

User Manual

[ACR Hub for *ACR Lite-SM200*]

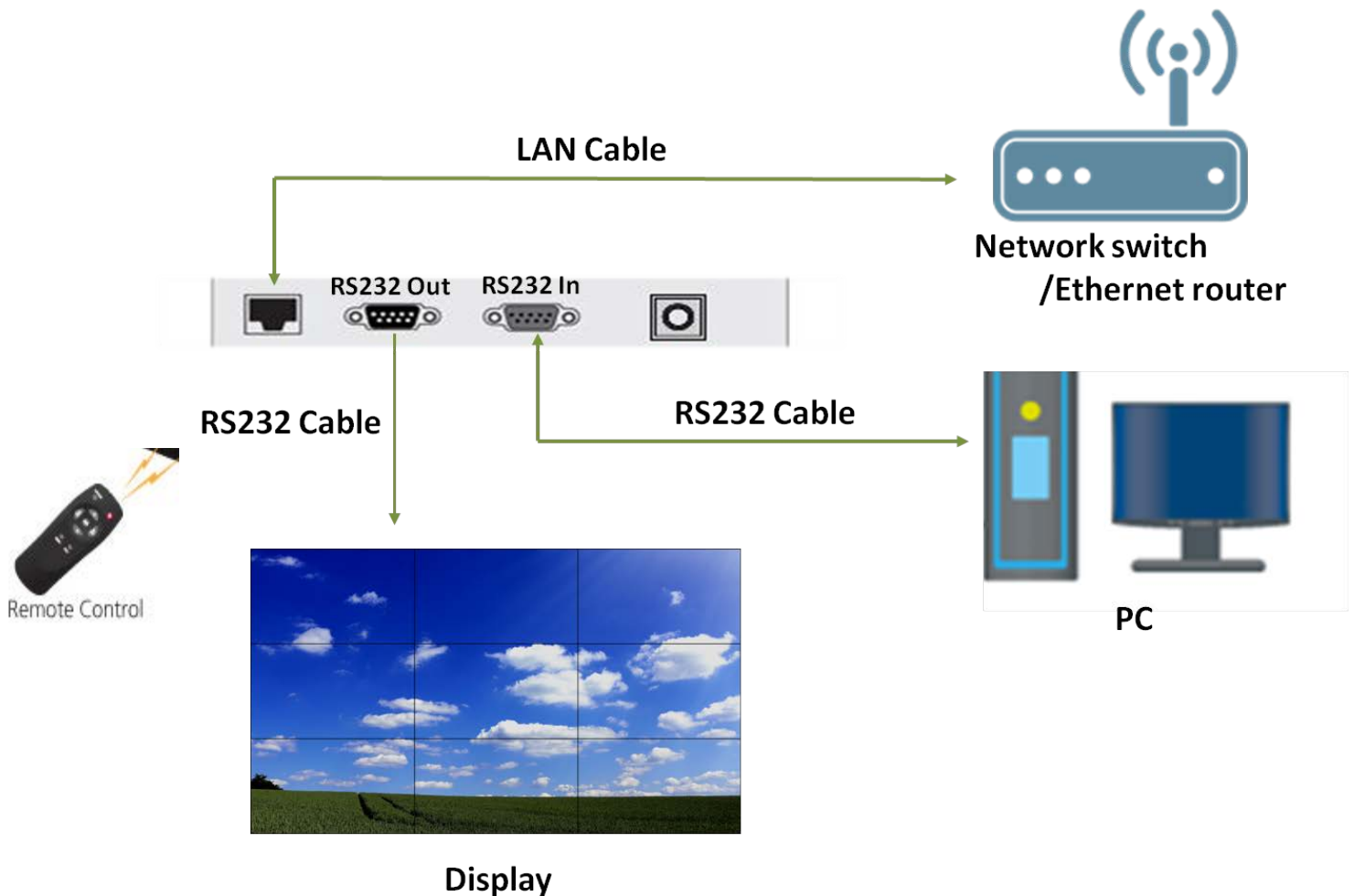


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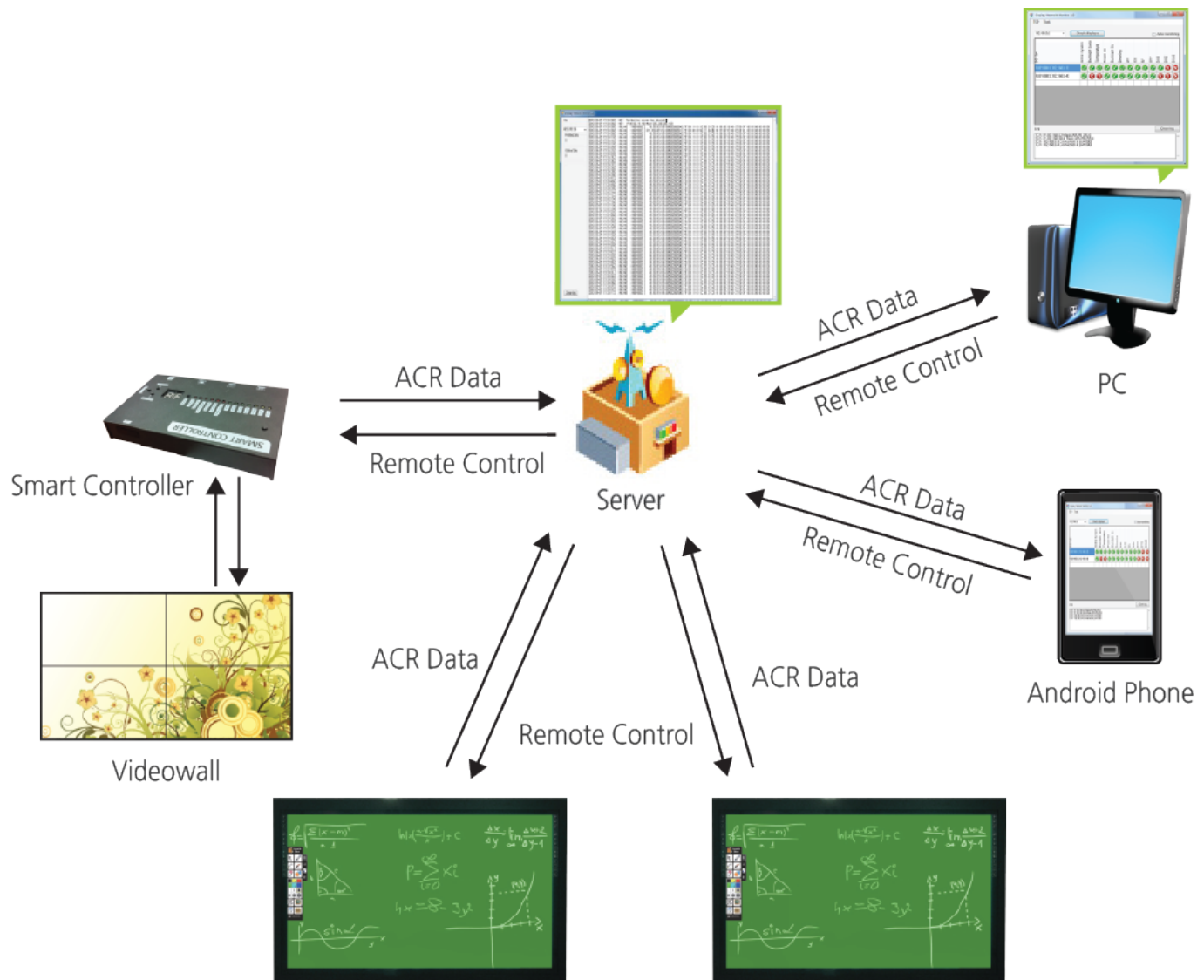
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ACR Network

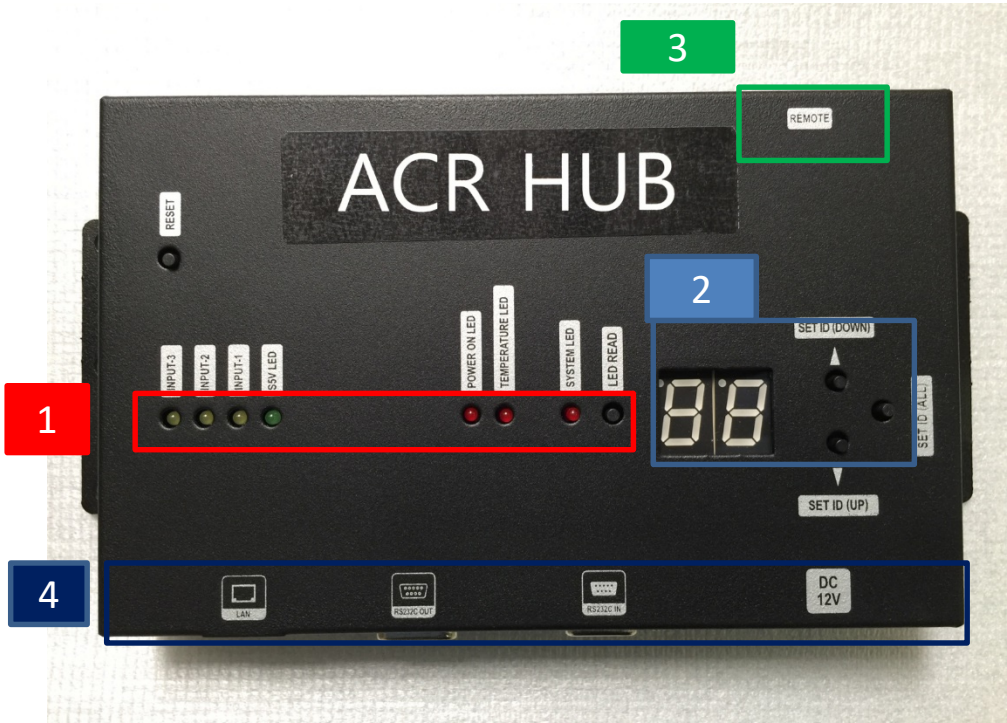


ACR Hub for ACR *Lite*

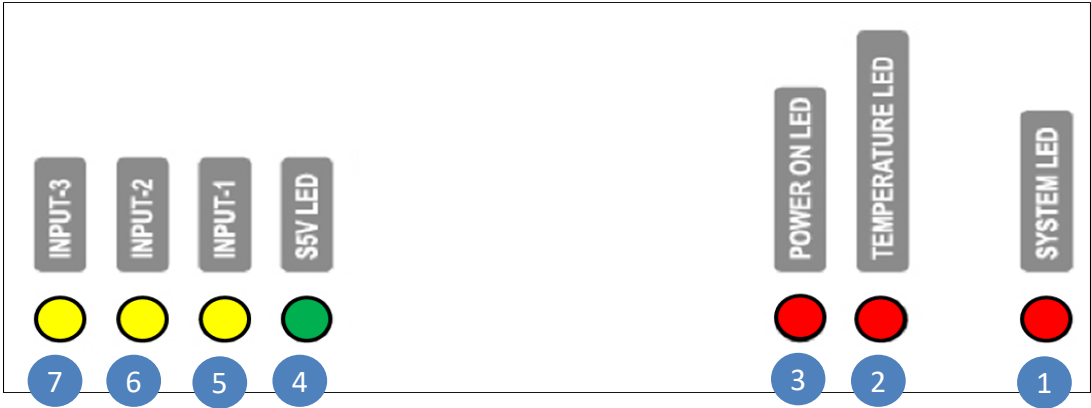


Manual		
 <p>Utilities CD</p>		
Cable		
 <p>Adapter</p>	 <p>RS-232C Cable</p>	 <p>AC Power Cable</p>
Others		
 <p>Remote Control</p>	 <p>Batteries (AAA x 2)</p>	

Layout



1

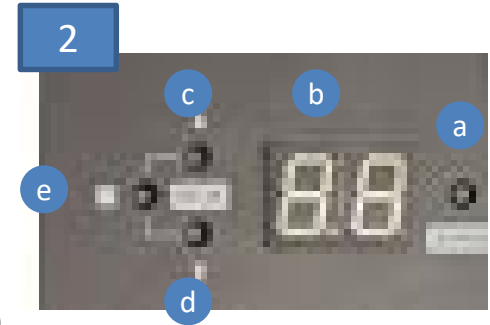


NO	LED	Name	Description
1	Red	SYSTEM LED	NETWORK STATUS CHECK LED
2	Red	TEMPERATURE LED	SET TEMPERATURE CHECK LED
3	Red	POWER ON LED	POWER ON SIGNAL CHECK LED
4	Green	S5V LED	STANDBY 5V CHECK LED
5	Yellow	INPUT 1	INPUT 1 SIGNAL LED
6	Yellow	INPUT 2	INPUT 2 SIGNAL LED
7	Yellow	INPUT 3	INPUT 3 SIGNAL LED

2 Select SET ID via ACR Hub buttons & LCD Display

- Read current status of selected SET ID
- Display window for selected SET ID
- SET ID adjust button (Press the button to change the number of SET ID "Up")
- SET ID adjust button (Press the button to change the number of SET ID "Down")
- SET ID adjust button (Press the button return SET ID value to "00")

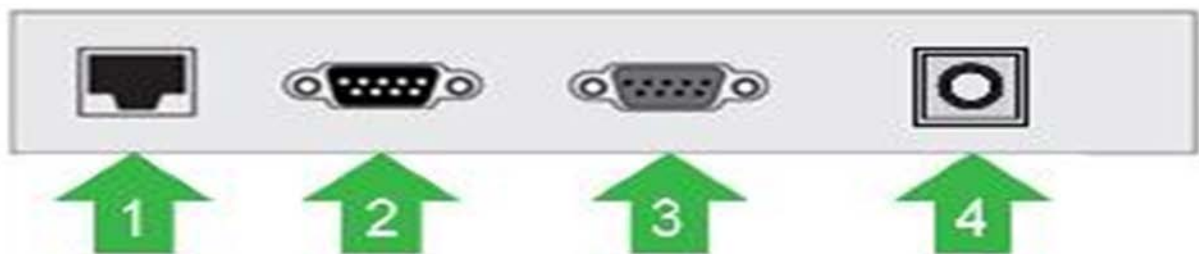
- 00 : ALL SET ID
- 01 : SET ID 1
- 02 : SET ID 2
- 99 : SET ID 99



3 Remote controller

An IR remote controller (included with all display shipments) can be used to control the OSD Menu on individual displays (when a specific Set ID is selected on ACR Hub) or an entire video wall array connected via RS-232 daisy-chain (when Set ID "00" selected). There is an IR receiver (blue item #3) shown on the ACR Hub diagram on p. 5.

4 ACR Hub I/O port



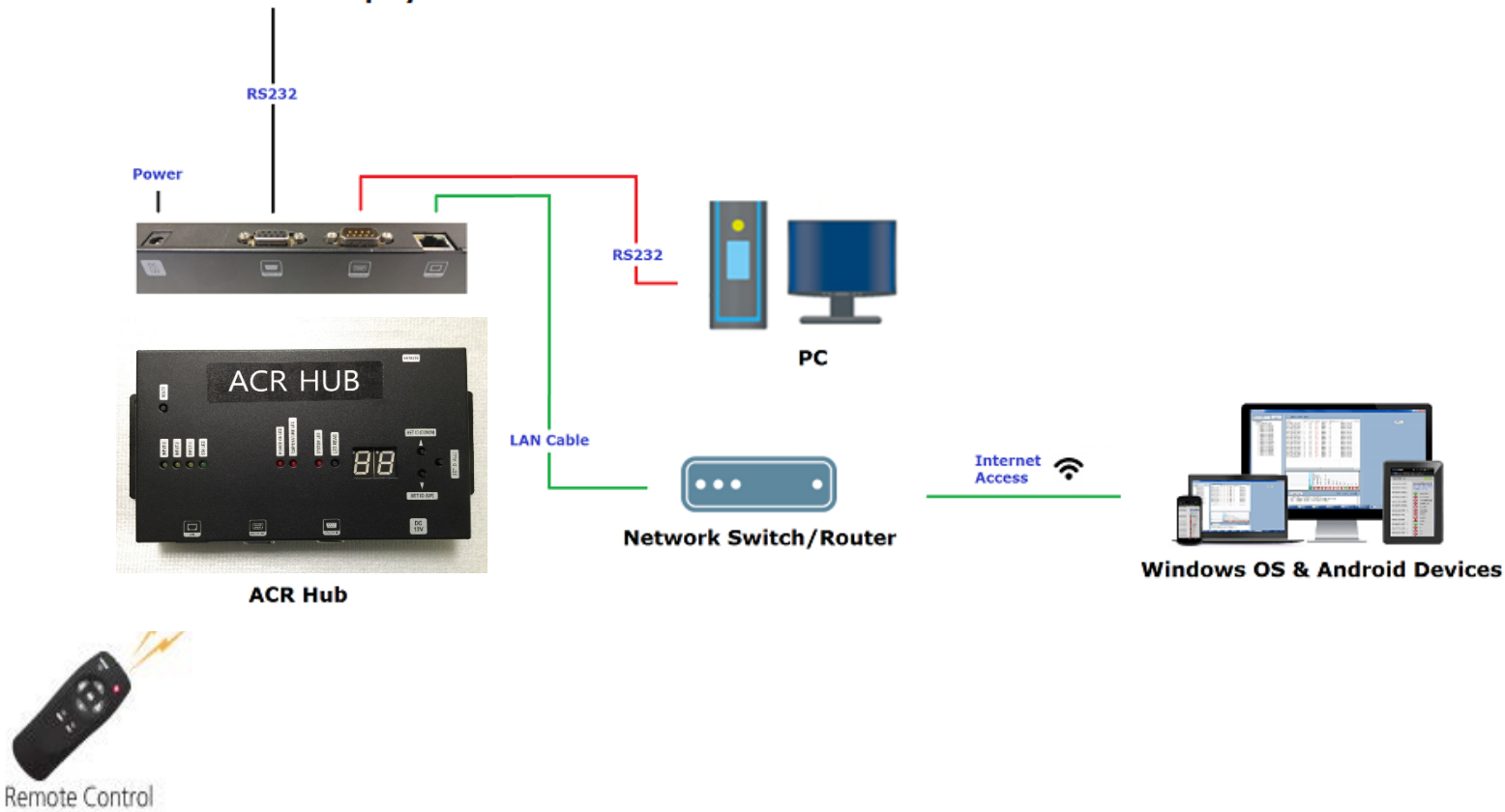
1. LAN Input
2. RS232 Input
3. RS232 Output
4. DC 12V Input

◆ Cabling

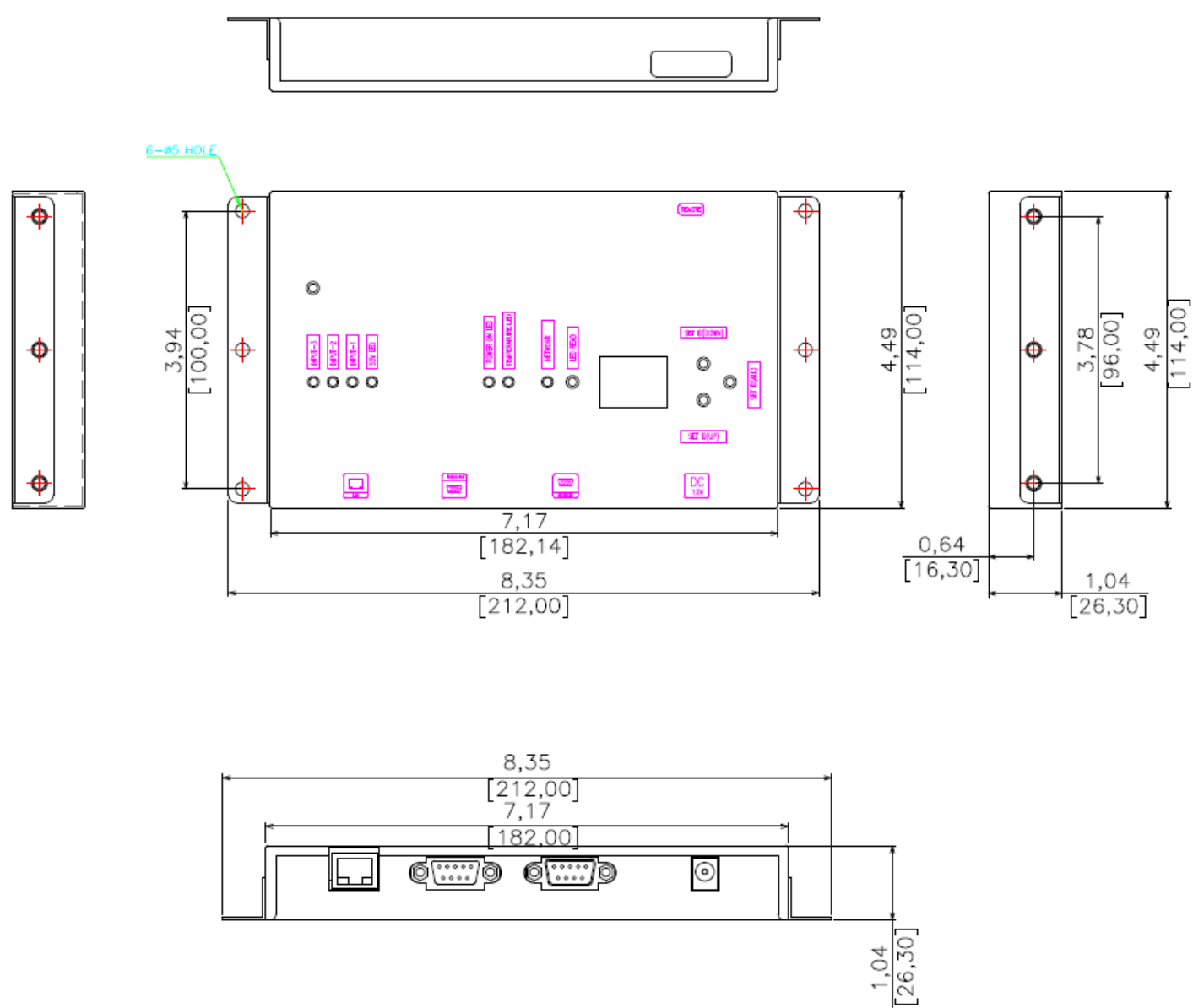


ACR Enabled Display

- Full Monitoring & Display Color Calibration
 - Full Monitoring
- (only one connection method needed for full operation)



◆ ACR Hub (SM200) drawing



◆ Remote Control



1. SOURCE : Selects Input Source
-DVI 1-> DVI 2-> PC
2. POWER : Turns the LCD Display On and Off
3. UP : Controls the UP cursor in the menu
- 4 LEFT : Controls the LEFT cursor in the menu
- 5 RIGHT : Controls the RIGHT cursor in the menu
- 6 ENTER : Controls the ENTER cursor in the menu
- 7 DOWN : Controls the DOWN cursor in the menu
- 8 MENU : Displays the main On-Screen menu or returns to previous menu screen
9. EXIT : Exits the On-Screen menu

Case 1: Use Local Server

ACR Network Local Server Setup

Static IP is recommended for ACR Monitoring

Introduction

This user guide is provided to users of ACR (Auto Condition Report) Local Network Server

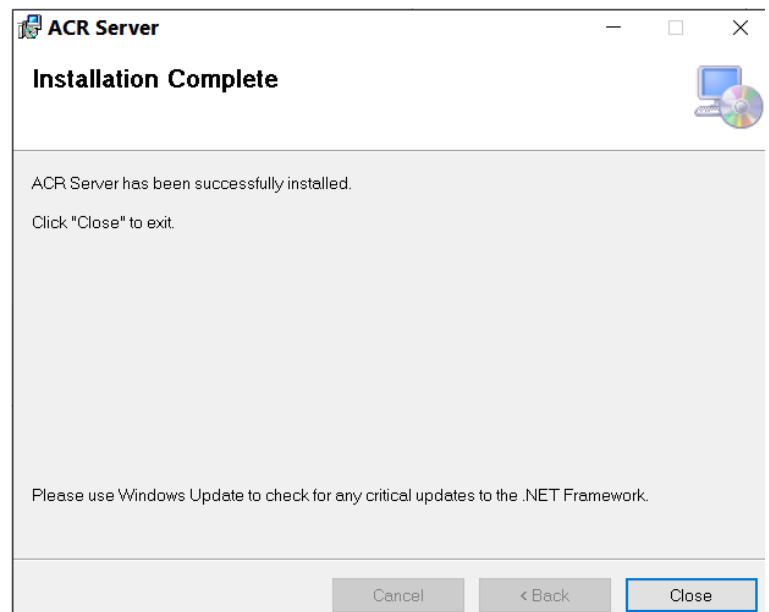
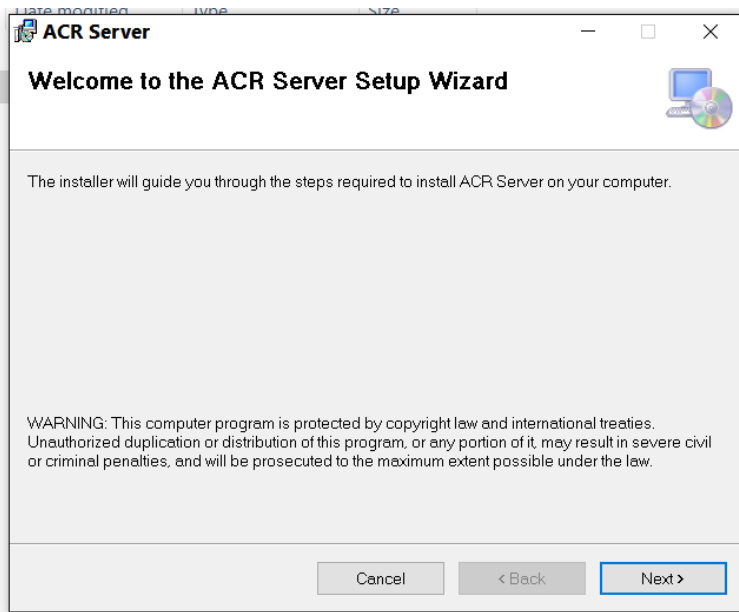
-Program: ACR Server : ACR Data

*Windows 7 is required to run Auto Condition Reporting

Program Installation

Installing “ACR Server”:

-Run the file named “ACR Server Setup.exe”



-Click “Next” > “Next” > “Next” and then “Close”

-After completing this, look for the program in Windows startup menu or find the shortcut on the Desktop

ACR Network Local Server Setup

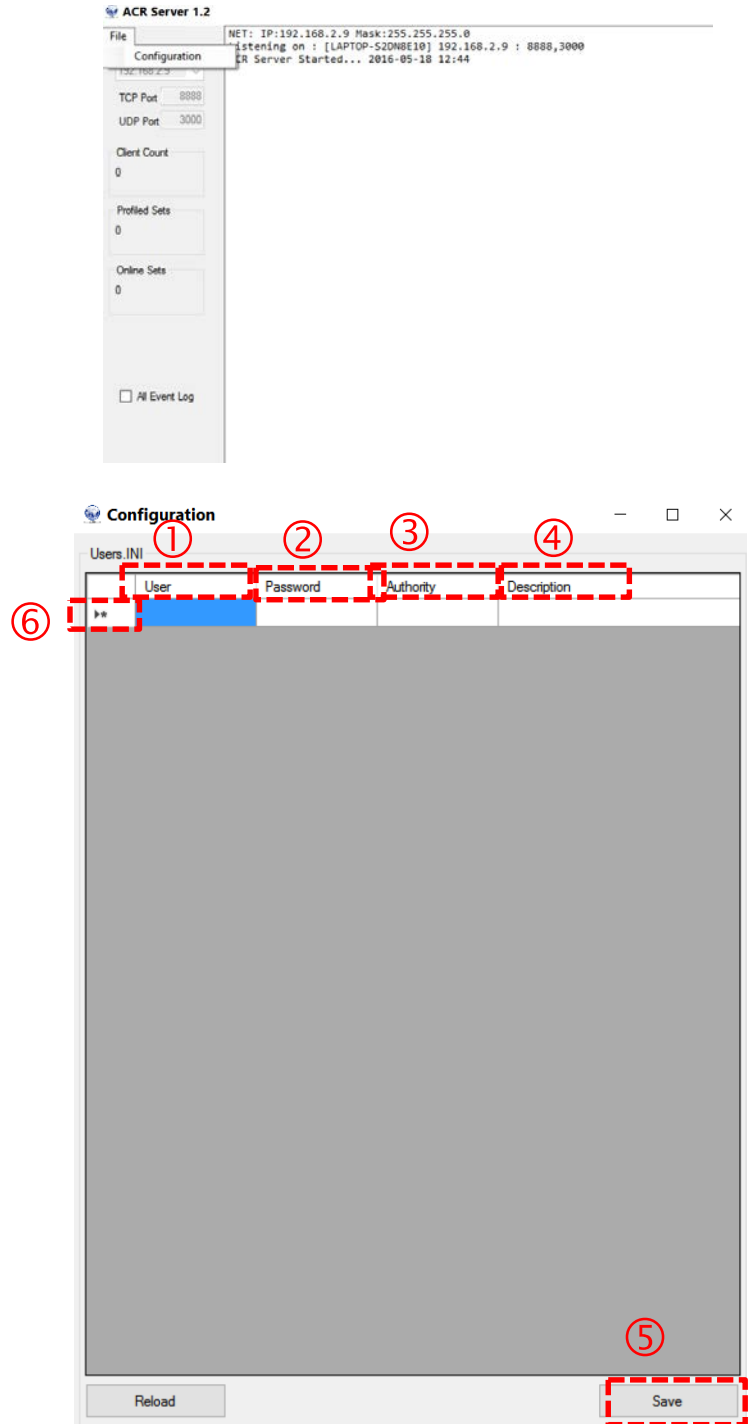
1. Open “ACR Server”
2. Click “File” and then click “Configuration”
3. Configuration Settings:
 - 1) **User:** Create a username using under eight (8) characters and/or numbers without spaces
 - 2) **Password:** Create a password using under eight (8) characters and/or numbers without spaces

*Use this Username and Password when logging into the ACR monitoring program. Store this information for future use/access.

- 3) **Authority:** Create an “Authority” code containing exactly eight characters using characters and/or numbers without spaces.
 - When setting up the ACR Hub for network access, insert the “Authority” code in the “Customer code” box shown on p. 18.

If the Authority and Customer codes do not match, the user will not be able to read data

- 4) **Description:** Enter a description of the display group and/or location. A description of at least one character must be entered or the user will receive an error message.
- 5) Click “Save” and close the Configuration window.
- 6) In order to add separate groups of displays, click the icon outlined in red here.

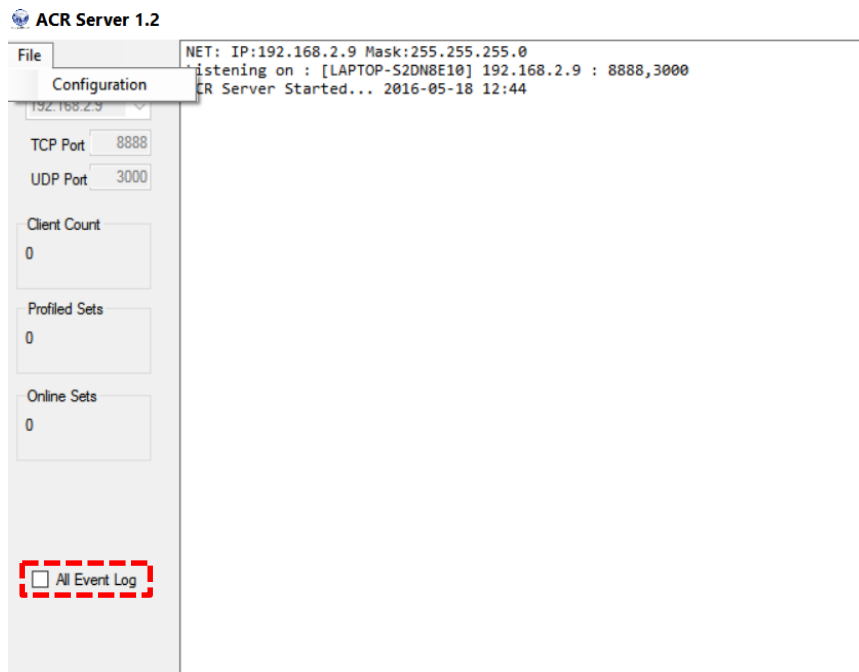


ACR Network Local Server Setup

4. The IP address is automatically assigned from the PC running ACR Server on the local network. TCP & UDP port values are static

* When setting up the ACR Hub, you must use the Server IP and UDP port value (see p. 18)

All event log: Select this box only when you wish to store a complete historical readout of status for each display in the group.



***Troubleshooting:**

- Firewall: If the PC running the ACR Server program is not receiving communication from the ACR Hub and displays, disable firewall.
- Check for duplicate Set IDs if you are not receiving status readouts from a particular display or displays.

***Download “Shutdownutility” in order to automatically reset the PC running the ACR service program once every 24 hours. The ACR Server program will automatically open when the PC reboots.**

Remote Control Local server setup(GPM Server)

Introduction

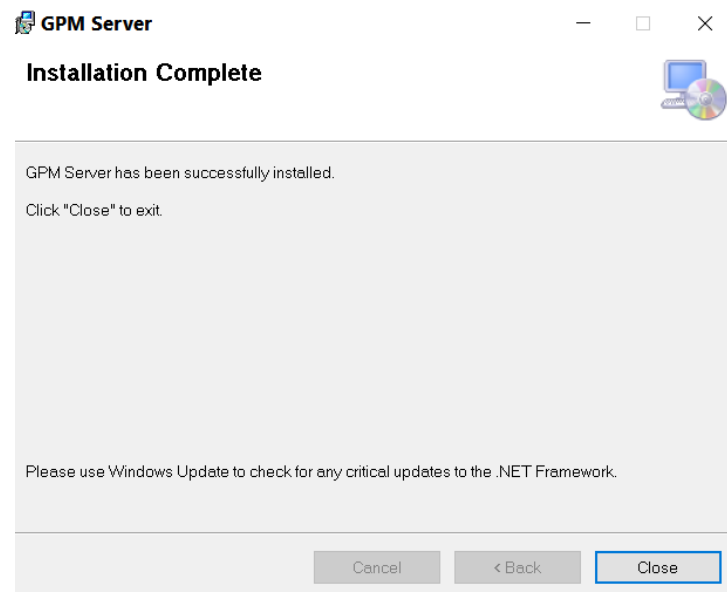
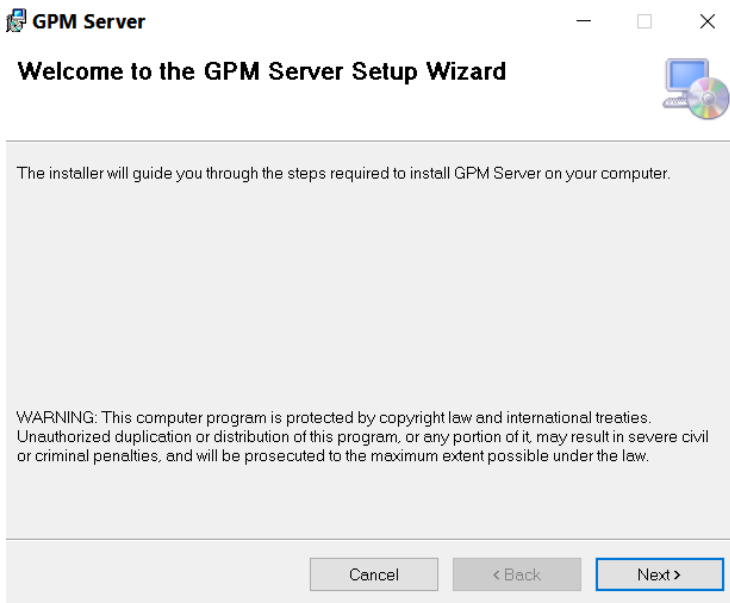
This user guide is provided to users of Remote Network server.

-Program: GPM Server (used for virtual remote controller functions)

Program Installation

Installing GPM Server:

Run the file named “GPM Server Setup.exe”

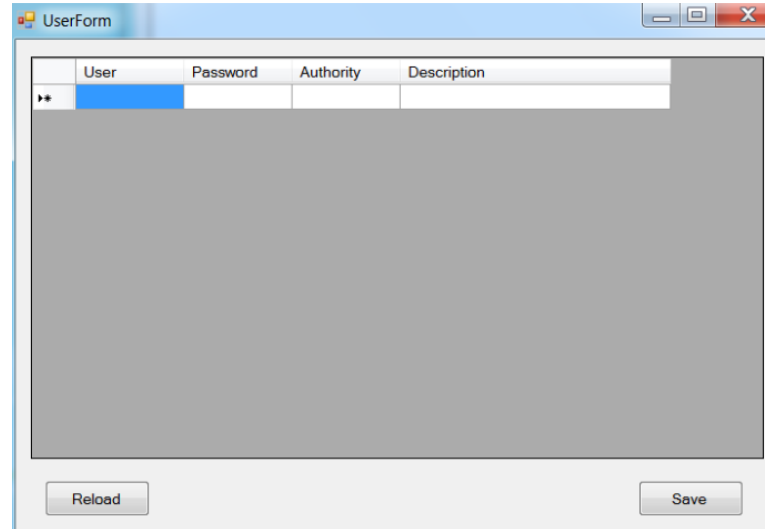


-Click “Next” > “Next” > “Next” and then “Close”

-After completing this, look for the program in Windows startup menu or find the shortcut on the Desktop

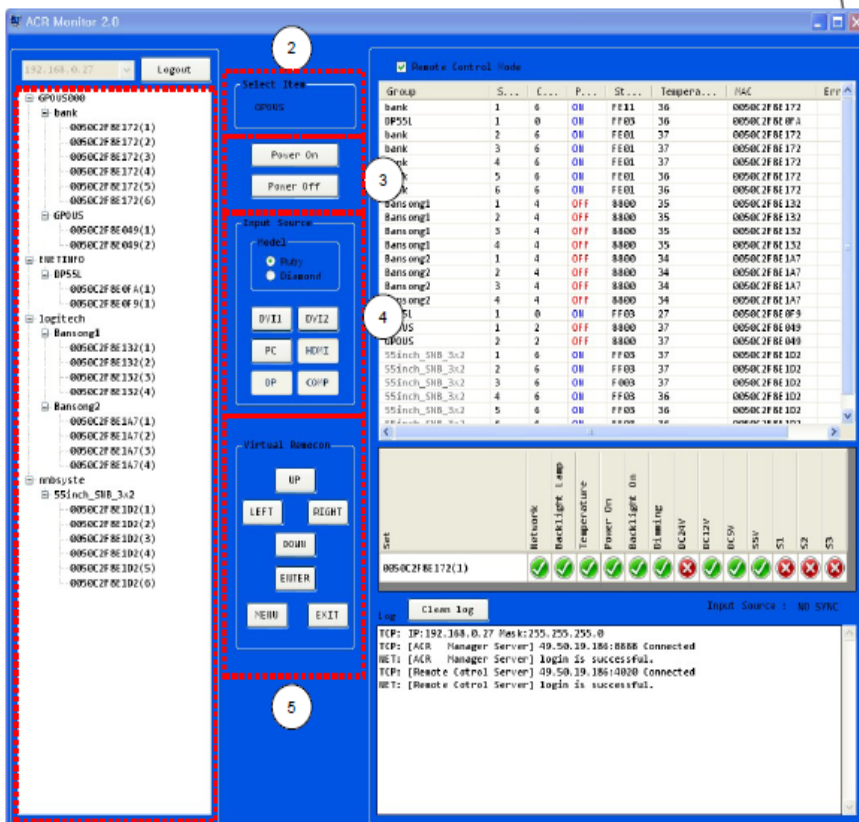
Remote Control Local server setup

1. Open "GPM Server"
2. Click "File" > "Select User"
3. A. **User:** Create a username using under eight (8) characters and/or numbers without spaces
 B. **Password:** Create a password using under eight (8) characters and/or numbers without spaces
 *Use this Username and Password when logging into the Remote Control program (both PC and Android versions). Store this information for future use/access.
- C. **Authority:** Same as Authority code used for ACR Server program.
- D. **Description:** Enter a description of the display group and/or location. A description of at least one character must be entered or the user will receive an error message.
- E. Click "Save" and close the "UserForm" window.



User	Password	Authority	Description
**			

Reload Save



[PC Version]



[Android Version]

Network setup for ACR Hub

Introduction

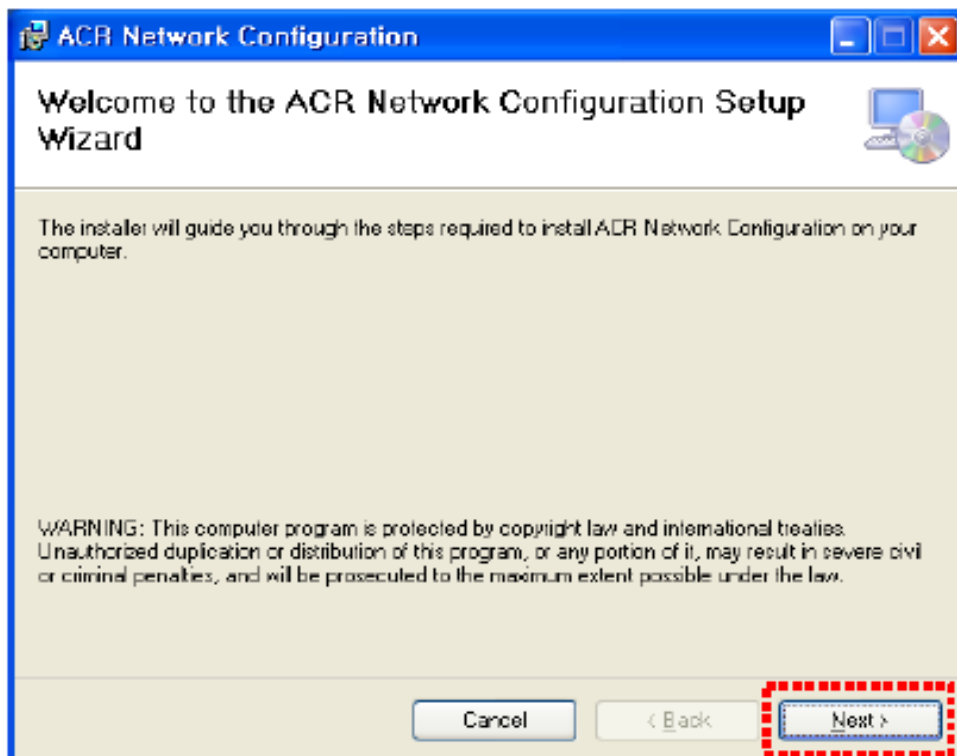
This user guide is provided to users of ACR (Auto Condition Report) Network Agent and Monitoring Software & App.

-Program: ACR Network Configuration.msi
ACR Network Setup.exe
ACR Monitor

Program Installation

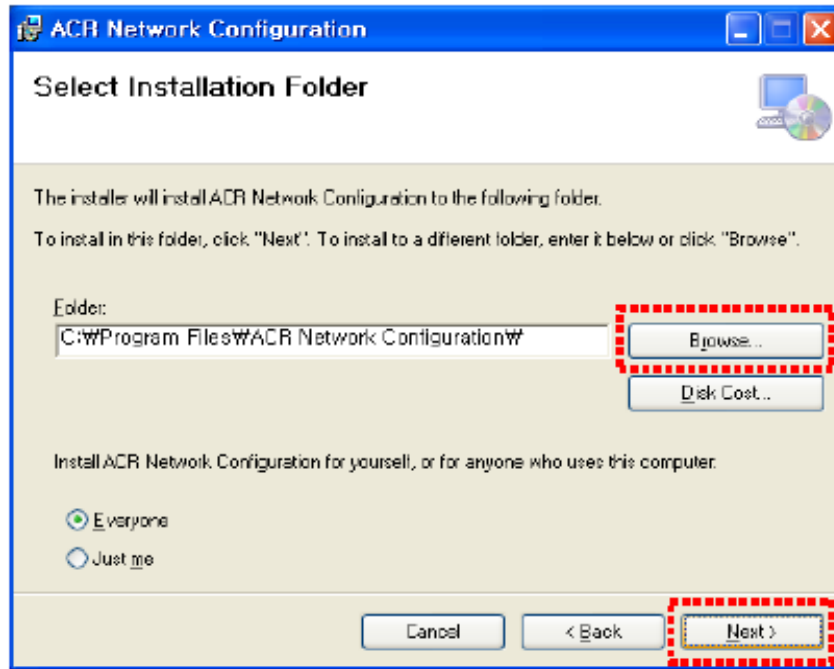
Installing ACR Network Setup

Run the file named “ACR Network Setup.exe” and follow the instructions below. If you previously installed the ACR Network Program, delete the previous one and re-install the new one.

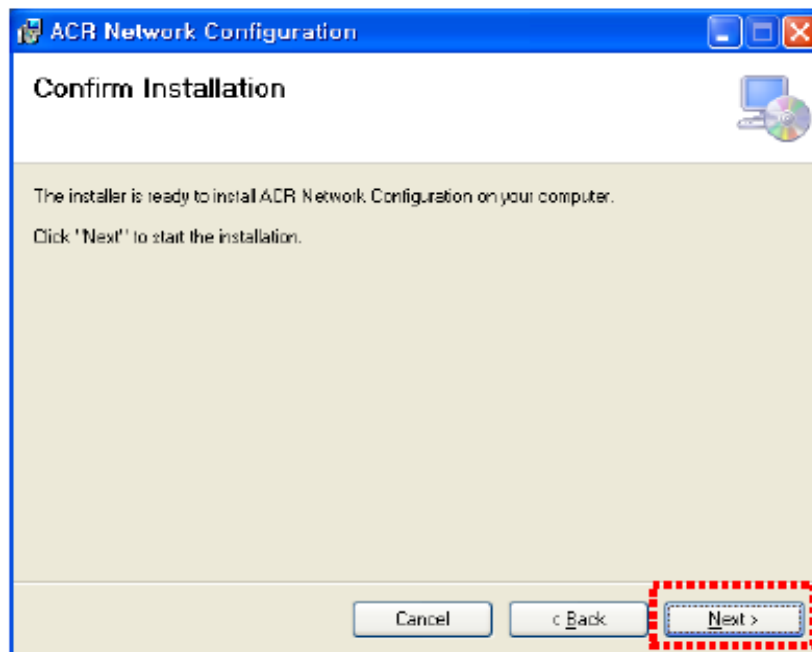


Click “Next”

Network setup for ACR

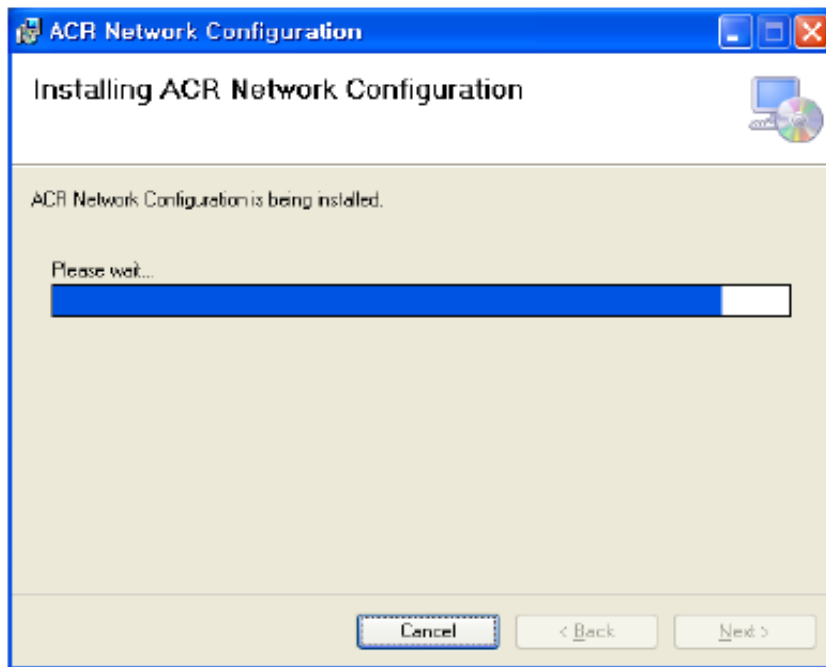


Select the folder you wish to save the file in. Press "Install" if you are ok with the designated folder.

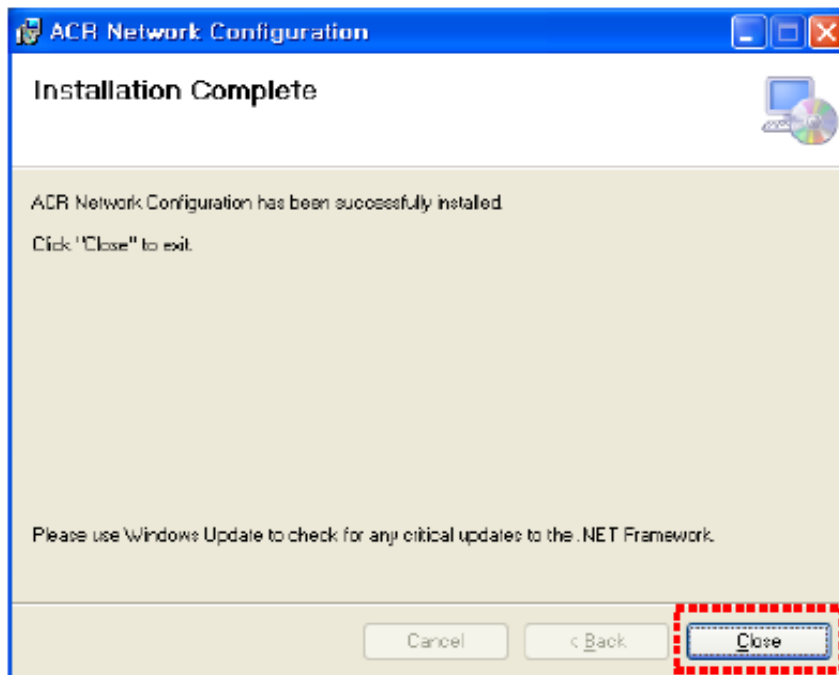


Click "Next"

Network setup for ACR



Wait until the installation is complete.

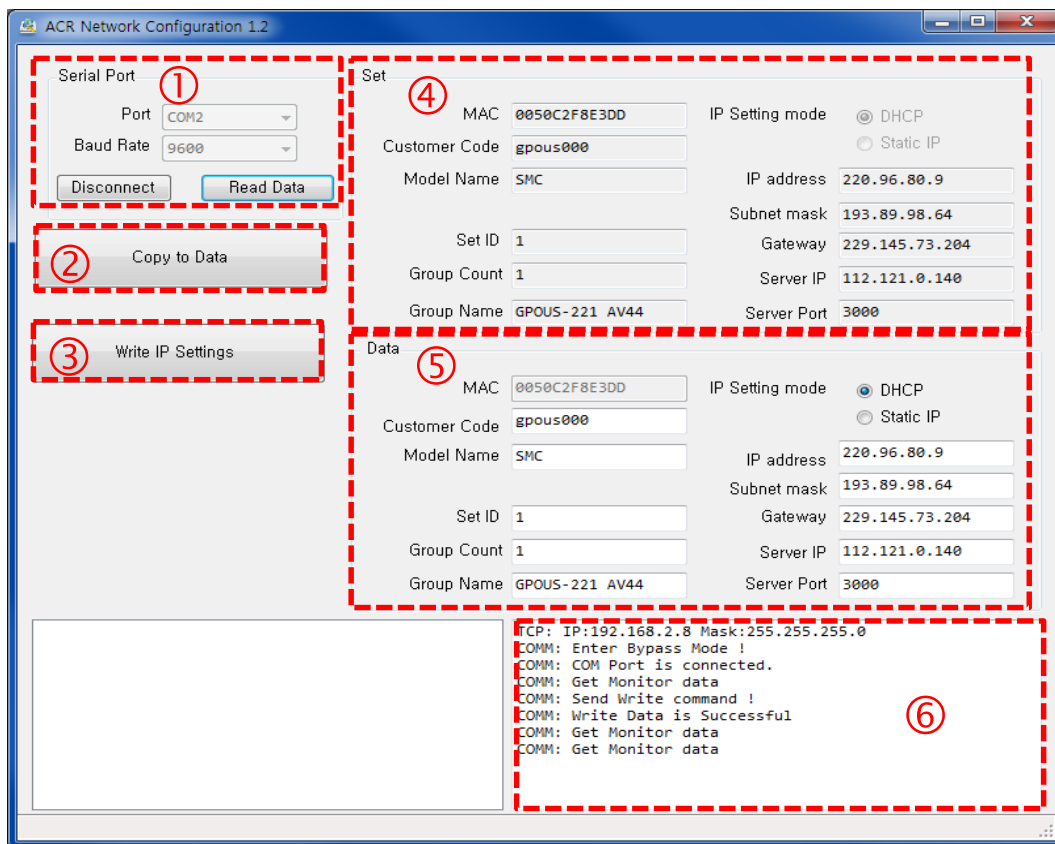


Once installation is complete,
Go to "C:\Program Files\ACR Network Configuration\" to run the program.
or go to shortcut to run program at "C:\Users\Public\Desktop"

Network setup for ACR

Network Configuration

When configuring the ACR Hub with ACR Network Configuration you must disconnect: the LAN cable from the ACR Hub (SM200). You must also connect the ACR Hub to the PC running “ACR Network Configuration” via RS-232 (on the Hub’s 232 “in” port) prior to setup. Disconnect RS-232 from the ACR Hub’s “out” port as well.



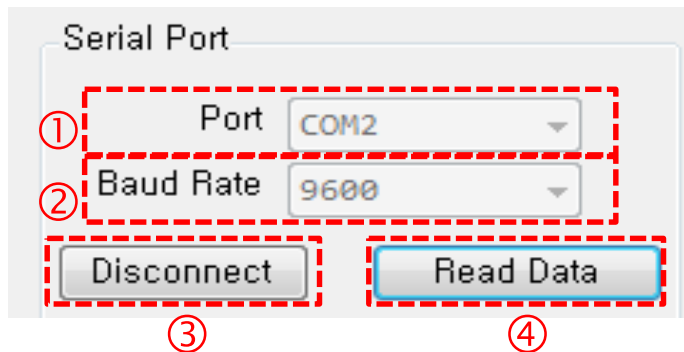
The screenshot shows the 'ACR Network Configuration 1.2' window. It has a 'Serial Port' section with 'Port' set to 'COM2' and 'Baud Rate' set to '9600'. Below this are 'Disconnect' and 'Read Data' buttons. A 'Copy to Data' button is also present. The 'Set' section contains fields for MAC (0050C2F8E3DD), Customer Code (gpous000), Model Name (SMC), Set ID (1), Group Count (1), Group Name (GPOUS-221 AV44), IP Setting mode (DHCP selected), IP address (220.96.80.9), Subnet mask (193.89.98.64), Gateway (229.145.73.204), Server IP (112.121.0.140), and Server Port (3000). The 'Data' section mirrors these fields. A message log at the bottom shows the following text: 'TCP: IP:192.168.2.8 Mask:255.255.255.0', 'COMM: Enter Bypass Mode !', 'COMM: COM Port is connected.', 'COMM: Get Monitor data', 'COMM: Send Write command !', 'COMM: Write Data is Successful', 'COMM: Get Monitor data', and 'COMM: Get Monitor data'.

1. Serial Port info (COM Port, Baud Rate)
2. “Copy To Data” button- Copies data from “Set” block and applies same values to “Data” block
3. “Write IP Settings” button- saves settings (IP, Subnet mask, gateway, Server IP/port) to ACR Hub
4. When “Read Data” is clicked, ACR Hub data is shown in this section
5. Enter desired IP, Subnet mask, gateway, Server IP settings in this section. Do not change any settings in left column. After entering data, click “Write IP Settings”. Then, click “Read Data” button- the settings in this box and #4 should be the same.
6. Message log (successful communication, error)

****Server IP and Server Port values are automatically listed when “ACR Server” is opened. Apply these values in the Network Configuration interface in order to connect. (ACR Server IP => Server IP / ACR Server UDP Port value=> Server port)**

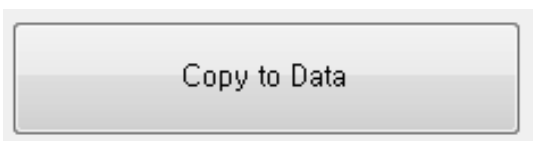
Network setup for ACR

Serial Port Block



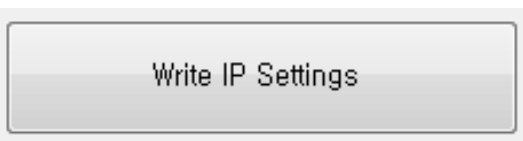
- A. Sets PC's serial communication port
 - Sets PC's serial communication speed (Baud Rate)
- B. Serial Communication Speed (Baud Rate)
 - SET: 115200
 - Smart Controller: 9600
- C. Connection button (PC & SET Communication)
 - Connect: Connect for serial communication between User PC and SET
 - Disconnect: Stop serial communication between User PC and SET
- D. Reads ACR Hub connection info

Copy to Data



- Copies data from "Set" block and applies same values to "Data" block

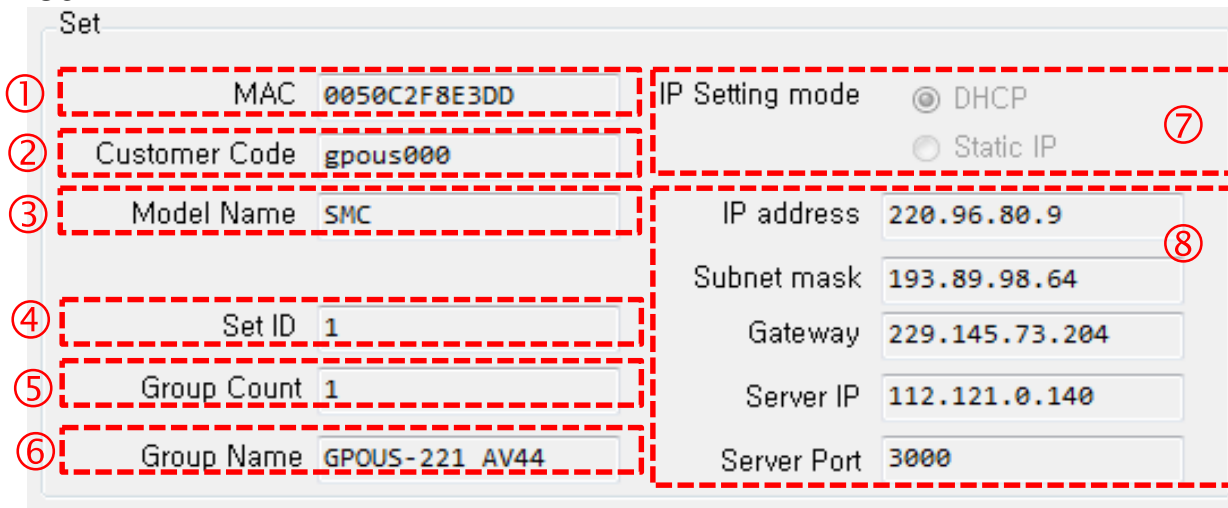
Write IP Settings



- Applies settings to ACR Hub

Network setup for ACR

Set Block

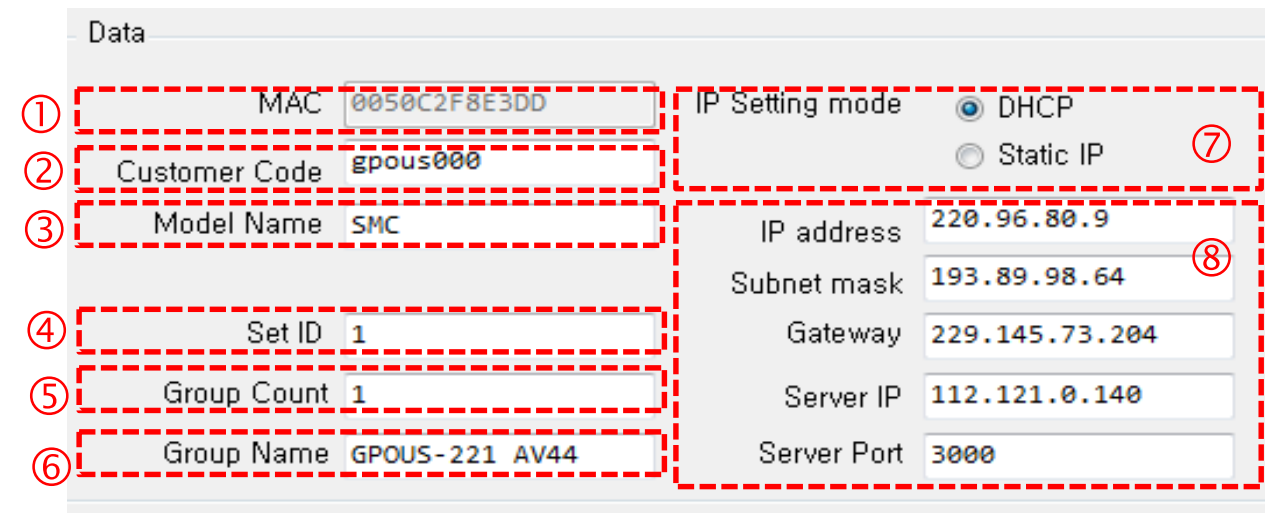


The 'Set' configuration window contains the following fields and settings:

Field	Value
MAC	0050C2F8E3DD
Customer Code	gpous000
Model Name	SMC
Set ID	1
Group Count	1
Group Name	GPOUS-221 AV44
IP Setting mode	<input checked="" type="radio"/> DHCP <input type="radio"/> Static IP
IP address	220.96.80.9
Subnet mask	193.89.98.64
Gateway	229.145.73.204
Server IP	112.121.0.140
Server Port	3000

- 1) MAC Address Display window
- 2) Display window of Buyer code under master control
- 3) Display window of product model under master control
- 4) ID display window of SET
- 5) Display Group's product quantity under Buyer's control
- 6) Display Group's name under Buyer's control
- 7) IP mode display to show the setting value
- 8) Shows IP Display Setting

Data Block



The 'Data' configuration window contains the following fields and settings:

Field	Value
MAC	0050C2F8E3DD
Customer Code	gpous000
Model Name	SMC
Set ID	1
Group Count	1
Group Name	GPOUS-221 AV44
IP Setting mode	<input checked="" type="radio"/> DHCP <input type="radio"/> Static IP
IP address	220.96.80.9
Subnet mask	193.89.98.64
Gateway	229.145.73.204
Server IP	112.121.0.140
Server Port	3000

- 1) MAC Address Display window
- 2) Client's Code display window under master control
- 3) Product model display window under master control
- 4) Set ID selected
- 5) Display window showing master product's quantity under the client's control
- 6) Set Group name display under the client's control
- 7) IP mode setting selection
- 8) IP Settings

Network setup for ACR



Data Block

```
TCP: IP:192.168.2.8 Mask:255.255.255.0  
COMM: Enter Bypass Mode !  
COMM: COM Port is connected.  
COMM: Get Monitor data  
COMM: Send Write command !  
COMM: Write Data is Successful  
COMM: Get Monitor data  
COMM: Get Monitor data
```

- Displays communication status, errors, program notifications

Installation Process

1. Open “ACR Network Configuration” Program
2. Enter Settings in Serial Port Block
3. Click “Connection” button

The screenshot shows the "ACR Network Configuration 1.2" window. It has a blue title bar and a standard Windows-style interface. The window is divided into several sections. On the left, there's a "Serial Port" section with dropdown menus for "Port" (set to COM2) and "Baud Rate" (set to 9600), and buttons for "Disconnect" and "Read Data". Below this is a "Copy to Data" button. Further down is a "Write IP Settings" button. The main area is divided into "Set" and "Data" sections. The "Set" section contains fields for MAC (0050C2F8E3DD), Customer Code (gpous000), Model Name (SMC), IP Setting mode (DHCP selected), IP address (220.96.80.9), Subnet mask (193.89.98.64), Gateway (229.145.73.204), Set ID (1), Group Count (1), Server IP (112.121.0.140), and Server Port (3000). The "Data" section contains identical fields. At the bottom right, there's a text area displaying the same communication log as seen in the "Data Block" section above.

Network setup for ACR



4. Click the “Read Data” button

ACR Network Configuration 1.2

Serial Port

Port: COM2

Baud Rate: 9600

Disconnect

Read Data

Copy to Data

Write IP Settings

Set

MAC: 0050C2F8E3DD

Customer Code: gpous000

Model Name: SMC

Set ID: 1

Group Count: 1

Group Name: GPOUS-221 AV44

IP Setting mode: ☒ DHCP ☐ Static IP

IP address: 220.96.80.9

Subnet mask: 193.89.98.64

Gateway: 229.145.73.204

Server IP: 112.121.0.140

Server Port: 3000

Data

MAC: 0050C2F8E3DD

Customer Code: gpous000

Model Name: SMC

Set ID: 1

Group Count: 1

Group Name: GPOUS-221 AV44

IP Setting mode: ☒ DHCP ☐ Static IP

IP address: 220.96.80.9

Subnet mask: 193.89.98.64

Gateway: 229.145.73.204

Server IP: 112.121.0.140

Server Port: 3000

TCP: IP:192.168.2.8 Mask:255.255.255.0

COMM: Enter Bypass Mode !

COMM: COM Port is connected.

COMM: Get Monitor data

COMM: Send Write command !

COMM: Write Data is Successful

COMM: Get Monitor data

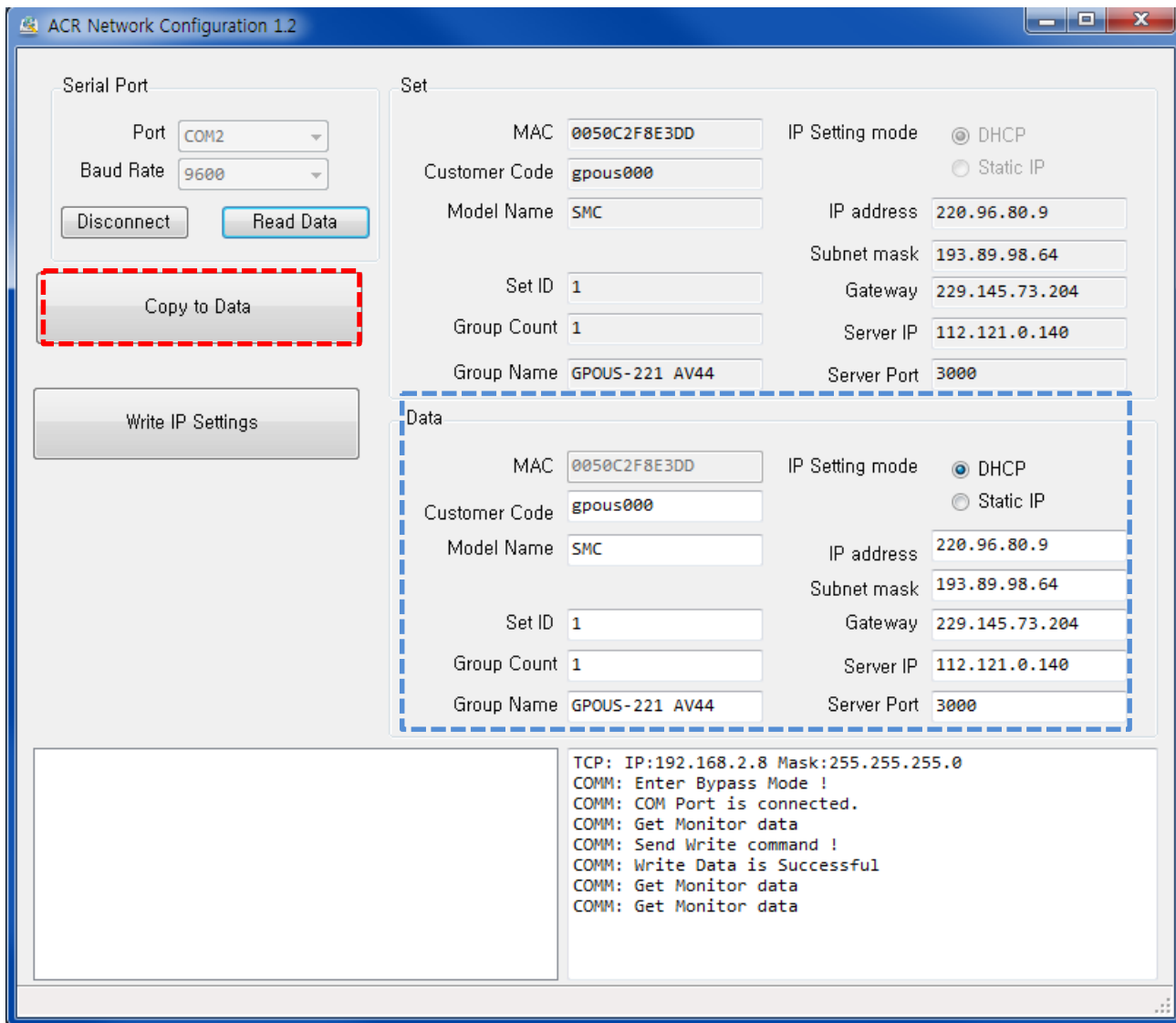
COMM: Get Monitor data

- Successful when the IP value appears in “Set” box circled in blue in top/right
- Successful when message of “COMM” Get Monitor or data” appears in bottom/right

****Server IP and Server Port values are automatically listed when “ACR Server” is opened. Apply these values in the Network Configuration interface in order to connect. (ACR Server IP => Server IP / ACR Server UDP Port value=> Server port)**

Network setup for ACR

5. Select Copy Data button

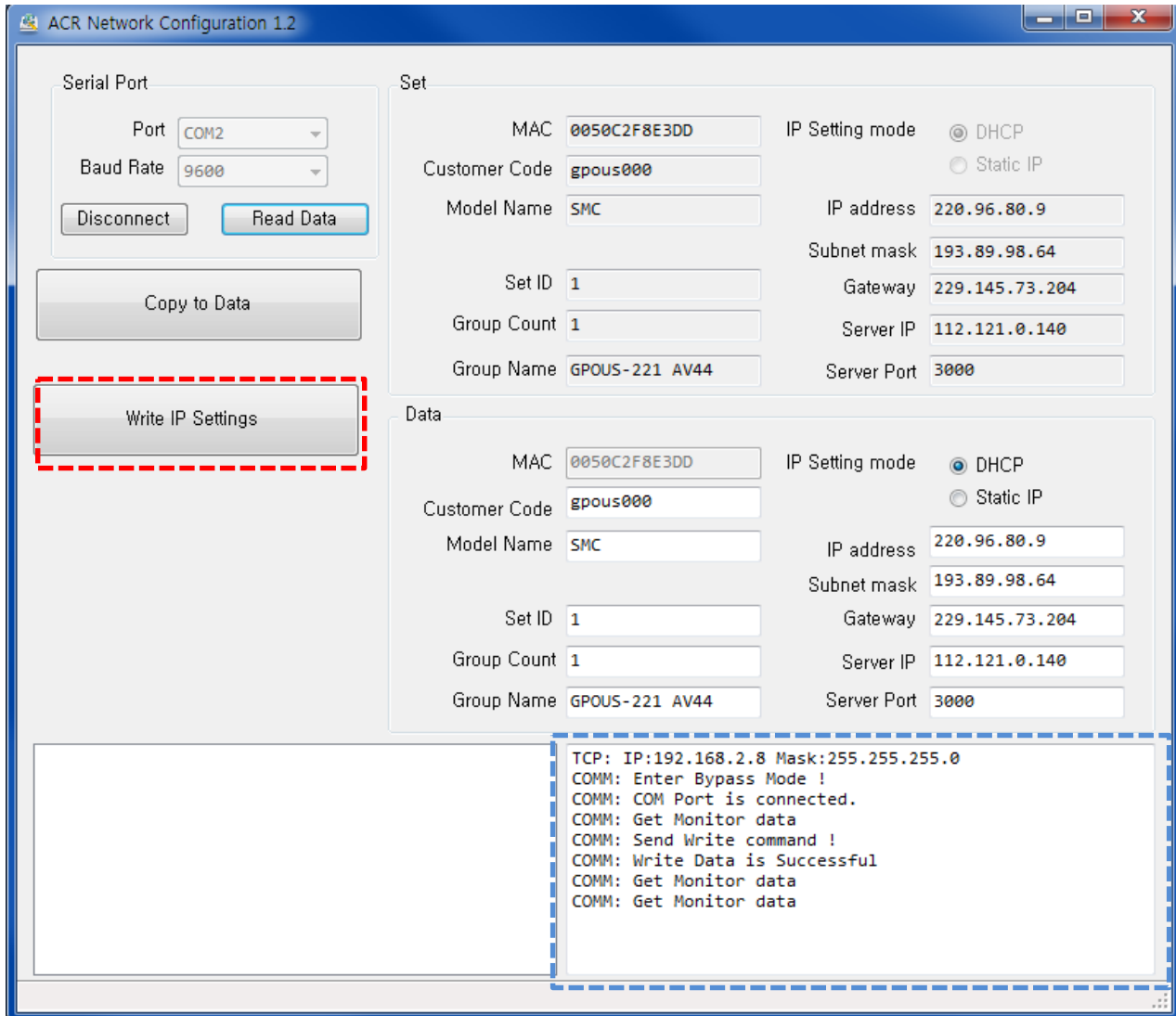


- Successful when IP address value appears in “Data” block (circled in blue- bottom/right)
 - Successful when “COMM: is successful” appears
-
- a. Set Group Count
 - b. Set Group Name
 - c. Set IP Setting mode
 - d. Set IP of the install location

****Server IP and Server Port values are automatically listed when “ACR Server” is opened. Apply these values in the Network Configuration interface in order to connect. (ACR Server IP => Server IP / ACR Server UDP Port value=> Server port)**

Network setup for ACR

6. Click “Write IP Settings” button



ACR Network Configuration 1.2

Serial Port

Port: COM2

Baud Rate: 9600

Disconnect Read Data

Copy to Data

Write IP Settings

Set

MAC: 0050C2F8E3DD

Customer Code: gpous000

Model Name: SMC

Set ID: 1

Group Count: 1

Group Name: GPOUS-221 AV44

IP Setting mode: ☒ DHCP ☐ Static IP

IP address: 220.96.80.9

Subnet mask: 193.89.98.64

Gateway: 229.145.73.204

Server IP: 112.121.0.140

Server Port: 3000

Data

MAC: 0050C2F8E3DD

Customer Code: gpous000

Model Name: SMC

Set ID: 1

Group Count: 1

Group Name: GPOUS-221 AV44

IP Setting mode: ☒ DHCP ☐ Static IP

IP address: 220.96.80.9

Subnet mask: 193.89.98.64

Gateway: 229.145.73.204

Server IP: 112.121.0.140

Server Port: 3000

TCP: IP:192.168.2.8 Mask:255.255.255.0
 COMM: Enter Bypass Mode !
 COMM: COM Port is connected.
 COMM: Get Monitor data
 COMM: Send Write command !
 COMM: Write Data is Successful
 COMM: Get Monitor data
 COMM: Get Monitor data

- Click “Write IP Settings” to save settings
- Operation successful when “COMM: is successful” appears
- Click “Read Data” button to cross-check values of “Set” and “Data” blocks

****Server IP should be default value of user’s desired local IP setting (example. GPO Display’s Server IP “112.121.0.140”, Server Port “3,000)**

ACR Monitor Program (PC Version)

Introduction

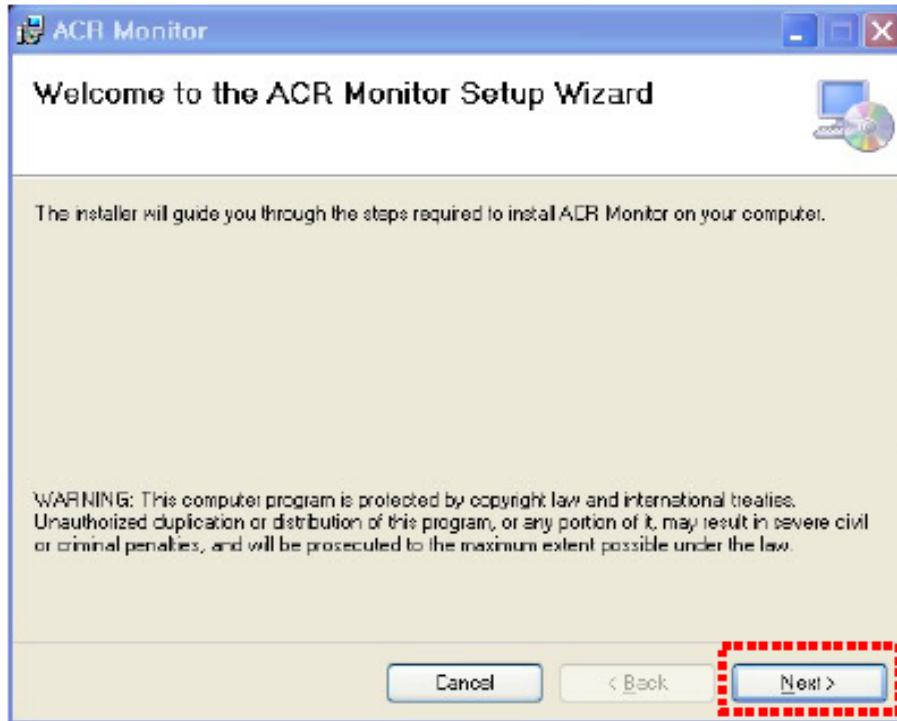
This section of the user guide pertains to ACR (Auto Condition Reporting) Monitor Program. This program allows users to pull real-time status of groups and individual sets via the network.

- Program: ACR Monitor.msi
ACR Monitor Setup.exe
- Operating System : Microsoft Windows XP, WIN7

Program Installation

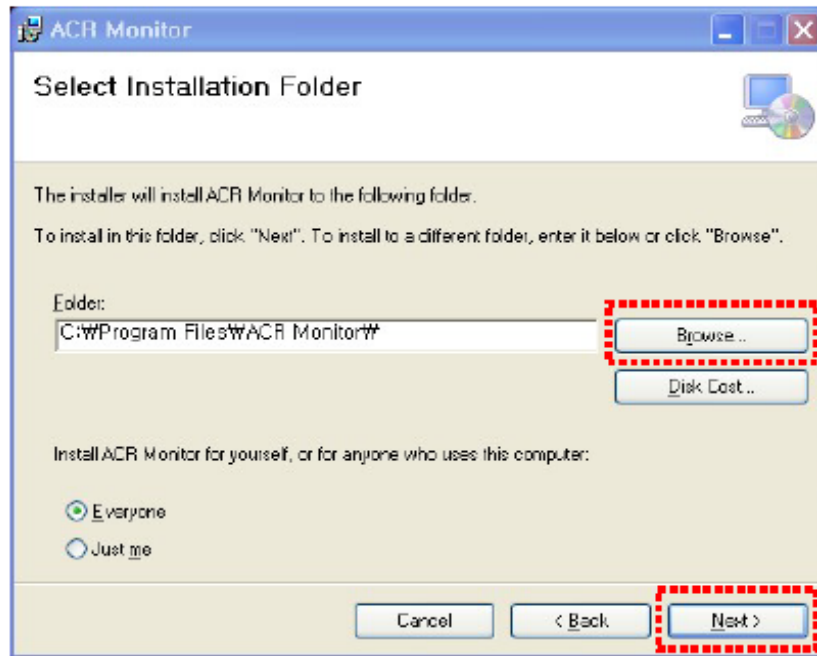
Installing ACR Monitor2.1 Setup

Run the file named "Setup.exe and follow the instructions below If you have ACR Monitor software installed already, delete/uninstall the previous version and re-install the new one.

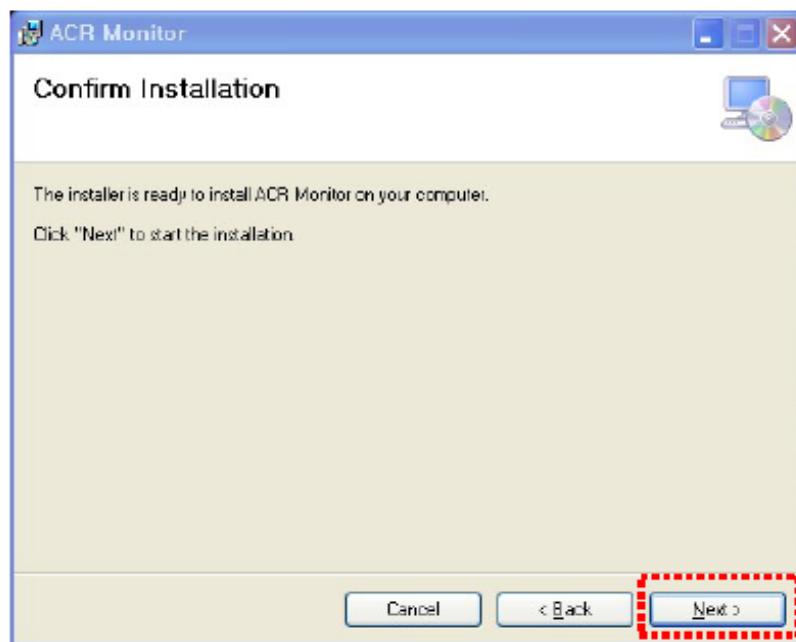


Click "Next"

ACR Monitor Program (PC Version)

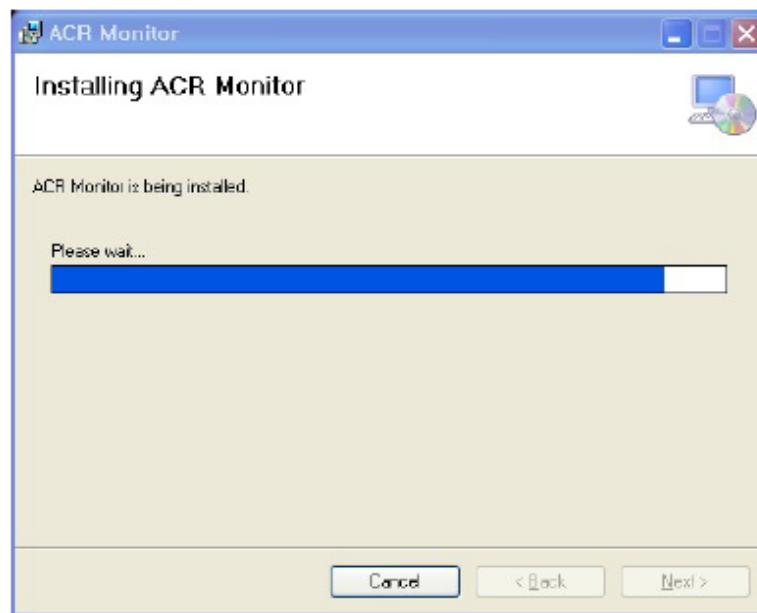


Select the folder you wish to save the file in. Press "Install" if you are ok with the designated folder.

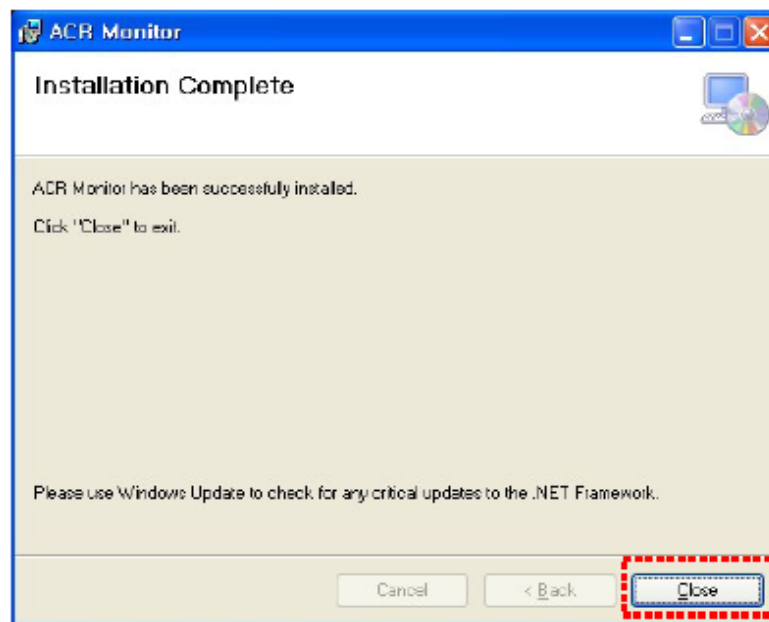


Click "Next"

ACR Monitor Program (PC Version)

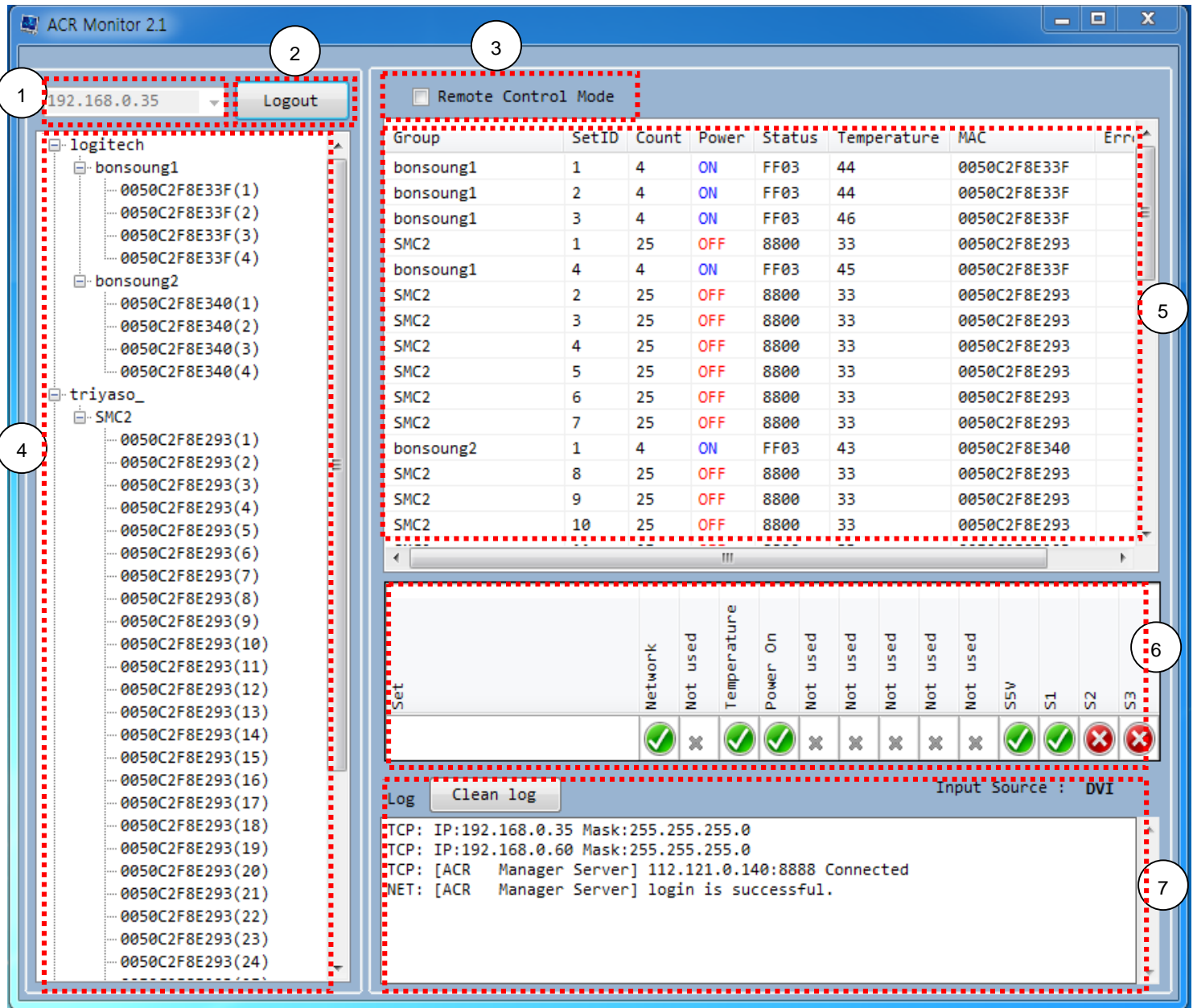


Wait until the installation is complete.



Once installation is complete,
Go to "C:\Program Files\ACR Monitor\" to run the program.
or go to shortcut to run program at "C:\Users\Public\Desktop"

ACR Monitor Program (PC Version)



The screenshot shows the ACR Monitor 2.1 interface. The interface is divided into several sections:

- Top Left:** A text box containing the IP address "192.168.0.35" (callout 1) and a "Logout" button (callout 2).
- Top Center:** A checkbox labeled "Remote Control Mode" (callout 3).
- Left Panel:** A tree view showing a hierarchy of devices. Under "logitech", there are "bonsoung1" and "bonsoung2" groups, each with four sub-items (MAC addresses). Under "triyaso_", there is an "SMC2" group with 24 sub-items (MAC addresses) (callout 4).
- Right Panel:** A table displaying server information for selected SETs (callout 5). The table has columns: Group, SetID, Count, Power, Status, Temperature, MAC, and Error.
- Bottom Center:** A section for selecting a SET (callout 6). It includes a "Set" label, a "Network" column with a green checkmark, a "Temperature" column with a green checkmark, a "Power On" column with a green checkmark, and several "Not used" columns. Below this is a "Log" button and a "Clean log" button. The "Input Source" is set to "DVI".
- Bottom Right:** A log window showing connection messages (callout 7):


```
TCP: IP:192.168.0.35 Mask:255.255.255.0
TCP: IP:192.168.0.60 Mask:255.255.255.0
TCP: [ACR Manager Server] 112.121.0.140:8888 Connected
NET: [ACR Manager Server] login is successful.
```

- 1 => PC (on which ACR Monitor Program being used) IP address
- 2 => Server connection button
- 3 => Remote Control Mode Check button.
- 4 => Display of MAC address and Group Name of the SET on server
- 5 => Display of SET status and basic Information on server
- 6 => Display of selected SET by the user on server
- 7 => Message log

ACR Monitor Program (PC Version)

1 IP Address Block

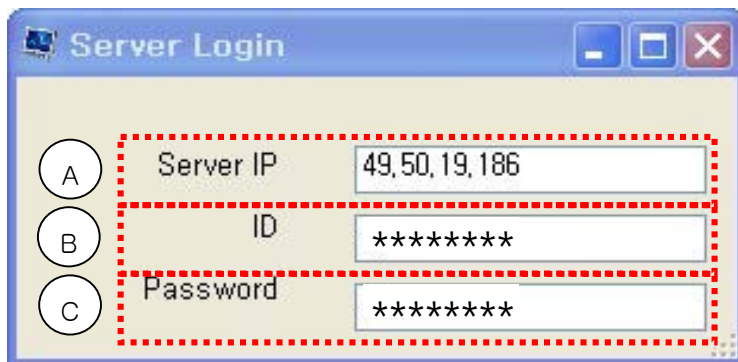


- IP Address of PC on which ACR Monitor Program is installed/running

2 Login



- Server connection button



- A. Server IP Address. ****Server IP should be changed to user's Local IP Setting**
- B. Server program allows for setting of access password (local server version only- GPO password in other cases).

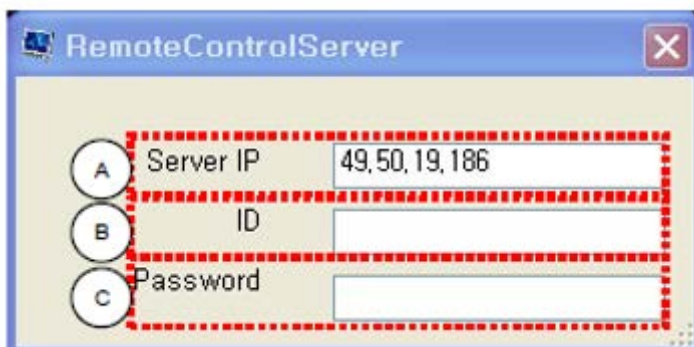
ACR Monitor Program (PC Version)

3

Remote Control Mode

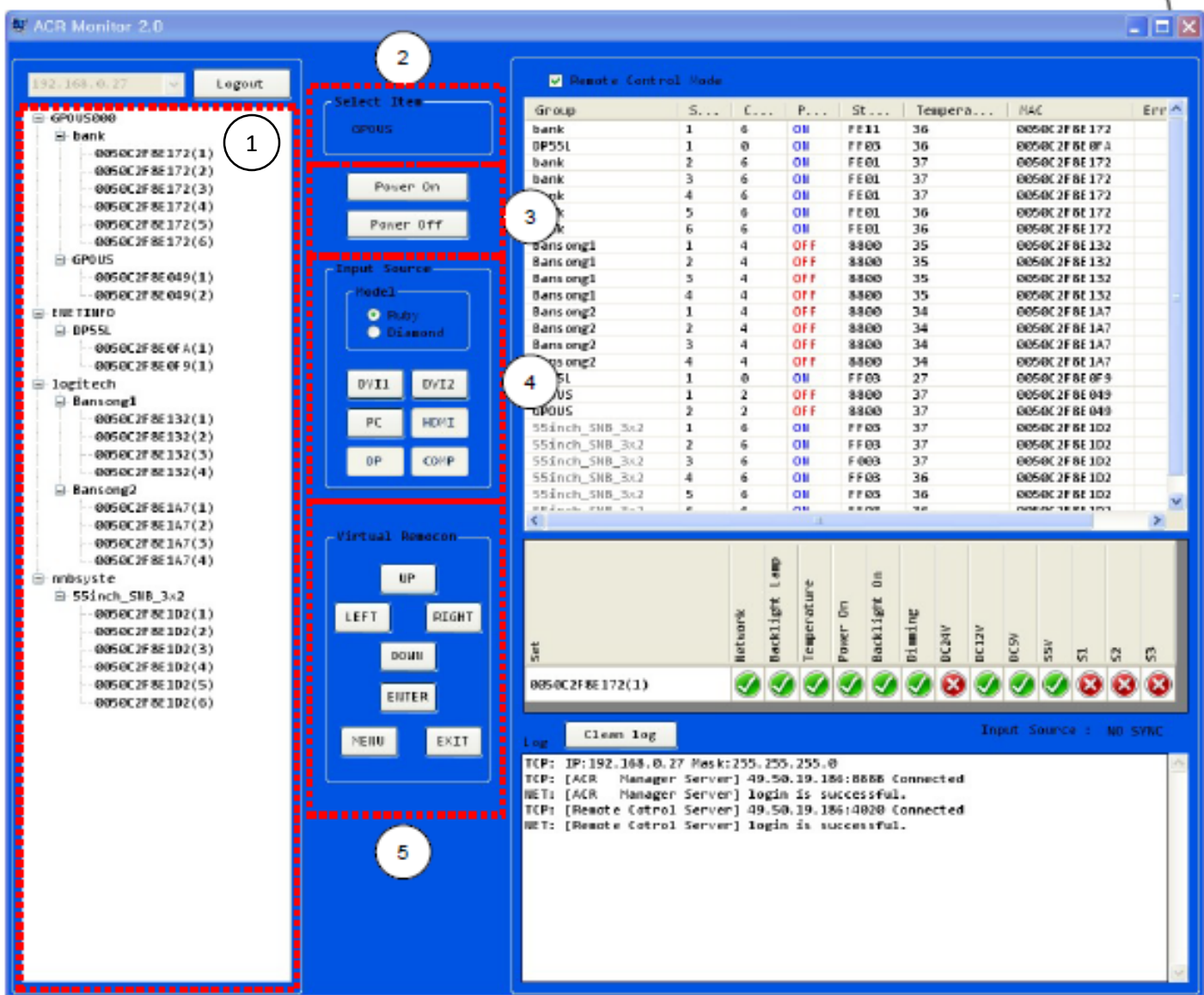


- “Remote Control Mode” activated with this box is selected. Basic remote control functions such as power on/off, input selection and navigation of the OSD menu are supported in this mode.



- A. Server IP Address.
 - B. Enter Remote Control ID created in server program allows for setting of access password (GPO Display provides ID in other cases / Local Server – Use setting Data).
 - C. Enter Remote Control password created in server program allows for setting of access password (GPO Display provides ID in other cases / Local Server – Use setting Data)
- If login is successful, a Remote Control window will appear (pg26)

****Server IP and Server Port values are automatically listed when “ACR Server” is opened. Apply these values in the Network Configuration interface in order to connect. (ACR Server IP => Server IP / ACR Server UDP Port value=> Server port)**



1. Displays MAC address and Group Name of the displays (SETS) on server
 - Click Group name to control all displays in the group at once
 - Click specific sets the list under the group to control individually
2. Name of selected group or set selected for control
3. Power On/Off control button
4. Input source selection buttons.
5. Virtual Remote Control button

Select Item.



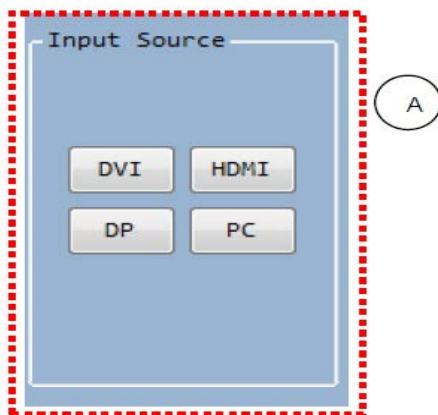
- Name of selected group or set selected for control

Power On/Off



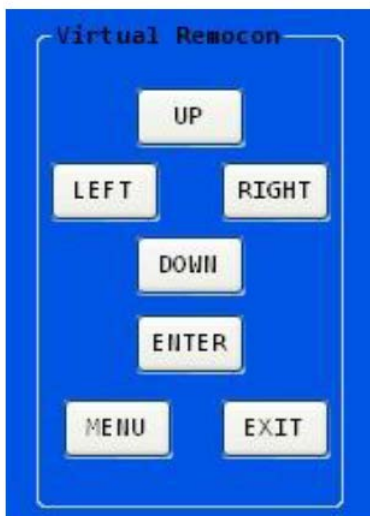
- Power On/Off control buttons

Input Source



- A. Select Input Source/signal

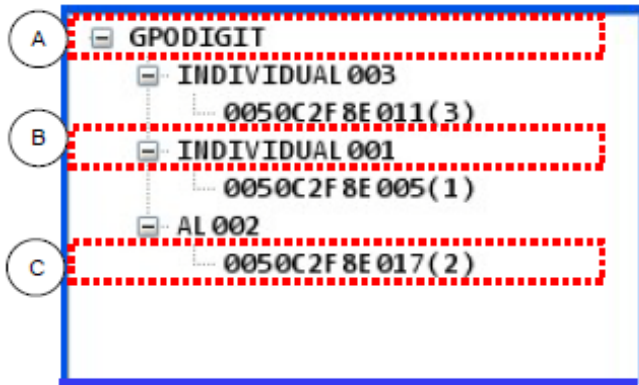
Virtual Remote Control



- Remote control buttons

ACR Monitor Program (PC Version)

4 Server connection status



➤ Displays MAC address and Group Name of the displays (SETS) on server

- A. Customer Code of SET on server
- B. Group Name of SET on Server
- C. MAC address and Set ID of the SET on server

5 Set Block














Group	Set ID	Count	Power	Status	Temperature	MAC
INDIVIDUAL 003	3	1	ON	FE01	1	0050C2F8E01
INDIVIDUAL 001	1	0	ON	FF00	0	0050C2F8E00
AL 002	2	0	ON	FE01	1	0050C2F8E01

A
B
C
D
E
F
G

- A. Group Name on server
- B. SET ID on server
- C. Quantity of Group's SETS (displays) on server
- D. Product power (on/off) on server
- E. Status of the SET (ASCII) on server
- F. Temperature status (over/under threshold: "1" indicates "over") of SET on server
- G. MAC Address of SET on server













ACR Monitor Program (PC Version)

6 Data Block

Set	Network	Not used	Temperature	Power On	Not used	Not used	Not used	Not used	Not used	S5V	S1	S2	S3
													

- Displays the status of SET on Server
- ACR status indicators of selected SET

ACR Input LED

S1	S2	S3	Input
			DVI1
			PC
			HDMI
			DP

7 Message Block

```
TCP: IP:192.168.0.27 Mask:255.255.255.0
TCP: IP:192.168.100.5 Mask:255.255.255.0
TCP: 49.50.19.186 Connected at port 8888
NET: login is successful.
```







- Window displays connection info and status
- Backlight monitoring function optional. Contact GPO Display for more information.

Checking the status of a selected display (SET)












- Check the product settings on ACR MONITOR PROGRAM
- Green indicators show that parameter being monitored is in good condition, Red indicates either a problem or inactivity.

1) If the display (SET) is powered on and fully operational with no malfunction,

- All parameters being monitored will show a corresponding green indicator.
- Backlight Lamp monitoring is optional so this status may be displayed in red even when SET is fully operational.

Set	Network	Not used	Temperature	Power On	Not used	Not used	Not used	Not used	Not used	SSV	S1	S2	S3
													

2) If there is NO display (black screen) or a “No Signal” message, check status of the input signal.

Set	Network	Not used	Temperature	Power On	Not used	Not used	Not used	Not used	Not used	SSV	S1	S2	S3
													

- Check each of the input signals
- Green indicator will be shown for an active input, red indicator for inactive input/no signal

3) If there is an active input as shown in the diagram above but still no display, check the power indicators. There is no active DC24V in the readout above, indicating a board issue.

ACR Monitor(Android Version-Option)

Introduction

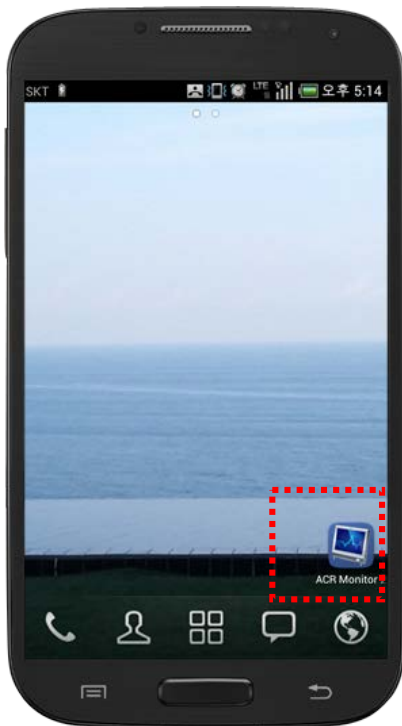
This user guide book is provided for ACR (Auto Condition Report) Monitor Program.
This program to remote control of the current SET via Android mobile phone.
Program: Android_ACRMonitor_131213.apk

Program Installation

Installing ACR Monitor Setup

Download “Android_ACRMonitor_131213.apk”file and install the ACR Monitor program

ACR Monitor

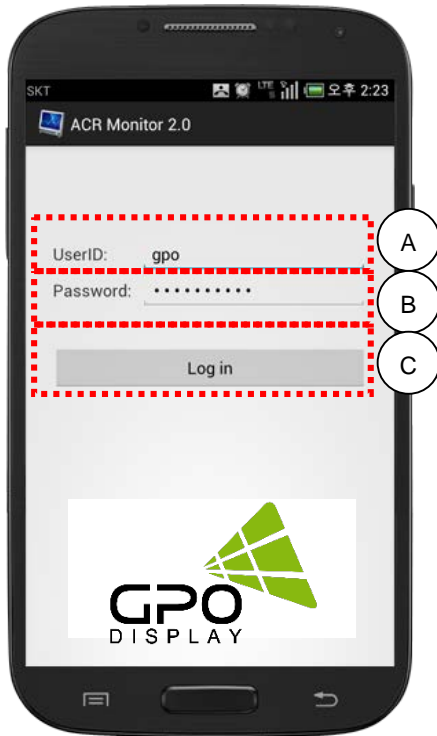


Touch ACR Monitor program icon.

ACR Monitor(Android Version-Option)



Login

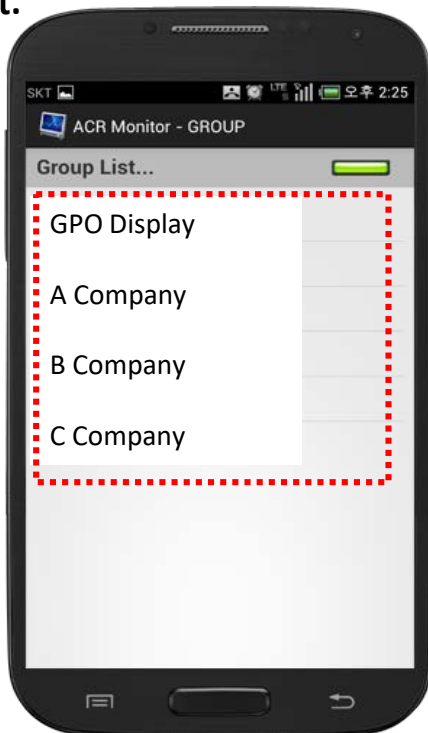


A. Master qualifies for server access ID to the user.

B. Master qualifies for server access password to the user

C. Login button

Group List.

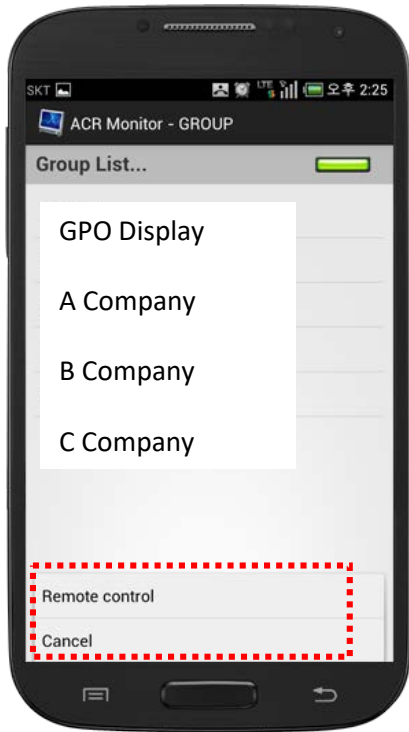


You will see the connected Group list if login is successful

ACR Monitor(Android Version-Option)

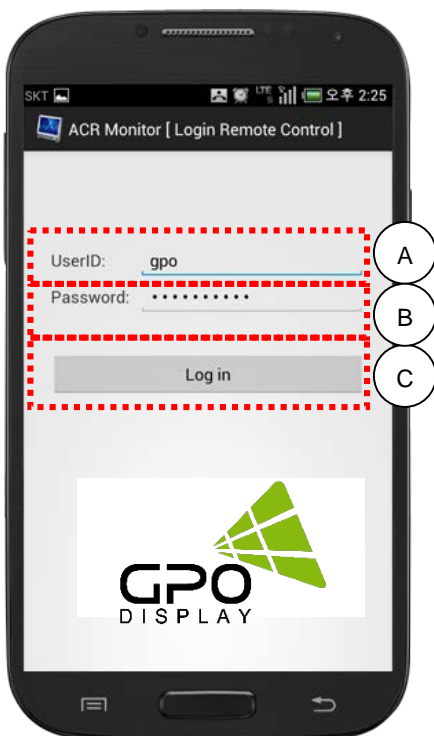


Remote Control Mode



Touch the menu button on the Remote Control handset display window.
Select the Remote Control.

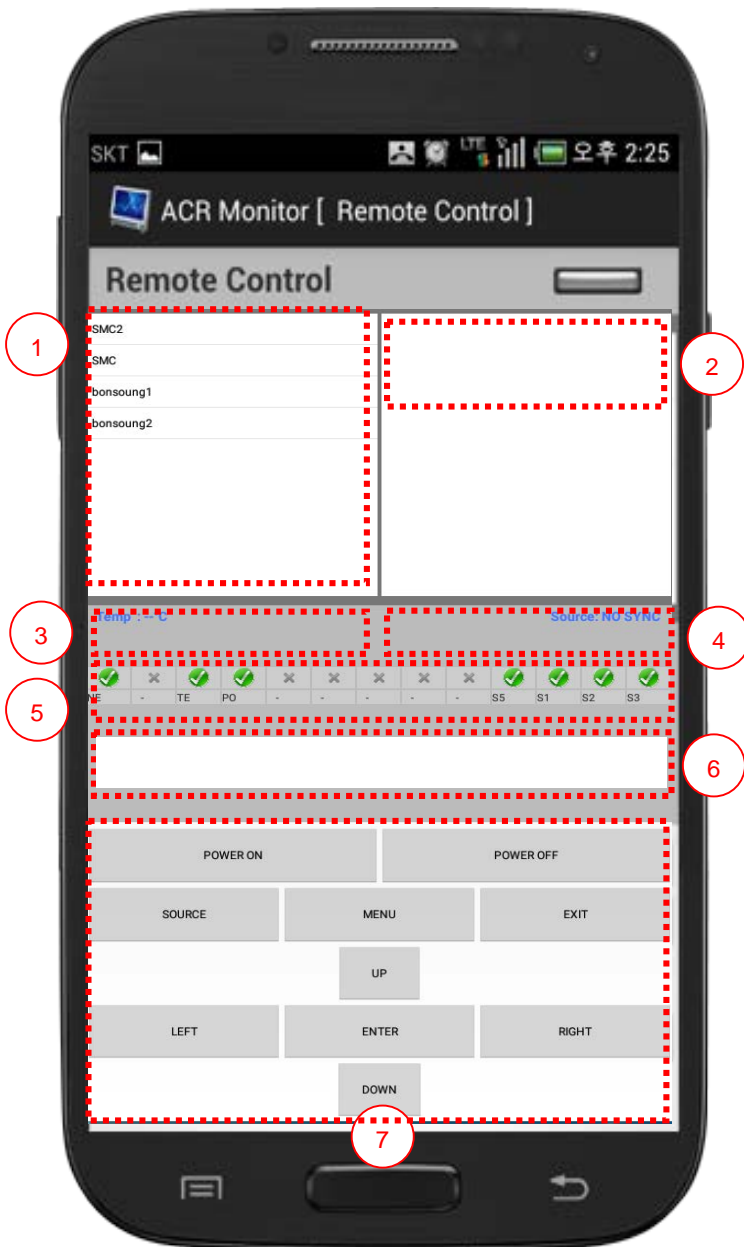
Remote Control Login.



- A. Enter Remote Control ID given by GPO Display.
- B. Enter Remote Control Password given by GPO Display.
- C. Remote Control Login button.

ACR Monitor(Android Version-Option)

Remote Control Mode



1. Display groups that are connected to the server display window.

2. Display the connected product's group on the Server.

3. Connected products' Mac address(es) and Set ID(s) on the Server.

4. Displays the connected product's internal temperature.

5. Displays the connected product's input signal status.

6. Displays connected products' ACR data.

7. Virtual Remote Controller.

- Click a display Group to control the full group all at once.
- Click each list under the Group to control individually.

Data Block

Displays the status of SET on Server
Reflect same ACR LED of SET

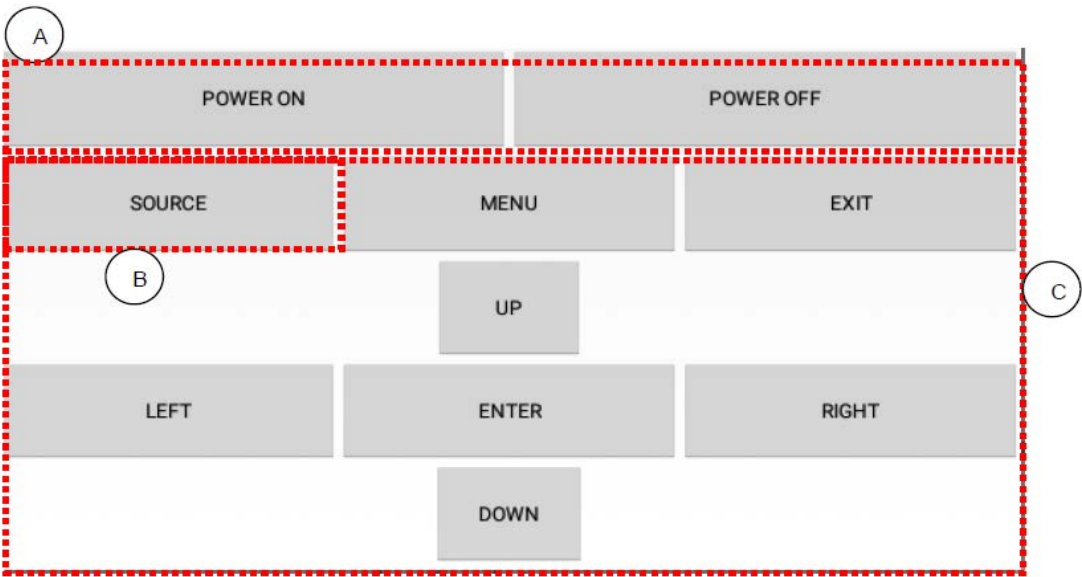


ACR Input LED

ACR Input LED

S1	S2	S3	Input
			DVI1
			PC
			HDMI
			DP

Virtual Remote Control



- A. Power On/Off button
- B. Input Source selection button
- C. Virtual Remote Controller button

ACR Serial Protocol

SICP (Serial Interface Communication Protocol)

This document defines all the command and messages exchanged between the Master (a PC or the other controller) and the Slave (the displays).
 It also describes the ways to send or read the commands or the messages.

1. Protocol definition

SICP stands for “Serial Interface Communication Protocol”.
 The protocol is specifically designed to allow data communication in half duplex multi-point environments, but it can also be used for half duplex point-to-point RS-232C communication.

2. Communication characteristics

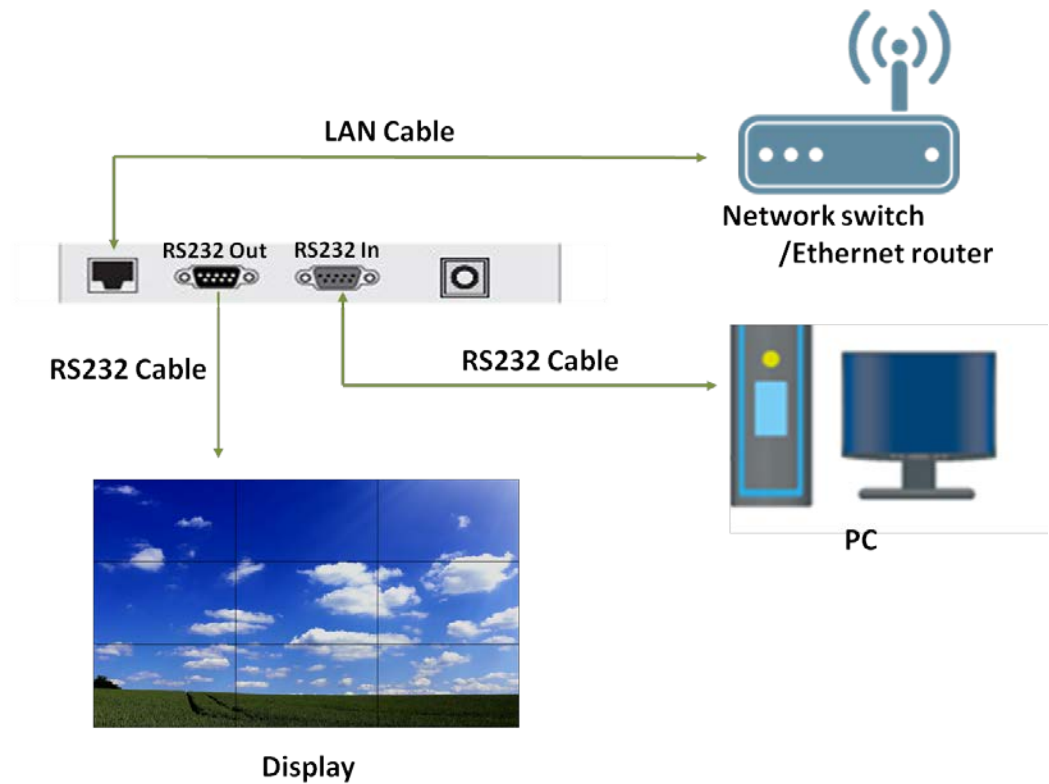
A half-duplex communication is implemented starting from the concept of a master-slave structure, where the display is supposed to be the slave.
 The first action is always taken by the master, which can be either a PC or any controlling device (acting as server) interfaced to the monitor. After sending a command or a request in the appropriate format the master receives from the slave an acknowledgement, which tells the transmitter whether the command is not valid (or not executable, anyway) or it is accepted. In the case of a request, the requested information is sent back and it becomes the acknowledgement by itself.

3. How to connect external equipment

Female Pin number	Male Pin number
2 <----->	2
3 <----->	3
5 <----->	5

4. Hardware Protocol

Baud rate : 9600 bps
 Data bits : 8 bit
 Parity bits : None
 Stop bits : 1 bit
 Handshake : None



Send the packet below from control device in order to receive status acknowledgement

◆ System Status Data (RDS)

- ID1 ~ ID3 : Set ID ("001" ~ "100")
- DA1 ~ DA3 : "000" (unused)

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3	IND	ETX
0x0f				R	D	S	R				0	0x0d
Hex	ASCII (capital letter)											Hex

[Read Code Value]

(bit 0, bit 1, bit 2 always "0")

D A 1								D A 2								D A 3							
7	6	5	4	3	2	1	0	7	6	5	4	3	2	1	0	7	6	5	4	3	2	1	0
	x			x	0	0	0	x	x	x	x		0	0	0				x	x	0	0	0

("x" : unused code)

DA1.7 : Active System (On: 1 , Off: 0)

DA1.5 : Temperature (Below 80°C:1 , Over 80°C: 0)

DA1.4 : Power On (On: 1 , Off: 0)

DA2.3 : S5V (On: 1 , Off: 0)

DA3.7,6,5 : DVI1 Signal (100)

DA3.7,6,5 : DP Signal (110)

DA3.7,6,5 : HDMI Signal (101)

DA3.7,6,5 : PC Signal (001)

D A 3								Input
7	6	5	4	3	2	1	0	
1	0	0	x	x	0	0	0	D V I 1
1	1	0	x	x	0	0	0	D P
1	0	1	x	x	0	0	0	H D M I
0	0	1	x	x	0	0	0	P C

* < > Hex Value

E x)

<0x0F>003RDSR0000<0x0D> (Read System Status Set ID : 003)

<0x0F>003RDS#<0x78><0xF8><0x20>#<0x0D> (ACK System Status Set ID : 003)

Troubleshooting with ACR



Network (red): indicates whether there is active network connection. The light will be on if the ACR Hub is connected to a network.



BLK Lamp LED (red): This LED light will always be turned off unless option selected



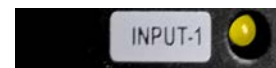
Temperature LED (red): Indicates whether internal temperature on the controller board detects overheating. This should always be on if the display is on. The light will turn off if the temp. threshold set by the user (or the default 45 C) is exceeded.



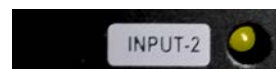
Power ON LED (red): Indicates whether or the AD board has sent power to the Inverter board. This should be on unless display is off.



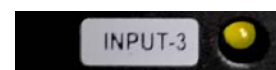
SSV LED (green): Indicates whether power is running to the standby function (on the AD board). This should always be on.



Input-1 (yellow): Indicates input is active. This light will be on if you are running a source through this input.



Input-2 (yellow): Indicates input is active. This light will be on if you are running a source through this input.



Input-3 (yellow): Indicates input is active. This light will be on if you are running a source through this input.

Case 2: Use GPO Display Server

Network setup for ACR

Static IP is recommended for ACR Monitoring*

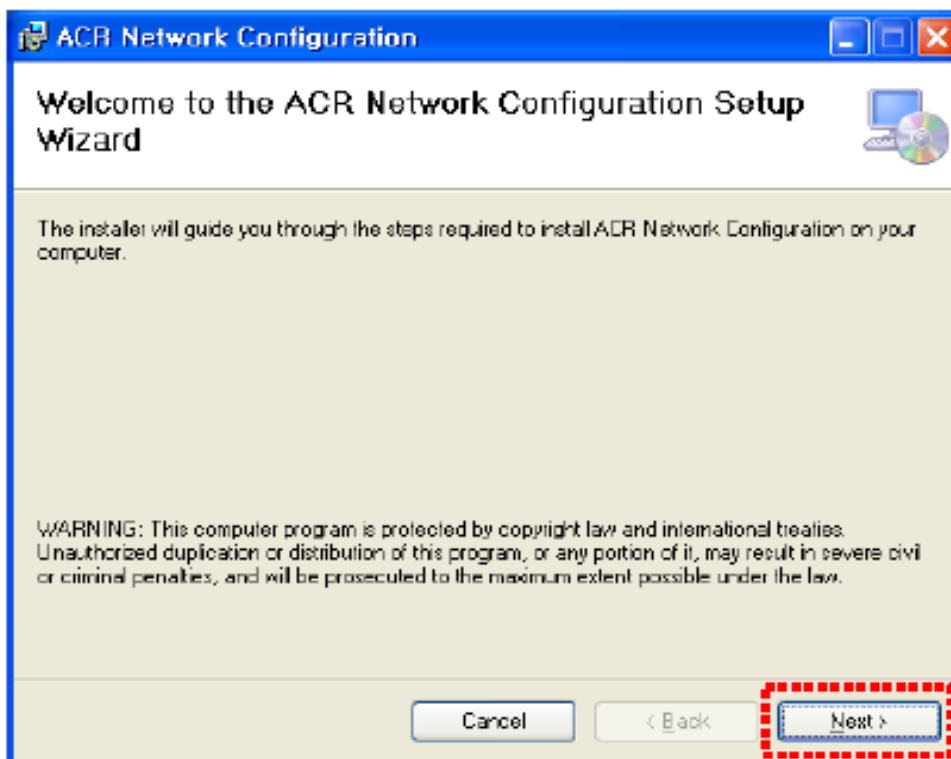
1. This user guide is provided to users of ACR (Auto Condition Report) Network Agent and Monitoring Software & App.

-Program: ACR Network Configuration.msi
ACR Network Setup.exe
ACR Monitor

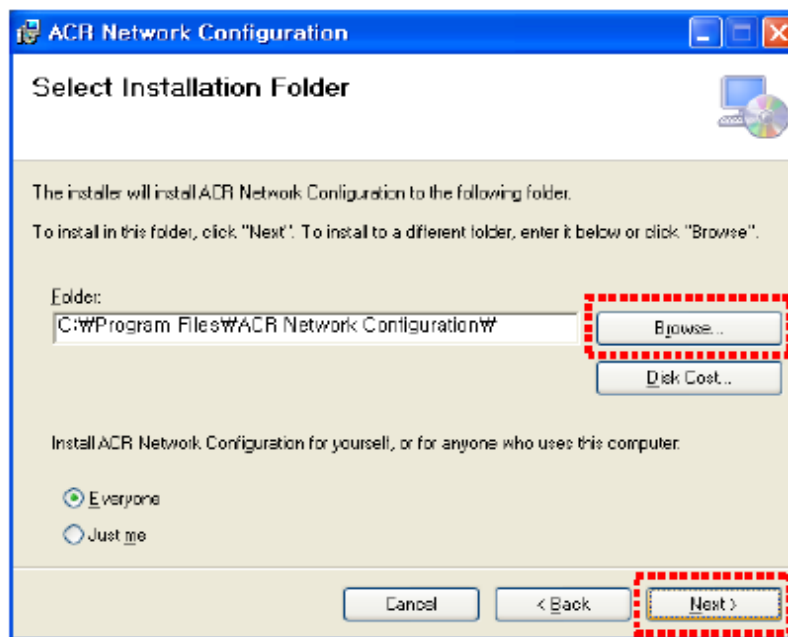
2. Program Installation

Installing ACR Network Setup

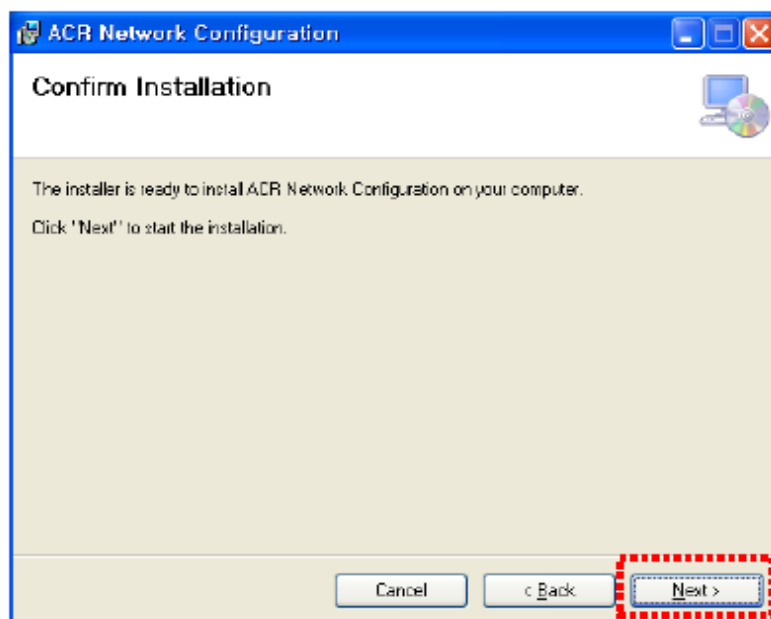
Run the file named “ACR Network Setup.exe” and follow the instructions below.
If you previously installed the ACR Network Program, delete the previous one and re-install the new one.



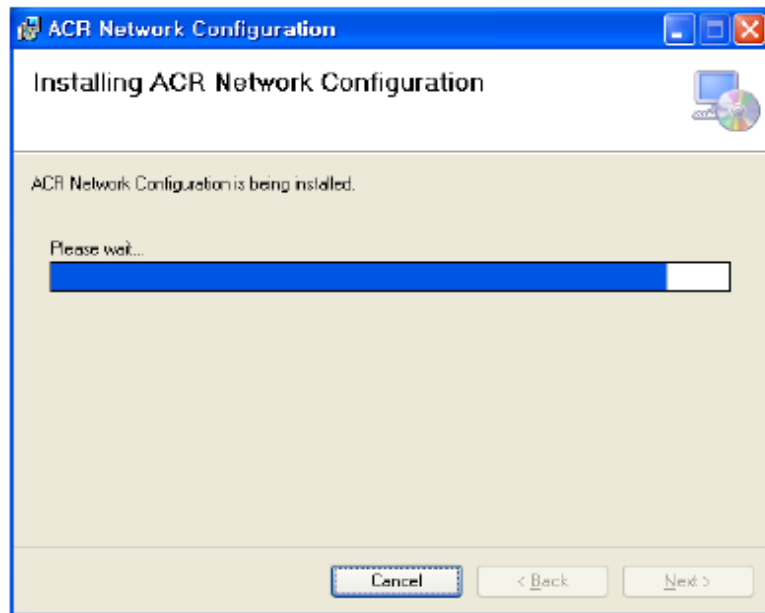
Click “Next”



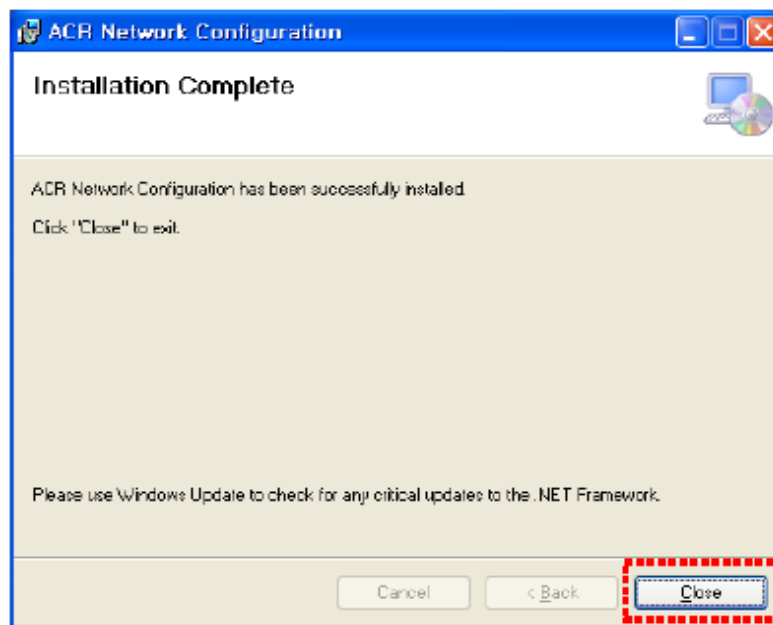
Select the folder you wish to save the file in. Press "Install" if you are ok with the designated folder.



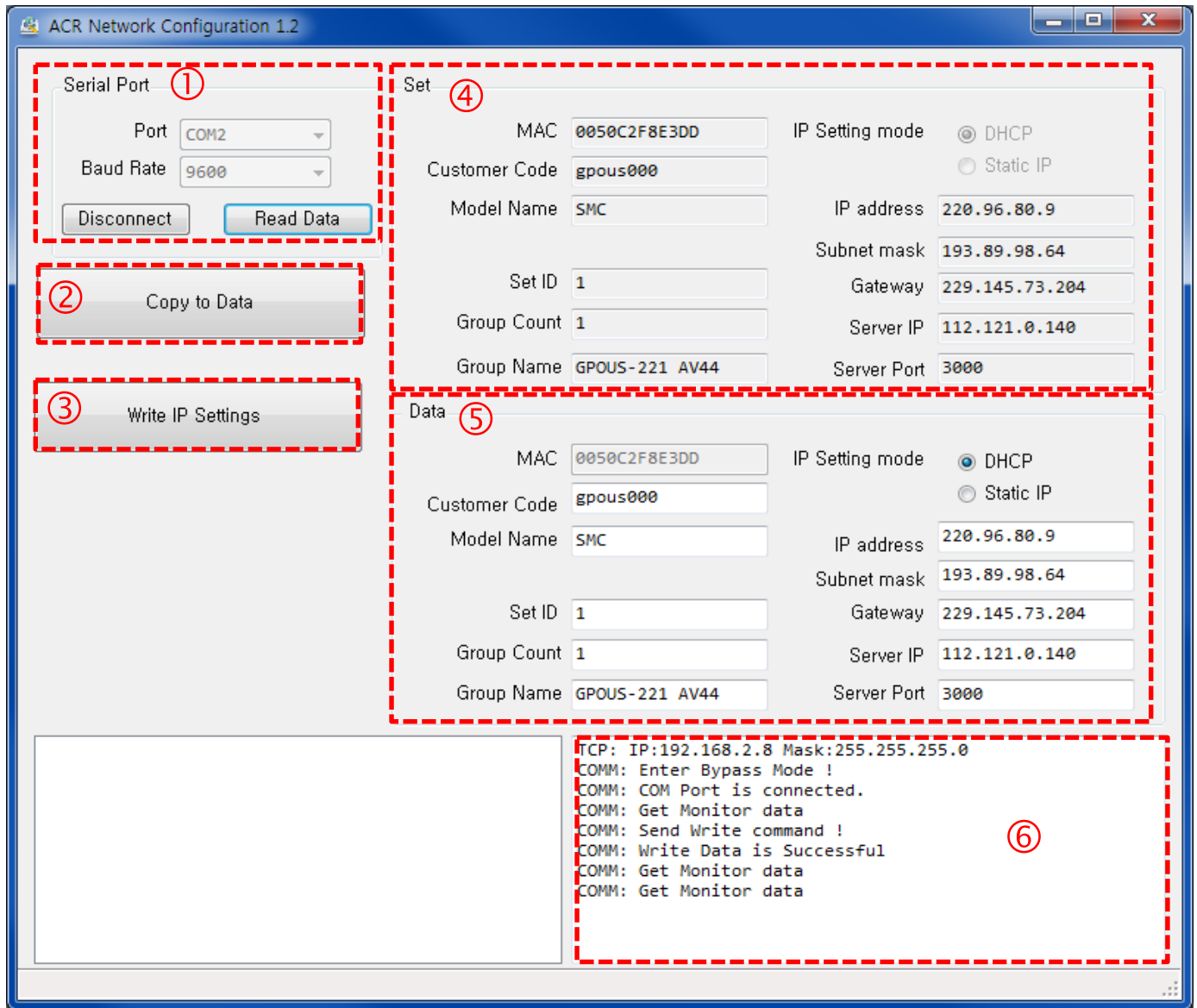
Click "Next"



Wait until the installation is complete.



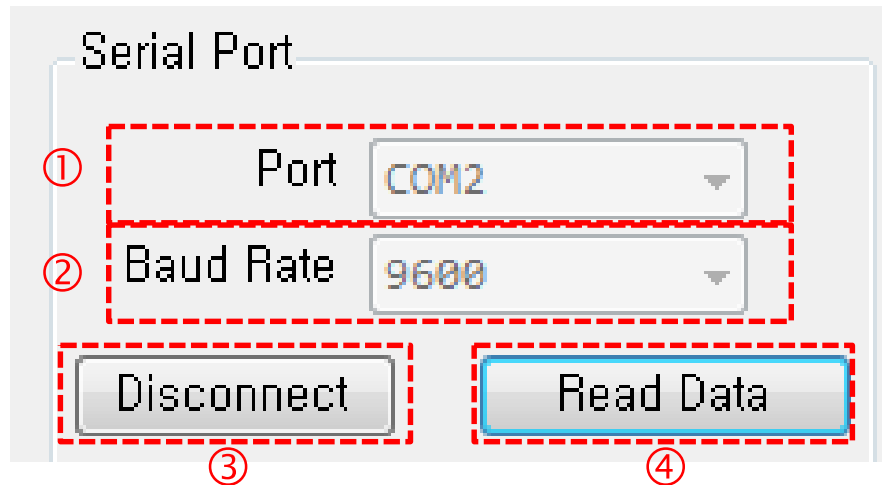
Once installation is complete,
Go to "C:\Program Files\ACR Network Configuration\" to run the program.
or go to shortcut to run program at "C:\Users\Public\Desktop"



1. Serial Port info (COM Port, Baud Rate)
2. "Copy To Data" button- Copies data from "Set" block and applies same values to "Data" block
3. "Write IP Settings" button- saves settings (IP, Subnet mask, gateway, Server IP/port) to ACR Hub
4. When "Read Data" is clicked, ACR Hub data is shown in this section
5. Enter desired IP, Subnet mask, gateway, Server IP settings in this section. Do not change any settings in left column. After entering data, click "Write IP Settings". Then, click "Read Data" button- the settings in this box and #4 should be the same.
6. Message log (successful communication, error)

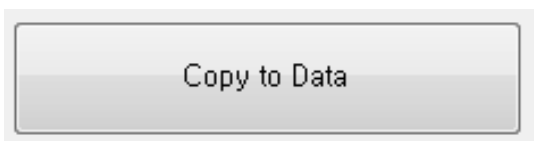
****Server IP (in section 5 of the picture above)
should be "112.121.0.140" or change to user's desired local IP setting**

3-1. Serial Port Block



- A. Sets PC's serial communication port
 - Sets PC's serial communication speed (Baud rate)
- B. Serial Communication Speed
 - SET: 115200
 - Smart Controller: 9600
- C. Connection button (PC & SET Communication)
 - Connect: Connect for serial communication between User PC and SET
 - Disconnect: Stop serial communication between User PC and SET
- D. Reads ACR Hub connection info

3-2. Copy to Data



- Copies data from "Set" block and applies same values to "Data" block

3-3. Write IP Settings



- Applies settings to ACR Hub

3-4. SET Block

Set	
① MAC 0050C2F8E3DD	IP Setting mode <input checked="" type="radio"/> DHCP ⑦
② Customer Code gpous000	<input type="radio"/> Static IP
③ Model Name SMC	IP address 220.96.80.9 ⑧
④ Set ID 1	Subnet mask 193.89.98.64
⑤ Group Count 1	Gateway 229.145.73.204
⑥ Group Name GPOUS-221 AV44	Server IP 112.121.0.140
	Server Port 3000

- 1) MAC Address Display window
- 2) Display window of Buyer code under master control
- 3) Display window of product model under master control
- 4) ID display window of SET
- 5) Display Group's product quantity under Buyer's control
- 6) Display Group's name under Buyer's control
- 7) IP mode display to show the setting value
- 8) Show IP Display Setting

3-5. Data Block

Data	
① MAC 0050C2F8E3DD	IP Setting mode <input checked="" type="radio"/> DHCP ⑦
② Customer Code gpous000	<input type="radio"/> Static IP
③ Model Name SMC	IP address 220.96.80.9 ⑧
④ Set ID 1	Subnet mask 193.89.98.64
⑤ Group Count 1	Gateway 229.145.73.204
⑥ Group Name GPOUS-221 AV44	Server IP 112.121.0.140
	Server Port 3000

- 1) MAC Address Display window
- 2) Client's Code display window under master control
- 3) Product model display window under master control
- 4) ID display window of SET
- 5) Display window of master product's quantity under the client's control
- 6) Set Group name display under the client's control
- 7) Setting IP mode setting
- 8) Setting IP

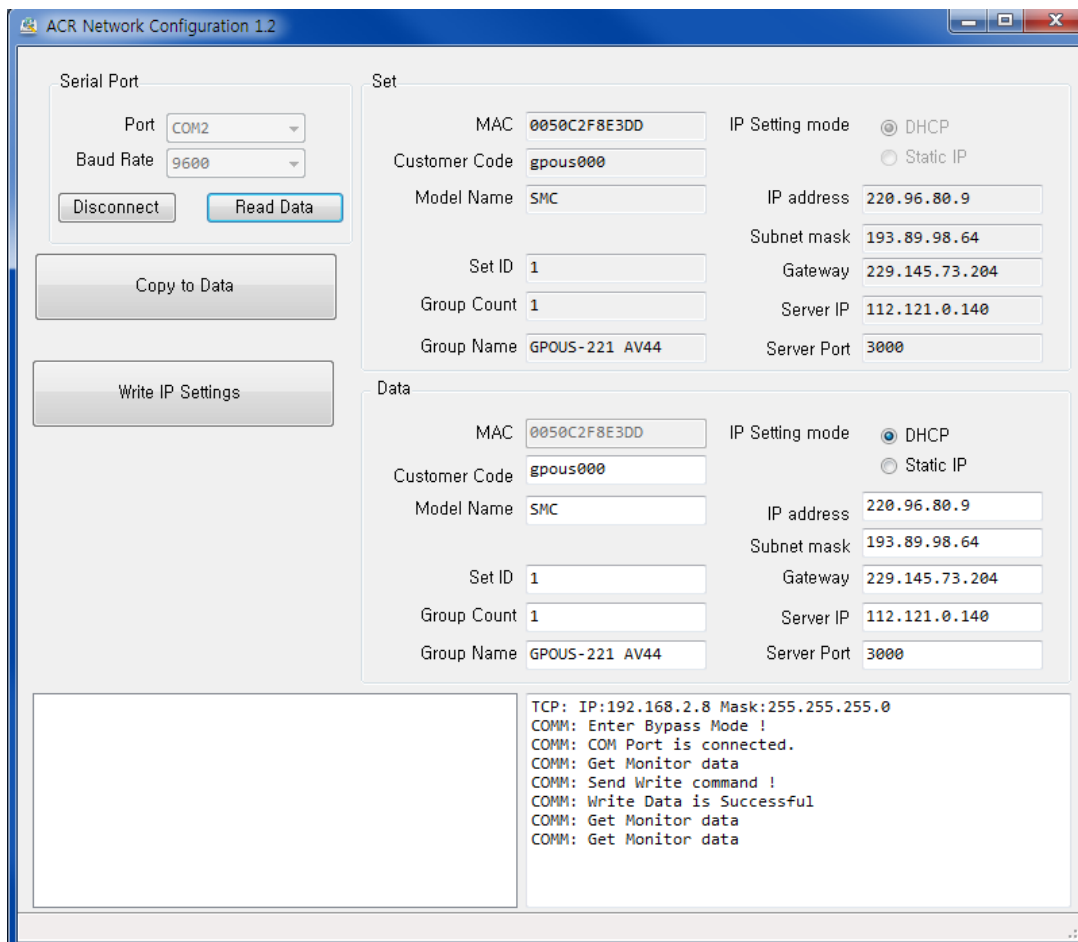
3-6. Data Block

```
TCP: IP:192.168.2.8 Mask:255.255.255.0
COMM: Enter Bypass Mode !
COMM: COM Port is connected.
COMM: Get Monitor data
COMM: Send Write command !
COMM: Write Data is Successful
COMM: Get Monitor data
COMM: Get Monitor data
```

- Displays communication status, errors, program notifications

4. Installation Process

- 4-1. Open “ACR Network Configuration” Program
- 4-2. Enter Settings in Serial Port Block
- 4-3. Click Connection button (in red below)



ACR Network Configuration 1.2

Serial Port

Port: COM2
Baud Rate: 9600

Disconnect Read Data

Copy to Data

Write IP Settings

Set

MAC: 0050C2F8E3DD
Customer Code: gpous000
Model Name: SMC
Set ID: 1
Group Count: 1
Group Name: GPOUS-221 AV44

IP Setting mode: ☒ DHCP ☐ Static IP
IP address: 220.96.80.9
Subnet mask: 193.89.98.64
Gateway: 229.145.73.204
Server IP: 112.121.0.140
Server Port: 3000

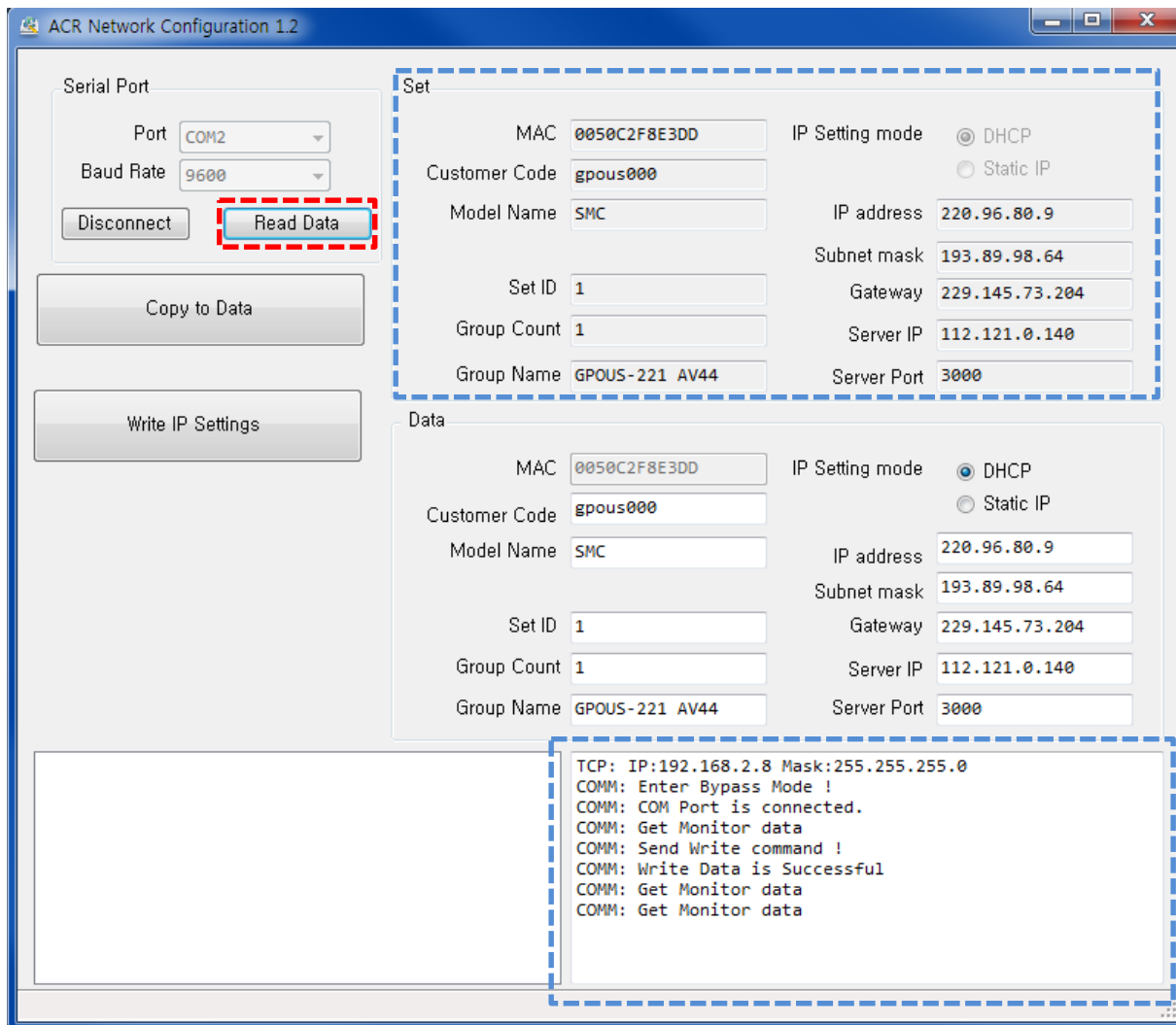
Data

MAC: 0050C2F8E3DD
Customer Code: gpous000
Model Name: SMC
Set ID: 1
Group Count: 1
Group Name: GPOUS-221 AV44

IP Setting mode: ☒ DHCP ☐ Static IP
IP address: 220.96.80.9
Subnet mask: 193.89.98.64
Gateway: 229.145.73.204
Server IP: 112.121.0.140
Server Port: 3000

TCP: IP:192.168.2.8 Mask:255.255.255.0
COMM: Enter Bypass Mode !
COMM: COM Port is connected.
COMM: Get Monitor data
COMM: Send Write command !
COMM: Write Data is Successful
COMM: Get Monitor data
COMM: Get Monitor data

4-4. Select Read Data button



ACR Network Configuration 1.2

Serial Port
 Port: COM2
 Baud Rate: 9600
 Disconnect
Read Data
 Copy to Data
 Write IP Settings

Set

MAC: 0050C2F8E3DD
 Customer Code: gpous000
 Model Name: SMC
 Set ID: 1
 Group Count: 1
 Group Name: GPOUS-221 AV44

IP Setting mode: ☒ DHCP
☐ Static IP
 IP address: 220.96.80.9
 Subnet mask: 193.89.98.64
 Gateway: 229.145.73.204
 Server IP: 112.121.0.140
 Server Port: 3000

Data

MAC: 0050C2F8E3DD
 Customer Code: gpous000
 Model Name: SMC
 Set ID: 1
 Group Count: 1
 Group Name: GPOUS-221 AV44

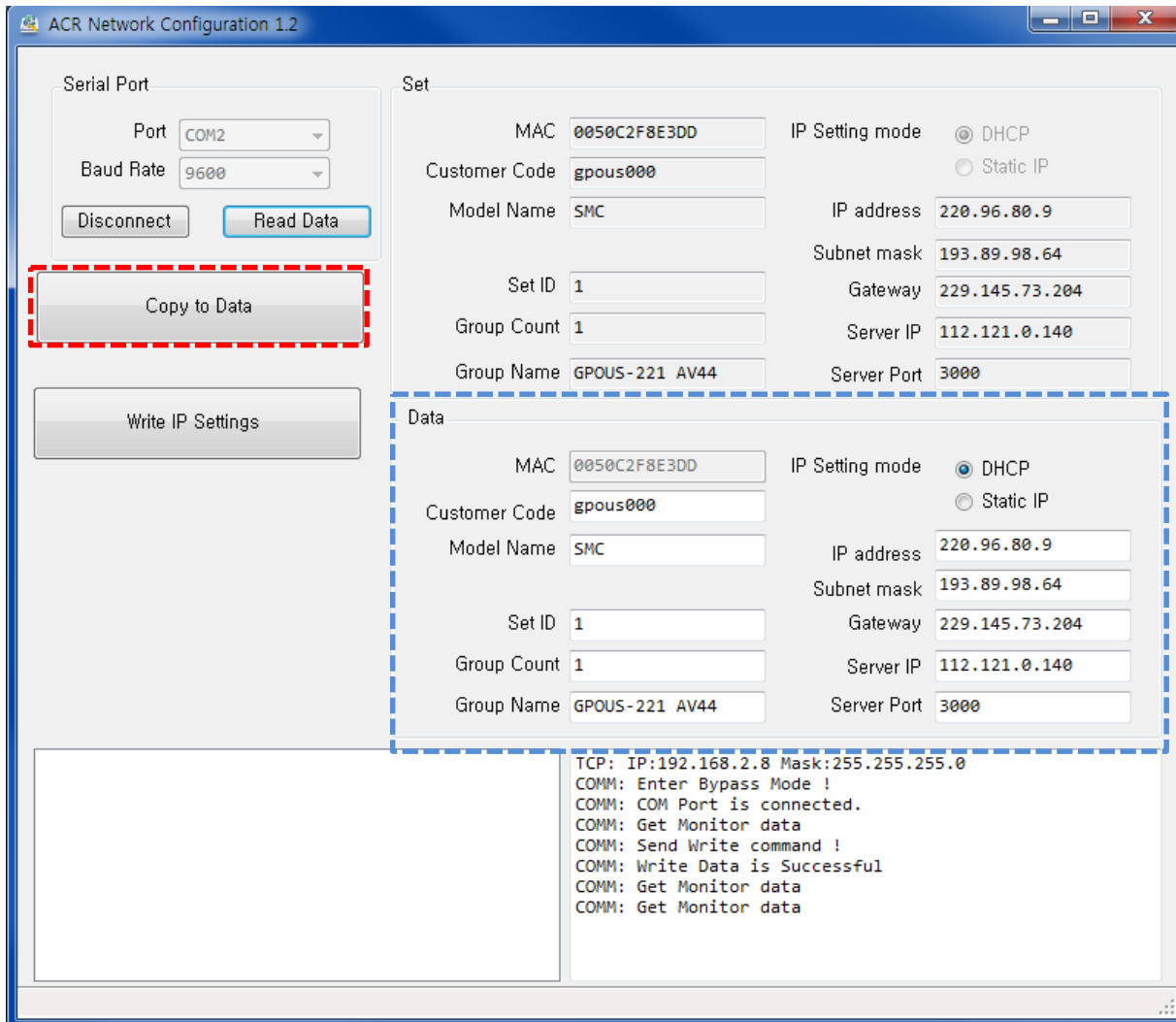
IP Setting mode: ☒ DHCP
☐ Static IP
 IP address: 220.96.80.9
 Subnet mask: 193.89.98.64
 Gateway: 229.145.73.204
 Server IP: 112.121.0.140
 Server Port: 3000

TCP: IP:192.168.2.8 Mask:255.255.255.0
 COMM: Enter Bypass Mode !
 COMM: COM Port is connected.
 COMM: Get Monitor data
 COMM: Send Write command !
 COMM: Write Data is Successful
 COMM: Get Monitor data
 COMM: Get Monitor data

- Successful when the IP value appears in “Set” box circled in blue in top/right
- Successful when message of “COMM” Get Monitor or data” appears in bottom/right

****Server IP should be 112.121.0.140 or change to user’s desired local IP setting**

4-5. Select Copy Data button

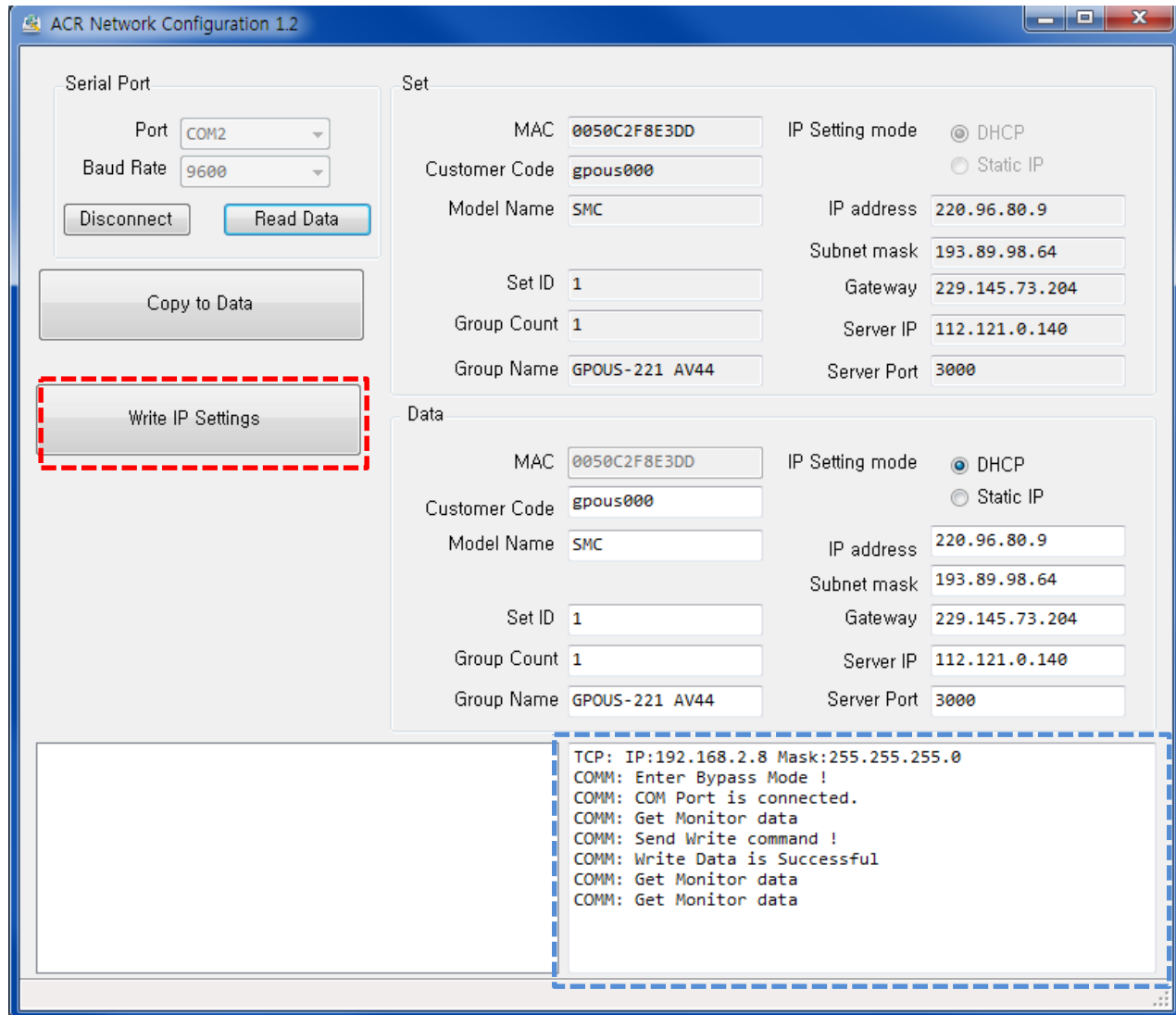


- Successful when IP address value appears in “Data” block (circled in blue-bottom/right)
- Successful when “COMM: is successful” appears

- a. Set Group Count
- b. Set Group Name
- c. Set IP Setting mode
- d. Set IP of the install location

****Server IP should be 112.121.0.140 or change to user’s desired local IP setting**

4-6. Select Write Setting button



ACR Network Configuration 1.2

Serial Port

Port: COM2

Baud Rate: 9600

Disconnect Read Data

Copy to Data

Write IP Settings

Set

MAC: 0050C2F8E3DD

Customer Code: gpous000

Model Name: SMC

Set ID: 1

Group Count: 1

Group Name: GPOUS-221 AV44

IP Setting mode: ☒ DHCP ☐ Static IP

IP address: 220.96.80.9

Subnet mask: 193.89.98.64

Gateway: 229.145.73.204

Server IP: 112.121.0.140

Server Port: 3000

Data

MAC: 0050C2F8E3DD

Customer Code: gpous000

Model Name: SMC

Set ID: 1

Group Count: 1

Group Name: GPOUS-221 AV44

IP Setting mode: ☒ DHCP ☐ Static IP

IP address: 220.96.80.9

Subnet mask: 193.89.98.64

Gateway: 229.145.73.204

Server IP: 112.121.0.140

Server Port: 3000

TCP: IP:192.168.2.8 Mask:255.255.255.0

COMM: Enter Bypass Mode !

COMM: COM Port is connected.

COMM: Get Monitor data

COMM: Send Write command !

COMM: Write Data is Successful

COMM: Get Monitor data

COMM: Get Monitor data

- Click “Write IP Settings” to save settings
- Successful when “COMM: is successful” appears
- Click “Read Data” button to cross-check values of “Set” and “Data” blocks

****Server IP should be changed to: 112.121.0.140**

ACR Monitor Program

1. Introduction

This section of the user guide pertains to ACR (Auto Condition Reporting) Monitor Program.

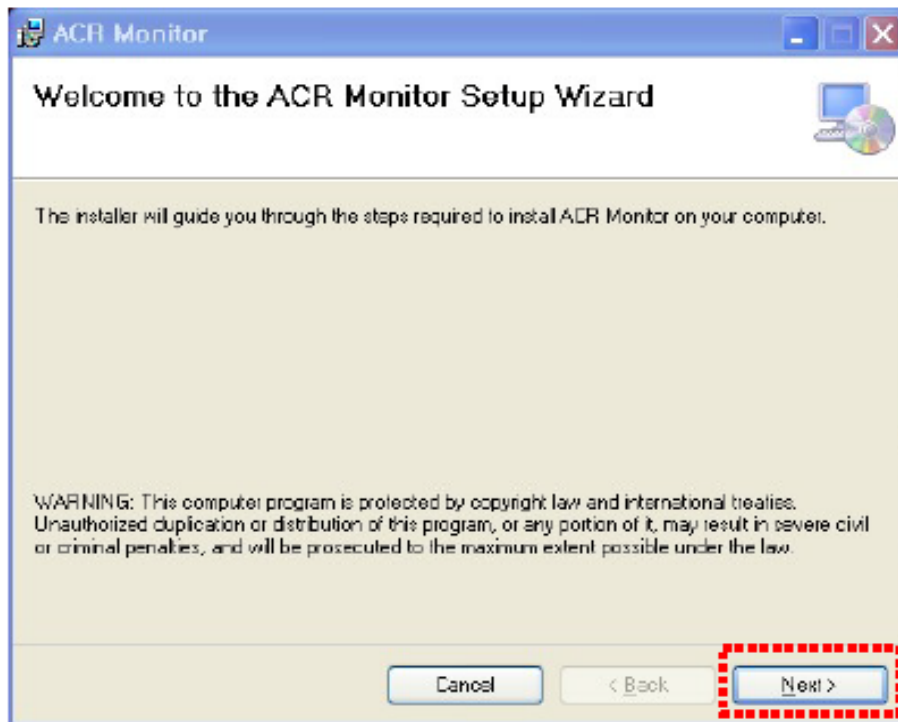
This program allows users to pull real-time status of groups and individual sets via the network.

- Program: ACR Monitor.msi
ACR Monitor Setup.exe
- Operating System : Microsoft Windows XP, WIN7

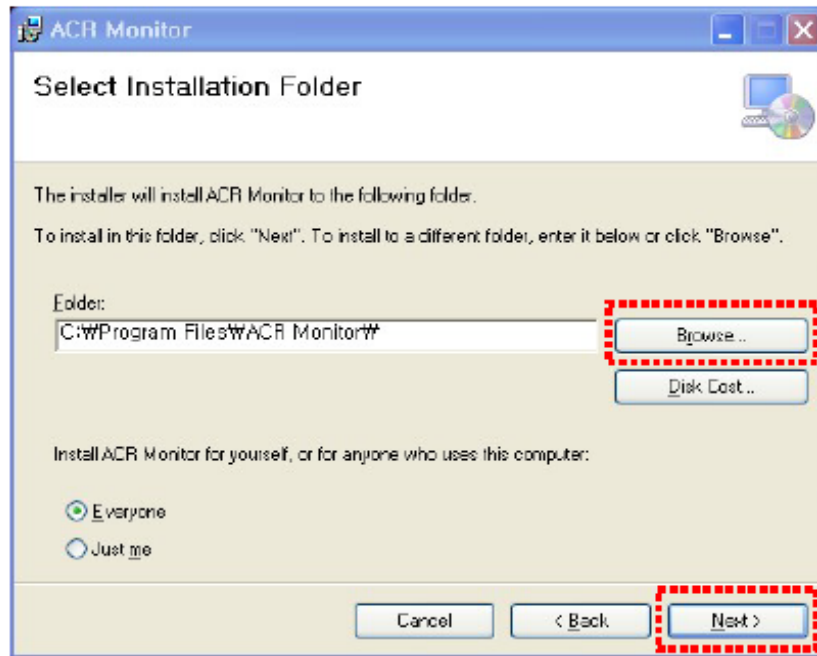
2. Program Installation

Installing ACR Network Setup

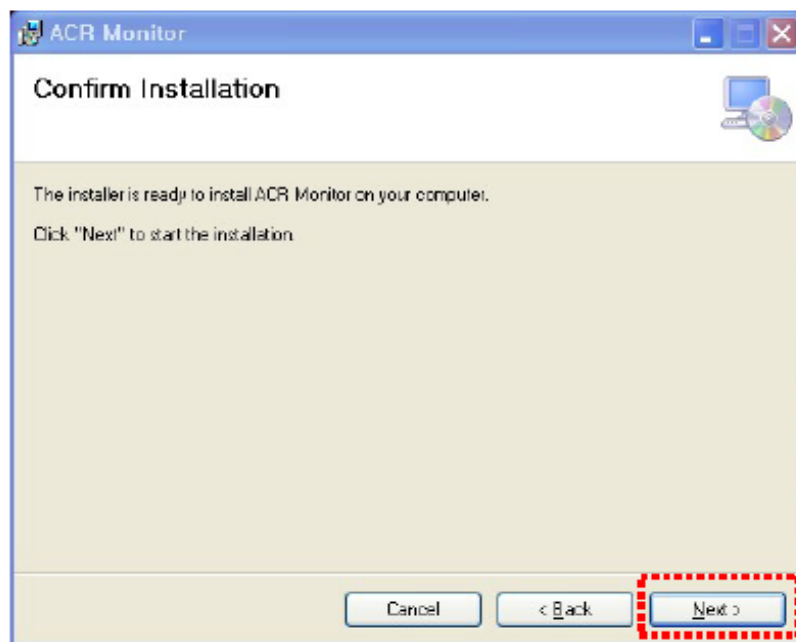
Run the file named "ACR Monitor Setup.exe and follow the instructions below If you have ACR Monitor software installed already, delete/uninstall the previous version and re-install the new one.



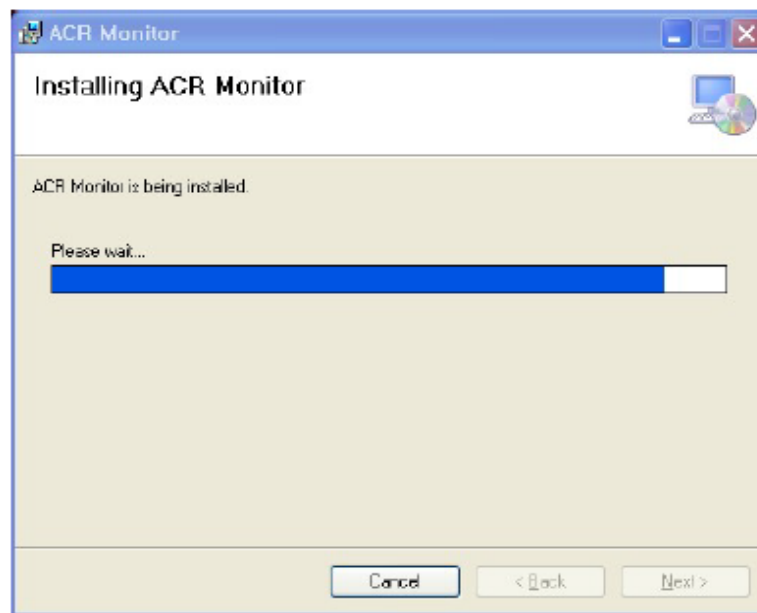
Click "Next"



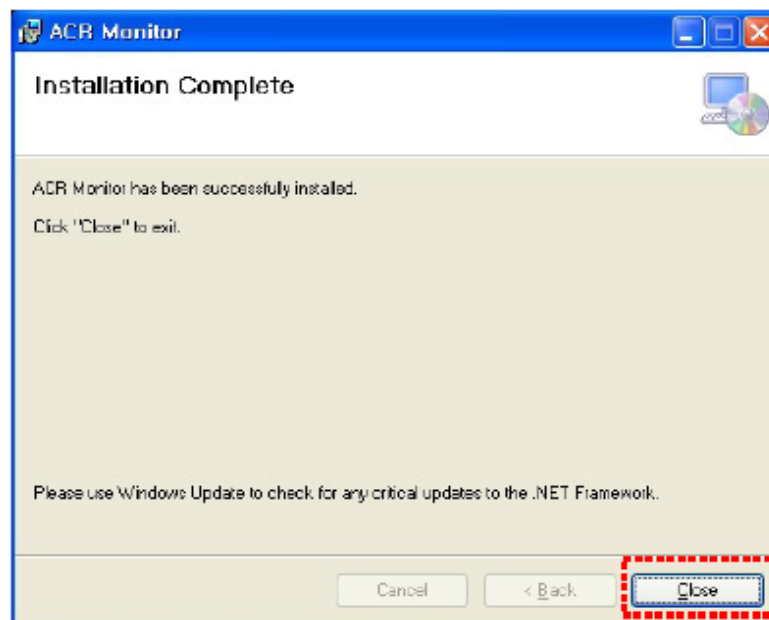
Select the folder you wish to save the file in. Press "Install" if you are ok with the designated folder.



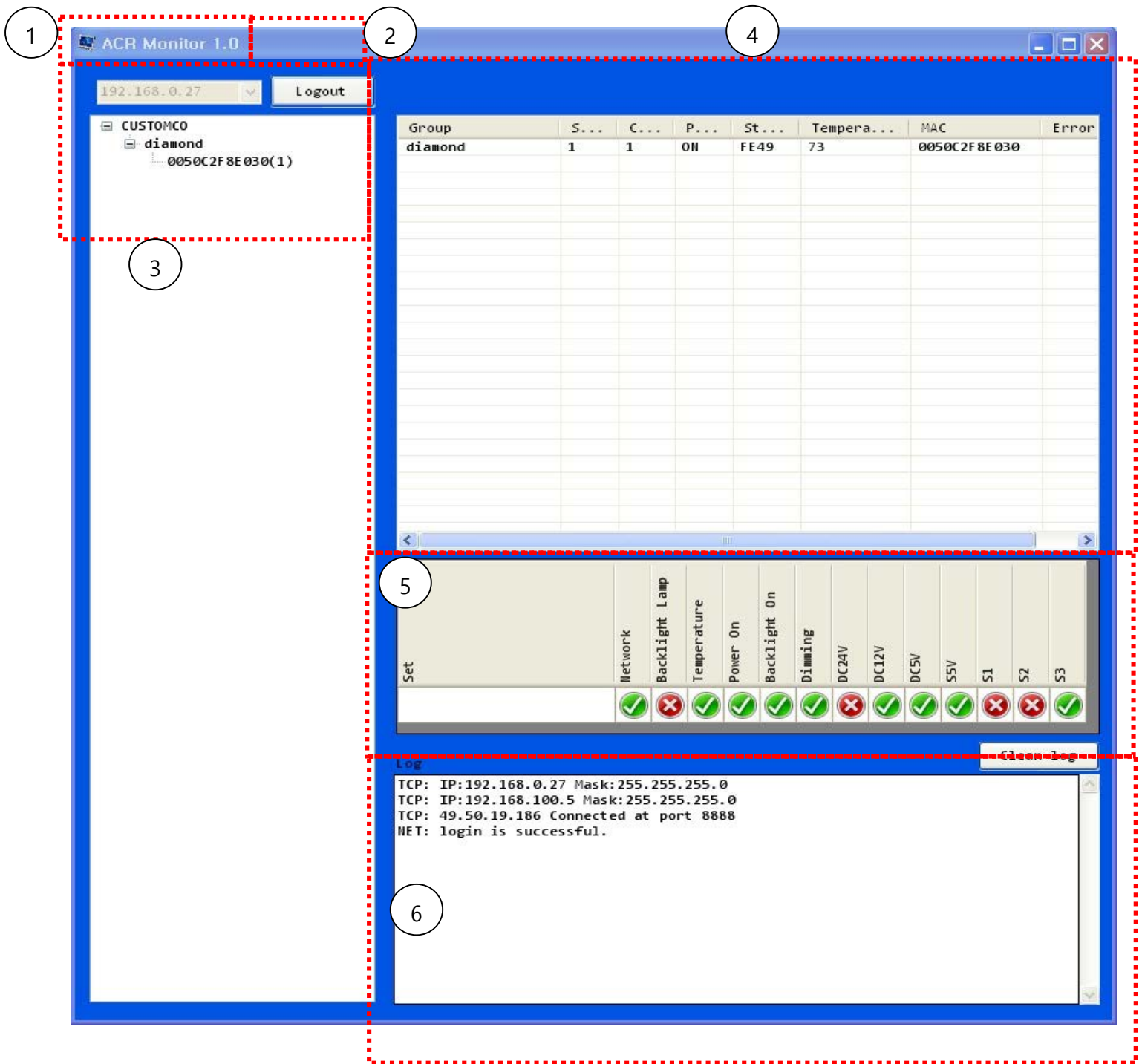
Click "Next"



Wait until the installation is complete.

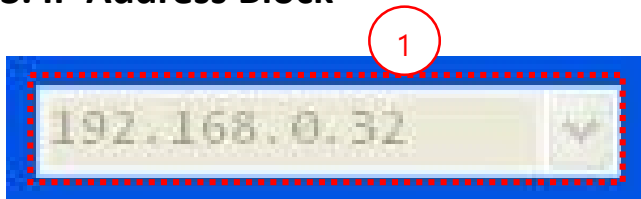


Once installation is complete,
Go to "C:\Program Files\ACR Monitor\" to run the program.
or go to shortcut to run program at "C:\Users\Public\Desktop"



1. PC's IP Address on which ACR Monitor Program being used
2. Server connection button
3. Displays MAC address and Group Name of the SET on server
4. Displays SET (display) status and basic information on server
5. Displays the selected SET by the user on server
6. Displays messages/feedback

3. IP Address Block

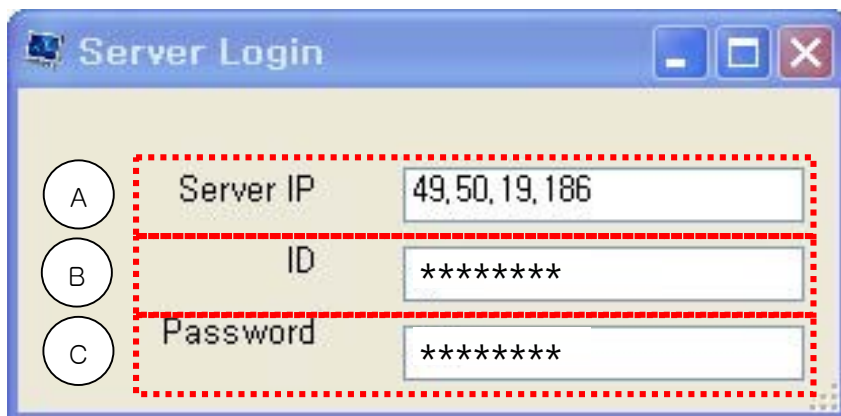


- IP Address of PC on which ACR Monitor Program is installed/running

4. Login

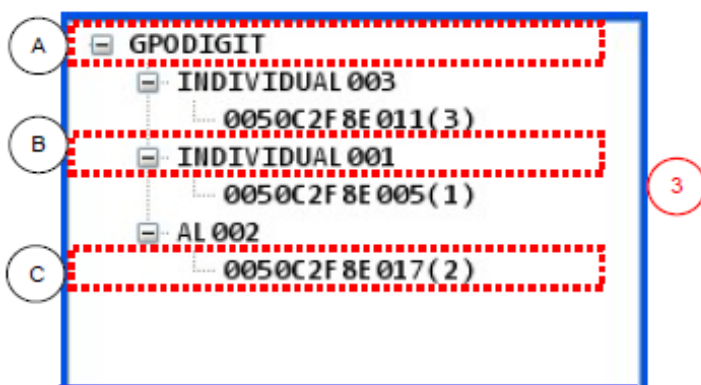


- Server connection button



- A. Server IP Address. ****Server IP should be changed to: 112.121.0.140**
- B. Server program allows for setting of access ID (local server- GPO provides ID in other cases).
- C. Server program allows for setting of access password (local server- GPO provides ID in other cases).

5. Server Connection Status



- Display of MAC address and Group Name of the SET on server

- A. Customer Code of SET on server
- B. Group Name of SET on Server
- C. MAC address and Set ID of the SET on server

6. SET Block

Group	SetID	Count	Power	Status	Temperature	MAC
INDIVIDUAL 003	3	1	ON	FE01	1	0050C2F8E01
INDIVIDUAL 001	1	0	ON	FF00	0	0050C2F8E00
AL 002	2	0	ON	FE01	1	0050C2F8E01

(A)
(B)
(C)
(D)
(E)
(F)
(G)

4

- A. Group Name on server
- B. SET ID on server
- C. Quantity of Group's SETS (displays) on server
- D. Product power (on/off) on server
- E. Status of the SET (ASCII) on server
- F. Temperature status (over/under threshold: "1" indicates "over") of SET on server
- G. MAC Address of SET on server

7. Data Block

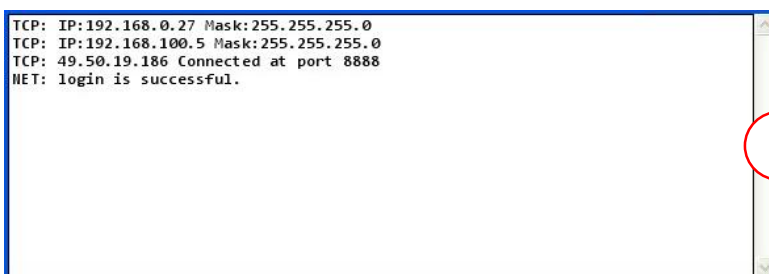


- Displays the status of SET on Server
- ACR status indicators of selected SET

ACR Input LED

S1↕	S2↕	S3↕	Input↕
✓	✗	✗	DVI1↕
✗	✓	✗	DVI2↕
✗	✗	✓	PC↕
✓	✗	✓	HDMI↕
✓	✓	✗	DP↕
✗	✓	✓	Component↕

8. Message Block



- Window displays connection info and status
- Backlight monitoring function optional.

10. Checking the status of a selected SET

- Check the product settings on ACR MONITOR PROGRAM
 - Green indicators show that parameter being monitored is in good condition, Red indicates a problem or inactivity.
- 1) If the SET is powered on and fully operational with no malfunction,
- All parameters being monitored will show a corresponding green indicator.
 - Backlight Lamp monitoring is optional so this status may be displayed in red even when SET is fully operational.

Set	Network	Backlight Lamp	Temperature	Power On	Backlight On	Dimming	DC24V	DC12V	DC5V	55V	S1	S2	S3
	✓	✗	✓	✓	✓	✓	✗	✓	✓	✓	✗	✗	✓

2) If there is NO display, check status of the input signal.

- Check each of the input signals
- Green indicator will be shown for an active input, red indicator for inactive input/no signal

3) If there is an active input as shown in the diagram above but still no display, check the power indicators. There is no active DC24V in the readout above, indicating a board issue.

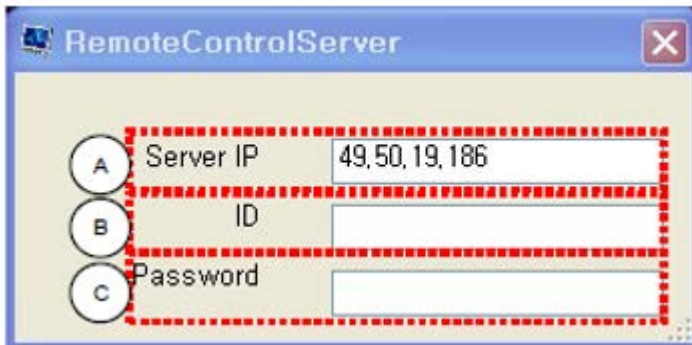
Remote control mode

(applicable to non-video wall series only)

5. Remote Control Mode

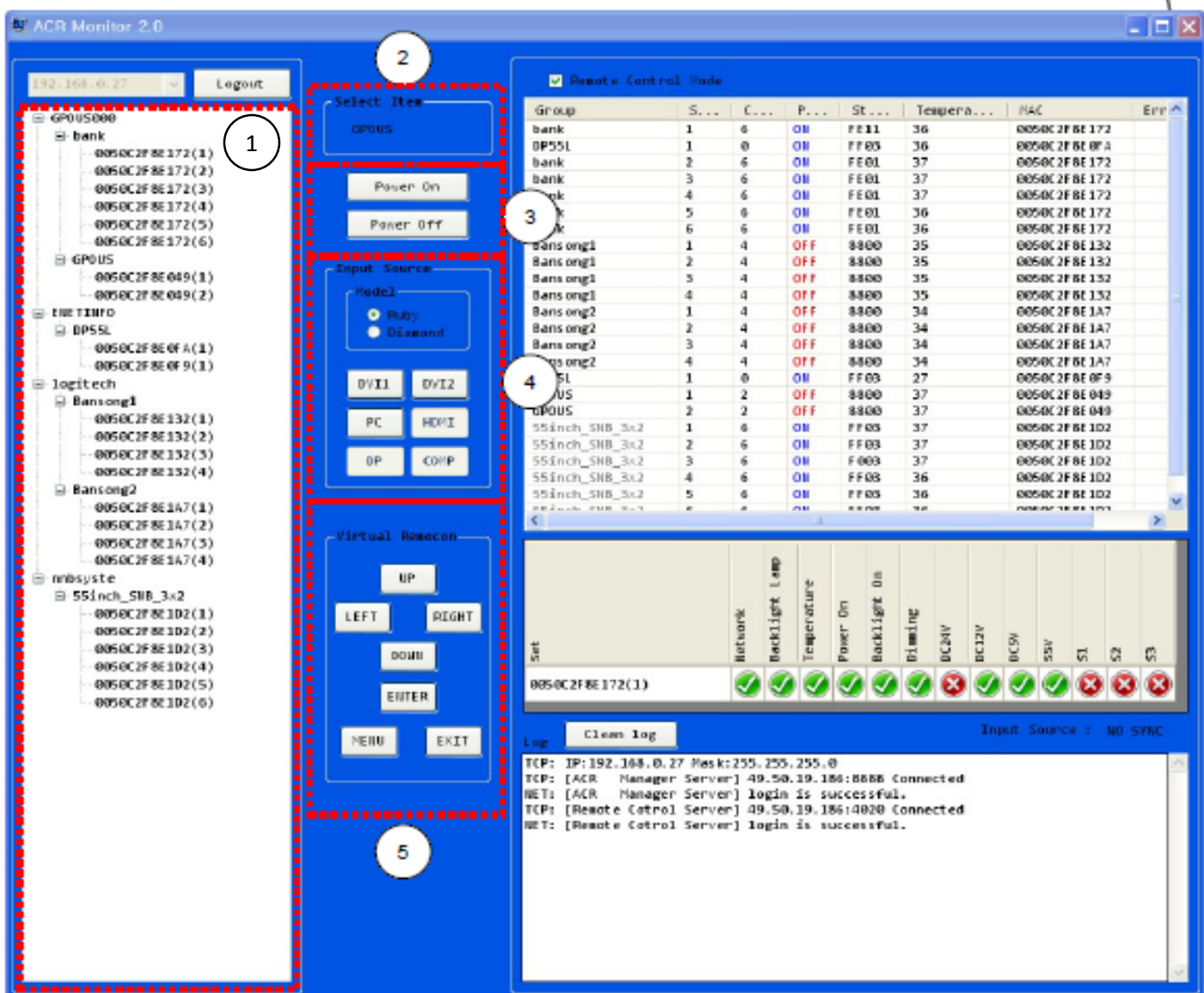


- Remote Control Mode activated with this box is selected



- A. Server IP Address.
- B. Enter Remote Control ID created in server program allows for setting of access password (local server- GPO provides ID in other cases).
- C. Enter Remote Control password created in server program allows for setting of access password (local server- GPO provides ID in other cases).

****Server IP should be "112.121.0.140" or change to user's desired local IP setting**



1. Displays MAC address and Group Name of the SET on server
 - Click Group name to control all displays in the group at once
 - Click specific sets the list under the group to control individually
2. Name of selected group or set selected for control
3. Power On/Off control button
4. Source select buttons.
5. Virtual Remote Control button (Remote controller)

5-1. Select Item.



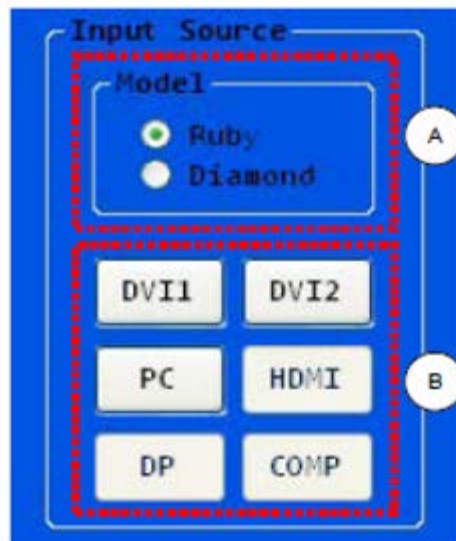
- Name of selected group or set selected for control

5-2. Power On / Off.



- Power On/Off control buttons

5-3. Input Source.



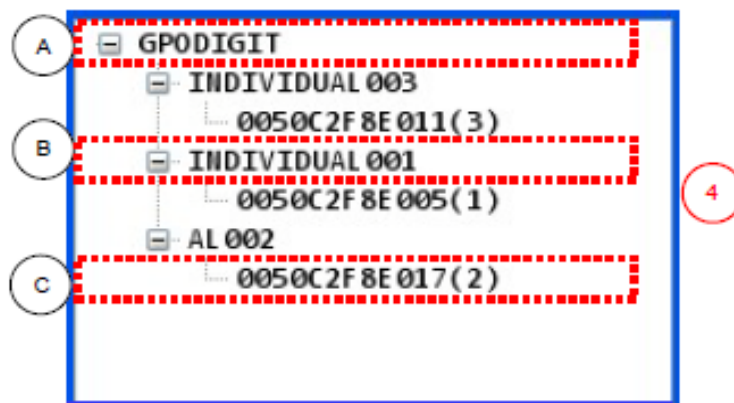
- A. Select "Diamond"
- B. Select input signal/source

5-4. Virtual Remocon.



- Remote control buttons

6. Server connection status



- Displays MAC address and Group Names of Sets (displays) on server or connected on local network
- A. Displays Customer Code of SETs on server
- B. Displays Group Names of SETs on server
- C. Displays MAC addresses and SET IDs of SETs on server

ACR Serial Protocol

SICP (Serial Interface Communication Protocol)

This document defines all the command and messages exchanged between the Master (a PC or the other controller) and the Slave (the displays).
It also describes the ways to send or read the commands or the messages.

1. Protocol definition

SICP stands for “Serial Interface Communication Protocol”.
The protocol is specifically designed to allow data communication in half duplex multi-point environments, but it can also be used for half duplex point-to-point RS-232C communication.

2. Communication characteristics

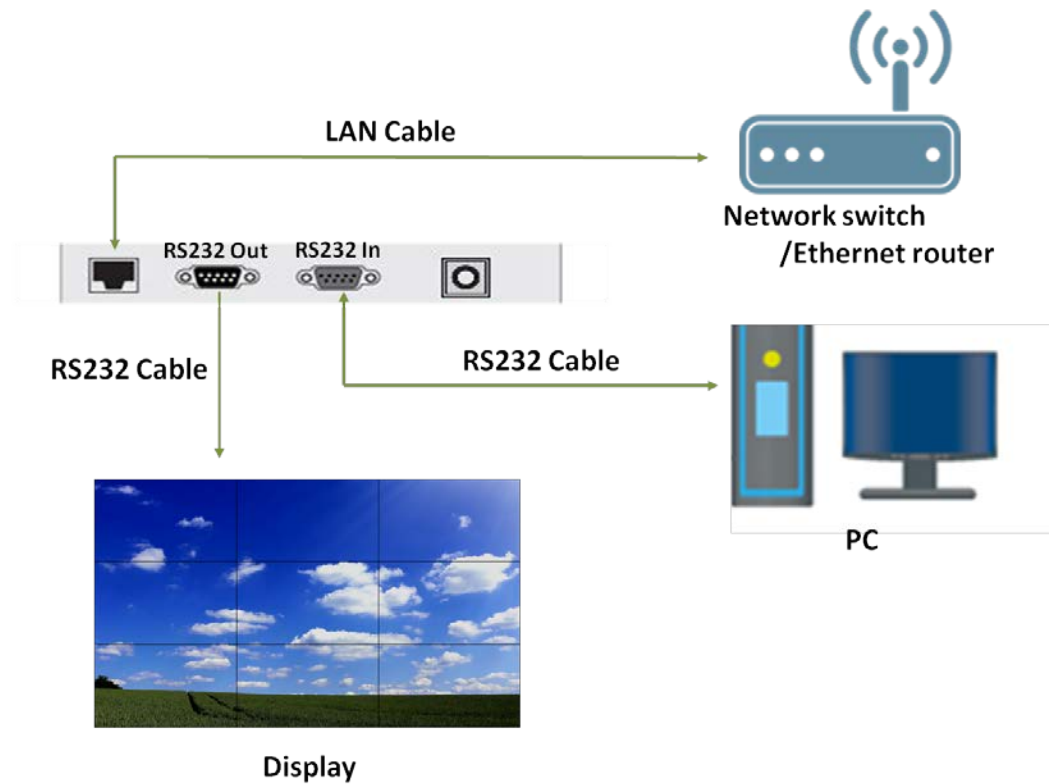
A half duplex communication is implemented starting from the concept of a master-slave structure, where the display is supposed to be the slave.
The first action is always taken by the master, which can be either a PC or any controlling device (acting as server) interfaced to the monitor. After sending a command or a request in the appropriate format the master receives from the slave an acknowledgement, which tells the transmitter whether the command is not valid (or not executable, anyway) or it is accepted. In case of a request, the requested information is sent back and it becomes the acknowledgement by itself.

3. How to connect a external equipment

Female Pin number	Male Pin number
2 <----->	2
3 <----->	3
5 <----->	5

4. Hardware Protocol

Baud rate : 9600 bps
 Data bits : 8 bit
 Parity bits : None
 Stop bits : 1 bit
 Handshake : None



Send the packet below from control device in order to receive status acknowledgement

◆ Send Status Data

- ID1 ~ ID3 : Set ID (“001” ~ “100”)
- DA1 ~ DA3 : Status Data

STX	ID1	ID2	ID3	CM1	CM2	CM3	R/W	DA1	DA2	DA3		ETX
0x0f				R	D	S	#				#	0x0d
Hex	ASCII (capital letter)							Hex			ASCII	Hex

[Status Data Code Value]
 (bit 0, bit 1, bit 2 always "0")

DA1								DA2								DA3							
7	6	5	4	3	2	1	0	7	6	5	4	3	2	1	0	7	6	5	4	3	2	1	0
					0	0	0						0	0	0				x	x	0	0	0

("x" : unused code)

DA1.7 : Active System (On: 1 , Off: 0)
 DA1.6 : Backlight Lamp (On: 1 , Off: 0)
 DA1.5 : Temperature (Below 80°C:1 , Over 80°C: 0)
 DA1.4 : Power On (On: 1 , Off: 0)
 DA1.3 : Backlight On (On: 1 , Off: 0)

DA2.7 : Backlight Dimming (On: 1 , Off: 0)
 DA2.6 : DC24V (On: 1 , Off: 0)
 DA2.5 : DC12V (On: 1 , Off: 0)
 DA2.4 : DC5V (On: 1 , Off: 0)
 DA2.3 : S5V (On: 1 , Off: 0)

DA3.7 : DVI1 Signal (On: 1 , Off: 0)
 DA3.6 : DVI2 Signal (On: 1 , Off: 0)
 DA3.5 : PC Signal (On: 1 , Off: 0)

* < > Hex Value

Ex)

<0x0F>003RDSR0000<0x0D> (Read System Status Set ID : 003)

<0x0F>003RDS#<0x78><0xF8><0x20>#<0x0D> (ACK System Status Set ID : 003)