3. Alignment and Adjustments

3-1 Error mode and check method

3-1-1 Indoor Unit

■ MH***FPEA*/MH***FWEA/MH**VP2-**/MH**VW2-**/MH***FVEA/MH**VV1-**

| Display | Explanation | Main checking Point / Remark | |
|-------------------------|--|--|--|
| E 1 ↔ Ø 1 | Communication error (unable to receive data) | Communication cable connection | |
| € 1 ↔ 82 | Communication error (outdoor cannot communicate) | Another indoor unit or indoor PCB | |
| £ 1 ↔ 2 1 | Indoor unit room temperature sensor error (Open/Short) | Room temperature sensor, indoor PCB | |
| <i>E 1 ↔ 22</i> | Indoor unit heat exchanger in temperature sensor error (Open/Short) | Heat exchanger in sensor, indoor PCB | |
| E 1 ↔ 23 | Indoor unit heat exchanger out temperature sensor error (Open/Short) | Heat exchanger out sensor, indoor PCB | |
| <i>E 1 ↔ 28</i> | Indoor unit heat exchanger in temperature sensor detached | Heat exchanger in sensor | |
| € 1 ~ 28 | Indoor unit heat exchanger out temperature sensor detached | Heat exchanger out sensor | |
| E 1 ↔ 30 | Indoor unit heat exchanger in & out temperature sensor detached | Heat exchanger in & out sensor | |
| £ 1 ↔ 5 ¥ | Indoor unit fan motor malfunction | Fan motor and cable | |
| £ 1 ↔ 5 1 | More than 2 indoor units cool and heat simultaneously | Another indoor unit operation mode | |
| <i>E 1 ↔ 8 2</i> | EEPROM error | Indoor PCB | |
| <i>E 1 ↔ 8 3</i> | Option code setting error | Option code | |
| £ 1 ↔ 85 | Cable miss-wiring | Cable connection (Indoor & Outdoor unit) | |
| £ 1 ↔ 88 | MPI error malfunction | MPI | |
| <i>E2</i> ↔ <i>B</i> 1 | The number of indoor unit mismatched | Cable connection (another indoor unit & outdoor unit), SW01(outdoor) | |
| <i>E2</i> ↔ 5 <i>I</i> | Compressor discharge sensor error(Short/Open) | Outdoor unit | |
| <i>E</i> 5 ↔ 5 <i>9</i> | Outdoor unit error | Outdoor unit (Error code) | |

3-1 Samsung Electronics

■ MH***FKEA/MH***FMEA

| | | | | Indicators | 3 | | |
|--|------------|-------|--------|------------|----------|--------|---|
| | MH***FKEA | Green | Red | Yellow | Green | Orange | |
| Abnormal conditions | | (1) | | (4) | S | | Operating |
| | MH***FMEA | (h | *\(\) | (3) | <i>‰</i> | | |
| Power reset | • | × | × | × | × | | |
| Error of temperature sensor in indoor unit (OF | PEN/SHORT) | × | × | • | × | × | |
| Error of heat exchanger sensor in indoor unit Error of heat exchanger OUT sensor in indoo Error of outlet temperature sensor in indoor u (OPEN/SHORT): For heat pump models only | • | × | • | × | × | | |
| Error of mixed operation | | × | • | × | • | × | |
| Error of indoor fan motor : Below 450RPM for | 15 minutes | × | × | × | • | × | |
| Error of outdoor temperature sensor Error of CONDENSER sensor Error of DISCHARGE sensor | • | × | × | • | × | | |
| 1. No communication for 2 minutes between indoor unit and outdoor unit (communication error for more than 2 minutes) 2. Indoor unit receiving the communication error from outdoor unit 3. Outdoor unit tracking 3 minutes error 4. When sending the communication error from outdoor unit due to the mismatching of the communication numbers and installed numbers after completion of tracking (communication error for more than 2 minutes) | | | × | • | • | × | Error of indoor unit: Displayed on the indoor unit regardless of operation |
| 1. 2 nd detection of refrigerant completely leak 2. 2 nd detection of high temperature CONDENSER 3. 2 nd detection of high temperature DISCHARGE 4. Compressor down due to 6th detection of freezing | | | × | • | • | • | Displayed on appropriate indoor unit which is operating Displayed on outdoor unit |
| Error of float switch | | | × | × | • | • | |
| Error of setting option switches for optional accessories | | | × | • | × | • | |
| EEPROM error | | • | × | • | • | × | |
| EEPROM option error | • | • | • | • | • | | |

 $lackbox{ } \bullet$: On $lackbox{ } \bullet$: Flickering $lackbox{ } imes$: Off

[♦] If you turn off the air conditioner when the LED is flickering, the LED is also turned off.

■ MH***FDEA/MH***FEEA

The error indicated on the LED display of Indoor unit

| | Indicators | | | | | |
|--|---------------|----------------|------------|---|---|--|
| Aboromod conditions | | Concealed Type | | | | |
| Abnormal conditions | Blue | Red | (4) | Se la constant de la | | Operating |
| | Standard Type | | | 2 | | |
| | (1) | * | | | | |
| Power reset | • | × | × | × | × | |
| Error of temperature sensor in indoor unit(OPEN/SHORT) | × | × | 0 | × | × | Displayed on appropriate indoor unit which is operating |
| Error of heat exchanger sensor in indoor unit Error of heat exchanger OUT sensor in indoor unit Error of outlet temperature sensor in indoor unit (OPEN/SHORT): For heat pump models only | • | X | • | × | × | Displayed on appropriate indoor unit which is operating |
| Error of mixed operation | × | • | × | • | × | |
| Error of outdoor temperature sensor Error of COND sensor Error of DISCHARGE sensor | | × | × | • | × | Displayed on appropriate indoor unit which is operating Displayed on outdoor unit |
| 1. No communication for 2 minutes between indoor unit and outdoor unit (communication error for more than 2 minutes) 2. Indoor unit receiving the communication error from outdoor unit 3. Outdoor unit tracking 3 minutes error 4. When sending the communication error from outdoor unit the mismatching of the communication numbers and installed numbers after completion of tracking. (communication error for more than 2 minutes) | × | × | • | • | × | Error of indoor unit: Displayed on the indoor unit regardless of operation Error of outdoor unit: Displayed on the indoor unit which is operating |
| Self-diagnostic error (including the indoor unit not detected) 1. Error of electronic expansion valve close 2. Error of electronic expansion valve open 3. Breakaway of EVA OUT sensor 4. Breakaway of EVA IN sensor | × | × | • | • | • | Displayed on appropriate indoor unit which is operating Displayed on outdoor unit |

- ♦ If you turn off the air conditioner when the LED is flickering, the LED is also turned off.
- lacktriangle If you re-operate the air conditioner, it operates normally at first, then detect an error again.

3-3 Samsung Electronics

■ MH***FDEA/MH***FEEA(cont.)

The error indicated on the LED display of Indoor unit

| | | ı | | | | |
|--|----------------|-----|-----|----------|---|---|
| Abnound anditions | Concealed Type | | (4) | % | | Operating |
| Abnormal conditions | | Red | | | | |
| | Standard Type | | | | | |
| | (1) | * | | | | |
| Breakaway of COND MID sensor 2nd detection of refrigerant completely leak 2nd detection of high temperature COND 2nd detection of high temperature DISCHARGE COMP DOWN due to 2nd detection of low pressure switch Error of reverse phase Compressor down due to 6th detection of freezing Self-diagnosis of condensation sensor (G8, G9) Compressor down due to condensation ratio control | × | × | • | • | • | Displayed on appropriate indoor unit which is operating Displayed on outdoor unit |
| Error of float switch | × | × | × | • | • | |
| Error of setting option switches for optional accessories | × | × | • | × | • | |
| EEPROM error | • | × | • | • | × | |
| EEPROM option error | | • | • | • | • | |

- $lackbox{ } \bullet$: On $lackbox{ } \bullet$: Flickering $lackbox{ } imes$: Off
- lacktriangle If you turn off the air conditioner when the LED is flickering, the LED is also turned off.
- $lack \bullet$ If you re-operate the air conditioner, it operates normally at first, then detect an error again.

3-1-2 Outdoor Unit

| Display | | Explanation | Main checking Point |
|---------|--|--|---|
| E 1 | B: | Communication error (indoor unable to receive data) | Communication cable connection |
| Ε: | 82 | Communication error (outdoor unable to communicate) | Indoor unit |
| E 1 | 21 | Indoor unit room temperature sensor error (Open/Short) | Indoor unit |
| E ! | 22 | Indoor unit heat exchanger in temperature sensor error (Open/Short) | Indoor unit |
| E ! | 23 | Indoor unit heat exchanger out temperature sensor error (Open/Short) | Indoor unit |
| Ε: | 28 | Indoor unit sensor error - Evaporator pipe in sensor detached | Indoor unit |
| Ε: | 23 | Indoor unit sensor error - Evaporator pipe out sensor detached | Indoor unit |
| Ε: | 30 | Indoor unit heat exchanger in & out temperature sensor detached | Indoor unit |
| ε: | <i>5 :</i> | More than 2 indoor units cool and heat simultaneously | Indoor unit operation mode |
| E : | 90 | Piping check operation error - Auto Addressing Mode: Number of checked indoor unit is unmatched with it's assigned - Manual Addressing Mode: Detected indoor unit's Adddress is unmatch with assigned address. | Outdoor(Number of indoor) Indoor (Address) |
| 82 | <i>B </i> | The number of indoor unit mismatched | Communication wiring |
| 82 | 88 | Communication error (outdoor unable to receive data) | Communication wiring |
| 82 | 03 | Communication error between 2 microcontroller on the outdoor PCB | Outdoor unit PCB |
| 82 | 21 | Outdoor temperature sensor error (Short/Open) – Error level : over 4.9V(-50°C) under 0.4V(93°C) | Temperature sensor |
| 88 | 37 | Condenser temperature sensor error (Short/Open) – Error level : over 4.9V(-50°C) under 0.4V(93°C) | Temperature sensor |
| 82 | 48 | Condenser temperature sensor detached | Temperature sensor |
| 53 | 80 | Compressor discharge sensor error (Short/Open) – Error check condition : outdoor temperature over -20°C – Error level : over 4.95V(-30°C) under 0.5V(151°C) | Temperature sensor |
| 82 | 8 1 | Compressor discharge sensor detached | Temperature sensor |
| 83 | 20 | Compressor OLP sensor error (Short/Open) – Error check condition : outdoor temperature over -20°C – Error level : over 4.95V(-30°C) under 0.5V(151°C) | Temperature sensor |
| 84 | 8 : | Indoor unit heat exchanger freezing and compressor stop (cooling mode) | Check pipe matching also(indoor-outdoor) |

3-5 Samsung Electronics

Outdoor Unit(cont.)

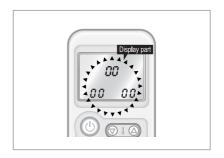
| Disp | olay | Explanation | Main checking Point |
|------------|------|--|---|
| 84 | 84 | Outdoor unit overload and compressor stop (protection control in heating mode) | Check pipe matching also(indoor-outdoor) |
| EY | 18 | Outdoor unit high discharge temperature and compressor stop (protection control in heating mode) | Check pipe matching also(indoor-outdoor) |
| 84 | 13 | Outdoor unit EEV open error (self diagnosis) | EEV |
| EY | 22 | Outdoor unit EEV close error (self diagnosis) | EEV |
| 84 | 48 | High temperature (over 30°C) of outdoor as heating mode | Operation mode |
| 84 | 4 ; | Low temperature (under -5°C) of indoor as cooling mode | Operation mode |
| EY | 58 | Fan error | Fan |
| <i>E</i> 4 | 80 | Wrong connection between communication and power cable | Wiring indoor and outdoor |
| £ 4 | 8 : | Inverter Compressor starting failure (5 times) | Service valve, EEV, Compressor terminal, Compressor wire, Outdoor controller |
| <i>E</i> 4 | 82 | Compressor trip by input current limit control | EEV, Gas over charge, Outdoor controller |
| E 4 | 83 | Compressor trip by OLP temperature limit control | Outdoor fan, Compressor, Outdoor controller |
| EY | 84 | Compressor peak current protection | Outdoor fan, Compressor, Compressor wire, Outdoor controller |
| <i>E</i> 4 | 85 | Compressor overload protection by current | Outdoor fan, EEV, Service valve, Outdoor controller |
| E 4 | 88 | DC-link voltage error (under 150V or over 410V) (This error might display for a few seconds after power cut) | Power voltage, Outdoor controller |
| E4 | 87 | Compressor rotation error | Compressor terminal, Compressor wire, Outdoor controller |
| <i>E</i> 4 | 88 | Current sensor error | Outdoor controller |
| EY | 89 | DC-link voltage sensor error | Outdoor controller |
| £4 | 78 | Compressor overload protection | Outdoor fan, EEV, Service valve, Outdoor controller |
| EY | 7 / | EEPROM error | Outdoor controller |
| EA | 72 | AC line zero-crossing detection circuit error | Outdoor controller, Terminal Block |
| <i>E</i> 5 | 54 | NO GAS error (self diagnosis) | Piping (gas leak) |

■ MH*****FPEA***/**MH******VP2**-**

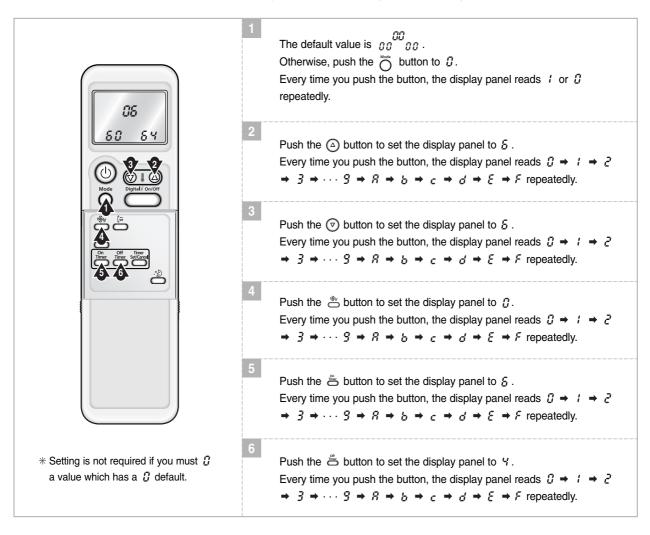
ex) Option No. : \$\alpha 6 6 6 6 4 - 17 6 3 7 3

Step 1 : Enter the Option Setup mode.

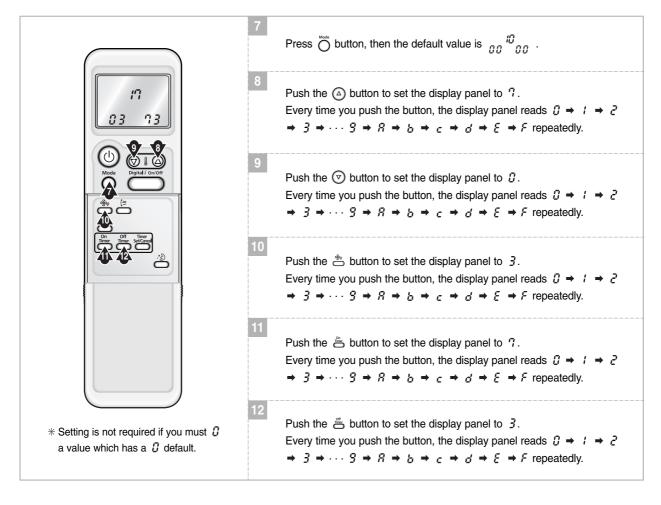
- 1st Take out the batteries of remote control.
- 2nd Press the temperature ① I ② button simultaneously and insert the battery again.
- $3^{\rm rd}$ Make sure the remote control display shown as $gg \overset{\partial G}{\partial g} gg$.



Step 2: Enter the Option Setup mode and select your option according to the following procedure.



3-7 Samsung Electronics



Press the Mode Selection key, $\bigcap^{\text{\tiny Mode}}$ to set the display part to $\mathfrak Z$ and check the display part.

→ The display part shows 66° 84° .

Press the Mode Selection key, $\bigcap^{\text{\tiny Mode}}$ to set the display part to t and check the display part.

→ The display part shows $_{\it G\,3}$ 17 $_{7\,3}$.

Step 4: Pressing the ON/OFF button ((b))

When pressing the operation ON/OFF key with the direction of remote control for unit, the sound "Ding" or "Diriring" is heard and the OPERATION ICON(\lessapprox) lamp of the display is flickering at the same time, then the input of option is completed. (If the diriring sound isn't heard, try again pressing the ON/OFF button.)

Step 5: Unit operation test-run

First, Remove the battery from the remote control.

Second, Re-insert the battery into the remote control.

Third, Press ON/OFF key with the direction of remote control for set.

• Error Mode

- 1st If all lamps of indoor unit are flickering, plug out, plug in power plug again and press the ON/OFF key to retry.
- 2nd If the unit is not working properly or all lamps are continuously flickering after setting the option code, see if the correct option code is set up for its model.

■ MH***FWEA/MH**VW2-**

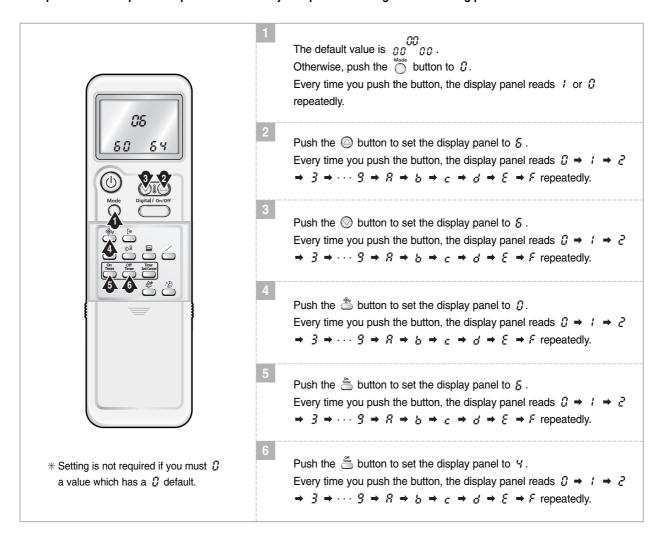
ex) Option No. : \$\alpha 6 6 \alpha 6 4 - 17 \alpha 3 7 3

Step 1 : Enter the Option Setup mode.

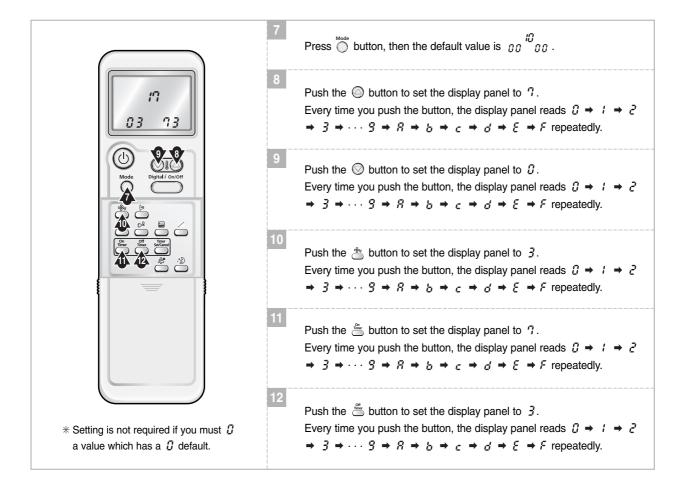
- 1st Take out the batteries of remote control.
- 2nd Press the temperature button simultaneously and insert the battery again.
- 3^{rd} Make sure the remocon display shown as $\frac{\partial G}{\partial B} = \frac{\partial G}{\partial B}$.



Step 2: Enter the Option Setup mode and select your option according to the following procedure.



3-9 Samsung Electronics



Press the Mode Selection key, oto set the display part to and check the display part.

→ The display part shows $\frac{\partial \mathcal{S}}{\partial \mathcal{G}} \frac{\partial \mathcal{S}}{\partial \mathcal{G}}$.

Press the Mode Selection key, to set the display part to t and check the display part.

→ The display part shows $_{\it G\,3}$ $^{\it 17}_{\it 7\,3}$.

Step 4: Pressing the ON/OFF button ((b))

When pressing the operation ON/OFF key with the direction of remote control for unit, the sound "Ding" or "Diriring" is heard and the OPERATION ICON() lamp of the display is flickering at the same time, then the input of option is completed. (If the diriring sound isn't heard, try again pressing the ON/OFF button.)

Step 5: Unit operation test-run

First, Remove the battery from the remote control.

Second, Re-insert the battery into the remote control.

Third, Press ON/OFF key with the direction of remote control for set.

• Error Mode

- 1st If all lamps of indoor unit are flickering, plug out, plug in power plug again and press the ON/OFF key to retry.
- 2nd If the unit is not working properly or all lamps are continuously flickering after setting the option code, see if the correct option code is set up for its model.

■ MH***FVEA/MH**VV1-**

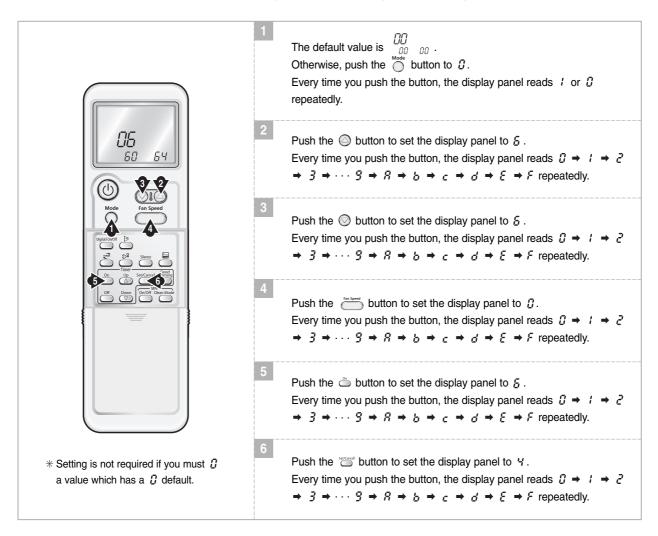
ex) Option No. : \$\alpha 6 6 \alpha 6 7 17 \alpha 3 7 3

Step 1 : Enter the Option Setup mode.

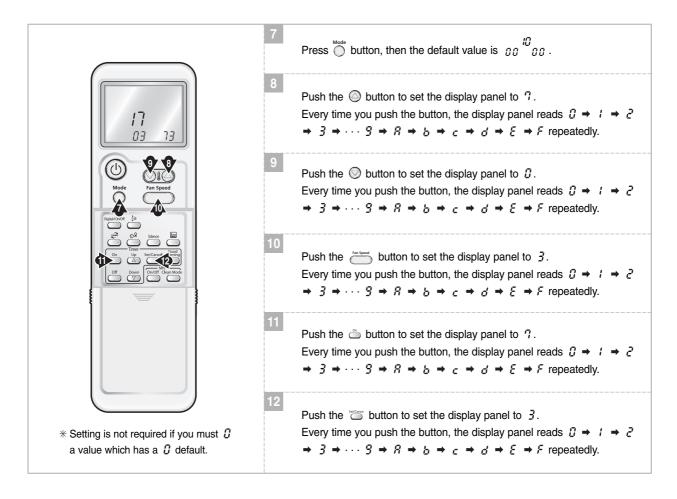
- 1st Take out the batteries of remote control.
- 2nd Press the temperature button simultaneously and insert the battery again.
- 3^{rd} Make sure the remocon display shown as $\frac{\partial \Omega}{\partial n}$ $\frac{\partial \Omega}{\partial n}$.



Step 2: Enter the Option Setup mode and select your option according to the following procedure.



3-11 Samsung Electronics



Press the Mode Selection key, oto set the display part to $\mathfrak Q$ and check the display part.

→ The display part shows $\begin{tabular}{l} $\mathcal{Q}\mathcal{B}$ \\ $&50$ & 54 \\ \end{tabular}$

Press the Mode Selection key, oto set the display part to ! and check the display part.

Step 4: Pressing the ON/OFF button ((b))

When pressing the operation ON/OFF key with the direction of remote control for unit, the sound "Ding" or "Diriring" is heard and the OPERATION ICON() lamp of the display is flickering at the same time, then the input of option is completed. (If the diriring sound isn't heard, try again pressing the ON/OFF button.)

Step 5: Unit operation test-run

First, Remove the battery from the remote control.

Second, Re-insert the battery into the remote control.

Third, Press ON/OFF key with the direction of remote control for set.

• Error Mode

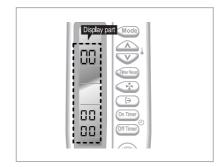
- 1st If all lamps of indoor unit are flickering, plug out, plug in power plug again and press the ON/OFF key to retry.
- 2nd If the unit is not working properly or all lamps are continuously flickering after setting the option code, see if the correct option code is set up for its model.

■ MH*FKEA/MH***FMEA/MH***FDEA/MH***FEEA**

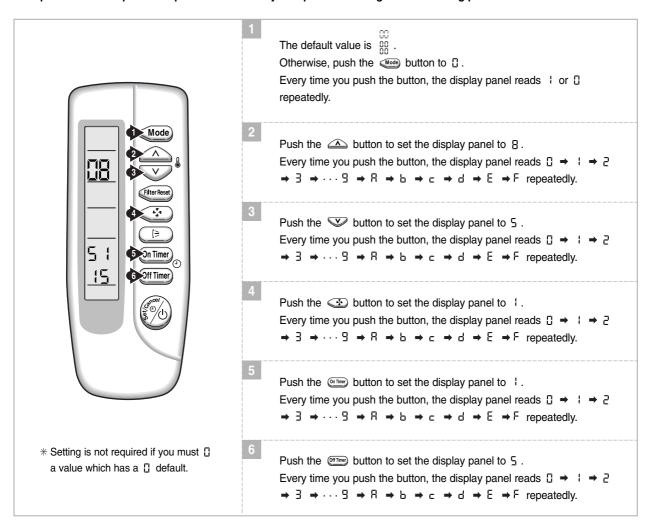
ex) Option No.: 085 | 15-162340

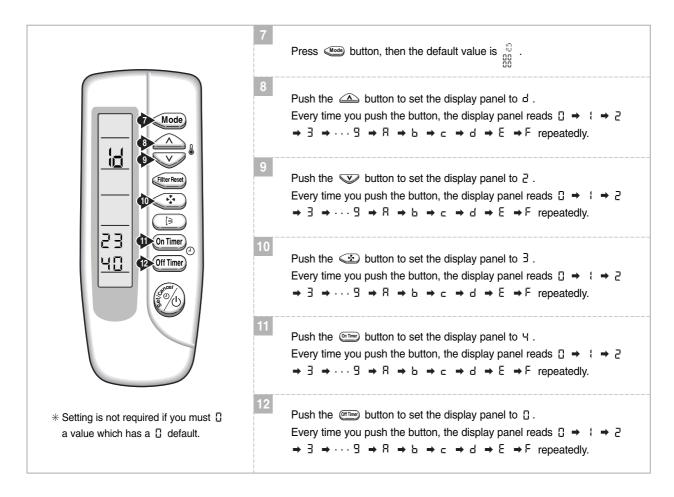
Step 1 : Enter the Option Setup mode.

- 1st Take out the batteries of remote control.
- 2nd Press the temp. \bigoplus button simultaneously and insert the battery again.



Step 2: Enter the Option Setup mode and select your option according to the following procedure.





Press the Mode Selection key, og to set the display part to and check the display part.

Press the Mode Selection key, wo to set the display part to and check the display part.

→ The display part shows 년 .

Step 4: Pressing the ON/OFF button (1)

When pressing the operation ON/OFF key with the direction of remote control for unit, the sound "Ding" or "Diriring" is heard and the OPERATION ICON(()) lamp of the display is flickering at the same time, then the input of option is completed. (If the diriring sound isn't heard, try again pressing the ON/OFF button.)

Step 5: Unit operation test-run

First, Remove the battery from the remote control.

Second, Re-insert the battery into the remote control.

Third, Press ON/OFF button() with the direction of remote control for set.

• Error Mode

- 1st If all lamps of indoor unit are flickering, Plug out, plug in power plug again and press ON/OFF key to retry.
- 2nd If the unit is not working properly or all lamps are continuously flickering after setting the option code, see if the correct option code is set up for its model.

■ Table of the option code

| MODEL | OPTION CODE |
|--|---------------|
| MH020FPEA MH14VP2-07 MH16VP2-07 MH19VP2-07 | 0d7400-13223F |
| MH023FPEA MH026FPEA MH16VP2-09 MH18VP2-09 MH30VP2-09 | 0d6400-142351 |
| MH035FPEA MH19VP2-12 MH30VP2-12 | 0d7404-162362 |
| MH052FPEA MH052FPEA1 | 0d5408-192351 |
| MH050FWEA | 0E8400-1320F8 |
| MH023FWEA MH026FWEA MH14VW2-07 MH16VW2-07 MH16VW2-09 MH18VW2-09 MH19VW2-07 MH30VW2-09 | 0E8400-142228 |
| MH035FWEA MH19VW2-12 MH30VW2-12 | 0E7400-16226E |
| MH052FWEA | 0E5404-19222E |
| MH023FVEA MH026FVEA MH18VV1-09 MH19VV1-07 | 004402-1420E7 |
| MH035FVEA MH19VV1-12 | 007402-16221A |
| MH052FVEA | 005406-19225E |
| MH026FKEA | 005600-14221d |
| MH035FKEA | 005600-162340 |
| MH030FMEA MH035FMEA | 045024-164051 |
| MH052FMEA | 045024-1940d5 |
| MH052FDEA | 015200-190000 |

3-15 Samsung Electronics

■ Table of the option code(cont.)

| External Static Pressure (mmAq) | 1.0 | 2.0(Standard) | 3.0 | 4.0 |
|---------------------------------|---------------|---------------|---------------|---------------|
| MH023FEEA MH026FEEA | 015201-1400Fb | 015201-14020c | 015201-140360 | 015201-1403A2 |
| MH035FEEA | 015201-16025d | 015201-16026E | 015201-1603c4 | 015203-160108 |
| MH052FEEA | 011223-194108 | 011223-194119 | 011223-1941Ac | 011223-19431d |