# OPERATING MANUAL


## FINGERPRINT ACCESS CONTROLLER

## MODEL: GE314

# Table of Contents

# 1. IMPORTANT SAFETY INSTRUCTIONS

**To prevent injuries to persons and damages to property, please read all instructions and follow them whenever you deal with this product.**

After reading, please put this instruction manual where it can be easily seen for the system operator.

## ON INSTALLATION AND POWER

Use 12V DC power ONLY.

- Connecting to higher than 12V DC may result in a risk of electric shock, fire, or heavy damage of the unit.

Do NOT install this product at places with wet or metallic dust or that can be watered.

- There may be risks of electric shock and fire.

Do NOT install this product near electric motors running.

- The Unit may not operate normally.

Do NOT set this product near heaters or any thing that produces heat.

- There may be a risk of fire.

Be ALWAYS careful not to short-circuit any part of the circuitry with tools like a screwdriver.

- There may be a risk of fire or heavy damage of the unit.

## ON MAINTENANCE

Do NOT use any kind of liquid for cleaning.

- There may be a risk of electric shock, fire or heavy damage of the unit. Use air spray, if needed.

Users are cautioned NOT to attempt repair of this product or modify the wirings set by the installer at their own discretion.

- It may pose the risk of fire, hardware damages, or abnormal operations of the unit.

It is recommended not to use a flammable spray or something else easy flammable near this product.

- There may be the risk of an explosion or fire.

Keep the unit away from any unauthorized people.

- It may cause abnormal operations of the unit.

**NOTICE**

Please contact a designated service center or the outlet at which the product was purchased when

A. Any liquid has been spilt or sprayed onto the product. In this case, cut the power off first.

B. The product seems to be operating abnormally.

C. The unit exhibits a distinct change in performance.

D. The unit has fallen to be broken down or damaged on its case.

* Repairing costs can be charged for troubles caused due to improper handling or negligence of users or the operator.

# 2.  INTRODUCTION

## 2.1 IDENTIFYING SUPPLIED PARTS

Please unpack and check the contents of the box (Optional accessories, if purchased, may be included in the package).

| Main unit<br>( 1ea ) | Wall mount<br>( 1ea ) | Manual<br>( 1ea ) | Diode<br>( 2   ) |
|---|---|---|---|

## 2.2 INTRODUCTION

The GE314 is ideal to use for Single Door Access Control and Time & Attendance. The GE314 has four input ports, two Form-C relay outputs, two TTL outputs, RS232/RS485 communication port and 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 be stored up to 20,000 event transactions. All Events can be uploaded and saved to the database of the host PC and the software creates the report to MS-Excel, HTML and Text files for the Time & Attendance purpose. The GE314 has a built-in Fingerprint Module, proximity card reader with IDC 26-bit Wiegand format and it has 24 keypads (10 Numeric keys, 2 Control keys and 12 Function keys) for wide applications. The GE314 allows to accessing the door with any combination of Fingerprints, Proximity Card/PIN and/or Password. The GE314 has four external input ports to be connected to an exit button, motion detector, door contact sensor and existing alarm system to prevent unauthorized access. The GE314 has a door relay to control the door lock and an alarm relay to warn any error. The graphic LCD display supports 6 different languages so that the unit can be operated anywhere in the world. All setup menus can be programmed through the front keypads or via Windows-based software program. The GE314 is a cost effective biometrics system to be used for Standalone or network. Dual tamper switches prevent unauthorized access.

## 2.3 FEATURES

- Dual function for Access Control and Time & Attendance
- 8 bit and 16 bit Dual Microprocessors, 32 bit ARM9 Microprocessor for Fingerprint Module
- 1,000 Fingerprint Users (Optional 2,000/4,000 Fingerprint Users) and 20,000 Event Buffers
- Built-in Fingerprint Scanner, Module and Algorithm
- Built-in Proximity Reader and External Reader Port for T&A
- 24 Keypads including 12 Functional Keys
- Graphic LCD Display for 6 different Language Support
- Standalone or Network Communication via RS232/RS485 (max. 256ch)
- Optional TCP/IP Communication, Optional Automatic Touch Sensor (for Identification Mode)
- Independent 4 Inputs and 4 Outputs including 2 FORM-C Relay Outputs
- Output Time Setting for Individual ID(4 Levels – Longer Output Time for Handicap Person)
- Forced Door Open Alarm, Door Lock/Unlock by T/S and/or by registered ID
- Anti-pass Back, Duress Alarm Functions

- Dual Tamper Alarm
- 10 Time schedules, 8 Days with 5 Individual Time intervals each
- 10 Holiday Schedules, 100 holidays each
- Operating Mode Selectable for Individual ID (Proximity/PIN Only Mode, Fingerprints Only Mode, Proximity/PIN + Fingerprints Mode, Proximity/PIN + Password + Fingerprints Mode)
- Time Schedule Applied to Individual ID, Input Port, Output Port and   Reader Mode
- Multiple Master ID/Fingerprints Registration
- 3 LED Indicators and Beeper for the System Status

## 2.4 SPECIFICATIONS

| | |
|---|---|
| CPU | 8 bit and 16bit Dual Microprocessors, 32bit ARM9 Microprocessor |
| Memory | Program Memory: 2M bit   ROM |
| | Data Memory: 4M bit FLASH memory |
| | Fingerprint Module: 1M bytes FLASH memory (Optional 2M/4M bytes) |
| Fingerprint User | 1,000 Fingerprint Users (Optional 2,000/4,000 Fingerprint Users) |
| Event Buffer | 20,000 Event Buffers |
| Operating Mode | Operating mode can be programmed for Individual ID |
| | - Proximity ID/PIN Only Mode |
| | - Fingerprints Only Mode (Up to 500 Users only, Identification Mode) |
| | - Proximity ID/PIN + Fingerprints(Password) Mode |
| | - Proximity ID/PIN + Password + Fingerprints Mode |
| FAR (False Acceptance Rate) | 0.001% |
| FRR (False Reject Rate) | 0.1% |
| Fingerprint Scanner | Optical Scanner, LED Lighting |
| Resolution of Scanner | 500dpi, CMOS CCD, 356 x 292 pixels |
| 1:1 Verification Time | < 1 sec. |
| 1:N Identification Time | < 3 sec. if ID found (Up to 500 Fingerprints only) |
| Reader Port | 1 Internal and 1 External Reader Port |
| Read Range | Up to 4" (10cm) with IDC170 Clamshell Card |
| Reader Data Format | Standard IDC 26 bit Wiegand Format |
| | 8 bit Burst Format for Keypad Reader |
| Communication port | RS232/RS485(up to 256 channels) Address Selectable |
| | 9600(Default), 19200, 38400, 57600bps Communication Speed |
| Input/Output | 4 Input Ports, Rating DC12V/ 20mA max. |
| | 2 Relay Outputs, DC12V~24V/ FORM-C Relay 2A max. |
| | 2 TTL Outputs, DC0 ~5V/ 20mA max. |
| Keypad | 24 keys with Back lighting (Sky Blue) |
| | - 10 Numeric Keys |
| | - 2 Control Keys |
| | - 12 Function Keys |
| Self Diagnostic | Yes |
| Reset | Power On Reset and Watch-dog Timer Reset |
| Operating Status | 3 LED (Red, Green, Yellow) indicators, Beeper |

| | |
|---|---|
| Weight | 1.62 lbs (735g) |
| Dimensions | 7.56" x 6.42" x 1.97" (192mm x163mm x50mm) |
| LCD Display Module | 128 x 64 dots,    2.85" x 1.56"(72.5mm x 39.5mm) View Area |
| Power | DC 12V±10%, 550mA max. |
| Operating Environment | 32°F ~ 149°F (0°C ~ +45°C), 0 ~ 90% Humidity None Condensing |
| Storage Environment | -40°F ~ 158°F (-40   ~+70   ), 0 ~ 90% Humidity None Condensing |
| Mount | Wall Mount or Electrical Gang Box Mount (U.S. and European/Asian) |
| Color | Silver and Dark Gray Color |
| Optional | |
| TCP/IP Module (Internal) | IIM7100A Internal Mounting Module for TCP/IP Communication |
| Connection | RJ45 Socket |
| Automatic Touch Sensor | Capacitance Touch Sensor for Identification Mode only |
| Fingerprint Module | 2,000 Fingerprint Module, 4,000 Fingerprint Module |

# 3.   PRODUCT OVERVIEW

## 3.1 FUNCTIONS

**Stand-Alone Operation**

The GE314 is capable of having 2 readers (1 Door Control). The unit receives card ID numbers from the proximity readers and determines whether or not to unlock the door. When an input signal is entered, for example from a Sensor activated or an Exit button pressed, the controller generates and logs an appropriate response by input signals. All events are stored into the memory buffers and sent to the host computer. The access controller is a true stand-alone device that, in the event of malfunction, will not affect other units when used in conjunction with one another.

**Operation with Host Computer**

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

**Keypad**

If the GE314 is not connected to a host PC, the integrated keypad and LCD display module can also be used for the entire programming process.

**Input/Output**

The GE314 has 4 built-in inputs and 4 outputs (2 relay outputs and 2 TTL outputs) which can be used to manipulate a wide variety of controls.

**Time Schedule Setup**

You can program 10 time schedules and apply one time schedule to each User. Each time schedule has 8 different time zones from Monday-Sunday (7 time zones) and one holiday. Each time zone has 5 different time codes so you can program 5 different time codes to each day. You can also program time schedules for individual inputs and outputs. Note that the time schedule for input is activated time code for input device so that the input is activated during the time code on this time schedule. Each time schedule is linked to one holiday schedule and this linked holiday only validates to the holiday time code of the time schedule.

**Holiday Schedule Setup**

Excepting Sunday, you can program 100 holidays to one holiday schedule. Each holiday schedule 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 the holiday time zone of time schedule.

Example: A.     Holiday schedule 01 linked to time schedule 01,

Holiday schedule 02 linked to time schedule 02

B.  Holiday schedule 02 linked to time schedule 01,

Holiday schedule 01 linked to time schedule 03

**Forced Door Open Alarm**

When the door is opened by force, the door contact sensor will be activated. For this application, 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 cleared.

**Overtime Door Open Alarm**

The Overtime Door Open Alarm will be generated when the door is open continusly, after the door is opened by corrected process.

The Overtime Door Open Alarm will be generated until the door is closed.

**Anti-Pass-Back**

By using an additional proximity reader, the Anti-Pass-Back mode can be set. The Anti-pass-back mode prevents entry or exit when the registered user did not properly followed one entry and one exit by the Anti-pass-back rule. The same user can not enter twice with the entry card without properly using the exit before.

**Duress Alarm**

In case of duress, enter the 2 digits Duress Password and press the<ENT> key before the normal access process. The door can be opened as normal, but the duress alarm is also generated at the same time. The duress alarm output will be activated to the TTL output and an alarm event will be sent to the host PC.

## 3.2 PRODUCT EXPLANATION

### 3.2.1 FRONT PANEL DESCRIPTION
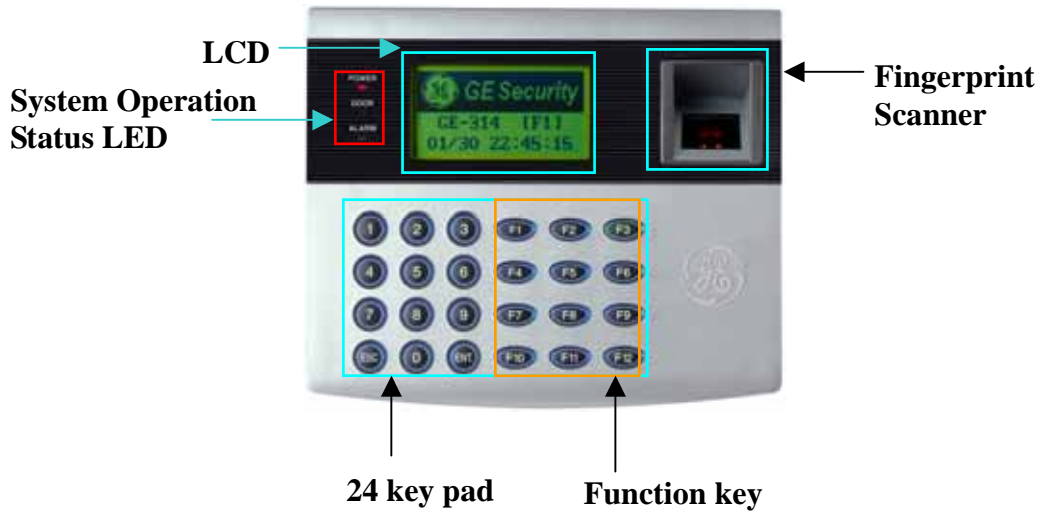


Figure: Description of GE314 Front Panel

**LCD Module:**

LCD module display GE314 status.

**System Operation Status LED:**

When the power is applied to GE314, the red LED is turned on.

When the Relay #1 is operated, the green LED is turned on.

When the Relay #2 is operated, the yellow LED is turned on.

**24 key pad:**

You can operate GE314 manually by using the key pad.

**Function key:**

The GE314 has 12 Function keys ([F1] ~ [F12]).

### 3.2.2 CONNECTOR LAYOUT



Figure: Connector Layout

### 3.2.3 WIRE COLOR TABLE OF THE GE314

| I/O PORT NAME | SIGNAL NAME | WIRE COLOR |
|---|---|---|
| **CNN-1: POWER** | | |
| Main Power (+12V) | +12V | Red wire |
| Power Ground | 0V | Black wire |
| **CNN-2:COMMUNICATION** | | |
| RS485-RTX(+) | RS485-A(+) | Gray wire |
| RS485-RTX(-) | RS485-B(-) | Blue wire |
| RS232-TX | TXD | Red wire with white stripe |
| RS232-RX | RXD | Black wire with white stripe |
| RS232-GND | GND | Black wire |
| **CNN-3: INPUT/OUTPUT** | | |
| TTL OUTPUT #1 | TTL#1, WD0 | Brown wire |
| TTL OUTPUT #2 | TTL#2, WD1 | Yellow wire |
| Aux Input #1 | IN#1 | Pink wire |
| Aux Input #2 | IN#2 | Cyan wire |
| Wiegand DATA 0 | DATA-0 | Green wire |
| Wiegand DATA 1 | DATA-1 | White wire |
| **CNN-4: INPUT/OUTPUT** | | |
| Door RELAY(NC) | NC(1) | Gray wire with white stripe |

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| Door RELAY(COM) | COM(1) | Green wire with white stripe |
|---|---|---|
| Door RELAY(NO) | NO(1) | White wire with red stripe |
| Alarm RELAY(NC) | NC(2) | Yellow wire with red stripe |
| Alarm RELAY(COM) | COM(2) | Brown wire with white stripe |
| Alarm RELAY(NO) | NO(2) | Blue wire with white stripe |
| Exit Button | EXIT | Orange wire |
| Door Sensor | CONTACT | Purple wire |
| **CNN-5: TCP/IP RJ45 CONNECTOR** | | |

# 4. INSTALLATION TIPS & CHECK POINT

## 4.1 CHECK POINT BEFORE THE INSTALLATION

### 4.1.1 CABLE SELECTION
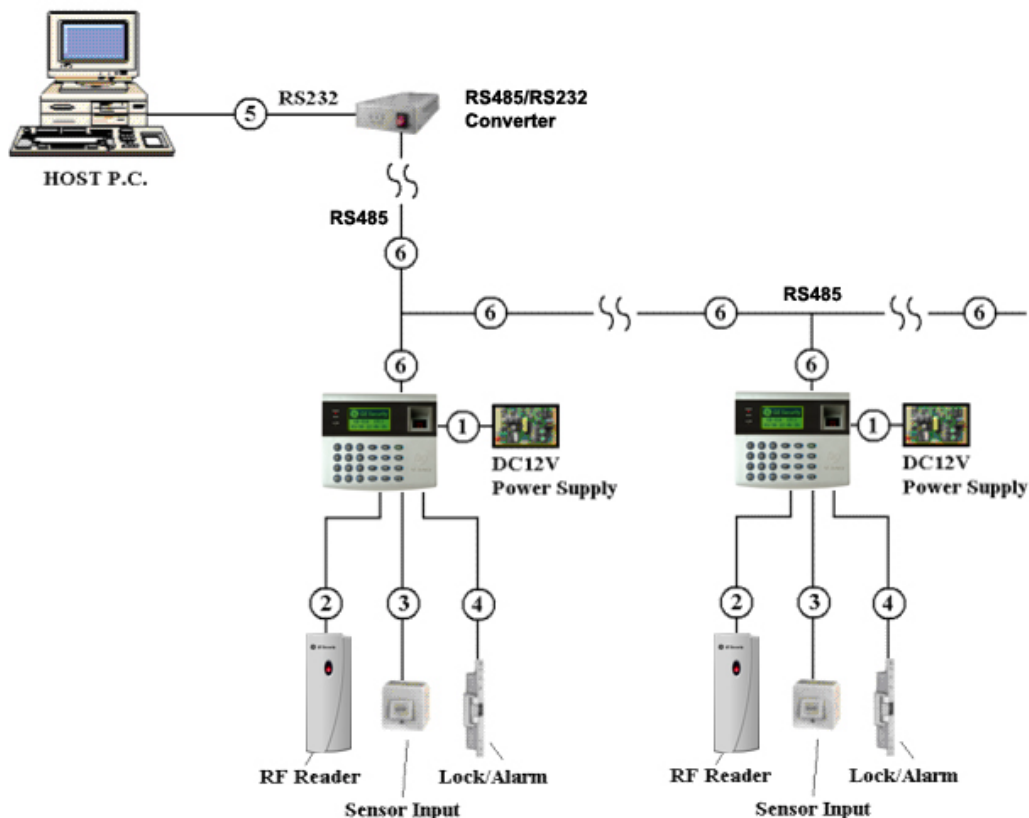


Figure: System Installation Layout

## 4.1.2 CABLE SELECTION TABLE

| Reference | Description | Cable Specification | Maximum Distance |
|---|---|---|---|
| | GE314 Power (DC12V) DC Power -> GE314 | Belden #9409, 18 AWG 2 conductor, unshielded | |
| + | Reader (Power and Data) Exit Reader -> GE616 | Belden #9512, 22 AWG 4 conductor, shielded | |
| | | Belden #9514, 22 AWG 8 conductor, shielded | |
| | Door Contact Exit Button Sensor Input Input -> GE314 | Belden #9512, 22 AWG 4 conductor, shielded | |
| | | Belden #9514, 22 AWG 8 conductor, shielded | |
| | Door Lock, Alarm Device Lock (Alarm) -> GE314 | Belden #9409, 18AWG 2 conductor, unshielded | |
| | RS232 Cable Converter -> Host P.C. | Belden #9829, 24 AWG 2-twisted pair, shielded | |
| | RS485 Cable GE314 -> GE314 GE314 -> Converter | Belden #9829, 24 AWG 2-twisted pair, shielded | |

[+] : Need thicker wire if you connect the reader with high current consumption.

## 4.2 CHECK POINT DURING THE INSTALLATION

### 4.2.1 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 transmission line. The decision whether or not to use termination resistors should be based on the cable 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 velocity of cable is 0.66 x speed of light (This value is specified by the cable manufacturer), if we assume the reflections will damp out in three round trip up and down the cable length, the transmitted signal will stabilize 18.6us after the leading edge of a bit. Since the data bit is captured in the middle of the bit which is approximately 52us after the leading edge of a bit. The reflection stabilizing time 18.6us is much before the center of the bit therefore the termination 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 can be used for termination resistor in parallel between the receiver lines "A" and "B" for 2 wires RS485 system. A termination resistor of less than 90Ω should not be used and no more than 2 terminations should be used in one networking system.

## 4.2.2 HOW TO CONNECT TERMINATION RESISTORS
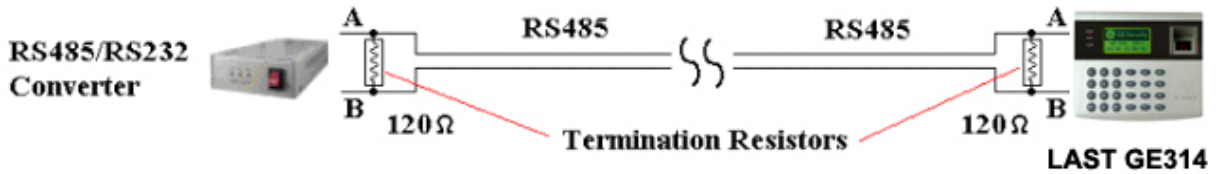


Figure: Termination resistors for 2 wire RS485 communication system

## 4.2.3 GROUND SYSTEM

We recommend to using proper grounding system of the communication cable. The best method for grounding system is to put the shield wire of the communication cable to the 1$^{st}$ class earth grounding; however it is not so easy to bring the earth ground to the communication cable and also the installation cost is raised.

There will be three grounding point where you can find during installation;
1) Earth Ground
2) Chassis Ground
3) Power Ground

The most important point for grounding system is not to connect both ends of shield wires 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 create noise and interfere to communications. For the good grounding, we recommend to connecting ONLY one end of shield wire of communication cable to grounding system; If you find earth ground nearby, then connect one end of shield wire to earth ground; If you do not have earth ground nearby, then find chassis ground and connect one end of shield wire to chassis ground; If you do not find both earth ground and chassis ground, then connect one end of shield wire to power ground. (GND of GE314) Note that if the chassis ground is not properly connected to the earth and floated from the ground level, then grounding to the chassis ground will give the worst communication; in this case we recommend to using power ground instead of chassis ground.
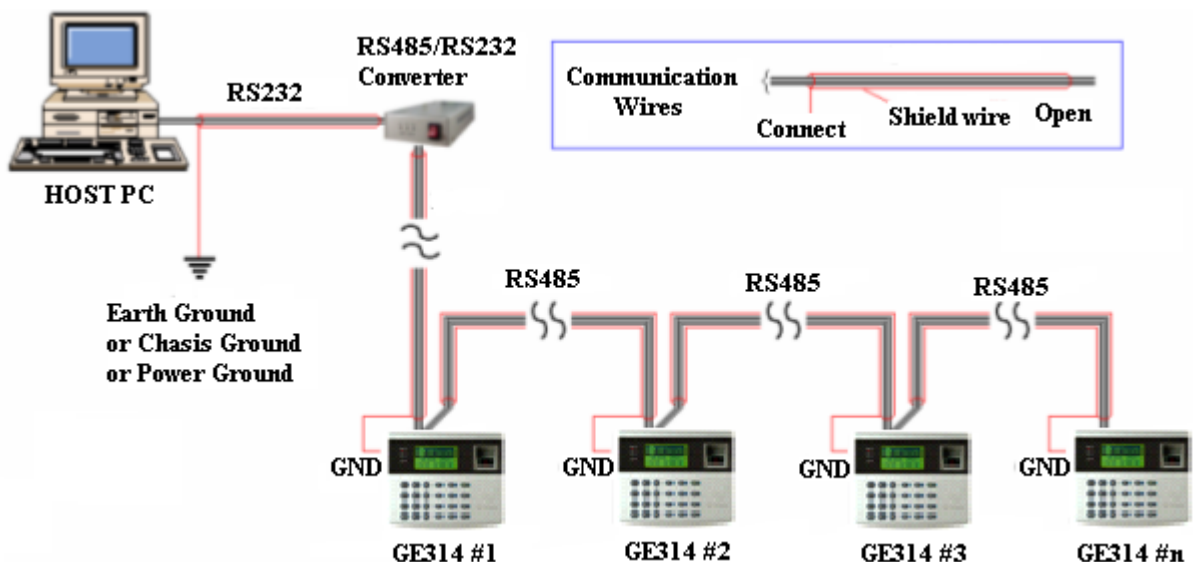


Figure: Grounding system

### 4.2.4 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 reverse diode, the surge voltage will transfer and damage to the electronic circuit of the controller. It is strongly recommended to add a reverse diode between the inductor coils to absorb this surge voltage.
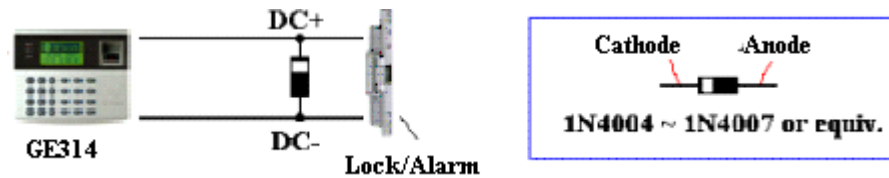


Figure: Reverse Diode connection

## 5.   INSTALLATION

### 5.1 WALL MOUNT DRAWING (Unit: mm)
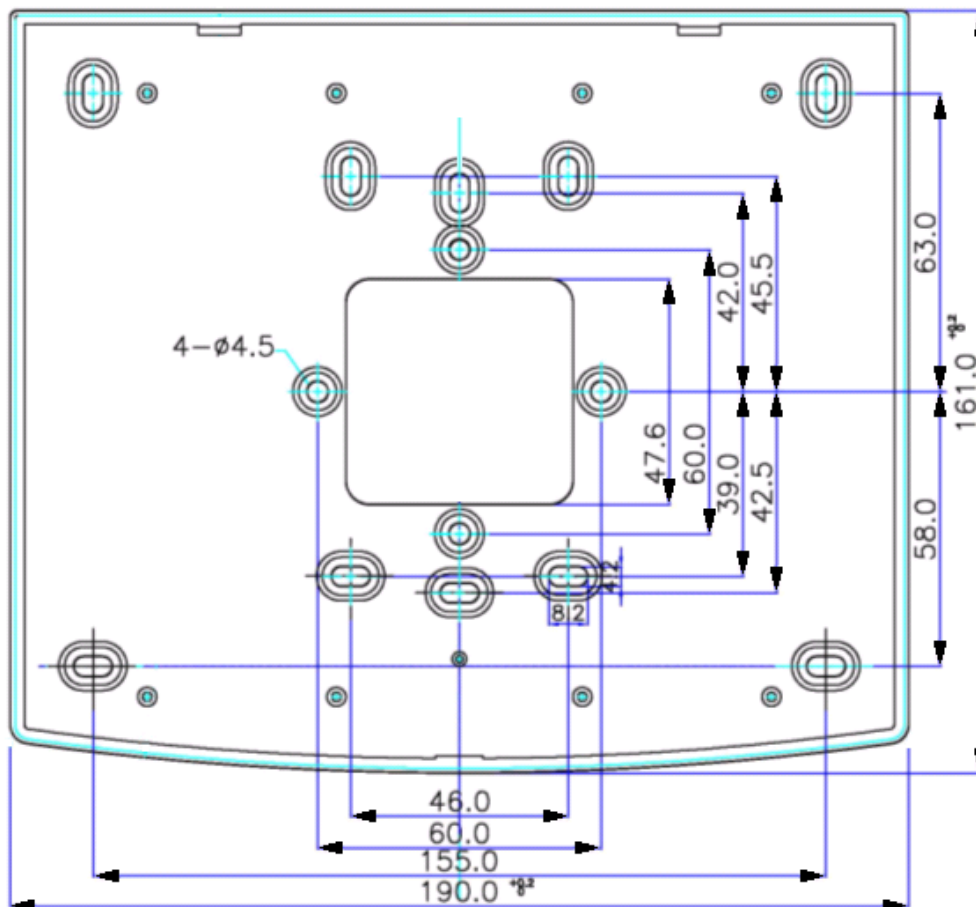


Figure: Wall Mount Layout

## 5.2 BACKUP BATTERY SWITCH

GE314 has a switch for the backup battery connection, which remains open circuit to prevent any current consumption of the backup battery (Figure: Switch setting). Before the GE314 operation, it needs to be connected so that the backup battery can retain the serial RTC(Date and Time data) during power failure.
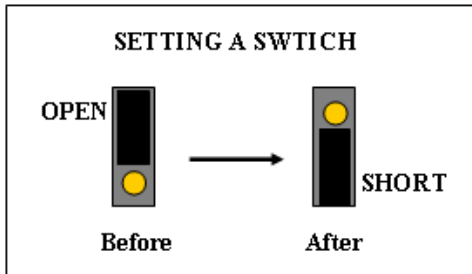


Figure: SWITCH SETTING



Figure: SWITCH LOCATION

## 5.3 SYSTEM INITIALIZATION

After the all installation and connections are completed, press and hold the Initialize button and put the power (+12V DC) to GE314. The LCD will first display "**Initialize OK? 0:No 1:Yes**". Press <1> key if you want to initialize the system. After all Initialization process is completed, the system is operating on normal mode and the LCD displays "**GE Security, GE314 [F1], Date Time**".
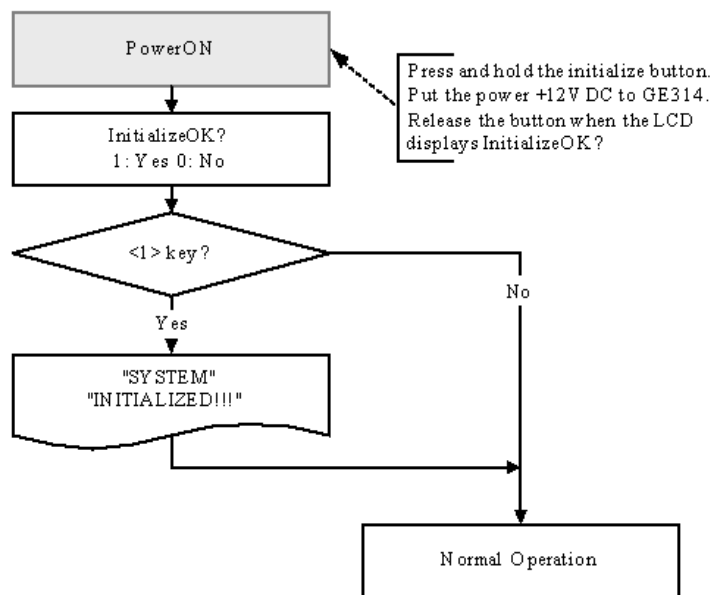
## 5.4 WALL MOUNT INSTALLATION
- Position the Wall Mount to the location where you install the unit and mark 4 x drilling position. Drill 6-32 holes at least 4 mounting point.
- Drill 1/2" hole on the center of Wall Mount.
- Using 4 screws, install the Wall Mount to the proper location.
- Take out the cable through the center hole.
- After the wiring is done on the section 8, install the Main Unit to the Wall Mount using a screw to the bottom of the Wall Mount.

# 6.  WIRING

## 6.1 POWER CONNECTION

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

## 6.2 INPUT CONNECTION

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

**Door Contact Sensor Connection**
1. Connect one wire from a Door Contact Sensor to the Purple wire.
2. Connect the other wire from the Door Contact Sensor to GND.

**Auxiliary Input Connection**
**Applied to Aux Input #1(Pink wire), Aux Input #2(Cyan wire)**
1. Connect one wire from an Auxiliary Input Device to one of the Aux Input #1 or Aux Input #2.
2. Connect the other wire from the Auxiliary Input Device to GND.
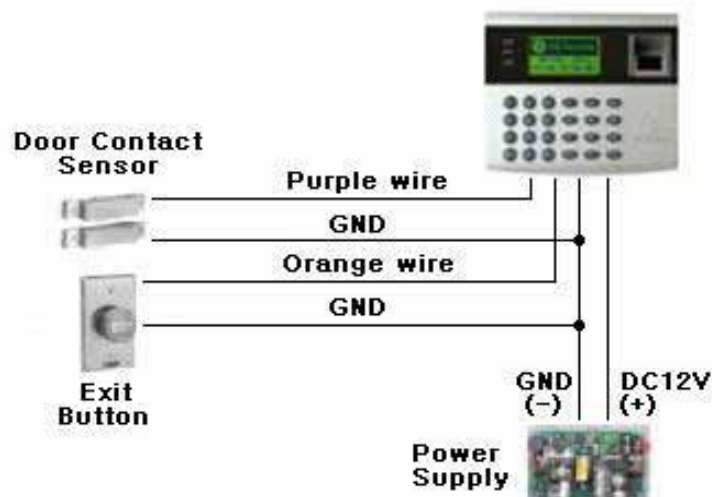


Figure: Input Device Connection

## 6.3 OUTPUT CONNECTION

**Door Lock (Power Fail Safe) Connection (Door Relay)**
1. Connect COM wire of Door Relay, the Green wire with white stripe to +12V.
2. Connect NC wire of Door Relay, the Gray wire with white stripe to (+) wire of door lock device.
3. Connect GND wire to (-) wire of door lock device.
**Door Lock (Power Fail Secure) Connection (Door Relay)**
1. Connect COM wire of Door Relay, the Green wire with white stripe to +12V.
2. Connect NO wire of Door Relay, the White wire with red stripe to (+) wire of door lock device.
3. Connect GND wire to (-) wire of door lock device.
**Alarm Device Connection (Alarm Relay)**
1. Connect COM wire of Alarm Relay, the Brown wire with white stripe to +12V.
2. Connect NO wire of Alarm Relay, the Blue wire with white stripe to (+) wire of Alarm device.
3. Connect GND port to (-) wire of Alarm device.
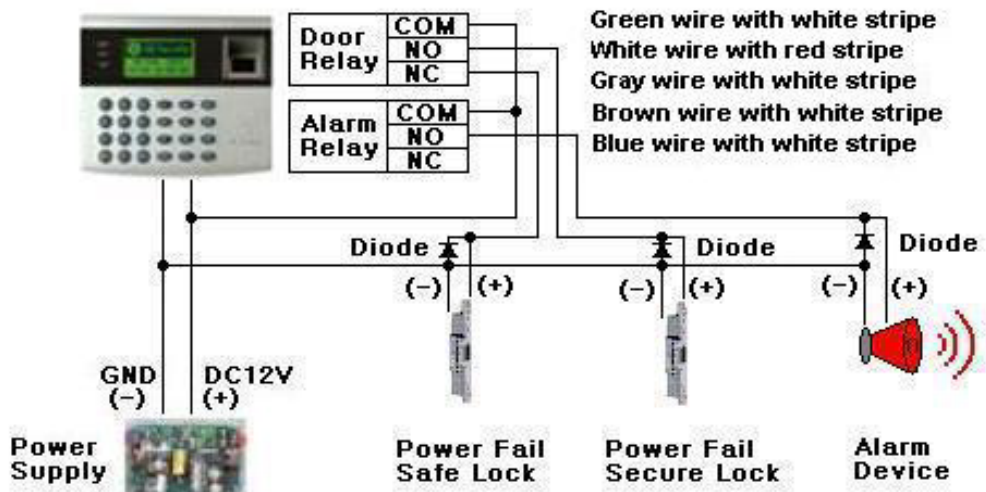


Figure: Door Lock, Alarm Device Connection

**CAUTION: Must add REVERSE DIODE as shown above.**
**DIODE: Fast Recovery DIODE (current: min. 1A), 1N4004 ~ 1N4007 or similar.**

## 6.4 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 Green wire.
4. Connect Data-1 wire of the Proximity Reader to the White wire.

● **Compatible Reader**:
   **GE616:** Standard IDC 26bit Wiegand Format Proximity Reader.
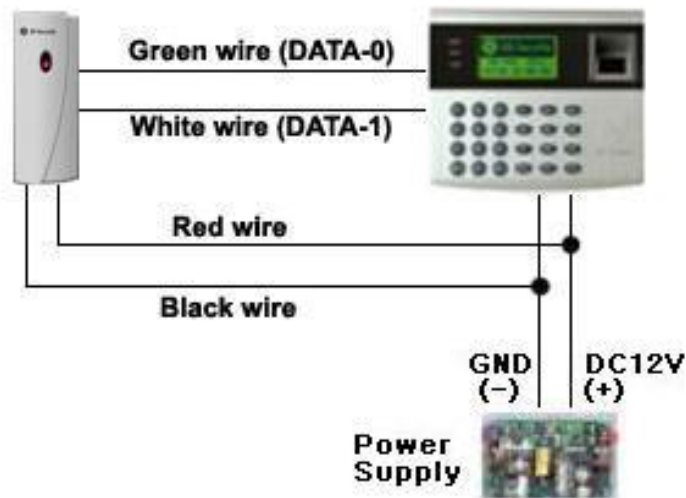
Figure: External Reader Connection

## 6.5 RS232 PORT CONNECTIN

A 9-pin connector (Serial communication connector, female) is required to connect the GE314 to a host computer via RS232 communication. Please follow the instructions.
1. Connect RS232-TX, Red wire with white stripe to the pin #2(RXD) of the 9-pin connector.
2. Connect RS232-RX, Black wire with white stripe to the pin #3(TX) of the 9-pin connector.
3. Connect GND, Black wire to the pin #5 of the 9-pin connector.
4. Plug in the 9-pin female connector to COM1 or COM2 Port of the host PC.
5. Install and run GE314 Application Software.
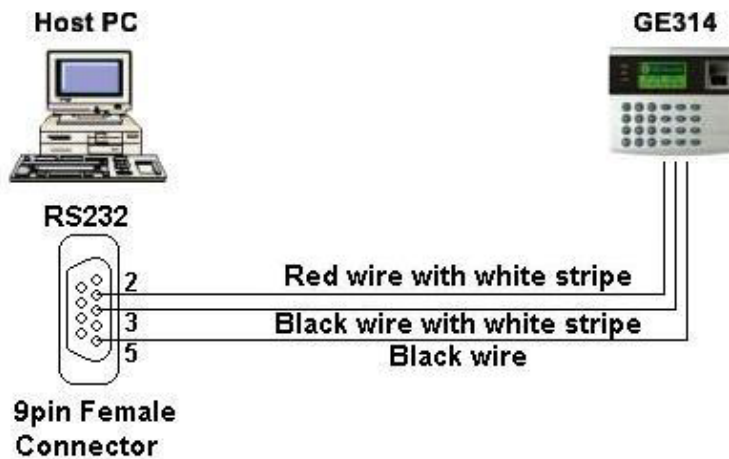


Figure: RS-232 COMMUNICATON

## 6.6 RS-485 PORT CONNECTION

### 6.6.1 RS-485 CONNECTION(SINGLE UNIT)

RS485/RS232 converter is required to use RS485 communication between the GE314 and a host PC. Please follow the instructions.
1. Connect RS485-RTX(+), Grey wire to RS485-A port of the converter.
2. Connect RS485-RTX(-), Blue wire to RS485-B port of the converter.
3. Plug the RS232, 9-pin connector of the converter into the COM1 or COM2 Port of the host PC.
4. Install and run the GE314 Application Software.
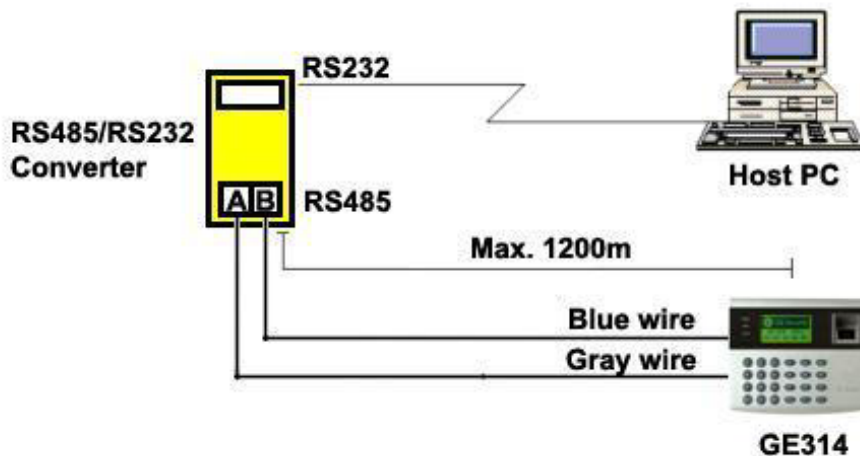


Figure: RS-485 Connection between GE314 and a host PC

### 6.6.2 RS-485 CONNECTIN(MULTIPLE UNITS)

RS485/RS232 converter is required to use RS485 communication between multiple GE314 and a host PC. Please follow the instructions.

**First, you have to connect all RS485 port of GE314 in parallel. (max. 32 x GE314 Units)**
1. Connect RS485-RTX(+), Grey wire of one GE314 to RS485-RTX(+), Grey wire of another GE314.
2. Connect RS485-RTX(-), Blue wire of one GE314 to RS495-RTX(-), Blue wire of another GE314.
3. Set a different COMM ID for each GE314.

**Second, you have to connect one of RS485 port of GE314 to RS485/RS232 converter**.
1. Connect RS485-RTX(+), Grey wire of one GE314 to RS485-A port of the converter.
2. Connect RS485-RTX(-), Blue wire of one GE314 to RS485-B port of the converter.
3. Plug the RS232, 9-pin connector of the converter into the COM1 or COM2 Port of the host PC.
4. Install and run the GE314 Application Software.
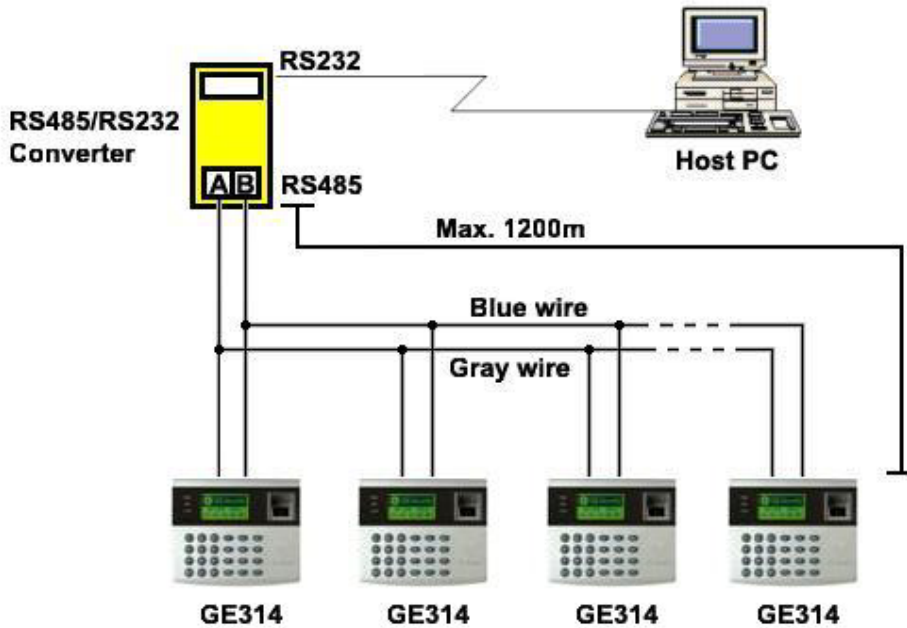
Figure: RS-485 Communication between multiple GE314 and a host PC

## 6.7 TCP/IP CONNECTION (OPTIONAL)

Optional TCP/IP Module is required for TCP/IP communication to the host PC.
1. Connect RJ45 plug, LAN cable of the network system to RJ45 jack of the GE314.
2. If you install multiple GE314 and only one TCP/IP port is available, you may connect one GE314 to
   TCP/IP then connect all GE314 units to RS485 multiple communication shown above.
3. Set a different COMM ID for each GE314.
4. Install and run the GE314 Application Software.
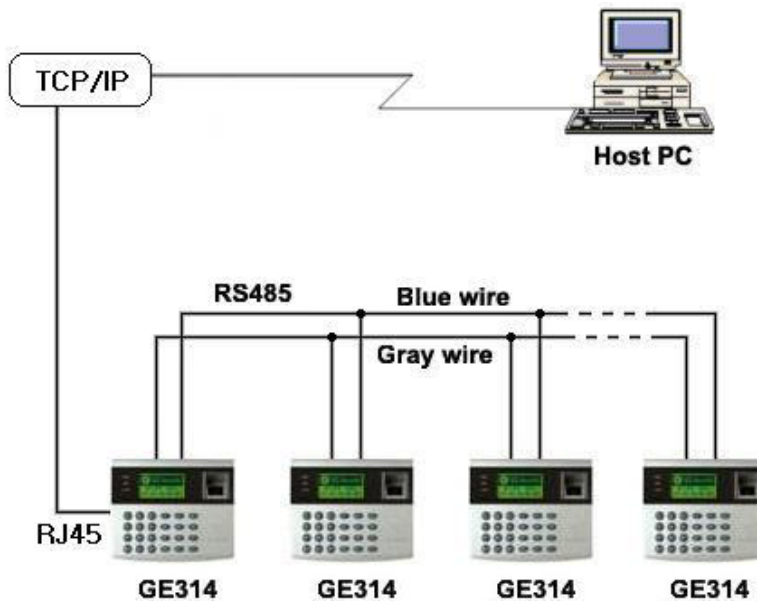


Figure: TCP/IP Communication between multiple GE314 and a host PC

# 7. BASIC SETTINGS

## 7.1 INITIALIZATION OF GE314

After the all installation and connections are completed, press and hold the Initialize button and put the power (+12V DC) to GE314. The LCD will first display "**Initialize OK? 1:YES, 0:NO**". Press <1> key if you want to initialize the system. After all Initialization process is completed, the system is operating on normal mode and the LCD displays "**GE Security, GE314 [F1], Date Time**".
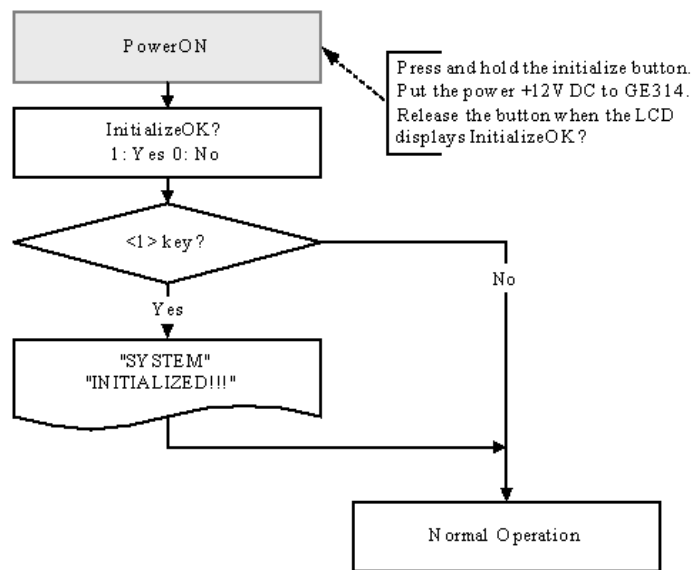


## 7.2 HOW TO ENTER THE SETUP MENU

To setup or to change the GE314 settings, you have to enter the **SETUP MENU** first. To do so, press **<0>** key eight times (**Default Master ID '00000000'**) and **<ENT>** key from the Keypad. You now entered to the **SETUP MENU**. There are **9 SETUP MENU** and you first get into **[F1 SETUP MENU]**. You can move to another **SETUP MENU** by pressing **<F1>** key to **<F9>** key button. For example, if you want to go to **[F2 SETUP MENU]** then press **<F2>** key, for **[F5 SETUP MENU]** then press **<F5>** key and so on. There are several **SUBMENU** on each **SETUP MENU** and you can scroll up and down the **SUBMENU** by pressing **<4>** and **<6>** key on each **SETUP MENU**. If you don't press any key for 60 seconds or if you press **<ESC>** key, GE314 will exit the **SETUP MENU** and return to normal operation mode. You can also change the **Master ID** in the **[F4 SETUP MENU]**.

**GE Security**
GE314 [F1]
12/25 09:07:30

(MASTER ID) '00000000' (ENT) →

1.FIRMWARE VER.
GE314 V1.0.0

(SETUP MENU) (4)

(F1) [F1 SETUP MENU] — SUBMENU (6)
(F2) [F2 SETUP MENU]
(F3) [F3 SETUP MENU]
(F4) [F4 SETUP MENU]
(F5) [F5 SETUP MENU]
(F6) [F6 SETUP MENU]
(F7) [F7 SETUP MENU]
(F8) [F8 SETUP MENU]
(F9) [F9 SETUP MENU]

(ESC)

(ESC) — Return to Normal Mode
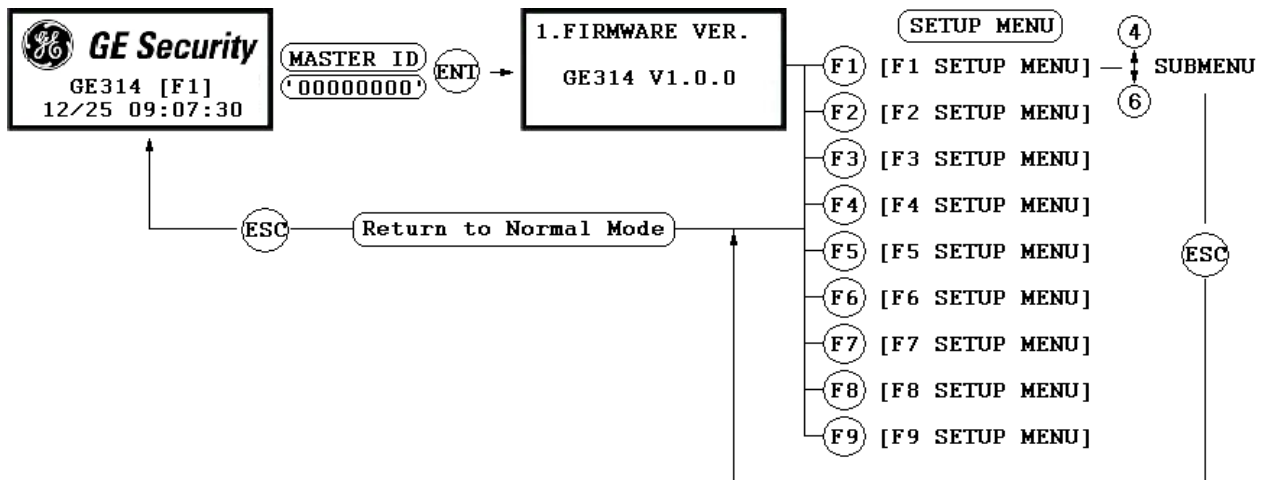
## 7.3 LANGUAGE SETTING

Select [**LANGUAGE**] in the [**F2 SETUP MENU**] then press **<ENT>** key to select the LANGUAGE. Please follow the steps below for LANGUAGE setting and following procedure is for selecting CHINESE.

**GE Security**
GE314 [F1]
12/25 09:07:30

(MASTER ID) '00000000' (ENT) →

1.FIRMWARE VER.
GE314 V1.0.0

(F2)

1.LANGUAGE
ENGLISH

(ENT) →

1.LANGUAGE
->ENGLISH

(4) (6)
->KOREAN
->ENGLISH
->CHINESE
->JAPANESE
->SPANISH
->PORTUGUESE

1.LANGUAGE
->CHINESE

(ENT) →

1.LANGUAGE
CHINESE

(ESC) (Done)
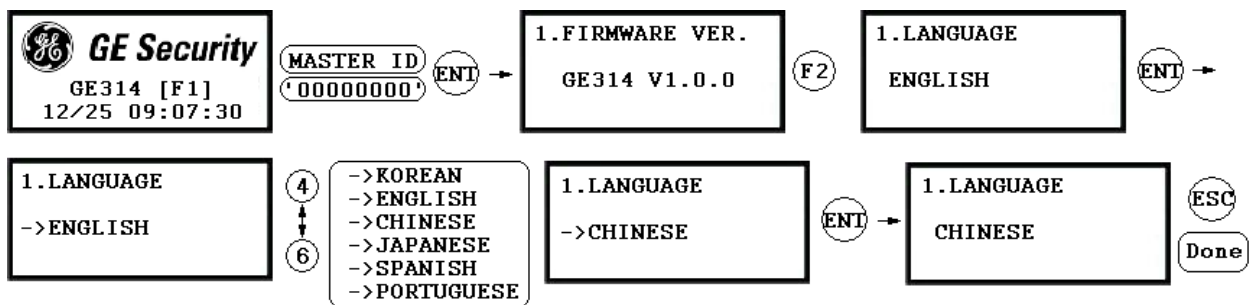
## 7.4 DATE/TIME SETTING

Select **[SET DATE/TIME]** in the **[F2 SETUP MENU]** and enter Year / Month / Date / Hour / Minute / Second / Day (Total 15 digits) as shown below. The LCD will display the new Date and Time after the time setting is completed but the year and day will not be displayed. GE314 has a 24 hours system and 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.

**GE Security**
GE314 [F1]
12/25 09:07:30

(MASTER ID) '00000000' (ENT) →

1.FIRMWARE VER.
GE314 V1.0.0

(4) (F2) (6)

2.SET DATE/TIME

(ENT) →

2.SET DATE/TIME
YYYYMMDDhhmmssW
_

YYYY:Year, MM:Month, DD:Date
hh:hour, mm:minute, ss:second
W:1-Sun,2-Mon,3-Tue,4-Wed
5-Thu,6-Fri,7-Sat

(ENT) →

2.SET DATE/TIME

(ESC) (Done)
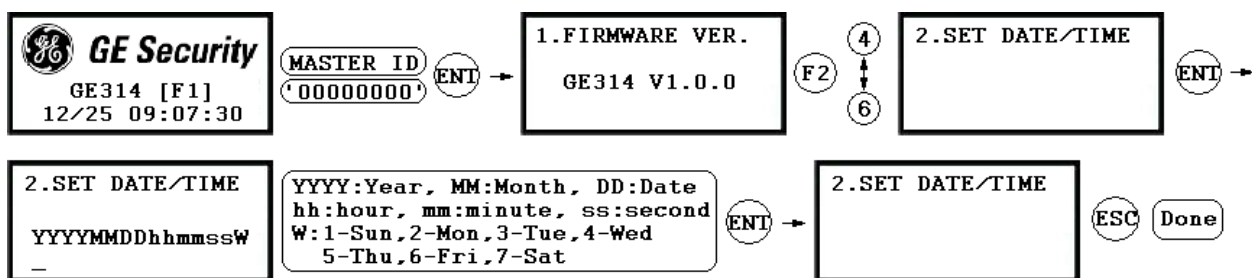
## 7.5 ID REGISTRATION

You can register the User ID into the GE314. Select **[F4 SETUP MENU]** -> **[REGISTRATION]** and follow the steps below.

```
┌─────────────────────┐
│  GE Security        │  ┌─MASTER ID─┐         ┌──────────────────┐         ┌──────────────────┐
│  GE314 [F1]         │  │ 00000000  │ (ENT) → │ 1.FIRMWARE VER.  │ (F4)  → │ 1.REGISTRATION   │ (ENT) →
│  12/25 09:07:30     │  └───────────┘         │   GE314 V1.0.0   │         │                  │
└─────────────────────┘                        └──────────────────┘         └──────────────────┘
```

```
┌──────────────────┐      (1) → ( REGISTRATION BY CARD )
│ 1.REGISTRATION   │
│   1:CARD 2:PIN   │      (2) → ( REGISTRATION BY KEY  )
└──────────────────┘
```

### 1. Registration by Card

```
┌──────────────────┐   ┌─────────┐   ┌──────────────────┐     ┌────────────────────────────────────────┐
│ 1.REGISTRATION   │   │ PRESENT │   │ 1.REGISTRATION   │     │ PW:4digit Password, default:0000       │
│  SCANNING...     │   │ A CARD  │   │ ID:12300001      │     │ TA:Reader#1 T/S, 00~10, default:00     │ →
│                  │   └─────────┘   │ PW_     TA   TB  │     │ TB:Reader#2 T/S, 00~10, default:00     │
└──────────────────┘                 │ RD MA MB LV FP   │     │ RD:Reader Assignment                   │
        │                            └──────────────────┘     │    0=RD1+RD2, 1=RD1, 2=RD2             │
        │                                                     │ MA:Reader#1 Mode, MB: Reader#2 Mode    │
        │                                                     │ LV:Output Operating Level, 0~4         │
        │                                                     │ FP:Fingerprint, 0=UNUSE, 1=USE         │
        │                                                     └────────────────────────────────────────┘
( If FP=0 ) →  ┌──────────────────┐
(ENT) →        │  ID REGISTERED!  │
( If FP=1 ) →  └──────────────────┘

┌──────────────────┐   ┌─────────┐   ┌──────────────────┐     ┌────────────────────┐
│ TO REGISTER F/P  │   │ PUT YOUR│ → │ LIFT AND         │     │ LIFT AND PUT       │
│ PUT YOUR FINGER  │   │ FINGER  │   │ PUT YOUR FINGER  │     │ YOUR FINGER FOR    │ →
└──────────────────┘   └─────────┘   └──────────────────┘     │ SECOND F/P         │
                                                              └────────────────────┘
```

### 2. Registration by Key

```
┌──────────────────┐   ┌─────────┐   ┌──────────────────┐     ┌────────────────────────────────────────┐
│ 1.REGISTRATION   │   │ENTER 4~8│   │ 1.REGISTRATION   │     │ PW:4digit Password, default:0000       │
│ ID:_             │   │ DIGIT ID│   │ ID:12300001      │     │ TA:Reader#1 T/S, 00~10, default:00     │ →
│                  │   │   (ENT) →│  │ PW_     TA   TB  │     │ TB:Reader#2 T/S, 00~10, default:00     │
└──────────────────┘   └─────────┘   │ RD MA MB LV FP   │     │ RD:Reader Assignment                   │
        │                            └──────────────────┘     │    0=RD1+RD2, 1=RD1, 2=RD2             │
        │                                                     │ MA:Reader#1 Mode, MB: Reader#2 Mode    │
        │                                                     │ LV:Output Operating Level, 0~4         │
        │                                                     │ FP:Fingerprint, 0=UNUSE, 1=USE         │
        │                                                     └────────────────────────────────────────┘
( If FP=0 ) →  ┌──────────────────┐
(ENT) →        │  ID REGISTERED!  │
( If FP=1 ) →  └──────────────────┘

┌──────────────────┐   ┌─────────┐   ┌──────────────────┐     ┌────────────────────┐
│ TO REGISTER F/P  │   │ PUT YOUR│ → │ LIFT AND         │     │ LIFT AND PUT       │
│ PUT YOUR FINGER  │   │ FINGER  │   │ PUT YOUR FINGER  │     │ YOUR FINGER FOR    │ →
└──────────────────┘   └─────────┘   └──────────────────┘     │ SECOND F/P         │
                                                              └────────────────────┘
```

1. **Scanning…** The reader is waiting for the ID number to be registered. The card number will appear with a beep sound when you present the card. ID number is 8digit number.

2. **ID:** ID number consists of 4~8 digit. Enter 4~8digit ID number (PIN) and press <**ENT**> key on the field.

3. **PW:** PW is the password which can be used to access the doors with RF + Password operating mode. It is necessary to enter a default password ('**0000**') when you register an ID.

4. **TA:** TA is the Time Schedule code ('**00**' ~ '**10**') for the Reader#1 (Built-in Reader). When you present the card to the Reader#1, the cardholder is only allowed the access of the door during the Time intervals of the Time Schedule code entered to TA. To setup the Time intervals for each Time Schedule code, refer to the Time Schedule Setup on the [**F5 SETUP MENU**]. If you want to access the door anytime for the cardholder then enter the default Time Schedule code '00' for the value.

5. **TB:** TB is the Time Schedule code ('**00**' ~ '**10**') for the Reader#2 (Exit Reader). When you present the card to the Reader#2, the cardholder is only allowed the access of the door during the Time intervals of the Time Schedule code entered to TB. To setup the Time intervals for each Time Schedule code, refer to the Time Schedule Setup on the [**F5 SETUP MENU**]. If you want to access the door anytime for the cardholder then enter the default Time Schedule code '00' for the value.

6. **RD**: RD is the Reader Assignment code for the cardholder. Code '0' assigns for both readers (Built-in Reader and Exit Reader), code '1' only assigns Reader#1 (Built-in Reader) and code '2' only assigns Reader#2 (Exit Reader). If you put '1' for RD (Only Reader#1 assigned) and try to exit through Reader#2 (Exit Reader) then GE314 generates an error message ("Access Door Error") on the LCD display.

7. **MA**: MA is the Reader#1 (Built-in Reader) Operating Mode for the cardholder. If you put '1' for MA, Reader#1 is always operating on RF Only Mode.

> '0' – System Operating Mode [**F2 SETUP MENU**]➔ [**READER#1 MODE**]
>
> '1' – ID Only Mode
>
> '2' – ID + Finger(Password) Mode
>
> '3' – ID + Password + Finger Mode

8. **MB**: MB is the Reader#2 (Exit Reader) Operating Mode for the cardholder. If you put '1' for MB, Reader#2 is always operating on RF Only Mode.

> '0' – System Operating Mode [**F2 SETUP MENU**]➔ [**READER#2 MODE**]
>
> '1' – ID Only Mode
>
> '2' – ID + Password Mode

9. **LV**: LV is the Output Operating Level for the cardholder. Output operating time can be set for each user. To setup Output operating time for each level, refer to the Output Setting on the [**F7 SETUP MENU**].

'0' or '1' – Level #1

'2' – Level #2

'3' – Level #3

'4' – Level #4

10. **FP**: FP is the Fingerprint Usage Flag (1 digit). You can assign the user who uses fingerprint or not.

'0' – User without Fingerprint

'1' – User with Fingerprint

## 3. How to put your finger to the scanner

When you enroll or verify your fingerprint, please place your finger to the scanner correctly.
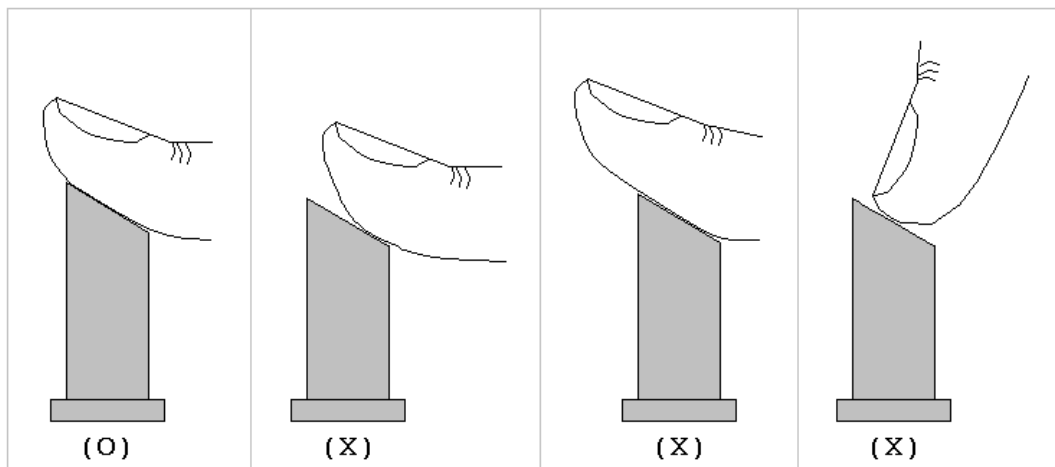


Figure: How to put your finger to the scanner

# 8.  OPERATION

## 8.1 NORMAL OPERATION

**Power on**

When the power is applied to GE314, the Red LED is turned on.

**Registered card reading**

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

**Exit Button**

When the Exit button is pressed, the Door (Relay#1) will open for 3 seconds with the Green LED on.

**Alarms**

When an unregistered card is read or his/her fingerprint is not verified, the access is denied and the Alarm (Relay#2) will be activated for 3 seconds with the Yellow LED on.

## 8.2 DEFAULT SETTING

When you operate the system for the first time or the system initialized, the factory setting values (default settings) will be stored in the memory. You may change the settings for the desired application.

# 9. SETTING CHANGES
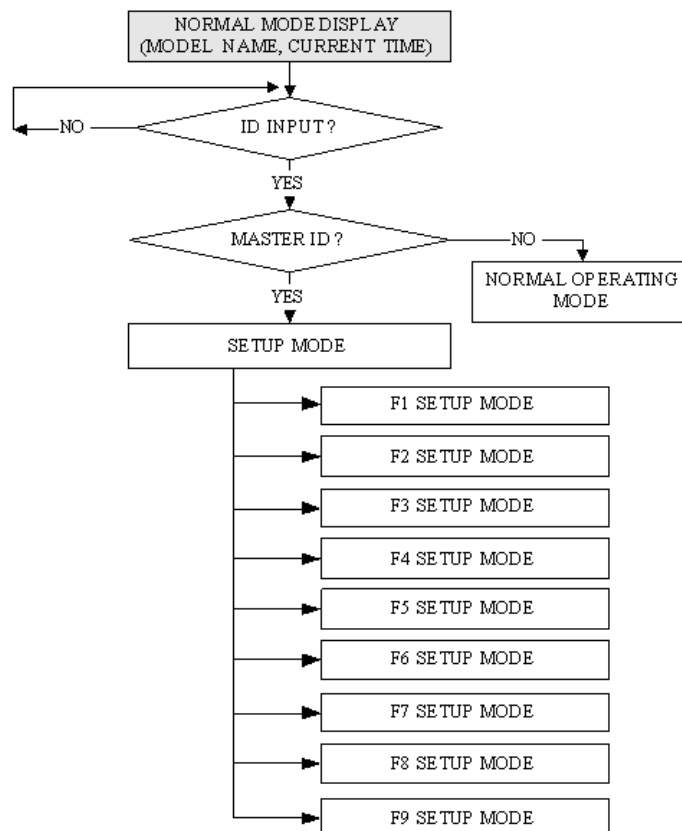


. To setup or to change the GE314 settings, you have to enter the **SETUP MENU** first. To do so, press **<0>** key eight times (**Default Master ID '00000000'**) and **<ENT>** key from the Keypad. You now entered to the **SETUP MENU**. There are **9 SETUP MENU** and you first get into **[F1 SETUP MENU]**. You can move to another **SETUP MENU** by pressing **<F1>** key to <F9> key button. For example, if you want to go to **[F2 SETUP MENU]** then press **<F2>** key, for **[F5 SETUP MENU]** then press <F5> key and so on. There are several **SUBMENU** on each **SETUP MENU** and you can scroll up and down to **SUBMENU** by pressing **<4>** and **<6>** key on each **SETUP MENU**. If you don't press any key for 60 seconds or if you press **<ESC>** key, GE314 will exit the **SETUP MENU** and return to normal operation mode. You can also change the **Master ID** in the **[F4 SETUP MENU]**.

## 9.1 F1 SETUP MENU
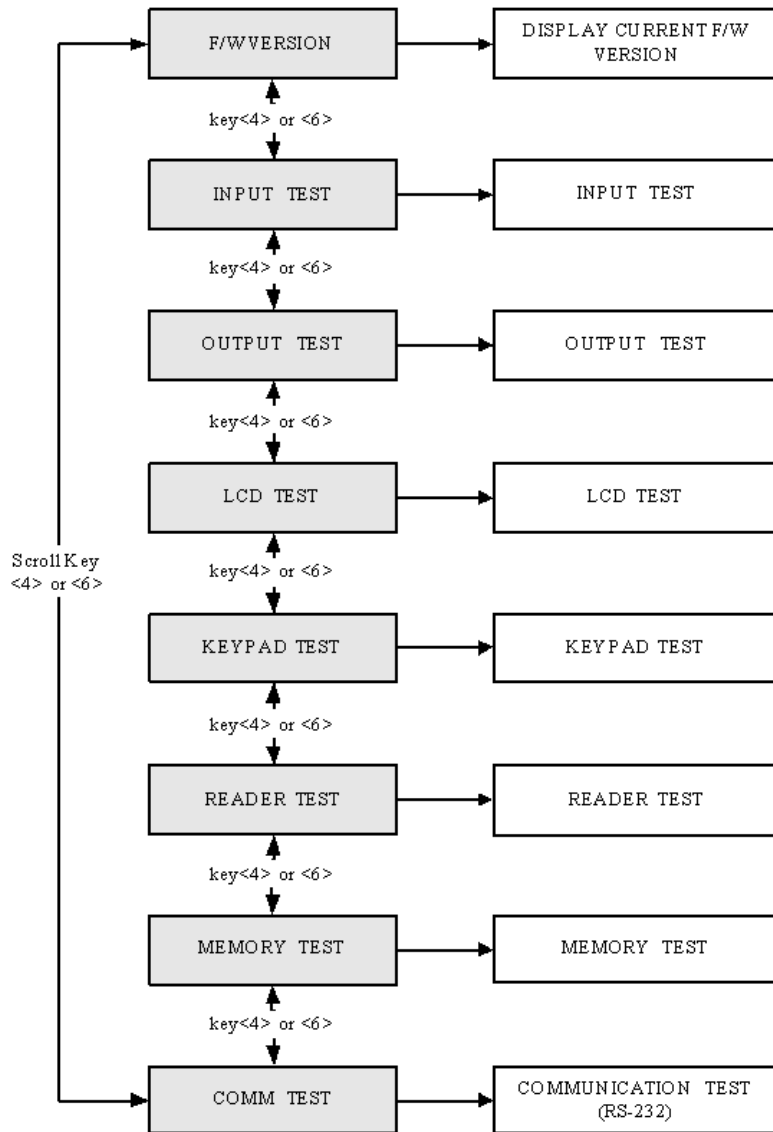


## 9.1.1 VERSION CHECK

```
1.FIRMWARE VER.

  GE314 V1.0.0
```

.  The Firmware Version of the GE314 displays on the LCD.
   Press <**4**> or <**6**> key to have a look for other menus on
   [ **F1 SETUP MENU**]

## 9.1.2 INPUT TEST



```
2.INPUT TEST
```
ENT →
```
2.INPUT TEST

EX DC I1 I2 TP
 0  0  0  0  0
```
Press
EXIT Button →
```
2.INPUT TEST

EX DC I1 I2 TP
 1  0  0  0  0
```
ESC

```
EX:Exit Button Input
DC:Door Contact Input
I1:AUX#1 Input
I2:AUX#2 Input
TP:Tamper Switch Input
```
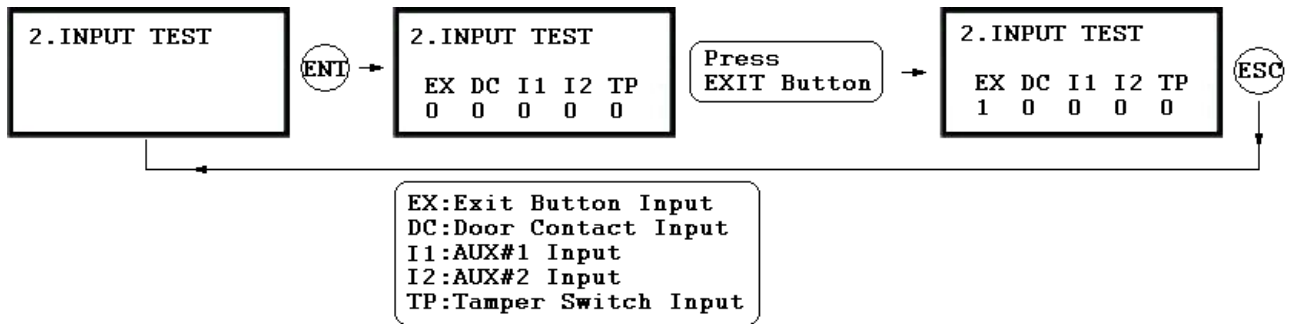
. The 5digit shows the input status and "0" indicates that the input port is open circuit and "1" indicates that the input port is short circuit to ground level.

## 9.1.3 OUTPUT TEST



```
3.OUTPUT TEST
```
ENT →
```
3.OUTPUT TEST

 DOOR RELAY
    ON
```
→
```
3.OUTPUT TEST

 DOOR RELAY
    OFF
```
→ → → → ESC

```
1.Door Relay & Green LED ON/OFF 2 times
2.Alarm Relay & Yellow LED ON/OFF 2 times
3.TTL#1 Output ON/OFF 2 times
4.TTL#2 Output ON/OFF 2 times
5.Internal Buzzer Beeps 2 times
PRESS ANY KEY...
```
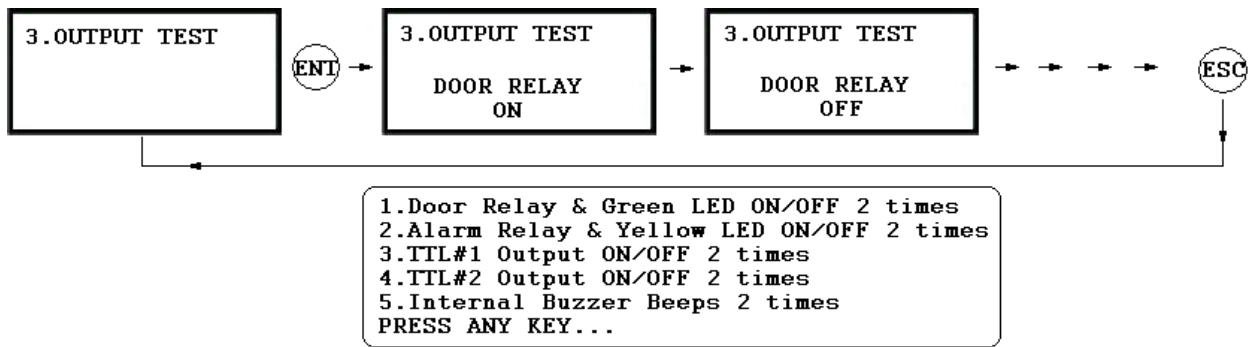
. The first two tests are for the output relays (Door Relay and Alarm Relay) test. You can hear the mechanical sound of relays and LED will blink. Following two tests are for TTL#1 and TTL#2 output testing. The last test is for the Internal Buzzer test and you can hear two beep sounds.

## 9.1.4 LCD TEST



```
4.LCD TEST
```
ENT →
```
DISPLAY ALL
CHARACTERS
```
→
```
LAST UPDATE
PRESS ANY KEY...
```
→ ESC
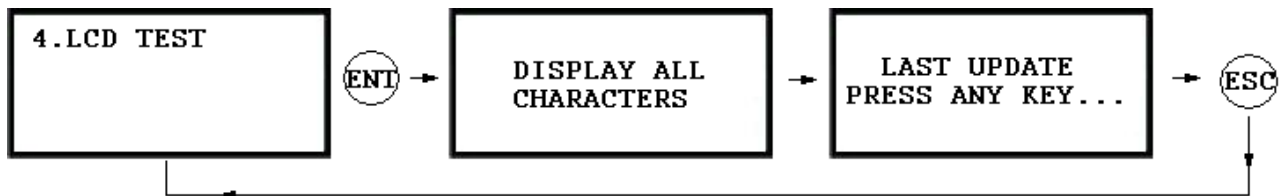
. The LCD will display all characters on the screen. When the test is done, the LCD will show "Last Update Press any key".

## 9.1.5 KEYPAD TEST

```
5.KEYPAD TEST        (ENT) →   1 2 3 F1  F2  F3    (F1) →   1 2 3     F2  F3    → →  All keys
                               4 5 6 F4  F5  F6             4 5 6 F4  F5  F6           pressed
                               7 8 9 F7  F8  F9             7 8 9 F7  F8  F9
                               * 0 # F10 F11 F12            * 0 # F10 F11 F12
```
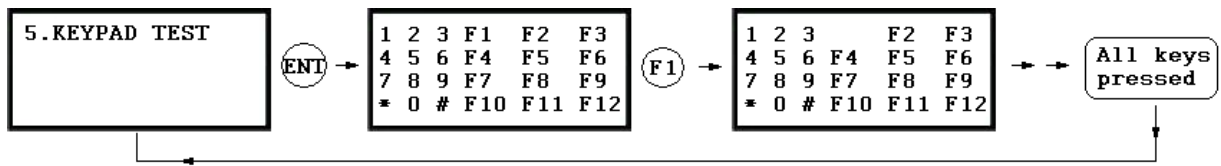
. LCD will display all keys of the unit. Press each key from the keypad one by one, the depressed key will
  disappear from the LCD. Note that ENT key is "#" and ESC key is "*" on the LCD.

## 9.1.6 READER TEST

```
6.READER TEST    (ENT) →  6.READER TEST       Present  →   6.READER TEST
                                               a Card
                          SCANNING...                         READER#1
                                              (ESC)           12300001
```

```
READER#1:Built-in Reader
READER#2:Exit reader
```
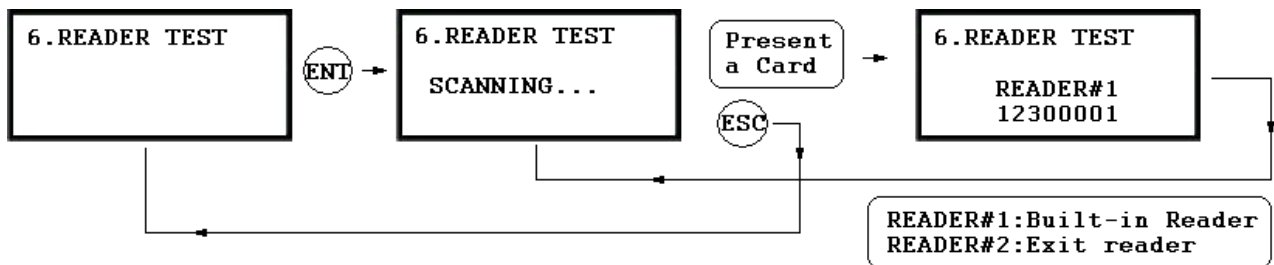
. LCD will display "Scanning…" for reading the cards. Present the card to one of the readers.
. When the reader successfully read the card, LCD will display Reader number and 8digit card number on the
  LCD.

## 9.1.7 MEMORY TEST

```
7.MEMORY TEST   (ENT) →  If Memory Test passed  →   TEST PASSED!!!
                                                    PRESS ANY KEY...
                                                                      (ESC)
                         If Memory Test failed  →   TEST FAILED!!!
                                                    PRESS ANY KEY...
```
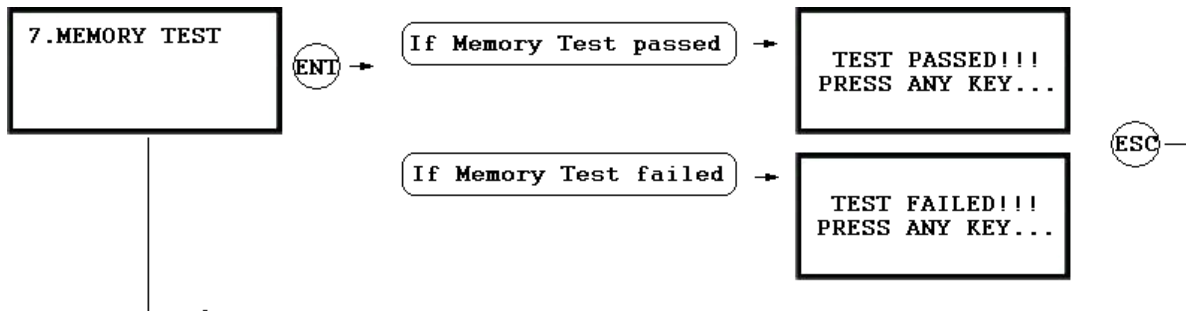
. If the Data Memory has problems, LCD will show the memory block number with Memory failure message.
  In this case, contact manufacturer for technical support.

## 9.1.8 COMMUNICATION TEST

```
┌─────────────────┐
│ 8.COMM TEST     │   (ENT) →    ( If COMM Test passed )  →    ┌──────────────────┐
│                 │                                            │  TEST PASSED!!!  │
│                 │                                            │  PRESS ANY KEY...│
└─────────────────┘                                           └──────────────────┘
         │                       ( If COMM Test failed )  →    ┌──────────────────┐     (ESC)
         │                                                     │  TEST PASSED!!!  │
         │                                                     │  PRESS ANY KEY...│
         │                                                     └──────────────────┘
         └──────────────────────────────────────────────────────────────────────
```
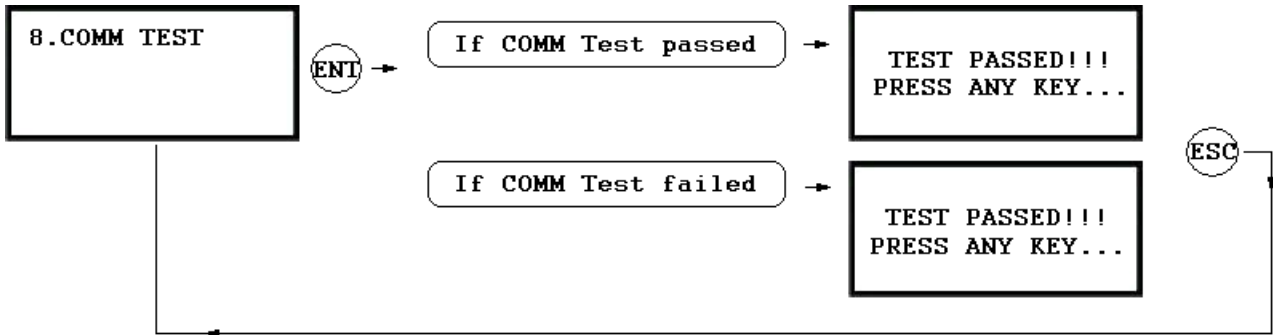
┌────────────────────────────────────────────────────────────────────────────────┐
│  . Before this communication test, connect RS232-RX and RS232-TX wires together. │
│  . This test is a loop test and GE314 sends a character to RS232-TX and check whether the RS232-RX receive │
│    the same character or not. If you have an error, contact manufacturer for technical support. │
└────────────────────────────────────────────────────────────────────────────────┘

## 9.2 F2 SETUP MENU



| LANGUAGE | | KOREAN |
| | | ENGLISH (DEFAULT) |
| | | CHINESE |
| key<4> or <6> | | JAPANESE |
| | | SPANISH |
| | | PORTUGUESE |

SET DATE/TIME ← 15 digit keyin

key<4> or <6>

| READER #1 MODE | | ID ONLY(DEFAULT) |
| | | ID+F/P (P/W) |
| key<4> or <6> | | ID+P/W+F/P |

| READER #2 MODE | | ID ONLY(DEFAULT) |
| | | ID+P/W |

key<4> or <6>

| RD#1 PIN INPUT | | UNUSE (DEFAULT) |
| | | USE |

key<4> or <6>

| RD#2 PIN INPUT | | UNUSE (DEFAULT) |
| | | USE |

key<4> or <6>

COMM ADDR SET

key<4> or <6>

| BAUD RATE | | 9600(DEFAULT) |
| | | 19200 |
| | | 38400 |
| | | 57600 |

Scroll Key <4> or <6>

## 9.2.1 LANGUAGE

```
1.LANGUAGE            1.LANGUAGE         4     ->KOREAN        1.LANGUAGE
                                               ->ENGLISH
  ENGLISH      (ENT)-> ->ENGLISH               ->CHINESE        ->CHINESE      (ENT)
                                         6     ->JAPANESE
                                               ->SPANISH
                                               ->PORTUGUESE

1.LANGUAGE

  CHINESE
```

> . The default Language is in ENGLISH.
> . There are 6 languages can be selected. (KOREAN, ENGLISH, CHINESE, JAPANESE, SPANISH,
>   PORTUGUESE)

## 9.2.2 DATE AND TIME SETTING

```
2.SET DATE/TIME           2.SET DATE/TIME      YYYY:Year, MM:Month, DD:Date
                                               hh:hour, mm:minute, ss:second
                  (ENT)-> YYYYMMDDhhmmssW       W:1-Sun,2-Mon,3-Tue,4-Wed     (ENT)
                          _                       5-Thu,6-Fri,7-Sat
```

> . **Example: 200302101330152 => Feb. 10, 2003, 13:30:15, Monday**

## 9.2.3 READER#1 MODE

```
3.READER#1 MODE           3.READER#1 MODE      4   ( SELECT MODE )
                                                                           (ENT)->
  ID ONLY         (ENT)-> ->ID ONLY                ->ID ONLY
                                               6   ->ID+F/P (P/W)
                                                   ->ID+P/W+F/P
3.READER#1 MODE

  ID+F/P (P/W)
```
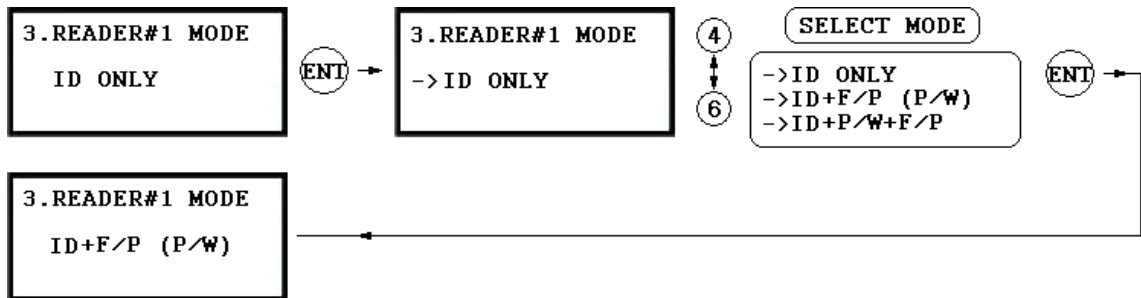
> **Note: READER#1 is built-in proximity reader in the unit.**
> ID(PIN) ONLY: The door is accessible by just presenting the proximity card(or Press the ID Number).
> ID+F/P(P/W): The door is accessible by presenting a card and verifying Fingerprint (or Password).
> ID+P/W+F/P: The door is accessible by presenting a card and verifying Password and Fingerprint.

### 9.2.4 READER#2 MODE

**READER#2 MODE setting is the same as 9.2.3 READER#1 MODE setting.**

---

**Note: READER#2 is an external Exit reader of the unit.**
ID(PIN) ONLY: The door is accessible by just presenting the proximity card(or Press the ID Number).
ID+ P/W: The door is accessible by presenting a card and Password.

---

### 9.2.5 READER#1 PIN INPUT



---
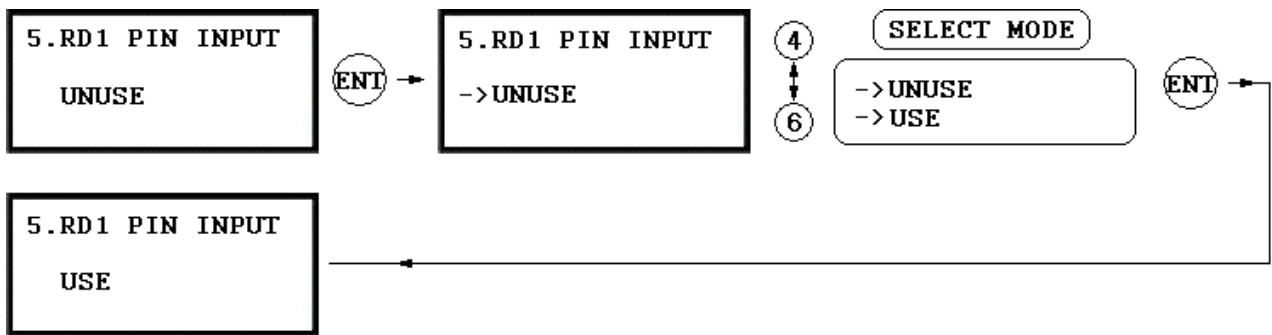
. This function is for USE/UNUSE the keypad inputs for the Reader#1. The default setting is UNUSE the keypad inputs. If you want to access the door by entering the user ID by keypad, set this mode USE. You have to set this mode USE when the unit is operating with Password.

---

### 9.2.6 READER#2 PIN INPUT

**READER#2 PIN INPUT setting is the same as 9.2.5 READER#1 PIN INPUT setting.**

### 9.2.7 COMMUNICATION ADDRESS SETTING



---
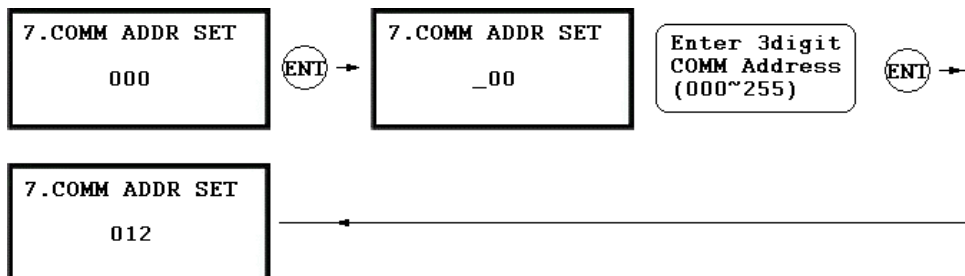
. The default Communication Address is "000" and set a different COMM Address for each unit in the loop.

## 9.2.8 BAUD RATE SETTING
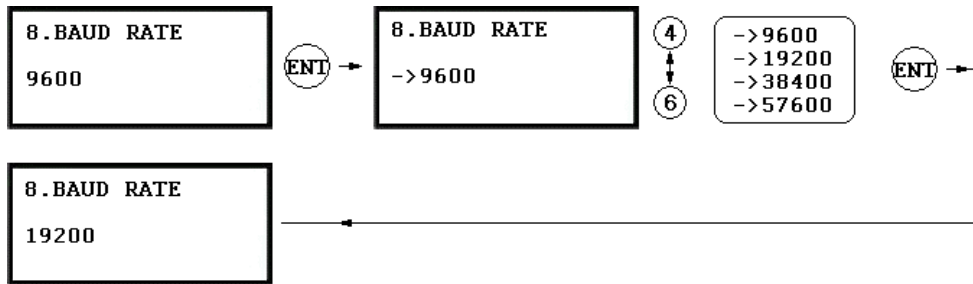


. GE314 supports 9600, 19200, 38400 and 57600bps of Baud Rate and default Baud Rate is 9600bps. Wrong Baud Rate setting will cause communication error and you have to set same Baud Rate for the same communication network.

If you have communication problem, please check followings;
- Check Communication Address for both GE314 and the host PC (Software)
- Check Baud Rate for both GE314 and host PC
- Check Communication Port and Cable
- Check COM port setup of the host PC
  Parity: None, Data Bit: 8 bit, Stop Bit: 1 bit

## 9.3 F3 SETUP MENU



| | |
|---|---|
| EVENT MEMORY | UNUSE |
| | USE (DEFAULT) |
| ID DISPLAY | MESSAGE (DEFAULT) |
| | ID+MESSAGE |
| TIME UNIT | UNIT: 1 SEC (DEFAULT) |
| | UNIT: 0.1 SEC |
| OUTPUT T/S+ID | UNUSE (DEFAULT) |
| | USE |
| APB MODE | UNUSE (DEFAULT) |
| | USE |
| | ALL FLAG RESET |
| DURESS MODE | UNUSE (DEFAULT) |
| | USE |
| | DURESS P/W SETTING |
| WIEGAND OUTPUT | UNUSE (DEFAULT) |
| | USE |
| OPEN ALARM TIME | |

key<4> or <6>

Scroll Key <4> or <6>

### 9.3.1 EVENT MEMORY

```
┌─────────────────┐        ┌─────────────────┐   ④   ┌───────────┐
│ 1.EVENT MEMORY  │  (ENT) │ 1.EVENT MEMORY  │   ↕   │ ->USE     │  (ENT)
│                 │   →    │                 │       │ ->UNUSE   │   →
│ USE             │        │ ->USE           │   ⑥   └───────────┘
└─────────────────┘        └─────────────────┘
┌─────────────────┐
│ 1.EVENT MEMORY  │
│                 │ ←──────────────────────────────────────────┘
│ UNUSE           │
└─────────────────┘
```
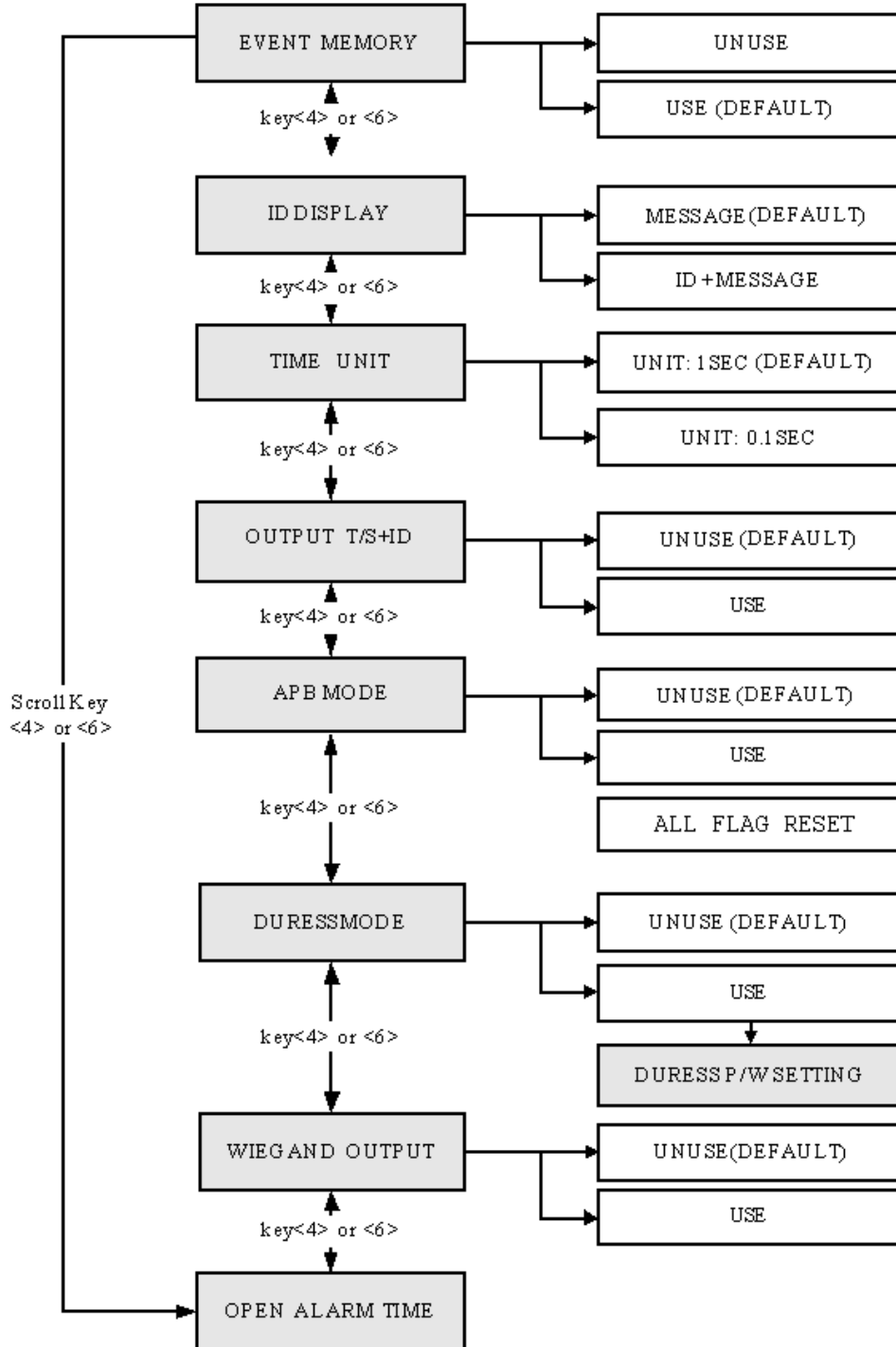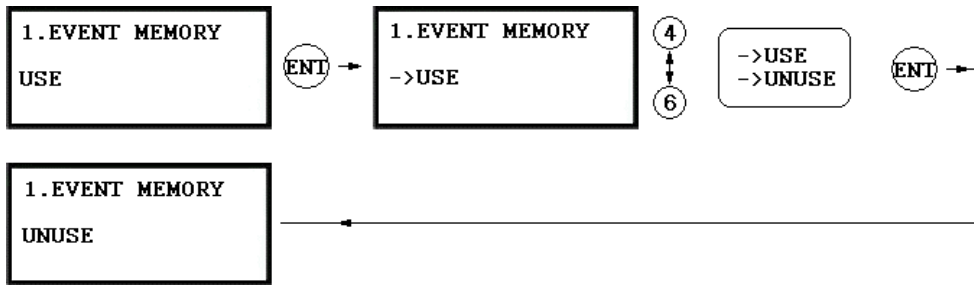
.    . You can select whether you will use event memory or not. When you select USE and in case of an event memory, GE314 generates an error message and keeps all events stored in the memory. When you select UNUSE, GE314 will not generate an error and new event overwrite into the event buffers. If you use GE314 for standalone (just for door access), select UNUSE.

### 9.3.2 ID DISPLAY

```
┌─────────────────┐        ┌─────────────────┐   ④   ┌──────────────┐
│ 2.ID DISPLAY    │  (ENT) │ 2.ID DISPLAY    │   ↕   │ ->MESSAGE    │  (ENT)
│                 │   →    │                 │       │ ->ID+MESSAGE │   →
│ MESSAGE         │        │ ->MESSAGE       │   ⑥   └──────────────┘
└─────────────────┘        └─────────────────┘
┌─────────────────┐
│ 2.ID DISPLAY    │
│                 │ ←──────────────────────────────────────────┘
│ ID+MESSAGE      │
└─────────────────┘
```
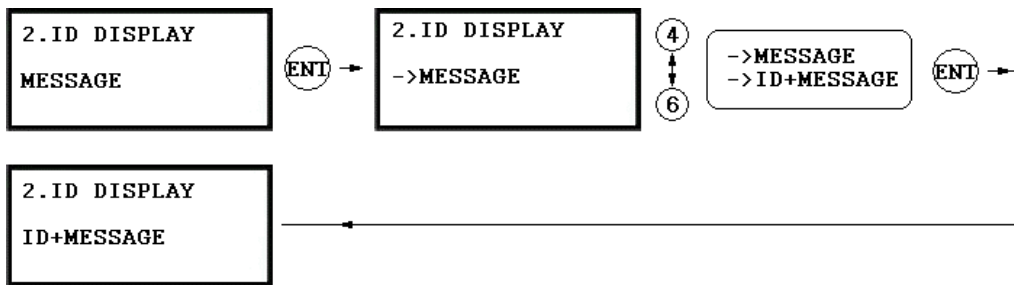
. This function is to set display mode. If you want to display user ID number on the LCD, select ID+MESSAGE. MESSAGE: Text message and "********" characters will be displayed on the LCD and it will not display user ID number. ID+MESSAGE: The user ID number will be displayed on the LCD with text message. Default setting is MESSAGE only.

### 9.3.3 TIME UNIT SETTING

```
3.TIME UNIT         3.TIME UNIT        ④        ->UNIT: 1SEC
                                       ↕        ->UNIT: 0.1SEC      (ENT) →
UNIT: 1SEC          ->UNIT: 1SEC       ⑥
```

```
3.TIME UNIT

UNIT: 0.1SEC
```
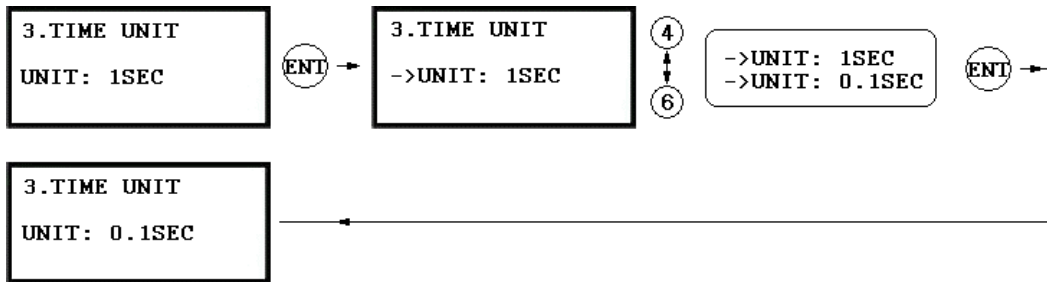
> . This menu is to define time unit for 5 output ports.
>  1sec: Output Time will be calculated by one second time unit for in/out definition.
>  0.1sec: Output Time will be calculated by 1/10 second time unit (100ms) for in/out definition
>
> Ex) If you want to activate Door Relay (Relay #1, DR) for 3 second, you have to set as follow.
>  - Set Output Time Unit to 1 SEC.
>  - Set Door Relay (DR) Output Time to "03"
> Ex) ) If you want to activate Door Relay (Relay #1, DR) for 0.5 second, you have to set as follow.
>  - Set Output Time Unit to 0.1 SEC.
>  - Set Door Relay (DR) Output Time to "05"

### 9.3.4 OUTPUT T/S+ID

```
4.OUTPUT T/S+ID     4.OUTPUT T/S+ID    ④        ->USE
                                       ↕        ->UNUSE             (ENT) →
UNUSE               -> UNUSE           ⑥
```

```
4.OUTPUT T/S+ID

USE
```
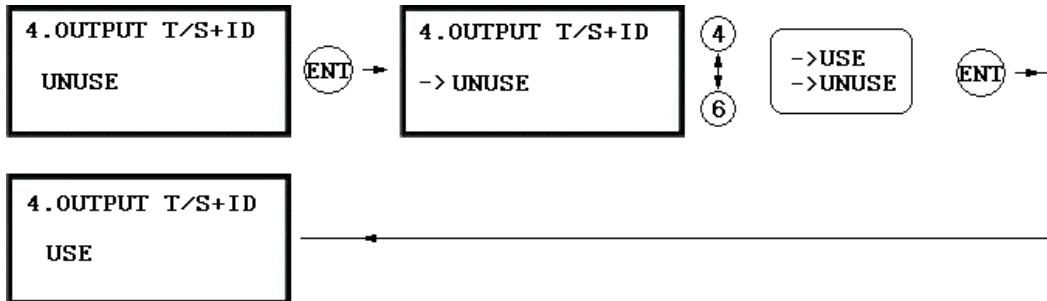
> . Output Time Schedule+ID is to unlock the door when the first user grants the access during the Time Interval
>  of the Time Schedule. The door will be locked just after the Time Interval period is over.
>  UNUSE: Door will unlock at the beginning of the Time Interval of the Time Schedule code.
>  USE: Door will unlock when the first user grants the access during the Time Interval of the Time Schedule.

## 9.3.5 ANTI-PASS BACK MODE

```
5.APB MODE              5.APB MODE           ④   ->USE
                                                  ->UNUSE
UNUSE          (ENT) →  ->UNUSE              ⑥   ->ALL FLAG RESET    (ENT) →
```

```
5.APB MODE

USE
```
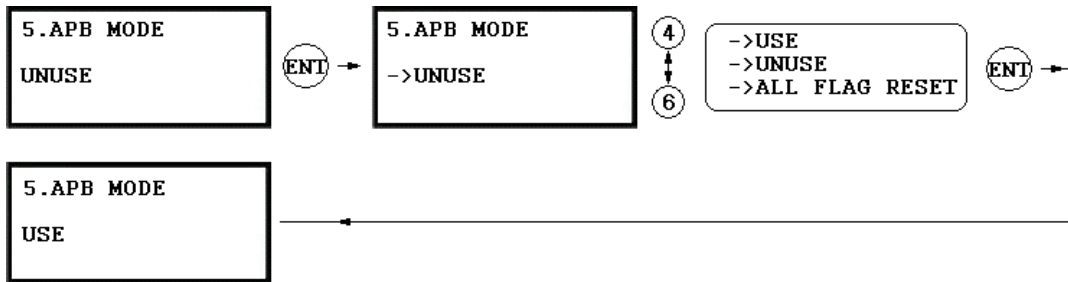
. The Anti-pass Back mode is only used when you installed Exit Reader. Do not set this mode in USE when
  you installed Exit Button. You must install GE314 for entry and Exit Reader for Exit.
  UNUSE: Anti-pass Back mode OFF
  USE: Anti-pass Back mode ON
. ALL FLAG RESET: Allow the access only one time whatever the Anti-pass Back flag is.

## 9.3.6 DURESS MODE

```
6.DURESS MODE           5.APB MODE           ④   ->UNUSE              DURESS PASSWORD
                                                  ->USE
UNUSE          (ENT) →  ->UNUSE              ⑥          (ENT) →           00          (ENT) →
```

```
6.DURESS MODE                                    Enter 2digit     DURESS PASSWORD
                                      (ENT)      Duress P/W
USE                                                               _
```
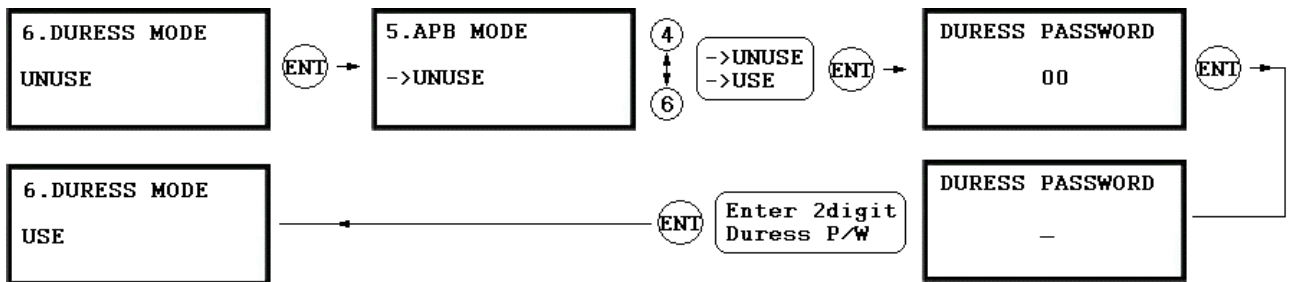
. You can set Duress Mode for Reader#1. Default setting is UNUSE. If you select USE, LCD will display
  default Duress Password '00'. Enter 2 digit Duress Password.
**Note!!**
  If you are in Duress condition, enter 2 digit Duress Password and press <ENT> key prior to present the card.
  Door will be opened as normal but the Duress Alarm will be generated and reported to the host PC.

## 9.3.7 WIEGAND OUTPUT

```
7.WIEGAND OUT           7.WIEGAND OUT        ④   ->UNUSE
                                                  ->USE
UNUSE          (ENT) →  ->UNUSE              ⑥          (ENT) →
```

```
7.WIEGAND OUT

USE
```
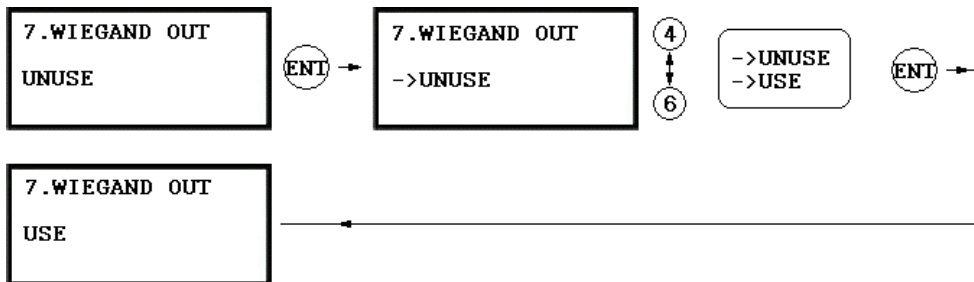
. This is the function to use GE314 as a Reader and sends 26bit Wiegand Output through two TTL output ports.
Press <ENT> key and select USE by pressing <4> or <6> key then press <ENT> key for setting.
UNUSE: Normal TTL outputs will be activated.
USE: 26bit Wiegand output will be generated through TTL1 and TTL2 port.
When an registered card is read, the "CARD SCCANNING OK" message will appear on the LCD.
● TTL1 : Data 0　TTL2 : Data 1

## 9.3.8 DOOR OPEN ALARM TIME SETTING

```
8.OPEN ALR TIME        8.OPEN ALR TIME        00~98:Alarm Delay
       03                     _              99:No Alarm
```
(ENT)

```
8.OPEN ALR TIME
       20
```
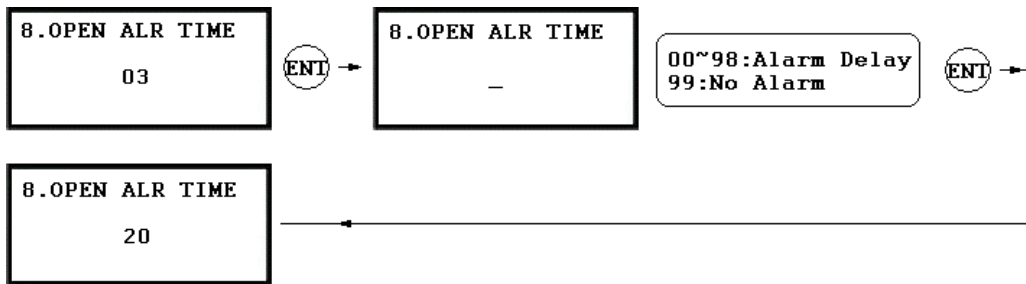
. When the door is not closed after the door open time is over, you may set the delay time to generate Door
Open Alarm. To use this function, you have to install a Door Contact Sensor on the door and setup the alarm
time by Door Contact Sensor. '03' sec. is default time.
00: Alarm if the door is not closed after the door open time (Door Relay time).
01~98: Alarm if the door is not closed after the door open time and over the alarm delay time. (01~98s)
99: No Door Open Alarm

## 9.4 F4 SETUP MENU
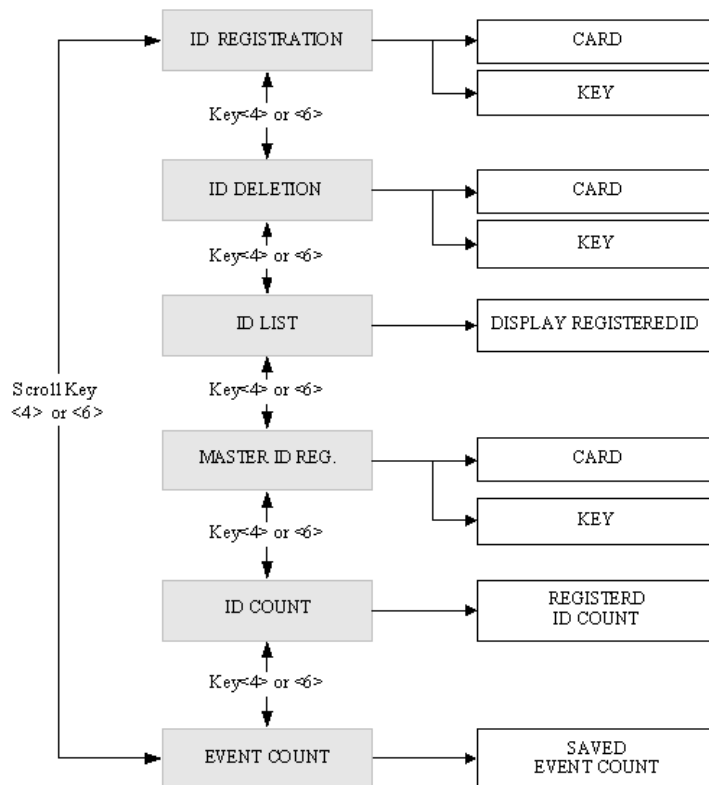


## 9.4.1 ID REGISTRATION



### 1. Registration by RF Card



```
PW:4digit Password, default:0000
TA:Reader#1 T/S, 00~10, default:00
TB:Reader#2 T/S, 00~10, default:00
RD:Reader Assignment
   0=RD1+RD2, 1=RD1, 2=RD2
MA:Reader#1 Mode, MB: Reader#2 Mode
LV:Output Operating Level, 0~4
FP:Fingerprint, 0=UNUSE, 1=USE
```

## 2. Registration by Keypad

```
┌─────────────────┐   ┌─────────────┐   ┌─────────────────┐   ┌──────────────────────────────────────┐
│ 1.REGISTRATION  │   │ ENTER 4~8   │   │ 1.REGISTRATION  │   │ PW:4digit Password, default:0000     │
│ ID:_            │   │ DIGIT ID    │   │ ID:12300001     │   │ TA:Reader#1 T/S, 00~10, default:00   │
│                 │   │             │   │ PW_     TA  TB  │   │ TB:Reader#2 T/S, 00~10, default:00   │ →
│                 │   │       (ENT) →│  │ RD MA MB LV FP  │   │ RD:Reader Assignment                 │
└─────────────────┘   └─────────────┘   └─────────────────┘   │     0=RD1+RD2, 1=RD1, 2=RD2          │
                                                              │ MA:Reader#1 Mode, MB: Reader#2 Mode  │
                                                              │ LV:Output Operating Level, 0~4       │
                                                              │ FP:Fingerprint, 0=UNUSE, 1=USE       │
                                                              └──────────────────────────────────────┘

  (If FP=0) →   ┌─────────────────┐
                │  ID REGISTERED! │ ←─────────────────────────────────────────────┐
(ENT) →         └─────────────────┘
  (If FP=1) →   ┌─────────────────┐  ┌──────────┐   ┌─────────────┐   ┌──────────────────┐
                │ TO REGISTER F/P │  │ PUT YOUR │   │ LIFT AND    │   │ LIFT AND PUT     │
                │ PUT YOUR FINGER │  │ FINGER   │ → │ PUT YOUR    │   │ YOUR FINGER FOR  │ →
                │                 │  │          │   │ FINGER      │   │ SECOND F/P       │
                └─────────────────┘  └──────────┘   └─────────────┘   └──────────────────┘
```

1. **Scanning…** The reader is waiting for the ID number to be registered. The card number will appear with a beep sound when you present the card. ID number is 8digit number.

2. **ID:** ID number consists of 4~8 digit. Enter 4~8digit ID number (PIN) and press <**ENT**> key on the field.

3. **PW:** PW is the password which can be used to access the doors with RF + Password operating mode. It is necessary to enter a default password ('**0000**') when you register an ID.

4. **TA:** TA is the Time Schedule code ('**00**' ~ '**10**') for the Reader#1 (Built-in Reader). When you present the card to the Reader#1, the cardholder is only allowed the access of the door during the Time intervals of the Time Schedule code entered to TA. To setup the Time intervals for each Time Schedule code, refer to the Time Schedule Setup on the [**F5 SETUP MENU**]. If you want to access the door anytime for the cardholder then enter the default Time Schedule code '00' for the value.

5. **TB:** TB is the Time Schedule code ('**00**' ~ '**10**') for the Reader#2 (Exit Reader). When you present the card to the Reader#2, the cardholder is only allowed the access of the door during the Time intervals of the Time Schedule code entered to TB. To setup the Time intervals for each Time Schedule code, refer to the Time Schedule Setup on the [**F5 SETUP MENU**]. If you want to access the door anytime for the cardholder then enter the default Time Schedule code '00' for the value.

6. **RD**: RD is the Reader Assignment code for the cardholder. Code '0' assigns for both readers (Built-in Reader and Exit Reader), code '1' only assigns Reader#1 (Built-in Reader) and code '2' only assigns Reader#2 (Exit Reader). If you put '1' for RD (Only Reader#1 assigned) and try to exit through Reader#2 (Exit Reader) then GE314 generates an error message ("Access Door Error") on the LCD display.

7. **MA**: MA is the Reader#1 (Built-in Reader) Operating Mode for the cardholder. If you put '1' for MA, Reader#1 is always operating on RF Only Mode.

'0' – System Operating Mode [**F2 SETUP MENU**]→ [**READER#1 MODE**]

'1' – ID Only Mode

'2' – ID + Finger Mode

'3' – ID + Password + Finger Mode

8. **MB**: MB is the Reader#2 (Exit Reader) Operating Mode for the cardholder. If you put '1' for MB, Reader#2 is always operating on RF Only Mode.

'0' – System Operating Mode [**F2 SETUP MENU**]→ [**READER#2 MODE**]

'1' – ID Only Mode

'2' – ID + Password Mode

9. **LV**: LV is the Output Operating Level for the cardholder. Output operating time can be set for each user. To setup Output operating time for each level, refer to the Output Setting on the [**F7 SETUP MENU**].

'0' or '1' – Level #1

'2' – Level #2

'3' – Level #3

'4' – Level #4

10. **FP**: FP is the Fingerprint Usage Flag (1 digit). You can assign the user who uses fingerprint or not.

'0' – User without Fingerprint

'1' – User with Fingerprint

## 9.4.2 ID DELETION
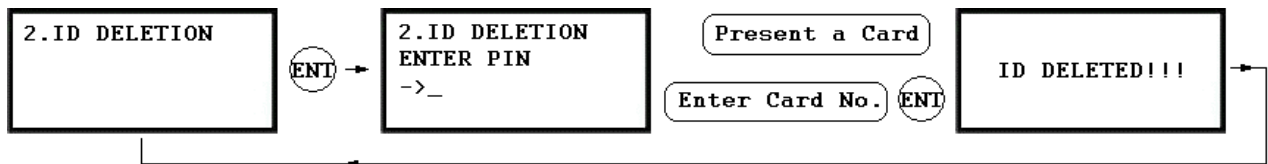


. Registered ID will be deleted in the controller by presenting the card or input the ID number from the keypad. Present the card to be deleted. The ID number will appear on the LCD. If you don't have the card, input 8digit ID number and <ENT> key from the keypad. If the ID number is found, the ID will be deleted and display "ID DELETED". If the ID number is not found, the display will show " UNREGISTERED ID". You may repeat ID DELETION many times.

### 9.4.3 ID LIST

```
┌─────────────────┐         ┌─────────────────┐  ④    ┌──────────────────────────┐
│ 3.ID LIST       │  ENT    │ ID INDEX:00001  │  ↕    │ FIRST ID: ID List Top    │  ESC
│                 │  ───►   │ ID:12300001     │  ⑥    │ LAST ID: ID List Bottom  │  ───►
│                 │         │ PW0000 TA00 TB00│       │ EMPTY: No ID             │
│                 │         │ RDOMA0MB0LV1FP1 │       └──────────────────────────┘
└─────────────────┘         └─────────────────┘
         └──────────────────────────┘
```
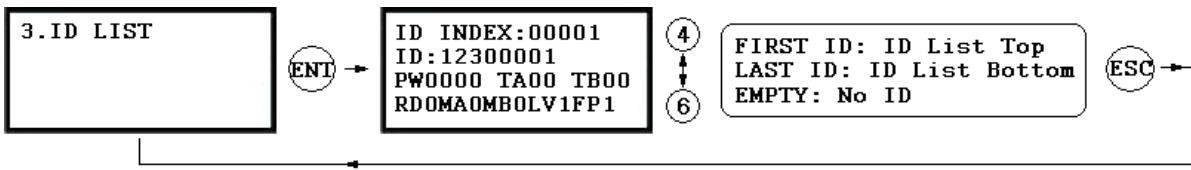
┌─────────────────────────────────────────────────────────────────────────────────────────┐
│  . LCD will display 5digit ID Index, 8digit ID number, 4digit Password, T/S for Reader#1(TA) and │
│    Reader#2(TB), accessible Readers(RD), operating mode for Reader#1(MA) and Reader#2(MB), the output │
│    level(LV) and usage of Fingerprint(FP) for this user.                                   │
│  . "EMPTY" message will be displayed if there is no registered user ID.                    │
│  . "FIRST ID" message will be displayed if the LCD displays the ID on the top of the list. │
│  . "LAST ID" message will be displayed if the LCD displays the ID on the bottom of the list. │
└─────────────────────────────────────────────────────────────────────────────────────────┘

### 9.4.4 MASTER ID REGISTRATION

```
┌─────────────────┐        ┌─────────────────┐        ┌─────────────────┐  ①  ─►  ┌──────────┐
│ 4.MASTER ID REG.│  ENT   │ 4.MASTER ID REG.│  ENT   │ 4.MASTER ID REG.│         │ BY CARD  │
│                 │  ───►  │                 │  ───►  │                 │         └──────────┘
│                 │        │   MASTER #01    │        │   1:CARD 2:PIN  │  ②  ─►  ┌──────────┐
│                 │        │   EMPTY!!!      │        │                 │         │ BY PIN   │
└─────────────────┘        └─────────────────┘        └─────────────────┘         └──────────┘
                                  ④
                                  ↕   ┌─────────────────┐
                                  ⑥   │ SELECT          │
                                      │ MASTER #01~#10  │
                                      └─────────────────┘
```
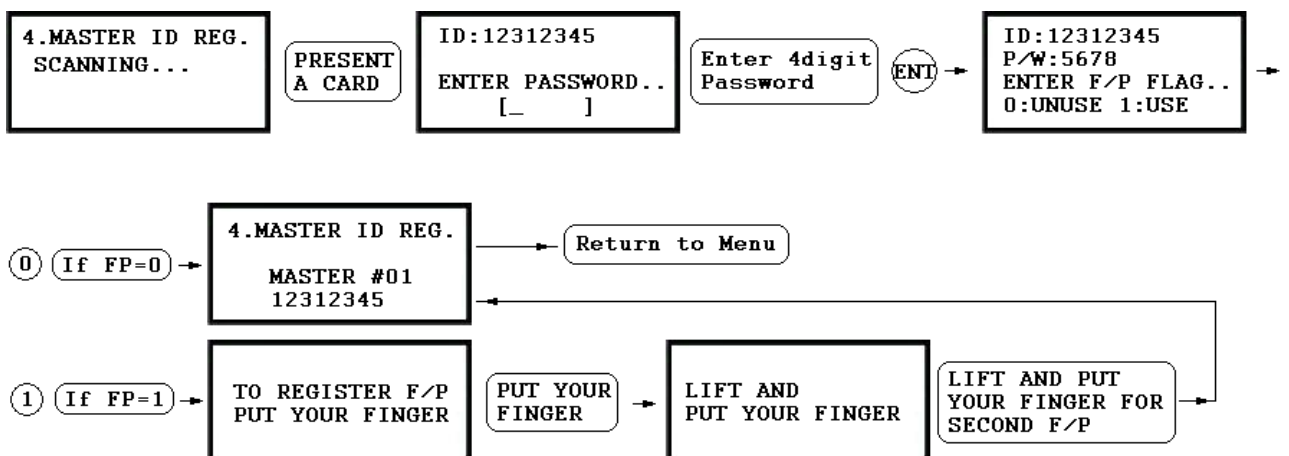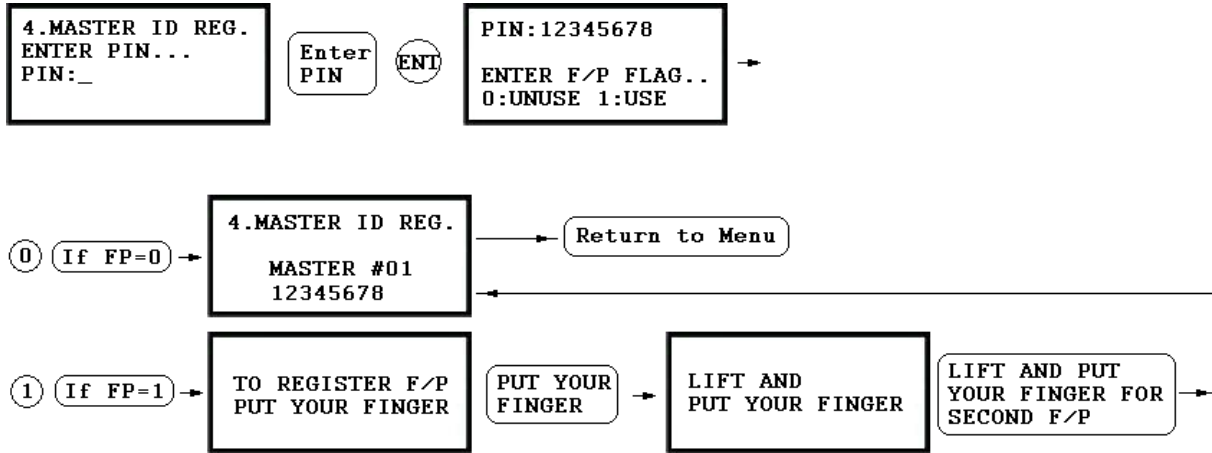
#### MASTER ID REGISTRATION BY CARD

```
┌─────────────────┐          ┌───────────────┐          ┌───────────────┐          ┌───────────────┐
│ 4.MASTER ID REG.│  PRESENT │ ID:12312345   │  Enter 4digit │               │  ENT  │ ID:12312345   │
│ SCANNING...     │  A CARD  │               │  Password     │               │  ───► │ P/W:5678      │  ─►
│                 │          │ ENTER PASSWORD..│             │               │       │ ENTER F/P FLAG..│
│                 │          │   [_    ]     │             │               │       │ 0:UNUSE 1:USE │
└─────────────────┘          └───────────────┘          └───────────────┘          └───────────────┘
```

```
                              ┌─────────────────┐
  ⓪ (If FP=0) ─►              │ 4.MASTER ID REG.│  ──►  ┌──────────────────┐
                              │                 │       │ Return to Menu   │
                              │   MASTER #01    │       └──────────────────┘
                              │   12312345      │  ───────────────────────────┐
                              └─────────────────┘                             │
                                                                              │
                              ┌─────────────────┐          ┌─────────────┐   │
  ① (If FP=1) ─►              │ TO REGISTER F/P │  PUT YOUR │ LIFT AND    │  LIFT AND PUT │
                              │ PUT YOUR FINGER │  FINGER   │ PUT YOUR FINGER │ YOUR FINGER FOR ─┘
                              │                 │  ───►     │             │  SECOND F/P    │
                              └─────────────────┘          └─────────────┘   └───────────────┘
```

**MASTER ID REGISTRATION BY PIN**

```
┌─────────────────────┐
│ 4.MASTER ID REG.    │       ┌───────┐  ┌─────┐     ┌─────────────────────┐
│ ENTER PIN...        │       │ Enter │  │     │     │ PIN:12345678        │
│ PIN:_               │       │ PIN   │  │ ENT │     │                     │ ──►
│                     │       └───────┘  └─────┘     │ ENTER F/P FLAG..    │
└─────────────────────┘                              │ 0:UNUSE 1:USE       │
                                                      └─────────────────────┘
```

```
          ┌─────────────────────┐
          │ 4.MASTER ID REG.    │      ┌──────────────┐
  ⓪ [If FP=0] ──►│               │ ──►──┤ Return to Menu│
          │   MASTER #01        │      └──────────────┘
          │    12345678         │ ◄─────────────────────────────────────┐
          └─────────────────────┘                                       │
                                                                         │
          ┌─────────────────┐  ┌───────┐  ┌──────────────┐  ┌─────────────────┐
  ① [If FP=1] ──►│ TO REGISTER F/P │ │ PUT   │  │ LIFT AND     │  │ LIFT AND PUT    │
          │ PUT YOUR FINGER │  │ YOUR  │─►│ PUT YOUR FINGER│  │ YOUR FINGER FOR │──►
          │                 │  │ FINGER│  │              │  │ SECOND F/P      │
          └─────────────────┘  └───────┘  └──────────────┘  └─────────────────┘
```

> . The default Master ID '01' is "00000000" and Fingerprint is not used.
>   There are total 10 Master IDs (from "01" to "10") can be stored in the unit.

## 9.4.5 ID COUNT

```
┌─────────────────────┐
│ 5.ID COUNT          │
│                     │
│    00123            │
│                     │
└─────────────────────┘
```

> . This menu displays the total number of registered user ID. It automatically counts when you register or delete user IDs. The LCD shows total 123 user IDs registered in the memory.
> . Total number of user IDs is 1,000 user IDs (standard) or optional 2,000/4,000 user IDs can be stored in the unit.

## 9.4.6 EVENT COUNT

```
┌─────────────────────┐
│ 6.EVENT COUNT       │
│                     │
│    12345            │
│                     │
└─────────────────────┘
```

> . This menu displays the total number of Event stored in the memory. It automatically increases the count when the Event is stored in the memory. The LCD shows total 12345 Events are stored in the memory.
> . Total number of Event is 20,000 Event buffers and the Event is automatically deleted once the Event is successfully uploaded to the host PC.

## 9.5 F5 SETUP MENU
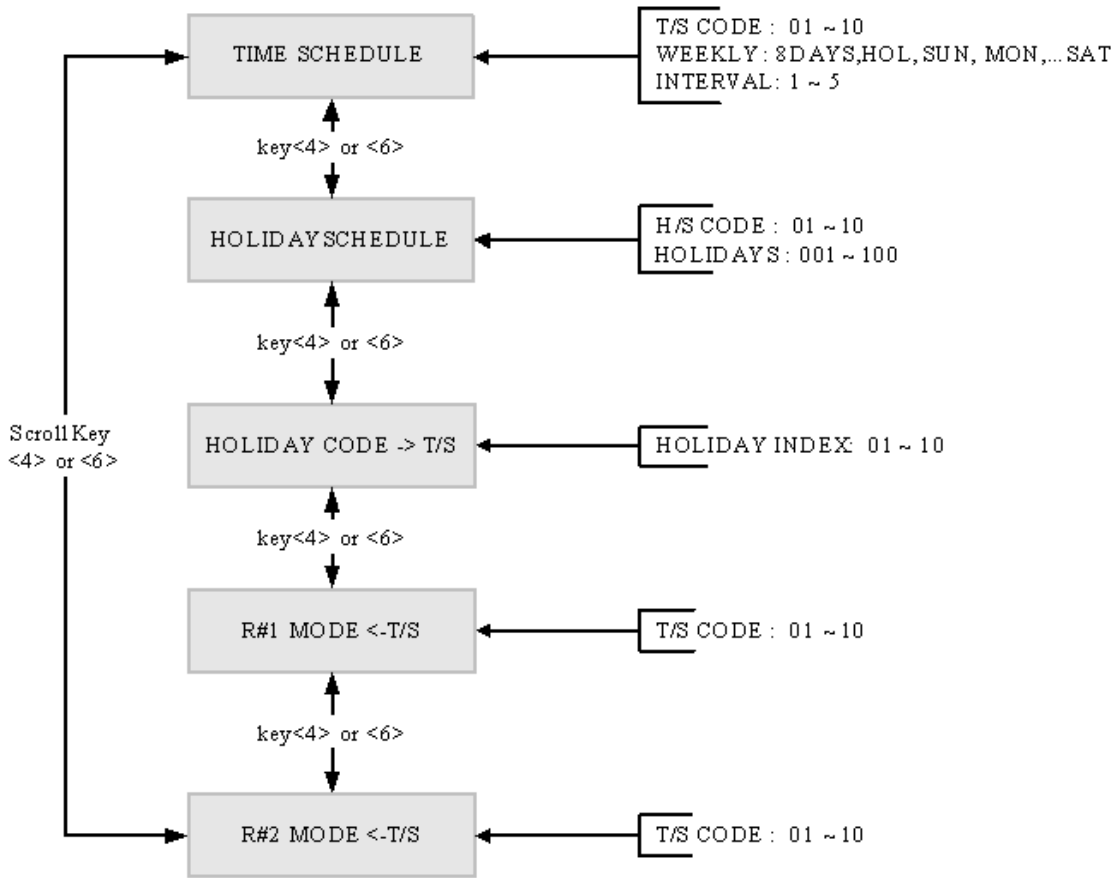


## 9.5.1 TIME SCHEDULE
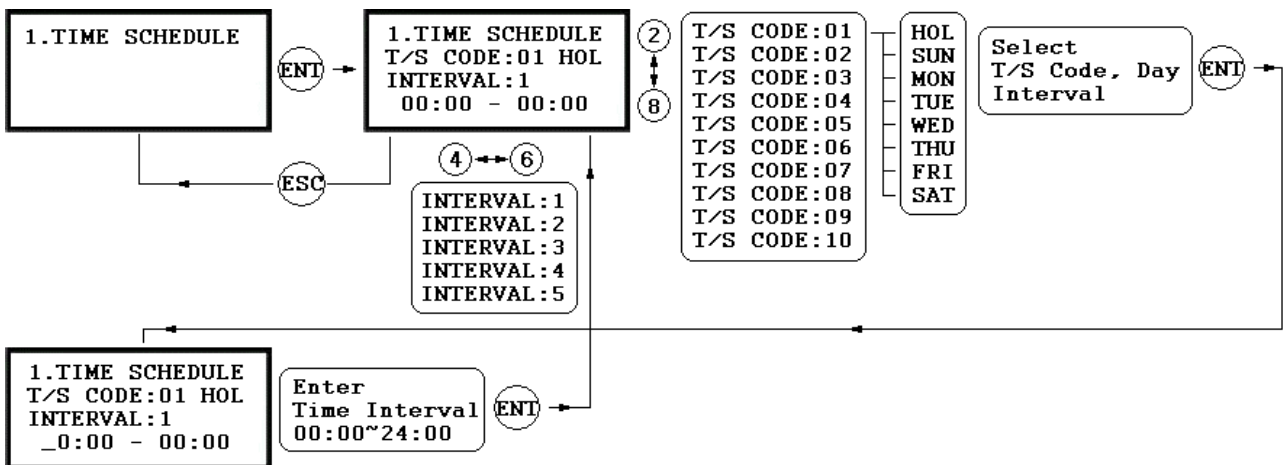
- There are 10 Time Schedule Code available for the users. T/S Code "00" is a default and allows the access for all users for all the time. (Access is granted 24 hours per day) The user can program the Time Schedule Code from "01" to "10". Each Time Schedule Code has 8 programmable days (Sun, Mon, Tue, Wed, Thu, Fri, Sat and Holiday) and each day has 5 Time Intervals. (Shift time or Accessible time zone)
- LCD will show current T/S settings such as T/S Code, Day, Time Interval and 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 (1 ~ 5). The Holiday in this Time Schedule will be linked to the Holiday Schedule Code.
  Select one of the Time Schedule Code, Day and Interval then press <ENT> key to program the time period. This system is based on 24 hours system and therefore the time 00:00 and 24:00 is the same time and 12:00 is 12 O'clock afternoon. Enter hour and minutes for start time and hour and minutes for end time of the Time Interval then press <ENT> key to store T/S to the memory.
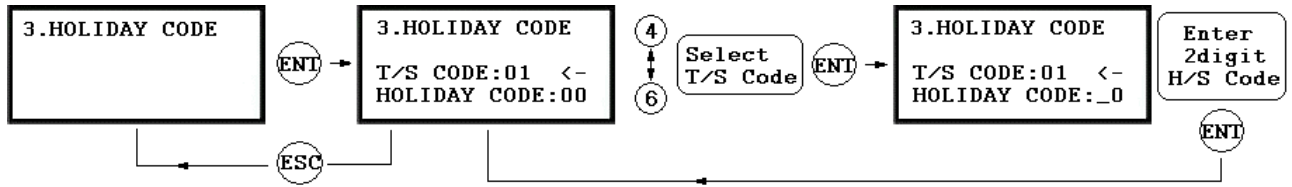  Press <ESC> key to return to the menu.

## 9.5.2 HOLIDAY SCHEDULE
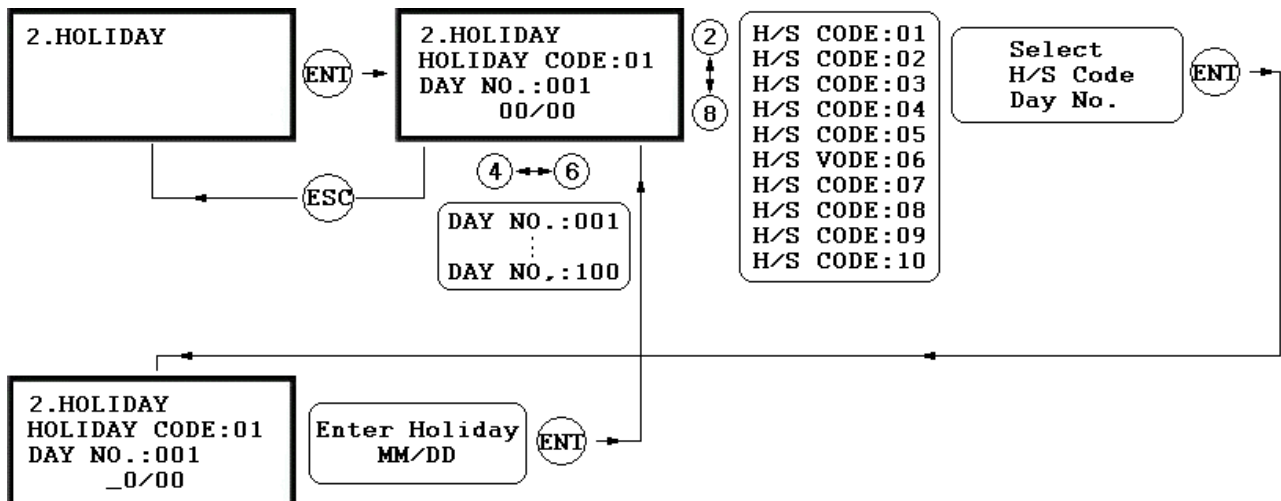


- There are 10 Holiday Schedule Code available for the users. H/S Code "00" is a default and there is no Holidays in this code. The user can program the Holiday Schedule Code from "01" to "10". Each Holiday Schedule Code has 100 programmable holidays.
- LCD will show current H/S settings such as H/S Code, Holiday number and Date.
  Use <2> or <8> key to scroll up and down the Holiday Schedule Code (01~10) and use <4> or <6> key to select Holiday number (001 ~ 100).
  Select one of the Holiday Schedule Code and Holiday number then press <ENT> key to program holidays.
  Enter month and date of holiday then press <ENT> key to store H/S to the memory.
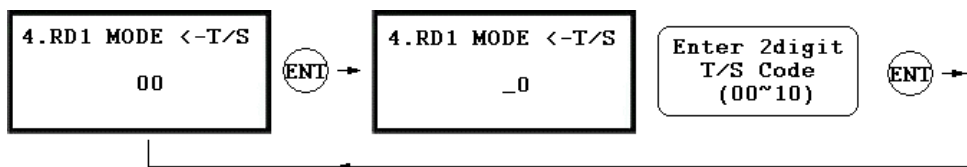  Press <ESC> key to return to the menu.

### 9.5.3 HOLIDAY CODE

```
┌──────────────┐      ┌──────────────┐   ④  ┌─────────┐     ┌──────────────┐   ┌─────────┐
│3.HOLIDAY CODE│      │3.HOLIDAY CODE│   ↕  │Select   │     │3.HOLIDAY CODE│   │Enter    │
│              │ ENT→ │              │      │T/S Code │ ENT→│              │   │2digit   │
│              │      │T/S CODE:01 <-│      └─────────┘     │T/S CODE:01 <-│   │H/S Code │
│              │      │HOLIDAY CODE:00│  ⑥                  │HOLIDAY CODE:_0│  └─────────┘
└──────────────┘      └──────────────┘                     └──────────────┘      ENT
        └──────── ESC ────────┘           └─────────────────────────┘
```

. Holiday Code is to link the Holiday Schedule to the Time Schedule. T/S has 5 Time Intervals for holidays and
this Time Intervals are only applied to the dates of this Holiday Schedule. Default Holiday Schedule Code is
'00' which means no holidays are applied to T/S.
Use <4> or <6> key to scroll up and down the T/S Code (01~10) and press <ENT> key to enter 2digit Holiday
Schedule Code and press <ENT> key to store Holiday Index to the memory.
Press <ESC> key to return to the menu.

### 9.5.4 READER#1 MODE TIME SCHEDULE

```
┌──────────────┐      ┌──────────────┐      ┌─────────────┐
│4.RD1 MODE <-T/S│    │4.RD1 MODE <-T/S│    │Enter 2digit │
│              │ ENT→ │              │      │  T/S Code   │ ENT→
│      00      │      │      _0      │      │  (00~10)    │
│              │      │              │      └─────────────┘
└──────────────┘      └──────────────┘
        └──────────────────┘
```
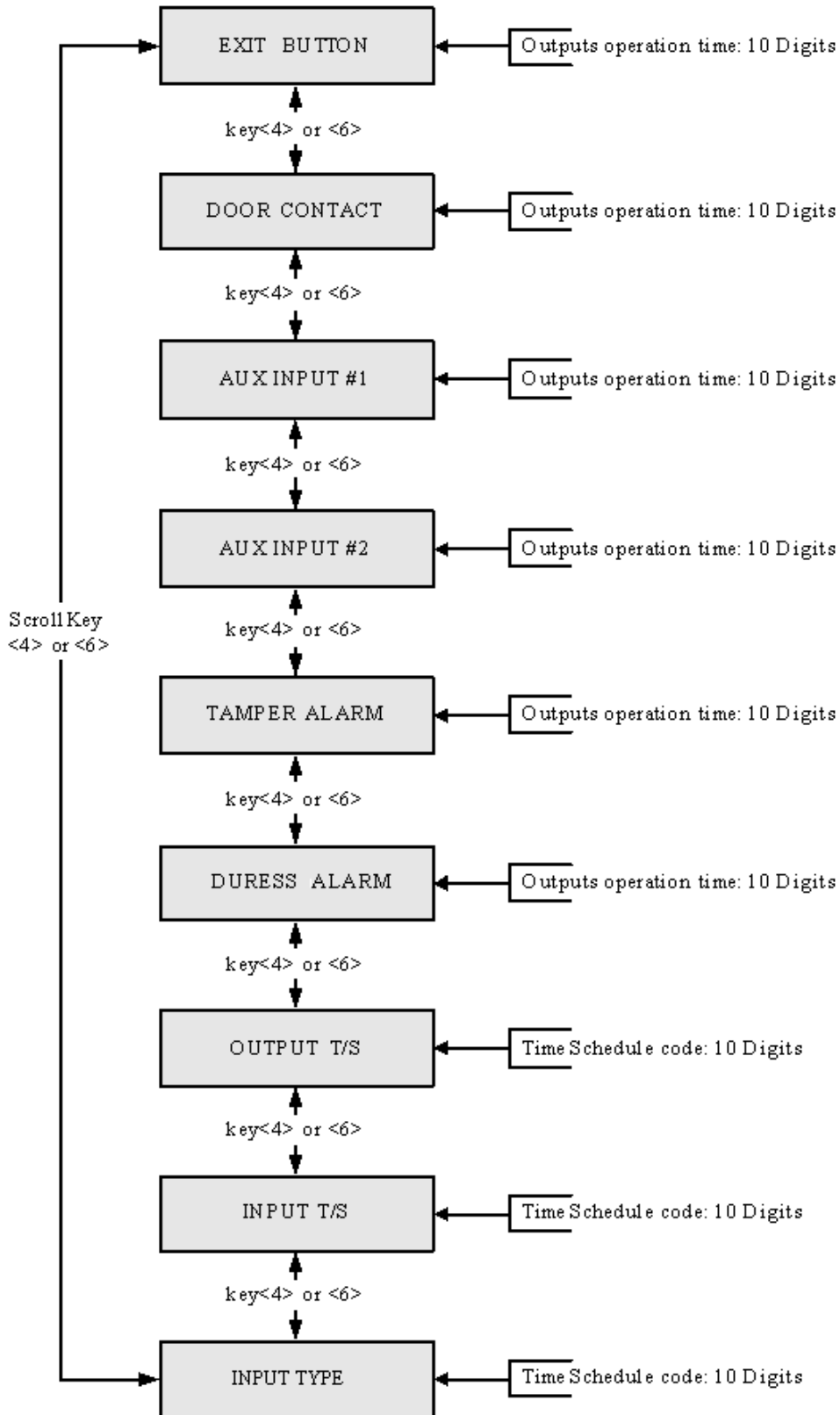
. There are 3 system operating mode, RF Only Mode, RF+F/P Mode and RF+PW+F/P Mode. You can setup one
of the system operating mode from [F2 SETUP MODE]->[R1 MODE SETTING] menu. However, you want
to apply different operating mode for a certain Time Interval for all users. For example, you want to access the
door by just presenting the card for the time from 09:00 to 17:00 and you want to use Fingerprint verification
for the rest of the time. In this case, setup [R1 MODE SETTING] to RF+F/P Mode which is for the system
operating mode and program "01" T/S Code which includes a Time Interval 09:00-17:00 then link "01" T/S
Code to this function, R1 MODE T/S setting here.
To link a T/S Code (01~10) to Reader#1 Mode, press <ENT> key. Enter 2digit T/S Code and press <ENT>
key to store T/S Code to R1 MODE to the memory.
Press <ESC> key to return to the menu.
. There are 3 system operating mode, ID Only Mode, ID + Finger(Password) Mode and ID + PW + Finger
Mode.
You can select one of the system operating mode from [F2 SETUP MENU]->[READER#1 MODE SETTING]
however, you want to apply different operating mode
      '2' – RF + Finger Mode
      '3' – RF + PW + Finger Mode

### 9.5.5 READER#2 MODE TIME SCHEDULE

**READER#2 MODE TIME SCHEDULE setting is the same as 9.5.4 READER#1 MODE T/S setting.**
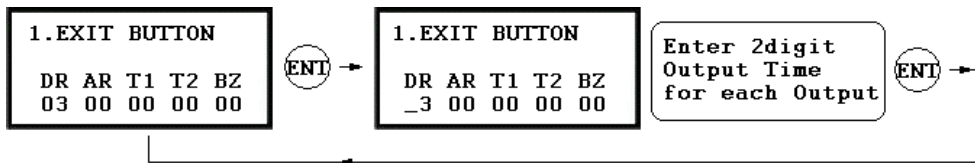
## 9.6 F6 SETUP MENU

```
                ┌─────────────────┐        ┌──────────────────────────────────┐
          ┌────▶│  EXIT  BUTTON   │◀────────│ Outputs operation time: 10 Digits │
          │     └─────────────────┘        └──────────────────────────────────┘
          │           ▲│
          │        key<4> or <6>
          │           │▼
          │     ┌─────────────────┐        ┌──────────────────────────────────┐
          │     │  DOOR CONTACT   │◀────────│ Outputs operation time: 10 Digits │
          │     └─────────────────┘        └──────────────────────────────────┘
          │           ▲│
          │        key<4> or <6>
          │           │▼
          │     ┌─────────────────┐        ┌──────────────────────────────────┐
          │     │  AUX INPUT #1   │◀────────│ Outputs operation time: 10 Digits │
          │     └─────────────────┘        └──────────────────────────────────┘
          │           ▲│
          │        key<4> or <6>
          │           │▼
          │     ┌─────────────────┐        ┌──────────────────────────────────┐
          │     │  AUX INPUT #2   │◀────────│ Outputs operation time: 10 Digits │
          │     └─────────────────┘        └──────────────────────────────────┘
  Scroll Key      ▲│
  <4> or <6>   key<4> or <6>
          │           │▼
          │     ┌─────────────────┐        ┌──────────────────────────────────┐
          │     │  TAMPER ALARM   │◀────────│ Outputs operation time: 10 Digits │
          │     └─────────────────┘        └──────────────────────────────────┘
          │           ▲│
          │        key<4> or <6>
          │           │▼
          │     ┌─────────────────┐        ┌──────────────────────────────────┐
          │     │  DURESS  ALARM  │◀────────│ Outputs operation time: 10 Digits │
          │     └─────────────────┘        └──────────────────────────────────┘
          │           ▲│
          │        key<4> or <6>
          │           │▼
          │     ┌─────────────────┐        ┌──────────────────────────────────┐
          │     │   OUTPUT  T/S   │◀────────│ Time Schedule code: 10 Digits    │
          │     └─────────────────┘        └──────────────────────────────────┘
          │           ▲│
          │        key<4> or <6>
          │           │▼
          │     ┌─────────────────┐        ┌──────────────────────────────────┐
          │     │    INPUT T/S    │◀────────│ Time Schedule code: 10 Digits    │
          │     └─────────────────┘        └──────────────────────────────────┘
          │           ▲│
          │        key<4> or <6>
          │           │▼
          │     ┌─────────────────┐        ┌──────────────────────────────────┐
          └────▶│   INPUT TYPE    │◀────────│ Time Schedule code: 10 Digits    │
                └─────────────────┘        └──────────────────────────────────┘
```

**\* Default Output Setting 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] DURESS ALARM | 00 | 00 | 00 | 00 | 00 |
| [7] OUTPUT TIME SCHEDULE | 00 | 00 | 00 | 00 | 00 |
| [8] INPUT TIME SCHEDULE | 00 | 00 | 00 | 00 | 00 |
| [9] INPUT TYPE | 00 | 00 | 00 | 00 | 00 |

## 9.6.1 EXIT BUTTON OUTPUT SETTING

```
┌─────────────────┐           ┌─────────────────┐    ┌─────────────────┐
│1.EXIT BUTTON    │           │1.EXIT BUTTON    │    │Enter 2digit     │
│                 │  (ENT) →  │                 │    │Output Time      │  (ENT) →
│DR AR T1 T2 BZ   │           │DR AR T1 T2 BZ   │    │for each Output  │
│03 00 00 00 00   │           │_3 00 00 00 00   │    │                 │
└─────────────────┘           └─────────────────┘    └─────────────────┘
```

> . You can program OUTPUT activating time when the EXIT button pressed. The value put here is value x second when the Time Unit set to 1 second and value/10 second when the Time Unit set to 0.1 sec.
> You can set the time from 00 to 98 seconds (0.0 to 9.8 seconds if Time Unit set to 0.1 sec.) and if you put the value "99", the Output will activate forever until you reset the Output.
> Press <4> or <6> key to select Input Sources then press <ENT> key to program the Output time.
> DR: Door Relay Output
> AR: Alarm Relay Output
> T1: TTL#1 Output
> T2: TTL#2 Output
> BZ: Buzzer Output

## 9.6.2 DOOR CONTACT OUTPUT SETTING

## 9.6.3 AUX INPUT#1 OUTPUT SETTING

## 9.6.4 AUX INPUT#2 OUTPUT SETTING

## 9.6.5 TAMPER ALARM OUTPUT SETTING

## 9.6.6 DURESS ALARM OUTPUT SETTING

**Output Time setting for above Input Sources are the same as 9.6.1 Exit Button Output setting.**

## 9.6.7 OUTPUT TIME SCHEDULE SETTING

```
┌──────────────────────┐         ┌──────────────────────┐      ┌──────────────────┐
│ 7.OUTPUT T/S         │         │ 7.OUTPUT T/S         │      │ Enter 2digit     │
│                      │ (ENT)→  │                      │      │ Output T/S Code  │ (ENT)→
│  DR AR T1 T2 BZ      │         │  DR AR T1 T2 BZ      │      │ for each Output  │
│  00 00 00 00 00      │         │  _0 00 00 00 00      │      └──────────────────┘
└──────────────────────┘         └──────────────────────┘
```
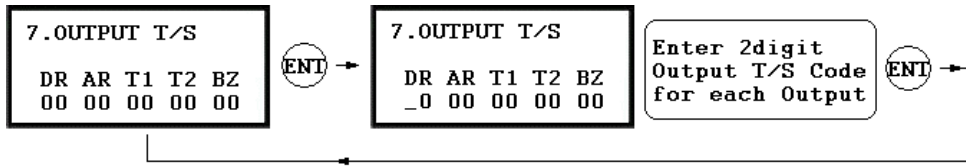
. You can link a T/S Code to each Output. The default T/S Code is "00" which means no T/S is applied to the
  Outputs. This setting is very useful when you want to open the door for a Time Interval.
   Press <ENT> key to link a T/S Code to the Output then enter 2digit T/S Code for each Output.
  DR: Door Relay Output T/S Code
  AR: Alarm Relay Output T/S Code
  T1: TTL#1 Output T/S Code
  T2: TTL#2 Output T/S Code
  BZ: Buzzer Output T/S Code

## 9.6.8 INPUT TIME SCHEDULE SETTING

```
┌──────────────────────┐         ┌──────────────────────┐      ┌──────────────────┐
│ 8.INPUT T/S          │         │ 8.INPUT T/S          │      │ Enter 2digit     │
│                      │ (ENT)→  │                      │      │ Input T/S Code   │ (ENT)→
│  EX DC I1 I2 TP      │         │  EX DC I1 I2 TP      │      │ for each Input   │
│  00 00 00 00 00      │         │  _0 00 00 00 00      │      └──────────────────┘
└──────────────────────┘         └──────────────────────┘
```
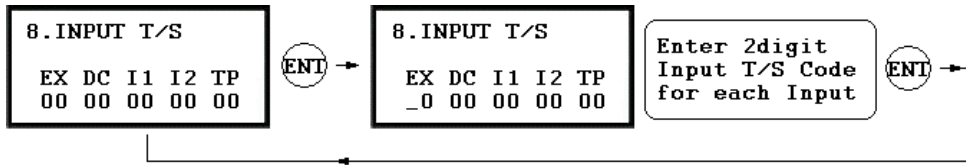
. You can link a T/S Code to each Input. The default T/S Code is "00" which means no T/S is applied to the
  Inputs. This setting is very useful when you want to activate PIR sensor input for a Time Interval.
   Press <ENT> key to link a T/S Code to the Input then enter 2digit T/S Code for each Input.
  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

## 9.6.9 INPUT TYPE SETTING

```
┌──────────────────────┐         ┌──────────────────────┐      ┌──────────────────┐
│ 9. INPUT TYPE        │         │ 9. INPUT TYPE        │      │ Enter 2digit     │
│  00: NO, 01: NC      │         │  00: NO, 01: NC      │      │ Input TYPE Code  │ (ENT)→
│  EX DC I1 I2 TP      │ (ENT)→  │  EX DC I1 I2 TP      │      │ for each Input   │
│  00 00 00 00 00      │         │  _0 00 00 00 00      │      └──────────────────┘
└──────────────────────┘         └──────────────────────┘
```
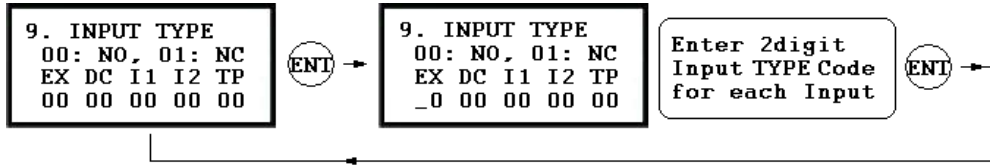
. You can program input type(00: NO, 01: NC) to each Input. The default input type is "00" which means input
  is NO type.
   Press <ENT> key then enter 2digit Code for each Input.
  EX: EXIT Button Input type
  DC: Door Contact Sensor Input type
  I1: Aux Input#1 type
  I2: Aux Input#2 type
  TP: Tamper Switch is "00" because it is internal device.

## 9.7 F7 SETUP MENU

| | |
|---|---|
| R1 ID OK LV1 | Outputs operation time : 10 Digits |
| R1 ID OK LV2 | Outputs operation time : 10 Digits |
| R1 ID OK LV3 | Outputs operation time : 10 Digits |
| R1 ID OK LV4 | Outputs operation time : 10 Digits |
| R1 ID ERROR | Outputs operation time : 10 Digits |
| R1 T/S ERROR | Outputs operation time : 10 Digits |
| R1 APB ERROR | Outputs operation time : 10 Digits |
| R2 ID OK LV1 | Outputs operation time : 10 Digits |
| R2 ID OK LV2 | Outputs operation time : 10 Digits |
| R2 ID OK LV3 | Outputs operation time : 10 Digits |
| R2 ID OK LV4 | Outputs operation time : 10 Digits |
| R2 ID ERROR | Outputs operation time : 10 Digits |
| R2 T/S ERROR | Outputs operation time : 10 Digits |
| R2 APB ERROR | Outputs operation time : 10 Digits |

Searching key
<4> or <6>

**\* Default Output Setting for Input Circumstance**

| 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 |

## 9.7.1 OUTPUT SETTING FOR READER#1 ID OK LEVEL 1



```
1.RD1 ID OK LV1          1.RD1 ID OK LV1        Enter 2digit
                                                Output Time
DR AR T1 T2 BZ    (ENT)→  DR AR T1 T2 BZ         for each Output   (ENT)→
03 00 00 00 00           _3 00 00 00 00
```
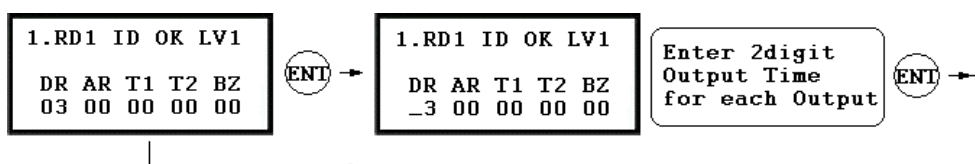
. You can program OUTPUT activating time when the user ID is granted the access from the Reader#1. The value put here is value x second when the Time Unit set to 1 second and value/10 second when the Time Unit set to 0.1 sec. This Output Time is applied for the users registered with Level#1 output.
You can set the time from 00 to 98 seconds (0.0 to 9.8 seconds if Time Unit set to 0.1 sec.) and if you put the value "99", the Output will activate forever until you reset the Output.
Press <4> or <6> key to select Input Sources then press <ENT> key to program the Output time.
DR: Door Relay Output Time
AR: Alarm Relay Output Time
T1: TTL#1 Output Time
T2: TTL#2 Output Time
BZ: Buzzer Output Time

**Output Time setting from 9.7.2 to 9.7.14 is the same as 9.7.1 RD1 ID OK LV1 Output setting.**

### 9.7.2 OUTPUT SETTING FOR READER#1 ID OK LEVEL 2

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

### 9.7.3 OUTPUT SETTING FOR READER#1 ID OK LEVEL 3

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

### 9.7.4 OUTPUT SETTING FOR READER#1 ID OK LEVEL 4

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

### 9.7.5 OUTPUT SETTING FOR READER#1 ID ERROR

This Output Time is applied if the user is not registered to Reader#1.

### 9.7.6 OUTPUT SETTING FOR READER#1 T/S ERROR

This Output Time is applied if the user is T/S error to Reader#1.

### 9.7.7 OUTPUT SETTING FOR READER#1 APB ERROR

This Output Time is applied if the user is APB error to Reader#1.

### 9.7.8 OUTPUT SETTING FOR READER#2 ID OK LEVEL 1

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

### 9.7.9 OUTPUT SETTING FOR READER#2 ID OK LEVEL 2

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

### 9.7.10 OUTPUT SETTING FOR READER#2 ID OK LEVEL 3

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

### 9.7.11 OUTPUT SETTING FOR READER#2 ID OK LEVEL 4

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

### 9.7.12 OUTPUT SETTING FOR READER#2 ID ERROR

This Output Time is applied if the user is not registered to Reader#2.

### 9.7.13 OUTPUT SETTING FOR READER#2 T/S ERROR

This Output Time is applied if the user is T/S error to Reader#2.

### 9.7.14 OUTPUT SETTING FOR READER#2 APB ERROR

This Output Time is applied if the user is APB error to Reader#2.

## 9.8 F8 SETUP MENU
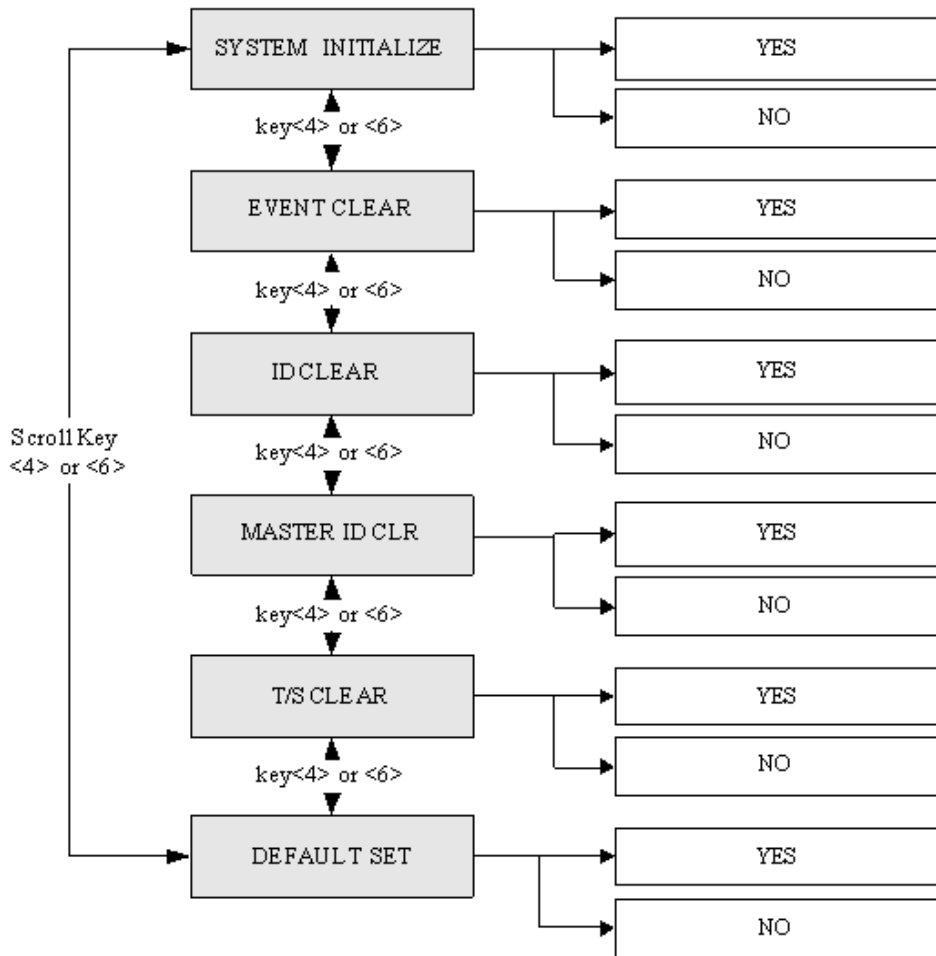


## 9.8.1 SYSTEM INITIALIZE
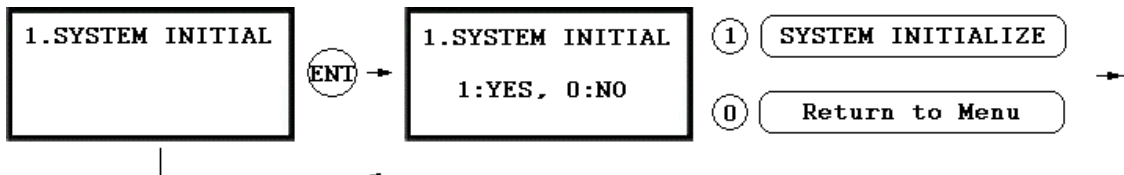


. This operation will initialize the GE314. Press <ENT> key, if an initialization is needed (First time installation
   or resetting in the event of a malfunction).
   **CAUTION: Initializing will erase all stored data in the memory.**
. Press the <1> key to initialize or <0> key to cancel the operation.
. The "WAIT.."message appears while the system is being initialized.
   After the initialization, GE314 will return to the Setup menu.

### 9.8.2 EVENT CLEAR

```
┌─────────────────┐          ┌─────────────────┐     ⎛1⎞ ( ERASE ALL EVENTS )
│ 2.EVENT CLEAR   │  (ENT)→  │ 2.EVENT CLEAR   │
│                 │          │   1:YES, 0:NO   │     ⎛0⎞ ( Return to Menu )
└─────────────────┘          └─────────────────┘
```

---
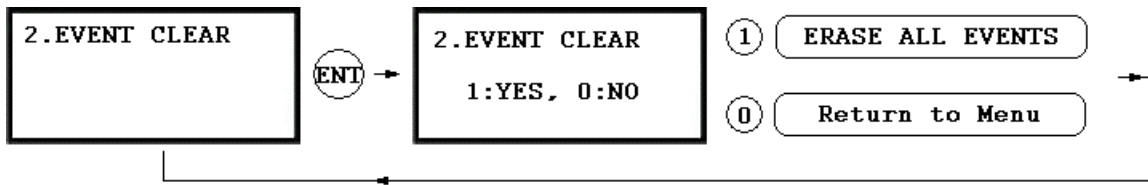
> . When the event memory is full or when you want to change ID COUNT, you can clear the event memory in this menu. Press <ENT> key then press <1> key to clear event memory or <0> key to cancel the operation.
> **CAUTION: Before you clear the events, make sure that the stored events is not necessary to upload to the host PC otherwise you may lose important data.**

### 9.8.3 ID CLEAR

```
┌─────────────────┐          ┌─────────────────┐     ⎛1⎞ ( DELETE ALL ID )
│ 3.ID CLEAR      │  (ENT)→  │ 3.ID CLEAR      │
│                 │          │   1:YES, 0:NO   │     ⎛0⎞ ( Return to Menu )
└─────────────────┘          └─────────────────┘
```

---
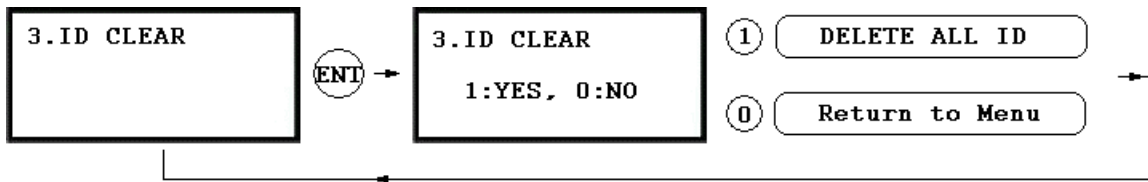
> . When you want to delete all User IDs (Card IDs), you can clear all User IDs from the memory. Press <ENT> key, then press the <1> key to clear all User IDs or <0> key to cancel the operation.
> **CAUTION: Before clearing all User IDs, make sure that the registered User ID is no longer used otherwise you may lose all registered User IDs.**

### 9.8.4 MASTER ID CLEAR

```
┌─────────────────┐          ┌─────────────────┐     ⎛1⎞ ( DELETE MASTER ID )
│ 4.MASTER ID CLR │  (ENT)→  │ 4.MASTER ID CLR │
│                 │          │   1:YES, 0:NO   │     ⎛0⎞ ( Return to Menu )
└─────────────────┘          └─────────────────┘
```

---
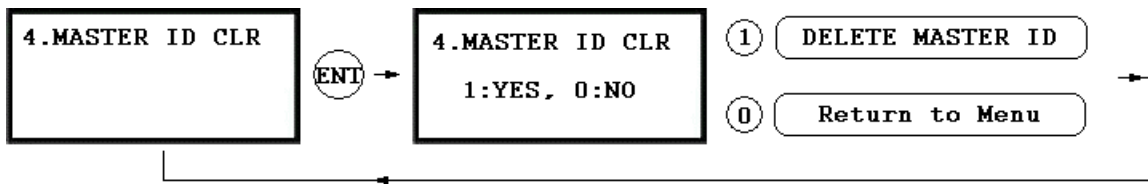
> . When you want to delete all Master IDs, you can clear all Master IDs from the memory. Press <ENT> key, then press the <1> key to clear all Master IDs or <0> key to cancel the operation.
> **CAUTION: Before clearing all Master IDs, make sure that the registered Master ID is no longer used otherwise you may lose all registered Master IDs.**

## 9.8.5 TIME SCHEDULE CLEAR

```
┌─────────────────┐           ┌─────────────────┐    ①  ┌─────────────────────┐
│ 5.T/S CLEAR     │           │ 5.T/S CLEAR     │       │  ALL T/S CLEAR      │
│                 │  ENT  →   │                 │       └─────────────────────┘
│                 │           │   1:YES, 0:NO   │    ⓪  ┌─────────────────────┐
└─────────────────┘           └─────────────────┘       │  Return to Menu     │
                                                         └─────────────────────┘
```
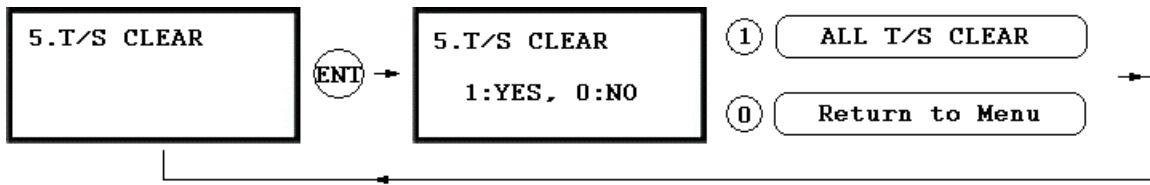
. When you want to delete all Time Schedules (01~10), all Holiday schedules(01~10), Holiday code, Reader#1 Mode T/S code and Reader#1 Mode T/S code, you can clear them from the memory. Press <ENT> key and press the <1> key to clear all T/S or <0> key to cancel the operation.

**CAUTION: Before you clear all T/S, make sure that the stored T/S is no longer used, otherwise you may lose all stored T/S in the memory.**

## 9.8.6 DEFAULT SETTING

```
┌─────────────────┐           ┌─────────────────┐    ①  ┌─────────────────────┐
│ 6.DEFAULT SET   │           │ 6.DEFAULT SET   │       │  LOAD DEFAULT SET   │
│                 │  ENT  →   │                 │       └─────────────────────┘
│                 │           │   1:YES, 0:NO   │    ⓪  ┌─────────────────────┐
└─────────────────┘           └─────────────────┘       │  Return to Menu     │
                                                         └─────────────────────┘
```
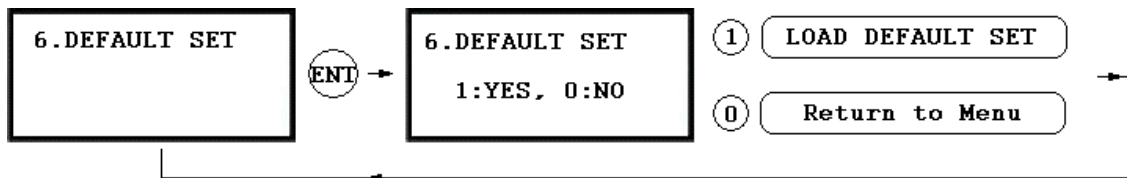
. When you want to delete all Default setting value, you can clear them from the memory. Press <ENT> key and press the <1> key to reload all default setting value clear all T/S or <0> key to cancel the operation.

**CAUTION: Before you clear all Default setting value(Reader mode, Board ID etc..), make sure that the stored system setting value is no longer used, otherwise you may lose all stored system setting value in the memory.**

## 9.9 F9 SETUP MENU
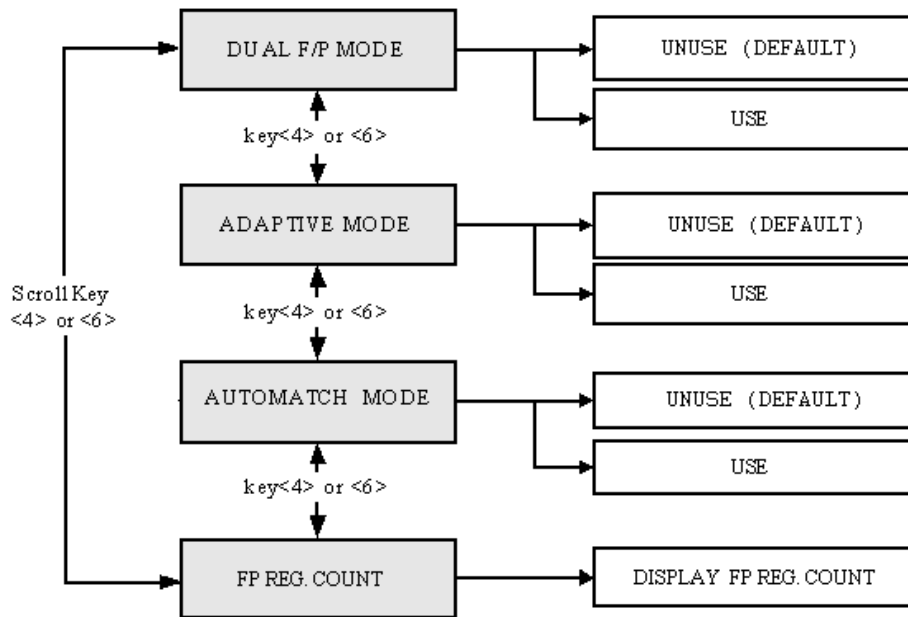


## 9.9.1 DUAL FINGERPRINT MODE
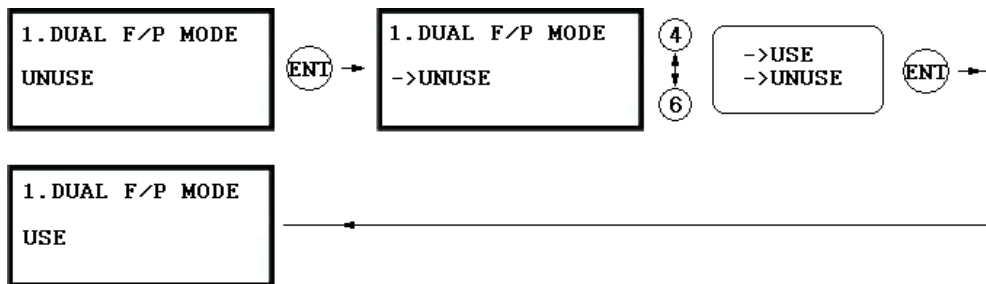


. In **DUAL FINGERPRINT MODE,** you can register two fingerprints for one user ID. Default is UNUSE.
But Dual Fingerprint Mode is higher False Acceptance Rate (FAR) measured.

## 9.9.2 ADAPTIVE MODE
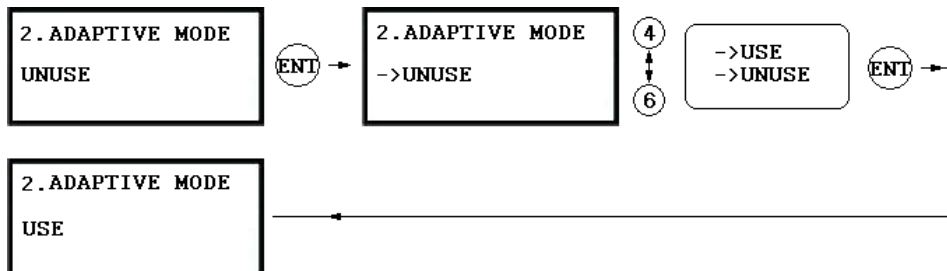


. In **ADAPTIVE MODE**, scanning quality is better than normal mode and also it checks latent finger..
But scanning speed is longer than normal mode. Default is USE.

### 9.9.3 AUTOMATCH MODE

```
┌─────────────────────┐          ┌─────────────────────┐      ④    ┌─────────────────┐
│ 3.AUTOMATCH MODE    │  (ENT)   │ 3.AUTOMATCH MODE    │    ↕      │  ->USE          │  (ENT)
│                     │    →     │                     │          │  ->UNUSE        │    →
│ UNUSE               │          │ ->UNUSE             │      ⑥    └─────────────────┘
└─────────────────────┘          └─────────────────────┘
┌─────────────────────┐
│ 3.AUTOMATCH MODE    │
│                     │  ←───────────────────────────────────────────────────────────
│ USE                 │
└─────────────────────┘
```
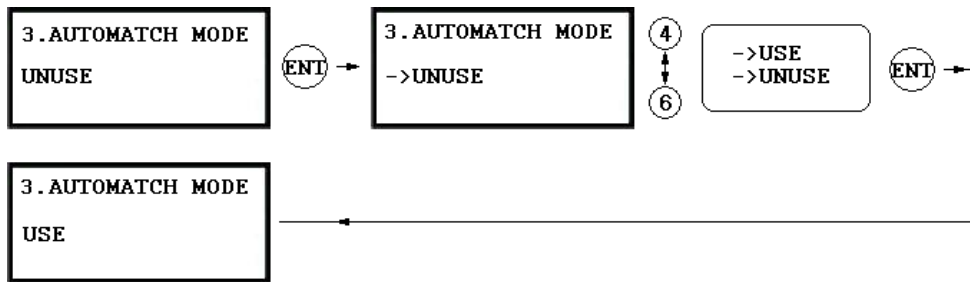
┌──────────────────────────────────────────────────────────────────────────────────────┐
│ . Automatch Mode is an **IDENTIFICATION MODE**, you can use 1:N Identification. You can Identify ID by │
│   only putting finger to the scanner. Automatic Touch Sensor is optional purchase. │
└──────────────────────────────────────────────────────────────────────────────────────┘

### 9.9.4 FP REG. COUNT
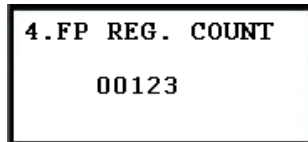
```
┌─────────────────────┐
│ 4.FP REG. COUNT     │
│                     │
│        00123        │
│                     │
└─────────────────────┘
```

┌──────────────────────────────────────────────────────────────────────────┐
│ . This menu displays the total number of registered user ID. It            │
│   automatically counts when you register or delete user IDs. The LCD        │
│   shows total 123 user IDs registered in the memory.                        │
│ . Total number of user IDs is 1,000 user IDs (standard) or optional         │
│   2,000/4,000 user IDs can be stored in the unit.                           │
└──────────────────────────────────────────────────────────────────────────┘

# APPENDIX

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

### * Default Output Setting for Input Sources

| OUTPUT<br><br>INPUT | Door Relay (DR) | Alarm Relay (AR) | TTL#1 (T1) | TTL#2 (T2) | Buzzer (BZ) |
|---|---|---|---|---|---|
| [1] EXIT BUTTON | 03 | 00 | 00 | 00 | 00 |
| [ | 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] DURESS ALARM | 00 | 00 | 00 | 00 | 00 |
| [7] OUTPUT TIME SCHEDULE | | 00 | 00 | 00 | 00 |
| [8] INPUT TIME SCHEDULE | 00 | 00 | 00 | 00 | 00 |
| [8] INPUT TYPE | 00 | 00 | 00 | 00 | 00 |

* Index No. [1] ~ [6]:
    The value indicates operation time (second) of each output for the input signal.
* Index No. [7]:
    The value indicates time schedule code (index) that each output operation has to be applied.
* Index No. [8]:
    The value indicates the time schedule code (index) that each input #1(Exit button) ~#5 operation has to be applied.
* Index No. [9]:
    The value indicates the type of each input #1(Exit button) ~#5 operation.
    The "00" is NO(Normal Open) type.
    The "01" is NC(Normal Close) type.
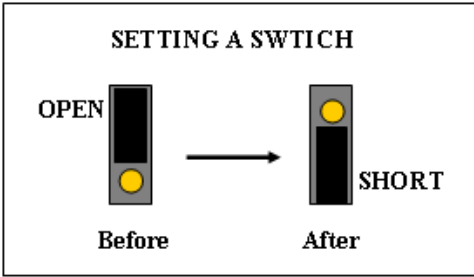
**\* Default Output Setting for Input Circumstance**

| INPUT        OUTPUT | Door (DR) | Alarm (AR) | TTL#1 | 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 | | 00 | 00 | 00 | 00 |
| [4] Reader#1 ID OK LV4 | | 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 |

\* Index No. [1] ~ [14]:
   The value indicates operation time (second) of each output for the input signal.

## B. TROUBLE SHOOTING

| | **When the power off and on after the time setting, the LCD displays "00/00 00:00:01".** |
|---|---|
| Cause | Of that user mistake, or the system is defective of the device. |
| Solution | 1. Check BAT connection S/W.<br><br>You have to short the S/W, and system initialize before system installation.<br><br><br><br>Figure: SWITCH SETTING           Figure: SWITCH LOCATION<br><br>2. If the trouble remains after checking the above, contact a designated service center. |

| | **A valid card became unregistered after batch-downloading IDs from PC.** |
|---|---|
| Cause | Wrong procedure during download or a component defect. |
| Solution | 1.  The card ID might be registered only to the controller and not registered in the PC. During the process of downloading IDs, GE314 first erase the ID memory of the unit, therefore if the IDs from the PC didn't contain the card ID, this can happen.<br>2.  Check whether the card ID is registered in the PC.<br>3.  If not, please register the number and try downloading again.<br>4.  If the trouble remains after the procedure above, contact a designated service center. |

| | **It doesn't enter the Setup Mode after entering the Master ID "00000000".** |
|---|---|
| Cause | The Master ID might have been changed or components are defective. |
| Solution | 1. Try changing the Master ID through the application S/W (It'll be changed to "00000000").<br>2. When it is not feasible, initialize the unit as following:<br>After the all installation and connections are completed, press and hold the Initialize button and put the power (+12V DC) to GE314. The LCD will first display "**Initialize OK? 0:No 1:Yes"**. Press <1> key if you want to initialize the system. After all Initialization process is completed, the system is operating on normal mode and the LCD displays "**GE Security, GE314 [F1], Date Time**".<br>3. If the trouble remains after the procedure above, contact a designated service center. |

| No problem with accessing by card, but cannot access with the PIN input. | |
| --- | --- |
| Cause | An error in Setup or possible component defect. |
| Solution | 1. Check whether a beep sound is generated when you press a key.<br><br>   When a beep sound is generated, the problem may be an error in setup. Proceed like followings:<br><br>    - Enter the Master ID ("00000000" default) to enter the Setup mode.<br><br>    - Press <F2> key.<br><br>    - [LANGUAGE] will appear on the LCD, then use the key <6> to choose [RD1_PIN_INPUT] and select 'USE' as wanted.<br><br>   2. When there is no beep sound or already enabled Key-in functions, contact a designated service center. |

| The Setup mode suddenly goes back to the Normal operating mode. | |
| --- | --- |
| Cause | Time out error |
| Solution | In the Setup mode, it is programmed to do so when there is no key-in or reading card within 60 seconds. |

| Keeps making buzzer sound: "beep~ beep ~ beep" or "beeeeeeeep~~~~". | |
| --- | --- |
| Cause | Error in Installation, Door status or Internal circuits. |
| Solution | 1. Check the door status. It occurs in case that the door is opened over 3sec(Default) after the proper door open time.<br><br>   2. Check the door contact sensor type: it should be NO type.<br><br>   3. Check in [7. OUTPUT T/S] of F6, the ten Time schedule code (01~10) value of output T/S. If the time schedule code is set between 01 up to 10 and if the present time is included in the schedule.<br>   If it is set to unintended value, change it to "00" ( Programmable via PC software)<br><br>   4. Check in Tamper switch of GE314.<br><br>   5. If the trouble remains after checking the above, contact a designated service center. |

| **"SCHEDULE ERROR" message shows when RFID card is read.** | |
|---|---|
| Cause | Error in RFID card registration, time schedule setting or the system itself. |
| Solution | 1. If it was a properly operating unit before, there has been an electric shock that damaged the internal memory and data. Please initialize the unit as instructed in the manual.<br><br>2. Check if ID information has been put in incorrectly during its registration.<br>  * Register ID again checking the following points.<br>  -In order to restrict access of the ID user for specific time zone as instructed in the manual, register time schedule in advance and apply the time schedule code(1~10) in the registration of the user ID.<br>  **- In order to allow the user to access at all times, put in "00".**<br><br>3. Use software for time schedule setting in case it is connected to PC as the software manual.<br><br>4. If the trouble remains after checking the above, contact a designated service center. |

| **"ACCESS DOOR ERR" message shows when the RF ID card is read.** | |
|---|---|
| Cause | Incorrect user setting or false of internal circuit. |
| Solution | 1. If it was a properly operating unit before, there has been an electric shock that damaged the internal memory and data. Please initialize the unit as instructed in the manual.<br><br>2. Check if ID information has been put in incorrectly during its registration.<br>  * Register ID again and check the following points:<br>  - Since the controller has two reader ports, define "RD" – door for the user to be allowed to access (Reader1(Bilt-in reader) only: "1", Reader 2(Extra reader) only: "2", Reader 1 & 2 both: "0 or 3")<br>  - If RD is set as "1", only when the card is read at Reader 1, the door opens but not at Reader2. If it is read at Reader 2, "ACCESS DOOR ERROR" message shows up.<br>  - If RD is set as "2", only when the card is read at reader 2, the door opens but not at reader1. If it is read at reader 1, "ACCESS DOOR ERROR" message shows up.<br>  - If RD is set as "0 or 3", reader 1 & 2 both open each door.<br><br>3. If the trouble remains after checking the above, contact a designated service center. |

| **The controller does not communicate with the Host-PC.** |
|---|

| Cause | A defective cable is used, errors in wiring, an error in setting COMM ID of the controller, or damage on the communication port (either on PC side or on the controller side). |
|---|---|
| Solution | 1. Please check the settings of the application S/W and the controller.<br>  - Check if the controller's COMM ID is listed on the application S/W.<br>  - Set the different COMM ID when two or more controllers are installed.<br>  - Check if the communication speed (9600bps default) is the same as the setting on the S/W.<br>  - Make sure that the PC's COM port is set correctly on the S/W.<br>  - The parameters at the S/W should be set as following:<br>    Parity bit     : NONE<br>    Data bit       : 8bit<br>    Stop bit       : 1bit<br>2. Check the line connection for communication. |

| RS232 | | RS485 (mono) | | |
|---|---|---|---|---|
| GE313 | PC | GE314 | RS485/232 Converter | PC |
| RX | TX | RTX(-) | RTX(-) | The RS232 cable from the converter |
| TX | RX | RTX(+) | RTX(+) | |
| GND | GND | | | |

| RS485(Multi Drop) | | | |
|---|---|---|---|
| GE314 | GE314 | RS485/232 Converter | PC |
| RX(-) | RX(-) | TX(-) | The RS232 cable from the converter |
| RX(+) | RX(+) | TX(+) | |

3. In case of setting RS485 communication, we recommend to use line-end resistors of 120 Ohm between the RTX (+) and RTX (-) lines. Apply the same resistors to the converter RS485 lines. Consult a service center or an electric technician if you are not sure how to do it.
4. When a multi-drop communication doesn't work, test one-by-one communication first.
5. If the trouble remains after the procedure above, contact a designated service center.

# FCC REGISTRATION INFORMATION

## FCC REQUIREMENTS PART 15

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

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 interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a **Class A Digital Device**, pursuant to **Part 15 of the FCC Rules**. These limits are designed to this equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.
However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the radio or television off and on, the user is encouraged to try to correct interference by one or more of the following measures.

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.

# WARRANTY AND SERVICE

GE314 warranty is 1 years from the shipping date; returns must have an RMA (Return Material Authorization) number. The customer is to provide a description of the specific problem. The customer is to include serial numbers, formats, and model numbers with the items to be returned.

## IN THE UNITED STATES

**RF LOGICS Inc. Service Center**
**370 Amapola Ave.#106, Torrance, CA90501**
**Tel.:  310-782-8383**
**Fax.: 310-782-8292**
**E-mail: rflogics@rflogics.com**
**Web-site: www.rflogics.com**

## OUTSIDE OF THE UNITED STATES

**ID TECK CO., LTD. Service Center**
**5F Ace Techno Tower B/D.**
**684-1 Deungchon-dong, Gangsuh-gu,**
**SEOUL 157-030, KOREA**
**Tel.:  +82-(2)-2659-0055**
**Fax.: +82-(2)-2659-0086**
**E-mail: webmaster@idteck.com**
**Web-site: www.idteck.com**

## Technical Support(in korea)

**E-mail : techsupport@idteck.com**
**Hotline: +82-16-604-8965 (Customer support)**
**          +82-17-340-4170(R&D)**

Please use the original container, or pack the unit(s) in a sturdy carton with sufficient packing to prevent damage, include the following information:
1. A proof-of-purchase indicating model number and date of purchase.
2. Bill-to address
3. Ship-to address
4. Number and description of units shipped.
5. Name and telephone number of person to contact.
6. Reason for return and description of the problem.

**NOTE**: Damage occurring during shipment is deemed the responsibility of the carrier, and claims should be made directly to the carrier.

# RMA REQUEST FORM & A/S REQUEST FORM

● **RMA REQUEST FORM : ORIGINAL**

## ID TECK Co., LTd

5F, Ace Techno Tower B/D, 684-1, Deungchon Dong, Gangsuh Gu, Seoul, Korea 157-030
TEL : +82-2-2659-0055, FAX ; +82-2-2659-0086, www.idteck.com

| RMA REQUEST FORM | | | | | |
|---|---|---|---|---|---|
| **Send To** <br> **RMA Control Center** <br> 5F, Ace Techno Tower B/D 684-1, <br> Deungchon-Dong, Kangsuh-Gu <br> Seoul, Korea, 157-030 | | | **RMA No. & Date :** <br> **Original Invoice No. & Date :** | | |
| **Sales Person In Charge** | | | **Requested From :** | | |
| **Shipping Port :** <br> **Air / Vessel :** | | | **Departure Date :** | | |
| **NO** | **Model** | **Serial Number** | Error Check Box by shipper | | |
| **1** | Engineer Comment | | RS 232 Com. □ <br> Input/Output □ | Power □ <br> Keypad □ | Card Reading □ <br> RS 422 Com □ |
| | | | Others □ : | | |
| **2** | Engineer Comment | | RS 232 Com. □ <br> Input/Output □ | Power □ <br> Keypad □ | Card Reading □ <br> RS 422 Com □ |
| | | | Others □ : | | |
| **3** | Engineer Comment | | RS 232 Com. □ <br> Input/Output □ | Power □ <br> Keypad □ | Card Reading □ <br> RS 422 Com □ |
| | | | Others □ : | | |
| **4** | Engineer Comment | | RS 232 Com. □ <br> Input/Output □ | Power □ <br> Keypad □ | Card Reading □ <br> RS 422 Com □ |
| | | | Others □ : | | |
| **5** | Engineer Comment | | RS 232 Com. □ <br> Input/Output □ | Power □ <br> Keypad □ | Card Reading □ <br> RS 422 Com □ |
| | | | Others □ : | | |
| **Manufacture's Verification** | | | | | |
| Product Defective : <br> User's Misuse : <br> Communication Error : | | | Installation Error : <br> Connection Error : <br> Others : | | |
| **Packing Details** | | | | | |
| Dimension(L:W:H) : <br> Net & Gross Weight : | | | No. of Units <br> No. of Boxes | | |
| **Requested By** <br><br> —————————— <br> Buyer's Signature | | | **Received By** <br><br> —————————— <br> IDTECK's Signature | | |

- **RMA REQUEST FORM : SAMPLE**

**ID TECK Co., LTd**

5F, Ace Techno Tower B/D, 684-1, Deungchon Dong, Gangsuh Gu, Seoul, Korea 157-030
TEL : +82-2-2659-0055, FAX ; +82-2-2659-0086, www.idteck.com

| | | | | | | |
|---|---|---|---|---|---|---|
| | | **RMA REQUEST FORM** | | | | |
| **Send To** RMA Control Center 5F, Ace Techno Tower B/D 684-1, Deungchon-Dong, Kangsuh-Gu Seoul, Korea, 157-030 | | | **RMA No. & Date :** We send this No. , when you want. **Original Invoice No. & Date :** 00-00-0-000 / 1990.01.01 | | | |
| **Sales Person In Charge** Karina Kwak | | | **Requested From :** Mr. Luis Castro ABC Company,… address…. Tokyo, Japan | | | |
| **Shipping Port :** Narita **Air / Vessel :** Air | | | **Departure Date :** | 2003, 11. 25 | | |
| NO | Model | Serial Number | Error Check Box by shipper | | | |
| 1 | **505R** Engineer Comment | **XXXXXXXXXXXX** **Write problem to be detailed.** | RS 232 Com. □ Input/Output □ Others □ : | Power Keypad | Card Reading RS 422 Com □ | |
| 2 | **others** Engineer Comment | | RS 232 Com. □ Input/Output □ Others □ : | Power □ Keypad □ | Card Reading □ RS 422 Com □ | |
| 3 | Engineer Comment | | RS 232 Com. □ Input/Output □ Others □ : | Power □ Keypad □ | Card Reading □ RS 422 Com □ | |
| 4 | Engineer Comment | | RS 232 Com. □ Input/Output □ Others □ : | Power □ Keypad □ | Card Reading □ RS 422 Com □ | |
| 5 | Engineer Comment | | RS 232 Com. □ Input/Output □ Others □ : | Power □ Keypad □ | Card Reading □ RS 422 Com □ | |
| **Manufacture's Verification** | | | | | | |
| Product Defective : User's Misuse : Communication Error : | | | Installation Error : Connection Error : Others : | | | |
| **Packing Details** | | | | | | |
| Dimension(L:W:H) :  **30 * 25 * 80** Net & Gross Weight :  **10Kg** | | | No. of Units  **20** No. of Boxes  **2** | | | |
| **Requested By** **XXXXXXXX** Buyer's Signature | | | **Received By** IDTECK's Signature | | | |

● **A/S REQUEST FORM : ORIGINAL**

○

## A/S Request Form

| 1. Model: | 2. RMA No: |
|---|---|
| 3. Original Invoice No: | 4. Serial No: |
| 5. Distributor: | 6. Date: |

### User's Check List

| ☐ Card Reading | ☐ Power | ☐ Keypad |
|---|---|---|
| ☐ Communication | ☐ Relay | ☐ LCD |
| ☐ LED & Buzzer | ☐ Registration | |
| Others : | | |

### How to return...

1. Require 'RMA Request Form' to your contact point before sending the units.
2. Send back the 'RMA Request Form' filled and get RMA No. from RMA Control Center.
3. Retun the defective goods with this Form filled and packed as it was.
4. If out of warranty, repairing invoice will be issued.

**IDTECK RMA CONTROL CENTER**
5F Ace Techno Tower B/D, 684-1, Deungchon-Dong, Gangsuh-Gu, Seoul
Korea 157-030.   Online RMA service : www.idteck.com
Hotline : +82-19-264-7550(Customer support), +82-17-340-4170(R&D)

● **A/S REQUEST FORM : SAMPLE**

## A/S Request Form

| 1. Model: **XXXXX  V X.XX** | 2. RMA No: **XXXXXXXX** |
|---|---|
| 3. Original Invoice No: **XXXXXXXXX** | 4. Serial No: **XXXXXXXXXXXXXX** |
| 5. Distributor: **XXXXXXX** | 6. Date: **2003.XX.XX** |

### User's Check List

| ■ Card Reading | □ Power | □ Keypad |
|---|---|---|
| ■ Communication | □ Relay | ■ LCD |
| □ LED & Buzzer | □ Registration | |

Others : **Write problem!**

### How to return...

1. Require 'RMA Request Form' to your contact point before sending the units.
2. Send back the 'RMA Request Form' filled and get RMA No. from RMA Control Center.
3. Retun the defective goods with this Form filled and packed as it was.
4. If out of warranty, repairing invoice will be issued.

**IDTECK RMA CONTROL CENTER**
5F Ace Techno Tower B/D, 684-1, Deungchon-Dong, Gangsuh-Gu, Seoul Korea 157-030.   Online RMA service : www.idteck.com
Hotline : +82-19-264-7550(Customer support), +82-17-340-4170(R&D)

**MEMO**

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