

# TSG-550/750

## Fingerprint Identification Reader Operation & Installation Manual v1.3



TSG-550



TSG-750

# Table of Contents

## SECTION 1 – TSG-550/750 Installation Manual

1 Power .....	5
2 RS-485 communication .....	5
3 LAN communication .....	6
4 Sensor connection .....	6
5 Wiegand output connection .....	7
6 External reader connection .....	7
7 Lock connection .....	8
8 Anti-passback .....	8

## SECTION 2 – TSG-550 Operation Manual

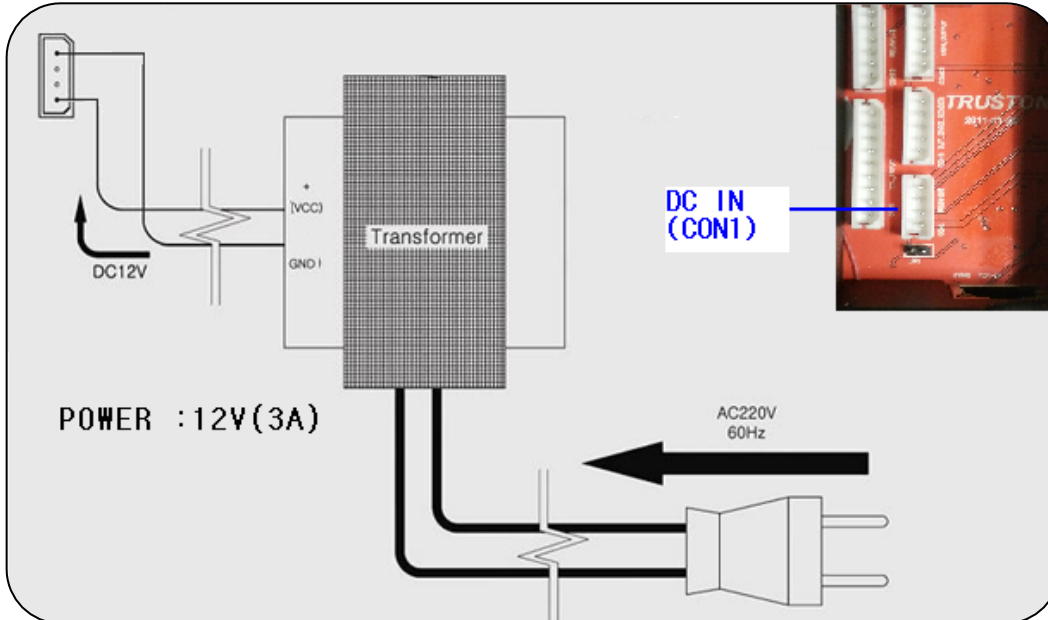
9 -Terminal ID & Network Setup .....	9
10 User Registration .....	10
11 User Delete .....	11
12 Temporary User ID Registration .....	11
13 Basic Setup .....	11
14 Advanced Setup .....	12
15 Schedule .....	12
16 WiFi (Wireless) .....	13
17 Event Setup .....	13
18 Access Setup .....	14
19 Memory Card .....	14
20 Memory Information .....	15
21 Test .....	15
22 Voice Communication .....	16
23 How to use sub sensor .....	16
24 Features of optical and sub sensor .....	17
25 Product Specification .....	18

## SECTION 3 – TSG-750 Operation Manual

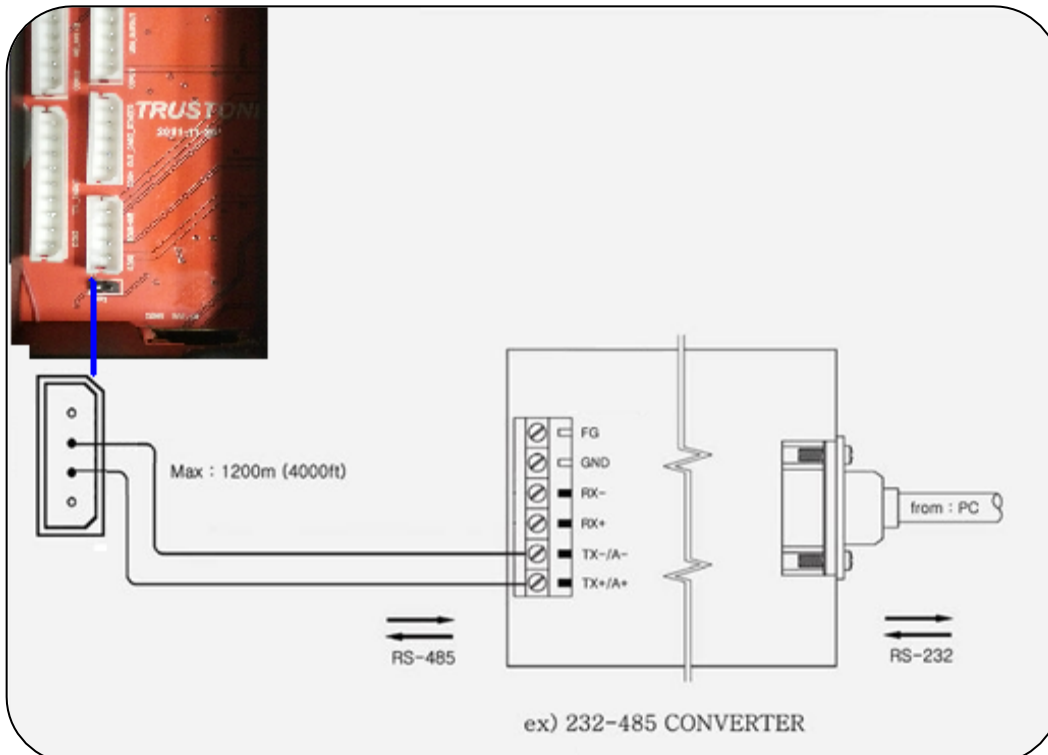
27 Terminal ID & Network .....	19
26 User Registration .....	20
27 Temporary User ID Registration .....	21
28 User Delete .....	21
29 Data Search .....	22
30 Screen Setup .....	23
31 Advanced Setup .....	23
32 Camera Setup .....	24
33 Memroy Save .....	25
34 Access Setup .....	25
35 Operation Mode .....	26
36 Schedule .....	27
37 Test .....	27
38 Memory Information .....	27
39 How to use Visual Communication .....	28
40 How to use sub sensor .....	28
41 Features of optical sensor and sub sensor .....	29
42 Product Specification .....	30

**SECTION 1 – TSG-550/750 Installation Manual**

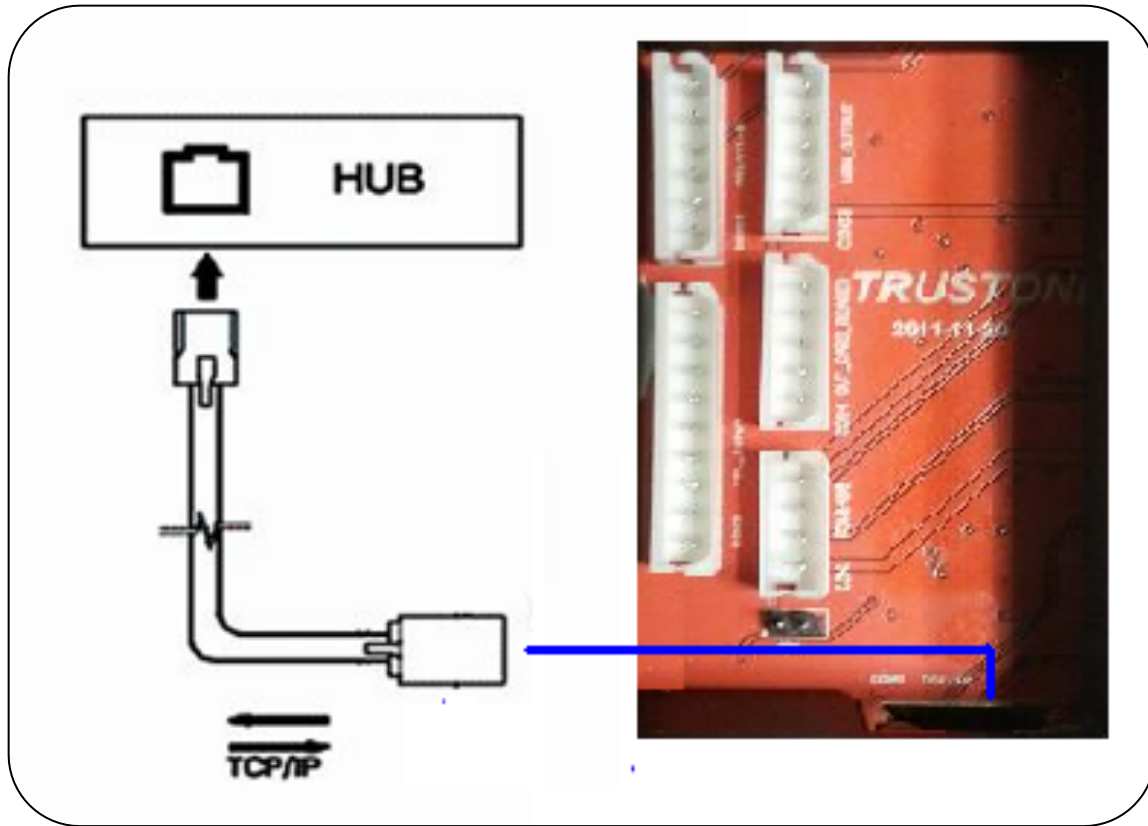
**1. Power can come from a 12V DC transformer or via LAN PoE**



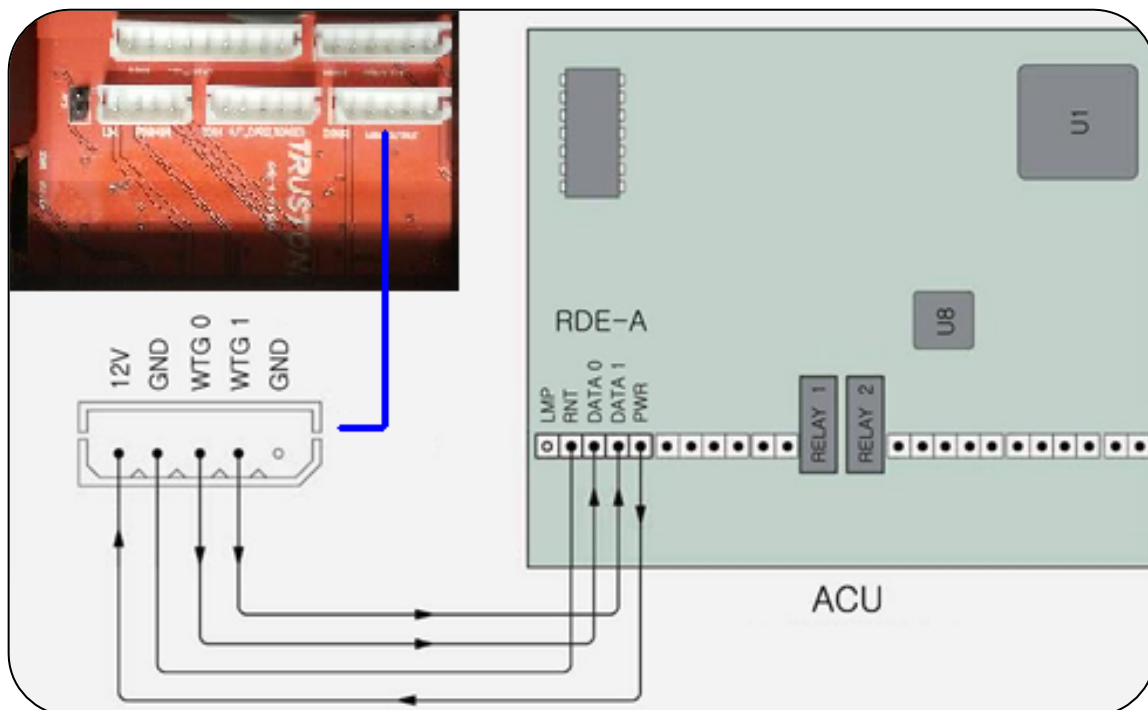
**2. RS-485 Connection for old legacy installs**



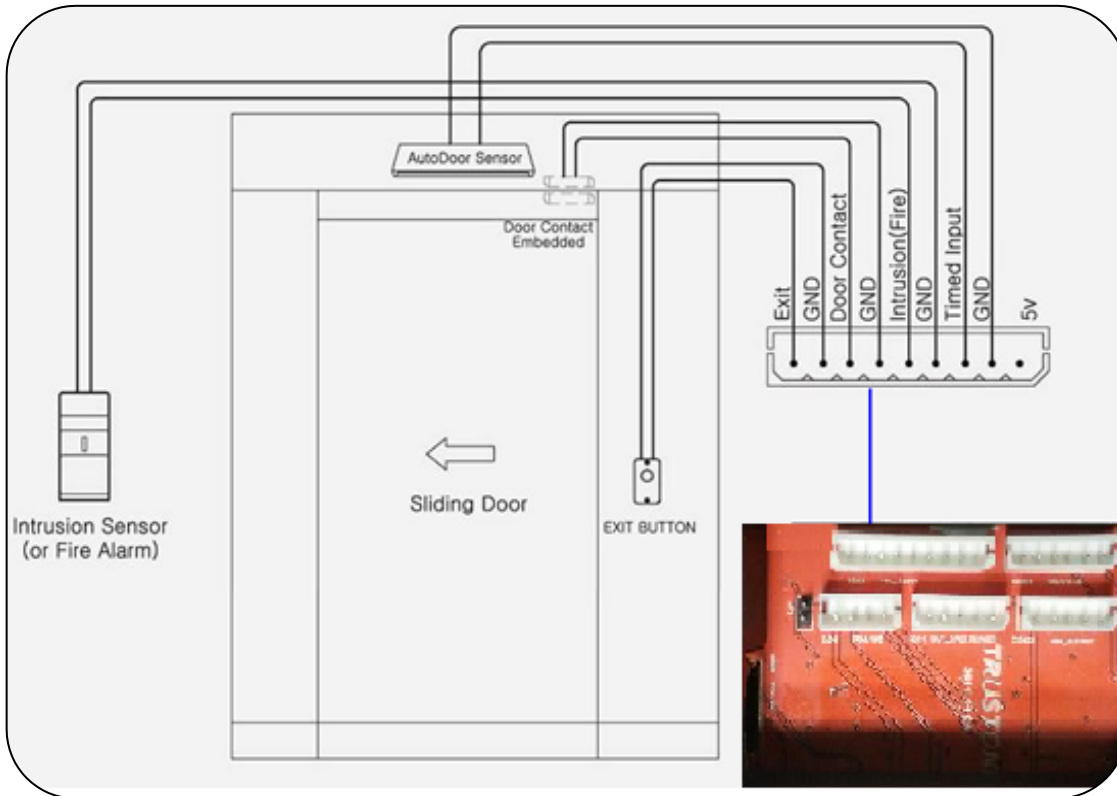
### 3. LAN Network Communication



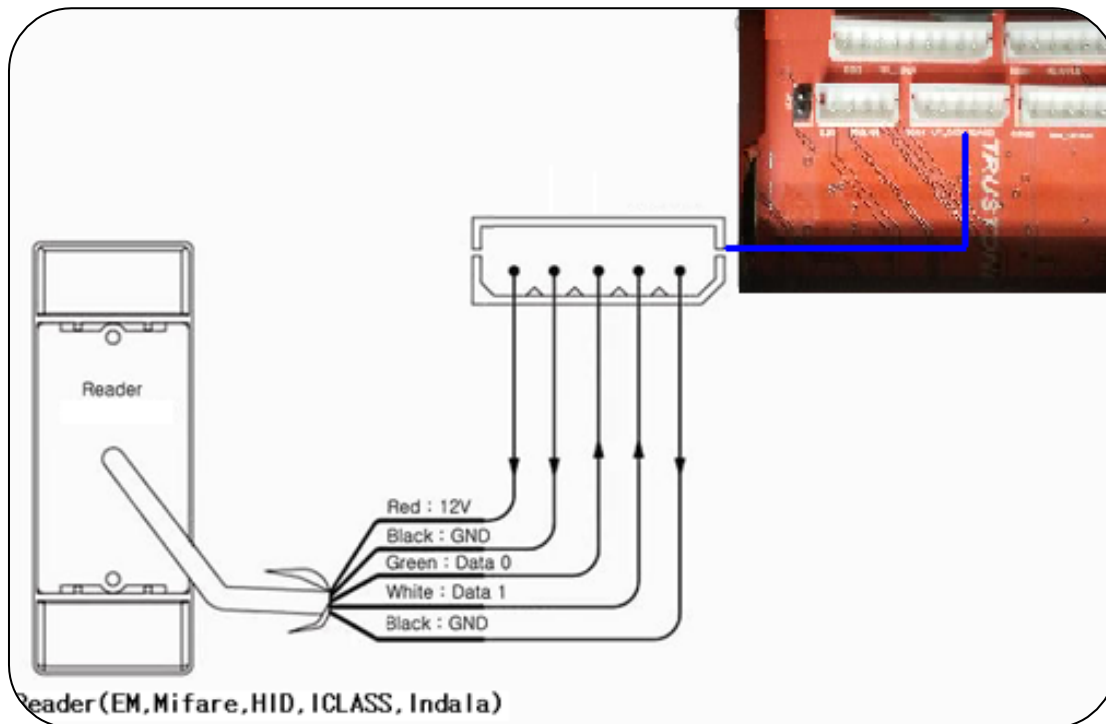
### 4. Sensor Connection for Access controller



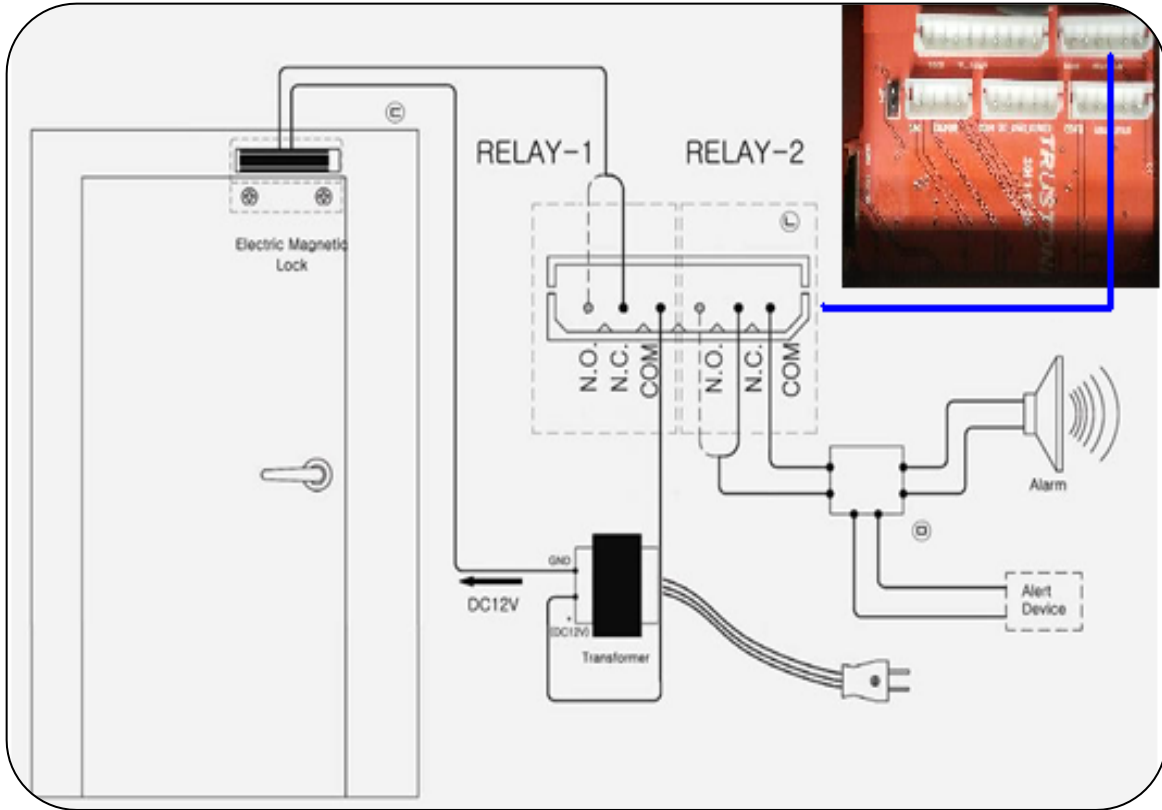
**5. Wiegand Output Connection for Access controllers**



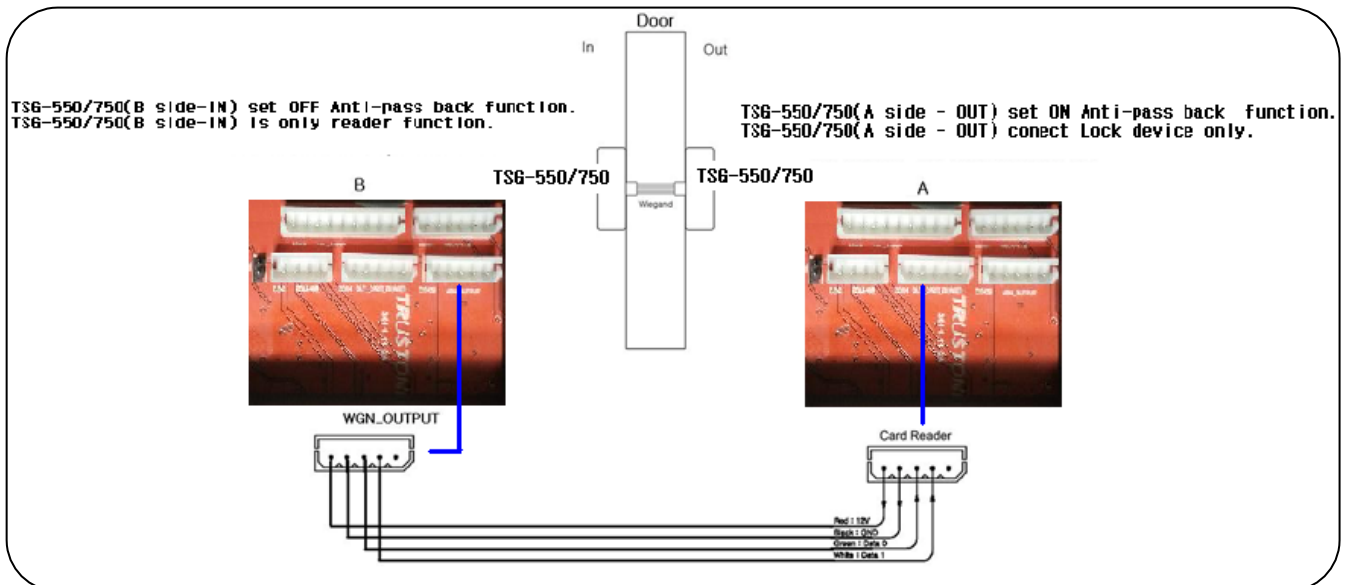
**6. External CARD Reader Connection**



**7. Direct 12Volt Lock Connection**



**8. Access Control Anti-passback between two TSG Devices**



## SECTION 2 – TSG-550 Operation Manual

### 9. Product Specification for TSG-550



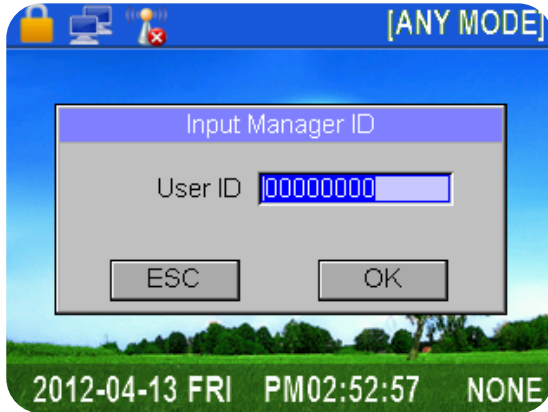
Feature	TSG-550
User Capacity	10,000 (Default) 50,000 (Optional)
1:N 10,000 Speed	< 1 Sec
Event Log	500,000
LCD	2.8 Inch TFT
Camera	No
SD Memory	Yes
POE	Yes
Communication	TCP/IP, RS-485 Wi-Fi (Optional)
Spoof Detection	Yes
VoIP	Yes
P2P	Yes
Card	EM, Mifare, HID Prox or iClass
FAR/FRR	0.00001% / 0.01%
Size (W * H * D)	118 * 163 * 40 Cm



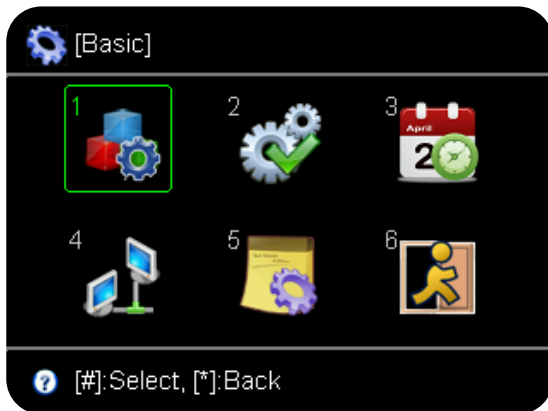
## 10. Terminal ID and Network Setting


Terminal should have a unique ID in order to communicate with PC.

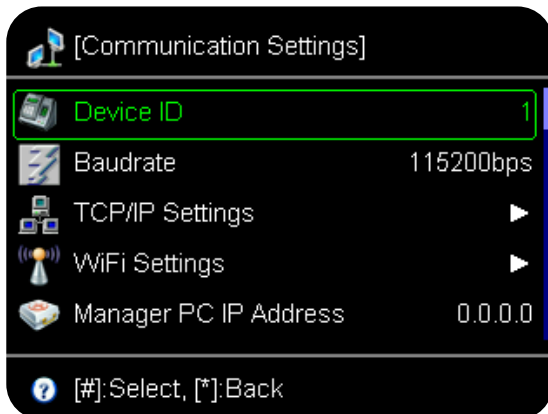
**[Note]** If the ID is duplicated, there should be a communication error.



From the main menu, click \* button. Input admin ID, “1 2 3 4”and then press # button.



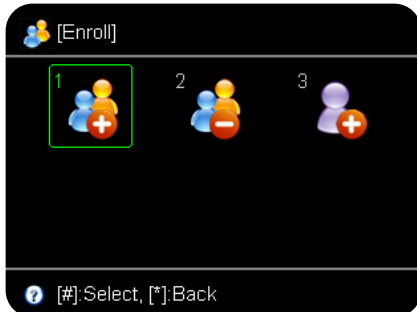
Press no 2 or F2 button and choose  icon and press # button to get into basic setup menu.



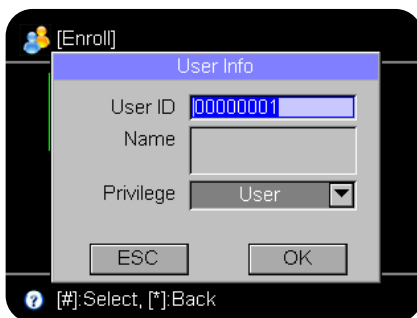
Press No 4 button or F2 button to go to network setting icon and then press # button. In the communication setting, choose the terminal ID and change the ID number. And using F2 button, go to network setting where IP address should be changed. Subnet mask/Gateway address/Port number should be done in the same way.

### 11. User Registration

Input Admin ID number, 1 2 3 4 and press # button.



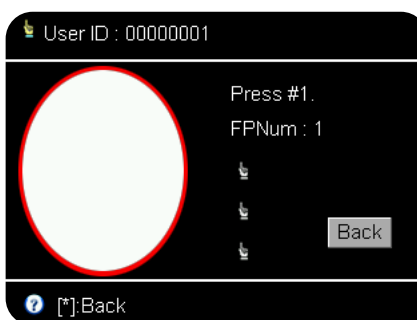
Click icon to register a user.



There will be a pop up window related to user's registration information. Input user ID. Name should be registered on software Privilege can be chosen by user or administrator and click # button.



Register a first finger in three times  
If want to register second finger, do the same way as the first finger.

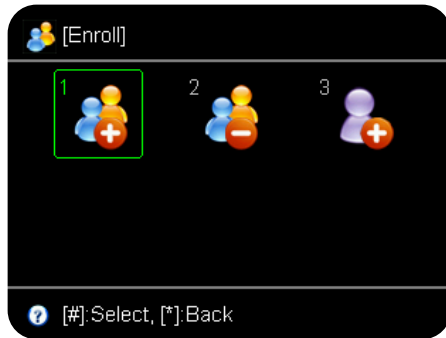


(If want to register on optical sensor, place a finger on the optical sensor in three times and if want to register on sub-sensor, swipe a finger on the sub-sensor in three times)

**Caution) The sub-sensor works only in 1:1 type, so ID or Card should be accompanied)**

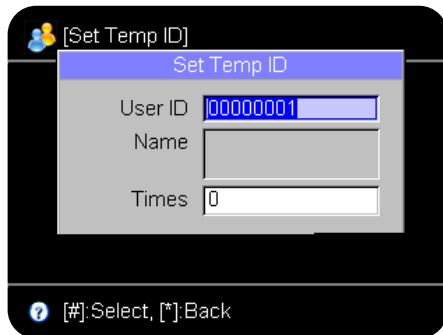
Choose card registration when needed. Wiegand data output is related to card data, so when connected with ACU, should input card data. Once all registration process is completed, press \* button until the main menu comes back.

## 12. User Delete



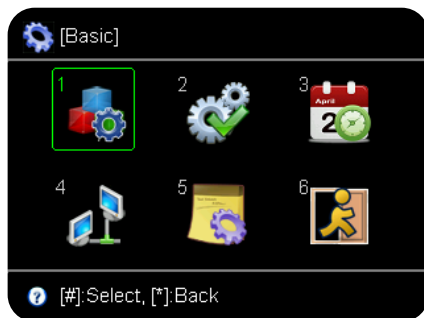
Input Admin ID number, 1 2 3 4 and press # button. Move to No 2 icon to delete a user. Fingerprint/card data can be deleted and user can also be deleted.


## 13. Temporary User ID Registration

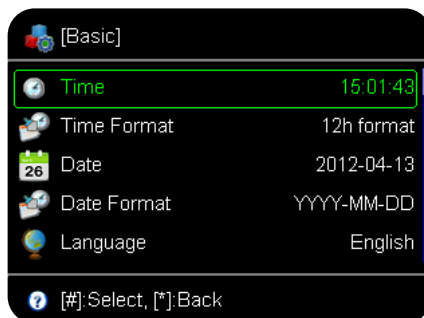


Temporary ID registration for visitors Input temporary ID and the number of times and then press # button. The Temporary ID will be counted as use and it will be deleted after the count is finished automatically.

## 14. Basic Setup




From the main menu, choose  press # button. On this menu, press No 1 button.

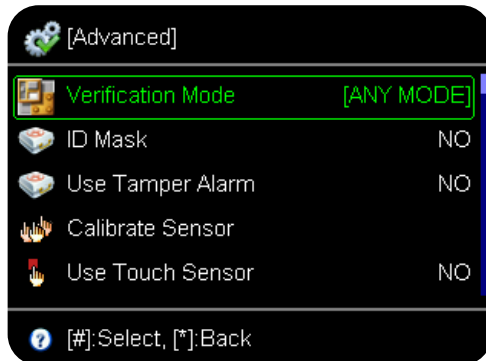


Use F1 and F2 button to scroll the menu and setup Time/Date/Language. Press the # button.

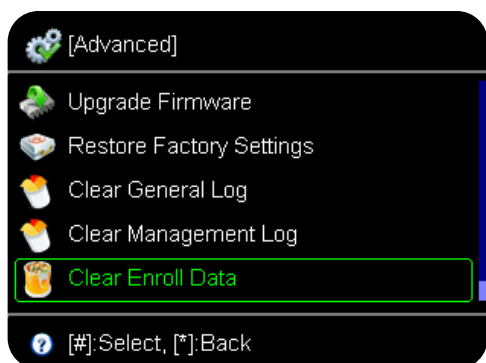
Once all registration process is completed, press \* button until the main menu comes back. Input Admin ID number, 1 2 3 4 and press # and from the basic setup

menu, click  icon and press # button.

## 15. Advance Setting

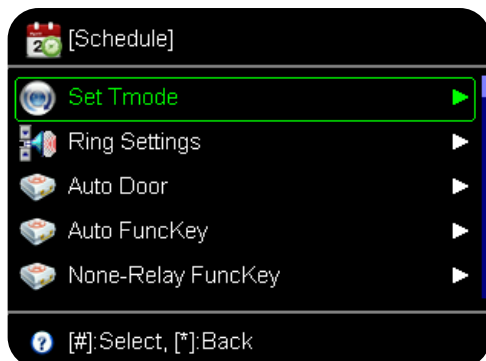


- Operation mode can be chosen by administrator.
- ID index security will not show a user's ID on the screen.
- Case open alarm will make a alarm when detach from the bracket.
- Sensor brightness adjustment will adjust the sensor's brightness.
- Touch sensor use is related to the sensor's "On and Off"



- Firmware update can be used by SD memory card. Initial setting is a factory setting. Access event/management event/all registration can be deleted.

## 16. Schedule

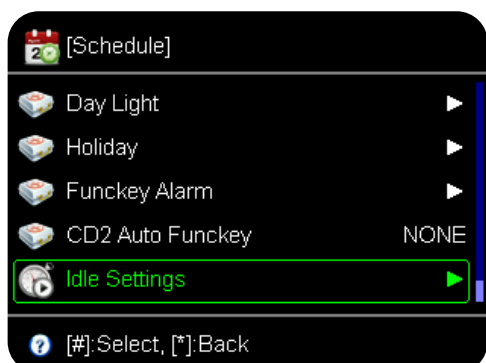


Input the admin number 1 2 3 4 and choose



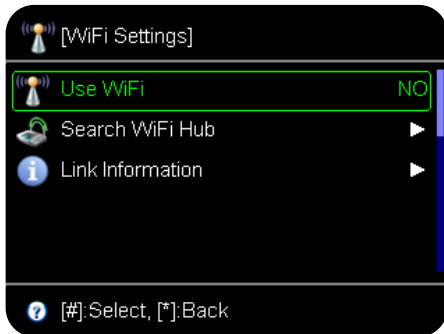
icon and then press # button.

PC operation time zone can be checked by PC program. Operation for Fingerprint/Card/Password will be setup by time zone.



Alarm can be setup by time zone. Automatic door operation time/Auto Function Key/Relay/Auto time change can

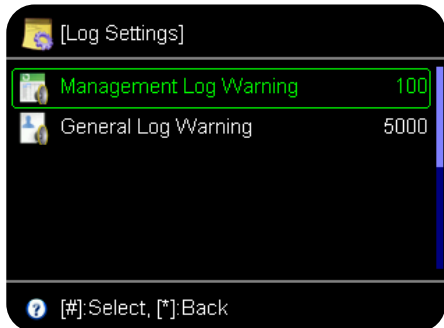
### 17. Wireless LAN Setting




From the Network menu (No 9), choose Wireless LAN option and then click # button.

Choose Wireless LAN and click # button.  
Search the wireless LAN and click the # button.  
Choose the appropriate WiFi.


### 18. Memory Log Full Warning

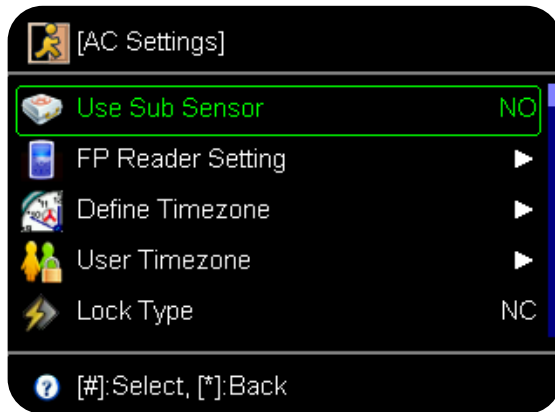


Input Admin ID number, 1 2 3 4 and press # button and from the basic setup menu, click  and then press # button.

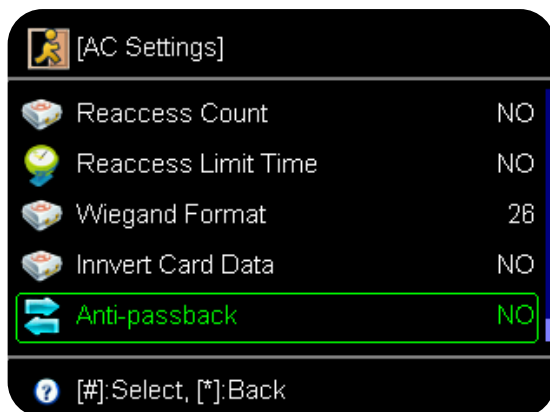
Without PC program, before overwrite the events when reach to full events it will be warning you in advance. If you set it up 1000 events, since its maximum size is 500K events, It will be warning you when reach to 499,000 events.

## 19. Access Setting

Input Admin ID number, 1 2 3 4 and press # button and from the basic setup menu, click  and press # button.




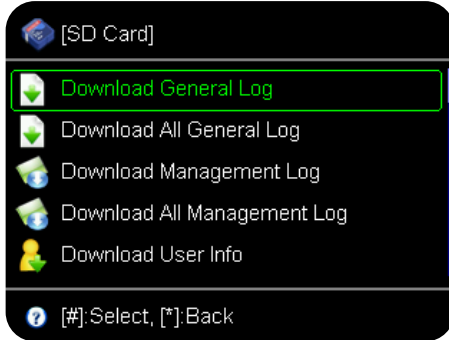
- Sub-sensor use: It is an innerskin sensor. It can be setup both Optical and Sub-sensor
- External reader setup: It is related for a reader to send the FP templates only.
- Timezone/User access setup: The contents can be checked by PC program.



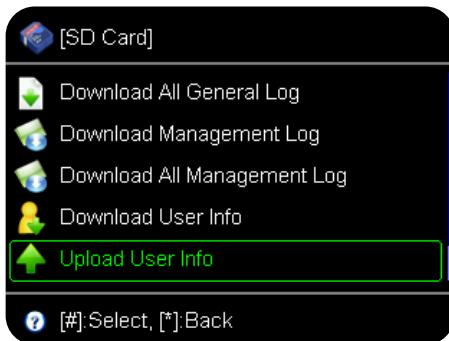
- Periodic type: It shows that the lock type is NC (Normal Close) or NO (Normal Open) type.
- Door Open Time: It is a door open time duration.
- Wiegand format: It is to set the BIT numbers for the prox card.

## 20. Memory Card

Input Admin ID number, 1 2 3 4 and press # button and from the basic setup menu, click  and press # button.




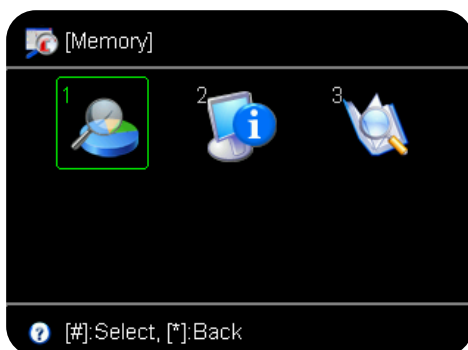
By using MICRO SD Memory card, save user's information/ events data and upload to a different device.



Once download from No 1 terminal and upload to No 2 terminal, the terminal's user information (fingerprint/card) can be transferred to a different terminal.


## 21. Memory Information

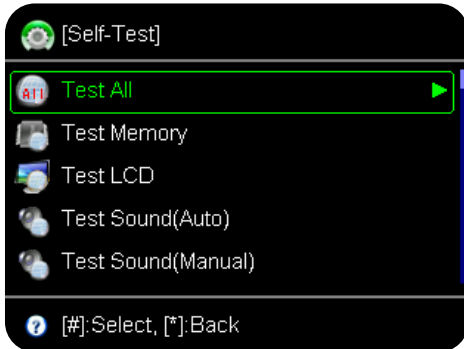
Input Admin ID number, 1 2 3 4 and press # button and from the basic setup menu, click  and press # button.



Once check out the No 1 memory information, current terminal will show the user storage and event numbers. For the No 2, device information, it shows the Product of production date, serial number, etc. No 3 shows user search and check the events.

## 22. Test

Input Admin ID number, 1 2 3 4 and press # button and from the basic setup menu, click  and press # button.



It is a self-test for the device. It can test either full details or subsection.

## 23. Voice Communication (subject to availability)

From the main menu, Press # button. There is a voice communication function. It is a purpose of communicating with visitors, so the administrator can control the door for them to be access.

**[Note]** Please check whether the network is fine with the administrator's computer.

## 24. Sub-Sensor (optional not fitted as standard)



The Sub-sensor is an inner-skin sensor that is mainly used for fake FP detection/damaged/dry/distorted FP. This is a swipe type sensor so the finger should be swiped vertically.

**[Note 1]** In PC, you can register a particular user as 'Sub-sensor user.' In this case, the user can use the sub-sensor only without putting his finger on the optical sensor.

**[Note 2]** Since it is 1:1 verification type, so the user who needs to use the sub-sensor has to input the ID number first and then swipe it on the sub-sensor.



## 25. Specification of Optical and Sub-Sensor

### 1. Registration

Both optical and sub-sensor can register the fingerprint.

**Suggestion)** When a user registers two fingerprints, it is better the user enroll one fingerprint on optical sensor and the other finger is on sub-sensor for the dual registration.

**Caution)** It should not be working if user who registered on sub-sensor cannot be verified on optical sensor. The sub-sensor is only worked as 1:1.

It will be fine if a user who registered on optical-sensor can use the sub-sensor for the verification.

### 2. Verification Mode

#### A. [FINGER], [CARD] or [FP]

- Use and Register on optical sensor
- Input ID and use sub-senor
- Input ID and use optical sensor

#### B. [ANY MODE]

Except for [CARD], [ID or CARD], [ID or FP], [ID & CD] modes, 1:1 verification will be working by using the sub-sensor.

## SECTION 3 – TSG-750 Operation Manual

### 26. Product Specification for TSG-750




Feature	TSG-750
User Capacity	10,000 (Default) 50,000 (Optional)
1:N 10,000 Speed	< 1Sec
Event Log	500,000
LCD	4.3 Inch Full Touch
Camera	Yes
SD Memory	Yes
POE	Yes
Communication	TCP/IP, RS-485 Wi-Fi (Optional)
Spoof Detection	Yes
VoIP	Yes
P2P	Yes
Card	EM, Mifare, HID Pro or iClass
FAR/FRR	0.0001% / 0.01%
Size (W * H * D)	118 * 163 * 40 Cm

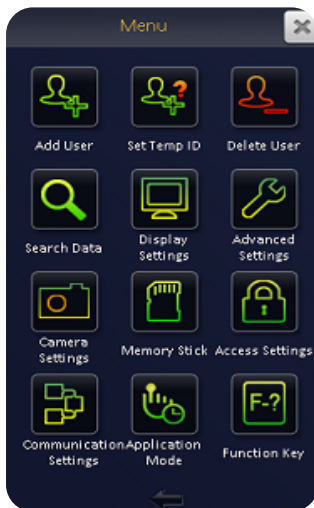
### 27. Terminal ID & Network Setup

The Terminal should be input unique ID in order to communicate with PC program.

[Note] If the ID is duplicated, there will be a communication error.

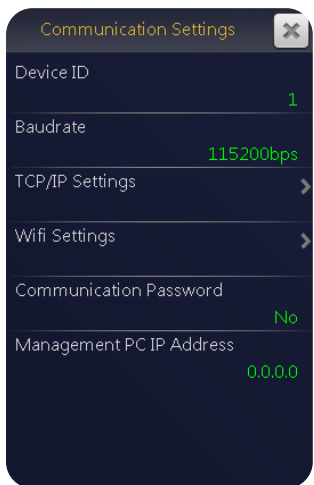


Click this icon  from the menu.  
Input admin ID 1,2,3,4 and then click 'OK'



After input the admin password, the main screen will be shown.


Click the icon in the bottom  and then the terminal ID and Network setup menu will be shown



Input the designed Device ID. The terminal ID should not be duplicated. On TCP/IP setting menu, input allocated IP, Subnet Mask, Gateway, Port number. For the management PC IP address, it should be input appropriate PC IP in order to make Video & Voice communication.

### 28. User Registration

Users can be registered by ID, Fingerprint, and RF card. Input admin password and

then click the icon .



Input User Information

User ID  
1

Employee ID  
00000001

Name  
[Empty field]

Privilege  
User

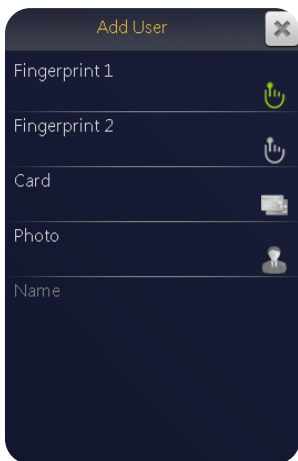
OK Cancel

- Input User ID


If Employee ID is needed, input the Employee ID. Otherwise input the same User's ID


- Input User's Name

- Privilege can be selected as User or Administrator.



Add User

Fingerprint 1 

Fingerprint 2 




Card 

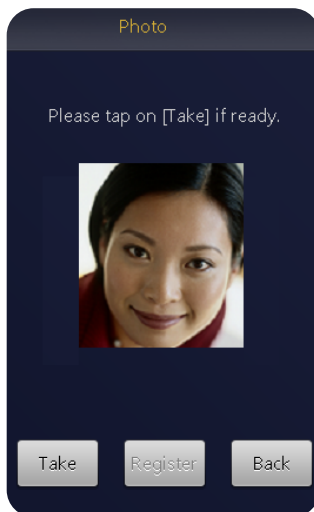
Photo 

Name 

Click Fingerprint 1 to register first finger three times. Click Fingerprint 2 to register second fingerprint. Thus, one user can register two fingerprints. If only one finger is needed, user can only use Fingerprint 1.


When register RF card, place the card on the reader.

**Caution)** The sub-sensor is only worked as 1:1 type, so when use the sub-sensor, user should use ID or CD with the sub-sensor.



Photo

Please tap on [Take] if ready.

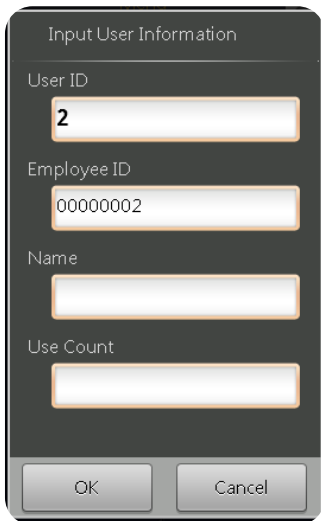


Take Register Back

Click the photo section when wish to take a picture. The taken picture will be saved automatically

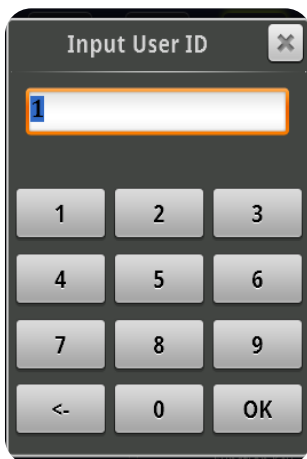
### 29. Temporary User ID Registration

The terminal provides visitors ID temporarily.




Click the icon Input the User ID, Employee ID, Name, and use count. It can be used temporarily for the visitors.

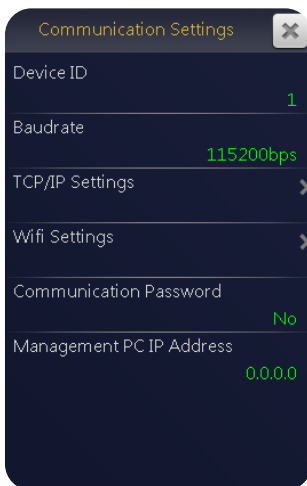
### 30. User Delete




Click the icon.

Put the ID and click 'OK'. Then you will see FP/Card/Picture/Delete all message.

Choose a desired option

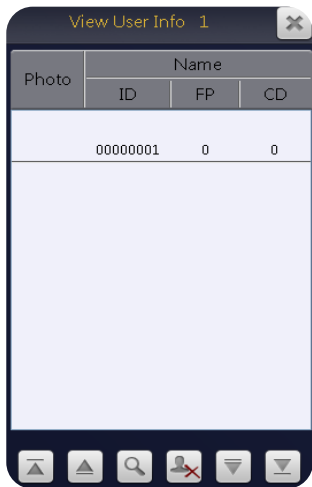



Click the Device ID.

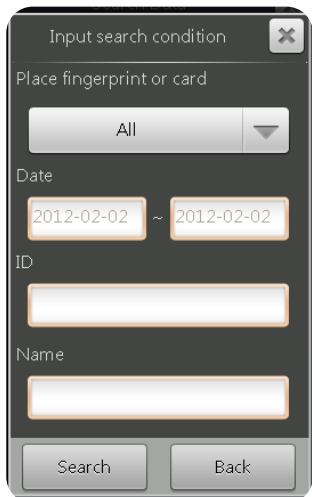
The device ID should not be duplicated.

From TCP/IP setup, input designated IP, Subnet Mask, Gateway, Port number.

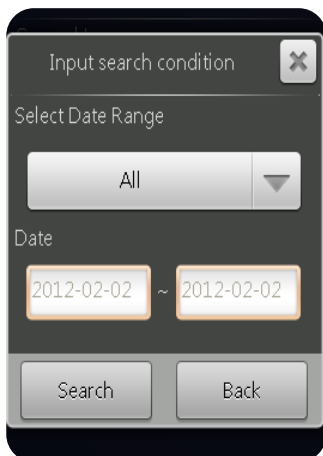
With the Admin's PC IP address, designated PC IP should be inserted for the visual and voice communication.



Click  icon from the main menu.  
Check the current user information.




From the search D/B, click the access event.  
After input the designated FP/Card, click the search button. Then you can check the access events.



From the search D/B, click the search. Then you can check the access events during the designated period.

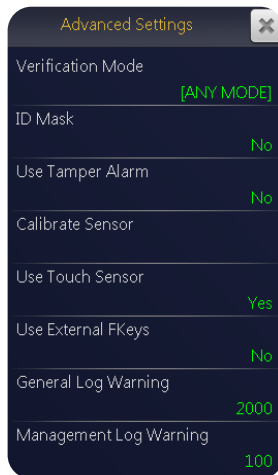
## 32. Display Setting




From the main menu, click  icon.

You can set Time/Time Format/Date/Language/Volume/Wallpaper.

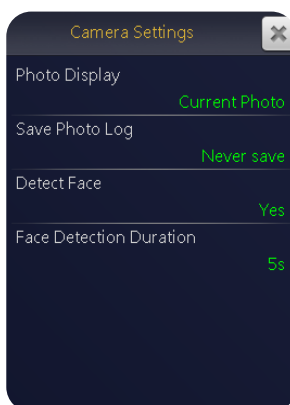
## 33. Advanced Setting



From the main menu, click  icon.

- Verification mode can be combined with ID/Card/FP
- ID Mask will hide your ID on the screen due to security reason.
- Tamper Alarm will be working when the bracket is detached from the wall.
- Calibrate sensor can be adjusted depending on the surrounding environment.
- Touch Sensor is related to operating the optical sensor.
- General Log Warning is a function of message alarming for the purpose of saving events before deleting the events in case of standalone.

## 34. Camera Setting




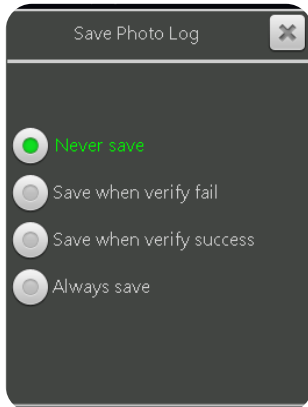
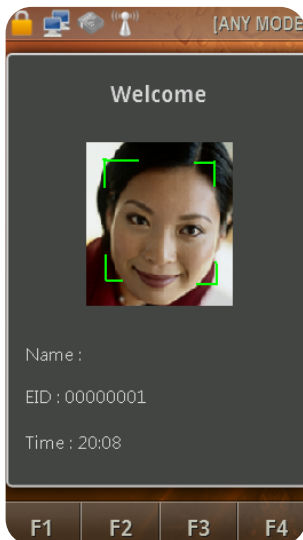
From the main menu, click  icon.

Photo Display shows current picture/already registered picture on the screen

### 34. Camera Setting (Cont.)



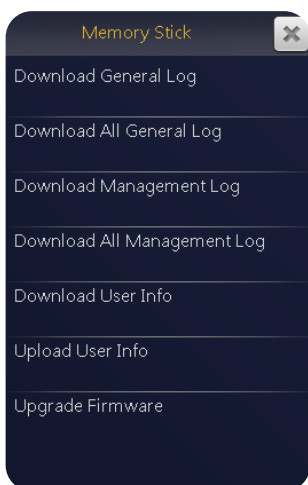
Save Photo Log have an option in Never Save/Save When verify fail/Save when verify success/Always Save.




For the face detection, once ID/Card/FP is verified, the door will be open. If the face is not clear enough like wearing a cap or a mask, it will not be verified.

In order to increase the security level, save the face in the DB

### 35. Memory Save

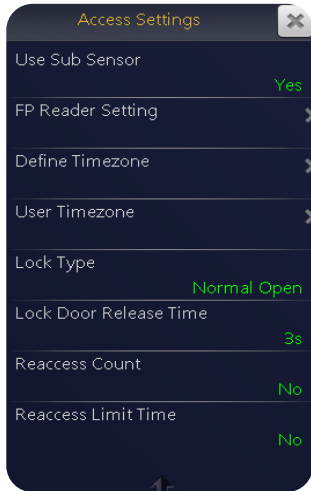



From the main menu, click  icon.

Using the MICRO SD memory card, Users information/access events/, etc can be uploaded and downloaded.



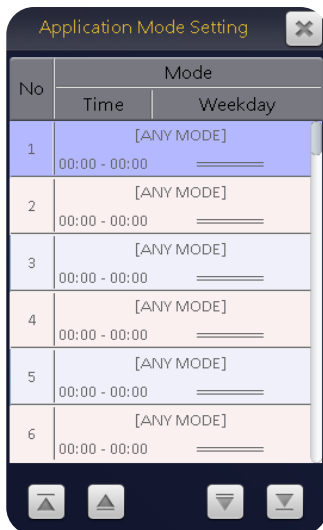
### 36. Access Setting (Sub Sensor)




From the main menu, click  icon.

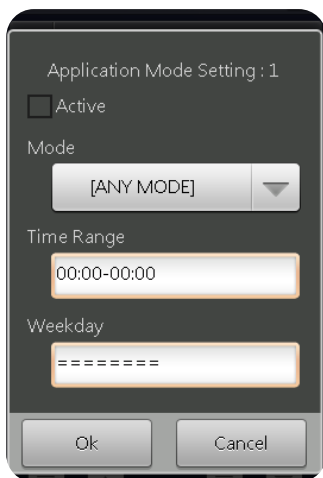
\* **Sub-sensor** has two main functions, inner-skin capture of the finger and fake fingerprint detection. It is mainly used for the user who have damaged fingerprints and want to detect the fake FP. Thus, the sub-sensor is well designed for an environment where the user are likely to be exposed to dry, heavy sunlight and harsh environment and a place where the perfect security is needed.

### 37. Operation Mode



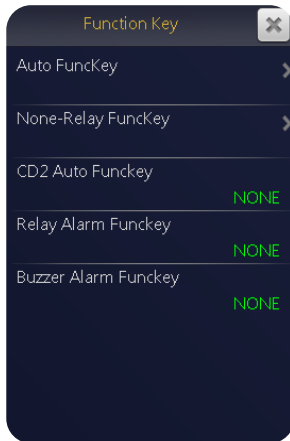
From the main menu, click  icon.

From No.1 application mode can be set by time/date.



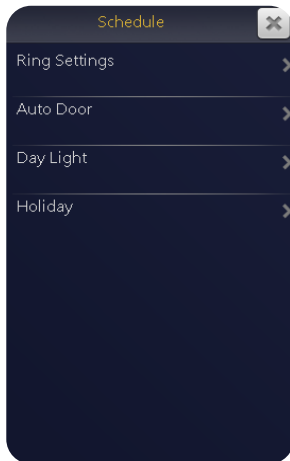
Application Mode Setting is for Mode type/Time Range/Weekday.


### 37. Operation Mode (Cont.)



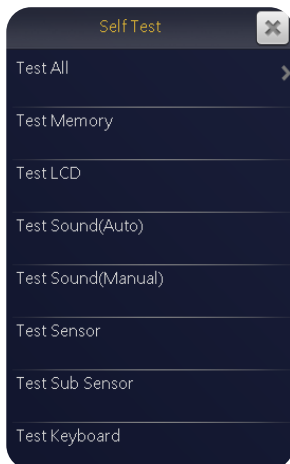
- Auto Funckey is not for the time & attendance but timezone for the function key .
- Non-Relay Funckey is only used for Time & Attendance events.
- CD2 Auto Funckey is related to external reader's license for the use.
- Relay/Buzzer Funckey will be used for alarming to the administration center.


### 38. Schedule



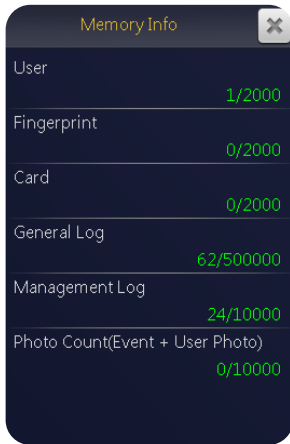
From the main screen, click  icon.  
Auto Door/Day Light/Holiday can be set by schedule.


### 39. Self-Test



From the main menu, click  icon.  
Self-Test is used for the testing the unit itself.

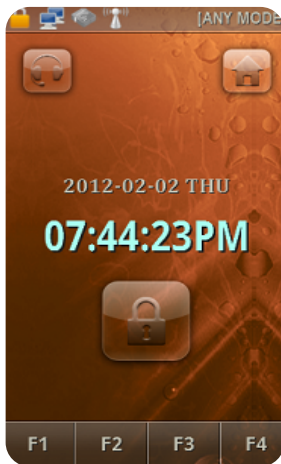
#### 40. Memory Information




From the menu, click  icon.

Memory Info shows all the information related to the terminal.

#### 41. Video Communication (if supported)



From the main menu, click  icon.

When IP is connected to call line, the user can communicate with the administrator in visual and voice. From the administration office, he can open the door.

**[Note]** Please make sure that the network on administrator is OK

#### 42. Sub Sensor (non Standard optional)



The Sub-sensor is an inner-skin sensor that is mainly used for fake FP detection/damaged/dry/distorted FP.

This is a swipe type sensor so the finger should be swiped vertically.

**[Note 1]** In PC, you can register a particular user as 'Sub-sensor user.' In this case, the user can use the sub-sensor only without putting his finger on the optical sensor.

**[Note 2]** Since it is 1:1 verification type, so the user who needs to use the sub-sensor has to input the ID number first and then swipe it on the sub-sensor.

### 43. Specification of Optical and Sub-Sensor

#### 1. Registration

Both optical and sub-sensor can register the fingerprint.

**Suggestion)** When a user registers two fingerprints, it is better the user enroll one fingerprint on optical sensor and the other finger is on sub-sensor for the dual registration.

**Caution)** It should not be working if user who registered on sub-sensor cannot be verified on optical sensor. The sub-sensor is only worked as 1:1.

It will be fine if a user who registered on optical-sensor can use the sub-sensor for the verification.

#### 2. Verification Mode

##### A. [FINGER], [CARD] or [FP]

- Use and Register on optical sensor
- Input ID and use sub-senor
- Input ID and use optical sensor

##### B. [ANY MODE]

Except for [CARD], [ID or CARD], [ID or FP], [ID & CD] modes, 1:1 verification will be working by using the sub-sensor.

