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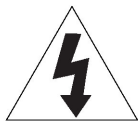
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Safety Information

1



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



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



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

WARNING

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

WARNING

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

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

CAUTION

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

1 IMPORTANT SAFETY INSTRUCTIONS

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

The Star 505R (iPASS IP505R, IDTECK SR505) is a highly advanced, intelligent single door controller with a dual 8bit microprocessor to meet the market requirement for a robust integrated solution for access control and time & attendance. It is designed for low cost as well as high security, convenience and reliability. This user-friendly device allows you to register 10,000 ~ 50,000 ID numbers and can keep 10,000 ~ 50,000 events. (The sum of users and events cannot exceed 60,000) The Event buffer reports and archive information to Excel or Access databases and ultimately manages all access control and time & attendance issues. With a built-in 4" inch RF reader and keypad for Personal Identification Numbers (PIN), the Star 505R (iPASS IP505R, IDTECK SR505) offers up to two levels of ID verification. You can verify by Proximity Card, PIN or both and multiple verification levels can be custom programmed for each user or user group. Four independent input ports can be utilized for a wide variety of controls including exit buttons, door contacts, PIR sensors and fire detection equipment. Actions to be taken and time settings can be programmed with the front keypad or via the intuitive Windows-based software program. The Star 505R (iPASS IP505R, IDTECK SR505) can be used both as a stand-alone system and also be networked. All control setting values such as ID numbers, inputs/outputs, real-time clock, time schedules, and event transaction reports can be uploaded and/or downloaded to and from the host computer. The compact and contemporary unit is easily installed and programming requires no significant knowledge of access control or time & attendance. The three LED indicator lights inform you of the systems operating status at real time and the digital display acts as a programming aid as well as a regulation time clock. By bundling the ultimate in high security access control and comprehensive employee management tools into a compact user friendly unit, the field proven Star 505R (iPASS IP505R, IDTECK SR505) is the ideal solution for controlling entrances and ensuring complete employee accountability.

FEATURES

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- 125 KHz Standalone Proximity Controller (Optional 13.56MHz Smart Card)
- Dual Function for Access Control and Time & Attendance
- Dynamic Control of Memory up to 10,000 Users / 50,000 Event Buffers (Selectable)
- Standalone / Network Communication via RS232, RS422 and TCP/IP (External LAN Converter Required)
- Cut Off Check Function
- Duress Alarm Function
- Compatible Software: STARWATCH DUAL PRO I / II, STARWATCH STANDARD

Specification

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Model		Star 505R
CPU		Dual 8bit Microprocessor
Memory	Program Memory	128KByte Flash Memory
	Data Memory	1MByte Flash Memory
User		10,000 ~ 50,000 Users(Default:10,000)
Event Buffer		10,000 ~ 50,000 Event Buffers(Default:50,000)(The Sum of Users and Events Cannot Exceed 60,000)
Power / Current		DC +12V / Max.150mA
External Reader Port	Star 505R	1ea (26bit Wiegand, 4/8bit Burst for PIN)
	SR505	1ea (34bit Wiegand, 4/8bit Burst for PIN)
Communication		RS232 / RS422 (Max.32ch)
		TCP/IP (Optional Internal TCP/IP Module Required)
Baud Rate		9600bps (Default) / 4800bps, 19200bps, 38400bps, 57600bps and 115200bps (Selectable)
Input Port		4ea / DC5V / 20mA
Output Port		2ea FORM-C Relay Output (COM, NO, NC) / DC12V, Max.2A)
		2ea (TTL Output / DC5V, Rating Max.20mA)
LCD		1 x LCD Module, 2Lines x 16ch, 65.6 x 13.8mm View Area
Keypad		16 Key Numeric Keypad with Back Lighting
LED Indicator		7 Array LED Indicators (Red, Green and Yellow)
Beeper		Piezo Buzzer

Operating temperature	0 to +40C (+32 to +104F)
Operating Humidity	10% to 90% Relative Humidity Non-Condensing
Color / Material	Dark, Pearl, Gray / Polycarbonate
Dimension (W x H x T)	150mm x 120mm x 39.5mm (5.9" x 4.72" x 1.55")
Weight	400g
Certification	FCC, UL, CE, RoHS, KC
TCP/IP Module(Optional)	IIM7100A

COMPARISON TABLE FOR READING RANGE

Model	505R	IP505R	SR505	
Card Type	IDC80 / IDC170	IPC80 / IPC170	IHC80	ISC80
Read Range	Up to 10 Cm	Up to 10 Cm	Up to 5 Cm	Up to 10 Cm

IDENTIFYING SUPPLIED PARTS

5

Please unpack and check the contents of the box.



Main Unit

(1ea)



Wall Mount

(1ea)



O-ring

(5ea)



User's Manual

(1ea)



Screws

3.5 x 12 mm (4ea)

3.5 x 40 mm (4ea)

Anchor bolt 6 x 30 mm (4ea)



Cable / Diode

300mm 2P (1ea)

300mm 3P (1ea)

300mm 4P (1ea)

300mm 7P (1ea)

300mm 10P (1ea)

UF4004 DIP (2ea)

1 FUNCTIONS

Stand-Alone Operation

The Star 505R is capable of having 2 readers (1 Door Control). The unit receives card ID numbers from the proximity readers and determines whether or not to unlock the door. When an input signal is entered, for example from a Sensor activated or an Exit button pressed, the controller generates and logs an appropriate response by input signals. All events are stored into the memory buffers and sent to the host computer. The access controller is a true stand-alone device that, in the event of malfunction, will not affect other units when used in conjunction with one another.

Operation with Host Computer

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

Data Backup

The controller retains all user information and event data, even in the case of power failure.

Keypad

If the Star 505R is not connected to a host PC, the integrated keypad and LCD display module can also be used for the entire programming process.

Anti-Pass-Back

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

Input/ Output

The Star 505R has 4 built-in inputs and 4 outputs (2 relay outputs and 2 TTL outputs) which can be used to manipulate a wide variety of controls.

Time Schedule Setup

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

Holiday Schedule Setup

Excepting Sunday, you can program 32 holidays to one holiday schedule. Each holiday schedule is linked to one time schedule which has a time code for holidays. You can program all holidays to a holiday schedule and the time code for holidays is programmed to the holiday time zone of time schedule.

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

Holiday schedule 02 linked to time schedule 02

B. Holiday schedule 02 linked to time schedule 01,

Holiday schedule 01 linked to time schedule 03

Forced Door Open Alarm

When the door is opened by force, the door contact sensor will be activated. The forced door open alarm will be generated until the door is closed again. For this application, you have to install the door contact sensor and properly set the door contact time and outputs to the alarm devices.

Duress Alarm

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

output and an alarm event will be sent to the host PC.

2 PRODUCT EXPANATION

2.1 Front View



LCD Display:

LCD displays Star 505R's status.

3LEDs:

When the power is supplied to Star 505R, the red LED is turned on.

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

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

16 Keypad:

You can operate Star 505R manually by using the keypad.

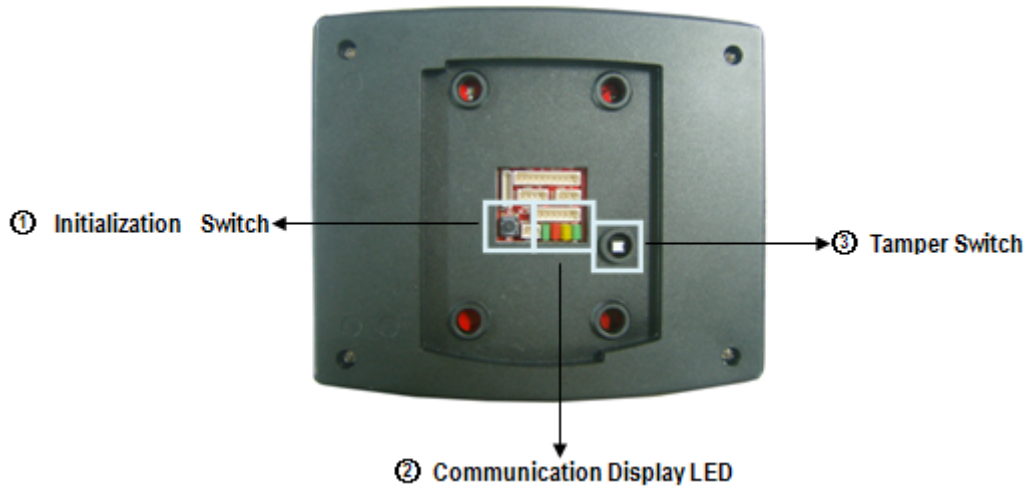
Function Key:

The Star 505R has four Function keys: [F1], [F2], [F3], [F4]

Card Reading Status LED:

When a card is read, the card reading status LED turns on green.

2.2 Rear View



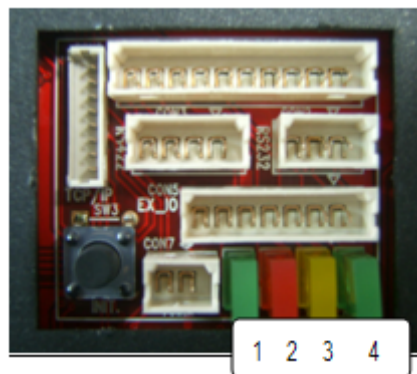
Initialization Switch

This switch is used to initialize Star 505R. For initialization, press down this switch and then keep it more than 2 seconds. Refer to '8.2 System Initialization' for more details.

Communication Display LED

3, 4(yellow, green) LED will twinkle during RS232, RS422 and TCP/IP communication.

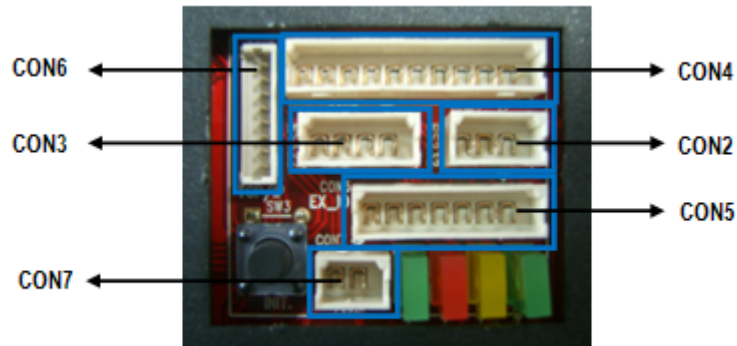
If the LAN is connected normally during TCP/IP communication, green LED will turn on. But in the collision status, the #2 LED (red) turns on.



Tamper Switch

If someone takes off installed Star 505R on the wall by force, this tamper switch is activated then buzzer makes sound.

2.3 WIRE COLOR TABLE



IO PORT NAME	SIGNAL NAME	COLOR CODED
POWER	CON7	
Main Power(+12V)	DC +12V	Red
Power Ground	GND	Black
OUTPUT	CON4	
Door Relay(COM)	COM(1)	Gray with Red Stripe
Door Relay(NC)	NC(1)	Blue with White Stripe
Door Relay(NO)	NO(1)	White with Red Stripe
Alarm Relay(COM)	COM(2)	White
Alarm Relay(NC)	NC(2)	Purple with White Stripe
Alarm Relay(NO)	NO(2)	Purple
INPUT	CON4	
Exit Button	EXIT	Orange
Door Sensor	CONTACT	Yellow with Red Stripe
Aux Input 1	IN1	Green
Aux Input 2	IN2	Green with White Stripe
EXTRA READER PORT	CON5	
Wiegand Data0	DATA0	Pink
Wiegand Data1	DATA1	Cyan
OUTPUT	CON5	
TTL Output1	TTL1/ Weigand D0 Out	Orange with White Stripe

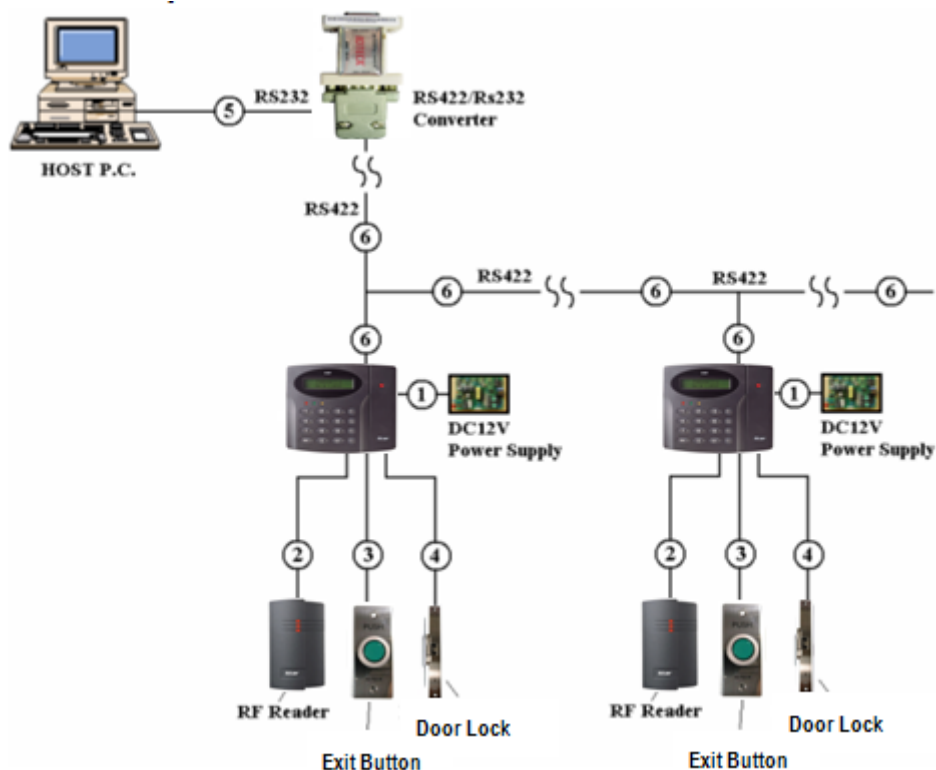
IO PORT NAME	SIGNAL NAME	COLOR CODED
TTL Output2	TTL2/ Weigand D1 Out	Brown with White Stripe
OK Signal Out	Not use	Green with Red Stripe
Error Signal Out	Not use	Blue with Red Stripe
Tamper Switch Out	Tamper Switch Out	Yellow with White Stripe
RS232 INTERFACE	CON2	
RS232-TX	TXD	Black with White Stripe
RS232-RX	RXD	Read with White Stripe
Ground	GND	Black
RS422 INTERFACE	CON3	
RS422-TX(-)	TX(-)	Yellow
RS422-TX(+)	TX(+)	Gray
RS422-RX(-)	RX(-)	Blue
RS422-RX(+)	RX(+)	Brown
TCP/IP Communication	CON6	
	TCP/IP Communication	8PIN Connector Module

INSTALLATION CHECKPOINTS & TIPS

7

1 CHECK POINTS BEFORE INSTALLATION

1.1 Installation Layout



1.2 Recommended Cable Type and Permissible Length of Cable

Reference	Description	Cable Specification	Maximum Distance
①	Star 505R Power (DC12V) DC Power -> Star 505R	Belden #9409, 18 AWG 2 conductor, unshielded	30m
②* ¹	Reader (Power and Data) Extra Reader -> Star 505R	Belden #9512, 22 AWG 4 conductor, shielded Belden #9514, 22 AWG 8 conductor, shielded	150m
③	Door Contact Exit Button Sensor Input Input -> Star 505R	Belden #9512, 22 AWG 4 conductor, shielded Belden #9514, 22 AWG 8 conductor, shielded	300m
④	Door Lock, Alarm Device Lock (Alarm) -> Star 505R	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 Star 505R -> Star 505R Star 505R -> Converter RS422 Cable Star 505R -> Star 505R Star 505R -> Converter	Belden #9829, 24 AWG 2-twisted pair, shielded Belden #9830, 24 AWG 3-twisted pair, shielded	1,200m

¹ * Requires thicker wire if you connect the reader with high current consumption.

2 CHECK POINTS DURING INSTALLATION

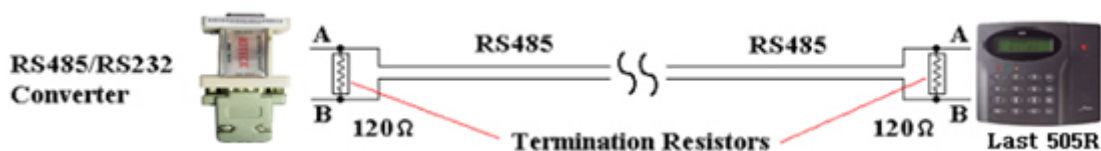
2.1 Termination Resistor

Termination resistors are used to match impedance of the network to the impedance of the transmission line being used. When impedance is mismatched, the transmitted signal is not completely absorbed by the receiver and a portion of signal is reflected back into the transmission line.

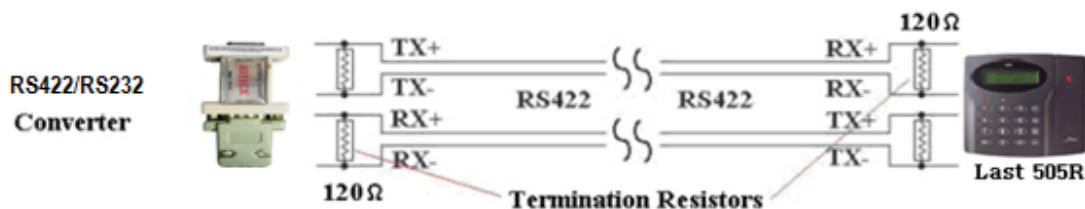
A 120Ω resistor can be used for termination resistor in parallel between the receiver lines “A” and “B” for 2 wires RS485 system or “RX+” and “RX-” for 4 wires RS422 system. A termination resistor of less than 90Ω should not be used and no more than 2 terminations should be used in one networking system.

2.2 How to Connect Termination Resistors

Termination Resistors for 2 Wire RS485 Communication System



Termination Resistors for 4 Wire RS422 Communication System



2.3 Grounding System for Communication Cable

We recommend to using proper grounding system on the communication cable. 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.

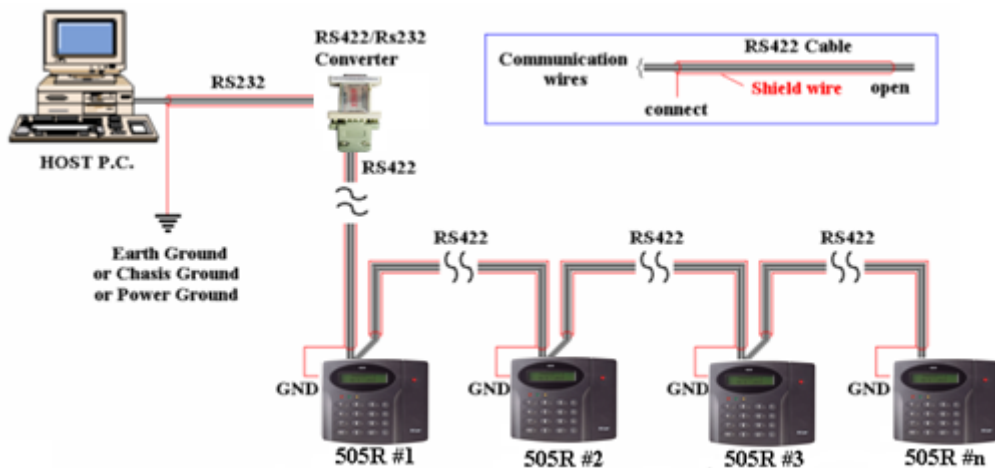
There will be three grounding points where you can find during installation;

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

The most important point for grounding system is not to connect both ends of shield wires to the grounding system; in this case there will be a current flow through the shield wire when the voltage level of both ends of shield wire is not equal and this current flow will create noise and interfere to communications.

For the good grounding, we recommend connecting ONLY one end of shield wire of communication cable to the grounding system; If you find earth ground nearby, then connect one end of shield wire to earth ground; If you do not have earth ground nearby, then find chassis ground and connect one end of shield wire to chassis ground; If you do not find both earth ground and chassis ground, then connect one end of shield wire to power ground. (GND of Star 505R)

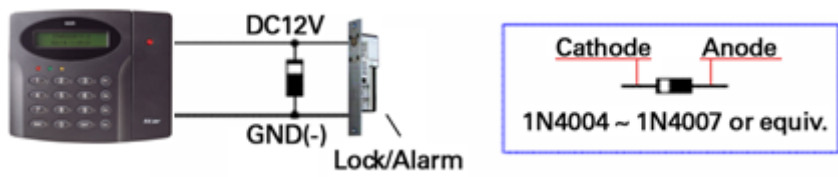
Note that if the chassis ground is not properly connected to the earth and floated from the ground level, then grounding to the chassis ground will give the worst communication; in this case we recommend to using power ground instead of chassis ground.



2.4 Reverse Diode Connection

If you connect an inductor (Door Locks or Alarm device) to the output relays, there will be a high surge voltage created while the inductor is turning on and off. If you do not connect reverse diode, the surge voltage will transfer and damage to the electronic circuit of the controller. It is strongly recommended to add a reverse diode between the inductor coils to absorb

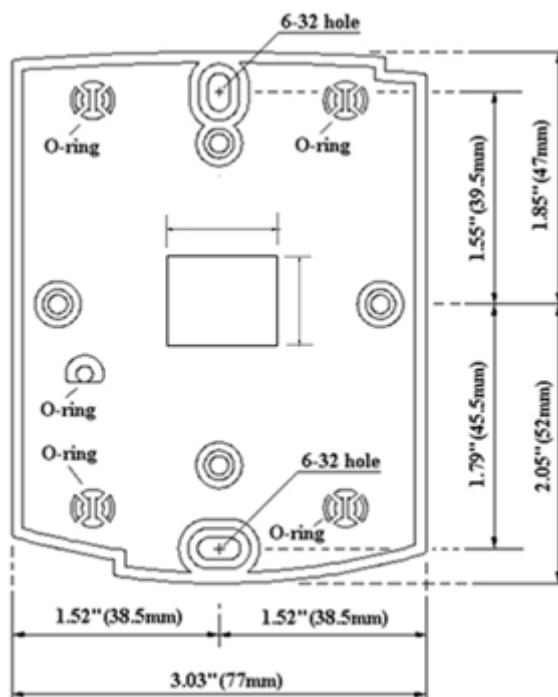
b this surge voltage.



1 WALL MOUNT INSTALLATION

Real size template is on 59p in this manual. Tear off the template page and attach it to the wall. And then follow steps below to install the Star 505R. (You can install the Star 505R directly, if the gang box is installed on the wall.)

1. Position the Wall Mount template to the location at which you want to install the unit and mark 2 drilling (two Tap #6-32 holes) positions and then drill it
2. Drill a 1/2" hole on the center of the wall mount.
3. Using two screws, install the wall mount to the wall.
4. Take out the cable through the center hole.
5. After connecting cables, initialize the Star 505R. And then test basic function. (Refer to 'SYSTEM INITIALIZATION' of the following chapter)
6. Insert O-ring at 5 positions and then insert the bundle of cable to the center hole.
7. Put the Star 505R unit on the wall mount and push it until it is fixed up.

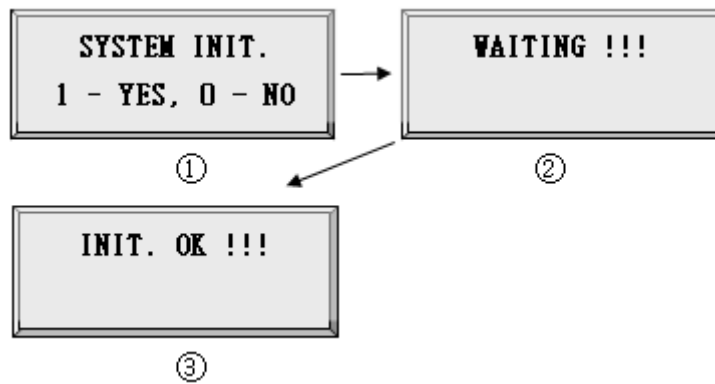


Before mounting the Star 505R unit to the Wall Mount bracket, operational test of the unit should be completed, as the locking pins will lock the unit to the Wall Mount. Removing the unit from the Wall Mount bracket after they have been installed together may cause damages to the bracket and render its effectiveness.

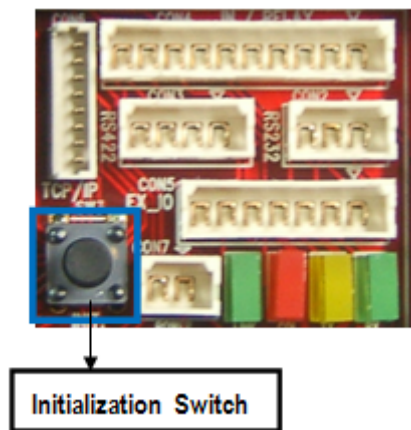
Insert 5 O-rings to the wall mount as indicated, then route the cable of the main unit through the center hole and push the main unit to wall mount to lock the main unit and make sure that the main unit is locked with wall mount.

2 SYSTEM INITIALIZATION

You have to initialize the Star 505R unit prior to installation. Once power is supplied to the Star 505R, press down the initialization switch on the back of the Star 505R unit and then keep it more than 2 seconds, then you can see displays below on the LCD. If you want initialization, press key <1> otherwise press key <0>.



- ① Press the key <1> if you wish to initialize the Star 505R.
- ② Initialization is processing
- ③ Rebooted automatically after Initialization



3 WIRING

3.1 Power

Connect (+) wire of DC +12V power to the DC +12V (Red wire) of Star 505R. Connect GND (-) wire of DC +12V power to the GND (Black wire) of Star 505R.

3.2 Input Connection

Exit Button Connection

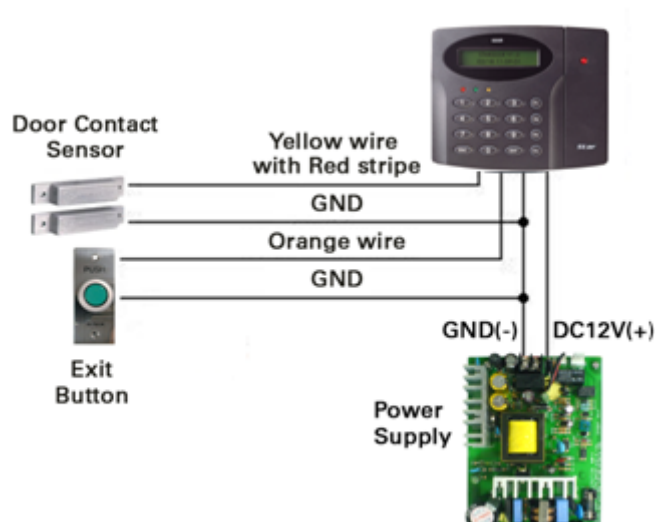
- Connect one wire from an Exit Button to the Orange wire.
- Connect the other wire from the Exit Button to the GND.

Door Contact Sensor Connection

- Connect one wire (COM) from a Door Contact Sensor to the Yellow wire with Red stripe.
- Connect the other wire (NC) from the Door Contact Sensor to GND.

Auxiliary Input Connection (Applied to Aux Input IN1, Aux Input IN2)

- Connect one wire from an Auxiliary Input Device to one of the Input IN1, IN2.
- Connect the other wire from the Auxiliary Input Device to GND.



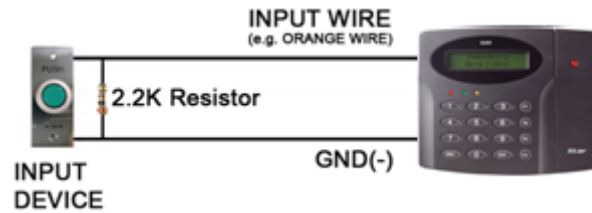
2.2K Resistance Connection for Cut Off Check

You have to connect a 2.2K Resistor between the input wire (e.g. Orange wire) and the GND to apply the Cut Off Check feature.

First, select whether or not to check the Cut Off status of each device from "F2 SETUP MENU" -> "5. IN/OUT DEFINE"-> "21.CUT OFF CHECK".

Second, set the desired output that will be generated in the event of a cut off from "F2 SETU

P MENU" -> "5. IN/OUT DEFINE"-> 18. CUT OFF ALARM".



3.3 Output Connections

Door Lock (Power Fail Safe) Connection (Relay 1)

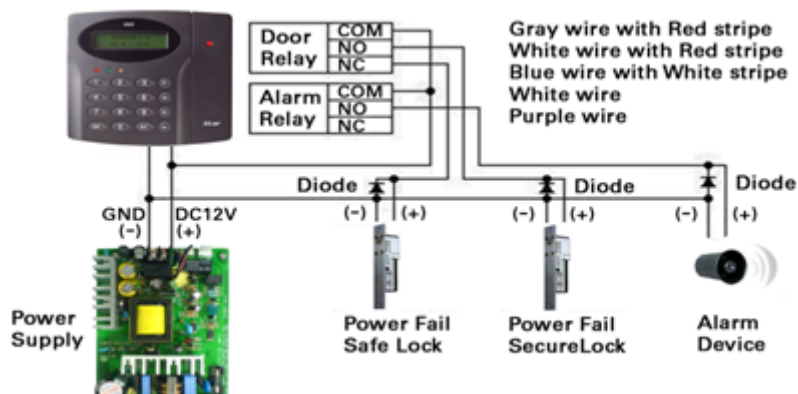
- Connect COM port of Relay 1 (Gray with Red Stripe) to + 12V (Red wire)
- Connect NC port of Relay 1 (Blue with White Stripe) to (+) wire of Door Lock Device.
- Connect GND (Black wire) port to (-) wire of Door Lock Devices.

Door Lock (Power Fail Secure) Connection (Relay 1)

- Connect COM port of Relay 1 (Gray with Red Stripe) to + 12V (Red wire)
- Connect NO port of Relay 1 (White with Red Stripe) to (+) wire of Door Lock Device
- Connect GND (Black wire) port to (-) wire of Door Lock Devices

Alarm Device Connection (Relay 2)

- Connect COM port of Relay 2 (White) to + 12V (Red wire)
- Connect NO port of Relay 2 (Purple) to (+) wire of Alarm Devices.
- Connect GND (Black wire) port to (-) wire of Alarm Devices





Please add one diode as shown above. A fast recovery diode (Current: Min. 1A), 1N4001 - 1N4007 or similar, is recommended.

Wiegand Data Connection (Applicable to Reader Mode)

- Connect DATA0 IN wire of controller to TTL1/D0 (TTL Output) wire of 505R (Orange with White Stripe)
- Connect DATA1 IN wire of controller to TTL2/D1 (TTL Output2) wire of 505R (Brown with White Stripe)



If the controller and 505R use separate power sources, you must connect the GND between the controller and 505R

3.4 Extra Reader Connections

Proximity Reader Connection

- Connect (+) wire of the Proximity Reader to DC +12V (Red wire).
- Connect (-) wire of the Proximity Reader to GND of Power (Black wire).
- Connect Data-0 wire of the Proximity Reader to D0, the Pink wire.
- Connect Data-1 wire of the Proximity Reader to D1, the Cyan wire.



If the Extra Reader and 505R use separate power sources, you must connect the GND between the controller and 505R

Compatible Readers:

Star 505R/IP505R:

- Standard 26bit Wiegand Format Proximity Readers.
- Standard 26bit Wiegand+8bit Burst Format Proximity and Keypad Readers.

SR505:

- Standard 34bit Wiegand Format Proximity Readers.

- Standard 34bitWiegand+8bit Burst Format Proximity and Keypad Readers.

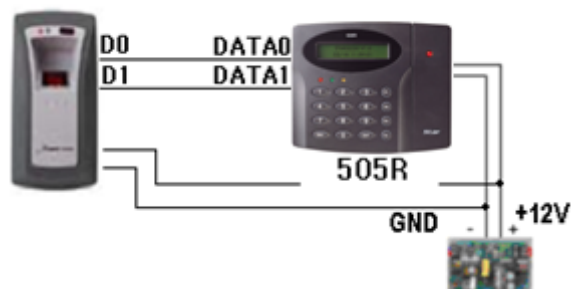
Recommended Readers:

Star 505R/IP505R:

RF-TINY, RF10, RF20, RF30, RFK101, FGR006, FGR006EX, iP10, iP20, iP30, iPK101.

SR505:

SR10, SR20, SR30, SRK101, FGR006SR, FGR006SRB.



1 RS232 COMMUNICATION PORT CONNECTION

A 9-PIN connector is required to connect the Star 505R to the PC via RS232 communication. Please follow the instructions below:

- Connect RS232-TX (Black wire with White stripe) port of Star 505R to the PIN 2 of the 9-PIN connector.
- Connect RS232-RX (Red wire with White stripe) port of Star 505R to the PIN 3 of the 9-PIN connector.
- Connect GND of Star 505R to the PIN 5 of the 9-PIN connector.
- Plug in the 9-PIN connector to COM1 or COM2 port of the PC.
- Install and run Star 505R Application Software.

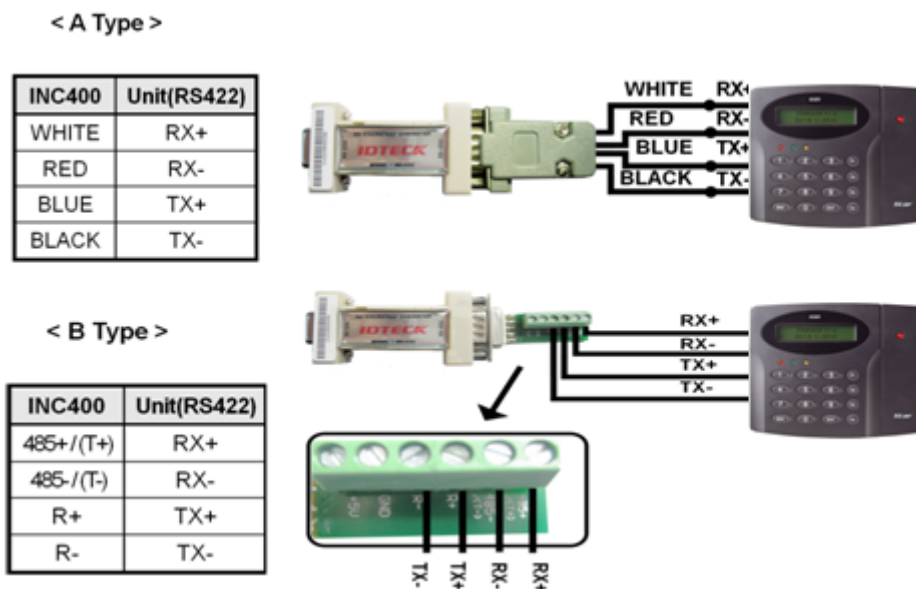
2 RS422 COMMUNICATION PORT CONNECTION

2.1 RS422 Connection (Single connection of Star 505R)

An RS422/RS232 converter (INC400) is required to use RS422 communication between the Star 505R and the PC.

Please follow the instructions below:

- Connect RS422-TX (+) (Gray wire) of Star 505R to RS422-RX (+) port of converter.
- Connect RS422-TX (-) (Yellow wire) of Star 505R to RS422-RX (-) port of converter.
- Connect RS422-RX (+) (Brown wire) of Star 505R to RS422-TX (+) port of converter.
- Connect RS422-RX (-) (Blue wire) of Star 505R to RS422-TX (-) port of converter.
- Plug in the RS232 9PIN connector of the converter to the COM1 or COM2 port of the PC.
- Install and run Star 505R Application Software.



2.2 RS422 Connection (Multiple Connection of Star 505Rs)

RS422/RS232 converter is required to use RS422 communication between multiple Star 505Rs and the PC. Please follow the following instructions.

1. First, you have to connect all RS422 port of all Star 505Rs in parallel.
 - I. Connect RS422-TX (+) of one Star 505R to RS422-TX (+) of another Star 505R.
 - II. Connect RS422-TX (-) of one Star 505R to RS422-TX (-) of another Star 505R.
 - III. Connect RS422-RX (+) of one Star 505R to RS422-RX (+) of another Star 505R.
 - IV. Connect RS422-RX (-) of one Star 505R to RS422-RX (-) of another Star 505R.
2. Second, you have to connect one of RS422 port of Star 505R to RS422/RS232 converter.
 - I. Connect RS422-TX (+) of the one Star 505R to RX (+) port of the converter.
 - II. Connect RS422-TX (-) of the one Star 505R to RX (-) port of the converter.
 - III. Connect RS422-RX (+) of the one Star 505R to TX (+) port of the converter.
 - IV. Connect RS422-RX (-) of the one Star 505R to TX (-) port of the converter.

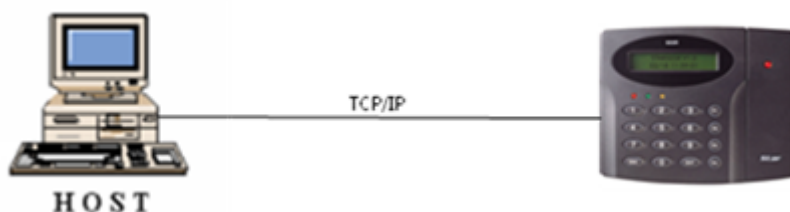
- V. Plug in the RS232 9PIN connector of the converter to the COM1 or COM2 port of the PC.
- VI. Install and run Star 505R Application Software



3 TCP/IP COMMUNICATION PORT CONNECTION

Optional TCP/IP module is required to use TCP/IP communication between the Star 505R and the PC. Please follow the following instructions below:

1. Connect the LAN cable of the network system to the RJ45 jack of the Star 505R.
2. Set the ID of the Star 505R.
3. Install and run the Star 505R Application Software.



4 TCP/IP CONVERTER (EXTERNAL CONVERTER)

When you use the TCP/IP converter, choose only one converter between RS232 and RS422.



INTERFACE	STAR 505R	ILAN422	LINE COLOR
RS232	TX (CON2)	RX (RS232 DSUB9)	BLACK+WHITE
	RX (CON2)	TX (RS232 DSUB9)	RED + WHITE
	GND(CON2)	GND	BLACK
RS422	TX+ (CON3)	RX+ (RS422 CONNECTOR)	GRAY
	TX- (CON3)	RX- (RS422 CONNECTOR)	YELLOW
	RX+ (CON3)	TX+ (RS422 CONNECTOR)	BROWN
	RX- (CON3)	TX- (RS422 CONNECTOR)	BLUE

1 SYSTEM INITIALIZATION

Press and hold the initialization button.

Apply DC +12V power to the Star 505R. Release the button when the LCD displays “Initialize OK?”

After installation and cable connections are completed, apply power (DC12V) to the Star 505R with the initialization button held down. (The initialization button can be found on the back of the Star 505R.) Then, the LCD will first display “Initialize OK? 1: Yes 0: No”. Press <1> key if you want to initialize the system or <0> to cancel the initialization procedure. After all the initialization process is completed, the system will be operating in the normal mode and the LCD will display “Star 505R [F1], MM/DD hh : mm : ss”.



If initialization is completed, all of the existing data will be deleted.

2 ENTERING SETUP MODE

To setup or to change the Star 505R settings, you have to enter the Setup Mode first. To do so, enter the Master ID (default=00000000)* and press the <ENT> key. There are 4 main Setup menus and you automatically get into “SETUP MENU F1” first. You can move to other Set

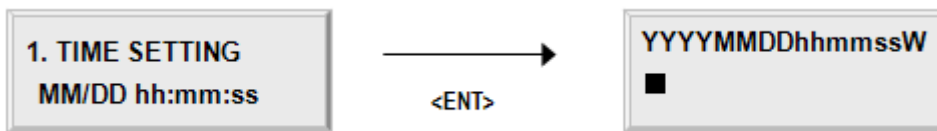
up menus by pressing the <F1> key for “SETUP MENU F1”, <F2> key for “SETUP MENU F2”, <F3> key for “SETUP MENU F3” and <F4> key for “SETUP MENU F4”. There are setting items in the main Setup Menu and you can scroll up or down the menu by pressing the <4> or <6> key. If you press the <ESC> key then the Star 505R will exit the Setup Mode and return to normal operation in Reader Mode.



The default Master ID for the SR505 is 0000000000 (Press the <0> key 10 times)

3 TIME / DATE SETTING

After you enter the Setup Mode, you will see the following screen with the current date and time. To adjust the time / date setting, press <ENT>, then enter 15 Digits in a YYYYMMDDhhmmssW format, and then enter <ENT> again to confirm.



After you enter the Setup Mode, you will see the following screen with the current date and time. To adjust the time / date setting, press <ENT>, then enter 15 Digits in a YYYYMMDDhhmmssW format, and then enter <ENT> again to confirm.

4 SETTING MAXIMUM NUMBER OF CARDHOLDER IDS

You can set the maximum number of cardholder IDs that can be registered on the Star 505R. By default, the Star 505R is set to store up to 10,000 cardholders and 50,000 events and you can adjust this setting to increase the cardholder capacity at the expense of event memory. To change the ID memory setting, enter the Setup Mode. Press <F3>, and then press <6> 4 times until you can see “5.ID memory” (Figure 1) on the LCD. Once the 5.ID memory item appears on the LCD, press <ENT>, and press <4> or <6> to select “10000/50000”, “20000/40000”

, “30000/30000”, “40000/20000” or “50000/10000” (No. of IDs / No. of events), and then press <ENT> again to confirm.



Prior to changing the maximum number of cardholders, you must clear the event data from the memory. Because entering the Setup Mode itself generates an event, you must always initialize the event memory prior to changing the maximum ID number setting. For additional information on how to initialize the event memory. If you attempt to change the setting with some event data still in the memory, the LCD will display “EVENT MEMORY NOT EMPTY” (Figure 2) error message.



If you attempt to reduce the ID memory size to a value lower than the current number of IDs stored in the memory, the LCD will display the “ID TOTAL COUNT WRONG” (Figure 3) error message. If this is the case, please clear the card data from the memory.



Figure 1.

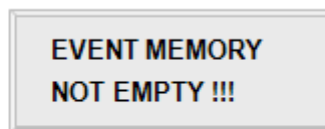


Figure 2.

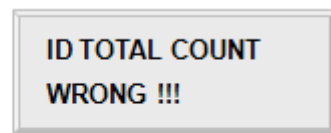


Figure 3.

5 REGISTERING CARDHOLDER IDS

To add new cardholder IDs to the Star 505R, enter the Setup Mode, press <F3>. Once the “1 .registration” item appears on the LCD, press <ENT> to begin the ID registration process.

1 NORMAL OPERATION

Power On

When the power is applied to Star 505R, the “RED LED” is turned on.

Registered Card Reading

When a registered card (or PIN) is read, the door (Relay1) will open for 3 seconds with the “LED” on.

Exit Button

To make a request for exiting from inside, an Exit Button (Or External Reader) can be used.

The Door (Relay1) will open for 3 seconds (Defaults) with the LED on.

Alarms (Unregistered / Password / Time Schedule / Door Error)

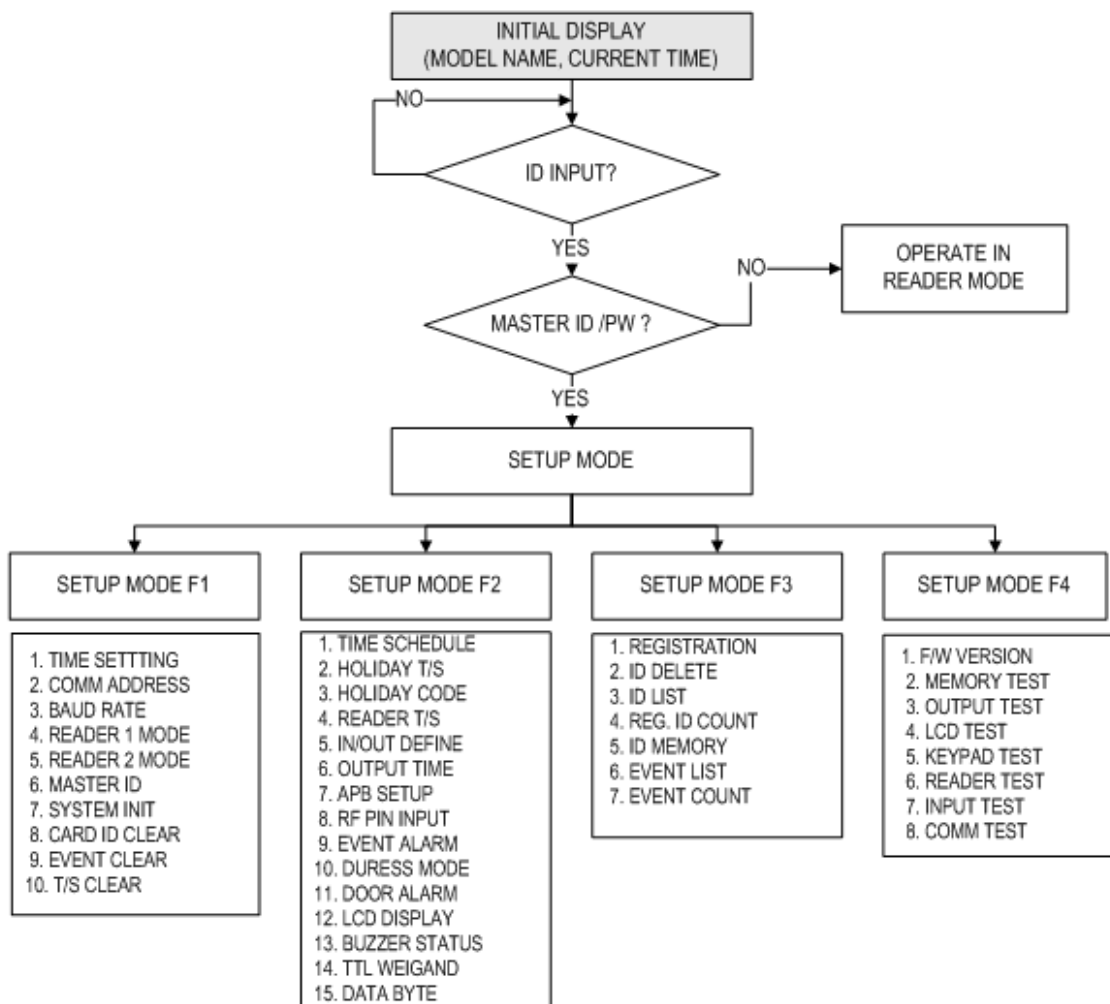
When an unregistered card is read, wrong password is input, over the Time Schedule, and access wrong door, the access is denied and the alarm (Relay 2) will be activated for 3 seconds (Defaults) with “RED LED” on.

2 DEFAULT SETTING

When you operate the Star 505R first time or you initialize the Star 505R, the controller will set up all values to default settings (Factory Settings). You can change the settings for desired application. Please refer to the “APPENDIX” section at the back of this manual for the default setting values.

SETTING CHANGES

12

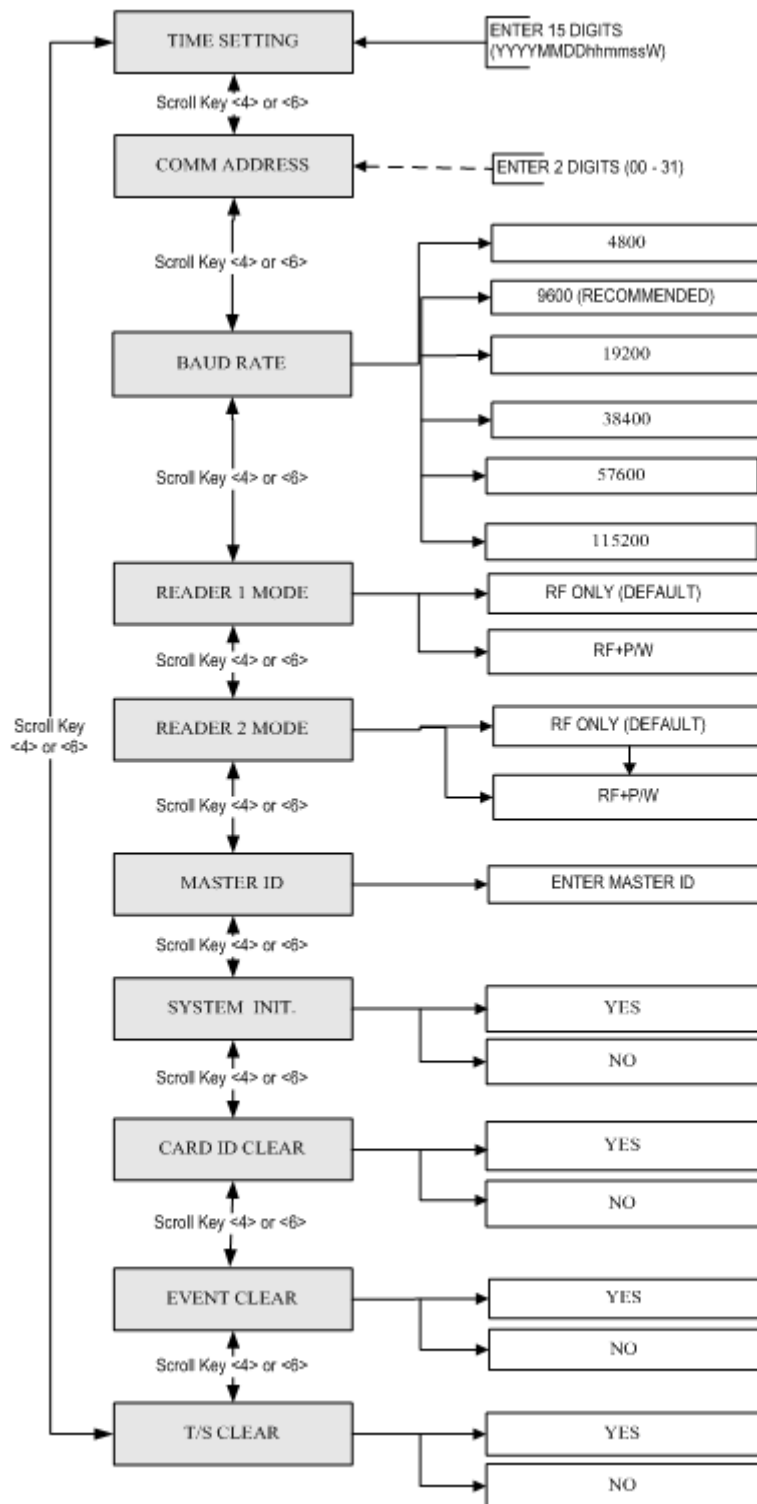




To setup or to change the 505R settings, you have to enter the setup mode first. To do so, enter the Master ID (Default=00000000)*¹ and press the <ENT> key. There are 4 main Setup menus and you automatically get into “SETUP MENU F1” first. You can move to other setup menus by pressing the <F1> key for “SETUP MENU F1”, <F2> key for “SETUP MENU F2”, <F3> key for “SETUP MENU F3” and <F4> key for “SETUP MENU F4”. There are setting items in the main setup menu and you can scroll up or down the menu by pressing the <4> or <6> key. If you press the <ESC> key then the 505R will exit the Setup Mode and return to normal operation in Reader Mode.

¹ The default Master ID for the SR505 is 0000000000 (Press the <0> key 10 times)

1 Setup Menu F1



1.1 Time Setting

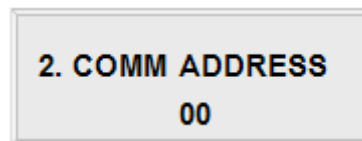


The LCD displays the current time. To change the time, press <ENT>, enter 15 Digits in a “YYMMDDhhmmssW” format, and then enter <ENT> again to confirm.



NOTE: For the days of the week (W),
1 : Sun, 2 : Mon, 3 : Tue, 4 : Wed, 5 : Thu, 6 : Fri, 7 : Sat.
e.g. To input August 24, 2009, 13:30:15, Monday,
enter 200908241330152.

1.2 Communication Address



A communication address is a unique number assigned to each device for communication. The default address is 00.

For proper communication with the PC, it is important that the value you set here should match the value you set on the application software. It is also important to make sure each device on a loop has a unique address.

To change the communication address of the 505R, press <ENT>, enter the desired 2-Digit address in the 00-31 range, and then press <ENT> again to confirm.

1.3 BAUD RATE



Baud Rate is the measure of speed in serial communication. As for the communication address, the baud rate you set here should match the value you set on the software.

Baud Rates of 4800bps, 9600bps, 19200bps, 38400bps, 57600bps and 115200bps are supported, and 9600bps is recommended.

To change the Baud Rate, press <ENT>, select the desired baud rate by pressing <4> or <6>, and then press <ENT> again to confirm.



If a TCP/IP module is being used, the Baud Rate setting must be the same as the TCP/IP module setting.



Troubleshooting Communication Problems

Step 1. Match the communication address between the device and the Application Software.

Step 2. Match the Baud Rate between the device and the Application Software.

Step 3. Ensure that the COM port setting in the Application Software is correct.

Step 4. Ensure that the communication settings in the Application Software are as follows;

1) Parity Bit: None 2) Data Bit: 8 Bits 3) Stop Bit: 1 Bit

1.4 Reader1 Mode

4. READER 1 MODE
RF ONLY

4. READER 1 MODE
->RF + PW

You can decide which combination of RF card, fingerprint and password verification you wish to use on Reader1 (the 505R device itself).

To change the Access Mode for Reader 1, press <ENT>, select the “DESIRED MODE” by pressing <4> or <6>, and then press <ENT> again to confirm.

RF ONLY

Users can access the door by presenting their card or entering their ID number.

RF + Password

Users can access the door by presenting their card or entering their ID number and then verifying their identity by a Password.

1.5 Reader 2 Mode

5. READER 2 MODE
RF ONLY

If you have an external reader connected to the 505R (referred to herein as Reader 2), you must adjust this setting according to what access mode is used on Reader 2.

READER 2 MODE
-> RF ONLY

READER 2 MODE
-> RF+PW

To change the Access Mode for Reader 2, press <ENT>, select the desired mode by pressing <4> or <6>, and then press <ENT> again to confirm.

RF ONLY

Select this option if Reader 2 is operating without password verification

RF+ P/W

Select this option if Reader 2 uses password verification.



Proper selection of this setting depends solely on whether Reader 2 uses password verification, but it has nothing to do with whether Reader 2 uses fingerprint verification or not

1.6 Master ID Registration

6. MASTER ID

ENTER MASTER ID
->[]

REGISTRATION OK!

Master ID is the number/card that you use to enter the Setup Mode. For security reasons, it is advisable that you change the default Master ID immediately and keep the new Master ID / card confidential.



Beware that if you forget the Master ID, you cannot access the Setup Mode.

To change the Master ID, press <ENT>, and then either enter the desired 8Digit Master ID or present a card to the reader.



For the SR505, the Master ID is 10Digits long in the range of 0000000000 to 4294967295.

When the Master ID/card registration is successfully completed, the LCD displays the “REGISTRATION OK” message.

PW

if you present card to register, password is checked for entering Master mode (Range of Password 0000-9999)



The default Master SR505, it is 0000000000 (Ten zeros.)

1.7 System Initialization

7. SYSTEM INIT .

System initialization allows you to initialize the 505R. Initialization clears all the user-defined data stored in the device such as card data, input/output setting, Time Schedules, etc.



Prior to system initialization, make sure to check whether or not the data stored in the device is not needed, since it will be deleted after the initialization.

SYSTEM INIT.

1 – Yes, 0 - No

WAITING !!

To initialize the 505R, press <ENT>, and then press <1> to confirm. If you wish to cancel and exit without initialization, press <0> instead. Device address and communication speed is maintained.

1.8 Card ID Clear

8. CARD ID CLEAR

CARD ID CLEAR

1 - Yes, 0 - No

Card ID clear allows you to delete all the card data from the 505R. To clear the card data stored in the memory, press <ENT>, and then press <1> to confirm. If you wish to cancel and exit, press <0> instead.



Before you clear the card memory, make sure you do not need the data stored in the device.

1.9 Event Clear

9. EVENT CLEAR

EVENT CLEAR

1 - Yes, 0 - No

Event clear allows you to delete all the event data from the 505R. To clear the event data stored in the memory, press <ENT>, and then press <1> to confirm. If you wish to cancel and exit, press <0> instead.



Before you clear the event memory, make sure you do not need the data stored in the device.

1.10 Time Schedule Clear

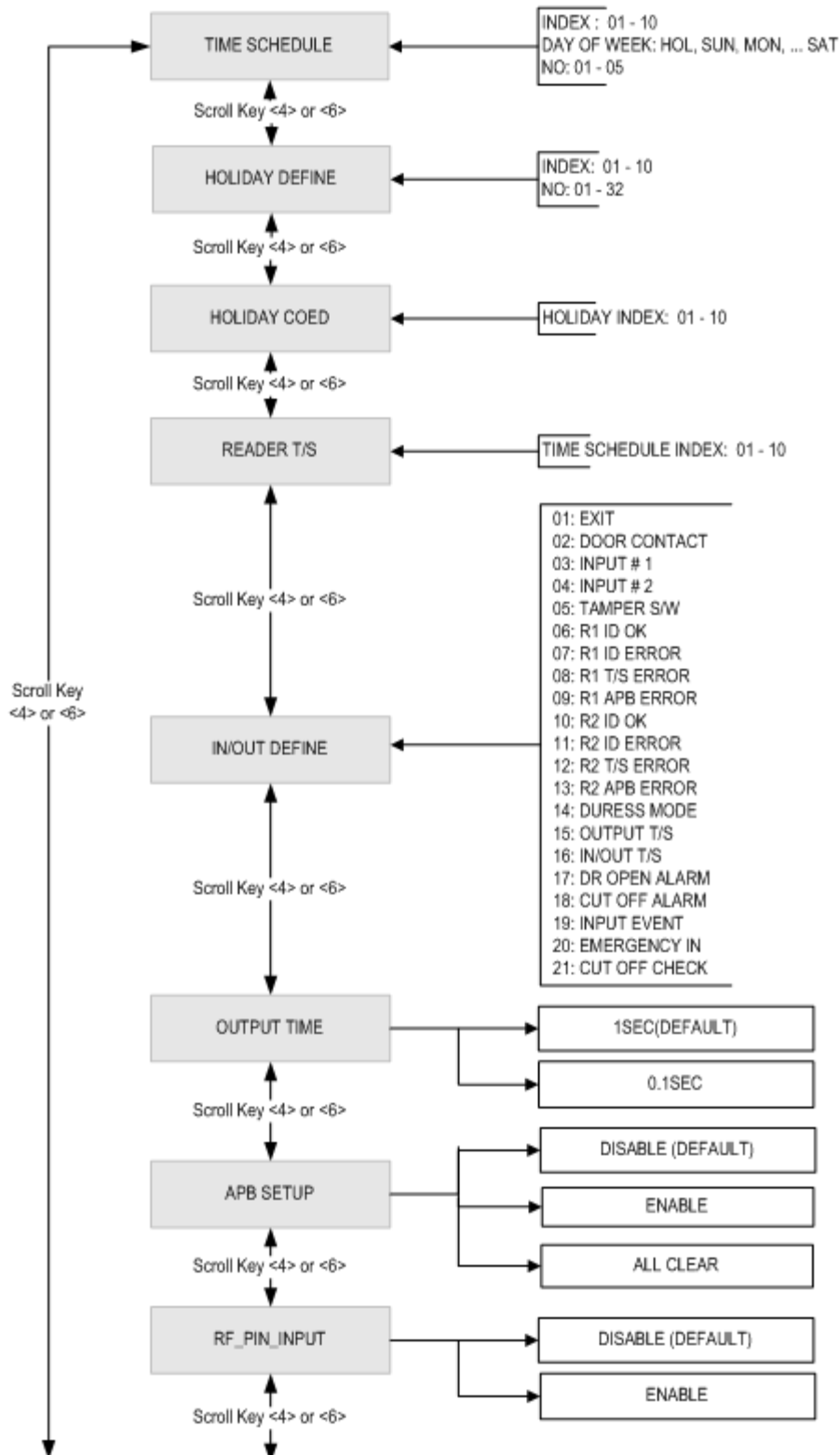


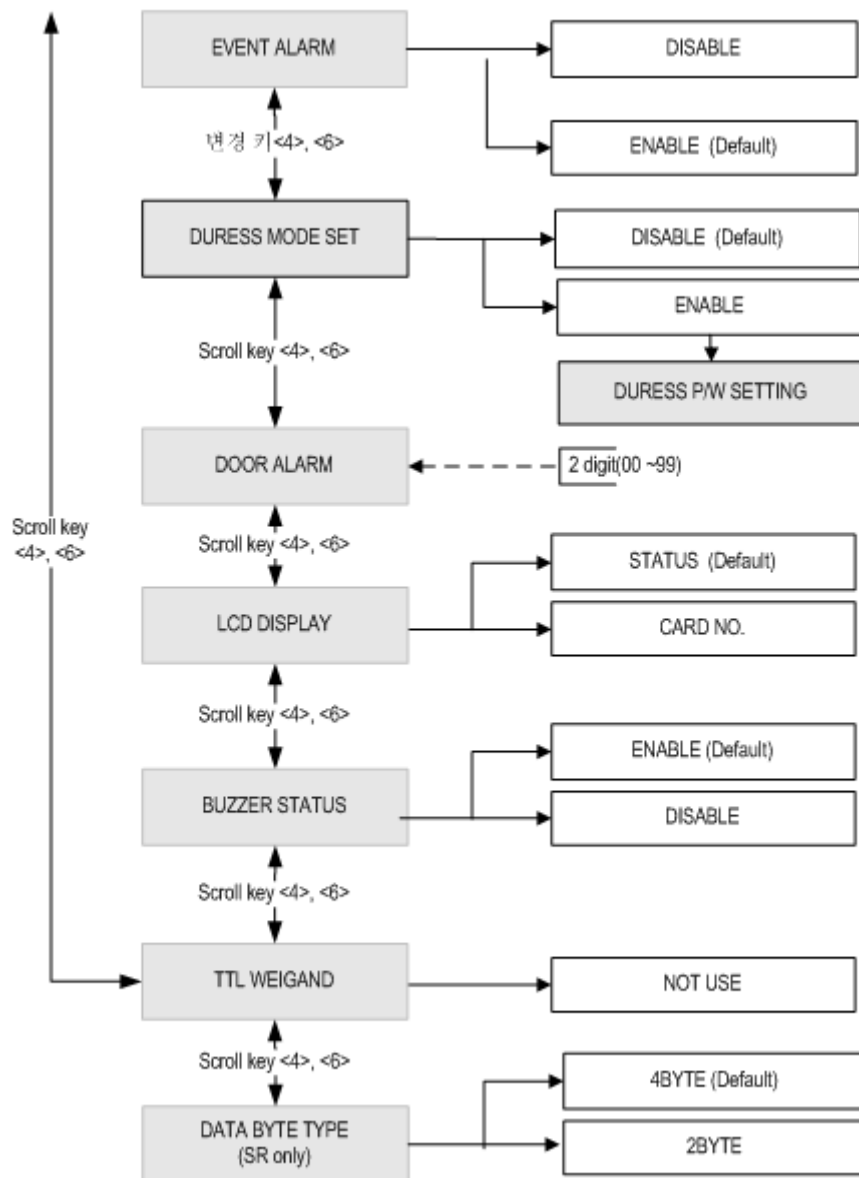
T/S Clear allows you to delete all the data related to time scheduling, such as Time Schedules, Holiday and Reader Time Schedules, Holiday Codes, etc. To clear the time schedule data stored in the memory, press <ENT>, and then press <1> to confirm. If you wish to cancel and exit, press <0> instead.



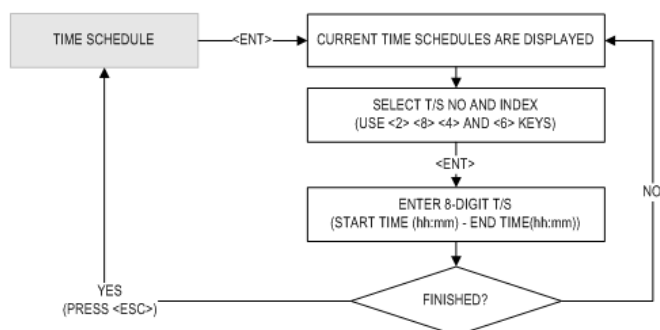
Before you clear the time schedule Memory, make sure you do not need the data stored in the device.

2 Setup Menu F2





2.1 Time Schedule



1. TIME SCHEDULE

You can define up to 10 time schedule codes. Time schedule code 00 is the default code and can be used to allow round-the-clock access. You can define time schedule codes 01 to 10. Each time schedule code has 8 programmable days (i.e. Sun, Mon, Tue, Wed, Thu, Fri, Sat and holiday) and each day has 5 time intervals.

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



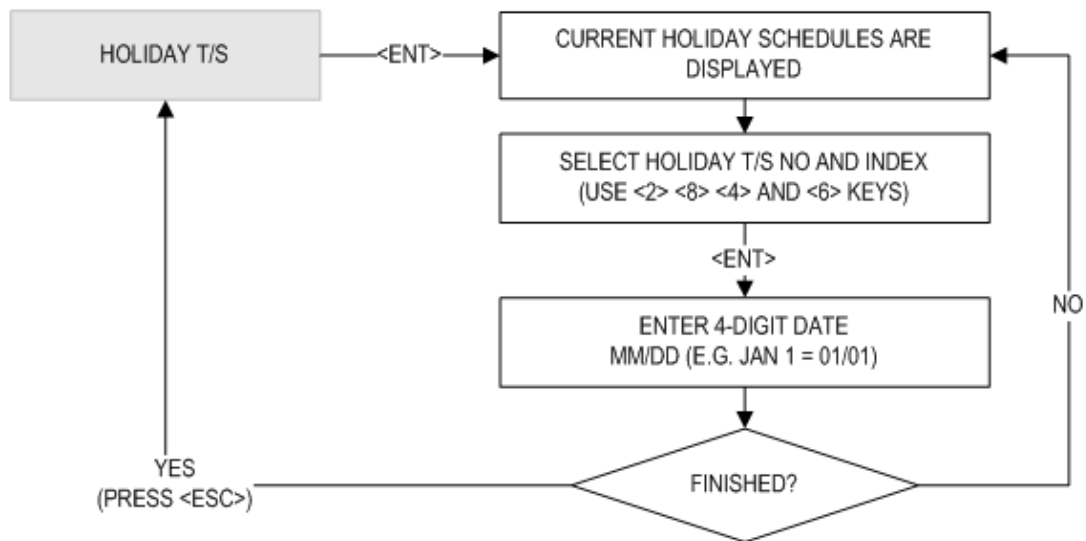
How to Define Time Schedule Codes

To define a new T/S code or change an existing one, press <ENT>, and the LCD will show T/S information such as T/S code, day, time interval and time period. Press <2> or <8> to scroll up or down the time schedule code (01-10) and the day of the week. (Mon - Sun and holiday). Press <4> or <6> to scroll up or down the time interval. The holiday in this time schedule will be linked to the holiday schedule code. Select a time schedule code, day and Interval, and press <ENT>. Enter the start and end time for the time interval in the 24-hour, hh/mm format, then press <ENT> to save the new T/S settings. Once all information is entered, press <ESC> to return to the menu.



You can also define time schedule codes using the Application Software. For more information, please refer to the Software Manual.

2.2 Holiday T/S



2. HOLIDAY T/S

You can define up to 10 Holiday T/S codes. Holiday T/S code 00 is the default code without any holidays. (This means that applying Holiday T/S code 00 is the same as applying no holidays at all.) You can define Holiday T/S codes 01 to 10. Each holiday schedule code can have up to 32 holidays defined.

HOL T/S:01 #01
00/00



How to Define Holiday T/S Codes

To define a new Holiday T/S code or change an existing one, press <ENT>, and the LCD will show holiday T/S information such as Holiday T/S code, holiday number and date. Press <2> or <8> to scroll up or down the Holiday T/S code (01-10). Press <4> or <6> to scroll up or down the time interval. Select a Holiday T/S code and index, and press <ENT>. Enter the date in the MM / DD format, then press <ENT> to save the new holiday definition. Once all information is entered, press <ESC> to return to the menu.



You can also define time schedule codes using the Application Software. For more information, please refer to the Software Manual.

2.3 Holiday Code

3. HOLIDAY CODE

T/S_INDEX 01
HOLIDAY CODE 00

The Holiday code setting lets you link a holiday schedule to a time schedule. The default holiday schedule code is 00, which means no holidays are applied to the time schedule.

Use <4> or <6> to scroll up or down from the T/S code 01 to 10, and press <ENT>. Then, enter a 2Digit holiday schedule code and press <ENT> to store the changed settings to the memory. To return to the previous menu, press <ESC>.

2.4 Reader Time Schedule

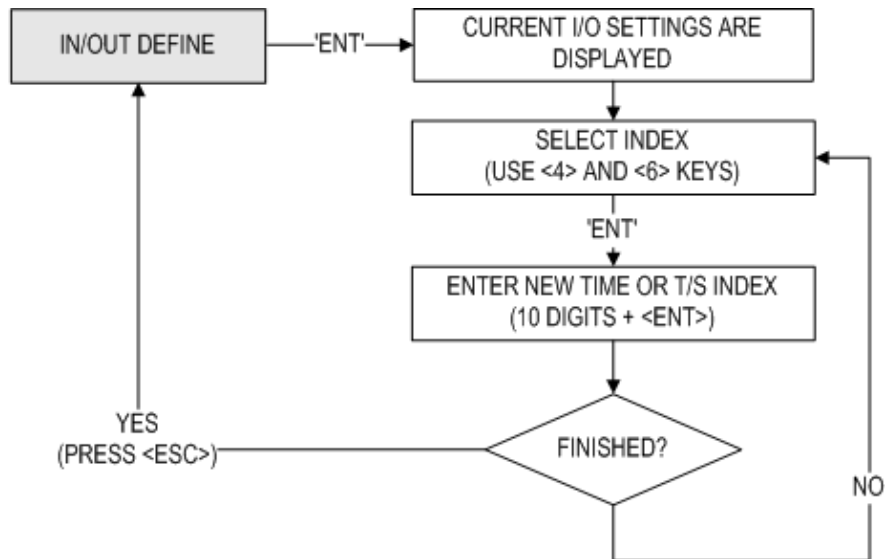
4. READER T/S
00

READER T/S
00

You can select one of 2 Access Modes (i.e. RF Only Mode, ID+PW Mode) in “READER1 MODE” of “F1 SETUP MENU”. However, you may apply RF Only Mode during a certain period of the day. For example, if you wish to allow RF-Only Access from 09:00 to 17:00 while using fingerprint verification for the rest of the time, you can proceed as follows;

1. Set “READER 1 MODE” to RF+P/W Mode.
2. Define T/S code 01 so that it can include a Time Interval between 09:00 and 17:00 for the desired days of the week.
3. Here in Reader T/S, press <ENT>, enter the 2Digit T/S code (In this case, 01), and then press <ENT> again to confirm.
4. To return to the previous menu, press <ESC>.

2.5 Input / Output Definition



5. IN/OUT DEFINE

In/Output Define allows you to adjust In/Output settings (Output activation time, In/Output Time Schedule, Cut-Off Check, etc.).

1. EXIT 03 00 00 00 00

To change the In/Output Settings, press <ENT> and select an item using <4> or <6> key, and press <ENT> again. After the cursor appears, enter the 10Digit number for the desired setting. Once all information is entered, press <ESC> to exit.



The range of values you can enter in each field is as follows:

1-14, 17-18: 00 - 99 (Output Signal Time)

15-16: 00-10 (Time Schedule Code)

19-21: "Enable" or "Disable" (Selecting "01" is "Enable", Selecting "00" is "Disable")

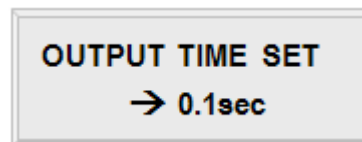
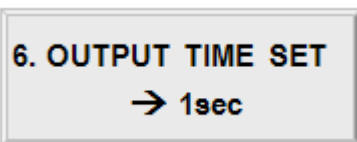


The 14.Duress mode setting allows you to decide the output signal time for when access is granted following a duress event.



When a particular event occurs, the 505R will generate an output signal for Relays #1 and #2, TTL #1 and #2, and Buzzer for the length of time defined for each.

2.6 Output Time Setting



Output Time Set allows you to define the unit of time.

1 sec

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

0.1 sec

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

To change the setting, press <ENT> and press <4> or <6> to select the desired time unit and press <ENT> to confirm.



Output Time Setting Examples

e.g. If you want to activate the Relay#1 (OUT #1) for 3 seconds;

- The Time Unit should be set to "03" for Relay#1 in the menu "1. EXIT".
- Set to 1Sec in the menu "OUTPUT TIME SET"

e.g. If you want to activate Door Relay#1 (OUT #1) for 0.3 seconds;

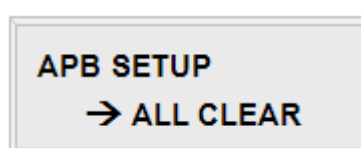
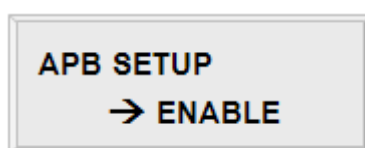
- The Time Unit should be set to "03" for Relay#1 in the menu "1. EXIT"
- Set to 100ms in the menu "OUTPUT TIME SET"

2.7 Anti-Passback



The Anti-Pass Back feature is used to prevent an identical user from entering or exiting the door more than twice in a row so that employees cannot pass back their cards to their coworkers. Anti-Pass Back can be applied only when an Exit Reader is installed. "DO NOT" enable it if an "Exit Button" is installed instead of an Exit Reader.

For enable or disable Anti-Pass Back or resetting all APB flags, press <ENT> and press <4> or <6> to select the desired item and press <ENT> to confirm.



DISABLE

The Anti-Pass Back feature is disabled.

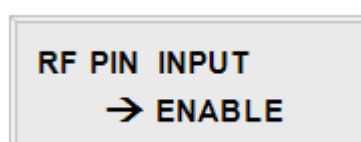
ENABLE

The Anti-Pass Back feature is enabled.

ALL CLEAR!

All Anti-Pass Back flags are reset, and access will be allowed one time regardless of the current status of the existing flags.

2.8 RF PIN Input



RF Pin Input allows you to decide whether to enable or disable PIN (or RF card number) Input via the keypad. By default, PIN Input is disabled.



If you choose “Disable”, you cannot gain access via password input when using RF +PW mode.

To enable or disable PIN Input, press <ENT> and press <4> or <6> to select “ENABLE” or “DISABLE”, and then press <ENT> again to confirm.

2.9 Event Alarm



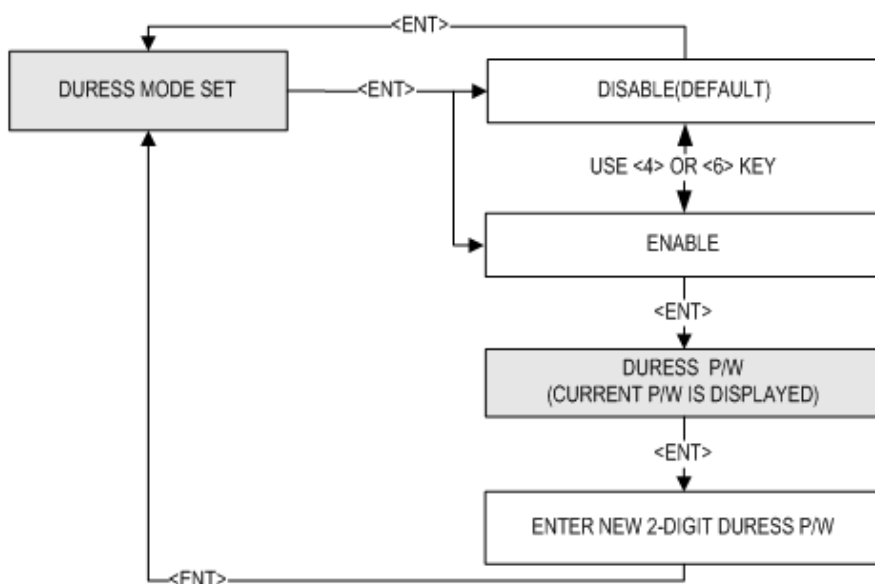
Event Alarm allows you to decide whether to enable or disable the event memory full alarm. If you enable Event Alarm, the 505R beeps with an alarm message when the event memory becomes more than 90% full.

To enable or disable Event Alarm, press <ENT> and press <4> or <6> to select “ENABLE” or “DISABLE”, and then press <ENT> again to confirm.



If the event memory becomes full, the oldest event data is overwritten and lost.

2.10 Duress Mode



**10. DURESS MODE
DISABLE**

**DURESS MODE
→ ENABLE**

**DURESS P/W
00**

Duress Mode enables a cardholder under duress to activate a silent alarm to notify the security.

To enable or disable the Duress Mode and / or set the Duress Password, press <ENT> and press <4> or <6> to select either “DISABLE” or “ENABLE”. If you select “ENABLE” the LCD will display the current “DURESS PASSWORD”. To change the password, press <ENT> and enter the desired 2-Digit Duress Password, and press <ENT> again to confirm. If you do not wish to change the password, press <ESC>.



In case of duress, enter the 2Digit Duress Password and press <ENT> prior to the regular access process. Following a successful access process, access will be granted as usual but, at the same time, a duress alarm will be generated.

2.11 Door Open Alarm Time

**11. DOOR ALARM
03**

**DOOR ALARM
99**

Door Open Alarm Time refers to the delay between the time at which the Door Relay time finishes and the time at which a Door Open Alarm is activated. To change the Door Open Alarm Time, press <ENT> and enter a 2Digit number as follows;

00

The alarm will be activated immediately if the door is still left open past the Door Relay Time.

01-98

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

99

No alarm.

After entering the number, press <ENT> to confirm.



For this application, a Door Contact Sensor must be installed on the door.

2.12 LCD Display

**12. LCD DISPLAY
STATUS**

**LCD DISPLAY
→ CARD NO.**

LCD DISPLAY allows you to decide whether to display the card number or the status message on the LCD when access is granted or denied. To change the setting, press <ENT> and press <4> or <6> to select “STATUS” or “CARD NO” and press <ENT> to confirm.

STATUS

The LCD will display the text message indicating the status, i.e. “ACCESS GRANTED” or “ACCESS DENIED”

CARD NO

Display the number of the card.

2.13 BUZZER STATUS

**13. BUZZER STATUS
ENABLE**

**BUZZER STATUS
→ DISABLE**

The buzzer generates a beep when a button on the keypad is pressed, when a card is read, when an error occurs, etc.

To enable or disable the buzzer sound, press <ENT> and press <4> or <6> to select “ENABLE” or “DISABLE” and press <ENT> to confirm.



The buzzer beeps regardless of this setting, when you exit the Setup Mode, when a memory alarm is activated, or when Buzzer Output is defined in “In/Output Define”.

2.14 TTL WEIGAND Output



This function allows whether to use “TTL Output” as “WEIGAND Output”

The default value is “NOT USE”
You can select setup status by using “<4> or <6>” keys

If you press “ENTER” after choosing “TTL WEIGAND” to “USE”, TTL,1,2 setup values would be initialized to “00”.

2.15 Data Byte (SR505 Only)

This feature only applies to the SR505.



By default, the SR505 can read smart card written in the 4BYTE format, but, for advanced applications, you can use 2BYTE format smart cards. To do so, you must change the Data BYTE setting to “2BYTE”. To change the setting, press <ENT> and press <4> or <6> to select “4BYTE” or “2BYTE” and press <ENT> to confirm.

4 Byte (Default)

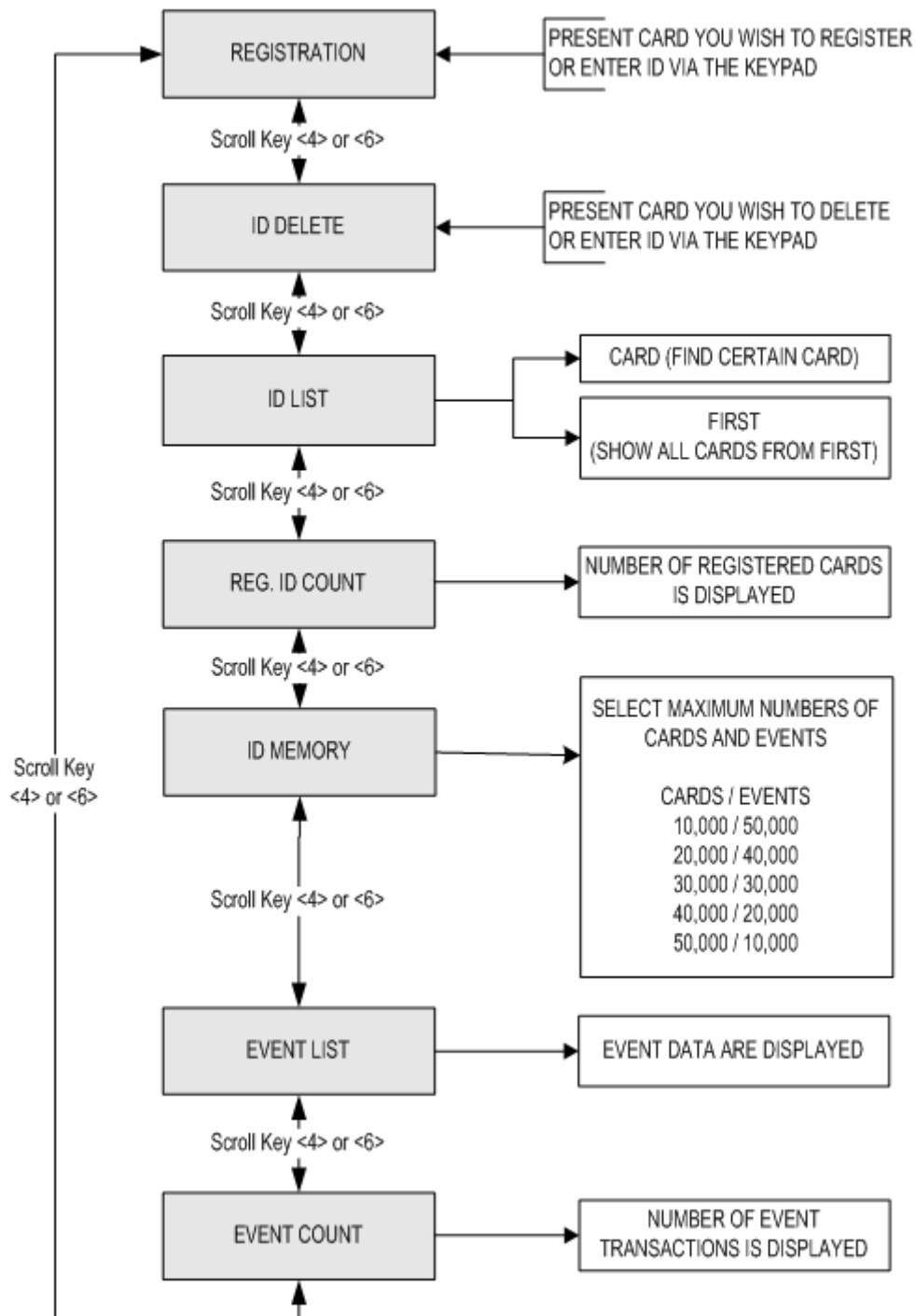
The Card Number can be in the ranges of 00000000 - 4294967295.

2 Byte

The first and last 5 digits can each be in the ranges of 00000 ~ 65535, respectively.

The total is in the ranges of 0000000000~6553565535

3 Setup Menu F3



3.1 ID Registration

1. REGISTRATION

Registration allows you to add new cardholders to the 505R. To add a new cardholder ID, press <ENT>.

ENTER ID NO.



Either present a card you wish to register to the 505R or enter the card number (ID) via the keypad and press <ENT>.



A Card Number (ID) can be 4 to 8 Digits long. For the SR505, it can be 4 to 10 Digits long.

ID: *****(**)

PW ■ _ TS _ RD _

Once the Card Number is entered, enter the Password (PW), Time Schedule (TS) and Reader Number (RD) and press <ENT>.

REGISTRATION OK!

If the registration is successful, the “REGISTRATION OK!” message will be displayed on the LCD. If the registration is not successful, the “REGISTRATION ERR!” Message will be displayed on the LCD.

PW (Password)

Enter the 4Digit password. Password verification can be enabled in 11.1.4. Reader1 Mode. This field is compulsory even if you do not use password verification.

TS (Time Schedule)

If you wish to apply a certain time schedule to the cardholder, enter the T/S code. If you wish to allow the cardholder round-the-clock access, enter 0.

RD (Reader Code)

To use both Reader 1 and 2 for the cardholder. Enter 0. To use just Reader1, enter 1. To use just Reader2, enter 2.



The TS and RD fields do not appear if the Star 505R is set in Reader Mode.

3.2 ID Deletion

2. ID DELETE

ID Delete allows you to delete existing cards from the 505R. To delete an existing card (Or ID), press <ENT>.

ENTER ID NO.

→ _

Either present a card you wish to delete to the 505R or enter the card number (ID) via the keypad and press <ENT>.

ID: *****(**)

DELETE SUCCESS!

If the card was successfully deleted, the “DELETE SUCCESS!” message will be displayed on the

e LCD. If the card you presented or the card number you entered is not found, the “UNREGISTERED ID” message will be displayed.

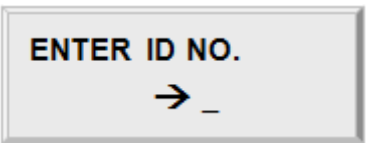
3.3 ID List

3. ID LIST

ID List allows you to search for a certain registered card or view the list of all registered cards. To begin, press <ENT>

3. ID LIST
1: CARD 2: FIRST

To search for a certain registered card, press <1>. To view the entire list of all registered cards, press <2>.



ENTER ID NO.
→ _

If you have entered <1>, enter the Card Number (ID) or present the card you wish to view the information of.



ID *****
PW1234 TS00 RD3

The LCD will show the information of the card you have selected in the previous step or the first card on the list. Press <4> or <6> to view the information of the previous or next card. The “FIRST ID” or “LAST ID” message will appear if you are viewing the first or last ID. If there is no card data, the LCD will display the “MEMORY EMPTY” message.

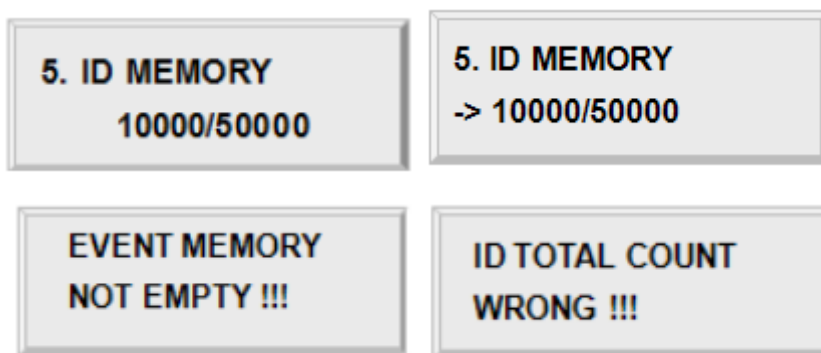
If your 505R is set in Reader Mode, the TS and RD values are not valid and the LCD will display “TS00RD3”.

3.4 Registered ID Count



The number of registered user IDs is displayed. This count automatically increases or decreases as IDs are registered or deleted. The LCD above shows that the total of 1234 user IDs are registered in the memory.

3.5 ID Memory



ID Memory allows you to decide how to divide the memory space between IDs and event transactions. The total number of IDs and event transactions combined is a maximum of 60,000. The default setting is 10,000 users and 50,000 event transactions. If you increase the maximum number of IDs, the maximum number of events decreases in the same proportion, and vice versa. To change the memory partition setting, press <ENT>, and press <4> or <6> to select 10000/50000, 20000/40000, 30000/30000, 40000/20000 or 50000/10000 (No. of IDs / No. of Events), and then press <ENT> again to confirm.

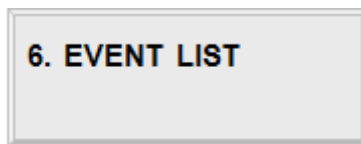


The event memory must be emptied prior to changing this setting. If you attempt to change the setting with some event data still in the memory, the LCD will display "EVENT MEMORY NOT EMPTY" error message.

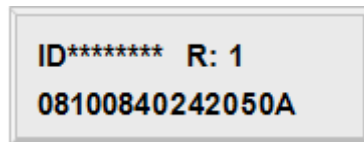


If you attempt to reduce the ID memory size to a value lower than the current number of IDs stored in the memory, the LCD will display the "ID TOTAL COUNT WRONG" error message.

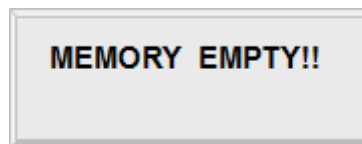
3.6 Event List



Event List allows you to check the past access events with the information such as card number, time and date, etc.

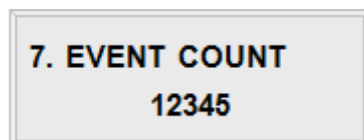


The LCD displays the information of the access events as follows; Card Number (ID), Reader Number (R: 1 - Reader 1), Event Date (YY/MM/DD), Day of the Week (4: Wed), Time (hh/mm/ss), Access Status (0: Access granted) and Function Key Value (A=F1).



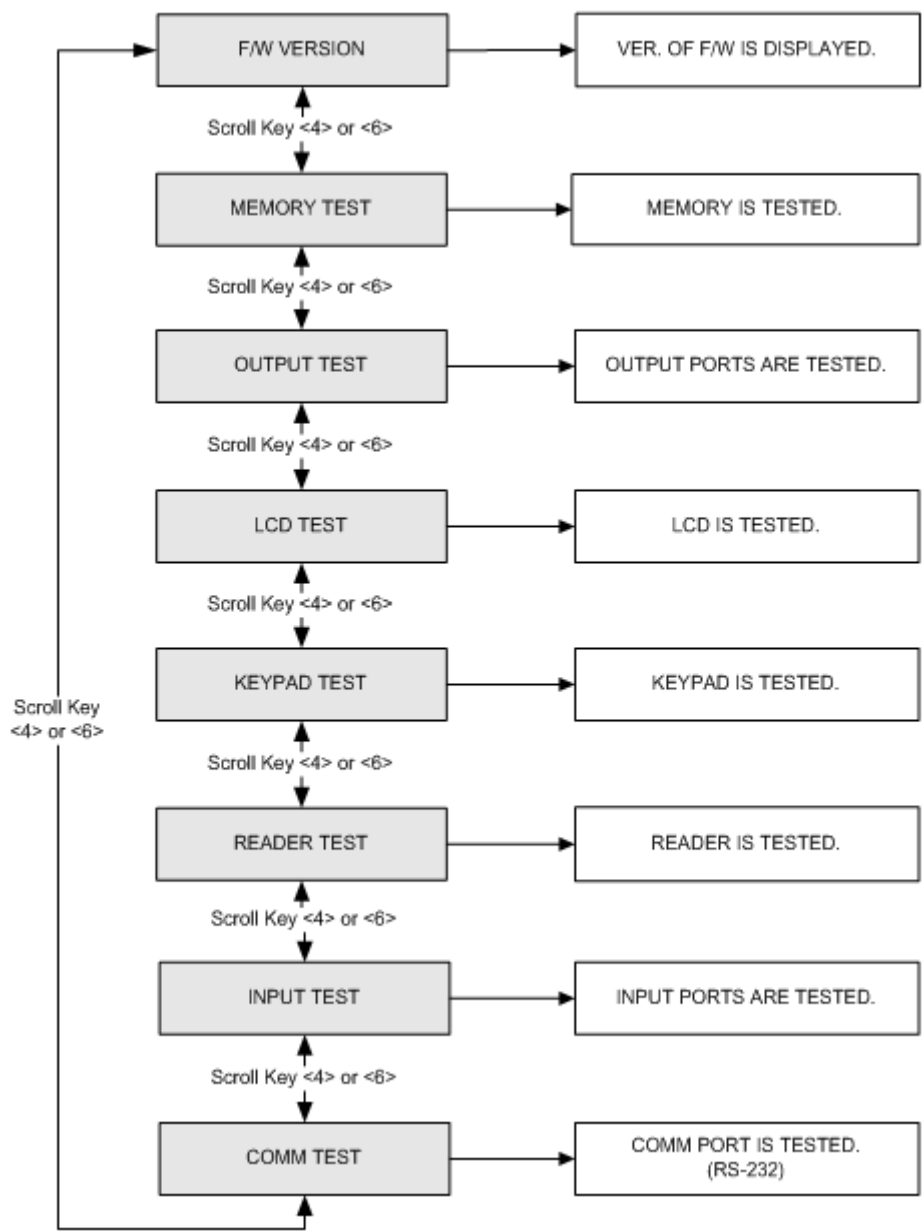
Press <4> or <6> to view the information of the previous or next event transaction. The "FIRST EVENT" or "LAST EVENT" message will appear if you are viewing the first or last event. If there is no event data, the LCD will display the "MEMORY EMPTY" message.

3.7 Event Count



The number of event transactions is displayed. This count automatically increases or decreases as new events occur or the existing events are uploaded to the PC. The LCD on the left shows that the totals of 12345 event transactions are stored in the memory.

4 Setup Menu F4

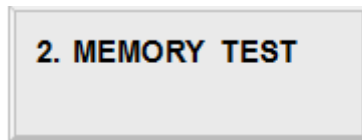


4.1 Firmware Version

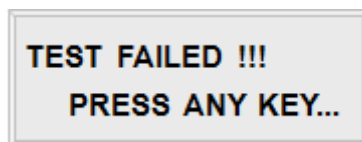


The version of the firmware installed in the 505R is displayed on the LCD.

4.2 Memory Test

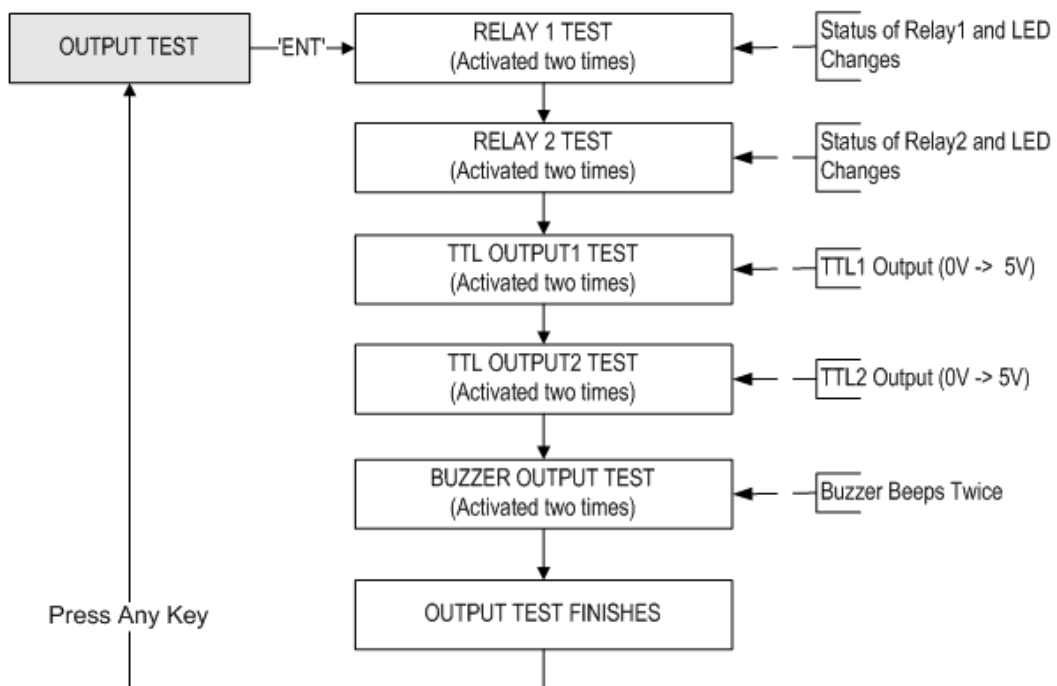


Memory Test allows you to test the memory of the 505R. To begin the test, press <ENT>.



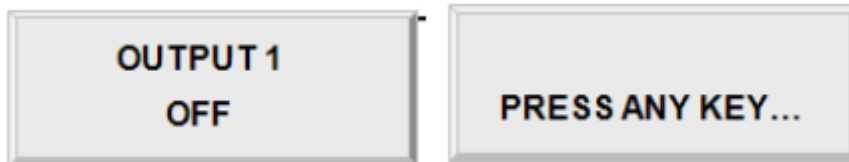
If the test is successful, the LCD will display the “TEST PASSED” message. Press any key to finish the test. If the test is unsuccessful, the LCD will display the “TEST FAILED” message. Press any key to finish the test and try again. If the problem persists, please contact your local IDTECK dealer for assistance or service.

4.3 Output Test



3. OUTPUT TEST

Output Test allows you to test the output ports of the 505R. To begin the test, press <ENT>.

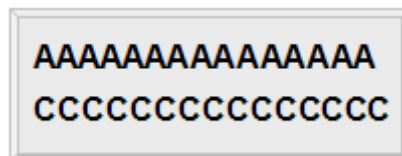


First, output ports 1 and 2 will be tested. During the test, relay outputs are activated and you will hear Tick-Tack sounds with the green LED blinking twice. Second, output ports 3 and 4 will be tested. During the test, TTL outputs are activated and the yellow LED blinks twice. You can check the voltage level of the TTL outputs with appropriate test equipment. Lastly, output port 5 will be tested. During the test, you will hear 2 beeps. After all the tests are over, press any key to exit.

4.4 LCD Test

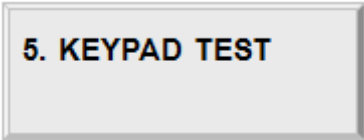
4. LCD TEST

LCD Test allows you to test the LCD of the 505R. To begin the test, press <ENT>.



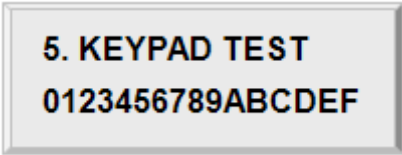
Once the test begins, the LCD will display a series of different screens. Ensure that all the screens on the LCD are properly displayed. The test ends with the display of the firmware update date (YYYY/MM/DD). After the test is finished, press any key to exit.

4.5 Keypad Test



5. KEYPAD TEST

Keypad Test allows you to test the keys on the keypad. To begin the test, press <ENT>.



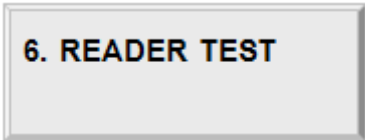
5. KEYPAD TEST
0123456789ABCDEF

Press each key on the keypad, then the number or letter that corresponds to the key pressed will disappear from the screen. After all the keys are pressed, the LCD displays the “TEST PASSED” message.



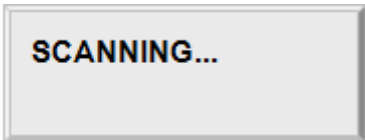
“A”=ESC, “B”=ENT, “C”=F1, “D”=F2, “E”=F3, “F”=F4

4.6 Reader Test



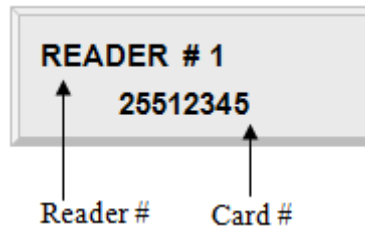
6. READER TEST

Reader Test allows you to test the reader(s). To begin the test, press <ENT>.



SCANNING...

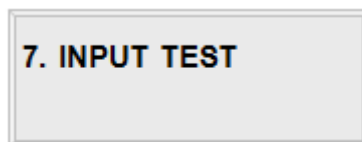
While the LCD displays “SCANNING”, present a card to the reader you would like to test, and the LCD will display the reader number and the card number. After the test is finished, press <ESC> to exit.



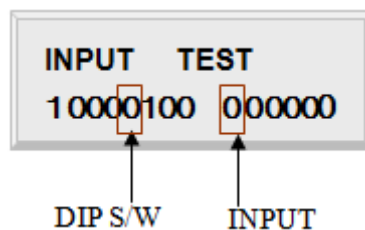
Reader#1 refers to the built-in reader of the 505R, and Reader #2 refers to an external reader.

You can also use Reader Test to check the number of a card.

4.7 Input / DIP Switch Test



Input Test allows you to check the status of Input Ports and DIP switches (Communication Address Setting Switches). To begin the test, press <ENT>.



DIP Switch

1=ON, 2=OFF (It shows how the DIP switch on the back of the Star 505R is set.)

Input 1-4

0=OFF (Disabled)

1=ON (Enabled)

2=Input Disconnected

Input 5

The status of the tamper switch inside the Star 505R (0=OFF (Disabled), 1=ON (Enabled))



If you activate the Cut-Off Check feature for all the input ports in “5.IN/OUT DEFIN E” from F2 Setup menu, the result of an input port test will change to 222200 (If t ermination resistors are not connected) or 000000 (If termination resistors are con nected).

4.8 Communication Test

8. COMM TEST

COMM Test allows you to test communication. Prior to the test, connect the RS232-RX wire (Black wire with White stripe) and the RS232-TX wire (Red wire with Black stripe) together. To begin the test, press <ENT>.

TEST Failed !!!
PRESS ANY KEY

If the test is unsuccessful, the LCD will display the “TEST FAILED” message. Press any key to fi nish the test and try again after powering the 505R off and back on.

TEST PASSED !!!
PRESS ANY KEY

If the test is successful, the LCD will display the “TEST PASSED” message. Press any key to fini sh the test.

1 DEFAULT VALUES FOR PARAMETERS

No	Parameter	Default Value
1	READER #1 Operation Mode	RF ONLY
2	READER #2 Operation Mode	RF ONLY
3	READER #1 Keypad Input Limit	NOT USE (DISABLE)
4	READER #2 Keypad Input Limit	NOT USE (DISABLE)
5	Use of Event Memory	USE (ENABLE)
6	Unit of Time for Output Ports	UNIT : 1 Sec
7	Output Port Time Schedules	NOT USE (DISABLE)
8	Anti-Pass Back Feature	NOT USE (DISABLE)
9	Duress Mode	NOT USE (DISABLE)
10	Door Open Alarm Time	3 Sec (03)
11	Time Schedule	All Time (00:00)
12	Holiday	All Date (00:00)
13	Holiday Code	00 (all Holiday code)
14	Time Schedule Assigned to Reader #1 Mode	00
15	Time Schedule Assigned to Reader #2 Mode	00

2 DEFAULT OUTPUT SETTINGS FOR INPUT / OUTPUT RELATIONS

Index No	Relay#1	Relay#2	TTL#1	TTL#2	BUZZER
[1] Input #1(EXIT BUTTON)	03	00	00	00	00
[2] Input #2(Door Contact SW)	00	99	00	00	99
[3] Input #3	00	00	00	00	00
[4] Input #4	00	00	00	00	00
[5] Input #5(TAMPER S/W)	00	99	00	00	99
[6] Reader#1 ID OK	03	00	00	00	00
[7] Reader#1 ID Error	00	03	00	00	00
[8] Reader#1 ID T/S Error	00	03	00	00	00
[9] Reader#1 APB Error	00	03	00	00	00
[10] Reader#2 ID OK	03	00	00	00	00
[11] Reader#2 ID Error	00	03	00	00	00
[12] Reader#2 ID T/S Error	00	03	00	00	00
[13] Reader#2 APB Error	00	03	00	00	00
[14] DURESS MODE	00	00	00	00	00
[15] OUTPUT TIME SCHEDULE	00	00	00	00	00
[16] INPUT TIME SCHEDULE	Input #1	Input #2	Input #3	Input #4	Input #5
	00	00	00	00	00
[17] DR OPEN ALARM	Relay#1	Relay#2	TTL#1	TTL#2	BUZZER
	00	03	00	00	00
[18] CUT OFF ALARM	Input #1	Input #2	Input #3	Input #4	Input #5
	00	03	00	00	00
[19] INPUT EVENT	01	01	01	01	01
[20] EMERGENCY IN	00	00	00	00	00
[21] CUT OFF CHECK	00	00	00	00	00



Index No. [1] - [14], [17]-[18]

The values indicate the operating time of each output for the input signal.
99 denote "Operating time is not limited".

Index No. [15]

The values indicate the Time Schedule Code (index) applied to each output.

Index No. [16]

The values indicate the Time Schedule Code (index) applied to each input.

Index No. [19]-[21]

The values indicate whether to enable or disable the feature for each output.
(01-Enable, 02-Disable)

FCC Requirements Part 15

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

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.

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

1. 1 The device dose not communicate with PC.
2. 2 Cards which were being used are not authenticated after executing batch transmission of IDs from software to the device.
3. 3 When configuring the device using MASTER ID, suddenly the device goes back to the normal mode.
4. 4 The device does not go to setting mode after inputting MASTER ID.
5. 5 The device work well with RF Card, but does not work when inputting card number.
6. 6 A buzzer keeps making sounds. "Bee~ Bee~ Bee~"
7. 7 A buzzer keeps making sounds. "Bee~~~~~"
8. 8 "SCHEDULE ERROR" appears on the LCD when a card is read.
9. 9 "ACCESS DOOR ERR" appears on the LCD when a card is read.
10. 10 I want to access with card only, without password.

1 The device dose not communicate with PC.

1.1 Please check wiring.

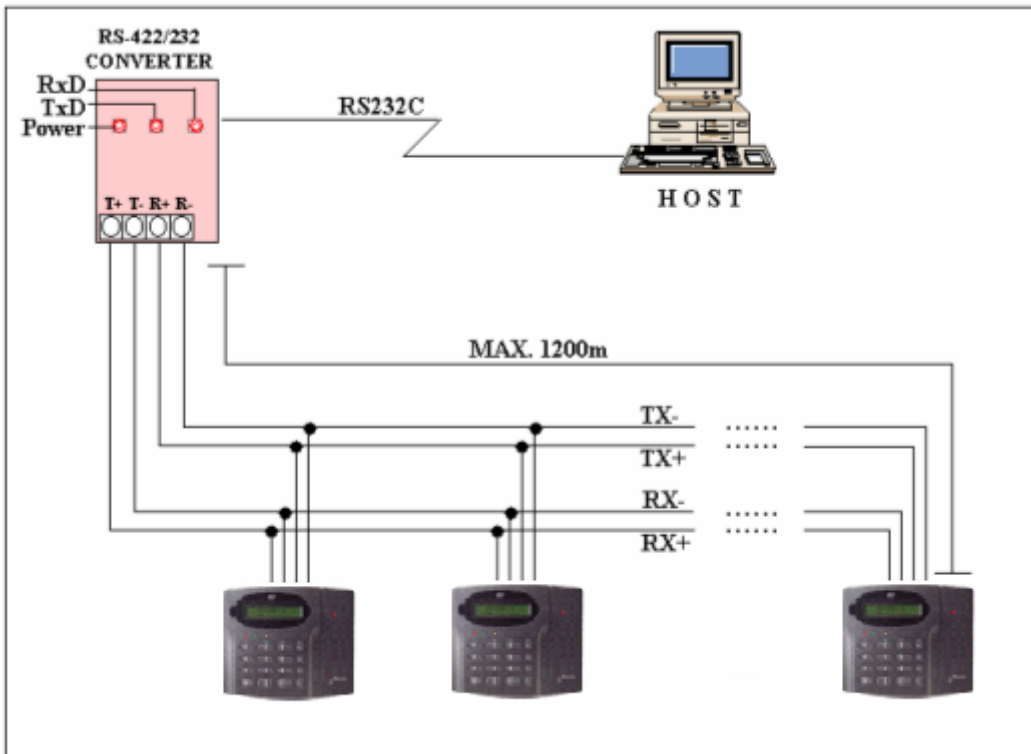
See [Communication] of the manual and check if the wiring is good.

In the case of RS232 communication

See [Communication] > [RS232 Communication Port Connection] of the manual and check if the wiring is good.

In the case of RS422 communication

See [Communication] > [RS422 Communication Port Connection] of the manual and check if the wiring is good.



1.2 Please check if the communication ID is good.

Check communication address setting of software and the device.

1. Check if communication ID set in the device is same with communication ID set in a software.
See [Setting Changes] > [Setup Menu F1] > [COMMUNICATION address] and check a communication address set in the device.
2. When you use several devices together, communication addresses set in the devices should be different from each other.
3. See [Setting changes] > [Setup Menu F1] > [Baud Rate] and check if baud rate is same with baud rate set in a software.
* If you initialize the device, baud rate is set to **9,600 bps** which is the default.

1.3 Please check if the communication port setting is good.

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



If the problem persists, please contact service center.

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

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

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



If the problem persists, please contact service center.

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

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

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

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

4.1 A MASTER ID may have changed.

1. Change the MASTER ID from software and transmit it to the device.
2. If you cannot change MASTER ID using software, see
3. **[Installation] > [System Initialization]** and initialize the device.



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



If the problem persists, please contact service center.

5 The device work well with RF Card, but does not work when inputting card number.

5.1 Please check if Keypad is set to "USE".



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

1. See **[Setting Changes] > [Setup Menu F2] > [RF PIN input]** of the manual and set it to "USE".



If the problem persists, please contact service center.

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

6.1 Please check if the door is closed well.

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



If the problem persists, please contact service center.

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

7.1 Check if the tamper switch is pressed well.

- The device has a tamper switch on the back to check if the device is fixed on the wall well.
- The tamper switch should be being pressed when and after the installation. If the switch is not pressed, tamper alarm is activated and the buzzer sounds an alarm.
- The tamper switch let you know when someone has taken the device off the wall while attempting trespass or the device has fallen from the wall due to wrong installation.





If the problem persists, please contact service center.

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

8.1 Please check Time Schedule set for the ID.

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

1. * See **[Setting Changes] > [SETUP MENU F2] > [Time Schedule]** or check it from a software.
 - Check time schedule set in the ID of the card and change it to what you want..
 - If you cannot change it from the software, from the device, see **[Setting Changes] > [SETUP MENU F3] > [ID Deletion]** of the manual and delete the ID and see **[Setting Changes] > [SETUP MENU F3] > [ID Registration]** of the manual to newly create the ID with the right time schedule.



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



If the problem persists, please contact service center.

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

9.1 Please check reader assignment code set for the ID.

- Check the Reader assignment code set for the ID of the card from a software and change it to the right RD(Reader assignment code).

- If you cannot change it from the software, from the device, see **[Setting Changes] > [SETUP MENU F3] > [ID Deletion]** of the manual and delete the ID and see **[Setting Changes] > [SETUP MENU F3] > [ID Registration]** of the manual to newly create the ID with the right Reader Mode.



RD

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



If the problem persists, please contact service center.

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

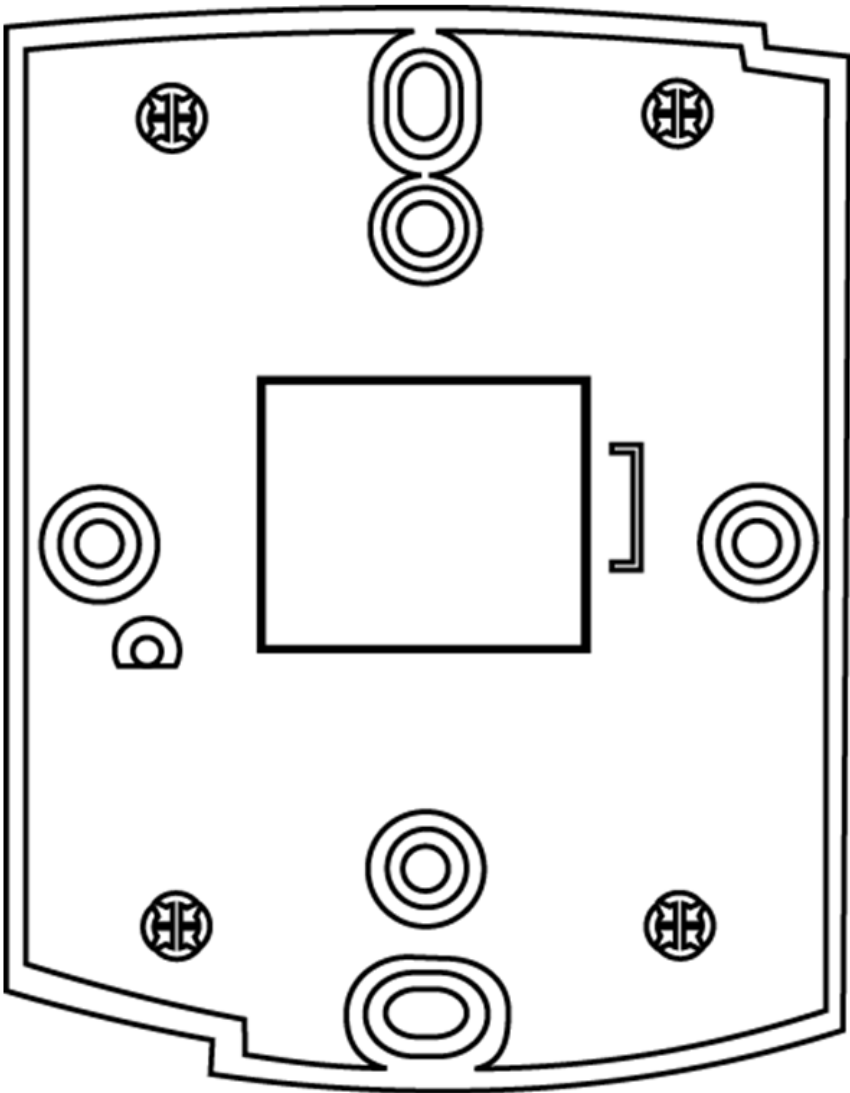
10.1 Please check reader mode set for the ID.

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

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



If the problem persists, please contact service center.



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

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