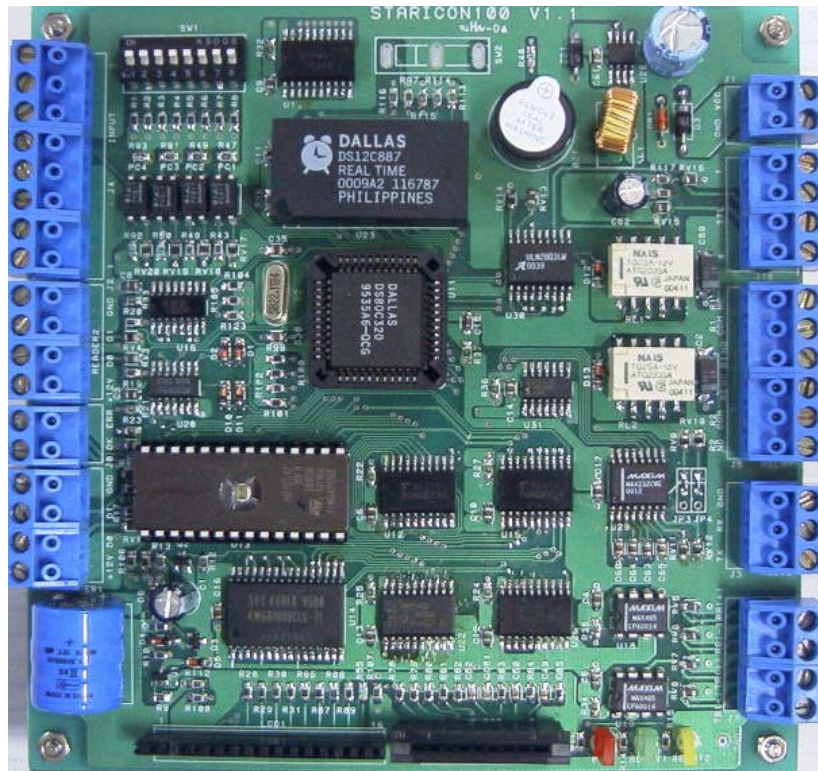


USER'S MANUAL

STAR ICON100 Access Controller



ID TECK Co. Ltd.

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1. Important Safety Instructions

When using your STAR ICON100, basic safety precautions should always be followed to reduce the risk of fire, electrical shock, and injury to persons. In addition, the following safety guides should also be followed:

1. **Fully** read and understand all instructions and follow them completely.
2. **Follow** all warnings and instructions marked on the product.
3. **Do not** use liquid or aerosol cleaners. Use a damp cloth for cleaning. If necessary, use mild soap.
4. **Do not** use this product near water.
5. **Only** operate this product using the type of power source indicated. If you are not sure of the type of power supplied to your installation site, consult your dealer or local power company.
6. **Never** insert objects of any kind into the product or through the cabinet slots as they may touch voltage points and/or short circuit parts possibly resulting in fire or electric shock. Never spill liquid of any kind on the product.
7. **Never** disassemble this product by yourself; take the unit to a qualified service center whenever service or repair is required. Opening or removing the covers may expose you to dangerous voltages or other risks. Also, incorrect reassembly can cause electric shock when the unit is subsequently used.
8. **Unplug** this product from the Direct Current (DC) power source and refer to qualified service personnel under these conditions:
 - a. When the power supply cord or plug is damaged or frayed.
 - b. If liquid has been spilled on the product.
 - c. If the product does not operate normally after following the operating instructions in this manual. Adjust only those controls that are covered by the operating instructions in this manual. Improper adjustment of other controls that are not covered by this manual may damage the unit and will often require extensive work by a qualified technician to restore normal operation.
 - d. If the product exhibits a distinct change in performance.

2. General

The STAR ICON100 is an intelligent single door access controller with a powerful 8 bit microprocessor to meet the market requirements for a simple and cost-effective access controller. It is designed to achieve low cost as well as high security, convenience and reliability. This user friendly device allows you to register 500 ~ 10,000 ID numbers and it can keep 2,500 ~ 7,250 events. Number of ID & Event can be exchanged under the ratio of 2 to 1 which means every 500 users can be convert to 250 events. Independent 4 input ports can be connected with various devices such as exit button, door contact, PIR sensor, fire sensors. Extra reader port allows for user to add external RF reader for Anti pass back operation. Star ICON100 can be used as not only a standalone access controller but also a network system communicating via RS-422 and RS-232 communication port. All setting values including ID numbers, inputs/outputs, real-time clock and time schedule, all event transaction reports can be downloaded/uploaded from/to the host computer. The STAR ICON100 will provide you an accurate access control for single door and 3 LED indicators inform you all system operating status at real time. The STAR ICON100 access controller will give you field proven reliability and cost-effective solution wherever access controls and high security are required

3. Features

- Single Door Control Panel
- 2 Reader ports with 26bit Wiegand format
- Data memory programmable
 - Card holder records ----- 500 to 10,000
 - Off-line stored events ----- 7,250 to 2,500
- Anti-Pass Back Operation
- Duress mode Operation
- Various Time Schedule Operation
- 4 independent input ports(Exit button, Door contact, Aux #1, Aux #2)
- 4 output ports including 2 Form-C Relays
- All setting values are user programmable from the keypad or from the application software
- Door Lock and Unlock functions
- One RS-232 port and one RS-422 communication port for easy interfacing to Host computer
- Communication Address selectable up to 32ch
- Baud rate selectable at 4800, 9600(default),19200bps
- 3 LEDs (red, green, and yellow) for system operation status
- Door open by compulsion and Door open alarm

4. Specification

CPU	: 8bit Microprocessor
Memory	: Program memory(64KB ROM) Data memory(128KB RAM : battery backup)
Power	: DC 12V/ 150mA (max.)
Card Holders/Event buffers	: Memory programmable for: Card holder records ----- 500 to 10,000 Off-line stored events ----- 7,250 to 2,500
Reader ports/Data format	: 2 Reader port / 26bit wiegand format
Input/Output	: 4 Inputs(Exit button, Door contact, Aux #1, Aux #2), max. rating at DC12V/20mA : 2 Relay outputs : DC12V~24V/2A max. : 2 TTL outputs : DC5V/20mA
Communication	: One RS-232 port and one RS-422 port 4800, 9600(default), 19200 bps Baud Rate .
LED	: 3 LEDs (red, green, and yellow)
Operating environment range	: -35°C to +65°C, 10% to 90% Humidity
Mounting	: 4 screw mount
Weight	: 170g
Dimensions	: 137mm(5.4 ") x137mm(5.4 ")
Self diagnostic	: Yes
Reset	: Power on reset & watch dog timer
<u>Optional:</u>	
Keypad	: 16 Numeric Keypad
LCD	: 1x LCD module, 2Lines x 16ch, 65.6 x 13,8mm view area

5. Identifying Supplied Parts

Please unpack and check the contents of the box.

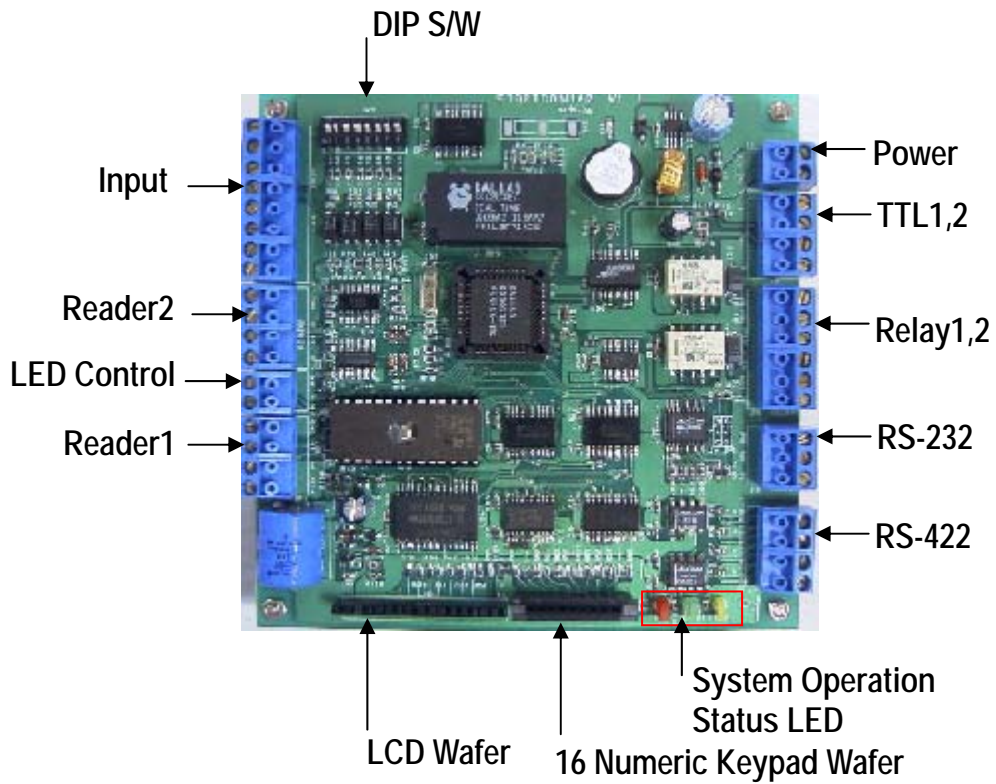


Main Unit
(1)

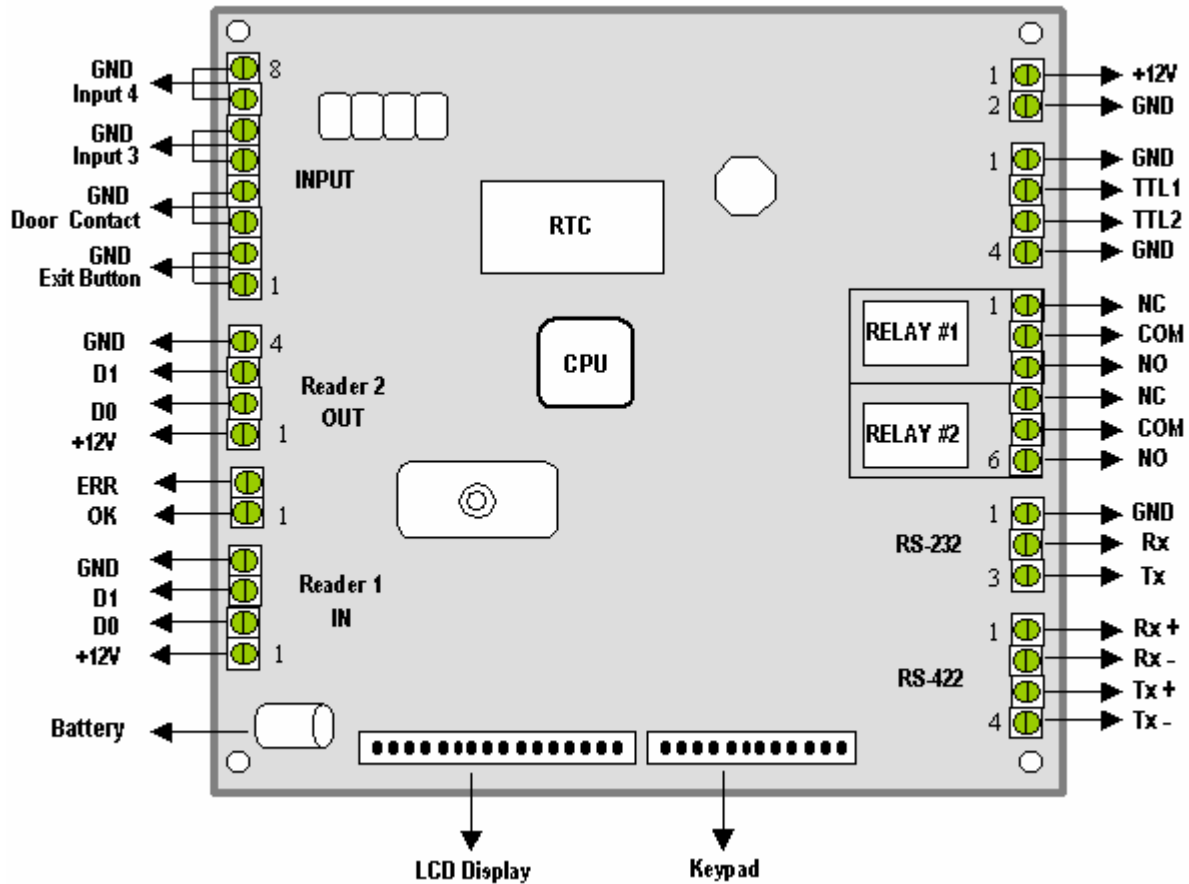


Manual
(1)

6. System Description



7. Connection

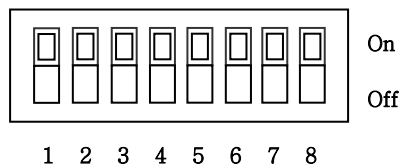


Setting address by the addressing DIP switch

1. Initial status

Initial status of the DIP switch is as follows.

The address set by the DIP switch is to be used when operating with application program, so it must be set equal to application's value. If necessary, see the application program manual.



2. Addressing the unit

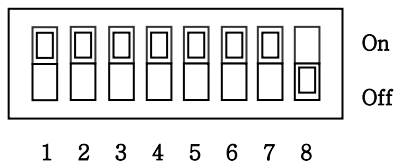
Table 1 : The relation between Setting and Dip switch

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
1	On	Off	On	Off	On	Off	On	Off	On	Off	On	Off	On	Off	On	Off
2	On	On	Off	Off	On	On	Off	Off	On	On	Off	Off	On	On	Off	Off
3	On	On	On	On	Off	Off	Off	Off	On	On	On	On	Off	Off	Off	Off
4	On	On	On	On	On	On	On	On	Off	Off	Off	Off	Off	Off	Off	Off
5	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On
6	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On
7	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On
8	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On

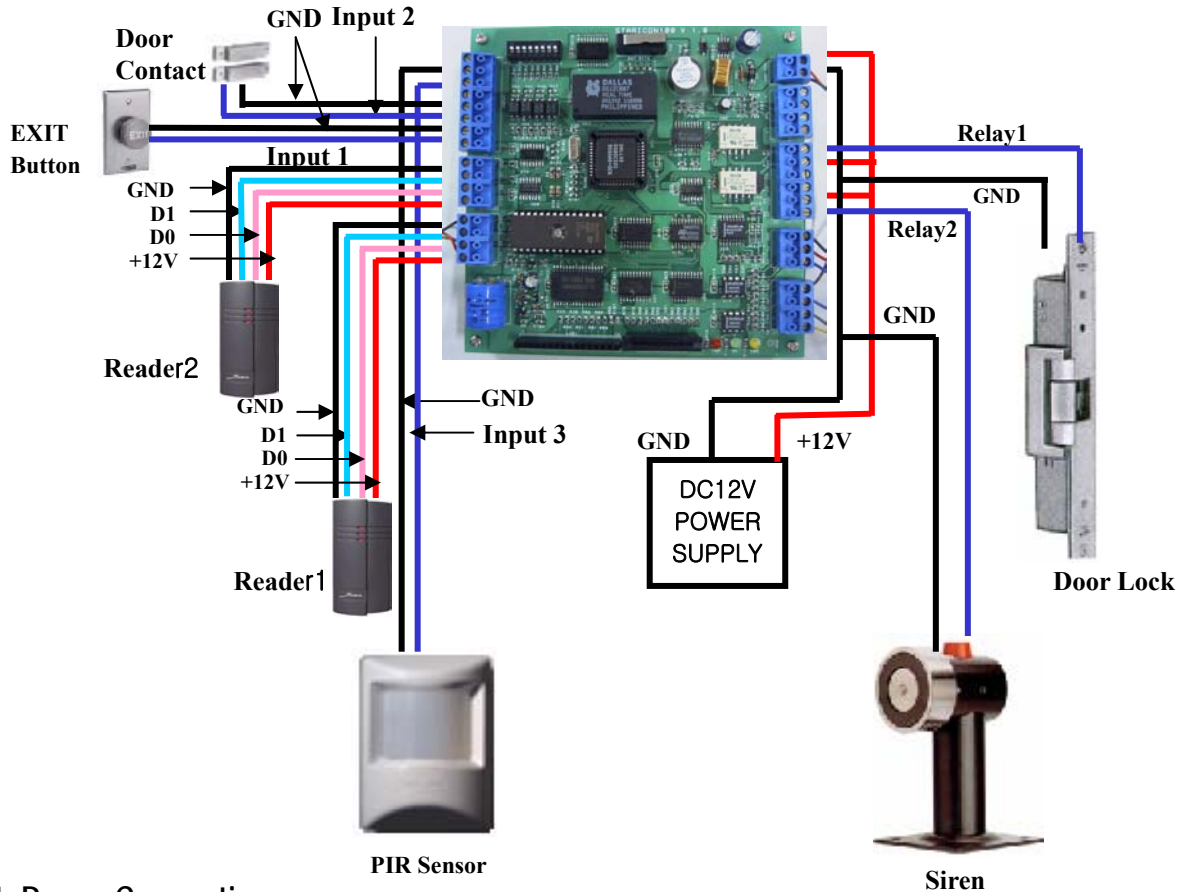
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	On	Off	On	Off	On	Off	On	Off	On	Off	On	Off	On	Off	On	Off
2	On	On	Off	Off	On	On	Off	Off	On	On	Off	Off	On	On	Off	Off
3	On	On	On	On	Off	Off	Off	Off	On	On	On	On	Off	Off	Off	Off
4	On	On	On	On	On	On	On	On	Off	Off	Off	Off	Off	Off	Off	Off
5	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
6	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On
7	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On
8	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On

3. Initializing the unit.

Toggle the switch 8 to 'off' and toggle it back to 'on' when the power is on. Then you will see a message showing the initialization is completed on the LCD. Press the <ESC> key and finish.



8. System Application



8-1. Power Connection

- Connect (+) wire of DC 12V power to +12V(power port 1) port
- Connect Power GND (-) wire of DC 12V to GND(power port 2) port

8-2. Door Lock Connection(Relay1)

8-2-1 Connection of POWER FAIL SAFE: Door Lock

- Connect Door RELAY (COM port) to DC +12V (be sure that the existing power supply has enough capacity to support this accessory or upgrade to a sufficient one.)
- Connect (+) wire of Door Lock to Door RELAY (NO port) port.
- Connect (-) wire of Door Lock to Power GND (-) port.

8-2-2 Connection of POWER FAIL SECURE: Door Lock

- Connect Door RELAY (COM port) to DC +12V (be sure that the existing power supply has enough capacity to support this accessory or upgrade to a sufficient one.)
- Connect (+) wire of Door Lock to Door RELAY (NC port).
- Connect (-) wire of Door Lock to Power GND(-).

8-3. Alarm Device Connection(Relay2)

- Connect Alarm RELAY (COM port) to DC +12V (be sure that the existing power supply has enough capacity to support this accessory or upgrade to a sufficient one.)

- Connect (+) wire of Alarm Device to Alarm RELAY (NO port) wire.
- Connect (-) wire of Alarm Device to Power GND (-) wire.

8-4. Exit Button Connection

- Connect one of the wires of Exit Button to Exit Button Input.
- Connect the other wire of Exit Button to Power GND(-).

8-5. Door Contact Sensor Connection

- Connect Door Contact sensor(COM) wire to Door Contact Input.
- Connect Door Contact sensor(NO) wire to Power GND(-).

8-6. Auxiliary Input Device Connection (Applied to Input 1,2)

- Connect one wire of the Auxiliary Input Device to the Input(Input 1,2).
- Connect the other wire of Auxiliary Input Device to Power GND(-).

8-7. Wiegand Input Connection From Wiegand Reader(1, 2)

- Connect (+) wire of Reader(1,2) to +12V port of Main Unit.
- Connect (-) wire of Reader(1,2) to GND (-) port of Main Unit.
- Connect Wiegand output DATA0 wire of the additional Reader(1,2) to DATA0(Reader1,2).
- Connect Wiegand output DATA1 wire of the additional Reader(1,2) to DATA1(Reader1,2).
- **When installing readers, reader1 set for entry and reader2 set for exit.**

* **Qualified card readers:** 26bit wiegand format reader

EXAMPLE: ID_TECK	:	RF series, RFK 101
MOTOROLA	:	ARK501+
BALOGH	:	Hyper_X

8-8. RS-232 Communication Port Connection

9-pin connector (COM Port, female) is required to connect serial communication RS-232 between Main Unit and Personal Computer.

- Connect RS-232-TX of main unit to pin number 2 of 9-pin connector.
- Connect RS-232-RX of main unit to pin number 3 of 9-pin connector.
- Connect RS-232-GND of Main Unit to pin number 5 of 9-pin connector.
- Plug in 9-pin connector to COM1 or COM2 Port of Personal Computer.
- Install and run Application Software.

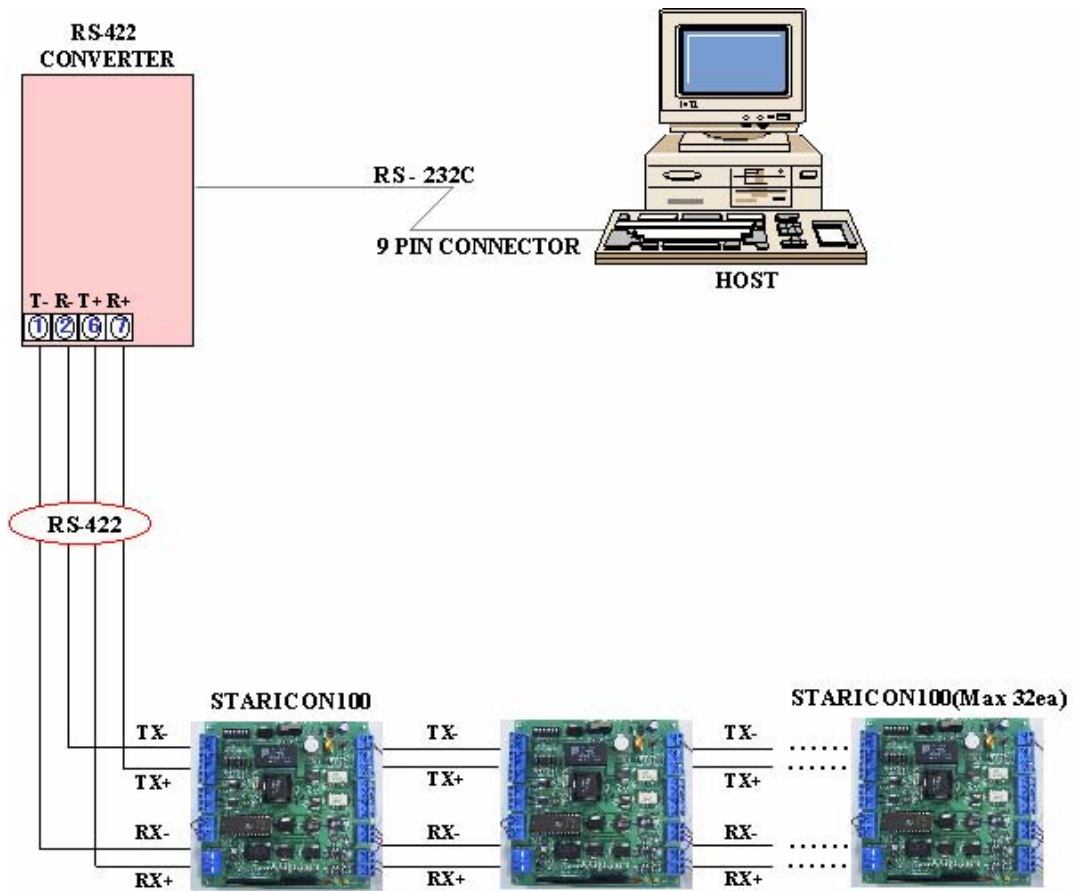
8-9. RS-422 Communication Port Connection

RS-422/RS-232 converter is required to connect serial communication RS-422 between Main Unit and Personal Computer.

- Plug in RS-232 9-pin connector of RS-422/RS-232 converter to COM1 or COM2 Port of Personal Computer.

- Connect RS-422-TX(-) of Main Unit to RX(-) port of converter.
- Connect RS-422-TX(+) of Main Unit to RX(+) port of converter.
- Connect RS-422-RX(-) of Main Unit to TX(-) port of converter.
- Connect RS-422-RX(+) of Main Unit to TX(+) port of converter.
- Install and run Application Software.

9. Wiring for Network



10. Functions

10-1. Standalone Operation

The STAR ICON100 is capable of having two readers (entry and exit). The unit receives card data signals from the RF readers and determines whether or not to unlock the door. When an input signal is sent, for example from an activated sensor or if the exit button pressed, the controller generates and logs an appropriate response. All events are kept in its own memory and sent to the host computer. The access controller is a true standalone device that in the event of a malfunction, will not affect other units, even if used in conjunction with one another.

10-2. Operation with Host Computer

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

10-3. Keypad

In the event that a host PC is not used, the integrated keypad and LCD can also be used for the entire programming process.

10-4. Cooperation with Fire Detection Equipment

The STAR ICON100 access controller and fire detection equipment can cooperate to unlock the door in case of fire.

10-5. Anti-Pass-Back

Using an additional RF reader for exiting, the Anti-Pass-Back mode can be utilized. Anti-pass-back prevents a registered user from exiting if the user did not properly register when entering. Likewise if the user has exited without verification by the unit, the user will not be allowed entry on their next attempt.

10-6. Data Backup

The controller retains all user information and event data for over a week, even if the event of loss of power. Using a battery back up the unit can operate normally for a significant time period, depending on the power of the battery used.

10-7. Inputs/ Outputs

The STAR ICON100 access controller has four input ports(two relay output ports and two TTL output ports) which can be used to manipulate a wide variety of controls.

10-8. Time Schedule

You can program periods of time when each person(ID number) can access the door. Each user can be programmed individually to address work shifts, weekends and holidays. All scheduling can be programmed through the keypad and LCD or via the software program on the host computer. Also you can set periods of time about output following input, and only output(see 13.2.3 page29), the former correspond to Input, the latter correspond to Output. So, you can set Input and Output according to each T/S. All these can be defined through the setup menu or application program.

10-9. Output Behavior Setup

The two relays outputs, two TTL outputs, buzzer sound, etc. are customizable. They may be activated or deactivated, and in active mode may be programmed for different lengths of time, different responses to inputs, and can be set through the setup menu or the application program.

10-10. Door Open by Compulsion and Door Open Alarm

When door is opened by compulsion, Door Contact output(see 13.2.3 page29) is generated. And, when the door is being opened by normal operation, after 20 sec. door-open alarm(blink buzzer) will be generated until the door is closed.

10-11. Duress Mode

In case of Duress, enter the 2 digit Duress Password and press <ENT> and open the door using general process. If you registered ID, then duress output(see 13.2.3 page29) will be generated.

10-12. Programmable ID/EVENT memory

This user friendly device allows you to register 500 ~ 10,000 ID numbers and it can keep 2,500 ~ 7,250 events. Number of ID & Event can be exchanged under the ratio of 2 to 1 which means every 500 users can be convert to 250 events.

11. Operation

11-1. Normal Operation Mode (Safe Mode)

When the Main Unit operates in standby mode(waiting for RF card), the red LED is lit.



11-2. Open the Door

When a registered card(or PIN) is read, the Door will open for 3 seconds.(default)



11-3. Exit (Open the Door)

To request for exit from the inside, an Exit Button(or Exit Reader) can be used to open the door.



11-4. Action And Alarm Caused by Unregistered Card

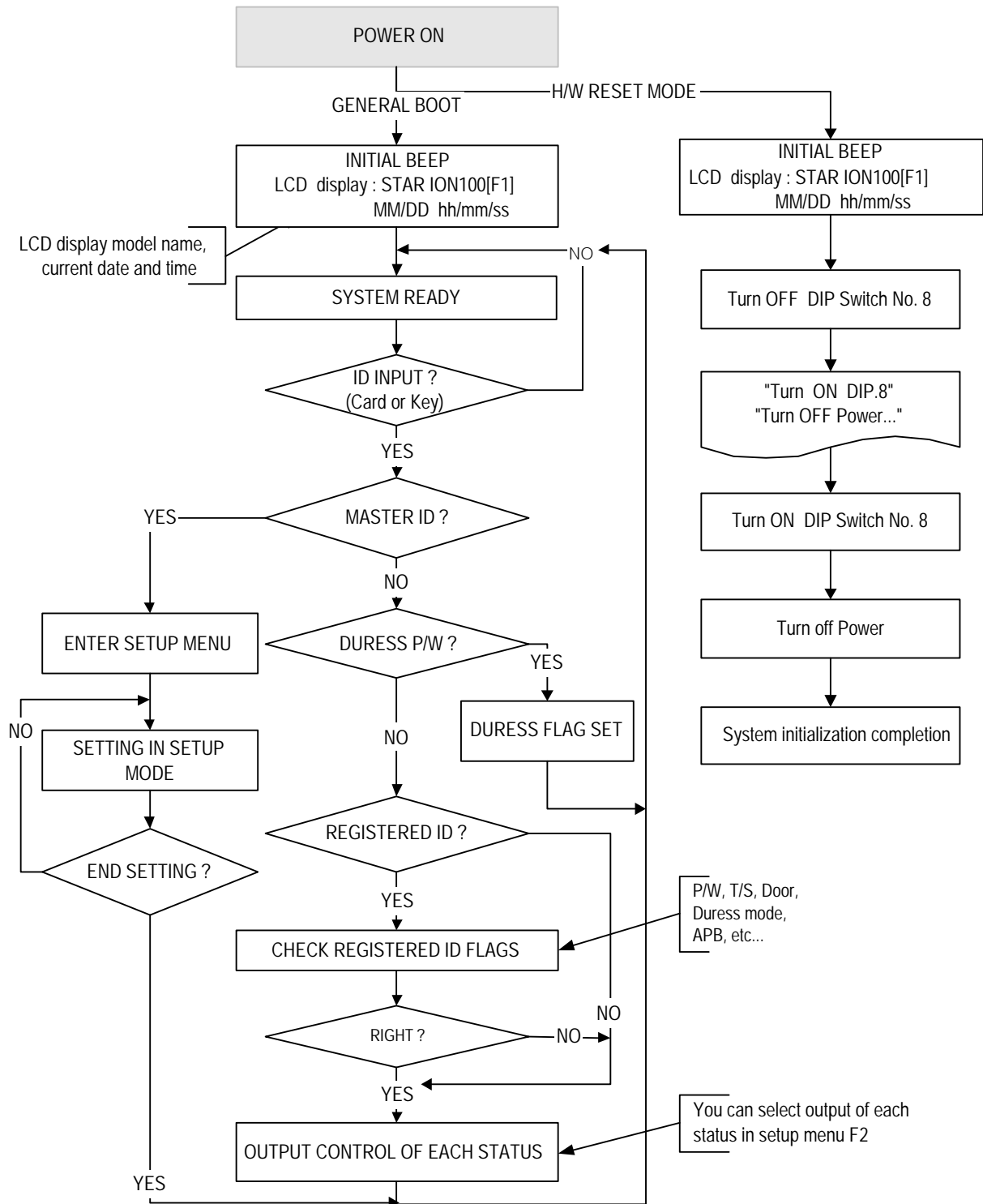
When an unregistered card is read the access is denied and the alarm can be activated for 3 seconds along with a buzzer sound.



(If you do not want to activate the Alarm in case of unregistered access attempt, then you can change this setting as shown in section 13.2.3.)

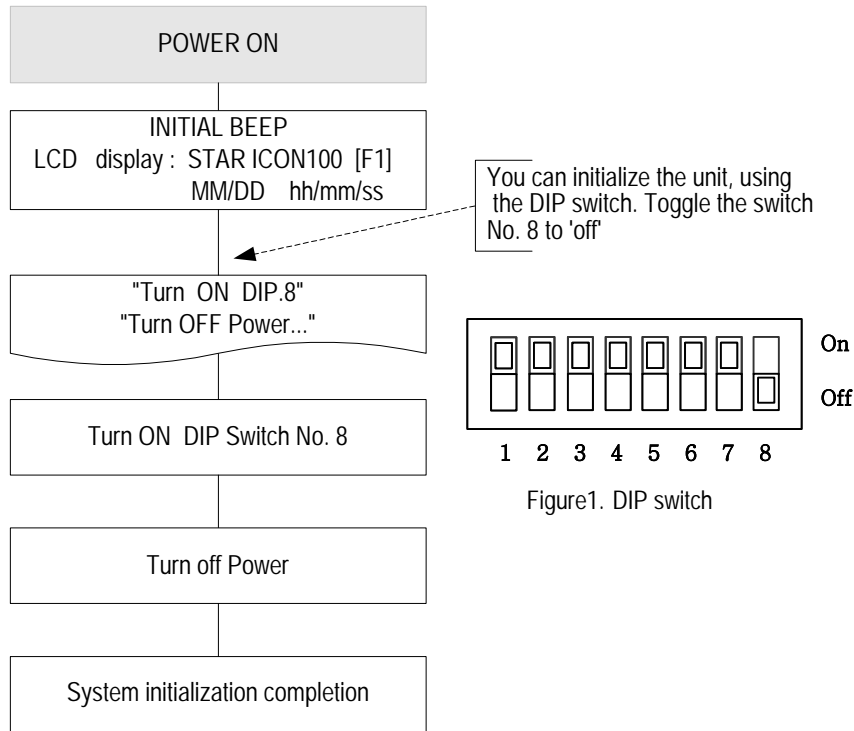
12. Basic settings

12.1 Basic operation

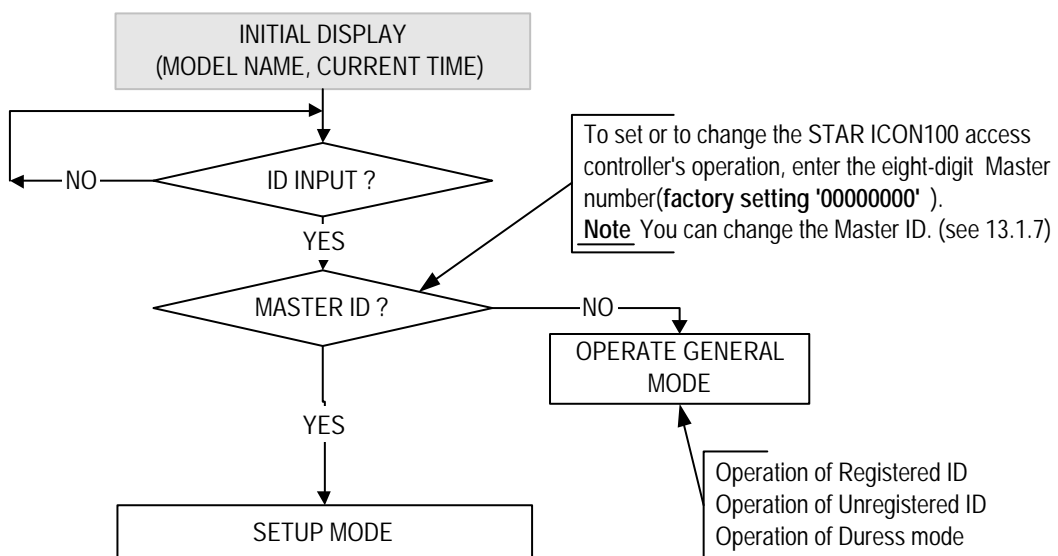


12.2 System initialization by using the addressing DIP switch

You can initialize the unit, using the DIP switch. Toggle the switch 8 to 'off' and toggle it back to 'on' when the power is on. Then you will see a message showing the initialization is completed on the LCD. Press the <ESC> key and finish. The illustration below shows the process.



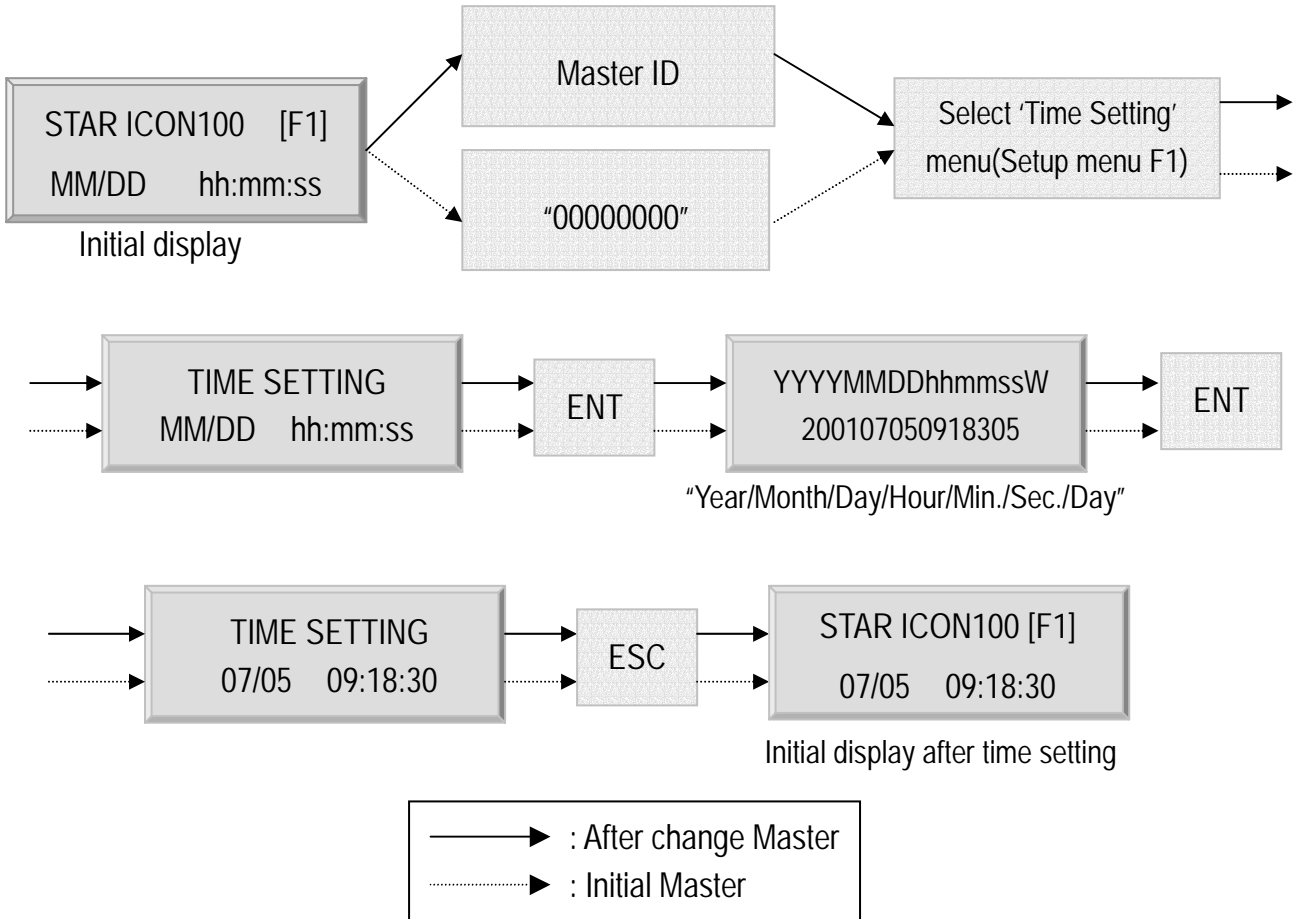
12.3 Enter into setup menu



12.4 Setting the Date and Time

Select 'Time setting' in "Setup menu F1" and enter the data of year /month /date /hour /minute /second /day (15digit) as the illustration below shows.

You will see the adjusted time on the LCD when finished.

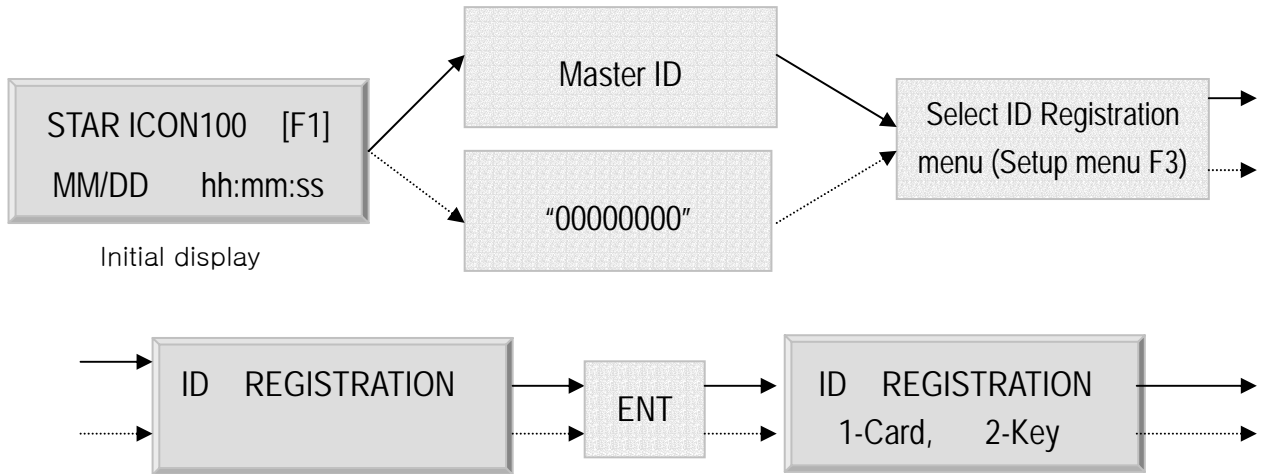


Day code 1 : Sun., 2 : Mon., 3 : Tue., 4 : Wed., 5 : Thu., 6 : Fri., 7 : Sat.
For example : '200106071330253' for Tuesday, June 7, 2001 01:30:25PM.

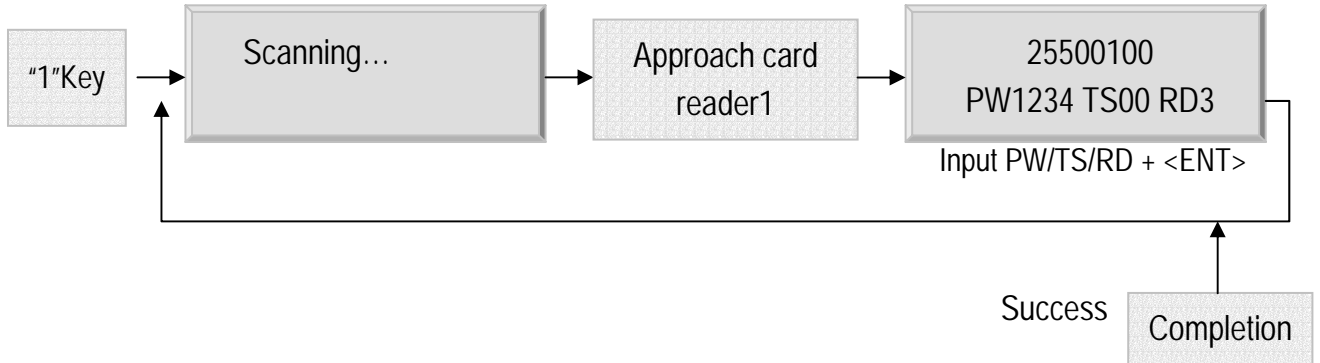
12.5 Registering Cards

You can register Cards(or PIN) to the system. (See, 13.3.1)

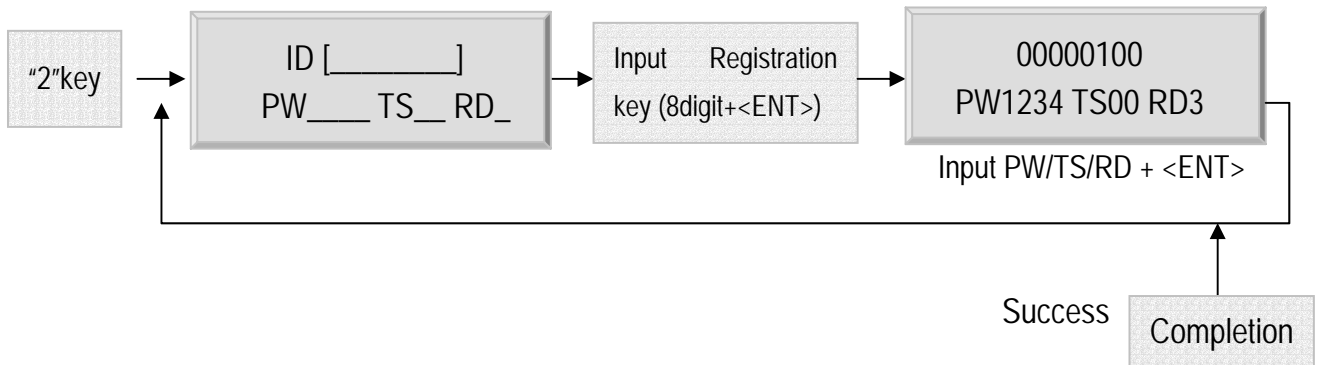
Select 'ID REGISTRATION' in Setup menu 3, follow through illustration below shows.



1. Registration by RF Cards



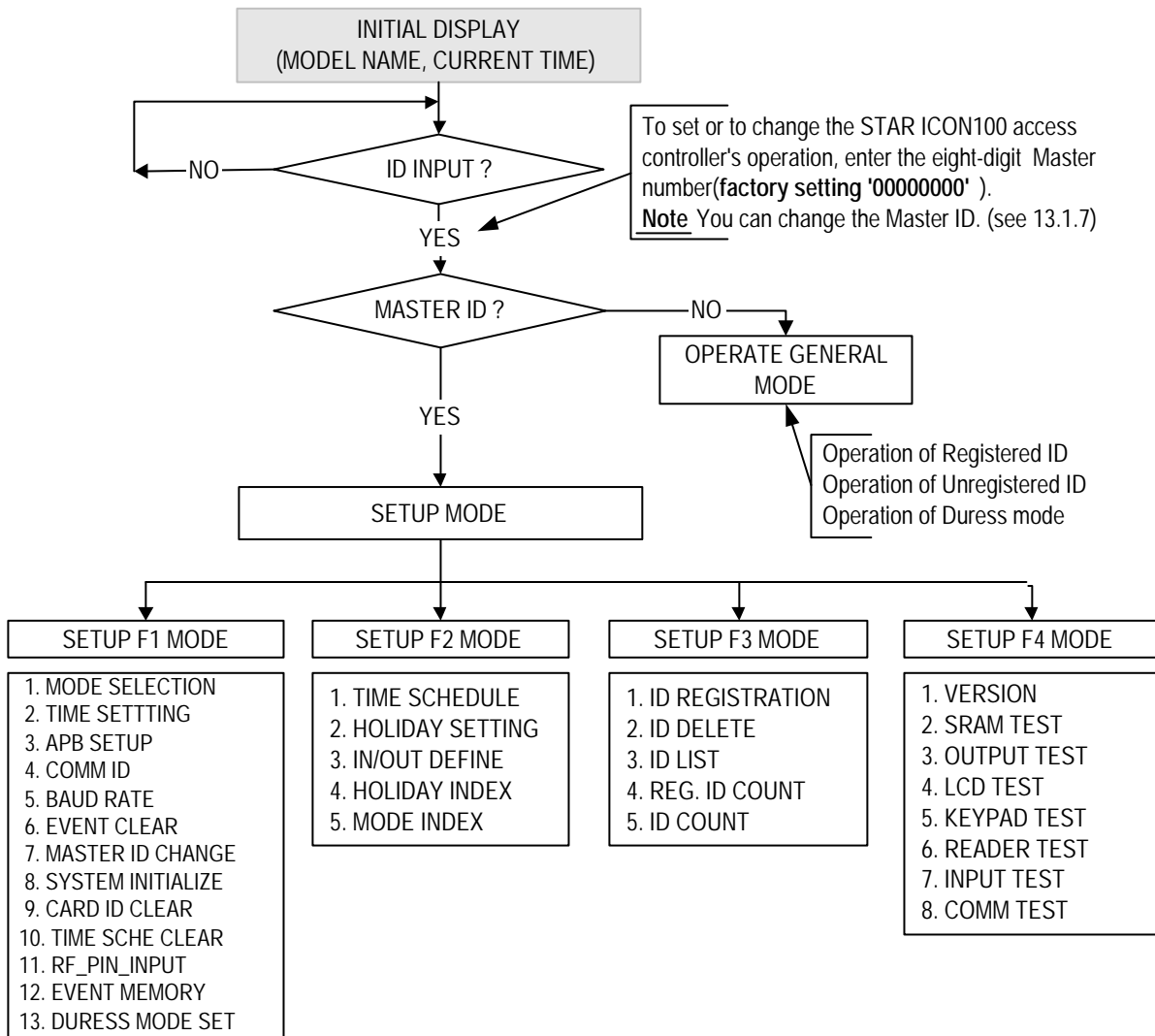
2. Registration by Key_pad



When registering cards,

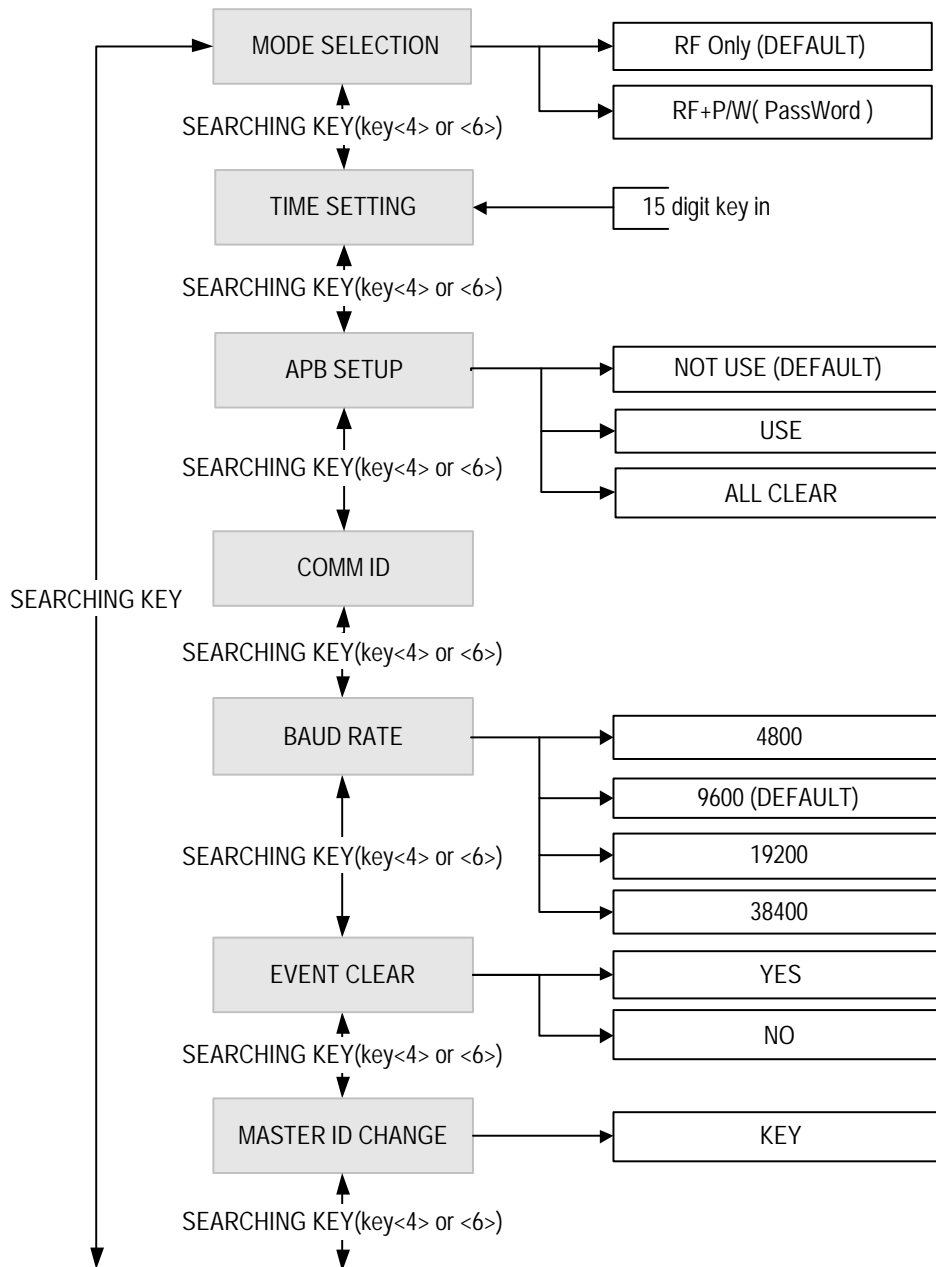
1. The 'PW' is for password input. The password is needed to access doors when the controller is operating in RF + PW mode. But regardless of the operating mode, it is necessary to input a password when registering.
2. The 'TS' is for Time Schedule index(01~10). To control the accessible periods of time for each card, set Time schedules first(see 13.2.1 page27) and enter the Time Schedule index number here.
If there is no need to apply the Time Schedule(anytime accessible with that card), enter '00' for the value.
3. The 'RD' is for selecting accessible reader for the card. Usually '3' (both readers) is used when using both entry and exit readers. If '1' is entered for the value, only reader 1 will recognize the card and reader 2 will deny access, indicating 'ACCESS DOOR ERR' on the LCD (this is also the choice when using a one reader setup, meaning using one reader for entry and no reader for exit). Likewise, when '2' is entered, only the reader 2 is accessible with that card and reader 1 access will be denied. And again, both readers are accessible when '3' is entered for the 'RD' value.

13. Setting Changes

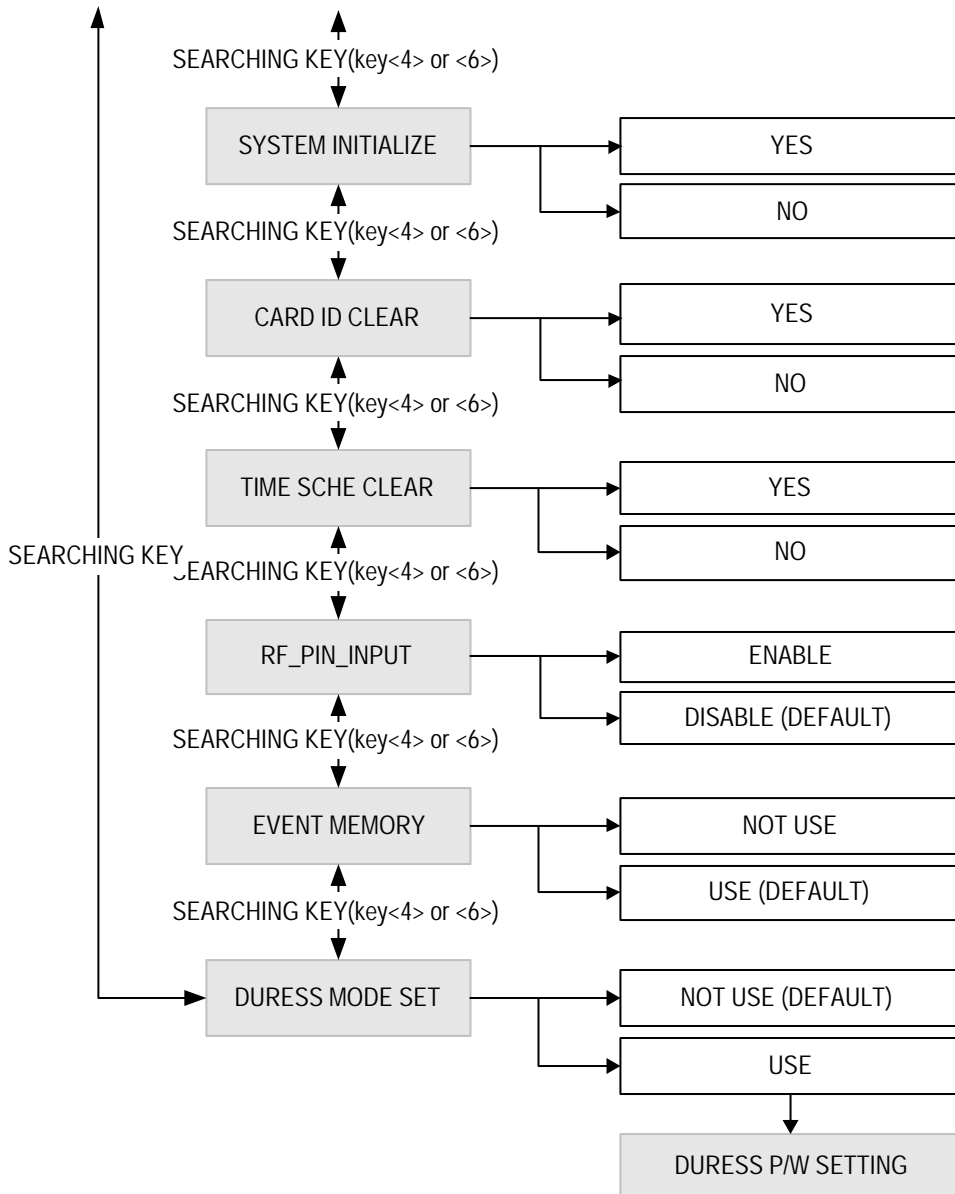


To set or to change the STAR ICON100's operation, enter the eight-digit Master number (factory setting "00000000") <ENT>key, then you are ready to set or to change all the settings of the controller. There are four main setup menus. You need to press <F1> key for setup menu F1, <F2> key for setup menu F2, <F3> key for setup menu F3 and <F4> key for setup menu F4.
Note You can change the Master number. (see 13.1.7)

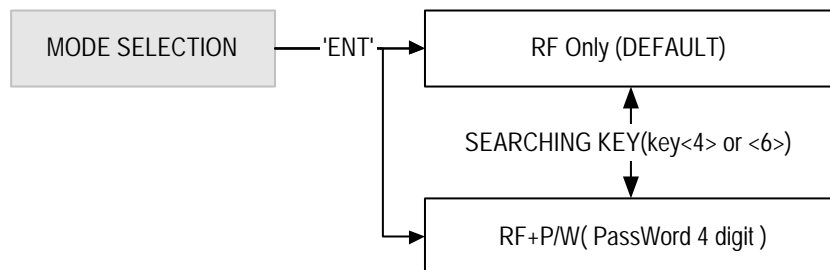
13.1 Setup Menu F1



Note There are four main setup menus. You need to press <F1> key for setup menu F1, <F2> key for setup menu F2, <F3> key for setup menu F3 and <F4> key for setup menu F4. The keys <4>, <6>, <2> and <8> are used to change submenus or to select values, <ENT> to select and set, <ESC> to go to upper step or to leave setup mode. When selecting mode or setting values is completed, in all kind of menu, the figure on the LCD returns to the first figure of that menu. Then, for the next setting, use <4> and <6> keys(searching key).



13.1.1 Changing Operating Mode



MODE SELECTION
RF ONLY

This menu is to select reader1 operating mode. You may choose to use prox, PIN # verification, or both. The lower line on the LCD indicates the current operating mode. Press the <ENT> key to change the mode.

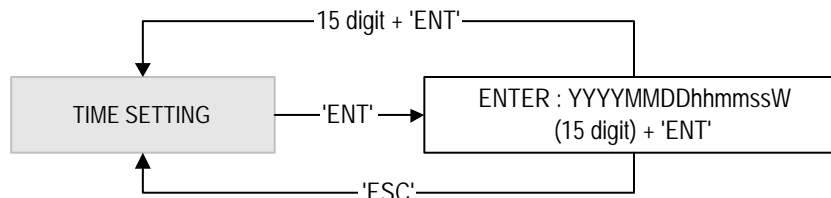
MODE SELECTION
--> RF ONLY

Then, this figure appears on the LCD, press <4> key or <6> key to toggle the mode, and finish selecting by pressing <ENT> key. For the next setting, use <4> and <6> keys.

MODE SELECTION
--> RF + PW

Note: RF only : The door is accessible with the card alone.
RF + PW : To access the door, the card and the password is needed.

13.1.2 Time Setting



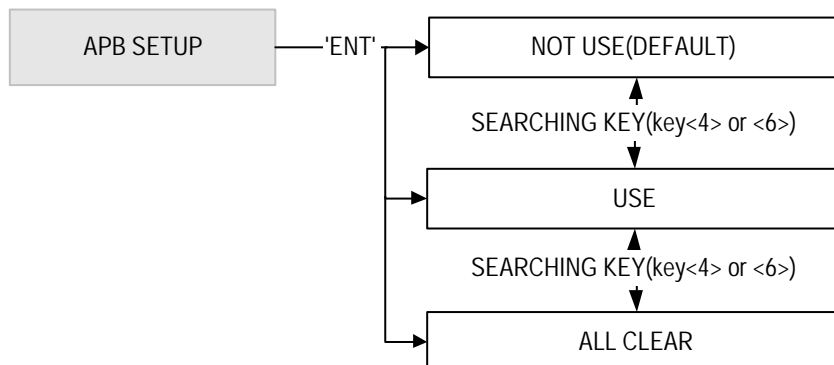
TIME SETTING
MM/DD hh:mm:ss

The lower line on the LCD indicates present time. To set time, press <ENT> key.

YYYYMMDDhhmmssW

Enter the correct information of the year, month, date, hour, minute, second, day code in due order, then the setting is finished. If the input information is out of range, an error message appears on the LCD and the current time value is to be kept.
Day code 1 : Sun., 2 : Mon., 3 : Tue., 4 : Wed., 5 : Thu., 6 : Fri., 7 : Sat.
For example : '200106071330253' for Tuesday, June 7, 2001 01:30:25PM.

13.1.3 Anti-Pass-Back Setup



APB SETUP
NOT USE

You can select whether the Anti-Pass-Back(APB) is used or not. The lower line on the LCD indicates the current mode. To change mode, press <ENT> key.

APB SETUP
--> NOT USE

Press <4> or <6> to toggle the mode, from NOT USE to USE or the reverse, and finish selecting by pressing <ENT> key. Then the figure on the LCD returns to the first figure of that menu, which indicates the selected mode now. Then, for the next setting, use <4> and <6> keys.
Note: If you select All Clear, then system ignore all registered ID's APB flag only once.

APB SETUP
--> USE

APB SETUP
--> All Clear

13.1.4 Communication ID

COMM ID
00

This is communication ID checking menu. For the next setting, use <4> and <6> keys.

13.1.5 Adjusting Communication Speed

BAUD RATE
9600

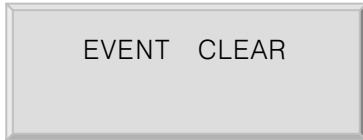
The number on the LCD is the current communication speed in Baud rate. Press <ENT> key to adjust the speed.

BAUD RATE
--> 9600

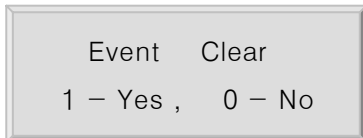
Available speeds are 4800bps, 9600bps and 19200bps and the default value is 9600 baud. Press <4> or <6> to change speed, and finish selecting by pressing <ENT> key. Then, for the next setting, use <4> and <6> keys.

BAUD RATE
-->19200

13.1.6 Clearing Event Data Buffer

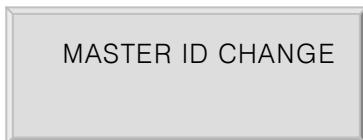


Used to erase ALL of the event data such as the permitted access and denied access records. If you want to do so, press <ENT> key.

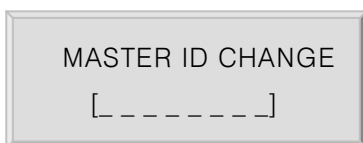


When this figure appears on the LCD, press <1> key to clear and <0> key to cancel the operation.
CAUTION: Be careful in using this operation, or you may lose important data.

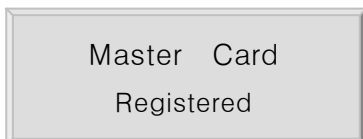
13.1.7 Changing Master Number



Press <ENT> key to change the current Master ID. You should use the new Master ID to access the setup menu since the change is finished.

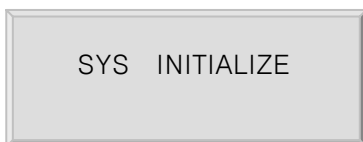


You should use eight digit number. Enter the eight-digit new Master number.
And press <ENT> key.

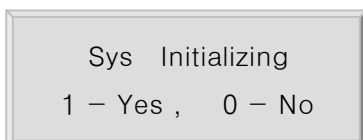


The figure indicates that changing Master ID is finished successfully, and soon, will return to the first figure of this menu. For the next setting, use <4> and <6> keys.

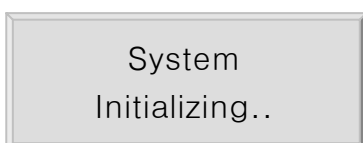
13.1.8 Initializing the System



This operation will initialize the STAR ICON100. 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 incl. registered IDs event data.**

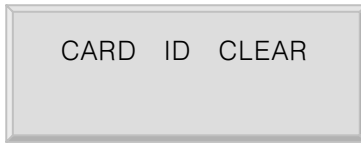


When this figure appears on the LCD, press <1> key to clear and <0> key to cancel the operation, then the LCD displays the first figure of this menu.

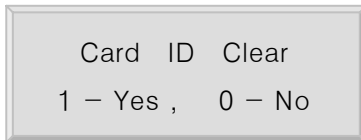


This message appears while the system is being initialized. When finished, you will be automatically returned to the setup menu.

13.1.9 Clearing Card IDs

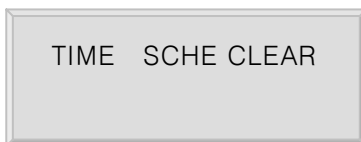


Used to erase ALL the card ID data. stored in the device. If you want to do so, press <ENT> key.

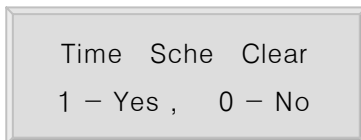


When this figure appears on the LCD, press <1> key to clear and <0> key to cancel the operation, then the LCD automatically returns to the start menu.
CAUTION: Be careful in using this operation, or you may lose important data.

13.1.10 Clearing Time Schedule

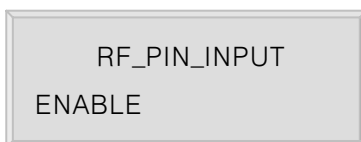


Used to erase ALL the time schedules. If you want to do so, press <ENT> key. **CAUTION: This function will erase ALL programmed time schedules.**

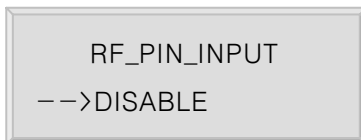


When this figure appears on the LCD, press <1> key to clear and <0> key to cancel the operation, then the LCD automatically returns to the start menu.

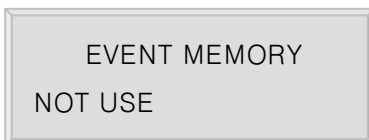
13.1.11 Selecting ID Input mode



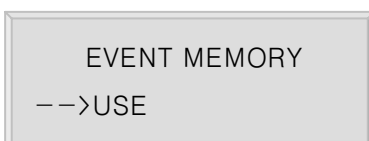
You can enable PIN(card number) to be input through the keypad, so that someone who doesn't carry RF cards with him can access the door. When it is disabled, accessing the door by keypad will be denied. The display shows the current mode. Press <ENT> key to toggle the mode.



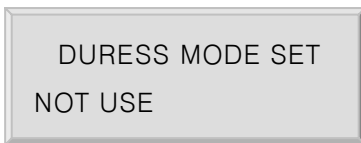
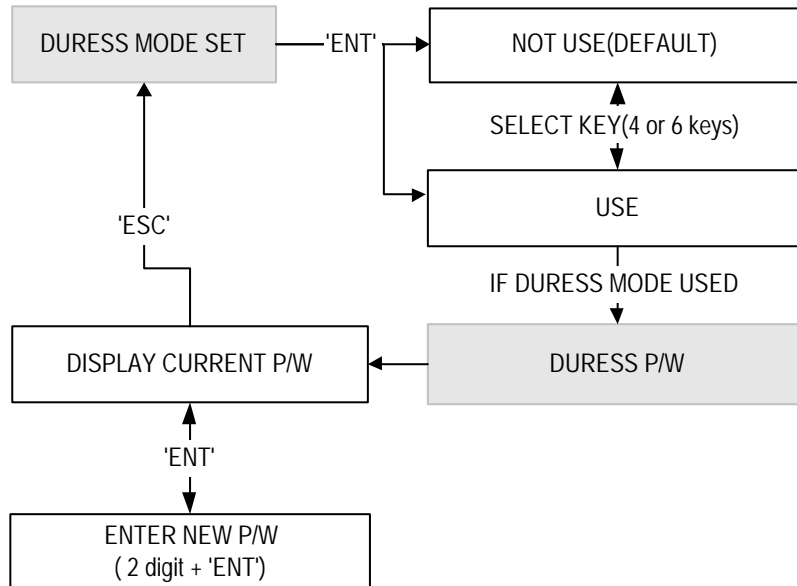
13.1.12 Selecting Event memory USE or NOT USE



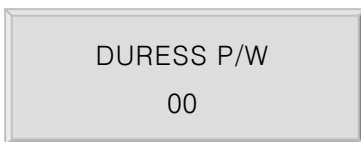
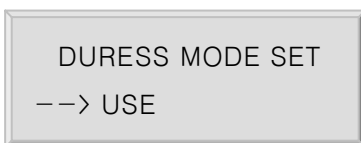
You can select whether the Stand Alone is used or not. The lower line on the LCD indicates the current mode. Press <4> or <6> to toggle the mode, from NOT USE to USE or the reverse, and finish selecting by pressing <ENT> key.
Note: If you select NOT USE, then system will not display event full message.



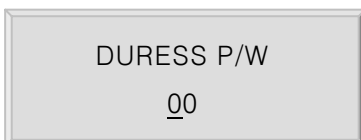
13.1.13 Setting Duress Mode



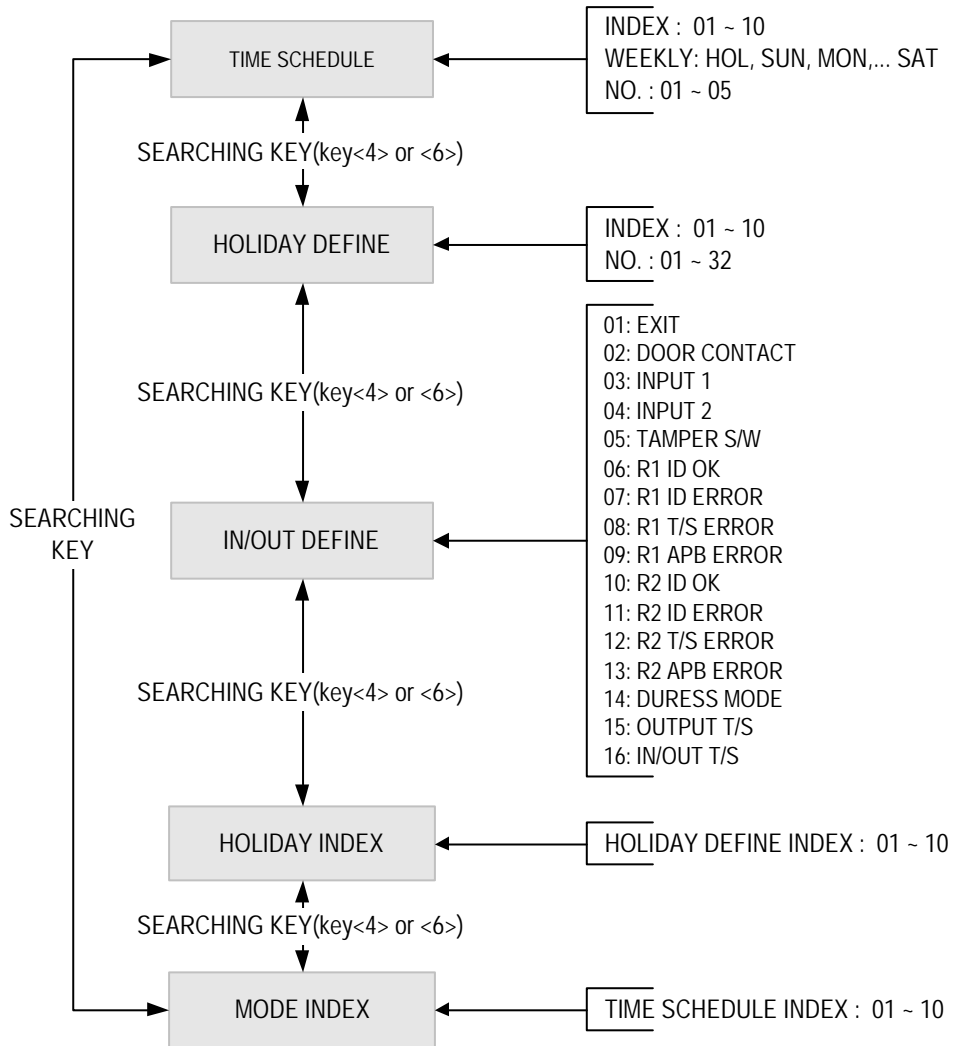
You can select whether the Duress mode is used or not. The lower line on the LCD indicates the current mode. To change mode, press <ENT> key.



If you select USE, then system displays the current DURESS P/W. To change P/W, press <ENT> key.
Note: You can set the duress output in setup menu F2 (in/out define). In case of Duress, enter the 2 digit Duress Password and press <ENT> and open the door using general process.
 If you registered ID, then duress output(see 13.2.3) will be generated.

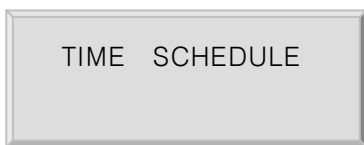
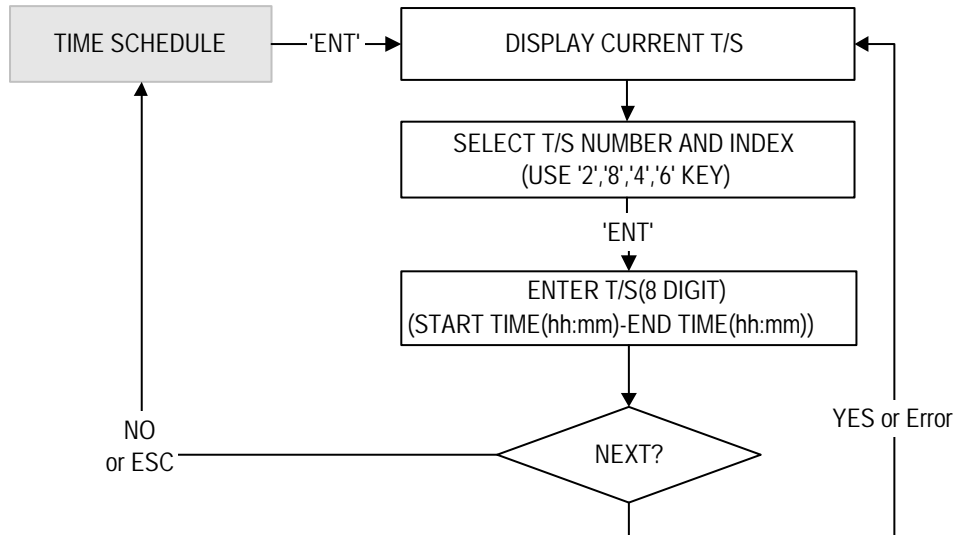


13.2 Setup Menu F2

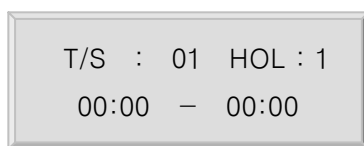


Note The keys <4>, <6>, <2> and <8> are used to change menu, <ENT> to select and store. Press <ESC> to go to back one level and/or to leave setup mode.


13.2.1 Registering and Changing Time Schedule



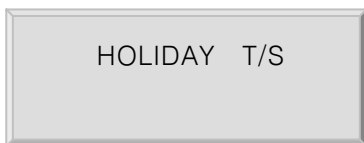
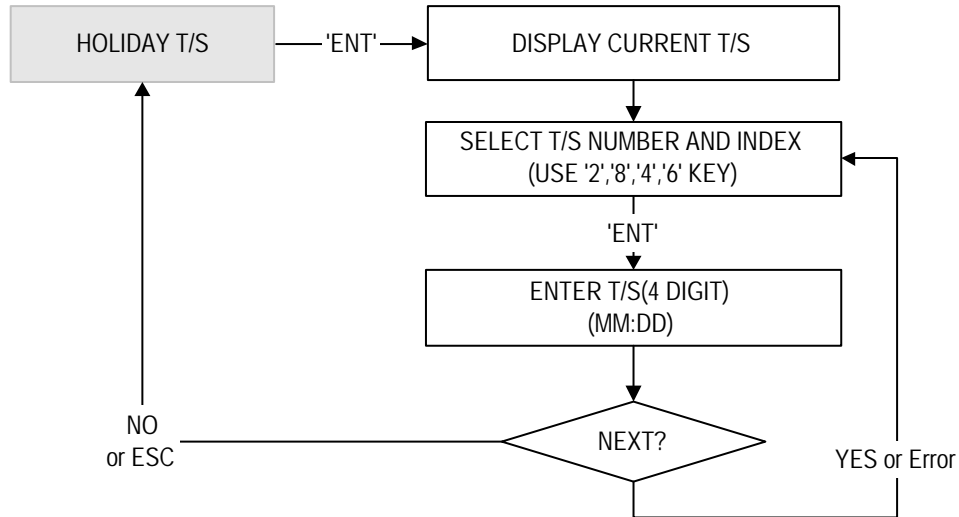
You may program time schedules to grant and restrict access for each user. There can be up to ten different schedules. A minimum of one schedule must be defined. If only one schedule is programmed the most common setting allows access for all users 24 hours / day. A time schedule can be programmed for each day of the week and holidays (see 13.2.2 page 28), and five shifts can be defined for each day. To set time schedules, press <ENT> key from this menu. If you want to set time schedules, press <ENT> key when this figure is displayed.



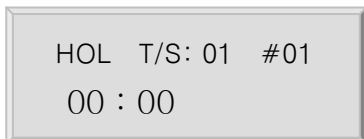
Press <2> key or <8> key to adjust the Time Schedule (T/S) number (1-10) and the day of the week (Mon-Sun and 'HOL'). Define which shift of the day (1-5), using the <4> key and <6> key. 'HOL' refers to specific holidays you will register(see 13.2.2 page 28). Press <ENT> key, and the cursor will blink, then enter the beginning time of the period, in the form of hour(2-digit):minute(2-digit) and the ending time in the same form. Then the lower line will indicate the defined period. For more schedules, repeat the process. To end time scheduling, press <ESC> key.

-  Possible values for time scheduling
- 1) Time schedule number : 01 ~ 10 (Needed when IDs are registered)
 - 2) A day of the week : MON, TUE, WED, THU, FRI, SAT, SUN, HOL
 - 3) Index : 1 ~ 5(referred to the five periods of time of a day)

13.2.2 Registering and Changing Holiday Time Schedule



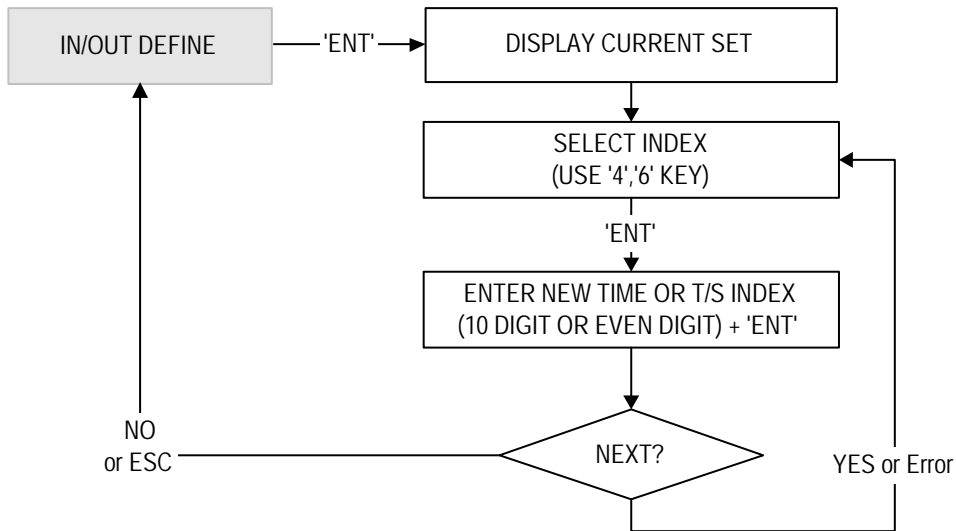
You can register up to 32 specified "holidays," per year for each schedule setting. There can be 10 other registration sets created, meaning holidays can be set for up to 10 years. Press <ENT> to register the days.



With <2> key and <8> key, select the date registration set number (1~10), and with <4> key and <6> key, select the index for the days (1~32). Then, press <ENT> key, and the cursor will blink, then enter the date, in the form of Month (1~12):date, Then the LCD will indicate the defined date. Now, a day has been registered. For further registration, repeat the process.
To end registering the days, press <ESC> key to return to the setup menu.

- 👉 1) Holiday Time schedule(Date registration set) number : 01 ~ 10(10 years)
- 2) Index for the days : 01 ~ 32(32 days)

13.2.3 Defining Outputs in Compliance with Inputs



IN/OUT DEFINE

You can program or deactivate each output to be generated and choose how long (in seconds) they will last. There are default values as seen in the table 2 below.

1. EXIT
03 00 00 00 00

Select input sources by changing index No. with the keys <4> or <6>, and press <ENT> key, and you'll see a cursor blinking at the first digit, from the left, of the five couples of digit, which corresponds to relay1, relay2, TTL1, TTL2 and buzzer, respectively. Then enter the delay times(refer to the table below) one by one. Now, an inputs/outputs definition has completed. For further definition, repeat the process. To end defining inputs/outputs, press <ESC> key, and you will see the first figure of the menu.

Note: The five couples of digit of [15] Output T/S and [16] Input/Output T/S are time schedule indexes.

Table 2 : The relation between index(Source, Input and Output(default))

Index No	Relay1	Relay2	TTL1	TTL2	Buzzer
[1] Exit button	03	00	00	00	00
[2] Door contact	00	00	00	00	00
[3] Input #1	00	00	00	00	00
[4] Input #2	00	00	00	00	00
[5] Tamper S/W	00	00	00	00	00
[6] Reader(1) ID OK	03	00	00	00	00
[7] Reader(1) ID Error	00	03	00	00	00
[8] Reader(1) ID T/S Error	00	03	00	00	00
[9] Reader(1) APB Error	00	03	00	00	00
[10] Reader(2) ID OK	03	00	00	00	00
[11] Reader(2) ID Error	00	03	00	00	00
[12] Reader(2) ID T/S Error	00	03	00	00	00
[13] Reader(2) APB Error	00	03	00	00	00
[14] Duress Mode	03	00	03	03	03
[15] Output T/S	00	00	00	00	00
[16] Input/Output T/S	Input1	Input2	Input3	Input4	Input5
	00	00	00	00	00

Note ;

- 1) The relation between index number and input is shown in the table above.
- 2) The inputs of index No. 3-4 are signals from extra equipments, such as PIR sensor, Fire sensor and etc, connected to the controller.
The index No. 5 corresponds to the tamper switch input (activated when the controller has a physical damage).
The messages of the No. 6 ~ 13 is generated after reading a card.
The index No. 15 ~ 16 are not output time but time schedule number.
- 3) The second line of the LCD shows the output status.(see the table)
(00 :No operation, 99 : Always on, 01~98 : Activated for given seconds long)
- 4) Relay 1(Lock Door), Relay 2(Alarm)

13.2.4 Setting Holiday Index

HOLIDAY INDEX
00

You choose which Holiday time schedule (date registration set) is to be used. The default index is "00". Choose the schedule you programmed (01-10). If necessary, press <ENT> key.

HOLIDAY INDEX
00

Enter Index number(00~10) and press <ESC> key to finish selecting. You will then automatically be returned to the setup menu.

13.2.5 Setting Mode Index

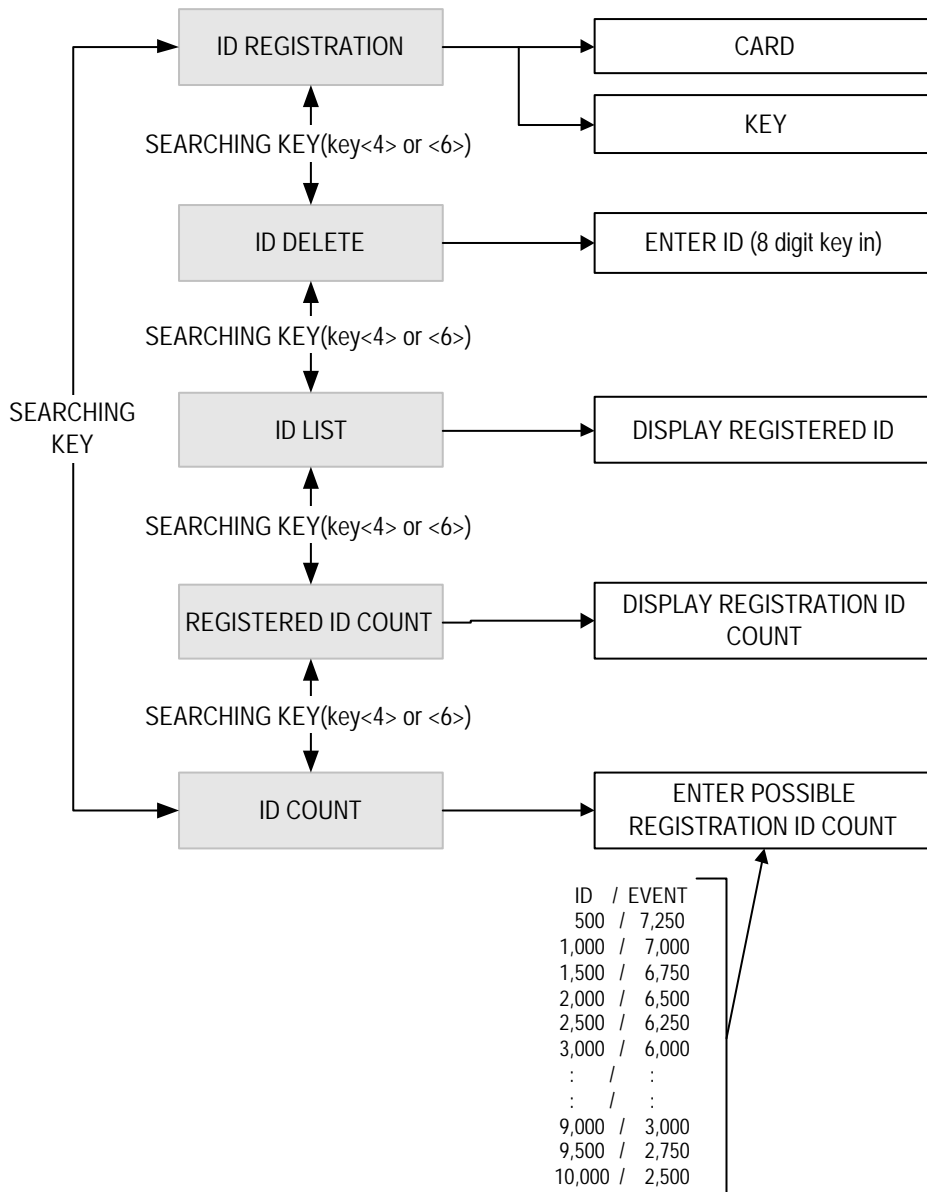
MODE INDEX
00

The function to apply the Time schedule to operating mode, which must be applied. The default index is "00". If necessary, press <ENT> key.

MODE INDEX
00

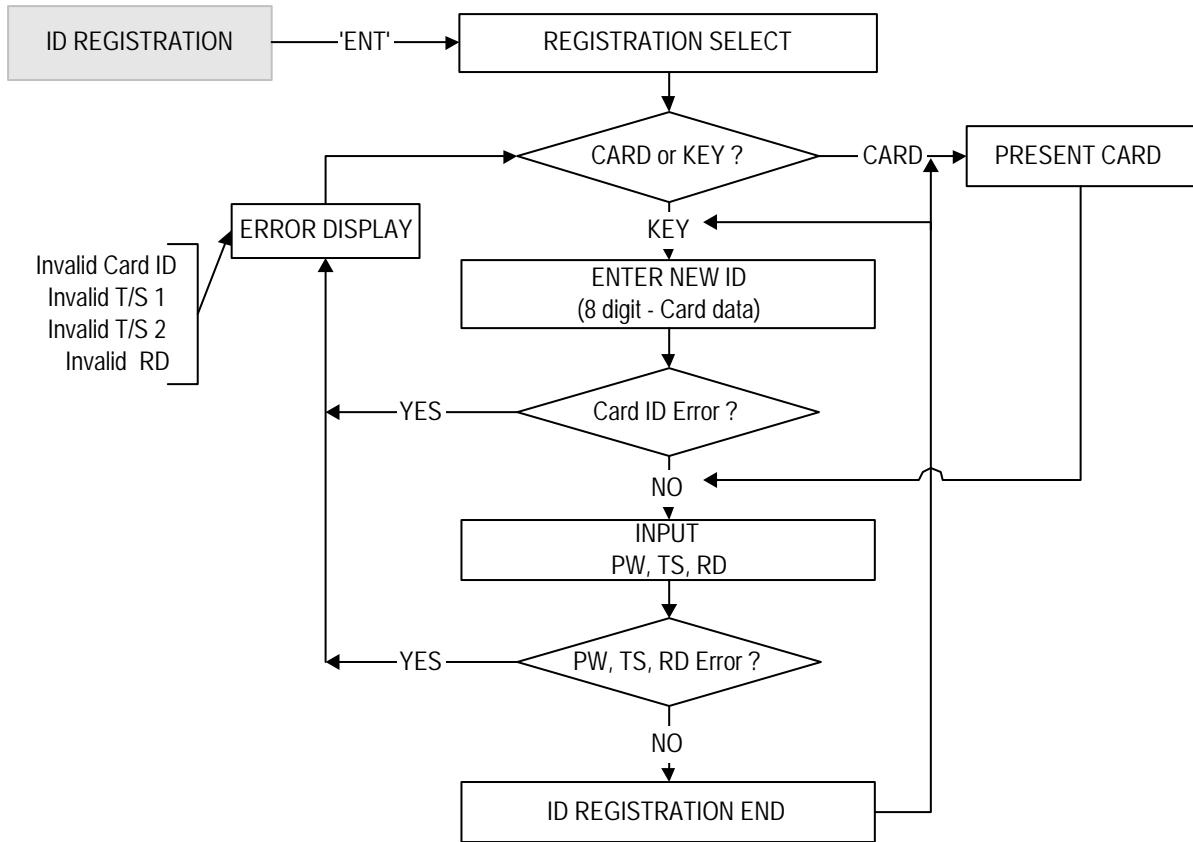
Enter Index number(00~10) and finish. During the period of time the applied T/S indicates, your controller will operate in RF only mode and for the rest of the time, in RF card + four digit password mode. Press <ESC> key to end the selecting, then the first figure of the menu is displayed on "100".

13.3 Setup Menu F3

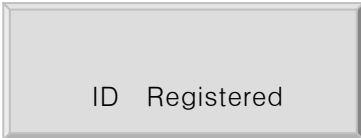
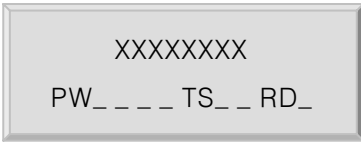


Note: On setup menu F3, there are functions to register additional IDs, to delete registered IDs and to display the registered IDs.

13.3.1 Registering IDs



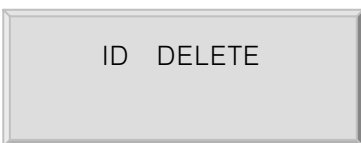
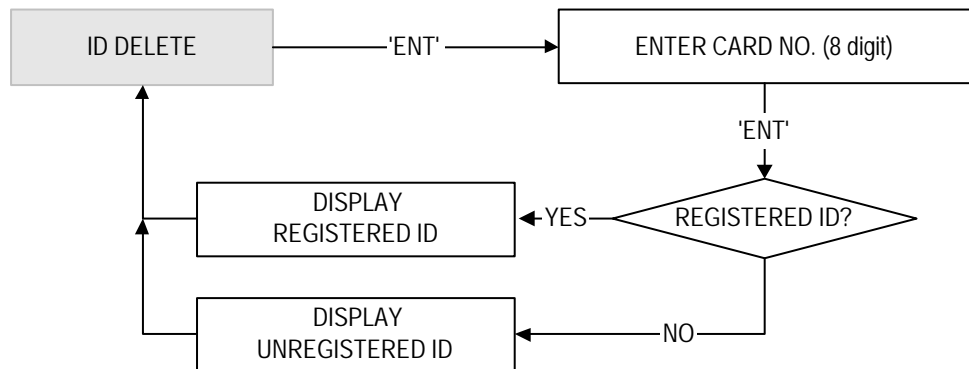
ID REGISTRATION	This is ID registration menu. To register additional IDs. Press <ENT> key.
ID REGISTRATION 1: Card, 2: Key	ID Number is registered in the controller by RF cards or through the keypad. For RF cards, Press <1>key, the keypad, <2>key, or you can quit the registration by pressing <ESC>key.
Scanning ...	The reader is waiting for an RF card which is to be registered. The card number will appear with a beep as the card is read.
[_ _ _ _ _] PW_ _ _ _ TS_ _ RD_	This figure appears When you press the <2>key for through keypad registration, then you are to enter eight-digit ID number. The ID number is card number format. Eight digit ID : Upper 3 digit : 0 ~ 255 Lower 5 digit : 0 ~ 65535



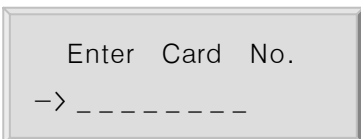
The LCD's upper line shows the number read, and the lower line indicates that the four-digit password, time schedule index and reader code are needed. Enter those values, referring to the following information. Then the registration of the card is finished, and the reader will be waiting for another card, displaying the second menu of the menu. Press <ESC> key to end registering IDs, then the first figure of the menu will appear.

- 1) PW(password) : the password used in RF + password mode.
- 2) TS(Time schedule) :
 - 00 : Anytime accessible
 - 01 ~ 10 : Accessible according to each T/S index
- 3) RD(Reader code) - 1 : for using reader 1 alone,
2 : for using reader 2 alone,
3 : for using both reader 1 and 2.

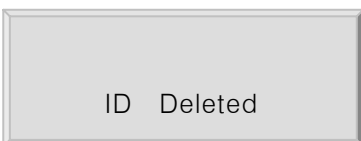
13.3.2 Deleting IDs



To delete some registered ID, press <ENT> key.



Enter the eight-digit ID number that you want to delete. Then the following message will show on the LCD.



The display shows on the LCD for a second, indicating that the deletion is finished successfully, and then the first figure of the menu appears.

13.3.3 Listing Registered IDs

ID LIST

If you wish to list the registered user IDs, press the <ENT> key in this menu.

MEMORY
EMPTY

This message is displayed when there is no registered users.

XXXXXXXX
PWXXXX TSXX RDX

An ID number, the password, the applied T/S and the reader code are displayed on the LCD, and you can scroll to the next ID using the <4> and <6> keys. Press <ESC> key when you finished to return to the setup

ID LIST TOP

This message will appear momentarily when scrolling back to the top of the list (using the <4> key). After a few seconds the ID for the first user reappears.

ID LIST BOTTOM

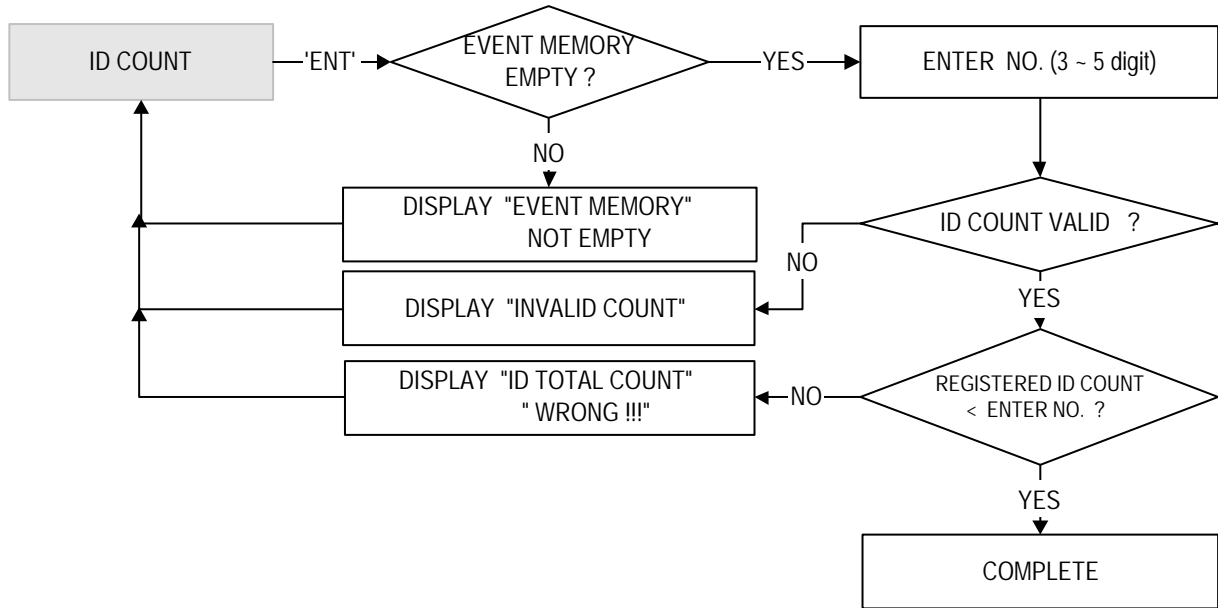
This message will appear momentarily when scrolling forward (using the <6> key). After a few seconds it disappears revealing the very first ID number.

13.3.4 Counting Registered IDs

REGISTERED ID
XXXXX

This menu displays the total number of registered IDs .

13.3.5 Setting Possible Registration ID Count



ID COUNT
500

You should choose which possible registration ID count is to be applied. The default count is "500"(up to 7,250 events can be stored off-line.). If necessary, press <ENT> key.

ENTER ID COUNT
[_ _ _ _]

This figure appears When you press the <ENT>key(and event memory is empty or not used.). You are to enter a new upper limit of ID registration which must be a multiple of 500.

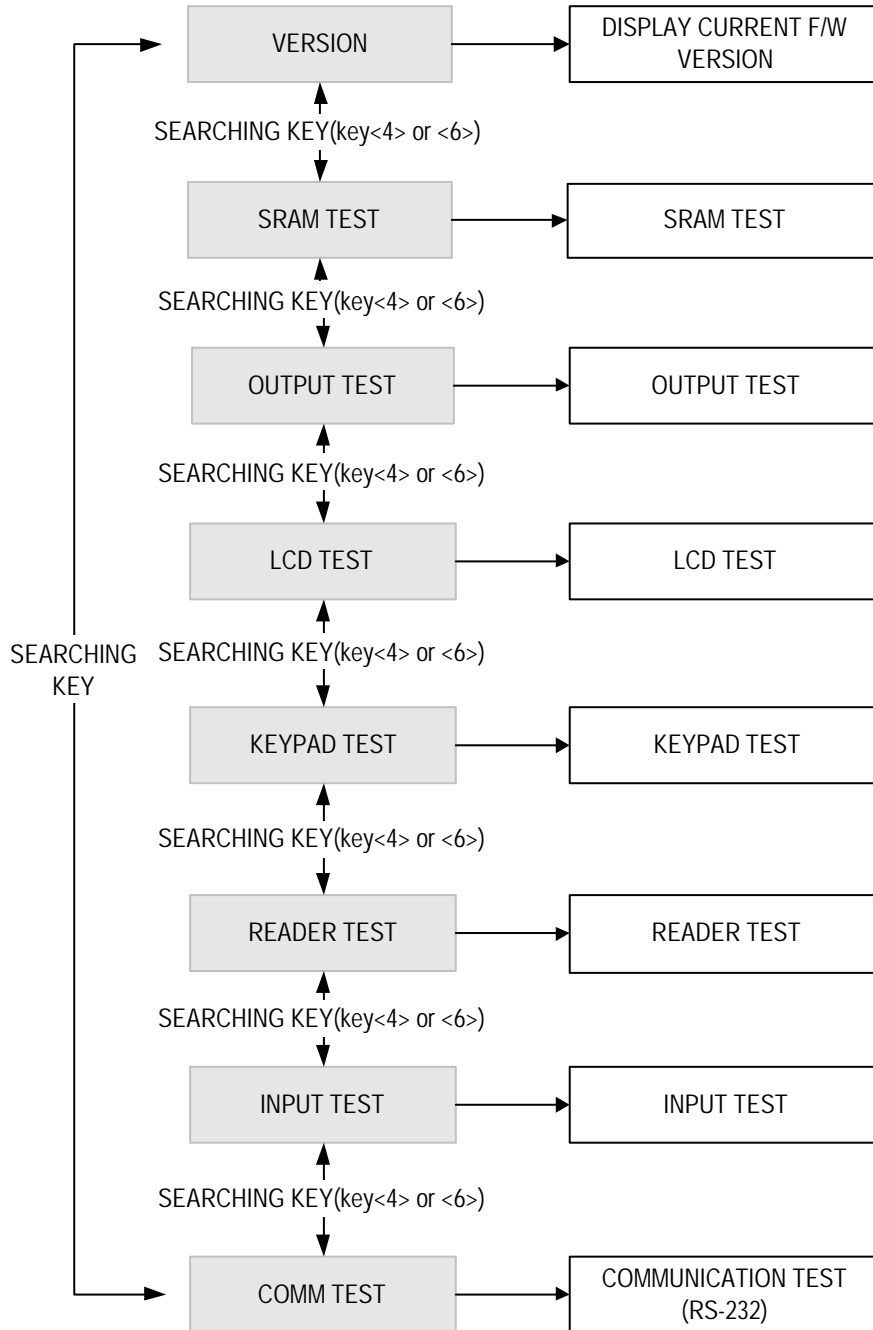
EVENT MEMORY
NOT EMPTY !!!

You'll see this message when the event memory have been used and it's not empty. You can try again after uploading the data to the host or deleting them, using the setup mode F1.

ID TOTAL COUNT
Wrong !!!

This message will show when the entered number is less than the total number of the registered IDs. If you want to delete some of the IDs and reduce the possible registration ID count, clear the event memory, using the setup mode F1 first and try again from the beginning.

13.4 Setup Menu F4



Note: On setup menu F4, there are self-diagnosis functions to test the performances of the operations. To test, press <ENT> key.

13.4.1 VERSION

VERSION
F/W : Rev. 2.5

The version of the controller’s firmware is displayed on the LCD. Press <4> or <6> key to look for other menus of setup menu F4.

13.4.2 SRAM TEST

SRAM TEST

To test the memory, press <ENT> key.

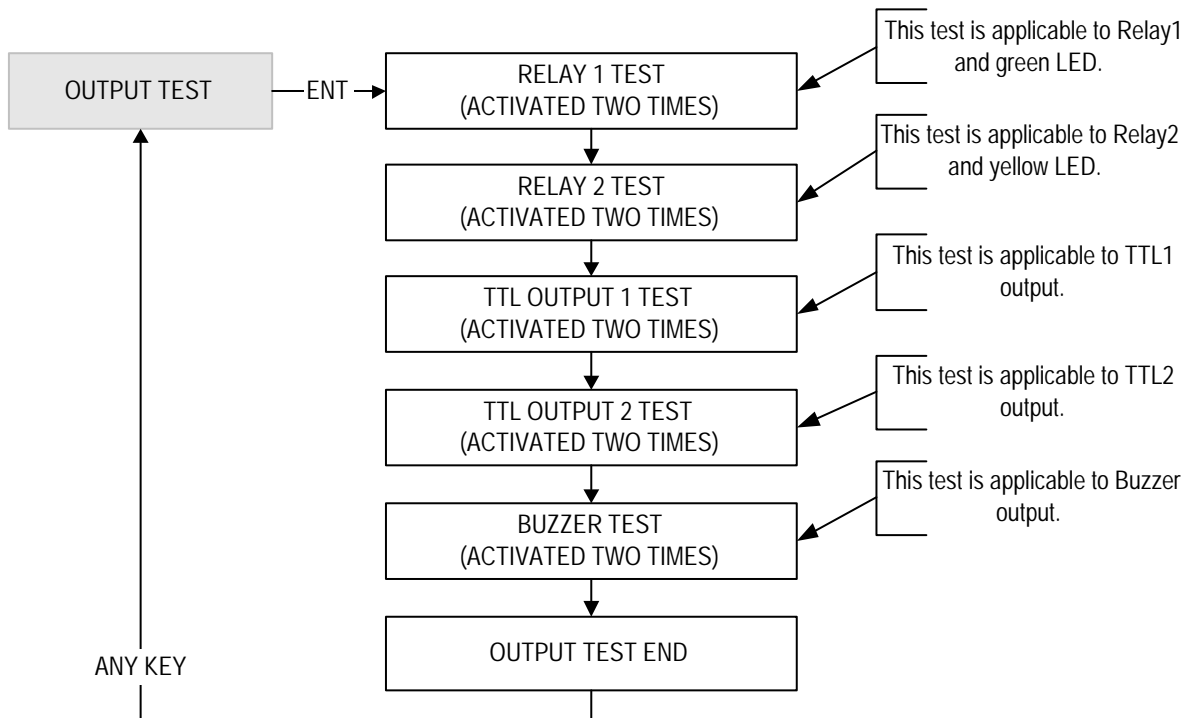
Memory fail !!! 0
RAM testing...

This message would indicate the SRAM has problems. In this event, contact technical support. Press any key to return to the setup menu. Use <4> key and <6> key for testing other performances.

RAM test pass !!!
Press any key . . .

This message appears when the SRAM is operating normally. Press any key to return to the setup menu. Use <4> key and <6> key for testing other performances.

13.4.3 Outputs TEST



OUTPUT TEST

To test the output performances, press <ENT> key. If the output performance has no problems, the test will proceed as follows:
First, the green LED blinks twice as the relay is being shorted and opened twice. The relay makes a clicking sound as it runs. **Second**, the yellow LED blinks twice as the relay is being shorted and opened twice. The relay makes a clicking sound as it works. **Third**, the LCD changes its figure, 'ON, OFF, ON, OFF'. **Fourth**, the buzzer beeps twice.
Note: The LCD provides no message to indicate if the test has finished successfully

OUTPUT 5
Press any key . . .

This figure means that the test has finished. Press any key to return to the setup menu. Use <4> or <6> key to scroll to perform other tests.

13.4.4 LCD TEST

LCD TEST

To test the performance of the LCD, press <ENT> key. As the test proceeds several characters will move quickly from right to left.

Last Update
Press any key . . .

This means the test has finished. Press any key to return to the setup menu. Use <4> key and <6> key for testing other performances.

13.4.5 Keypad TEST

KEYPAD TEST

To test the performance of the keypad, press <ENT> key.

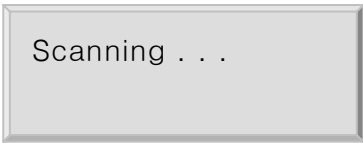
0123456789ABCDEF

When operating normally, pressing the keys on the keypad will display the corresponding letter on the LCD.
Note: For function keys, the letters A, B, C, D, E and F will refer to the <F1>, <F2>, <F3>, <F4>, <ESC> and <ENT>key, respectively.

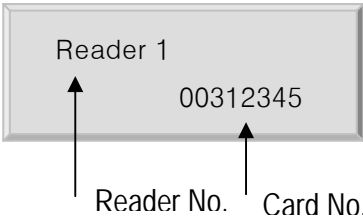
13.4.6 Readers TEST

READER TEST

To test the performance of the reader, press <ENT> key.

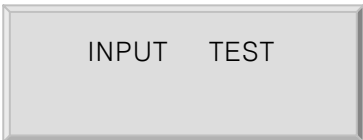


The reader is waiting for an RF card to read. Present an RF card to the reader.

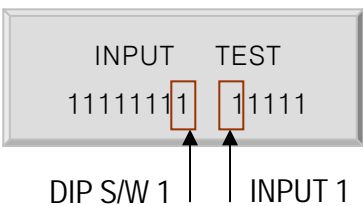


The test has completed successfully if the LCD displays the ID card number (example shown to left).

13.4.7 Input and DIP Switch TEST

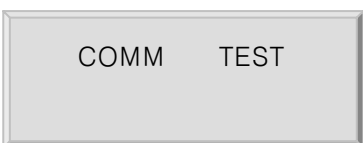
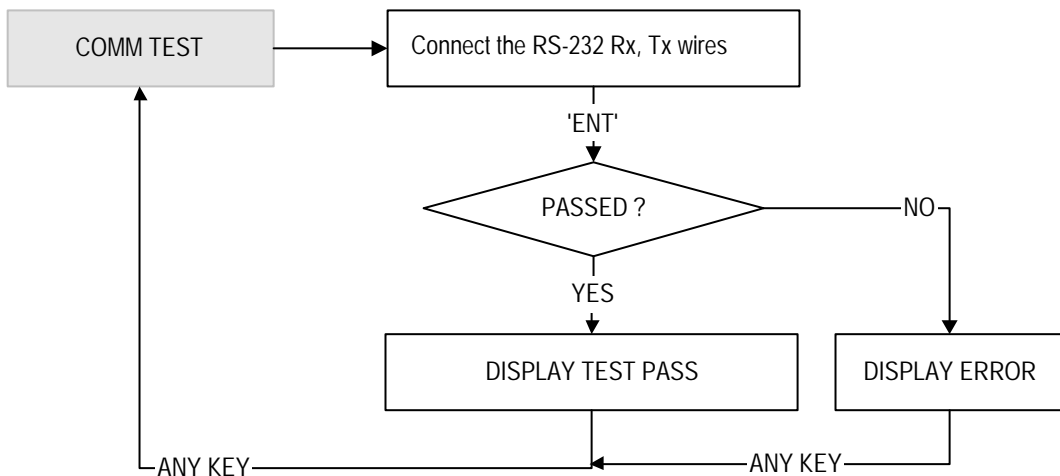


To test the performance of input ports , press <ENT> key.



The fore part of the lower line on the LCD indicates DIP switch status and the rear part indicates the status of the five input signals.
Note: 1. DIP switch : "1"=ON, "0"=OFF
2. Input 1-4 : "0"=ON , "1"=OFF
3. Input 5 : "0"=OFF, "1"=ON

13.4.8 Communication TEST



Before this communication test, connect the RS-232 Rx, Tx wires to each other. And to begin the test, press <ENT> key.


```
TX data = 0  
COMM fail
```

This message indicates there is a problem with the communication performance. Check connections and try again. Press any key to return to the setup menu.

```
COMM test pass !!  
Press any key . . .
```

As the test proceeds, you can see the characters being transmitted and received. This message indicates that the communication test has succeeded.

14. Operating Status Indications

- Granted Access : Displayed when an access is granted.
- UNREGISTERED CARD : Displayed when an unregistered card(or PIN) is presented to the unit.
- SCHEDULE ERROR : Displayed when a Time Schedule error occurs.
- APB ERROR : Displayed when an anti-pass back error occurs.
- PASSWORD ERROR : Displayed when an invalid password is entered.
- ACCESS DOOR ERR : Displayed when a registered card(or PIN) that is supposed to access the other reader is presented to the reader. This may occur if 1 or 2 is entered for the RD value when the card was being registered.

15. Warranty and Service

STAR ICON100 warranty is 2 years from the shipped 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.

Contact Technical Support

In the United states

RF LOGICS Inc. Service Center
3026 Scott Blvd.,
SANTA CLARA, CA95054
Tel.: (408)980-0001
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Note: Damage occurring during shipment is deemed the responsibility of the carrier, and claims should be made directly to the carrier.

MEMO

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