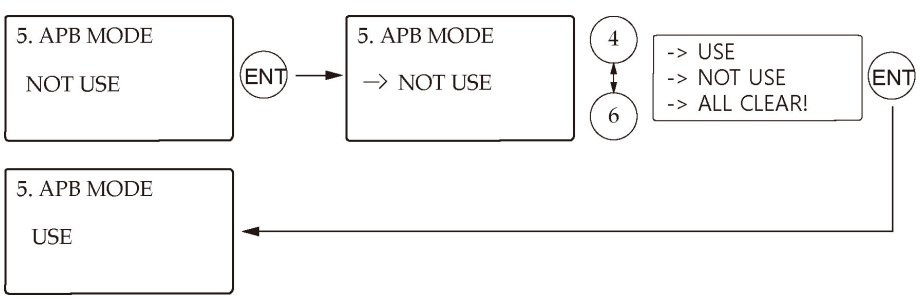
Output is generated at the beginning of the assigned Time Interval.

USE

Output is generated when a registered user gains access for the first time after the Ti me Interval of the applied Time Schedule begins.

The default setting is **NOT USE**

2.5 Anti-passback Mode



The Anti-pass back feature is used to prevent an identical user from entering or exiting the d oor more than twice in a row. This mode can be applied only when an Exit Reader is installe d. DO NOT set this mode to USE if an Exit Button is installed instead of an Exit Reader.

NOT USE

The Anti-pass back feature is disabled.

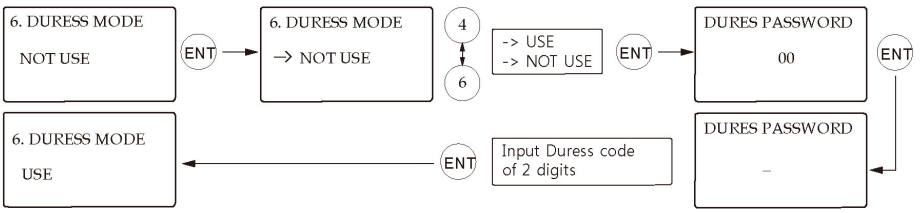
USE

The Anti-pass back feature is enabled.

ALL CLEAR

All Anti-pass back flags are reset, and access will be allowed one time regardless of th e current status of the existing flags.

2.6 Duress Mode

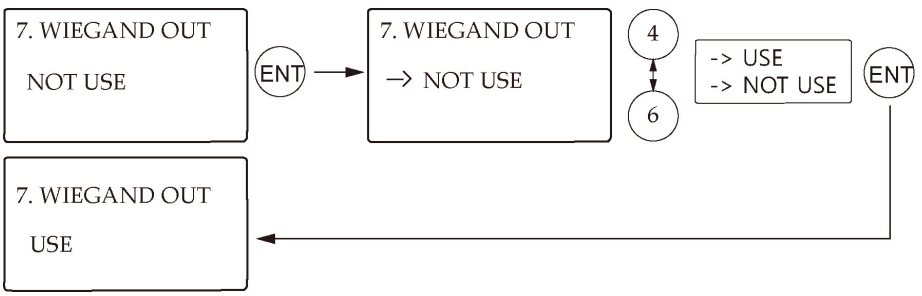


You can set Duress Mode for Reader#1. The default setting is NOT USE. If you select USE, th e LCD will display the default Duress Password '00'. If you want to change the Duress Passw ord, press <ENT> key and enter a 2-digit Duress Password. If you do not want to change it, p ress the <ESC> key.

In case of duress, enter the 2-digit Duress Password and press <ENT> key prior to p resenting the card. The Duress Alarm will be generated and reported to the host P C while the door is opened as usual.

The Duress Password and ARM and DISARM codes must differ.

2.7 Wiegand Output



This feature allows you to use the LX007 as a reader (as opposed to as a controller). If this se tting is set to USE, the LX007 sends 26bit Wiegand Output through two TTL output ports. (T he LX007SR sends out 34bit Wiegand output.)

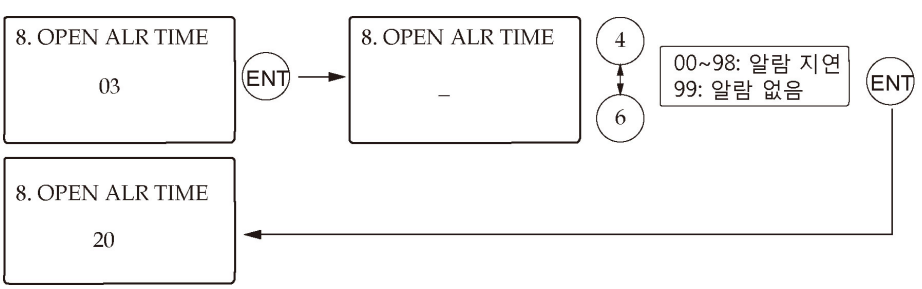
NOT USE

Normal TTL outputs will be activated.

USE

26bit Wiegand outputs will be generated through TTL1 and TTL2 ports. When a regist ered card is read, the “ID SCANNING OK” message will appear on the LCD. (TTL1 : Dat a 0 TTL2 : Data 1)

2.8 Door Open Alarm Time Setting



The Door Open Alarm Time is the delay between the point at which the Door Relay Time fini shes and the point at which the Door Open Alarm starts ringing.

00

The alarm will ring immediately past the Door Relay time if the door is left open.

01-98

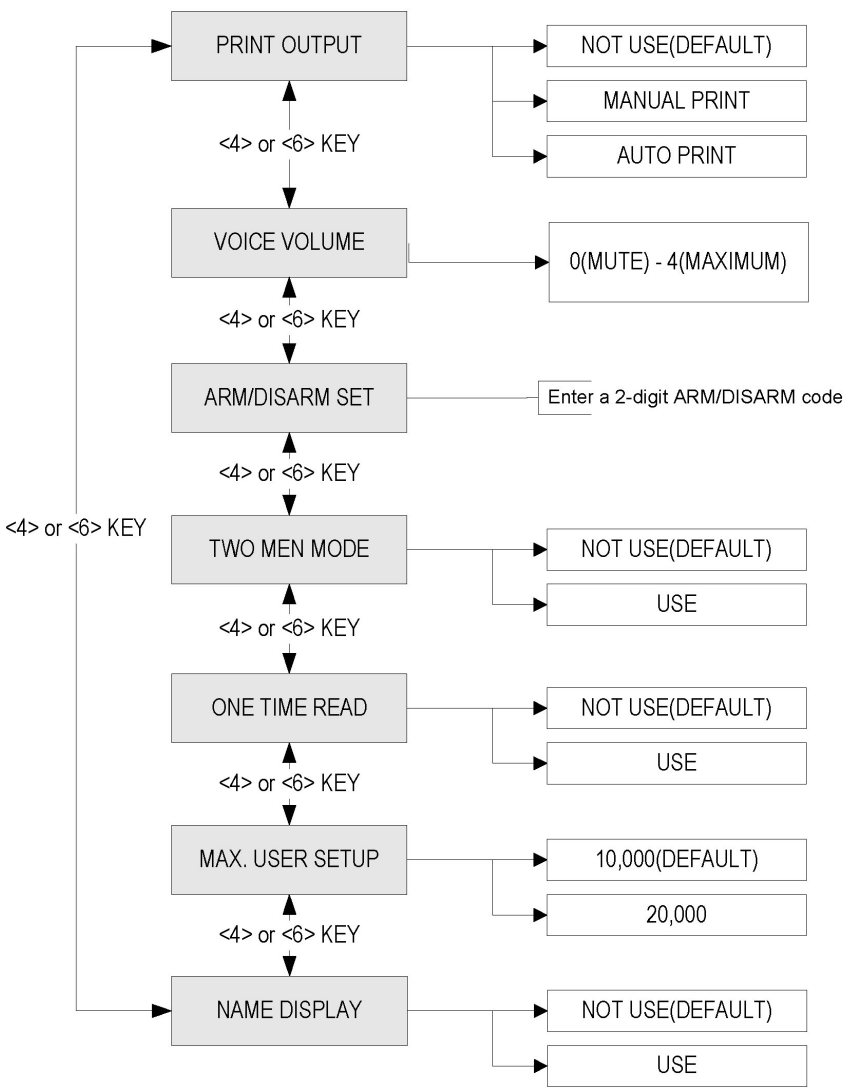
Delay (01-98 sec.) will be inserted before an alarm is triggered.

99

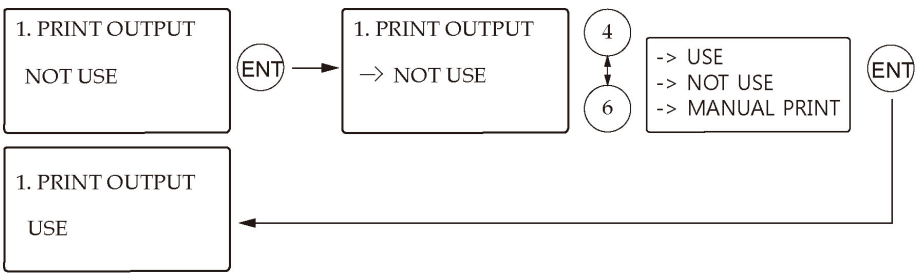
No alarm.

A Door Contact Sensor must be installed on the door for this application.

3 F3 SETUP MENU



3.1 Print Output



If connected to a serial printer, the LX007 can send the printer the details of new events incl uding ID, data, time, function key, name, etc.

To print name, go to F3 > 7.NAME DISPLAY, then set it to 'USE'.

AUTO PRINT

Print outputs are generated for every new event.

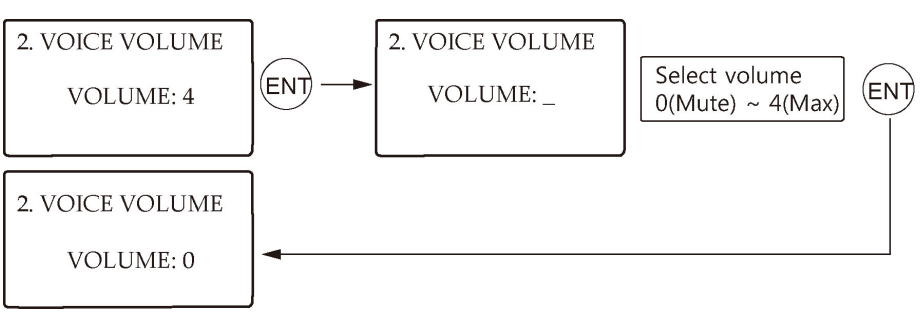
MANUAL PRINT

By pressing '0' (no printing) or '1' (printing) key, you can manually select whether or n ot to print a new event.

NOT USE

No printing output.

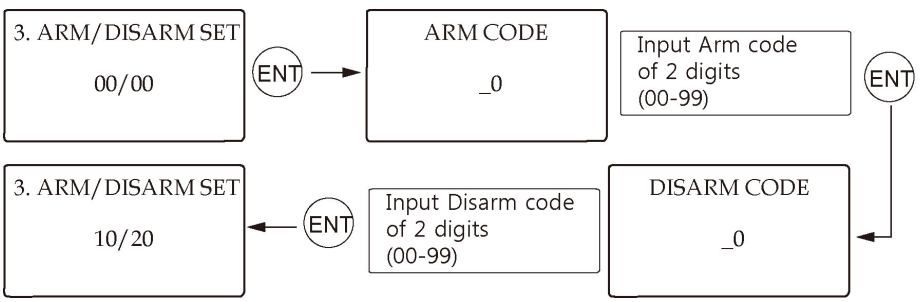
3.2 Voice Volume



The LX007 tells you its status out loud. You can adjust the volume of the voice from 0 (mute) to 4 (maximum).

For customized voice messages other than the default voice messages, please cont act IDTECK.

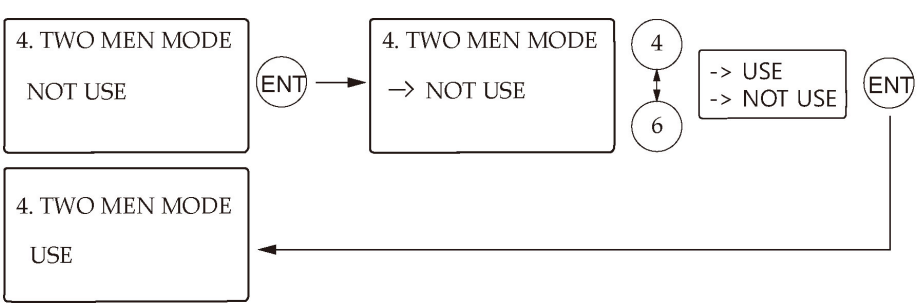
3.3 Arm/Disarm Setting



This setting allows you to set the Arm Code and the Disarm Code. After setting the Arm Cod e or Disarm Code, you can set the LX007 to the ARM mode by entering the ARM code and presenting an ARM/DISARM card (i.e. a card that was registered with Code 3). Once the LX 007 toggles into ARM mode, all readers freeze and stop reading cards. To DISARM the LX00 7, enter the Disarm Code and present an ARM/DISARM card.

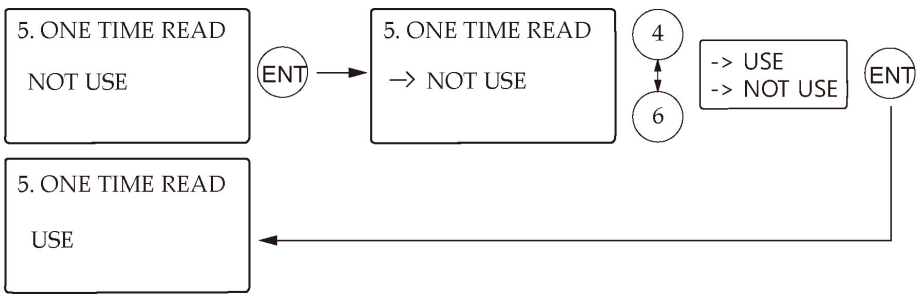
The ARM Code, DISARM Code, and Duress Code must all differ.If ARM/DISARM co des are both 00, Arm/Disarm function does not work.

3.4 Two Men Mode



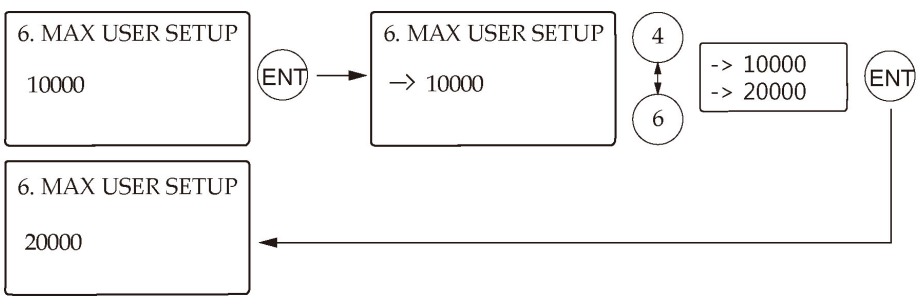
To apply this feature, cards designated for guides should be registered into the Guide Group (C:1) and visitor cards into the Visitor Group(C:2). If configured in the two-man mode, the L X007 won't grant access until one guide card and one visitor card are presented together wi thin a certain time length.

3.5 One Time Read



If this option is set to USE, the same card can't be read twice in a row within 30 seconds.

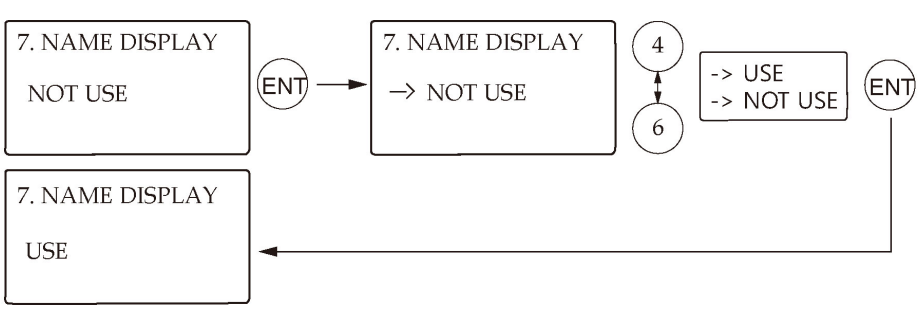
3.6 Max. User Setup



You can select the maximum number of user registrations; 10,000 or 20,000. If the maximum number of registrants is set to 20,000, the maximum number of event transactions becomes 10,000.

> CAUTION: Before changing the maximum number of users, you must initialize the device.

3.7 Name Display

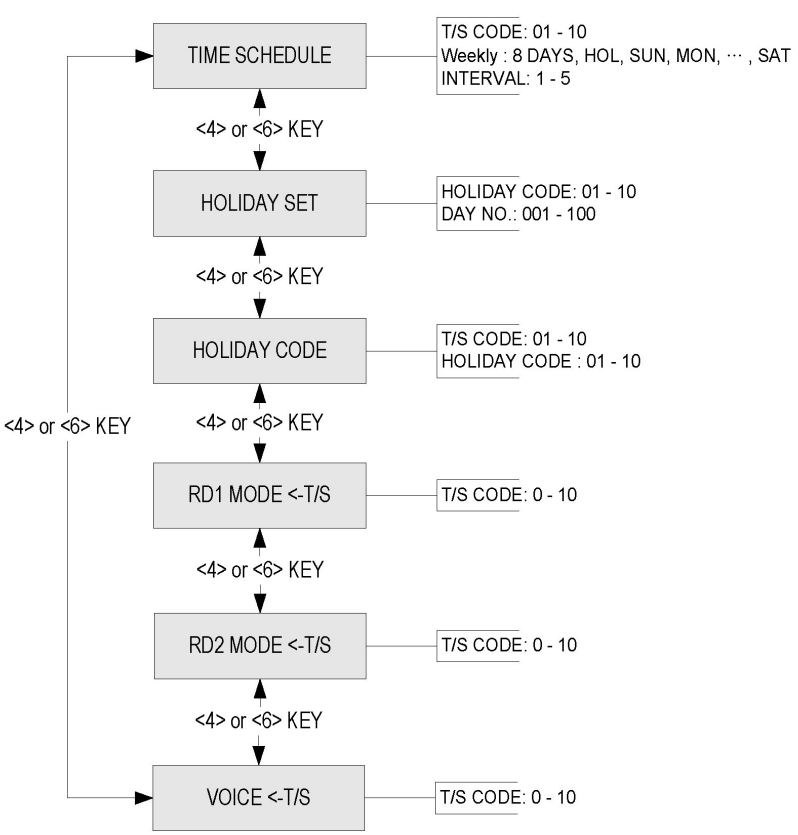


The Name Display option is used to determine whether the unit will display the name of the user who receives access. This setting also determines whether to print name when printing events using serial printer.

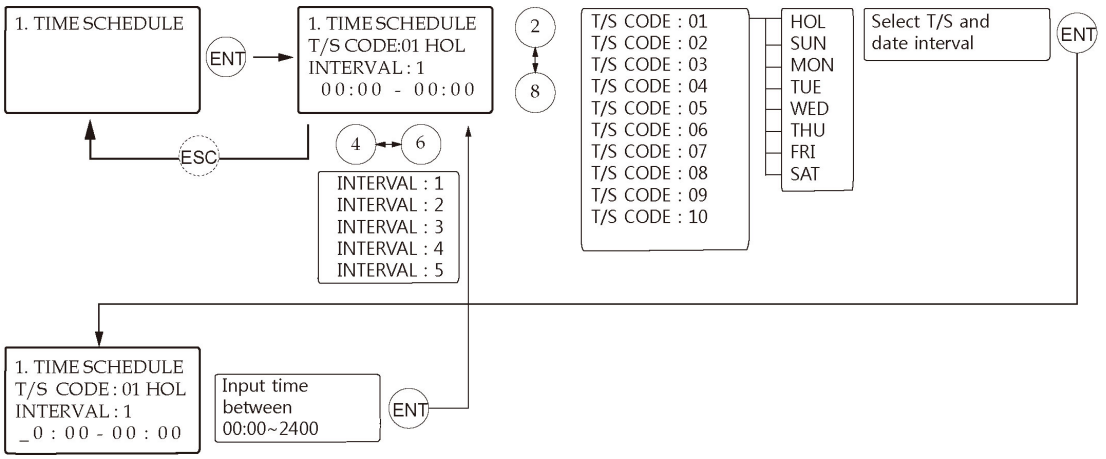
User names can only be downloaded from the software. If you register a new user via the device SETUP MENU, the name of the user can't be entered and, therefore, won't be displayed when the user receives access.

If you set this option to USE, the maximum number of IDs that can be registered is limited to 10,000. Also, you can set this option to USE only when there's no registe red ID because the memory structure is different when the name display option is applied.

4 F4 SETUP MENU



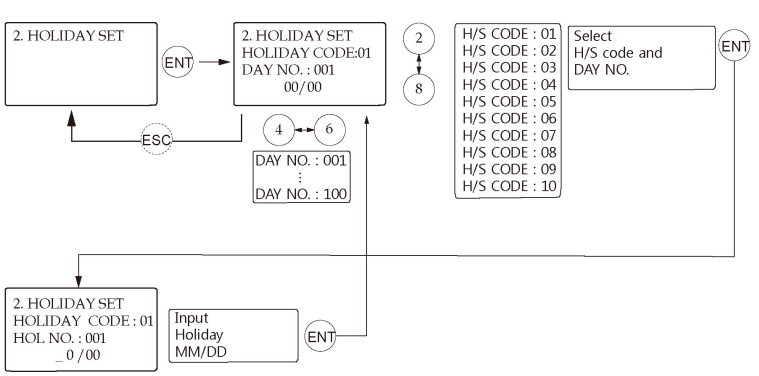
4.1 Time Schedule



There are 10 Time Schedule Codes available for users. Time Schedule Code “00” is the defaul t setting that allows access to all users at any time. The user can program the Time Schedule Codes 01 to 10. Each Time Schedule Code has 8 programmable days (i.e. Sun, Mon, Tue, W ed, Thu, Fri, Sat and Holiday) and each day has 5 Time Intervals (i.e. Shift Time or Accessible Time Zone.)

The LCD will show the current Time Schedule settings such as T/S Code, Day, Time Interval a nd time period. Use <2> or <8> key to scroll up and down the Time Schedule Code (01~10) and a day of the week. (Mon - Sun and Holiday). Use <4> or <6> key to select Time Interval b etween 1 and 5. The Holiday in this Time Schedule will be linked to the Holiday Schedule Co de. Select one of the Time Schedule Code, Day and Interval, and then press <ENT> key. This system is based on 24-hour system and therefore the time 00:00 and 24:00 refer to the sam e time and 12:00 refers to 12 O’clock afternoon. Enter the hour and minute of the start time and hour and minutes for end time of the Time Interval then press <ENT> key to store T/S to the memory. Press <ESC> key to return to the menu.

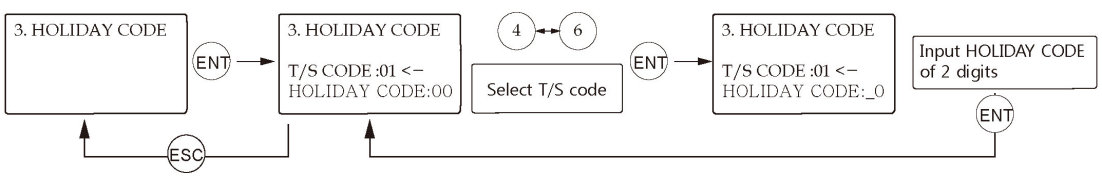
4.2 Holiday Setting



There are 10 Holiday Schedule Codes (H/S CODE) available for users. Holiday Schedule Code “00” is the default code, which includes no Holidays in it. The user can program the Holiday Schedule Codes 01 to 10. Each Holiday Schedule Code can have up to 100 programmable h olidays.

The LCD will show current Holiday Code settings including H/S Code, Holiday number and D ate. Use <2> or <8> key to scroll up and down from the Holiday Schedule Code 01 to 10 and use <4> or <6> key to select from Holiday number 001 to 100. Select one of the Holiday Sch edule Code and Holiday number then press <ENT> key. Enter the month and date of the holi day, then press <ENT> key to store the Holiday Schedule to the memory. To return to the pre vious menu, press <ESC> key.

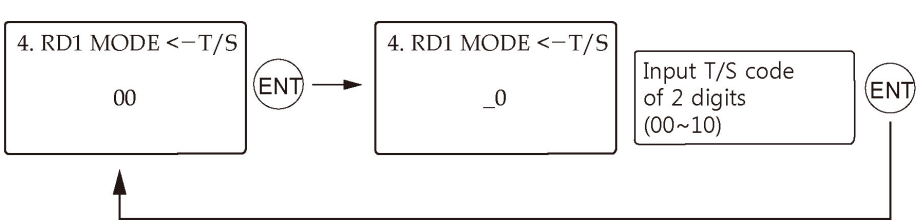
4.3 Holiday Code



The Holiday Code setting allows you to link a Holiday Schedule to a Time Schedule. A Time S chedule has 5 Time Intervals for holidays and the Time Intervals are applied only to the dates of this Holiday Schedule. The default Holiday Schedule Code is ‘00’ which means no holidays are applied to the Time Schedule.

Use <4> or <6> key to scroll up and down from the T/S Code 01 to 10 and press <ENT> key. Then, enter a 2-digit Holiday Schedule Code and press <ENT> key to store the changed Holid ay Index settings to the memory. To return to the previous menu, press <ESC> key.

4.4 Reader#1 Mode Time Schedule



* There are 3 system operating modes including ID Only Mode, ID+F/P(PW) Mode and ID+P W+F/P Mode. You can select one of these system operating modes at [R1 MODE SETTING] f rom [F1 SETUP MENU]. However, you may apply ID Only Mode during a certain Time Interva

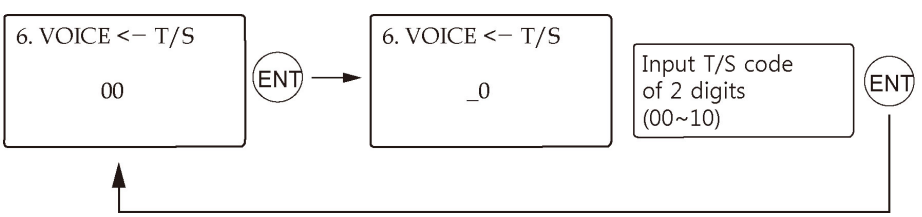
l.

For example, suppose you want to access the door by only presenting a card from 09:00 to 17:00 and use the Fingerprint Verification method for the rest of the time. Then, you can do so by setting [R1 MODE SETTING] to ID+F/P Mode, which is for the system operating mode, and then program T/S Code 01 so that it can include a Time Interval between 09:00 and 17:00. Then, here, link the programmed Time Schedule Code 01 to the R1 MODE Time Schedule setting. To link a Time Schedule Code (01~10) to Reader#1 Mode, first, press <ENT> key and get into the setting mode. Then, enter the 2-digit Time Schedule Code and press <ENT> key to store and apply the Time Schedule Code to R1 MODE. To return to the previous menu, press <ESC> key.

4.5 Reader#2 Mode Time Schedule

The READER#2 MODE TIME SCHEDULE setting can be configured in the same way as READER#1 MODE T/S setting, which is explained in the previous section.

4.6 Voice Time Schedule



The Voice T/S feature allows you to apply time schedules to the voice message output. You can configure the unit to play voice messages in a certain time range and mute them at other times.

To apply a time schedule code, enter the time schedule code you want. Within the time range assigned by the time schedule, voice messages will be played while at other times, they will not be played.

Using this feature, for example, you can configure the unit to play voice messages in the day time and mute them at night.

5 F5 SETUP MENU

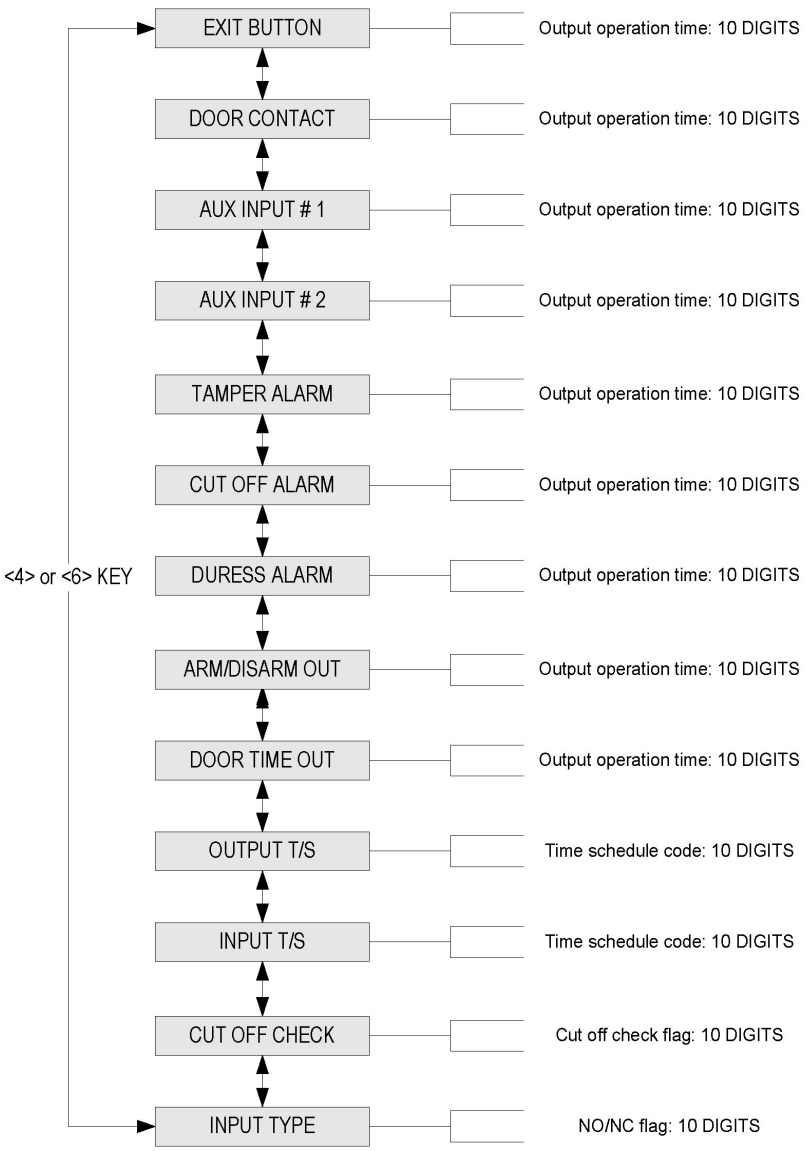
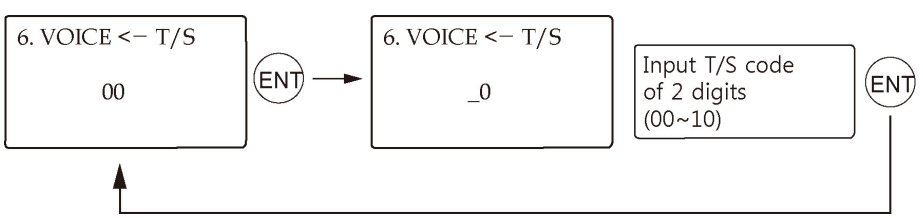


Table 12-1 Default Output Settings for Input Source

OUTPUT	Door Relay (DR)	Alarm Relay (AR)	TTL#1 (T1)	TTL#2 (T2)	Buzzer (BZ)
[1] EXIT BUTTON	**03**	00	00	00	00
[2] DOOR CONTACT	00	**99**	00	00	00
[3] AUX Input #1	00	00	00	00	00
[4] AUX Input #2	00	00	00	00	00
[5] TAMPER ALARM	00	**99**	**99**	**99**	**99**

[6] CUT OFF ALARM	00	00	00	00	00
[7] DURESS ALARM	00	00	00	00	00
[8] ARM/DISARM OUT	00	00	00	00	00
[9] DOOR TIME OUT	00	**99**	00	00	00
[10] OUTPUT TIME SCHEDULE	00	00	00	00	00
INPUT	Exit Button (EX)	Door Contact Sensor (DC)	Aux Input # 1 (I1)	Aux Input # 2 (I2)	Tamper Switch (TP)
[11] INPUT TIME SCHEDULE	00	00	00	00	00
[12] CUT OFF CHECK	00	00	00	00	00
[13] INPUT TYPE	00	00	00	00	00

5.1 Exit Button Output Setting



You can program the Output Activation Time, the length of time for which the output is activated after the EXIT button is pressed.

Let's say, we put '03' for one of the fields, If the unit of time is set to '1 sec', then the activation time will be 3 seconds. If the unit of time is set to '0.1 sec', then the activation time will be 0.3 seconds (or 300 ms.)

You can set the time somewhere between 00 and 98 seconds (or between 0.0 and 9.8 seconds if the Time Unit is set to 0.1 sec.) If you enter "99", the corresponding output will be activated forever until you reset the output.

DR

Door Relay Output

AR

Alarm Relay Output

T1

TTL#1 Output

T2

TTL#2 Output

BZ

Buzzer Output

5.2 Door Contact Output Setting

5.3 Aux Input#1 Output Setting

5.4 Aux Input#2 Output Setting

5.5 Tamper Alarm Output Setting

5.6 Cut Off Alarm Output Setting

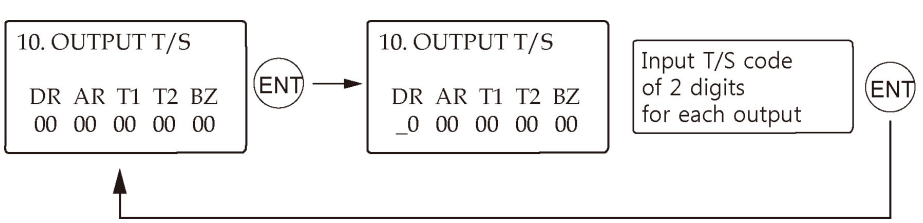
5.7 Duress Alarm Output Setting

5.8 Arm/Disarm Output Setting

5.9 Door Time Output Setting

The rest of output activation time settings above can be configured in the same way as the E xit Button Output Setting in the section 12.5.1, which means you can refer to that section t o get some idea as to how to do the configuration.

5.10 Output Time Schedule Setting



You can assign a Time Schedule Code to each output. The default Time Schedule Code for e very output is “00”, which means no Time Schedule is applied to them.

Changing these settings can be very useful when you want to leave the door open during a certain time period. Press <ENT> key enter the setting mode and enter a 2-digit Time Schedu

le Code for each output.

DR

Door Relay Output

AR

Alarm Relay Output

T1

TTL#1 Output

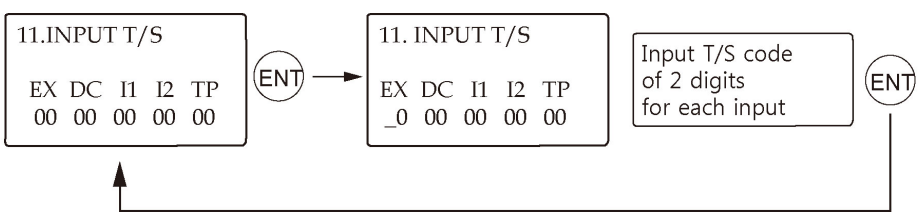
T2

TTL#2 Output

BZ

Buzzer Output

5.11 Input Time Schedule Setting



You can assign a Time Schedule Code to each input to activate the input only during that pe riod. The default Time Schedule Code for every input is “00”, which means no Time Schedule is applied to them. Changing these settings can be very useful when you want to activate PI R sensor input during a certain period of time.

Press <ENT> key to enter this setting mode, and then enter a 2-digit Time Schedule Code for each input.

EX

EXIT Button Input T/S Code

DC

Door Contact Sensor Input T/S Code

I1

Aux Input#1 T/S Code

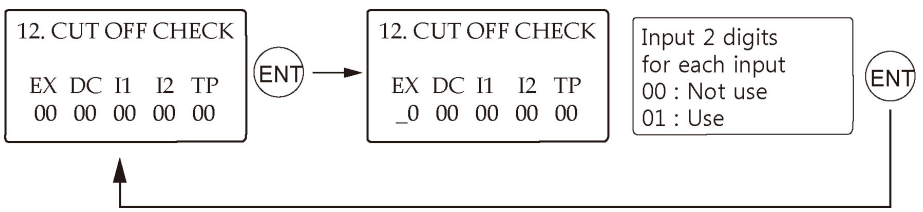
I2

Aux Input#2 T/S Code

TP

Tamper Switch Input T/S Code

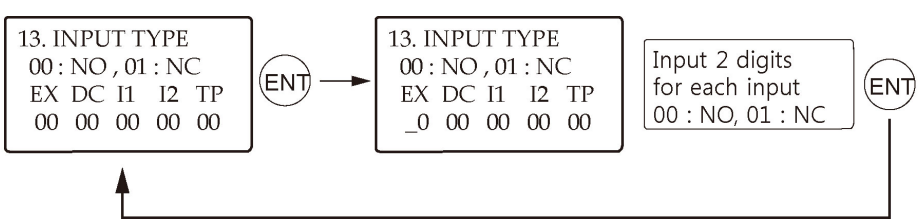
5.12 Cut Off Check Setting



You can choose whether or not to check the connection cutoff of each input port. '00' mea ns not using this feature and '01' means using it.

Before applying this feature, a 2.2K resistor should be connected between the inp ut wire and the GND.

5.13 Input Type Setting



You can program each input for either NO(Normally Open) or NC(Normally Close) operation. '00' means NO while '01' means NC. The default setting is 00(NO).

6 F6 SETUP MENU

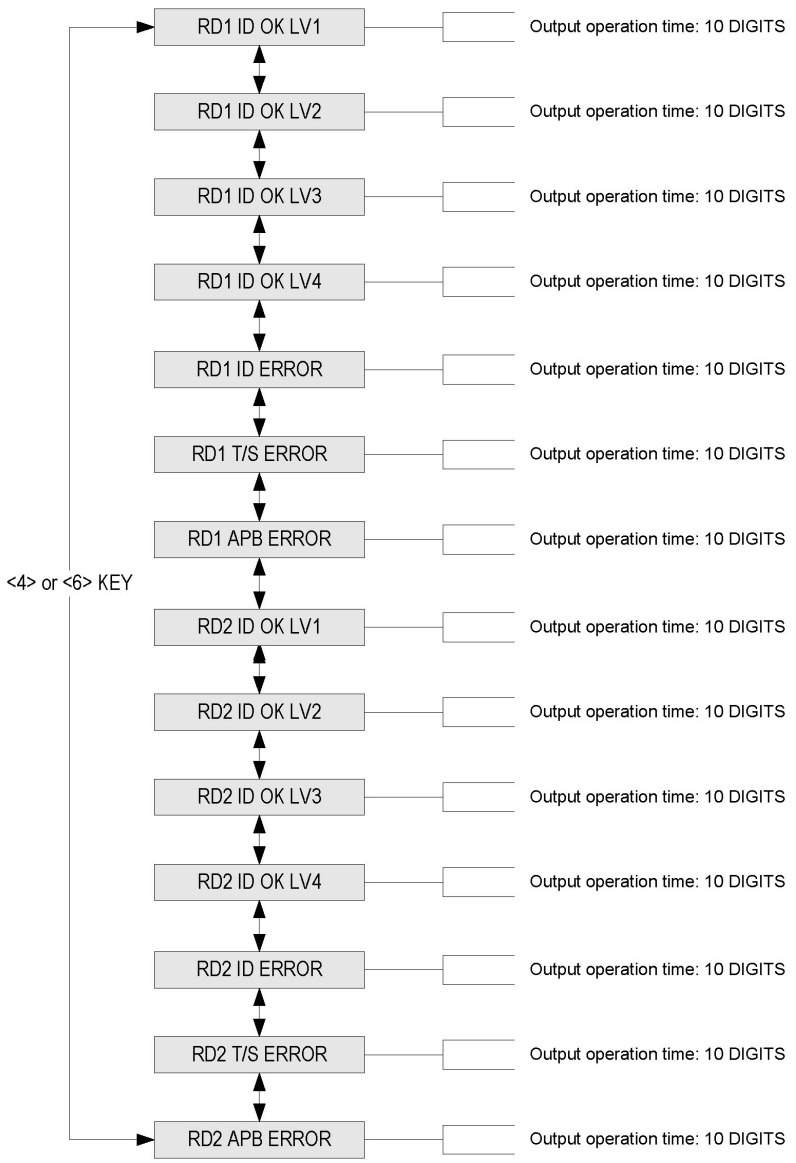
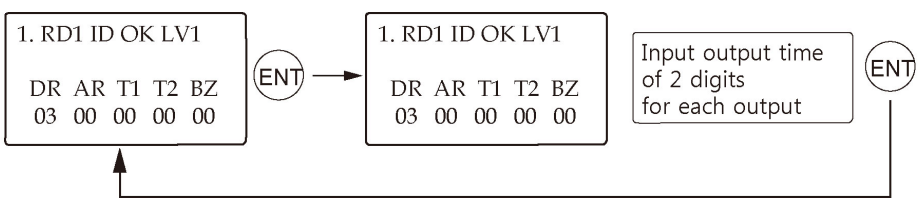


Table 12-2 Default Output Setting for Different Inputs

OUTPUT	Door Relay (DR)	Alarm Relay (AR)	TTL#1 (T1)	TTL#2 (T2)	Buzzer (BZ)
[1] Reader#1 ID OK LV1	**03**	00	00	00	00
[2] Reader#1 ID OK LV2	**05**	00	00	00	00
[3] Reader#1 ID OK LV3	**05**	00	00	00	00
[4] Reader#1 ID OK LV4	**05**	00	00	00	00
[5] Reader#1 ID Error	00	**03**	00	00	00

[6] Reader#1 T/S Error	00	**03**	00	00	00
[7] Reader#1 APB Error	00	**03**	00	00	00
[8] Reader#2 ID OK LV1	**03**	00	00	00	00
[9] Reader#2 ID OK LV2	**05**	00	00	00	00
[10] Reader#2 ID OK LV3	**05**	00	00	00	00
[11] Reader#2 ID OK LV4	**05**	00	00	00	00
[12] Reader#2 ID Error	00	**03**	00	00	00
[13] Reader#2 T/S Error	00	**03**	00	00	00
[14] Reader#2 APB Error	00	**03**	00	00	00

6.1 Output Setting for Reader#1 ID OK Level 1



You can program the Output Activation Time, the length of time during which the output is activated after the EXIT button is pressed. The actual Output Activation Time equals either V seconds, provided that the Time Unit is set to 1 second, or V/10 seconds, provided that the Time Unit is set to 0.1 second. (V=Activation Time Value assigned for each output.)

You can set the time somewhere between 00 and 98 seconds (between 0.0 and 9.8 second s if the Time Unit is set to 0.1 sec.) If you enter “99”, the corresponding output will be activat ed forever until you reset the Output.

DR

Door Relay Output

AR

Alarm Relay Output

T1

TTL#1 Output

T2

TTL#2 Output

BZ

Buzzer Output

Output Time setting from 12.6.2 to 12.6.14 can be configured in the same way as 12.6.1 R D1 ID OK Level 1 Output setting.

6.2 Output Setting for Reader#1 ID OK Level 2

This output time is applied for the users registered with Level#2 output.

6.3 Output Setting for Reader#1 ID OK Level 3

This output time is applied for the users registered with Level#3 output.

6.4 Output Setting for Reader#1 ID OK Level 4

This output time is applied for the users registered with Level#4 output.

6.5 Output Setting for Reader#1 ID Error

This output time is applied when a user that is not registered in Reader #1 attempts access.

6.6 Output Setting for Reader#1 T/S Error

This output time is applied when a user attempts access before or after the time assigned by the applied time schedule.

6.7 Output Setting for Reader#1 APB Error

This Output Time is applied when a user who attempts access has violated the one-entry-on e-exit rule of Anti-pass-back.

6.8 Output Setting for Reader#2 ID OK Level 1

This Output Time is applied for the users registered with Level#1 output.

6.9 Output Setting for Reader#2 ID OK Level 2

This Output Time is applied for the users registered with Level#2 output.

6.10 Output Setting for Reader#2 ID OK Level 3

This Output Time is applied for the users registered with Level#3 output.

6.11 Output Setting for Reader#2 ID OK Level 4

This Output Time is applied for the users registered with Level#4 output.

6.12 Output Setting for Reader#2 ID Error

This output time is applied when a user that is not registered in Reader #2 attempts access.

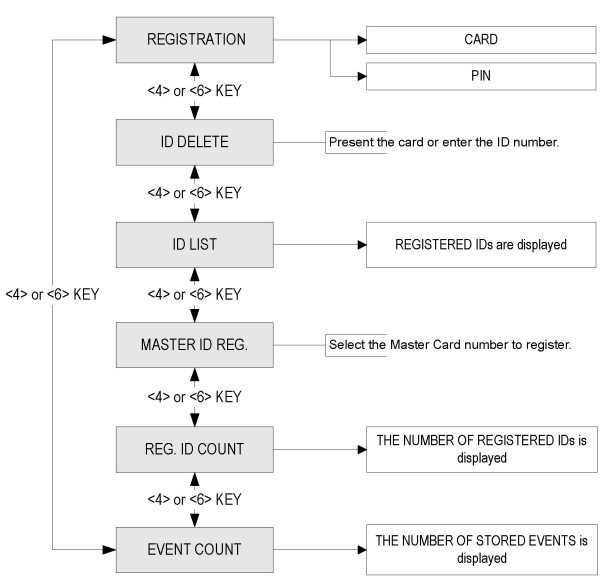
6.13 Output Setting for Reader#2 T/S Error

This output time is applied when a user attempts access before or after the time assigned by the applied time schedule.

6.14 Output Setting for Reader#2 APB Error

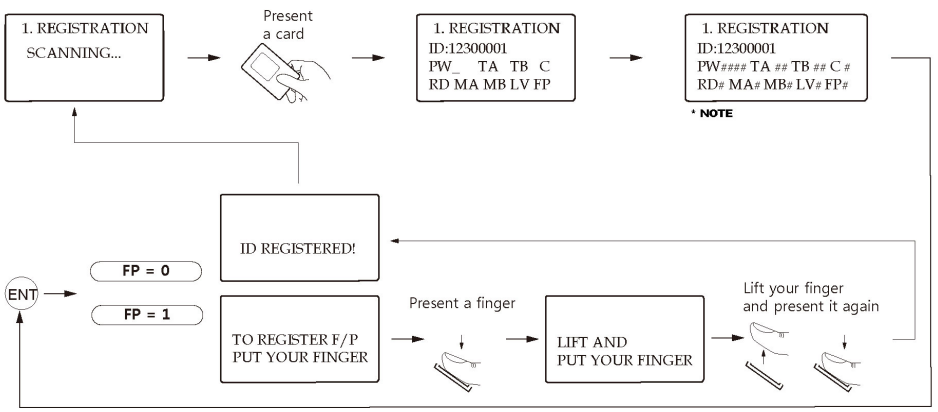
This Output Time is applied when a user who attempts access has violated the one-entry-on e-exit rule of Anti-pass back.

7 F7 SETUP MENU

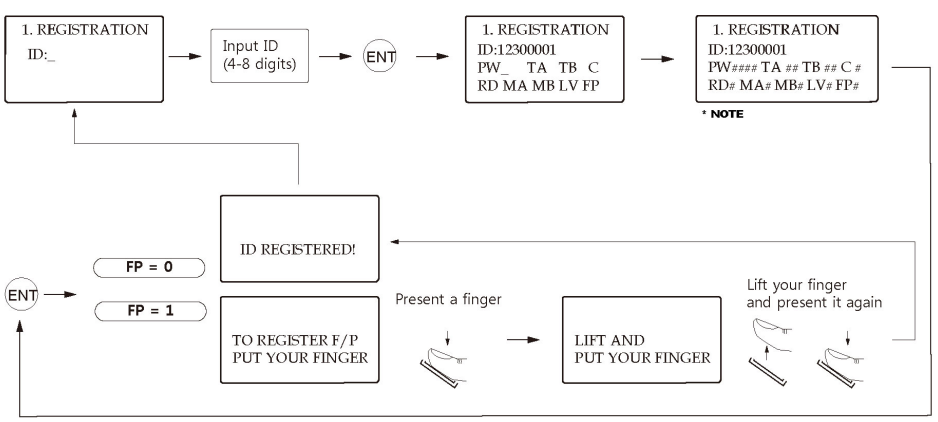


7.1 ID Registration

Registration by Card



Registration Using Keypad



NOTE: In case you make a typing mistake during the registration process, you can press the F 1 button to erase the errors.

Terminology

- Scanning
  Means the reader is waiting for an ID number to be entered. The number of the card wil

l appear with a beep sound when you present a card.

- ID

  Refers to a Personal Identification Number (PIN) that consists of 4-8 digits. Enter a 4-8 di git ID number (PIN) and press <ENT> key. (An ID number of the LX007SR consists of 4-1 0 digits.)

- PW

  stands for a password that is required for verification in the ID + Password operating mo de.

- TA

  Refers to the Time Schedule code (‘00’ - ‘10’) for the Reader*1 (i.e. the built-in reader). I f you assign a Time Schedule in this field, the new cardholder can gain access only durin g the assigned Time Intervals. To set the Time Intervals for each Time Schedule code, ref er to the instructions on the Time Schedule Setup in the [F4 SETUP MENU]. If you wish t o give the cardholder unlimited access time, enter the default Time Schedule code '00' f or the value.

- TB

  Refers to the Time Schedule code (‘00’ - ‘10’) for the Reader*2 (i.e. the exit reader). If yo u assign a Time Schedule in this field, the new cardholder can gain access only during th e assigned Time Intervals. To set the Time Intervals for each Time Schedule code, refer to the instructions on the Time Schedule Setup in the [F4 SETUP MENU]. If you wish to giv e the cardholder unlimited access time, enter the default Time Schedule code '00' for th e value.

- RD

  Refers to the Reader Assignment code for the cardholder. Entering the code ‘0’ and '3' a ssigns both readers (Built-in Reader and Exit Reader) to grant access to the cardholder t hat is being registered, code ‘1’ only assigns Reader*1 (Built-in Reader) and code ‘2’ assi gns Reader*2 (Exit Reader). If you enter ‘1’ in the RD field(Only Reader*1 assigned) and try to exit through Reader*2 (Exit Reader) then the LX007 generates an error message (“Access Door Error”) on the LCD display.

- C

  Refers to the ID code. Code ‘0’ is default and codes ‘1’ and ‘2’ are codes are used for the TWO MEN MODE. Code ‘3’ is used for the ARM/DISARM function and code ‘4’ is assigne d for lost cards.

- MA

  Refers to the Operating Mode that the new cardholder will use on Reader*1 (i.e. the bu ilt-in reader). If you enter ‘1’ for MA, for example, this card holder will be able to gain ac cess using his or her ID only.

  - ‘0’ - Depend on System Operating Mode ([F1 SETUP MENU] > [READER*1 MODE])
  - ‘1’ - ID Only Mode
  - ‘2’ - ID + Fingerprint (Password)

- ‘3’ - ID + Password + Fingerprint

- MB

  Refers to the Operating Mode that the new cardholder will use on Reader*2 (Exit Reade r).
  - ‘0’ - Depend on System Operating Mode ([F1 SETUP MENU] > [READER*2 MODE])
  - ‘1’ - ID Only Mode
  - ‘2’ - ID + Password Mode

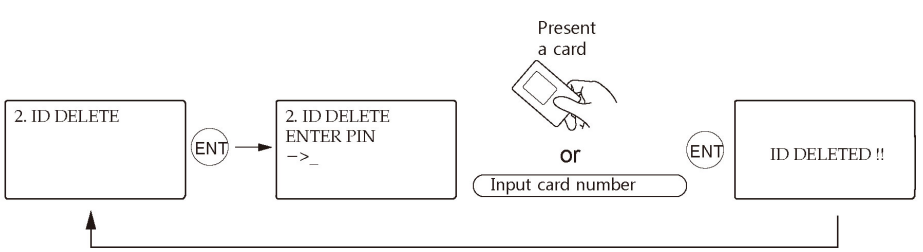
> You cannot apply the ID + Password Mode if Reader#2 does not have a keypad or does not use password verification.

- LV

  Refers to the Output Operating Level for the new cardholder. Output operating time ca n be set for each user. To define an output operating time for each level, refer to the ins tructions on Output Setting in [F6 SETUP MENU].
  - ‘0’ or ‘1’ - Level *1
  - ‘2’ - Level *2
  - ‘3’ - Level *3
  - ‘4’ - Level *4
- FP

  FP is the Fingerprint Usage Flag (1 digit). You can decide whether or not the user will us e a fingerprint.
  - ‘0’ - Not using a fingerprint
  - ‘1’ - Using a fingerprint

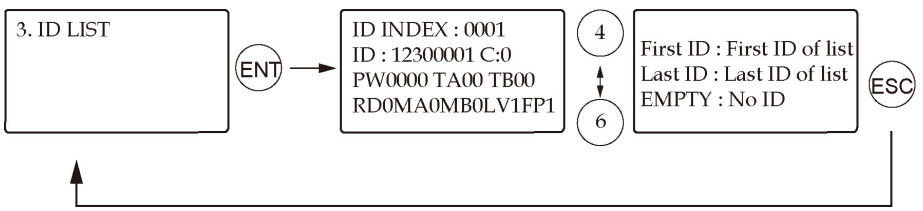
7.2 ID Delete



Registered IDs can be deleted from the LX007 by presenting the card or entering the ID num ber. After entering the ID DELETE mode, present the card you want to delete. Alternatively, you may enter an 8 digit ID number and press <ENT> key from the keypad. The ID number w ill appear on the LCD and that ID will be removed from the device and the “ID DELETED” mes

sage will be shown on the LCD. If the ID number is not found, the “UNREGISTERED ID” mess age will appear. You can delete multiple IDs by repeating this process.

7.3 ID List



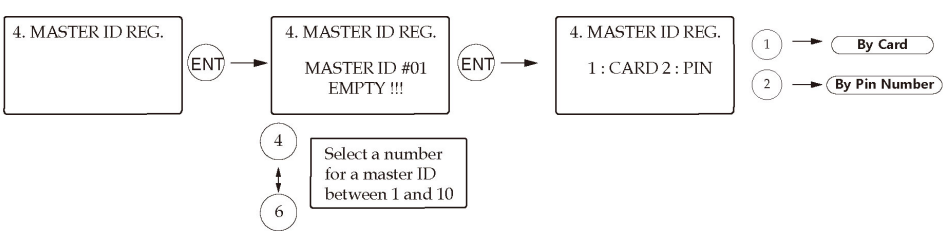
The LCD will display the 5-digit ID Index, 8-digit ID number, 4-digit Password, Timeschedule for Reader#1(TA) and Reader#2(TB), ID code(C), accessible Readers(RD), operating mode fo r Reader#1(MA) and Reader#2(MB), the output level(LV) and usage of Fingerprint(FP) for e ach user.

The “EMPTY” message will appear if there is no registered user ID.

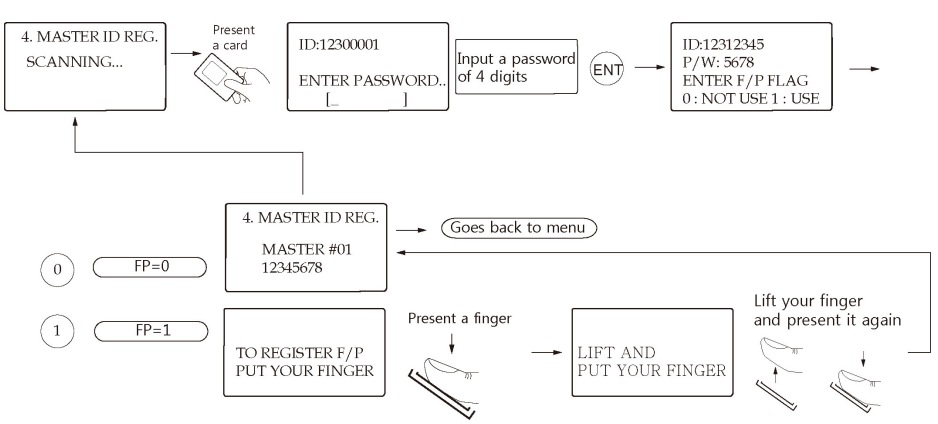
The “FIRST ID” message will be appear if the ID on the LCD is on the top of the list.

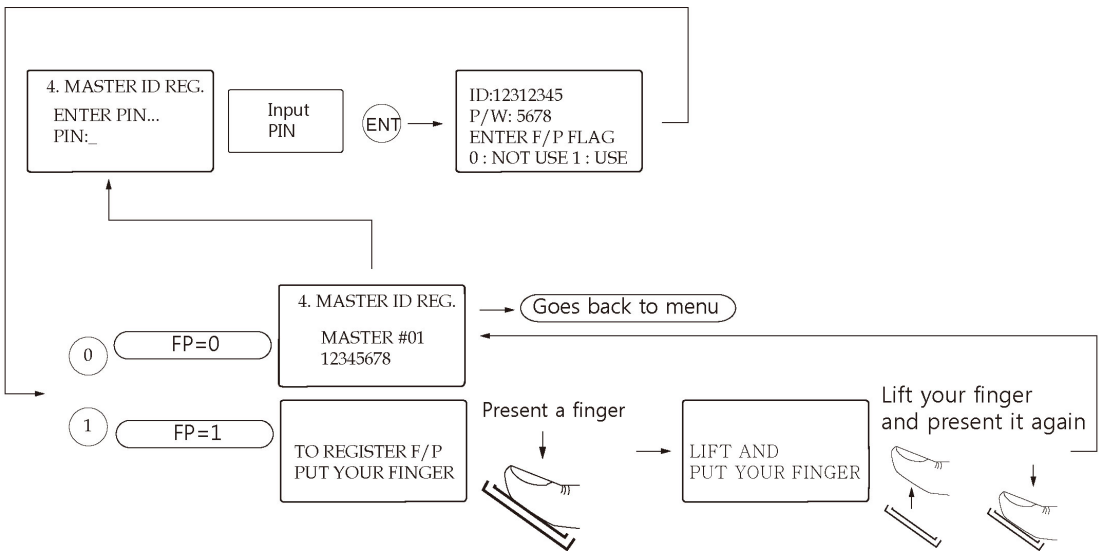
The “LAST ID” message will appear if the ID on the LCD is on the bottom of the list.

7.4 Master ID Registration



Master ID Registration by Card

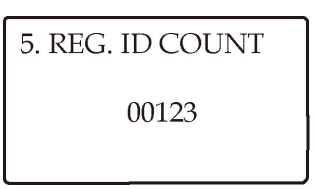




The default Master ID is “00000000” (or “0000000000” for LX007SR) without a fingerprint. Up to 10 Master IDs (from “01” to “10”) can be stored in LX007.

To delete a Master ID, enter “00000000” (or “0000000000” for LX007SR) in the M aster ID Registration process.

7.5 Registered ID Count



The number of registered user IDs is displayed. This count automatically increases or decreas es as new IDs are registered or old IDs are deleted. The LCD in the left picture shows that the total of 123 user IDs are registered in the memory.

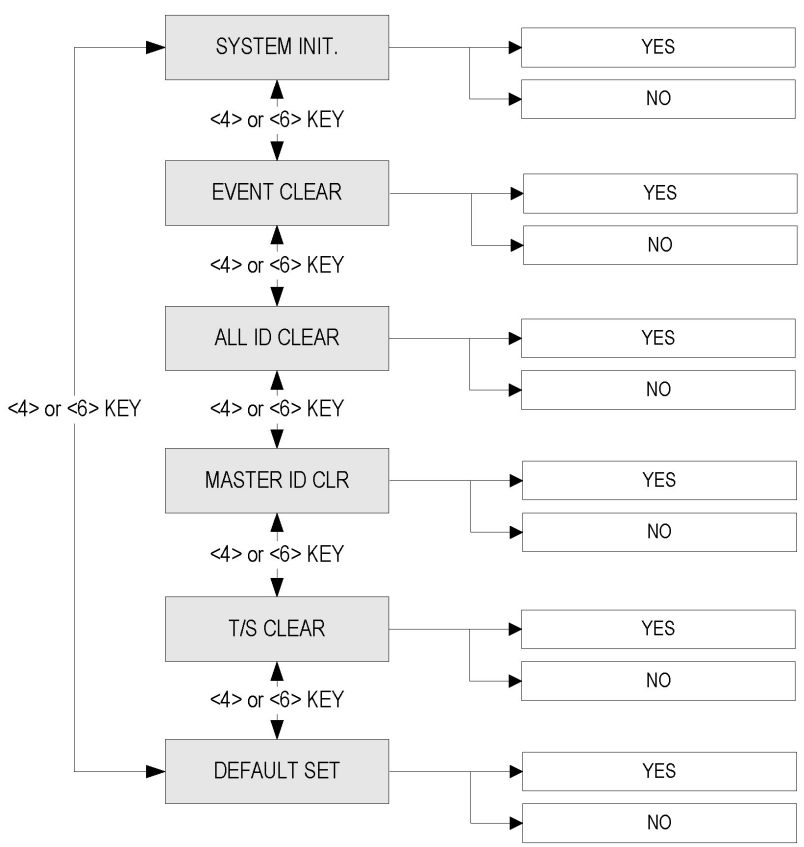
1,000 users in total can be registered (standard). You can optionally choose to regi ster up to 2,000/4,000 user IDs

7.6 Event Count

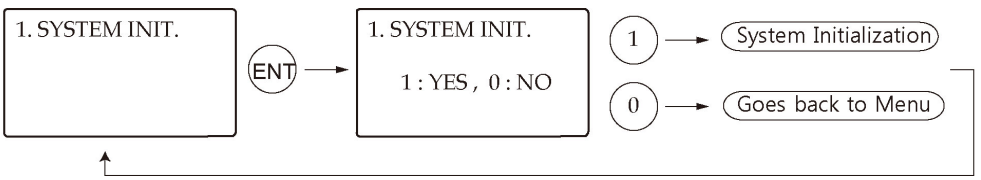
The LCD displays the total number of events stored in the memory. The count automatically i ncreases as a new event is recorded in the memory. The LCD in the left figure shows that a t otal of 12345 Events are stored in the memory.

Up to 20,000 event buffers are available. When stored events are successfully uplo aded to the host PC, they are automatically deleted from the device.

8 F8 SETUP MENU



8.1 System Initialization

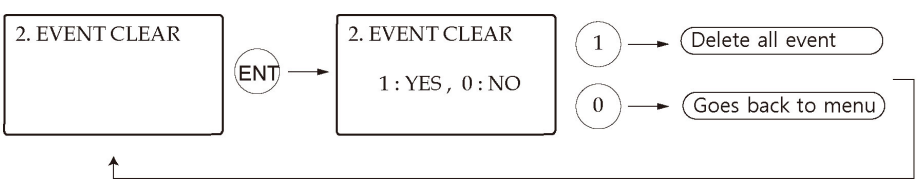


This operation is used to initialize the LX007 system. Press <ENT> key for initialization (when installing LX007 first or when resetting the system in the event of malfunction).

- Press the <1> key to initialize or <0> key to cancel the operation.
- The “WAIT..” message appears while the system is being initialized. After the initializatio n is completed, the LX007 returns to the Setup menu.

Initializing will erase all stored data in the memory. Before you clear the data, mak e sure that the stored events are unnecessary. If you need to keep the event data, please upload the data to the host PC; otherwise, you may lose all important data.

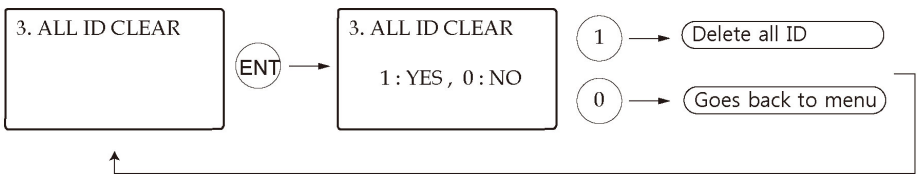
8.2 Event Clear



If the event memory is full, you can clear the event memory here. Press <ENT> key, then pres s <1> key to clear event memory or <0> key to cancel the operation.

Before you clear the events, make sure that the stored events are unnecessary. If y ou need to keep the event data, please upload the data to the host PC; otherwise, you may lose all important data.

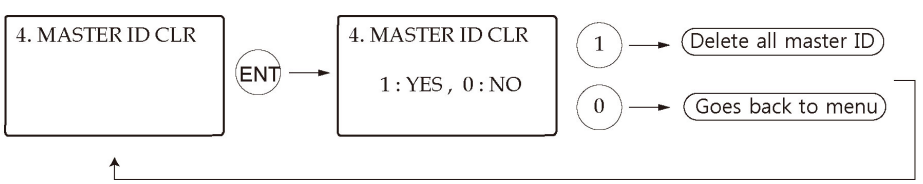
8.3 All ID Clear



When you want to delete all the stored User IDs, you can do so in this menu item. Press <EN T> key first, then press <1> key to clear all the registered User IDs or <0> key to cancel the op eration.

Before clearing all the User IDs, make sure that the registered User ID is no longer used or necessary; otherwise you may lose all the registered User IDs.

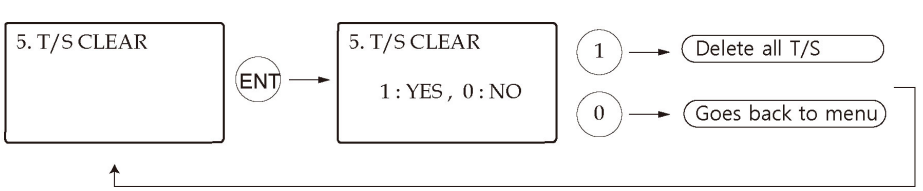
8.4 Master ID Clear



To delete all Master IDs, press <ENT> key first, then press the <1> key to clear all of the Mast er IDs or <0> key to cancel the operation.

Before clearing all Master IDs, make sure that registered Master IDs are no longer u sed; otherwise, you may lose all registered Master IDs.

8.5 Time Schedule Clear

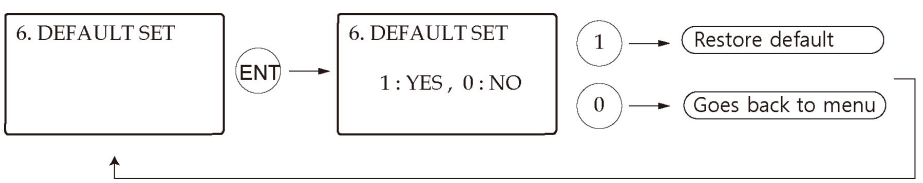


When you want to delete all the Time Schedules (01~10), Holiday schedules(01~10), Holida y code, Reader#1 Mode Time Schedule code and Reader#2 Mode Time Schedule code, you can clear them from the memory here. Press <ENT> key first and press the <1> key to clear al

l T/S or <0> key to cancel the operation.

> Before you clear all Time Schedule data, make sure that the stored Time Schedule data are no longer used or necessary; otherwise, you may lose all stored Time Sche dule data in the memory including important ones.

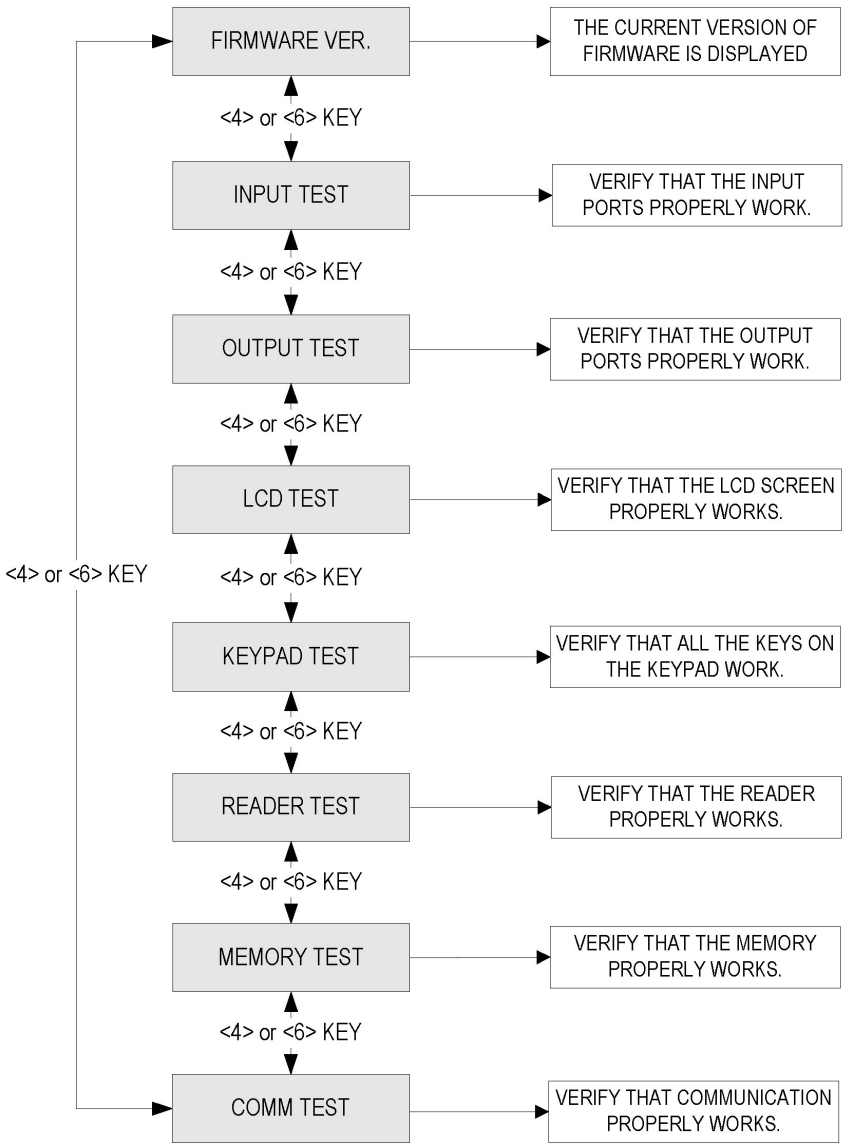
8.6 Default Setting



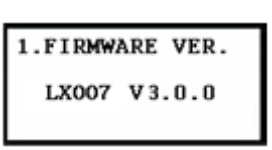
Here, you can restore the default settings of the LX007, if necessary. Press <ENT> key and pr ess <1> key to restore the default setting values for all menus and or <0> key to cancel the o peration.

> Before restoring default values for all settings such as Reader Mode, COMM Addre ss etc, make sure that the stored setting values are not necessary; otherwise, you may lose all system setting values in the memory and need to adjust the settings all over again.

9 F9 SETUP MENU

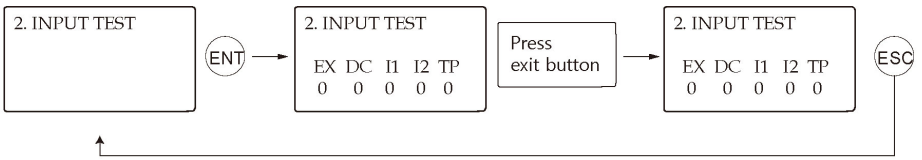


9.1 Firmware Version Check



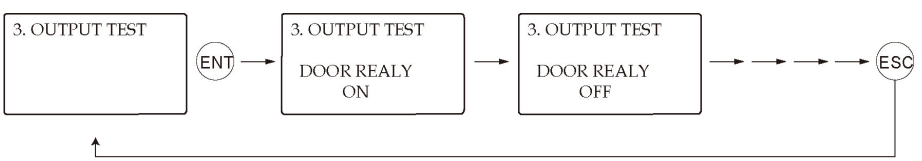
The Firmware Version of the unit is displayed on the LCD. Press **〈4〉** or **〈6〉** key to see other i tems of the menu on **[F9 SETUP MENU]**.

9.2 Input Test



The 5-digit number shows the input status, where “0” indicates that the input port is open ci rcuit, and “1” indicates that the input port is short circuit to the ground level, and, finally, “2” indicates that the input port is disconnected.

9.3 Output Test

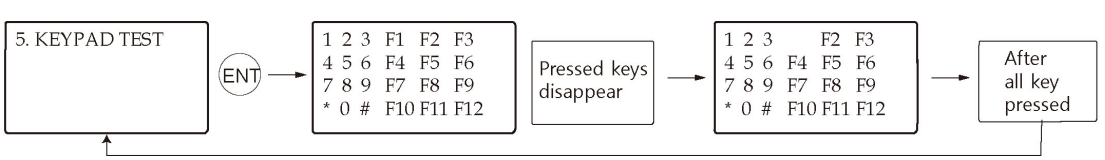


The first two tests verify the output relays (Door Relay and Alarm Relay) are working properl y. You can hear the mechanical sound of relays and see the LED blink. The next two tests ar e to verify TTL#1 and TTL#2 outputs. Finally, the last test is for an Internal Buzzer test. You c an hear two beeps during the test.

9.4 LCD Test

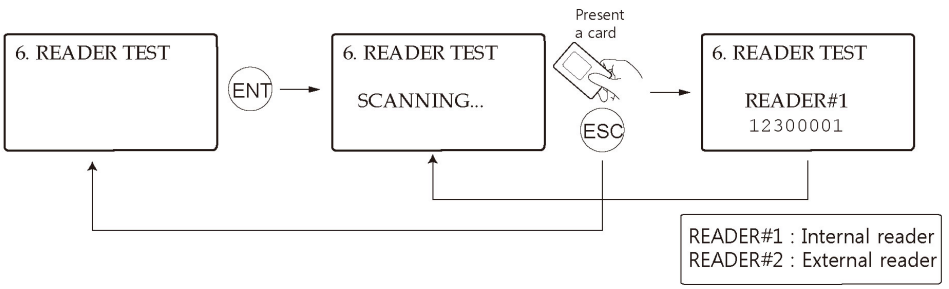
The LCD will display test screens. When the test is over, the LCD will show the “LAST UPDAT E PRESS ANY KEY” message.

9.5 Keypad Test



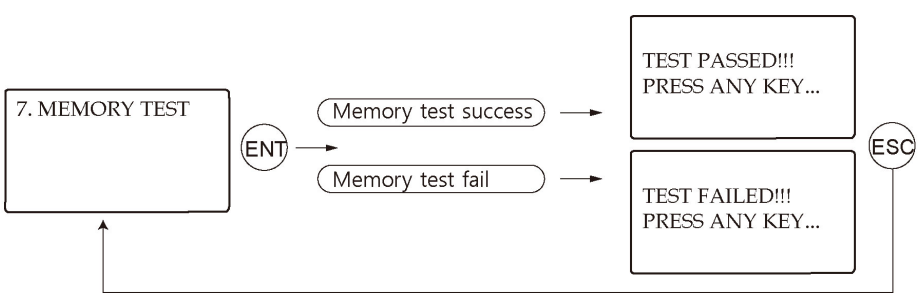
The LCD will display all the keys on the keypad. Press each key one by one and the depresse d key will disappear from the screen. Note that ENT key is represented as “#” and ESC key as “*” on the LCD.

9.6 Reader Test



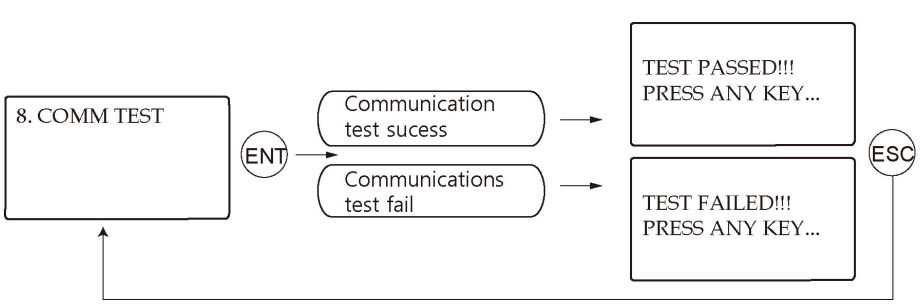
The LCD will display “Scanning…”, which means the LX007 is waiting for a card to be presen ted. Present a card to one of the readers. When the reader successfully reads the card, the L CD displays the Reader number and the 8-digit (or 10-digit for LX007SR) card number.

9.7 Memory Test



After Memory Test, If the Data Memory has a problem, the LCD will show the “TEST FAILED” message. If this is the case, contact IDTECK or a nearby distributor for technical supports.

9.8 Communication Test



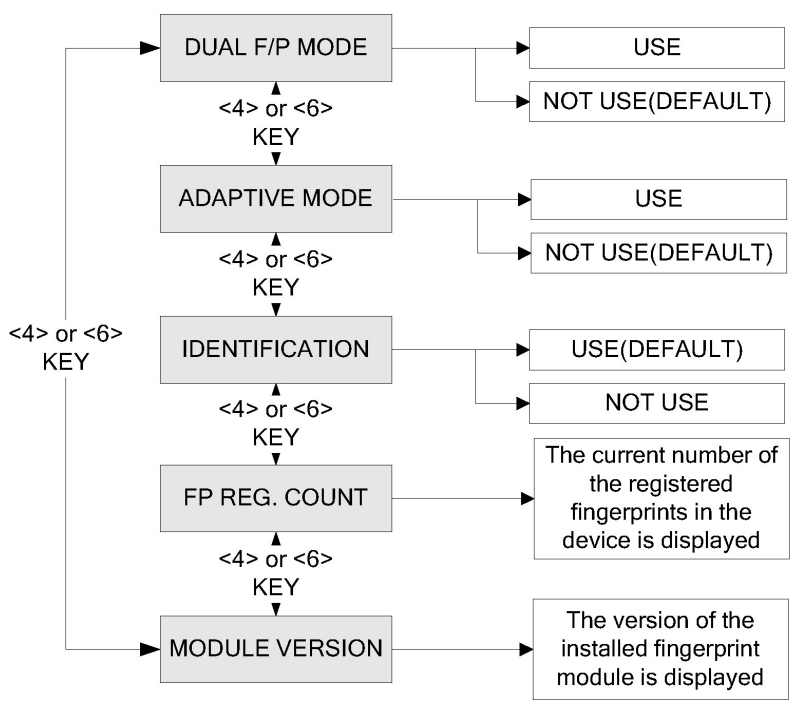
You can test whether the communication works properly or not. Before executing this test, r emember to connect the RS232 TX wire (Black wire with White stripe) and the RS232 RX wi re (Red wire with White stripe) together.

If the communication is malfunctioning, the LCD will show the “TEST FAILED” message. If thi s is the case, check the communication settings and try again.

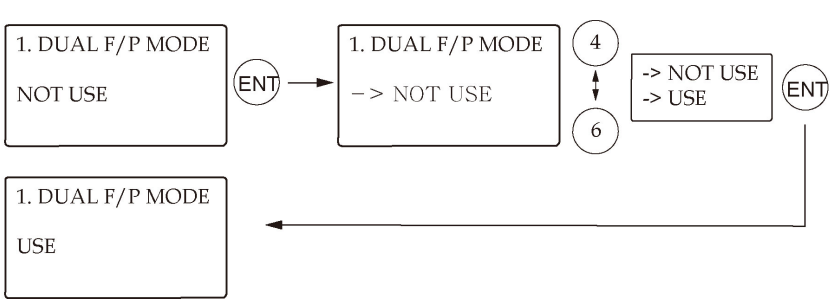
If the communication is working properly, the LCD will show the “TEST PASSED” message.

After the test is finished, please put the wires back in their original places.

10 F10 SETUP MENU



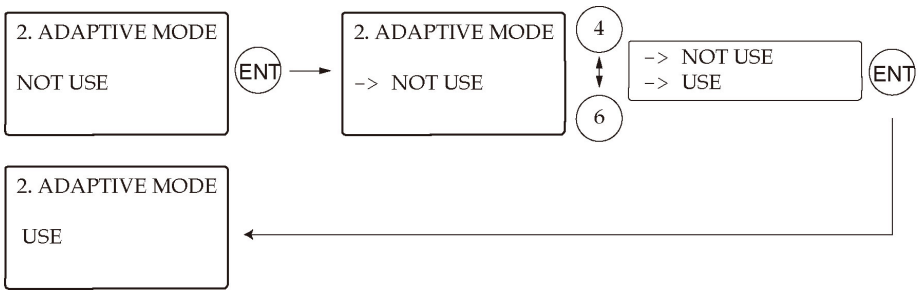
10.1 Dual Fingerprint Mode



If you set Dual finger mode to 'USE ', you can register 2 different fingers for your ID so that if one finger is injured, you may verify your ID with the other registered finger.

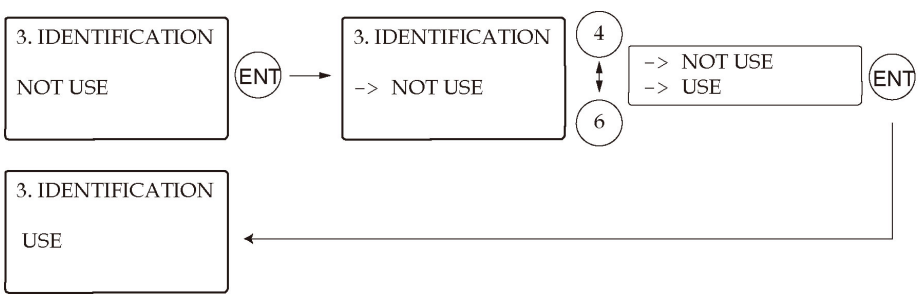
DUAL FINGER?	Number of Templatesand Fingers	Authentication Success Ratio	Recommended Authentication Mode
NOT USE	2 storage templates for a single finger.	High	Identification Mode
USE	1 storage template each for 2 different fingers.	Low	Verification Mode

10.2 Adaptive Mode



In **ADAPTIVE MODE**, the LX007 automatically improves the quality of fingerprint pictures, g uaranteeing a higher likelihood of successful authentication. However, the authentication pr ocess may take longer.

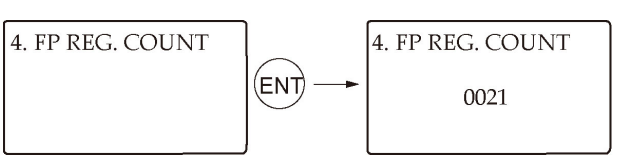
10.3 Identification Mode



When the LX007 is configured in IDENTIFICATION MODE, it can perform the 1:N identificati on, which means users only need to have their fingerprint identified and the LX007 will mat ch their fingerprint image against all the stored fingerprints. Users will not need to carry thei r cards or enter their ID for each access attempt.

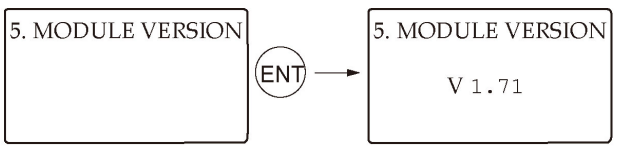
The opposite of IDENTIFICATION MODE is VERIFICATION MODE

10.4 Registered Fingerprint Count



The number of registered fingerprints is displayed.

10.5 Module Version



The version of the fingerprint module is displayed.

Appendix 13

1 A. THE RELATION BETWEEN INPUT AND OUTPUT (DEFAULT)

Table 13-1 Default Output Settings for Input Sources

OUTPUT	Door Relay (DR)	Alarm Relay (AR)	TTL#1 (T1)	TTL#2 (T2)	Buzzer (BZ)
[1] EXIT BUTTON	03	00	00	00	00
[2] DOOR CONTACT	00	99	00	00	00
[3] AUX Input #1	00	00	00	00	00
[4] AUX Input #2	00	00	00	00	00
[5] TAMPER ALARM	00	99	99	99	99
[6] CUT OFF ALARM	00	00	00	00	00
[7] DURESS ALARM	00	00	00	00	00
[8] ARM/DISARM OUT	00	00	00	00	00
[9] DOOR TIM	00	00	00	00	

E OUT					
[10] OUTPUT TIME SCHEDULE	00	00	00	00	00
INPUT	Exit Button (EX)	Door Contact Sensor (DC)	Aux Input #1 (I1)	Aux Input #2 (I2)	Tamper Switch (TP)
[11] INPUT TIME SCHEDULE	00	00	00	00	00
[12] CUT OFF CHECK	00	00	00	00	00
[13] INPUT TYPE	00	00	00	00	00

*** Index No. [1] - [9]**

The values indicate the operating time of each output for the input signal.99 denotes “forever”.

*** Index No. [10]**

The values indicate the time schedule code (index) applied to each output.

*** Index No. [11]**

The values indicate the time schedule code (index) applied to each input.

*** Index No. [12]**

The values indicate whether or not to use the cut off check feature for each input. (0 - NOT USE, 1 - USE)

*** Index No. [13]**

The values indicate whether the input type is NO(Normally Open) or NC(Normally Closed). (0 - NO, 1 - NC)

Table 13-2 Default Output Settings for Input Circumstance

OUTPUT INPUT	Door Relay (DR)	Alarm Relay (AR)	TTL#1 (T1)	TTL#2 (T2)	Buzzer (BZ)
[1] Reader#1 ID OK LV1	03	00	00	00	00
[2] Reader#1 ID OK LV2	05	00	00	00	00
[3] Reader#1 ID OK LV3	05	00	00	00	00
[4] Reader#1 I	06	00	00	00	

D OK LV4					
[5] Reader#1 ID Error	00	**03**	00	00	00
[6] Reader#1 T/S Error	00	**03**	00	00	00
[7] Reader#1 APB Error	00	**03**	00	00	00
[8] Reader#2 ID OK LV1	**03**	00	00	00	00
[9] Reader#2 ID OK LV2	**05**	00	00	00	00
[10] Reader#2 ID OK LV3	**05**	00	00	00	00
[11] Reader#2 ID OK LV4	**05**	00	00	00	00
[12] Reader#2 ID Error	00	**03**	00	00	00
[13] Reader#2 T/S Error	00	**03**	00	00	00
[14] Reader#2 APB Error	00	**03**	00	00	00

Index No. [1] - [14]

The values indicate the operating time of each output for the input signal.

Troubleshooting 14

Before requesting RMA, please check the cases below if your problem is one of them.

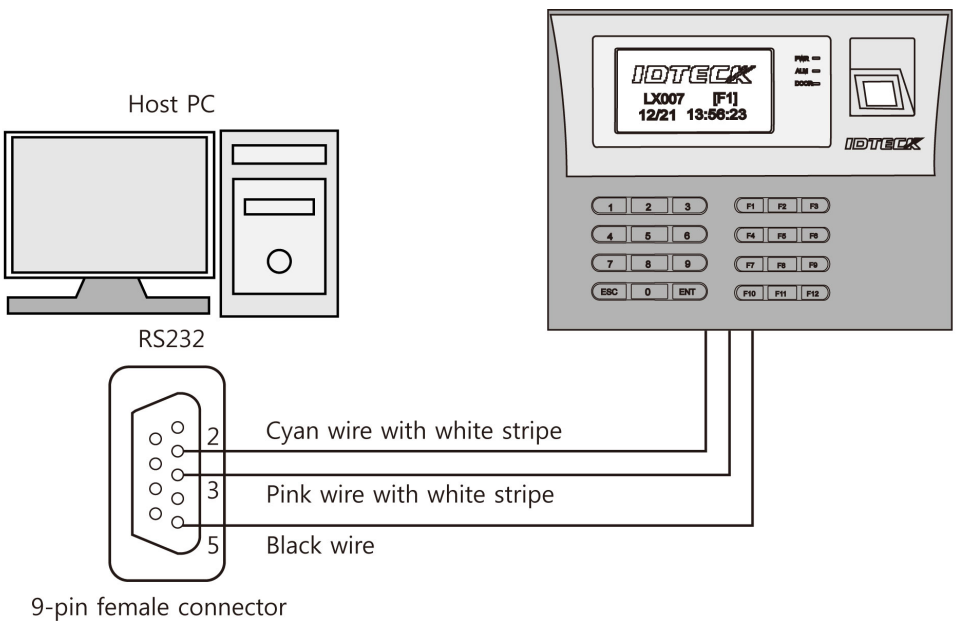
1 The device dose not communicate with PC.

1.1 Please check wiring.

See [9 Communication] of the manual and check if the wiring is good.

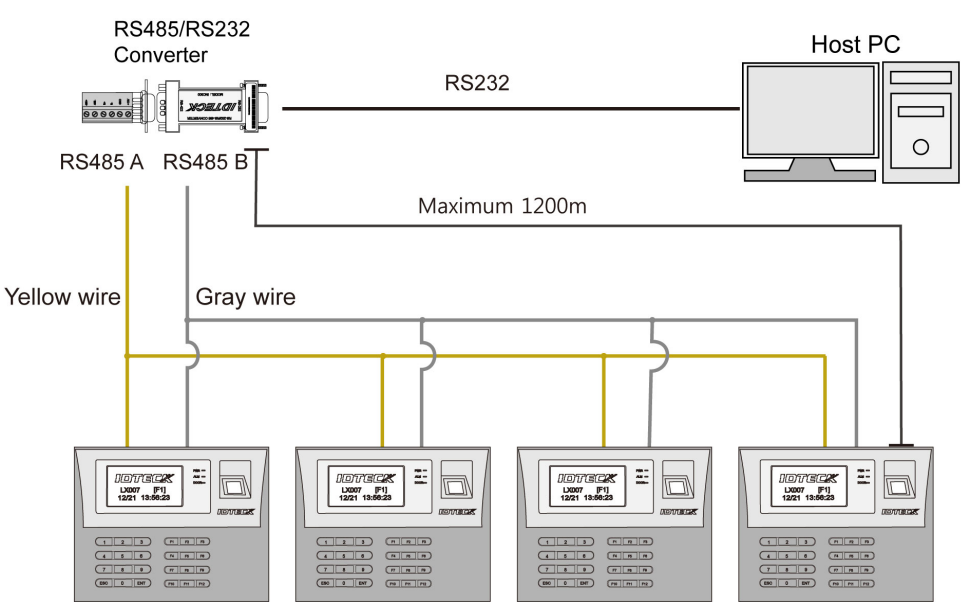
In the case of RS232 communication

See **[Communication] > [1 RS232 Communication Port Connection]** of the manual and chec k if the wiring is good.



In the case of RS485 communication

See **[Communication] > [2 RS485 Communication Port Connection]** of the manual and chec k if the wiring is good.



1.2 Please check if the communication address is good.

Check communication address setting of software and the device.

1. Check if communication ID set in the device is same with communication ID set in a soft ware.
   See **[12 Setting Changes] > [1 F1 SETUP MENU] > [1.7 Communication Address Setting]** and check a communication address set in the device.
2. When you use several devices together, communication addresses set in the devices sh ould be different from each other.
3. Check if baud rate is same with baud rate set in a software.
   See **[Setting Changes] > [F1 SETUP MENU] > [1.8 Baud Rate Setting] and check baud r ate set in the device.**
   * If you initialize the device, baud rate is set to **57,600 bps** which is the default.

1.3 Please check if the communication port setting is good.

Check if communication port set in software is same with communication port set in PC.

If the problem persists, please contact service center.

2 Cards which were being used are not authenticated af ter executing batch transmission of IDs from software to the device.

2.1 The ID of the card may not be registered to software.

1. Check if the ID is registered to software.
2. If the ID is not registered, register the ID to the software and execute batch transmissio n of the IDs from software to the device.

If the problem persists, please contact service center.

3 When configuring the device using MASTER ID, suddenly the device goes back to the normal mode.

3.1 If you do not input anything for 60 seconds in setting mode, the device goes back to the normal mode.

To prevent the setting from being changed by one who is not a manager, when the manage leaves the device in setting mode, the device goes back to the normal mode when there is no input for 60 seconds.

4 The device does not go to setting mode after inputting MASTER ID.

4.1 A MASTER ID may have changed.

1. Change the MASTER ID from software and transmit it to the device.
2. If you cannot change MASTER ID using software, see **[**Basic setting**]** > **[**Initialization of LX007**]** and initialize the device.

Once you initialize the device, MASTER ID of the device goes back to 00000000 (8 digits). In the case of SR model, MASTER ID goes back to 0000000000 (10 digits).

If the problem persists, please contact service center.

5 The device works with RF Cards while it does not work with keypad.

5.1 Please check if the keypad is set to "NOT USE".

The default for the keypad input is "NOT USE".

1. See [12 Setting Changes] > [1 F1 SETUP MENU] > [1.5 Reader #1 KEY Input] and set it to "USE".

If the problem persists, please contact service center.

6 A buzzer keeps making sounds. "Bee~ Bee~ Bee~"

6.1 Please check if the door is closed well.

If a door remains open longer than the preset time, "Door open alarm" goes off. Close the door.

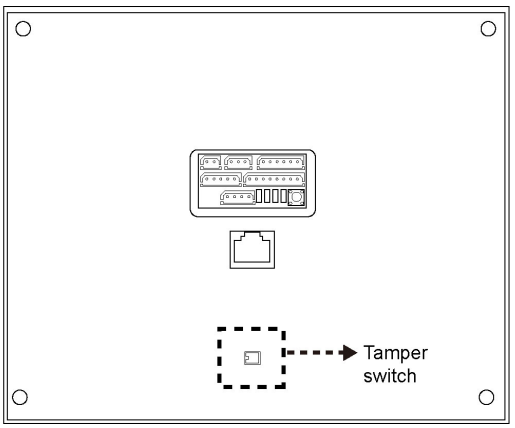
If the problem persists, please contact service center.

7 A buzzer keeps making sounds. "Bee~~~~~"

7.1 Check if the tamper switch is pressed well.

- The device has a tamper switch on the back to check if the device is fixed on the wall well.
- The tamper switch should be being pressed when and after the installation. If the switch is not pressed, tamper alarm is activated and the buzzer sounds an alarm.

- The tamper switch let you know when someone has taken the device off the wall while attempting trespass or the device has fallen from the wall due to wrong installation.



If the problem persists, please contact service center.

8 "SCHEDULE ERROR" appears on the LCD when a card is read.

8.1 Please check Time Schedule set for the ID.

In the case that the ID has time schedule, the ID is not authenticated when it is not the time of the time schedule.

- See **[**Setting Changes**]** > **[**F4 SETUP MENU**]** > **[**Time Schedule**]** or check it from a softwar e.
  - Check time schedule set in the ID of the card and change it to what you want..
  - If you cannot change it from the software, from the device, see **[**Setting Changes**]** > **[**F7 SETUP MENU**]** > **[**ID Delete**]** of the manual and delete the ID and see **[**Setting Ch anges**]** >**[**F7 SETUP MENU**]** > **[**ID Registration**]** of the manual to newly create the ID with the right time schedule.

To let a user access anytime, set time schedule to 00.

If the problem persists, please contact service center.

9 "ACCESS DOOR ERR" appears on the LCD when a card is read.

9.1 Please check reader assignment code set for the ID.

- Check the Reader assignment code set for the ID of the card from a software and change it to the right RD(Reader assignment code).
- If you cannot change it from the software, from the device, see [Setting Changes] >[F7 SETUP MENU] > [ID Delete]of the manual and delete the ID and see [Setting Changes] > [F7 SETUP MENU] > [ID Registration] of the manual to newly create the ID with the right reader mode.

RD

RD is the Reader Assignment code for the cardholder. Entering the code "0", "3" assigns both readers (Built-in Reader and Exit Reader) to grant access to the cardholder that is being registered, code "1" only assigns Reader#1 (Built-in Reader) and code "2" assigns Reader#2 (Exit Reader). If you enter "1" in the RD field (Only Reader#1 assigned) and try to exit through Reader#2 (Exit Reader) then the the device generates an error message (“Access Door Error”) on the LCD display.

If the problem persists, please contact service center.

10 I want to access with card only, without password.

10.1 Please check reader mode set for the ID.

By changing reader mode, you can select how to authenticate when accessing.

See [12 Setting Changes] >[1 F1 SETUP MENU] > [1.3 Reader #1 Mode] of the manual and select how to authenticate when accessing.

READER#1 refers to the built-in proximity reader in the unit.

ID(PIN) ONLY
In this mode, users can access the door by simply presenting their card or entering their ID number.

ID+F/P(P/W)
In this mode, users can access the door by presenting their card or entering their ID number and then verifying their identity by a fingerprint. For users who did not reg ister their fingerprints, password verification is used instead of fingerprint verificati on.

ID+P/W+F/P
In this mode, users can access the door by presenting their card or entering their ID number and then verifying their identity by both a fingerprint and a password.

If the problem persists, please contact service center.

11 I want to access with fingerprint only, without card or password.

11.1 Please check if IDENTIFICATION mode is set to "USE".

See [12 Setting Changes] > [10 F10 SETUP MENU] > [10.3 Identification Mode] of the man ual and set IDENTIFICATION MODE to "**USE**".

If the problem persists, please contact service center.

12 A fingerprint is not recognized.

12.1 Please check the status of the fingerprint.

- If something is attached to fingerprint, fingerprint recognition may not work properly.
  → Remove it.
- If a fingerprint has a scar, fingerprint recognition may not work properly.
  → Register other fingerprint without a scar.

12.2 If the status of the fingerprint is OK, register your fingerprint again.

If something had been attached to fingerprint or fingerprint had had a scar when you regist ered, fingerprint recognition may not work properly.

If the problem persists, please contact service center.

13 I want to register 2 fingerprints for 1 ID.

13.1 Please check if Dual Fingerprint Mode is set to "USE".

If you use Dual Fingerprint Mode, you can register 2 fingerprints for 1 ID just in case a finger print is injured.

1. See [12 Setting Changes] > [10 F10 SETUP MENU] > [10.1 Dual Fingerprint Mode] of t he manual and check if Dual Fingerprint mode is set to "USE"
2. If it is not set to "USE", change it to "USE".

If the problem persists, please contact service center.

FCC REGISTRATION INFORMATION 15

FCC Requirements Part 15

Caution: *Any changes or modifications in construction of this device which are not expressly approved by the responsible for compliance could void the user's authority to operate the e quipment.*

NOTE: *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 interface, and
2. This device must accept any interference received, including interference that may caus e undesired operation.

This equipment has been tested and found to comply with the limits for a **Class A Digital De vice**, pursuant to **Part 15 of the FCC rules**. These limits are designed to this equipment gener ates, uses, and can radiate radio frequency energy and, if not installed and used in accordan ce with the instructions, may cause harmful interference to radio communications.

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on another circuit.
4. Consult the dealer or an experienced radio/TV technician for help.

RMA Request

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If you have any questions or problems regarding the RMA services, please contact us using t he contact information below. Friendly representatives at IDTECK are always standing by to provide the best after sales services.

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Website: www.idteck.com
E-Training Center: http://www.idtecktraining.com

IDTECK Production Facility and RMA Center
2F, 89-4Dodang-Dong, Weonmi-Gu,
Bucheon-Si, Gyeonggi-Do 420-130, Korea
Tel: +82 2 2659 0055
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E-mail: webmaster@idteck.com
Website: www.idteck.com
E-Training Center: http://www.idtecktraining.com

The specifications contained in this manual are subject to change without notice at any time.

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