

**SAMSUNG**

# Wired Remote Control

Basic : MWR-WE00

Model : MWR-WE10

Model Code : MWR-WE10

# **SERVICE** *Manual*

## WIRED REMOTE CONTROL



MWR-WE10

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2. Product Specifications
3. Disassembly and Reassembly
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Refer to the service manual in the GSPN(see the rear cover) for the more information.

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# 1. Precautions

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## 1-1 Precautions for the Service

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- **Use the standard parts when replacing the electric parts.**
  - Confirm the model name, rated voltage, rated current of the electric parts.
- **Repair the disconnection of HARNESS securely when repairing the break down.**
  - If there is any connection error, it causes an abnormal noise and incorrect operation.
- **In case that you assemble or disassemble the products with laying it on the side, do work on the work cloth.**
  - If not, the exterior of products can be scratched.
- **Remove dust and foreign materials from harness, connection part, and inspection part thoroughly when repairing the break down.**
  - It protects the danger of fire such as tracking and short.
- **Check the assembly status of parts after repairing the break down.**
  - It should be same as the status before repairing.

## 1-2 Precautions for the Safety

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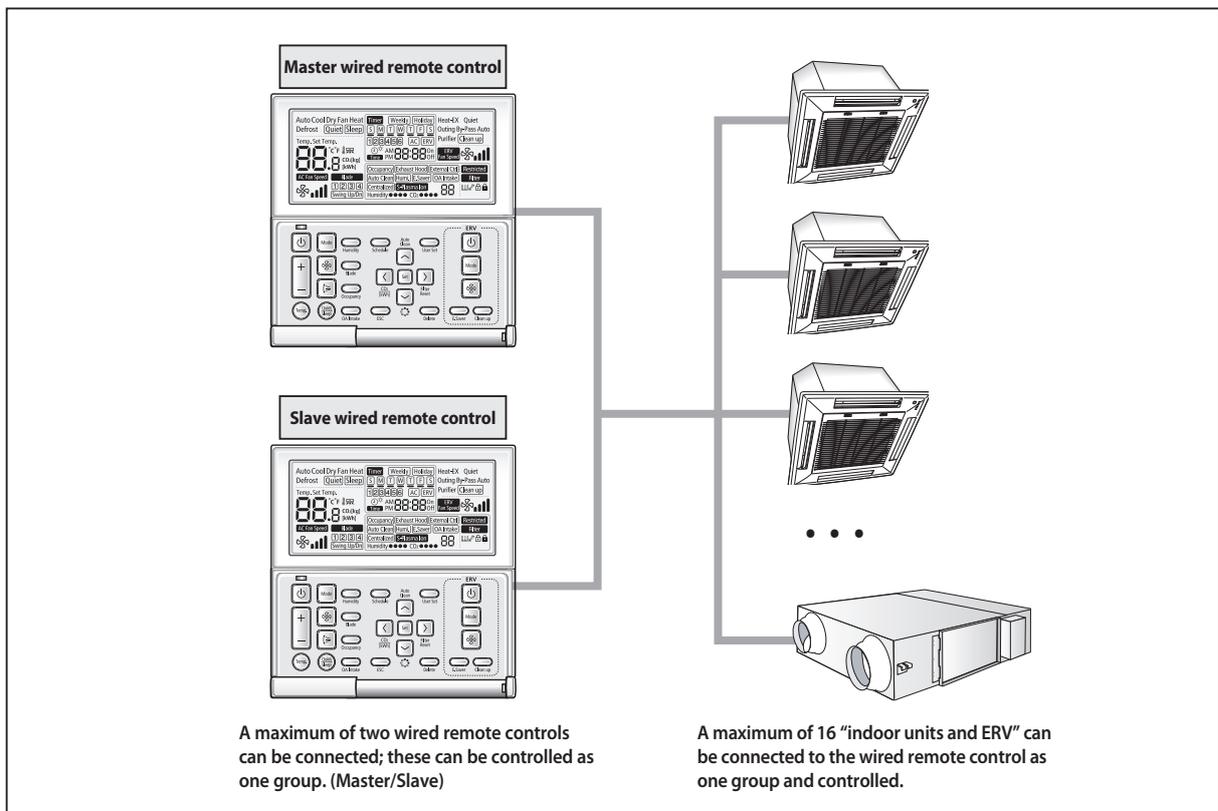
- **Do not pull any electric wires and do not touch an auxiliary power switch with a wet hand.**
  - There is a danger of electric shock or fire.
- **In case any wire or power plug has been damaged, replace it to eliminate any possible danger.**
- **Do not bend the power cord by force and do not put any heavy object on the power cord.**
  - There is a danger of electric shock or fire.
- **Ground the product if necessary.**
  - Be sure to ground the product if there is any danger of electric leakage due to water or moisture.
- **Be sure to turn off the auxiliary power switch or pull out the power plug during replacement or repair of electric parts.**
  - There is a danger of electric shock.

## 2. Product Specifications

### 2-1 The Feature of Product

#### 2-1-1 Features

- **After 11 years, the introduction of the new technology used in the new products required the development of the control part.**
  - Global 4Way : 4-directional individual control, sensors that detect human presence, automatic cleaning and S-Plasma ion, etc.
  - ERV PLUS, AHU : Humidification, supply of outside air and clean-up, etc.
- **Integrated control between systems is necessary due to the growth in the market for ventilation products.**
  - Remote control integrated between the air conditioner and ERV products is necessary.
  - Energy saving is realized through interlocking control.



#### 1) PBA: Main PBA

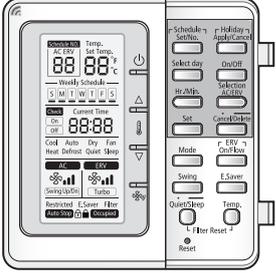
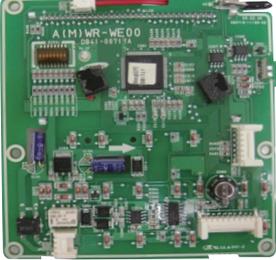
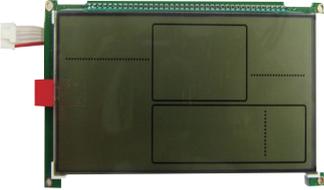
- SAMSUNG 3F4A1HJZZ
- FRAM
- COB TYPE FSTN LCD
- Misconnection prevention relay applied
- Diode for button multiple recognitions applied

#### 2) Application S/W

- Basic control
- Schedule control
- Error display
- Individual control of indoor unit
- ERV individual control
- Integrated control of indoor unit and ERV
- Energy Saving function

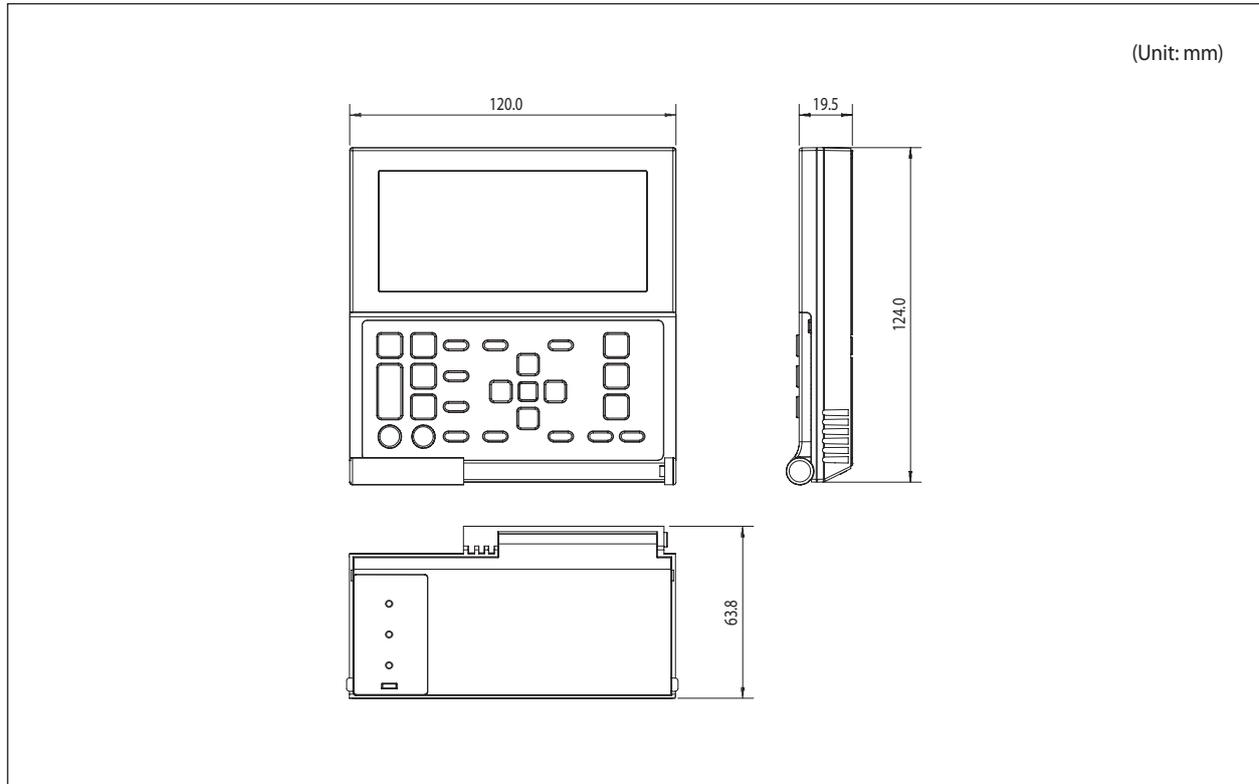
#### 3) Product materials: Box, Label, Manual

## 2-1-2 Basic Product Preparation Changes

Item	Basic Model (MWR-WE00)	Model made (MWR-WE10)	Changes
Ass'y Case			<p><b>New Equipment</b></p> <ul style="list-style-type: none"> <li>- New hinge (Hinge used in folder-type mobile phones)</li> <li>- New TOP/BOTTOM/DOOR</li> <li>- Addition of door button part</li> </ul>
Ass'y PCB			<p><b>New MAIN PBA</b></p> <ul style="list-style-type: none"> <li>- Communication/power terminal B/L</li> <li>- Electrolytic CAP SMD type</li> <li>- Display connector connected</li> </ul>
Ass'y LCD			<p><b>New Display</b></p> <ul style="list-style-type: none"> <li>- Application of display communicating IC to expand the segment</li> <li>- Separate development of LCD PBA including backlight</li> </ul>
Other	<ol style="list-style-type: none"> <li>1) Development of new inlay</li> <li>2) Review of new labels (Option, Door and Box)</li> <li>3) New User/Installation/Service manuals</li> <li>4) Application of display communicating method with the application of display IC</li> <li>5) Compatibility of newly developed set             <ul style="list-style-type: none"> <li>- Global 4Way, ERV Plus and AHU, etc.</li> </ul> </li> <li>6) New addition of User Mode/Service Mode (many)</li> <li>7) Software for OPTION function</li> <li>8) Changing daytime reservation function</li> </ol>		

## 2-2 Product Structure

### External Dimensions



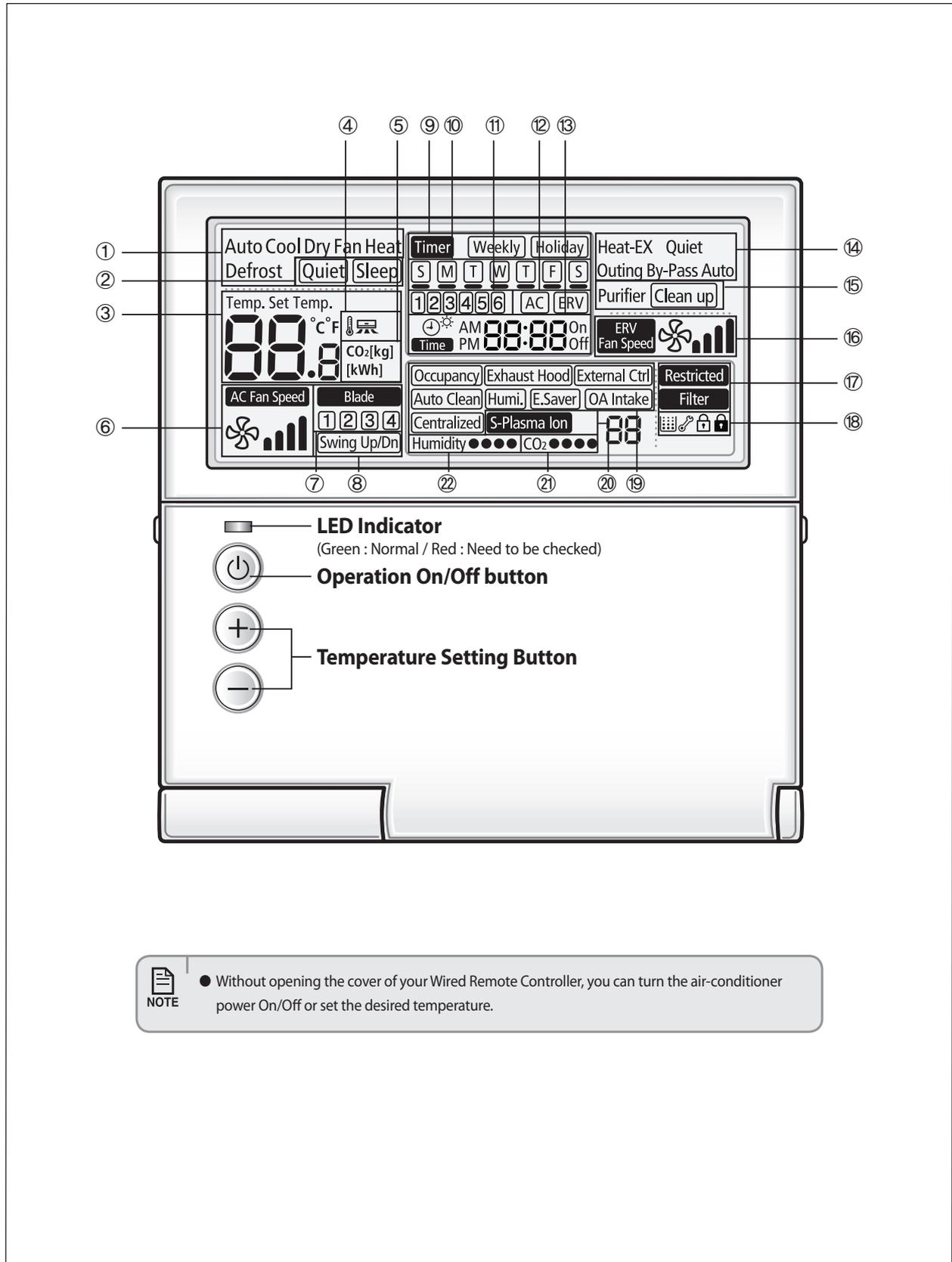
## 2-3 Product Specifications

### 2-3-1 Environment of Usage

Classification	No	Item	Standard	Remarks
General Conditions	1	Region	Domestic	
	2	Form	Wall-hanging, air conditioner indoor unit remote control equipment	Refer to user guide
	3	Parts supply	Inquiries to Service Center	
Installation Conditions	1	Standard temperature and humidity	15 ~ 25°C , 35 ~ 65 %	
	2	Temperature for usage	0°C ~ 40°C (Indoor usage)	
	3	Humidity for usage	Humidity 30%RH ~ 90%RH (conditional to no condensation)	
Power	1	Input	12VDC/500mA	
Installation	2	Installation space	Installing on the wall using the exclusive install bracket	
Delivery	1	Opening	Conform to the appointed order	
	2	Confirmation of delivery	<ul style="list-style-type: none"> <li>• Confirm with the delivery check sheet, and repair faulty items.</li> <li>• Follow the method, usage conditions, and notices according to the user guide. When a problem occurs during this process, it supported by places that can provide these services.</li> </ul>	
Installation Method	1		- Refer to the Installation guide.	
Other	1		- You must refer to Installation guide and User guide.	

## 2-3-2 Functional Development Specifications

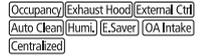
### ■ Display



**NOTE** ● Without opening the cover of your Wired Remote Controller, you can turn the air-conditioner power On/Off or set the desired temperature.

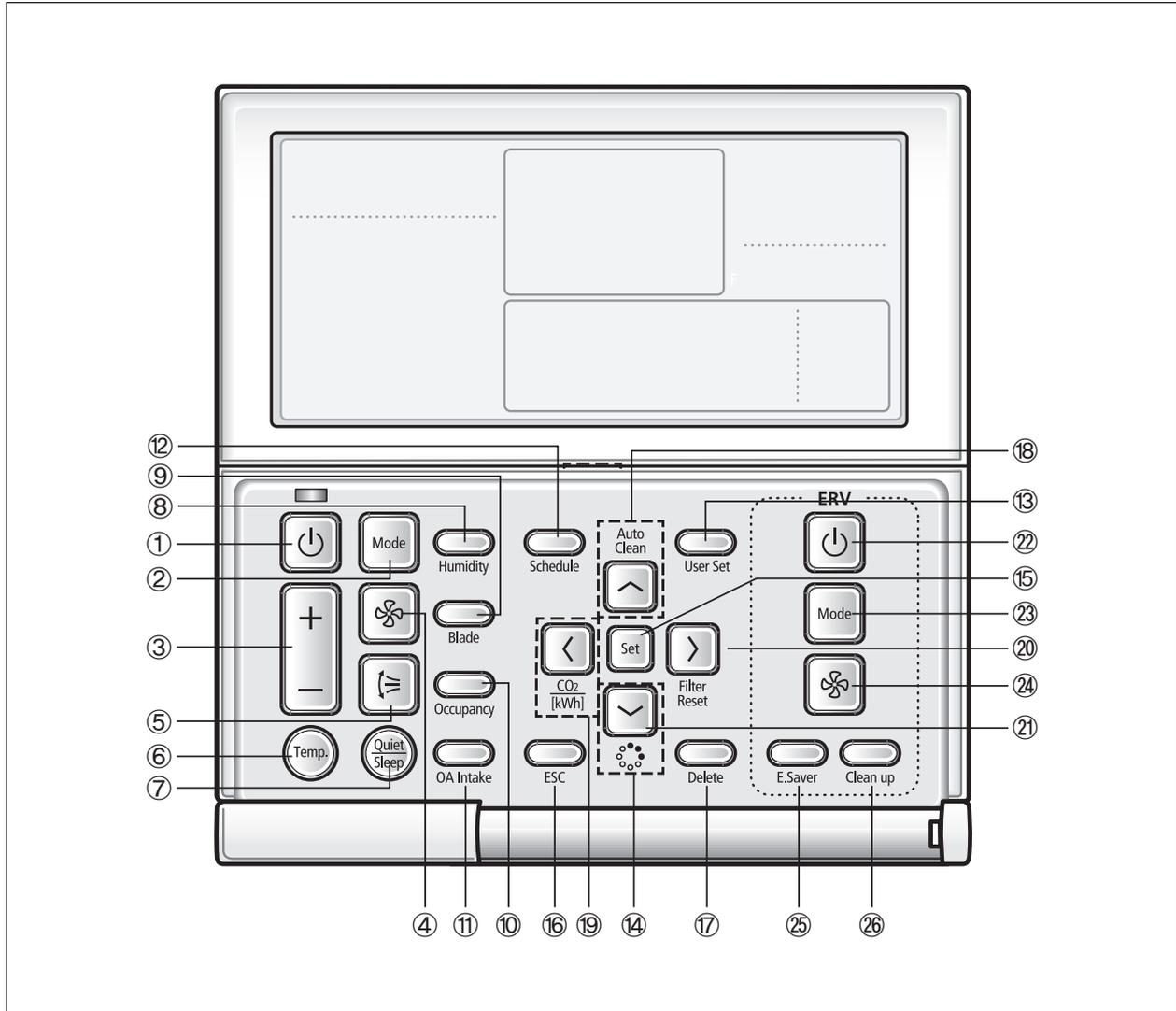
## Functional Development Specifications (cont.)

### Display (cont.)

Classification	Indication	Function
Air Conditioner Related Information	① Auto Cool Dry Fan Heat Defrost	Displays Air conditioner operation
	② 	Displays Quiet/Sleep operation
	③ Temp. Set Temp. 	Displays Indoor temperature/Set temperature
	④ 	Displays discharge temperature control
	⑤ 	Displays CO <sub>2</sub> /power consumption
	⑥ 	Displays AC fan speed
	⑦ 	Displays Blade selection
	⑧ 	Displays Air swing(Up/Dn)
Schedule related information	⑨ 	Weekly schedule/Holiday setting displays
	⑩ 	Displays Current day(□) or scheduled day(□)
	⑪ 	Displays Schedule number
	⑫ 	Displays Scheduled device selection
	⑬ 	Displays Current time/summer time/scheduled time
Ventilator (ERV) related information	⑭ Heat-EX Quiet Outing By-Pass Auto Purifier	Displays Ventilator(ERV) operation
	⑮ 	Displays Clean up
	⑯ 	Displays Ventilator(ERV) fan speed
Commom function related information	⑰ 	Displays Invalid operation /Filter cleaning (filter cleaning period)
	⑱ 	Displays Dust box cleaning alert/check/partial locking/full locking
	⑲ 	Displays occupancy detection/Exhaust hood/External interconnection control/Auto clean/ Humidifying/Energy saving/Outdoor air supply intake/ Centralized control
	⑳ 	Displays S-Plasma Ion
	㉑ CO <sub>2</sub> ●●●●	Displays Indoor CO <sub>2</sub> density
	㉒ Humidity ●●●●	Displays Indoor humidity

## Functional Development Specifications (cont.)

### Buttons



Classification	Button	Function		
Air Conditioner Related Information	①		<b>Operation On/Off button</b>	Turns the air conditioner power On/Off
	②		<b>Mode button</b>	Selects the desired air conditioner operation
	③		<b>Temperature setting button</b>	Sets the desired temperature
	④		<b>Fan speed button</b>	Changes the air conditioner's fan speed
	⑤		<b>Air Swing button</b>	Changes the air flow direction to move upward or downward
	⑥		<b>Temp. button</b>	Checks the indoor temperature
	⑦		<b>Quiet/Sleep button</b>	Selects Quiet or Sleep operation for the air conditioner

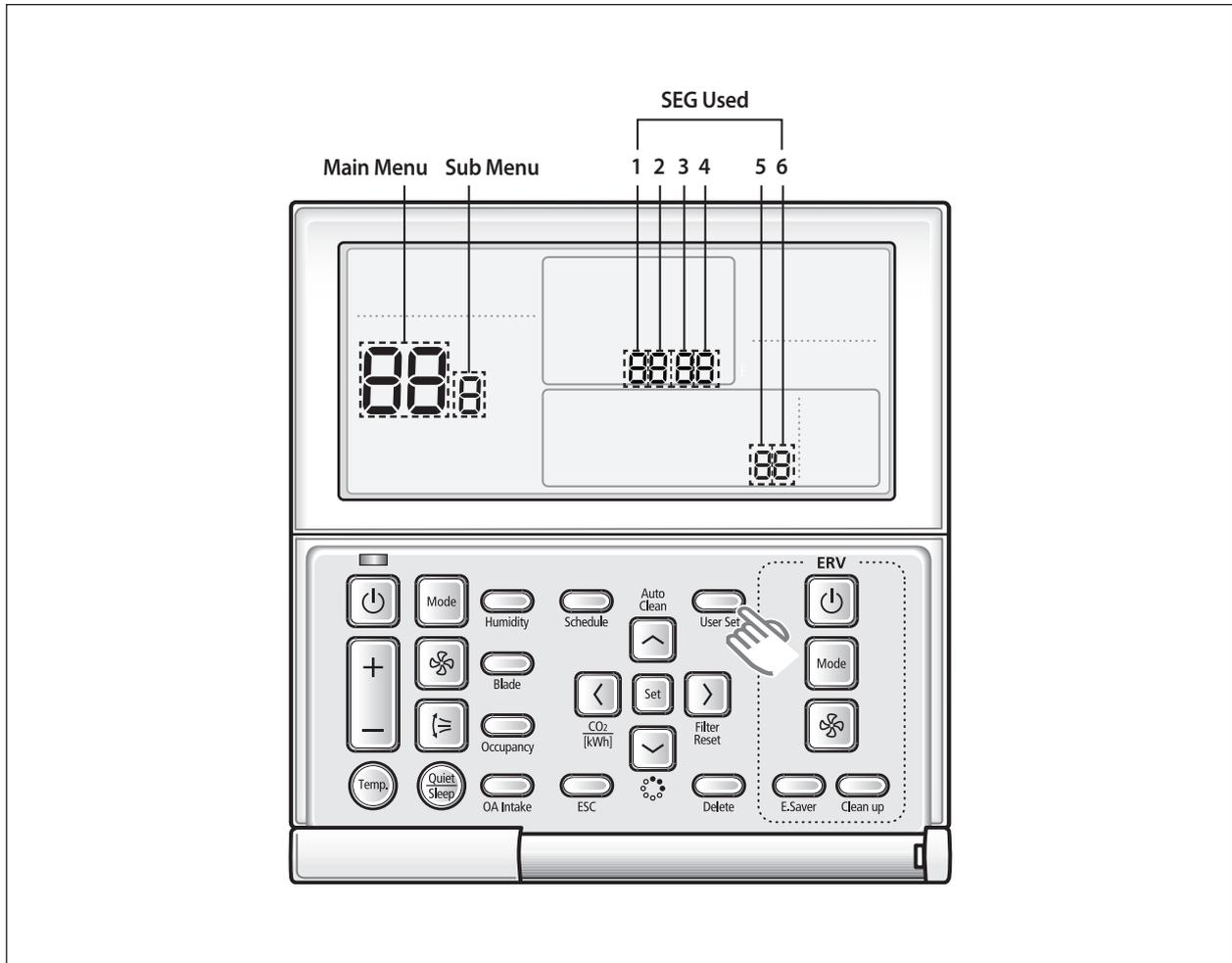
## Functional Development Specifications (cont.)

### Buttons (cont.)

Classification		Button	Function	
Air Conditioner Related Information	⑧	 Humidity	<b>Humidity button</b>	Turns the AHU humidifying function On/Off
	⑨	 Blade	<b>Blade button</b>	Selects a blade for individual control
	⑩	 Occupancy	<b>Occupancy detection button</b>	Set the power to automatically turn off if there is nobody in the room
	⑪	 OA Intake	<b>Outdoor air intake</b>	Select the AHU Outdoor intake function
Special Function Displays	⑫	 Schedule	<b>Schedule Button</b>	Select the schedule setting function
	⑬	 User Set	<b>User Set Button</b>	Select the detailed setting function
	⑭	 Navigational buttons	<b>Navigational buttons</b>	Move between items or change the item value
	⑮	 Set	<b>Set button</b>	Save your new settings
	⑯	 ESC	<b>ESC button</b>	Return to general mode from schedule and detailed setting screens
	⑰	 Delete	<b>Delete button</b>	Cancel the schedule setting
	⑱	 Auto Clean	<b>Auto Clean button</b>	Use the auto cleaning function for your air conditioner
	⑲	 CO <sub>2</sub> /[kWh]	<b>CO<sub>2</sub>/[kWh] button</b>	Display the amount of CO <sub>2</sub> and the power consumption
	⑳	 Filter Reset	<b>Filter Reset button</b>	Turn off the filter cleaning displays (filter using time reset)
	㉑	 S-Plasma Ion	<b>S-Plasma Ion button</b>	Choose the S-Plasma Ion function
Ventilator (ERV) Related Buttons	㉒	 Operation On/Off	<b>Operation On/Off button</b>	Turn the Ventilator(ERV) On/Off
	㉓	 Mode	<b>Mode button</b>	Select the desired operation for the Ventilator(ERV)
	㉔	 Fan speed	<b>Fan speed button</b>	Change the fan speed for your Ventilator(ERV)
	㉕	 E.Saver	<b>E.Saver button</b>	Begin Energy Saving Operation
	㉖	 Clean up	<b>Clean up button</b>	Select air purification through the in/out load controls

## Functional Development Specifications (cont.)

### ■ Detailed Settings (User Settings)



**1. If you want to set the detailed settings, press the **User Set** button.**

- ▶ You will enter the User Set mode, and the [Main Menu] will be displayed.

**2. Refer to the Wired Remote Controller's User Set list on the next page to select the desired menu.**

- ▶ Using the [^]/[v] buttons, select a main menu number and press the [>] button to enter the sub-menu setting screen.
- ▶ Using the [^]/[v] buttons, select a sub-menu number and press the [>] button to enter the data setting screen.
- ▶ Once you have entered the setting screen, the current setting will be displayed.
- ▶ Refer to the chart for data setting.
- ▶ Using the [^]/[v] buttons, change the settings and press the [>] button to move to the next setting.
- ▶ Press the **Set** button to save the setting and exit to the sub-menu setting screen.
- ▶ Press the **Esc** button to exit to general mode.



- While setting the data, you can use the [>]/[<] buttons to set the range of SEG used.
- While configuring the setting, press the **Esc** button to exit to the sub-menu setting screen without saving the setting.

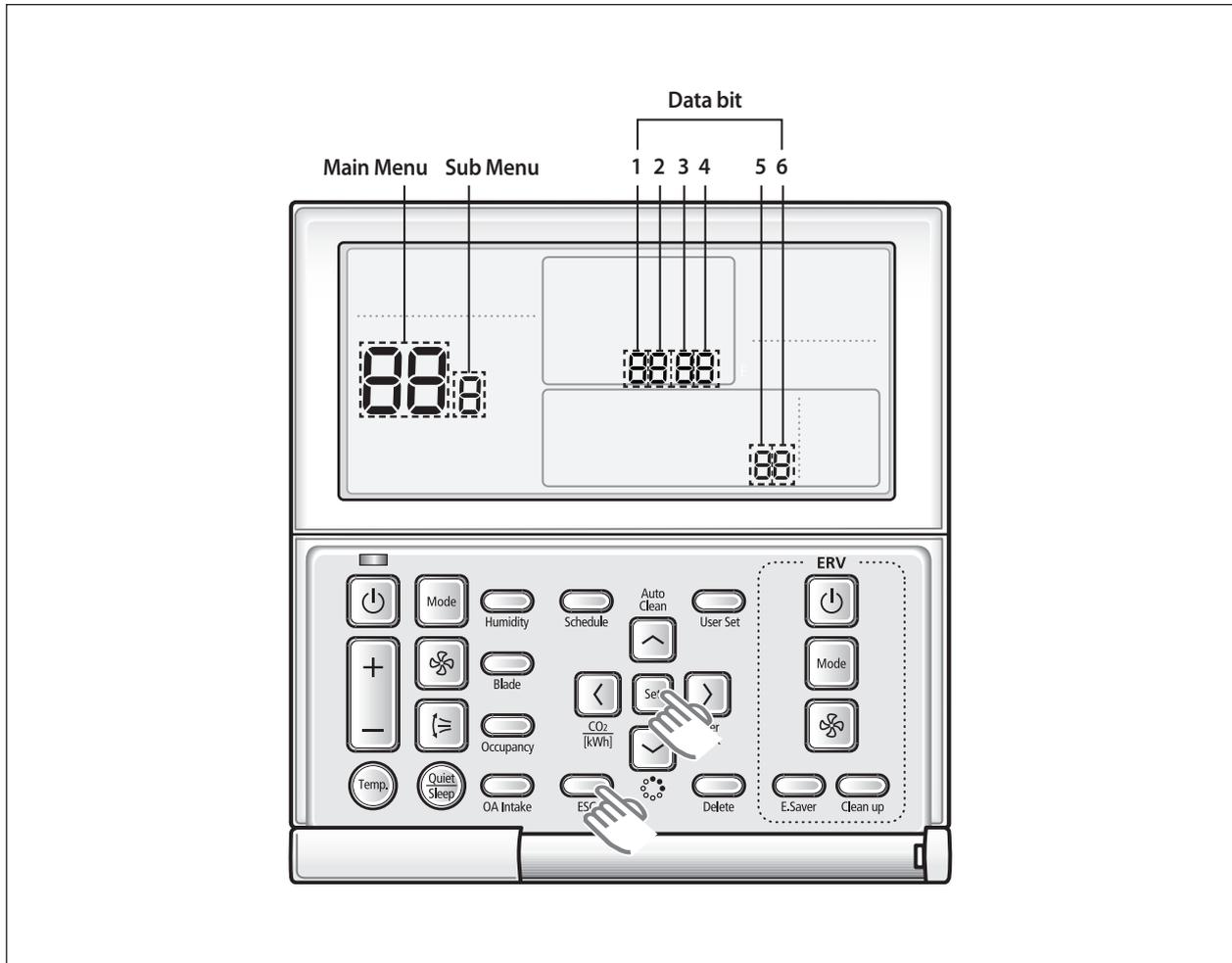
## Functional Development Specifications (cont.)

### Detailed Settings (User Settings) (cont.)

Main Menu	Sub menu	Functions	SEG Used	Default	Range	Unit	
1		Auto stop	1	0	0~12 hours	1 hour	
2		Temp limits [°C(°F)]	Lower Limit	1,2	16(61)	16~30°C (61~86°F)	1°C(1°F)
			Upper Limit	3,4	30(86)	18~30°C (65~86°F)	1°C(1°F)
3		All locking		1	0	0-Unlock, 1-Lock	-
		Lock of partial button	Lock of Operation On/Off button	2	0	0-Unlock, 1-Lock	-
			Lock of operation selection button	3	0	0-Unlock, 1-Lock	-
			Lock of temperature setting button	4	0	0-Unlock, 1-Lock	-
			Lock of fan speed button	5	0	0-Unlock, 1-Lock	-
			Lock of schedule setting button	6	0	0-Unlock, 1-Lock	-
4	1	Current Temperature Setting (Year, Month, Date)	1,2/3,4/5,6	10/01/01	00~99/1~12/1~31	YY,MM,DD	
	2	Current Time Setting (Day, Hour, Minute)	Day/AM/PM/1,2/3,4	Friday/PM/12/00	Sun~Sat/AM~PM/0~12/0~59	Day, hour, minute	
5	1	Summer Time Use and Setting Methods	Use of summer time (Y/N)	1	0	0-No use, 1-Use	-
			Summer Time Application Method	2	0	0- Weekly,1- Daily	-
	2	Summer time use (Weekly) Start (? Month, ? th Sunday)	1,2/4	03/F	1~12th month/ 1~4,F (last week)th week	-	
	3	Summer time use (Weekly) End (? Month, ? th Sunday)	1,2/4	10/F	1~12 month/ 1~4,F (last week)th week	-	
	4	Summer time use (Daily) Start (? Month, ? th Sunday)	1,2/3,4	03/22	Jan~Dec/1~31st day	Month, date	
5	Summer time use (Daily) End (? Month, ? th Sunday)	1,2/3,4	09/22	Jan~Dec/1~31st day	Month, date		
6		Backlight Time Setting/Checking		1,2	5	0~30 sec	1 sec
		Use of LED(Green) (Y/N)		3	1	0-No use, 1-Use	-
		Use of LED (Red) (Y/N)		4	1	0-No use, 1-Use	-
7		Ventilator(ERV) Delay Time Setting/Checking	Ventilator(ERV) Delay Application (Y/N)	1	0	0-No use, 1-Use	-
			Delay Time	3,4	30	30~60 minutes	1 minute
0		Reset to user mode defaults (except the current time)	1	0	0-No use, 1-Reset	-	

## Functional Development Specifications (cont.)

### ■ Installation/Service Modes



1. If you want to use the various additional functions for your Wired Remote Controller, press the **Set** and **Esc** buttons at the same time for more than three seconds.

▶ You will enter the additional function settings, and the [main menu] will be displayed.

2. Refer to the list of additional functions for your Wired Remote Controller on the next page, and select the desired menu.

▶ Using the [▲]/[▼] buttons, select a main menu number and press the [➤] button to enter the sub-menu setting screen.

▶ Using the [▲]/[▼] buttons, select a sub-menu number and press the [➤] button to enter data setting screen.

▶ When you enter the setting stage, the current setting will be displayed.

▶ Refer to the chart for data settings.

▶ Using the [▲]/[▼] buttons, select the settings. Press the [➤] button to move to the next setting.

▶ Press the Set button to save the settings and exit to the sub-menu setting screen.

▶ Press the Esc button to exit to normal mode.



NOTE

● While setting the data, you can use the [◀]/[▶] buttons to set the range of Data bit.

● While configuring the setting, press the **Esc** button to exit to the setting sub-menu without saving your changes.

## Functional Development Specifications (cont.)

### Installation/Service Modes (cont.)



● If your indoor machine does not support the setting mode, then you may not be able to edit the settings or apply your changes.

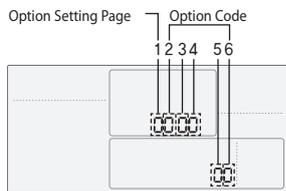
Main menu	Sub menu	Function	Data bit	Factory setting	Description	Unit	
1	1	Wireless remote controller Option setting/checking (1)	Cooling/Heating selection	1	0	0 – Cooling/Heating, 1 – Cooling only	-
			Use of wireless remote controller	2	1	0 – No use, 0 – Use	-
			MAIN/SUB wired remote controller	3	0	0 – MAIN, 1 – SUB	-
			Temperature unit	4	0	0 – Celcius(°C), 1 – Fahrenheit(°F)	-
	2	Wireless remote controller Option setting/checking (2)	Temperature sensor selection	1	0	0 – Indoor unit, 1 – Wired remote controller	-
			Use of average temperature	2	0	0 – No use, 0 – Use	-
			Use of Auto mode	3	1	0 – No use, 0 – Use	-
			Temperature display	4	0	0 – Set temperature, 1 – Room temperature	-
			AC On/Off button function	5	0	0 – Indoor unit + ERV, 1 – Indoor unit only, 2 – ERV only,	-
	3	Blade setting/checking	Lock of Blade1	1	0	0 – Unlock, 1 – lock	-
			Lock of Blade2	2	0	0 – Unlock, 1 – lock	-
			Lock of Blade3	3	0	0 – Unlock, 1 – lock	-
			Lock of Blade4	4	0	0 – Unlock, 1 – lock	-
	4	ERV option Setting/checking	Use of By-Pass mode	1	0	0 – No use, 1 – Use	-
			Use of Auto mode	2	0	0 – No use, 1 – Use	-
			Use of air purification mode	3	0	0 – No use, 1 – Use	-
			Use of external control	4	0	0 – No use, 1 – Use	-
	5	Room Temperature compensation	Temperature control reference	1,2,3	0	-9 ~ 40(°C)	0.1(°C)
			Temperature compensation value	4,5,6	0	-9.9 ~ 9.9(°C)	0.1(°C)
	6	Number of connected units	Number of indoor units	1,2	-	0 ~ 16	-
			Number of ERVs	3,4	-	0 ~ 16	-
	7	Temperature increment/decrement (°C only)		1	0	0-1°C, 1-0.5°C, 2-0.1°C	-
	0	Factory option setting		1	0	0 – Unchanged 1 – Factory setting	-
2	Software code		1~6	-	Software code	-	
	Software version		1~6	-	Software version	-	
3	1	Indoor unit room temperature		1,2,3	-	Room temperature	°C
	2	Indoor unit EVA IN temperature		1,2,3	-	EVA IN temperature	°C
	3	Indoor unit EVA OUT temperature		1,2,3	-	EVA OUT temperature	°C
	4	Indoor unit EEV step		1,2,3	-	EEV step	-
	5	Indoor unit option checking (1)	Use of central control	1	-	0 – No use, 1 – Use	-
			Use of drain pump	2	-	0 – No use, 1 – Use	-
			Use of electric heater	3	-	0 – No use, 1 – Use	-
			Use of hot water coil	4	-	0 – No use, 1 – Use	-
	6	Indoor unit option checking (2)	Use of external control	1	-	0 – No use, 1 – Use	-
			Use of RPM compensation	2	-	0 – No use, 1 – Use	-
			Filter time	3	-	0 – 2000 hours, 1 – 1000 hours	-
			Heating temperature compensation	4	-	0-2°C, 1-5°C	-
EEV stop step in heating			5	-	0 – 1/80 steps, 1 – 80	-	

## Functional Development Specifications (cont.)

### Installation/Service Modes (cont.)

Main menu	Sub menu	Function	Data bit	Factory setting	Description	Unit	
4	1	Indoor unit main address checking	1,2	-	Main address (0~63)	-	
		Indoor unit main address setting (outdoor unit reset is needed to set)	3,4	-	Main address (0~63)	-	
		Indoor unit RMC address setting/checking	5,6	-	RMC address (00H~2FH)	-	
	2	Indoor unit option code setting/checking	1)*	-	Indoor unit option code (24 bits)	-	
	3	Indoor unit option switch setting/checking	1)*	-	Refer to the indoor unit installation manual for details	-	
5	1	AHU setting/checking	Setting/checking the differential value	1,2	-	0~30	1
			RPM setting/checking	3,4	-	0~25	1 RPM
			filter performance	5	-	0 - Pre 1 - Medium performance 2 - High performance	-
			humidity setting/checking	6	-	0 - 30, 1 - 40, 2 - 50	-
	2	AHU discharge temperature setting/checking	Use of discharge temperature control	1	-	0 - No use, 1 - Use	-
			Cooling discharge temperature	3,4	-	10~25°C	1°C
			Heating discharge temperature	5,6	-	28~43°C	1°C
	3	Fresh Duct discharge temperature checking	Cooling discharge temperature	1,2	-	13~25	1°C
			Heating discharge temperature	3,4	-	18~30	1°C
	6	1	ERV Plus setting/checking	Use of cold air prevention	1	-	0 - No use, 1 - Use
Use of humidification when Heating thermo off				2	-	0 - No use, 1 - Use	-
Use of fan operation in Defrost				3	-	0 - No use, 1 - Use	-
Use of humidification when Heating				4	-	0 - No use, 1 - Use	-
2		ERV Plus temperature setting/checking	Cooling	1,2	-	15~30°C	1°C
			Heating	3,4	-	15~30°C	1°C
3		ERV Plus Auto mode temperature setting/checking	Set temperature	1,2	-	15~30°C	1°C
			Set temperature difference	3,4	-	5~15°C	1°C
4			Setting/checking the compensating temperature A under the Heating EEV control for ERV Plus	1,2	-	0~10°C	1°C
			Checking the compensating temperature B under the Heating EEV control for ERV Plus	3,4	-	0 - Non use of humidifier(0°C) 1 - Use humidifier(10°C)	-
5		ERV Plus fan RPM setting/checking	Air supply RPM	1,2	-	10~27 RPM	1 RPM
			Air exhaust RPM	3,4	-	10~27 RPM	1 RPM
0			Factory setting	1	-	0 - No use, 1 - Factory setting	-

1)\* Data1 is the option setting page. / Data2~6 stand for the option codes.



You can set the 24 digits options.

Page	Option Settings	How to Move Between Pages	Page	Option Settings	How to Move Between Pages
PAGE 1	1 <sup>st</sup> ~5 <sup>th</sup> digit option setting	Press the [>] button to go to PAGE 2.	PAGE 4	16 <sup>th</sup> ~20 <sup>th</sup> digit option setting	Press the [>] button to go to PAGE 5.
PAGE 2	6 <sup>th</sup> ~10 <sup>th</sup> digit option setting	Press the [>] button to go to PAGE 3.	PAGE 5	21 <sup>th</sup> ~24 <sup>th</sup> digit option setting	-
PAGE 3	11 <sup>th</sup> ~15 <sup>th</sup> digit option setting	Press the [>] button to go to PAGE 4.			

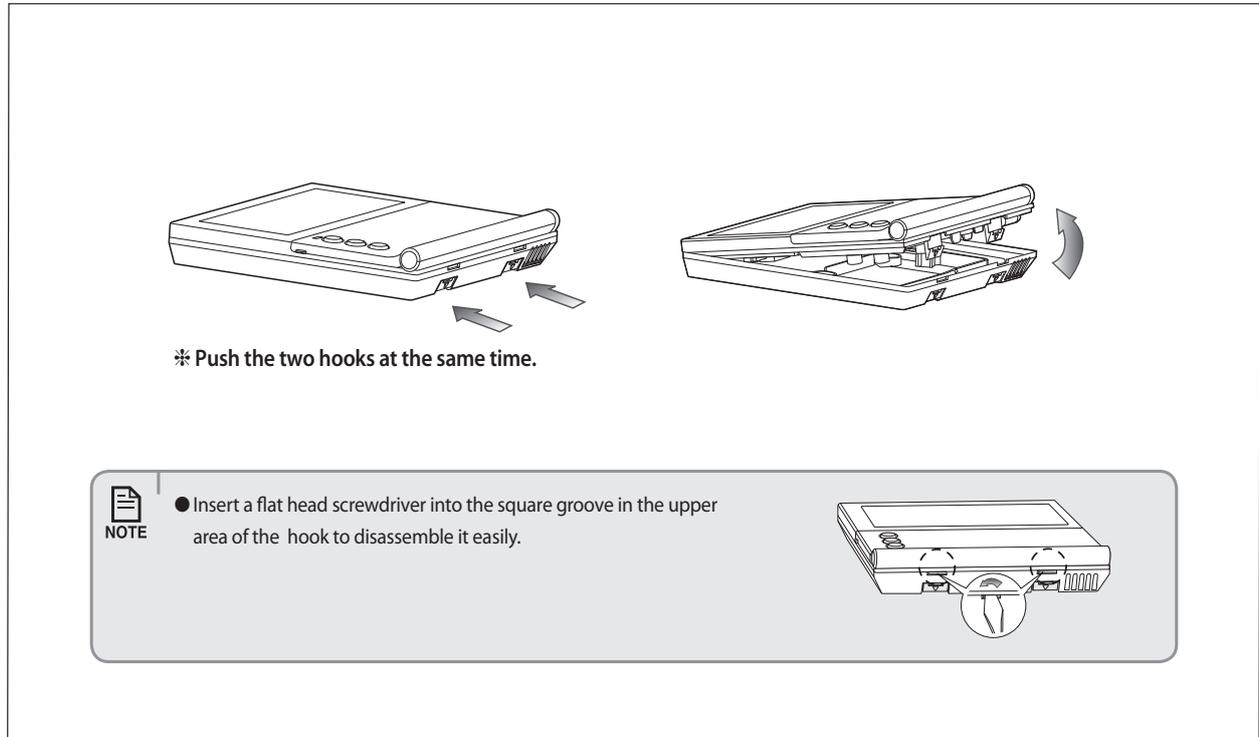
\* Regardless of Celsius and Fahrenheit setting, service mode setting is available only with Celsius.

- **Maximum no. of Connections: A maximum of 16 "indoor units + ERV" can be connected.**
- **Separate control between indoor unit and ventilation system (ERV) is possible.**
- **Integrated control between indoor unit and ventilation system (ERV) is possible.**

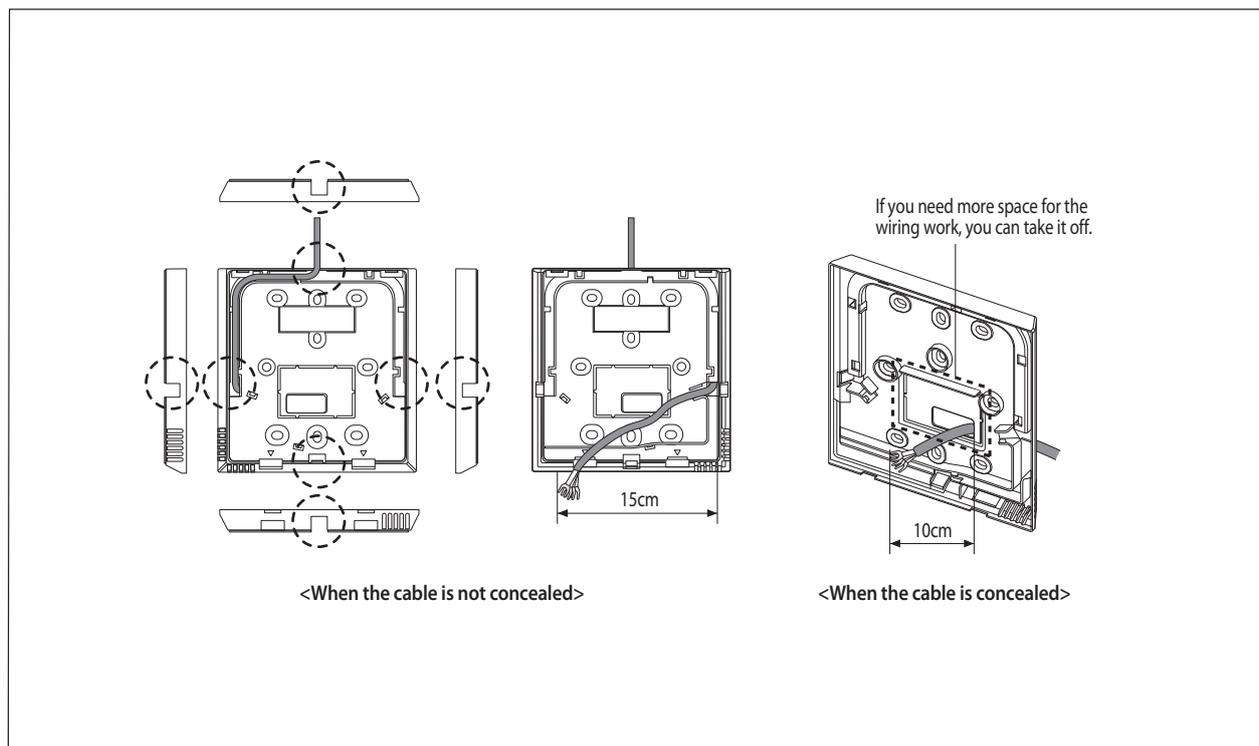
## 2-4 Installation Method

### 2-4-1 Wired Remote Control Installation

1. Push the two hooks at the bottom of your Wired Remote Control at the same time, and then pull up the front cover to separate it from the rear cover.

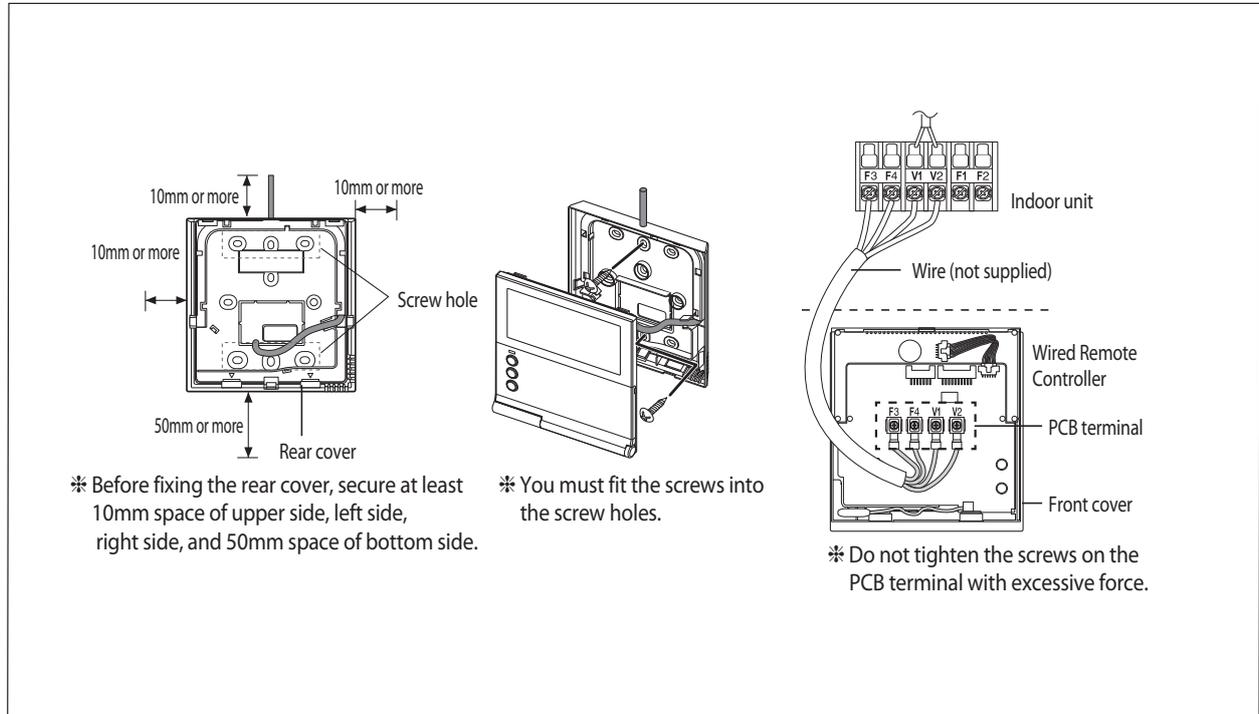


2. Arrange the power cable and the communication cable so that they fit in the housing along the edges of the rear cover.



### Wired Remote Control Installation (cont.)

3. Using more than two screws, firmly affix the rear cover of the remote controller to the wall, and then connect the power(V1, V2) and communication cables(F3, F4), making sure these cables have reasonable length, to the terminal at the back of the cover.



### 4. Reassemble your Wired Remote Controller.

**NOTE**

- Align the controller with the upper groove first, and insert it by turning it downward as shown in the figure. After assembly, check and confirm that no wires are stuck in the gap between the rear and front cover.

**CAUTION**

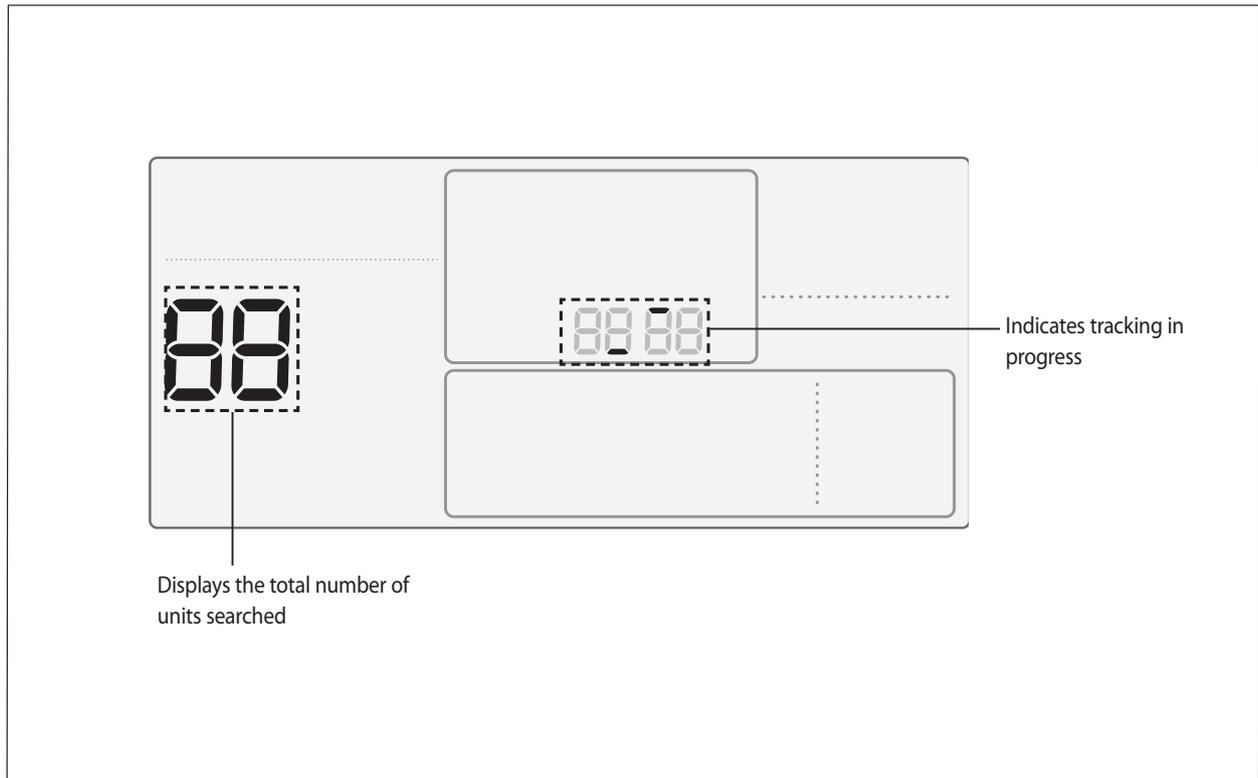
- When installing a Wired Remote Controller by using a cable longer than 10m, you must install the communication cable and the power cable separately. (Electrical interference can cause your Wired Remote Controller to malfunction.)
- When installing your Wired Remote Controller on the wall, consider the size of the wire hole, and select a wire with a proper thickness.
- Wire that is connectable to Wired Remote Controller PCB.
  - If you install the Wired Remote Controller by reclaiming, install it according to U-terminal cable specification.
  - If you install the Wired Remote Controller by using four pieces of PVC wire, remove the 30cm of the sheath of the cable and install it only with the four pieces of wires. (Recommended specification: AWG21)
- The following are the specs of the compression ring terminal connected to your Wired Remote Controller PCB.

Range of Permitted Wires		Rated Size	Stud Size	Basic Size (mm)						
AWG	mm <sup>2</sup>	mm <sup>2</sup>	mm	t	øD	G	E	F	W	L
22~16	0.25~1.65	1.5	3	0.7	3.8	10.0	4.5	6.5	6.0	21.2

※ Maximum distance for connecting communication and power cable: 100m

- Screws on the PCB terminal must be tightened with less than 6N-cm tightening torque. If the tightening torque is greater, it may damage the screw thread.

## 2-4-2 Tracking Your Indoor Unit from the Wired Remote Controller



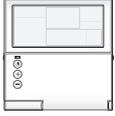
1. Tracking of your Wired Remote Controller will automatically start when you turn on the power after installation.
2. If you want to perform tracking again after installation, then press the Esc and Delete buttons at the same time for more than five seconds.
  - The system will reset, and tracking will start again.
3. During tracking, the total number of currently searched indoor units and ventilator(ERV) will be displayed.



- If you want to perform tracking again after installation, then press the **Esc** and **Delete** buttons at the same time for more than five seconds.
- Only the master Wired Remote Controller can display the total number of indoor units and ventilator(ERV).
  - Slave Wired Remote Controllers do not display the total number of units.

## 2-5 Optional Materials Specifications

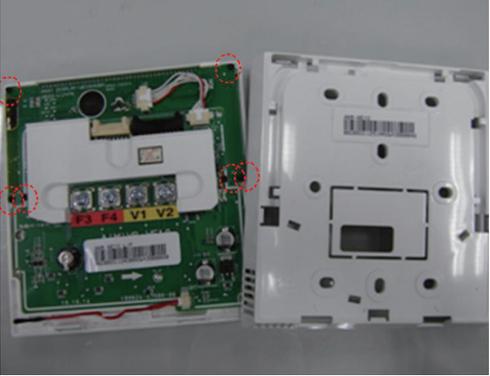
### 2-5-1 Accessories

Item	Description	Code No.	Q'ty	Remark
	Wired remote control	DB93-11251B	1	
	Cable tie	DB65-10099B	2	
	Cable clamp	DB65-10074E	3	
	Cable clamp	6002-000474	5	
	User Manual	DB98-32810A	1	
	Installation Manual	DB98-32811A	1	
	U-terminal	DB60-00444A	6	

# MEMO

### 3. Disassembly and Reassembly

No	Image	Procedure
1		<p>Push the 2 fixing structures at the bottom inwards, and then pull up the front cover to separate it from the rear cover. (This step is easy when using a flathead screwdriver.)</p> <p><b>⚠ When assembling, assemble the upper part first as in the picture, and then insert the bottom hook.</b></p>
2		<p>Separate the door cover by pushing the bottom-right part of the product sideways.</p> <p><b>⚠ For assembling or dismantling, leave the door cover open about 130 degrees as in the image to do the work. Otherwise, the hinge may be incorrectly assembled, resulting in faulty operation.</b></p>

No	Image	Procedure
3		<p>Unscrew the 6 screws assembled in the front cover to separate the PBA.</p>
4		<p>Separate the PCB cover and the LCD connector to detach the PBA from the front cover.</p>
5		<p>Separate the attached rubber keypad.</p>

---

## 4. Troubleshooting

---

### 4-1 Checklist before Diagnosis

---

#### 4-1-1 Wired Remote Control Error Codes

- The error codes of the wired remote control and the products connected to the remote are shown on the LCD display.

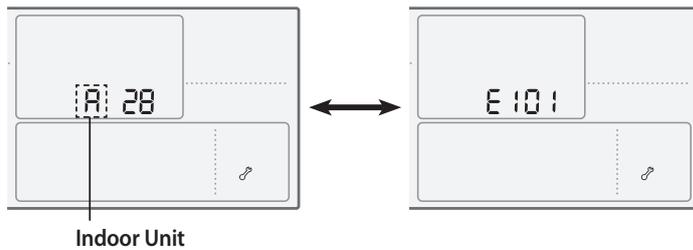


<LCD Display>

#### ■ Errors Found in Indoor Unit/Outdoor Unit (Product Group Indication: A)

The product address where the error has occurred and the occurred error code are indicated, displayed one after another.

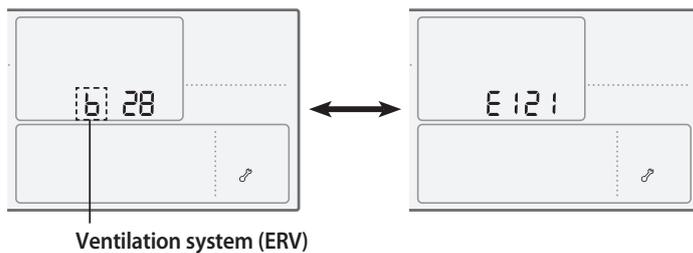
Example) 101 error occurred in No. 28 indoor unit.



#### ■ Error Found in Wired Remote Control

The product address where the error is occurred and the occurred error code are indicated, displayed one after another.

Example) 121 error occurred in No. 28 ventilation system (ERV).



#### ■ Error Found in Wired Remote Control

Only the occurred error code is indicated. (No indication of the address where error occurred.)

Example) 601 error occurred in wired remote control.



### 4-1-2 Wired Remote Control Error List

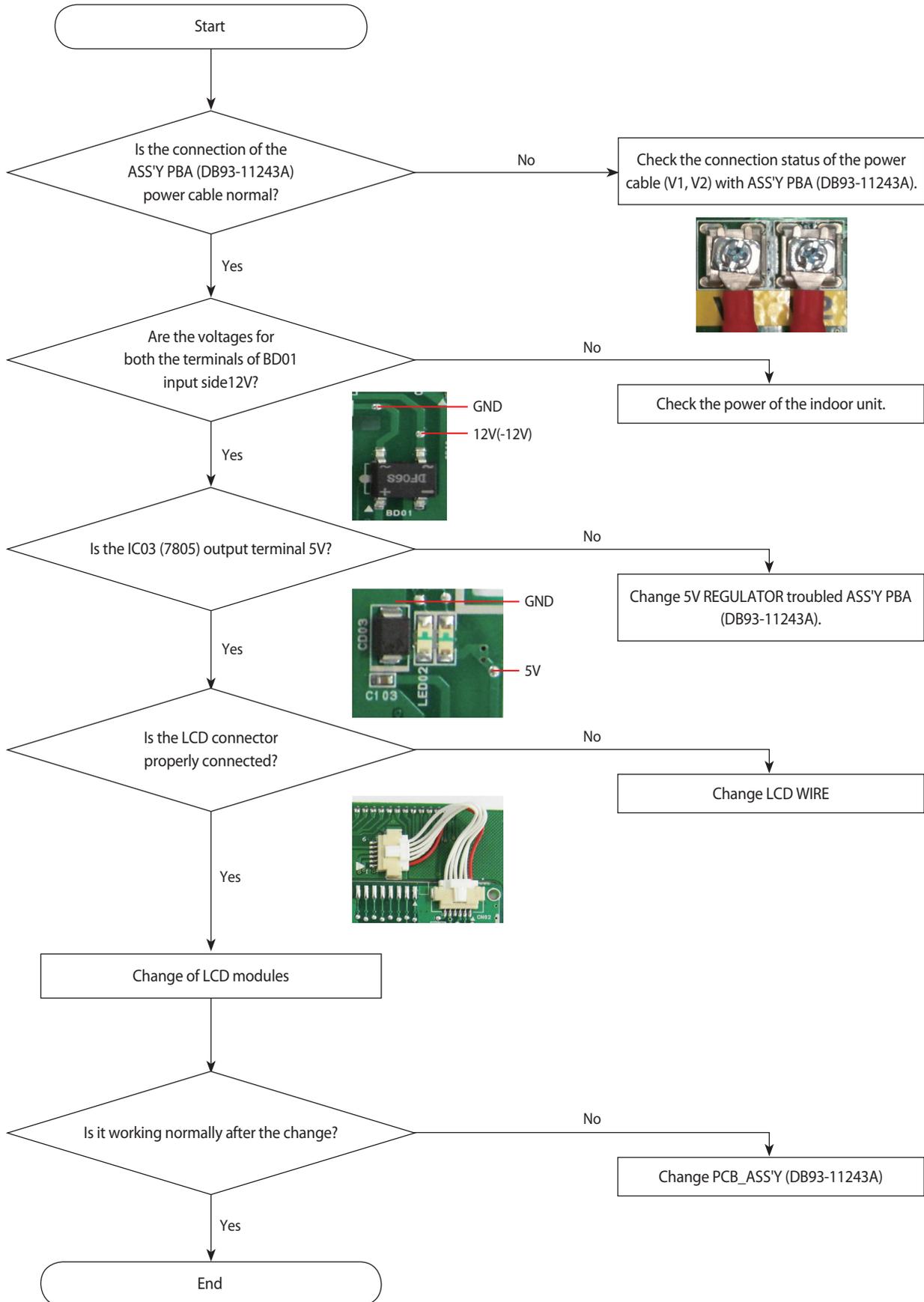
Error Display	Contents	Remark
601	Communication error between wired remote control ↔ indoor unit/ventilation system (ERV) (When communication has stopped for 3 minutes after detecting indoor unit/ventilation system (ERV) and wired remote control)	
602	Communication error between wired remote control ↔ indoor unit/ventilation system (ERV) (When communication has stopped for 3 minutes after detecting indoor unit/ventilation system (ERV) and wired remote control)	
604	Tracking 10 or more errors between wired remote control ↔ indoor unit/ventilation system (ERV)	
606	- COM1, COM2 crossing connection error - When wired remote control is connected to indoor unit COM1 (F1, F2) terminal	
607	- Multiple master error - Error occurred during installation when two wired remote controls are both set as masters in one communication line (This is not possible to detect if the communication polarity is connected in reversed polarity.)	When using master remote control
608	Ventilation system (ERV) is not installed in case of outside gearing.	Can be connected by both master and slave wired remote controls
609	Indoor unit is not installed in case of outside gearing (when the indoor unit is not detected after outside gearing option setting and tracking are finished).	In case of using outside gear control
618	- Exceeded maximum no. of installation for indoor unit/ventilation system (ERV) (16 equipment devices) - A reset is required after checking the number of indoor unit/ventilation system (ERV) installations	
619	- Mixed installation error for °C/°F indoor unit - Error occurs when mixed indoor units of °C and °F settings are installed	Only detected by the master wired remote control
620	- Wired remote control °C/°F setting error - This error occurs if the indoor unit is set in °C while the wired remote control is set in °F or vice versa.	
621	This error occurs when the option settings of the master and slave wired remote controls are different from each other.	
627	Slave wired remote control installation error (when two slave wired remote controls are installed)	
630	Normal operation option setting error (when normal operation is selected with the wired remote control for a ventilation system (ERV) that does not support the normal operation option)	
631	Automatic operation option setting error (when automatic operation is selected with the wired remote control for a ventilation system (ERV) that does not support the automatic operation option)	
653	Temperature sensor open/short error	Only detected by products with a temperature sensor
654	- FRAM READ/WRITE error - Damper error [error is detected when there is no input for 100 seconds (time for about 5 revolutions) during damper output]	



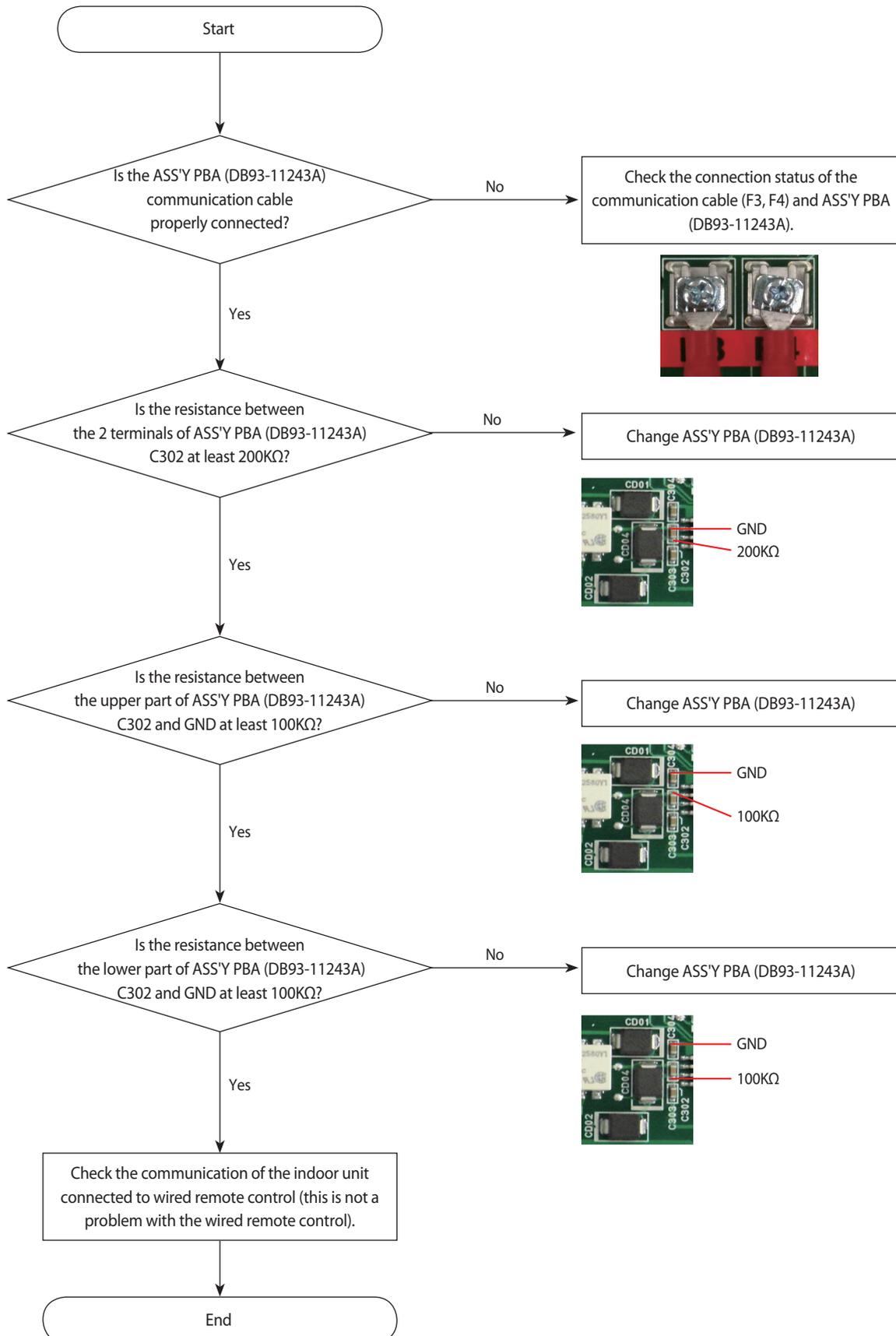
● Please refer to the Installation guide of each equipment device for the error codes used for the indoor unit, the outdoor unit, and the ventilation system (ERV).

## 4-2 Troubleshooting by Condition

### 4-2-1 LCD Display Does Not Appear

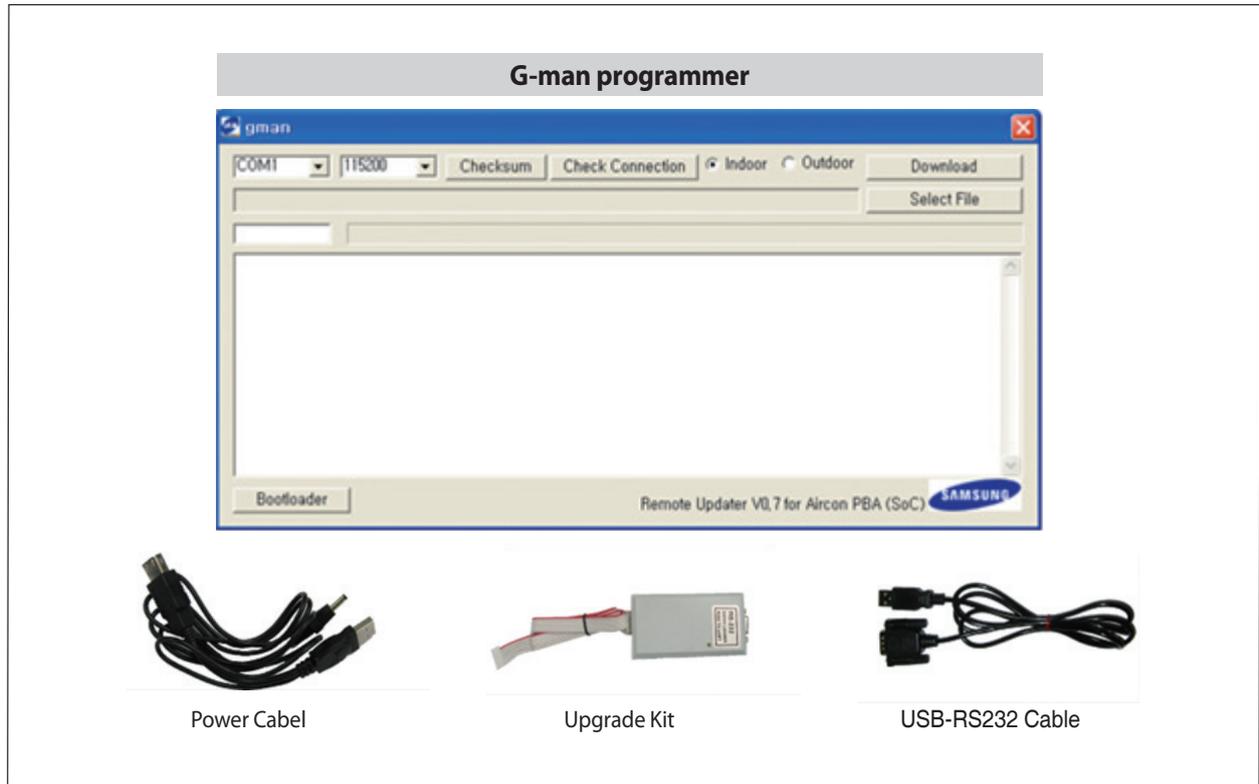


### 4-2-2 Communication Error or Malfunction

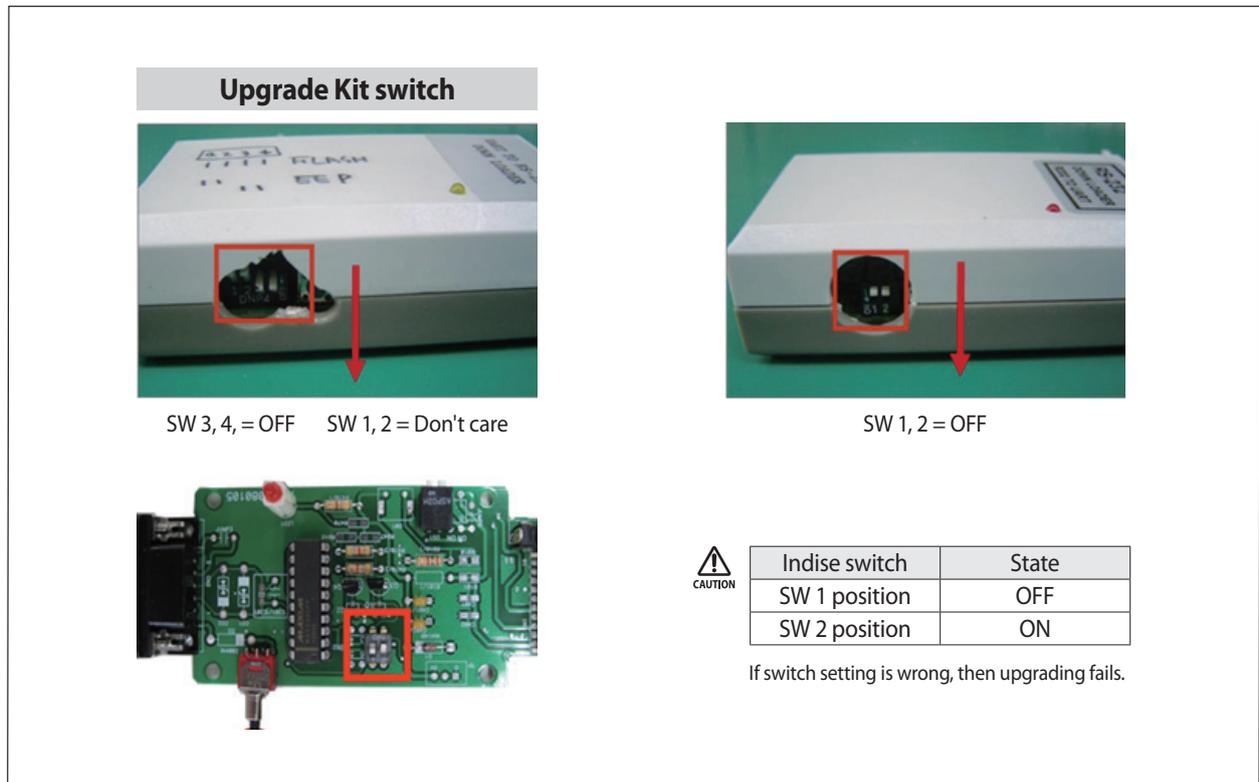


## 4-3 How to Download Micom Software

### 4-3-1 Micom Software Upgrade Kit

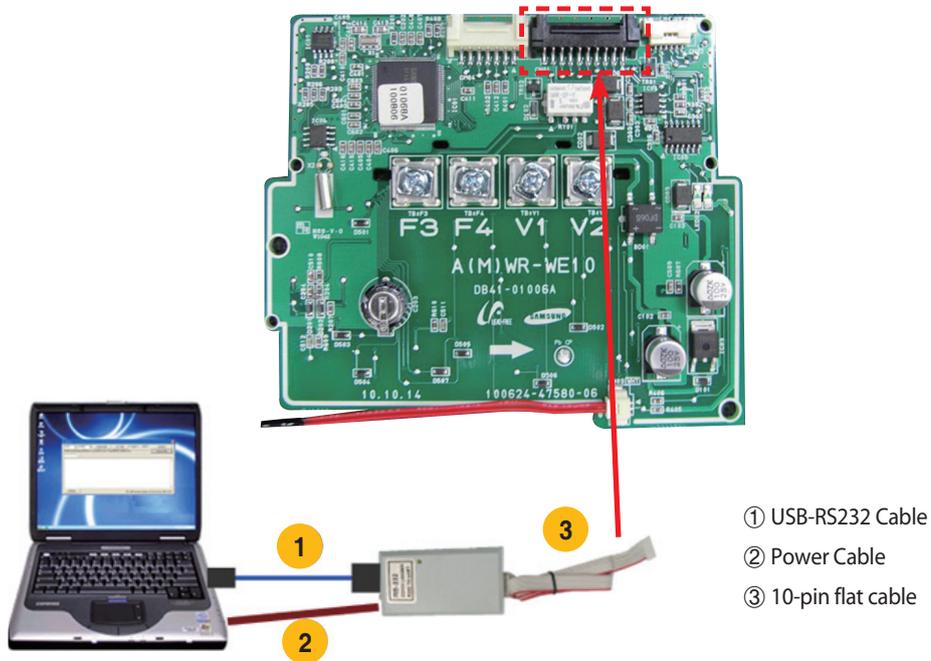


### 4-3-2 Upgrade Kit Switch setting

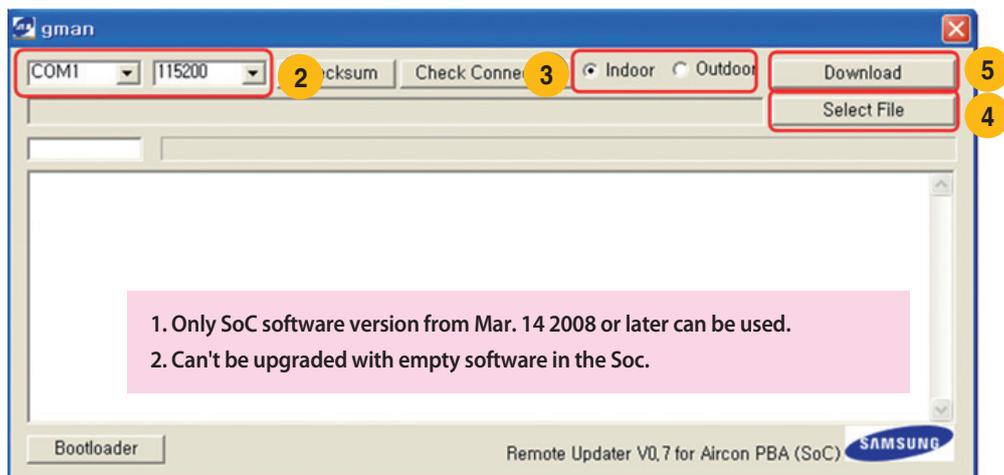


### 4-3-3 Micom Software Upgrading Order

1) Connect the upgrade kit to the PCB download port.



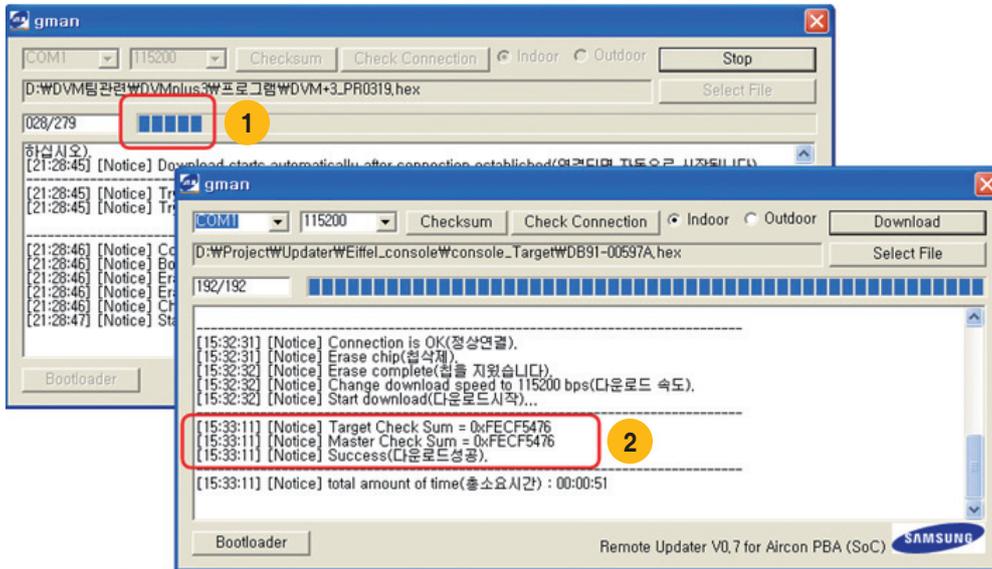
2) Set the G-man programmer (download program).



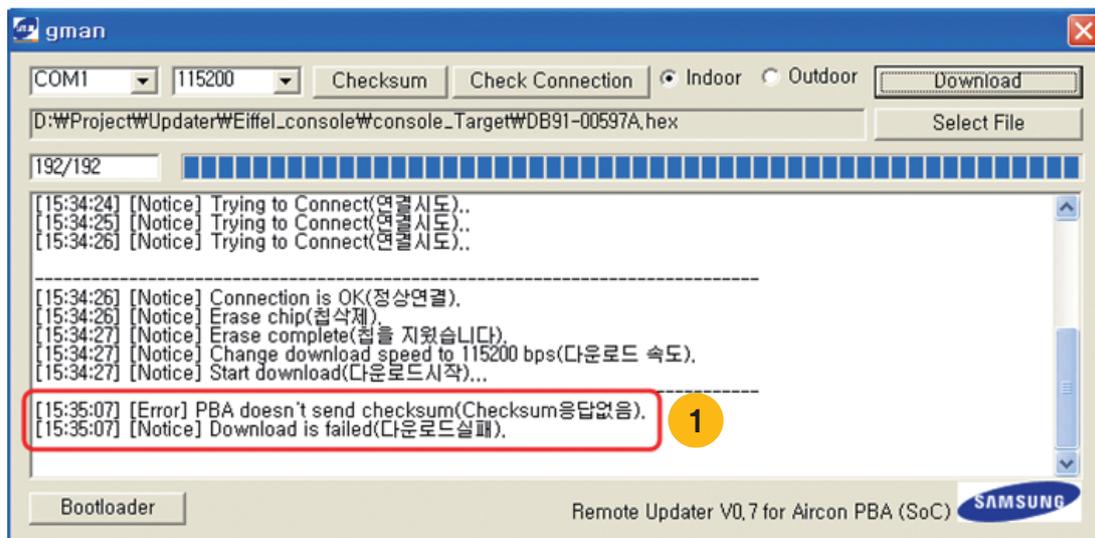
- Select a COM port and set the Baud rate at 115200bps.
- Select "Indoor."
- Select the Micom software to download by pressing the "Select File" button.
- Start downloading by pressing the "Download" button.

### Micom Software Upgrading Order (cont.)

3) The download is successful if the "Successful" message appears with the upgrade status.

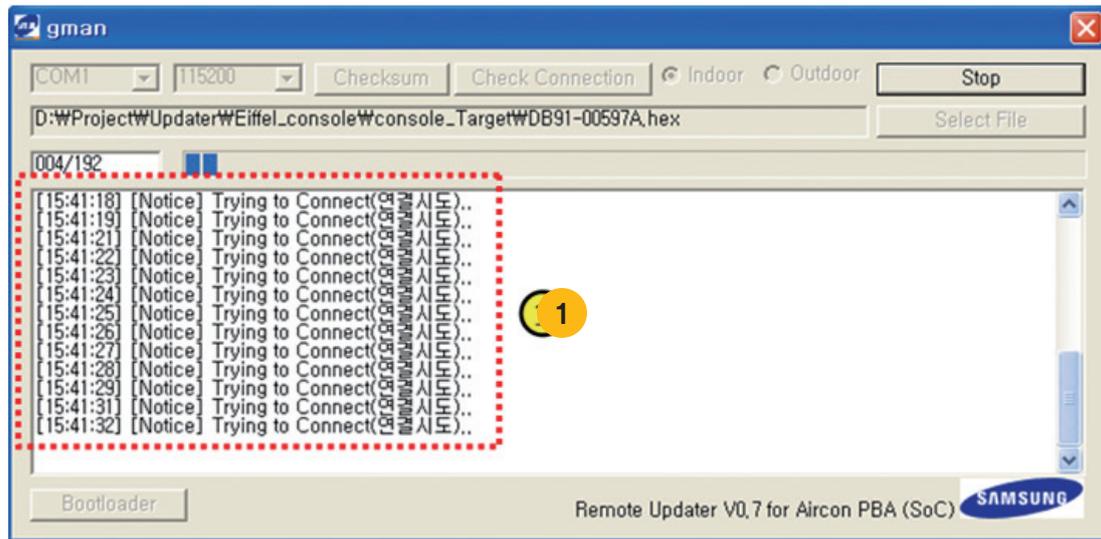


4) If the "Download has failed" message appears, then check the connection status and start again.

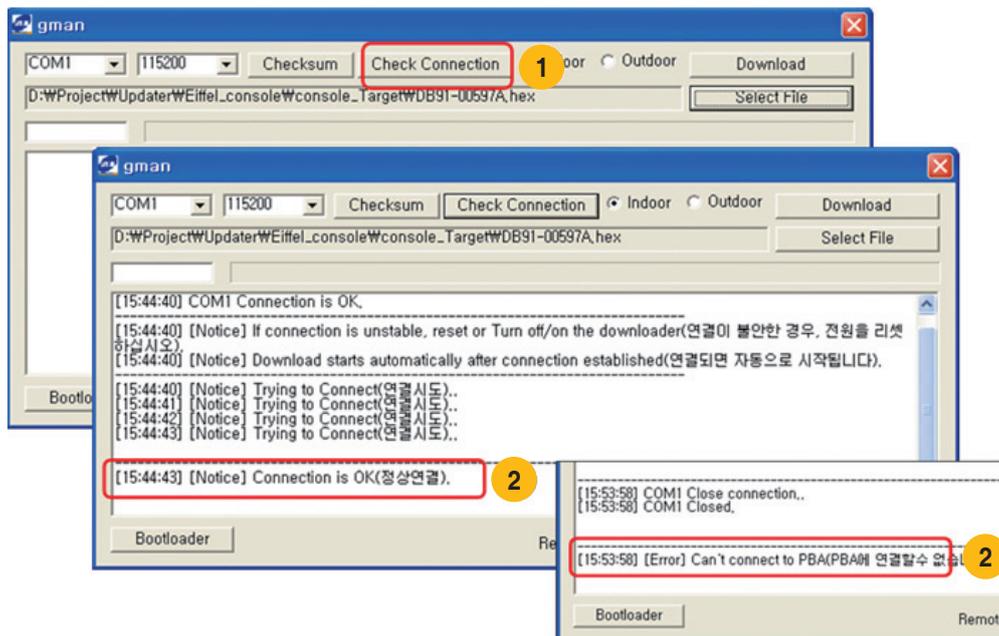


### Micom Software Upgrading Order (cont.)

#### 5) Measures to Take if a “Trying to Connect” Message Repeatedly Appears



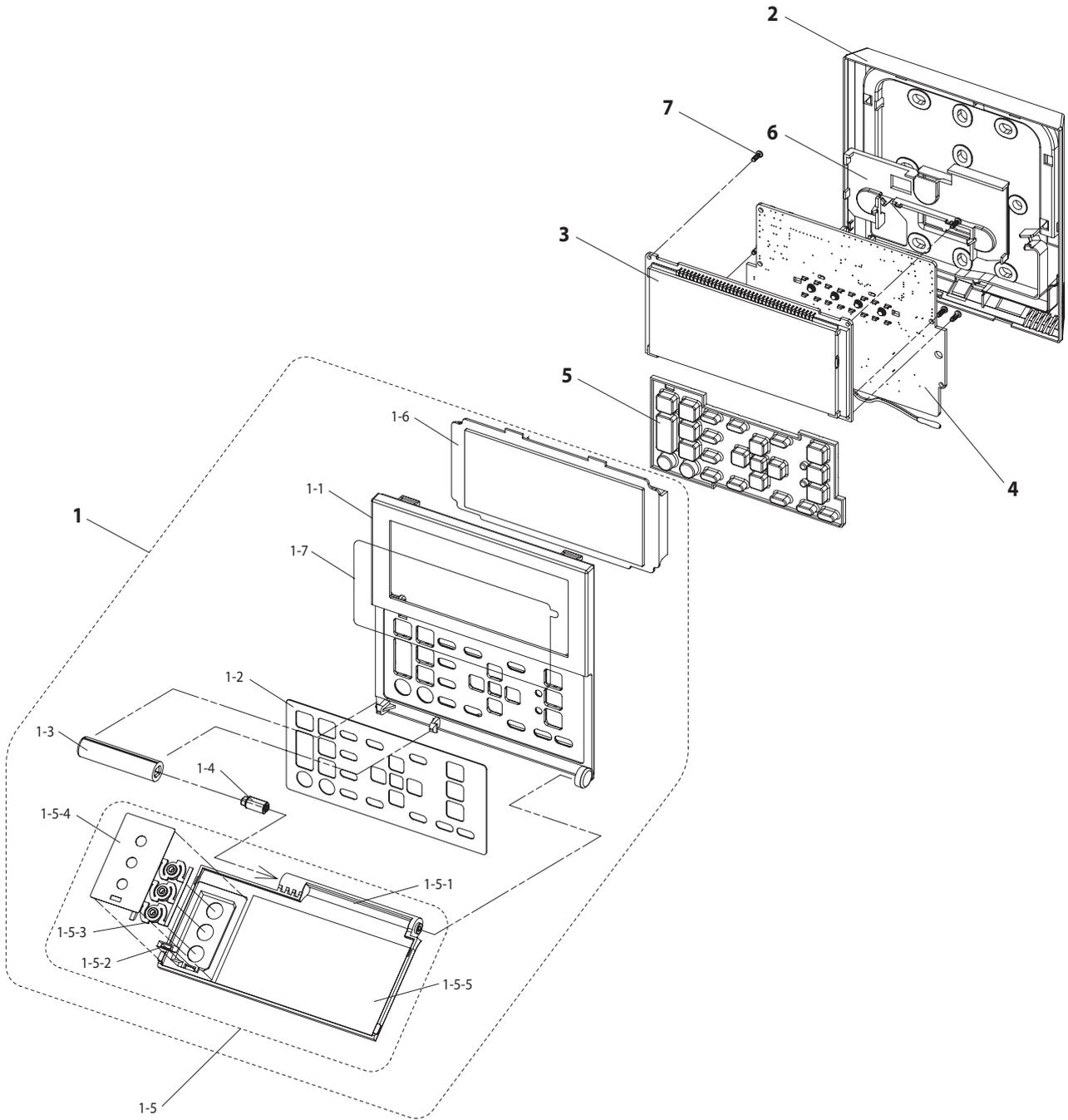
- Check if the connection is normal by pressing the “Check Connection” button.



#### 6) Troubleshooting and Solution for Other Problems

- Bootloader of SOC Micom is damaged. → Change PCB.
- PBA is damaged. → Change PBA.
- Problem found in the upgrade kit. → Change the upgrade kit.
- Problem found in a cable (USB/Power/10-pin flat cable) → Change the relevant cable.

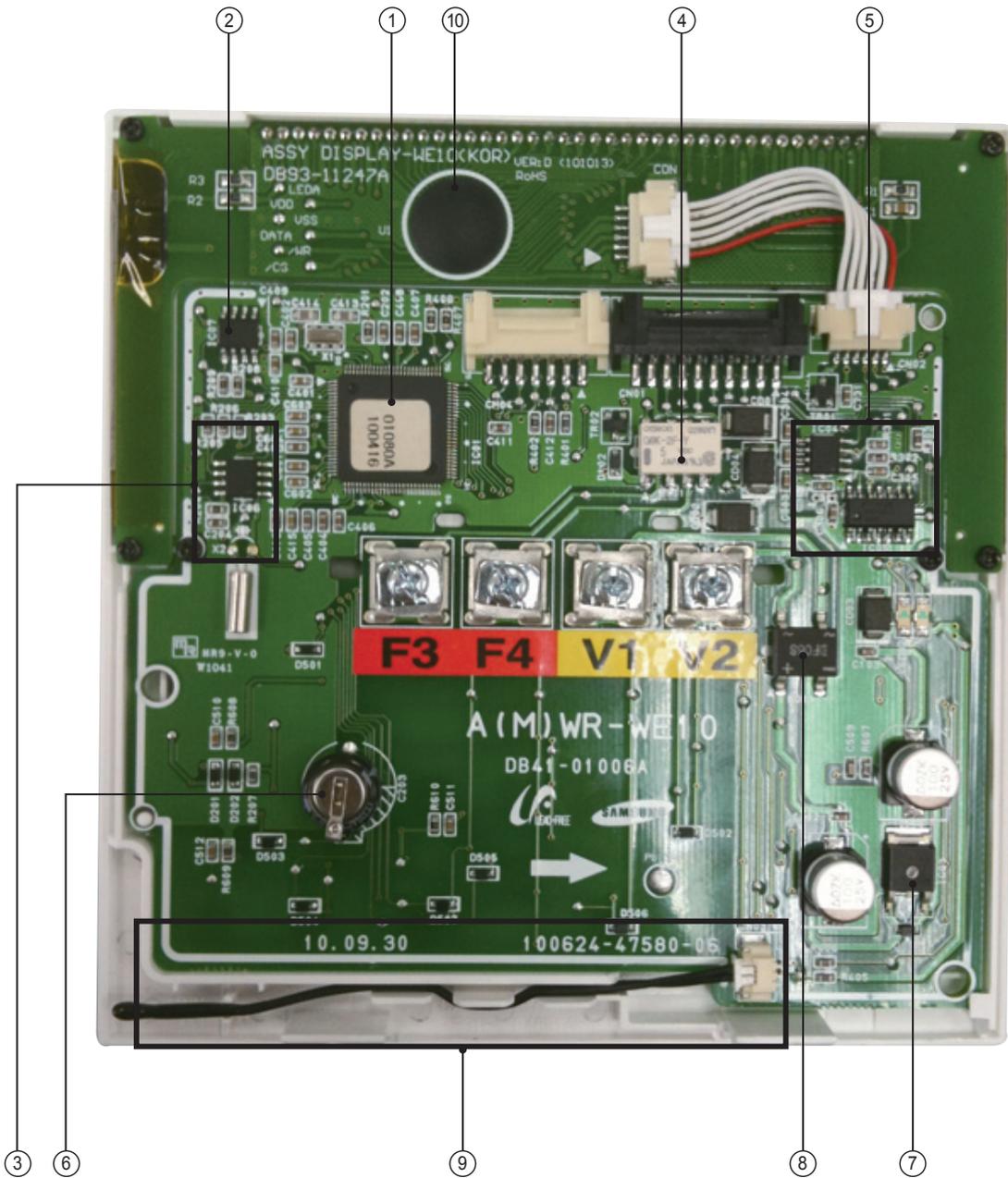
## 5. Exploded Views and Parts List



## ■ Parts List

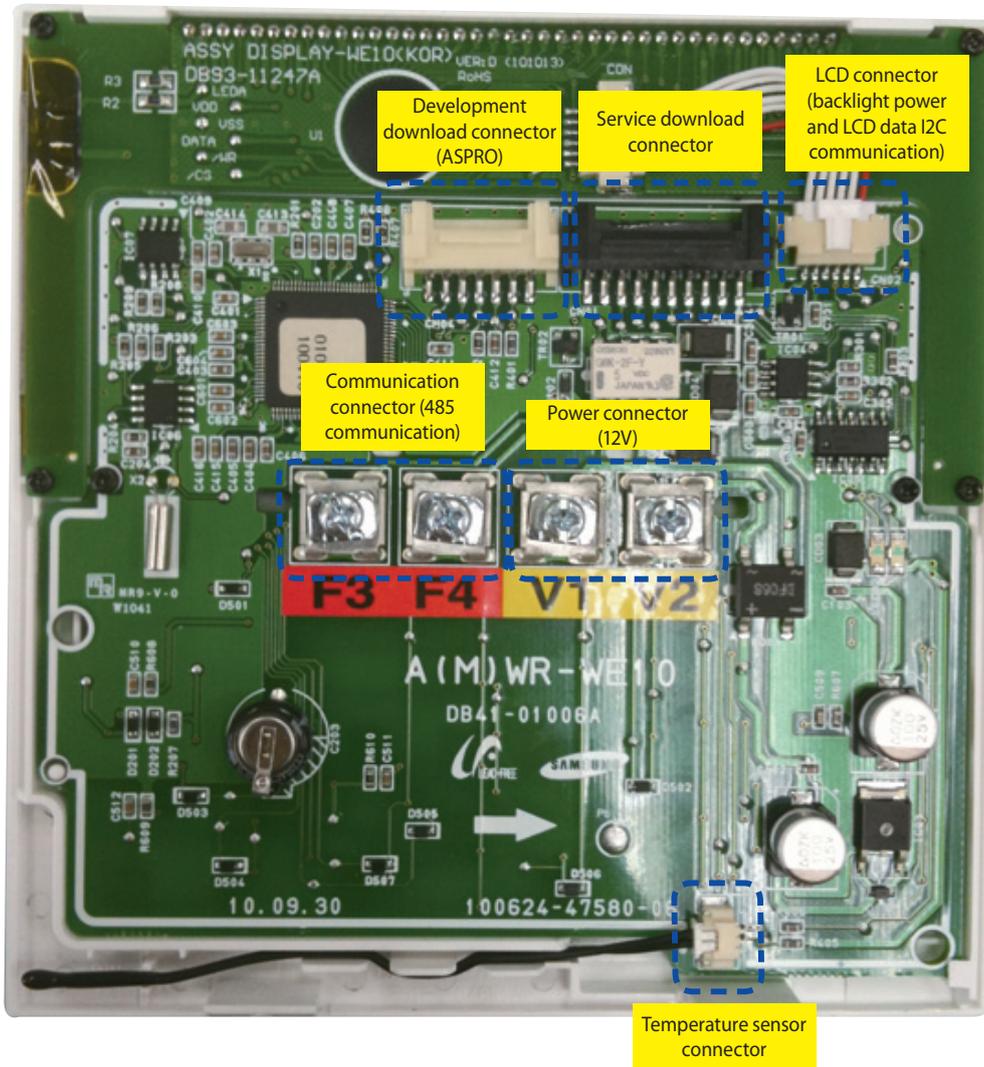
No.	Code No.	Description	Specification	Q'TY	SA/SNA
1	DB90-06126B	ASS'Y CASE-TOP	ASS'Y	1	<b>SA</b>
1-1	DB61-04651A	CASE-TOP	ABS	1	SNA
1-2	DB64-02627B	INLAY-BUTTON	PC	1	SNA
1-3	DB63-02816A	COVER-HINGE	ABS	1	SNA
1-4	DB61-04729A	HINGE-DOOR	STS304	1	<b>SA</b>
1-5	DB90-06127B	ASS'Y COVER-DOOR	ASS'Y	1	<b>SA</b>
1-5-1	DB63-02815A	COVER-DOOR	ABS	1	SNA
1-5-2	DB61-04671A	GUIDE-LED	PC	1	SNA
1-5-3	DB64-02600A	BUTTON-KEY	ABS	1	SNA
1-5-4	DB63-02840A	COVER-BUTTON	ABS	1	SNA
1-5-5	DB98-33083A	ASS'Y-DOOR LABEL	ART PAPER	1	SNA
1-6	DB64-02599A	WINDOW-DISPLAY	PC	1	SNA
1-7	DB02-00044A	TAPE ETC-PROTECTOR	PET	1	SNA
2	DB61-04652A	CASE-BOTTOM	ASS'Y	1	<b>SA</b>
3	DB93-11266B	ASS'Y DISPLAY-WE10	ASS'Y	1	<b>SA</b>
4	DB93-11243A	ASS'Y PCB MAIN-SOLUTION	ASS'Y	1	<b>SA</b>
5	DB64-02608B	BUTTON-RUBBER KEY	SILICON	1	SNA
6	DB63-02867A	COVER-PCB	ABS	1	<b>SA</b>
7	6001-001413	SCREW-MACHINE	M2,L5	6	<b>SA</b>

## 6. PCB Diagram

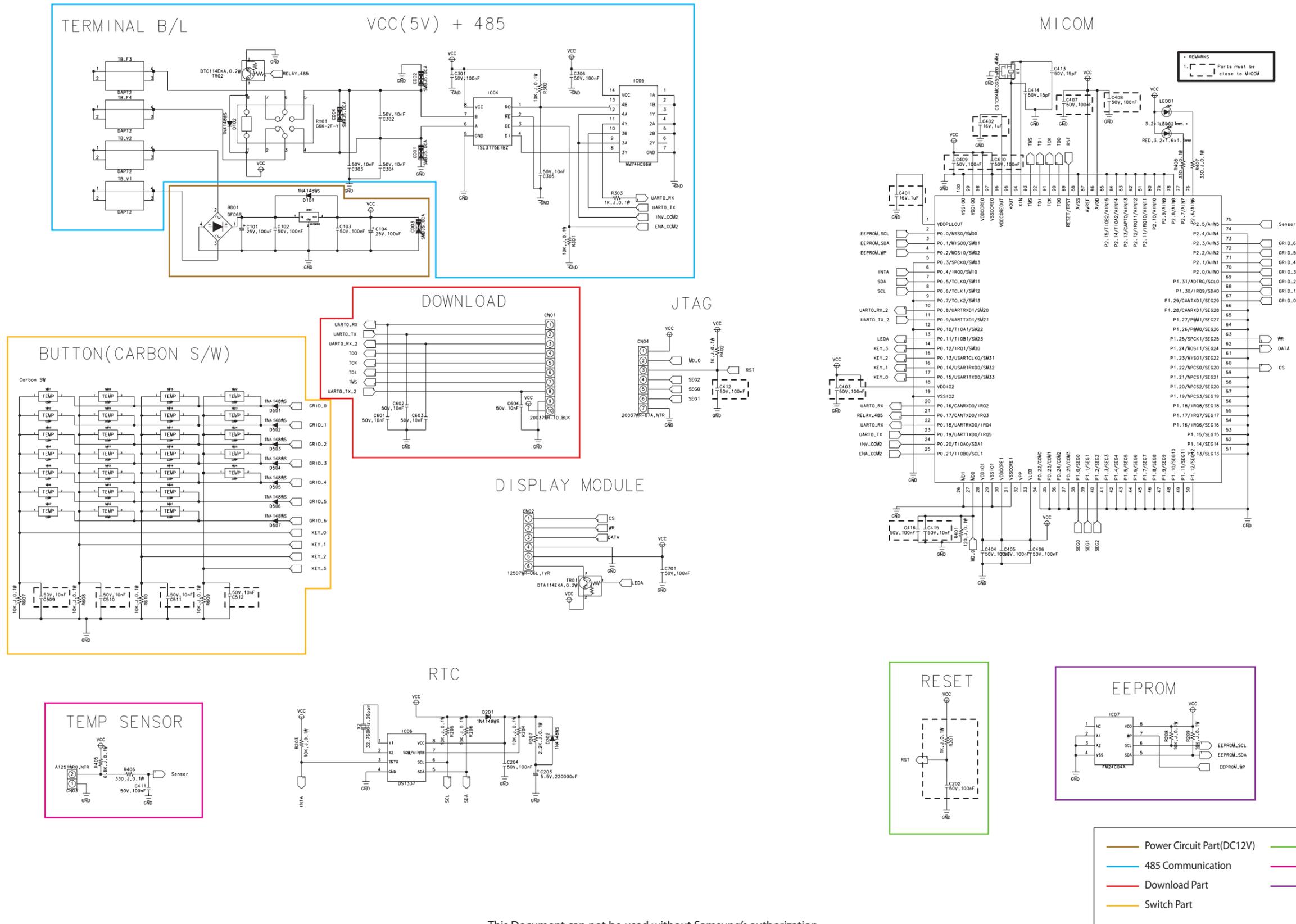


① <b>MICOM</b> S3F4H Micro controller	② <b>FRAM</b> EEPROM memory	③ <b>Clock IC</b> Clock for scheduler	④ <b>Relay</b> Prevents misconnection of communication/power
⑤ <b>485 Communication part</b> 485 Communication with indoor unit	⑥ <b>Battery</b> Supply of power in the case of power suspension for Clock IC	⑦ <b>5V Power</b>	⑧ <b>Doide</b> In charge of non-polar function for power
⑨ <b>Temperature sensor</b>	⑩ <b>LCD Control IC</b>		

## 7. Wiring Diagram



# 8. Schematic Diagram



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