



Multi-door Networking Controller

ECL-ACC1000 (RS-485)

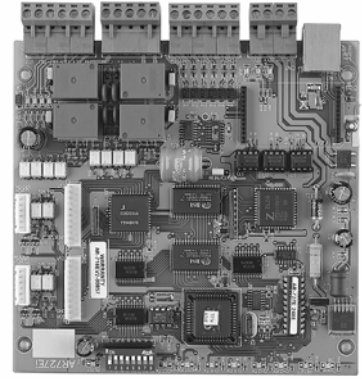
User's Guide

Version: 6.8

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1. Introduction

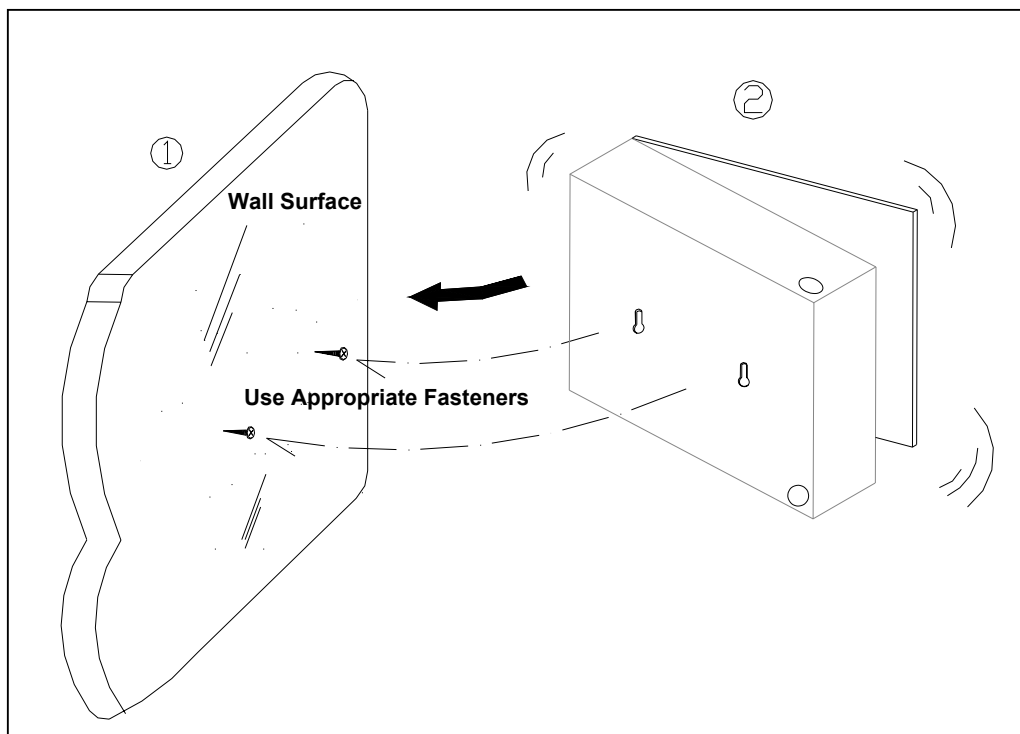


- Card capacity: 15,000 Users.
- 11,000-Event history transaction.
- Built-in watchdog monitoring for auto reboot.
- Supports scheduled door release time zone.
- Supports scheduled arming time zone.
- Built-in power and RS-485 transmission LED indicator for signal state.
- Works as a 16-doors networking controller and can be linked up to 254 units.
- Supports alarm status output when reader is off-line.
- Multi-door Anti-pass-back and auto reset function for Anti-pass-back violations.
- Supports “opens all doors” function in an emergency.
- Two RS-485 Reader ports, each port supports 8 readers.
- Two Wiegand ports for External readers.
- Retains data for over 60 days during power failure.
- Individual programmable time zones for each door.
- Support 4 “Forced ON/OFF code” for remote control from RS-485 readers.
- Built-in 10 BaseT interface for Ethernet networking.

2. Installation

1. Select a location for the ACC1000 unit that is secure and sheltered from weather and extreme humidity. Choose a location that facilitates access to power and is reasonably close to the doors that are to be controlled.
2. Using the unit as a template, mark on the mounting surface the location of the two mounting holes.
3. Install appropriate mounting hardware (anchors, retainers, etc.) to the mounting surface if necessary.
4. Screw mounting screws into the top 2 mounting holes of the mounting surface, leaving about 0.4 cm clearance. Place panel top key-way mounting holes over installed mounting screws and slide panel down.
5. Route cables into the enclosure through knockouts in sides, top or bottom of box, being careful not to nick or scrape insulation on any rough edges.


CAUTION SHOULD BE TAKEN NOT TO TOUCH CIRCUIT BOARD OR ELECTRONIC COMPONENTS PRIOR TO AND DURING INSTALLATION TO AVOID ELECTRO-STATIC DISCHARGE (ESD) DAMAGE.




3. Software Setting

3.1 701 Server software settings for external Wiegand reader

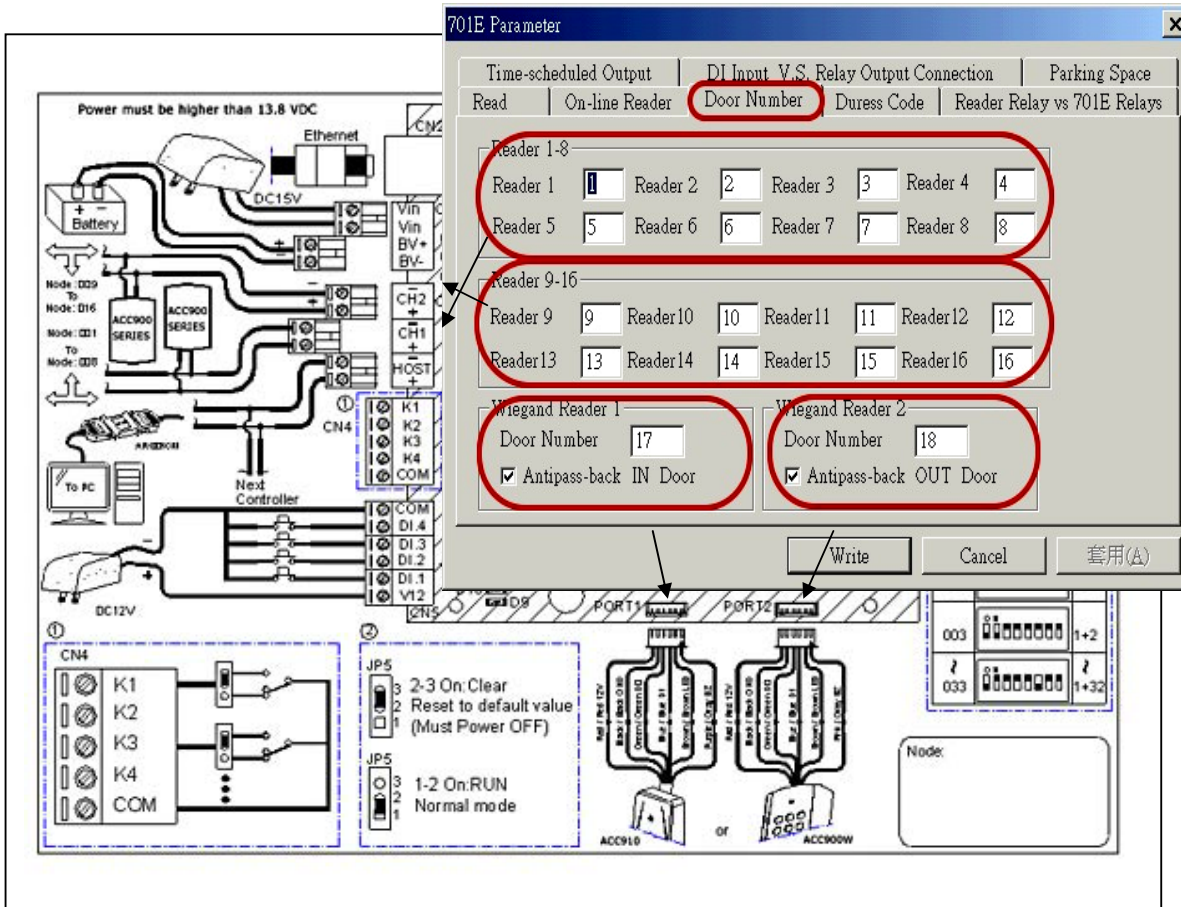
After installing the server software from the CD provided:

Step1: Click the 701 Server Icon on the lower right corner of the windows screen  twice to access the Server software. (Note: The 701 server refers to the ACC1000 controller as 701E)

Step2: Click Tool Bar Icon  (701E parameter) for the windows.

Step3: Enter networking controller node ID, then click "Read".

Step4: Click the tab on top labeled "Door Number".

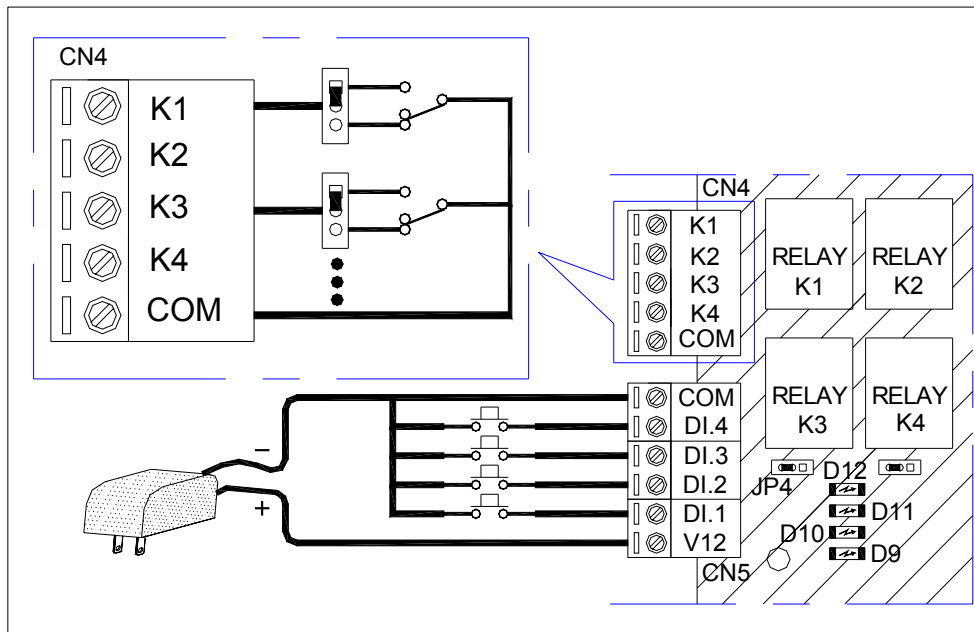


3.2 Door number setting of 701E Server software (Using RS485 readers)

1. Readers 1-8 are the door numbers of the CH1 RS-485 readers.
(CH1 can connect to on-line readers ID node 1-8).
2. Readers 9-16 are the door numbers of the CH2 RS-485 readers.
(CH2 can connect to on-line readers ID node 9-16).
3. The ID Node of WG reader port 1 is fixed to no.17 on the ECL-ACC1000 PCB.
If anti-pass-back is enabled, ID Node 17 is fixed as an entry point.
4. The ID Node of WG reader port 2 is fixed to no.18 on the ECL-ACC1000 PCB.
If anti-pass-back is enabled, ID Node 18 is fixed as an exit point.

Note: All the door numbers are changeable.

Step5: Click the tab “DI Input V.S. Relay Output Connection”.



3.3 DI Input V.S. Relay Output Connection setting of 701E Parameter

1. The DI.2 is an exit button input for reader port 1 and the K1 is the open door relay.
 - (1) Choose “DI 2” under the menu item.
 - (2) Click “K1”.
2. The DI.3 is exit button input of reader port 2 and the K2 is open door relay.
 - (1) Choose “DI 3” under the menu item.
 - (2) Click “K2”.

Note: Active second can be set only when the window is DI 1.

3.4 Weigand reader LED and Buzzer indicators

1. A green LED light and one beep means acknowledge, green LED light twice and two beep sounds mean not acknowledged.
2. In anti-pass-back access mode, green LED light five times and five beeps means violated access function.
3. When the access mode is set to have user code, after you flash the card, green LED light will blink four times and four beep sounds mean that reader is waiting for 4-digit user code.

4. ECL-ACC1000 Configuration

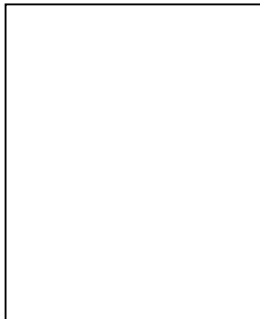
4.1 Reset to Factory Default of the ECL-ACC1000 (On-board network adapter)



Press RESET button more than 5 seconds, then ECL-ACC1000 will restore to Factory Default value.

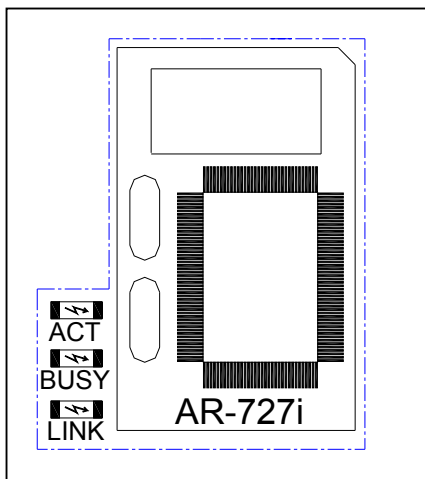
IP Address : 192.168.001.127
 Gateway IP : 192.168.001.254
 Subnet Mask : 255.255.255.000
 Serail Port : 9600,N,8,1
 TCP Port : 1621
 Password : none

4.2 DIP Switch Settings



	Description
Switch 1	DHCP Function ECL-ACC1000 support Auto Configuration of the IP and gateway addresses and subnet mask function, but must make sure the DHCP Server is active.
Switch 2	Serial Setup Mode

4.3 ECL-ACC1000's contains three LED indicators, as described in the following table



LED Name	LED Color	LED Function
Link	Yellow	Media is connected.
	Off	Media is not connected.
ACT	Green	10 Mbps Ethernet connection.
	Off	Ethernet cable is disconnected, or has a short.
BUSY	Red	Configuration Setup.
	Off	No.

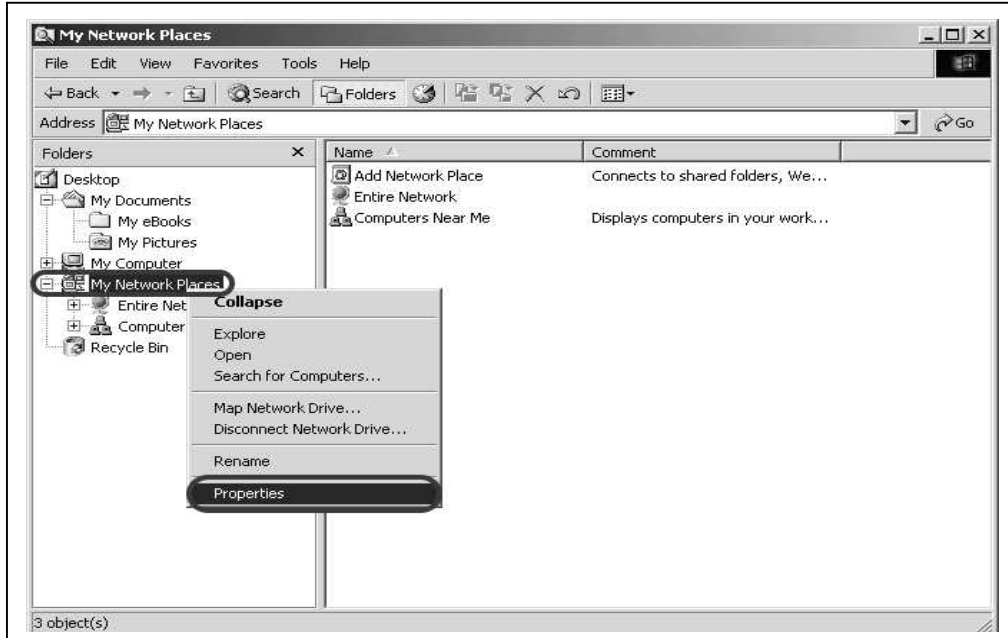
4.4 How to set IP address on the ECL-ACC1000

4.4.1 Change IP address by using Net727i software

Usually, existing networks don't use DHCP Server. Therefore, we can use the following method to get default IP address and modify it. The steps are as follows:

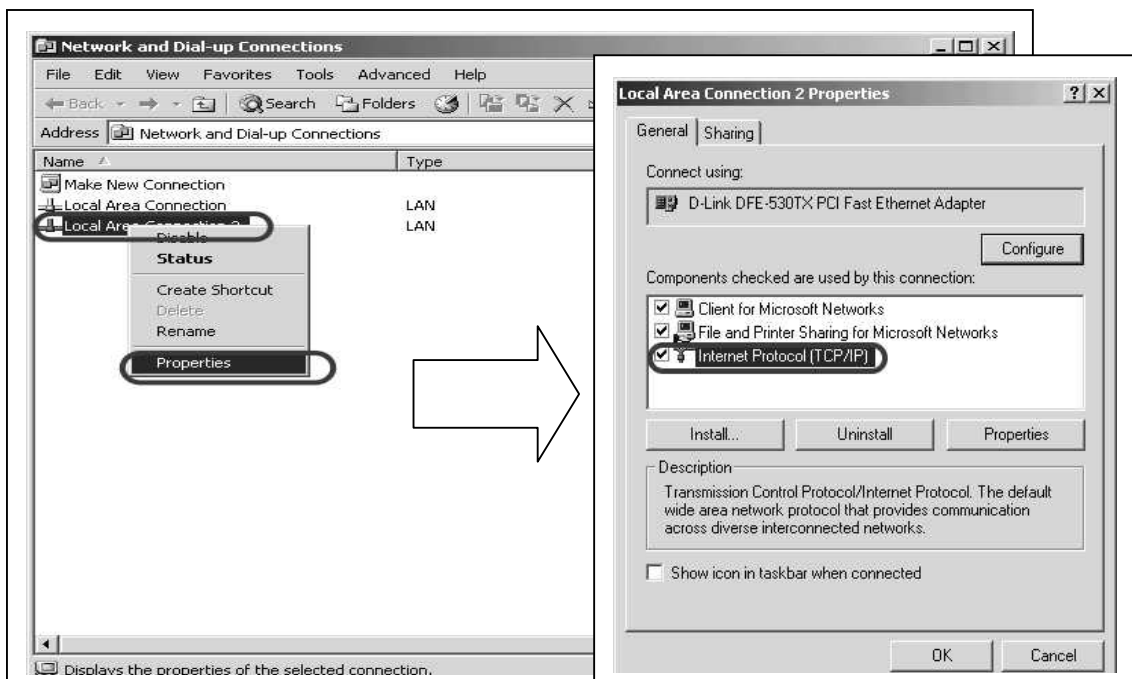
Step 1: Press RESET button more than 5 seconds, The BUSY LED will flash 5 times, the ECL-ACC1000 will restore to Factory Default value.

Step 2: Open explorer, click "My Network Places" and press right key to open Properties.

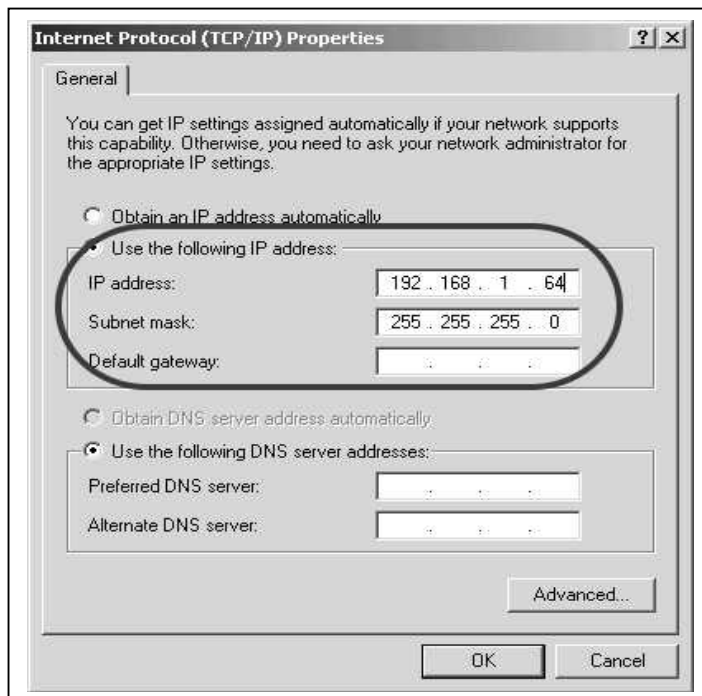


Step 3: Click "Local Area Connection" and press right key to open Properties.

Then double click Internet Protocol (TCP/IP) to open Properties.



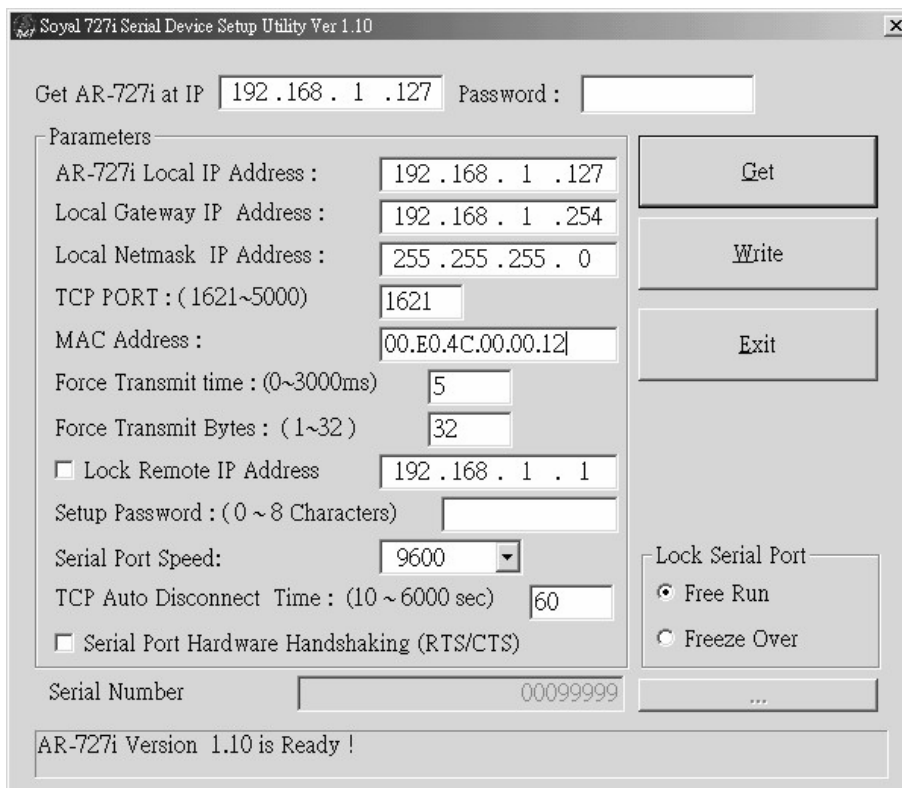
Step 4: Click "Use the following IP address" and enter IP address 192.168.001.64, Subnet mask 255.255.255.0



Step 5: Click "ok" to exit.

Step 6: Install Net727i.exe into your PC and run Net727i.exe

(Start → Programs → soyal software → Net727i )



Step 7: Click “Get” to get default Local IP Address, Gateway, Netmask and TCP Port.

Step 8: Change new address and parameters then click “write”.

Step 9: switch DIP SW-1 and SW-2 to “OFF” position.

Remark:

(1) How to know PC’s IP Address? (Win98)

Start → execute → enter “winipcfg”.

(2) How to know PC’s IP Address? (Win2000)

Start → Programs → Accessories → Command Prompt → C:\> ipconfig

(3) Please see detailed parameter in next page:

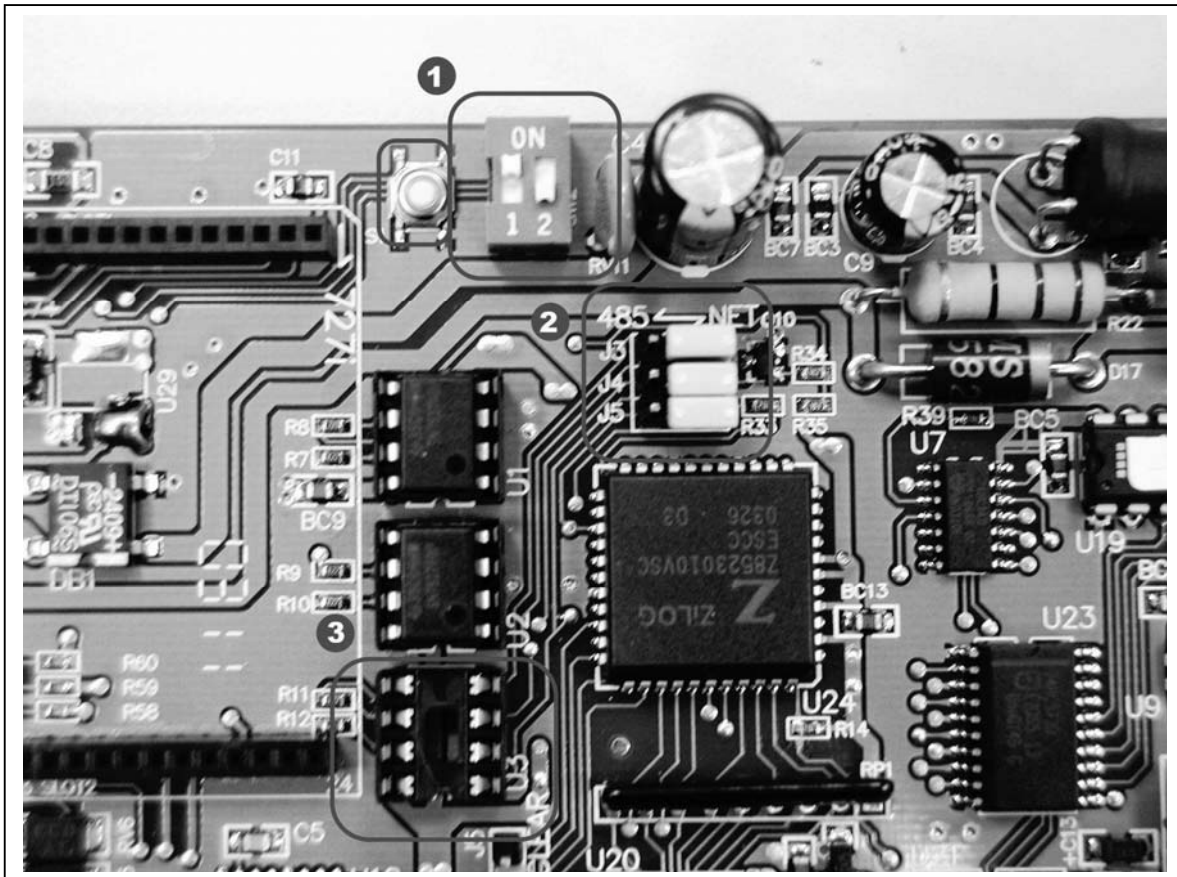
Setting	Value	Notes	Necessity
Local IP Address	192.168.001.127	Defines own IP Address of the AR-727CM	Required
Local Gateway IP Address	192.168.001.254	Defines the IP Address of the default gateway	Required
Local Subnet Mask	255.255.255.000	Defines the IP Address range for the local network segment	Required
TCP Port	1621	The TCP port that other devices must use to contact this device. To avoid conflicts with standard TCP ports.	Required
MAC Address	00.E0.4C.00.00.50	The MAC (Media Access Control) address is a unique identifier set at the factory.	-
Force Transmit time	5	Forces AR-727CM device's TCP/IP protocol software to try to pack serial data received during the specified time into the same data frame.	Optional
Force Transmit Bytes	32	Defines the amount of data in the serial, Ethernet buffer at which the break condition will be generated and the contents of buffer will be sent out via the Ethernet port.	Optional
Lock Remote IP Address	-	Allows contact with only the specified remote IP address.	Optional
Lock Serial Port (Free Run or Freeze Over)	-	To avoid the hacker use this IP to intercept data when Remote IP Address doesn't receive data.	Optional
Setup Password	none	Console password	Optional
Serial Port Speed	9600	Changes current baud rate of the AR-727CM's serial port (from 2400bps to 57600bps).	Required
TCP Auto Disconnect Time (Second)	60	This device automatically closes TCP connection if there is no TCP activity for the given time.	Optional
Serial Port Hardware Handshaking (RTS/CTS)	-	An exchange of signal over specific wires which each device indicates its readiness to send or receive data.	Optional
DHCP	-	Selecting the enable option allows DHCP to automatically assign the AR-727CM's IP address.	Optional

4.4.2 Get IP address by DHCP Server:

ECL-ACC1000 supports Auto Configuration of the IP and gateway addresses and subnet mask function, but you must make sure the DHCP Server is active. The steps are as follows:

Step 1: Power off.

Step 2: Follow the PCB diagram as follows by using the DHCP Function.



- ① Switch DIP SW-1 to “ON” position.
- ② Switch DIP SW-2 to “OFF” position.
- ③ Switch Jumper J3, J4 and J5 to Net position.
- ④ No IC Chip in the U3 position.

Step 3: Power on. In the begging state the ACT LED will flash, after the IP has been received the ACT LED will turn off and auto save the new IP address to EEPROM.

Step 4: Power off.

Step 5: Change communication IC Chip from the “U2” position to the “U3” position.

Step 6: Then, Switch DIP SW-1 to “OFF” position and Switch DIP SW-2 to “ON” position.

(return to Serial Setup Mode)

Step 7: Connect AR-801CM to the HOST of the PCB.

Step 8: Power on.

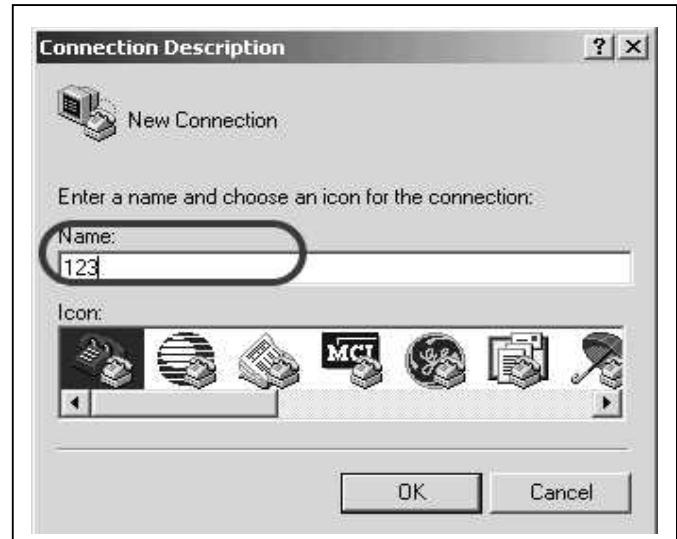
Step 9: To modify parameter on the ECL-ACC1000 through the Hyper-Terminal function of the Window.

(Start → Programs → Accessories → Communication → Hyper Terminal)

Step 10: Click “Hyper-Terminal”.
Shown as follows:



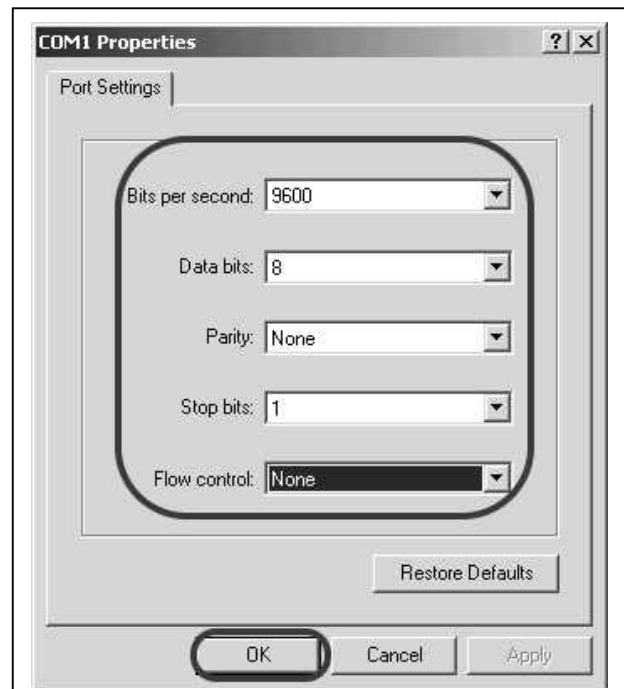
Step 11: key-in any temporary name.
It is not important matter.



Step 12: Choose which COM port that AR-801CM connect and click OK to exit.



Step 13: Set Port Settings to 9600, 8, None, 1, None and click “OK” to save.



Step 14: ECL-ACC1000 already receives IP address now shown as follows:

Note that save it after set all parameters.

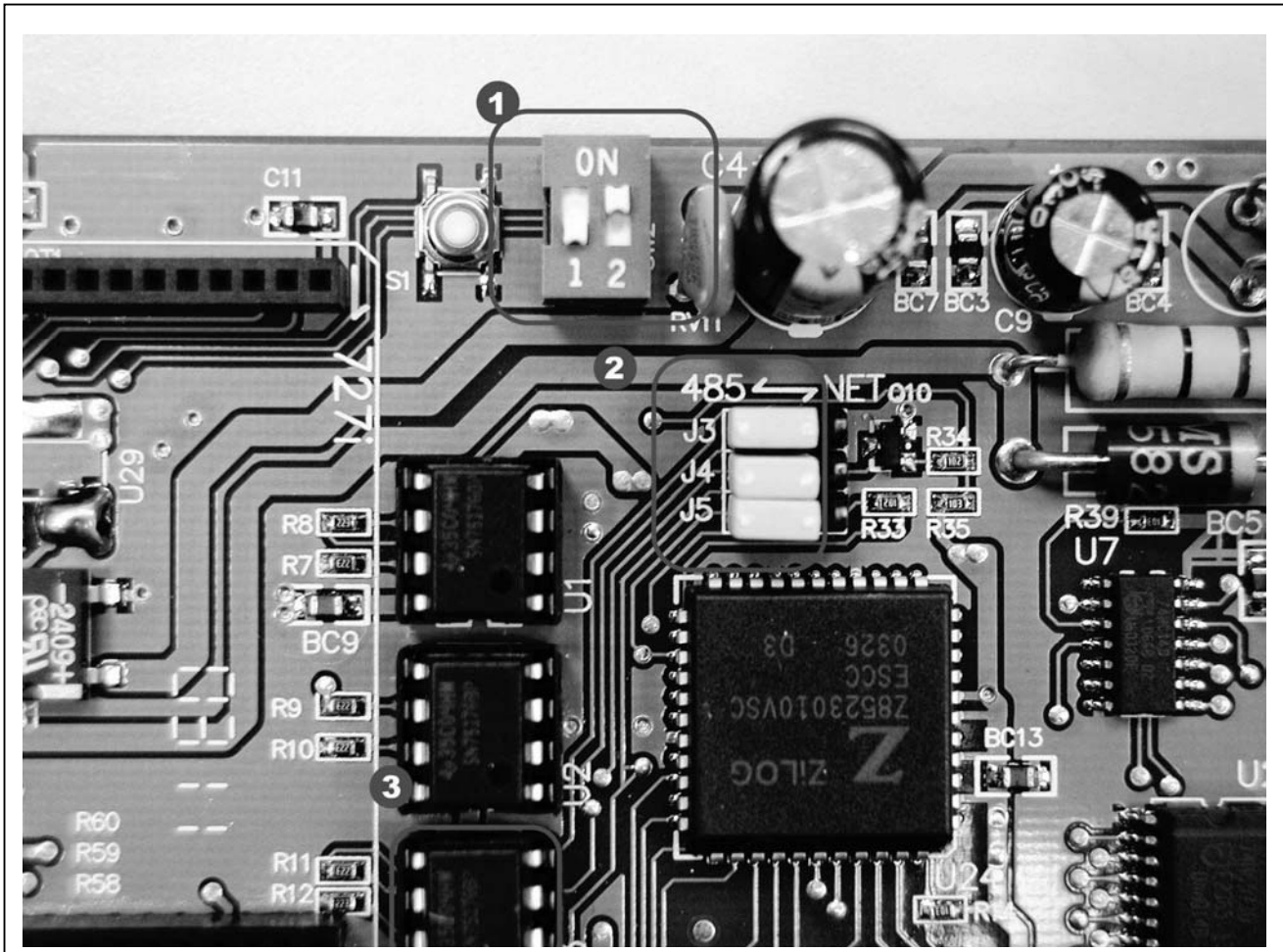
```
IP Address :192.168.001.127 |
Gateway IP :192.168.001.254
Netmask IP :255.255.255.000
TCP Port   :1621
Remote IP  :192.168.001.001
Password   :

=== SOYAL AR-727i Ver:1.09 ===
    0. Local IP
    1. Gateway IP
    2. Netmask IP
    3. TCP Port
    4. Remote IP
    5. Password
    6. Save
==> Quit(OFF DIP SW:1) or Enter a choice:
```

Step 15: Power off. Then switch DIP SW-2 to “OFF” position, take away communication IC Chip on the U3 position of the PCB and AR-801CM.

4.4.3 Get IP address by AR-801CM (COM Port) connects to PC

At first, follow the PCB diagram and Connect the AR-801CM to the HOST of the PCB:



- ① Switch DIP SW-1 to "OFF" position.
- ② Switch DIP SW-2 to "ON" position. (Serial Setup Mode)
- ③ Switch Jumper J3, J4 and J5 to RS-485 position.
- ④ Make sure that have communication IC Chip in the U3 position.

Step 1: To modify parameter on the ECL-ACC1000 through the Hyper-Terminal function of the Window.

(Start → Programs → Accessories → Communication → Hyper Terminal)

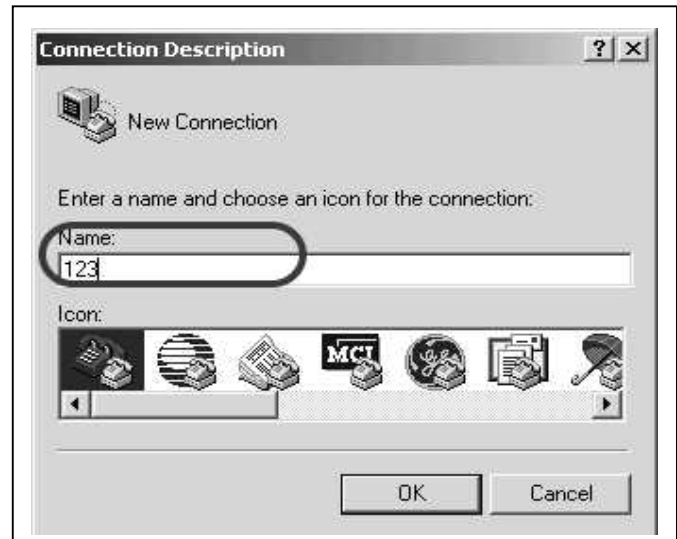
Step 2: Click “Hyper-Terminal”.

Shown as follows:



Step 3: key-in any temporary name.

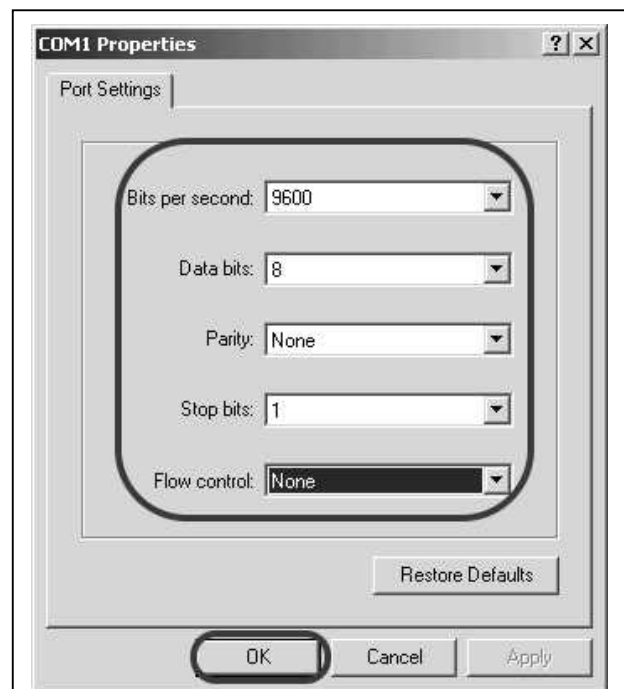
It is not important matter.



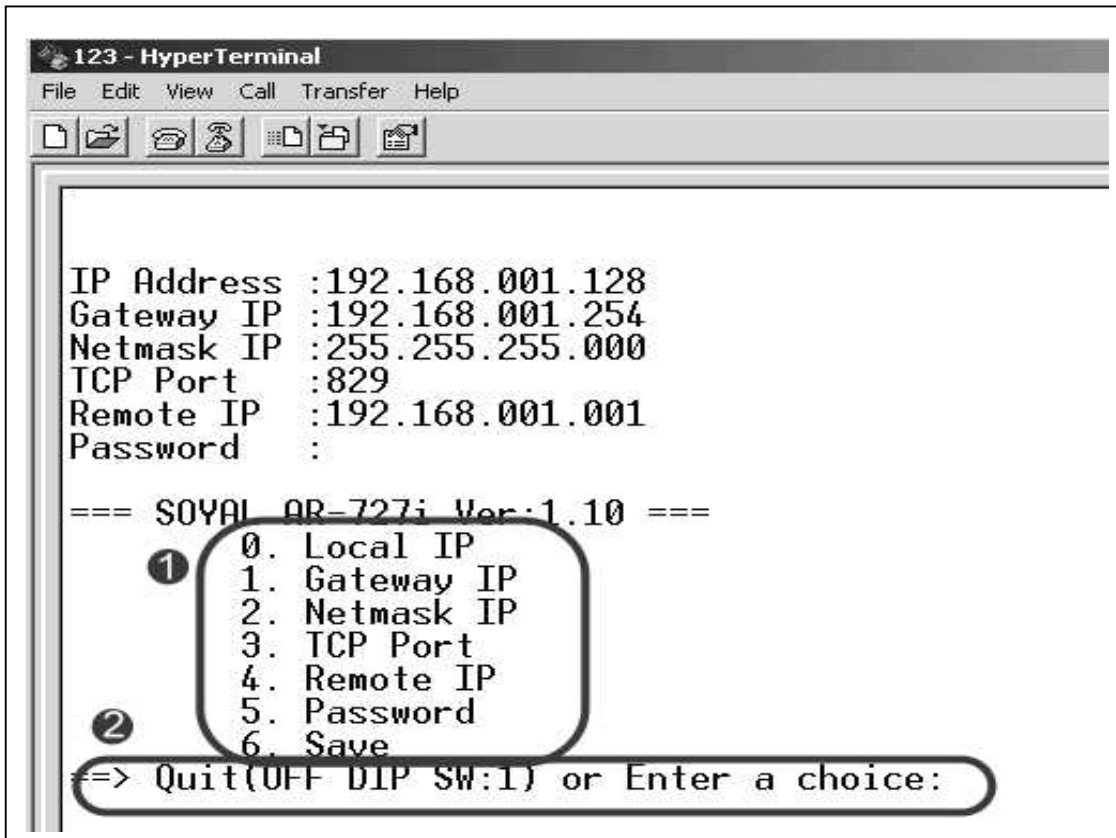
Step 4: Choose which COM port that AR-801CM connect and click OK to exit.



Step 5: Set Port Settings to 9600, 8, None, 1, None and click “OK” to save.



Step 6: ECL-ACC1000 already receives IP address now shown as follows:



```
123 - HyperTerminal
File Edit View Call Transfer Help

IP Address :192.168.001.128
Gateway IP :192.168.001.254
Netmask IP :255.255.255.000
TCP Port   :829
Remote IP  :192.168.001.001
Password   :

=== SOYAL AR-727i Ver:1.10 ===
  ① 0. Local IP
    1. Gateway IP
    2. Netmask IP
    3. TCP Port
    4. Remote IP
    5. Password
    6. Save
  ② ==> Quit(OFF DIP SW:1) or Enter a choice:
```

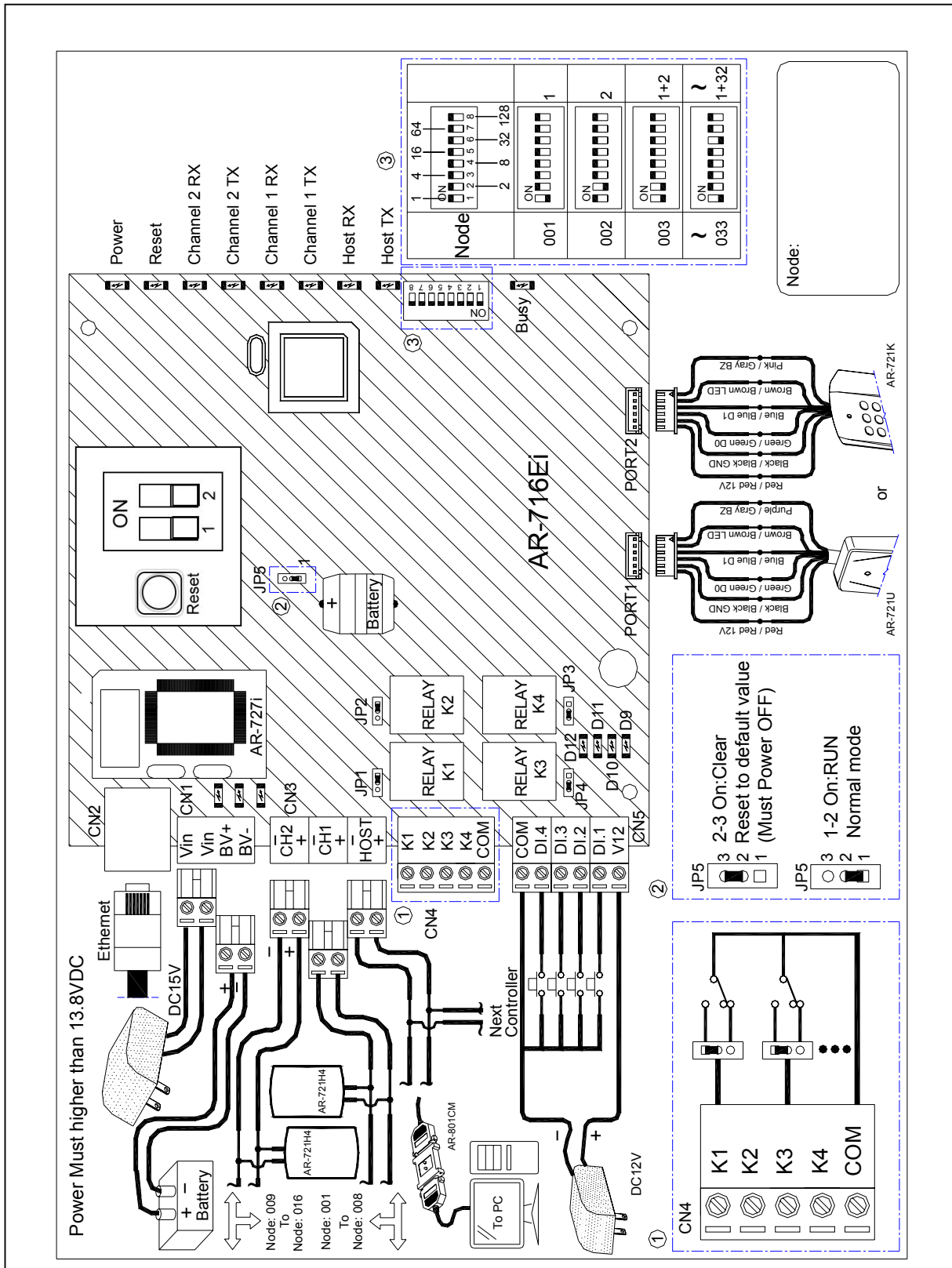
Step 7: Please refer above ① item and enter item on the ② to set all parameters.

Step 8: Note that enter item 6 on the ② to save parameter after finishing to set parameter.

Step 9: Then switch DIP SW-1 and SW-2 to “OFF” position.

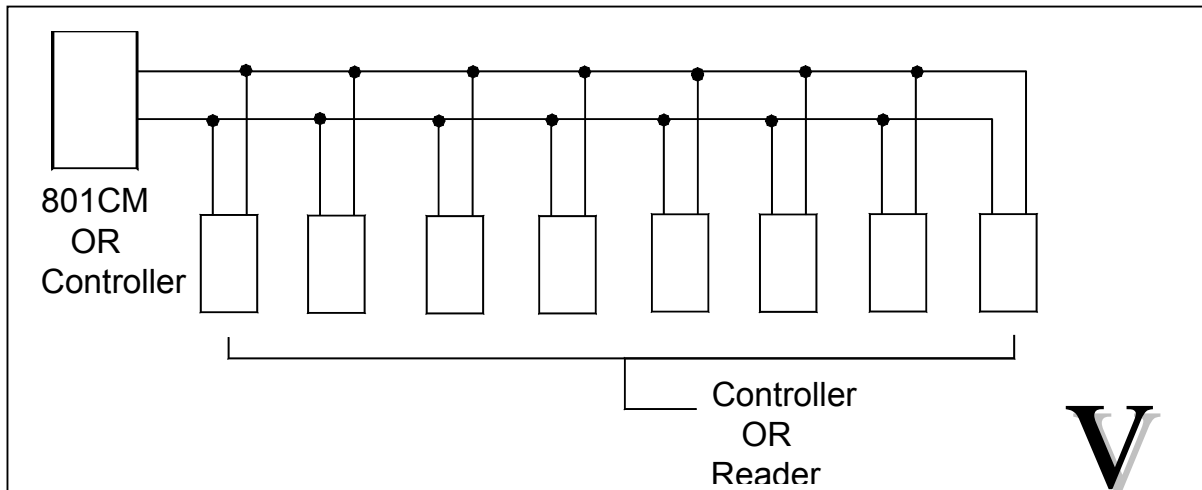
5. Installation diagram

5.1 ECL-ACC1000 and ECL-ACC950 networking installation

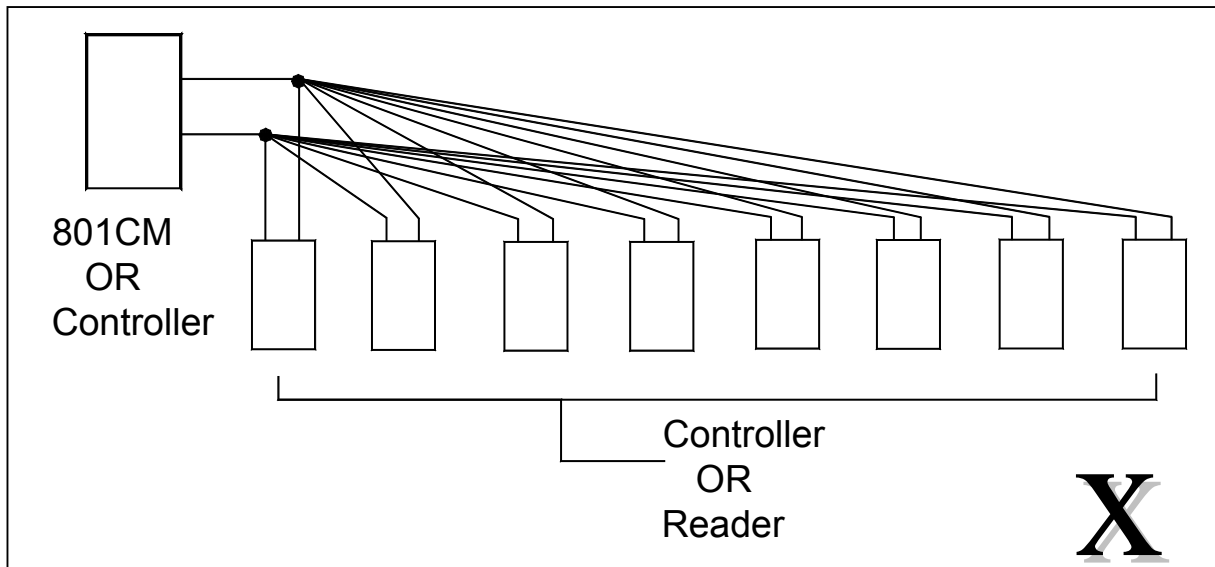


5.3 Points for attention

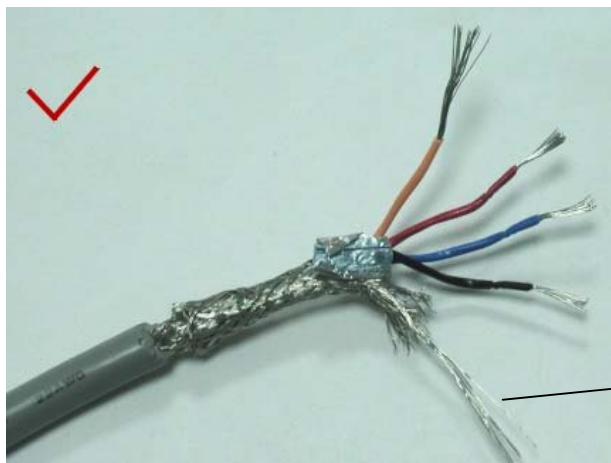
1. Please use the following installation method, it is correct.



2. Don't use the following installation method, it will cause communication error.



3. We suggest using the following cable in RS-485 communication (shielded)



Please screw snake net on the controller.