The Purpose of Networking

SOYAL has not only got capabilities in hardware and firmware developing, we are also proud of our software support which always being a weakness for other manufacturers.

Basically, we provide users with 701Server as a bridge to communicate between PC and controllers. Then all of transactions be analyzed and reported in 701Client, which also provide you with useful functions for Time-attendance and access control purposes. No need to set those parameters on the access controllers one by one, respectively. Now you can complete those setting via 701Server and 701Client software.

The resident software **701Server** is responsible for the computer and the correspondence, as well as the customer system's hardware plan, such as the correspondence port configuration, the acquisition of information, the controller parameter configuration, the network construction, checking connection status and so on. 701Server main task is to set the hardware and communication parameters.

Installation and Execution

Software Installation

Double click **701Server-Setup.exe** icon to start the installation process.
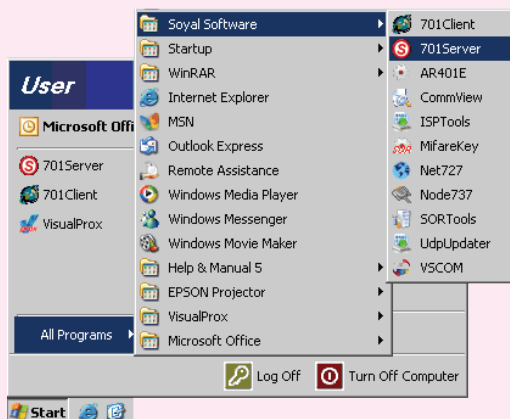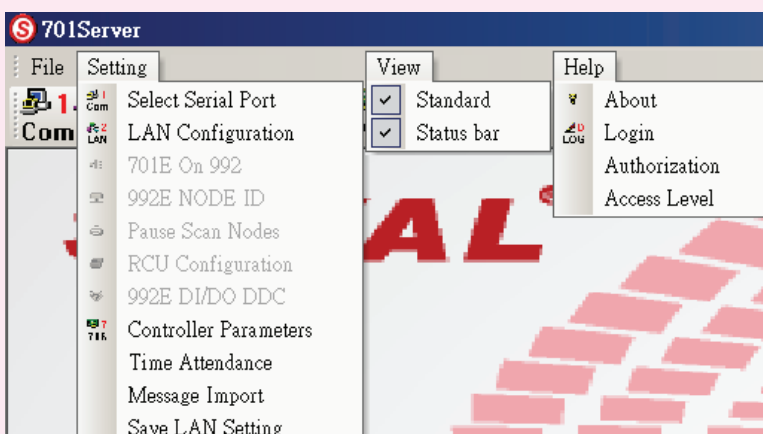
Go to the direction of Start → All Programs → Soyal Software → 701Server, Click 701Server and then login window will come out.

The 701Server icon will show up at the right bottom of taskbar. Double click 701Server icon to activate the software.
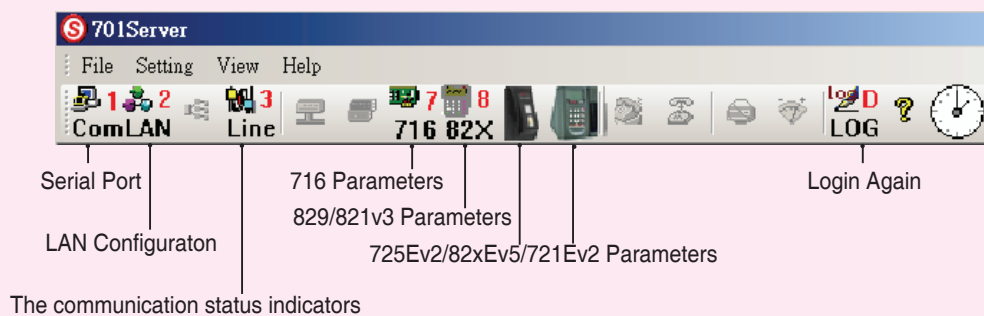
Main Menu

Setting	
Select Serial Port	Select a serial port (COM port or TCP/IP) that can link the PC and controllers.
LAN Configuraton	Set the Node ID of access controller, an item number to help achieve the correct connection and data transmission.
Controller Parameters	Set the Node ID and related parameters of AR-716E
Time Attendance	Set Time attendance related processing and the system user capacity.
Message Import	Import other message files.

| View	
Standard	View tool bar
Status bar	View status Bar
Help	
About	You can check the version of 701Server.
Login	Login again
Authorization	0 ~ 119 operators for editing their access level, login name and password.
Access Level	Permission to operate the software, with level ranging from 00 ~ 63.

■ Tool Bar

Serial Port

LAN Configuraton

716 Parameters

829/821v3 Parameters

725Ev2/82xEv5/721Ev2 Parameters

Login Again

The communication status indicators

Com	Com port selected depends on which port of PC is used.
LAN	LAN base selected depends on which items and its node ID connected.
Line	Y(Blue): Well. X(Red): Not connected. ?(Black): Not identified.
716	Set the Node ID and related parameters of AR-716E.

82X	Set the parameters and related functions of AR-821E(V3) and AR-829E(V3) .
881EF/EV	Set the parameters and related functions of AR-725E-V2, AR-727H-V5, AR-829E-V5, AR-837E/EF, AR-821EF, AR-721E-V2
LOG	Login again

■ Basic Setting

Login
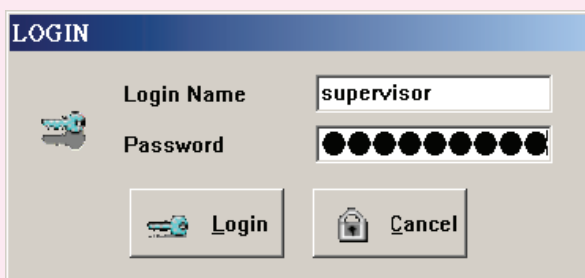
When login 701Server for the first time, please enter the default Login Name and password as below.
Login Name: supervisor
Password: supervisor
To improve security, please change your password and access level immediately after login.

Access Level/Password
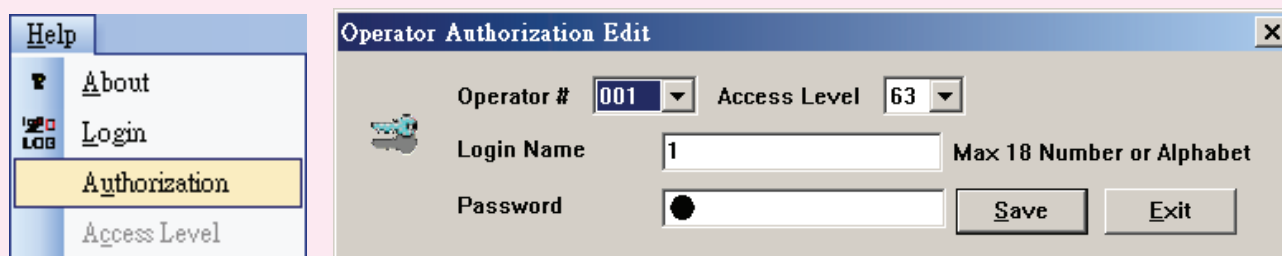
Help → Authorization and then the "Operator Authorization Edit" window will come out. Items can be modified as follows:
1. Operator #: 0-119 operators for editing their access level, login name and password.
2. Access Level: 0-63 access level for editing. 63 is the highest authority.
3. Login Name: login name can have up to a total of 18 English letters or 9 Chinese characters.
4. Password: password can have up to a total of 18 English letters or 9 Chinese characters.

Permission to Operate the Software

Both the operator and the software itself will be given an access level index. Operator with higher level index number is allowed to operate the software.
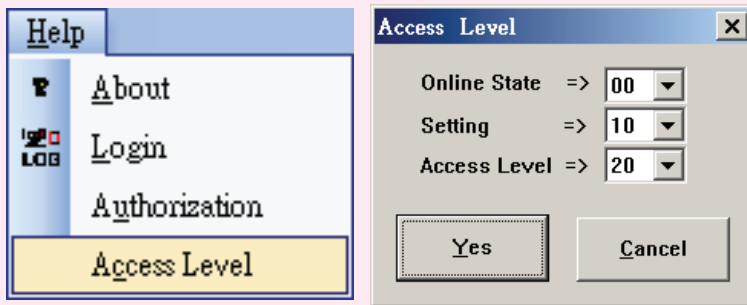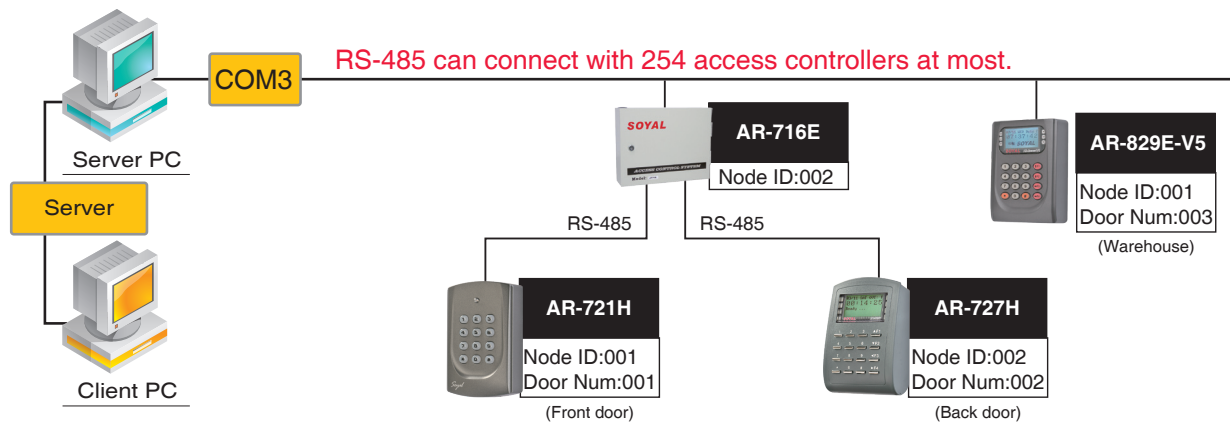
Click **Help → Access Level** and then the "Access Level" window will come out. Setting can be modified as follows:

1. LAN Chart: 00 ~ 63. This level determines the permission to view the connectivity. 63 is the highest authority.
2. Setting: 00 ~ 63. This level determines the permission to modify data. 63 is the highest authority.
3. Access Level: 00 ~ 63. This level determines the permission to modify access level. 63 is the highest authority.

Example

You can get more familiar with 701Server functions by practicing the following demonstrated example.

RS-485 can connect with 254 access controllers at most.

COM3

Server PC

Server

Client PC

AR-716E
Node ID:002

RS-485   RS-485

AR-829E-V5
Node ID:001
Door Num:003
(Warehouse)

AR-721H
Node ID:001
Door Num:001
(Front door)

AR-727H
Node ID:002
Door Num:002
(Back door)

For example, there are three doors in a company: front door, back door and the warehouse door. We can use Multi-Door Networking Controller (AR-716E) to connect with two access controllers (AR-721H: front door and AR-727H: back door). Then, install AR-829E-V5 at the warehouse which is connected to the Server PC directly. After all installations and connections are completed, we can set the parameters and related functions of those access controllers.

^{Step.}
01 **Node ID**

Node ID ranges from 001 to 254. When access controllers are connecting to a computer, each of them would be given a Node ID, and the computer can identify and communicate with them through the Node ID. As shown in the above figure, the Node ID of each access controller is as follows: AR-716E (Node ID: 002), AR-721H (Node ID: 001), AR-727H (Node ID: 002), and AR-829E-V5 (Node ID: 001).

Set AR-716E Node ID

1 2 3 4 5 6 7 8

Adjust DIP switch to set the Node ID of AR-716E as 002.

Set AR-721H Node ID (AR-721H is connected to the Multi-Door Networking Controller)

P ᴹ**4** ᴹ**8**
Command

0 0 * 0 0 1 #

Access Controller Node ID (001 ~ 016)

Input master code (default: * 123456 #) to enter program mode and use this command 00 * 001 # to set the Node ID of AR-721H as 001.
● Each Multi-Door Networking Controller (AR-716E) can only control 16 doors, so the Node ID of the access controller which is connected to AR-716E ranges from 001 ~ 016.
● As for the door number of the access controller, you need to set it via 701Server or VisualProx software.

Set AR-727H Node ID (AR-727H is connected to the Multi-Door Networking Controller)

P ᴹ**4** ᴹ**8**

| 2.   User Setting |
| 3.   Parameter (1) |
| 4.   Parameter (2) |
| F1/F2:Next   # : YES |

Select "**3**. Parameter (1)"
Press #

| 0.   Auto Alarm Tm |
| 1.   Node ID |
| 2.   AutoOpen Zone |
| * : Exit   # : Enter |

Select "**1**. Node ID"
Press #

Input New NodeID
Range: 001 ~ 254
Current Data: 001
002

Input Node ID:
002

Show Card ID ?
1: No 2: WG 3:ABA
4: HEX   Cur.: 2

Select the format of Card ID which will be displayed on the LCD panel
For example: 2 (WG)

Input Door Num:H
Range: 001 ~ 254
Current Data: 001
001

Input door number H
For example: 001

Input Door Num:L
Range: 001 ~ 254
Current Data: 001
030

Input door number L
For example: 030

Quick instructions

P **3** **1**

※ When connected to AR-716E, the door number has to be set via software, so the door number here is actually ineffective.

● Each Multi-Door Networking Controller (AR-716E) can only control 16 doors, so the Node ID of the access controller which is connected to AR-716E ranges from 001 ~ 016.
● As for the door number of the access controller, you need to set it via 701Server or VisualProx software.

Set AR-829E-V5 Node ID

P

| 2. User Setting |
| **3. Parameter (1)** |
| 4. Parameter (2) |
| F1/F2:Next   # : YES |

Select "**3**. Parameter (1)"
Press #

| 0. Auto Alarm Tm |
| **1. Node ID** |
| 2. AutoOpen Zone |
| * : Exit   # : Enter |

Select "**1**. Node ID"
Press #

| Input New NodeID |
| Range: 001 ~ 254 |
| Current Data: 001 |
| 001 |

Input Node ID: 001

| Show Card ID ? |
| 1: No 2: WG 3:ABA |
| 4: HEX   Cur.: 2 |

Select the format of Card
ID which will be displayed
on the LCD panel
For example: 2 (WG)

Quick instructions〉

P 3 1
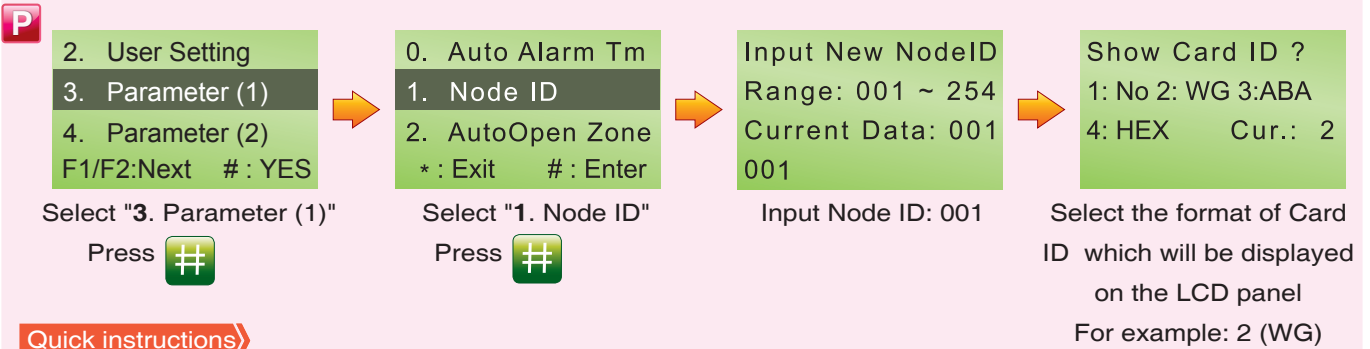
- When the access controller is connected to the host PC directly, the node ID of this access controller in each COM port (RS-485) can range from 001 ~ 254.
- As for the door number of the access controller, you need to set it via 701Server or VisualProx.

Step. 02 ## Networking Setting

When all devices are connected, you have to check the connection status to see if the connection is successful and which COM port is used. Please check the COM port as follows:

My Computer -> Properties -> Hardware -> Device Manager -> Ports (COM & LPT)
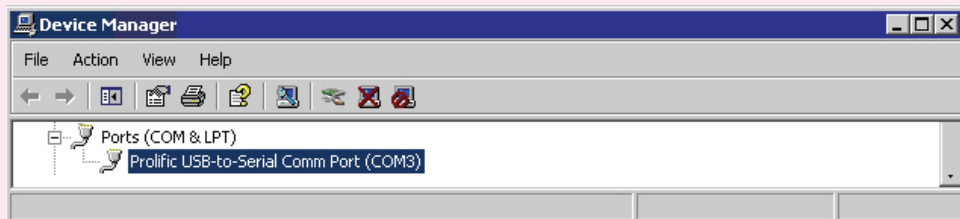
As the above chart shows, the COM port is COM3.

Serial Port

There are two ways to open the Communication Port setting window:

and

.
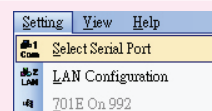
Step 1. Select "COM:3".
Step 2. Tick this option: Polling Message From Controller.
Step 3. Polling Interval (200 ms): adjust polling interval to 200 ms and the host PC will
inquire messages from access controllers every 200 ms.
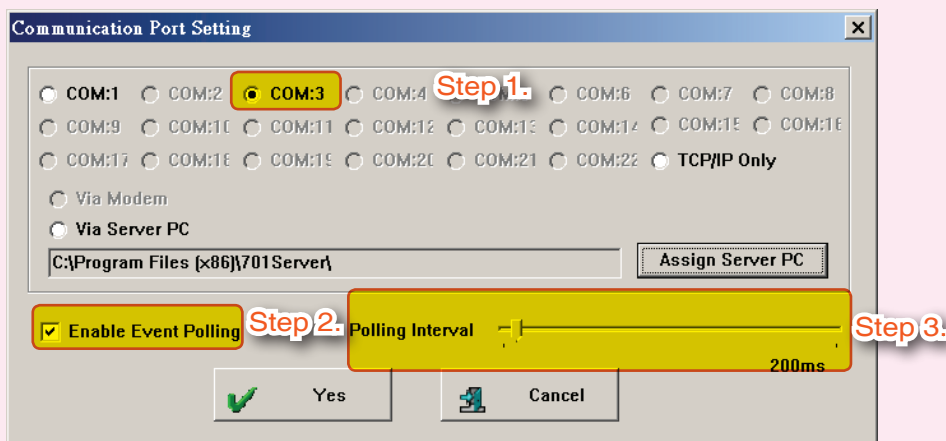
LAN Configuraton

To open the window of "Node Number for Polling" for further setting on 701Server,
you can either click or
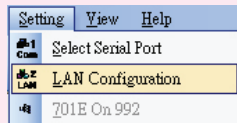
Step 4. Select Node ID (001, 002) and access controller type (829E-V5, 716E).

Step 5. Select "AR-7XX/AR-8XX in "LAN BASE".

Step 6. Click "YES".
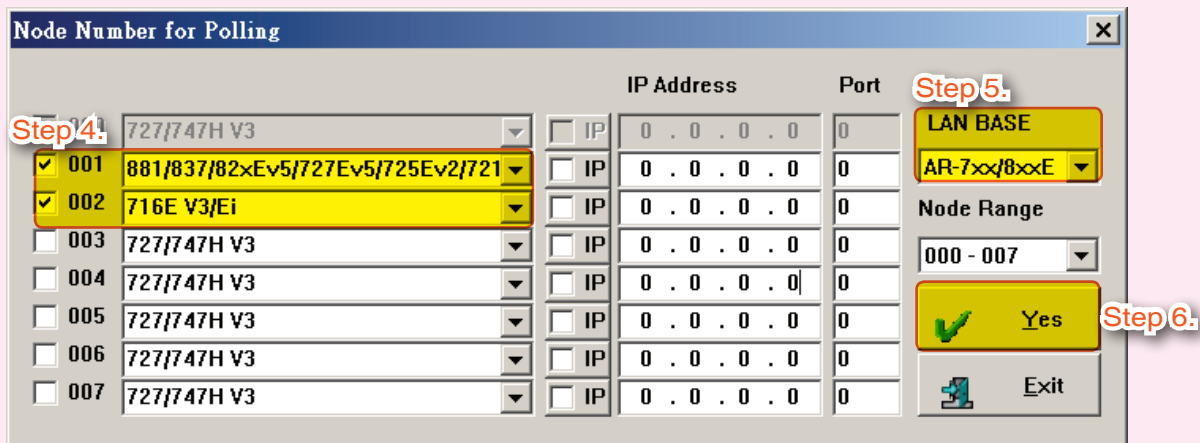
NOTE

In the "Node Number for Polling" window, we only need to set those controllers which are connected to the PC directly. For other access controllers (AR-727H and AR-721H) connected to Multi-Door Networking Controller, please click the icon to set their parameters.

※ Node Range: Node ID ranges from 001 ~ 254.

Controller On/Off Line

Open Controller On/Off Line window to check the device connection status:

Step 7. Click to check if the selected controllers show up. The icon in front the selected controller indicates this connection is successful, and the 701Server icon at the right bottom of taskbar will keep flickering.
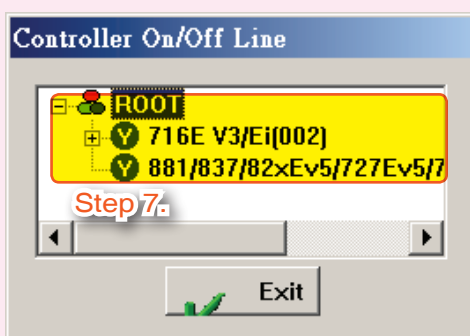
NOTE

 : the controller is connected to PC successfully.

 : there is something wrong with the connection.

Please check the following two things:

1. Check if there is any line broken

2. Check if the Node ID is set correctly

Only when the icon shows up indicating the connection is successful can you process further setting.

Step. 03 **AR-716E**

After AR-716E (Multi-Door Networking Controller) is connected to the PC successfully, you can proceed to further setting. When access controllers of H Series are connected to AR-716E, they will become just like readers reading card data and sending it to AR-716E for data analysis.

Read From Controller

There are two ways to open the 701E Parameter window: **Setting** - **Controller Parameters** and [icon 7 716]

Step 1. Input the Node ID of AR-716E (002) in "Read From Controller" field. Then, click "Read" and the menu of "701E Parameter" window will show up.
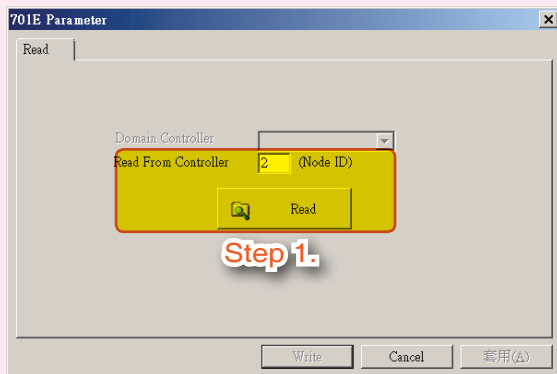
701E Parameter

Step 2. Click "On-line Reader" and tick Reader 001 (the Node ID of AR-721H) & 002 (the Node ID of AR-727H).

Step 3. When there are many AR-716E connected to the PC, ticking "Master Controller" option will let the PC poll this master controller prior to other controllers

Step 4. If "K3: Anti-passback Err / K4: Alarm" option is ticked: when someone violates the anti-pass-back rule, K3 relay of AR-716E will be activated or when the alarm system is activated, K4 relay of AR-716E will be simultaneously activated as well.

Step 5. If "Enable Auto Open (Zone: 63)" option is ticked: enable auto open during the period of time zone 63. After time zone 63 is finished, the lock will be automatically locked again.

Step 6. If this option is ticked, the selected access controller will automatically enter arming mode during the period of time zone 62. After time zone 62 is finished, the selected access controller will return its former state. That is, if the access controller is already in arming mode before time zone 62, nothing will change; in contrast, if the access controller is at the standby state before time zone 62, it will enter arming mode when time zone 62 begins, and return to the former standby state after time zone 62 is finished.

Step 7. If "DI1 Active Release All Doors" option is ticked: this option is mainly designed for emergency evacuation. When an alert signal like smoke detection is sent to DI1 of AR-716E, it can release all electric locks controlled by the access controllers connected with AR-716E to facilitate the process of evacuation.

Step 8. If "Auto Reset Anti-pass (Zone: 61)" option is ticked: auto reset anti-pass-back function in time zone 61. When the user violates the anti-pass-back rule, s/he cannot get access anymore. Reset allows the user get access again at this time regardless of the violation of the anti-pass-back rule before.

Step 9. If "On K2 While Reader Off Line" option is ticked: when any access controller connected to AR-716E should be disconnected, K2 relay of AR-716E will be activated and a message will be sent to inform the administrator.

Step 10. Click "Write" button to save all settings.
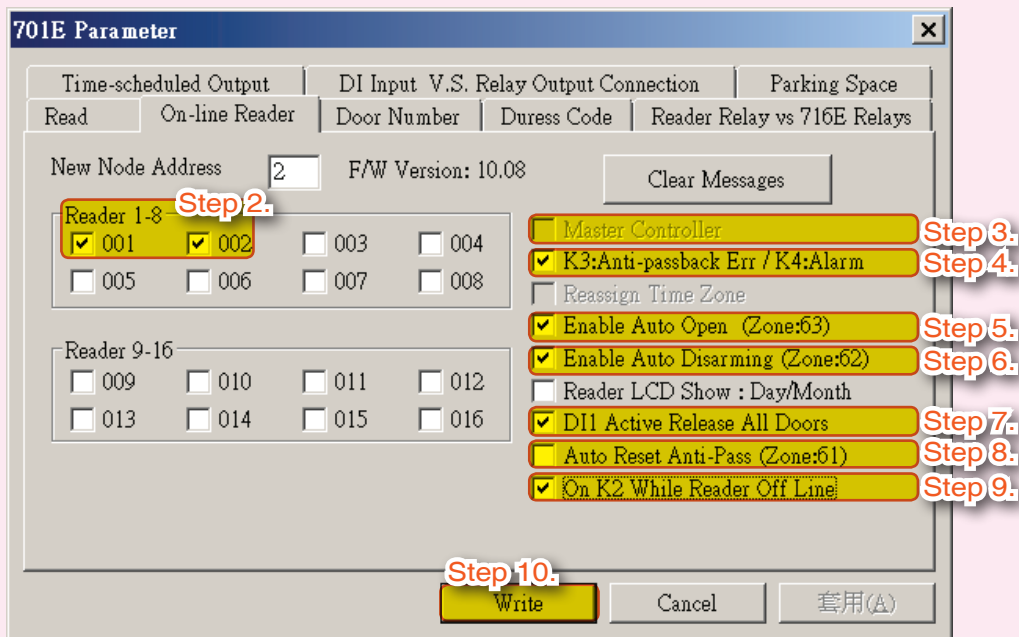
Door Number

Each door number represents a specific location. When event logs are sent to the computer, you can identify where the location is by the door number.

Step 1. Click "Door Number" and input the assign door number of each reader (door number of reader 1 is 1, and door number of reader 2 is 2).

Step 2. Click "Write" button to save all settings.
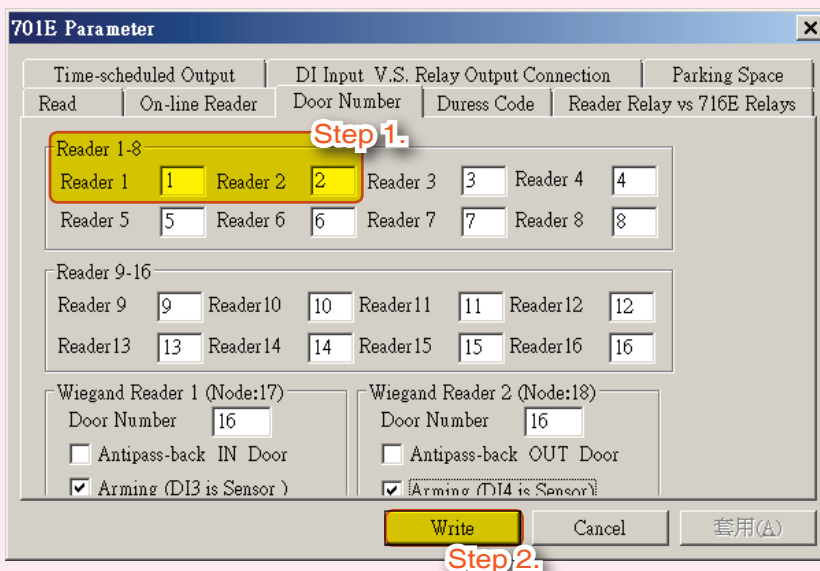
NOTE

There are two WG ports of AR-716E, and each port could connect with 1 WG access reader. The Node ID of the first WG reader is 17, and the Node ID of the second WG reader is 18. Here you can select the following functions:
1. Anti-pass back
2. DI3/DI4 of AR-716E can act as a sensor for the WG readers.

Duress Code

In the event that an assailant or robber ambush you at the entrance and force you to open the door or disarm the system, try to keep calm and input Duress code to open the door, which will simultaneously send a silent alert to the monitoring station or security guards.

Step 1. Enter 4 sets of 4-digit duress code, for example:1111, 2222, 3333, 4444.

Step 2. Click "Write" button to save all settings.

NOTE

The 4 sets of duress code set in the "701E Parameter" window are the main duress code.

※ You can also enter 4sets of 4-digit Force On/Off Code which can be used to activate the corresponding relay of AR-716E.

Reader Relay vs 716E Relays

For security concerns, we can set the synchronization output of relays between the relay of the readers connected to AR-716E and the 4 relays of AR-716E (K-1 ~ K-4), as well as the action time how long these relays will be activated. With an additional extension relay board, AR-716-IO, there can be 8 more relays for further setting.

Step 1. Select the Node ID of the reader in "Reader 1-16" field and tick one or more relays for K-1 ~ K-4. Here, we synchronize Reader 1 with K-1 and Reader 2 with K-2.

Step 2. Click "Write" button to save all settings.

You can set the time-scheduled output of designated relay of AR-716E on designated time, weekday for specific interval (second). This function is mainly applied to ring in the office or industrial automatic control.

Step 1. Select a specific day in "Weekday" field, for example, Monday.

Step 2. Select the range of displayed data (6 groups at a time).

Step 3. Select "Time to trigger", for example: 04:50 for the first group and 09:40 for the second group (by 24-hour clock).

Step 4. Select the activating interval, for example: 10 sec.

Step 5. Select relay for output.

Step 6. Click "Write" button to save all settings.

DI Input V.S. Relay Output Connection

The DI of AR-716E can be used to control relays and request to exit (RTE) buttons.

Step 1. Select one DI input from DI 1 ~ DI 4 and assign a Reader, for example: DI 1 for Reader 1 (AR-721H) and DI 2 for Reader 2 (AR-727H).

Step 2. Select one corresponding relay from K1 ~ K4, for example: K1 for DI 1 and K2 for DI 2.

Step 3. Input relay time(please set all the relay time in the window when DI 1 is selected), for example: K1 for 10 sec and K2 for 10 sec.

Step 4. Click "Write" button to save all settings.
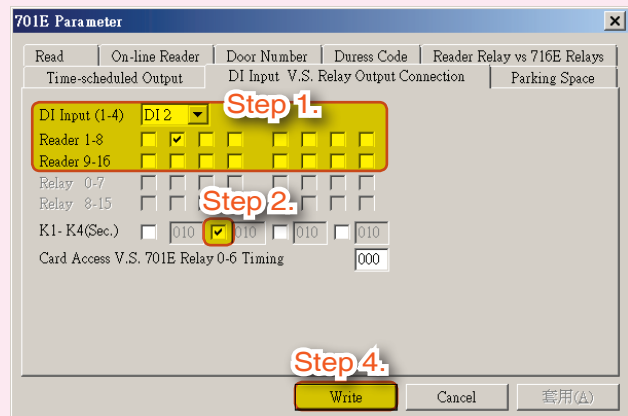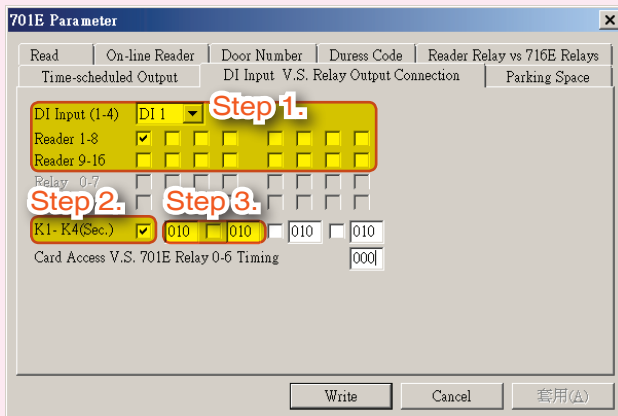
NOTE

If you didn't select the corresponding relay in Step 2, the relay of the access controller will be activated for the period of Door Relay Time (Electric Door relay Operate Time) which is set directly in program mode of this access controller.

Parking Space

This function is used for parking lot control, which can monitor the parking space status and output message to the designated device.
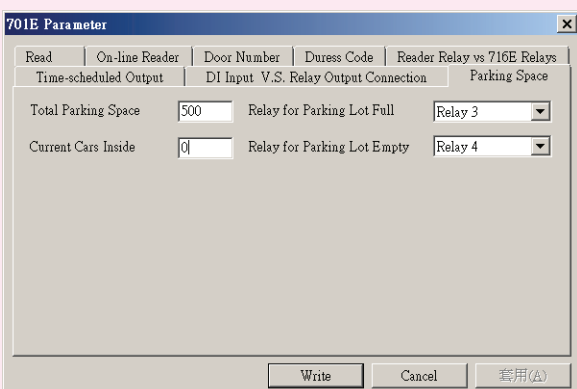
NOTE

● **Total Parking Space**: when the parking lot is totally full, K3 will be activated and send a message signal like "No Vacancy" to an external LED display.

● **Current Cars Inside**: when there is any parking space available in the parking lot, K4 will be activated and send a message signal like "Spaces Available" to an external LED display.

Step. 04 **821E/829E Parameter**

701Server can help you set the parameters of E series access controllers through the PC directly.

Click [icon] to open 821E/829E Parameter setting window.

Step 1. Before using 701Server, you have to set the Node ID of the access controller in program mode of this access controller, for example, for AR-829E, the access controller with LCD panel, please input * 123456 # to enter program mode and input quick instructions 31 to set the Node ID and set it as 001. Then, the PC can identify and communicate with this AR-829E by the Node ID (001).

Step 2. Click "Read From Controller" to get existent data from the access controller.

Step 3. After the communication is successful, you can also modify the Node ID of this access controller in "Node Addr" field.

Step 4. Door Relay Time: determines how long the electric lock is released, and users should open the door within this period, for example: 10 sec.

Step 5. Alarm Relay Time: determines how long the alarm will be activated, for example: 20 sec.

Step 6. Wait Relay Time (Door Close Time): after the period of door relay time, the door contact will start detecting the door status; however, sometimes the door just cannot be closed in time, so the door close time gives users a buffer time to close the door properly before the door contact starts detecting. Here it is set as 10 sec. That is, the door contact will start detecting after Door Relay Time (10 sec) + Door Close Time (10 sec), and the user should close the door properly within the total period (20 sec).

Step 7. Arm. Delay Time (Arming Delay Time): after the setting of arming mode is finished, the access controller will be in arming mode (armed) after the period of Arming Delay Time, which gives users a buffer time to exit without triggering the alarm. Here it is set as 10 sec.

Step 8. Alarm Delay Time: sometimes abnormal conditions are caused by inadvertent behavior or malfunctioned devices. In these situations, Alarm Delay Time gives users a buffer time to turn off the alarm before the beeper is sounding or an alarm signal is sent to the security guards. Here it is set as 10 sec.

Step 9. Master Code: you can set the 6-digit master code which is used for entering program mode. Here it is set as 123456.

Step 10. Arming PWD: to arming the access controller, you need to input 6-digit master code to enter the program mode, and press * + * + # to finish the setting. Or you can set it through the following methods:
1. Normal door open procedure + 4-digit Arming PWD + #
2. Without opening the door + 4-digit Arming PWD + Presenting a valid card
Here it is set as 1234.

Step 11. Door Number: each door number represents a specific location. When event logs are sent to the computer, user can identify where the location is by the door number. Here it should be set as 003 (the door number 003 indicates the location of warehouse, where AR-829E is installed).

Step 12. Master Controller of Network: if there are many networking access controllers, you can select one controller as Master Controller, and the PC will poll this master controller prior to other controllers.

Step 13. English Menu: change the language interface of the access controller to English.

Step 14. Enable Force Open Alarm: in the event that any door is opened without normal process like presenting a valid card from the outside or pressing the RTE button from the inside, it will cause a Force open condition. This situation will trigger the Force Open Alarm if the access controller is armed.

Step 15. Enable Egress Button: user can press the RTE button to open the door.

Step 16. Enable Auto Relock: the electric lock will be only lockable after the period of Door Relay Time, so there might be a gap between closing the door and the door being actually locked. How to solve this gap problem? You can enable the Auto Relock function which will let the door relock immediately whenever detecting the door is closed by the door contact.

Step 17. Auto Open (Zone: 63): you can set the time zone via 701Client, and time zone 63 is used for auto open (refer to **Step. 09**).

Step 18. Auto Enable Arming Mode (Zone: 62): you can set the time zone via 701Client, and time zone 62 is used to automatically enter arming mode (refer to **Step. 09**).

Step 19. Check Fingerprint: for biometric access controller like AR-821EF, you can tick this option to enable fingerprint check before getting access.

Step 20. Time Attendance Reader: when this option is ticked, the event logs of this access controller will be integrated to the Time Attendance Report.

Step 21. Auto Duty Functions: when this option is ticked, the current shift name will be shown on the LCD panel, such as "Duty: 0, Duty: F; OVT: 0, OVT: F".

Step 22. Close Door Stop Alarm: when this option is ticked, the activated alarm can be stopped by closing the door.

Step 23. Enable Anti-Passback: if there is an external WG reader connected to this access controller, you can tick this option to enable the anti-pass-back rule.

Step 24. WG Port Use Alarm Relay: when the access controller is connected to another WG reader, it can control double doors at once in which the alarm relay output is used to control another electric lock.

Step 25. Max Error Times (3 ~ 9): when someone input wrong master code more than Max Error Times, the keyboard panel will be automatically locked for 30 sec (if Max Error Times is set as 0, this function will be disabled).

Step 26. Msg. Overflow: you can set the access controller to sound an alert when the event logs stored in the memory of the access controller have exceeded the designated number.

Step 27. Duress Code: in the event that an assailant or robber ambush you at the entrance and force you to open the door or disarm the system, try to keep calm and input Duress code to open the door, which will simultaneously send a silent alert to the monitoring station or security guards. You can input 4 sets of 4-digit Duress Code at most, for example: 5151, 9191, 8181, 7171.

Step 28. Daily Time Schedule: you can set 12 sets of clock alarm time schedule every day, which will allow the clock alarm ring automatically according to this time schedule. This function is mainly applied to ring in the office or industrial automatic control.

Step 29. On Alarm for Expiry: if any expired card is presented, it will trigger an alarm.

Step 30. Reset Anti-pass (Zone: 61): you can set the time zone via 701Client, and time zone 61 is used to automatically reset anti-passback function. When the user violates the anti-pass-back rule, s/he cannot get access anymore. Reset allows the user get access again at this time regardless of the violation of the anti-pass-back rule before.

Step 31. DI Loop 2/3 Show Message: there are two additional DI in AR-829E, and if this option is ticked, when DI 2 or DI 3 receives a signal, it will also trigger a message sent to the PC for further using.

Step 32. Idle Screen: You can enter the message which will be shown on the LCD panel when the access controller is at standby state. For example, "WELCOME".

Step 33. Open Door via P.I.N. Selection: select the desired access mode.
Serial Num + PIN: input user address and private PIN and press #
PIN Only: Input private PIN directly (for E series access controller, there is no distinction between M4/M6/M8 modes)

Step 34. External Reader Format: select the card data format of the external reader.

Step 35. TP1 Serial Port Format: select the external device.

Step 36. Download: download fingerprint data to access controller (select a range of user address to be download).

Step 37. Delete: delete fingerprint or finger vein data stored in the memory of AR-821EF/V (Assign a range of user address to be deleted).

Step 38. Upload from Device to File: upload fingerprint or finger vein data from the access controller to the PC (Assign a range of user address to be uploaded).

Step 39. Write To Controller: Save all settings to the access controller.

821E/829E Parameter setting

Step 1. Read From 001
Step 3. Node Addr 1
Step 4. Door Relay 10
Step 5. Alarm Relay 20
Step 6. Wait Delay 10
Step 7. Arm. Delay 10
Step 8. Alarm Delay 10
Step 9. Master ******
Step 10. Arm. Pass 1234
Fringer # 720
Step 11. Door Num 3

☐ Master Node — Step 12.
☐ English Menu — Step 13.
☐ Date Format (DD/MM
☑ Enable Force Alarm — Step 14.
☑ Enable Egress Button — Step 15.
☑ Enable Auto Relock — Step 16.
☐ Time Zone Via Door
☑ Auto Open (Zone:63 — Step 17.
☑ Auto Disarm (Zone:62 — Step 18.
☐ Check Fingerprint — Step 19.
☑ TimeAttendance — Step 20.
☑ Auto Duty Funct — Step 21.
☑ Close Door Stop Alarm — Step 22.

☐ Enable Anti-passback — Step 23.
☐ WG Port Use Alarm Rela — Step 24.
☐ Enable via Master
Max Error Times 5 — Step 25.
Msg. Overflow 5000 — Step 26.
Duress Code — Step 27.
5151 9191
8181 7171

Daily Time Schedule — Step 28.
☐ On Alarm for Expiry — Step 29.
☐ Reset Anti-pass (Zone:61 — Step 30.
☐ DI Loop2/3 Show Messag — Step 31.

Step 32. Idle Screen...

Open Door via P.I.N. Selection — Step 33.
◉ Serial Num + PIN ○ PIN Only

External Reader Format — Step 34.
◉ WG26/34 ○ ABA10

TP1 Serial Port Format — Step 35.
◉ AR-401RO16 ○ LED Display ○ Line Printer ○ Terminal

F/W Version: X.XX

Step 2. ⬆R Read From Controller
Empty Controller Messages
Step 39. ⬇ Write To Controller
🔄 Exit

Range : 1 --- 20 **NOTE**
Fingerprint Device
◉ Single ○ All Connected
Step 36. ⬆⬇ Download Step 37. 🗑 Delete
Step 38. ⬆ Upload from Device to File

Ready Message
WELCOME
OK Cancel

Alarm Events Editor

Auto Duty	Event	Sec.
	Weekday	SUN
On Duty	00:00	000
Break Out	00:00	000
Break In	00:00	000
Off Duty	00:00	000
Over T. On	00:00	000
Over T. Off	00:00	000
	00:00	000
	00:00	000
	00:00	000
	00:00	000
	00:00	000
	00:00	000

Yes Exit

NOTE

When upload/download fingerprint or finger vein data, please assign a range of user address first.

Step. 05 725Ev2/727Hv5/881EF/829EV5/837EF/721Ev2 Parameter

Click ▪ or ▪ to open 881EFV/829EV5 Parameter setting window.

Step 1. Setting the Node ID of AR-881EF as 001.

Step 2. Click "Read From Controller" to get existent data from the access controller.

Step 3. After the communication is successful, you can also modify the Node ID of this access controller in "Node Addr" field.

Step 4. Door Relay Time (of the access controller): determines how long the electric lock is released, and users should open the door within this period, for example: 10 sec.

Step 5. Relay [WG] (Door Relay Time of the WG reader): determines how long the electric lock is released, and users should open the door within this period, for example: 10 sec.

Step 6. Open too long (Door Close Time of the access controller): after the period of door relay time, the door contact will start detecting the door status; however, sometimes the door just cannot be closed in time, so the door close time gives users a buffer time to close the door properly before the door contact starts detecting. Here it is set as 15 sec. That is, the door contact will start detecting after Door Relay Time (10 sec) + Door Close Time (15 sec), and the user should close the door properly within the total period (25 sec).

Step 7. too long [WG] (Door Close Time of the WG reader)

Step 8. Alarm Relay Time: determines how long the alarm will be activated.
Here it is set as 20 sec.

Step 9. Armed Delay (Arming Delay Time): after the setting of arming mode is finished, the access controller will be in arming mode (armed) after the period of Arming Delay Time, which gives users a buffer time to exit without triggering the alarm. Here it is set as 10 sec.

Step 10. Alarm Delay Time: sometimes abnormal conditions are caused by inadvertent behavior or malfunctioned devices. In these situations, Alarm Delay Time gives users a buffer time to turn off the alarm before the beeper is sounding or an alarm signal is sent to the security guards. Here it is set as 10 sec.

Step 11. Edit Pwd (Master Code): you can set the 6-digit master code which is used for entering program mode. Here it is set as 123456.

Step 12. Arming PWD: to arming the access controller, you need to input 6-digit master code to enter the program mode, and press * + * + # to finish the setting. Or you can set it through the following methods:
1. Normal door open procedure + 4-digit Arming PWD + #
2. Without opening the door + 4-digit Arming PWD + Presenting a valid card
Here it is set as 1234.

Step 13. Door Nr. (Door Number of the acess controller): each door number represents a specific location. When event logs are sent to the computer, user can identify where the location is by the door number. Here it should be set as 003.

Step 14. Door Nr [WG] (Door Number of the the WG reader)

Step 15. Enable Force Open Alarm: in the event that any door is opened without normal process like presenting a valid card from the outside or pressing the RTE button from the inside, it will cause a Force open condition. This situation will trigger the Force Open Alarm if the access controller is armed.

Step 16. Enable Antipassback: if there is an external WG reader connected to this access controller, you can tick this option to enable the anti-pass-back rule.

Step 17. Enable Push to Exit (Enable Egress Button): user can press the RTE button to open the door.

Step 18. Enable Auto Relock: the electric lock will be only lockable after the period of Door Relay Time, so there might be a gap between closing the door and the door being actually locked. How to solve this gap problem? You can enable the Auto Relock function which will let the door relock immediately whenever detecting the door is closed by the door contact.

Step 19. Close Stop Alarm: when this option is ticked, the activated alarm can be stopped by closing the door.

Step 20. Share Door Relay: if the WG reader and the access controller control the same one door, you can click this option.

Step 21. Enable Free Zone(63) (Auto Open (Zone: 63)): you can set the time zone via 701Client, and time zone 63 is used for auto open (refer to **Step. 09**).

Step 22. Free Zone Open Imm. : enable auto open during the period of time zone 62 without any requirement of presenting a valid card.

Step 23. Auto Enable Arming Mode (Zone: 62): you can set the time zone via 701Client, and time zone 62 is used to automatically enter arming mode (refer to **Step. 09**).

Step 24. Is Duty Reader (Time Attendance Reader): when this option is ticked, the event logs of this access controller will be integrated to the Time Attendance Report.

Step 25. Skip PIN Check: there is no keyboard on AR-881E, so you can tick this option. In that way, even though the access mode is "Card & PIN", inputting PIN can still be omitted at the reader.

Step 26. Door open for any Tag (Full access): used for short-term activities or temporary events which lets the door open whenever a card with the same frequency of the access controller is presented.

Step 27. Reset Antipass (TZ61): you can set the time zone via 701Client, and time zone 61 is used to automatically reset anti-passback function. When the user violates the anti-pass-back rule, s/he cannot get access anymore. Reset allows the user get access again at this time regardless of the violation of the anti-pass-back rule before.

Step 28. Alarming if Expiried: if any expired card is presented, it will trigger an alarm.

Step 29. WG Output Mode: if this option is ticked, the biometric access controller, AR-881EF will turn to be a WG reader instead.

Step 30. Free Zone Edit (auto Open Zone): you can set the auto open time zone here.

Step 31. Alarm Schedule: you can set clock alarm time schedule every day, which will allow the clock alarm ring automatically according to this time schedule. This function is mainly applied to ring in the office or industrial automatic control.

Step 32. Duty Shift: used for setting the timetable of auto duty-shift switch function.

Step 33. 721Ev2: you can select the on-line readers of the AR-721E-V2 and assign specific Door Number to each reader when Multi-Door Networking Controller AR-721E-V2 is connected.

Step 34. RS485 - 1 / 2 / 3 Port: select the desired external device.

Step 35. Write Fingerprint: download fingerprint data from the PC to access controller (select a range of user address to be download).

Step 36. Delete Fingerprint: delete fingerprint or finger vein data stored in the memory of AR-881EF (Assign a range of user address to be deleted).

Step 37. Read Fingerprint from controller: upload fingerprint data from the access controller to the PC (select a range of user address to be uploaded).

Step 38. Write: save all settings to the access controller.

AR881EFV/829EV5 Parameters

Step	Field	Value
Step 1.	Target Node	001
Step 3.	New Node ID	1
Step 4.	Door Relay	7
Step 5.	Relay [WG]	7
Step 6.	Open too long	15
Step 7.	too long[WG]	15
Step 8.	Alarm Relay	15
Step 9.	Armed Delay	1
Step 10.	Alarm Delay	1
Step 11.	Edit Pwd	••••••
Step 12.	Armed Pwd	1234
Step 13.	Door Nr.	1
Step 14.	Door Nr[WG]	2

Main WGA

- Step 15. Enable Force Alarm
- Step 16. Enable Antipassback
- Is Entry Door
- Step 17. Enable Push to Exit
- Egress Beep Sounds
- Step 18. Enable Auto Relock
- Step 19. Close Stop Alarm
- Step 20. Share Door Relay
- Step 21. Enable Free Zone
- Step 22. Free Zone Open Imm.
- Step 23. Ena. Disarm Zone(62)
- Step 24. Is Duty Reader
- Step 25. Skip PIN Check
- Step 26. Door Open for Any Tag

Duress Code 4321
- None English Menual
- Date Time Format(DD/MM)
- Enable Black Tag
- Step 27. Reset Antipass(TZ61)
- Step 28. Alarming if Expried
- Step 29. WG Output Mode
- Free RF Check at Finger Acce
- Lock Keyboard
- Enable duty shift table
- Show WG Port message on LC
- Dupl. check at enroll Finger

Master 0 --- 0
Max keypad error times 5

Step 30. Free Zone
Step 31. Alarm Schedule
Step 32. Duty Shift
Step 33. 721Ev2
Step 34.

RS485 - 1
- Lift Controller ● Host Comm. Port
- LED Panel Line Printer

RS485 - 2
- FP200 Photo & CMOS
- FP200 Photo
- FP200 CMOS
- FP9000 Photo/CMOS
- Finger Vein
- ● Lift Controller
- Card Reader / Voice Module
- Line Printer

RS485 - 3
- ● Lift Controller
- ...
- LED Panel
- Card Reader / Voice Module

Card or PIN Access Mode
- Address + PIN Code (M4)
- ● Pin Code Only (M8)

Firmware Ver:3.2

Step 2. Read   Empty Log
Step 38. Write   Exit

Target Controller
- ● Selected O
- All Connected Controller

User Range 0 --- 199

- Step 35. Write Fingerprint
- Step 36. Delete Fingerprint
- Step 37. Read Fingerprinit
- Transfer (V9-->V5)

NOTE
Select a range of user address to upload and download fingerprint data.

Step.
06
Set Client computer

A server computer is the host PC which connects to the access controllers and collects data from these controllers. If you want to view these data from another PC (client computer), you have to share data via Network Neighborhood as follows:

Step 1. Click right button of the mouse on two folder: C:\program files\701Server and C:\program files\701Client and select "Sharing and Security..." to open "701Server Properties" window and "701Client Properties" window.

Step 2. Tick "Share this folder on the network".

Step 3. Tick "Allow network users to change my files".
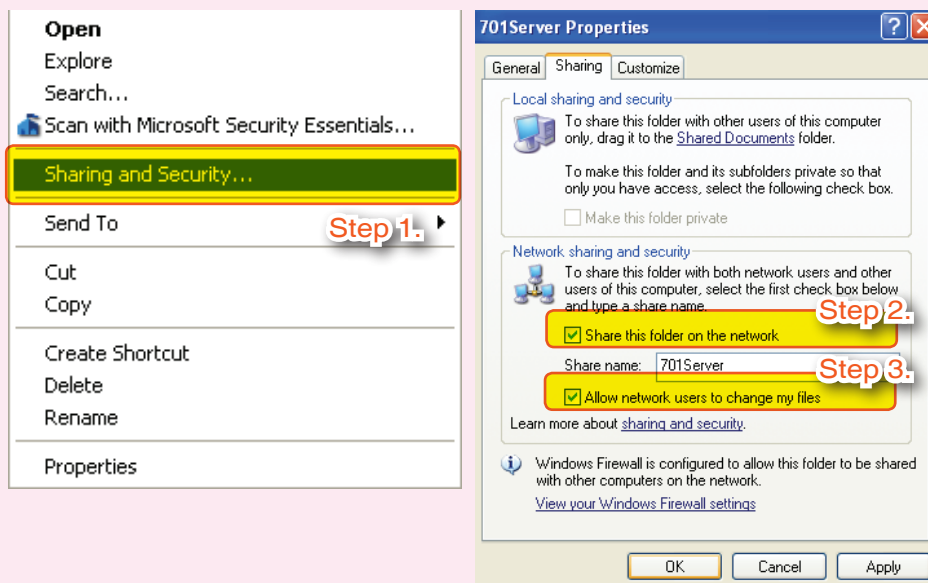
Step 4. Launch 701Server and login on the Client computer, click   to open "Communication Port Setting" window.

Step 5. Select "Via Server Computer" and click "Server Computer Path" button

Step 6. Select the server PC path.

Step 7. Please do **NOT** tick "Polling Message From Controller" (since this client PC doesn't connect to any access controller, there is no need to poll any event logs).

Step 8. Click "Yes" to save all settings.
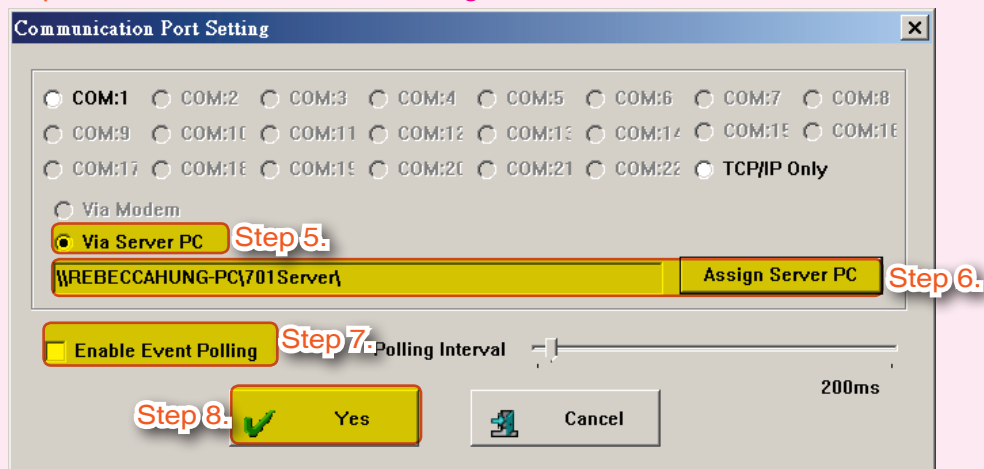
Step. **07**

Time Attendance

You can set relevant parameters of time attendance report here.

Click **Setting** -> **Time Attendance** to open "Time Attendance Setting" window.

Step 1. "Time attendance Base On": you can decide how the time and attendance is reported from the two choices:

Work Time [First and Last Records]: The first record and last records will be integrated into the time attendance report.

Depend On [Duty Function Key]: records are integrated into the tome attendance report according the shift name shown on the LCD panel of the access controller, for example: "Duty: 0,Duty: F; OVT: 0, OVT: F".

Step 2. Maximum User On System: set the user capacity.

Step 3. Duty Start Time [Day Shift]: designate the beginning time of day shift.

Step 4. Update time clock to controller at program start: Synchronize the time of the computer and the controller whenever 701Server is launched or at the midnight(00:00).

Step 5. Auto update Controller Clock: you can designate two time sets to automatically synchronize the time of the computer and the controller .

Step 6. Backup Message File: desinate the second folder path to save backup message file. Please designate the folder path other than C: disk, or it maight be intervened by the anti-virus software and cause error of the time attendance report.

Step 7. Execute another Program while Startup: you can designate the second program to be automatically launched as long as 701Server is being launched. We normally execute 701Client as the another program.

Step 8. Click "Yes" button to save all settings.