

4 DOOR ACCESS CONTROLLER

USER'S MANUAL

SMP iTDC

SMP iTDC-SR

SMP EI088
Access Controller

Rev. V2.0

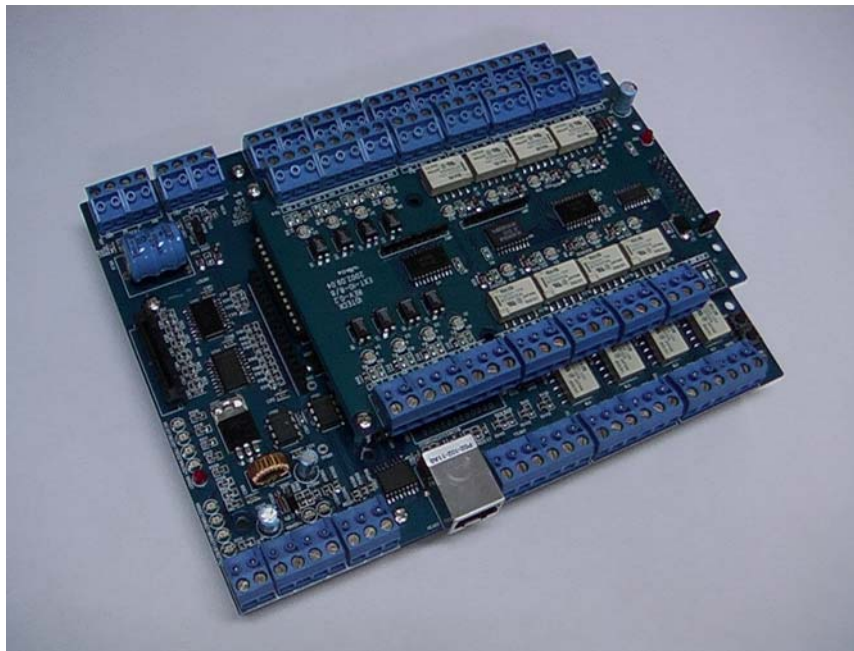


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1. IMPORTANT SAFETY INSTRUCTIONS

In order to prevent any physical injuries and damages of property, please carefully read these instructions as follow and properly use this product.

- 1) Please be aware of 'how to use' and all related details.**
- 2) Please follow all warnings and the usage indicated on the product.**

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

INSTALLATION AND POWER

Please use 12V DC power ONLY.

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

Do NOT install this product at those places with wet (watered) materials, metallic dust, or nearby water.

- There may be a risk of electric shock or fire.

Do NOT install this product near electric motors running.

- The unit may not be operated normally.

Do NOT set this product near the heaters or any material (object) 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 in hand.

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

MAINTENANCE

Do NOT use any kind of liquid material such as water, benzene, and thinner for cleaning.

- There may be a risk of electric shock, fire or serious damage to the unit. Use an air spray, if necessary.

The users are cautioned NOT to attempt to repair of this product or to modify the wiring that has been set by the installer at his/her own discretion.

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

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

- There may be a risk of fire or explosion.

Keep the unit away from any unauthorized people.

- It may cause abnormal operations of the unit.

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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, turn the power off first.
- B. The product seems to be abnormally operated.
- C. The unit exhibits a distinct change in performance.
- D. The unit has fallen to be broken down or damaged on its case.

* The cost of repairing can be charged for troubles due to the improper handling or negligence of the users or the operators.

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2. INTRODUCTION

2.1 IDENTIFYING SUPPLIED PARTS

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



**Main Unit
(1)**



**Manual
(1)**



**Diode
(1)**

* Optional Accessories

EIO88 (Expansion I/O Board)

Keypad (16 keys)

LCD Display Module

TCP/IP Module (IGM7100)

2.2 ABOUT STAR iTDC

The STAR iTDC is an intelligent 2~4 Door Access Controller designed 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 the user to register 1,000~20,000(30,000/40,000/50,000) User ID numbers and to register/delete/change the user card. And also, upon the number of those registered cards, 20,000~29,500(14,000/8,000 /3,000) matters of data (exit/entrance) status can be saved in its event memory. Those 4 of the reader ports can be connected with the Proximity Readers or Proximity + PIN Readers and each reader can have its own operation mode, ether RF only or RF + Password. The independent 7 input ports can be connected with various devices such as Exit Buttons, Door Contact Sensors, PIR Sensors, Window Breakage Sensors and Fire Sensors to strengthen security. Those In/Output ports can be expanded through adding an Expansion I/O Board. Because of the Optional Keypad attached to the device and LCD Display module, it is easy to setup and control each function manually. Using RS232 or RS422 communication, single or up to 256 units of network communication is possible. All setting values including ID numbers, Inputs/Outputs, Real Time Clock, Time Schedules and all Event Transaction Reports can be downloaded/uploaded from/to the host computer with the software supporting a variety of reporting formats. Since the STAR iTDC can be installed and managed inside the security

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zone, any damage of the device can be prevented. Experience a high-level security access control system with STAR iTDC.

2.3 SPECIFICATION

CPU	8bit Microprocessor
Memory	Program Memory: 64KB ROM Data Memory: 512KB RAM (battery backup)
Power	DC 12V/ 350mA max. (excluding lock current)
Card Holders / Event Buffers	User Programmable by 1,000 unit of card holders Card Holders: 1,000 ~ 20,000 users (Default: 5,000 users) (User Programmable 30,000/40,000/50,000) Event Buffers: 20,000 ~ 29,500 events (Default: 27,500 events) (14,000/8,000/3,000 events)
Reader Ports	4 Reader Ports
Reader Data Format	Standard 26 bits Wiegand Format, Standard 34 bits Wiegand Format (Applied to iTDC-SR), 4bit, 8 bits burst Format for keypad reader
Communication port	RS232/RS422 (up to 256 channels) selectable 4800, 9600(Default), 19200, 38400bps communication speed
Inputs/Outputs	7 Input ports/ DC12V/ 20mA 4 Relay Output ports/ DC12V~24V/ FORM-C Relay 2A max. 3 TTL Output ports: DC5V/ 20mA Optional EIO88 Expansion I/O board (8 Inputs and 8 Output Relays)
Self Diagnostic	Yes
Reset	Power on reset and Watchdog timer reset
Operation Status	21 LED (red or green) indicators
Operating Environment	0°C ~ +65°C, 0 ~ 90%(Humidity)
Weight	0.55 lbs (250g)
Dimensions	7.4" x 5.8" x 0.72" (185mm x 145mm x 18mm)

Optional

Keypad	16 keys
LCD Display Module	2Lines x 16ch, 2.62" x 0.55"(65.6mm x 13.8mm) viewing area
Expansion I/O Board	EIO88 (8 Input ports/8 Output Relays)
TCP/IP module	IIM7100 (IIM7100A)

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3. PRODUCT OVERVIEW

3.1 FUNCTIONS

Stand-Alone Operation

The STAR iTDC has such a capability of those 4 readers (4 Door Controls). The unit receives the 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 saved 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 any other unit when used in conjunction with one another.

Operation with Host Computer

All event transactions can be managed via the host computer. STAR iTDC saves the status of external input signal and un/authorized person's entrance/exit into the internal memory. Each kind of data saved can be transmitted from the computer via regulated communication protocol. The data transmitted from the controller can be saved and maintained on the host PC. It is also possible to output (print-out) the reports for the status of person going in/out and alarming.

Data Backup

The controller retains all user information and event data for 30 days even in the event of power failure.

CAUTION: Battery Jumper for keeping memory data must be set up correctly.

(See the INSTALLATION section)

Keypad (Registration)

If the STAR iTDC is not connected to the host PC, the integrated keypad and LCD display module can also be used for the entire programming process manually such as card data registration/delete and each kind of function set-up/cancel.

Anti-Pass-Back

Using an additional proximity reader for exit, the Anti-Pass-Back mode can be set up. Anti-pass-back mode prevents any entry or exit when the registered user does not properly follow one entry and one exit by the Anti-pass-back rule. APB only allows exit for the user who has once got into the door first and it does not allow any user trying twice entry or twice exit in a row. As it were, as 2 of card readers equipped on the both sides of the entrance and exit of one door, the user has to let the card-reader read the user card properly each time of entrance/exit so that only person who got in with the card read by the card reader equipped on the entrance side can get out also only by letting the card reader read the

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card for exit. When this rule was not kept, the internal memory saves APB error. Also, when this kind of error happens, it is possible to make the output on the specific output port. (ITDC applied programs such as entrance/exit control and diligence/laziness control – in/output set up – it is set up upon APB error selection.) APB function can be used for 2 doors each independently or linked together. (See Number of Door Control)

Number of Door Control (2/3/4-Door Control)

It can control maximum 4 doors with 4 of card readers attached. In case of controlling **2 doors**, the Reader 1 and 2 are equipped to the Door 1, and the Reader 3 and 4 are equipped to the Door 2. It means that APB can be applied to both doors each. If controlling **3 doors**, APB can only be applied to the first door using reader 1 for entry and reader 2 for exit. Door 2 and 3 cannot use APB function as they have only one reader each (Reader 3 for Door 2 and Reader 4 for Door 3). If controlling **4 doors**, APB function cannot be used so each 4 reader will be equipped to the Door 1, 2, 3, and 4 each. (If controlling 3 and 4 doors, the optional Expansion I/O board, EIO88, must be used to install Exit Button, Door Contact Sensor, Door lock and Alarm devices for the Door 3 and 4.)

Input/Output (External)

The STAR iTDC has 7 built-in inputs and 7 outputs (4 relay outputs and 3 TTL outputs). The input port can get those inputs such as exit button and fire sensor. Also, the door lock and alarm devices can be attached on those 4 of relay outputs so the in/output signal can be applied/used for various usages. Moreover, the output time can be also set-up on these output ports.

Optional Expansion I/O

1 of the optional Expansion I/O board (EIO88, additional 8 inputs and 8 output relays) can be connected to the STAR iTDC. It can control the output of the expansion I/O board by the iTDC input and the output of the expansion I/O board by the reader.

Input Device Type Setup (NO, NC)

If the input device is normal open (NO) type sensor, the user has to setup the input device type to (NO) so that the iTDC will be activated when the input port makes short circuit to ground. If the input device is normal close (NC) type sensor, the user has to setup the input device type to (NC) so that the iTDC will be activated when the input port makes open circuit. All input device type can be programmed by software program on the host computer. (This setup is also applied to optional Expansion I/O board.)

Time schedule Setup

As specific time zone is set up, this function allows set-up action only within the set-up time range. Upon each time schedule code, the user can select the time zone and transfer to the device. For the time range of Monday to Friday and holiday (see Holiday Schedule set-up), maximum 5 different time zones

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a day can be divided and set-up. Each time schedule code can have each different (or same) one code for holiday.

Entrance Time Limit of the Registered Card – In case of the card registration, please input those time schedule codes upon each reader. Within the set-up time range, it normally operates. When out of the set-up time range, it outputs the time schedule error.

Input Port Operating Time Limit – Please input the time schedule codes for each input port. Within the set-up time range, it just ignores the signal even if the signal is recognized on the input port.

Output Port Operating Time Setup – Please input the time schedule codes for each output port. Within the set-up time range, every signal gets output on the output port.

Reader Mode Operating Time Setup – In case of the reader mode is set-up as RF + PW (password), just RF is necessary for normal operating within the set-up time range. When out of this time range, both of RF and PW (password) are necessary for normal operating.

Holiday Schedule Setup

Except for Sunday, 100 holidays (legal holidays and day-off for shift working system) can be programmed for one holiday code. (As for those selected dates, it is possible to set up the time schedule so the entrance/exit can be possible only for the permitted time range.) Each holiday code can be set-up at each time schedule code.

- 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

Door Open Alarm and Door Open by Force Alarm

The Door Open Alarm function is to notice the administrator that any case of the door opened even after the normal opening time and waiting time. (The output port can activate the output signal. The error status with the time can be saved and transmitted upon the PC program's request.) The Door Open by Force Alarm function is to activate the alarm when the door is opened by force. If the waiting time passed with this status, the door open time excess status will be activated again.

Duress Alarm

This function is used to notice any case that the door has to be opened by force. In case of duress, enter the 2 digits Duress Password and <ENT> key before the normal access process then the door will be opened as normal but the duress alarm is also generated at the same time and the duress alarm output will be activated to TTL output and alarm event will be sent to the host PC.

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3.2 BOARD LAYOUT

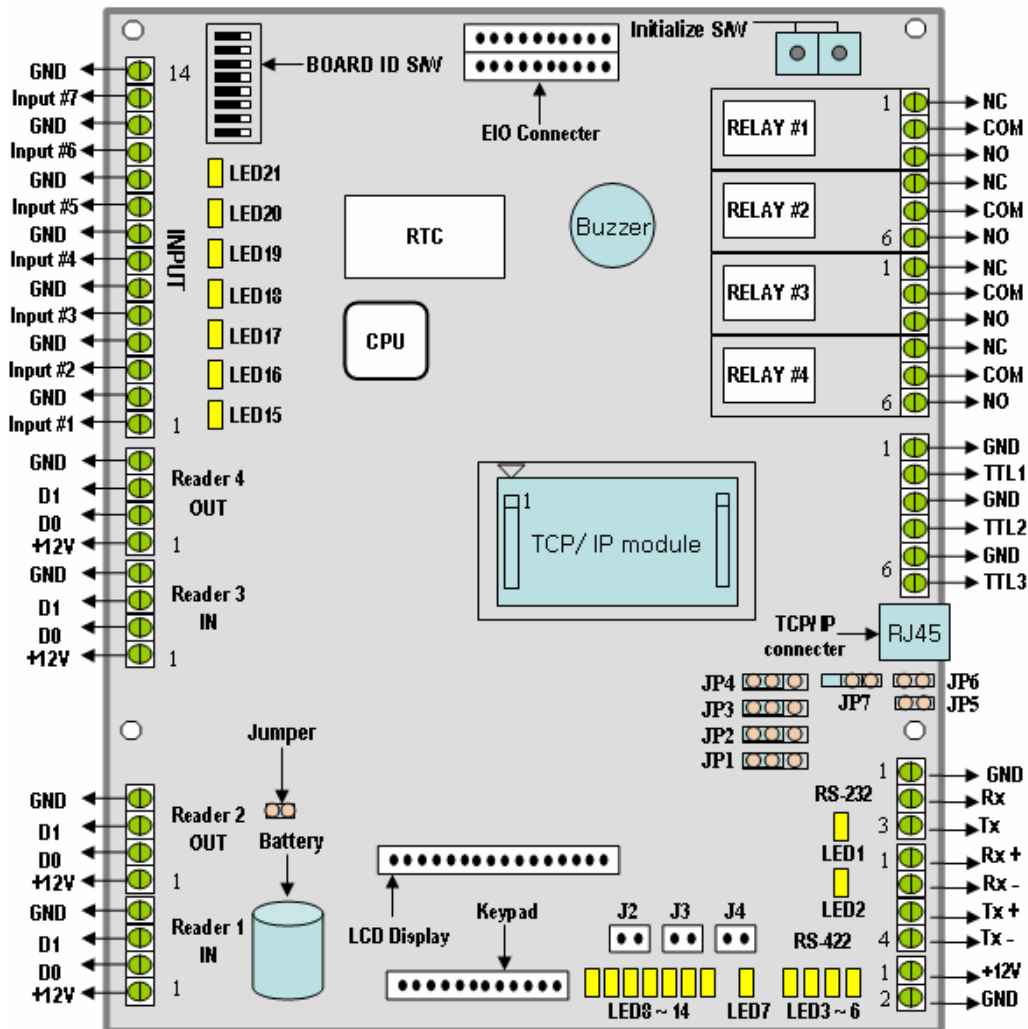


Figure: iTDC Control Board Layout

BOARD ID S/W

This BOARD ID S/W is for communication ID setting of iTDC control board. As the device number that set up by the address set-up switch is used to communicate with the computer, it should be same as the computer.

EIO Connector

This EIO Connector is the port for connecting the optional EIO88 expansion I/O board. It is possible to expand 8 in/output each.

Initialize S/W

This Initialize S/W is to initialize and erase all user data from the memory. There are two tactile

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switches and the initialization is only active when the two tactile switches are pressed at the same time.

Relay #1 ~ Relay #4

These are 4 FORM-C (COM, NO, NC) relay outputs at DC12~24V, Max 2A current.

TTL #1 ~ TTL #3

These are 3 TTL output ports at DC5V TTL level, max. 20mA current.

The normal logical state of TTL output is Low (DC0V) and activates to High (DC5V).

TCP/IP connector

iTDC can have 1 of TCP/IP converter module internally equipped.

Picture: As shown in the picture 'iTDC Layout', the pin with the mark of an inverted triangle on the location of the TCP/IP module of iTDC PCB is the Pin number 1. The TCP/IP module has the mark of number 1 on the both of the connecting pin (12pin connector). The TCP/IP module's pin number 1 should be connected to the pin number 1 of iTDC.

Jumper Switch for TCP/IP, RS422 Communication (JP1 ~ JP4):

This is to select if LAN communication with the internal type of module should be used or RS 422 communication should be used.

The initial status is as the Figure (iTDC Control Board Layout). (Default: RS422 communication)

Jumper Switch for RS_422 Communication test (JP5~6):

As a communication test function of the set-up mode F4, this is for test of RS_422 port.

Extract jumper of JP3~4 and short JP5~6 by this jumper.

Initial status of JP5~6 is Open.

Jumper Switch for TCP/IP module selection (JP7):

This jumper switch is for selection of the TCP/IP internal module (IIM7100 or IIM7100A).

The initial status is as the Figure (iTDC Control Board Layout). (Default: IIM7100A)

RS-232 Serial Communication Port

iTDC has 1 of RS-232 communication port for such short distance individual connection with the PC.

RS-422 Serial Communication Port

This is RS422 communication port for such long distance connection of multiple boards up to 256 units to PC. The RS422/RS232 converter is necessary for connecting RS422 port to PC.

+12V and GND (Main Power)

This is main power connection of control board and iTDC is working at DC12V and max 350mA current.

LED Expansion Port(J2~J4):

This port is for indicating the LED #1 ~ #2 (communication status LED) and LED #7 (power LED) externally through expansion.

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Keypad

This is an optional keypad port and it can be used with the optional LCD display module for manual setup. It is possible to various functions' set-up/cancel and the card data register/delete individually by the keypad. (But, the output time set-up of time schedule input and reader input is possible to be set up only on the PC program.)

LCD Display

This is an optional LCD Display port and it can be used with optional keypad for manual setup. It is for checking the device's set-up status through the LCD module. Also, by the keypad, it is possible to check the changing status of the users when any information changed upon set-up/cancel of each function and registration/delete of the card data.

Jumper for connecting the battery

This is a Battery Connection Jumper. Before normally using iTDC, this jumper prevents electric discharge of the battery for keeping RAM data. It is shipped out as 'not-connected' from the factory. (Please see set-up jumper switch)

Reader #1 ~ Reader #4

It is possible to connect 4 of readers to the iTDC.

These are 4 proximity reader ports and each reader port supplies DC12V to the proximity reader and receives 26bit Wiegand output from the reader. If the user connects PINPAD Reader then the user has to make sure that the PINPAD Reader has 8bit burst output through Wiegand output.

Input #1 ~ Input #7

These are 7 Input Ports of the iTDC.

Buzzer

This is internal Buzzer and it makes beep sounds every time the keypad is pressed from the optional keypad so the user can confirm how many keys are pressed

TCP/IP Module

This is the location for the optional TCP/IP module (IIM7100A) and the user has to install TCP/IP module at this location when the user would like to use TCP/IP communication port.

LED1 ~ LED2

These 2 LEDs indicate the status of communication. LED1 is RX status and it blinks when the data normally received from the PC. LED2 is TX status and it blinks when the data is being transmitted back to the PC after the data being totally treated as normal.

LED3 ~ LED6

These 4 LEDs indicate the status of TCP/IP module other than LED1~2 in case of communicating through the TCP/IP module. LED3 is Connection Status, LED4 is 10Mbps, LED5 is 100Mbps and LED6 is Collision Status indicator.

LED7

This red-colored LED is power indicator and it always on when the control board power is on.

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LED8 ~ LED14

These 7 LEDs indicate output status. Each LED is on when the corresponding output is activated. LED8 is for Relay #1, LED9 is for Relay #2, LED10 is for Relay #3, LED11 is for Relay #4, LED12 is for TTL 1, LED13 is for TTL 2, and LED14 is for TTL 3 output.

LED15 ~ LED21

These 7 LEDs indicate input status. Each LED is on when the corresponding input is activated (short circuit to ground). LED15 is for Input 1, LED16 is for Input 2, LED17 is for Input 3, LED18 is for Input 4, LED19 is for Input 5, LED20 is for Input 6, and LED21 is for Input 7.

3.3 OPTIONAL ACCESSORIES

3.3.1 EIO88 EXPANSION I/O BOARD

The EIO88 board features:

- 8 Inputs ports
- 8 FORM-C Relay Output ports
- 4 Inputs can be configured to Door 3 ~ 4 as of exit buttons and door contact sensors.
- 4 Output Relays can be configured to Door 3 ~ 4 as of door locks and alarm devices.

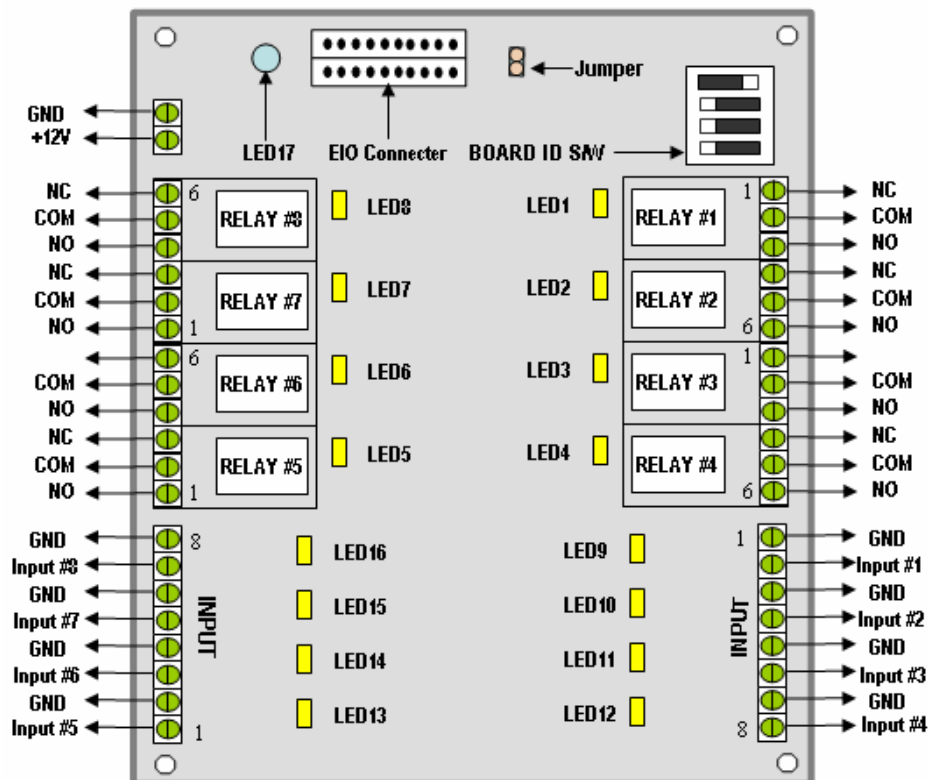


Figure: EIO88 Expansion I/O Board Layout

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EIO connector

This EIO Connector is the port for connecting to iTDC Main Control board. 1 EIO board is used for expanding of the in/output port of iTDC. The EI/O board port is connected to the EI/O board port of the iTDC.

BOARD ID S/W

The DIP switch is factory set as the above layout shown. DO NOT change the setting as it may cause wrong operation of EIO88 expansion I/O board.

+12V and GND (Main Power)

This is main power connection of expansion I/O board working at DC12V and max. 100mA current.

Relay #1 ~ Relay #8

These are 8 FORM-C (COM, NO, NC) relay outputs at DC12~24V and max 2A current.

Input #1 ~ Input #8

These are 8 Input Ports.

LED17

This red-colored LED is power indicator and it always on when the EIO88 board power is on.

LED1 ~ LED8

These 8 LEDs indicate output status. Each LED is on when the corresponding output is activated.

LED1: Relay #1, LED2: Relay #2, LED3: Relay #3, LED4: Relay #4,

LED5: Relay #5, LED6: Relay #6, LED7: Relay #7, LED8: Relay #8

LED9 ~ LED16

These 7 LEDs indicate input status. Each LED is on when the corresponding input is activated.

LED9: Input #1, LED10: Input #2, LED11: Input #3, LED12: Input #4,

LED13: Input #5, LED14: Input #6, LED15: Input #7, LED16: Input #8

3.3.2 TCP/IP MODULE

The user can add an optional TCP/IP module (IIM7100A) and this module can be used if the user wants TCP/IP communication to the host PC.

3.3.3 LCD DISPLAY MODULE

The user can connect the optional LCD display module to the iTDC main control board and the user can use the LCD display module with the optional keypad when the user sets up all functions to the iTDC manually.

3.3.4 KEYPAD

The user can connect the optional Keypad to the iTDC main control board and the user can use the keypad with the LCD display module when the user sets up all functions to the iTDC manually.

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4. INSTALLATION TIPS & CHECK POINT

Installing the iTDC is a relatively easy task. It can be installed with the common hand tools and readily available communications wire. This section provides information about wiring, wire runs, and the other information to make the installation quick and easy.

4.1 CHECK POINTS BEFORE INSTALLATION

4.1.1 SELECTION OF THE CABLE

System installation cabling will be configured as follow.

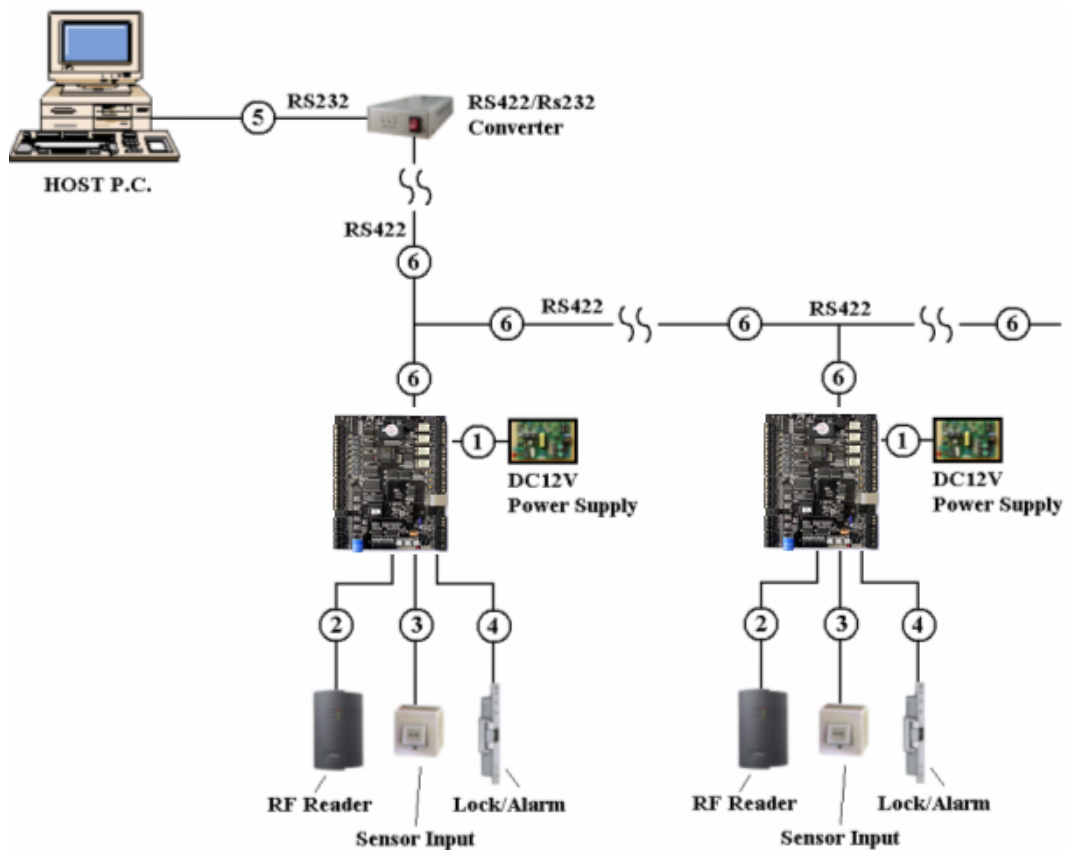


Figure: System Installation Layout

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4.1.2 RECOMMENDED CABLE TYPE AND PERMISSIBLE LENGTH OF THE CABLE

Reference	Description	Cable Specification	Maximum Distance
①	iTDC Power (DC12V) DC Power -> iTDC	Belden #9409, 18 AWG 2 conductor, unshielded	30m
②*	Reader (Power and Data) Extra Reader -> iTDC	Belden #9512, 22 AWG 4 conductor, shielded	150m
		Belden #9514, 22 AWG 8 conductor, shielded	
③	Door Contact Exit Button Sensor Input Input -> iTDC	Belden #9512, 22 AWG 4 conductor, shielded	300m
		Belden #9514, 22 AWG 8 conductor, shielded	
④	Door Lock, Alarm Device Lock (Alarm) -> iTDC	Belden #9409, 18AWG 2 conductor, unshielded	300m
⑤	RS232 Cable Converter -> Host P.C.	Belden #9829, 24 AWG 2-twisted pair, shielded	15m
⑥	RS485 Cable iTDC -> iTDC iTDC -> Converter	Belden #9829, 24 AWG 2-twisted pair, shielded	1,200m
	RS422 Cable iTDC -> iTDC iTDC -> Converter	Belden #9830, 24 AWG 3-twisted pair, shielded	

* The thicker wire is necessary if the user connects the reader with high current consumption.

4.2 CHECK POINT DURING INSTALLATION

4.2.1 TERMINATION RESISTOR

The 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 the data rate used by the communication system.

For example, if the user uses 9,600 baud rate and 1,200-m length of cable, the propagation velocity of

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the 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 be stabilized 18.6us after the leading edge of a bit. Since the data bit is captured in the middle of the bit that 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 the user installs the cable to maximum length, the impedance of the cable and the network are mismatched and the transmitted signal is overlapped by the reflected signal. In this case, it is recommended to add the 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 or “RX+” and “RX-” for 4 wires RS422 system. A termination resistor of less than 90Ω should not be used and no more than 2 termination resistors should be used in one networking system.

4.2.2 HOW TO CONNECT TERMINATION RESISTORS

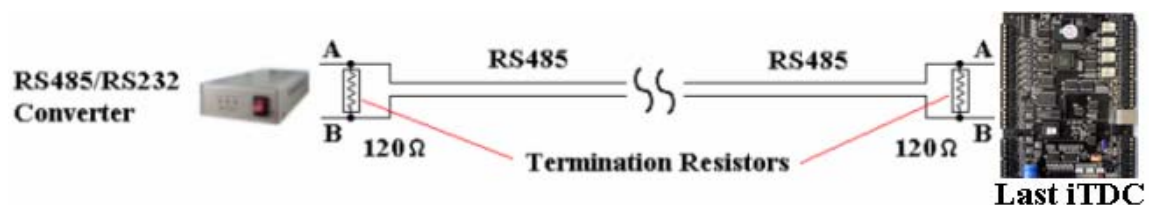


Figure: Termination resistors for 2 wire RS485 communication system

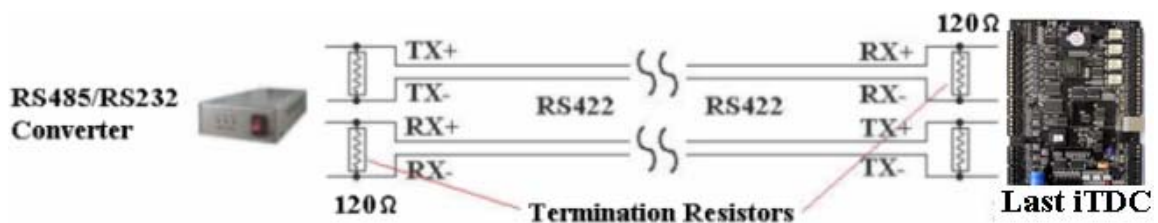


Figure: Termination resistors for 4 wire RS422 communication system

4.2.3 GROUNDING SYSTEM FOR COMMUNICATION CABLE

To use such proper grounding system on the communication cable is recommended. The best method for grounding system is to put the shield wire of the communication cable to the 1st 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 points where the user 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

4 DOOR ACCESS CONTROLLER

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, to connect ONLY one end of shield wire of communication cable to the grounding system is recommended; If the user finds the earth ground nearby, then connect one end of shield wire to the earth ground; If the user does not have the earth ground nearby, then find the chassis ground and connect one end of shield wire to the chassis ground; If the user does not find both earth ground and chassis ground, then connect one end of shield wire to the power ground. (GND of 505R)

Please be noticed about 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, to use the power ground instead of chassis ground is recommended.

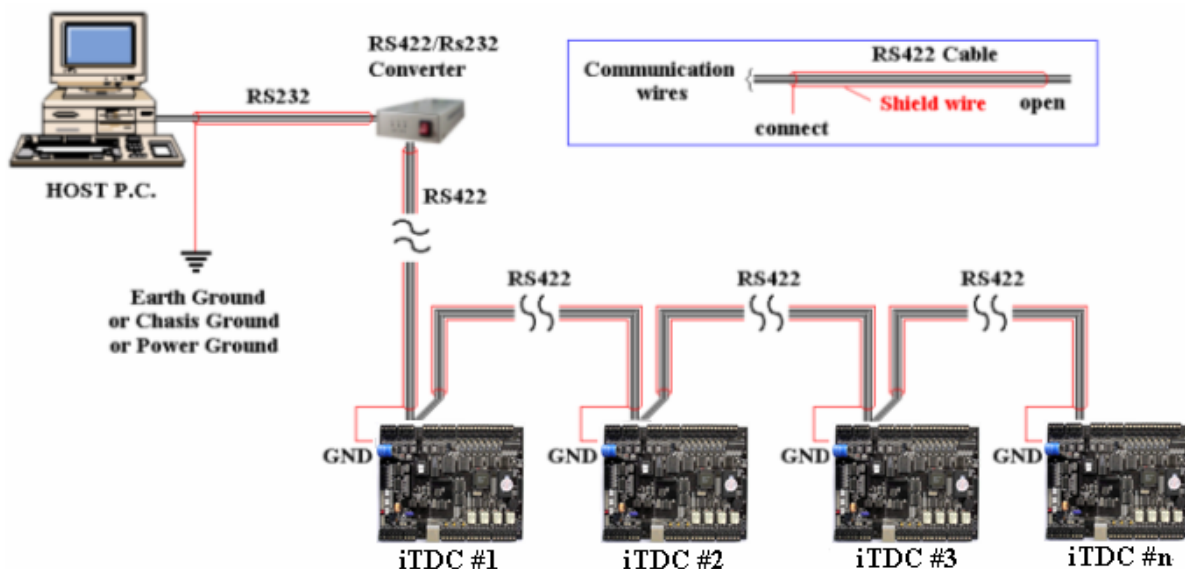


Figure: Grounding system

4.2.4 REVERSE DIODE CONNECTION

If the user connects 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 the user does not connect the reverse diode, the surge voltage will be transferred 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.



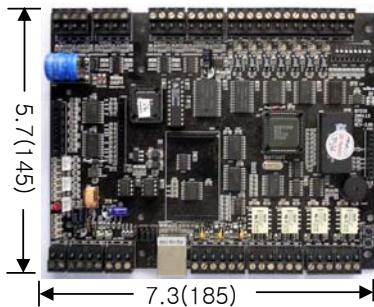
Figure : Reverse Diode connection

4 DOOR ACCESS CONTROLLER

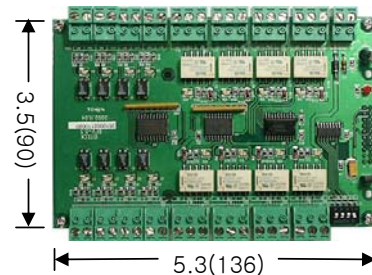
5. INSTALLATION

5.1 DIMENSIONS

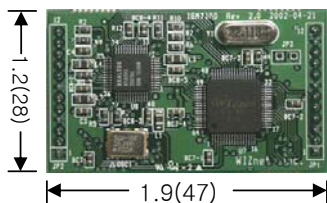
Unit: inch (mm)



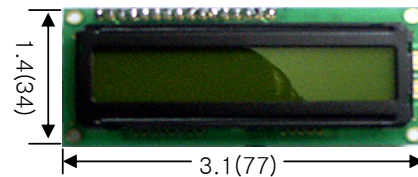
iTDC DIMENSION



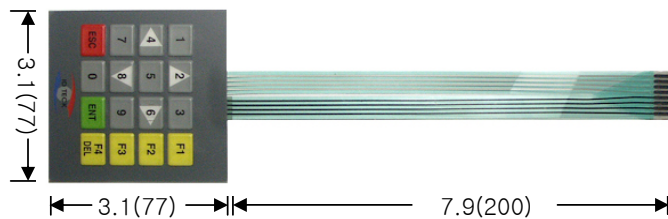
EIO88 DIMENSION



TCP/IP MODULE DIMENSION



LCD MODULE DIMENSION



KEYPAD DIMENSION

5.2 BACKUP BATTERY JUMPER

iTDC has a jumper for the backup battery connection, which is left open circuit to prevent any current consumption of backup battery (Figure: Jumper setting). Before the iTDC operation, it needs to be connected so that the backup battery can retain the memory during power failure.

4 DOOR ACCESS CONTROLLER

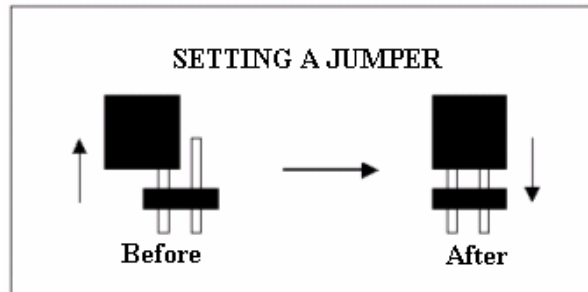
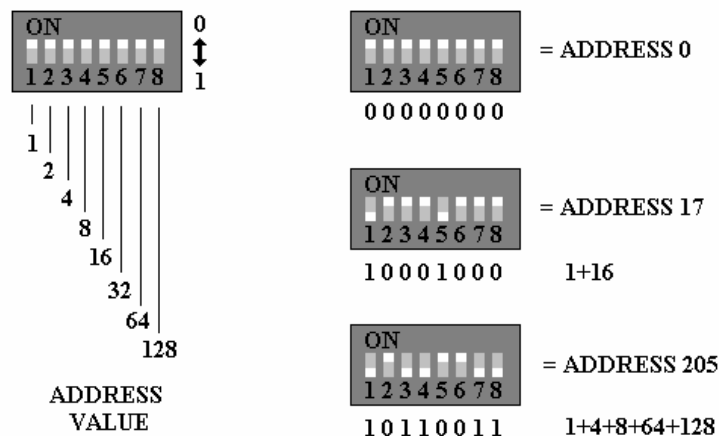


Figure: JUMPER SETTING

5.3 DIP SWITCH (BOARD ID)

There is 8-bit DIP SW for address setting and it turns to 8-bit binary code as below and each bit has fixed address value, the address is calculated the sum value of each bit set to "1" position. The device number that is set up by the address set-up switch should be same as the computer since it is such device number that is used when communicating with the computer.

Example



5.4 WIRING

5.4.1 POWER

- Connect (+) wire of DC 12V power to +12V terminal
- Connect GND (-) wire of DC 12V power to GND terminal

5.4.2 INPUT CONNECTIONS

Exit Button Connection (Input #1, Input #3)

- Connect one wire from an Exit Button to Input #1 for the Door1 and to Input #3 for Door2
- Connect the other wire from the Exit Button to the GND

Door Contact Sensor Connection (Input #2, Input #4)

4 DOOR ACCESS CONTROLLER

- Connect one wire from a Door Contact Sensor to Input #2 for the Door1 and to Input #4 for Door2
- Connect the other wire from the Door Contact Sensor to GND

Summary of Input connections to corresponding Doors

2-Door Control Door1: Input #1 to Exit Button, Input #2 to Door Contact Sensor
 Door2: Input #3 to Exit Button, Input #4 to Door Contact Sensor

3-Door Control Door1: Input #1 to Exit Button, Input #2 to Door Contact Sensor
The Exit Button and the Door Contact Sensor for Door2 and Door3 are controlled by the optional EIO88 Expansion I/O Board.
 Door2: EIO88 Input #1 to Exit Button, EIO88 Input #2 to Door Contact
 Door3: EIO88 Input #3 to Exit Button, EIO88 Input #4 to Door Contact

4 Door Control Door1: Input #1 to Exit Button, Input #2 to Door Contact Sensor
 Door2: Input #3 to Exit Button, Input #4 to Door Contact Sensor
The Exit Button and the Door Contact Sensor for Door3 and Door4 are controlled by the optional EIO88 Expansion I/O Board.
 Door3: EIO88 Input #1 to Exit Button, EIO88 Input #2 to Door Contact
 Door4: EIO88 Input #3 to Exit Button, EIO88 Input #4 to Door Contact

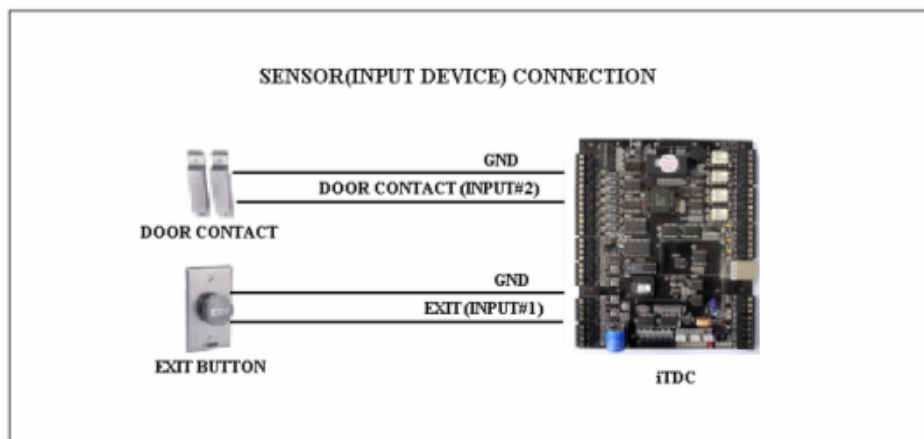


Figure: INPUT DEVICES CONNECTION

Auxiliary Input Connection (Applied to Input #5, Input #6 and Input #7)

- Connect one wire from an Auxiliary Input Device to one of the Input #5, #6 and #7.
- Connect the other wire from the Auxiliary Input Device to GND

Note: If the user has the EIO88 Expansion I/O Board, the user can use EIO88 Input #5, Input #6, Input #7, and Input #8 for the additional auxiliary input devices.

4 DOOR ACCESS CONTROLLER

5.4.3 OUTPUT CONNECTIONS

Door Lock (Power Fail Safe) Connection (Door1: Relay #1, Door2: Relay #3)

- Connect COM port of Relay #1 and Relay #3 to +12V
- Connect NC port of Relay #1(Door1) and Relay #3 (Door2) to (+) wire of door lock device
- Connect GND port to (-) wire of door lock devices

Door Lock (Power Fail Secure) Connection (Door1: Relay #1, Door2: Relay #3)

- Connect COM port of Relay #1 and Relay #3 to +12V
- Connect NO port of Relay #1(Door1) and Relay #3 (Door2) to (+) wire of door lock device
- Connect GND port to (-) wire of door lock devices

Alarm Device Connection (Door1 Alarm: Relay #2, Door2 Alarm: Relay #4)

- Connect COM port of Relay #2 and Relay #4 to +12V
- Connect NO port of Relay #2(Door1) and Relay #4 (Door2) to (+) wire of Alarm devices
- Connect GND port to (-) wire of Alarm devices

Summary of Output Relay connections to corresponding Doors

2-Door Control	Door1: Relay #1 to Door Lock, Relay #2 to Alarm Device Door2: Relay #3 to Door Lock, Relay #4 to Alarm Device
3-Door Control	Door1: Relay #1 to Door Lock, Relay #2 to Alarm Device The Door Lock and the Alarm Devices for Door2 and Door3 are controlled by the optional EIO88 Expansion I/O Board. Door2: EIO88 Relay #1 to Door Lock, EIO88 Relay #2 to Alarm Door3: EIO88 Relay #3 to Door Lock, EIO88 Relay #4 to Alarm
4 Door Control	Door1: Relay #1 to Door Lock, Relay #2 to Alarm Device Door2: Relay #3 to Door Lock, Relay #4 to Alarm Device The Door Lock and the Alarm Devices for Door3 and Door4 are controlled by the optional EIO88 Expansion I/O Board. Door3: EIO88 Relay #1 to Door Lock, EIO88 Relay #2 to Alarm Door4: EIO88 Relay #3 to Door Lock, EIO88 Relay #4 to Alarm

4 DOOR ACCESS CONTROLLER

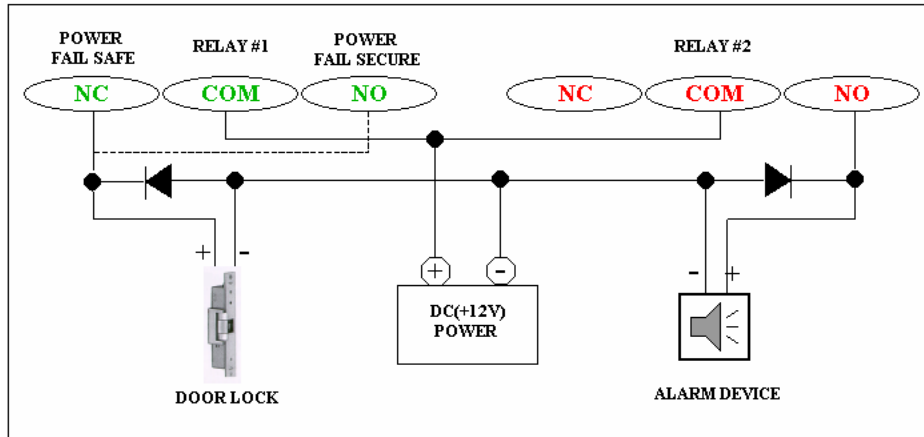


Figure: DOOR LOCK, ALARM DEVICE CONNECTION

CAUTION: Please add one DIODE as the above.

DIODE: Fast recovery DIODE (current: Min. 1A), 1N4001 ~ 1N4007 or similar

5.4.4 READER CONNECTIONS

Proximity Reader Connection

- Connect (+) wire of the Proximity Reader to +12V of Reader port
- Connect (-) wire of the Proximity Reader to GND of Reader port
- Connect Data-0 wire of the Proximity Reader to D0 of Reader Port
- Connect Data-1 wire of the Proximity Reader to D1 of Reader Port

Summary of Proximity Reader locations to corresponding Doors

2-Door Control

Door1: Reader #1 to Door1 Entrance, Reader #2 to Door1 Exit
 Door2: Reader #3 to Door2 Entrance, Reader #4 to Door2 Exit

3-Door Control

Door1: Reader #1 to Door1 Entrance, Reader #2 to Door1 Exit
 Door2: Reader #3 to Door2 Entrance, Exit Button to Door2 Exit
 Door3: Reader #4 to Door3 Entrance, Exit Button to Door3 Exit

The optional EIO88 Expansion I/O Board is necessary to control the Door Locks and the Exit Buttons for Door2 and Door3.

4 Door Control

Door1: Reader #1 to Door1 Entrance, Exit Button to Door1 Exit
 Door2: Reader #2 to Door2 Entrance, Exit Button to Door2 Exit
 Door3: Reader #3 to Door3 Entrance, Exit Button to Door3 Exit
 Door4: Reader #4 to Door4 Entrance, Exit Button to Door4 Exit

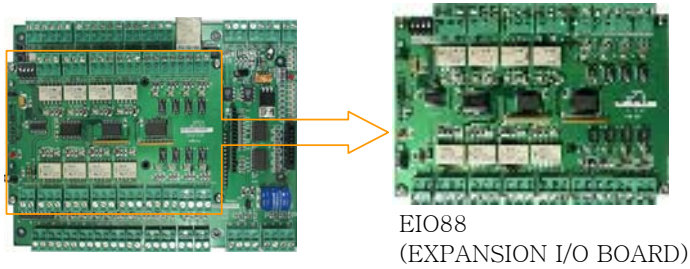
The optional EIO88 Expansion I/O Board is necessary to control the Door Locks and the Exit Buttons for Door3 and Door4.

4 DOOR ACCESS CONTROLLER

5.4.5 OPTIONAL ACCESSORY CONNECTIONS

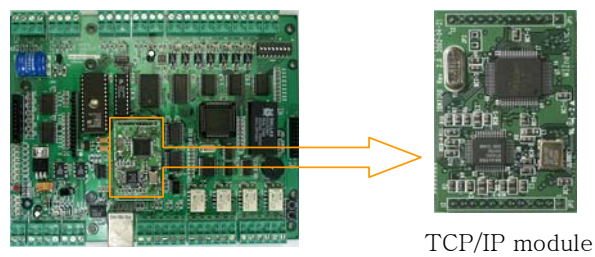
Expansion I/O Board connection (EIO88)

- Connect the EIO88 Expansion I/O Board to iTDC as below.



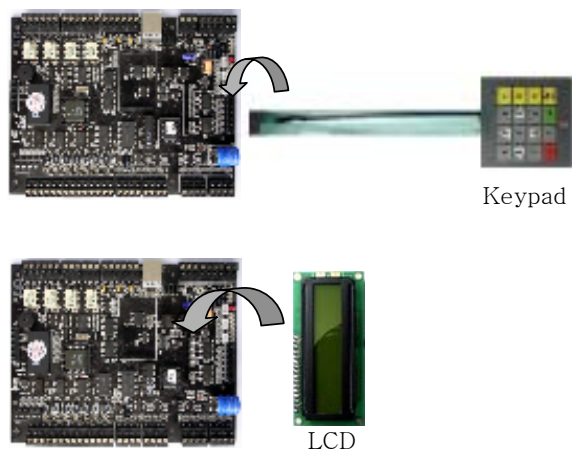
TCP/IP Module Connection (IIM7100A)

- Connect the IIM7100(IGM7100), IIM7100A TCP/IP Module as below.



Keypad and LCD Display Connection

- Connect the Keypad and LCD Display to the Keypad and LCD ports as below.



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6. COMMUNICATIONS

6.1 Communication Port Test(Loop Test)

This is a Loop test for communication test of [SETUP F4] (self-diagnosis functions).
The user can check for communication state between the iTDC and the Cable.

6.1.1 RS232 Port Test

COMM TEST	☞ Before this communication test, Connect the RS232-RX and RS232-TX wires together.
TX data = 0 COMM fail	☞ This test is a loop test and the iTDC sends a character to the TX port and check whether the RX port receives the character or not. If an error comes out, please contact our service facility.
COMM test pass!! Press any key...	☞ After the test is done, the LCD will display “COMM test pass!!”. Press any key to return to the setup menu.

6.1.2 RS422 Port Test

COMM TEST	☞ Before this communication test, Connect the Rx(-) and Tx(-), Rx(+) and Tx(+) wires. Note!! In case of RS-422 test, JP3, 4 disconnection and JP5, 6 short After the test is done, short pin1, 2 (or 2,3) of the JP3, 4.
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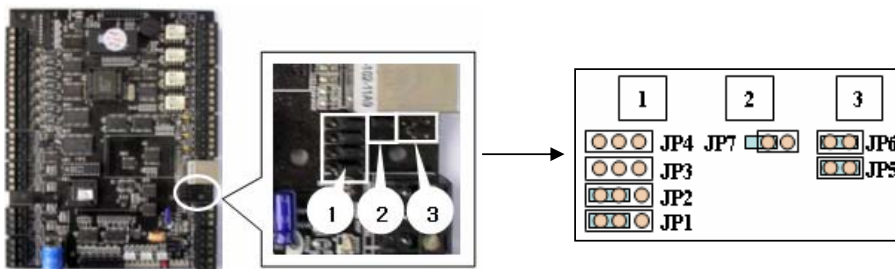


Figure: Jumper switch location and Jumper switch setting for RS_422 communication test

4 DOOR ACCESS CONTROLLER

6.2 RS232 COMMUNICATION PORT CONNECTION

A 9-pin connector (Serial communication connector, female) is required to connect the iTDC to a host computer via RS232 communication. Please follow the instructions.

- Connect RS232-TX port of iTDC to the pin #2 of the 9-pin connector.
- Connect RS232-RX port of iTDC to the pin #3 of the 9-pin connector.
- Connect RS232-GND of iTDC to the pin #5 of the 9-pin connector.
- Plug in the 9-pin connector to COM1 or COM2 Port of the host PC.
- Install and run iTDC Application Software.



Figure: RS-232 COMMUNICATON

6.3 RS-422 COMMUNICATION PORT CONNECTION

6.3.1 Jumper Switch Setting

Before the RS422 Communication, the jumper switch needs to be set up upon the figure as below.

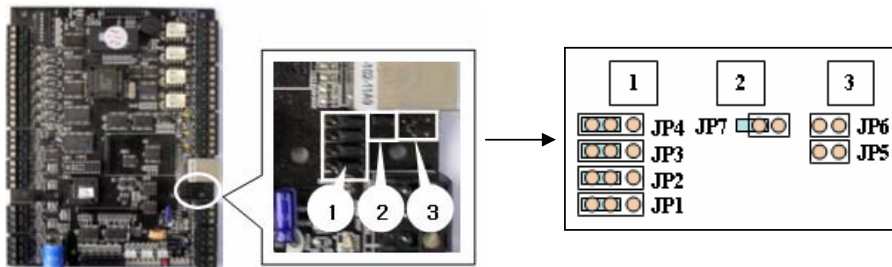


Figure: Jumper Switch location and setting for RS_422 communication

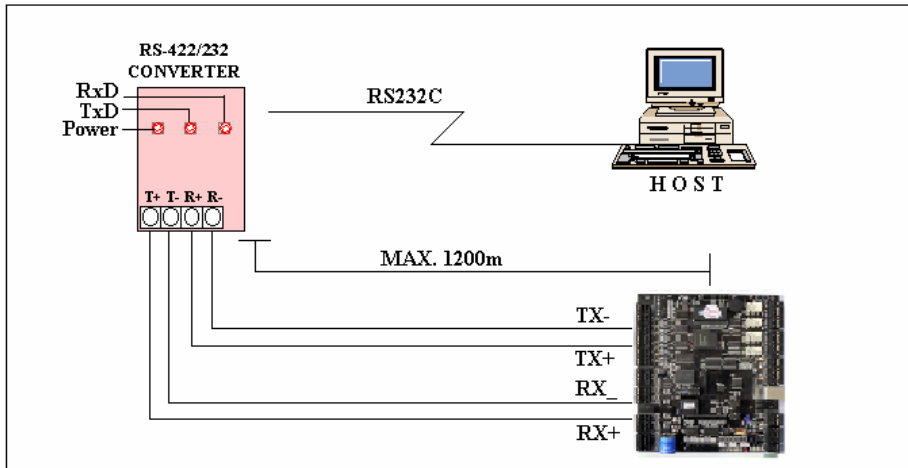
6.3.2 RS-422 CONNECTION (STAND ALONE)

RS422/RS232 converter (CNP200) is required to use RS422 communication between the iTDC and a host computer. Please follow the instructions.

- Connect RS422-TX(+) of the iTDC to RS422-RX(+) port of the converter.
- Connect RS422-TX(-) of the iTDC to RS422-RX(-) port of the converter.

4 DOOR ACCESS CONTROLLER

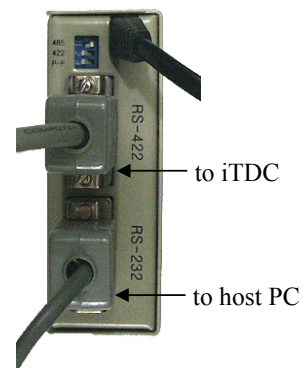
- Connect RS422-RX(+) of the iTDC to RS422-TX(+) port of the converter.
- Connect RS422-RX(-) of the iTDC to RS422-TX(-) port of the converter.
- Plug in the RS232 9-pin connector of the converter to the COM1 or COM2 Port of the PC.
- Install and run iTDC Application Software.



a. Between iTDC and CNP200



b. RS 422 port connection



c. CNP200 setting

Figure: RS-422 Communication between iTDC and Host Computer

6.3.3 RS-422 CONNECTION (MULTIPLE iTDC CONNECTIONS)

RS422/RS232 converter is required to use RS422 communication between multiple iTDCs and a host computer. Please follow the following instructions.

1 unit of iTDC can use a TCP/IP internal module for communications. And an iTDC used TCP/IP internal module can communicate with other iTDC Controllers by RS422 method.

In this case, the communication must be connected via RS422 method.

4 DOOR ACCESS CONTROLLER

First, you have to connect all RS422 port of all iTDCs in parallel.

- Connect RS422-TX(+) of one iTDC to RS422-TX(+) of another iTDC.
- Connect RS422-TX(-) of one iTDC to RS422-TX(-) of another iTDC.
- Connect RS422-RX(+) of one iTDC to RS422-RX(+) of another iTDC.
- Connect RS422-RX(-) of one iTDC to RS422-RX(-) of another iTDC.

Second, you have to connect one of RS422 port of iTDC to RS422/RS232 converter.

- Connect RS422-TX(+) of the one iTDC to RX(+) port of the converter.
- Connect RS422-TX(-) of the one iTDC to RX(-) port of the converter.
- Connect RS422-RX(+) of the one iTDC to TX(+) port of the converter.
- Connect RS422-RX(-) of the one iTDC to TX(-) port of the converter.
- Plug in the RS232 9-pin connector of the converter to the COM1 or COM2 Port of the PC.
- Install and run iTDC Application Software.

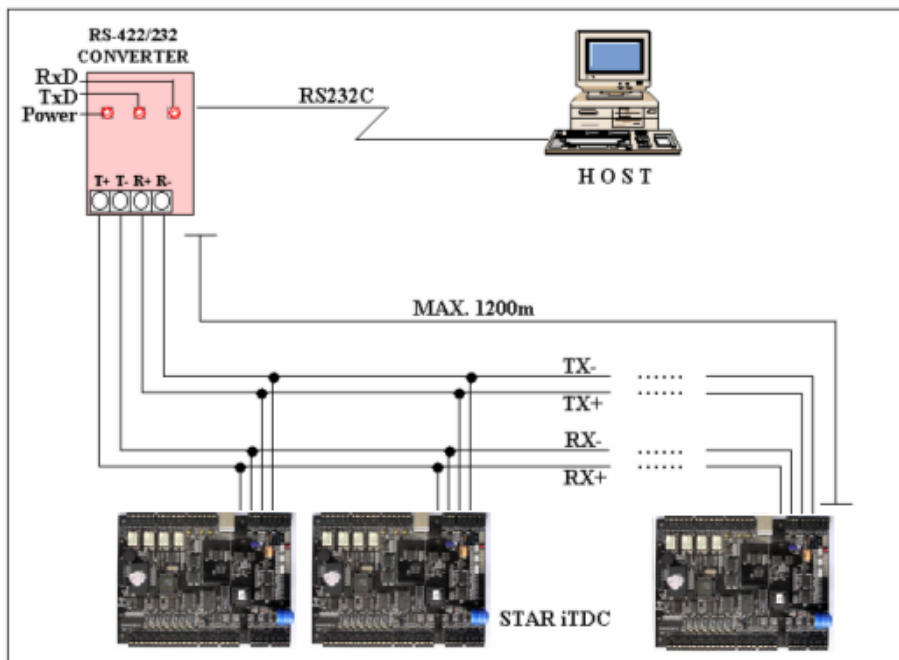


Figure: RS-422 Communication between iTDCs and Host Computer

6.4 DIAL UP MODEM

Please see the Software manual.

6.5 TCP/IP MODULE (INTERNAL VERSION)

Please see the Software manual.

4 DOOR ACCESS CONTROLLER

6.5.1 Jumper Switch setting (Over iTDC V3.0)

Before setting the LAN (TCP/IP module) Communication, the jumper switch needs to be set up upon the figure as below.

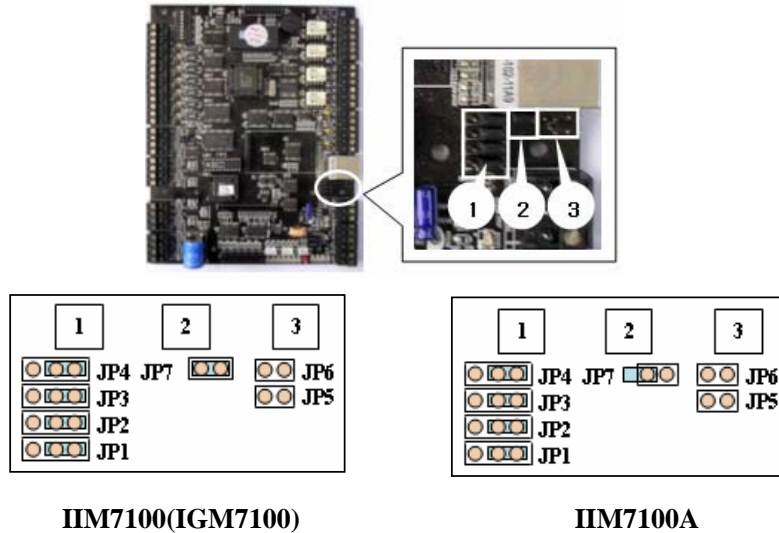


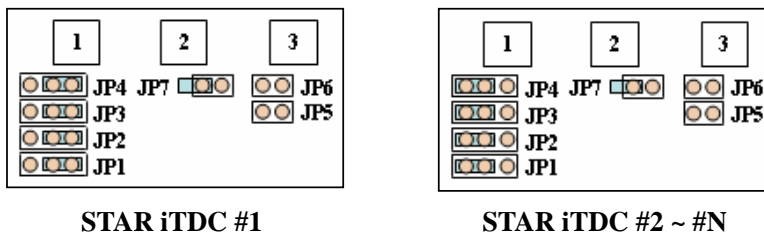
Figure: Jumper Switch location and setting for LAN(TCP/IP module) communication

6.5.2 Multi drop Connection (by TCP/IP internal module)

This is to use LAN (TCP/IP) communication between multiple iTDCs and a host computer.

Install the same as <Figure: Multi drop connection (by TCP/IP internal module)>.

Set the jumper switch the same as <Figure: Jumper switch setting for Multi drop connection (by TCP/IP internal module)>



STAR iTDC #1 is example use IIM7100A.

Figure: Jumper switch setting for Multi drop connection (by TCP/IP internal module)

4 DOOR ACCESS CONTROLLER

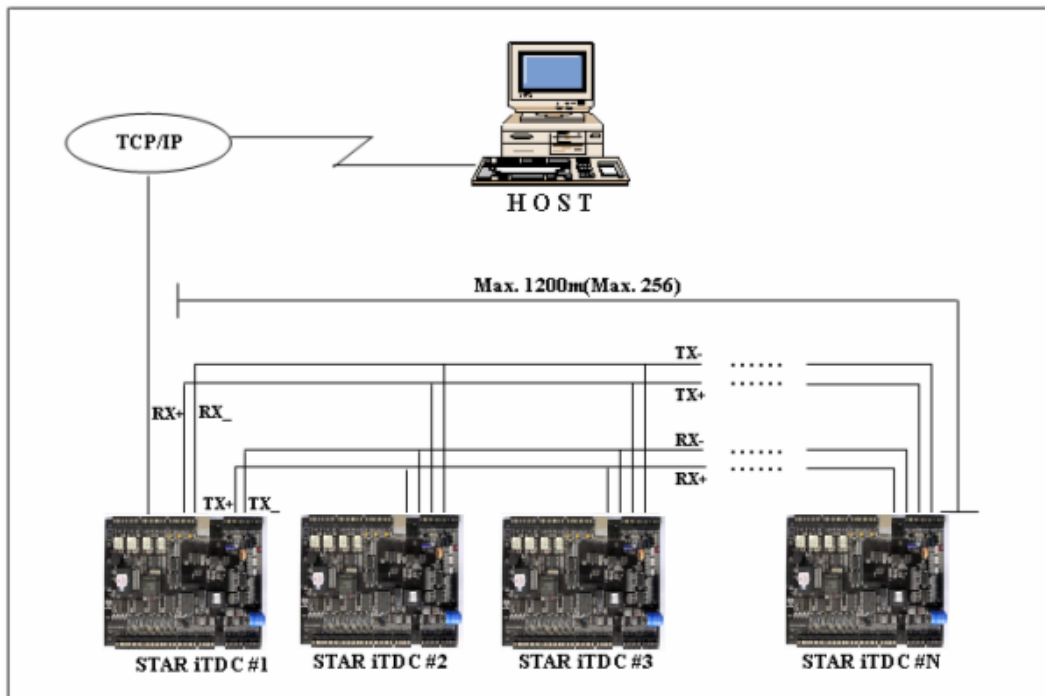


Figure: Multi drop connection(by TCP/IP internal module)

6.6 TCP/IP CONVERTER (EXTERNAL VERSION)

Please see the Software manual.

7. OPERATION STATUS

7.1 LED INDICATORS OF THE iTDC

The LEDs for indicating the status of the iTDC are located as shown in the Figure: iTDC Layout. Each LED will be turned on and off as the following status of the iTDC.

LED1 ~ LED2

These two LEDs indicate the communication status. The LED1 blinks while the communication signal is normally being received from the PC. The LED2 blinks while the iTDC is sending the signals back to the PC after the data being totally treated as normal.

LED1: RxD, LED2: TxD

LED3 ~ LED6

4 DOOR ACCESS CONTROLLER

If the TCP/IP module is installed, these LEDs indicate the status of the TCP/IP module.

LED3: Connection Status, LED4: 10M bps, LED5: 100M bps, LED6: Collision Status

LED7

This LED is always on if the iTDC is powered on.

LED8 ~ LED14

These LEDs indicate the status of the Output ports. The LED is turned on while the output is activated to the output port.

LED8: Relay #1, LED9: Relay #2, LED10: Relay #3, LED11: Relay #4

LED12: TTL #1, LED13: TTL #2, LED14: TTL #3

LED15 ~ LED21

These LEDs indicate the status of the Input ports' signal. When the LED light is on, it means that the signal has been input to the input port. (NC type input device) When NO type input device is connected, the LED is on when the sensor signal is not activated and the LED is off only when the input is activated.

LED15: Input #1, LED16: Input #2, LED17: Input #3, LED18: Input #4

LED19: Input #5, LED20: Input #6, LED21: Input #7

7.2 LED INDICATORS OF THE EIO88 EXPANSION I/O BOARD

The LEDs for indicating the status of the EIO88 Expansion I/O Board are located as shown in the Figure: EIO88 Expansion I/O Board Layout. Each LED will be turned on and off as the following status of the EIO88 Expansion I/O Board.

LED17

This LED is for indicating the power status and always on if the EIO88 Expansion I/O Board is powered on.

LED1 ~ LED8

These LEDs indicate the status of the Output ports of EIO88 Expansion I/O Board. The LED is turned on while the output is activated to the output port.

LED1: Relay #1, LED2: Relay #2, LED3: Relay #3, LED4: Relay #4

LED5: Relay #5, LED6: Relay #6, LED7: Relay #7, LED8: Relay #8

LED9 ~ LED16

These LEDs indicate the status of the Input ports' signal. When the LED light is on, it means that the signal has been input to the input port. (NC type input device) When NO type input device is connected, the LED is on when the sensor signal is not activated and the LED is off only when the input is activated.

LED9: Input1, LED10: Input2, LED11: Input3, LED12: Input4,

LED13: Input5, LED14: Input6, LED15: Input7, LED16: Input8

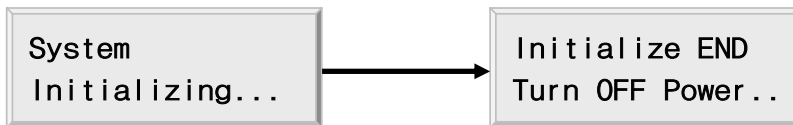
4 DOOR ACCESS CONTROLLER

8. BASIC SETTINGS

Note !!! The optional LCD display and the Keypad should be connected to the iTDC for the following manual settings.

8.1 INITIALIZATION OF iTDC

After the all installation and connections are completed, put the power (+12V DC) to the iTDC and then press the two Initialization Switches simultaneously. The LCD will first display “**System Initializing...**”. After the all Initialization process is completed then the LCD will display “**Initialize END Turn OFF Power..**”. Turn the power off and then turn on again for running the iTDC.



8.2 HOW TO ENTER THE SETUP MENU

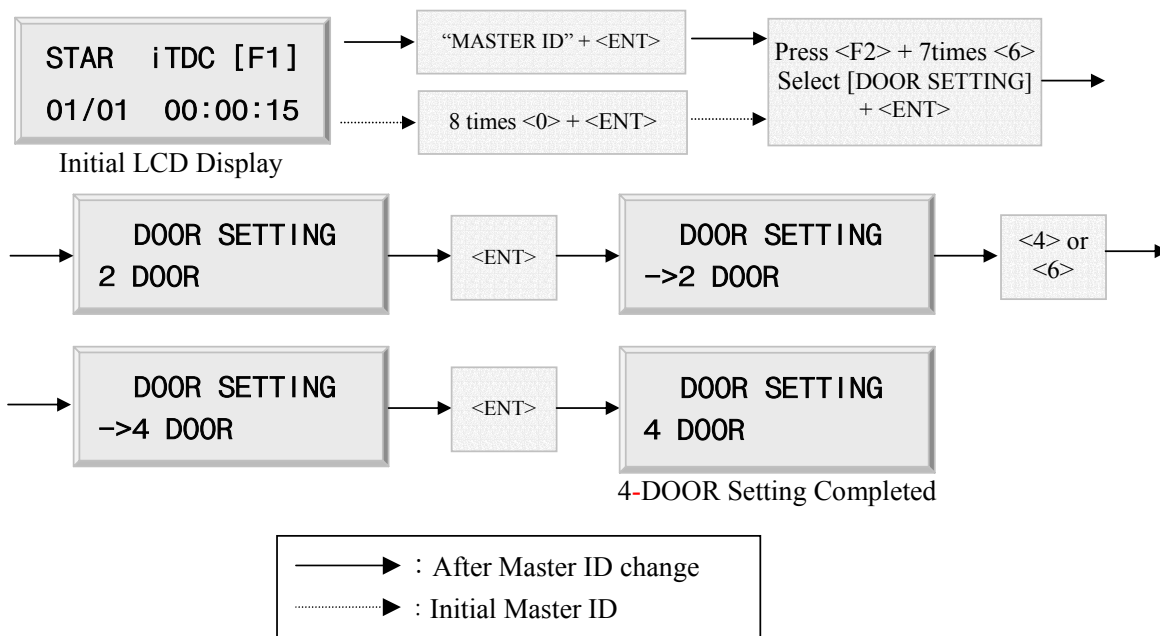
To set up or to change the iTDC settings, the user has to enter the **SETUP MENU** first. To do so, press <0> key **8 times** for **Master ID (Default setting “00000000”)** and <ENT> key from the optional Keypad and then the user can get into **SETUP MENU**. There are 4 main **SETUP MENU** and the user first gets into [SETUP MENU F1]. The user can move to other **SETUP MENU** by pressing <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]. There are several **SUB MENU**s in the main **SETUP MENU** and the user can scroll up and down the **SUB MENU** by pressing <4> and <6> key in the main **SETUP MENU**. If the user does not press any key for 20 seconds, or if the user presses <ESC> key, the iTDC will exit the **SETUP MENU** and then return to normal operation. The user can also change the **Master ID** in the [SETUP MENU F2].

The **Master ID** for iTDC-SR is **10 times <0> key (Default setting “0000000000”)**.

4 DOOR ACCESS CONTROLLER

8.3 DOOR SETTING

First, the user has to configure “How many doors you want to control by iTDC”, and this setup is very important as the iTDC will automatically configure the Input sources and Output Relays upon the number of the doors to be controlled by iTDC. Press <F2> key once, and then press <6> key or <4> key until the LCD shows [DOOR SETTING] in the [SETUP MENU F2], and then press <ENT> key to change the DOOR SETTING. Please follow the steps below for DOOR SETTING and it shows the procedure for 4-DOOR setting. The **Master ID** for iTDC-SR is **10-digit number (Default setting “0000000000”)**.



2 Door Setting

Confirm the Reader locations as shown on the table below.

	Entry	Exit
Door1	Reader #1	Reader #2
Door2	Reader #3	Reader #4

3 Door Setting

Confirm the Reader and the Exit Button locations as shown on the table below.

	Entry	Exit
Door1	Reader #1	Reader #2
Door2	Reader #3	EXIT Button
Door3	Reader #4	EXIT Button

4 DOOR ACCESS CONTROLLER

4 Door Setting

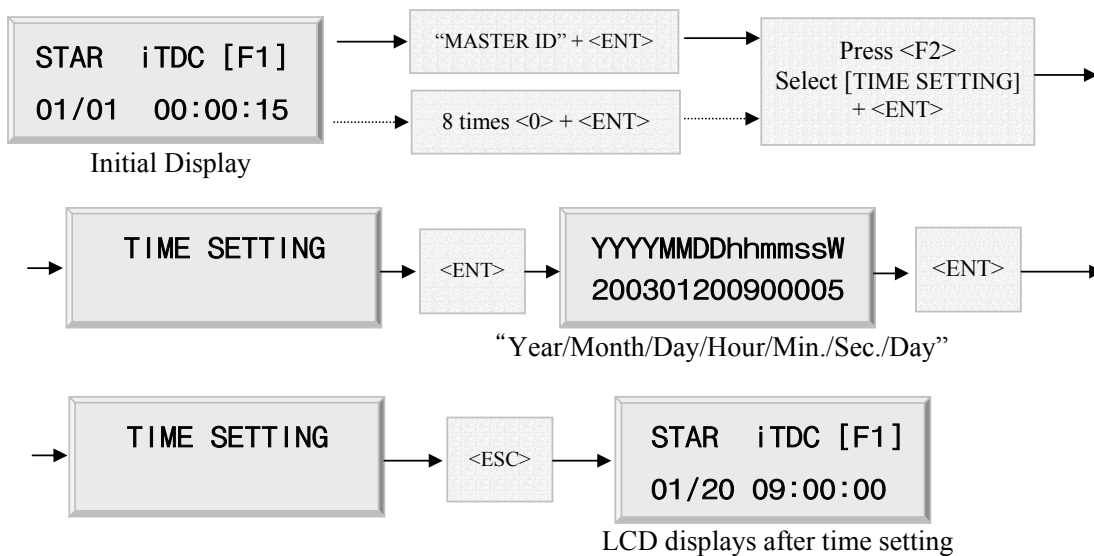
Confirm the Reader and the Exit Button locations as shown on the table below.

	Entry	Exit
Door1	Reader #1	EXIT Button
Door2	Reader #2	EXIT Button
Door3	Reader #3	EXIT Button
Door4	Reader #4	EXIT Button

Note! This must be setup first before any other setup.

8.4 DATE AND TIME SETTING

Select [TIME SETTING] in the [SETUP MENU F2], and then enter the Year / Month / Date / hour / minute / second / Day (Total 15 digits in order) as shown below. The LCD will display the new Date and Time after the time setting completed, but the year and day will not be displayed. The iTDC has 24-hour 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. The **Master ID** for iTDC-SR is **10-digit** number (**Default setting “0000000000”**).



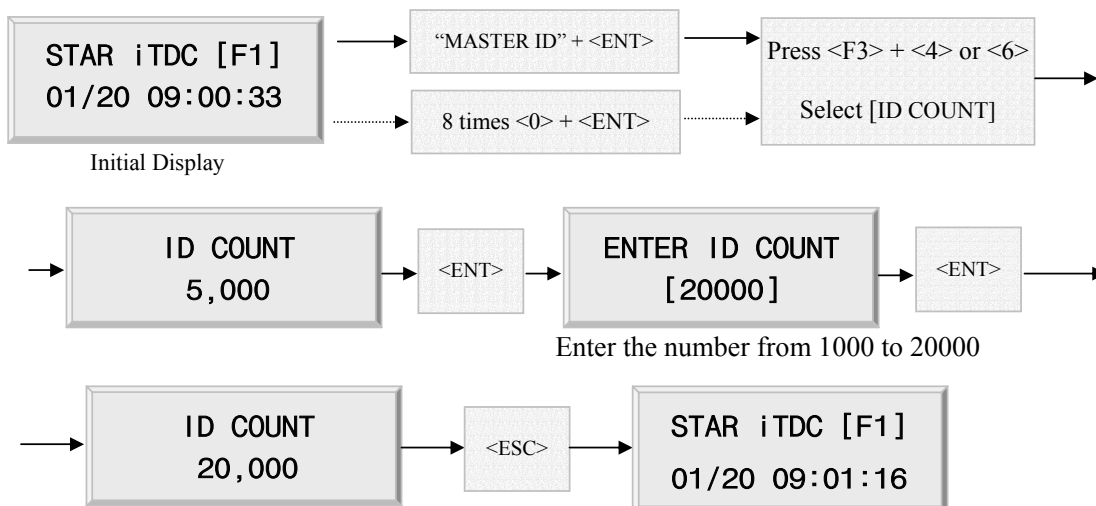
8.5 ID COUNT SETTING

The user can register maximum 20,000 User IDs into the iTDC and the user can select maximum User ID to be registered into the iTDC from 1,000 Users up to 20,000 Users by every 1,000 unit. This ID COUNT setting is to configure maximum User ID to be registered into iTDC and if the user sets up less ID COUNT then iTDC will increase the EVENT Buffer size to maximum. The default ID COUNT is

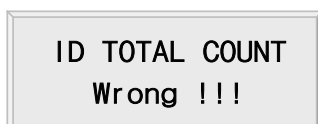
4 DOOR ACCESS CONTROLLER

5,000 Users and the default EVENT Buffer size is 27,500 can be stored when operating the iTDC offline. Select [ID COUNT] in the [SETUP MENU F3], and then set up the maximum User ID to be registered into the iTDC. Follow the steps to setup ID COUNT.

The Master ID for iTDC-SR is 10-digit number (Default setting “0000000000”).



This error message is seen when pressing <ENT> key in the [ID COUNT] menu and it means that some events are still existing in the EVENT Buffer and the data may be lost when changing the ID COUNT. This setting may be tried again after uploading the events to the host PC or deleting them, using the [SETUP MENU F2] -> [EVENT CLEAR].



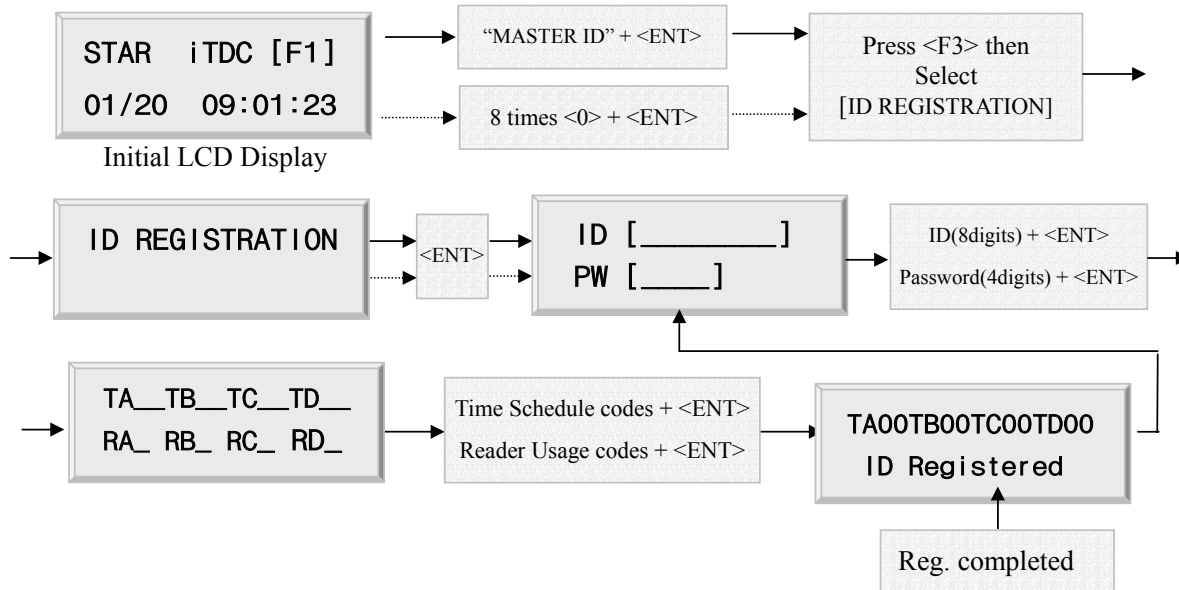
This error message is seen when trying to change ID COUNT less than the total registered User ID. In this case, some User ID should be deleted or just clear the User ID, using the [SETUP MENU F2] -> [ID CLEAR] first, and then try again from the beginning.

4 DOOR ACCESS CONTROLLER

8.6 ID REGISTRATION

The User ID can be registered into the iTDC. Select [SETUP MENU F3] -> [ID REGISTRATION] then follow the steps below.

The **Master ID** for iTDC-SR is **10-digit number (Default setting “0000000000”)**.



1. ID[] : ID number consists of 3-digit Facility code from 000 to 255 and 5-digit ID number from 00000 to 65535 so that the 8-digit ID number can not exceed 25565535. If the user does not know the ID number of the proximity cards, please select [SETUP MENU F4] -> [READER TEST] and then present the card to the reader to display the ID number. Enter 8-digit ID number and then press <ENT> key in the ID[] field. (ID number of iTDC-SR has 10-digit decimal numbers.)

2. PW[] : PW is the password that can be used to access the doors where a Proximity is installed and the Keypad Reader and setup the RF + Password operating mode. But regardless of the operating mode, it is necessary to enter a default password (0000) in the PW[] field when registering ID.

3. TA__TB__TC__TD__ : TA, TB, TC and TD are Time Schedule codes (00-15) for the Readers, TA is the Time Schedule for the Reader #1, TB is for Reader #2, TC is for Reader #3 and TD is for Reader #4. When the card is presented to Reader #1, the cardholder is only allowed the access of the door during the Time Schedule code entered to TA__ and the other Readers are operated as the same manner. To control the accessible Time Schedule for each cardholder, the Time schedules must be set up first, and then enter the Time Schedule code here. If the user wants to access the door anytime for the cardholder, then enter default Time Schedule code '00' for the value.

4 DOOR ACCESS CONTROLLER

4. RA__RB__RC__RD__ : RA, RB, RC and RD are Reader Usage codes for the cardholder. If the user put '1' for RA, then Reader #1 is accessible and if the user put '0' for RA, then the cardholder can not access through the Reader #1 and iTDC generates an error message "Access Door Error" and displays on the LCD. To get access through all 4 Readers, the user has to input '1' value for RA, RB, RC and RD.

8.7 OUTPUT SETTING

The output behavior can be programmed using the application software. Please refer to APPENDIX for factory settings.

9. OPERATION

9.1 NORMAL OPERATION

Power on

When the power is applied to the iTDC, the LED7 is turned on.

Registered card reading

When a registered card (or PIN) is read, the Door (Relay #1, Relay #3) will be opened for 3 seconds (Default) with the LED on. (LED8, LED10)

Exit Button

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

The Door (Relay #1, Relay #3) will be opened for 3 seconds with the LED on. (LED8, LED10)

Alarms

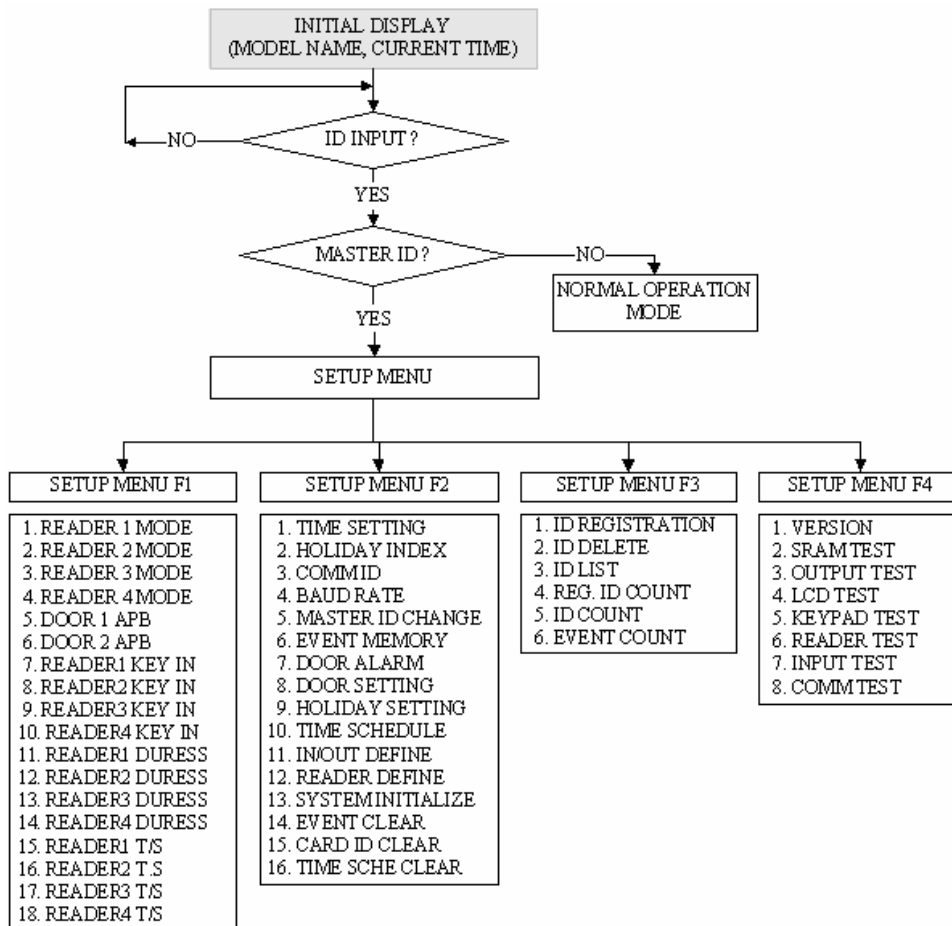
When an unregistered card is read, the access is denied and the alarm (Relay #2, Relay #4) will be activated for 3 seconds with the LED on (LED9, LED11) along with the buzzer sound.

9.2 DEFAULT SETTING

When operating the iTDC first time or initializing the iTDC, the controller will setup all values defaults (factory settings). The settings can be changed for desired application.

Please refer to the APPENDIX for the default setting values.

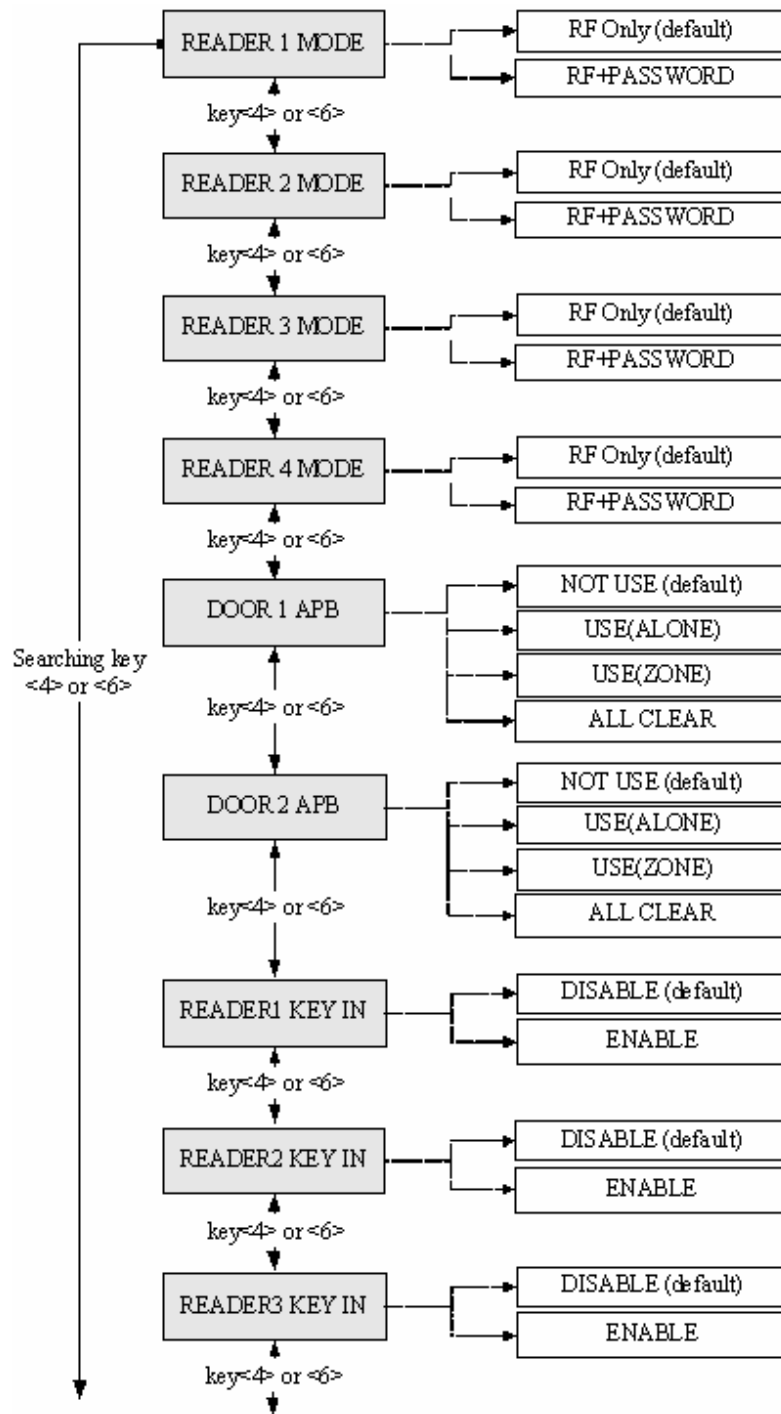
10. SETTING CHANGES



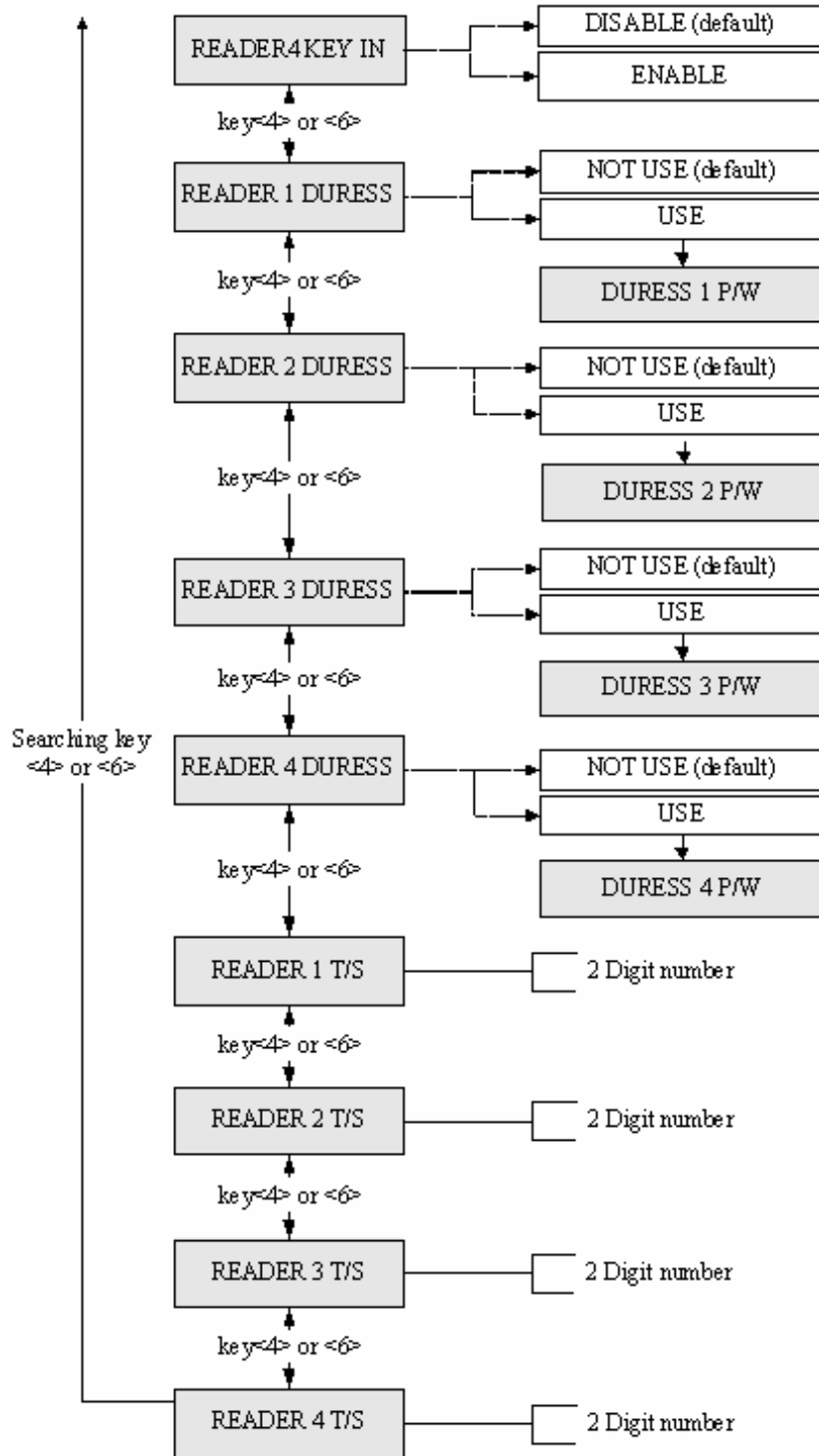
To setup or to change the iTDC settings, the user has to enter the **SETUP MENU** first. To do so, press <0> key **8 times** for **Master ID (Default setting “00000000”)** and <ENT> key from the optional Keypad then the user can get into **SETUP MENU**. There are 4 main **SETUP MENUS** and the user first gets into [**SETUP MENU F1**]. The user can move to other **SETUP MENU** by pressing <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**]. There are several **SUB MENUS** in the main **SETUP MENU** and the user can scroll up and down the **SUB MENU** by pressing <4> and <6> key in the main **SETUP MENU**. If the user does not press any key for 20 seconds, or if the user presses <ESC> key then the iTDC will exit from the **SETUP MENU** and then return to normal operation. The **Master ID** for iTDC-SR is **10 times of <0> key (Default setting “0000000000”)**.

4 DOOR ACCESS CONTROLLER

10.1 SETUP MENU F1

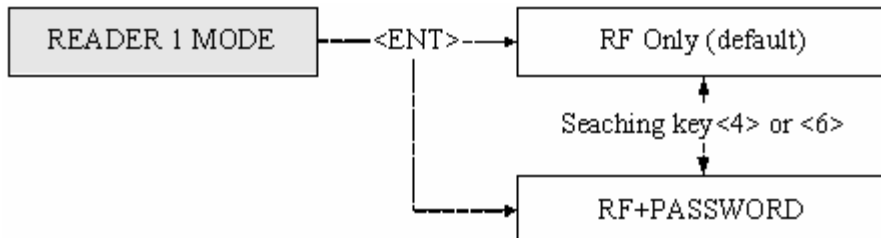


4 DOOR ACCESS CONTROLLER



4 DOOR ACCESS CONTROLLER

10.1.1 READER MODE SETTING



READER1 MODE RF ONLY	<p>☞ It shows READER1 MODE is set to RF ONLY operating mode. If the user wants to change the mode for RF+PASSWORD operating mode, the user can press <ENT> key.</p>
READER1 MODE ->RF ONLY	<p>☞ Now the user can change the mode by pressing <4> or <6> key to toggle the mode. If the user wants to setup the mode displayed, the user can press <ENT> key to accept this mode.</p> <p>Note: RF ONLY: The door is accessible with the proximity card alone. RF+PASSWORD: The door is accessible with the proximity card and Password.</p>
READER1 MODE ->RF+PASSWORD	

* READER2, READER3 and READER4 MODE setup is same as the above.

10.1.2 ANTI-PASS-BACK MODE SETTING

DOOR 1 APB NOT USE	<p>☞ It shows Door1 anti-pass-back operation is not used. Press <ENT> key. (It only applies when the Door has Exit Reader)</p> <ul style="list-style-type: none"> ● For Door1(2), the user must have Reader #1(#2) for entry and Reader #3(#4) for exit.
DOOR 1 APB ->USE(ALONE)	<p>☞ Press <4> or <6> key for searching the APB mode. Press <ENT> key to select the mode.</p> <p>NOT USE: Anti-pass-back mode is not applied. USE(ALONE): Door1(2) Anti-pass-back mode is separately applied. USE(ZONE): Door1(2) Anti-pass-back mode is applied together.</p> <p>Note: If USE(ZONE) selected, the APB flag will be affected to Door1 and Door2. DOOR2 APB mode is set automatically.</p> <p>Example: When USE(ALONE) is selected, Door2 entry is possible after the user got in through Door1. When USE(ZONE) is selected, Door2 entry is not possible after you got in through Door1. (APB error)</p>
DOOR 1 APB ->USE(ZONE)	
DOOR 1 APB ->All Clear	<p>☞ If All Clear is selected, the iTDC will clear all APB flags and all users are not allowed for Exit first.</p>

* DOOR2 APB mode setup is the same as above.

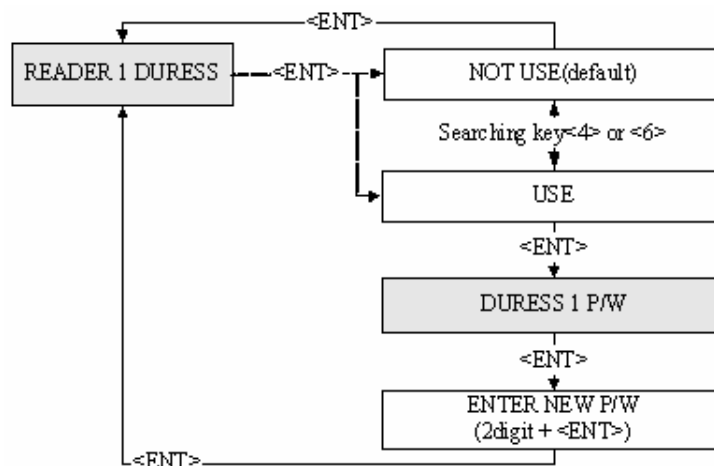
4 DOOR ACCESS CONTROLLER

10.1.3 KEYPAD INPUT SETTING

READER1 KEY IN DISABLE	<p>☞. This function is to set DISABLE/ENABLE the keypad inputs from the Proximity and Keypad Readers. The default setting is DISABLE the keypad inputs. If the user installs the Keypad Reader (8bit burst format) and set this mode ENABLE, the user can access the Door by pressing 8-digit User ID from the keypads. Press <ENT> key and press <4> or <6> key to select ->ENABLE then press <ENT> key to setup this function.</p>
READER1 KEY IN ->ENABLE	

* READER2, READER3 and READER4 KEY IN setup is same as the above.

10.1.4 DURESS MODE SETTING



READER1 DURESS NOT USE	<p>☞. The user can select whether the DURESS mode is used or not used for READER1. To use this function, the Keypad Reader is necessary. Default setting is NOT USE. If setting up Duress mode, press <ENT> key and select ->USE by pressing <4> or <6> key and then press <ENT> key. The LCD will display default Duress Password '00'. Press <ENT> key again to enter 2 digit Duress Password then press <ENT> key to finish setting.</p> <p>Note!! In case of Duress, enter the 2-digit Duress Password and <ENT> key then present the card. The Door will be opened as normal but the Duress alarm will be generated and reported to the host PC.</p>
READER1 DURESS -> USE	
DURESS 1 P/W 00	
DURESS 1 P/W 00	

* READER2, READER3 and READER4 DURESS setup is the same.

4 DOOR ACCESS CONTROLLER

10.1.5 READER TIME SCHEDULE SETTING

READER1 T/S
00

READER1 T/S
00

☞ If the user sets up RF+PASSWORD operating mode for Reader #1 (Refer to READER1 MODE SETTING), the user can apply Time Schedule for Reader #1. During the time period of Time Code in the T/S, Reader #1 will operate RF ONLY mode. And the rest of time period, Reader #1 will operate RF+PASSWORD mode.

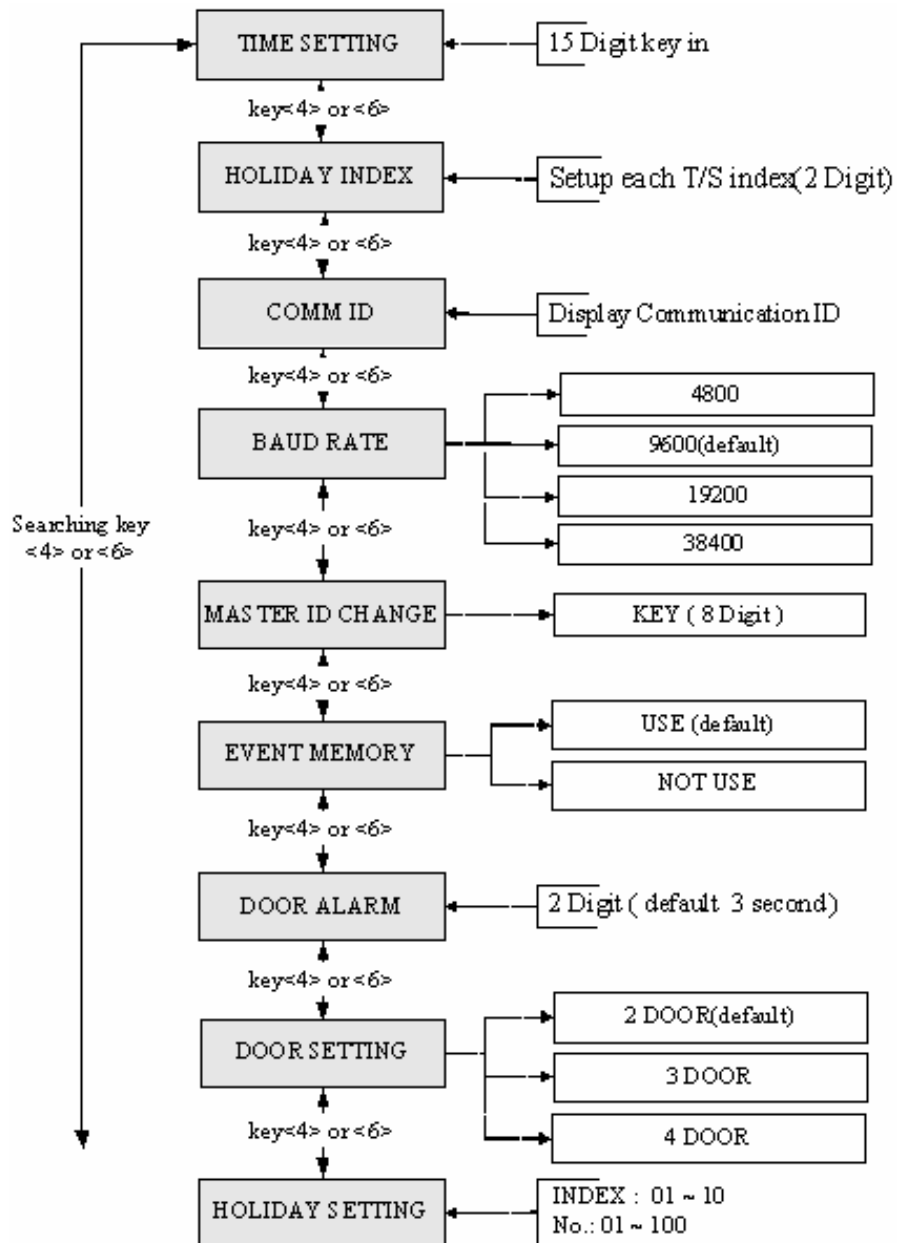
To apply this function, Time Schedules (T/S) should be set up and Holiday Schedules (H/S) from the iTDC Application Software and download T/S with H/S index to the iTDC. Please read iTDC Software Manual for detail.

Select READER1 T/S, and then press <ENT> key. Enter 2-digit T/S index ('00' ~ '15') then press <ENT> key to apply it.

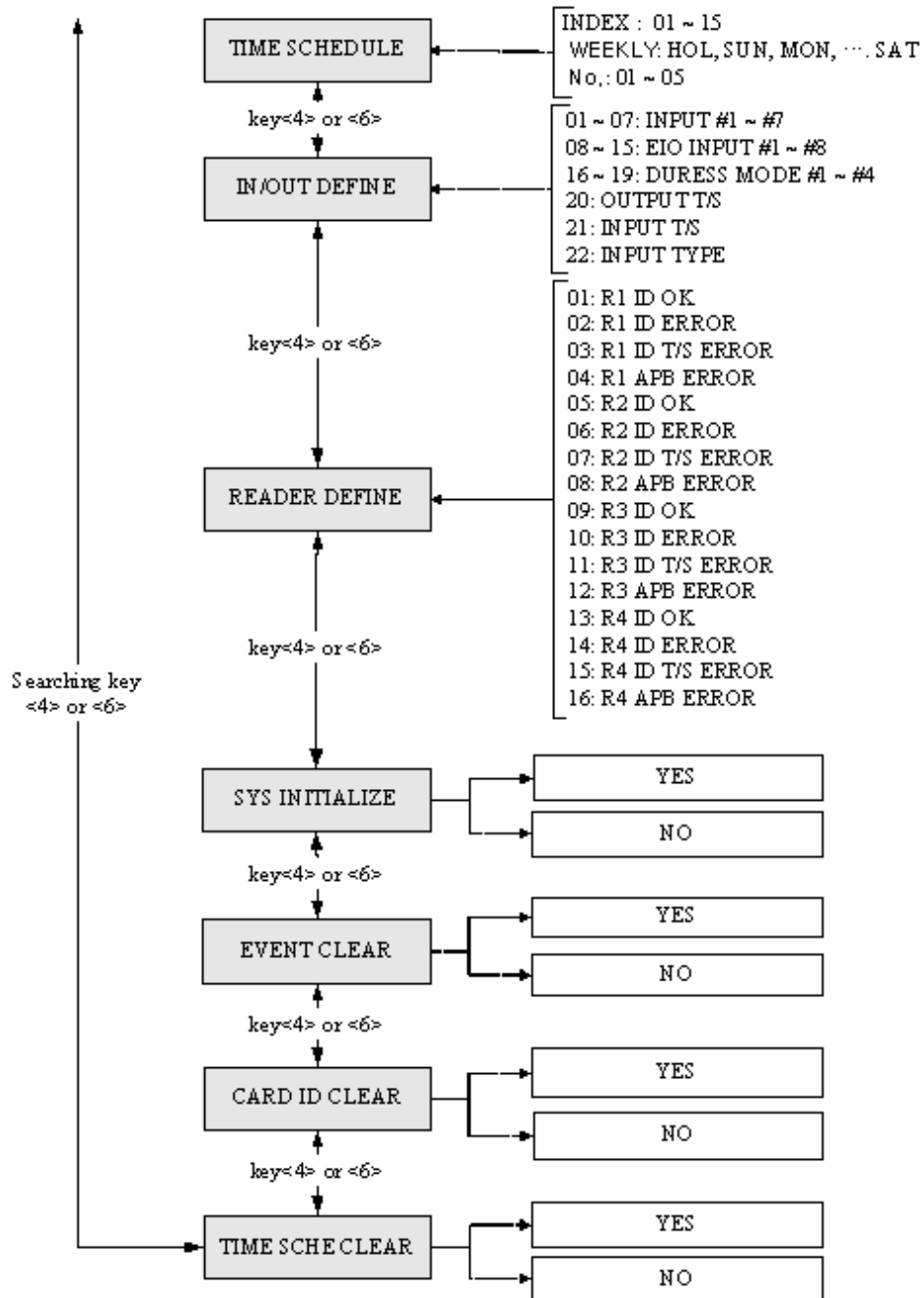
*** READER2, READER3 and READER4 T/S setup is same as the above.**

4 DOOR ACCESS CONTROLLER

10.2 SETUP MENU F2



4 DOOR ACCESS CONTROLLER



4 DOOR ACCESS CONTROLLER

10.2.1 TIME SETTING

TIME SETTING

YYYYMMDDhhmmssW

☞ Press <ENT> key and enter 15-digit Date/Time codes, and then <ENT> key to finish setting.

YYYY: Year, MM: Month, DD: Date

hh: Hours (24 hours system), mm: Minutes, ss: Seconds

W: Sun=1, Mon=2, Tue=3, Wed=4, Thu=5, Fri=6, Sat=7

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

10.2.2 HOLIDAY INDEX SETTING

HOLIDAY INDEX

T/S_INDEX 01
HOLIDAY CODE 00

☞ Holiday Index is to link the Holiday Schedule (H/S) to Time Schedule. One of holiday index (01~10) can be set up to one of T/S index (01~15) so that the Holiday Time Code in the T/S can be applied for the Holidays in the H/S. Default HOLIDAY CODE is '00' which means no holidays are applied to T/S.

Select HOLIDAY INDEX menu and press <ENT> then select desired T/S_INDEX (01~15) by pressing <4> or <6> key then press <ENT> key to input 2 digit HOLIDAY CODE and <ENT>.

10.2.3 COMMUNICATION ID(ADDRESS) DISPLAY

COMM ID
000

☞ This menu shows the current communication ID of the iTDC. If multiple iTDC units are connected to one host PC, each unit must be configured to different communication ID.

Note:

COMM ID can be changed by DIP switch setting of the iTDC.

10.2.4 BAUD RATE SETTING

BAUD RATE
9600

BAUD RATE
->9600

BAUD RATE
->19200

☞ iTDC supports 4800, 9600, 19200 and 38400bps of baud rate and default setting is 9600bps. Wrong baud rate setting will cause communication errors and the user has to set the same baud rate to iTDC and the host PC. If the user has any communication problem, please check as follows;

- Check COMM ID of iTDC and host PC
- Check BAUD RATE of iTDC and host PC
- Check communication port and cable
- Check COM port setup of host PC

Parity: None, Data Bit: 8 bit, Stop Bit: 1 bit

To change the baud rate, press <ENT> key and select desired baud rate by pressing <4> or <6> key then press <ENT> key.

4 DOOR ACCESS CONTROLLER

10.2.5 MASTER ID CHANGE

MASTER ID CHANGE	Press <ENT> key to change the current Master ID (“00000000”). The new Master ID should be used to access the SETUP MENU after changing the Master ID.
MASTER ID CHANGE [_____]	8-digit number should be used for Master ID. Press <ENT> key and enter the new 8-digit Master ID and <ENT> key.
Master Card Registered	Master ID is now changed and stored in the memory. The LCD shows that the new Master ID is registered successfully.

The Master ID for iTDC-SR is 10 digits number (Default setting “0000000000”).

10.2.6 EVENT MEMORY SETTING

EVENT MEMORY USE	The user can select whether to use the event memory or not. When USE is selected and in case of event memory is full, the iTDC generates an error message and keeps all events stored in the memory. When NOT USE is selected, the iTDC will not generate an error and the new event is overwritten into the event buffers. If the user uses the iTDC for standalone (just for door access), please select NOT USE.
EVENT MEMORY ->NOT USE	

10.2.7 DOOR OPEN ALARM SETTING

DOOR ALARM 03	When the door is still opened after the door-unlock time, the user may set this alarm function. To use this function, the user has to install Door Contact Sensor on the door and setup the output of Door Contact Sensor from the iTDC Application Software. ‘03’ default 00: Alarm if the door is opened after the door unlock time 01~98: Alarm if the door is opened after the set time (01~98s) 99: No alarm
DOOR ALARM 99	

10.2.8 DOOR SETTING

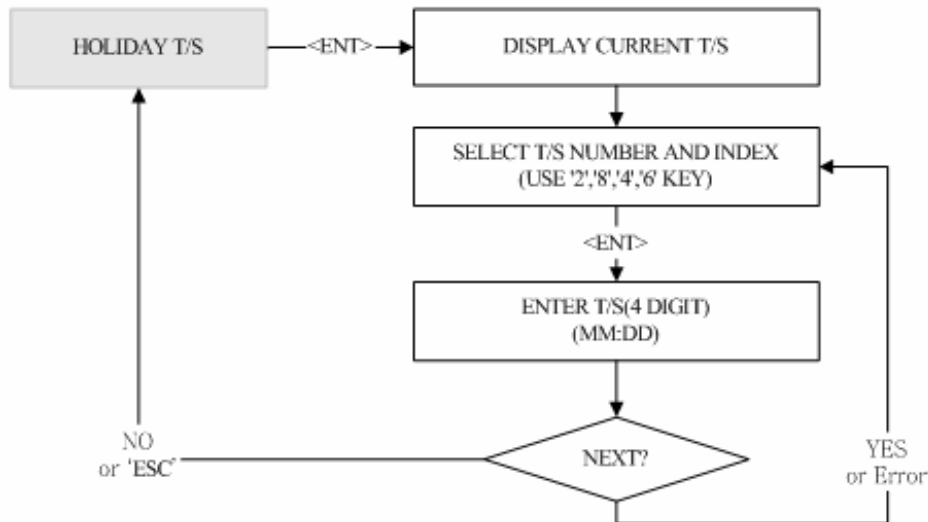
DOOR SETTING 2 DOOR	Setup how many doors to be controlled by the iTDC. 2 DOOR: Reader#1-Door1 Entry, Reader#2-Door1 Exit Reader#3-Door2 Entry, Reader#4-Door2 Exit 3 DOOR: Reader #1-Door1 Entry, Reader #2-Door1 Exit Reader#3-Door2 Entry, Reader#4-Door3 Entry
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4 DOOR ACCESS CONTROLLER

DOOR SETTING
->2 DOOR

4 DOOR: Reader#1,#2,#3,#4-Door1,2,3,4 Entry
Note! This must be setup first before any other setup.
Please refer to section 8.3 DOOR SETTING.

10.2.9 REGISTERING AND CHANGING HOLIDAY TIME SCHEDULE



HOLIDAY T/S

☞. The user can register up to 100 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.

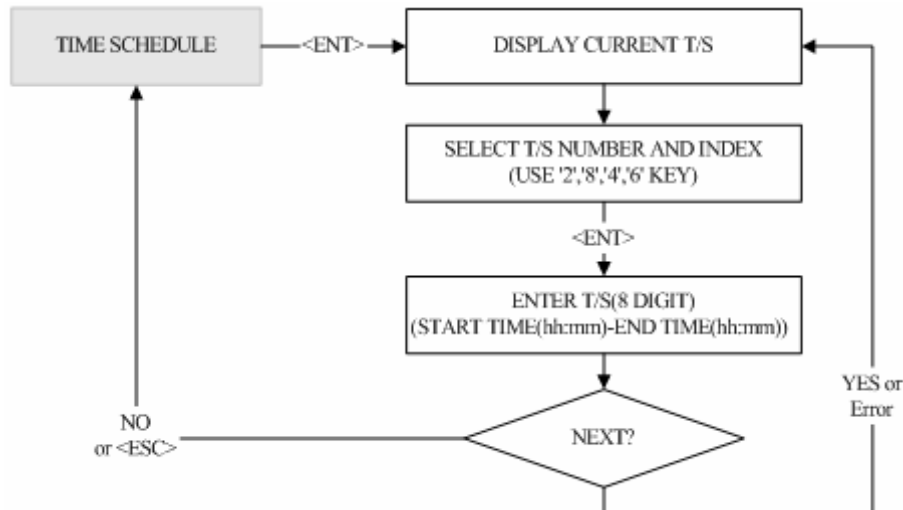
HOL T/S: 01 #001
00:00

☞. With the <2> key and <8> key, select the Date Registration Set Number (1~10), and with the <4> key and <6> key, select the index for the days (1~100). Press <ENT> key and the cursor will blink. Enter the date, in form of the Month (1~12). The LCD will indicate the defined date. Now a day has been registered. For further registration, repeat the process.

- ☞. 1) Holiday Time schedule(Date registration set) number : 01 ~ 10(10 years)
2) Index for the days : 01 ~ 100(100 days)

4 DOOR ACCESS CONTROLLER

10.2.10 REGISTERING AND CHANGING TIME SCHEDULE



TIME SCHEDULE

T/S: 01 HOL #1
00:00 - 00:00

☞. The user may program time schedules to grant and restrict access for each user. There can be up to 15 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, and five shifts can be defined for each day. To set time schedules, press <ENT> key from this menu.

If the user wants to set time schedules, press <ENT> key when this figure is displayed.

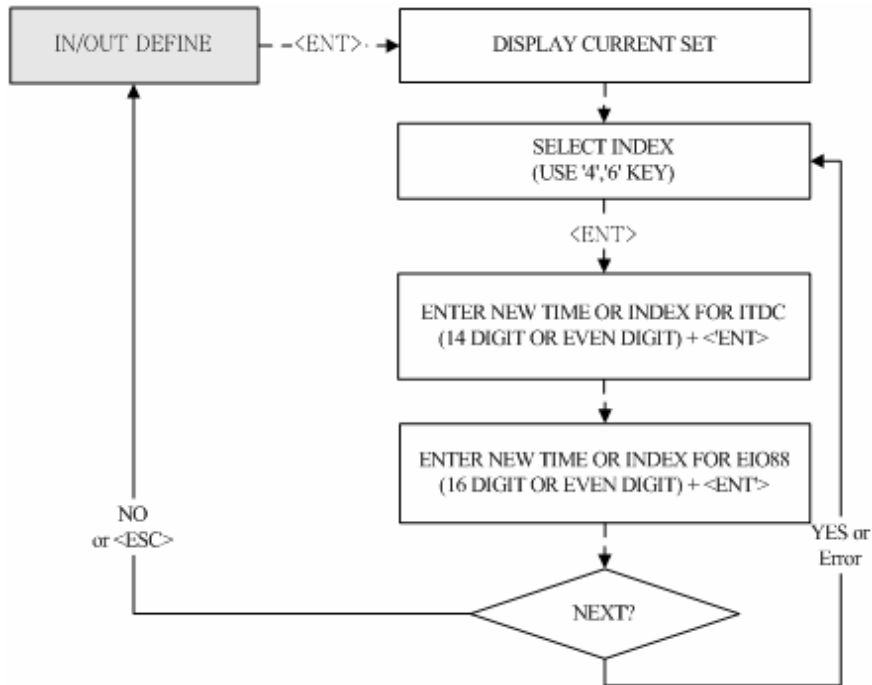
☞. Press <2> key or <8> key to adjust the Time Schedule (T/S) number (1-15) and the day of the week (Mon-Sun and 'HOL'). Define which shift of the day (1-5), using the <4> key and <6> key. 'HOL' refers to specific holidays the user will register. Press <ENT> key, and the cursor will blink, then enter 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 ~ 15 (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)

4 DOOR ACCESS CONTROLLER

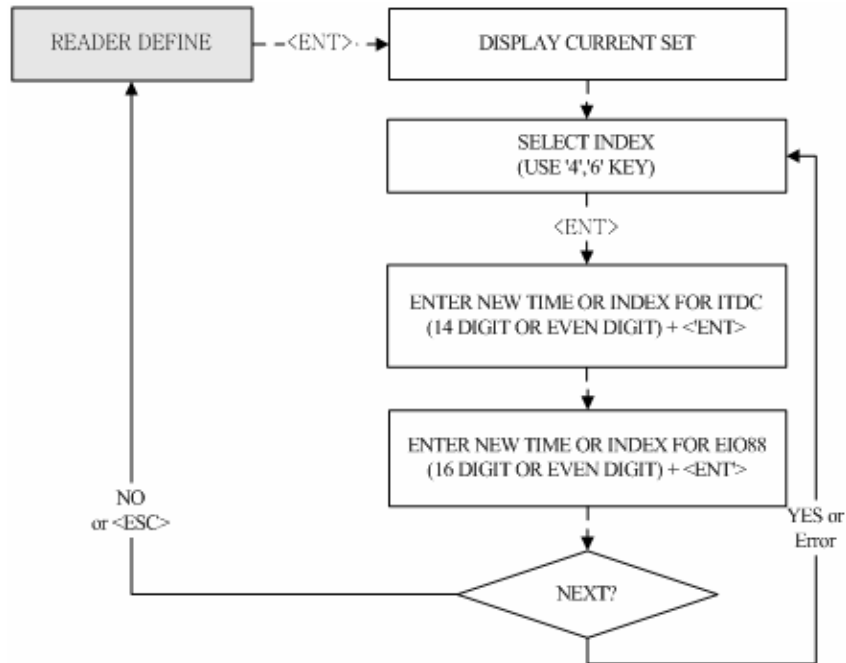
10.2.11 DEFINING OUTPUTS IN COMPLIANCE WITH INPUTS



IN/OUT DEFINE	<p>☞. The user 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 APENDIX (A. THE RELATION BETWEEN INPUT AND OUTPUT (DEFAULT))</p>
1. INPUT #1	<p>☞. Select input sources by changing Index numbers with the keys <4> or <6>.</p>
iTDC: <u>03</u> 00 00 00 00 00 00	<p>☞. Press <ENT> key and a cursor will be seen blinking at the first digit from the left of the seven couples of digits(Output of iTDC). Enter the 14-digit(seven couples) key.</p>
EIO: <u>00</u> 00 00 00 00 00 00 00	<p>☞. Press <ENT> key and a cursor will be seen blinking at the first digit from the left of the eight couples of digits(Output of EIO88). To set time for eight couples, press <ENT> key. For more inputs, repeat the process. To end input setting, press <ESC> key.</p>

4 DOOR ACCESS CONTROLLER

10.2.12 DEFINING OUTPUTS IN COMPLIANCE WITH READER



READER/OUT DEFINE

☞. The user 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 APENDIX (A. **THE RELATION BETWEEN INPUT AND OUTPUT (DEFAULT)**)

1.R1 ID OK

☞. Select input sources by changing Index numbers with the keys <4> or <6>.

iTDC: 03 00 00
00 00 00 00

☞. Press <ENT> key and a cursor will be seen blinking at the first digit from the left of the seven couples of digits(Output of iTDC). Enter the 14-digit (seven couples) key.

EIO: 00 00 00
00 00 00 00 00

☞. Press <ENT> key and a cursor will be seen blinking at the first digit from the left of the eight couples of digits(Output of EIO88). To set time for eight couples, press <ENT> key. For more inputs, repeat the process. To end input setting, press <ESC> key.

4 DOOR ACCESS CONTROLLER

10.2.13 SYSTEM INITIALIZE

SYS INITIALIZE	<p>☞ This operation will initialize the iTDC. Press <ENT> key if an initialization is needed. (first time installation or resetting in the event of a malfunction).</p> <p>CAUTION: Initializing will erase all stored data in the memory.</p>
SYS INITIALIZE 1 - Yes, 0 - No	<p>☞ Press <1> key to initialize or <0> key to cancel the operation.</p>
System Initializing..	<p>☞ This message appears while the system is being initialized. After the initialization, iTDC will return to the setup menu.</p>

10.2.14 EVENT CLEAR

EVENT CLEAR	<p>☞ When the event memory is full or when the user wants to change ID COUNT, the user 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.</p> <p>CAUTION: Before clearing the events, please make sure that the stored events are not necessary to be uploaded to the host PC otherwise important data may be lost.</p>
EVENT CLEAR 1 - Yes, 0 - No	

10.2.15 CARD ID CLEAR

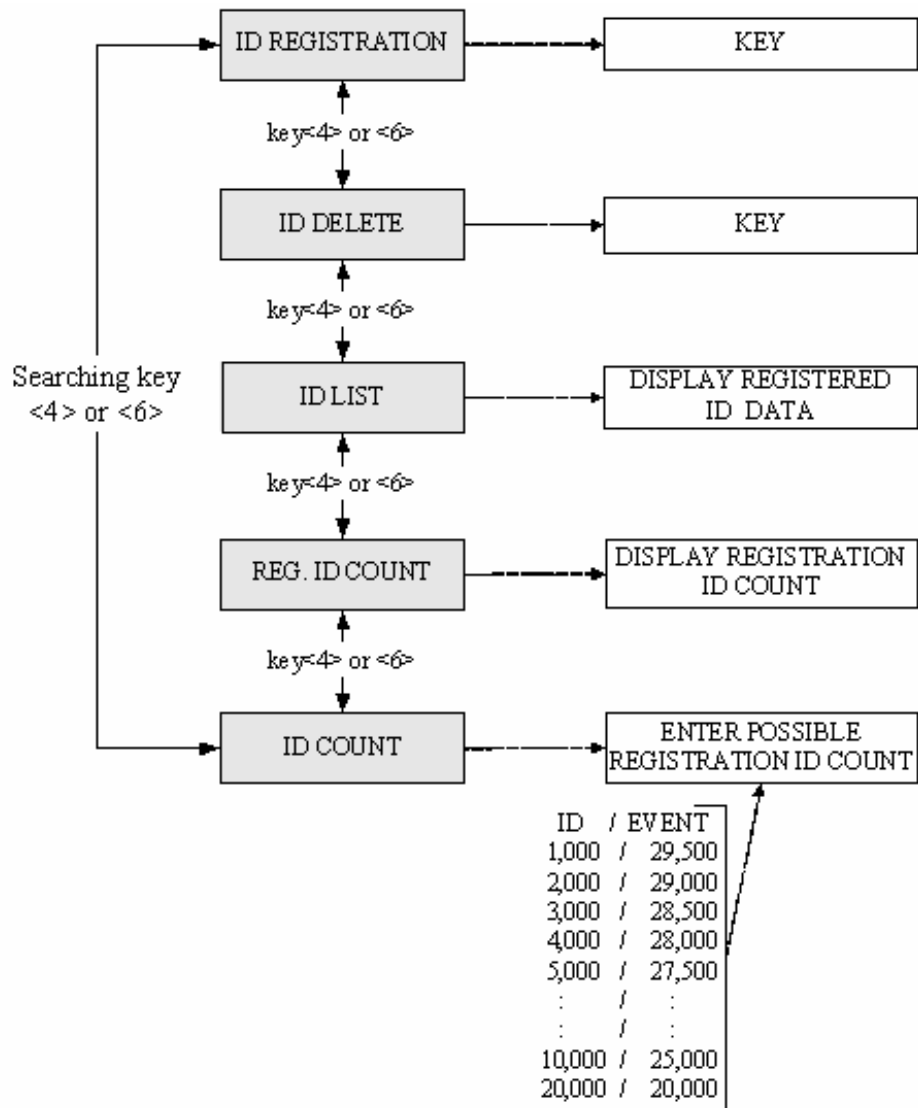
CARD ID CLEAR	<p>☞ When necessary to delete all User ID (Card ID), the user can clear all User ID from the memory. Press <ENT> key then press <1> key to clear all User ID or <0> key to cancel the operation.</p> <p>CAUTION: Before clearing all User ID, please make sure that the registered User ID is no longer used otherwise all registered User ID may be lost.</p>
CARD ID CLEAR 1 - Yes, 0 - No	

10.2.12 TIME SCHEDULE CLEAR

TIME SCHE CLEAR	<p>☞ When necessary to delete all Time Schedule (01~15), the user can clear all T/S from the memory. Press <ENT> key then press <1> key to clear all T/S or <0> key to cancel the operation.</p> <p>CAUTION: Before clearing all T/S, please make sure that the stored T/S is no longer used otherwise all stored T/S in the memory may be lost.</p>
TIME SCHE CLEAR 1 - Yes, 0 - No	

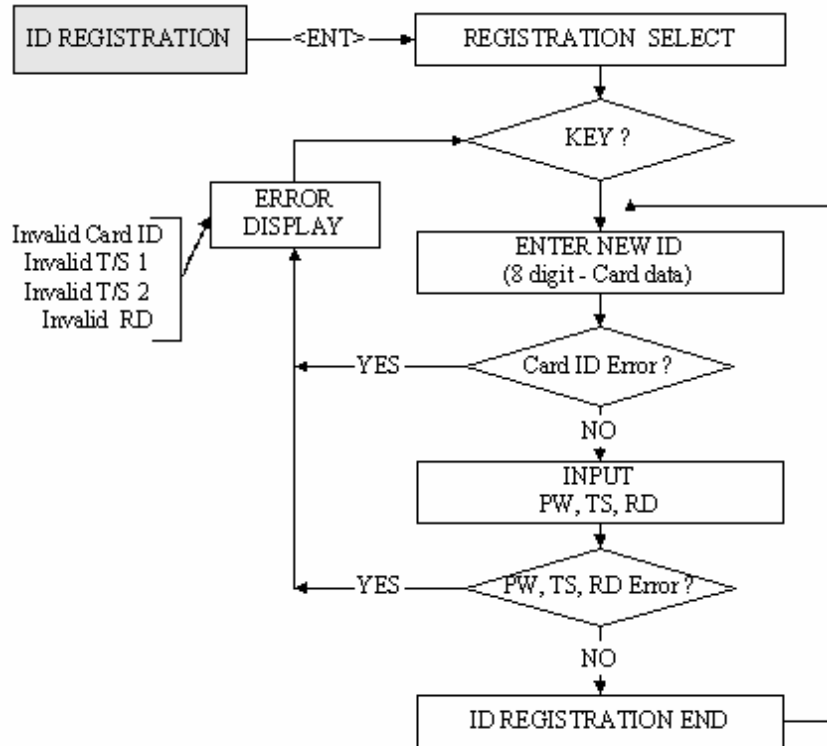
4 DOOR ACCESS CONTROLLER

10.3 SETUP MENU F3



4 DOOR ACCESS CONTROLLER

10.3.1 CARD REGISTRATION

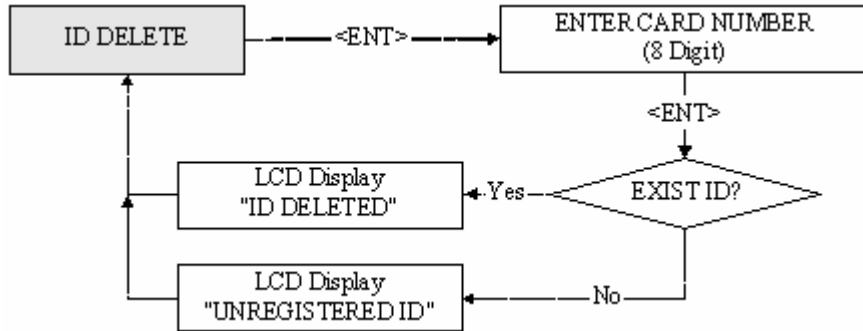


ID REGISTRATION	☞. Press <ENT> key to register the new User ID.
ID [_____] PW [____]	☞. Enter 8-digit Card ID in the ID[_____] field and press <ENT> key. Enter 4-digit Password in the PW[____] field and press <ENT> key. Even Password is not used, it is necessary to enter 4-digit Password as default. (Example: '0000')
TA_ TB_ TC_ TD_ RA_ RB_ RC_ RD_	☞. Enter 2-digit T/S index to TA, TB, TC and TD and <ENT> key. This T/S will be applied to each Reader. Enter <1> key to use the Reader or <0> key for no use and <ENT> key to finish the setting.
ID Registered	Example: When necessary to apply T/S 01 for Reader#1(TA), T/S 02 for Reader#2(TB), T/S 02 for Reader#3(TC) and T/S 00 for Reader#4(TD), and the user wants to use Reader#1, #2, #3 only, press <0><1><0><2><0><2><0><0><ENT> key for T/S Press <1><1><1><0><ENT> key for Reader use/not use

ID number of iTDC-SR is 10 digits decimal number.

4 DOOR ACCESS CONTROLLER

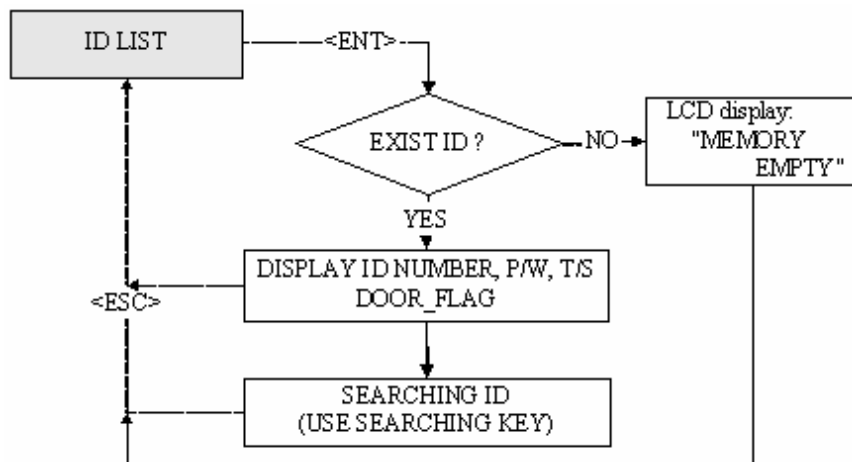
10.3.2 ID DELETE



ID DELETE	☞ . Press <ENT> key to delete registered User ID
Enter Card No. -> _____	☞ . Enter 8-digit User ID that the user wants to delete and <ENT>.
ID Deleted	☞ . If the User ID entered is found, the User ID will be deleted and display "ID Deleted" and if the User ID is not found then only display "ID Unregistered". ID DELETE may be repeated many times and press <ESC> key to exit the menu.

ID number of iTDC-SR is 10-digit decimal number.

10.3.3 ID LIST



4 DOOR ACCESS CONTROLLER

ID LIST	☞ If the user wants to see the list of registered User ID, press the <ENT> key in this menu.
ID[XXXXXXXX] PW[XXXX]	☞ 8-digit User ID, 4-digit password and T/S for the readers are displayed on the LCD, and the user can scroll up and down the list by pressing <4> and <6> keys. Press <ESC> key to return to the setup menu.
TA__TB__TC__TD__ RA_ RB_ RC_ RD_	
MEMORY EMPTY	☞ “MEMORY EMPTY” message will be displayed when there is no registered User ID.
ID LIST TOP	☞ “ID LIST TOP” message will be displayed first when the first registered User ID is displayed on the LCD.
ID LIST BOTTOM	☞ “ID LIST BOTTOM” message will be displayed first when the last registered User ID is displayed on the LCD.

ID number of iTDC-SR is 10-digit decimal number.

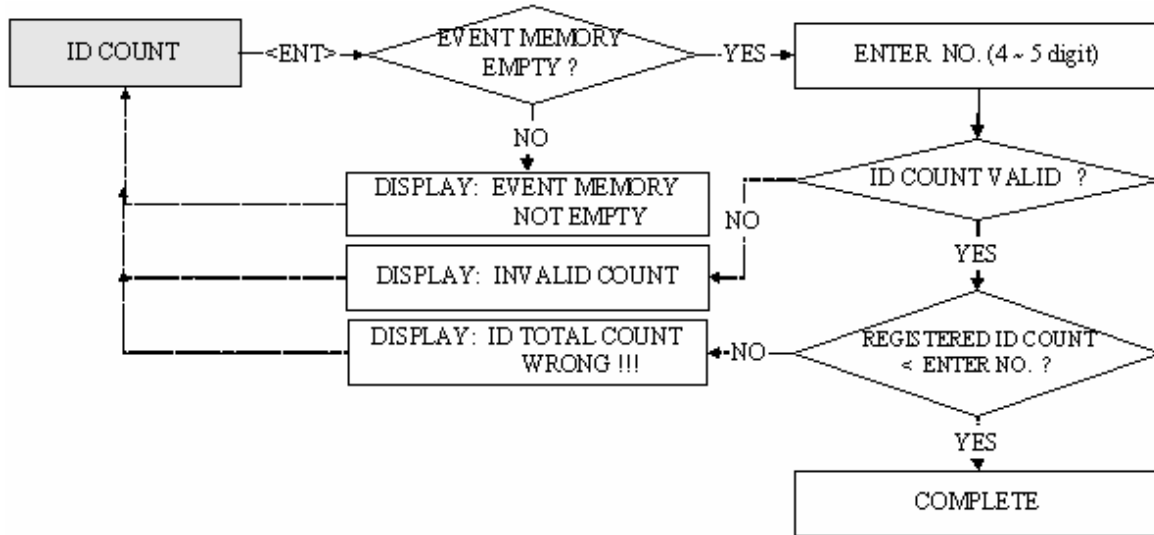
10.3.4 REGISTERED ID COUNT

REG. ID COUNT 12345	☞ This menu displays the total number of registered User ID. It automatically counts when the user registers or deletes User ID. The LCD shows 12,345 User ID is now registered in the memory.
------------------------	--

10.3.5 ID COUNT

ID COUNT	☞ Press <ENT> key to change maximum ID Count. Note! This must be setup first before other setup. Please refer to section 8.5 ID COUNT SETTING.
ENTER ID COUNT [____]	☞ Enter number from 1000 to 20000 in multiple of 1000 for the maximum User ID count. Example: 1000, 2000, 5000, 10000, 20000. Then press <ENT> key.

4 DOOR ACCESS CONTROLLER



Invalid Count	<p>☞. The LCD will display “Invalid Count” error message when the user enters the ID Count which is not multiple of 1,000 or the ID Count is not in between 1,000 and 20,000.</p>
EVENT MEMORY NOT EMPTY !!!	<p>☞. The LCD will display “EVENT MEMORY NOT EMPTY!!!” error message when the user wants to change ID Count and there are some events still existing in the Event Buffer.</p>
ID TOTAL COUNT Wrong !!!	<p>☞. The LCD will display “ID TOTAL COUNT Wrong !!!” error message when the user enters the less ID Count number than the number of User ID registered in the memory. Note! This must be setup first before other setup. Please refer to section 8.3 DOOR SETTING.</p>

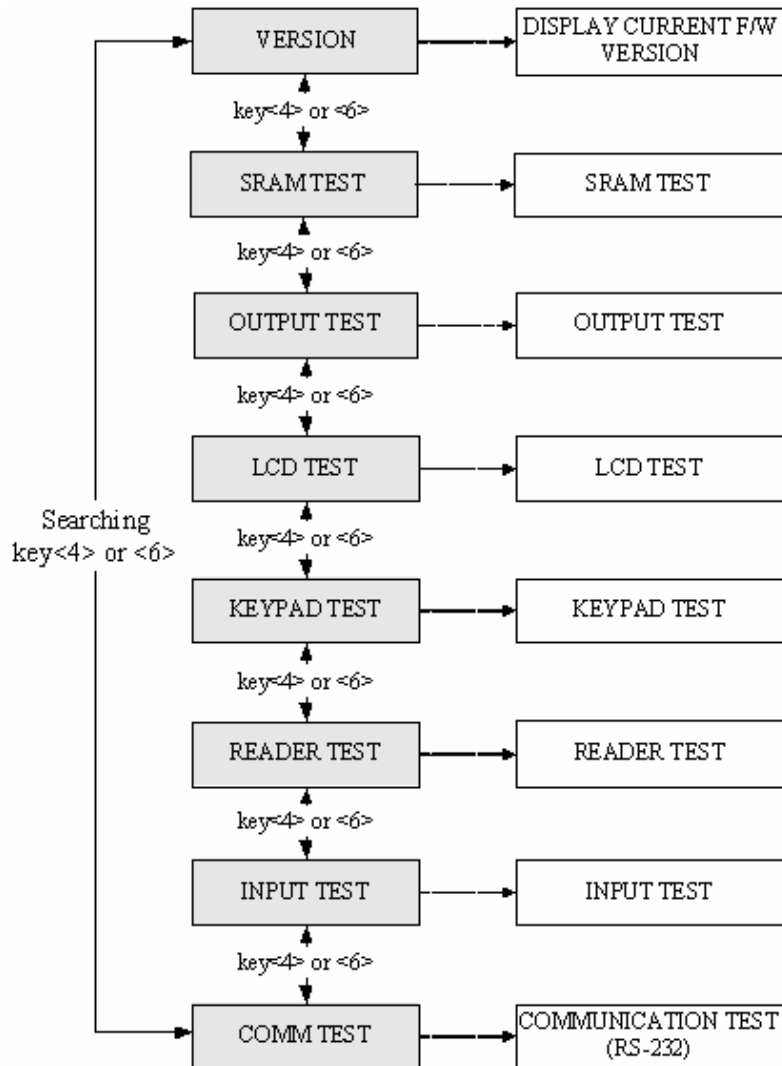
10.3.6 STORED EVENT COUNT

EVENT COUNT 12345	<p>☞. This menu displays the total number of event. It automatically counts when the user uploads to the PC. The LCD shows 1,234 User ID is now registered in the memory</p>
----------------------	--

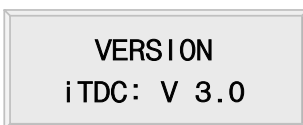
4 DOOR ACCESS CONTROLLER

10.4 SETUP MENU F4

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



10.4.1 VERSION CHECK



- 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.

4 DOOR ACCESS CONTROLLER

10.4.2 SRAM TEST

SRAM TEST

☞. To test the SRAM memory, press <ENT> key.

Memory fail!!! 00
RAM testing...

☞. If the SRAM has problems, the LCD will show the memory block number with Memory fail message. In this case, the user has to contact technical support. Press any key to return to the setup menu.

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

☞. If the SRAM is working properly, the LCD will show RAM test pass message. Press any key to return to the setup menu.

10.4.3 OUTPUTS TEST

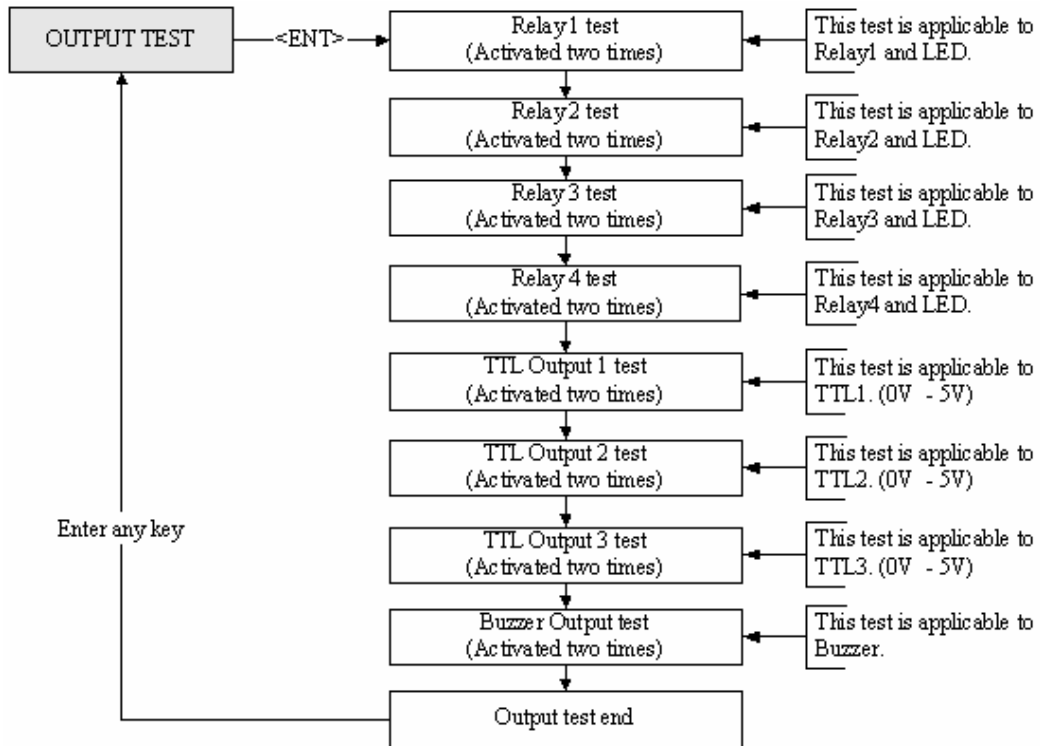
OUTPUT TEST

☞. To test the outputs, press <ENT> key.

OUTPUT 8
Press any key..

☞. The output test will be proceeding for each output twice On and Off. The first 4 tests are for output relays (Relay#1~Relay#4) so the user can hear the mechanical sound of relays and followed 3 tests are for TTL output test. The last test is for built-in buzzer test and the user can hear beep sound twice. Press any key to return to the setup menu.

4 DOOR ACCESS CONTROLLER



10.4.4 LCD TEST

LCD TEST	☞ Press <ENT> key to continue the test. The LCD will display all characters on the screen.
Last Update Press any key...	☞ When the test is done. The LCD will show "Last Update Press any key..." then press any key to return to the setup menu.

10.4.5 KEYPAD TEST

KEYPAD TEST	☞ Press <ENT> key to start the keypad test.
0123456789ABCDEF	☞ The LCD will display "0123456789ABCDEF" on the bottom line of the LCD. Press each key from the keypad then the depressed key will be disappeared from the LCD. Note that F1 key is "A", F2 key is "B", F3 key is "C", F4 key is "D", ESC key is "E", and ENT key is "F" on the screen. After the test is done, it returns to setup menu.

4 DOOR ACCESS CONTROLLER

10.4.6 READER TEST

READER TEST	<p>☞ Press <ENT> key for the reader test.</p>
Scanning ...	<p>☞ The LCD will display “Scanning...” for reading the cards. Present the card to one of the readers.</p>
Reader 1 00312345 <small>↑ ↑</small> <small>Reader # Card #</small>	<p>☞ When the reader successfully reads the card, the LCD will display reader number and 8-digit card number on the LCD. Press <ESC> key to return to the setup menu. ID number of iTDC-SR is 10-digit decimal number.</p>

10.4.7 INPUT AND DIP SWITCH TEST

INPUT TEST	<p>☞ Press <ENT> key for the input test.</p>
INPUT TEST 11111111 00000000 <small>↑ ↑</small> <small>DIP S/W INPUT</small>	<p>☞ The first 8 digits of the bottom line show the status of the DIP switch for communication ID setting and “1” indicates the switch ON position and “0” indicates the switch OFF position. The last 7 digits show the input status and “0” indicates the input port open circuit and “1” indicates the input port short to ground level. Press <ESC> key to return to the setup menu.</p>

10.4.8 COMMUNICATION TEST

COMM TEST	<p>☞ Before this communication test, RS232: Connect the RS232-RX and RS232-TX wires together. RS-422: Connect the Rx(-) and Tx(-), Rx(+) and Tx(+) wires. Note!! In case of RS-422 test, JP3, 4 disconnection and JP5, 6 short After the test is done, short pin1, 2(or 2,3) of the JP3, 4.</p>
TX data = 0 COMM fail	<p>☞ This test is a loop test and iTDC sends a character to TX port and check whether the RX port receives the character or not. If an error comes out, please contact our service facility.</p>
COMM test pass!! Press any key...	<p>☞ After the test is done, the LCD will display “COMM test pass!!”. Press any key to return to the setup menu.</p>

4 DOOR ACCESS CONTROLLER

APPENDIX

A. THE RELATION BETWEEN INPUT AND OUTPUT (DEFAULT)

1. The relation between input and output (2Door setup: iTDC Board Default)

Index No	Relay#1	Relay#2	Relay#3	Relay#4	TTL#1	TTL#2	TTL#3
[1] Input #1 (Door1 Exit button)	03	00	00	00	00	00	00
[2] Input #2 (Door1 Contact SW)	00	03	00	00	00	00	00
[3] Input #3 (Door2 Exit button)	00	00	03	00	00	00	00
[4] Input #4 (Door2 Contact SW)	00	00	00	03	00	00	00
[5] Input #5	00	00	00	00	00	00	00
[6] Input #6	00	00	00	00	00	00	00
[7] Input #7	00	00	00	00	00	00	00
[8] EIO88 Input #1	00	00	00	00	00	00	00
[9] EIO88 Input #2	00	00	00	00	00	00	00
[10] EIO88 Input #3	00	00	00	00	00	00	00
[11] EIO88 Input #4	00	00	00	00	00	00	00
[12] EIO88 Input #5	00	00	00	00	00	00	00
[13] EIO88 Input #6	00	00	00	00	00	00	00
[14] EIO88 Input #7	00	00	00	00	00	00	00
[15] EIO88 Input #8	00	00	00	00	00	00	00
[16] DURESS MODE 1	03	00	00	00	00	00	00
[17] DURESS MODE 2	03	00	00	00	00	00	00
[18] DURESS MODE 3	00	00	03	00	00	00	00
[19] DURESS MODE 4	00	00	03	00	00	00	00
[20] OUTPUT Time Schedule	00	00	00	00	00	00	00
[21] INPUT Time Schedule	00	00	00	00	00	00	00
[22] INPUT Type	01	01	01	01	01	01	01

Default output setting values of EIO88 Relay#1 ~ Relay#8 are all "00".
INPUT Type: "00"= NC, "01"= NO

4 DOOR ACCESS CONTROLLER

2. The relation between input and output (3Door setup: iTDC Board Default)

Index No	Relay#1	Relay#2	Relay#3	Relay#4	TTL#1	TTL#2	TTL#3
[1] Input #1 (Door1 Exit button)	03	00	00	00	00	00	00
[2] Input #2 (Door1 Contact SW)	00	03	00	00	00	00	00
[3] Input #3	00	00	00	00	00	00	00
[4] Input #4	00	00	00	00	00	00	00
[5] Input #5	00	00	00	00	00	00	00
[6] Input #6	00	00	00	00	00	00	00
[7] Input #7	00	00	00	00	00	00	00
[8] EIO88 Input #1 (Door2 Exit)	00	00	00	00	00	00	00
[9] EIO88 Input #2 (Door2 Contact)	00	00	00	00	00	00	00
[10] EIO88 Input #3 (Door3 Exit)	00	00	00	00	00	00	00
[11] EIO88 Input #4 (Door3 Contact)	00	00	00	00	00	00	00
[12] EIO88 Input #5	00	00	00	00	00	00	00
[13] EIO88 Input #6	00	00	00	00	00	00	00
[14] EIO88 Input #7	00	00	00	00	00	00	00
[15] EIO88 Input #8	00	00	00	00	00	00	00
[16] DURESS MODE 1	03	00	00	00	00	00	00
[17] DURESS MODE 2	03	00	00	00	00	00	00
[18] DURESS MODE 3	00	00	00	00	00	00	00
[19] DURESS MODE 4	00	00	00	00	00	00	00
[20] OUTPUT Time Schedule	00	00	00	00	00	00	00
[21] INPUT Time Schedule	00	00	00	00	00	00	00
[22] INPUT Type	01	01	01	01	01	01	01

INPUT Type: "00"= NC, "01"= NO

4 DOOR ACCESS CONTROLLER

3. The relation between input and output (3Door setup: EIO88 Extension I/O Board Default)

Index No	Relay#1	Relay#2	Relay#3	Relay#4	Relay#5	Relay#6	Relay#7	Relay#8
[1] Input #1 (Door1 Exit button)	00	00	00	00	00	00	00	00
[2] Input #2 (Door1 Contact SW)	00	00	00	00	00	00	00	00
[3] Input #3	00	00	00	00	00	00	00	00
[4] Input #4	00	00	00	00	00	00	00	00
[5] Input #5	00	00	00	00	00	00	00	00
[6] Input #6	00	00	00	00	00	00	00	00
[7] Input #7	00	00	00	00	00	00	00	00
[8] EIO88 Input #1 (Door2 Exit)	03	00	00	00	00	00	00	00
[9] EIO88 Input #2 (Door2 Contact)	00	03	00	00	00	00	00	00
[10] EIO88 Input #3 (Door3 Exit)	00	00	03	00	00	00	00	00
[11] EIO88 Input #4 (Door3 Contact)	00	00	00	03	00	00	00	00
[12] EIO88 Input #5	00	00	00	00	00	00	00	00
[13] EIO88 Input #6	00	00	00	00	00	00	00	00
[14] EIO88 Input #7	00	00	00	00	00	00	00	00
[15] EIO88 Input #8	00	00	00	00	00	00	00	00
[16] DURESS MODE 1	00	00	00	00	00	00	00	00
[17] DURESS MODE 2	00	00	00	00	00	00	00	00
[18] DURESS MODE 3	03	00	00	00	00	00	00	00
[19] DURESS MODE 4	00	00	03	00	00	00	00	00
[20] OUTPUT TIME SCHEDULE	00	00	00	00	00	00	00	00
[21] INPUT TIME SCHEDULE	00	00	00	00	00	00	00	00
[22] INPUT TYPE	01	01	01	01	01	01	01	01

INPUT Type: "00"= NC, "01"= NO

4 DOOR ACCESS CONTROLLER

4. The relation between input and output (4Door setup: iTDC Board Default)

Index No	Relay#1	Relay#2	Relay#3	Relay#4	TTL#1	TTL#2	TTL#3
[1] Input #1 (Door1 Exit Button)	03	00	00	00	00	00	00
[2] Input #2 (Door1 Contact SW)	00	03	00	00	00	00	00
[3] Input #3 (Door2 Exit Button)	00	00	03	00	00	00	00
[4] Input #4 (Door2 Contact SW)	00	00	00	03	00	00	00
[5] Input #5	00	00	00	00	00	00	00
[6] Input #6	00	00	00	00	00	00	00
[7] Input #7	00	00	00	00	00	00	00
[8] EIO88 Input #1 (Door3 Exit)	00	00	00	00	00	00	00
[9] EIO88 Input #2 (Door3 Contact)	00	00	00	00	00	00	00
[10] EIO88 Input #3 (Door4 Exit)	00	00	00	00	00	00	00
[11] EIO88 Input #4 (Door4 Contact)	00	00	00	00	00	00	00
[12] EIO88 Input #5	00	00	00	00	00	00	00
[13] EIO88 Input #6	00	00	00	00	00	00	00
[14] EIO88 Input #7	00	00	00	00	00	00	00
[15] EIO88 Input #8	00	00	00	00	00	00	00
[16] DURESS MODE 1	03	00	00	00	00	00	00
[17] DURESS MODE 2	00	00	03	00	00	00	00
[18] DURESS MODE 3	00	00	00	00	00	00	00
[19] DURESS MODE 4	00	00	00	00	00	00	00
[20] OUTPUT Time Schedule	00	00	00	00	00	00	00
[21] INPUT Time Schedule	00	00	00	00	00	00	00
[22] INPUT Type	01	01	01	01	01	01	01

INPUT Type: "00"= NC, "01"= NO

4 DOOR ACCESS CONTROLLER

5. The relation between input and output (4Door setup: EIO88 Default)

Index No	Relay#1	Relay#2	Relay#3	Relay#4	Relay#5	Relay#6	Relay#7	Relay#8
[1] Input #1 (Door1 Exit Button)	00	00	00	00	00	00	00	00
[2] Input #2 (Door1 Contact SW)	00	00	00	00	00	00	00	00
[3] Input #3 (Door2 Exit Button)	00	00	00	00	00	00	00	00
[4] Input #4 (Door3 Contact SW)	00	00	00	00	00	00	00	00
[5] Input #5	00	00	00	00	00	00	00	00
[6] Input #6	00	00	00	00	00	00	00	00
[7] Input #7	00	00	00	00	00	00	00	00
[8] EIO88 Input #1 (Door3 Exit)	03	00	00	00	00	00	00	00
[9] EIO88 Input #2 (Door3 Contact)	00	03	00	00	00	00	00	00
[10] EIO88 Input #3 (Door4 Exit)	00	00	03	00	00	00	00	00
[11] EIO88 Input #4 (Door4 Contact)	00	00	00	03	00	00	00	00
[12] EIO88 Input #5	00	00	00	00	00	00	00	00
[13] EIO88 Input #6	00	00	00	00	00	00	00	00
[14] EIO88 Input #7	00	00	00	00	00	00	00	00
[15] EIO88 Input #8	00	00	00	00	00	00	00	00
[16] DURESS MODE 1	00	00	00	00	00	00	00	00
[17] DURESS MODE 2	00	00	00	00	00	00	00	00
[18] DURESS MODE 3	03	00	00	00	00	00	00	00
[19] DURESS MODE 4	00	00	03	00	00	00	00	00
[20] OUTPUT TIME SCHEDULE	00	00	00	00	00	00	00	00
[21] INPUT TIME SCHEDULE	00	00	00	00	00	00	00	00
[22] INPUT TYPE	01	01	01	01	01	01	01	01

Input type : 00- NC, 01- NO

4 DOOR ACCESS CONTROLLER

6. Factory settings on the outputs regarding access attempts (2Door setup: iTDC Board Default)

Index No	Relay#1	Relay#2	Relay#3	Relay#4	TTL#1	TTL#2	TTL#3
[1] Reader#1 ID OK	03	00	00	00	00	00	00
[2] Reader#1 ID Error	00	03	00	00	00	00	00
[3] Reader#1 ID T/S Error	00	03	00	00	00	00	00
[4] Reader#1 APB Error	00	03	00	00	00	00	00
[5] Reader#2 ID OK	03	00	00	00	00	00	00
[6] Reader#2 ID Error	00	03	00	00	00	00	00
[7] Reader#2 ID T/S Error	00	03	00	00	00	00	00
[8] Reader#2 APB Error	00	03	00	00	00	00	00
[9] Reader#3 ID OK	00	00	03	00	00	00	00
[10] Reader#3 ID Error	00	00	00	03	00	00	00
[11] Reader#3 ID T/S Error	00	00	00	03	00	00	00
[12] Reader#3 APB Error	00	00	00	03	00	00	00
[13] Reader#4 ID OK	00	00	03	00	00	00	00
[14] Reader#4 ID Error	00	00	00	03	00	00	00
[15] Reader#4 ID T/S Error	00	00	00	03	00	00	00
[16] Reader#4 APB Error	00	00	00	03	00	00	00

Factory set values of the EIO88 Expansion I/O board are all '00's.

4 DOOR ACCESS CONTROLLER

7. Factory settings on the outputs regarding access attempts (3Door setup: iTDC Board Default)

Index No	Relay#1	Relay#2	Relay#3	Relay#4	TTL#1	TTL#2	TTL#3
[1] Reader#1 ID OK	03	00	00	00	00	00	00
[2] Reader#1 ID Error	00	03	00	00	00	00	00
[3] Reader#1 ID T/S Error	00	03	00	00	00	00	00
[4] Reader#1 APB Error	00	03	00	00	00	00	00
[5] Reader#2 ID OK	03	00	00	00	00	00	00
[6] Reader#2 ID Error	00	03	00	00	00	00	00
[7] Reader#2 ID T/S Error	00	03	00	00	00	00	00
[8] Reader#2 APB Error	00	03	00	00	00	00	00
[9] Reader#3 ID OK	00	00	00	00	00	00	00
[10] Reader#3 ID Error	00	00	00	00	00	00	00
[11] Reader#3 ID T/S Error	00	00	00	00	00	00	00
[12] Reader#3 APB Error	00	00	00	00	00	00	00
[13] Reader#4 ID OK	00	00	00	00	00	00	00
[14] Reader#4 ID Error	00	00	00	00	00	00	00
[15] Reader#4 ID T/S Error	00	00	00	00	00	00	00
[16] Reader#4 APB Error	00	00	00	00	00	00	00

4 DOOR ACCESS CONTROLLER

8. Factory settings on the outputs regarding access attempts (3Door setup: EIO88 Default)

Index No	Relay#1	Relay#2	Relay#3	Relay#4	Relay#5	Relay#6	Relay#7	Relay#8
[1] Reader#1 ID OK	00	00	00	00	00	00	00	00
[2] Reader#1 ID Error	00	00	00	00	00	00	00	00
[3] Reader#1 ID T/S Error	00	00	00	00	00	00	00	00
[4] Reader#1 APB Error	00	00	00	00	00	00	00	00
[5] Reader#2 ID OK	00	00	00	00	00	00	00	00
[6] Reader#2 ID Error	00	00	00	00	00	00	00	00
[7] Reader#2 ID T/S Error	00	00	00	00	00	00	00	00
[8] Reader#2 APB Error	00	00	00	00	00	00	00	00
[9] Reader#3 ID OK	03	00	00	00	00	00	00	00
[10] Reader#3 ID Error	00	03	00	00	00	00	00	00
[11] Reader#3 ID T/S Error	00	03	00	00	00	00	00	00
[12] Reader#3 APB Error	00	03	00	00	00	00	00	00
[13] Reader#4 ID OK	00	00	03	00	00	00	00	00
[14] Reader#4 ID Error	00	00	00	03	00	00	00	00
[15] Reader#4 ID T/S Error	00	00	00	03	00	00	00	00
[16] Reader#4 APB Error	00	00	00	03	00	00	00	00

4 DOOR ACCESS CONTROLLER

9. Factory settings on the outputs regarding access attempts (4Door setup: iTDC Board Default)

Index No	Relay#1	Relay#2	Relay#3	Relay#4	TTL#1	TTL#2	TTL#3
[1] Reader#1 ID OK	03	00	00	00	00	00	00
[2] Reader#1 ID Error	00	03	00	00	00	00	00
[3] Reader#1 ID T/S Error	00	03	00	00	00	00	00
[4] Reader#1 APB Error	00	03	00	00	00	00	00
[5] Reader#2 ID OK	00	00	03	00	00	00	00
[6] Reader#2 ID Error	00	00	00	03	00	00	00
[7] Reader#2 ID T/S Error	00	00	00	03	00	00	00
[8] Reader#2 APB Error	00	00	00	03	00	00	00
[9] Reader#3 ID OK	00	00	00	00	00	00	00
[10] Reader#3 ID Error	00	00	00	00	00	00	00
[11] Reader#3 ID T/S Error	00	00	00	00	00	00	00
[12] Reader#3 APB Error	00	00	00	00	00	00	00
[13] Reader#4 ID OK	00	00	00	00	00	00	00
[14] Reader#4 ID Error	00	00	00	00	00	00	00
[15] Reader#4 ID T/S Error	00	00	00	00	00	00	00
[16] Reader#4 APB Error	00	00	00	00	00	00	00

4 DOOR ACCESS CONTROLLER

10. Factory settings on the outputs regarding access attempts (4Door setup: EIO88 Default)

Index No	Relay#1	Relay#2	Relay#3	Relay#4	Relay#5	Relay#6	Relay#7	Relay#8
[1] Reader#1 ID OK	00	00	00	00	00	00	00	00
[2] Reader#1 ID Error	00	00	00	00	00	00	00	00
[3] Reader#1 ID T/S Error	00	00	00	00	00	00	00	00
[4] Reader#1 APB Error	00	00	00	00	00	00	00	00
[5] Reader#2 ID OK	00	00	00	00	00	00	00	00
[6] Reader#2 ID Error	00	00	00	00	00	00	00	00
[7] Reader#2 ID T/S Error	00	00	00	00	00	00	00	00
[8] Reader#2 APB Error	00	00	00	00	00	00	00	00
[9] Reader#3 ID OK	03	00	00	00	00	00	00	00
[10] Reader#3 ID Error	00	03	00	00	00	00	00	00
[11] Reader#3 ID T/S Error	00	03	00	00	00	00	00	00
[12] Reader#3 APB Error	00	03	00	00	00	00	00	00
[13] Reader#4 ID OK	00	00	03	00	00	00	00	00
[14] Reader#4 ID Error	00	00	00	03	00	00	00	00
[15] Reader#4 ID T/S Error	00	00	00	03	00	00	00	00
[16] Reader#4 APB Error	00	00	00	03	00	00	00	00

4 DOOR ACCESS CONTROLLER

B. TROUBLE SHOOTING

☞ Broken or abnormal letters show on the LCD, when powered on.

Cause	SRAM backup battery problem or LCD module problem.
Solution	1. Initialize the controller and setup the date and time on SETUP MENU F2->SYS INITIALIZE and SETUP MENU F2->TIME SETTING. 2. If the problem is not resolved, please contact a designated service center.

☞ Is it possible to set the controller to operate in RF only mode for one card and in RF+P/W mode for another?

Cause	N/A
Solution	1. Do not mix the working mode for one Reader. 2. But it is possible to set one reader to operate in RF only mode and another one in RF+P/W mode.

☞ The Setup mode suddenly goes back to the Normal Operating mode.

Cause	Time out error
Solution	1. In the Setup mode, it is programmed to do so when there is no key-in or reading card within 60 seconds.

☞ 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 PC. The process of downloading IDs, iTDC first erase the ID memory of the unit, therefore if the IDs from the PC didn't contain the card ID, this can happen. 2. Check whether the card ID is registered in PC 3. If not, please register the number and try downloading again. 4. If the trouble remains after the procedure above, contact a designated service center.

☞ It is not possible to enter the Setup Mode after entering the Master ID "00000000".

Cause	The Master ID might be changed or components are defective.
Solution	1. Try changing the Master ID through the application S/W.(It'll be changed to "00000000".) - Note that the Master ID for iTDC-SR is 10 times <0>, "0000000000".

4 DOOR ACCESS CONTROLLER

	<p>2. When it is not feasible, initialize the unit as followings.</p> <ul style="list-style-type: none"> - Press the two System Initialization Switches simultaneously while power is on. - Wait until the message ‘Initialize END Turn OFF Power...’ appears on the LCD and turn it off and on again. Try entering the Setup mode. - Note that all the value will be set to default, including the IDs after initializing. <p>3. If the trouble remains after the procedure above, contact a designated service center.</p>
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☞ No problem with accessing by cards, but cannot access with the PIN input.

Cause	An error in Setup or possible component defect.
Solution	<p>1. Check whether a beep sound is generated when pressing a key. When it is, the problem may be an error in setup. Proceed as follow.</p> <ul style="list-style-type: none"> - Enter the Master ID(“00000000” default) to enter the Setup mode. (Note that the Master ID for iTDC-SR is 10 times <0>, “0000000000”.) - Press <F1> key. - ‘READER 1 MODE’ will appear on the LCD, then use the key <6> to choose ‘READER1 KEY IN’, ‘READER2 KEY IN’, ‘READER3 KEY IN’, or ‘READER4 KEY IN’ and select ‘Enable’ as wanted. <p>2. When there is no beep sound or already enabled Key-in functions, please contact a designated service center.</p>

☞ The reader seems to read cards, but the controller does not respond or does not respond properly, such as displaying wrong card numbers in the reader test mode.

Cause	Reader defect, wiring error between the reader and the controller, or the electric noises around.
Solution	<ol style="list-style-type: none"> 1. Be sure that the reader reads the card ID when you present a card. 2. Be sure that the reader format is correct. 26bit Wiegand or 34bit Wiegand for iTDC-SR 3. Check the wiring between the reader and iTDC. <ul style="list-style-type: none"> - Check the wires of Wiegand data lines D0 and D1 that is connected correctly. - Connect the controller ground to the ground wire of the reader and it is recommended to connect them to an earth ground. 4. Using oscilloscope, check the shape of signals from the reader at the controller’s side. When the noises are shown on the signals, it is recommended to use shielded wires and the unused wires to the common ground. The repeaters can also be used. 5. Check the maximum cable length, which may be indicated on the reader manual. 6. If the trouble remains after the procedure above, contact a designated service center.

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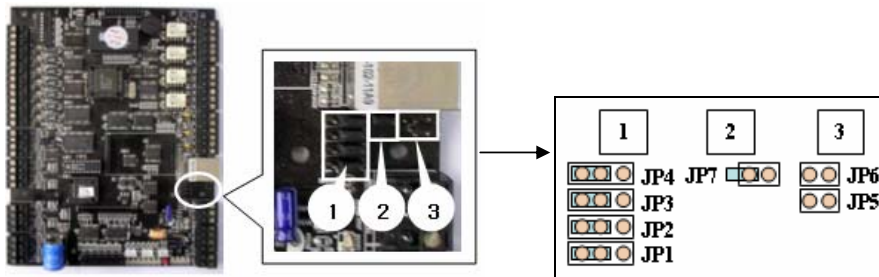
☛ The controller does not communicate with PC.

Cause 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

- Please, check the settings of the application S/W and the controller.
 - Check the controller's COMM ID is listed on the application S/W.
 - Set the different COMM ID when two or more controllers are installed.
 - Check the communication speed (9600bps default) is the same as the setting on the S/W.
 - Make sure that the PC's COM port is set correctly on the S/W.
 - The parameters at the S/W should be set as follows.
 - Parity bit : NONE
 - Data bit : 8bit
 - Stop bit : 1bit

2. In case of RS_422 communication, please check if the Jumper S/W set-up as below.



2. Check the line connection for communication.

RS232		RS422 (mono)		
iTDC	PC	iTDC	RS422/232 Converter	PC
TX port	TX	RX(-)	TX(-)	The RS232 cable from the converter
RX port	RX	RX(+)	TX(+)	
GND	GND	TX(-)	RX(-)	
		TX(+)	RX(+)	

RS422(Multi Drop)			
iTDC	iTDC	RS422/232 Converter	PC
RX(-)	RX(-)	TX(-)	The RS232 cable from the converter
RX(+)	RX(+)	TX(+)	
TX(-)	TX(-)	RX(-)	
TX(+)	TX(+)	RX(+)	

3. In case of setting RS422 communication, it is recommended to use line-end resistors of 120 Ohm between the RX(+) and RX(-) lines and between the TX(+) and TX(-) lines, and apply the same resistors to the converter RS422 lines. Please contact a service center or an electric

4 DOOR ACCESS CONTROLLER

- | | |
|--|---|
| | <p>technician if not sure about how to do it.</p> <ol style="list-style-type: none">4. When a multi-drop communication does not work, test one-by-one communication first.5. If the trouble remains after the procedure above, please contact a designated service center. |
|--|---|

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FCC REGISTRATION INFORMATION

FCC REQUIREMENTS PART 15

Caution: Any changes or modifications in construction of this device that is 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.

4 DOOR ACCESS CONTROLLER

WARRANTY AND SERVICE

The following warranty and service information applies only to the United States of America and Republic of Korea. For the information in other countries, please contact the local distributor.

To obtain in or out of warranty service, please prepay shipment and return the unit to the appropriate facility listed below.

IN THE UNITED STATES

RF LOGICS Inc. Service Center
3026 Scott Blvd.,
SANTA CLARA, CA95054
Tel.: (408) 980-0001
Fax.: (408) 980-8060
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 Bldg.,
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

+82-19-264-7550 (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.

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

4 DOOR ACCESS CONTROLLER

● 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, Gangsuh-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 <p style="text-align: center;">Karina Kwak</p>		Requested From : <p style="text-align: center;">Mr. Luis Castro</p> 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	RFK101A	XXXXXXXXXXXXXX	RS 232 Com. <input type="checkbox"/>	Power <input checked="" type="checkbox"/>	Card Reading <input checked="" type="checkbox"/>
	Engineer Comment	Write problem to be detailed.	Input/Output <input type="checkbox"/>	Keypad <input checked="" type="checkbox"/>	RS 422 Com <input type="checkbox"/>
Others <input type="checkbox"/> :					
2	others		RS 232 Com. <input type="checkbox"/>	Power <input type="checkbox"/>	Card Reading <input type="checkbox"/>
	Engineer Comment		Input/Output <input type="checkbox"/>	Keypad <input type="checkbox"/>	RS 422 Com <input type="checkbox"/>
Others <input type="checkbox"/> :					
3			RS 232 Com. <input type="checkbox"/>	Power <input type="checkbox"/>	Card Reading <input type="checkbox"/>
	Engineer Comment		Input/Output <input type="checkbox"/>	Keypad <input type="checkbox"/>	RS 422 Com <input type="checkbox"/>
Others <input type="checkbox"/> :					
4			RS 232 Com. <input type="checkbox"/>	Power <input type="checkbox"/>	Card Reading <input type="checkbox"/>
	Engineer Comment		Input/Output <input type="checkbox"/>	Keypad <input type="checkbox"/>	RS 422 Com <input type="checkbox"/>
Others <input type="checkbox"/> :					
5			RS 232 Com. <input type="checkbox"/>	Power <input type="checkbox"/>	Card Reading <input type="checkbox"/>
	Engineer Comment		Input/Output <input type="checkbox"/>	Keypad <input type="checkbox"/>	RS 422 Com <input type="checkbox"/>
Others <input type="checkbox"/> :					
Manufacturer's Verification					
Product Defective :		Installation Error :			
User's Misuse :		Connection Error :			
Communication Error :		Others :			
Packing Details					
Dimension(L:W:H) :		No. of Units	20		
Net & Gross Weight :		No. of Boxes	2		
Requested By <p style="text-align: center;"><u>Luis Castro</u> Buyer's Signature</p>		Received By <p style="text-align: center;">_____ IDTECK's Signature</p>			


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● 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		
<input type="checkbox"/> Card Reading	<input type="checkbox"/> Power	<input type="checkbox"/> Keypad
<input type="checkbox"/> Communication	<input type="checkbox"/> Relay	<input type="checkbox"/> LCD
<input type="checkbox"/> LED & Buzzer	<input type="checkbox"/> 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. Return 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)		

4 DOOR ACCESS CONTROLLER

- A/S REQUEST FORM : SAMPLE

		
A/S Request Form		
1. Model: XXXXX V X.XX	2. RMA No: XXXXXXXX	
3. Original Invoice No: XXXXXXXX	4. Serial No: XXXXXXXXXXXXXXXX	
5. Distributor: XXXXXX	6. Date: 2003.XX.XX	
User's Check List		
<input checked="" type="checkbox"/> Card Reading	<input type="checkbox"/> Power	<input type="checkbox"/> Keypad
<input checked="" type="checkbox"/> Communication	<input type="checkbox"/> Relay	<input checked="" type="checkbox"/> LCD
<input type="checkbox"/> LED & Buzzer	<input type="checkbox"/> 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. Return 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)		



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



5F, Ace Techno Tower B/D, 684-1, Deungchon-Dong,
Gangsu-Gu, Seoul, 157-030, Korea
Tel : (82) 2 2659-0055
Fax : (82) 2 2659-0086
E-mail : webmaster@idteck.com

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