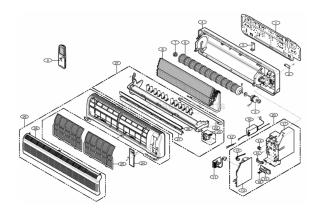
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LG AG1AC23BWI Owner's Manual

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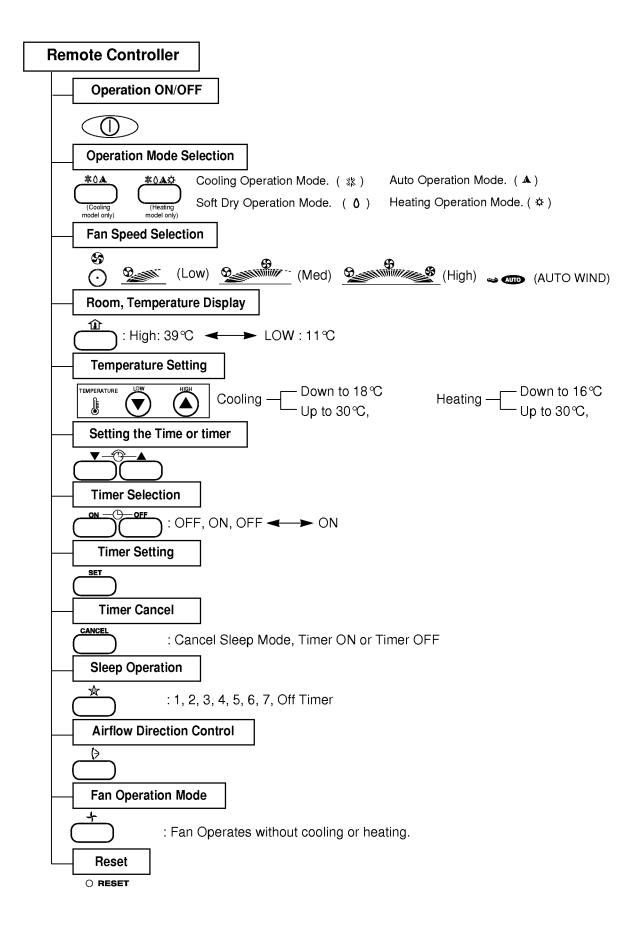


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----- Manual continues below ------

Functions

Indoor Unit	
Operation ON/OFF by Remote controller	
Sensing the Room Temperature	
Room temperature sensor. (THERMISTOR)	
Room temperature control	
Maintains the room temperature in accordance with the Setting	g Temp.
Starting Current Control	
 Indoor fan is delayed for 5 seconds at the starting. 	
Time Delay Safety Control	
Restarting is inhibited for approx. 3 minutes.	
Indoor Fan Speed Control	
• High, Med, Low, AUTO	
Operation indication Lamps (LED)	
 ① (Red) Lights up in operation ☆ (Yellow) Lights up in Sleep Mode ○ (Orange) Lights up in Timer Mode ★ (Green) Lights up in Deice Mode or Hot Start Mode OUT OUT (Green) Lights up during compressor running (only DOOR 	
Soft Dry Operation Mode	
Intermittent operation of fan at low speed.	
Sleep Mode Auto Control	
 The fan is switched to low(Cooling), med(Heating) speed. The unit will be stopped after 1, 2, 3, 4, 5, 6, 7 hours. 	
Natural Air Control by FUZZY Logic	Deice(defrost) control(Heating)
 The fan is switched to intermittent or irregular operation. The fan speed is automatically switched from high to low speed. 	 Both the indoor and outdoor fan stops during deicing. Hot start after deice ends.
Airflow Direction Control	Hot-start Control (Heating)
The louver can be set at the desired position or swing up and down automatically.	• The indoor fan stops until the evaporator piping temperature w be reached at 28 °C.



(1) The function of main control

1. Time delay Safety Control

- 3min... The compressor is ceased for 3minutes to balance the pressure in the refrigeration cycle. (Protection of compressor)
- 5sec... Vertical air flow direction control louvers open in 5 seconds to prevent noise between louvers and wind.
- 30sec... The 4-way valve is ceased for 30sec. to prevent the refrigerant-gas abnormal noise when the Heating operation is OFF or switched to the other operation mode while compress is off. While compressor is running, it takes 3~5 seconds to switch.

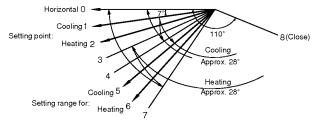
2. Airflow Direction Control

- This function is to swing the louver up and down automatically and to set it at the desired position.
- The procedure is as the following.

1st ; Press the ON/OFF Button to operate the product.

2nd ; Press the Airflow Direction Control Button to swing the louver up and down automatically.

3nd ; Repress the Airflow Direction Control Button to set the louver as the desired position.



Vertical airflow direction

3. Cooling Mode Operation

• When selecting the Cooling(*) Mode Operation, the unit will operate according to the setting by the remote controller and the operation diagram is as following.

Intake Air temp. SETTING TEMP. +0.5 ℃ (Compressor ON)					
SETTING TEMP0.5 ℃ (Compressor OFF)		More than 3 minutes		More than 3 minutes	
INDOOR FAN	Selecting fan speed	Low	Selecting fan speed	Low	Selecting fan speed
COMPRESSOR	ON	OFF	ON	OFF	ON

4. Cooling or Heating Mode with Sleep Mode Auto Operation

• When selecting the Cooling(*) or the Heating(*) combined with the Sleep Mode Auto Operation($\frac{1}{2}$), the operation diagram is as following.

■ Cooling Mode with the Sleep Mode

- The setting temperature will be raised by 1 $^{\circ}\!\!C$ 30minutes later and by 2 $^{\circ}\!\!C$ 1 hour later.
- The operation will be stopped after 1, 2, 3, 4, 5, 6, 7 hours.

Intake Air temp.	•	30 minutes			30 minutes
SETTING TEMP. +0.5℃ (Compressor ON) SETTING TEMP0.5℃ (Compressor OFF)		More than 3 minutes		1 ℃ More than 3 minutes	
INDOOR FAN	Low	Low	Low	Low	Low
COMPRESSOR	ON	OFF	ON	OFF	ON

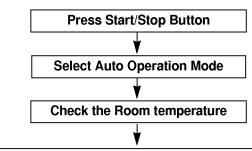
■ Heating Mode with the Sleep Mode

• The operation will be stopped after 1, 2, 3, 4, 5, 6, 7 hours.

SETTING TEMP. +0.3 °C (Compressor ON) SETTING TEMP				/		
(Compressor OFF)		More than 3 minutes		More than 3 minutes		More than 3 minutes
INDOOR FAN	Med.	Med.	Med.	Med.	Med.	Med.
COMPRESSOR	ON	OFF	ON	OFF	ON	OFF

5. Auto Operation

• The operation procedure is as following. (Cooling & Heating Model)



Operation mode Indoor fan speedare automatically decided by Fuzzy rule. Setting temperature				
Intake-air temperature	below 21 °C	Over ~ below 21℃ 24℃	Over 24℃	
Operation Mode	Heating	Soft Dry	Cooling	

* If initial mode is decided, that mode is continued without the room temperature changing.

* For cooling operation mode over 24 °C setting temperature and fan speed are same as cooling only model.

■ Auto Operation for Cooling. (Cooling only Model)

Operation Condition	Intake-air Temperature	Setting Temperature	Fan Speed	Air Direction Control		
	Over 26℃	25 <i>°</i> C				
	Over 24 ℃~below 26 ℃	Intake air -1 ℃		In this mode,		
When Auto Operation initial start When pressing room temperature setting button during Auto	Over 22℃~below 24℃	Intake air -0.5℃		when pressing the vertical air direction control.		
	Over 20 ℃~below 22 ℃	Intake air temperature	Controlled by			
	below 20 °C	20 <i>°</i> C	Fuzzy logic	Button, louvers moves to 1/f		
	Over 20 ℃~below 30 ℃	Fuzzy control		rhythm (refer to		
	below 20 °C	20 <i>°</i> C		page 17)		
Operation	over 30 °C	30℃				

Intake-Air temp. SETTING TEMP. +0.5 °C (Compressor OFF)				
SETTING TEMP0.5 ℃ (Compressor ON)				
INDOOR FAN		Fuzzy	Speed	
COMPRESSOR	ON	OFF	ON	OFF

■ Auto Operation for Soft Dry

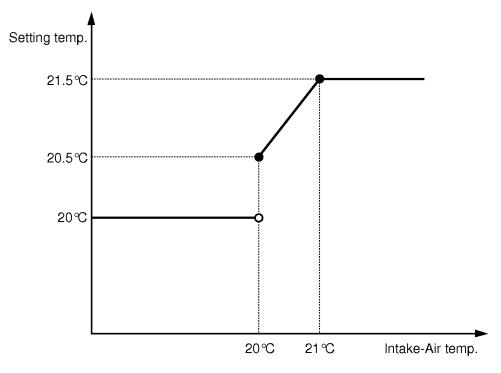
- The Setting temperature will be same that of the current intake-air temperature.
- Compressor ON temperature; Setting temperature +1 °C
- Compressor OFF temperature; Setting temperture -0.5 °C

■ Auto Operation for Heating

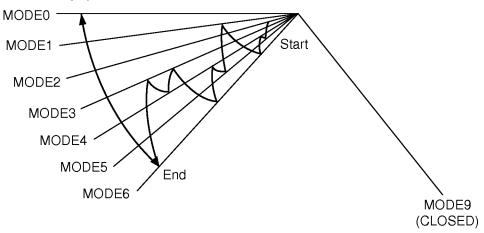
Intake Air temp.	below 20℃	Over 20℃~below 21℃	Over 30°C
Setting temp.	20°C	Intake air temperature +0.5℃	30°C

- Compressor ON temperature; Setting temperature

- Compressor OFF temperature; Setting temperature +3 °C

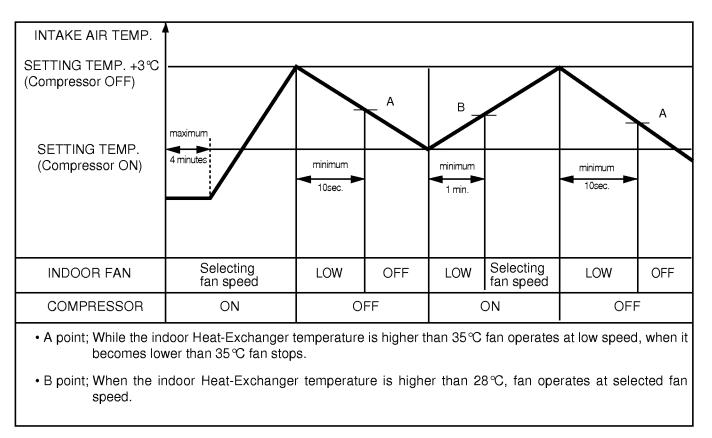


• 1/f rhythm louver operation : In Auto operation mode, when pressing the vertical air direction control button, louver moves as following cycle.



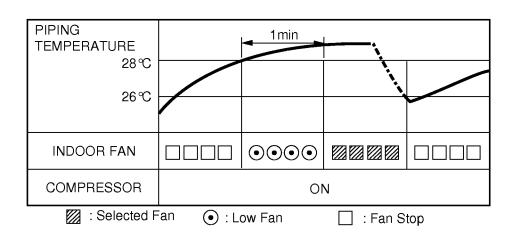
6. Heating Mode Operation

The unit will operate according to the setting by the remote controller and the operation diagram is shown as following.



7. Hot-Start Control

- The indoor fan stops until the evaporator piping temperature will be reached to 28 °C.
- During heating operation, if piping temperatures falls below 26 °C fan stops.
- The operation diagram is as following.



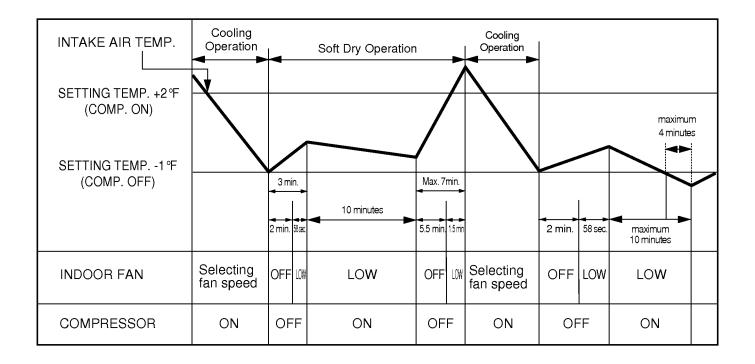
8. Deice Control

- Deicing operation is controlled by timer and sensing the outdoor piping temperature.
- The first deicing starts only when the outdoor pipe temperature falls below -6 °C after 60 minutes passed from starting of heating operation and more than 10 minute operation of compressor.
- Deicing ends after 12 minutes passed from starting of deice operation or when the outdoor pipe temperature rises over 12 °C even if before 12 minutes.
- The second deicing starts only when the outdoor pipe temperature falls below -6°C after 60 minutes passed from ending of the first deicing and more than 10 minutes operation of compressor.

The outdoor	More than 60 minutes of heating operation	1	'ithin hinutes		60 minutes of operation	Deicing
piping Temp. ↓ 12℃	More than 10 min. running of compressor	De	eicing		an 10 min. f compressor	
DEICE OFF						
			/			
-6 ℃						
DEICE ON						
			30SEC ←	HOT- START		
INDOOR FAN	ON		 0I	FF	ON	OFF
COMPRESSOR	ON		0)N	ON	ON
4-WAY VALVE	ON		OFF		ON	OFF

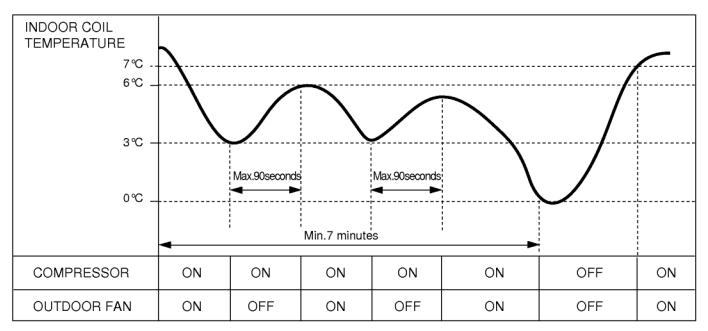
9. Soft Dry Operation.

- During Soft Dry Operation, the compressor ON temperature is the setting temperature plus 1 °C, the compressor OFF temperature is the setting temperature minus 0.5 °C.
- When the room temperature rises over the compressor ON temperature, the operation mode is switched to the cooling mode.
- When the room temperature falls between the compressor ON temperature and OFF temperature, the operation mode is switched to the Soft Dry Operation.
 In this temperature range, 10min. Dry Operation, 5.5min. operation OFF, 1.5min. only fan operation repeat.
 During 10min Dry operation, even if the room temperature falls below compressor OFF temperature, 10min(MAX) Compressor ON from starting of Dry operation which includes 4 min(MAX). Compressor ON operation below the compressor OFF temperature.
- In micom dehumidify mode, control of fan speed is as following.



10. Protection of the evaporator pipe from frosting

• Same as item(1) except that outdoor fan motor stops when indoor coil temperature is below 3°C and restarts at the coil temperature above 6°C or after 90 seconds, if the coil temperature does not rise to 6°C, outdoor fan motor runs continuously at even below 3°C.

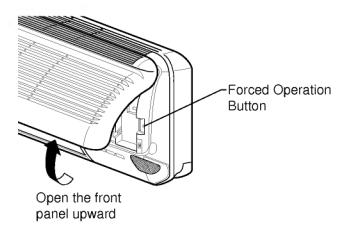


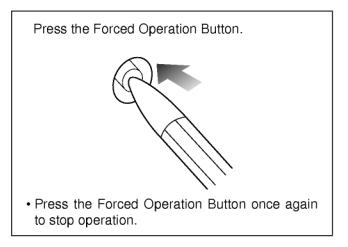
11. Forced Operation.

- If you lose wireless remote controller, you can operate the unit with forced operation switch.
- The standard conditions are as following.

	Cooling Model	Heat pump Model			
	e comig model	Room Temp. ≥ 24℃	21 ℃ ≤ Room Temp. < 24 ℃	Room Temp. < 21 ℃	
Operation Mode	Cooling	Cooling	Soft Dry	Heating	
FAN Speed	High	High	Softe Dry Rule	High	
Setting Temp.	22°C	22 <i>°</i> C	Air Intake Temperature	24 <i>°</i> C	

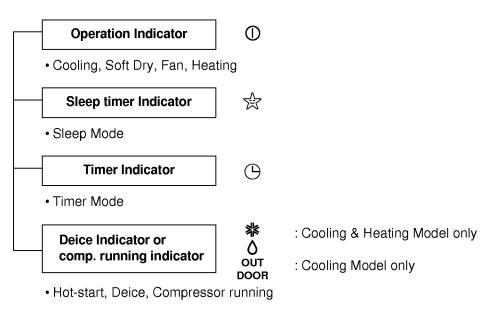
• Unit operation in low fan mode for first 15 seconds, then switched to proper operation mode according to intake Air temperature.





Display Function

Cooling Model



BUZZER SOUND

- Power Input or Reset : One short beep.
- Operation Stop : One long beep.
- Remote Controller Key Input Except Operation Stop Key: Two Short beeps.
- Forced Operation Switch Input : Two short beeps.

Self-diagnosis Function

CODE NO.	DIAGNOSIS	Operation Indicator LED Blinks	Unit Operation
¤	Indoor room temperature thermistor or pipe temperature thermistor Short/Open	Once	Still Operation
¤Ł	Outdoor pipe thermistor Short/Open	Twice	Outdoor Unit Off
۵¤	Communication failure between indoor and outdoor	5 times	Stop
¤	Indoor fan locked	8 times	Stop

• LED blinks as many times as code No. (0.5 second ON/0.5 second OFF) with 3 seconds intervals.

• While the unit is off, no indication displays.

• If more than one code occurs simultaneously, bigger code No. is displayed.

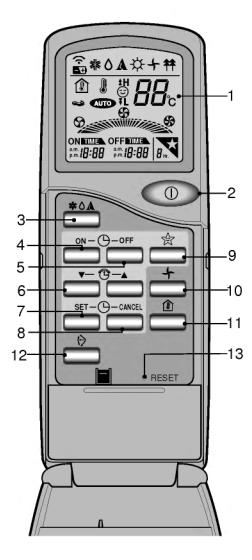
(1) Name and Function-Remote Control

1) Cooling Model

Remote Controller

Signal trasmitter

Transmits the signals to the room air conditioner.



/AOperation display

Displays the operation conditions.

∠BStart/Stop Button

Operation starts when this button is pressed, and stops when the button is pressed again.

COperation Mode Selection Button

- Used to select the operation mode.
- Cooling Operation Mode.
- Soft Dry Operation Mode.
- Auto Operation Mode.
- DON Timer Button

Used to set the time of starting operation.

∠EOFF Timer Button

Used to set the time of stopping operation.

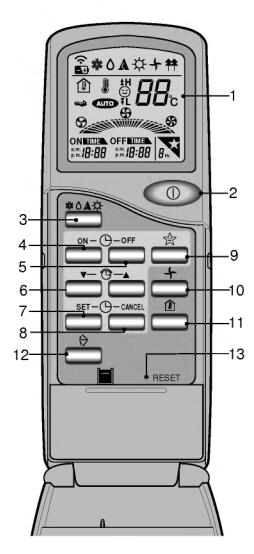
- F Time Setting Button Used to adjust the time.
- ~G Timer Set Button Used to set the timer when the desired time is obtained.
- ~H Timer CANCEL Button Used to cancel the timer operation.
- I Sleep Mode Auto Button Used to set Sleep Mode Auto Operation.
- J Fan Operation Button
 Used to circulate room air without cooling.
- K Room Temperature Checking Button Used to check the room temperature.
- ~L Airflow Direction Control Button Used to set the desired vertical airflow direction.
- /M Reset Button

2) Heating Model

Remote Controller

Signal trasmitter

Transmits the signals to the room air conditioner.



AOperation display

Displays the operation conditions.

BStart/Stop Button

Operation starts when this button is pressed, and stops when the button is pressed again.

COperation Mode Selection Button

Used to select the operation mode.

- Cooling Operation Mode.
- Soft Dry Operation Mode.
- Auto Operation Mode.
- · Heating Operation.
- ∠DON Timer Button

Used to set the time of starting operation.

- EOFF Timer Button
 Used to set the time of stopping operation.
- F Time Setting Button Used to adjust the time.
- GTimer Set Button Used to set the timer when the desired time is obtained.
- HTimer CANCEL Button Used to cancel the timer operation.
- I Sleep Mode Auto Button Used to set Sleep Mode Auto Operation.
- J Fan Operation Button
 Used to circulate room air without heating.
- K Room Temperature Checking Button Used to check the room temperature.
- L Airflow Direction Control Button
 Used to set the desired vertical airflow direction.
- ∠M Reset Button