User Manual

27, Sep, 2007

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THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

1. About BKS-4800 Series

BKS-4800 security, work place time and attendance, and over-time work verification and other situations requiring the presence of the authorized personnel. Fingerprint identification technology bypasses problems of existing security solutions such as EM TYPEcards and keypad locks. These are prone to security breach from card duplication and misplacement or improper disclosure of password. These accidents allow for proxy authorization and breach of security.

Fingerprints have constancy and uniqueness and its pattern can be easily and cheaply recorded, thus making it the most desirable form of biometric recognition system. The new sensor now enables us to cut costs as well as to miniaturize, both of which will make the technology more practical and more easily mass marketed.

BKS-4800 supports various I/O protocols and is an optimal solution for managing access-controlled points. With 128 X 64 pixels blue LCD screen, 12 regular keys and 5 special function keys, make BKS-4800 user-friendly. Communication is based on TCP/IP is also easy with the included 1 RS232 port, 1 RS485 port, 1 relay signal and 1 external sensor inputs.

2. Setup Console Manager

Installation

Installation PC Capacity

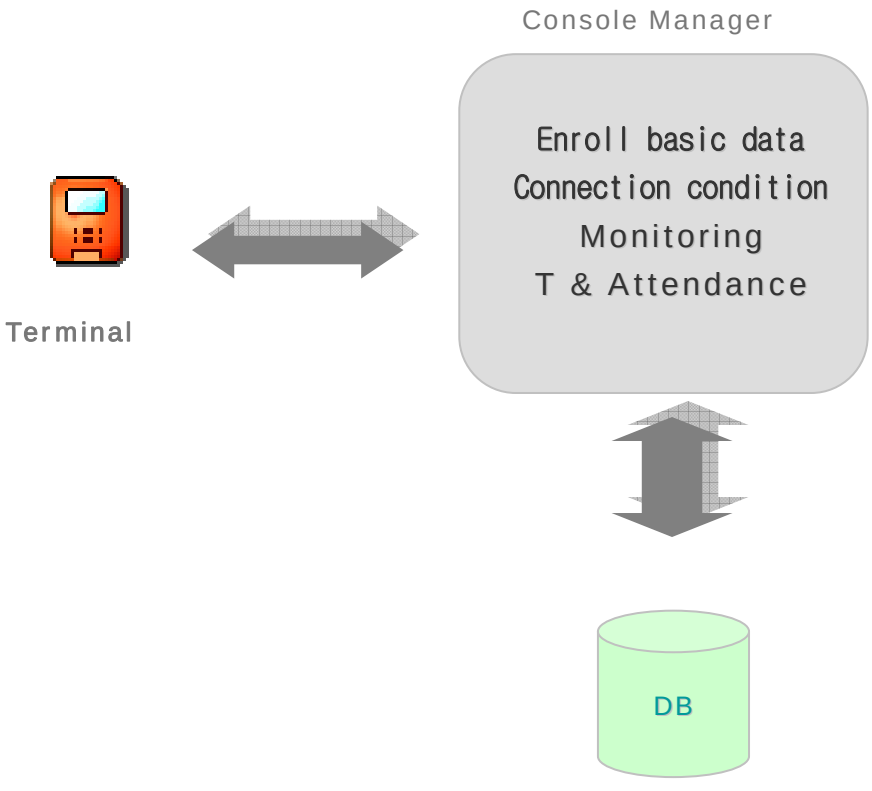
BKS-4800 Manager system : suggested PC application

CPU	Pentium 4 1.7 GHz over
RAM	256MB over (512MB suggest to be over)
OS	Windows 2000 / XP
HDD	40GB over
Network	LAN

BKS-4800 Manager system : minimum capacity

CPU	Pentium 3 1.0 GHz over
RAM	128MB over
OS	Windows NT / 2000 / XP
HDD	20GB over
Network	LAN

Console Manager total diagram



How to install Console Manager on PC

■ Content of installation

① Choose the administration PC.

② Check the computer installed Window system. (Windows 2000 / XP)

③ To install Console Manager as to click “Setup.exe”.

④ After installation of Console Manager, input BKS-2600 to USB port.

⑤ Install BKS-2600 driver.

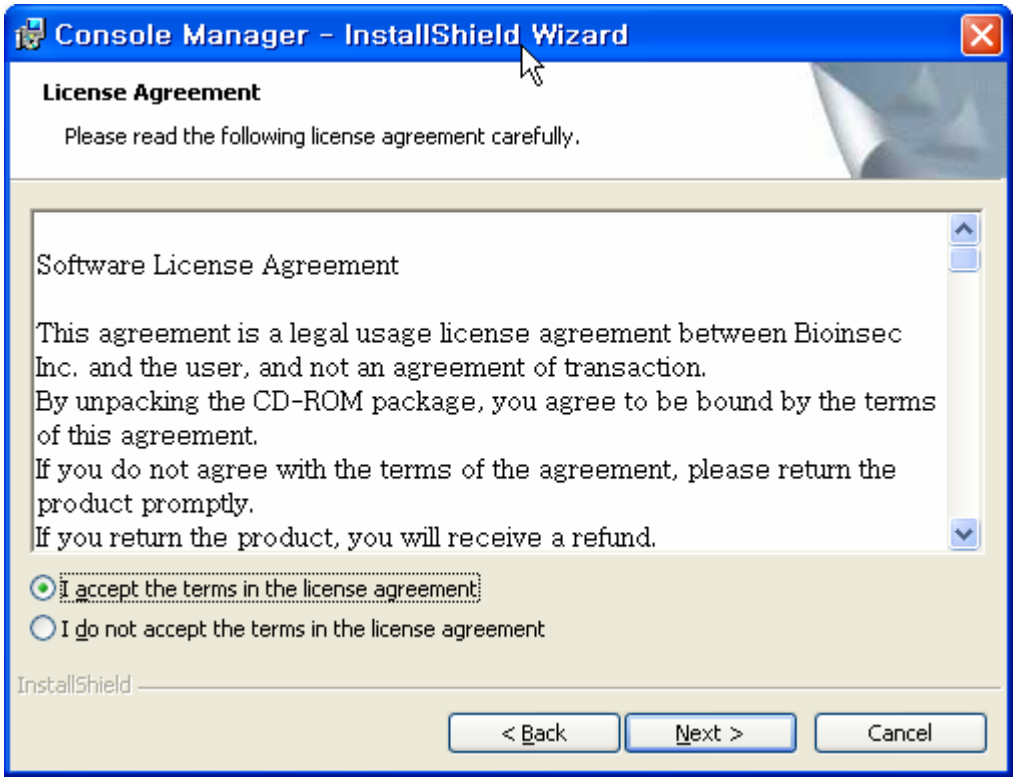
- Set Console Manager

Double click the “**setup.exe**” file and then the below installation window will be shown.

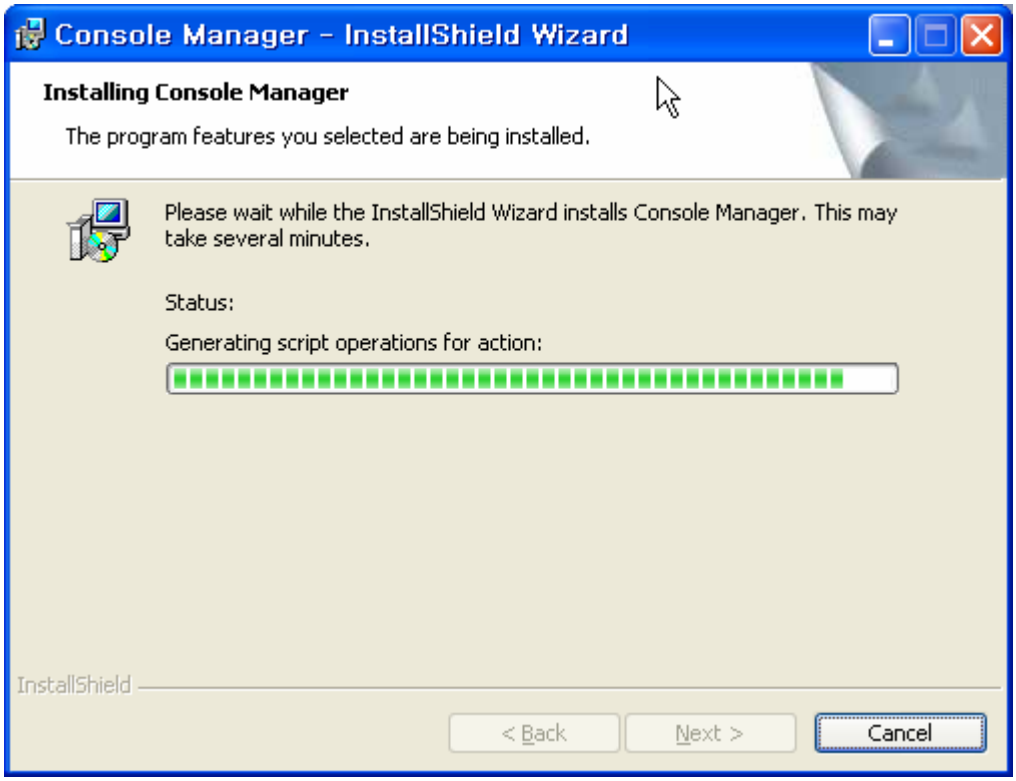
Caution: The Console manager should be set at only C drive.

Please click the **Next** button.

Click the next button after confirm License Agreement.



Click Next button.

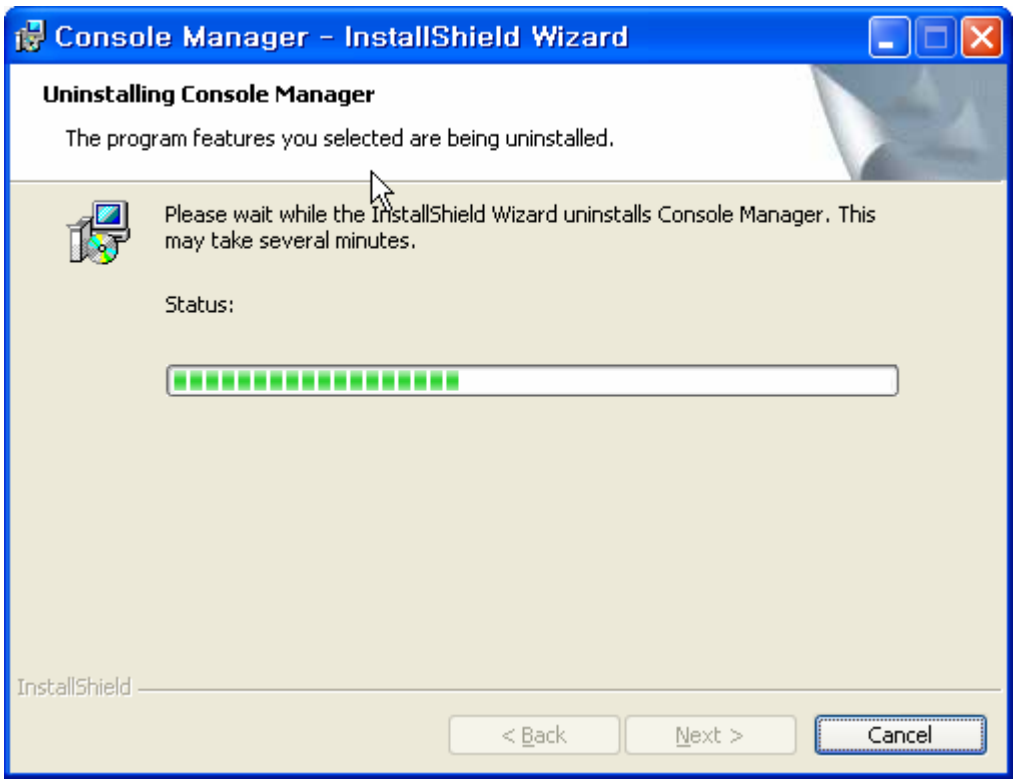


“Console Manager” & “Console Service” Icon created on the desktop.

How to uninstall Console Manager on PC

- Uninstall Console Manager
- Start – control – Program add/delete – Select **Console Manager .**

Click the delete button and Console Manager will be removed.



How to setup Console Manager

Console Manager is main control program networked several BIOINSEC terminals on network. It's shown all records of communication between terminal and server, that is the reason can control all LOG related of BKS-4800 terminals.

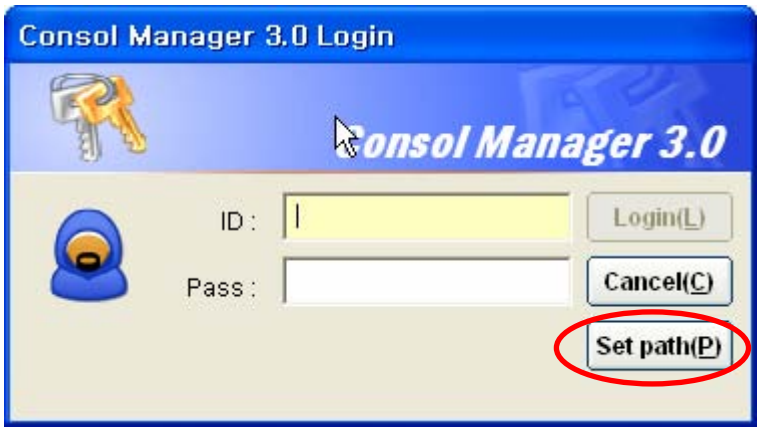
Enter Console Manager

■ Main long-in window appears after click Console Manager icon on the desktop, Click the Icon and above window appears.

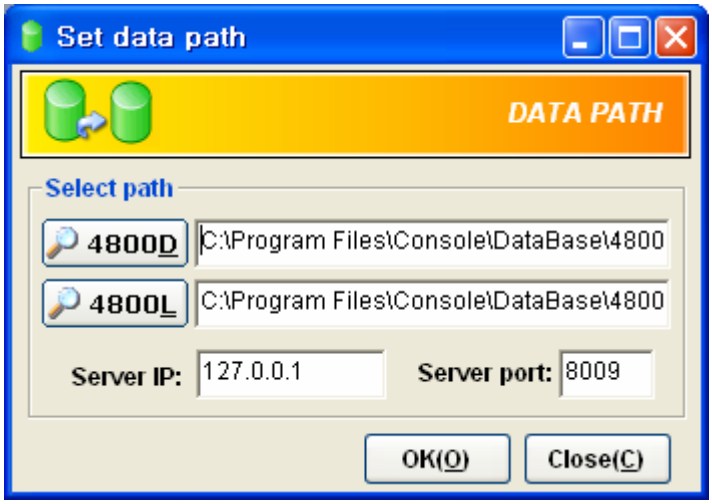
■ Initial set value is " **ID : 1 Pass : 1** ", **please give new Password for reduction of security risk.**

■ If the administrator enrolled "Admin Fingerprint," please click the blue man Icon pointing to finger icon and place your finger on BKS-2600 scanner.

< When USB Scanner doesn't be connected to PC, this message appears >



- Setup path : Please click "Set path" and then the below window appears.



4800D : C:\Program Files\Console\DataBase\4800D.mdb

4800L : C:\Program Files\Console\DataBase\4800D.mdb

Server IP : Computer IP address or input 127.0.0.1

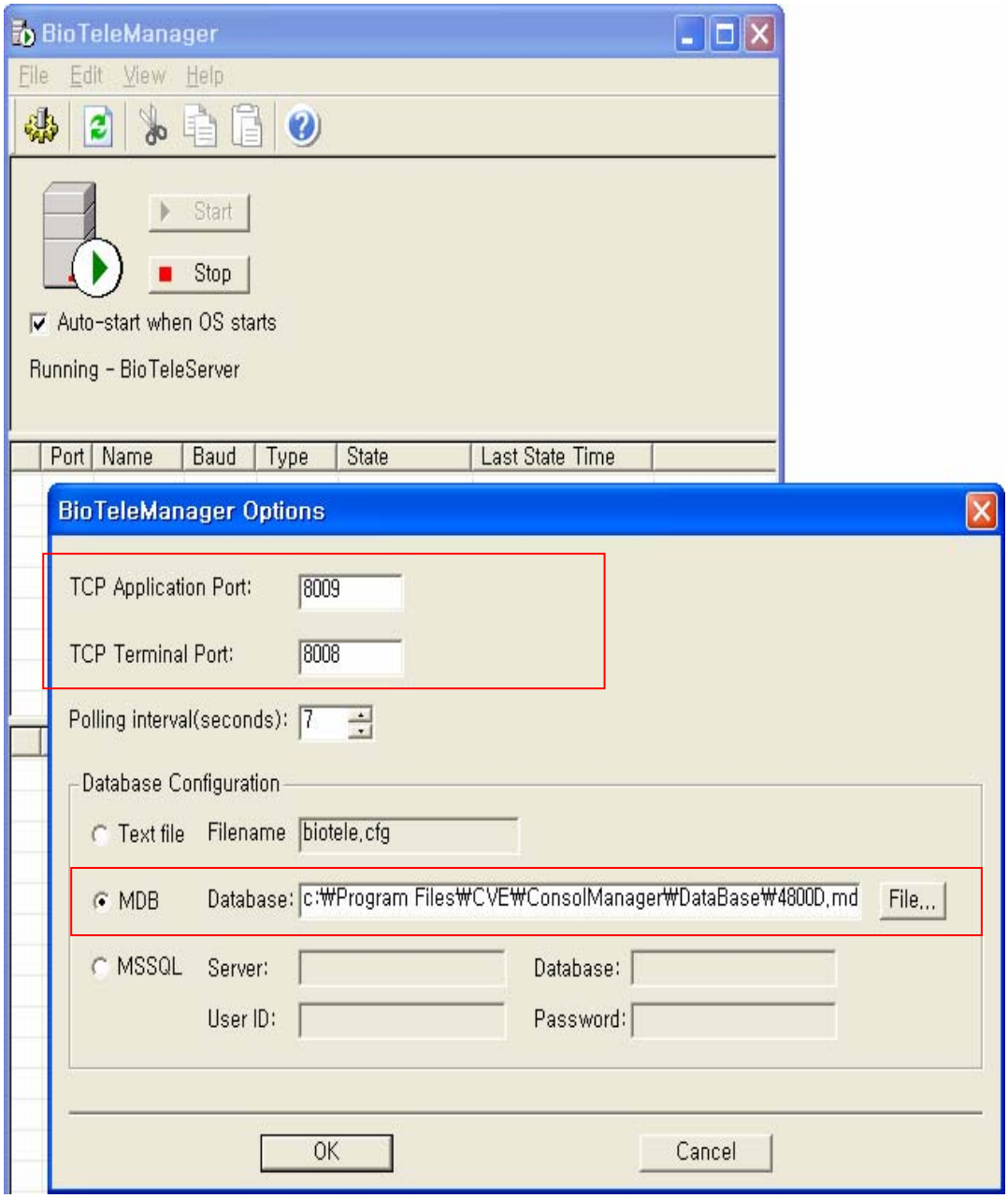
Server Port : 8009

Setting values are automatically set like above menu.

TCP Application Port and TCP/Terminal Port are automatically opened.

Console Manager & Console Server Manager icon displays on the desktop and "**Start => Program => Console Manager => Console Server Manager**".

Double click the "Console Server Manager" menu

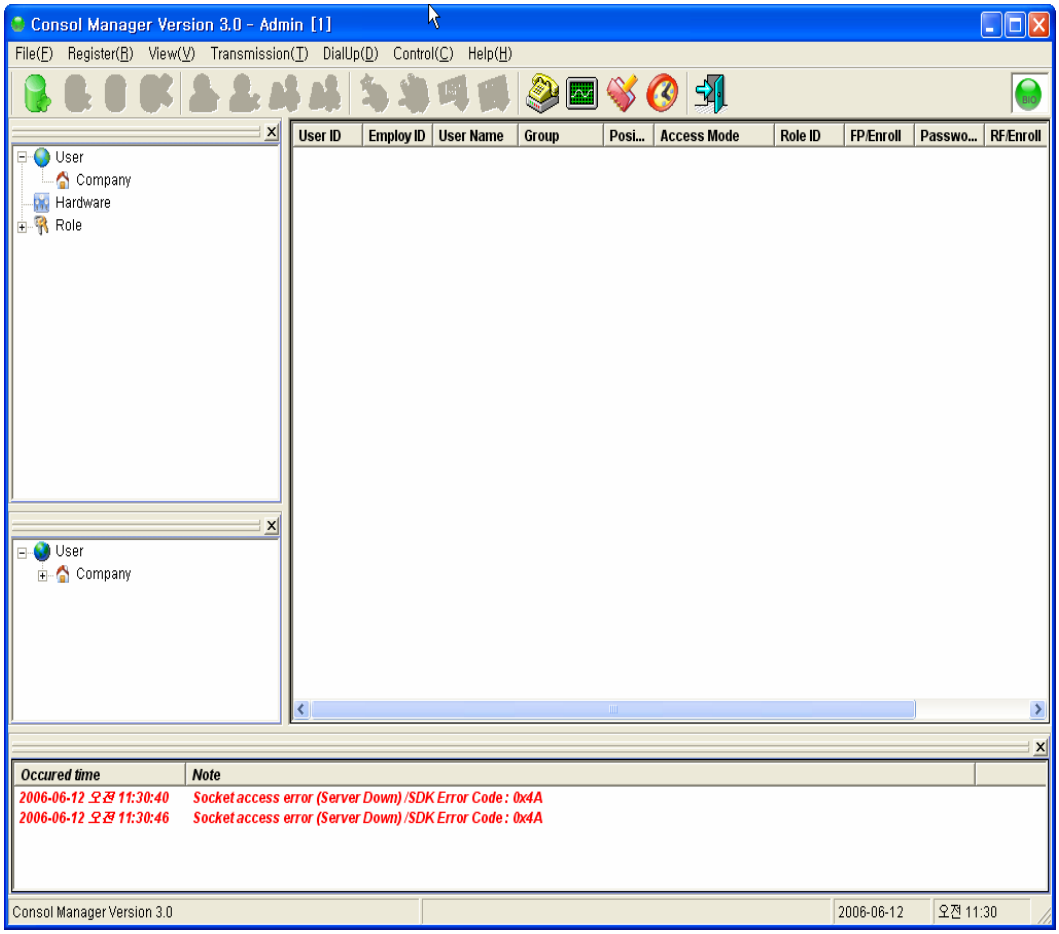


TCP Application Port and Console Manager Server port is automatically set 8009.

TCP/Terminal Port, 8008 also is automatically set as Terminal Port 8008.

After checking all data path clearly, click "OK" button for saving. And then main window appears.

Main window and basic word



■ **Main window is composed to Menu Bar, Tool, Tree View, Icon .**

① Menu bar : file, enroll, Setup, View, Transmission, Control, Window, Help.

② Tool : New enroll, delete, Information, Delete all, Transform data, Delete terminal user data, Transmit all user data, Delete all user data of system, Get FP data from Terminal, Get all FP data, Get all EM TYPEdata, Monitoring, Report, Time & Attendance, Close etc…

③ Position View : Show the position tree view of user and terminal data.

④ Event view: Show terminal status and event

⑤ Menu bar detail description

: Enroll new user

: Delete user ,

: Show user information

: Delete event window message

: Transmit user data to terminal

: Delete user data of terminal

: Transmit all user data to terminal

: Delete all user data of terminal

: Get FP data from terminal

: Get all FP data from terminal

: Get EM TYPEdata from terminal

: Get all EM TYPEdata from terminal

: Monitoring

: Report

: Time & Attendance

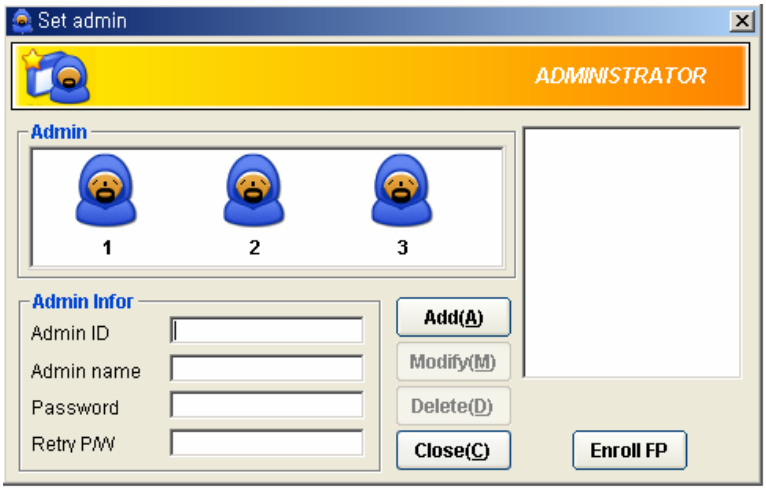
: Exit

: When service system works well, Console log is turning.

Menu	Sub menu	contents
file	Set admin	Set administrator
	Close	Finish Console Manager
Enroll	Company	Enroll Company
	Group	Enroll department
	Position	Enroll position
	Set port	Enroll terminal port
	Terminal	Add/delete terminal
	Role	Setup user access role
	User	Enroll user
Setup	Set FP enrollment	Set Fingerprint enrollment.
	Set data path	Set DB path
	Check Com	Check the communication with terminal
View	Admin window	Appear administrator window
	Position window	Appear position window
	Event window	Appear event window
	Document window	Appear document window

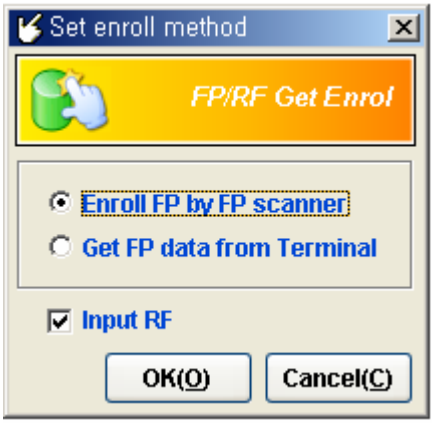
Menu	Sub menu	contents
Transmission	Transmit personal data	Transmit personal data to terminal
	Delete personal data	Delete personal data of terminal
	Transmit all data	Transmit all user data to terminal
	Delete all user data	Delete all user data from terminal
	Get FP data by personal	Get fingerprint data from terminal by personal
	Get all user FP data	Get all fingerprint data from terminal
	Get all user EM TYPEdata	Get all user EM TYPEdata from terminal
	Get EM TYPEdata by personal	Ger EM TYPEdata from terminal by personal
	Check user enroll	Check the enrollment.
Control	Download Terminals	Download terminal data
	Download Schedules	Download schedule data
	Download Holidays	Download Holiday data to terminal
	Download Time Zones	Download time zone to terminal
	Door open	Door open
	Set door	Set door condition
	Update Firmware	Terminal Firmware
Window	Horizontally	Sort horizontal style
	Vertically	Sort Vertical style
	Icon sorting	Icon sorting
	Cascade	Sort cascade
	Window List	
Help	Help	Help

■ **Set administrator**



Initial admin is set as “Admin ID 1”, you can add new administrators as push “Add” button after enrolled new ID and Password. If you want to use fingerprint, please enroll fingerprint as push “ Enroll FP” button and place your finger on the sensor of BKS-2600 scanner connected to PC.

■ **Set enroll method**



Select enrollment method between “Enroll by fingerprint scanner” and “Get Fingerprint data from terminal”

Please make sure that “Enroll by FP scanner” should connect of BKS-2600 scanner on PC.

And push “OK” button for saving.

■ **Useful description of word**

① **Download : Send data to terminal**

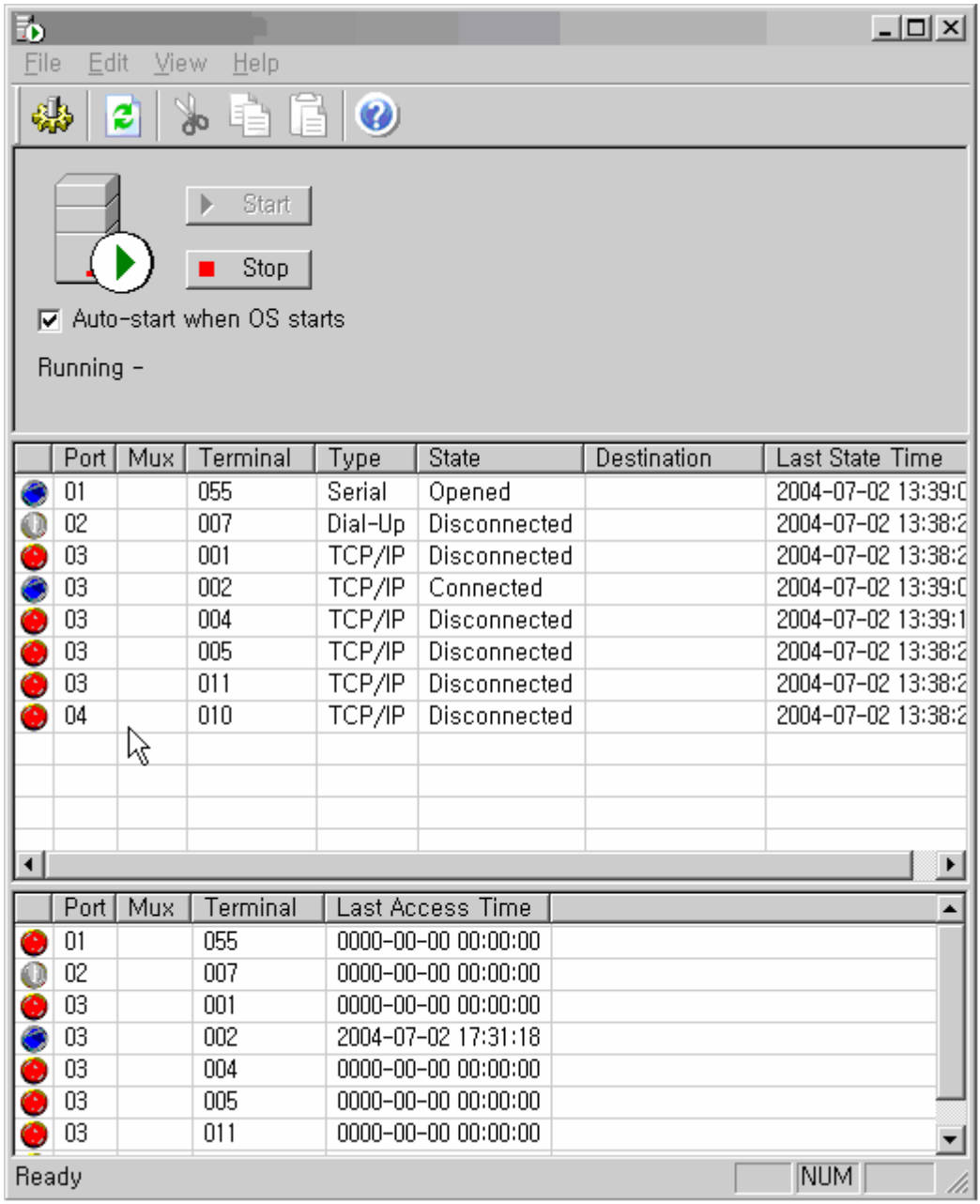
② **Upload : Get data from terminal**

③ **FP : Fingerprint**

How to use Console Service

For communication with terminal and Console Manager Software, Window service system should be started.

Click “Bio Tele Manager” Icon on desktop and appears the below window.



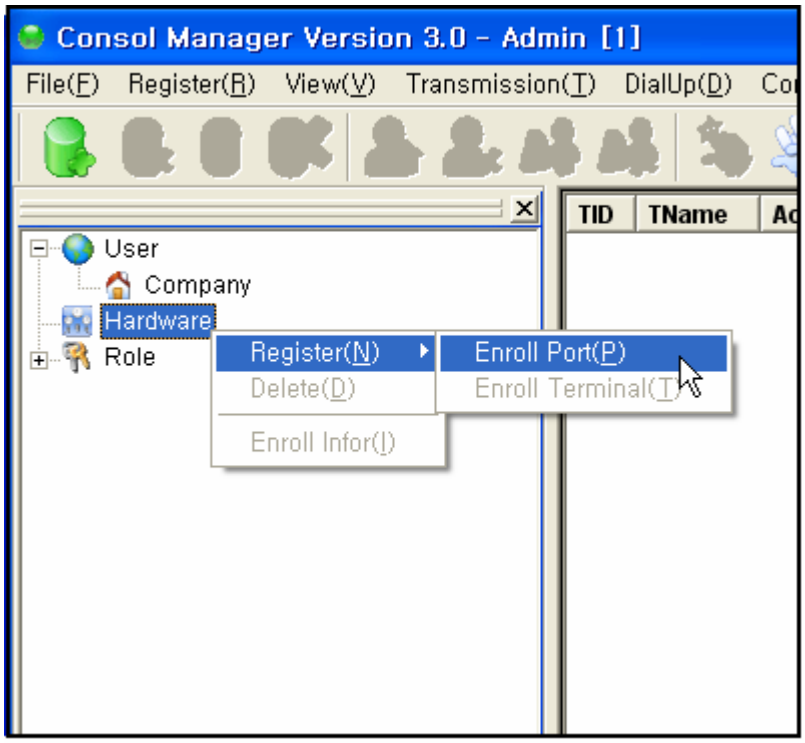
Click “Start” button and appears all status of enrolled terminal. Connected state is correct communication with server and terminal. If the state marked to disconnected, please check all condition of terminal set value and terminal set value.

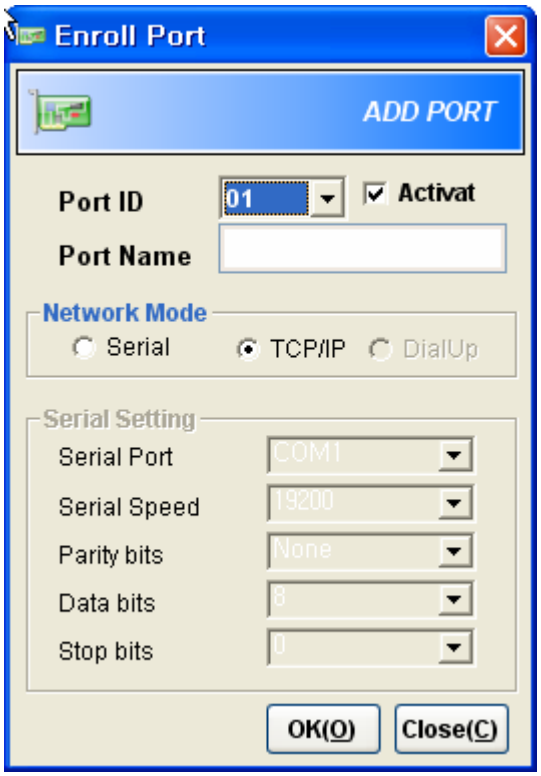
3. How to connect between Terminal and Server

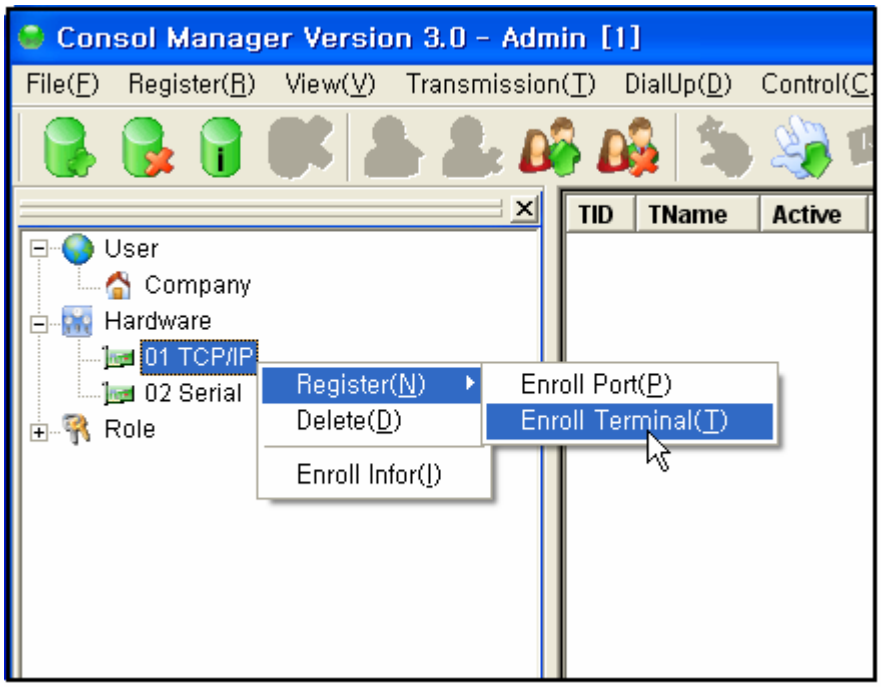
Select port

It initially input 3 kind of terminal port as **Dial-up, Serial and TCP/IP**.

First choose correct port type and enroll terminal as below.



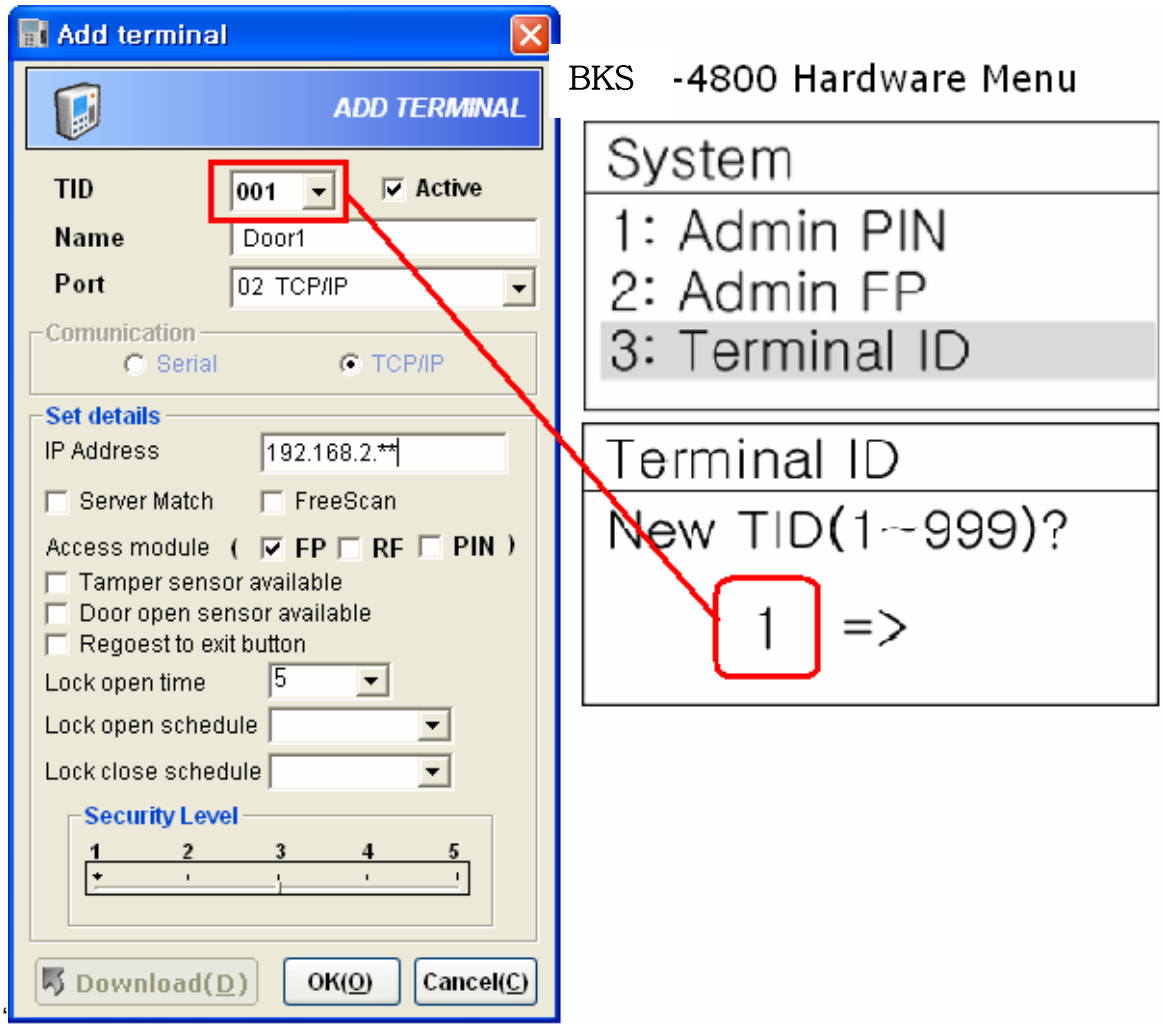


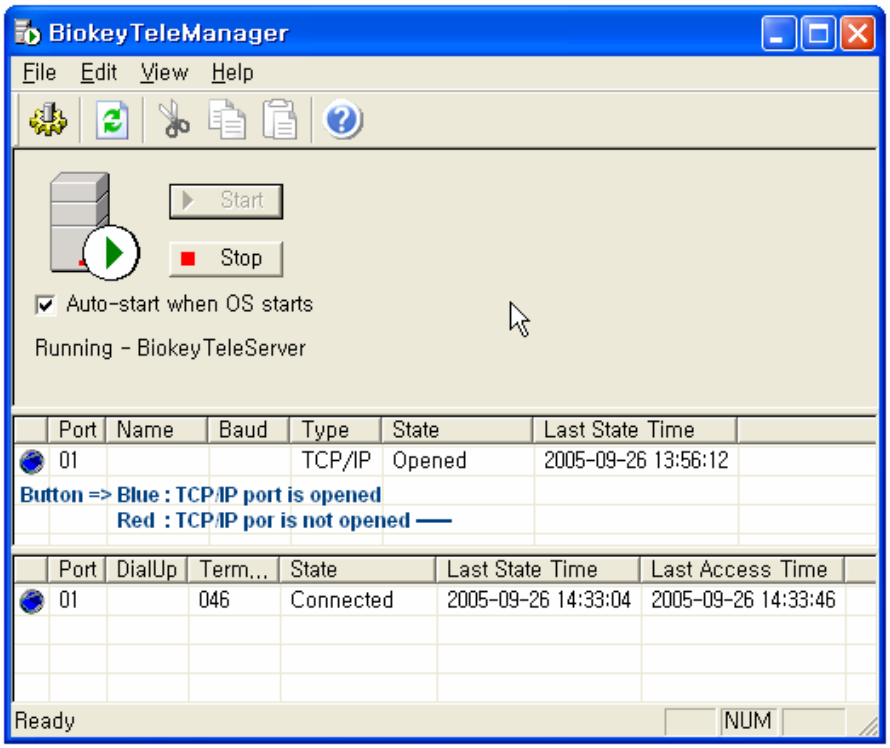


Setup TCP/IP Connection

Enroll Terminal by tree menu or menu bar to TCP/IP port

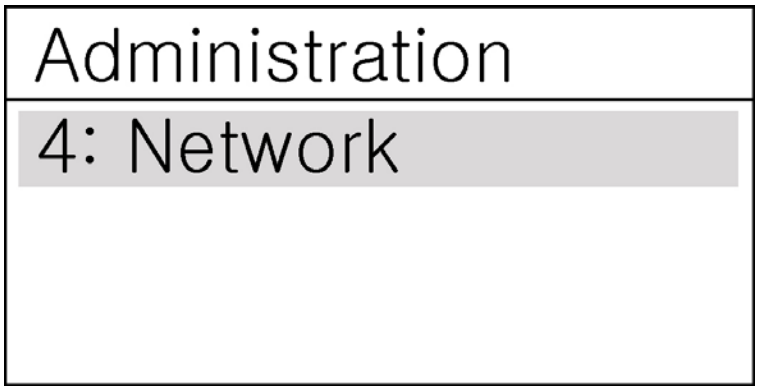
- **TID : Terminal ID should match as terminal enrolled terminal ID the stage of "3.System=>3.Terminal ID => Shown number"**
- **Name : Input terminal name**
- **Select port**
- **Server Match is not available now**
- **Check Free scan mode if you want to use**
- **TCP/IP port should input server PC IP address.**
- **Select Access module**
- **Check Temper sensor, Door open sensor, exit button if it's available.**
- **Select Security level applied to terminal.**
- **Push "OK" button for saving.**
- **After registration, Stop Console Server Manager and restart and then you can see the terminal**

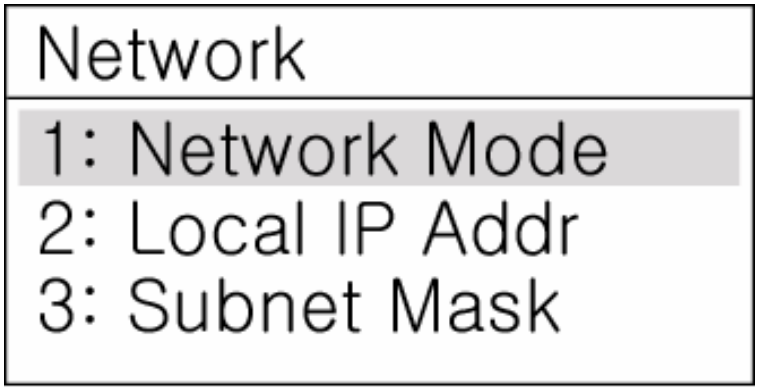

Add terminal
ADD TERMINAL
TID
001
Active
Name
Door1
Port
02 TCP/IP
Comunication
Serial
TCP/IP
Set details
IP Address
192.168.2.**
Server Match
FreeScan
Access module (FP RF PIN)
Tamper sensor available
Door open sensor available
Regoest to exit button
Lock open time
5
Lock open schedule
Lock close schedule
Security Level
1 2 3 4 5
Download(D)
OK(O)
Cancel(C)
BKS -4800 Hardware Menu
System
1: Admin PIN
2: Admin FP
3: Terminal ID
Terminal ID
New TID(1--999)?
1
=>

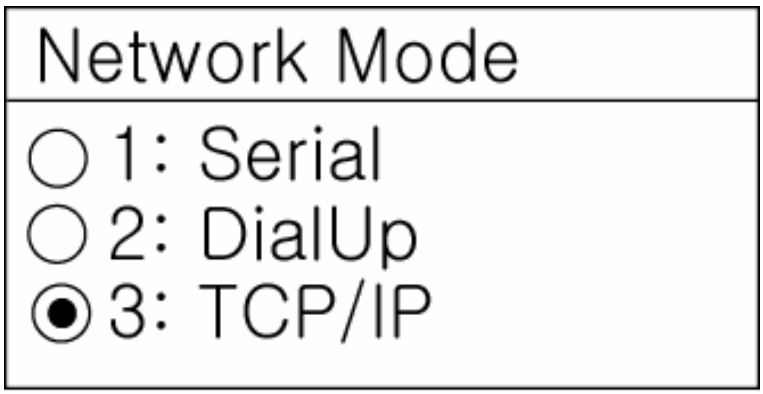


- CAUTION : IF YOU SEE RED COLOR BUTTON AND CLOSE STATE, PLEASE GO TO "4. OPEN PORT FOR THE USER OF WINDOW XP SERVICE PACK2"

■ **Go to " 4. Network Mode => 3. TCP/IP => Select TCP/IP network"**

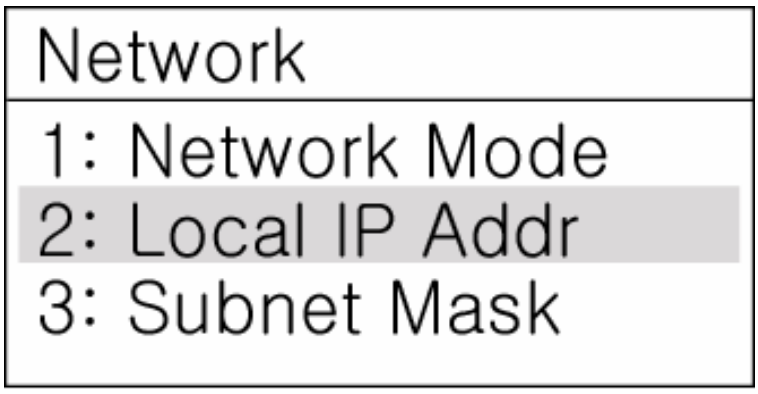




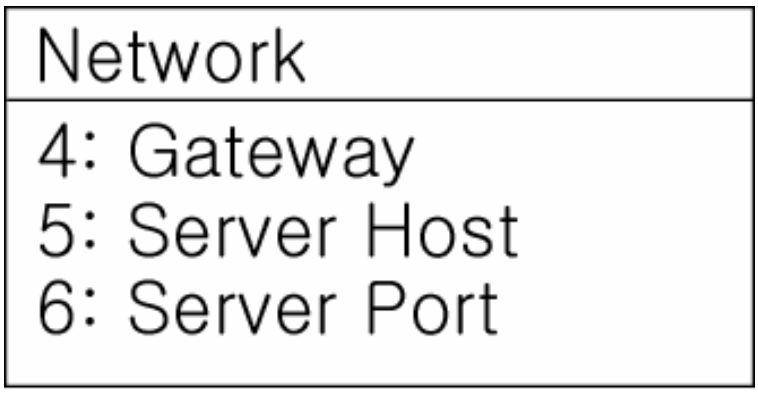


■ **Input TCP/IP value**

1. Local IP Address : Input Terminal IP address
2. Subnet Mask : Input Subnet Mask address

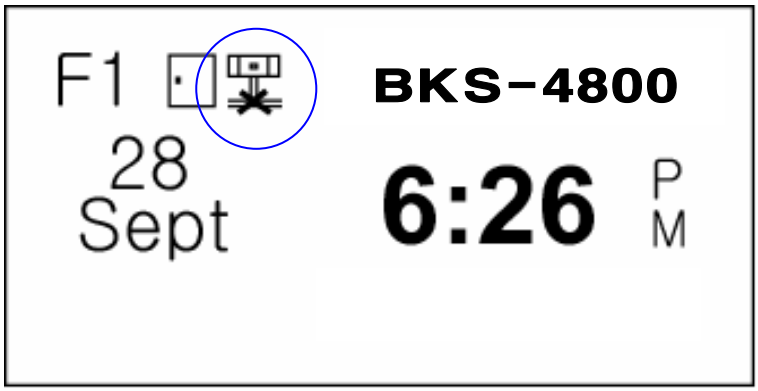


3. Gateway : Input Gateway address
4. Server Host : Input Server PC's IP address
5. Server Port : Input port number of PC server. It is set, as 8008 initially, please do not change without special cause.

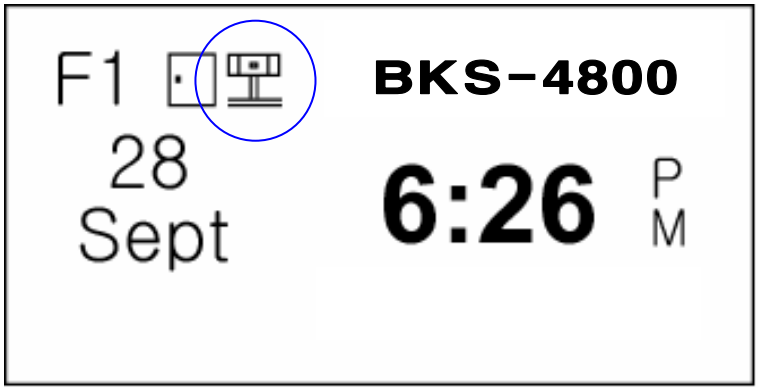


■ **LCD Icon change and network connection state**

When you see the TCP/IP network Icon and " X" means Network disconnected.

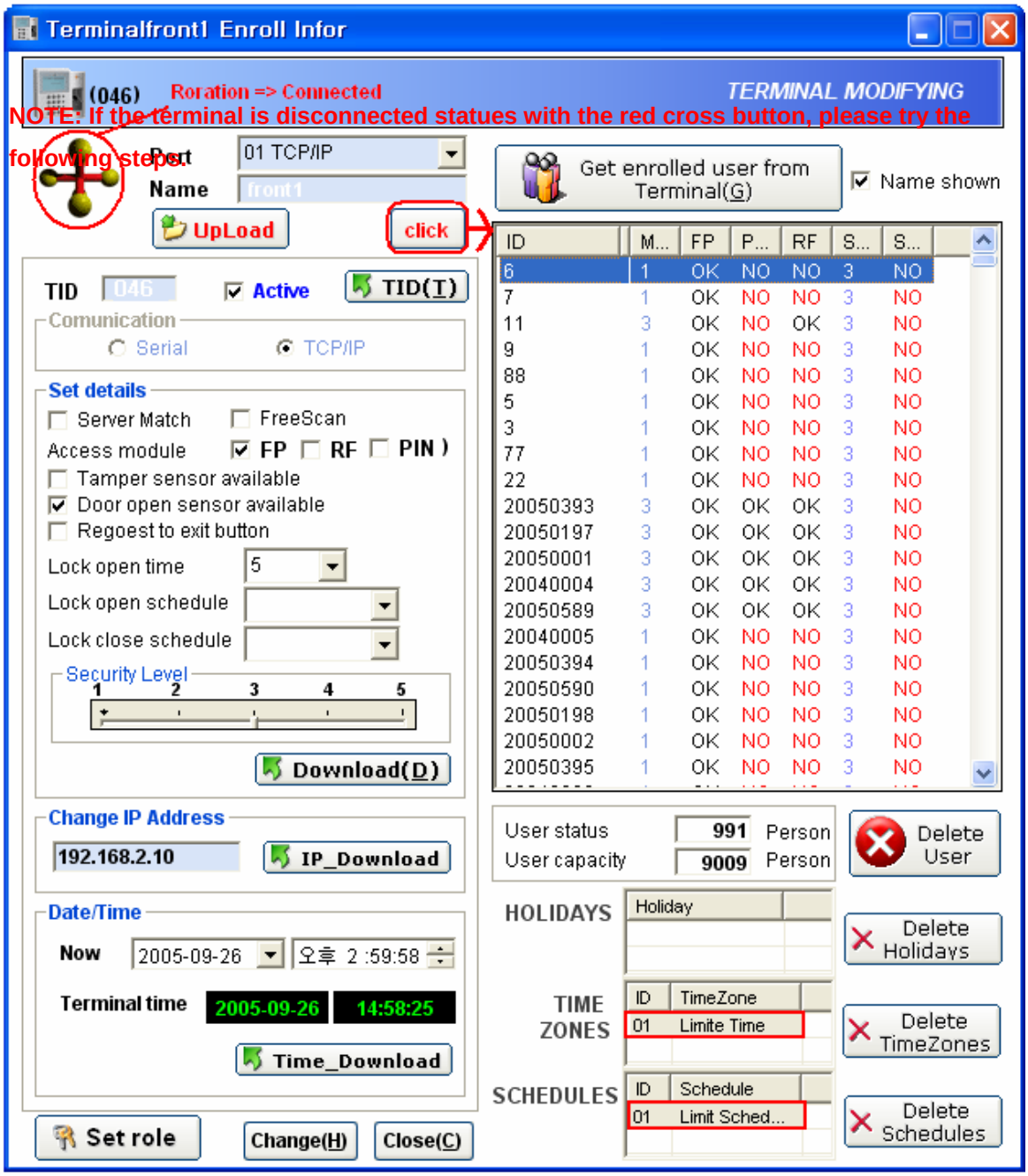


All setting value is correct and TCP/IP icon disappears "X" mark.

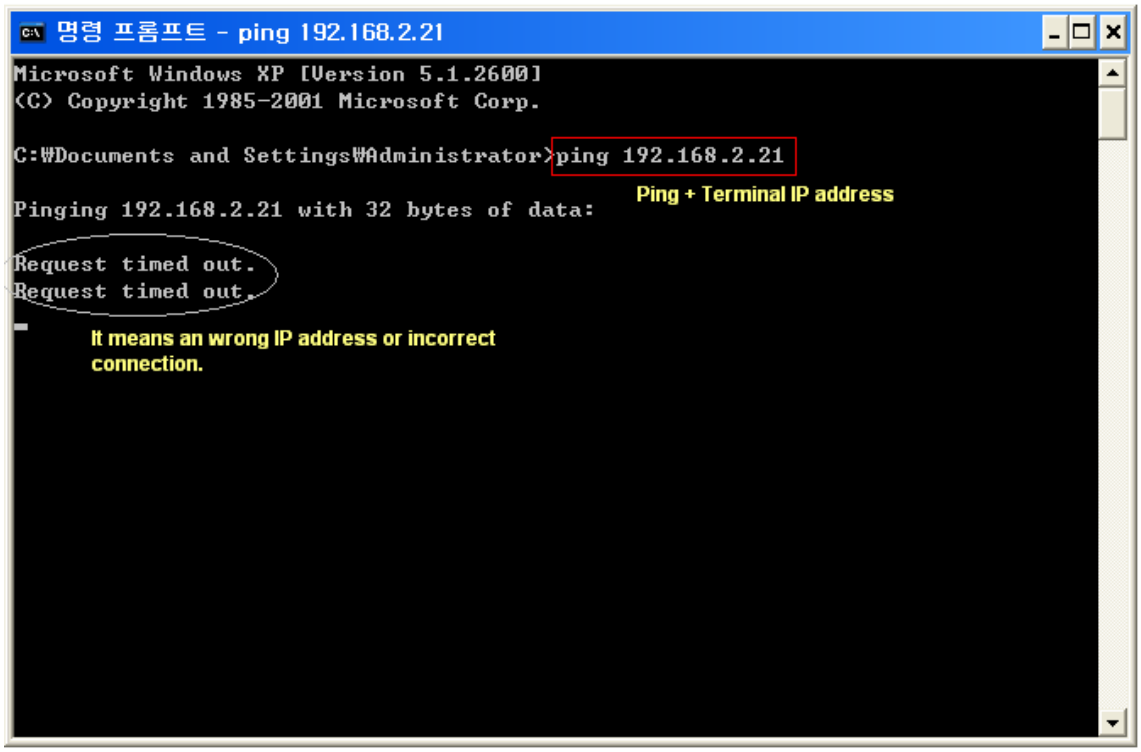


■ Console Manager connecting states

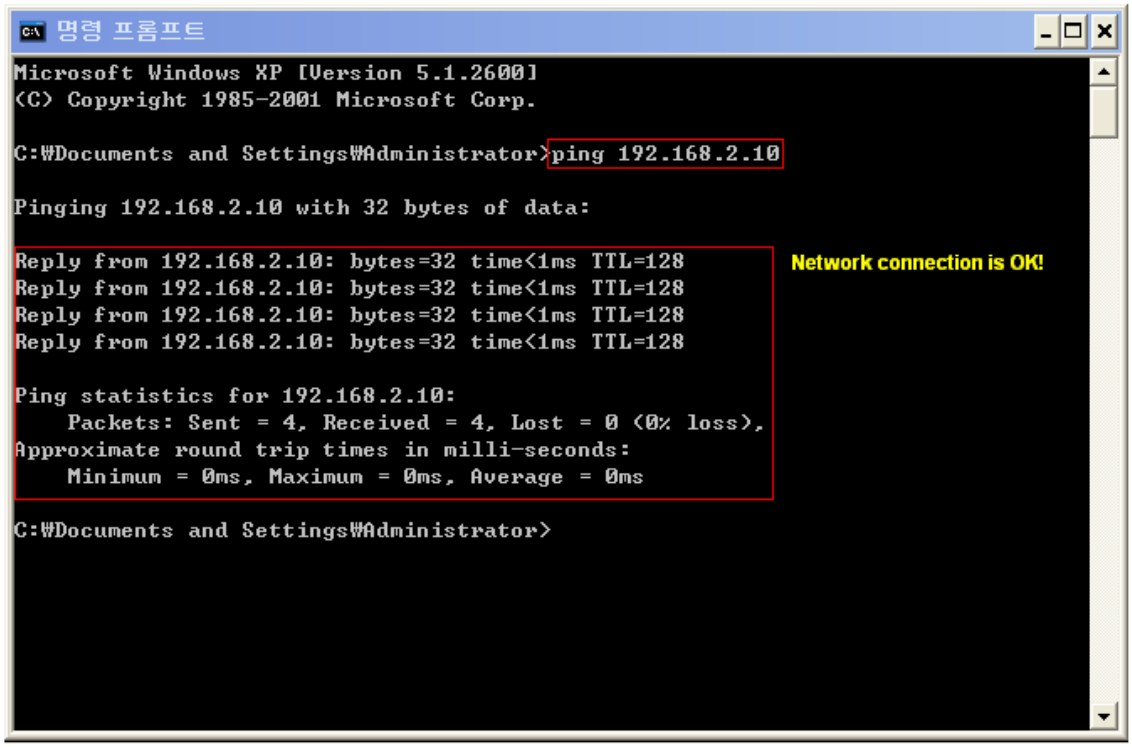
When you double click terminal on Console Manager, you can see the rotating icon as follows.



< Terminal IP Address >



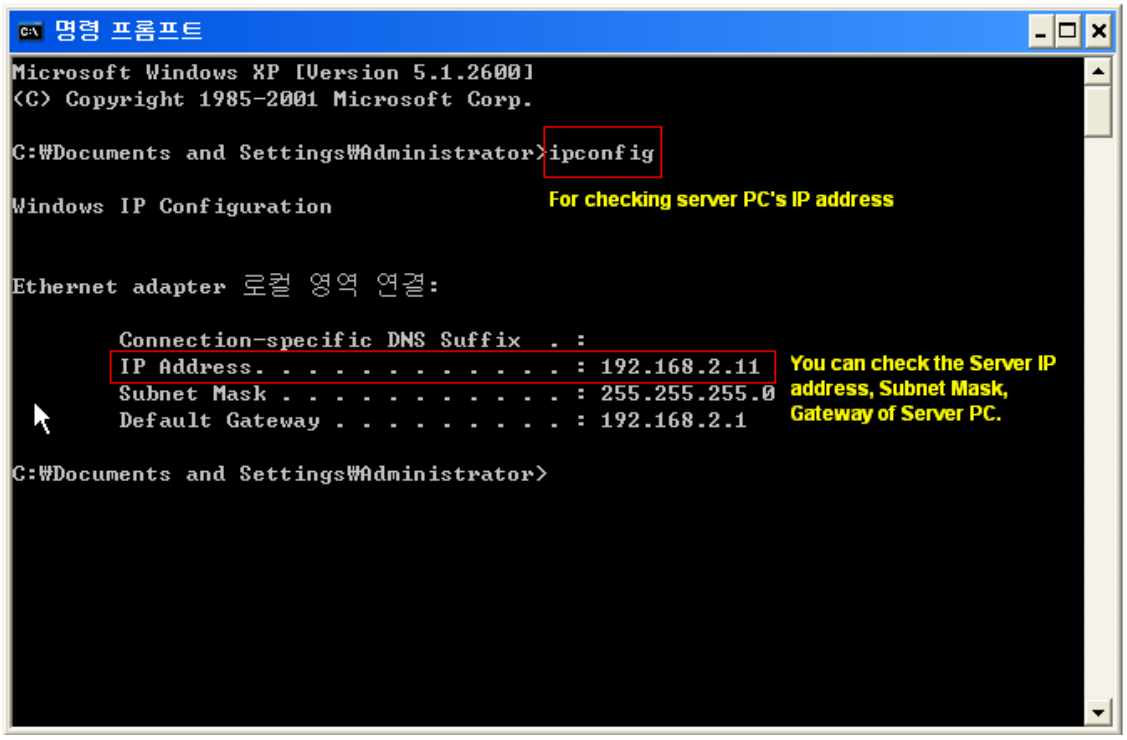
Open “command prompt” program on the server PC, write ping + Terminal IP address, if you got “Request timed out” message, it is the incorrect IP address.



When you receive the above message, it's the correct IP address for terminal.

< Server IP address >

Open "command prompt" program on the server PC, write "ipconfig" and push "Enter" key on the keyboard.

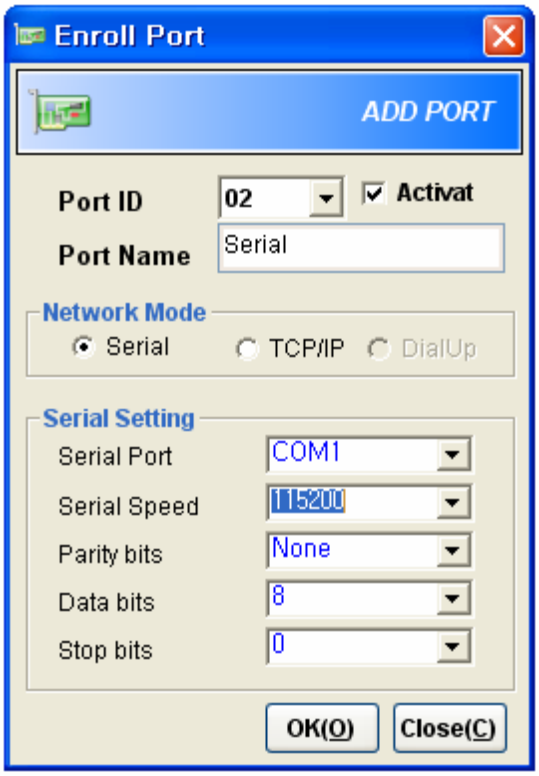


The server PC's network value is appeared.

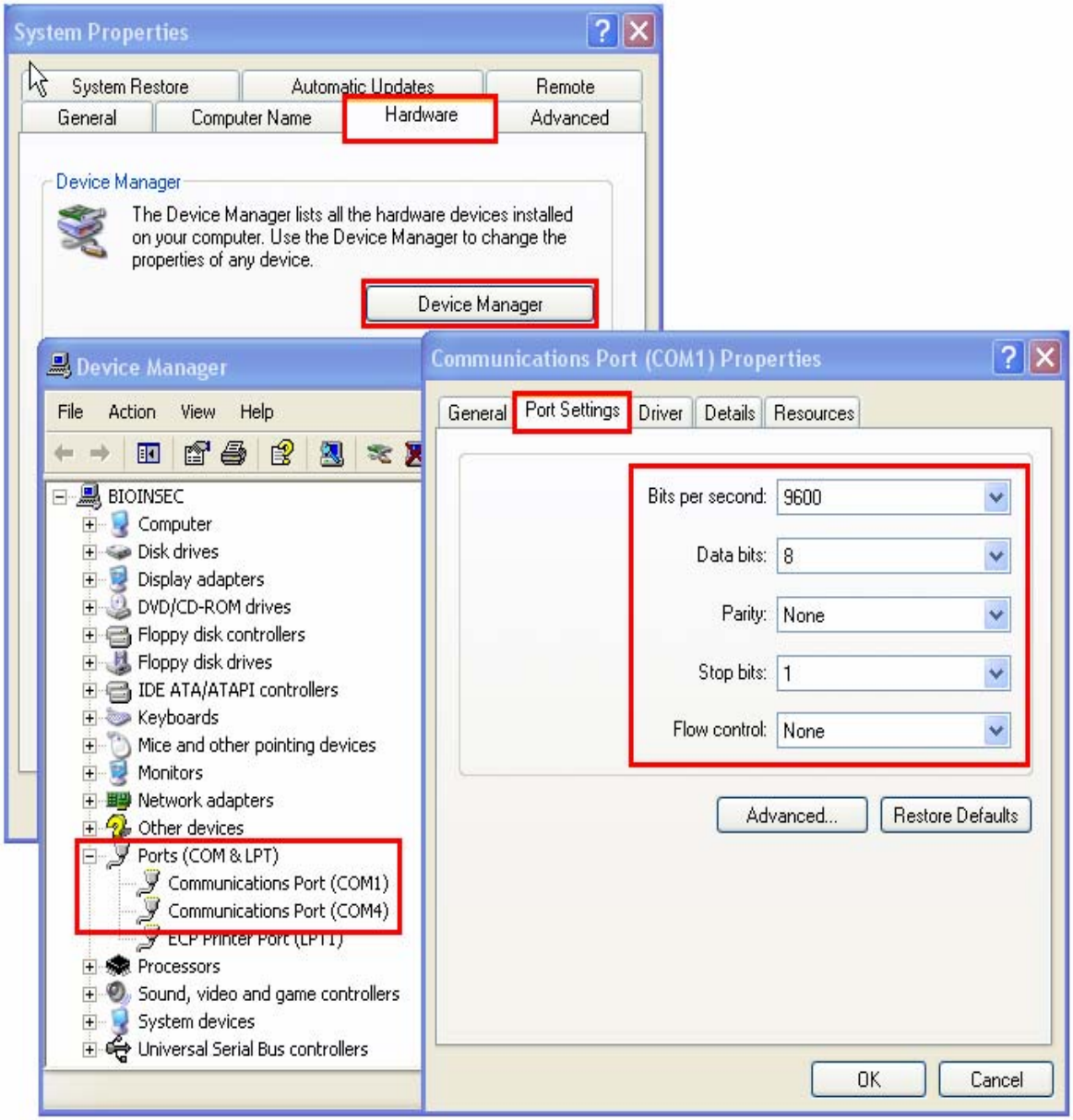
Change the correct IP setting value, it should restart "Console Server Manager" to be recognized changed value.

Setup Serial Connection

Enroll Terminal by tree menu or menu bar to Serial port

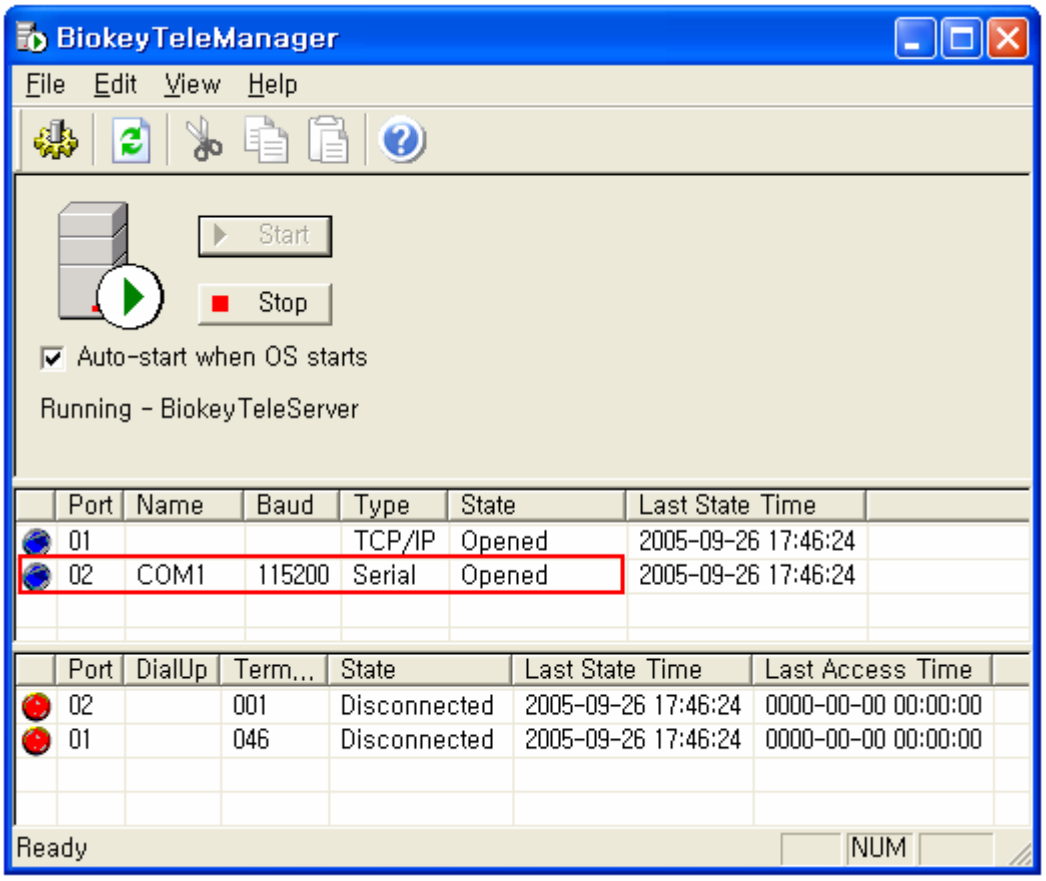


- **TID : Terminal ID should match as terminal enrolled terminal ID the stage of "3.System=>3.Terminal ID => Shown number"(Refer to page 26)**
- **Set Serial Port, Serial Speed and others at the same value of Window setting. (System Properties=> Hardware tab =>Device Manager => Ports => Double click "Communication Port" => Communications Port Properties => Port Settings Tab)**


System Properties
System Restore
Automatic Updates
Remote
General
Computer Name
Hardware
Advanced
Device Manager
The Device Manager lists all the hardware devices installed on your computer. Use the Device Manager to change the properties of any device.
Device Manager
Device Manager
File Action View Help
BIOINSEC
Computer
Disk drives
Display adapters
DVD/CD-ROM drives
Floppy disk controllers
Floppy disk drives
IDE ATA/ATAPI controllers
Keyboards
Mice and other pointing devices
Monitors
Network adapters
Other devices
Ports (COM & LPT)
Communications Port (COM1)
Communications Port (COM4)
ECP Printer Port (LPT1)
Processors
Sound, video and game controllers
System devices
Universal Serial Bus controllers
Communications Port (COM1) Properties
General
Port Settings
Driver
Details
Resources
Bits per second: 9600
Data bits: 8
Parity: None
Stop bits: 1
Flow control: None
Advanced...
Restore Defaults
OK
Cancel

■ **Restart “Console Server Manager” and then changed Opened state of port.**

When you push “Start” button on Console Manager, you can see the red box displays blue button, COM1, 115200, Serial Opened states.
If the COM1 port is not connected with terminals, you occur from the incorrect COM Port or different Baud rates.

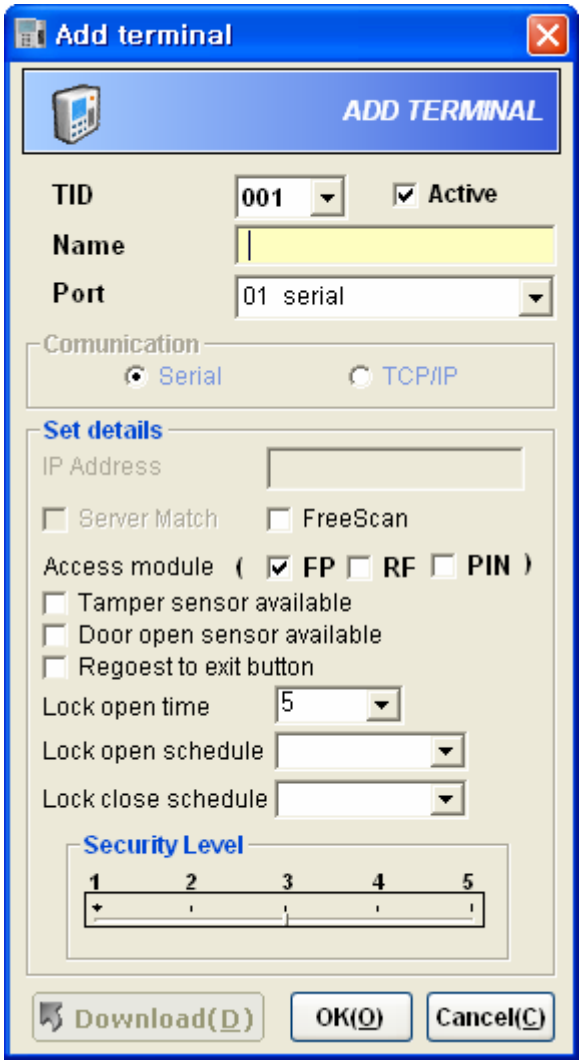


And go to Console Manager and push “Start” button, you can see the blue button and Serial Opened status.
The first box is for the Port state between terminal and server PC. So it shows blue button of the opened state.

NOTE: If the port is not opened statues with the red button, please check your computer is installed SP2. If yes, please refers to page 12~14.

- **Add Serial terminal**

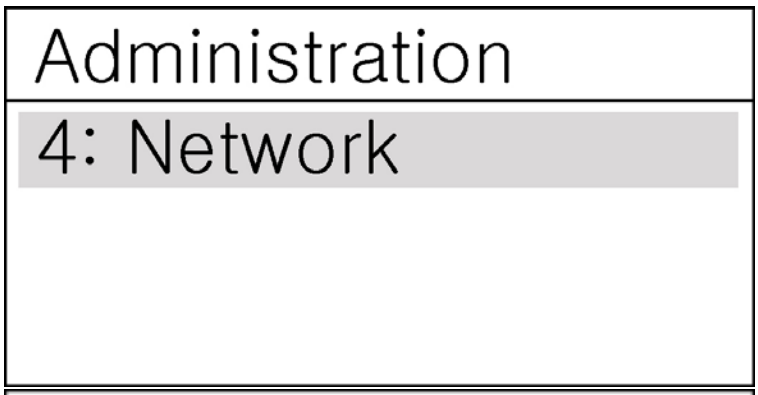
Enroll Terminal by tree menu or menu bar to Serial port

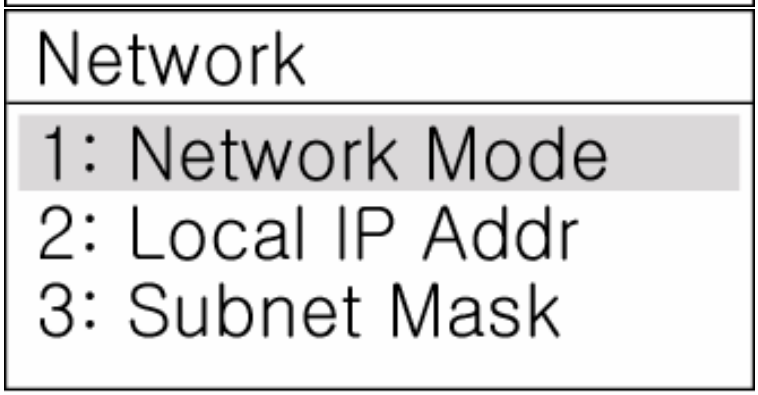


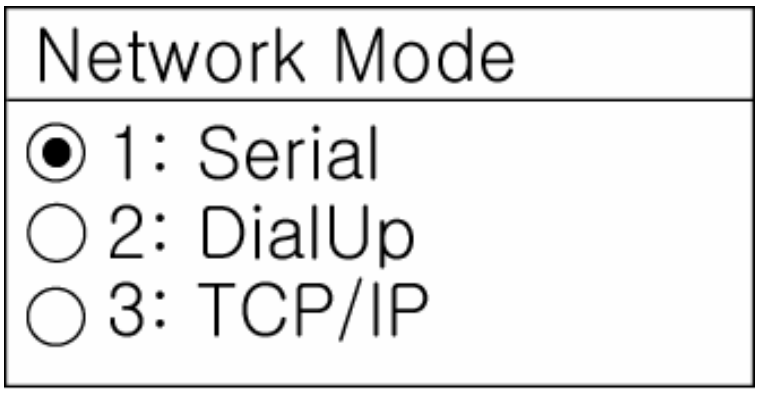
- **TID : Terminal ID should match as terminal enrolled terminal ID the stage of** "**3.System=>3.Terminal ID => Shown number**" (refer to 26 page)
- **Set the hardware setting of serial communication**

Go into the menu of terminal(CFR-3000 : 0 + <↵) as to input "1111" as initial password.

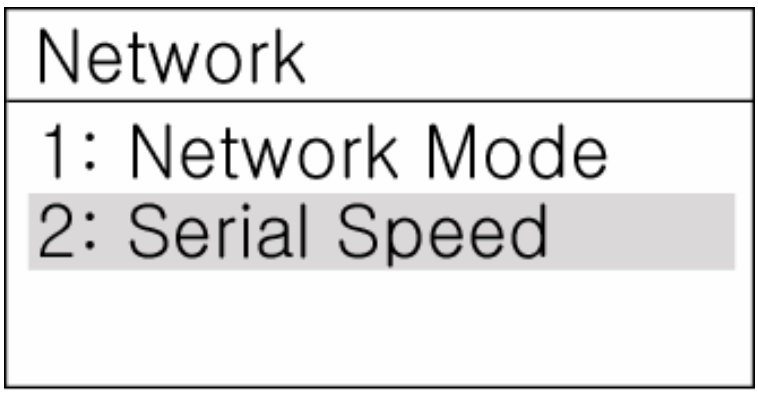
Go to "4. Network Mode => 1. Network Mode => 1.Serial mode"





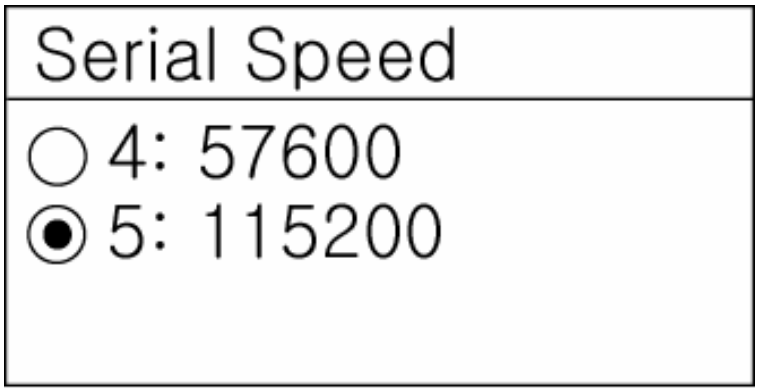


Input Serial Speed as same as Console Manager setting value(Refer to page 34).



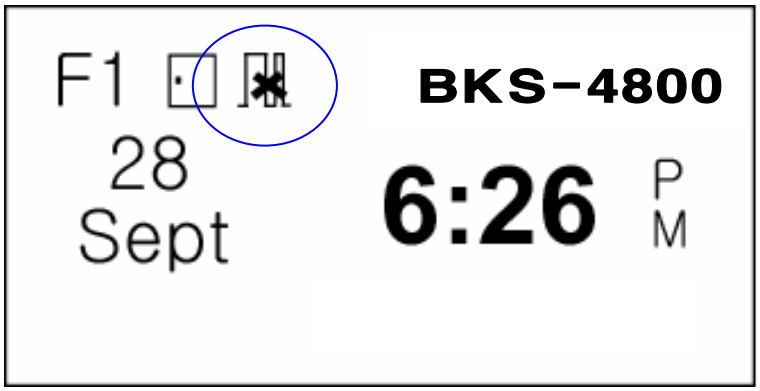
Select one value as same as Console Manager setting value. (Refer to page 33~34)

1. 9600
2. 19200
3. 38400
4. 57600
5. 115200

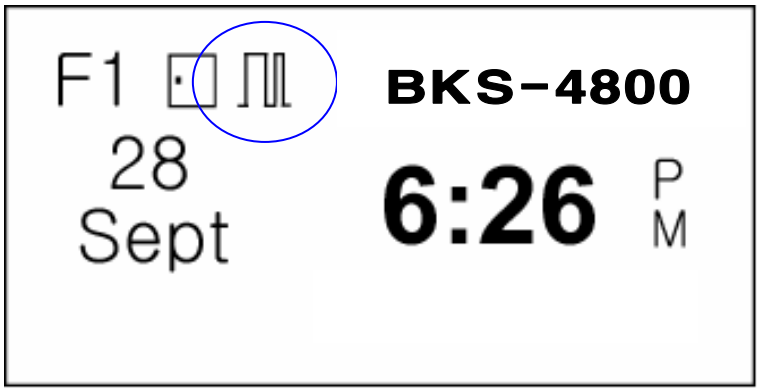


LCD Icon change and network connection state.

When you see the Serial network Icon and “X” means Network disconnected.



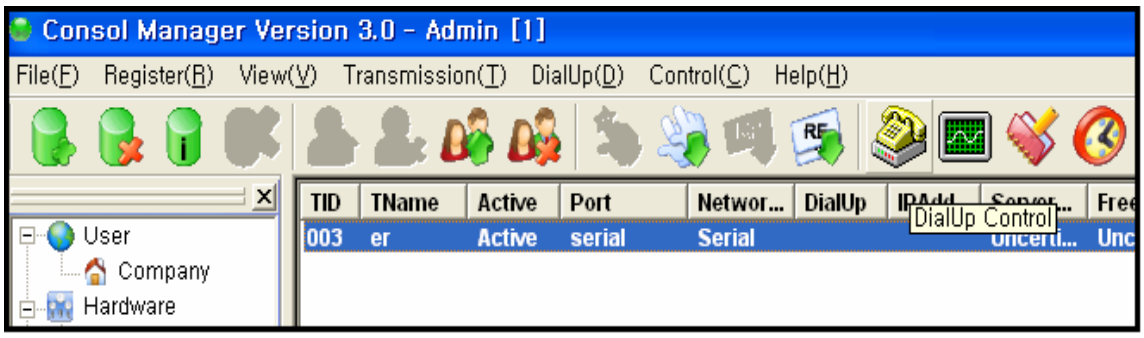
All setting value is correct and Serial icon disappears “X” mark.



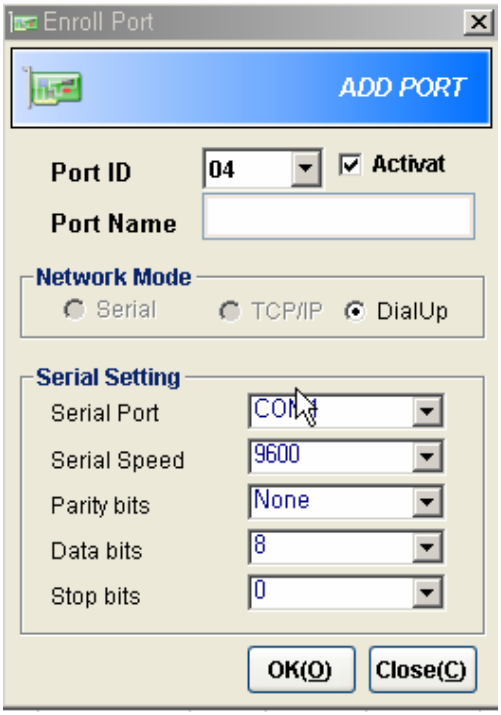
Setup Dial-Up Connection

Go to “DialUp(D) => DialUp Control” of Menu bar and the above Dial-up setting window appears.

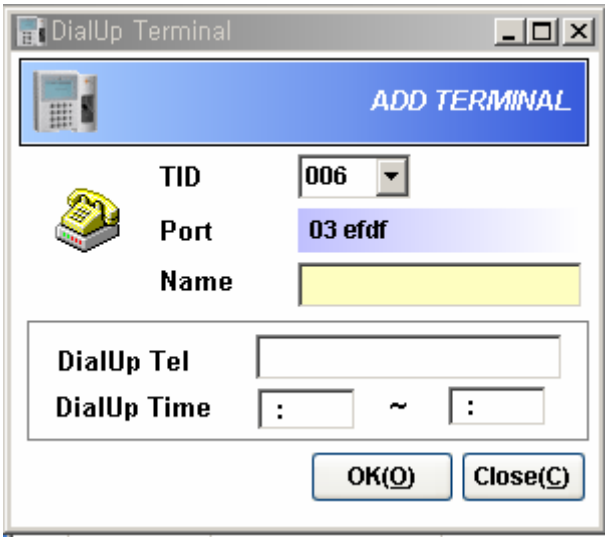
- Click “ADD” button when cursor is on DialUp (telephone image).



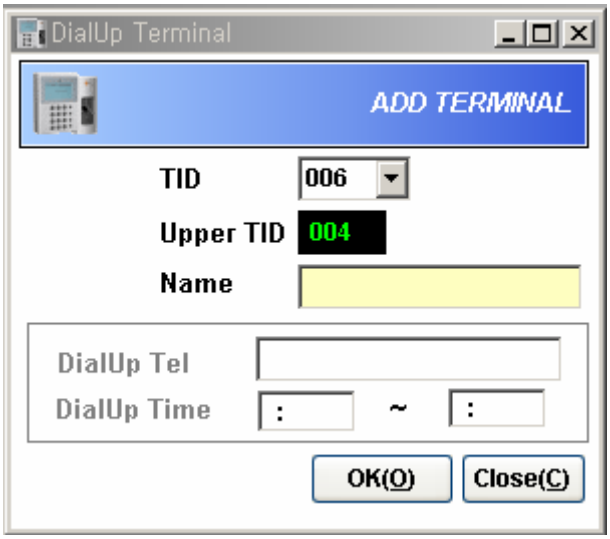
- Add port window appears



- Input port name first. Set Serial port and serial speed.(Refer to page 34)
- Click “ADD” button when cursor is on enrolled Port.
- ADD Terminal window appears



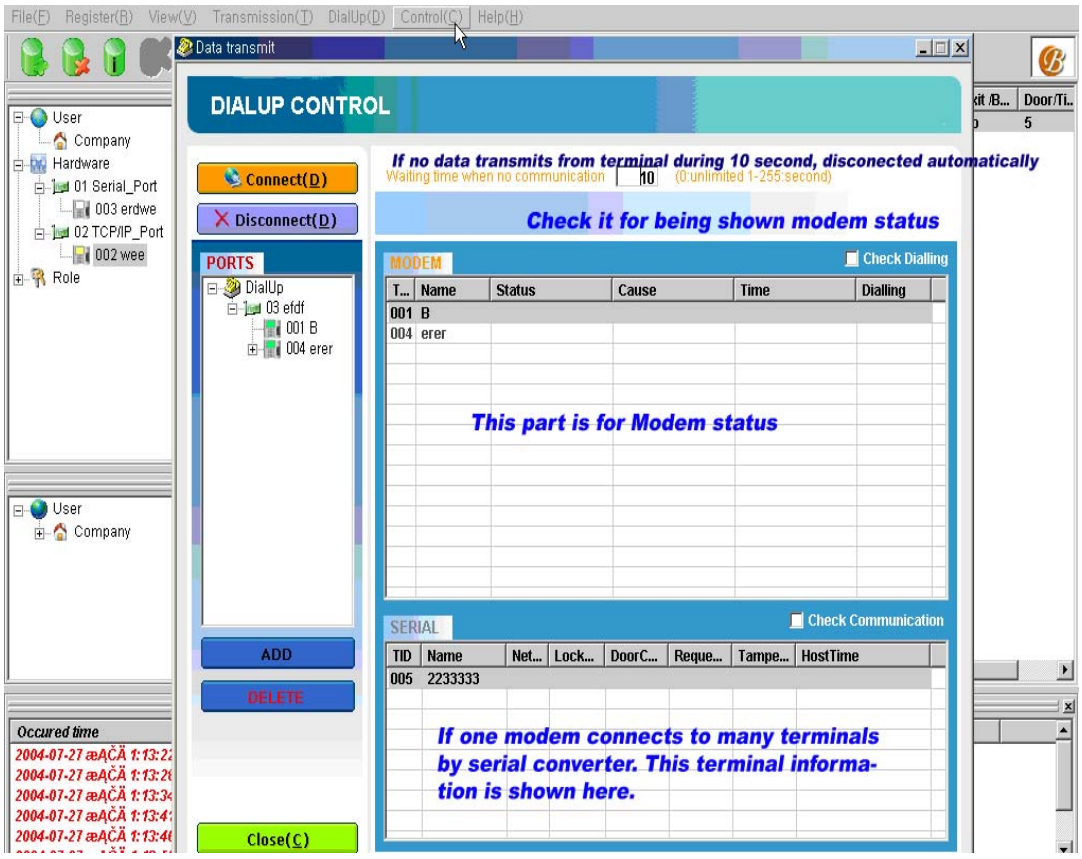
- Input “Name” DialUp setting. It should be direct telephone No. extension No is not available.
- If the modem is connected to 485 serial connection, give telephone No and Dial-up time to one terminal only. For enrollment of rest of terminals, Click “ADD” button when cursor is on enrolled Terminal. The below window appears.



- It couldn’t input Tel number and time so just input **correct TID** & Name.
- After set, click DialUp on the menu bar and the below window appears.
- The right section is shown enrolled dial-up terminal. For calling to terminal, select terminal and push “ Connect(D)” button. All modem connection status is shown in “MODEM” and “SERIAL” section.
- For checking dialing status, please check tick mark of Checking Dialing.
- 10 seconds mean, when terminal doesn’t send data to server for 10 seconds, modem disconnected. This setting value can’t change in automatic connection, but manual

connection as to click Connect button can give new value 0~ 255 seconds. 0 is continually connection(unlimited connect time) 1 is disconnect after no data for 1 second. 255 is disconnect after no data for 255 seconds.

- If modem connects to several terminals by serial converter, SERIAL section shows all sub terminals of modem.
- After terminal registration, Stop service and restart.



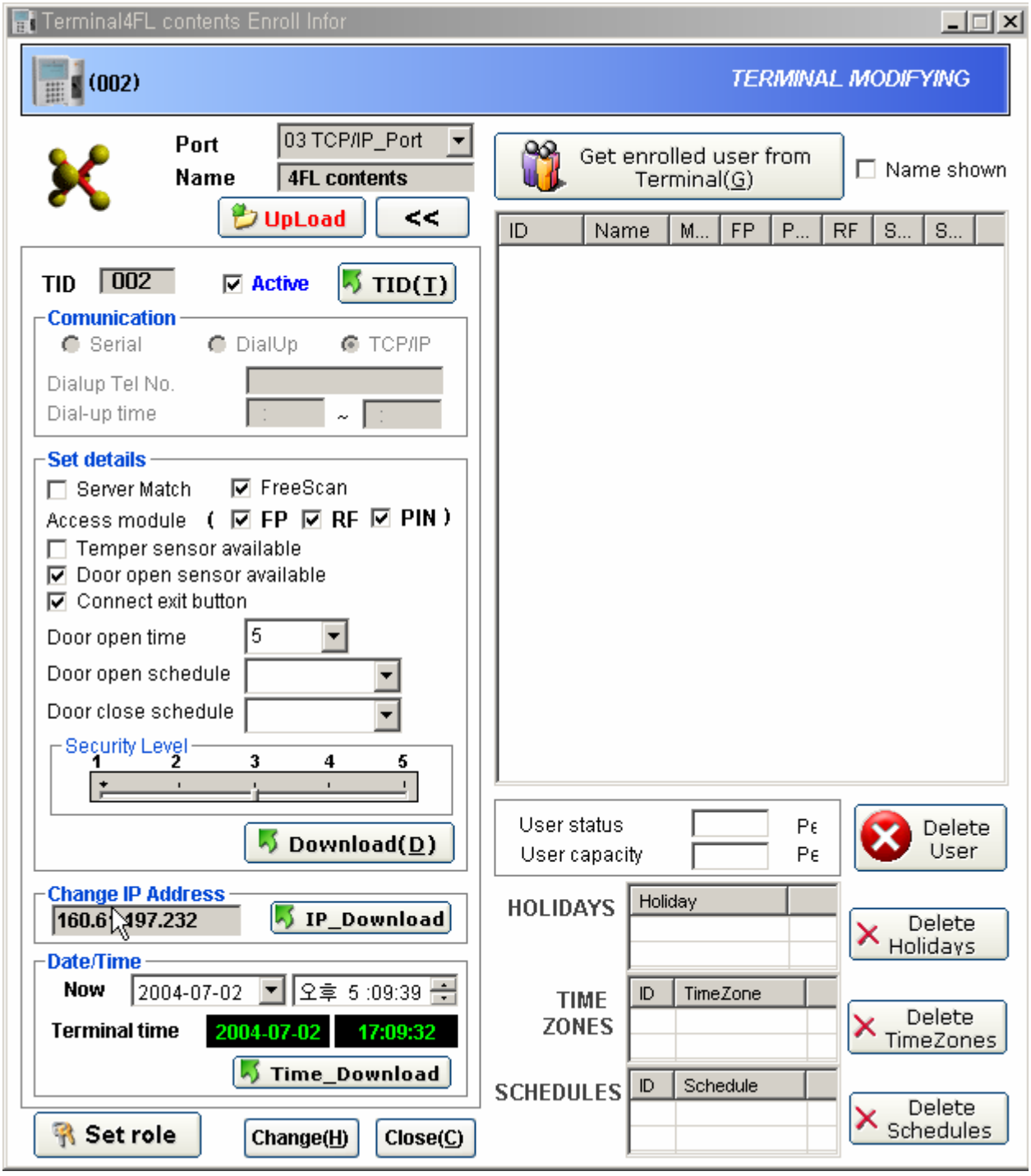
Connection of terminal

Click to enrolled terminal and appears the below window.

When server connection is well, the mark will be turning, if not, red X mark will be displayed.

If user wants to change setting value, change and click download button for changing terminal setting value.

All enrolled terminal status appears, and modification and deletion is possible by download and upload button.

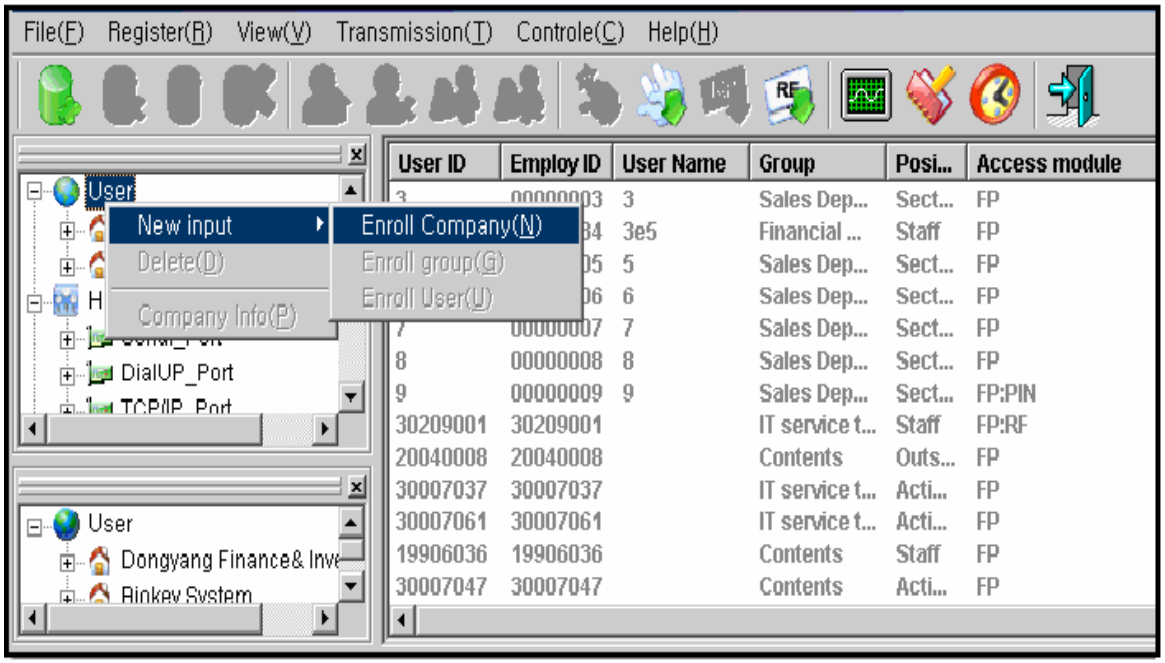


- Set details :
- Server Match is not available(plan to update this function),
- Free scan mode can set here and terminal
- Access module : possible to check here and terminal.
- Door open time : Door close after 5 seconds.
- Door open schedule : If user wants to keep opening door within given schedule time.
- Door close schedule : If user wants to keep closing door within given schedule time.
- Download : if you change any value, click Download button for applying.
- Holiday, TimeZone, Schedule is shown registered value of terminal, so if you want to apply schedule to user and terminal, it must have schedule value on terminal.

4. How to enroll User

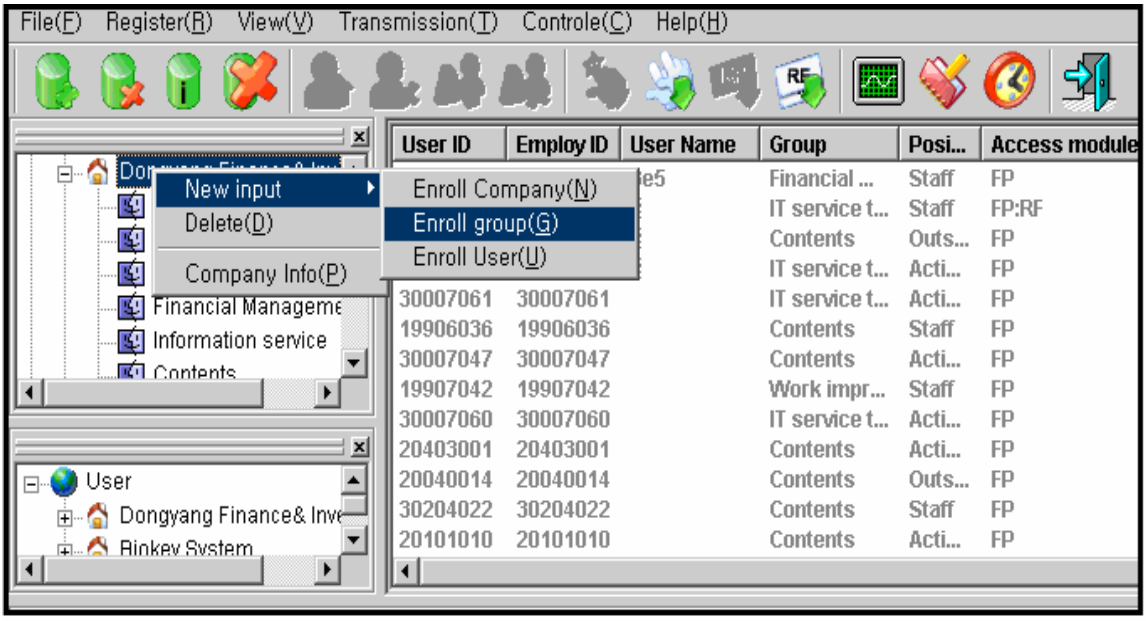
Enroll company

Select User and click the right button of mouse as the below picture or go to menu bar of stage (Register=> Company=>New).

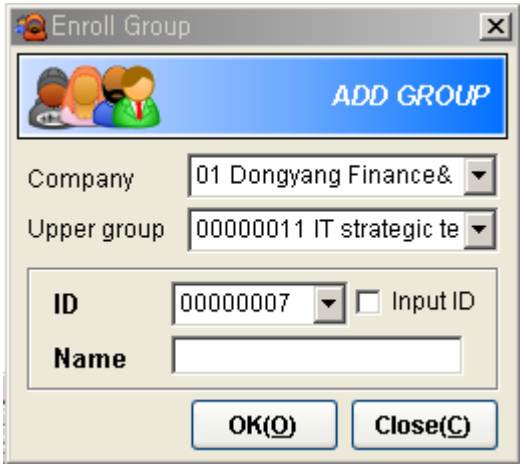


Enroll Group (Department or Branch)

After enrolled company, enroll group(Company department or branch) as sub menu of enrolled company.

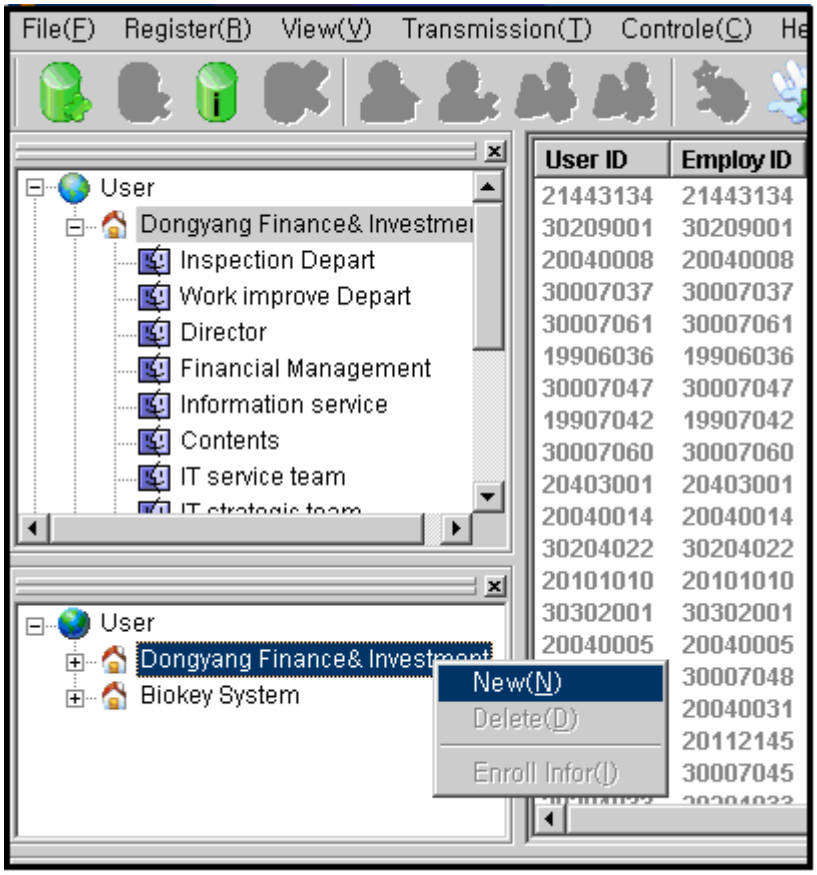


Sub group can be made under upper group.

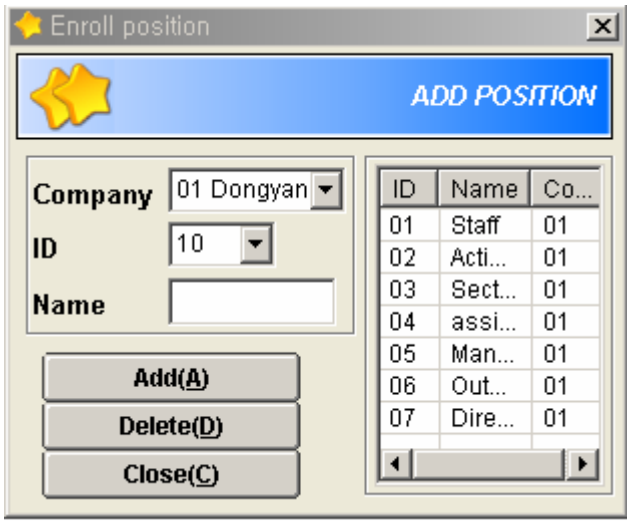


Enroll position

Select User and click the right button of mouse as the below picture or go to menu bar of stage (Register=> Position=>New)



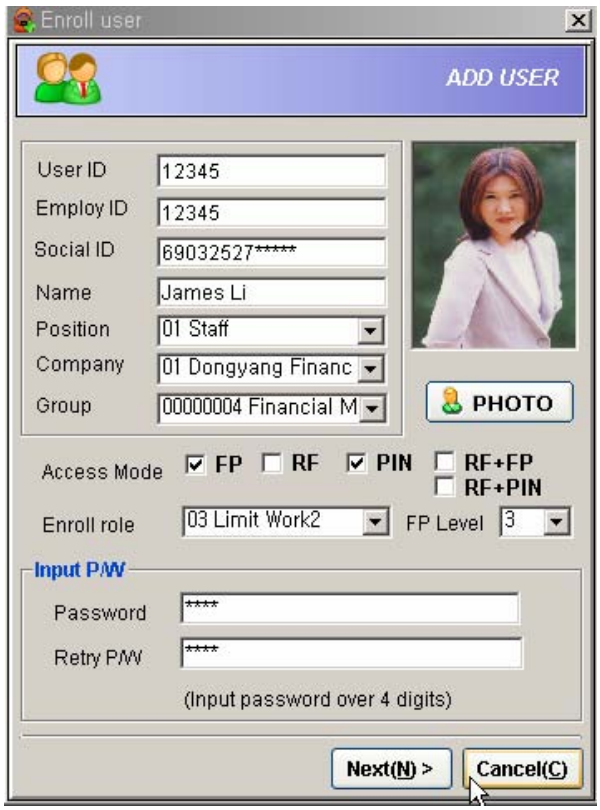
When click enroll position, this window appears. It can be enrolled by company.



Enroll User

Click the right button of mouse at selected Group or go to menu bar of stage (Register=> User=>New)

If you want to use Time & Attendance software, should select position, company and group correctly. BMP file is only available for photo upload.



When BKS-2600 scanner is connected, click “First FP enroll” button for fingerprint enrollment.

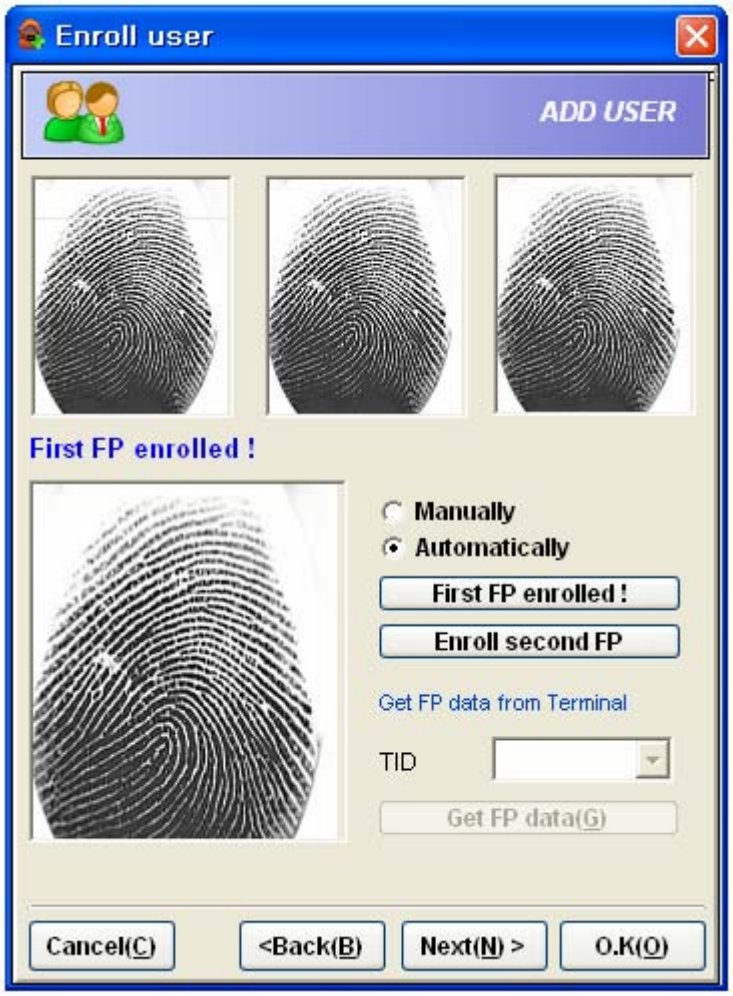
input	description
*User ID	Input User ID the range of 1~8 digit(0~99999999)
*com-ID	Company ID or employee No, 1~8(0~99999999) digit.
*User Name	Input user name
*Social No	Input user social No.
*Position	Select user position.
*Depart	Select user department
*Access mode	Select FR, RF, PIN, RF+FP, RF+PIN
*Set role	Set role by personal
Security level	Set security level by personal
Password	Input 1~8 digit(0~99999999).
Retry Password	Retry password for confirmation

- Security level

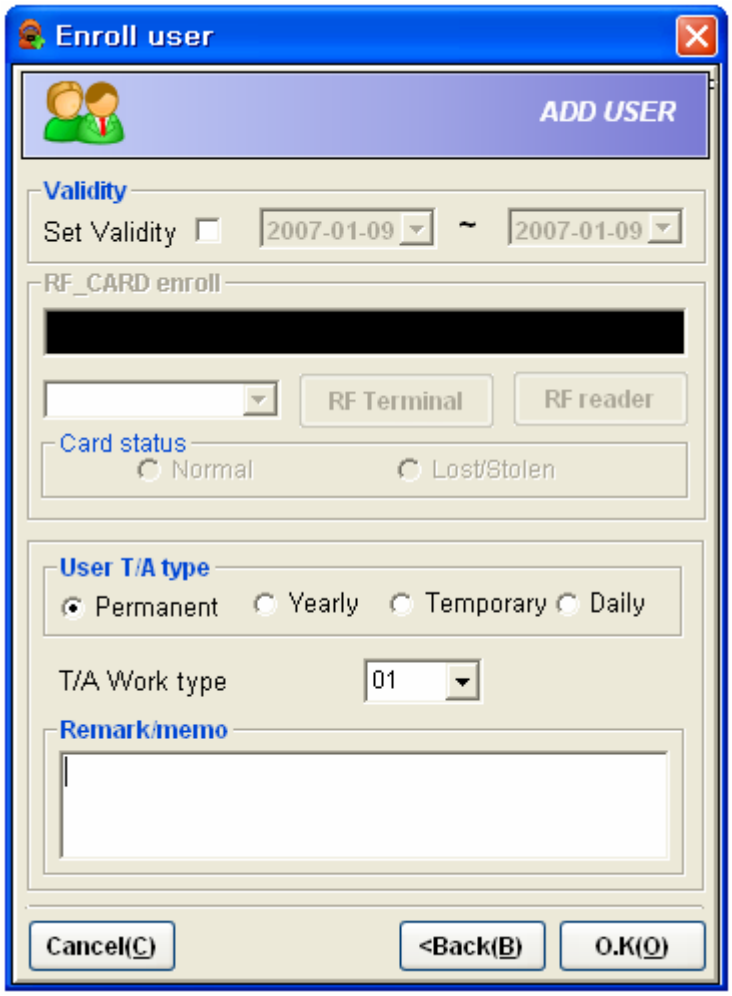
FP level	description
0	Same security level as terminal’s setting level
1	Very low
2	Low
3	Normal
4	High
5	Very high

If not, enroll in Terminal and use “Get FP data” function. Please push “Next” button after enrollment done.

- Manually : Select manually the most optimum image as to click “OK” button.
- Automatically : Select automatically the most optimum image.



This is for EM TYPEenrollment and work type for Time & Attendance. Push “OK” button after input done. Please select “User work time status” if you want to Time & Attendance software and detail information is in Time & Attendance chapter.



Input	Description
RF-CARD enroll	Enroll RF-CARD by EM TYPEcard reader.
Card status	Normal, stolen or lost
*Validity	User validity period
User type	Permanent, yearly contact, temporally, daily
User work time status	Set user work time.
Remark/memo	Record meno

Validity mean is the user usage period by set value.

This function is for transmit enrolled user data to terminal, and push “Download” button for saving on terminal.

All enrolled process is done but for using Access limit or Time & Attendance software, please see the corresponding chapter before user enrollment.

Green color : Dial-up terminal

Black color : TCP/IP, Serial

5. Set Schedule & Role

< Example of How to use >

***Group**

A Group : CEO & Executive

B Group : Administrator

C Group : Office Worker

D Group : Factory Worker- Line1

***Access permitted Area**

A Group : 1~10 (Terminal ID)

B Group : 4~10 (Terminal ID)

C Group : 4~10 (Terminal ID)

D Group : 7~10 (Terminal ID)

Group	Holiday	Working time	Access time	Access Area
A : CEO	SUN SAT	09:00~18:00	All day with Holiday	All terminals
B : Admin	NONE	09:00~18:00	06:00~22:00	TID :4~10
C : Office	SUN 2&4th of SAT 1 day of 15th	09:00~18:00 SAT : 09:00~13:00	08:00~19:00 SAT: 08:00~14:00	TID:4~10
D : Line1	SUN 3days of 10,20,30th	09:00~15:00 16:00~19:00	08:00~15:15 16:15~20:00	TID:7~10

Other conditions: National Holiday 19th , All Groups are applied to holiday

Step1

Holiday Setting

Go to the stage of “menu => Register => Schedule => Holidays”.

You can select a repeated common holiday on the schedule table.

What is repeated common holiday?

Every Sunday, Saturday

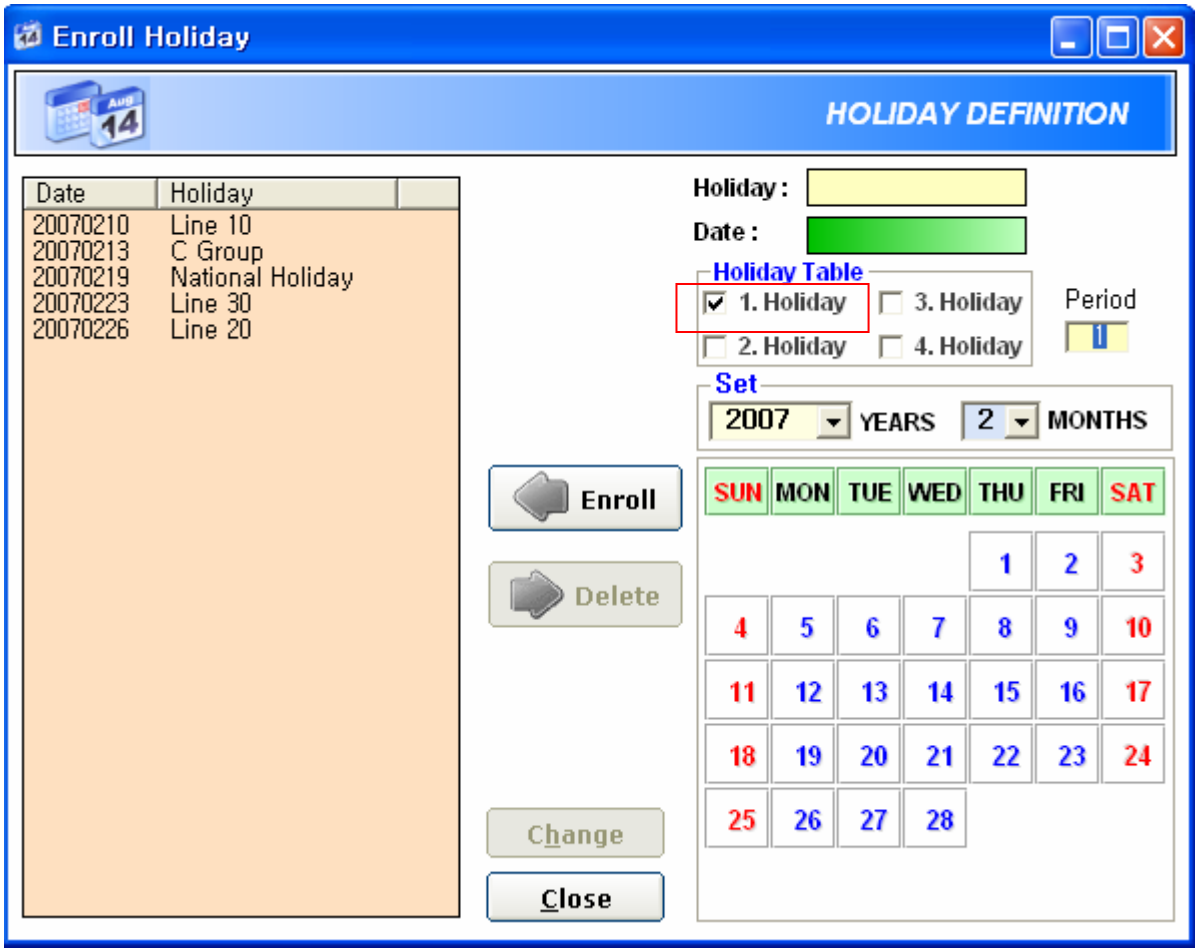
Rotating day of week like every 2nd & 4th of Saturday or every 1st of Monday etc…

You don't have to enroll on holiday list all these days.

It can be made the 3 holiday table

1. **19th => A,B Group**
2. **15th , 19th => C Group**
3. **10th , 19th , 20th , 30th => D Group**

Select date => Choose Holiday Table => Enroll



Step 2

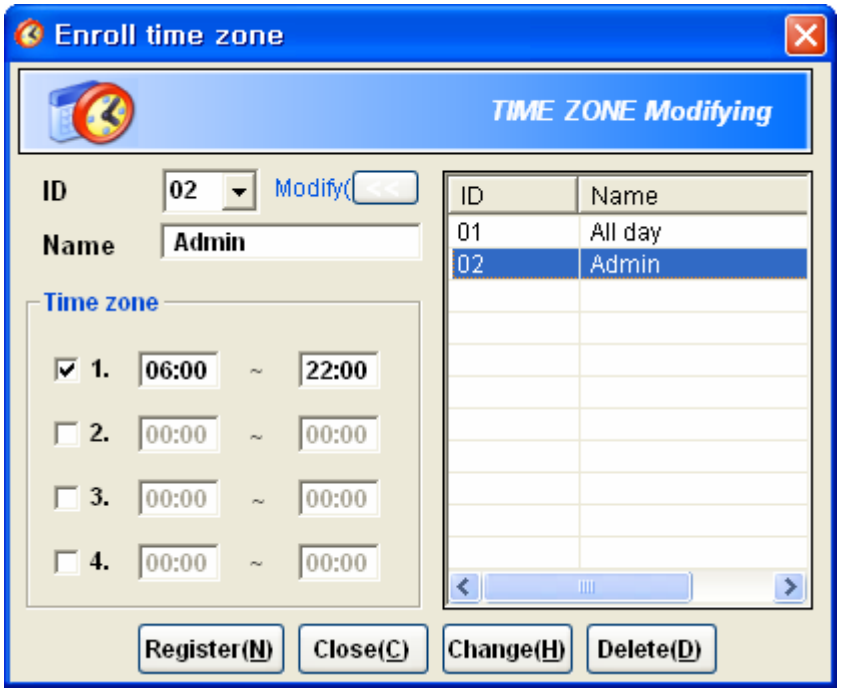
Time zone setting

Go to the stage of “menu => Register => Schedule => Time Zones.”

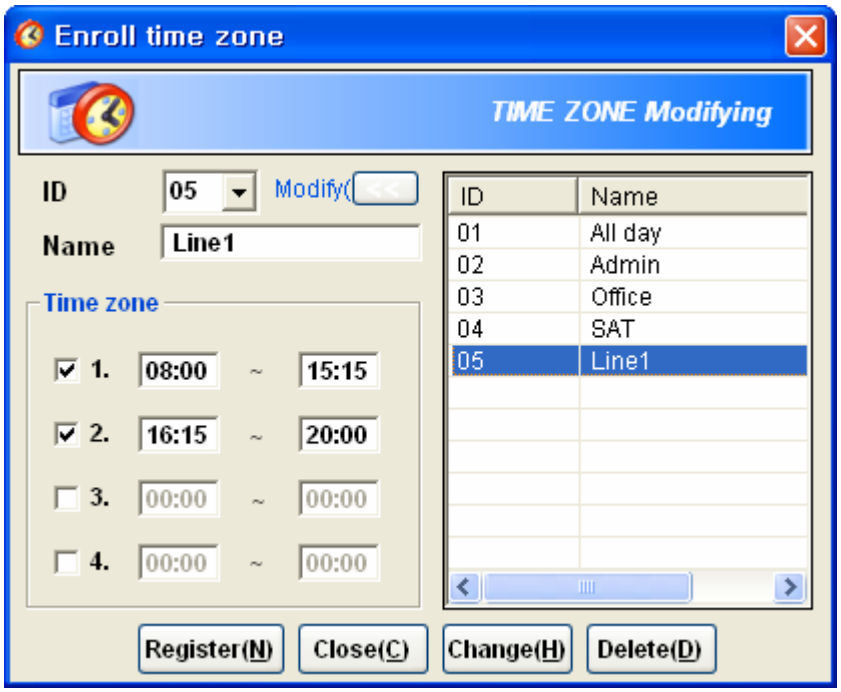
Note: You don’t need to register No entry (All day limited to enter) time zone for default value.

If the working time is 00:09~20:00, you can give one or half hours more time than working hour for early attend and late leave workers.

01 Limit Time : 00:00~00:00 => Access granted for all day
02 Admin : 06:00~22:00 => This is for B group of 09:00~18:00 working time.



03 Office : 08:00~20:00 => This is for ABC Group of 09:00~18:00 working time.
04 SAT : 0800~14:00 => This is for C Group of Saturday 09:00~13:00 working time.



05 Line : 08:00~15:15, 16:15~20:00 => This is for D group of 09:00~19:00 and 15:00~16:30 Break time.

Totally 5 different time zones are required for it.

Step 3

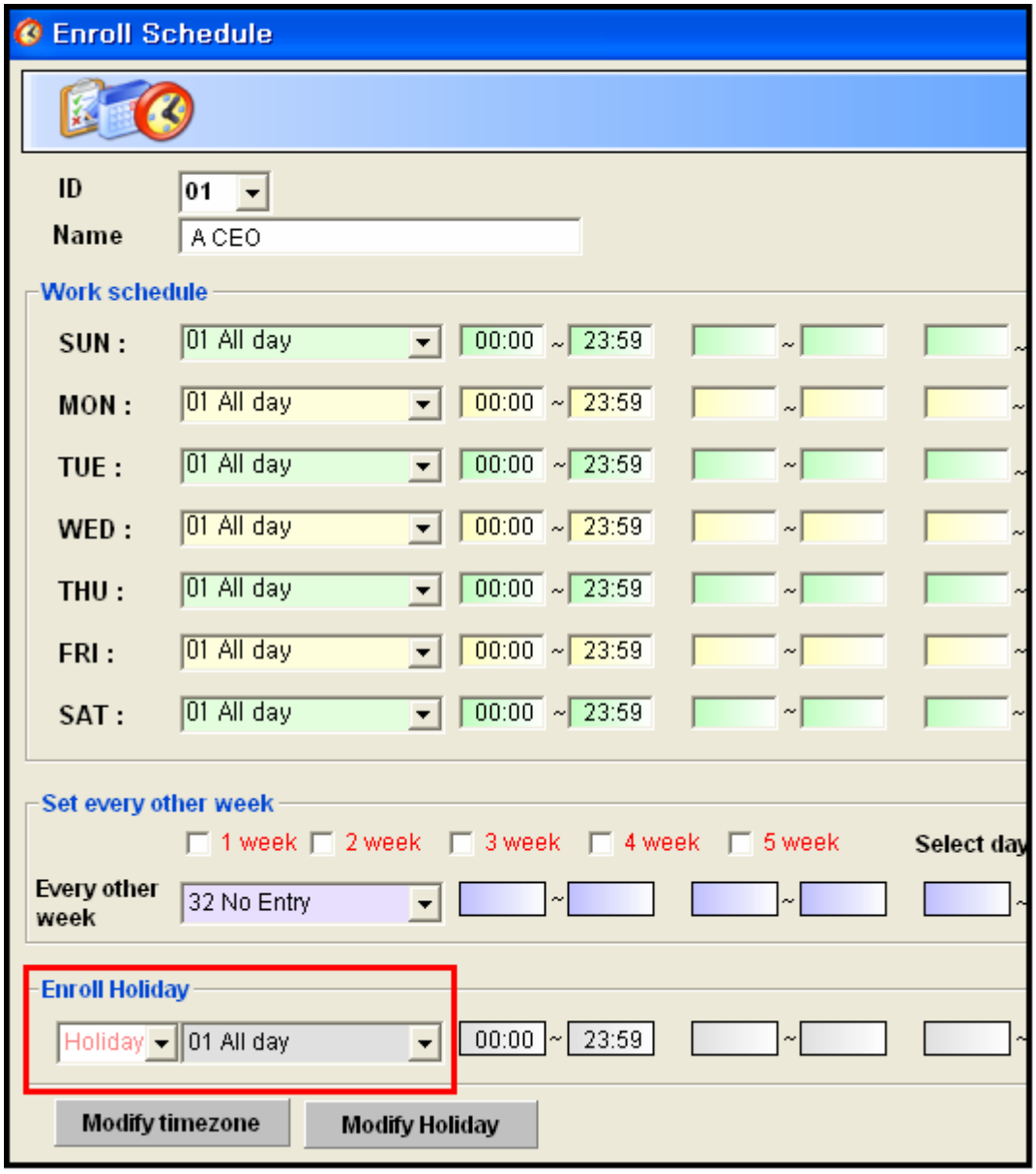
Schedule

Go to the stage of “menu => Register => Schedule => Schedules”.

A Group setting => Access All day

Select “01 All day” for every setting.

Please be careful of “Enroll Holiday” should be set “Holiday1” and select “01 All day”



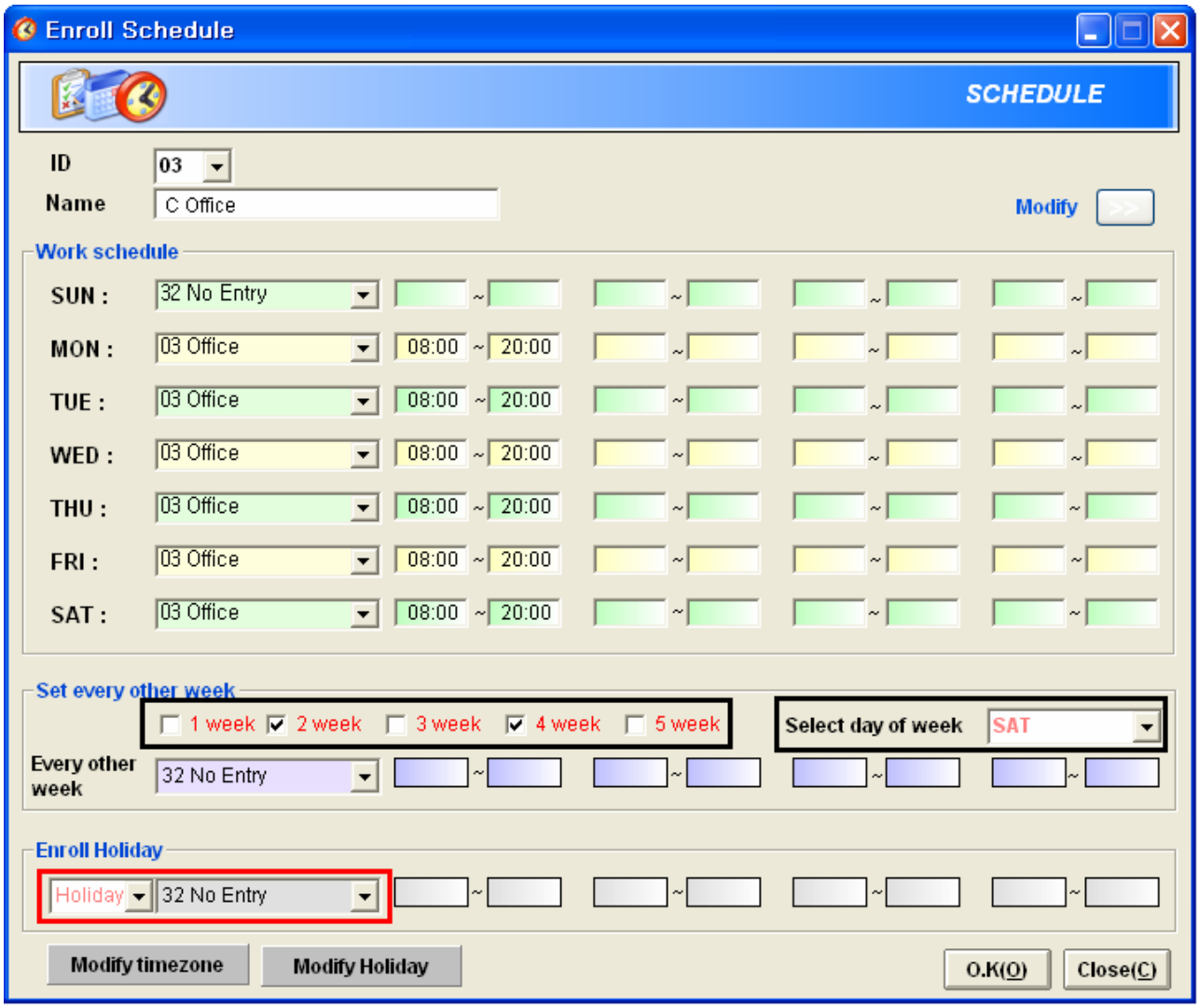
C Group setting

Please be careful of 2nd and 4th Saturday holiday setting and select “32 No Entry” for Sunday.

Week : 03 Office time zone

Set every other week : check 2nd &4th of Saturday and select “32 No Entry”

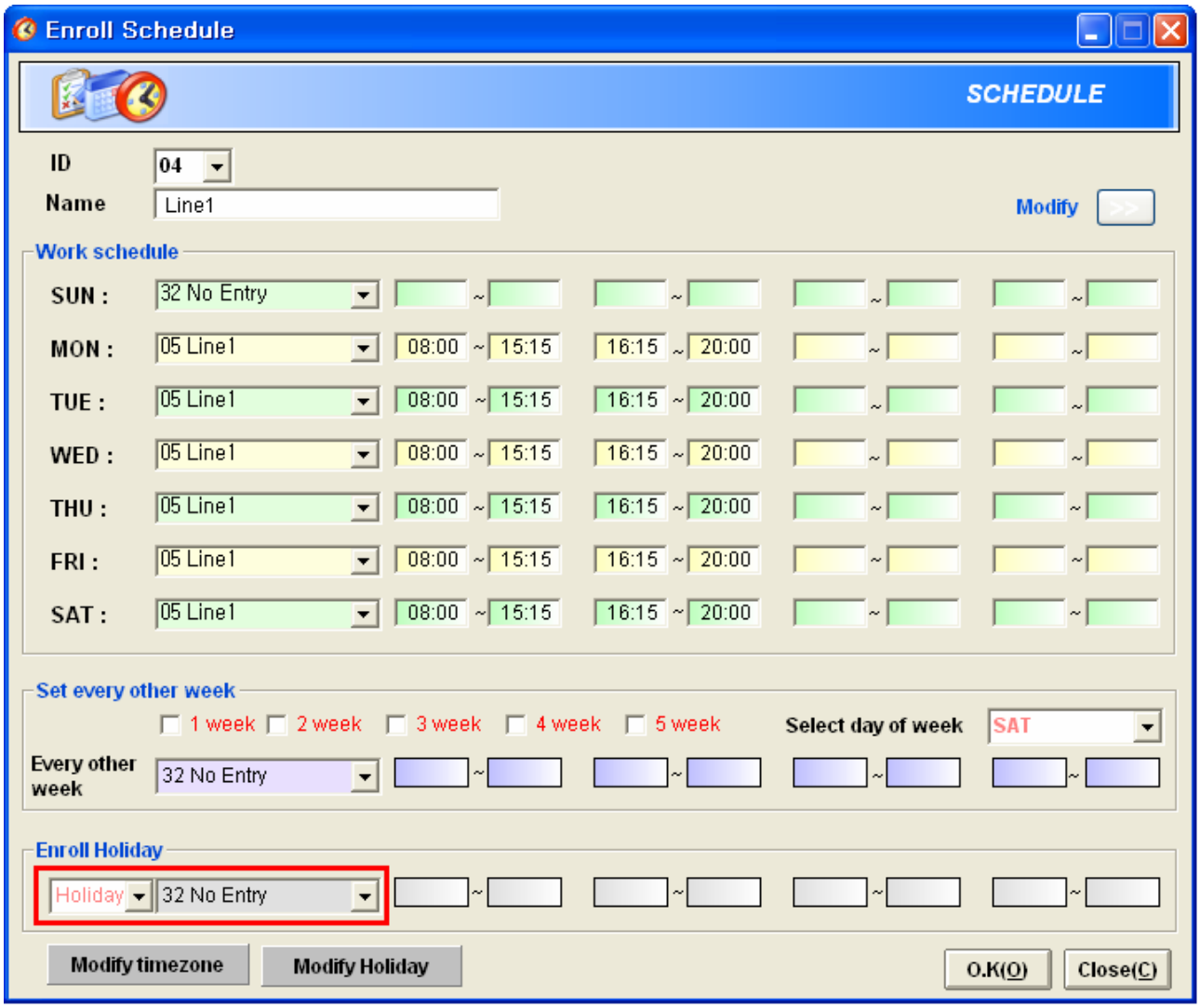
Enroll Holiday : Select “Holiday02” and “32 No Entry”



D Group setting

Holiday : Select “Holiday3” and “32 No Entry”

Sunday : Select “32 No Entry”.



All schedules are set as 4 different schedule ID using by time zone and holiday.

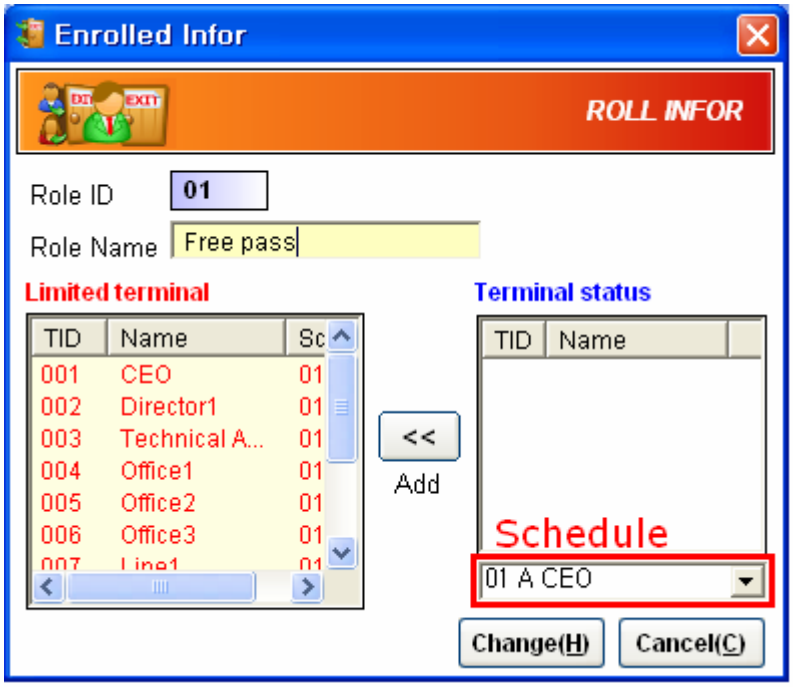
Step 3

Role setting

Go to the stage of “menu => Register => Role => New”.

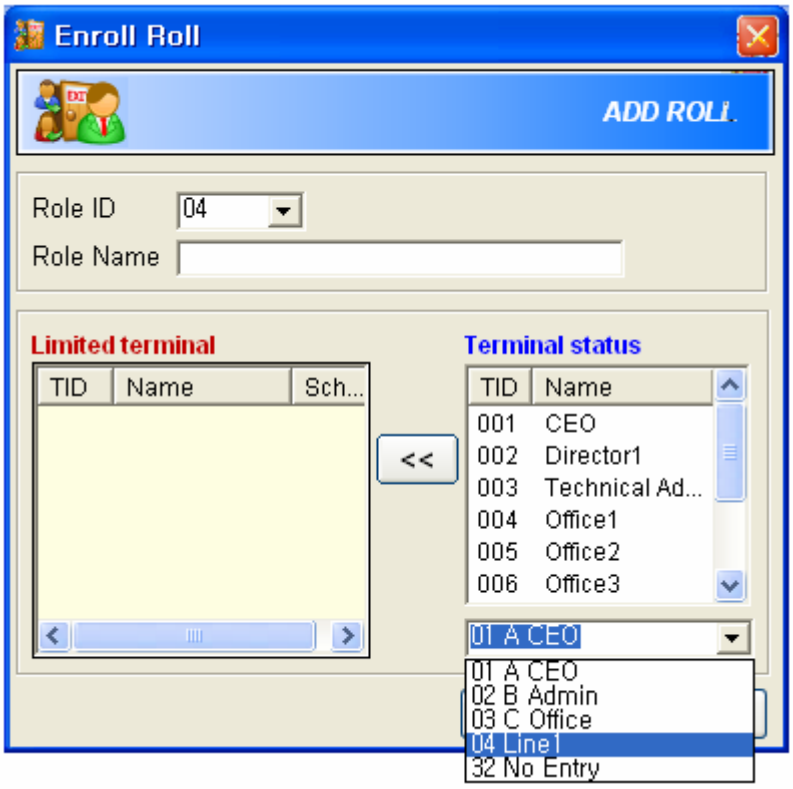
The role setting makes easy access control for several terminals together.

A CEO can pass any door so first you select “01 A CEO” schedule and then add applied terminals. CEO group can pass any door so select all terminals.



D Line1 group can pass 7~10 terminals only, **first select "04 Line1" and add 007~010 TID to Limited terminal field.**

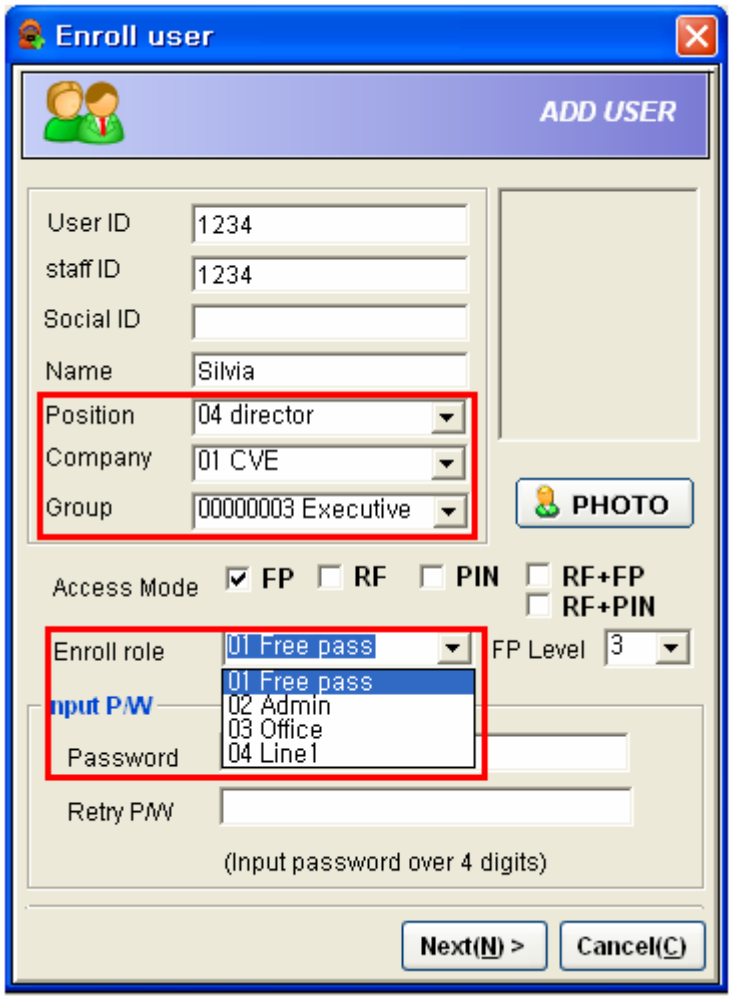
001~006 terminals: Select "32 No Entry" and then add to limited terminal field.



Step 4

Apply to user registration

Position : Director applies for“01 Free pass” role



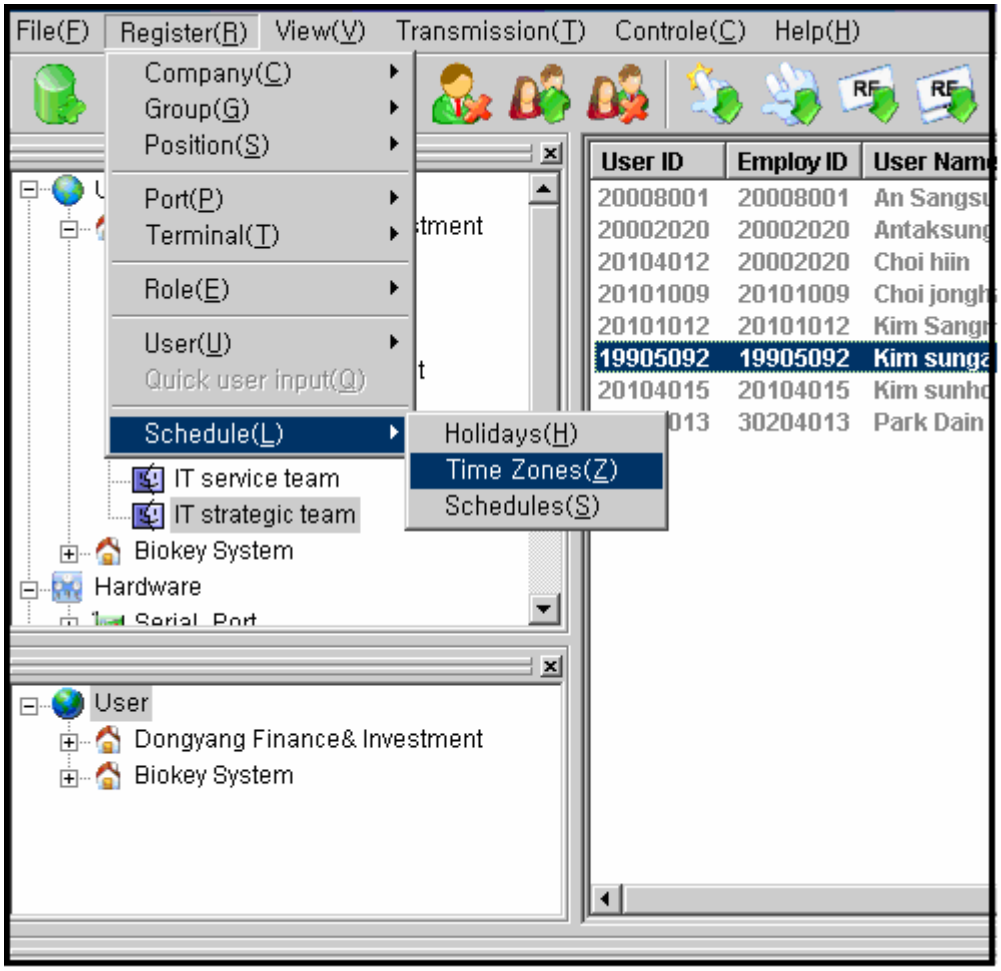
5.1Set Schedule

If terminal uses for Access control, it should be set correctly.

This software makes you manage the weekly schedule and base of Role function together.

5.1.1Set Holiday

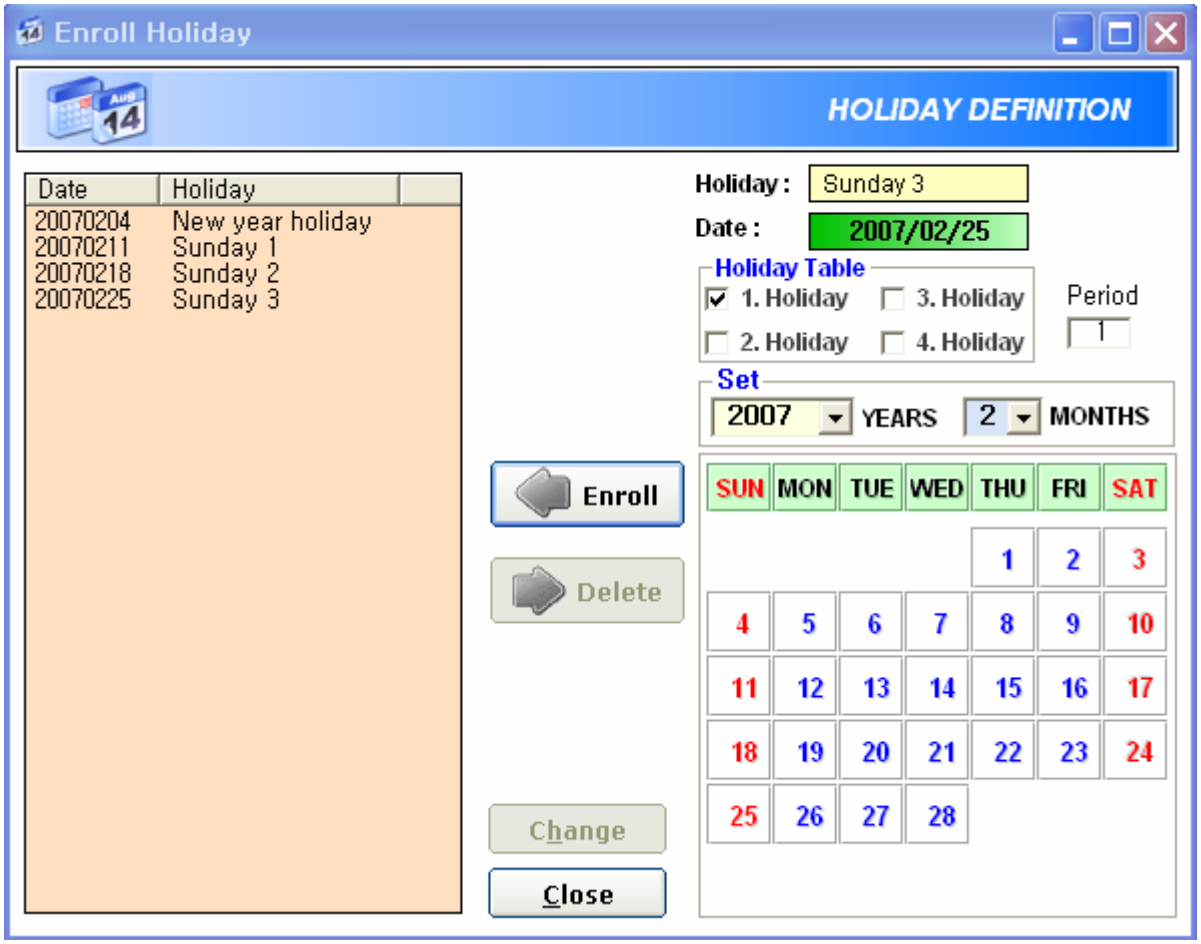
Go to the stage of (Register=> Schedule=> Holiday)



The below window appears when push “Holiday” of menu

Holiday table is initially set as “1 Holiday” is for dividing holiday type.

For example, Type 1 is for Sunday, Type 2 is for National Holiday, Type 3 is for Company day off and if 4th of July is including Sunday and National Holiday, please check “1 Holiday” & “2 Holiday”.



Holiday Table section

(EXAMPLE)

"A" group holiday => All Sunday and Saturday

"B" group holiday => All Sunday

"C" group holiday => All Sunday and 3 days of 10, 20 and 30th

EX) "A" group is day off all Sunday and National Holiday

"B" group is day off all Saturday and National Holiday.

"C" group is day off 10,15,20,15,30.

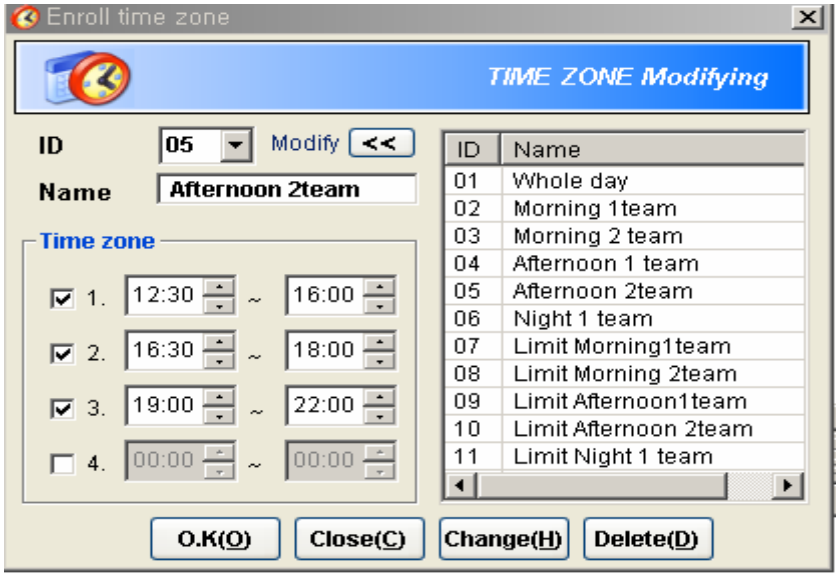
So you can make Holiday 1,2,3 by worker schedule.

For falling on day, check included schedule. For example "A" &"B" group has same holiday as National Holiday. If it is 6th of July, click and select "1,Holiday" & "2.Holiday" together.

5.1.2Set Time Zone

Go to the stage of (Register=> Schedule=> Time Zones). And the below window appears.

.Input Name and Time Zone**. It can be input 4 times a day (0 ~ 23:59)**.



For easy comprehension, time zone is divided by working group time as like Morning 1 team & 2 team, Afternoon 1 team & 2 team and Night 1 team.

EX) Whole day : 00:00~24:59

Morning 1team working time : 06:00~ 16:00

Morning 2 team working time : 07:00~10:00, 13:00~19:00

For setting value of time zone.

Morning 1 team : 05:00~17:00

Morning 2 team : 06:00~11:00, 12:00~20:00

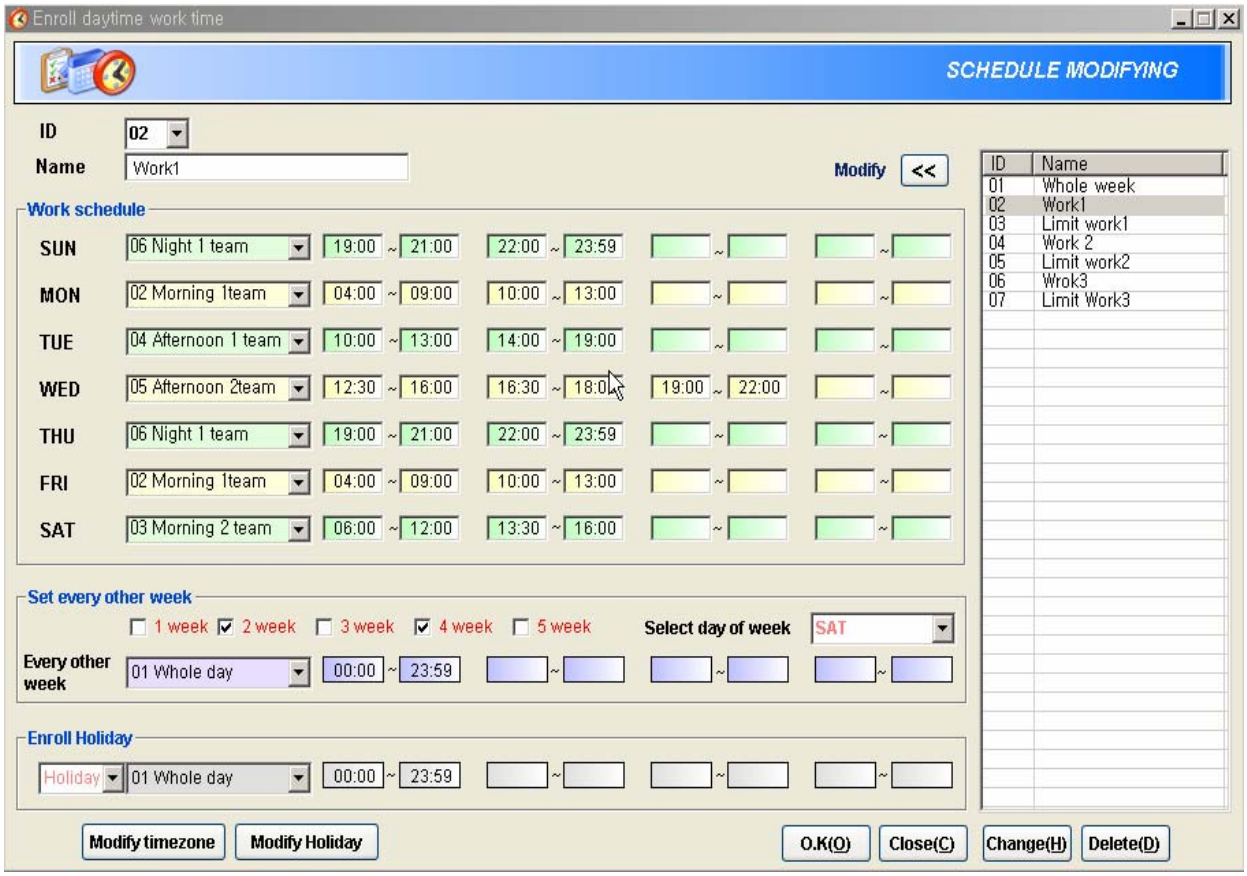
You should consider of time gap for enter company and leave company around 30 min~1 hour.

5.1.3Set Time Schedule

After set time zone, set weekly time schedule.

“Set every other week” is for fixed day off, it gets an advantage over the Holiday.

”Enroll “Holiday” should be sleeted of Holiday type and time set by time zone.



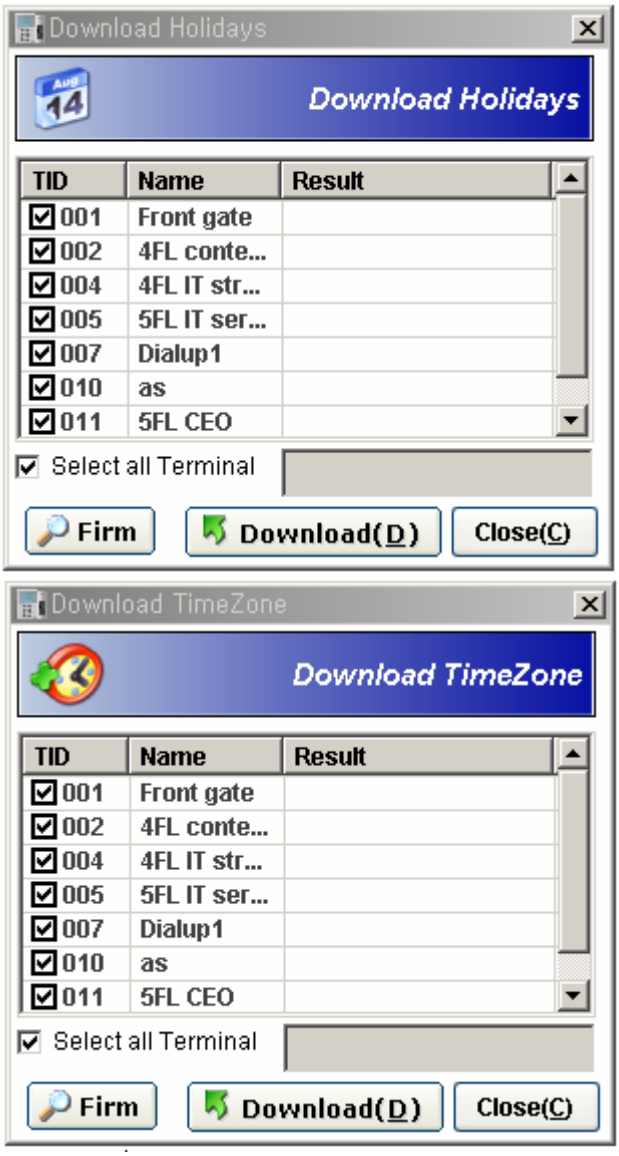
- Access control time : Please see the above picture. Sunday Night 1 team only can enter the door during set time(19:00~21:00, 22:00~23:59). When worker try to enter except set time(00:00~18:59, 21:01~21:59), access denied with authentication failed message appears
- Set every other week : This function is for company extra settled day off every other week. For example, “A” company is day off 2,4 Saturday. If you want to give value whole day close door, give time value to 00:00~00:01 or 23:58~23:59.
- Enroll Holiday : Please remember Holiday setting and give holiday value. And select one time zone. For example, you want to open only day time during Holiday, set as 10:00~16:00 or just close whole day set as 00:00~00:01 or 10:00~10:01 (Minimum time gap is 1 min)

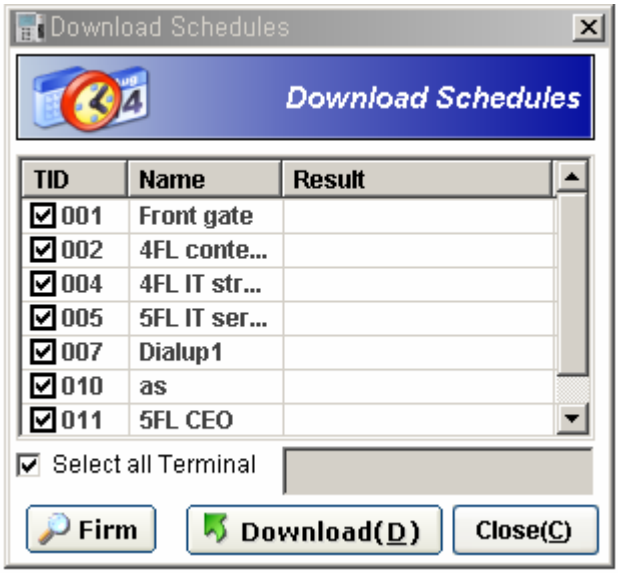
5.2Transmit Schedule to terminal

For use of Schedule & Role function, all record should be sent to selected terminal as to click the "Download" button of the window to be shown after saving.

The below window automatically appears when all process finished.

Without transmit to terminal, schedule and role functions can't apply.





* Green Color is DialUp connection terminal.

* Black Color is TCP/IP and Serial terminal.

5.3Role

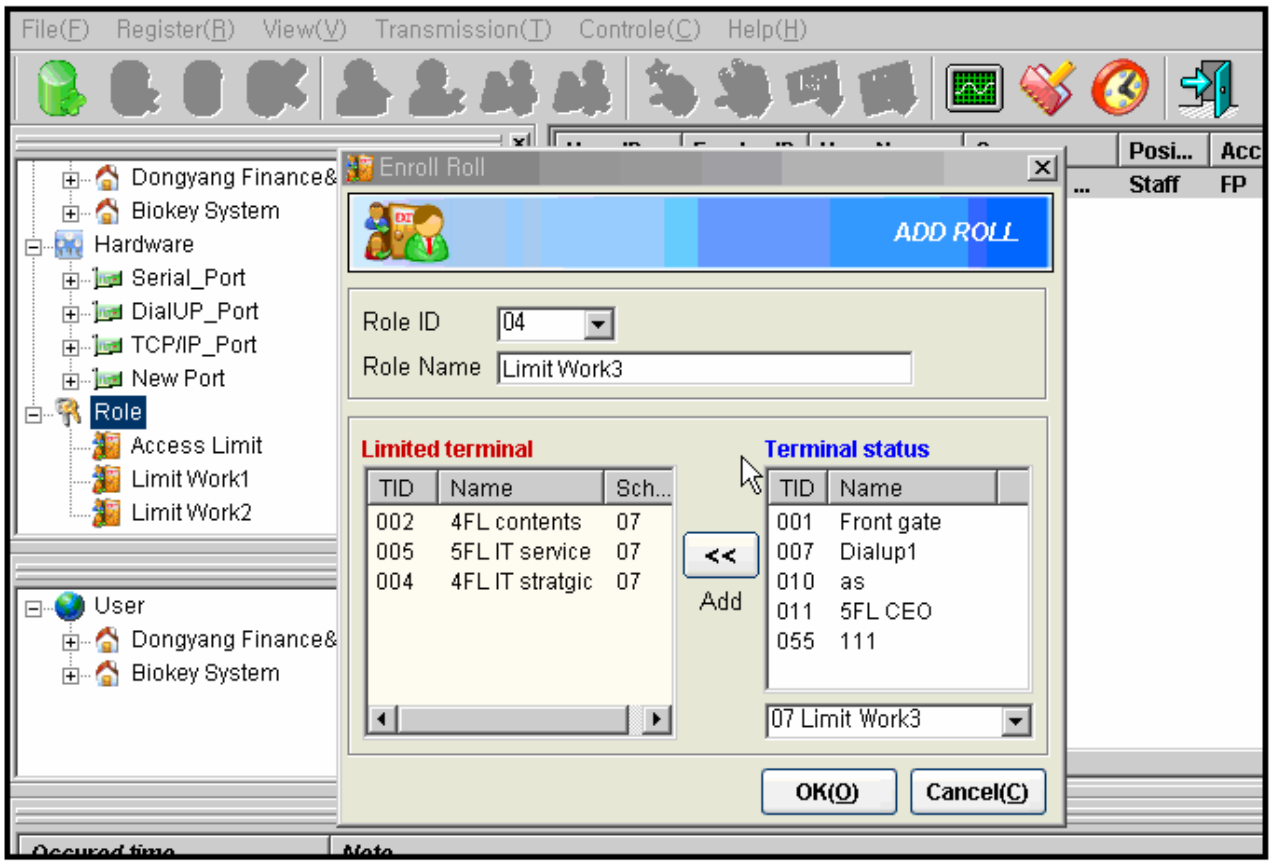
Select Role and click the right button of mouse as the below picture or go to menu bar of stage (Register=> Role=>New).

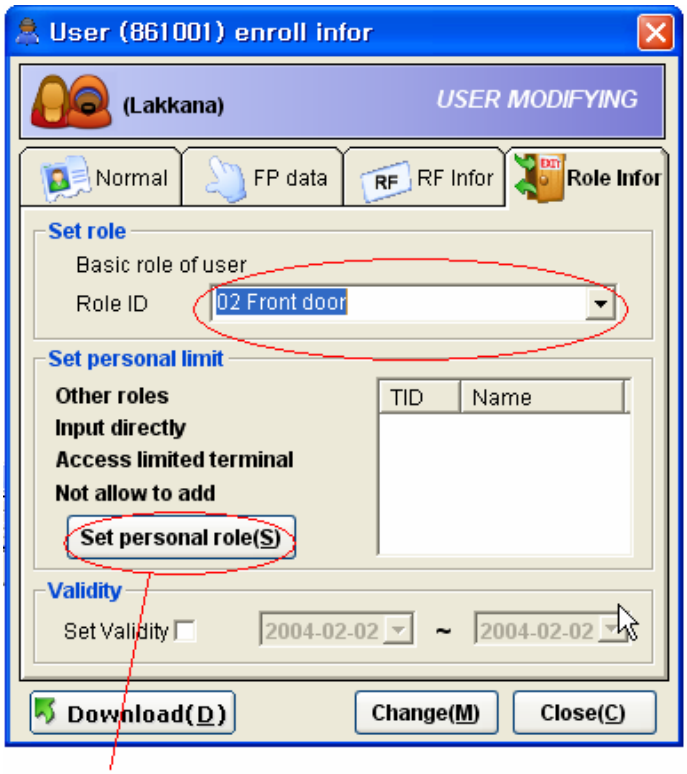
First, give Role Name and select on enrolled Schedules of above “OK” button.

Second, Select terminals to be applied.

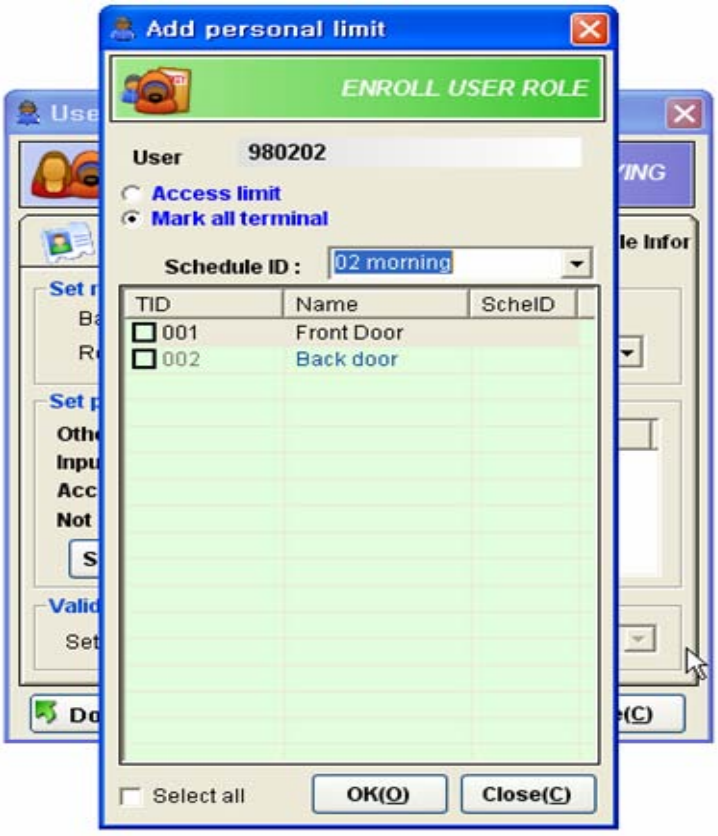
Third, push “OK” button for saving.

Apply for each user, please select “Enroll role” on process of “Enroll User”


File(F) Register(R) View(V) Transmission(T) Controle(C) Help(H)
Dongyang Finance&
Biokey System
Hardware
Serial_Port
DialUP_Port
TCP/IP_Port
New Port
Role
Access Limit
Limit Work1
Limit Work2
User
Dongyang Finance&
Biokey System
Enroll Roll
ADD ROLL
Role ID
04
Role Name
Limit Work3
Limited terminal
TID Name Sch...
002 4FL contents 07
005 5FL IT service 07
004 4FL IT stratgic 07
<<
Add
Terminal status
TID Name
001 Front gate
007 Dialup1
010 as
011 5FL CEO
055 111
07 Limit Work3
OK(O)
Cancel(C)
Posi...
Acc
Staff
FP
Occured time
Note



If this user doesn't include any set Role ID, give Role personally.



Check TID and click ”OK” button set personal limit.

5.4 Schedule control layout

Holiday : 4 different holiday setting

Time Zone : 4 different time zone a day

Time Zone enrolled ID : 32 time zones are possible

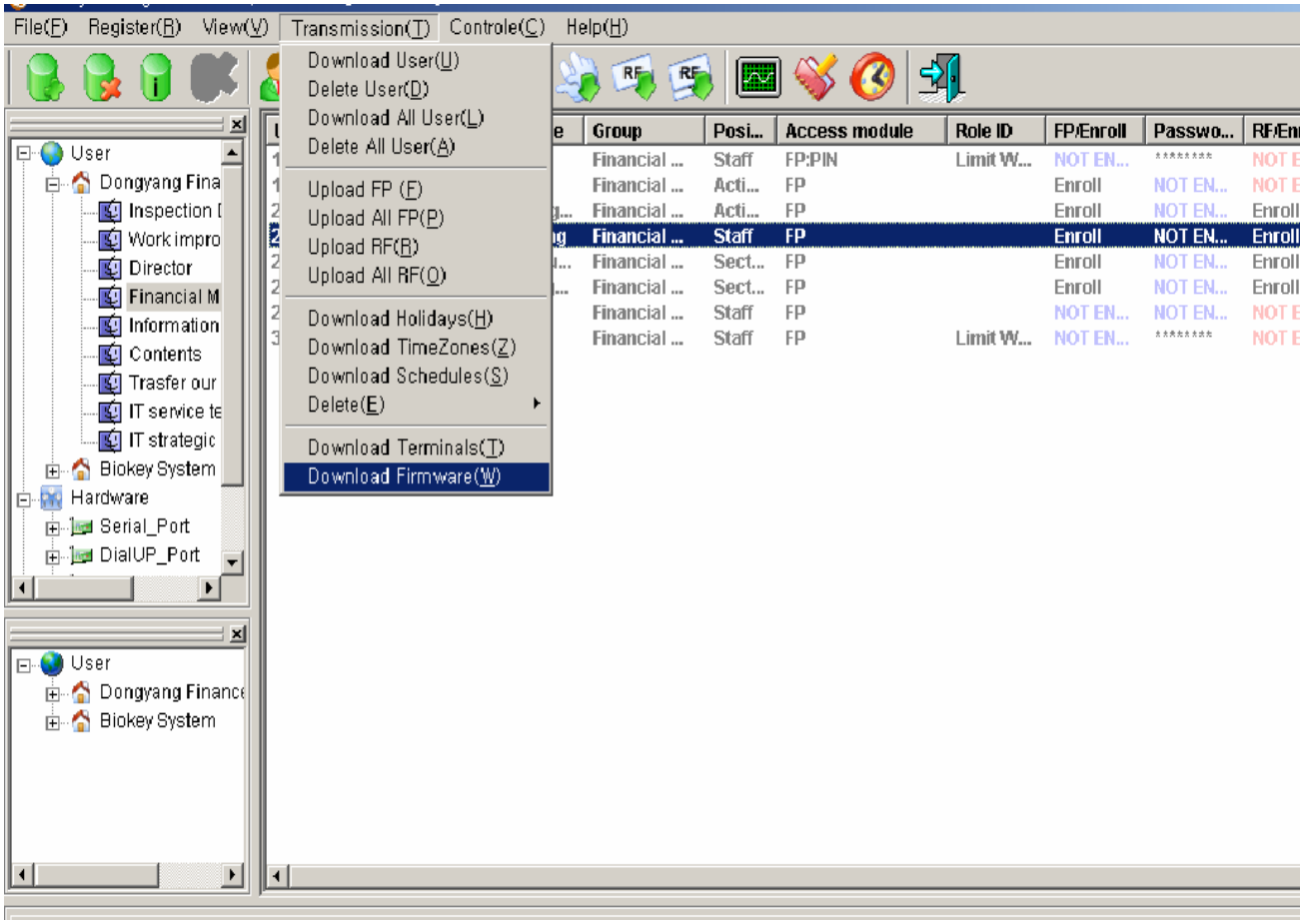
Schedule enrolled ID : 32 schedules are possible

You can management various schedule of access control.

6. Transmit

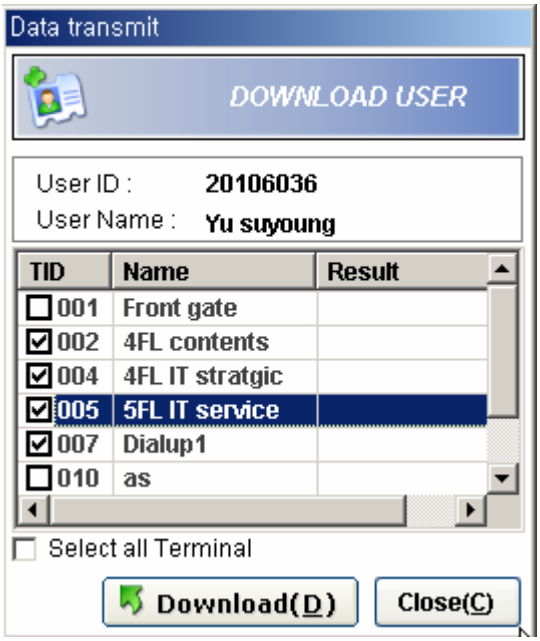
6.1 Download & Upload

Go to the process of “Transmission” of menu bar. “Download” means “ sending data to terminal” and “Upload” means “ Get data from terminal”.



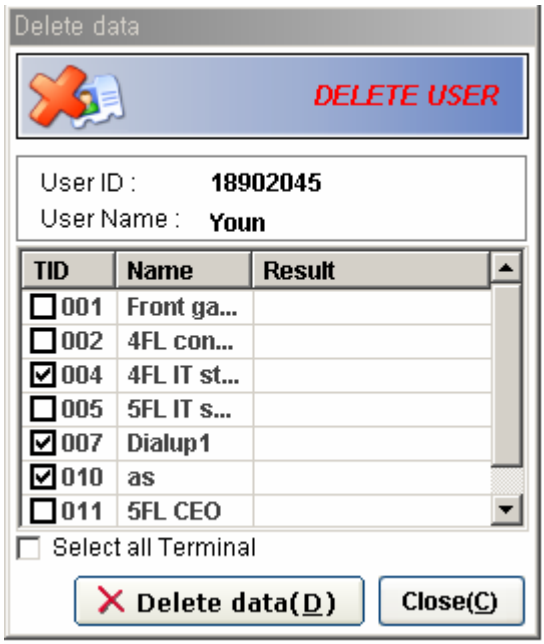
6.1.1 Download User

This is for transmit selected user data to terminal. First, it should select one user to be transmitted.



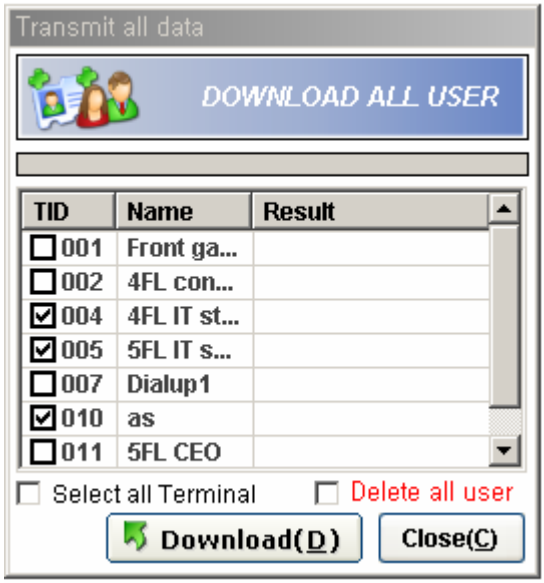
6.1.2 Delete User

This is for deletion of selected user data from terminal. First, it should select one user to be deleted.



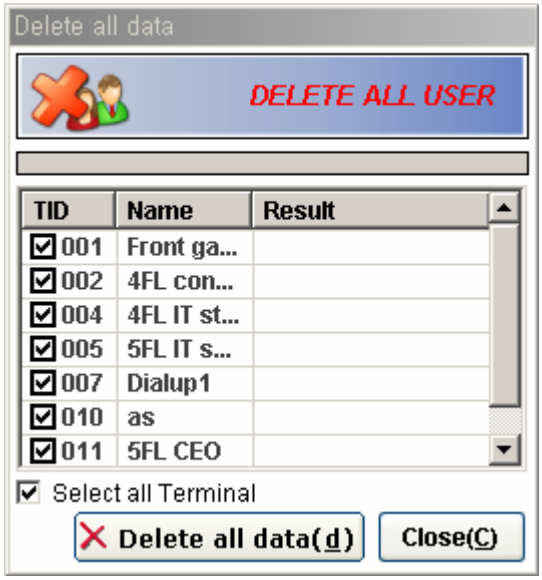
6.1.3 Download All user

This is for transmit all user data of selected group or company to terminal. First, it should select one group or company to be transmitted.



6.1.4 Delete All user

This is for deletion of all user data from terminal.



6.1.5 Upload FP and RF

This is for get Fingerprint & EM TYPEdata stored in Terminal.

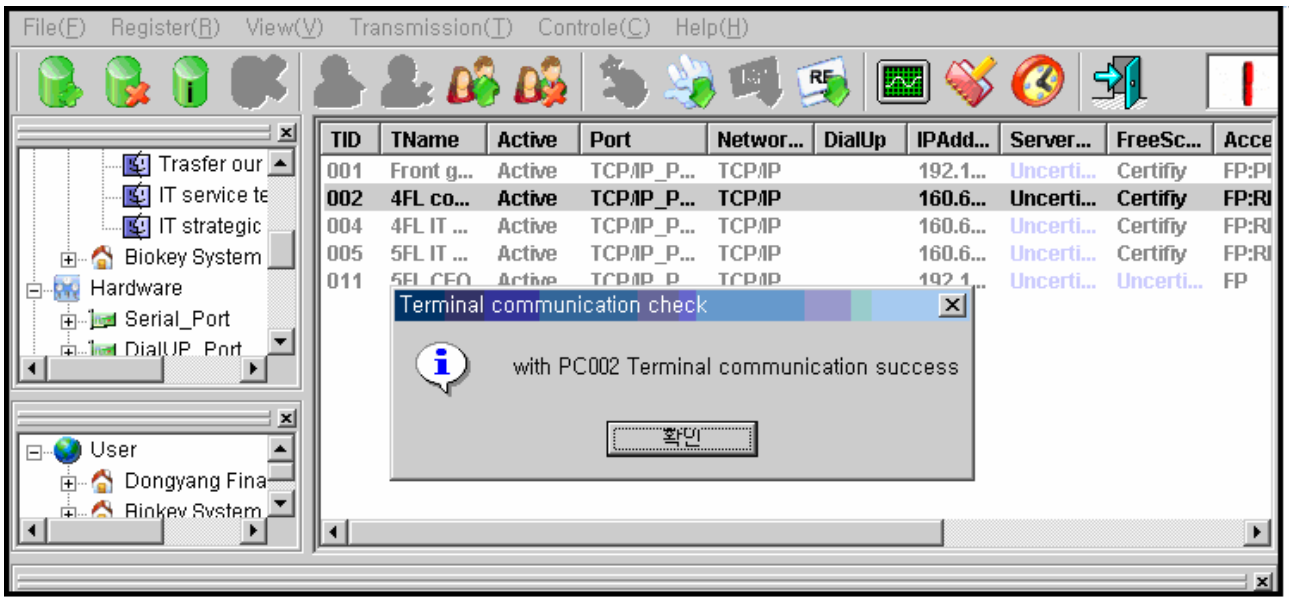
The data modify by User ID.

6.1.6 Download and delete Schedule

Enrolled schedule should transmit to terminal, if not, schedule function not works.

6.1.7 Download terminal

This is for checking terminal status.

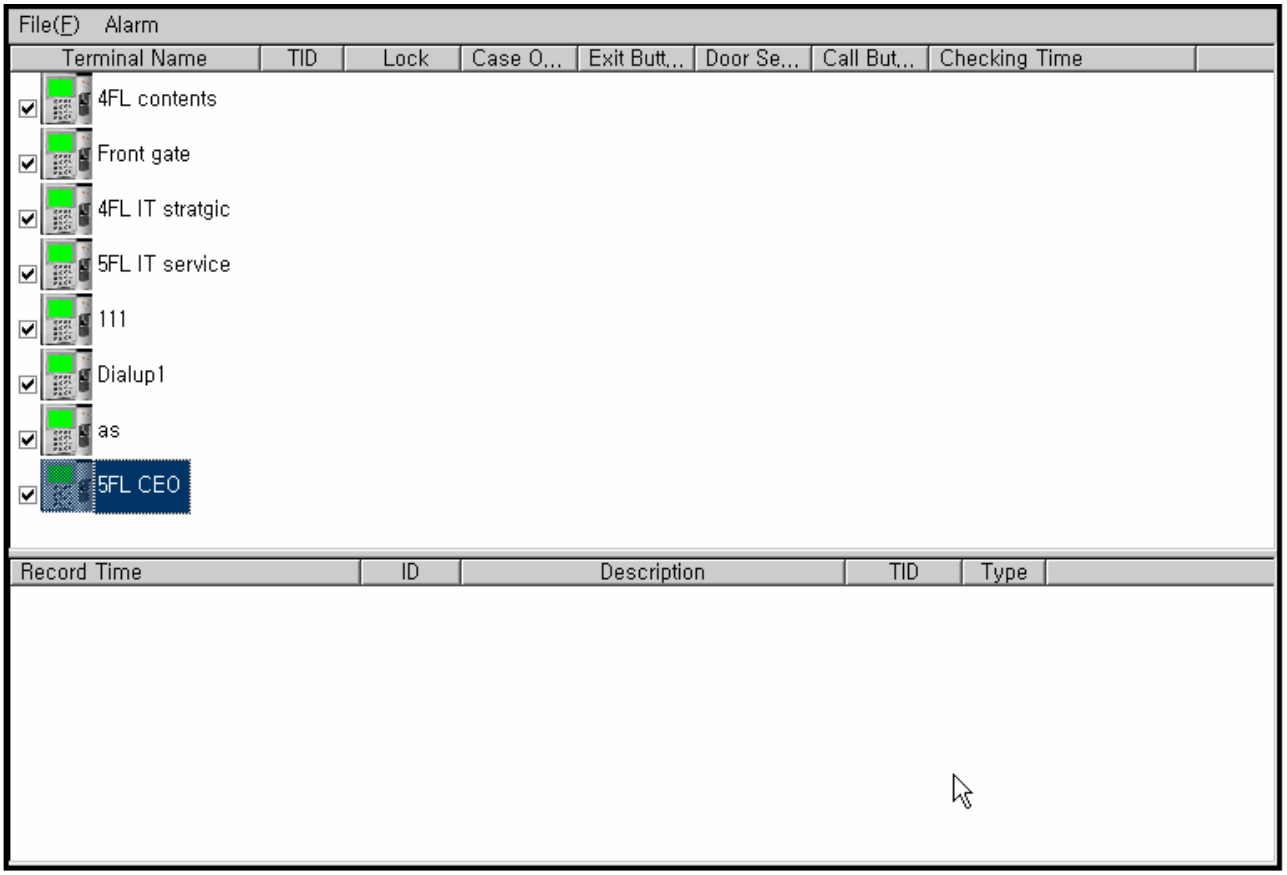


6.1.8 Firmware update

- Supported binary file named “＊＊＊.bin” by Console System, input to “C:/program/Console” folder and run Console Manager. Select “Control-> Update firmware” of tool bar.
- As to show of patch by Console, click it and wait till small window appears.
- Click the message and close the window.
- Please reset the terminal.

7 Monitoring

- After install Console Manager, run as to click icon ‘Monitoring’.
- It can real-time monitoring of Lock, case open, exit button door sensor and call button.
- The below part is shown the terminal and log record at real-time.
- When administrator wants to be off the alarm sound, select ‘Alarm’ of menu bar.

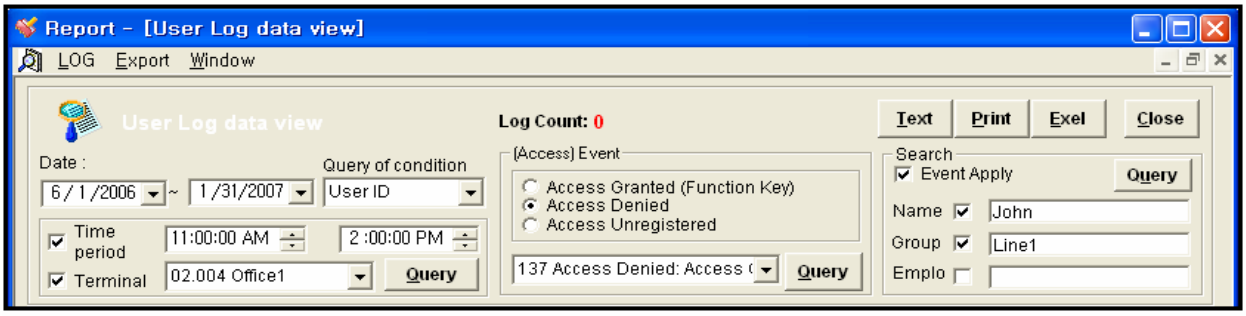


8 Report

<How to use Report>

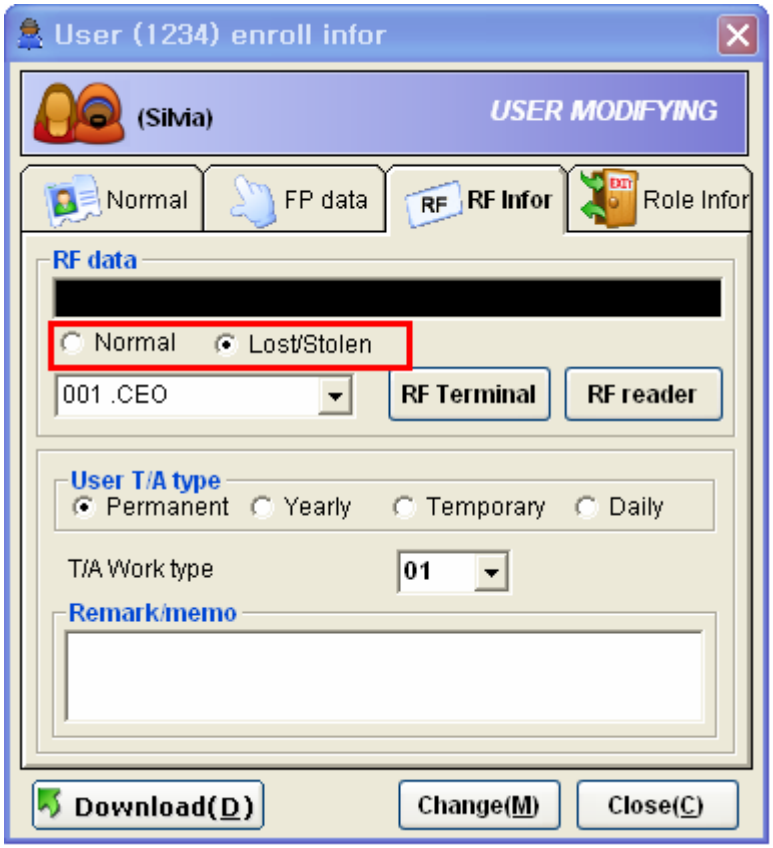
Search a person the following conditions

Name : John Smith
Group : Line 1
Date : 6/1/2006 ~ 6/31/2006
Time : AM11:00~ PM02:00
Terminal : Terminal 004
Purpose : John Smith tried to access the terminal 4 for the above time, even though he doesn't be allowed to enter this time by schedule.



After choose Access Denied of Event section, it is listed many event ID.

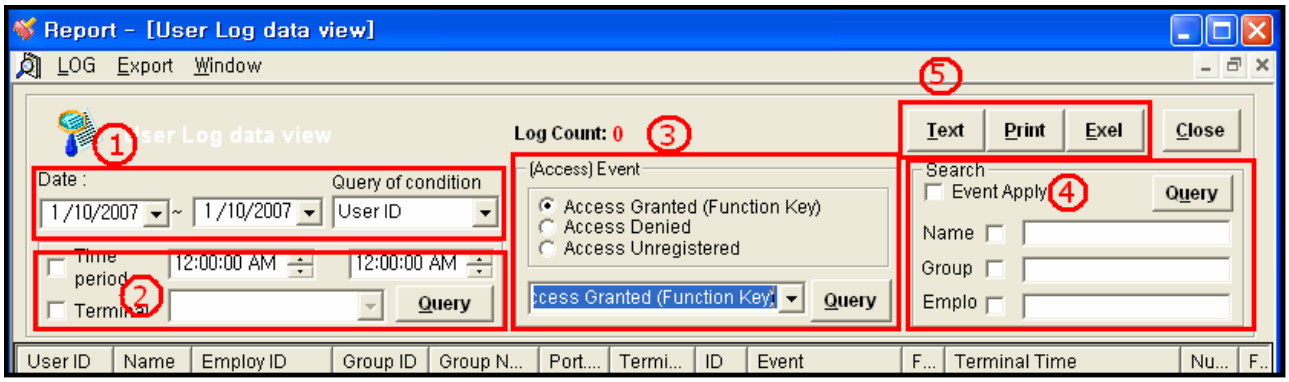
137 Access Denied : Access Control => Denied by schedule and role function
146 Access Denied : Lost Card => Denied by lost and stolen card on user information.



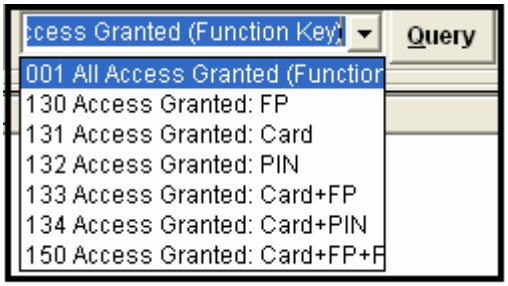
8.1 User log data view

User log data view is set as default window.

This is for user event log record by set period as to push “Query” button.



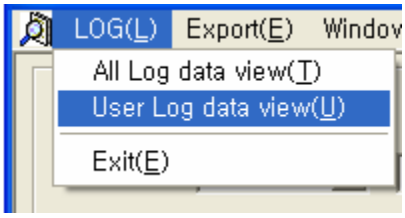
1. Date : Select the period of date and choose the priority query condition on the scroll list.
2. Time period and Terminal : it can make more details of searching under result of ①.
3. Access Event : It can be searched by log event type as Access Granted, Access Denied, Access Unregistered. After done it, select details by granted method.



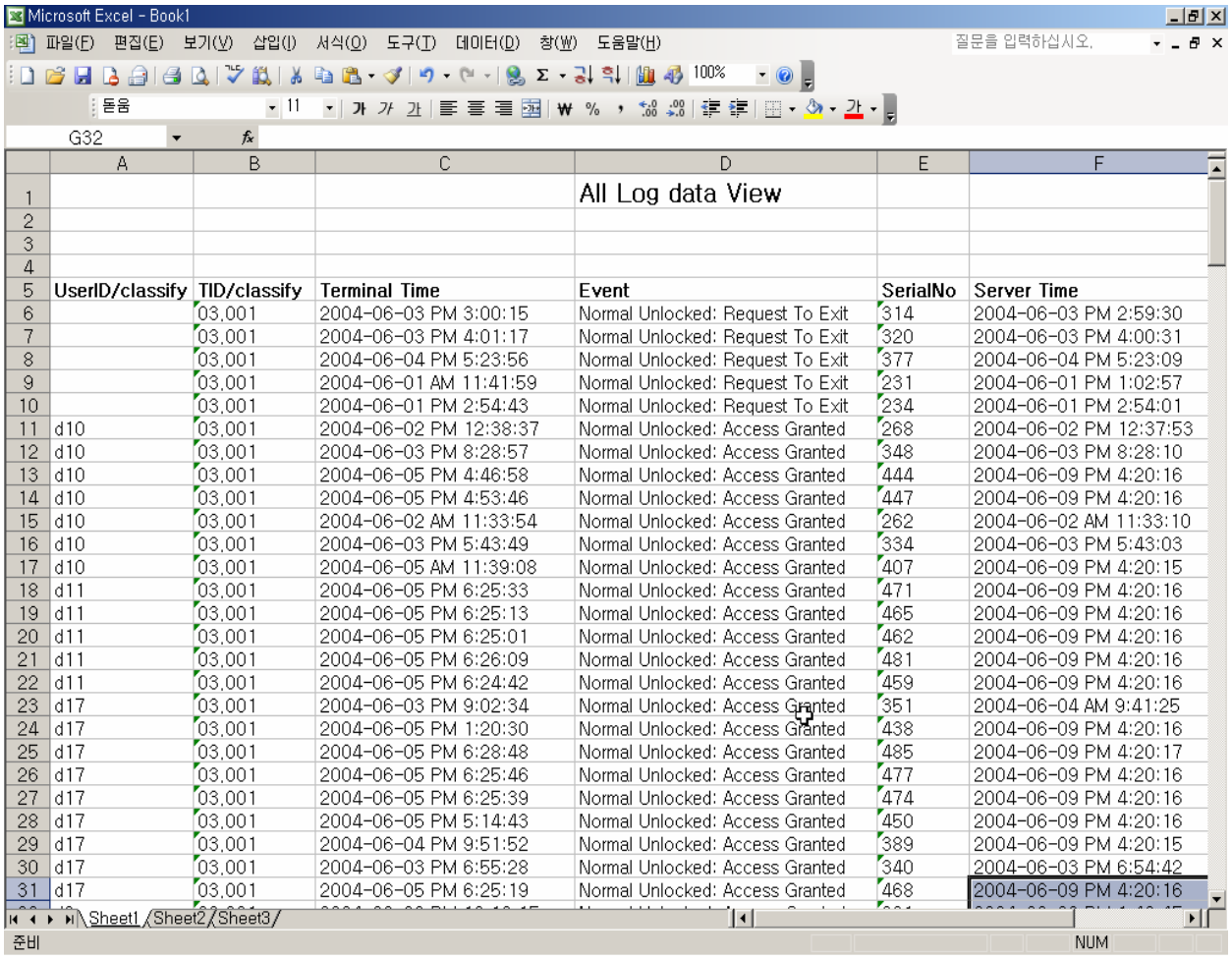
4. Search : Check the box required conditions of Name, Group and, Employee ID and then input character or number.
5. Data output by Text, Print, Excel : save by text or excel file and print out.

8.2 All log data view

If you need the details of records, not only user data, please select “menu=> Log=> All Log data view”



1. Date : Select the period of date and choose the priority query condition on the scroll list.
2. Terminal : Select terminal ID and then click the “Query” button.
3. Event : Door Event – Please choose one main event and you can see the change of scroll menu by your selection. Select sub query condition of scroll bar.
4. Search : input a words or number for searching on the listed data.
5. Data output by Text, Print, Excel : save by text or excel file and print out.

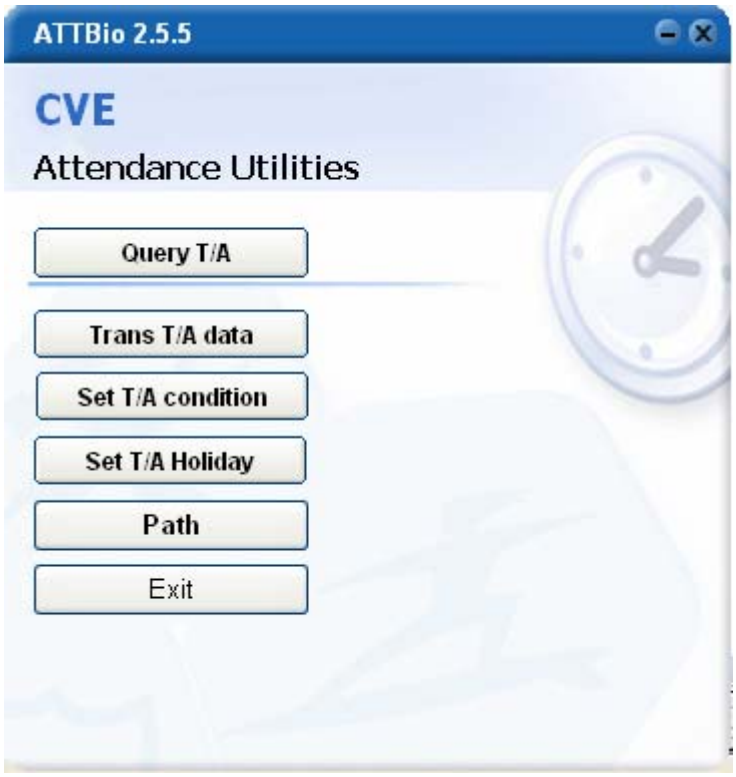


	A	B	C	D	E	F
1				All Log data View		
2						
3						
4						
5	UserID/classify	TID/classify	Terminal Time	Event	SerialNo	Server Time
6		03,001	2004-06-03 PM 3:00:15	Normal Unlocked: Request To Exit	314	2004-06-03 PM 2:59:30
7		03,001	2004-06-03 PM 4:01:17	Normal Unlocked: Request To Exit	320	2004-06-03 PM 4:00:31
8		03,001	2004-06-04 PM 5:23:56	Normal Unlocked: Request To Exit	377	2004-06-04 PM 5:23:09
9		03,001	2004-06-01 AM 11:41:59	Normal Unlocked: Request To Exit	231	2004-06-01 PM 1:02:57
10		03,001	2004-06-01 PM 2:54:43	Normal Unlocked: Request To Exit	234	2004-06-01 PM 2:54:01
11	d10	03,001	2004-06-02 PM 12:38:37	Normal Unlocked: Access Granted	268	2004-06-02 PM 12:37:53
12	d10	03,001	2004-06-03 PM 8:28:57	Normal Unlocked: Access Granted	348	2004-06-03 PM 8:28:10
13	d10	03,001	2004-06-05 PM 4:46:58	Normal Unlocked: Access Granted	444	2004-06-09 PM 4:20:16
14	d10	03,001	2004-06-05 PM 4:53:46	Normal Unlocked: Access Granted	447	2004-06-09 PM 4:20:16
15	d10	03,001	2004-06-02 AM 11:33:54	Normal Unlocked: Access Granted	262	2004-06-02 AM 11:33:10
16	d10	03,001	2004-06-03 PM 5:43:49	Normal Unlocked: Access Granted	334	2004-06-03 PM 5:43:03
17	d10	03,001	2004-06-05 AM 11:39:08	Normal Unlocked: Access Granted	407	2004-06-09 PM 4:20:15
18	d11	03,001	2004-06-05 PM 6:25:33	Normal Unlocked: Access Granted	471	2004-06-09 PM 4:20:16
19	d11	03,001	2004-06-05 PM 6:25:13	Normal Unlocked: Access Granted	465	2004-06-09 PM 4:20:16
20	d11	03,001	2004-06-05 PM 6:25:01	Normal Unlocked: Access Granted	462	2004-06-09 PM 4:20:16
21	d11	03,001	2004-06-05 PM 6:26:09	Normal Unlocked: Access Granted	481	2004-06-09 PM 4:20:16
22	d11	03,001	2004-06-05 PM 6:24:42	Normal Unlocked: Access Granted	459	2004-06-09 PM 4:20:16
23	d17	03,001	2004-06-03 PM 9:02:34	Normal Unlocked: Access Granted	351	2004-06-04 AM 9:41:25
24	d17	03,001	2004-06-05 PM 1:20:30	Normal Unlocked: Access Granted	438	2004-06-09 PM 4:20:16
25	d17	03,001	2004-06-05 PM 6:28:48	Normal Unlocked: Access Granted	485	2004-06-09 PM 4:20:17
26	d17	03,001	2004-06-05 PM 6:25:46	Normal Unlocked: Access Granted	477	2004-06-09 PM 4:20:16
27	d17	03,001	2004-06-05 PM 6:25:39	Normal Unlocked: Access Granted	474	2004-06-09 PM 4:20:16
28	d17	03,001	2004-06-05 PM 5:14:43	Normal Unlocked: Access Granted	450	2004-06-09 PM 4:20:16
29	d17	03,001	2004-06-04 PM 9:51:52	Normal Unlocked: Access Granted	389	2004-06-09 PM 4:20:15
30	d17	03,001	2004-06-03 PM 6:55:28	Normal Unlocked: Access Granted	340	2004-06-03 PM 6:54:42
31	d17	03,001	2004-06-05 PM 6:25:19	Normal Unlocked: Access Granted	468	2004-06-09 PM 4:20:16

9. Time & Attendance

9.1Enter T&A

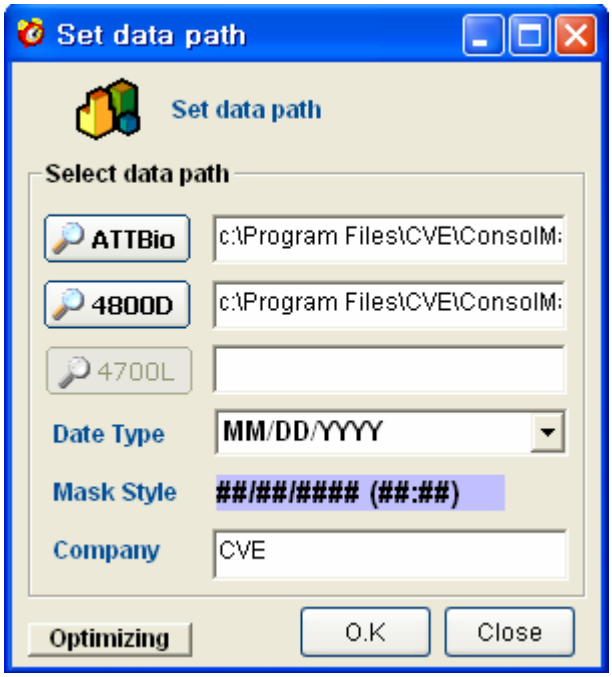
After push T&A icon on the menu bar, the below window appears.



When “Attendance Utilities” is shown, click the Path icon of window. And set the data path as like below

- ATTBio =>C:\Program Files\Console\DataBase\ATTDB.mdb
  4800D =>C:\Program Files\Console\DataBase\4800D.mdb

You can see that both ATTBio and 4800D paths are automatically set like below.

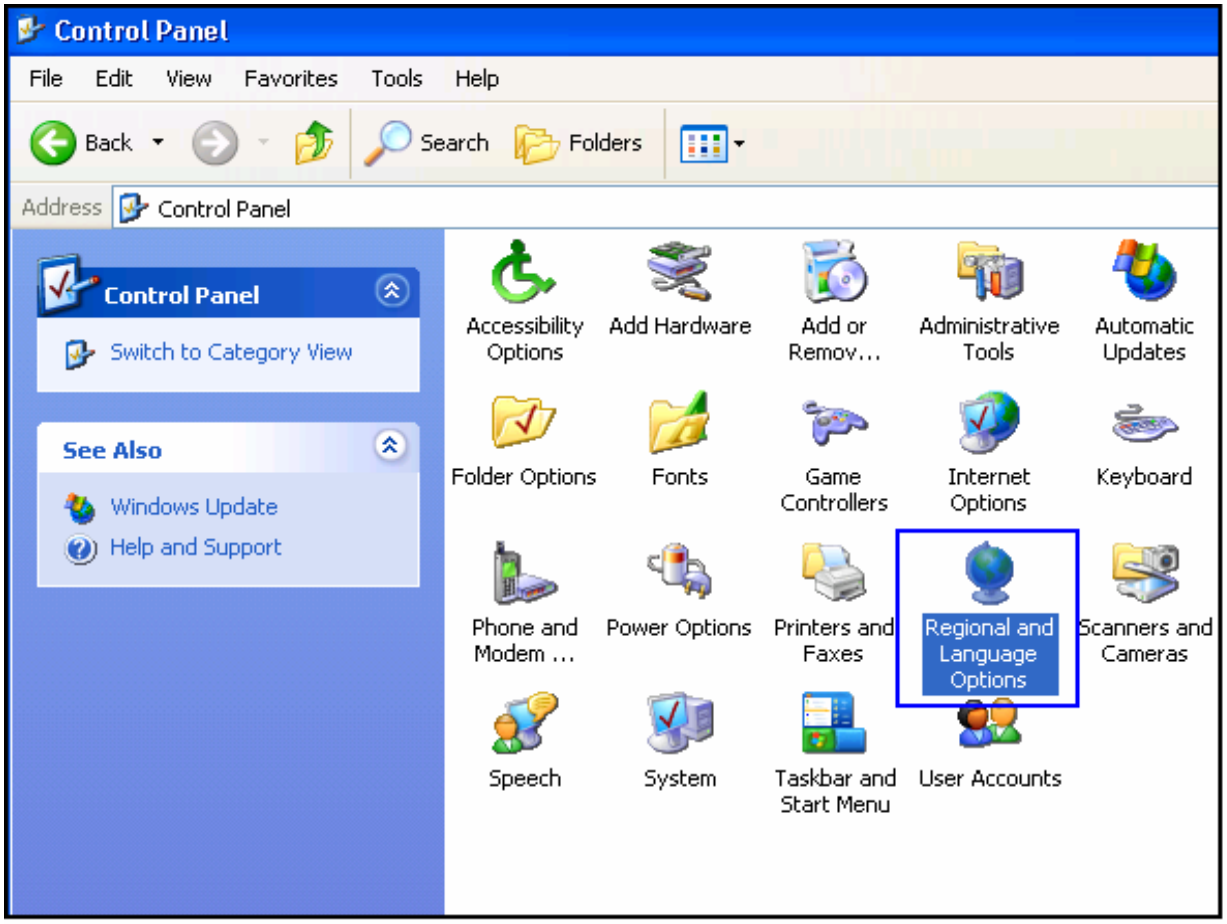


Input Company name and click “OK” button and close the window.

Set “Date Type”

It should be set the same as the window date format on the control panel of Window system as below.

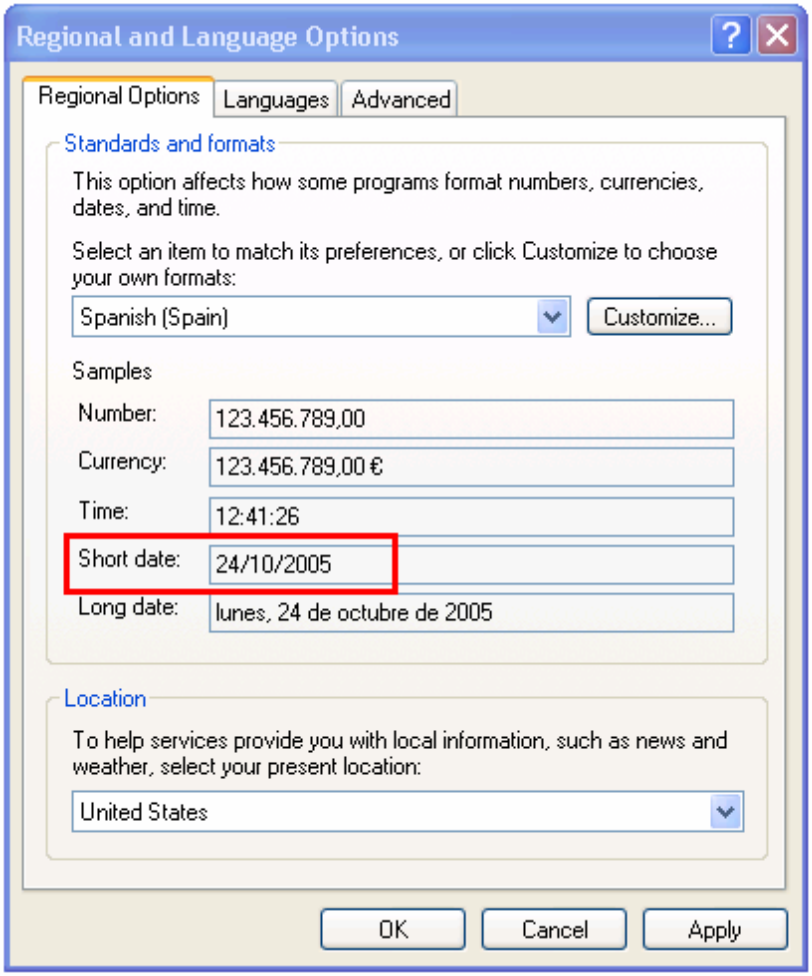
Go to control panel => Regional and Language



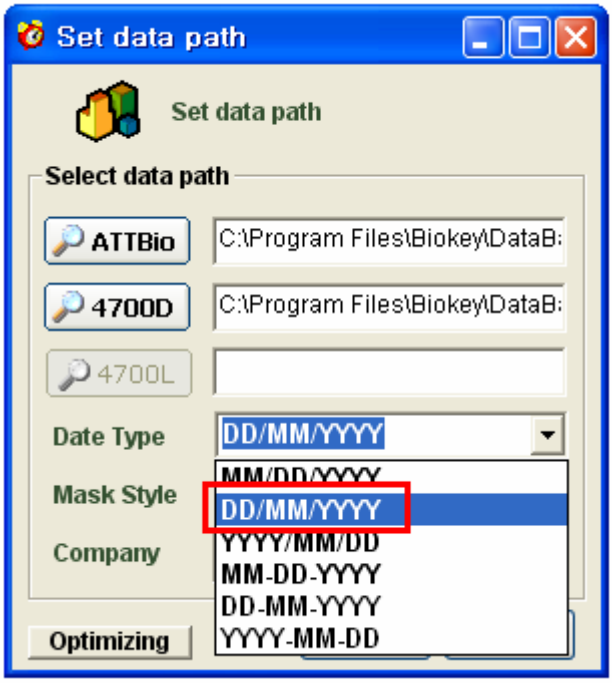
Go to Regional Option => Short date

Short Date : 24/10/2005

Date type : DD/MM/YYYY

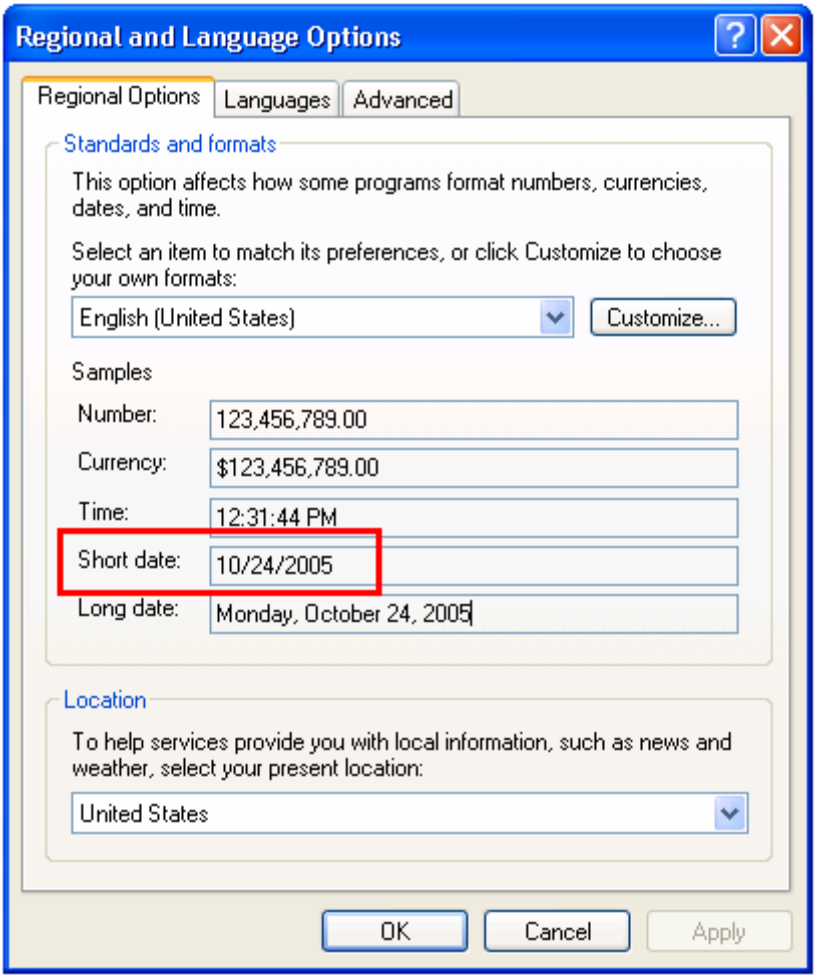


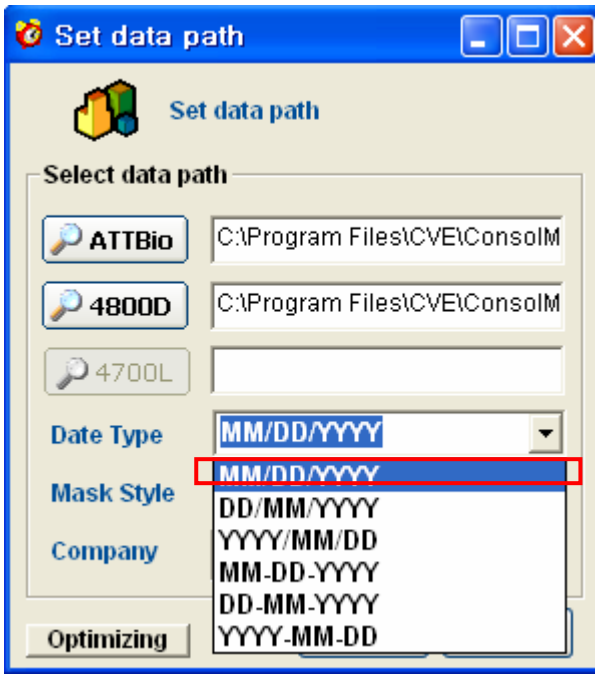
It should be selected the same date format as the window system and then click “OK” button.



Short Date : 10/24/2005

Date type : MM/DD/YYYY


Regional and Language Options
Regional Options
Languages
Advanced
Standards and formats
This option affects how some programs format numbers, currencies, dates, and time.
Select an item to match its preferences, or click Customize to choose your own formats:
English (United States)
Customize...
Samples
Number:
123,456,789.00
Currency:
$123,456,789.00
Time:
12:31:44 PM
Short date:
10/24/2005
Long date:
Monday, October 24, 2005
Location
To help services provide you with local information, such as news and weather, select your present location:
United States
OK
Cancel
Apply


Set data path
Set data path
Select data path
ATTBio
C:\Program Files\CVE\ConsolM
4800D
C:\Program Files\CVE\ConsolM
4700L
Date Type
MM/DD/YYYY
Mask Style
Company
MM/DD/YYYY
DD/MM/YYYY
YYYY/MM/DD
MM-DD-YYYY
DD-MM-YYYY
YYYY-MM-DD
Optimizing

After All value is set correctly, click “OK” button for saving this setting value.

9.2Set T&A condition

< How to set Time and Attendance condition >

***Name : John Smith**

***Work Type**

- **1st & 3rd week : Day work(09:00~18:00)**
  Saturday (09:00~14:00)
- **2nd & 4th week : Night work(14:00~23:00)**

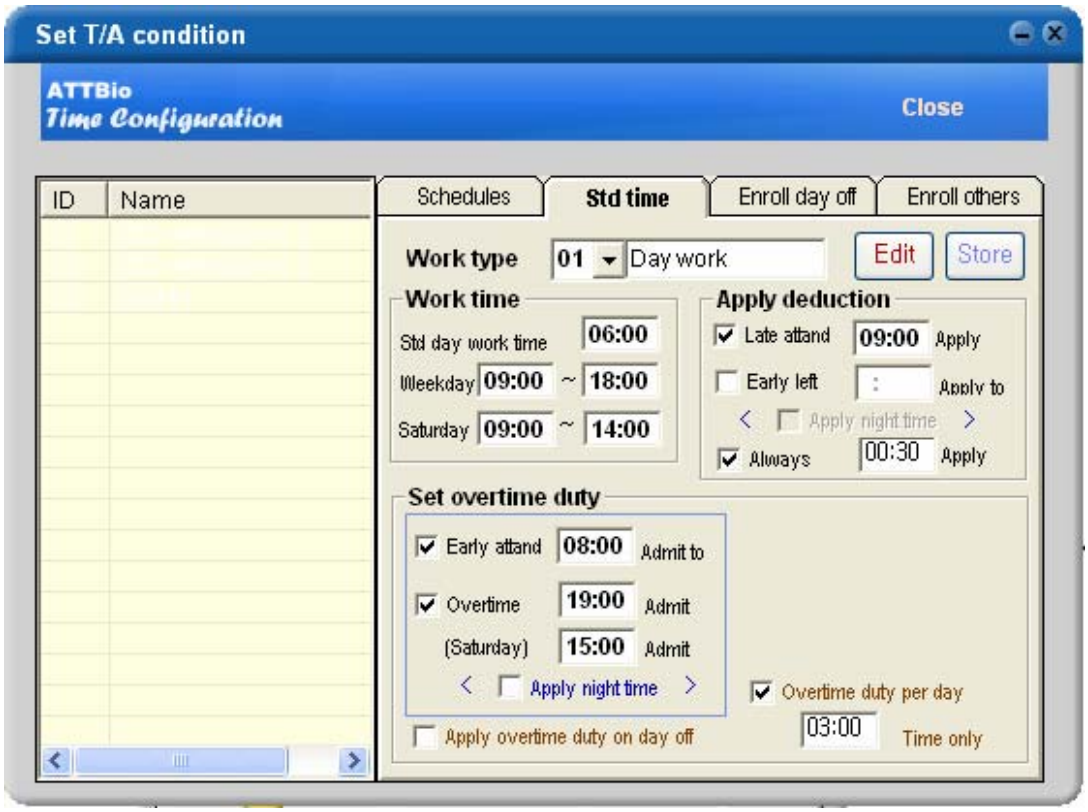
***Over time : Allowed over one hour than working time zone**
Not allowed over 3 hours a day

***Deduction : Being late than working time zone**
Minus 30 minutes(Break time) a day

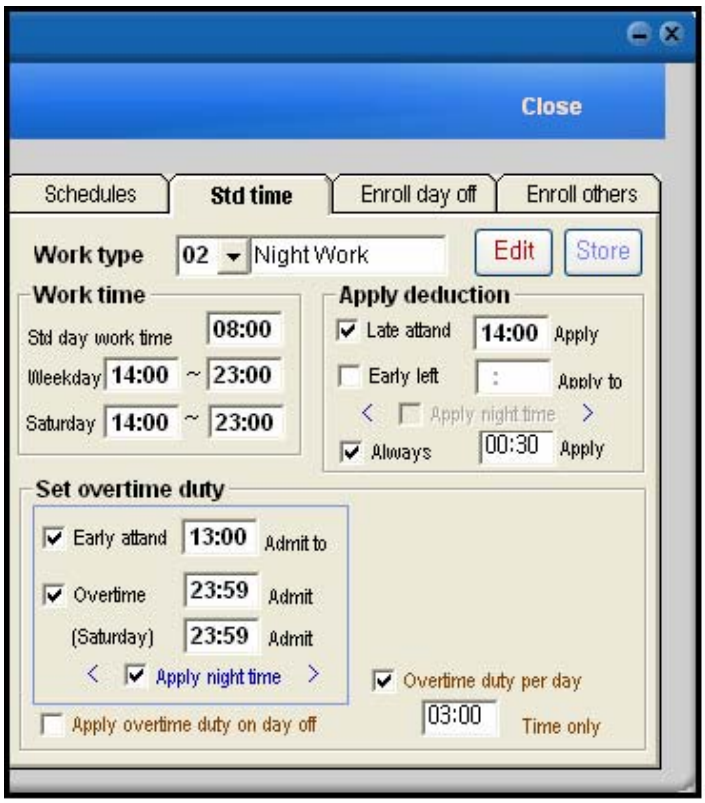
***Holiday : All Sunday**

Go to the “std time” tab for setting working time.

< Day work >



<Night Work>

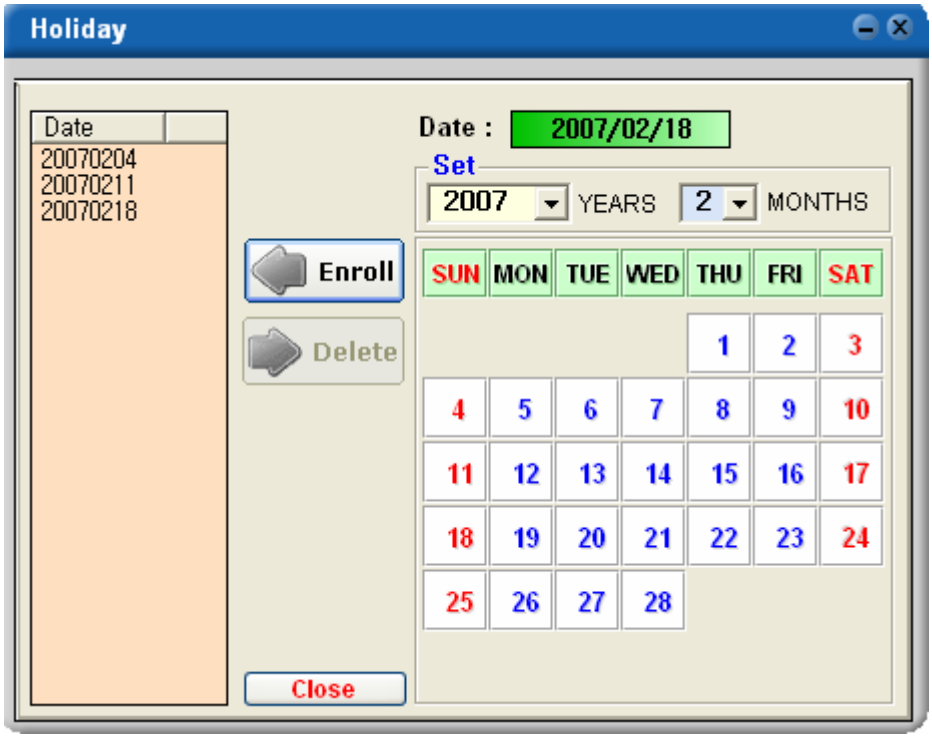


Please do not use 24:00 or 00:00 behind mis-calculation of working period of time. For correct calculation, must be checked at "Apply night time" for over 24 hour time line.

Go to the "enroll day off" tab for holiday enrollment.

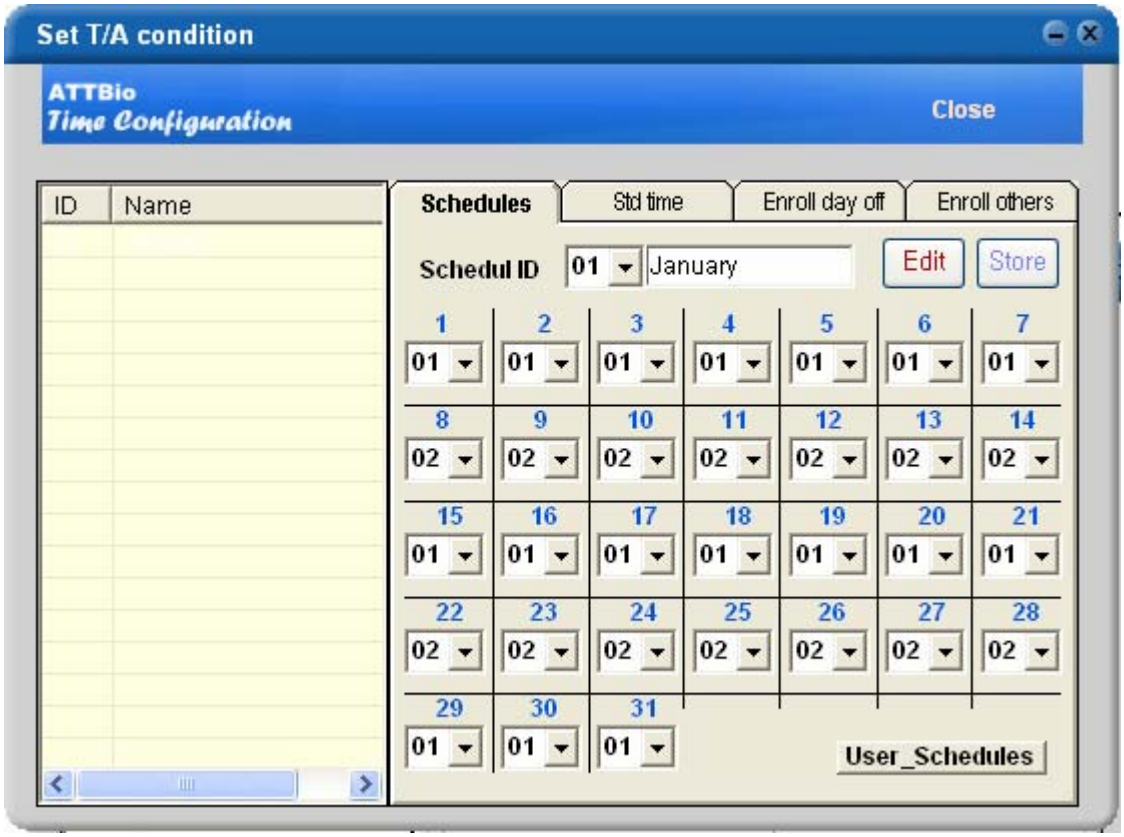
<Holiday>

Click each Sunday and click the "enroll" button.

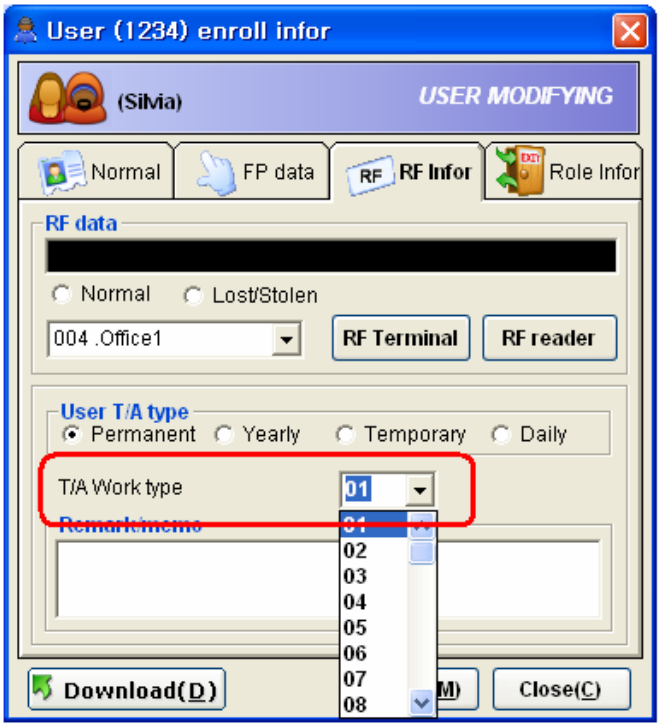


Go to the “Schedules” tab for making monthly schedule.

Make schedules 1&3rd week is applied to “01” and 2&3rd week is applied to “02” and then click “Store” button.

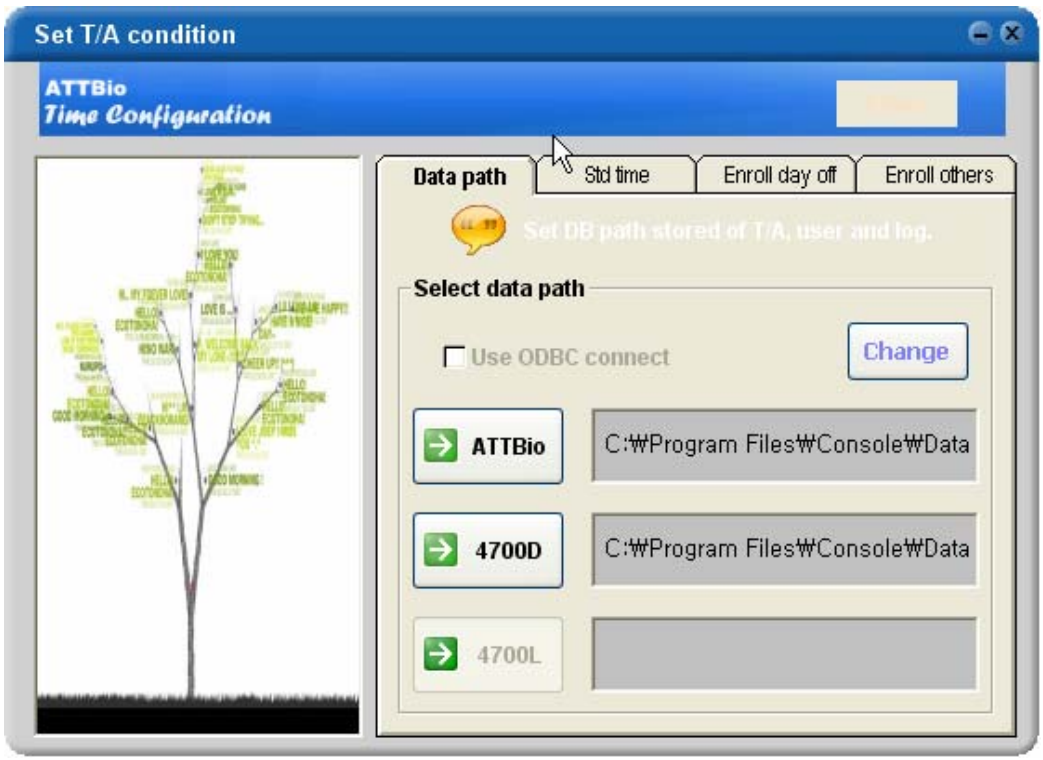


Applies to "User information => EM TYPEinfo tab => T/A Work type => Select T&A Schedule ID".



8.2.1 Data path

Select data path for Time & Attendance data.

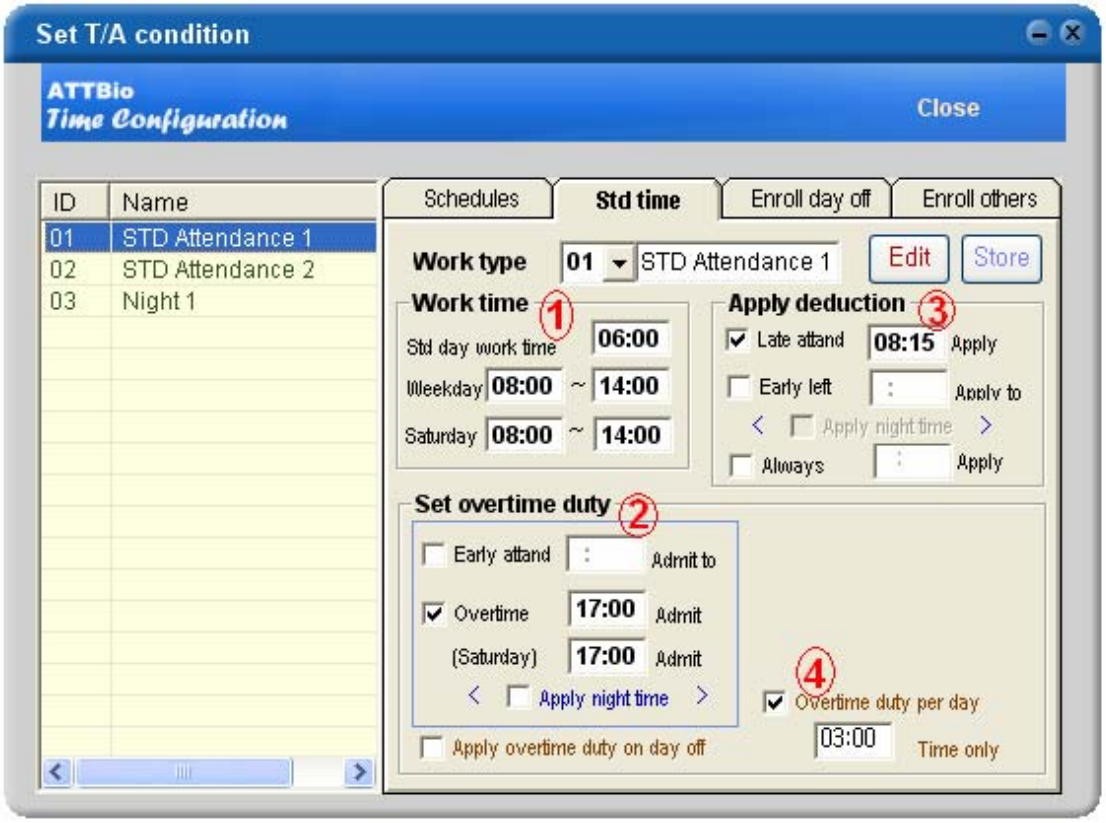


- ATTBio : DB for T&A data
- 4800D : Log record DB. This data transforms to T&A data.

9.2.2Standard time

Standard time is set 24 hours from input time. For example, when input 20:00, it calculates 20:00~19:59(Next day) is one day for night workers.

- Input name of work type
- Input standard time and settled work time.
- Set overtime duty and if work time is belong 2 days, please check “Apply night time”.
- Apply overtime duty on day off : if works on Holiday, it becomes same as overtime duty.
- Overtime duty per day : if company policy has limited overtime a day, only input time can be calculated for authorized overtime.
- Apply deduction : input late attend and Early left for minus of working time. If work time is belong 2 days, please check “Apply night time”.
- If company policy has settled deduction time for purpose of lunch time, rest time etc.., input time for minus.



Work type : Divide working group by different time schedule.

① Work time

- **Std day work time** – for example, working time is 20:00 ~ next day 05:00, normally it divided 2 days. But when Std day work time is set as 19:00, one day is from 19:00~18:59. This is for normally use for night worker over two days.
- **Weekday** – this is for working time
- **Saturday** – this is for working time on Saturday only.

② Set overtime duty

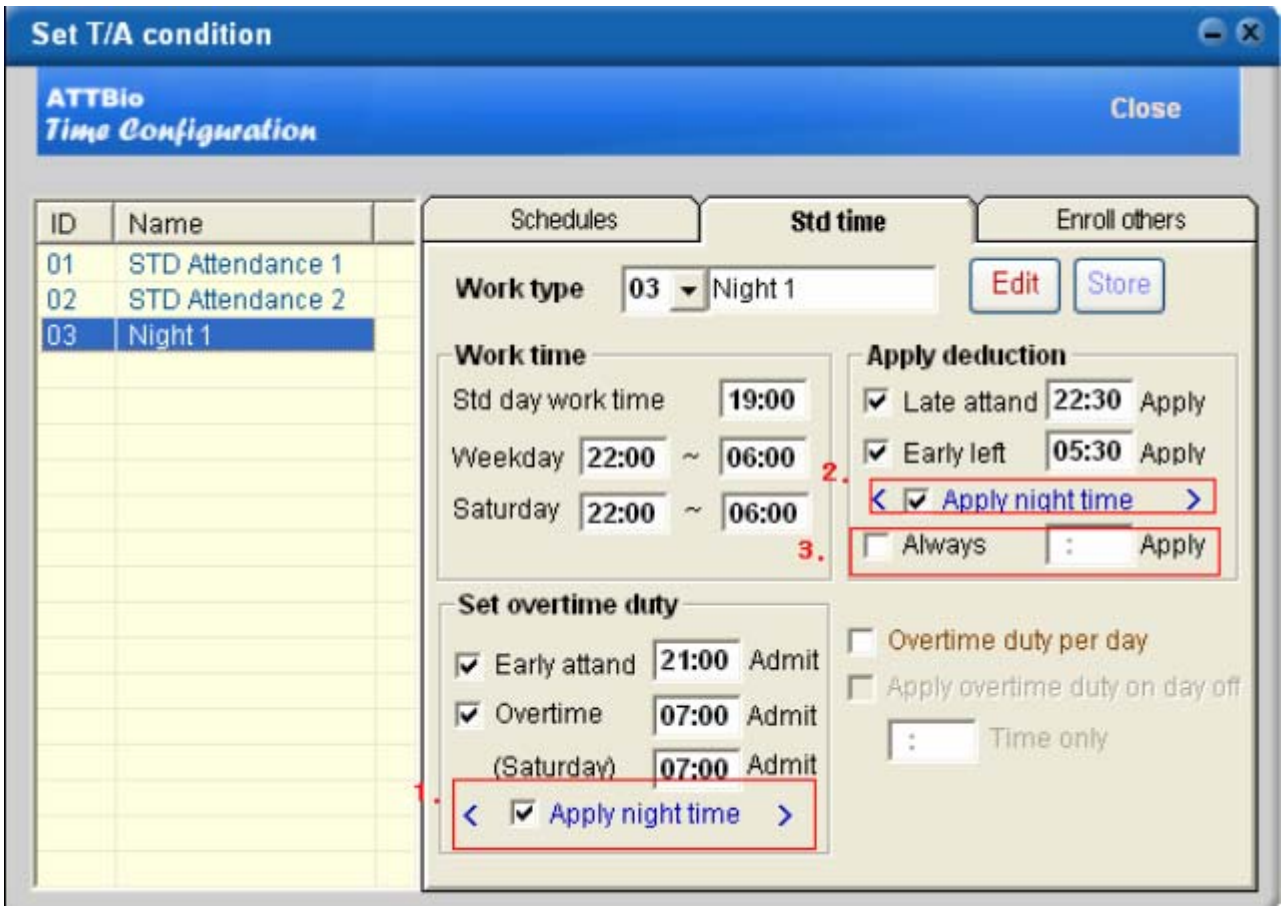
- **Early attend –** For example, working time starts 08:00 and set Early attend 07:00. if worker starts work from 06:00, company accept overtime. If worker starts work from 20:10, company don't accept overtime as the applied over time is earlier than 20:00.
- **Overtime** – For example, working time finishes 06:00 and set Over time 07:00. If worker does till 08:00, company accepts the overtime for two hours. If worker finishes at 06:30, company don't accept overtime as the applied over time is later than 07:00.
- **Apply night time** – Do not check it for normal working time, Please check the next page for the detail description.
- **Apply overtime duty on day off** : If company applies overtime for work on Holiday, check it.

③ Apply deduction

- **Apply deduction** : this is minus of working time.
- **Late attend** – For example, work starts 21:00, and set late attend as 21:30. A worker starts work from 21:45, it marks to late attendance and minus from work time
- **Early left** –For example, work finish 07:00, and set Early left as 06:30, A worker leaves earlier than 06:30, it marks to early left and minus from work time
- **Apply night time** – it must check for over two days night time working type. If not, it doesn't apply to one day.
- **Always** – If company wants to minus appointed time, (this is special function and normally use for government employee) check and input time to be deduction. For example, company input 01:00 Applied and the total working time is 10 hours. T&A data calculates working time is 9 hours for the deduction function.

④ Apply deduction

- **Overtime duty per day** : If company has a rule of the limited overtime, please check it. For example A company only accept 4 hours overtime per day Even though A worker did 5 hours overtime, the T&A data is calculated only 4 hours overtime.



1. Apply night time

Working time : 22:00 ~ 06:00

Over time : From 07:00

When working time over the 24 hours like above time setting, Check “Apply night time”.

2. Apply night time

Working time : 22:00 ~ 06:00

Over time : From 07:00

When working time over the 24 hours like above time setting, Check “Apply night time”.

3. Always

If the company has special deduction time on working time like lunch time, break time etc.,

Check it and input the deduction time from the total working time.

For example

Always : 00:30

Total working time (including overtime) : 09:00

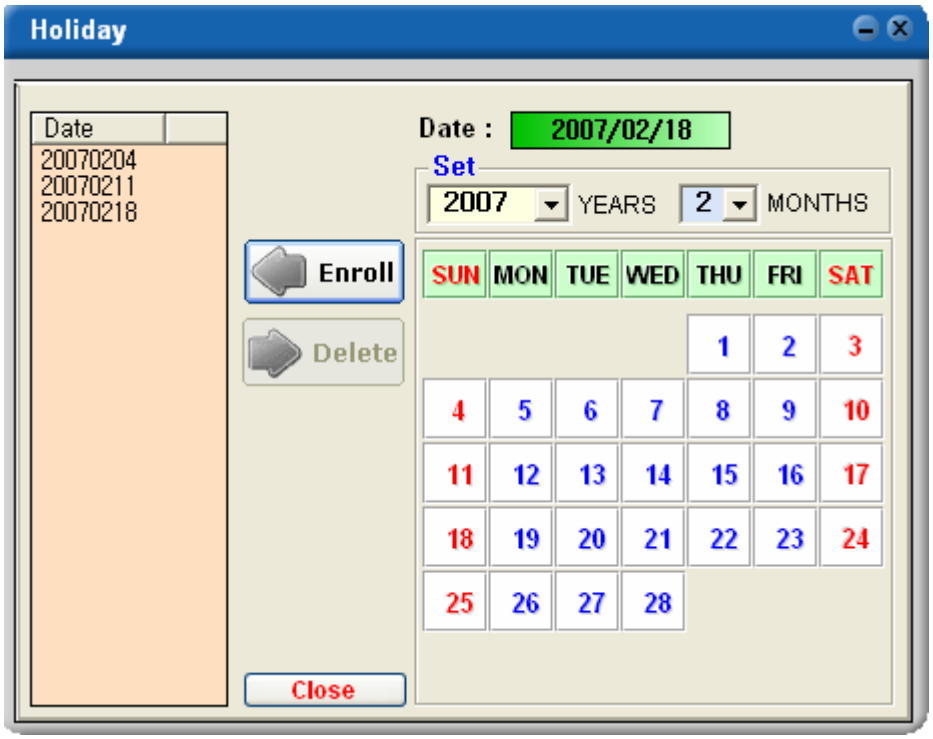
Calculated working time : 08:30

So this function is used for special company payment policy.

9.2.3 Holiday

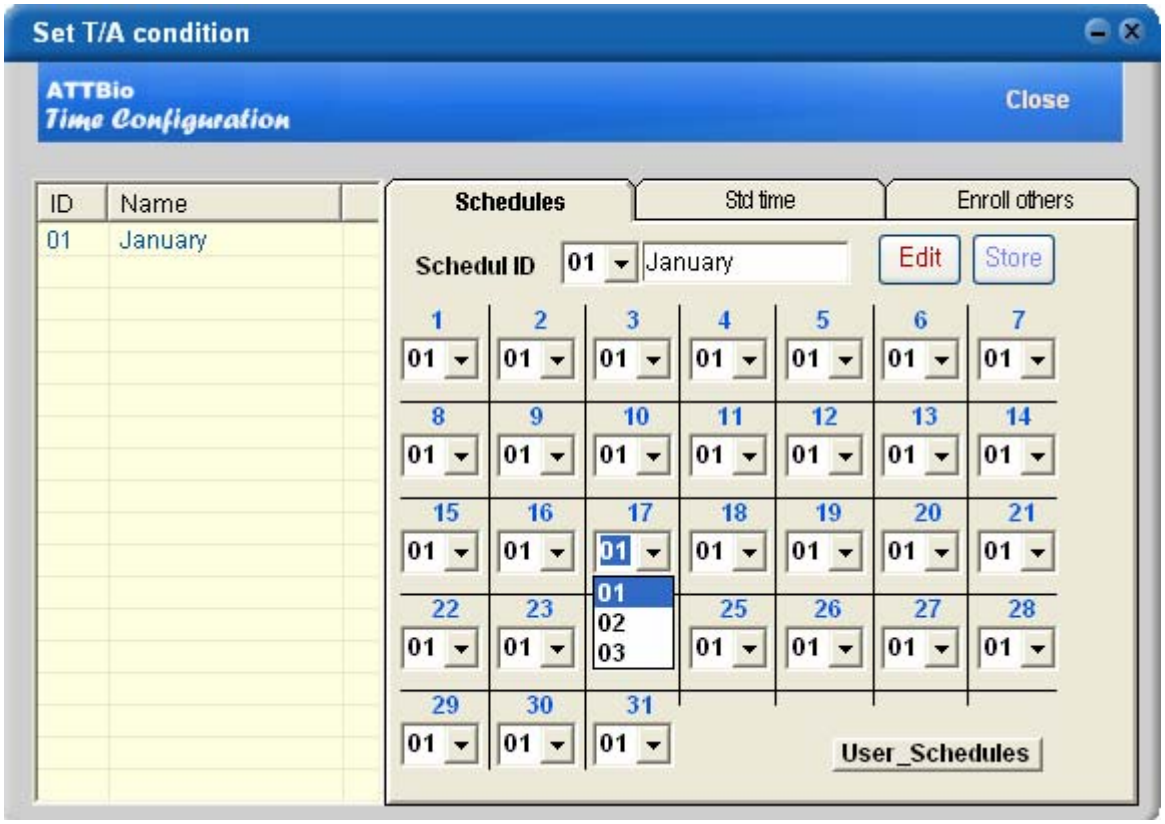
Please enroll Holiday separately to Schedule Holiday.

Schedule Holiday and T&A Holiday have no connection, please enroll it by purpose.



9.2.3Schedule

Manage monthly T&A schedule selected by “Work Type” ID listed on scroll menu.



9.2.4Enroll others

Temporary worker position and set trans-out depart.

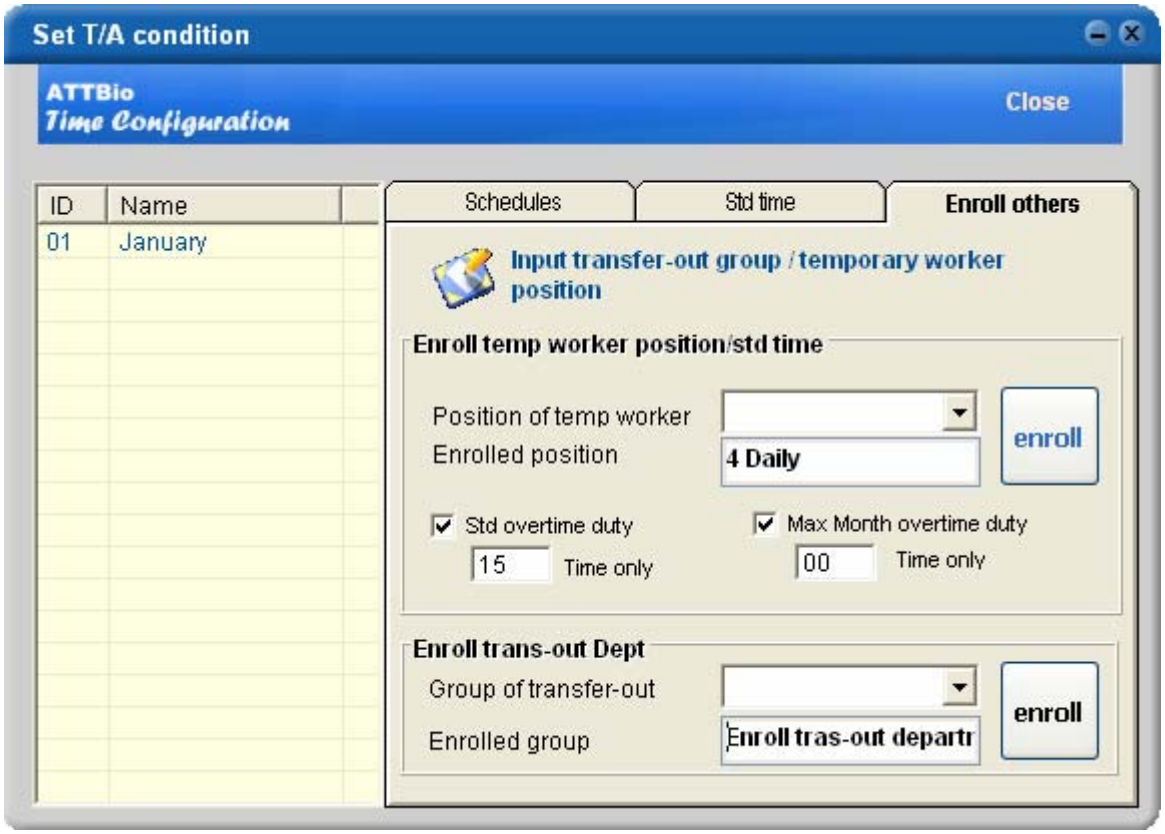
Temporary worker : If company policy has special condition for temporary workers as limit overtime, please input the condition.

Transferred to other department : It should set Trans-out Department for keeping previous record. Without it, previous record before moving out will be deleted.

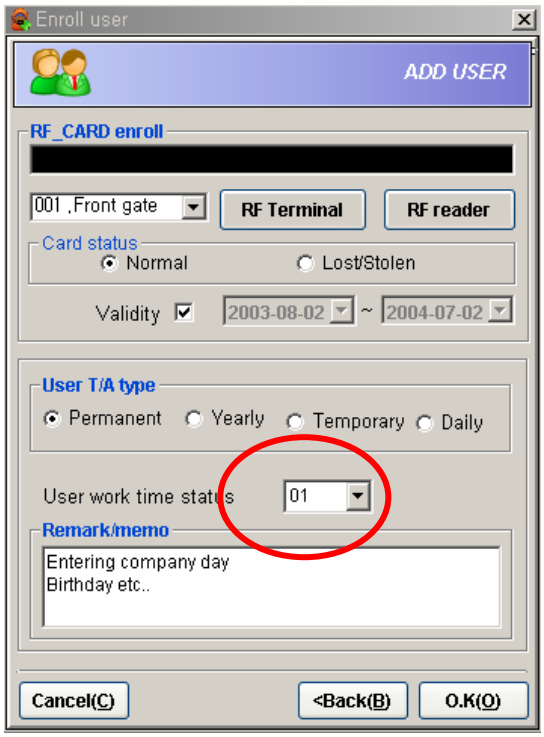
When department movement happens, please give another User ID for preventing from confusion.

For making this group, please see the 4.2 Enroll group (P17).

∗ All time is set as “ yyyy-MM-dd “. For using T&A software, you must change the date type on PC and then operate transform data in next step.

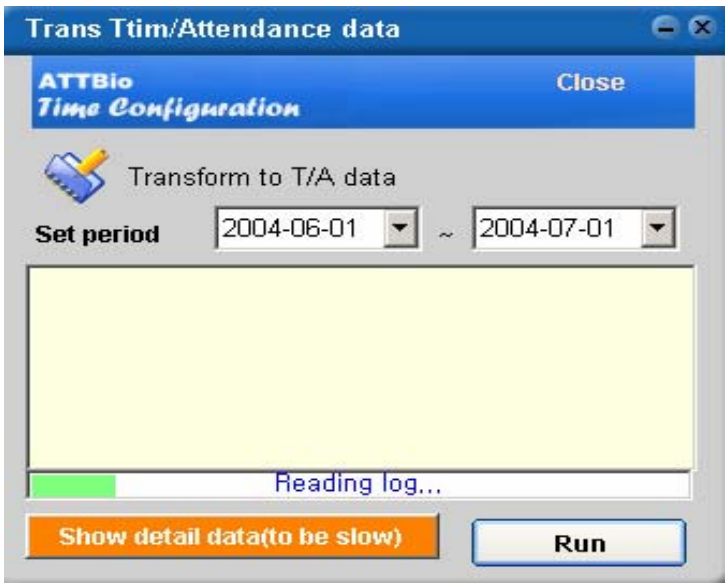


Enrolled Work type Number can apply when user enrollment to select suitable Work type No. When transform to T/A data, the user is calculated automatically by condition of Work type you set. If it's not selected, T&A data can't be applied.



9.3Trans T&A data

After saving all T&A condition, push “Trans T/A data”. Select period and push “ Run” button.



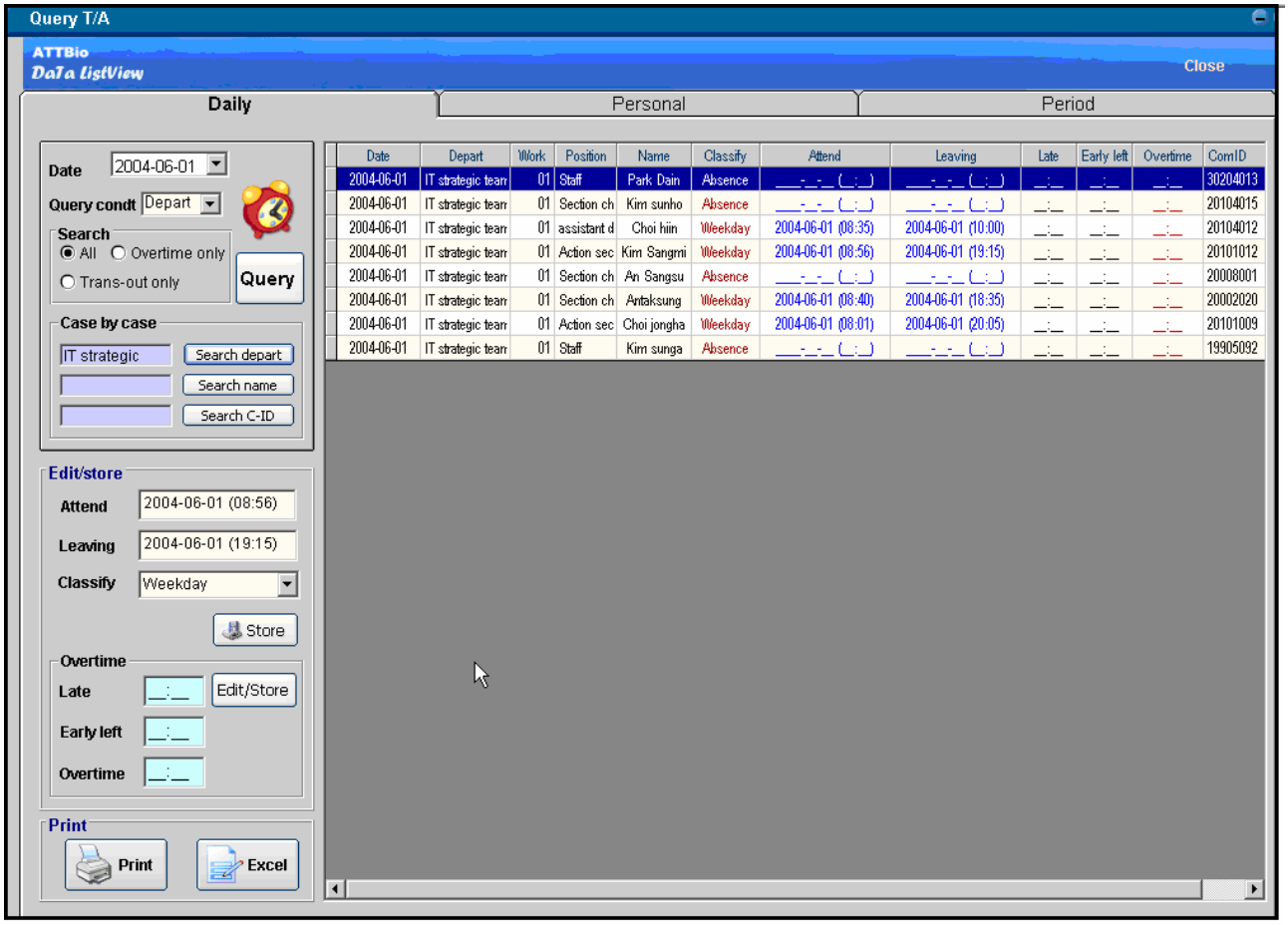
9.4Query T&A

It can be shown by Daily, personal and Period condition.

9.4.1Daily

After input query date and sub conditions, queried data appears.

It's possible to Edit, transform to Excel and Print out.



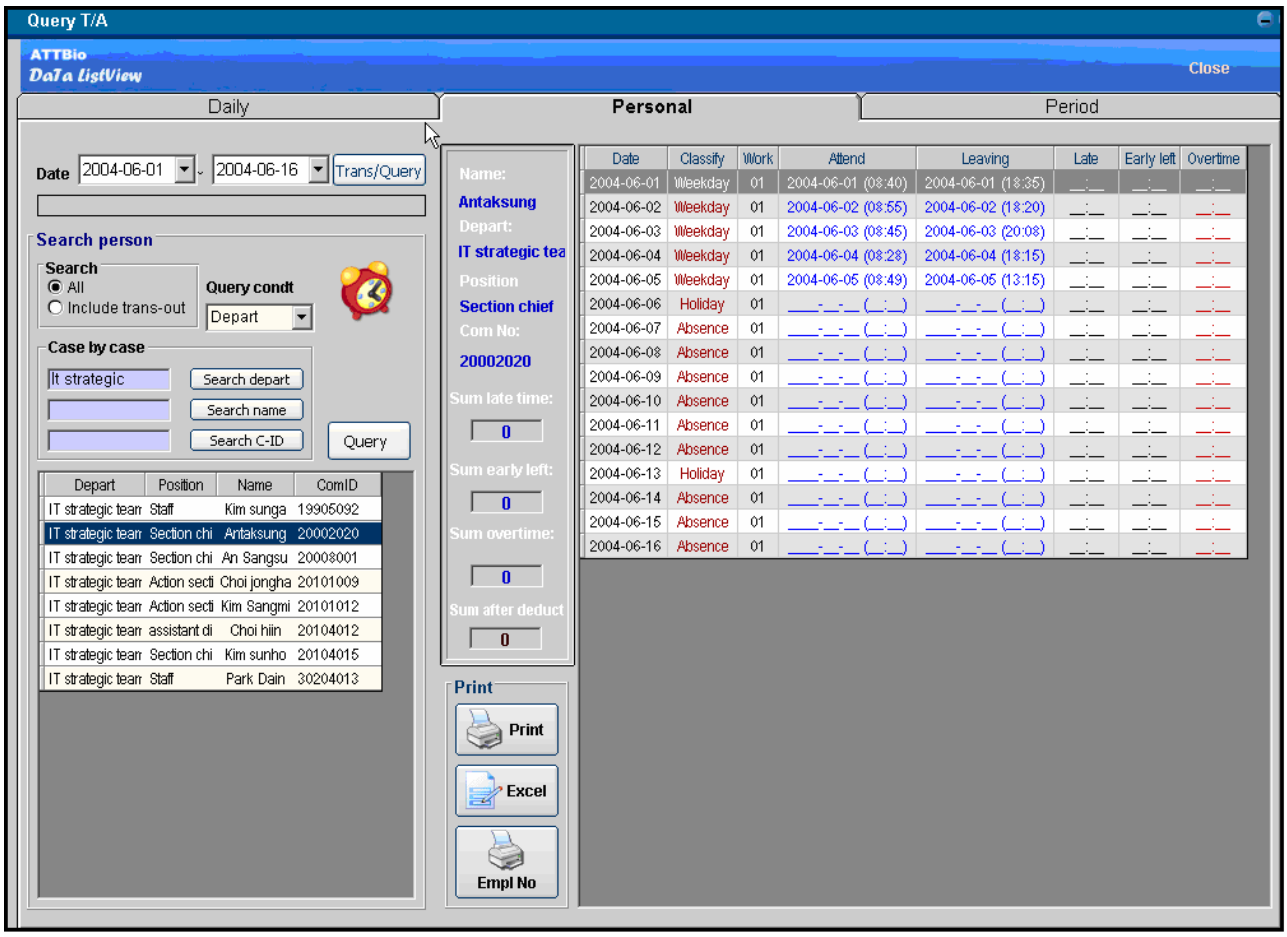
* Edit/Store section

Administrator can be edited the data by "Edit/Store section" and then click the "Store" button for saving.

9.4.2Personal

After input query date and sub conditions, personal queried data appears.

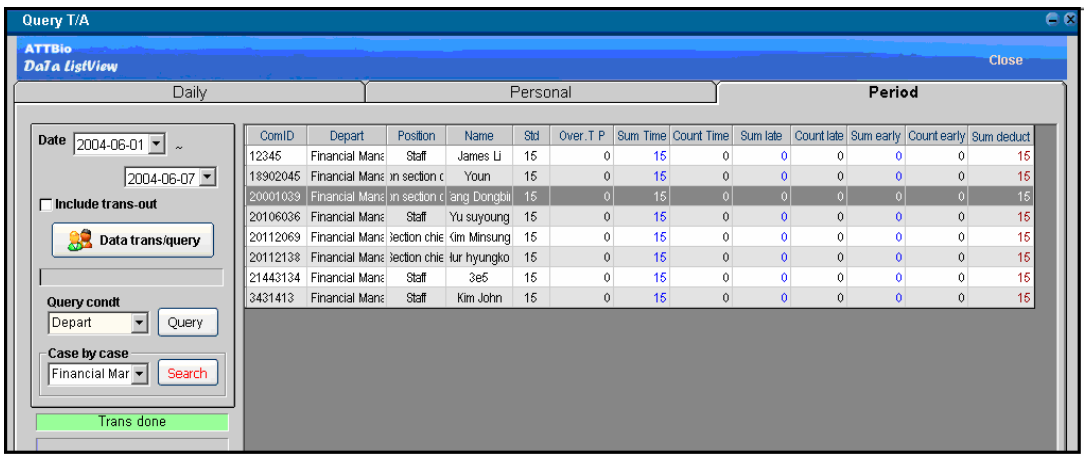
It's possible to Edit, transform to Excel and Print out.



9.4.3Period

After input query date and sub conditions, queried data appears.

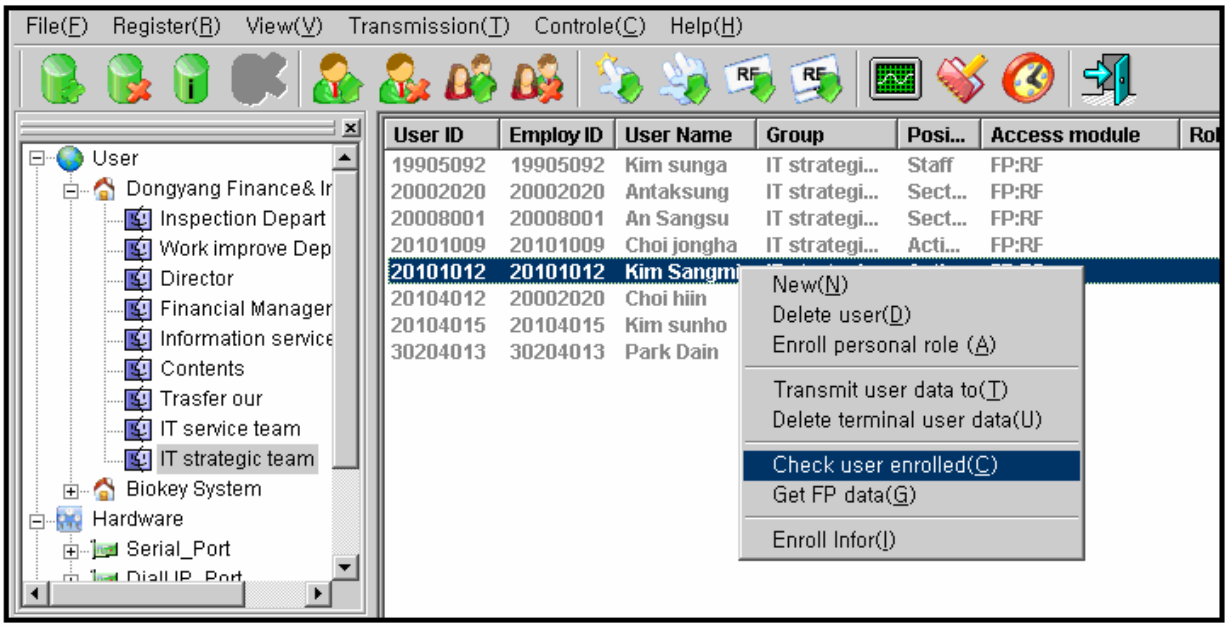
It's possible to Edit, transform to Excel and Print out.



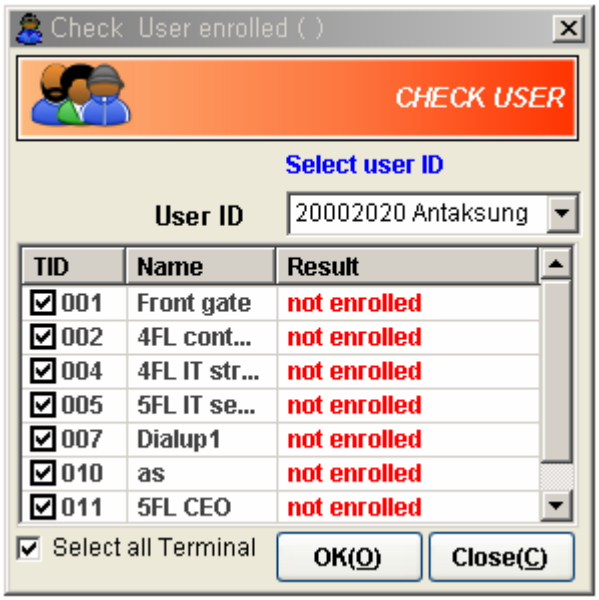
10. Other function

10.1Check enrolled user of terminal

Click the mouse of right button at the position of below image.



After select terminal, push “OK” button and enrollment status appears.

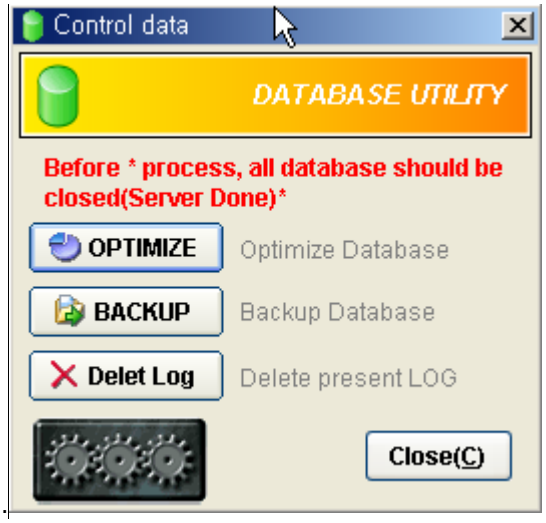


10.2 Database Utility

This is for optimize database or backup when database files up.

Go to at stage of (Menu bar=> File=> Database=> Data utility).

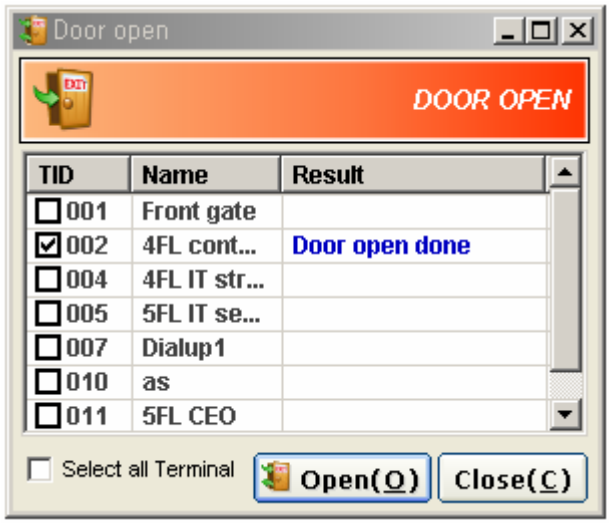
Before process, all run operation should be closed.



10.3 Door open

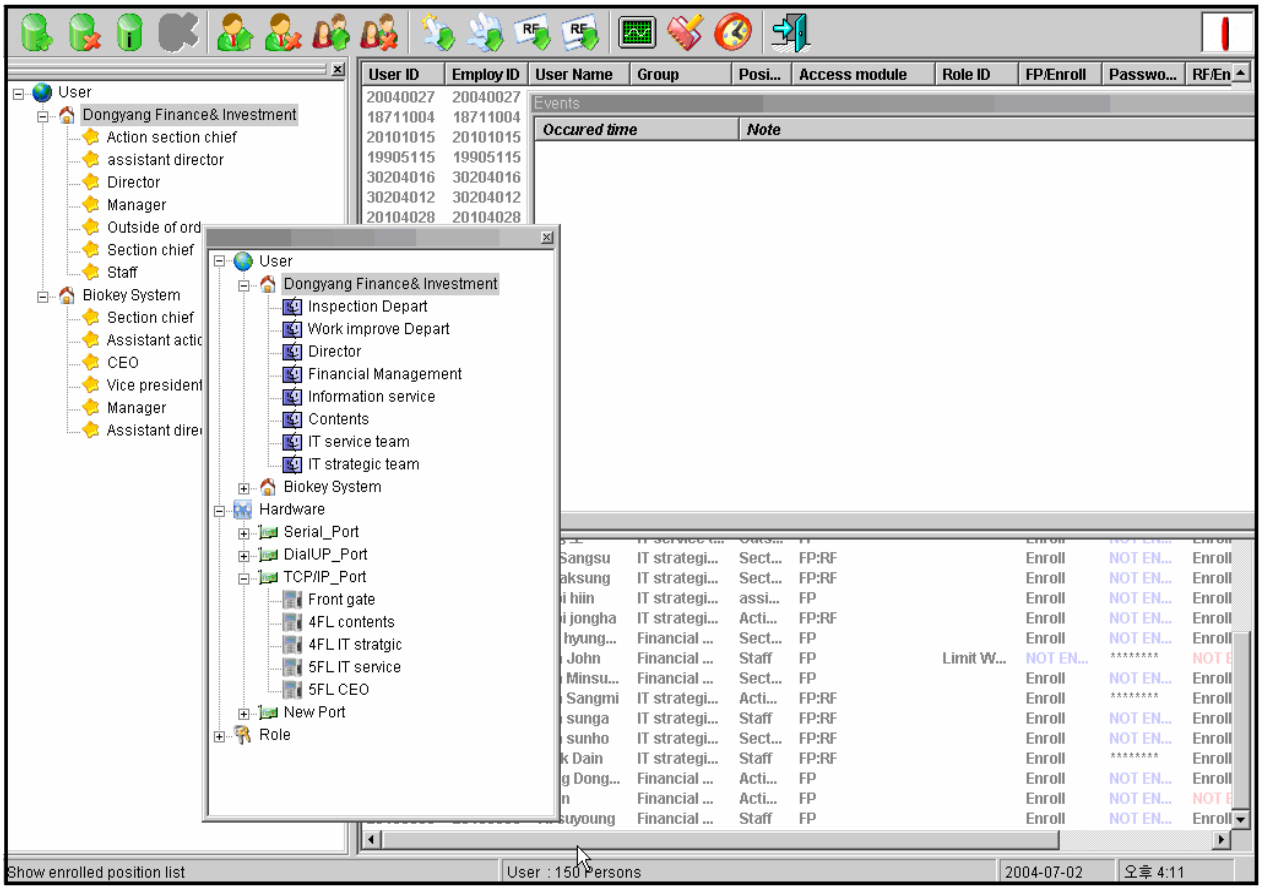
When visitor call, select the terminal to be opened and push “Open” button.

Go to the stage of (Menu bar=> Control=> Door open)



10.4 Change window structure

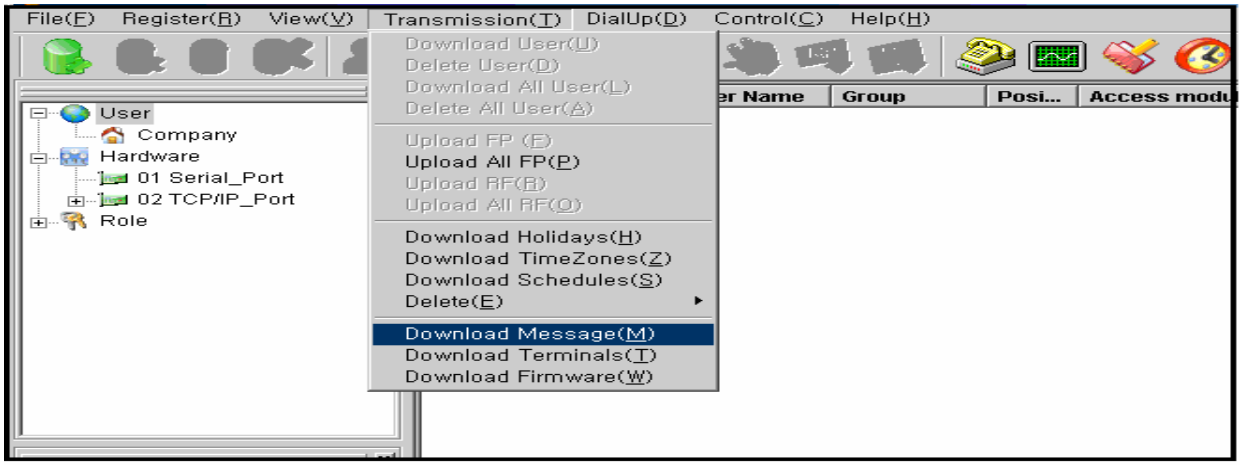
For change main window structure of Console Manager, double click the outline of window and it separated.



10.5 Sliding Message on LCD

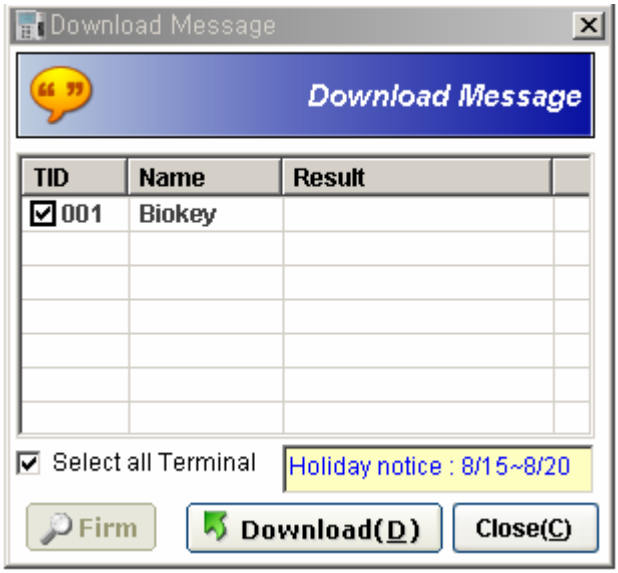
This method is for input sliding message as you want to display. It can input to 150 characters only.

Go to Transmission => Download Message => New window appears.



Input message in yellow table within 150 letters. Select terminal and click Download button.

When you reset or power off of terminal, the message is deleted.



BKS-4800 Device Manual

Nov. - 2007

BioInSec
Biometrics in Security

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About BKS-4800 Series

Creative Vision Electronics' 3rd generation biometric Access control system, the BKS-4800, offers superior technology with a competitive price point. The BKS-4800 can be installed as pure standalone or IP integrated system. The simplicity of working inside today's standards of IP connectivity and Microsoft Access as the database give you and your installation an advanced security product that is easy to manage.

BKS-4800 provides an ultimate biometric access control solution for an employer, whose main concern is to controlling of any unauthorized personnel's entry to a secured area and to automatically manage employees' access activities (ins & outs of certain premises) as well as other payroll-related information for any hourly employee (absences, late for work, lunch hour, holidays, overtime, special holidays work, etc.). BKS-4800, the fingerprint solution, can eliminate the current problems of EM TYPEcards and keypad access control systems, which are prone to a several security breaches (card duplication, loss of card, sharing of card or password).

BKS-4800 relies on a new optical sensor which enables us to decrease the cost of BKS-4800 as well as to allow the unit to be more accurate and reliable. BKS-4800 supports various I/O protocols and is an optimal solution for managing access-controlled points. With 128 X 64 pixels blue LCD screen, 12 regular keys and 5 special function keys, make BKS-4800 more user-friendly than our competitors' products. Communication are based on TCP/IP, RS232, RS485, 1 relay signal and 1 external sensor inputs.

5. Features

Characteristics

Level up the security reliability

Existing security measures such as security card systems and keypad systems are prone to breach by unauthorized persons through card-duplication or disclosure of set security code. Fingerprint ID system can truly restrict security access only to those authorized persons.

Reliable and stable algorithm

BIOINSEC utilizes its own proprietary algorithm with an outstanding match process and security.

Entrance security : Access control, time & attendance, over-time management and other applications

Fingerprint ID system allows for management of entrance security, work place time and attendance, and over-time work. Also, situations that require the presence of the authorized persons at a secured point can take advantage of our fingerprint ID system.

Function keys and log records.

Four programmable function keys may be used to manage time and attendance. A single terminal can be adapted to manage many different kinds of work involving site security control and time and attendance.

Low system maintenance cost

Existing ID cards require new issuance of cards with addition of new users and loss of cards. This becomes unnecessary with fingerprint ID system. System maintenance cost can be lowered to negligible levels when compared to other solutions.

Control the large number of terminal by one system.

Our fingerprint ID system module may be used as stand-alone units to control entrance traffic or in multiple module configurations utilizing TCP/IP/RS232/RS485/Modem protocol to connect with server. Also, direct connection to program wants to use through bundled SDK. Because BKS-4800 module contain RTC and log management capabilities (up to 10,000 records), entrance security and other event management are possible without an ACU.

Support functions

- User management
  - Register a user(RF, fingerprint, password)
  - Delete a user or all users
  - Query about registered user number(Console Manager)
  - Query about maximum registerable user number
  - Query about ID allocation(Console Manager)
  - Set a user's time zone
  - View or receive registered ID list(Console Manager)

- Transmit user's data in the terminal(Console Manager)

- System management
  - Configure and read terminal's time and date
  - Change and read security level
  - Change Terminal ID
  - Configure communication mode(TCP/IP, Serial, Dial-up)
  - Serial - Change communication speed
  - Receive firmware version(Console Manager)
  - Change lock operating time
  - Disable/enable free scan mode
- Door mode
  - Configure and read door mode (normal/ forced open/ forced close) and time(Console Manager)
- Log
  - Transmit the log record to server in real-time (Console Manager)
  - Log data contains the function key, entrance time, user ID(Console Manager)
  - Query log count(Console Manager)
  - Delete all log(Console Manager)
- Authentication
  - Authentication at the terminal(1 : 1, 1 : N)
  - Various authentication methods(RF, Password, Fingerprint, RF+FP, RF+PIN)
- Auxiliary function
  - Exit button
  - Relay out(Lock driver)
  - Transmit the case status
  - Support voice message
  - Transmit door switch status
  - Visible a condition of relay icon
  - Visible a condition of Network icon

Specification

Model number

Model	Description
BKS-4800	Fingerprint Access Control and Time/Attendance Management Terminal
BKS-4800M	Fingerprint Access Control with Mifare card(13.56Mhz) and Time/Attendance Management Terminal
BKS-4800E	Fingerprint Access Control with EM card(125Khz) and Time/Attendance Management Terminal

Common Specification

Features	Specification
CPU	Samsung ARM9 32bit Micro processor
Memory	SDROM 128Mb, NAND FROM 64Mb
LCD	128 x 64 pixels, Blue LED 4lines
Sensor	Optic, 500 DPI
1:1 matching	Speed: Less than 1 sec Storage : 5,000 User (Finger+RF+PW)
1:N matching(freescan)	Speed : Less than 2.5 sec Storage : 1,000 User (Finger+RF+PW)
Size	(H)95mm X (L)300mm X (D)35mm
Fingerprint Data Size	512 Byte
Power	DC 12V (provided)
IN/OUT Port	Exit S/W, Door open sensor, Lock controller
Protocol	TCP/IP(10/100BT), Serial (RS232, RS485), Dial-Up
Language/Voice	English
Option	Mifare Card, EM Card

LCD display

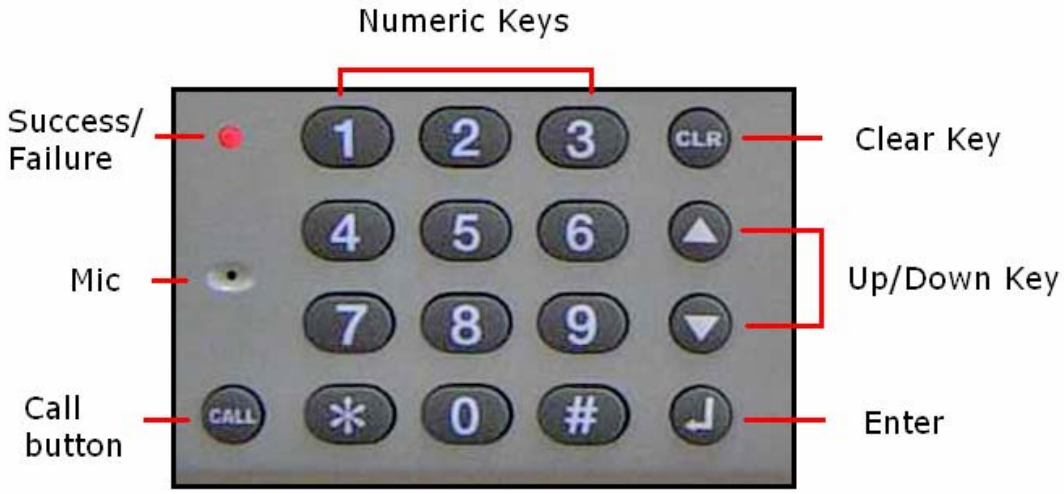
●**Function Key** : F1, F2, F3, F4

●**Door Status** : ☐ =>Door closed ⍰ =>Door opened

●**Network Connection :**

- TCP/IP : =>Connected =>Disconnected
- Serial : =>Connected =>Disconnected
- Dial-Up : =>Modem connected(ready to call)
=>Modem connection failed, Check the connection of the modem and BKS-4800
=>calling
=>line is connected, Data transmission

Keypad Instruction



● Enter to Admin menu : 0 + <↵

Hardware Instruction

6. Registration, Edition, Deletion

How to register

Administrator menu allows new user registration, edition, deletion and system setup.

Press “Menu” button enters the administrator mode and press ‘1111’.

The initial system password is set as ‘1111’.

<Useful description of button>

Arrow key (▲ ▼) : curser scroll down or up

“<↵ ” button: confirm the selection mode and get into the lower menu stage and saved.

"CLR" button: move to the upper menu stage without saving.

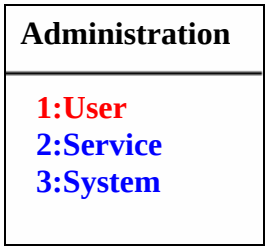
" * " button : 1) in grouping mode to mark all figures in the other place of ID number, 2) browse all user list 3) mark & delete check (√) and "." When input IP address at network mode.

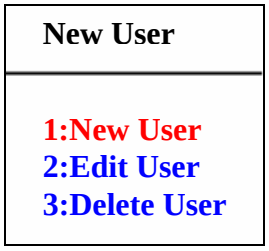
< How to enter Menu >

Push "0 " and "<┘ " button and input '1111' as the initial set value.

First, follow the process " 1.User => 1.New User " and "Enter User ID:" message appears.

If entered ID is in use already, "User ID Overlapped" message appears.





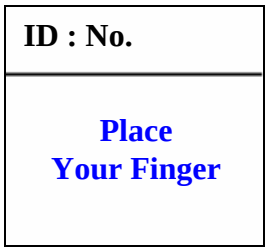
Fingerprint registration

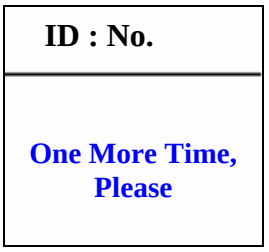
Fingerprint registration

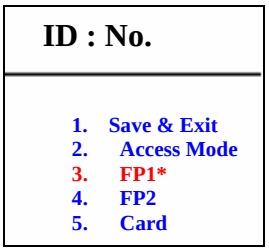
For registering a fingerprint, place the finger on the red lighting sensor after push "3.FP1".

The registration can be completely done as to press "1.Save & Exit" to save and back to upper menu stage automatically.

If you want to improve the authentication rate or register another finger for convenience, push "2.FP2" and keep the same process as "1.FP" registration.







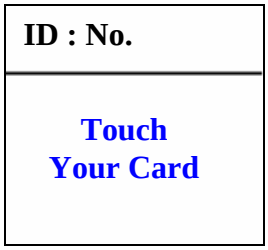
.▣Asterisk ('*') appears in the right of menu by saving.

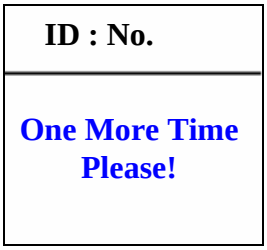
EM TYPECard Registration (Optional function.)

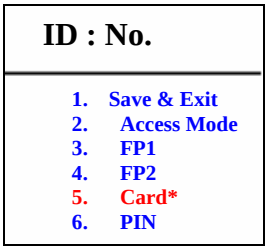
First, select "5. Card" for EM TYPECard registration and "Touch Your Card" message appears.

After close EM TYPECard registered, disclose EM TYPECard after "buzzer" sound.

When "One More Time Please!" message appears, repeat again with same EM TYPEcard.

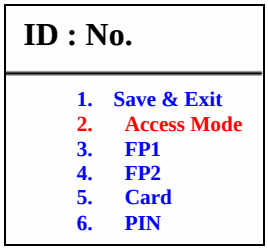


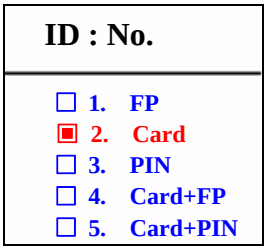


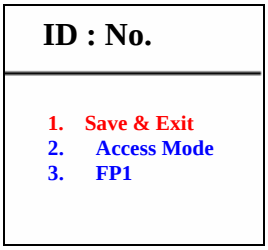


Second, For run EM TYPEcard authentication, follow the process " 2.Access Mode=>2.Card" with tick mark(√) by pushing "∗" button or corresponding number.

Back to upper menu stage for saving by pushing "1.Save & Exit".







Password registration

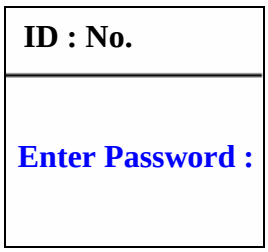
First, select "3. PIN" for password registration and "Enter Password:" message appears.

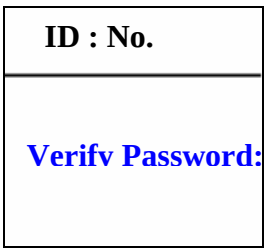
Enter the 4~8 digit password to be registered.

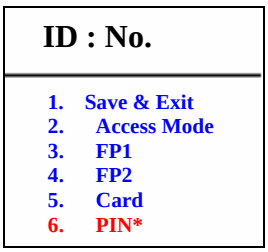
When "One More Time Please!" message appears, repeat again with same password.

When the two entered passwords do not match, "Sorry! Data Mismatched" message is displayed.

After confirming the password, select "1.Save & Exit" to be successfully registered.

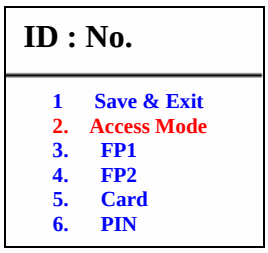


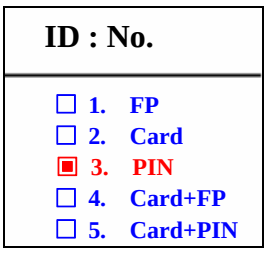


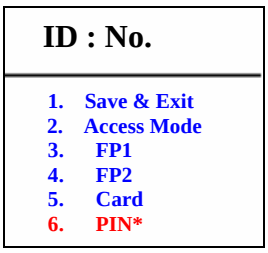


Second, For run the password authentication, follow the process " 2.Access Mode=>3.PIN" with tick mark(√) by pushing "∗" button or number "3".

Back to upper menu stage for saving by pushing "1.Save & Exit".







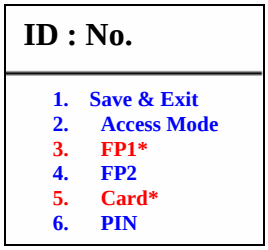
Card +FP

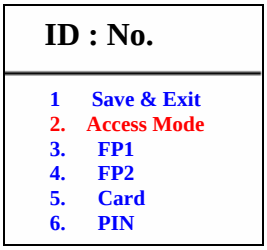
It's applied for the user wants to use EM TYPEcard instead of ID or the high security level as it must be matched EM TYPEcard and Fingerprint together.

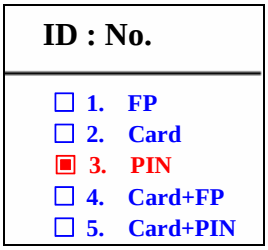
First, for registering a fingerprint and EM TYPEcard, select and register "3.FP1" and "5.Card" as the same process of "3-1-1" "3-1-2".

Second, For run the this authentication method, follow the process " 2.Access Mode=>4.Card +FP" with tick mark(√) by pushing "*" button or number "4".

Back to upper menu stage for saving by pushing "1.Save & Exit".







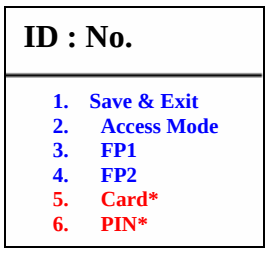
Card + Password

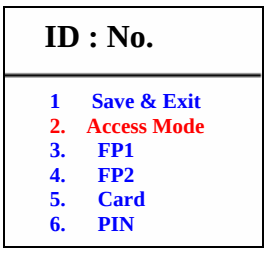
It's applied for the user wants to use "EM TYPEcard instead of ID+ Password" or the high security level as it must be matched EM TYPEcard and Password together.

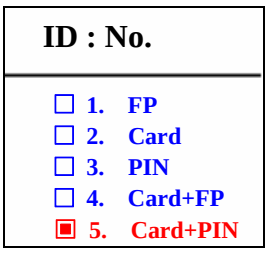
First, for registering a fingerprint and Password, select and register "5.Card" and "6.PIN" as the same process of "3-1-2" "3-1-3".

Second, For run the this authentication method, follow the process " 2.Access Mode=>5.Card +PIN" with tick mark(√) by pushing "*" button or number "5".

Back to upper menu stage for saving by pushing "1.Save & Exit".







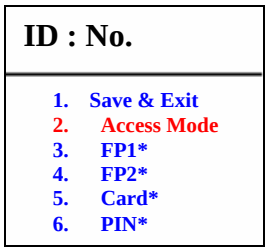
Selective authentication method

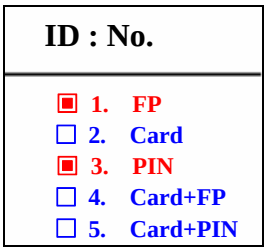
If you want to choose one authentication method of all registered methods.

First, register all methods want to be used, and then

Select “2.Accss mode” and then choose required numbers with the tick mark(√).

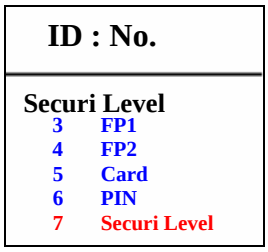
Back to upper menu stage for saving by pushing “1.Save & Exit”.

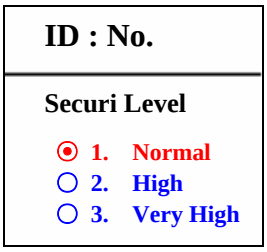




Set Personal Security Level

If you want to set the security level by personal, please select level and then click “<┘” button and “1.Save & Exit”





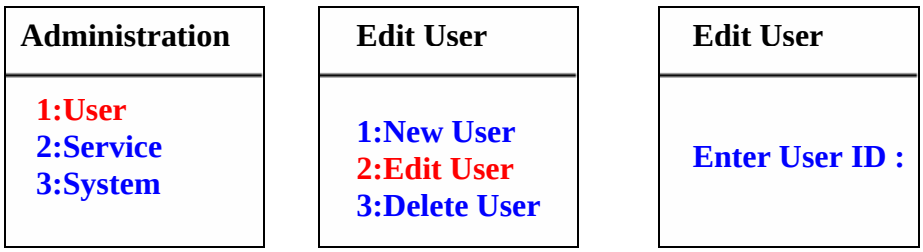
How to change authentication methods.

Search for ID of being amended.

For changing the authentication method, follow the process “ 1.User=>2.Edit User” and “Enter User ID:” message appears. Please enter ID of being amended.

If user needs to search ID list, push “*” button for a while as for displaying all ID list and then choose

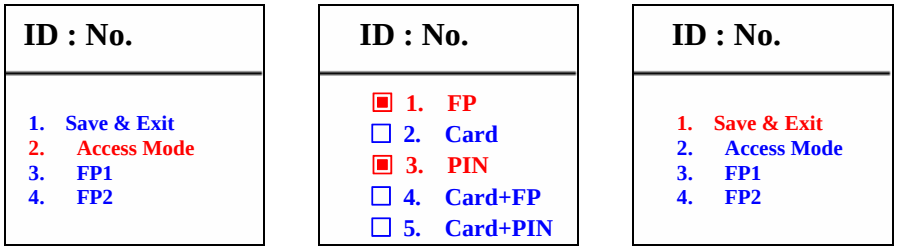
required ID. Please move curser by “ARROW” button for ID selecting, push “<┘” button to go edition mode.



Change authentication methods

For change the authentication method, select “2.Edit” user of system initiates the edition process. If it has additional methods, display check(√), otherwise, for not required method any longer, delete check(√).

save and back to upper menu stage by pushing “<┘” button and select “1.Save & Exit” for saving.

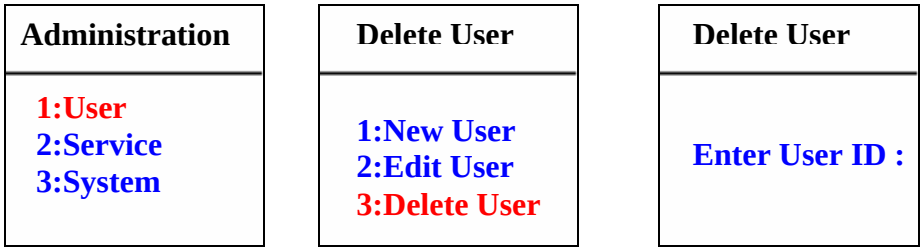


.▣Tick mark (√) appears as to push “*” button or corresponding number.

User Deletion

Delete user

When enter ID required to delete, “Enter User ID:” message appears at the stage of “1.User => 3.Delete User).



When “Verify User ID” message appears, input the same ID again to completely delete.

It’s matched, “OK! User deleted” message is displayed.

Delete User	Delete User	Delete User
Enter User ID : 3	Verify User ID: 3	OK! User Deleted

Delete all

For delete all input users, follow the process “1.User=>3.Delete User” and “ Enter User ID:” message appears, push “*” button for a while till “All ** Users” message appears.

For completely deleting all registered users, select “1.Yes” and then “OK! All User Deleted” message is displayed.

Delete User	Delete User	Delete User
Enter User ID : *	All 50 Users 1.Yes 2.No	OK! All User Deleted

7. Use & Authentication method

Fingerprint User

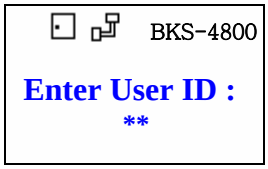
Light on the sensor by pushing “<┘” button or keeping on the last ID number for a while after input the user ID.

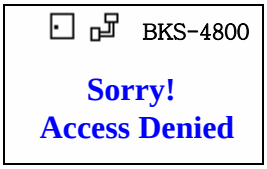
Place your finger on the finger sensor.

Success

BKS-4800	BKS-4800	BKS-4800
Enter User ID : **	Place Your Finger	OK! Access Granted

Failure





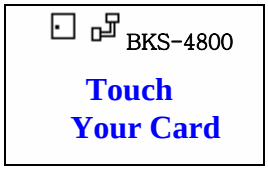
When fail authentication, repeat one more time automatically.

Please try again with second failure message.

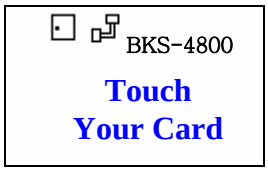
EM TYPECard User (Do not need to input ID)

Close EM TYPEcard to the below of the fingerprint sensor.

Success



Failure

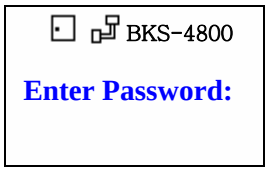


Password User

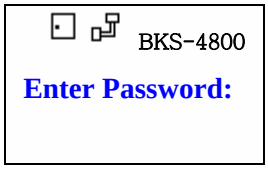
After input User ID, press “<┘” button or keep on the last number for a while.

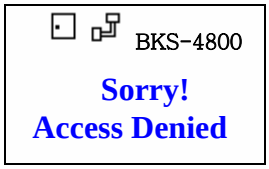
Push password when “Enter Password:” message appears.

Success



Failure





When fail authentication, repeat one more time automatically.

Please try again with second failure message.

EM TYPECard + Fingerprint, EM TYPECard + Password User(Do not need to input ID)

Apply for the place needs high security level.

Authenticate as the fingerprint and password is completely matched.

Selectable authentication method user

Select one authentication method of all registered methods. When one selected method is matched, “OK! Access Granted” message” appears.

Ex) in case of Fingerprint & Password register

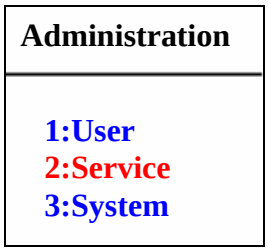
1. Input User ID

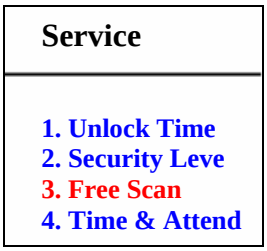
2. Apply fingerprint or Password

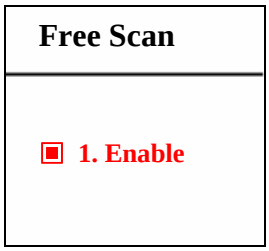
8. Free scan and Grouping

Free scan authentication

If number of user is less than 50 people, free scan authentication will be helpful to reduce one step of ID input. Follow the process “ 2.service =>3.Free Scan” and select “ 1.Enable ” and save it by “<┘” button.







For use of free scan, keep push “ ＊ “ button for seconds until sensor emit light or push twice of “＊“ button and place your finger on sensor for authentication.

Grouping

If number of user is more than 50 people, free scan authentication with grouping ID input will be helpful to reduce touching time of long ID and can speed up system processing time effectively.
For use of free scan with grouping ID, input first figure number of user ID and keep push " * " button for seconds until sensor emit light and place your finger on sensor for authentication.

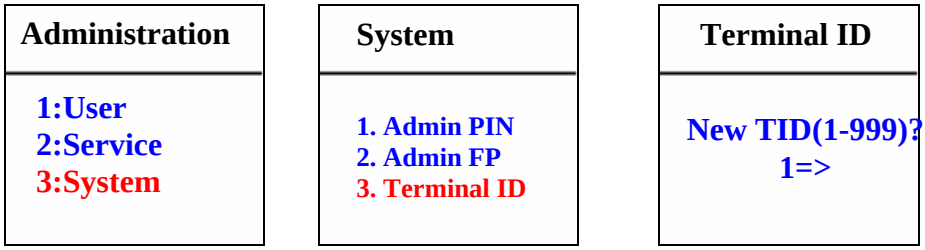
User ID grouping process is as follows;

- If user has 12345678 ID with more than 50 people, when try "1" and " ∗ " twice
- Basically processor count only all ID having "1" at first figure place among registered users.
- It means data loading burden on processor will be reduced to one tenth other than free scan.
- As like above wise, user can shorten a long ID number and a number of target user group ID as trying "12" and " ∗ " or "1" and " ∗ " and "8" or " ∗ " and " 8" and so on.

9. Terminal registration

Setting the terminal ID

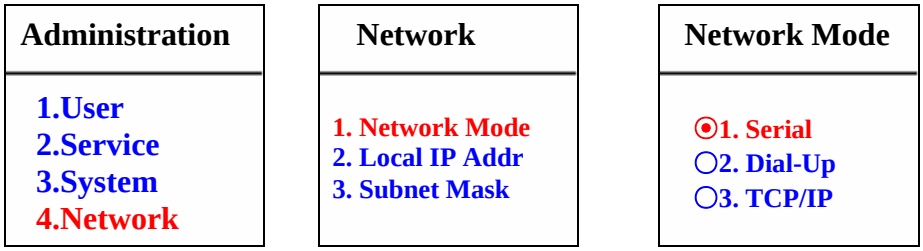
To operate terminals in network must set terminal ID. Follow the process "3.System=>2.Terminal ID=> new TID " up to 999 terminals and touch " <┘ " button for storage.



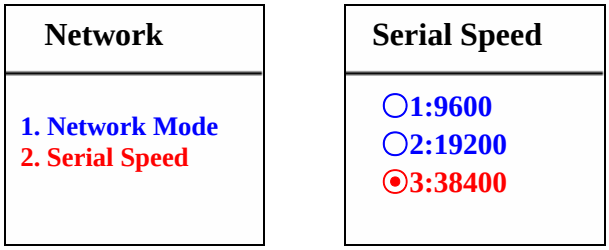
Setting network mode upon transmission methods

Serial, Dial-Up

Select this methods when try to connect server PC to terminal by serial line.
First, follow the process " 4.Network=>1.Network Mode=>1. Serial " and confirm it by touching " <┘" button or " number " button and then it's saved.



Second, back to upper menu stage by "<┘" button and set transmission speed by following this process "4.Network =>2.Serial Speed " and then it's saved by " <┘" button.

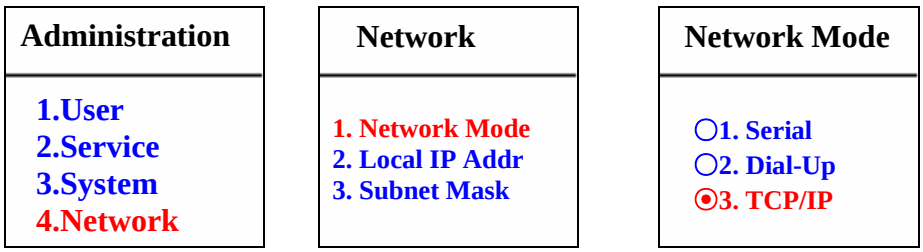


Dial-Up

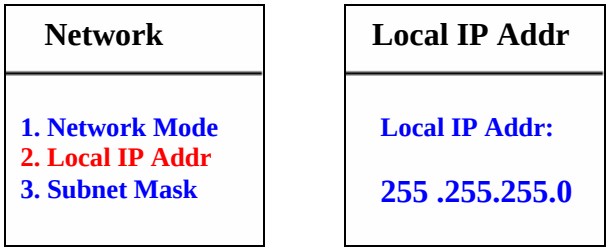
To be updated within June 2004.

TCP/IP

Select this methods when make terminal operation over Internet. First, follow this process " 4.Network =>1.Network Mode=>3. TCP/IP ", check 3. TCP/IP and then press " <┘" button for storage or push " number" button.



Second, go to the upper menu and set the five options;



a. Local IP Address (terminal IP)

Input IP address by use of “number” button, “#” button for deletion and “*” button for “.” And it’s saved by “<┘” button.

b. Subnet Mask

Input Subnet Mask address

c. Gateway

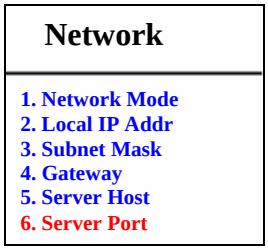
Input Gateway address

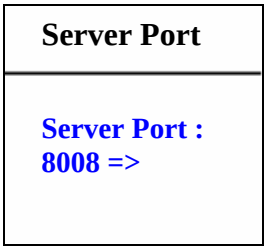
d. Server Host

Input PC server IP address

e. Server Port

Input port number of PC server. It is set, as 8008 initially, please do not change without special cause.

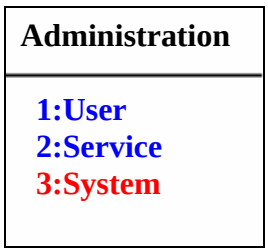


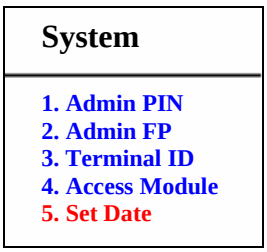


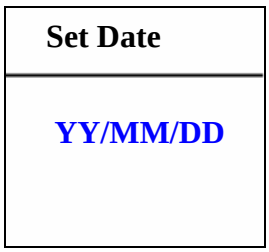
Setting date and time

Date and time keep even though power is off. It also can be changed at Console Manager program.

For date setting, follow this process “ 3.System=>5.Set Date” and input current date and save it “<┘” button. For the change, please move curser by “ARROW” button and delete it by “#”and input new date and save it.



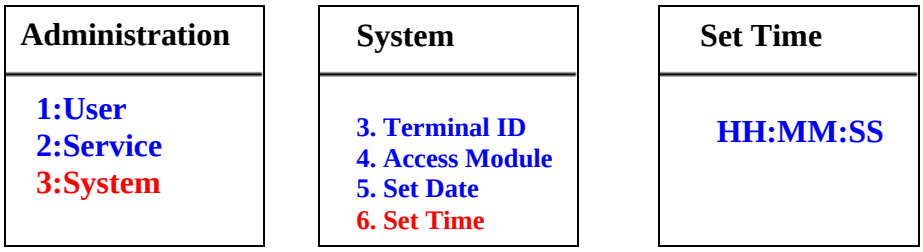




i.e.) if date is April 23, 2004, input 040423.

For time setting, follow this process “ 3.System=>6.Set Time “ and input current time and save it “<┘” button. For the change, please move curser by “ARROW” button and delete it by “#”and input new

time and save it.

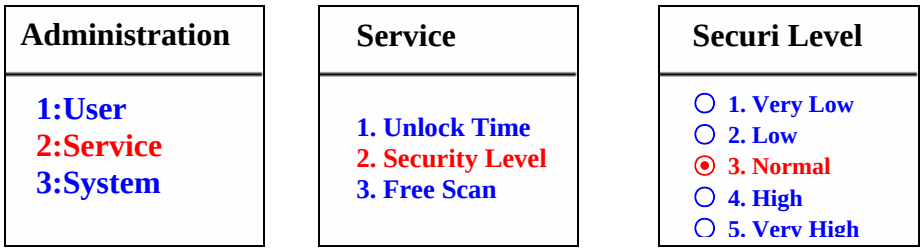


i.e.) if time is PM one thirty and five seconds, input 133005.

10. The other functions

Setting security level

Tune security level from 'Very Low(1)' to 'Very High(5)' level. '3. Normal' is set in default.

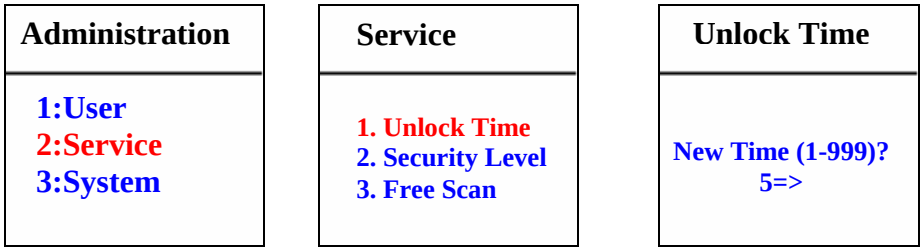


The higher security level is the lower FAR (fault acceptance rate). Reversibly the lower security level is the higher FAR.

There is an inverse proportion between FAR and FRR (fault rejection rate).

Tunes locking time of door

It can control locking speed of door operation. Five (5) seconds is set in default.



Checks all registered user

At the stage of (1.User=>3.Delete User=> Enter User ID) keep push (*) button for seconds, it shows all number of registered users. And for escape input “NO” or touch “CLR” button.

Administration	Delete User	Delete User
1:User 2:Service 3:System	1:New User 2:Edit User 3:Delete User	Enter User ID : *

Checks all registered ID

At the stage of (1.User=>2.Edit User=> Enter User ID) keep push (*) button for seconds, it shows all ID list in BKS-4800.

Administration	Edit User	Edit User
1:User 2:Service 3:System	1:New User 2:Edit User 3:Delete User	Enter User ID : *

If you want to change authentication method on target ID, scroll down to the target ID by “ARROW “ button and touch “<┘” button and it is ready to change.

Change administrator password

The initial password number was set as 1111. Please must change it to your own password number.

Type your new code twice as same number.

Follow this process as “ 2.System=>1.AdminPIN=>Enter New P/W=> Verify New P/W=>OK! Data Saved “

Administration	System	Admin P/W
1:User 2:Service 3:System	1. Admin PIN 2. Admin FP 3. Terminal ID 4. Access Module	Enter Password: ****

Change administrator Fingerprint

After registered Administrator fingerprint, this function can be used instead of P/W.

Process is same as user FP registration..

Follow this process as " 3.System=>2.Admin FP=>Place finger on the sensor=> OK! Data Saved "

Description of button

- Arrow key (▲ ▼) : curser scroll down or up
- <┘ button: confirm the selection mode and get into the lower menu stage and saved.
- CLR button: move to the upper menu stage without saving.
- " * " button : 1) in grouping mode to mark all figures in the other place of ID number, 2) browse all user list 3) mark & delete check (√) and "·" When input IP address at network mode.
- ' # ' Button: to cancel input number as like back space key in PC keyboard.

Change operations of authentication methods

Initially all authentication methods "Fingerprint, RF-card, Password (PIN)" was set for operation. If you want to delete any method from them, just touch "∗" to delete check (√) and save it by "<┘" button.

Follow the process " 3.System=>4.Access Module=>FP, Card, Key " and select your choice.

Administration
1:User 2:Service 3:System

System
1. Admin PIN 2. Admin FP 3. Terminal ID 4. Access Module

Access Module
⦿ 1: FP Sensor ⦿ 2: Card Reader ⦿ 3: PIN keypad

Set LCD Back Light time

If you want to control LCD back light time how long it's on, input the time from 0 to 255 second.

For light on all the time, select " 0 ", for power saving, you can select the back light off time.

If 200 second input, back light will be off after 200 second of last push button.

Administration
1:User 2:Service 3:System

System
5 Card Reader 6 Set Date 7 Set Time 8 Options

Options
1. BackLight Time 2. Exposure 3. LCD Contrast 4. LCD Brightness

BackLight Time
New Time(0-255) 0 =>

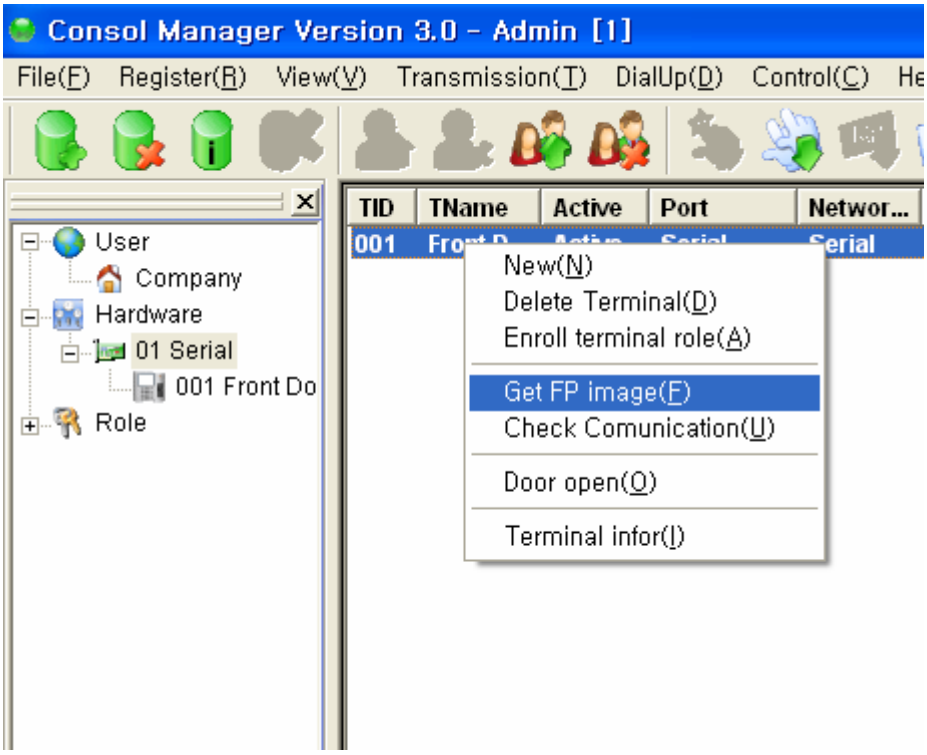
Exposure

It can control the sensor exposure time to get more high quality image.

Follow the process " 3.System=>8. Options=> 2.Exposure=> Select suitable Exposure of 3 levels and save it by "<┘" button.

Administration	System	Options	Exposure
1:User 2:Service 3:System	5 Card Reader 6 Set Date 7 Set Time 8 Options	1. BackLight Time 2. Exposure 3. LCD Contrast 4. LCD Brightness	○ 1: Very Low ○ 2: Low ◉ 3: Normal

You can check the fingerprint image from Console Manager.



First, check the image remained on terminal and you select the most clear image level.

LCD Contrast

It can control LCD contrast. To become big number, the background color is dark.

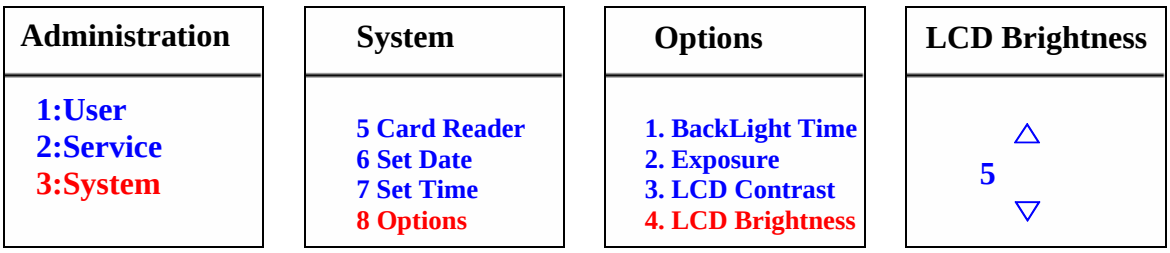
Follow the process " 3.System=>8.Options=>3.LCDContrast =>Select suitable contrast of "0~63 " and save it by "<┘" button.

Administration	System	Options	LCD Contrast
1:User 2:Service 3:System	5 Card Reader 6 Set Date 7 Set Time 8 Options	1. BackLight Time 2. Exposure 3. LCD Contrast 4. LCD Brightness	△ 5 ▽

LCD Brightness

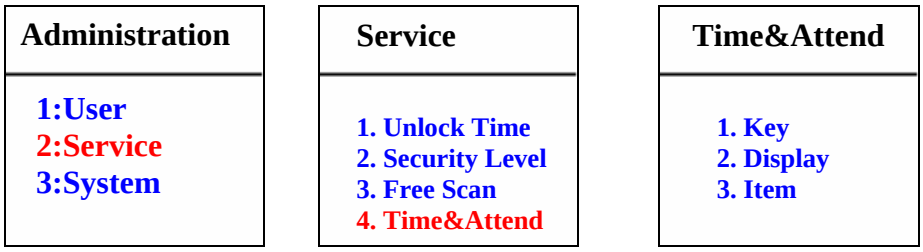
It's set to 5 levels in initial stage.

Follow the process " 3.System=>8.Options=>4.LCD Brightness=>Select suitable Brightness level and save it by "<┘" button.



Time & Attendance setting

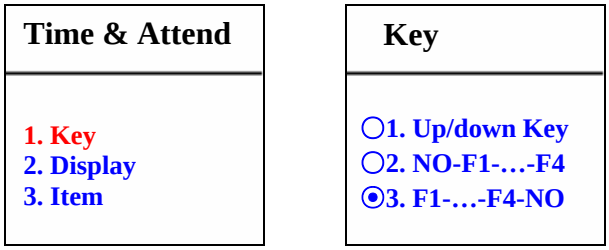
For being shown Time & Attendance function on LC window, go to the stage (2.Service=>4. Time&Attend) and set details.



1. Key

It's set the function key among the 1.Up/Down Arrow Key, 2. NO-F1,F2,F3,F4 and 3. F1,F2,F3,F4,NO

1. Up/Down Arrow Key : Select function by Up&Down arrow key
2. NO-F1,F2,F3,F4 : NO – CLR, F1 - △, F2 - ▽, F3 - <┘ , F4 - #
3. F1,F2,F3,F4,NO : F1 – CLR, F2 - △, F3 - ▽, F4 - <┘ , NO - #



It's set the function key between 1.Up/Down Arrow Key and 2. or 3(4 buttons of vertically forth line Arrow, CLR, <┘)

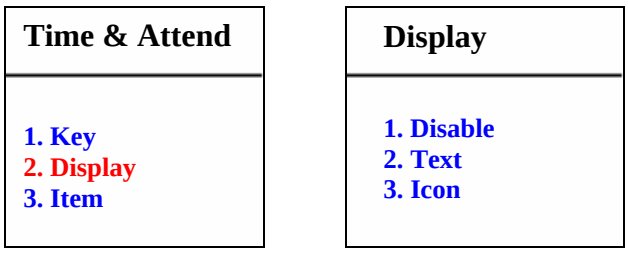
If you use over 4 functions, please select to 1.Up/Down Arrow key as to push number "1" or "*" button

2. Display

When you don't want to use T&A function, just check "1.Disable".

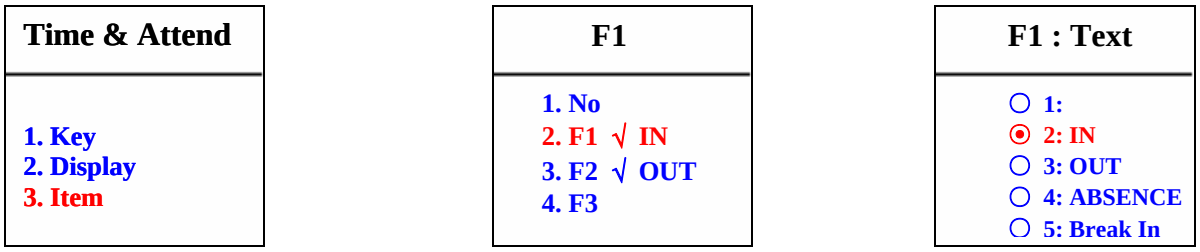
2. Text : display message as IN, OUT, ABSENCE, Break In, Break Out.

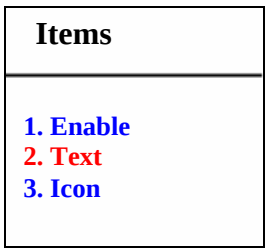
3. Icon : display icon as same step as text.



3. Message select

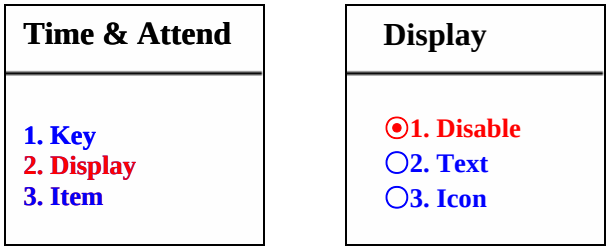
After selecting text or icon, set function key message.





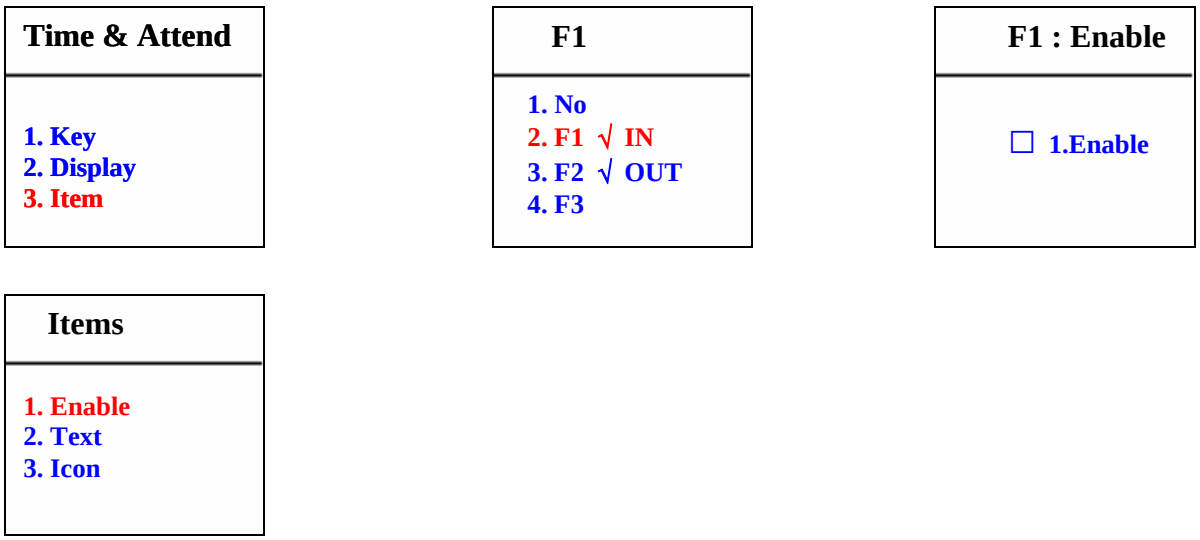
4. No display T&A message

For no display T&A message, go to 2.Service => 4.Time & Attend => 2> Display => Select 1.Disable. And save as click to '<-┘' button



5. No display function key.

If you want to set 'F1' key is no display, go to 2.Service => 4.Time & Attend => 3.Item => Select no operating button =>1.Enable => remove tick mark.



Event setting

For being shown Mast Event & Delete Event function on LCD window, go to the stage (2.Service=>5.Event) and set details.

- **Delete Event :** Delete all event on the memory of BKS-4800
- **Output Type : Network** – Standard type data is directly sent to PC
  26 Wiegand, 34 Wiegand – Directly connect to ACU(Access Control Unit) without PC interface
- Mask Event : **Lock Event** – Normal Locked, Normal Unlocked etc
  Access Event – Access Granted, ID etc main event
  Other Event – Network Status, System Information

☐ **1.Enable** : Send the Event to PC

■ **1.Enable** : Do not stored on Memory and not sent to PC

BKS-4800 store many event log records included the lock event (door open/close), Access Event and Other Event. If you don't want to store "Lock Event" data, disable it.

When BKS-4800 use for standalone mode and no need the Log record, sometimes push "6.Delete Event" stored Event or disables all Events. It helps the fast operation speed to prevent from full memory data.

11. Tips on cautions use

First setting in initial use

- Change system password for your security.
- Default setting password at manufacturing site: 1111
- Power should be supplied after all cablings are completed.

In case of fingerprint hard to be processed

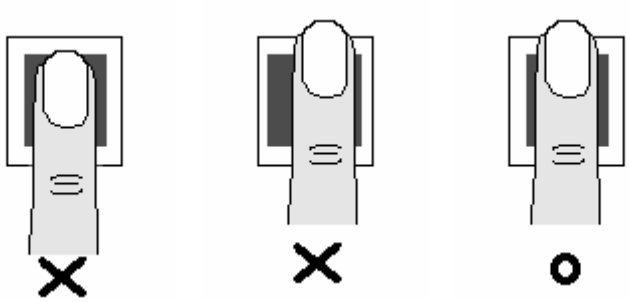
- Try again, after removing some dirties and water on fingerprint
- Stay more than 1.0 seconds on capture area and don't move your finger during touch.

Reset BKS-4800 and back to setting status before latest trial

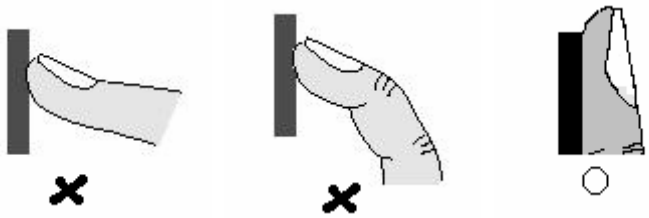
- When BKS-4800 is in disorder without special problem, Just push Reset switch, then it's back to setting status before latest trial.
- You can call anytime to customer support center for your trouble.

Right fingerprint registration position

- Registration position



- Right finger touching



12. Specification

Configuration

- Main board
- LCD module
- Fingerprint sensor

Power

- Voltage
  - +12V DC with ±30% tolerance, less than 150mVp-p ripple voltage
- Power consumption
  - Stand by: average 300mA
  - Maximum on working: average 600mA

Environment

- Temperature & humidity
  - Operation temperature : -15℃ to 60℃
  - Operation humidity: 0% to 90%
- Static electricity
  - 0~4KV contact discharge: No unrecoverable error
  - 0~8KV air discharge: No user detectable error

Communication Interface

- 1 RS232 port/RS485/Dial-UP
  - Speed: select one among 9600, 19200, 38400 bps
  - Default speed: 19200bps
  - Interface valuable: no flow control, 1 stop bit, 8 data bits
  - Maximum interface span is up to RS232, RS485 specification.
  - Maximum transmission span: 150m
- 1 TCP/IP
- 1 Wigand

Relay

- 1 Relay Out (COM, NO, NC)

  Rated 1A@24VDC

  Rated 1A@120VAC

Fingerprint storage

- 1:1 : up to 5,000 user (two templates per user)
- 1:N matching : up to 1,000 user (two templates per user)

Log records

- Up to 10,000 events

Dimension

- Device: 155 mm (W) X 35 mm (D) X 155 mm (H)
- LCD module: 75 mm (H) X 52 mm (W)
- Fingerprint capture area in Sensor: 18 mm (H) X 16 mm (W)

Weight

- 400g

Authentication speed

- Less than 1.0 seconds

FRR (fault rejection rate)

- 0.01%

FAR (fault acceptance rate)

- 0.001%

Fingerprint data

- 512 bytes

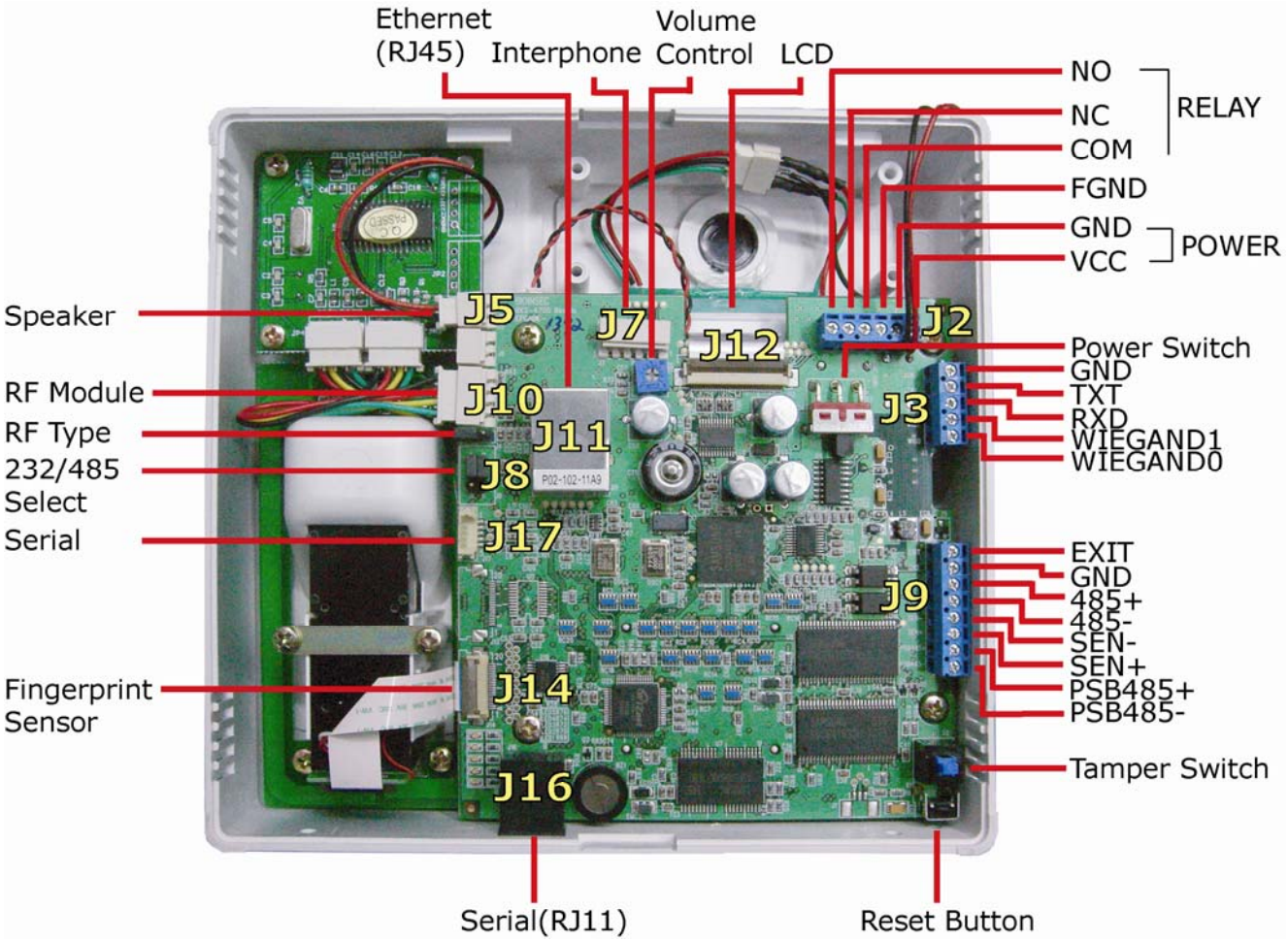
Sensor resolution

- 500DPI

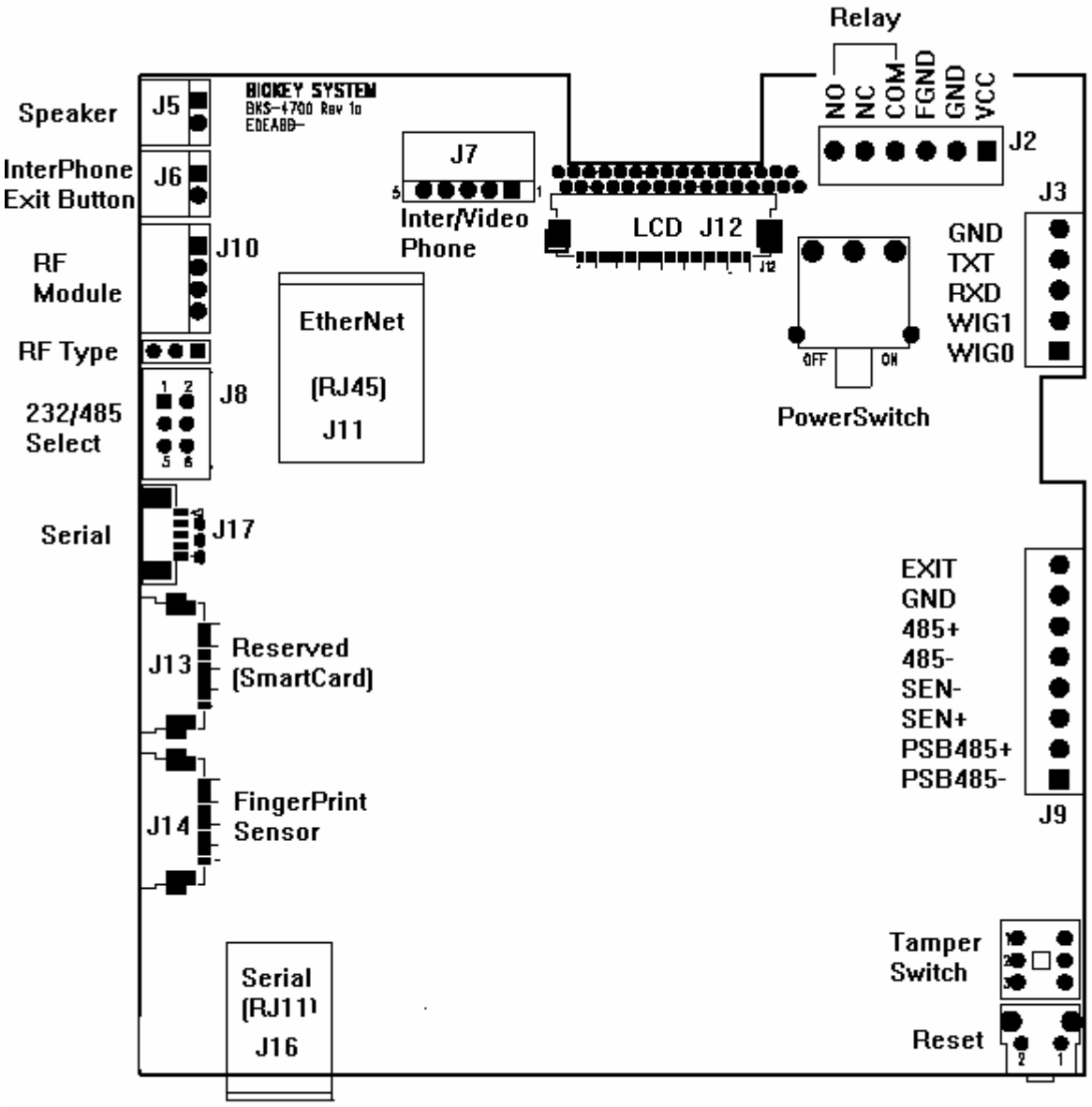
Hardware (main board)

Connector description

- Main board



- Details on connectors



* J2

- NO: Normal Open
- NC: Normal Close
- Relay Com: relay common port
- FGND: not used
- GND: ground

- VCC: DC +12V

* J3

- GND: ground
- TXD: RS232C transmit port (Dial-up)
- RXD: RS232C receipt port (Dial-up)
- WIG1: Wiegand connection port
- WIG0: Wiegand connection port

*J9

- EXIT: Exit button port (connect with GND port)
- GND: ground
- 485+: RS485 port
- 485-: RS485 port
- SEN-: connection port for door sensor
- SEN+: connection port for door sensor
- PSB485+: not yet applied
- PSB485-: not yet applied

*J8 (RS232 / 485 Jumper selectable)

- RS232: must jumper with 1-3,2-4 pin for 232 port use of J3
- RS485: must jumper with 3-5,4-6 pin for RXD/TXD port use of J7

Application example

- Instruction for power line installation is not explained
- In case of Lock, upon door type of installation site Dead bolt, Striker, EM Lock will be used.

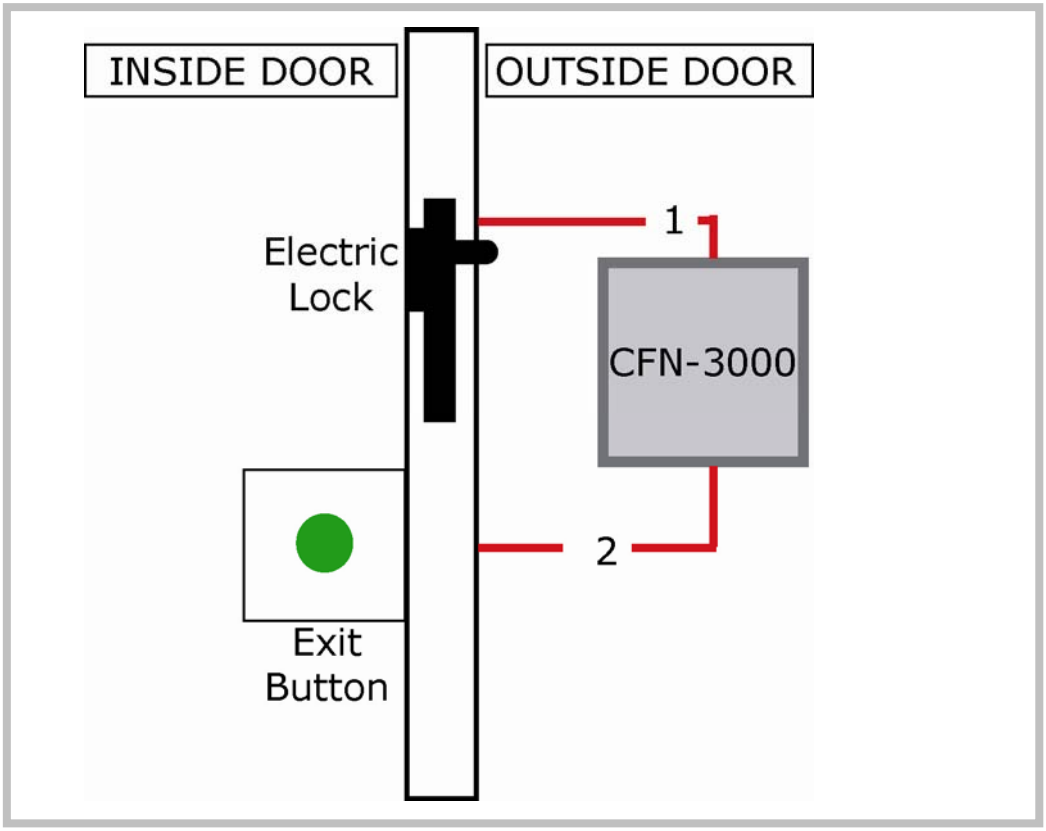
Standalone – one(1) device

- Installed one unit for only access control without PC.

  * Usage: access control

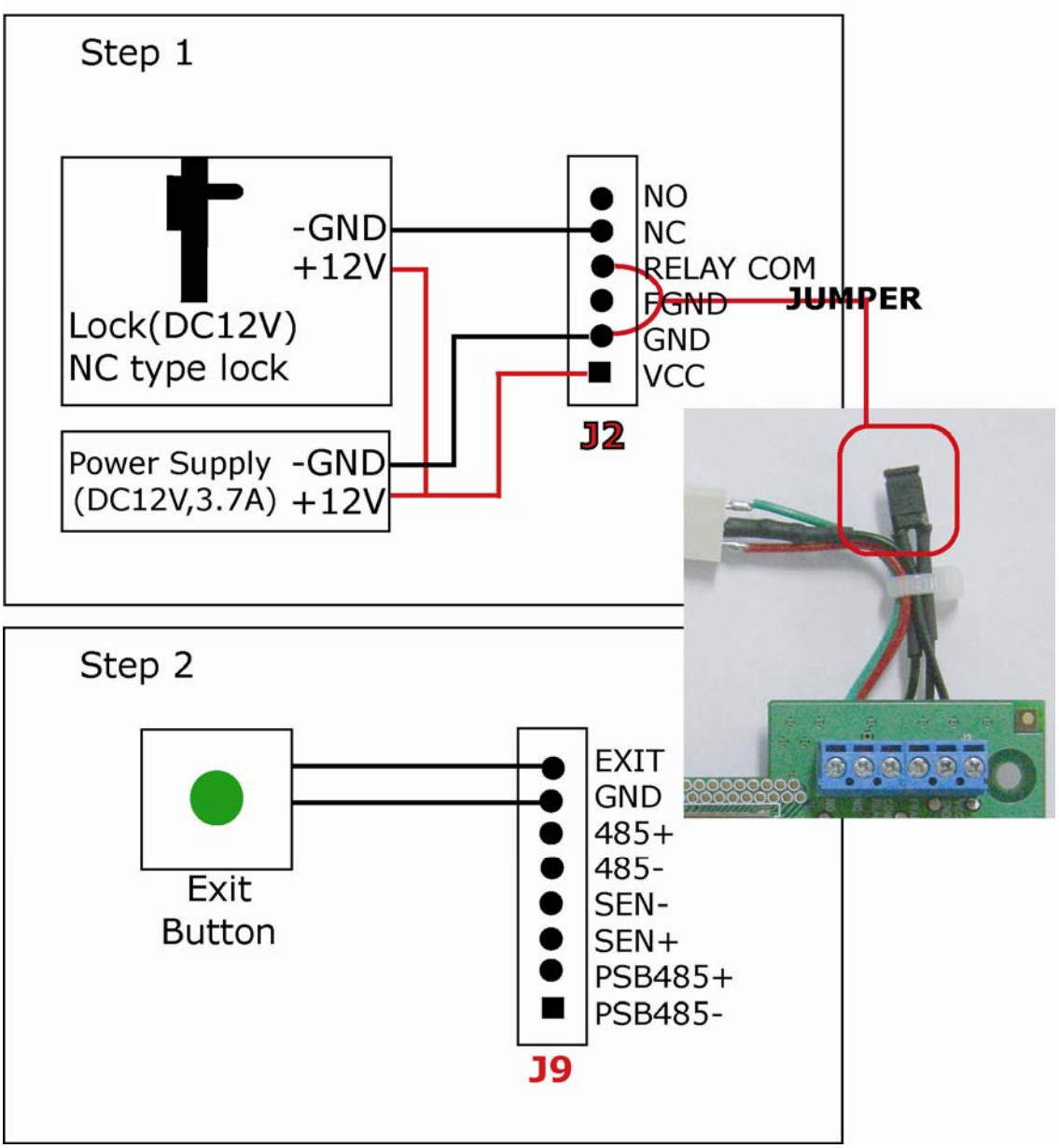
  * Configuration: BKS-4800, Lock, inner exit button, S.M.P.S adapter (DC 12V 2A)

  * Block diagram



- The # in the connection line means count # of line

  * Connection example of BKS-4800 connector



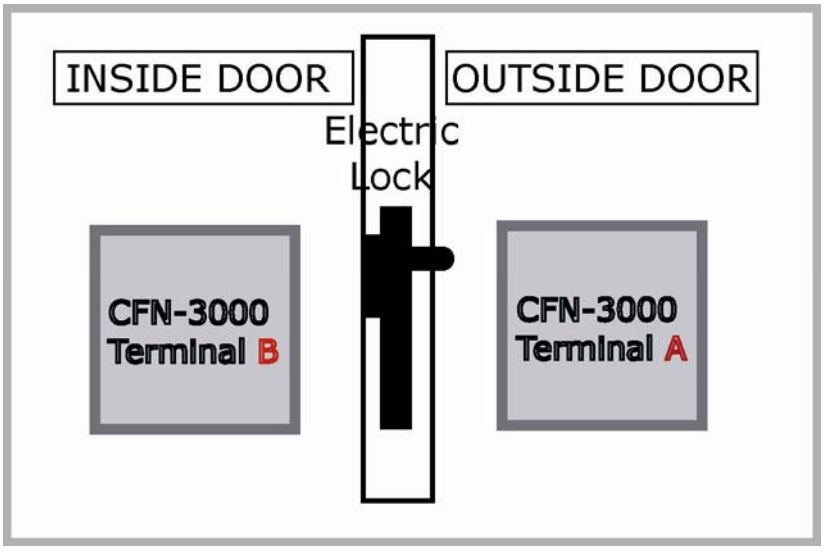
- Initial setting

  * Registration must be done at BKS-4800 terminal as manual 5.1 section shows.

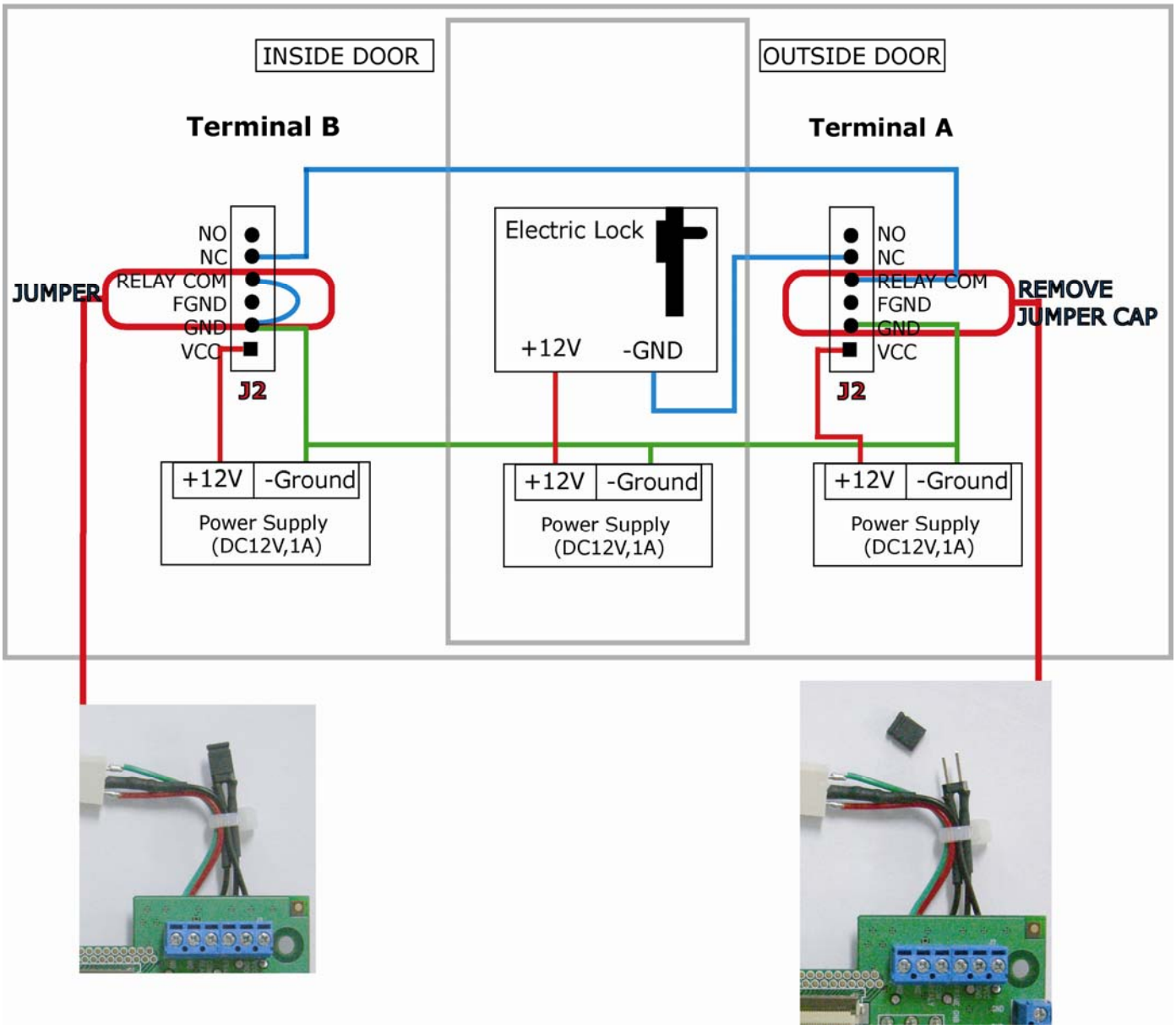
  Standalone for two(2) terminals between wall

Use both side of wall without exit button.

Please be careful of specific power connection as follows.



- Connection example of BKS-4800 connector



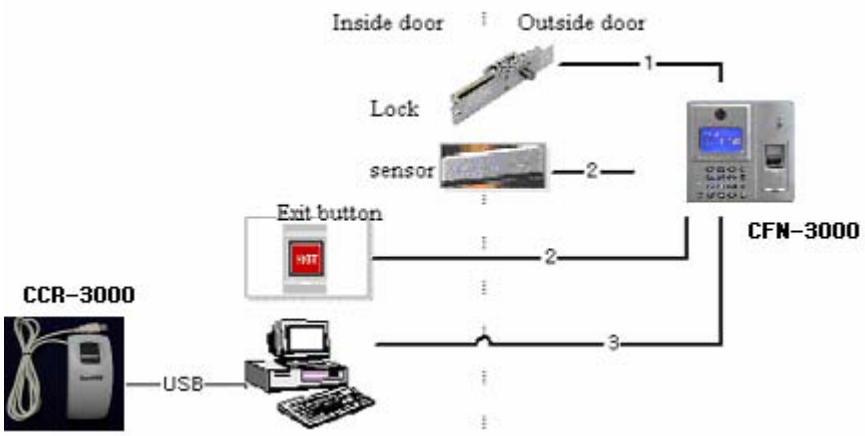
Please be careful of the difference Jumper setting as above picture.

PC - RS232

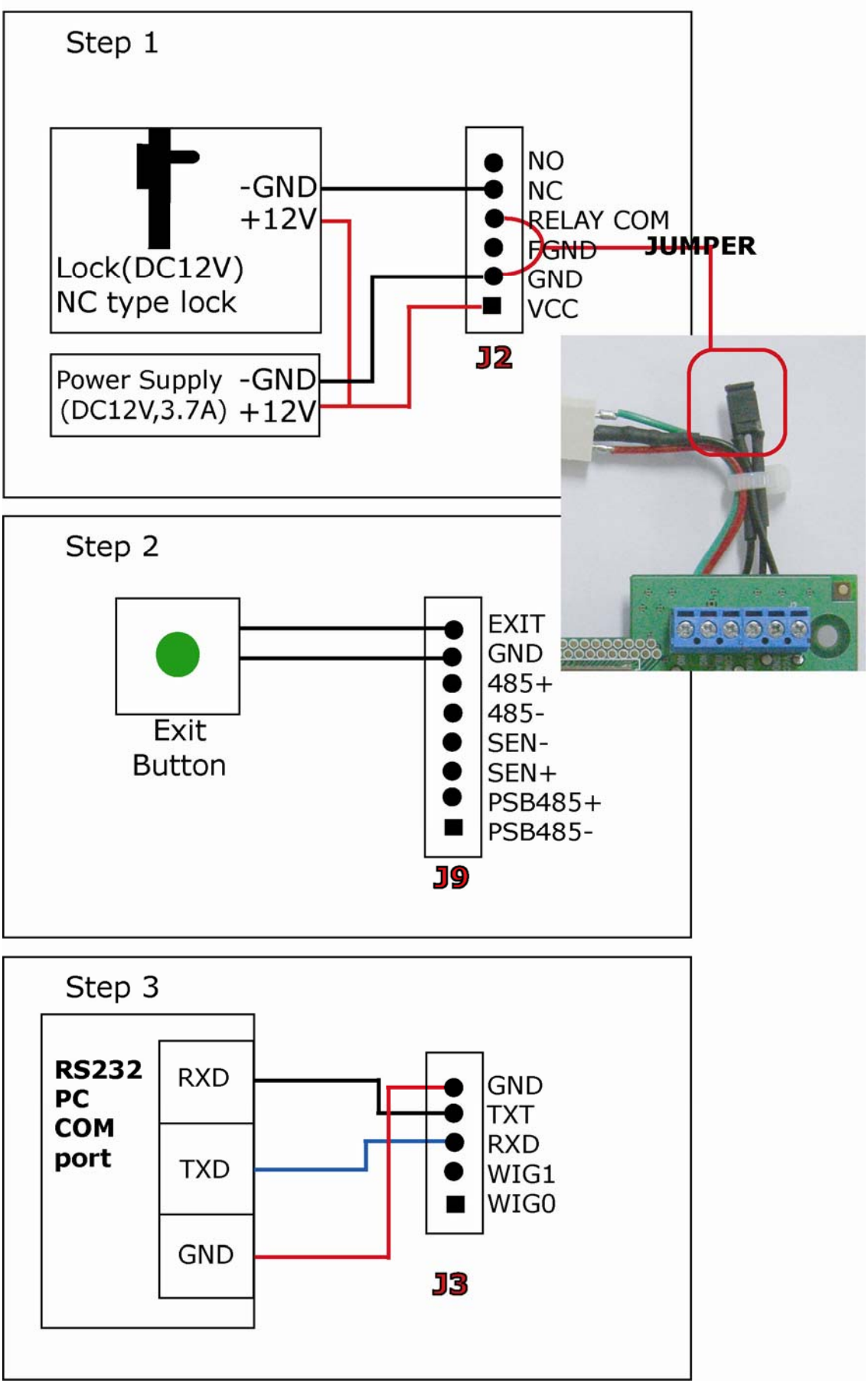
- Serial network application: more than one BKS-4800 connected with server PC through RS-232 for access control and Time & Attendance.
  - **Configuration**
    - Access control: BKS-4800, Console-Manager (terminal control & log management), Lock, inner exit button, S.M.P.S adapter (DC12V 2A), BKS-2600 (fingerprint scanner), Server PC, door sensor

- Time & Attendance: BKS-4800, Console-Manager (terminal control & log management), S.M.P.S adapter (DC 12V, 2A), BKS-2600, Server PC
- Door sensor: check on door being open or closed.

- Block diagram



- Connection example of BKS-4800 connector #2


Step 1
-GND
+12V
Lock(DC12V)
NC type lock
Power Supply -GND
(DC12V,3.7A) +12V
NO
NC
RELAY COM
FGND
GND
VCC
J2
JUMPER
Step 2
Exit
Button
EXIT
GND
485+
485-
SEN-
SEN+
PSB485+
PSB485-
J9
Step 3
RS232
PC
COM
port
RXD
TXD
GND
GND
TXT
RXD
WIG1
WIG0
J3

- **Initial setting**

- All setting's available on PC and BKS-4800, but we recommend PC processing for your convenience.

  - Registration

- In case of BKS-4800 (fingerprint scanner), customer can enroll the user's fingerprint by Console-Manger program or server program coded by SDK and transmit it to BKS-4800 terminals.
- Without BKS-4800, directly enroll user's fingerprint at BKS-4800 and download it to PC server by Console program.

  - Time & Attendance

- User's event records should be kept in BKS-4800 and transmitted to PC server.
- At the PC, Console-Manager or server program coded by SDK will handle it along with customer's management format.

  - Door control

- Regardless of terminal authentication, Door can be controlled by use of compulsory mode in Console Manager; open, closed, timeframe for open or closed

  - Restriction on user's admission

- Each user's timeframe for admission can be set in Console-Manage. If he tries to admit to door, LCD window shows " it is not time to use " and also door does not operate.
- Initially all user are not set for time restriction.

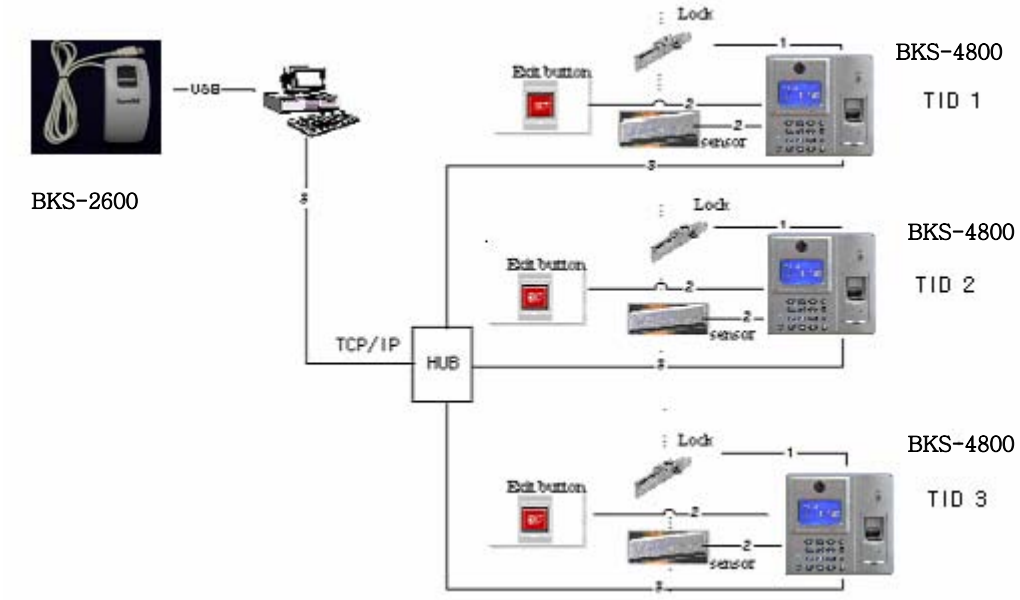
  - For more information on Console-Manager, please refer to manual of Console-Manager.

PC – TCP/IP

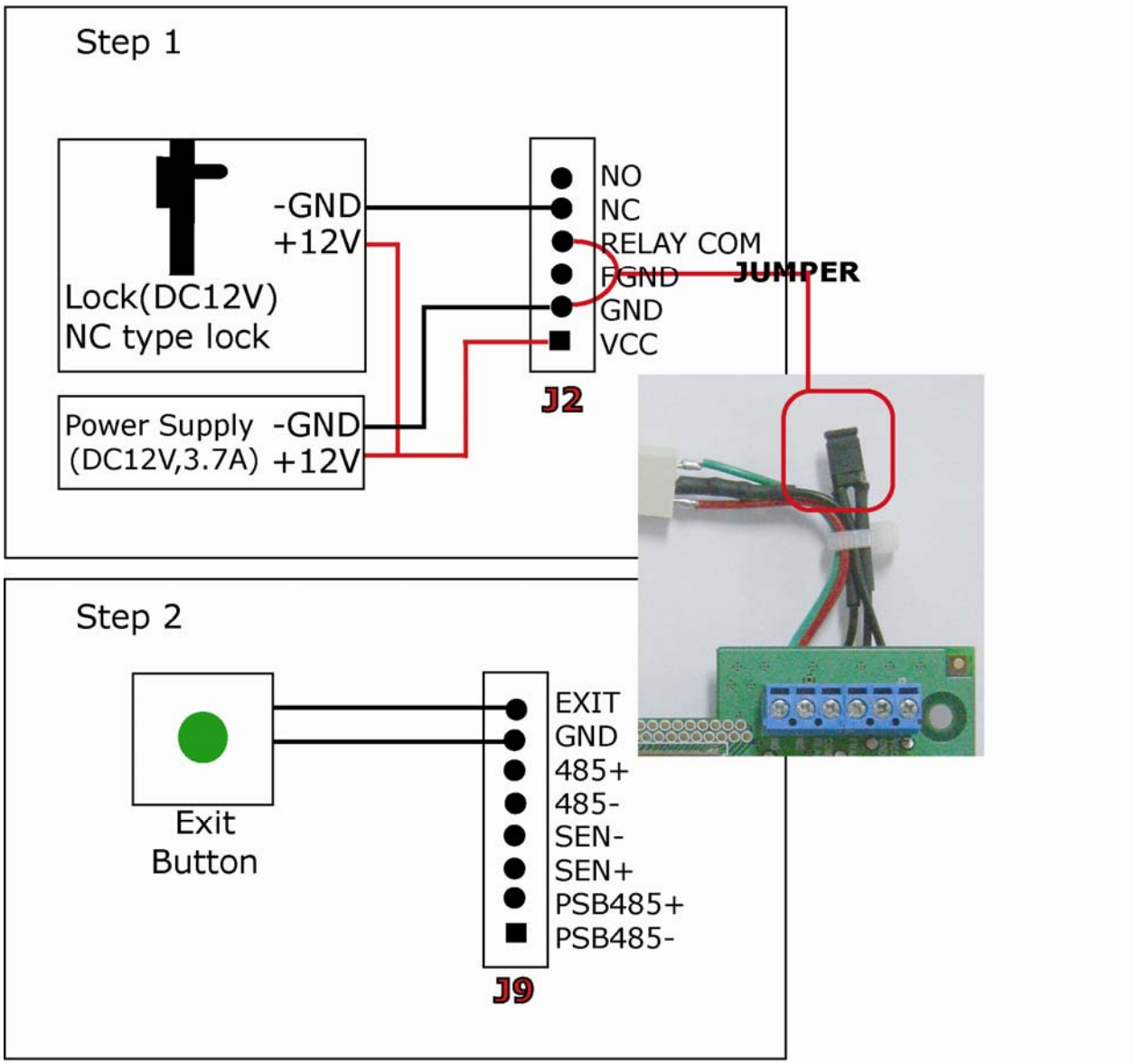
- BKS-4800 has TCP/IP port. So several terminals can be connected through HUB for PC server control network.
- In case of network mode, should set TID (terminal ID) in BKS-4800: 1 ~ 255. For the setting of TID please refer to manual 5.3.2 section.

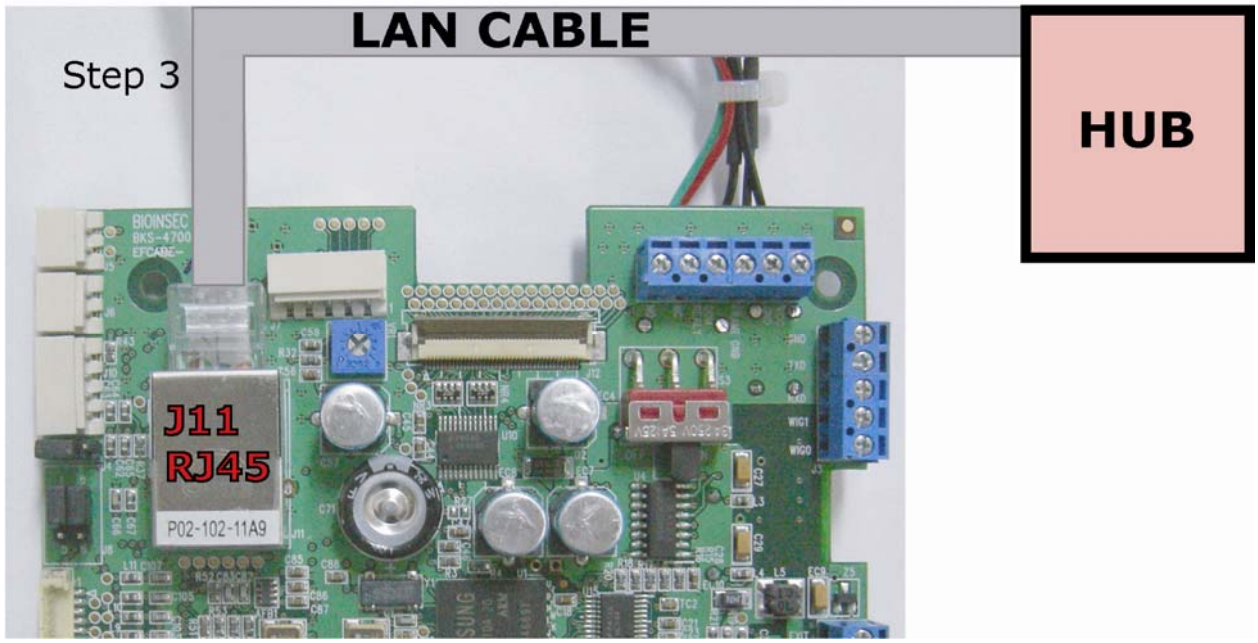
- **Configuration**
  - Access control: BKS-4800, Console-Manager, Lock, inner exit button, S.M.P.S adapter (DC 12V 2A), BKS-2600, Server PC, door sensor

- Time & Attendance: BKS-4800, Console Manager, S.M.P.S adapter (DC12V 2A), BKS-2600, Server PC
- Block diagram



- Connection example of BKS-4800 connector


Step 1
-GND
+12V
Lock(DC12V)
NC type lock
Power Supply -GND
(DC12V,3.7A) +12V
NO
NC
RELAY COM
FGND
GND
VCC
J2
JUMPER
Step 2
Exit
Button
EXIT
GND
485+
485-
SEN-
SEN+
PSB485+
PSB485-
J9


LAN CABLE
Step 3
HUB
J11
RJ45
P02-102-11A9

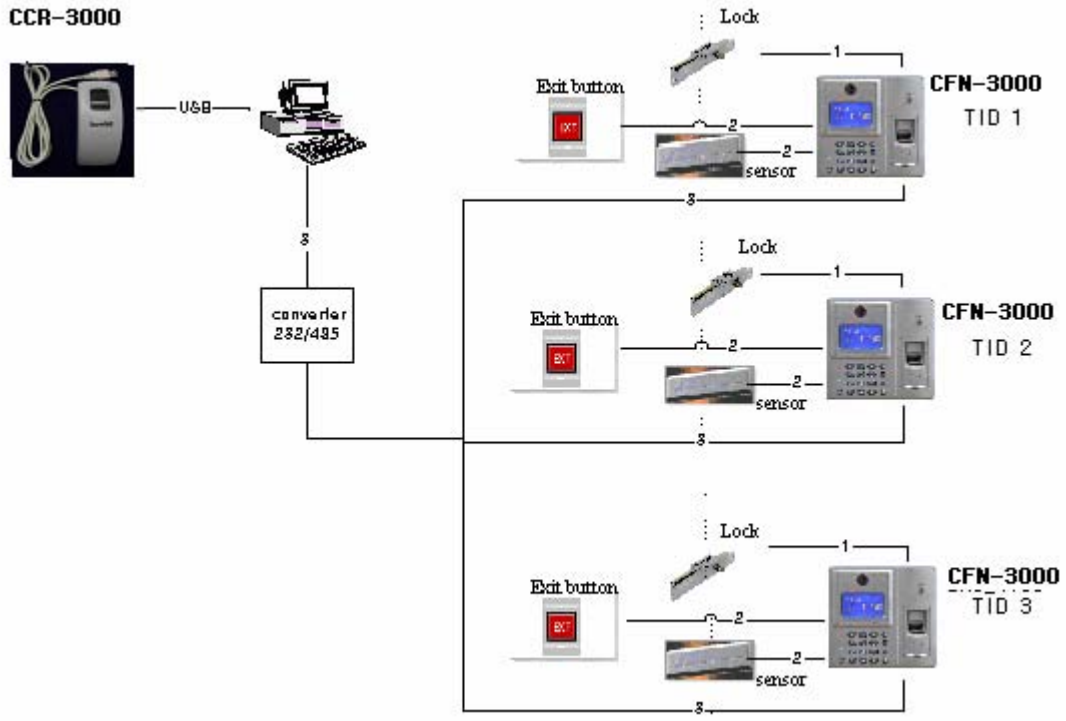
PC – RS 485

You can connect multiple BKS-4800 and PC via RS485. You are required RS232 to RS485 converter additionally. If you want to install several BKS-4800, you must assign unique TID to each BKS-4800. TID range is from 1 to 255. For changing method of TID, please refer to chapter 6.1

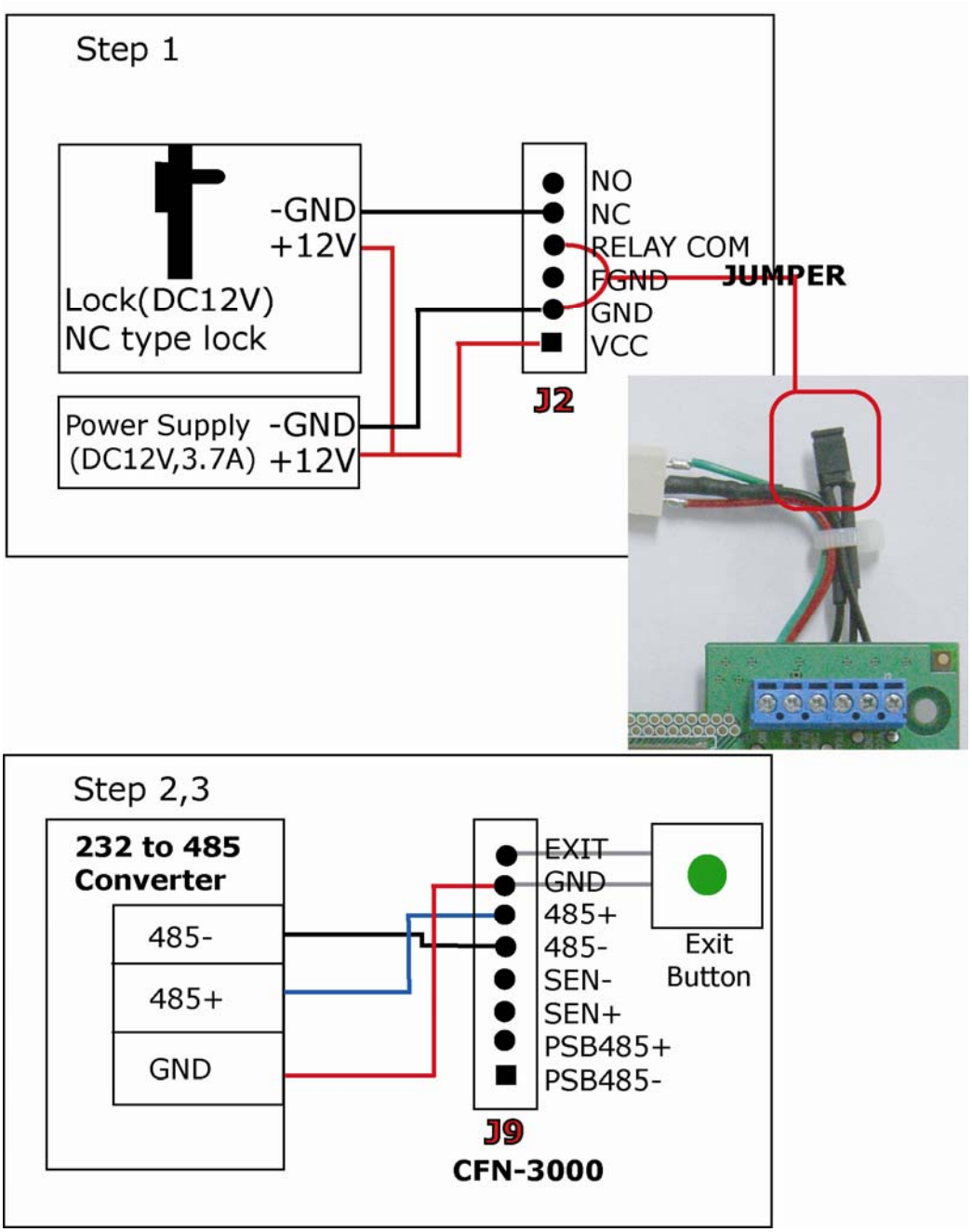
Configuration

- Access control: BKS-4800, RS232 to RS485 converter, Console-Manager(terminal control & log management), Lock, inner exit button, S.M.P.S adaptor (DC 12V, 2A), BKS-2600(fingerprint scanner), Server PC, door sensor
- Time and attendance: BKS-4800, RS232 to RS485 converter, Console-Manager(terminal control & log management), S.M.P.S adaptor (DC 12V, 2A), BKS-2600, Server PC
- Door sensor : check on door being open or closed

- Block diagram



- Connection example of BKS-4800 connector



✓ Connection example

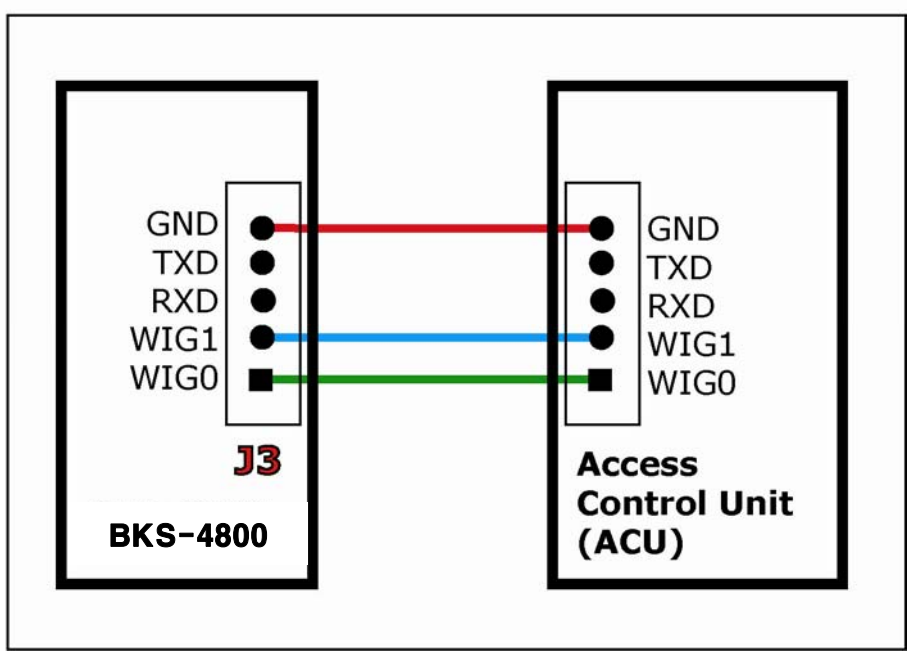
In this experiment, I use 232/485 converter of ILSHIN Inc.

BKS-4800, converter connection specification

BKS-4800	232 to 485 converter
485+ (connector #1,4)	485+ (DSUB 25, 4)
485-(connector #1,3)	485-(DSUB 25, 6)
GND(connector #1, 5)	GND(DSUB 25, 2)

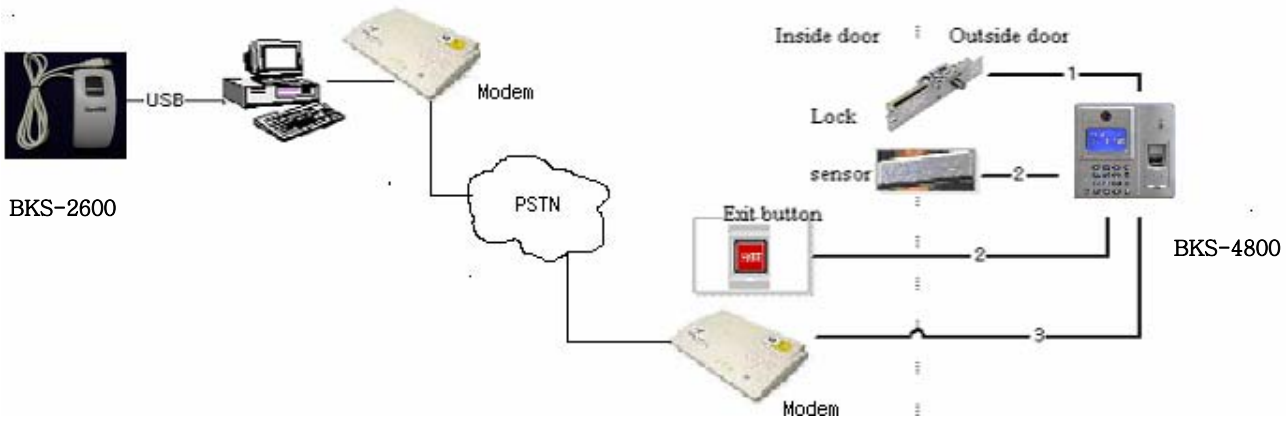
Wiegand communication with Access Control Unit (ACU)

- Connection example of BKS-4800 connector



PC – Modem

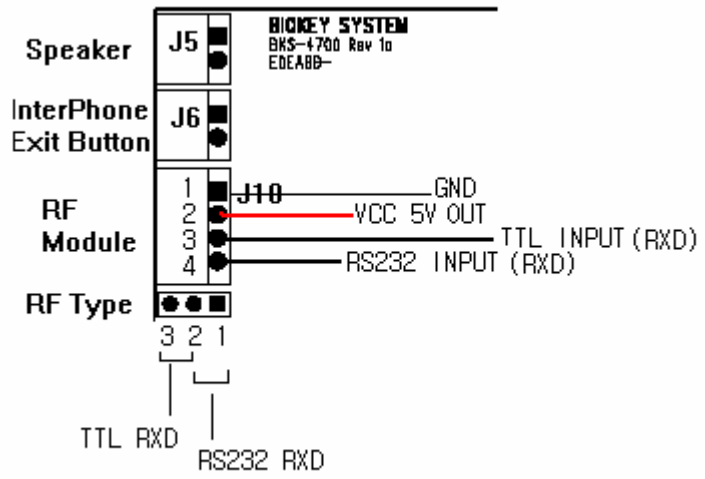
For modem communication, it needs two modems for sender and receiver with fixed telephone number.



Connection example of BKS-4800 connector

zsa

EM TYPEmodule connection- Mifare Standard Module



1. EM TYPEType
   - Voltage TTL (3.3V ~ 5V) from EM TYPEmodule : TTL RXD type
     (3-2 connect)
   - Voltage RS232(+- 15V) from EM TYPEmodule : RS232 RXD type
     (1-2 connect)
2. EM TYPEModule
   - 1,2 : Supply VCC 5V to module
   - 3 : TTL signal
   - 4 : RS232 signal
3. Communication Format
   9600, N , 8, 1
4. Data storage
   Max 8Byte

*Please inform to BIOINSEC with other type of module.