



Visit us at : <http://www.lgservice.com>

LG

LG  
CNU

## **INSTALLATION MANUAL**

**Model: PQNFG14B0**

ENGLISH

ITALIANO

ESPAÑOL

FRANÇAIS

DEUTSCH

CHINESE

### **IMPORTANT**

- Please read this Installation Manual completely before installing the product.
- Installation work must be performed in accordance with the national wiring standards by authorized personnel only.
- Please retain this Installation Manual for future reference after reading it thoroughly.

# TABLE OF CONTENTS

■ <b>Cautions for safety</b> .....	3
■ <b>Part Description</b> .....	6
Parts of a CNU .....	6
CNU connection .....	7
■ <b>Wiring Diagram</b> .....	8
Multi V SUPER(PLUS) & MPS PRODUCT .....	8
Connection .....	9
■ <b>Network Interface Connection</b> .....	11
Dip Switch Configuration .....	11
■ <b>CNU setup method</b> .....	12
Connect with the PC .....	12
Set the PC environment for CNU IP setting .....	13
CNU Setup Configuration .....	18
■ <b>CNU Normal operation condition confirmation</b> .....	19
Hardware operation condition confirmation .....	19
LAN communication condition confirmation .....	19
485 Communication condition confirmation .....	19

# Cautions for safety

To prevent injury to the user or other people and property damage, the following instructions must be followed.

- Incorrect operation due to ignoring instruction will cause harm or damage. The seriousness is classified by the following indications.

## WARNING

This symbol indicates the possibility of death or serious injury.

## CAUTION

This symbol indicates the possibility of injury or damage to properties only.

- Meanings of symbols used in this manual are as shown below.



**Be sure not to do.**



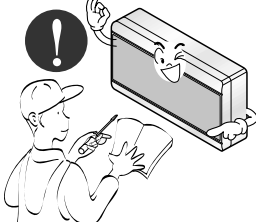
**Be sure to follow the instruction.**

## WARNING

### ■ WHEN INSTALLING

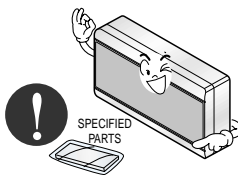
**You should always request product installation to our Service Center or to installation expert agency.**

- Otherwise it may cause fire hazard, electric shock, explosion, injury or damage.



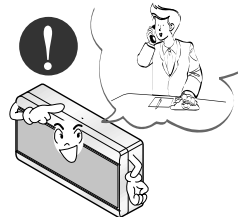
**Use specified parts.**

- Or else it may cause fire hazard, electric shock, explosion, injury, damage and trouble failure.



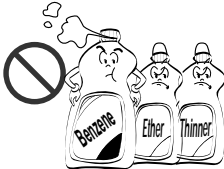
**When reinstalling an existing installed product, request it to our Service Center or to installation expert agency.**

- Otherwise it may cause fire hazard, electric shock, explosion, injury or damage.



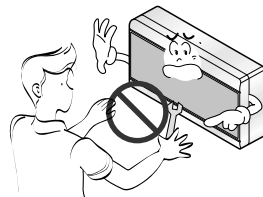
**Don't keep or use ignitable gas or any other flammable material in vicinity of the product.**

- Otherwise it may cause fire hazard and product trouble failure.



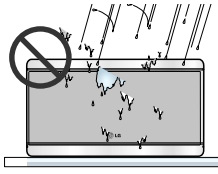
**Don't disassemble, repair and modify the product at your will.**

- Or else it may cause fire hazard and electric shock.



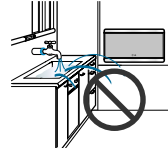
**Don't install it where rain falls on.**

- Otherwise it may cause product failure.



**Don't install it in humid place.**

- Otherwise it may cause product failure.



**■ WHEN USING**

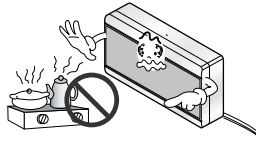
**Don't change or extend electric supply wire at your will.**

- Or else it may cause fire hazard and electric shock.



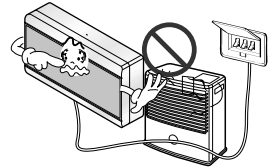
**Don't let there exist fire heat near the product.**

- Otherwise it may cause fire hazard.



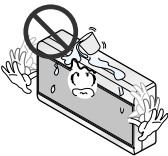
**Don't use heat equipment near the electricity supply line.**

- Or else it may cause fire hazard and electric shock.



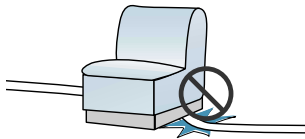
**Don't spill water into interior of the product.**

- Otherwise it may cause electric shock and product failure.



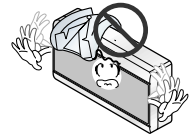
**Don't put heavy material upon electricity supply chord.**

- Or else it may cause fire hazard and electric shock.



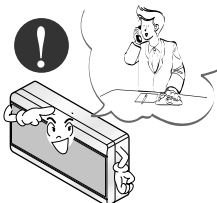
**Don't put heavy material upon the product.**

- Or else it may cause product trouble failure.



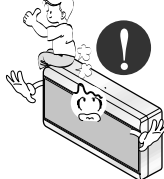
**Always request to our Service Center or installation expert agency in such case as the product has been submerged under water.**

- Or else it may cause fire hazard and electric shock.



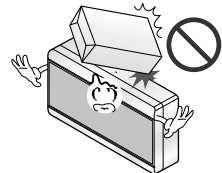
**Child or the old and the weak shall use it under custody of patron.**

- Otherwise it may cause safety accident or product failure.



**Don't give impact to the product.**

- If the product is impacted, it may cause product trouble failure.

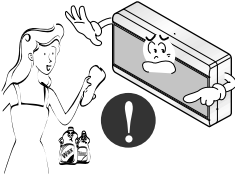


**⚠ CAUTION**

**■ WHEN USING**

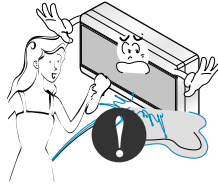
**Don't clean the product with strong detergent or solvents but only use soft cloth.**

- Or else it may cause fire hazard and product deformation.



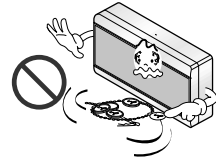
**If water has been smeared on electric charge part, use it after removing water.**

- Or else it may cause product failure.



**Don't let metallic products of necklace, coin, key, watch etc. touch the battery terminal.**

- Or else it may cause product failure and injury.



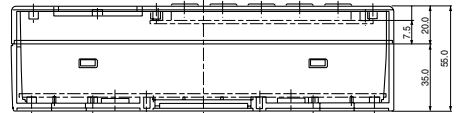
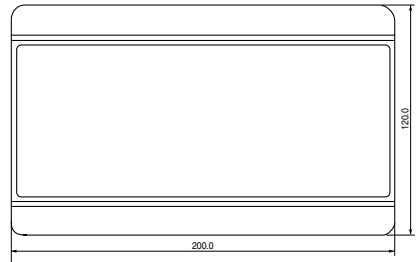
# Part Description

## ■ Parts of a CNU

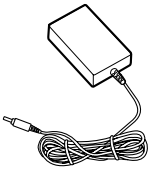


CNU CONT BOX

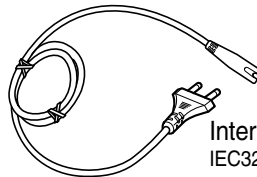
### Dimension



Input voltage : DC9V 2.0A  
In/out port : RS232 1ea  
RS485 1ea  
LAN 1ea



Power supply  
DC 9V , 2.0A



International standard  
IEC320 C8 type

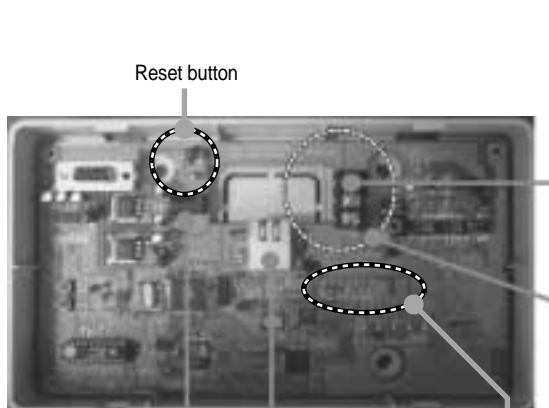
### Power cord

NOTE : AC input spec.  
- 100~250 VAC universal input  
- Desktop style or wall plug style

### Notice : In Australia purchase the power code

In Australia, the power code from local area. The power code is not included in the package.

## ■ CNU connection



Reset button

Power Connector  
DC 9V Adaptor  
(supplied)

RJ45 Connector :  
Connect with HUB OR  
Deluxe/PC Central  
Controller

RS-485 Communication Terminal  
Connect with PMNFP14A0 (PMNFP14A1) :  
BUS\_A, B

- Cautions while connecting RS-485 communication line : When connecting the 485 communication line do as the picture below using the provided core and tie.



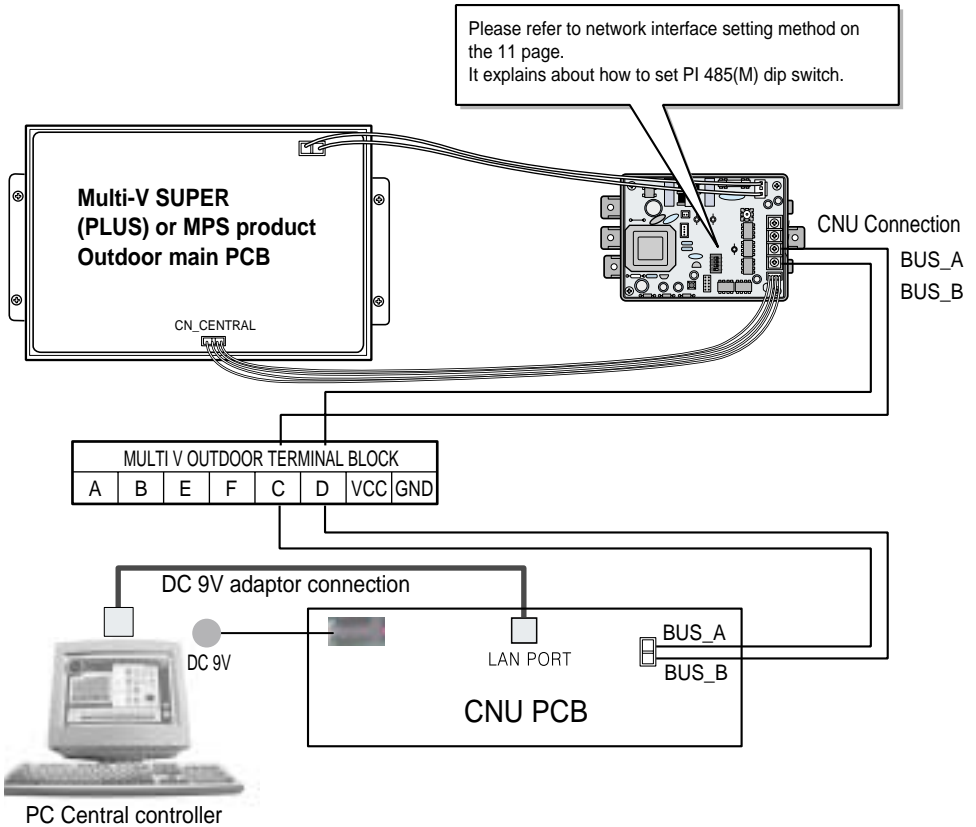
PQNFG14B0 ----  
PMNFP14A0  
(PMNFP14A1)  
-BUS\_A ---- BUS\_A  
-BUS\_B ---- BUS\_B

- NOTICE  
this terminal is for communication stability  
so, don't remove and connect other line

L06D: Connection of LAN H/W (LINK LED)  
L07D: Connection of LAN H/W LED(DUPLEX)  
L08D: 10MEGA BASE Communication LED  
(when CNU II is connected with Deluxe central controller)  
L09D: 100MEGA BASE Communication LED  
(when CNU II is connected with PC central controller)  
L10D: COLLISION DETECTOR LED

# Wiring Diagram

## ■ **MULTI**V™ SUPER(PLUS) & MPS PRODUCT

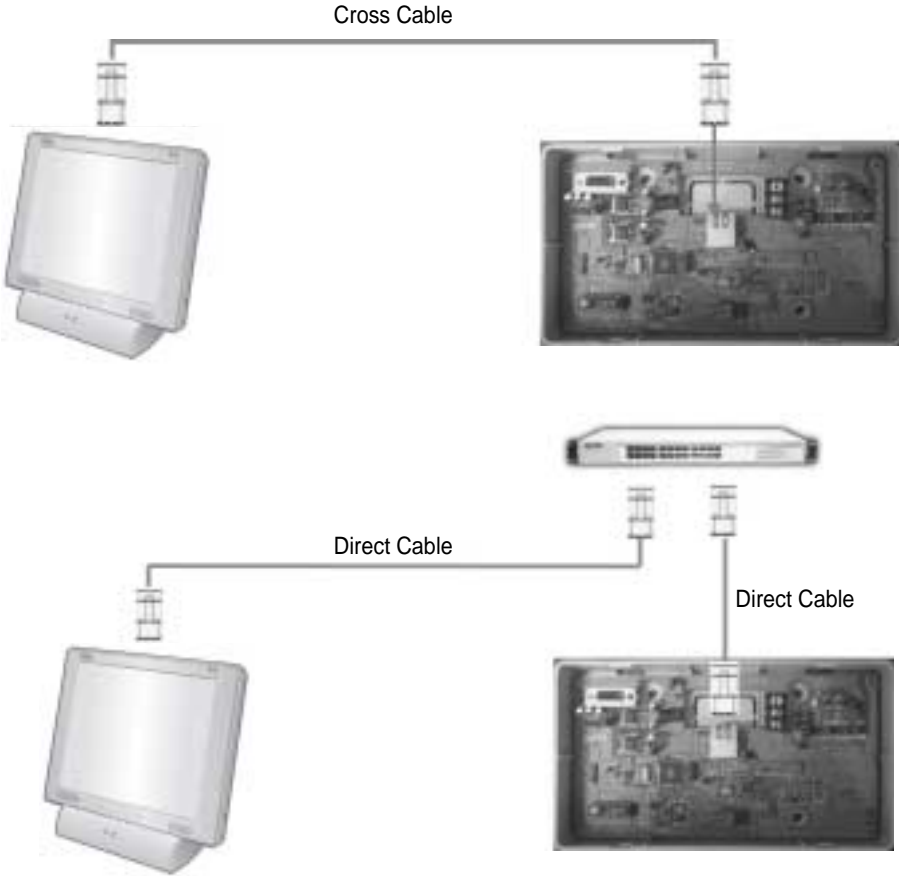


※ **NOTICE** : Use of terminal block in case of Multi V and other models may or may not be needed.  
If it is not present, make direct connections.

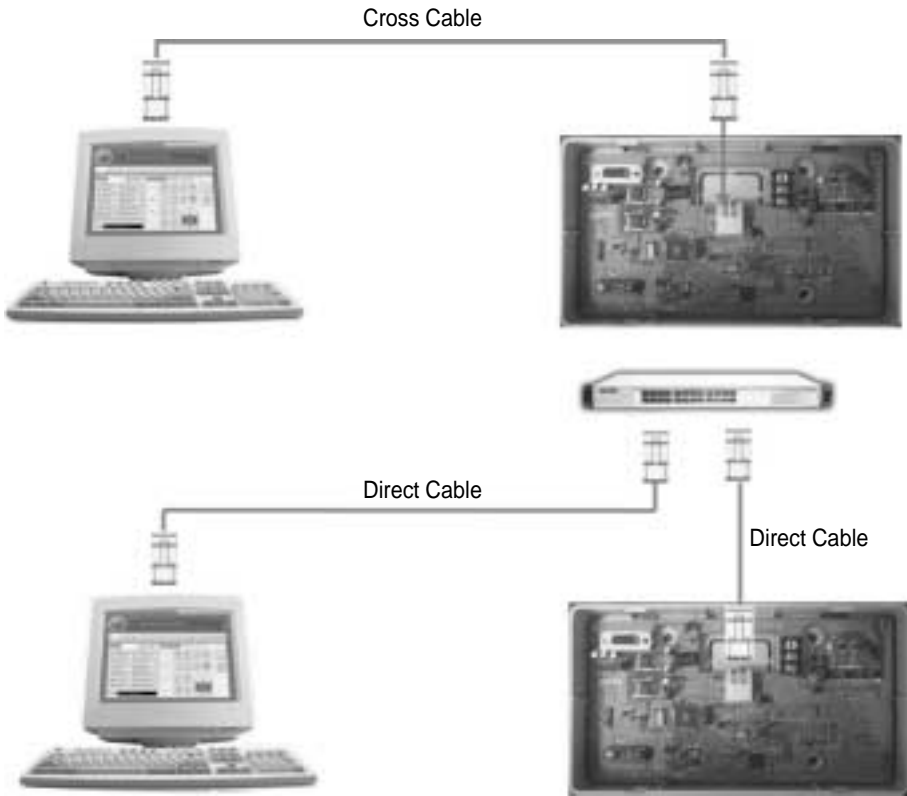


■ Connection

**Deluxe central controller connection**



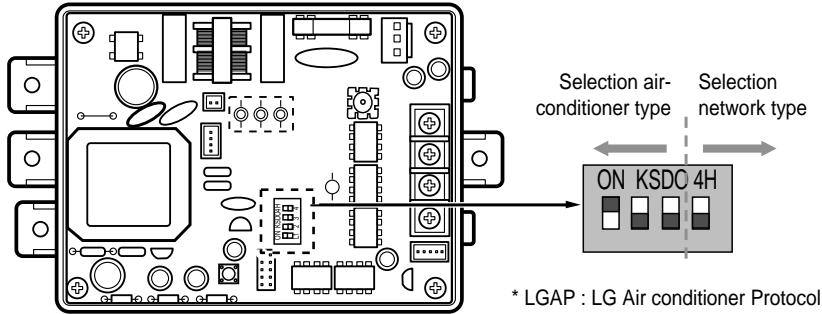
**PC central controller connection**



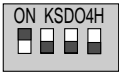
Use the cross cable if not using the hub.  
If willing to use the hub, use the direct  
cable to connect with the hub

# Network Interface Connection

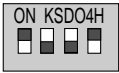
## ■ Dip Switch Configuration



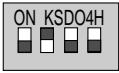
### **MULTIV.PLUS** & MPS MULTI Products Configuration Methods



➔ 1 ON, All others OFF: **MULTIV.PLUS** & MPS Non-Inverter Product applied Common PCB & MPS Inverter Product + Without LGAP central controller  
Ex) DCC(PQCSW series) or PCC(PQCSS501A0/PQCSS502A0)



➔ 1 and 4 ON, All others OFF : **MULTIV.PLUS** & MPS Non-Inverter Product applied Common PCB & MPS Inverter Product + With LGAP central controller  
Ex) PCC(PQCSS513A0)



➔ 2 ON, All others OFF: MPS Multi Standard Product + Without LGAP central controller  
Ex) DCC(PQCSW series) or PCC(PQCSS501A0/PQCSS502A0)



➔ 2 and 4 ON, All others OFF: Multi Standard Product + With LGAP central controller  
Ex) PCC(PQCSS513A0)

\* Please refer the corresponding Central Controller installation manual if you want to know whether your Central Controller is compatible with LGAP or not.

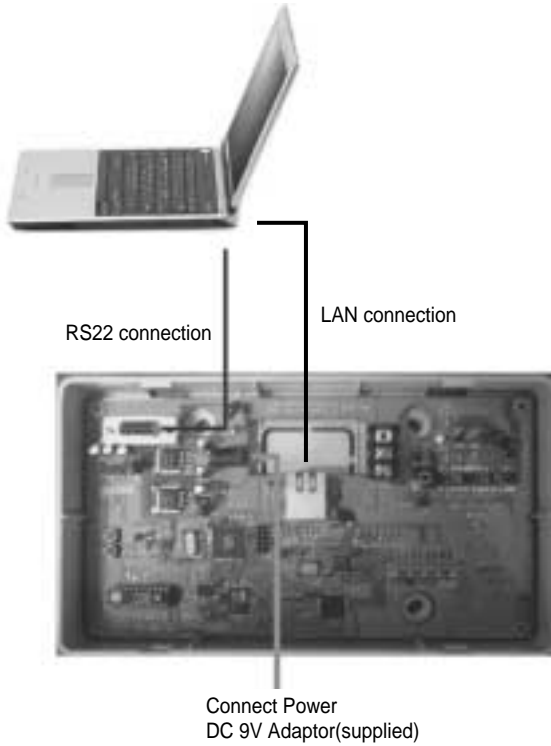
**NOTE:** Non-Inverter Product applied Common PCB  
PCB P/NO. : 6871A20917\*  
P/NO. : 6871A20918\*  
P/NO. : 6871A20910\*

# CNU setup method

## ■ Connect with the PC

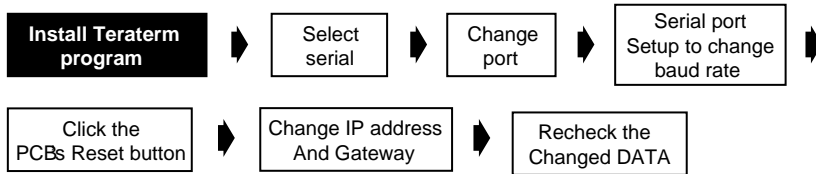
※ **NOTICE** : The CNU IP is automatically set-up 192.168.1.101 following factory shipment.

Do not set-up the CNU IP if wanting to use the PC Central Control without changing the CNU IP or Deluxe central controller connection



## ■ Set the PC environment for CNU IP setting

- 1) Check CNU , and connect between PC and CNU by 232 cable.  
If your computer doesn't have 232port, Use USB to 232 Port cable.
- 2) Start up the RS232 Monitoring Program on the PC.  
(You can download the RS232 Monitoring Program from LG air conditioner global website.)
- 3) Follow below procedure.



1.Select language  
2.Click Continue



3.Click Continue



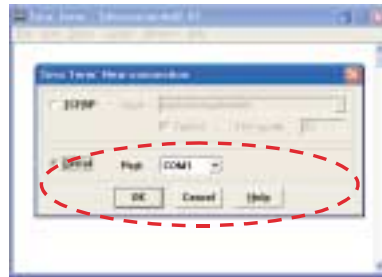
4.Installing step of program



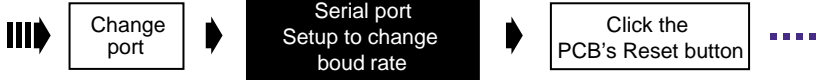
5.Finishing step of the installation



1. Click the starting icon



1. Select Serial
2. Reset the Port which is used by 232 cable.



ENGLISH



- 1. Click the Setup button
- 2. choosing serial port



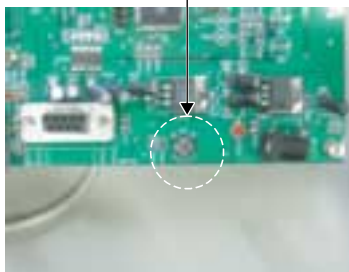
- 3. Change boud rate



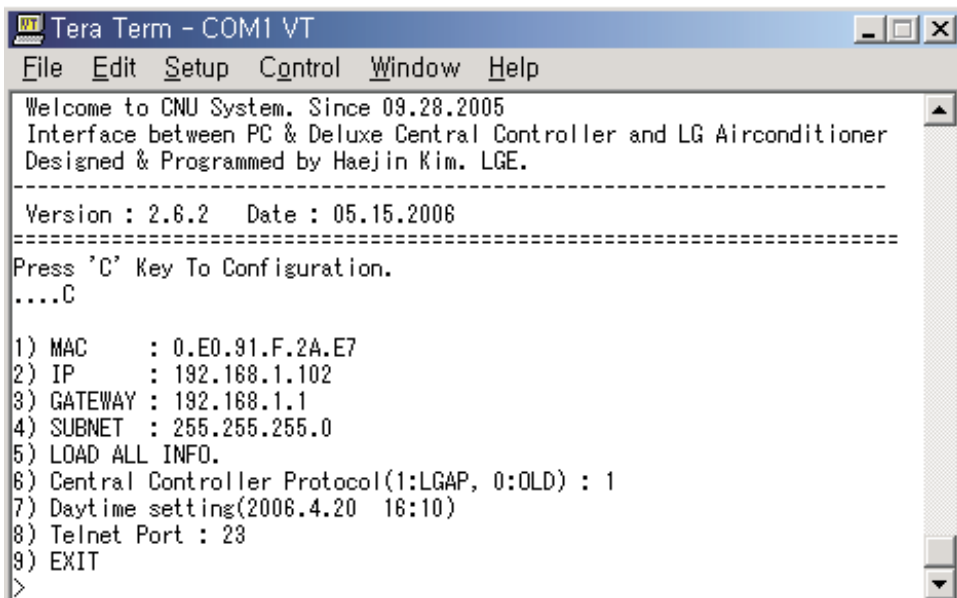
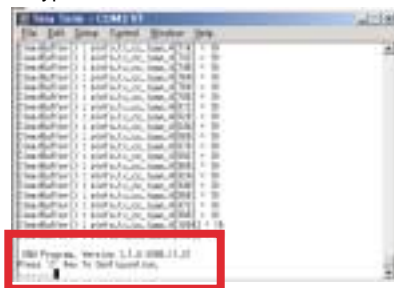
- 4. Set 57600



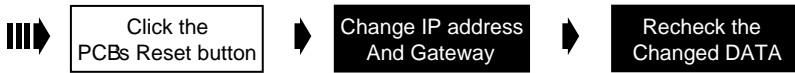
1. Click the PCB's reset button



1. type the character "C"

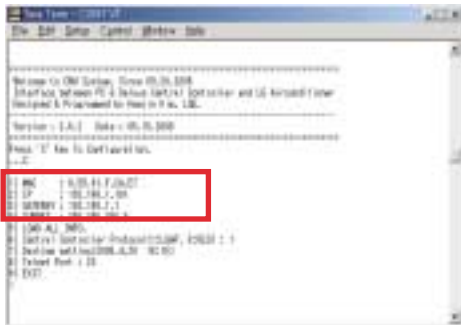






■ Check CNU Setting data

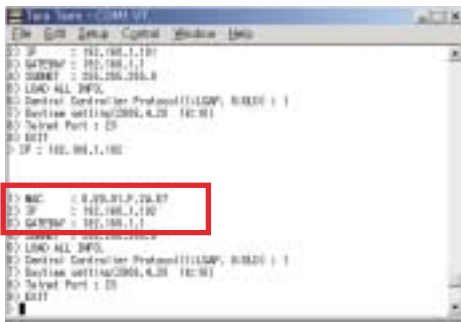
- 1) MAC : Device Address (Don't change)
- 2) IP : CNU internet address
- 3) Gateway : internet Gateway
- 4) Subnet : Subnet mask (Don't change)
- 5) Load all info : total information
- 6) Central Controller Protocol : Select protocol '0' or '1', refer next page.
- 7) Daytime Setting
- 8) Telnet Port : 23 (Don't change)
- 9) EXIT



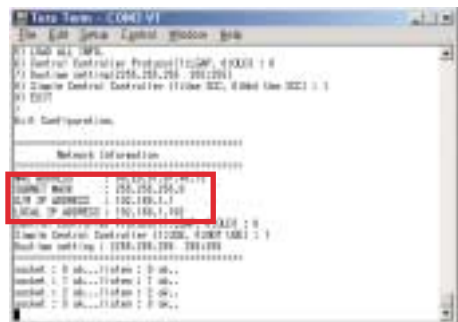
1. type character "2"



2. type IP address 192.168.1.10 , and Click ENTER key



3. Check the changed IP address



4. If you finish setting, Type "9"  
 \* Follow upper procedure and Change other setting items properly

## ■ CNU Setup Configuration

Press the number which it wants changing

1. MAC address (Don't change)

00.E0.91.0F.XX.XX is an item which is specific value

2. IP : IP set up menu

- Use CNU IP set or change

- Default value in factory is 192.168.1.101

※ **Notice** : In case using private IP, Consult with network manager

3. GATEWAY : network gateway IP set up menu

- Use CNU network gateway IP set or change

- Default value in factory is 192.168.1.1

※ **Notice** : In case using private IP, Consult with network manager

6. Central controller Protocol(1:LGAP,0:OLD) : LGAP selection menu

• select '0' : in using Deluxe central controller or PC central controller without LGAP(PQCSS501A0/PQCSS502A0)

• select '1' : in using PC central controller with LGAP(PQCSS513A0)

**example)**

- Central Controller Protocol(LGPA:1, OLD:0) → After input 0, press ENTER

- Central Controller Protocol(LGAP:1, OLD:0) → After input 1, press ENTER

※ **Notice** : When the network set goes wrong and does not become the communication

7. Number 1,4,5,7,8 items are not setup Menu.

So, Don't change default value

※ **Notice** : After all of settings are finished

You should escape set up mode by typing '9' otherwise, The CNU will not operate normally

# CNU Normal operation condition confirmation

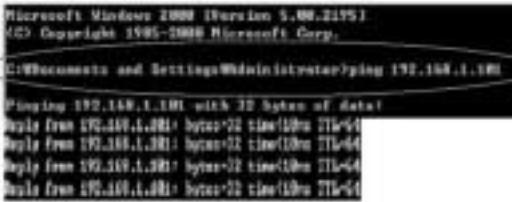
## ■ Hardware operation condition confirmation

- 1) Check CNU LED1 is continuously blinking : 485 communication LED
- 2) Check L06D, L07D LEDs are Lighting : LAN CABLE connection confirmation LED
- 3) Check L09D, L08D blinking : LAN communication condition confirmation LED
  - L08D blinking : connected Deluxe central controller(10M BPS)
  - L09D blinking : connected PC(100M BPS)

※ **Notice** : If the LAN cable is are not connected between PC(or DCC) and CNU then the LED6D,7D are not light

## ■ LAN communication condition confirmation

- 1) After connecting the LAN CABLE, executing, DOS Command of the PC which is connected
- 2) PING test : type 'ping' and 'CNU IP' then Enter key
  - ex**) PING 192.168.1.101 (The CNU IP will be different which is real set ,so type real CNU IP)



- ※ **Notice** : The response time will be different to system condition  
 If ping test is fail(request time out) then check below condition
- CNU IP is correct?
  - PC Network information has same with the CNU IP information
- ex**) If CNU IP is 192.168.1.101 then the PC network information does to have a same network information 192.168.1.XXX(except same CNU IP number or 1 )

- 3) When PING test executes well, LAN communication operates in the normality.

## ■ 485 Communication condition confirmation

- 1) Before confirm 485 communication condition, check indoor address setting and 485 G/W operation LED's condition and power resource condition.
- 2) Connecting RS232 cable and running RS232 monitoring program
- 3) In order to appear information in monitoring program window, Setup Com port and Baud rate to 57600.
- 4) The data will come up and it will be able to confirm a number of indoor
  - Setup address of indoor appears, 485 communication operational condition of CNU is normality
  - ex**) number monitoring of connected indoor

※ **Notice** : The indoor number searching time could be delayed in in the condition which searches

When neither information of the indoor information is searched  
 Check below check points

- 1) Check Indoor unit address are set correct or not
- 2) Check the 485 gateway setting (s/w setting, connect connection..etc.)
- 3) Check 485 communication line is correct or not BUS\_A, BUS\_B

