SYW95A-V3
ACCESS CONTROL SYSTEM
Operation Manual

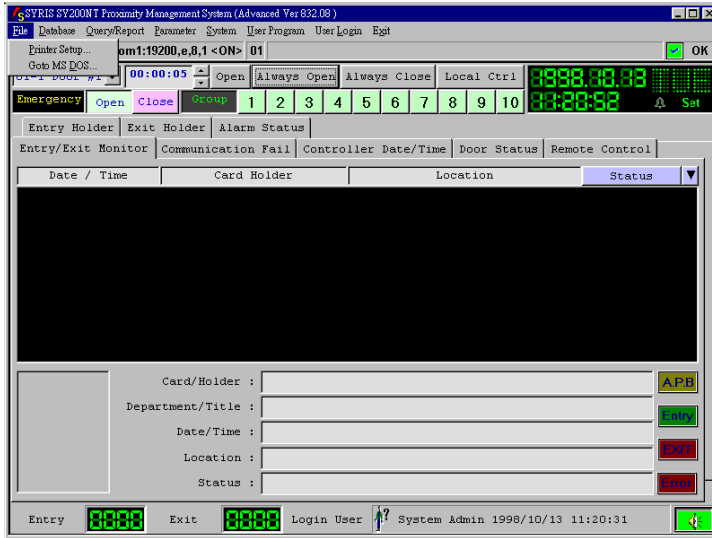**Version 2.0**

User requires to follow steps 1 to 6 in sequence below for the set up.

1. SYW95A Software Function Menu
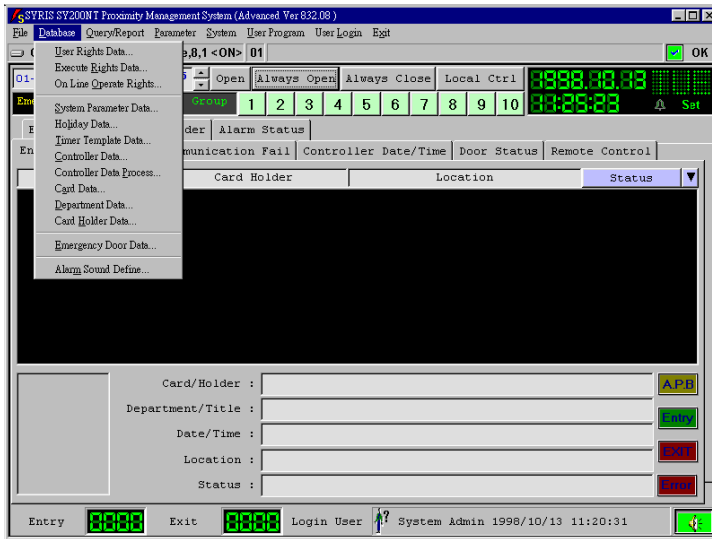
1.1 File (F)

1.2 Database (D)

1.3 Query / Report (Q)
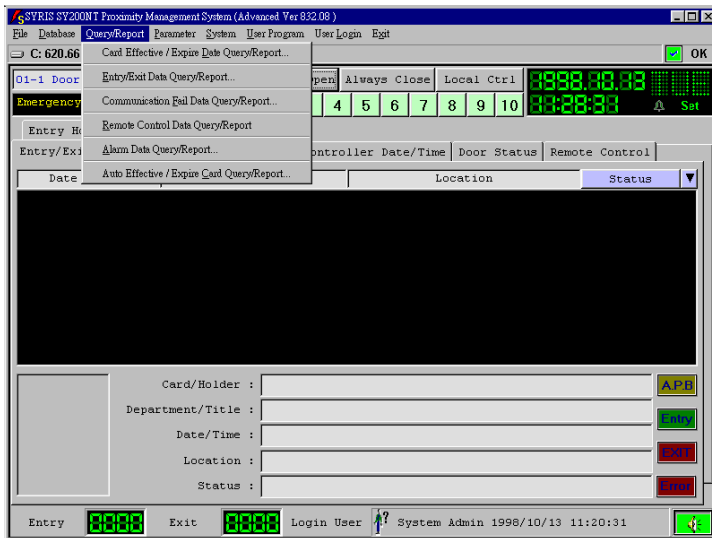
1.4 Parameter (P)
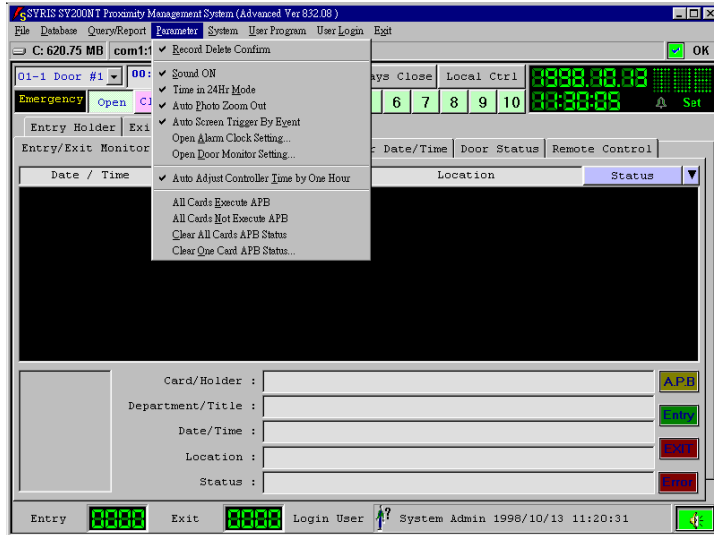
1.5 System (S)
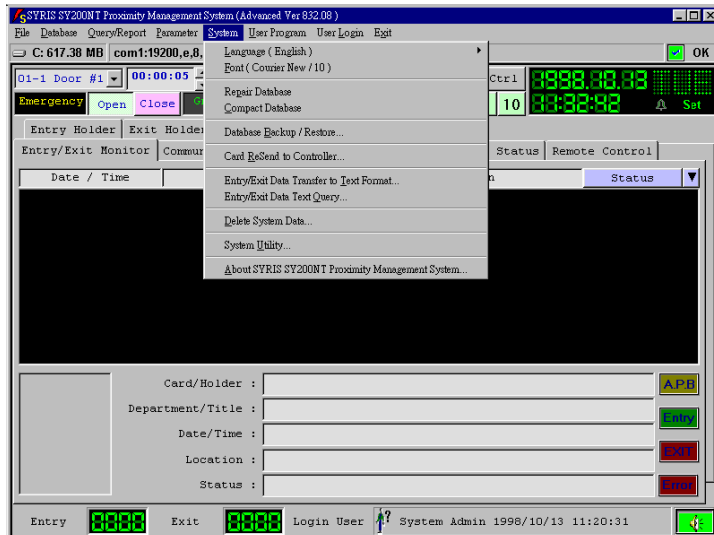
1.6 User Program (U)
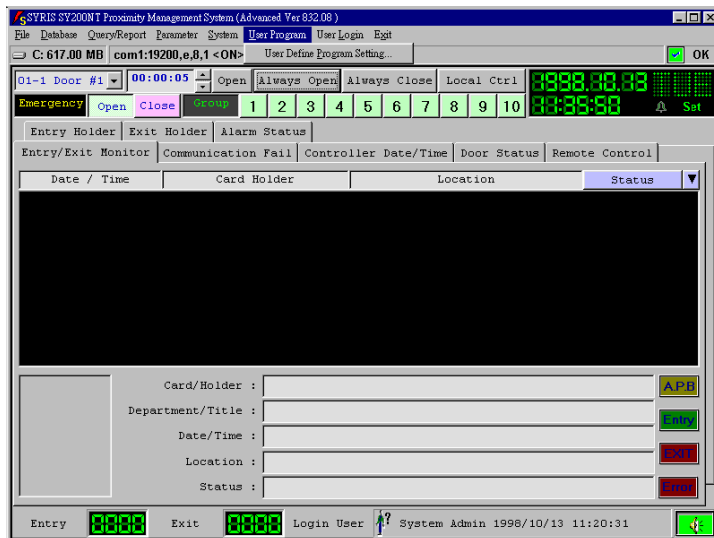
2. Software Installation

2.1 Specification

SYW95A software management is operating under Win98, WinMe, WinNT, Win2000 and WIN XP. It requires the following items:

A. Specification of PC
    a. Pentium III-500 and above
    b. Hard Disk 10 GB and above
    c. 128 MB RAM and above
    d. CD-ROM Drive
    e. Monitor Resolution - 800 x 600 High Color
    f. Use Com Port or USB Port

B. Software Packaging
    a. 1 x Software CD-ROM
    b. 1 x RS485 Converter
    c. 1 x RS485 Cable (to Controller)
    d. 1 x RS232 Cable or USB Cable (to PC)

Diagram of PC and Controller (Fig.2-1)
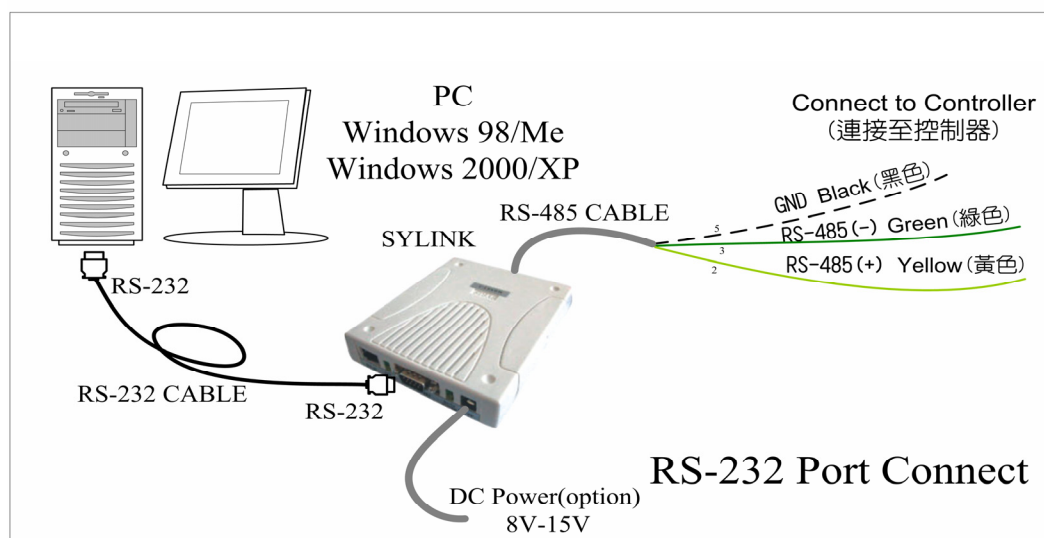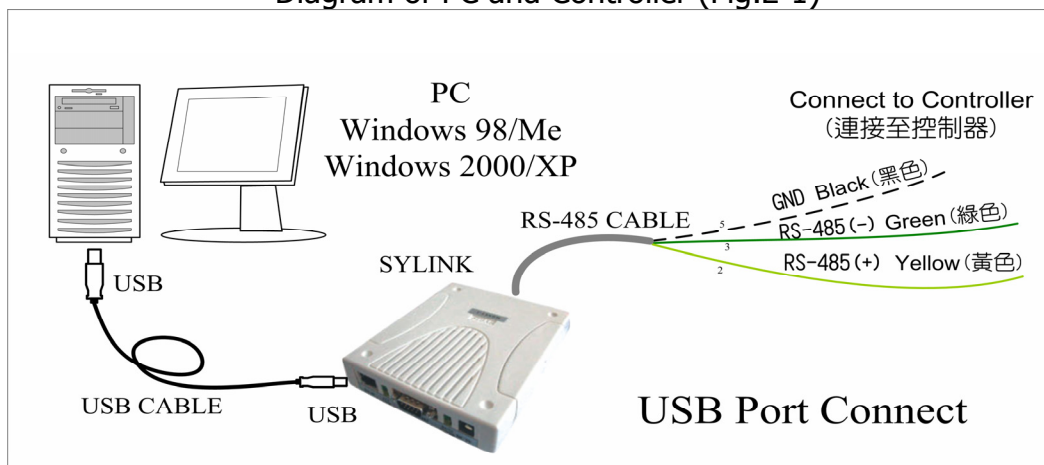
Fig.2-1 PC to Controller Connect

2.2 Software Installation

1. Run Windows
2. Insert CD-ROM
3. Go to "Start" "RUN" and from the CD-ROM select [SYW95A\SYW95AV3_Setup.exe]
4. Click "OK" to execute
5. Please follow screen instruction
6. Upon completion of installation, check whether [SYW95A Access Control System] is in the Program File.

2.3 Start Up

1. To ensure the connection between PC and Controller is connect before running the program.
2. Click the "Start" "Program File" [SYW95A Access Control System]
3. Key in the user or company name during the first installation, the company name with up to 30 characters.
4. Awaits for master menu to be display (Fig.2-2)
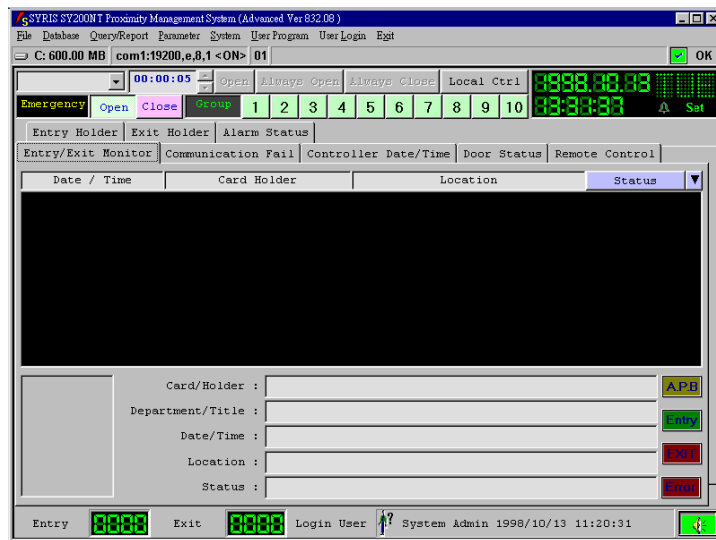
Fig.2-2 System Master Menu

2.4 SYWIN95 Software Icons

System record operate toolbar, as Fig.2-3.

Fig.2-3 Record Toolbar Icons

Tool Bar Icons Description :

	Close & Save		Return to Orginal
	Edit Record Mode		Cancel All Changes
	Query Record Mode		Ditto
	Set Quick Locate Content		Clear to Null
	Set Quick Locate Field		Move to First Record
	Locate One Record		Move Upward to Previous
	Locate Next Record		Move Downward to Next
	Define Record Range		Move to Last Record
	Add A Record		Preview
	Delete A Record		Print

3. Set Controller Data

3.1 On-Line setting between PC and Controller

Before setting "Controller Data" the system is in the OFF-LINE mode. To begin set "Controller Data" first as follow.

Click the "Database (D)" on the Master Menu and select "Controller Data (C)" Wait for the next menu (Fig.3-1) and Click "Edit Record Mode" icon for setting.

1. Click Item 01 at "SY210NT" of the "Type" and Click drop down button to select SY210NT.
2. Key in the controller location name with up to 20 characters.
3. Click "Controller Link" at the left bottom corner.
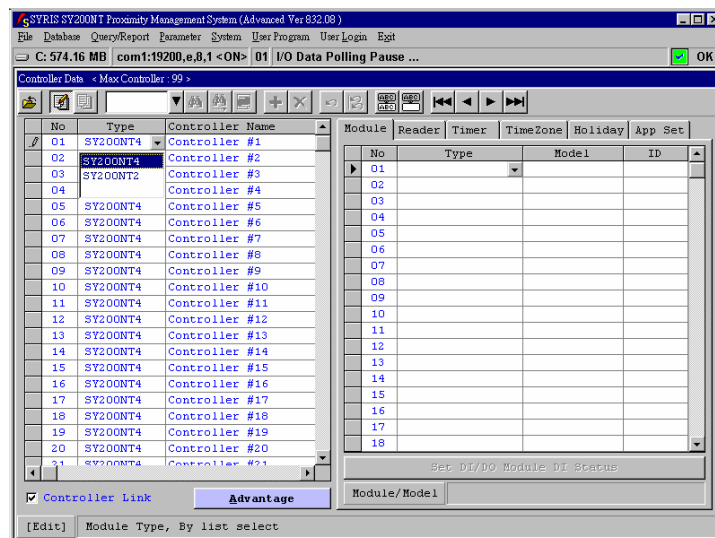
Fig.3-1 Controller Data Master Screen

3.2 Set Controller Parameter

3.2.1 Module Allocation

A single controller can connect up to 20 different modules including maximum 8 readers or 8 DIDO modules or 8 other modules.
1. Click "Module", sub-menu appears,Fig.3-2.
2. Click "Type" column and drop down button to Select A, B or E module type,Fig.3-3.
3. Click "Model" column and drop down button to select module model,Fig.3-4.
4. Click "ID" column and key in module device ID code,setting range from 1 to 8.

There are only A, B & E three types for R/O Reader, DIDO and Printer module at this moment.
Each module must set in different ID.
All controllers and modules are required to set in the system.

Fig.3-2 Module Allocation Master Screen

Fig.3-3 Module Type Select
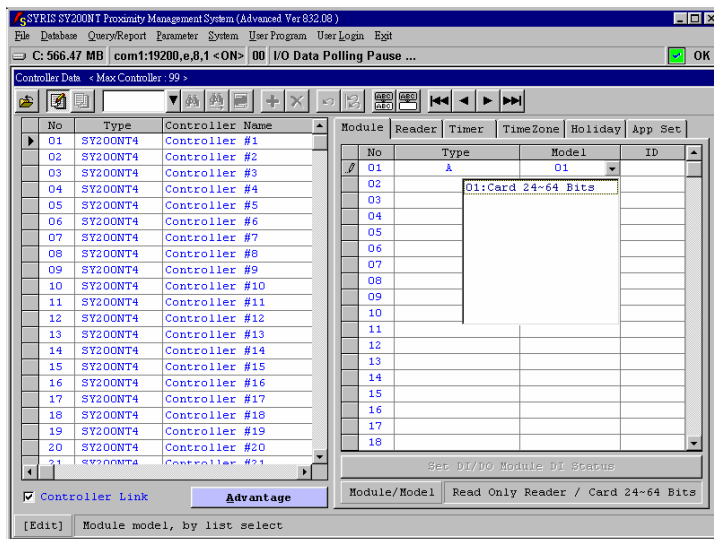
Fig.3-4 Module Model Select

3.2.2 Set Reader(Door) Parameter
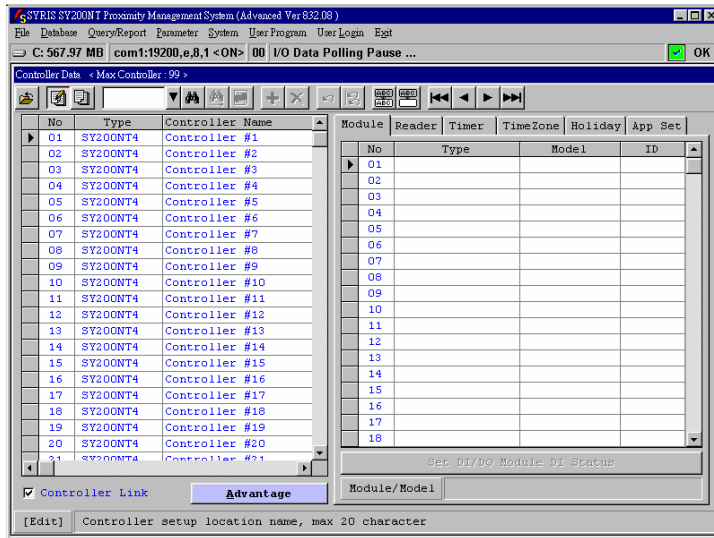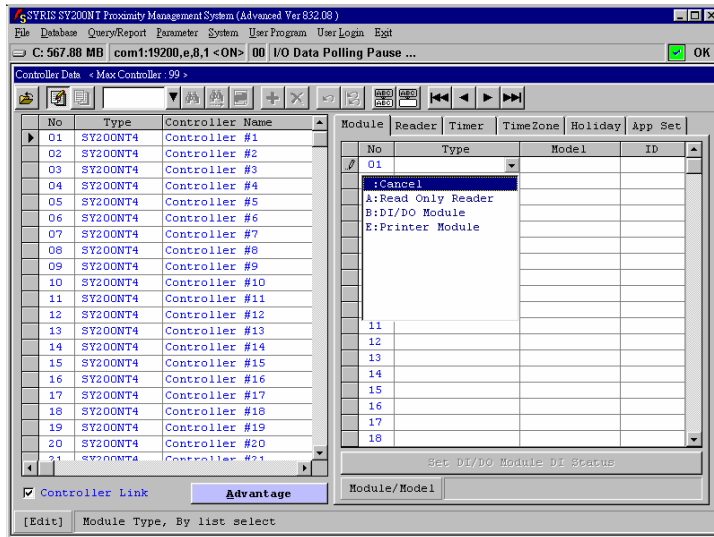
A single controller (SY210NT) maximum can control 4 doors. Each door connect 2 readers for In/Out (Maximum 8 readers).

Anti-Passback can be set at each individual door and classify under which level (Maximum 3 level). PIN Code can be added if additional keypad is installed with the reader. Controller DO is the output signal for door opening. There is 2 to 4 Relays output for door control.

1. Click "Reader", sub-menu appears,Fig.3-5.
2. Select Entry / Exit Reader and key in location name.
3. Select Execute A.P.B. control and select A.P.B. Control Level : 0 to 3 (max. 3 level)
4. Relay Module ID: 0 for Controller DO / 1 ~ 8 for DIDO Module DO
   Relay Module Channel: Controller 1 to 4 Relays. DIDO Module 1 to 16 Relays.
5. Relay Action Time: 1 to 999 seconds.
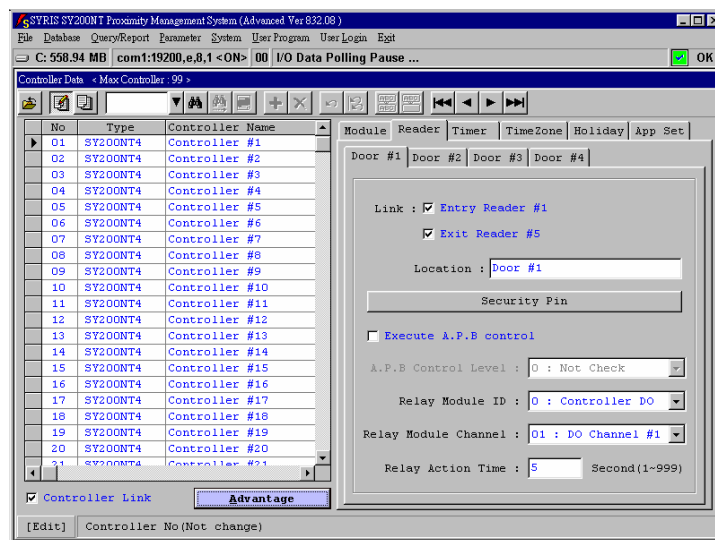
Fig.3-5 Module Model Select

3.2.3 Set Timers and TimeZone

Default setting from the factory is 24 hrs for card free access.
Both Timers and TimeZone are for application with Time and Day control, especially for DIDO modules.

Timer : up to 30 sets(01 to 30).
        Each Timer consists of start time and end time,Fig.3-6.
        00 : for No Access (Factory default always).
        01 to 30 : for No Access.
        31 : for 24 Hrs Access (Factory default always).

TimeZone : up to 60 sets(01 to 60).
        Each TimeZone consists of 3 Timers,Fig.3-7.
        01 to 59 : for Free Access (Timer #31).
        60 : for No Access. (Timer #00).

User need to define the timers first before setting the TimeZone.

Fig.3-6 Controller Timer Setting
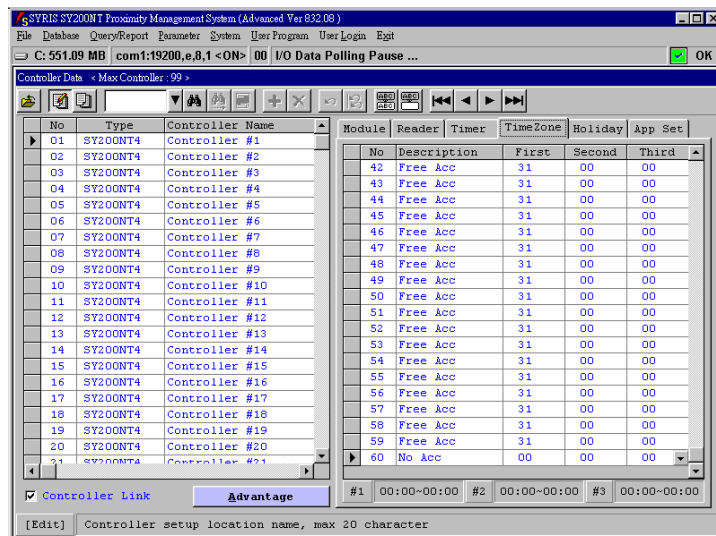
Fig.3-7 Controller TimeZone Setting

3.2.4 Set Holiday

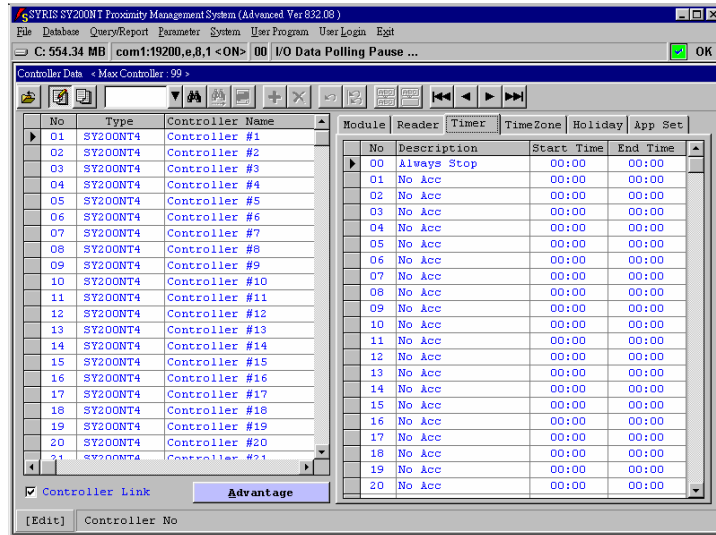The SYW95A System can configure up to 8 applications groups of Holidays, and Holiday access control will be set up in "App Set"

Before Setup Holiday access control plan, Go to "Database" and select "Holiday Data" to set Holiday for the whole year.

After the Holiday is set, the date will automatically update in the calendar and it will show in pink color in the following figure.

Fig.3-8 Controller Holiday Setting

Instructions:
1. Select the Holiday at the right side of the above figure.
2. Select the year and month.
3. Select the holiday date, then select the holiday application type: space or 1~8.
4. Repeat item 2 and 3 to set whole year holiday.

3.2.5 Set Application Set

One Controller provides 16 Application Set for card application.
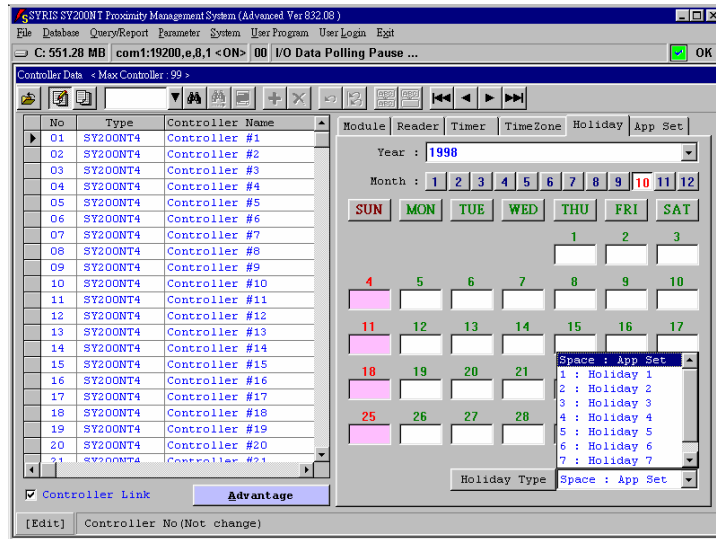Each card in each individual controller required to define which application set.
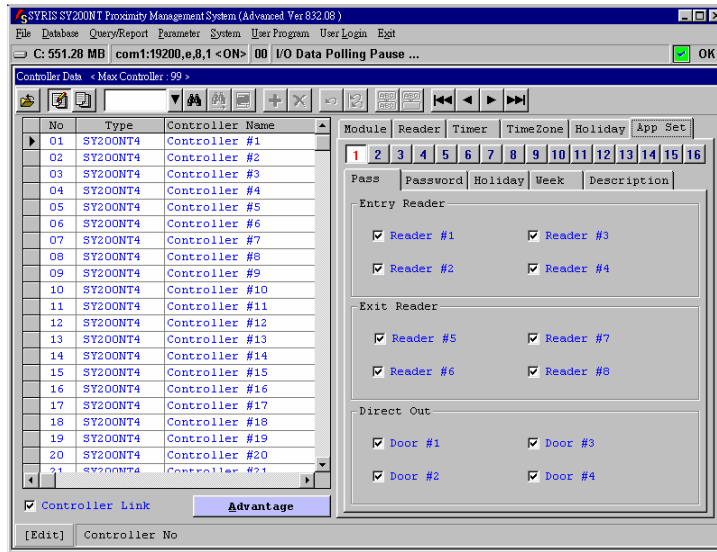

Fig.3-9 Application Set Setting

Click Sub-Menu "App Set"(Fig.3-9), setting of Application Set consists of the following:
  1. "Pass" (Reader/Door Access Control)
  2. "Password" (Card Plus PIN)
  3. "Holiday"
  4. "Week"
  5. "Description" (Set name for Application Set)
  Function as follows:

3.2.5.1 Application Set - Pass
Set each individual card allows to access to which reader, select Entry or Exit reader.
For "Direct Out" means whether to Control or Free Access for Exit Reader.
Setting as follows:
  1. Click sub-menu "Pass", as Fig.3-9.
  2. Select pass entry or exit reader.
  3. Select direct out for door.
Example :
  Set Controller #1 → App Set #1 → Only Reader #1 Pass
      Controller #2 → App Set #2 → Only Reader #2 Pass
      Controller #3 → App Set #3 → Only Reader #3 Pass
      Controller #1/#2/#3 → App Set #4 → No Pass
  Then set get card #0001, App Set setting follow:
      Controller #1 → App Set #1
      Controller #2 → App Set #4
      Controller #3 → App Set #4
  So card #0001：
      Controller #1 → allow pass reader #1
      Controller #2 & Controller #3 → all reader no pass

3.2.5.2 Application Set - Password

The function can be executed if additional keypad is installed with the reader.
Two types of password: (Fig.3-10)
    1. Security Password means common PIN for one door.
    2. Person Password means individual PIN for each card.
Security Password to be setting at sub-menu "Reader".
Person Password to be setting at master menu "Card Holder Data(H)" of the
"Database(D)".
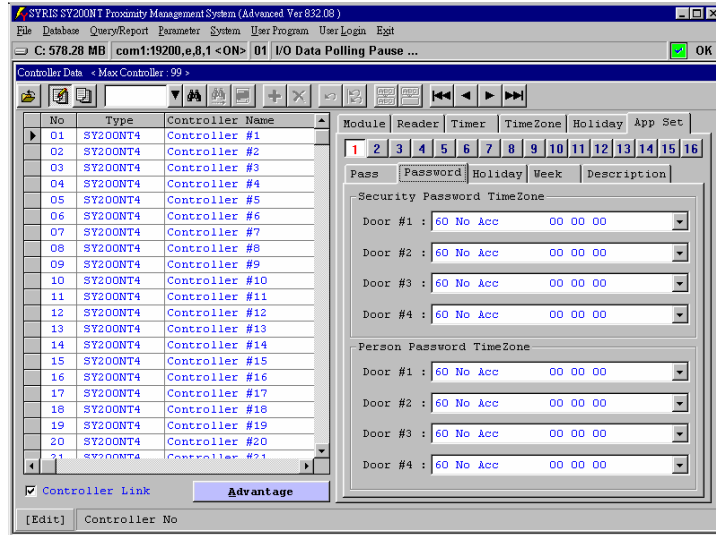Select TimeZone for each door either for Security or Person Password TimeZone.

Fig.3-10 Application Set – Password Setting

3.2.5.3 Application Set - Holiday

There are 8 types of Holiday Control (Fig.3-11).

Setting as follows:
    1.Select TimeZone for each type, to click drop down button.
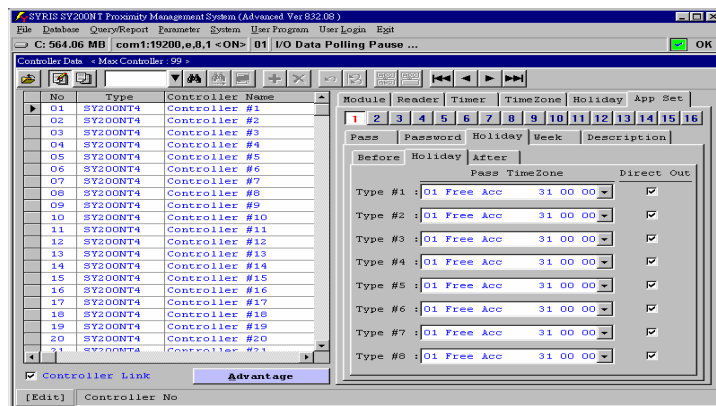   2.If no timer control for exit reader, Click the box in the "DirectOut" column.

Fig.3-11 Application Set – Holiday Setting

3.2.5.4 Application Set - Week

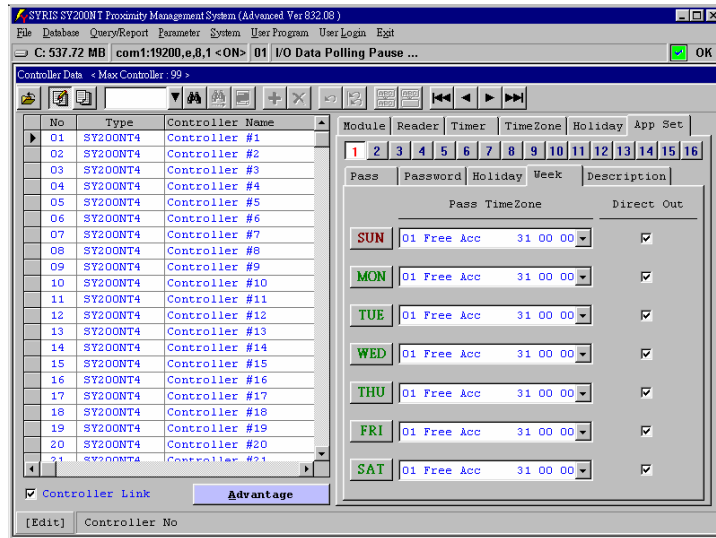Set Daily Time Zone for week, as Fig.3-12.

Fig.3-12 Application Set - Week Setting

3.2.5.5 Application Set - Description

Key in Description set name for easy reference, as Fig.3-13.
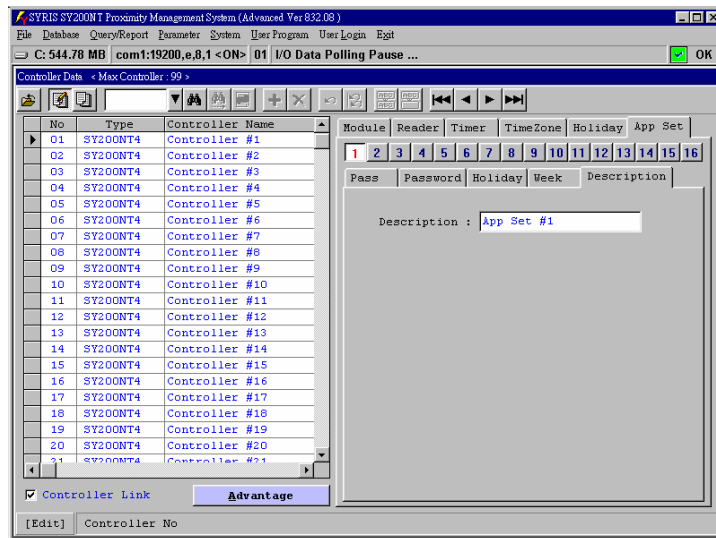

Fig.3-13 Application Set - Description Setting

Basic Setting is completed, please refer to Advance Stage (Advantage) for other setting.

[Importance Step]
Upon completion of setting all Controller Data. The next step is to send these parameters to the relative controllers.

4. Controller Data Process

Go into "Database (D)" menu and Click "Control Data Process".
Process consists of the following:
   1. Copy.
   2. Send To Controller

4.1 Controller Data Coyp

Copy the parameters data from one controller to another controller (Fig.4-1). "Copy" mean database copy to database.
When coyping controller parameters data, user need to define "all" controller ID numbers and select copying item.
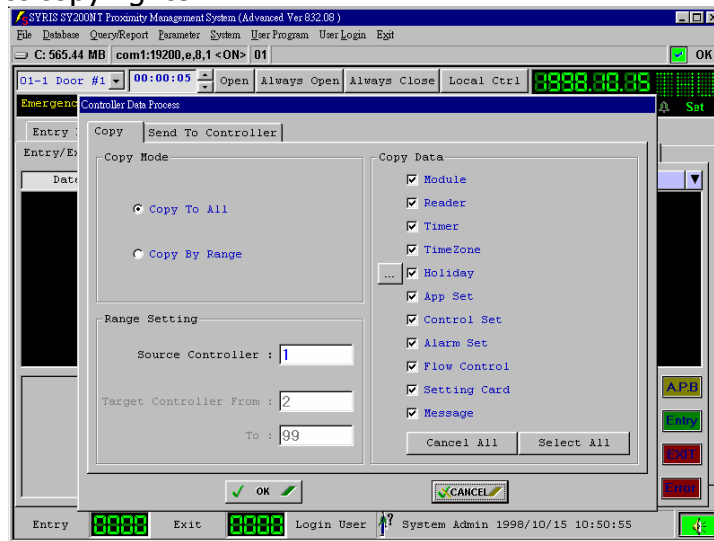

Fig.4-1 Controller Data Copy

4.2 Controller Data Send To Controller

Send controller parameters data from PC to Controller (Fig.4-2).
"Send" mean database copy to controller memory.
When sending parameters data to controllers, user need to define "all" controller ID numbers and select sending item.
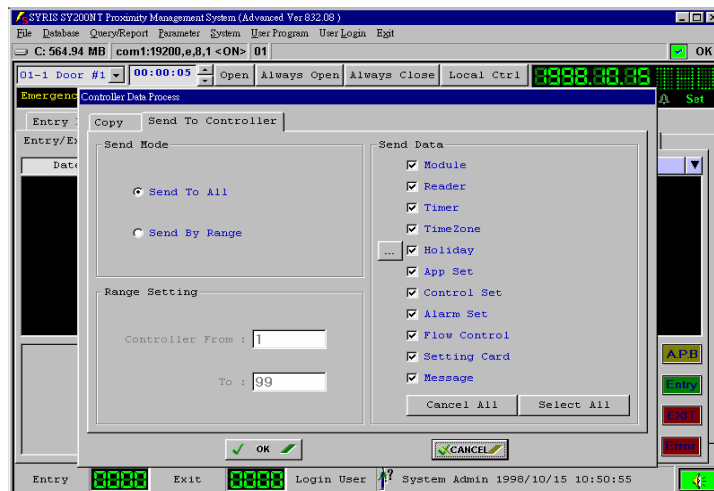

Fig.4-2 Controller Data Send To Controller

5. Add Card in PC

Go into "Database" menu and Click "Card Data", as Fig.5-1.
There are four types of methods:
1. Read the Card ID from the reader which connect to the controller.
2. Read it from the reader which connect direct to the PC.
3. Import Card ID record text file.
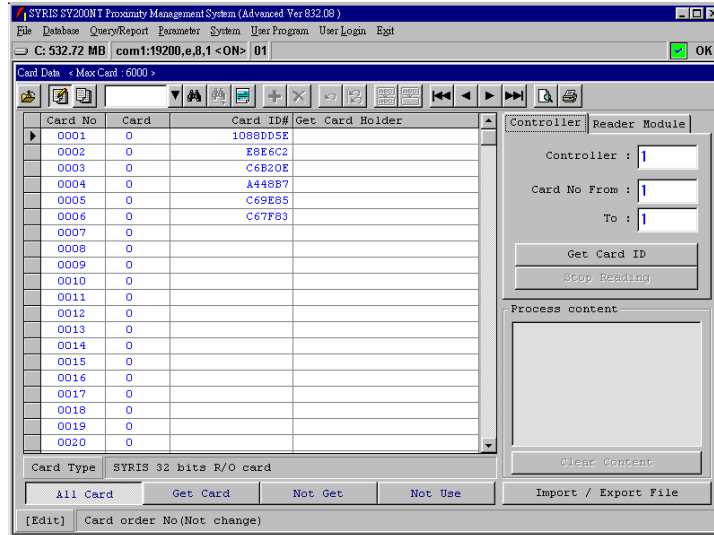4. Direct key in Card ID.

Fig.5-1 Card Data Setting

5.1 Read Card ID From Controller

Click Sub-Menu "Controller", as Fig.5-2.
Processing as follows:

1. Click 🔲 to Edit Record Mode.
2. Key in "Controller ID".
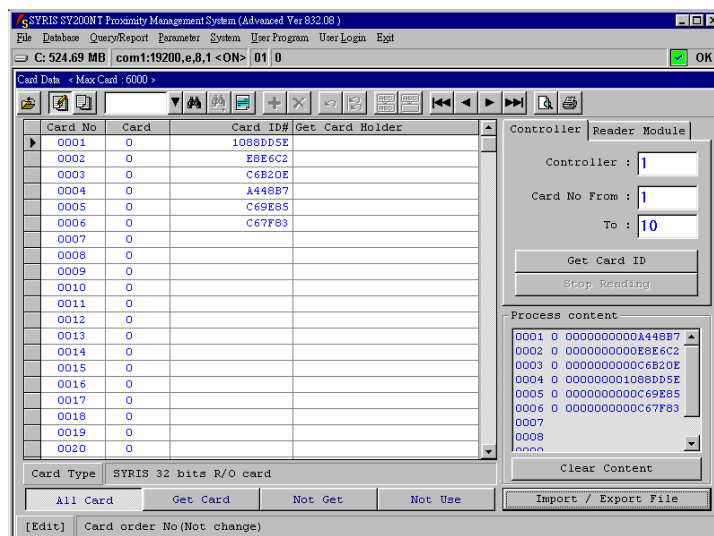3. Key in "Card Range" , wher "From" and "To".
4. Click "Get Card ID".

Fig.5-2 Read Card ID From Controller

5.2 Read Card ID From Reader

Only 2 readers are allowed to connect to PC. When the reader is reader, go to master menu "Database" and Click "System Parameter Data", setting screen as shown below, as Fig.5-3.

Fig.5-3 Connect to PC Reader Setting
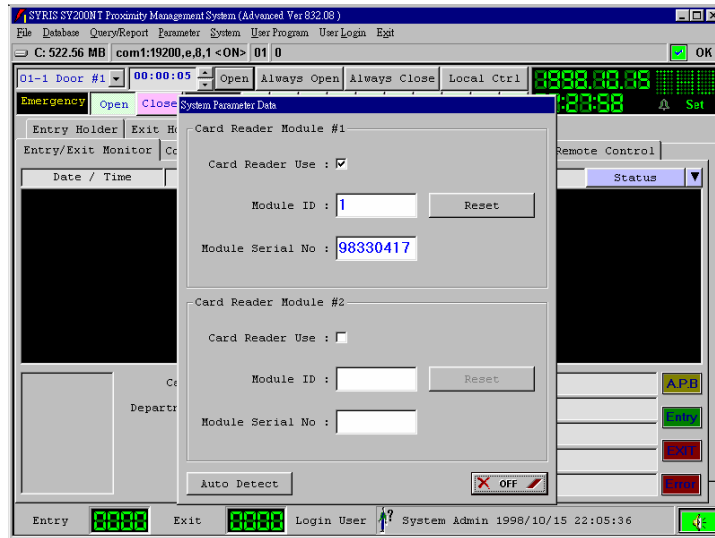
Processing as follows:

1. Select "Card Reader Use" for Card Reader Module #1 or #2.
2. Click "Auto Detect".
3. Key in Reader ID ,when to be change reader module ID, click "Reset".

Upon completion of setting reader module, go to master menu "Database" and click "Card Data", wait screen display and click Sub-Menu "Reader Module", as Fig.5-4.
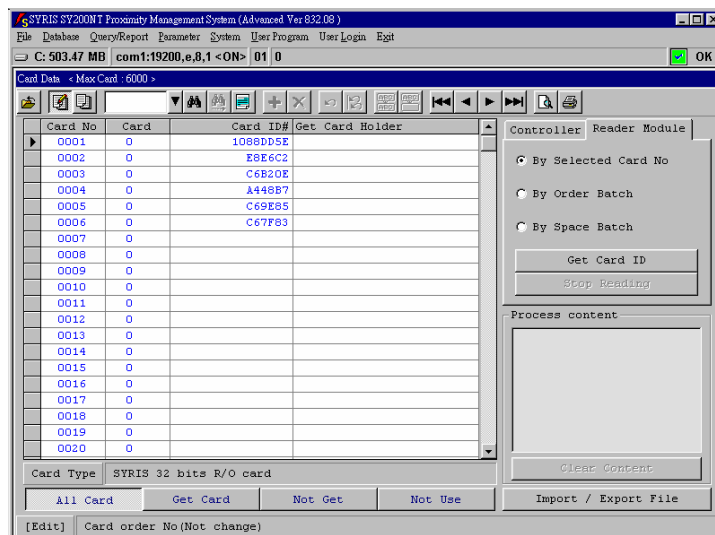

Fig.5-4 Read Card ID From Reader

Processing as follows:

1. Click 🖻 to Edit Record Mode.
2. To select :
    1). By Selected Card No:
        Click the card no and Flash Card at the Reader Module.
    2). By Order Batch:
        Click the Card no. in Batches and Flash Card continuously.
    3). By Space Batch:
        Flash Card at the Reader Module and the card will automatically store at the empty space in the Card ID column.
3. Click "Get Card ID".
4. Insert finish then click "Stop Reading".

5.3 Read Card ID From File (or Export To File)

Processing as follows:

1. Click 🖻 to Edit Record Mode.
2. Click "Import / Export File", wait next screen display, as Fig.5-5.
3. Select "Import From File" mode and select "Import Process":
    1). Delete Source Card Data:
        Delete all card data and read card ID from file.
    2). Overwrite Source Card ID:
        Read Card ID From file and overwrite source Card ID.

4. Key in file path and name or click [...] to look for file and open.
5. Click "OK" to execute.

If this file exist, you can click "Edit" to query or modify.

You can export data of all card ID to file for backup, processing as follows:

1. Click "Export To File" mode.

2. Key in file path and name or click [...] to look for file and open.
3. Click "OK" to execute.

5.4 Direct Key In Card ID

Processing as follows:

1. Click 📝 to Edit Record Mode.
2. Move record to process card no and click "Card ID#" column, as Fig.5-6.
3. Key in card ID#.
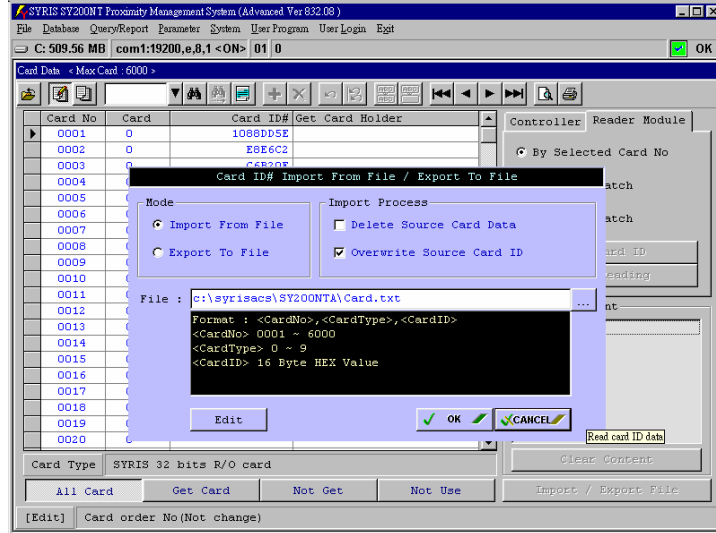
Fig.5-5 Read Card ID From File
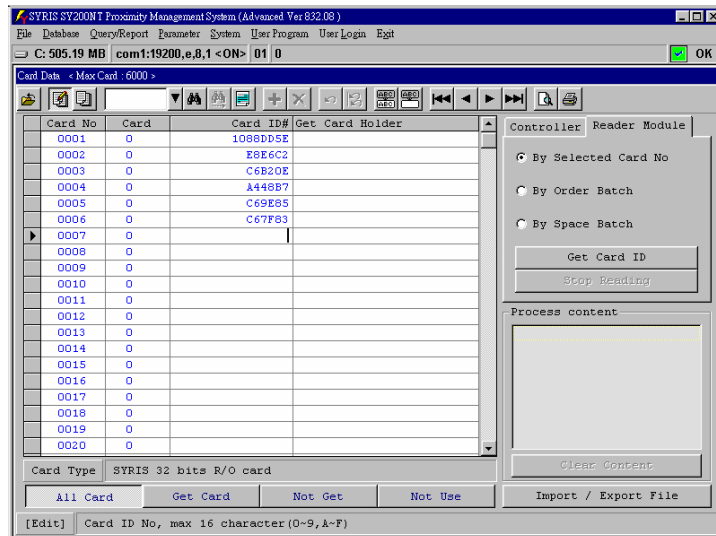
Fig.5-6 Direct Key In Card ID

6. Set Department Data

It is necessary to set Department Data. To begin, go to master menu "Database(D)" and click "Department Data", as Fig.6-1.
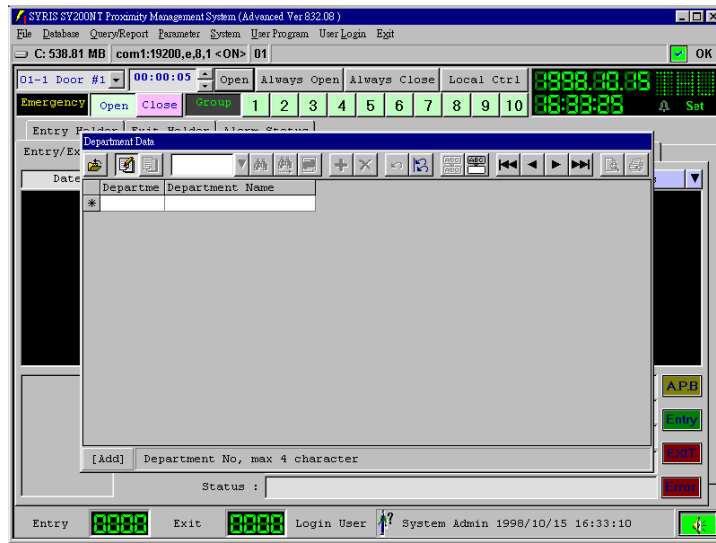
Fig.6-1 Department Data Setting

Default add a record when first entry system.

Setting as following:

1. Key in department no and name.

   Department No : Up to 4 digits or characters.

   Department Name : Up to 20 characters.

2. Click "Move Record" button for finish.

3. Click ➕ or 🖼 and ➕ to add next record or Click ❌ to delete record.

4. To Quit, Click 📂

7. Get Card, Suspend and Back Card

The PC automatically send card data to controller when the function setting finish.

7.1 Card Holder Setting and Get Card

Go to "Database" and click "Card Holder Data", as Fig.7-1.
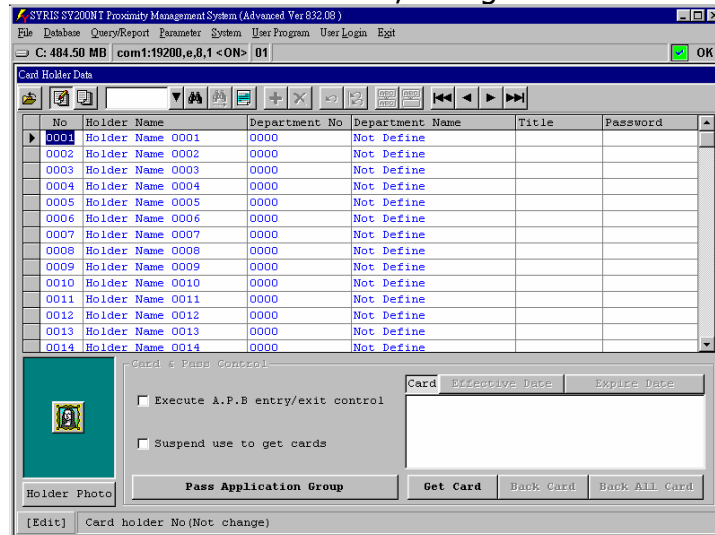
Fig.7-1 Card Holder Data Setting

Setting as follows :
1. Click 🖼 to Edit Record Mode.
2. Select "Holder No" and key in "Holder Name".
3. Click "Department No" column and key in department no or click to select department no, as Fig.7-2.
4. Select "Execute A.P.B. Entry/Exit Control".
5. Click "Get Card", wait screen display, as Fig.7-3.
6. Select "Card No" and click "OK".
7. Click "Pass Application Group", wait screen display, as Fig.7-4.
8. Click "App Set" column and key in "Application Set No" or Select by double click individual Application Set use for which controller and click 🖼 to quit.
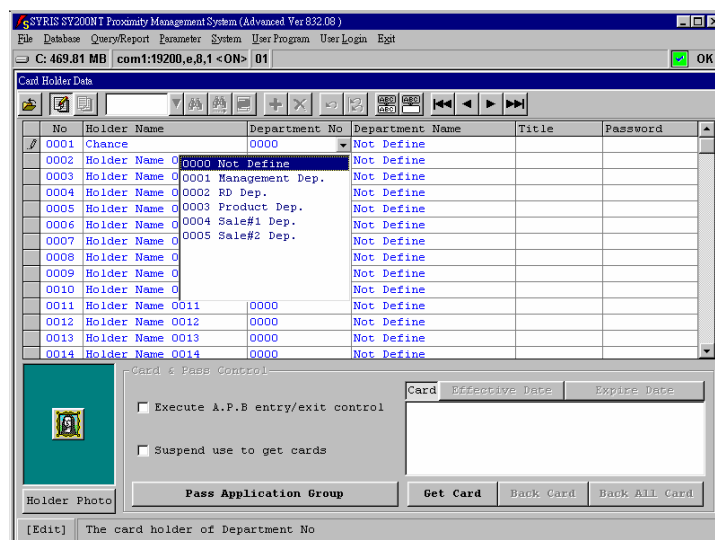
Fig.7-2 Department No Select
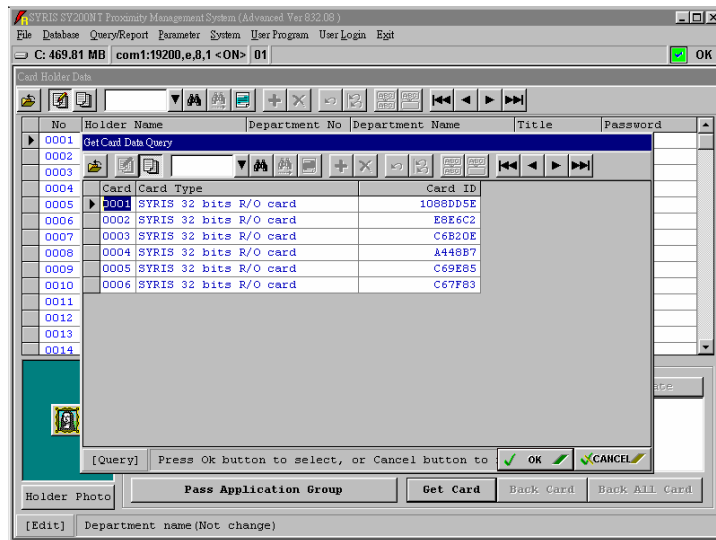
Fig.7-3 Get Card No Select
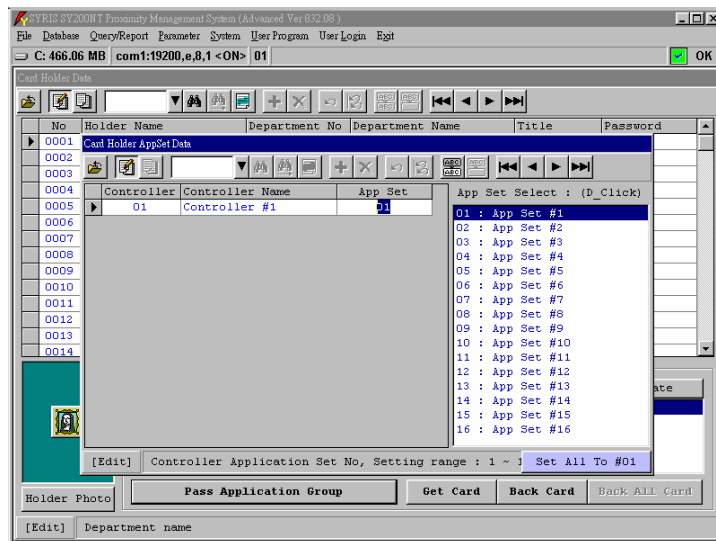
Fig.7-4 Pass Application Group Setting

7.2 Suspend (Disable) Card

Go to "Database" and click "Card Holder Data", as Fig.7-5.

Setting as follows :

1. Click ![icon] to Edit Record Mode.
2. Select Holder No.
3. Select "Suspend Use To Get Cards".
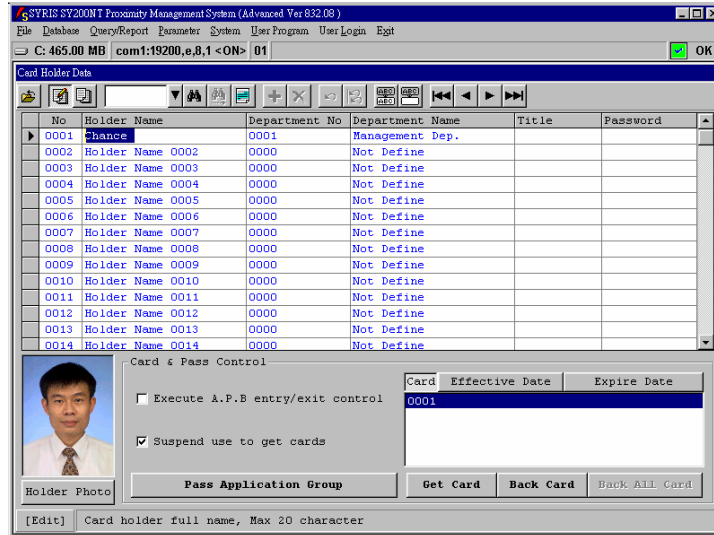
Fig.7-5 Suspend Card Setting

7.3 Back (Delete) Card

Go to "Database" and click "Card Holder Data", as Fig.7-6.

Setting as follows :

1. Click ![icon] to Edit Record Mode.
2. Select holder no and get card no.
3. Click "Back Card", wait screen display, as Fig.7-6.
4. Click "OK".
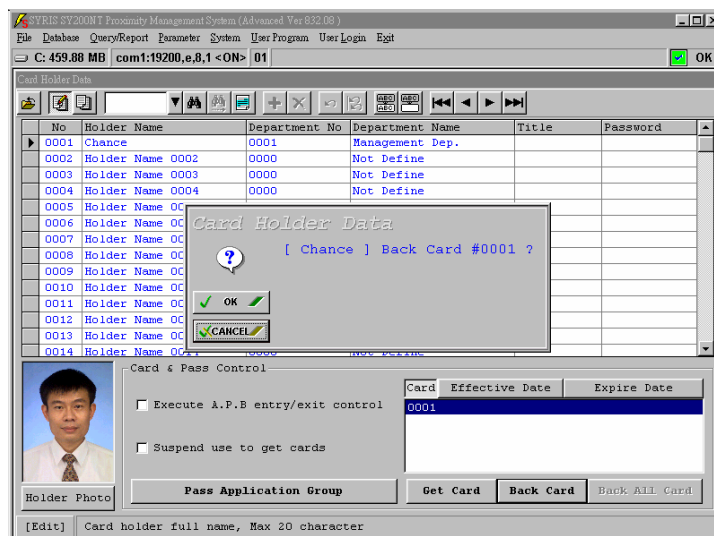
Fig.7-6 Back Card Setting

7.4 Card Effective / Expire Date

Go to "Database" and click "Card Holder Data".

7.4.1 Card Effective Date

Setting as follows :

1. Click [icon] to Edit Record Mode.
2. Select holder no and get card no.
3. Click "Effective Date", wait screen display, as Fig.7-7.
4. Key in Date or click "Date List" and key in time.
5. Click "OK".
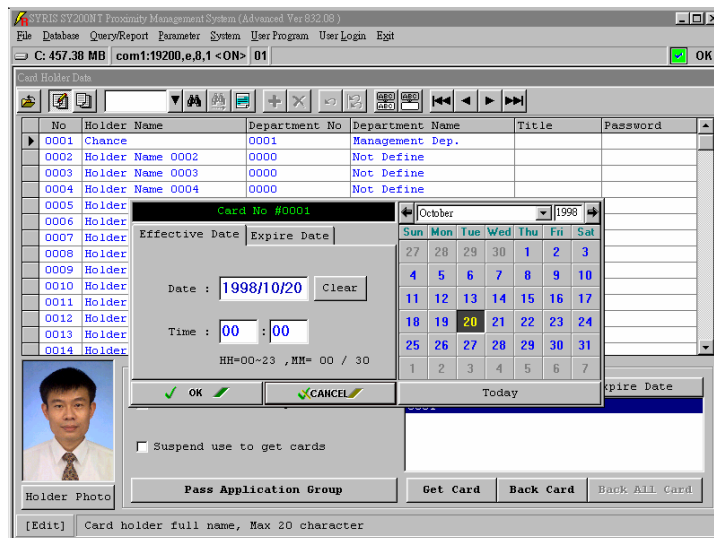
Fig.7-7 Card Effective Date Setting

7.4.2 Card Expire Date

Setting as follows :

1. Click [icon] to Edit Record Mode.
2. Select holder no and get card no.
3. Click "Expire Date", wait screen display, as Fig.7-8.
4. Key in Date or click "Date List" and key in time.
5. Click "OK".
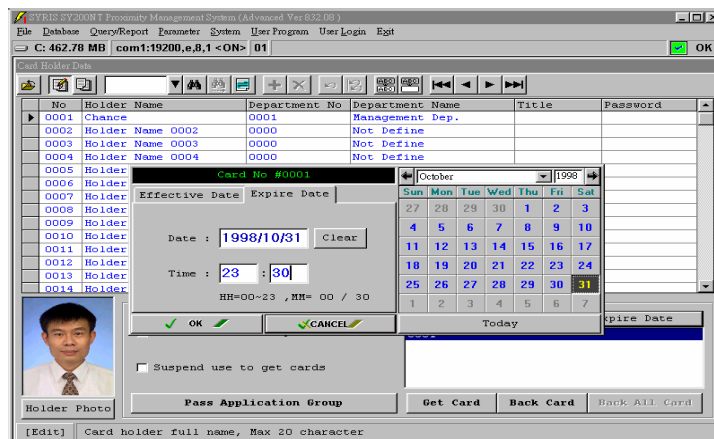
Fig.7-8 Card Expire Date Setting

8. Card Data From PC Send To Controller

When the follow three situation happen, must execute this function.
1. Card ID Change.
2. Add or Replace Controller.
3. Resend all Card Data.

Go to "System" and "Card Resend to Controller"
Select Controller and All Card or by Holder No.
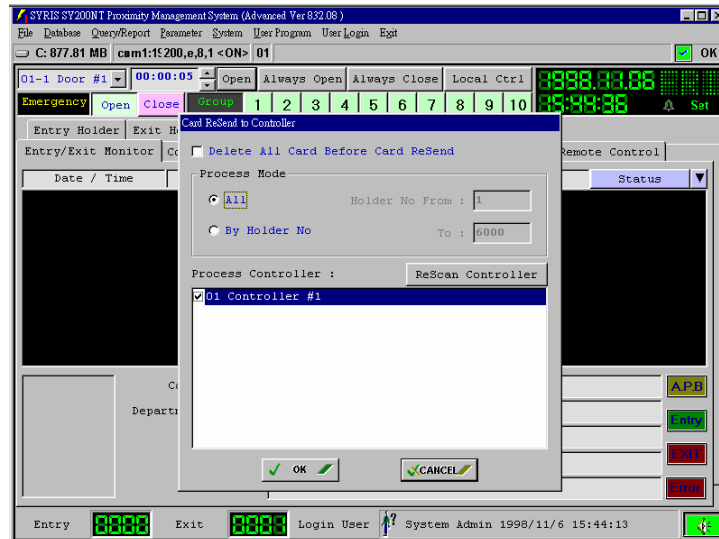
Fig.8-1 Card Data Send To Controller

Instruction:
1. Select the "Delete All Card Before Card Resend".
2. Select the "Process Mode" and Select the "All" or "By Holder Number".
3. Before Select the Controller, Select the "Process Controller"And click the "Rescan Controller".
4. Select the "OK" to resent the card.

9. Set System Rights

The "System Rights" division :
1. User Rights : system operator rights.
2. Execute Rights :
    1). Operate Execute Rights.
    2). On_Line Operate Rights.

The rights level is from 1 to 999. The lowest number has the highest rights.

9.1 Set User Rights Data

Goto "Database" and click "User Rights Data", as Fig.9-1.
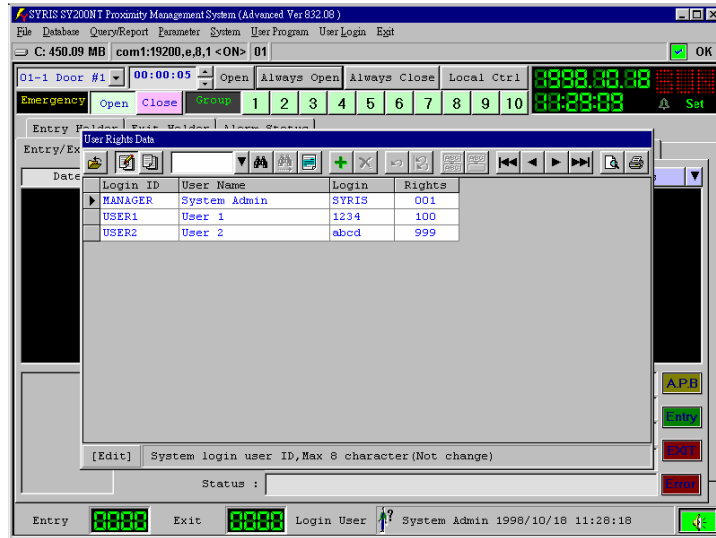
Fig.9-1 System User Rights Data

Default Setting is "MANAGER" for Login ID, which cannot be changed, and has the highest rights. Only "User Name" and "Login Password" are changeable.

Click ![icon] then ![icon] to add new system user for the "MANAGER" only.

9.2 Set Execute Rights Data

Set execute rights level for System User from 1-999.

Go to "Database" and click "Execute Rights Data", as Fig.9-2.
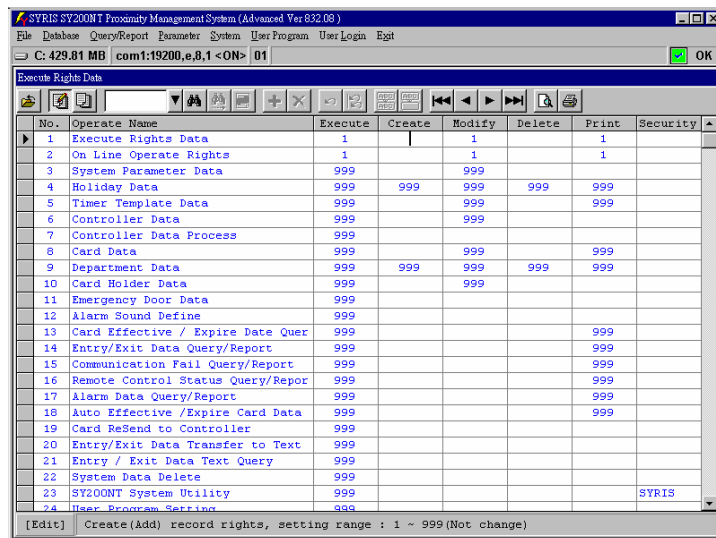
Fig.9-2 System Execute Rights Data

The rights of control consists of the following:
1. Execute : To enter into operate.
2. Create : To add new data.
3. Modify : To modify data.
4. Delete : To delete data.
5. Print : To print data.
6. Security : To set security for enter into operate.

Not every system user is allowed to edit all functions of the system. Setting of rights level for each function is necessary to restrict to system user.
For example, if you set 5 in the no. 6 for "Control Data", those user rights more than 5 is other functions cannot be executed.

9.3 Set On Line Operate Rights

Go to "Database" and click "On Line Operate Rights", as Fig.9-3.

Fig.9-3 System On Line Operate Execute Rights

This setting is to allow user to overwrite and control the controller through PC.

10. Set Controller Flow Process

Each controller can detect 26 events and is able to response 11 types of action upon detection of any event.
It is necessary to plan and set the action of events in the software in order to command the controller for execution.

10.1 Controller Event and Action Table

10.1.1 Controller Event Table

Item	Event Function	Event Module ID : 0 – 9	Event Module Channel : 0 - 60	Delay Time
1	Card Sense	1-8 : Reader ID 9 : All Module	None	None
2	In Check OK	1-8 : Reader ID 9 : All Module	None	None
3	Out Check OK	1-8 : Reader ID 9 : All Module	None	None
4	Invalid Card	1-8 : Reader ID 9 : All Module	None	None
5	Disable Card	1-8 : Reader ID 9 : All Module	None	None
6	Invalid TimeZone	1-8 : Reader ID 9 : All Module	None	None
7	Invalid Door	1-8 : Reader ID 9 : All Module	None	None
8	Invalid PIN	1-8 : Reader ID 9 : All Module	None	None
10	ReEntry	1-8 : Reader ID 9 : All Module	None	None
11	ReExit	1-8 : Reader ID 9 : All Module	None	None
12	KeyPad Press	1-8 : KEYPAD 9 : SY210NT	1-10 :1-9,0 11-20 : F1-F9,F0	None
13	DI On	1-8 : MDDIDO 9 : SY210NT	1-16 DI Point	0 - 99 Seconds
14	DI Off	1-8 : MDDIDO 9 : SY210NT	1-16 DI Point	0-99 Seconds
16	DI Change Status	1-8 : MDDIDO 9 : SY210NT	1-16 DI Point	None
17	DI Set On	1-4 DI Set	1-4 DI Point	None
18	DI Set Off	1-4 DI Set	1-4 DI Point	None
20	DI Set Change	1-4 DI Set	1-4 DI Point	None
21	DO Set On	None	1-16 DO Set	None
22	DO Set Off	None	1-16 DO Set	None
23	Door Open TimeOut	None	1-4 Door	0-99 Seconds
24	Door Forced Open	None	1-4 Door	0-99 Seconds
25	Duress	None	1-4 Door	None

10.1.2 Controller Action Table :

Item	Action Function	Action Module ID 0 – 9	Action Module Channel 0 -60	Action Method 0 – 4	Action Time
1	Set SY210NT LED	1 : Ok 2 : Error 3 : Setup 4 : Active 5 : BackLight	1 : Dark / Blacklight Off 2 : Red / Blacklight On 3 : Green 4 : Orange	1 : always 2 : 100ms 3 : sec 4 : min	1-999
2	Set Sound	1 : Beep sound 2 : Do Sound	None	None	None
3	Set Alarm Sound	1 : Steal 2 : Emergency 3 : Fire Alarm 4 : Gas 5 : Error 6 : Duress	None	1 : always 2 : 100ms 3 : sec 4 : min	1-999
4	Set Controller Internal DO	1 : Open 2 : Close 3 : Change	DO Point 1-4 : Door 1-4	1 : always 2 : 100ms 3 : sec 4 : min	1-999
5	Set DIDO Module DO Point On	1-8 : DIDO Module ID	DO Point 1-16	1 : always 2 : 100ms 3 : sec 4 : min	1-999
6	Set DIDO Module DO Point OFF	1-8 : DIDO Module ID	DO Point 1-16	1 : always 2 : 100ms 3 : sec 4 : min	1-999
7	SET DIDO Module DO Point Change	1-8 : DIDO Module ID	DO Point 1-16	1 : always 2 : 100ms 3 : sec 4 : min	1-999
10	Check Card	Create Event : Invalid Card Disable Card Invalid Door Invalid TimeZone Invalid PIN Invalid PIN Three Time ReEntry ReExit In Check Ok Out Check Ok		If the Card + PIN is required by user or system. The event will appear after entering Password.	
11	Add InOut	Refer Event Name			

10.2 Set Controller Flow Control

Go to "Database" and click "Controller Data", as Fig.10-1.
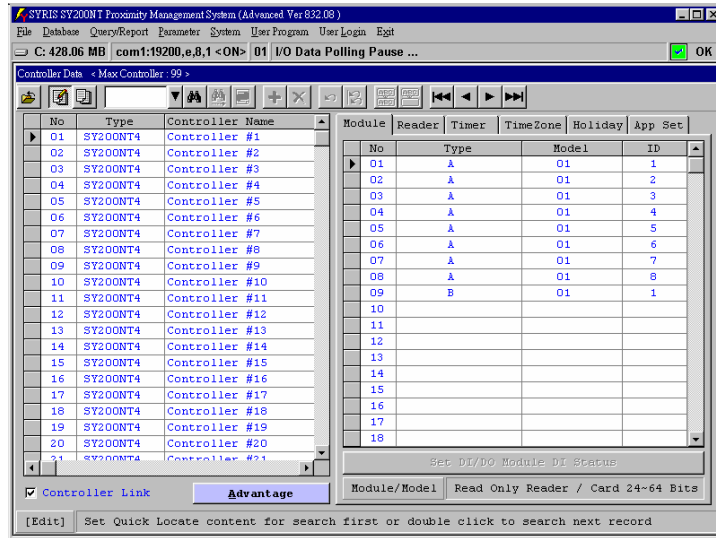

Fig.10-1 Controller Data

Set the Flow Control as follows :

1. Click 📝 to Edit Record Mode.
2. Select process controller.
3. Click "Advantage" and wait sub-menu display, as Fig.10-2.
4. Click "Flow Control" and wait screen display, as Fig.10-3.

5. Click "Flow Event" ▼ to select event no, as Fig.10-4.
6. Set event source and response action data.
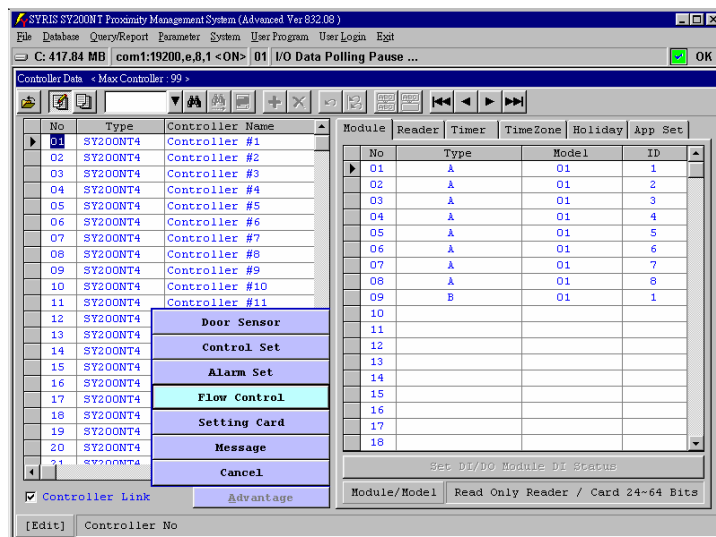
Fig.10-2 Advantage Sub-Menu
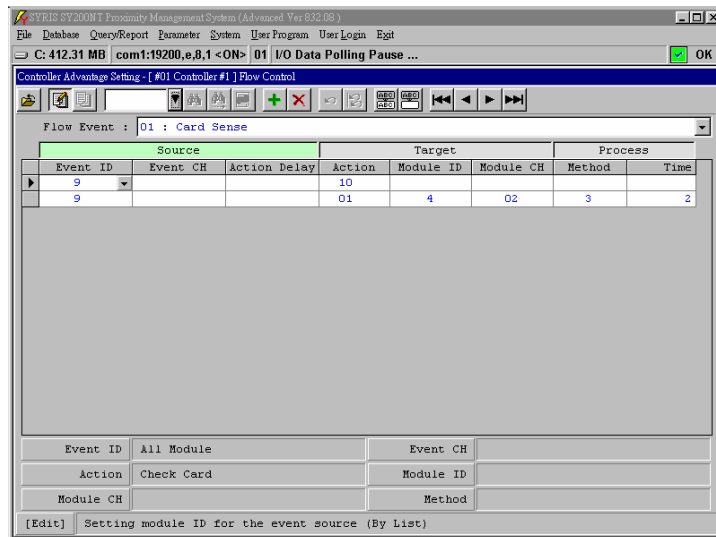
Fig.10-3 Flow Control Setting
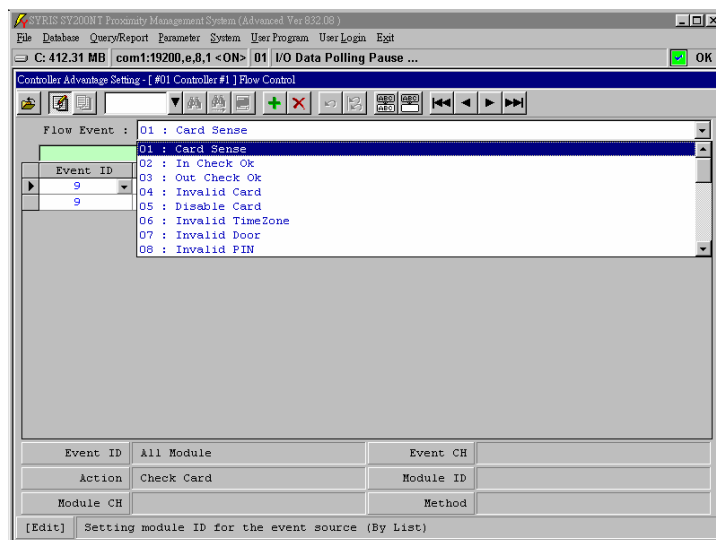
Fig.10-4 Flow Event Select

Refer to Fig.10-3 for description:

Event ID: It is a code and is predefined subject to "Flow Event".

Event CH: Is a channel depend on setting related to "Flow Event".

Action Delay: Time delay for controller action when any event is detected (e.g. To set how many seconds for controller to react/action when the door is opened by valid card and is left open.

Action: Set type/item of action to be happened according to Event.

Module ID: Action take place by selecting type of module.

Module Channel : Action take place through selecting the channel of module.

Method: Duration of action take place.

Time: Action time.

10.3 System Default Flow Controller Table

No	Event	Event ID	Event CH	Delay Time	Action	Action ID	Action CH	Action Method	Action Time
1	1	9			01	4	02	3	2
2	1	9			10				
3	2	9			01	1	03	3	2
4	2	9			02	1			
5	2	9			09	9	01	3	2
6	2	9			11				
7	3	9			01	1	03	3	2
8	3	9			02	1			
9	3	9			09	9	01	3	2
10	3	9			11				
11	4	9			01	2	02	3	2
12	4	9			02	1			
13	4	9			09	9	02	3	2
14	4	9			11				
15	5	9			01	2	02	3	2
16	5	9			02	1			
17	5	9			09	9	03	3	2
18	5	9			11				
19	6	9			01	2	02	3	2
20	6	9			02	1			
21	6	9			09	9	04	3	2
22	6	9			11				
23	7	9			01	2	02	3	2
24	7	9			02	1			
25	7	9			09	9	05	3	2
26	7	9			11				
27	10	9			01	2	02	3	2
28	10	9			02	1			
29	10	9			09	9	08	3	2
30	10	9			11				
31	11	9			01	2	02	3	2
32	11	9			02	1			
33	11	9			09	9	09	3	2
34	11	9			11				

(Refer Event Table & Action Table)

10.4 Set Exit Push Button

Click "Flow Event" ▼ to select "13 : DI On (Push Button)" , as Fig .10-5.
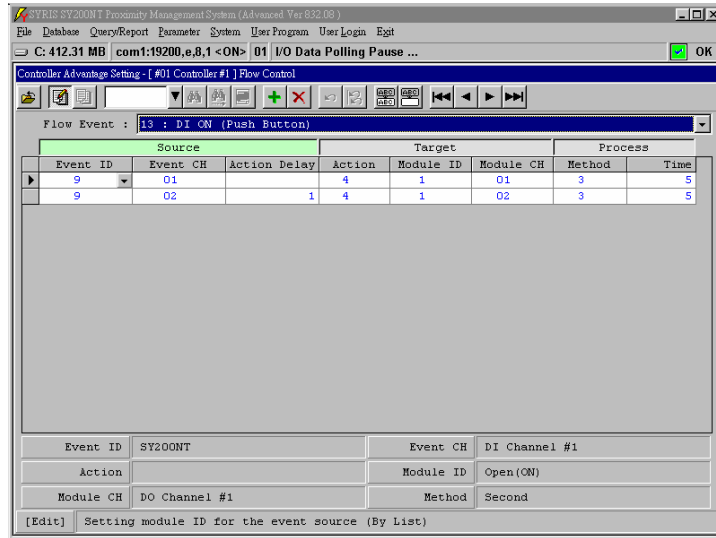

Fig.10-5 Flow Control – Exit Push Button

Above Picture shown 2 Exit Push Buttons control 2 different door.

For first row :

Field	Value	Setting Description
Event ID	9	SY210NT
Event CH	1	First DI point in the controller
Action Delay		No setting ,Immediate action
Action	4	Output from controller DO
Module ID	1	Door Open
Module CH	1	Coontroller DO Channel #01
Method	3	By Second
Time	5	Action Time 5 Seconds

For second row :

Field	Value	Setting Description
Event ID	9	SY210NT
Event CH	2	Second DI point in the controller
Action Delay	1	Action after delay 1 second
Action	4	Output from controller DO
Module ID	1	Door Open
Module CH	2	Coontroller DO Channel #02
Method	3	By Second
Time	5	Action Time 5 Seconds

From the above, the action for door open is immediate for first DI point and 1 second delay for second DI point.
Additional action can be added for door open is to either light up the LED or create a beep sound, etc.

[Importance]
Setting finish, go to "Controller Data Process" and send flow data to relation controller.

11. Set Door Sensor

Door sensor can connect to DI 1 to 4 in the controller or to DIDO Module.Go to "Database" and click "Controller Data", as Fig.11-1.
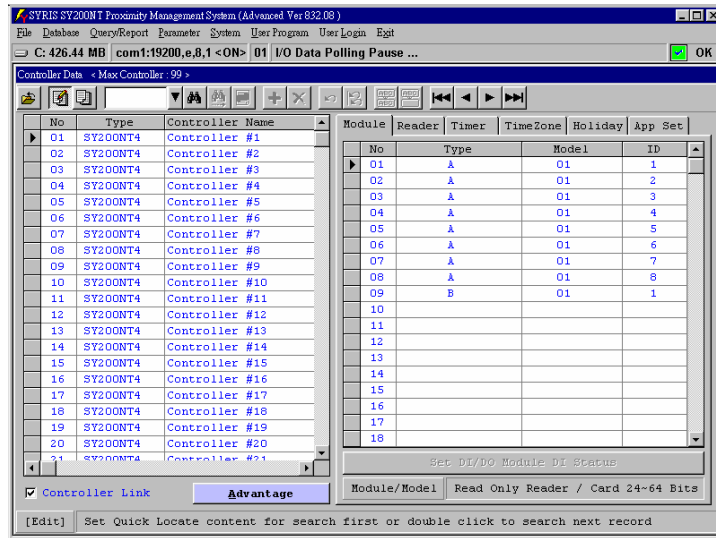

Fig.11-1 Controller Data Master Screen

Setting as follows :

1. Click 🗐 to Edit Record Mode.
2. Select process controller.
3. Click "Advantage" and wait sub-menu display, as Fig.11-2.
4. Click "Door Sensor" and wait screen display, as Fig.11-3.
5. Click each door "Module ID" to select module, as Fig.11-4.
6. Click each door "Channel" to select module channel, as Fig.11-5
7. Select DI point of normal status for each door.

Note : After Setting Door sensor, it is necessary to set in Flow Process to define the sensor, it is used for Door Forced Open Alarm, Door Left Open Alarm, etc.
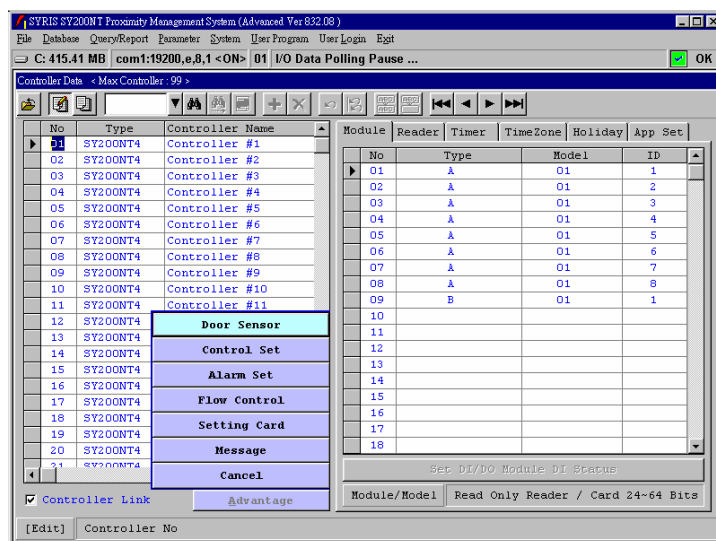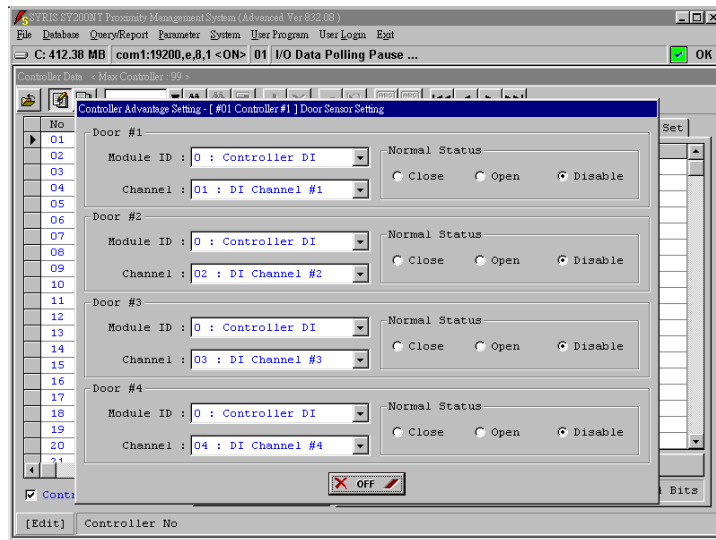

Fig.11-2 Advantage Sub-Menu
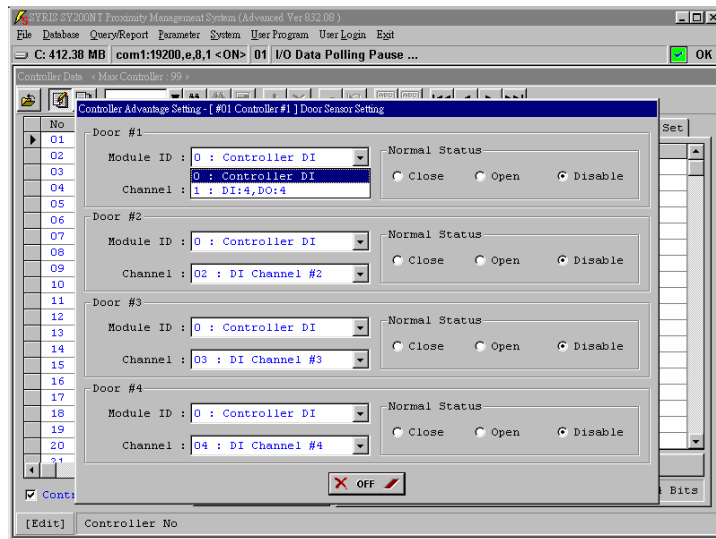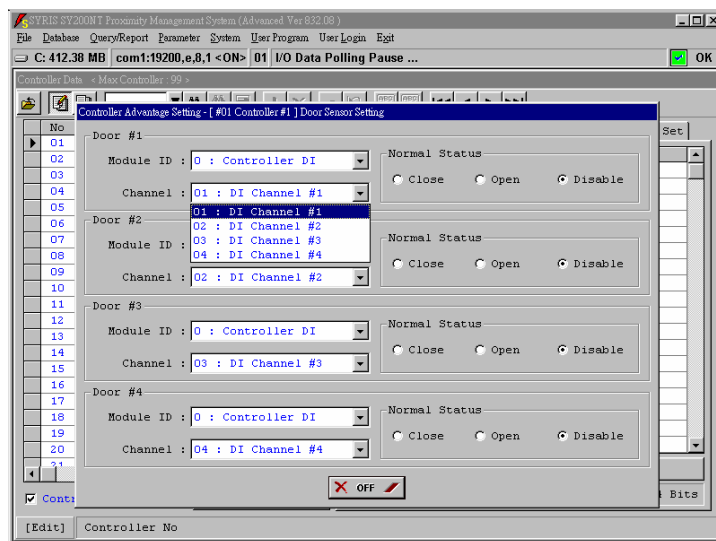
Fig.11-3 Door Sensor Setting

Fig.11-4 Door Sensor – DI Module Select

Fig.11-5 Door Sensor – DI Channel Select