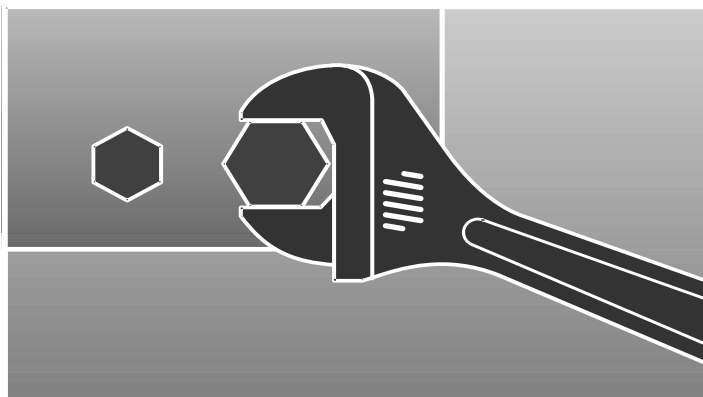
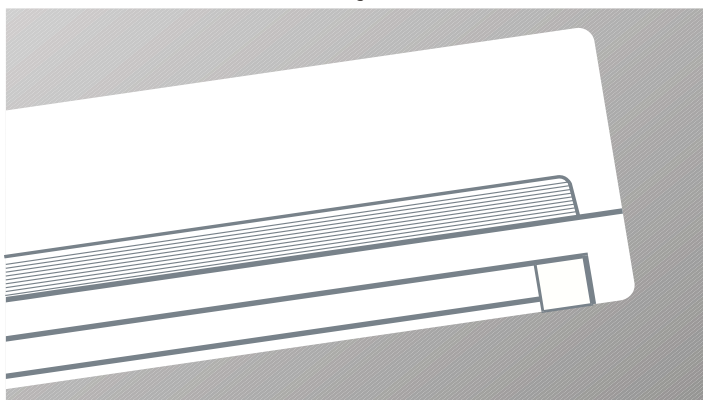


SAMSUNG

USER'S MANUAL & INSTALLATION MANUAL

AS12 ***
AS13 ***
AS18 ***
AS19 ***
AS24 ***

SPLIT-TYPE AIR CONDITIONER (Cooling)



© DB98-28279A

Safety Precautions

You should take the following safety precautions when using your air conditioner.



WARNING

- If you don't follow the safety precautions, you may get the risk of an electric shock, injury or death.
- The manufacturer or qualified service personnel must install this air conditioner.
- Unplug the electric power before repairing, installing or cleaning.

DURING OPERATION

- ◆ Do not repair the air conditioner at your discretion.
It is recommended to contact a service center directly.
- ◆ Never spill any kind of liquid on the air conditioner.
If this happens, unplug or turn off the air conditioner and contact an authorized service center.
- ◆ Do not insert anything between the airflow blades to prevent damage of the inner fan and consequent injury. Keep children away from the air conditioner.
- ◆ Do not place any obstacles in front of the air conditioner.
- ◆ Do not spray any kind of liquid into the indoor unit. If this happens, turn off the breaker and contact a service center.
- ◆ Make sure that the air conditioner is well ventilated at all times:
Do not place a cloth or other materials over it.
- ◆ Remove the batteries if you don't use the remote control for a long time. (If applicable)
- ◆ Use the remote control within 7 meters from the indoor unit. (If applicable)

DISPOSING OF THE UNIT

- ◆ Before throwing out the air conditioner, remove the batteries from the remote control.
- ◆ When you dispose of the air conditioner, consult your dealer. If pipes are removed incorrectly, refrigerant may blow out and cause air pollution. When it contacts with your skin, it can cause skin injury.
- ◆ The package of the air conditioner should be recycled or disposed properly for environmental reasons.

OTHERS

- ◆ Never store or load the air conditioner upside down or sideways to prevent the damage of the compressor.
- ◆ Young children or infirm persons should be always supervised when they use the air conditioner.
- ◆ Max current is measured according to IEC standard for safety.
- ◆ Current is measured according to ISO standard for energy efficiency.

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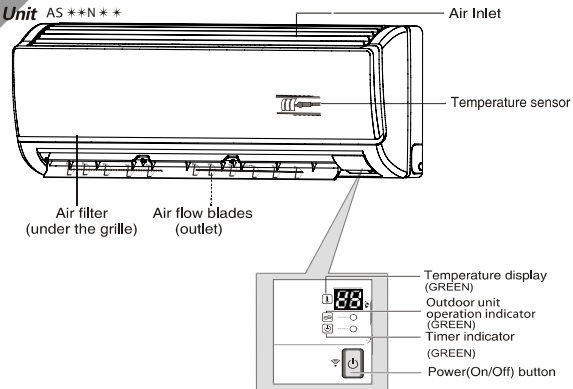
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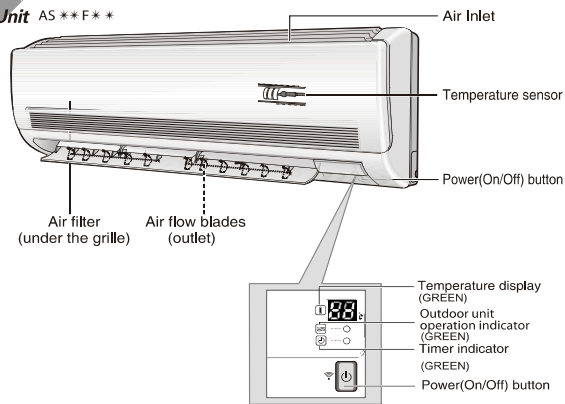
Name of Each Part

The design and shape can be changed according to the model.

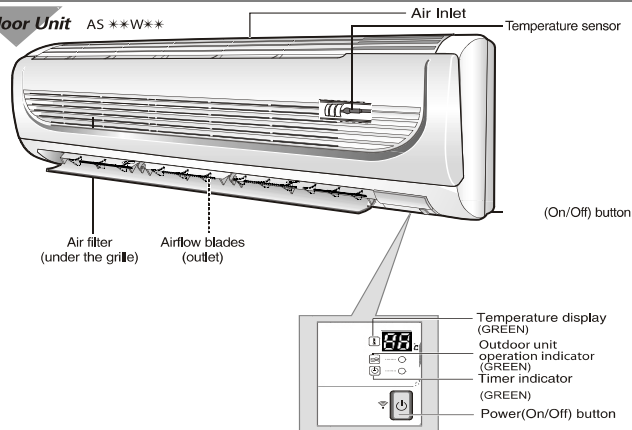
Indoor Unit AS **N**



Indoor Unit AS **F**

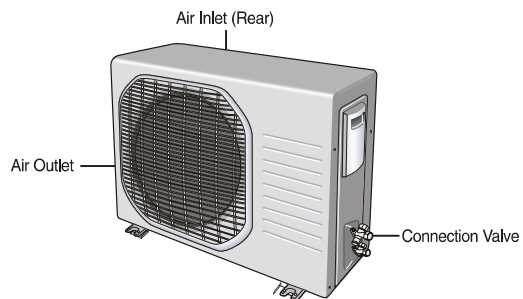


Indoor Unit AS **W**



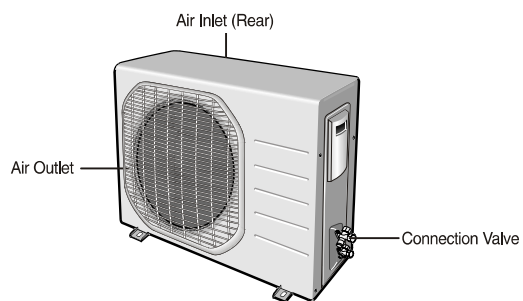
Outdoor Unit

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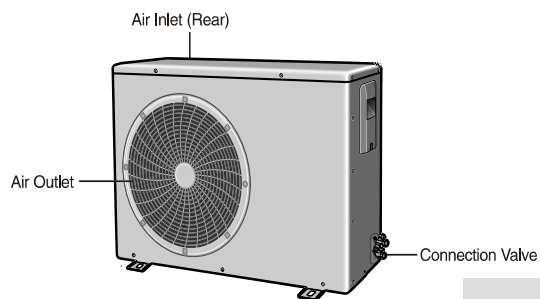
Outdoor Unit

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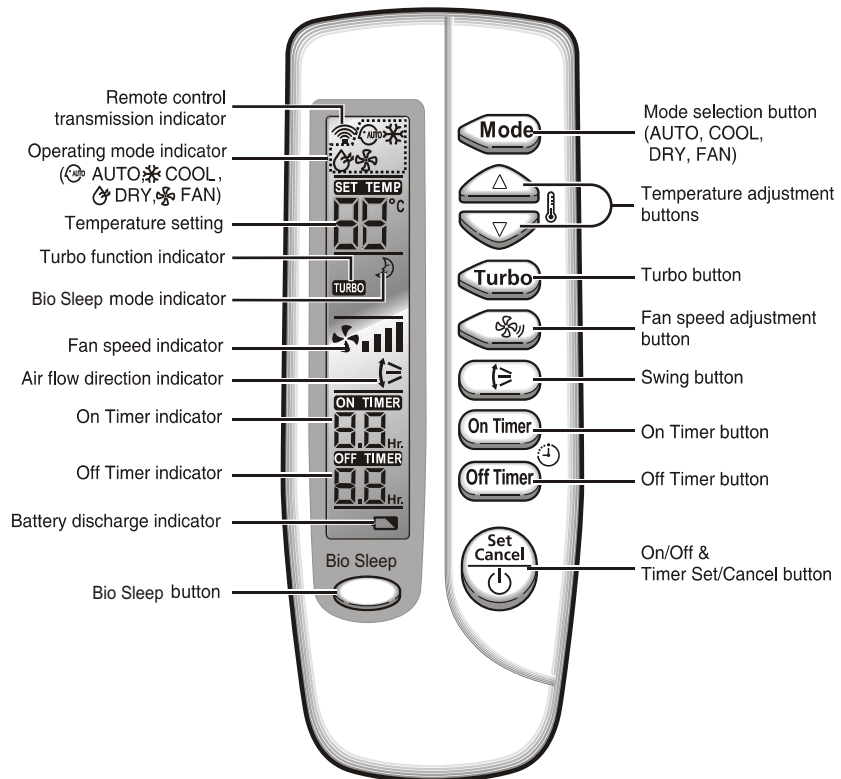


Outdoor Unit

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Remote Control - Buttons and Display



Inserting the Remote Control Batteries

You must insert or replace the remote control batteries when:

- ◆ *You purchase the air conditioner*
- ◆ *The remote control does not work correctly*

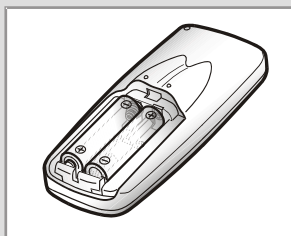
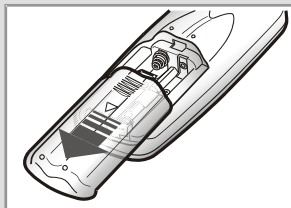
Note

- ◆ Use two AAA, LR03 1.5V batteries.
- ◆ Do not use old batteries or different kinds of batteries together.
- ◆ Batteries may be completely discharged after 12 months, even if they have not actually been used.

-
- 1 Remove the battery cover in the rear of the remote control by pushing it with your thumb.

-
- 2 Insert two batteries, respecting the polarities as indicated by the + and - symbols.

-
- 3 Close the cover by sliding it back in its place.
-

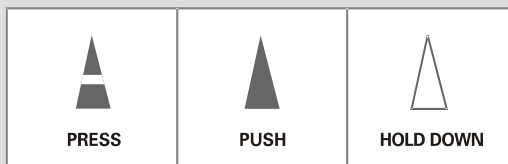


Getting Started

*The User's Manual provides you valuable information about your air conditioner.
Please read this manual carefully before using the air conditioner.
It will help you take full advantage of the unit's features.*


*You have already seen the basic description of the unit on pages from 4 to 6.
Starting up with the next page, you will find a series of step-by-step procedures
for each function available.*

The illustrations in the step-by-step procedures use three different symbols:



Selecting the Automatic Operating Mode

You can start the air conditioner in Auto mode from your remote control. In the Auto mode, the cooling operation is selected automatically. You can also raise or lower the temperature but not the fan speed.

- 1 If necessary, press the  button.



Result:

- ◆ The operation indicator on the indoor unit lights up.
- ◆ The air conditioner starts up in Cool mode with Turbo fan speed.
- ◆ The indoor unit beeps.


IMPORTANT The air conditioner is fitted with a protection mechanism to prevent the unit from being damaged when it is started immediately after being:

- ◆ Plugged in
- ◆ Stopped


It will start up normally after three minutes.

- 2 If the  is not displayed at the top of the remote control, press the  button on the remote control one or more times until it appears.


Result:

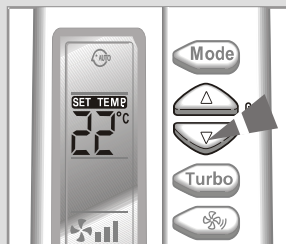
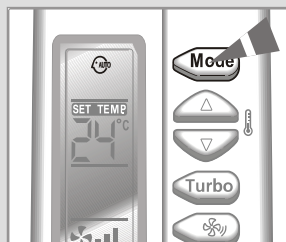
- ◆ The indoor unit beeps each time you press the  button.
- ◆ The air conditioner runs in the Auto mode.

Note You can change modes at any time.

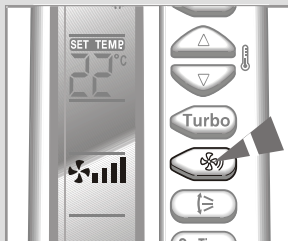
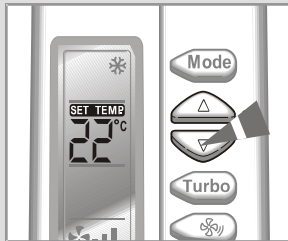
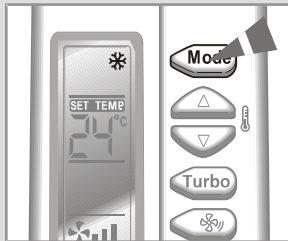
- 3 To adjust the temperature, press the  button one or more times until the required temperature is displayed. Possible temperatures are between 16°C and 30°C inclusive.

Result:

- ◆ Each time you press the  button:
 - The temperature is adjusted by 1°C
 - The indoor unit beeps



Cooling Your Room



You must select the Cool mode if you wish to adjust the:

- ◆ **Cooling temperature**
- ◆ **Fan speed when cooling**

1 If necessary, press the button.

- Result:**
- ◆ The operation indicator on the indoor unit lights up.
 - ◆ The air conditioner starts up in Cool mode with Turbo fan speed.
 - ◆ The indoor unit beeps.

IMPORTANT The air conditioner is fitted with a protection mechanism to prevent the unit from being damaged when it is started immediately after being:

- ◆ Plugged in
- ◆ Stopped

It will start up normally after three minutes.

2 If the is not displayed at the top of the remote control, press the button on the remote control one or more times until it appears.

- Result:**
- ◆ The indoor unit beeps each time you press the button.
 - ◆ The air conditioner runs in the Cool mode.

Note You can change modes at any time.

3 To adjust the temperature, press the button one or more times until the required temperature is displayed.
Possible temperatures are between 16°C and 30°C inclusive.

- Result:**
- ◆ Each time you press the button:
 - The temperature is adjusted by 1°C
 - The indoor unit beeps
 - ◆ The air conditioner starts cooling, provided that the room temperature is higher than the selected temperature.
 - ◆ If the room temperature reaches the set temperature, the air conditioner stops cooling, but the fan is still operating.

4 Select the fan speed by pressing the button one or more times until the required setting is displayed:


- Automatic (rotated :)
- Low
- Medium
- High
- Maximum

Result: Each time you press the button, the indoor unit beeps.

5 To control the direction of the air flow, refer to pages 13.

Removing Excess Humidity

If the atmosphere in your room is very humid or damp, you can remove excess humidity without lowering the room temperature too much.

- 1 If necessary, press the  button.



Result:

- ◆ The operation indicator on the indoor unit lights up.
- ◆ The air conditioner starts up in Cool mode with Turbo fan speed.
- ◆ The indoor unit beeps.


IMPORTANT The air conditioner is fitted with a protection mechanism to prevent the unit from being damaged when it is started immediately after being:

- ◆ Plugged in
- ◆ Stopped


It will start up normally after three minutes.

- 2 If the  is not displayed at the top of the remote control, press the  button on the remote control one or more times until it appears.


Result:

- ◆ The indoor unit beeps each time you press the  button.
- ◆ The air conditioner runs in the Dry mode.

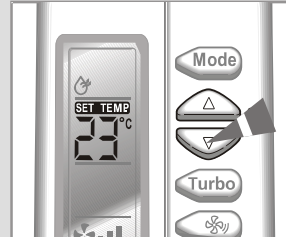
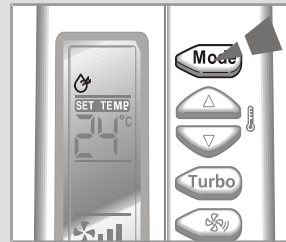
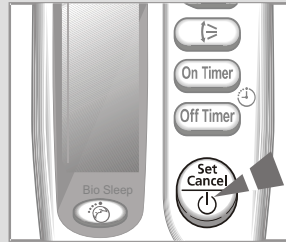
Note You can change modes at any time.

- 3 To adjust the temperature, press the  button one or more times until the required temperature is displayed.
Possible temperatures are between 16°C and 30°C inclusive.

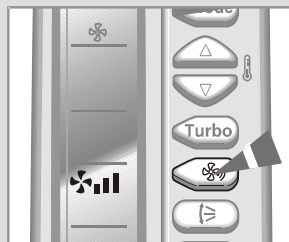
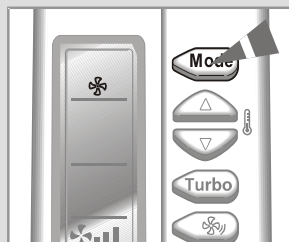
Result:

- ◆ Each time you press the  button:
 - The temperature is adjusted by 1°C
 - The indoor unit beeps
- ◆ The air conditioner starts removing the excess humidity; the quantity of air is adjusted automatically.
- ◆ The fan is running in auto mode.

- 4 To control the direction of the air flow, refer to pages 13.



Airing Your Room



If the atmosphere in your room is stale, you can air the room using the Fan feature.

- 1 If necessary, press the button.

Result:

- ◆ The operation indicator on the indoor unit lights up.
- ◆ The air conditioner starts up in Cool mode with Turbo fan speed.
- ◆ The indoor unit beeps.

- 2 If the is not displayed at the top of the remote control, press the button on the remote control one or more times until it appears.

Result:

- ◆ The indoor unit beeps each time you press the button.
- ◆ The air conditioner runs in the Fan mode.
- ◆ The temperature is set automatically.

Note You can change modes at any time.

- 3 Select the fan speed by pressing the button one or more times until the required setting is displayed:

- Low
- Medium
- High

Result:

- ◆ Each time you press the button, the indoor unit beeps.


- 4 To control the direction of the air flow, refer to pages 13.

Changing the Room Temperature Quickly

The Turbo cooling function is used to cool your room as quickly as possible.


Example : You have just come home and find that the room is very hot. You wish to cool it down as quickly as possible.

The Turbo function operates for 30 minutes with the maximum settings before returning automatically to the mode and temperature previously selected.

- 1 If necessary, press the  button.


Result:

- ◆ The operation indicator on the indoor unit lights up.
- ◆ The air conditioner starts up in Cool mode with Turbo fan speed.
- ◆ The indoor unit beeps.

- 2 Press the  button.

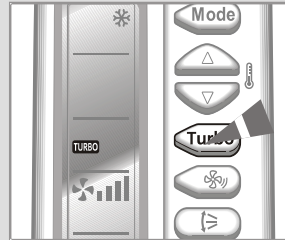
Result:

- ◆ The temperature and fan settings are adjusted automatically.
- ◆ The air conditioner cools the room as quickly as possible.
- ◆ After 30 minutes, the air conditioner is reset automatically to the previous mode, temperature and fan settings.
- ◆ You can select the Turbo function in the Auto or Cool mode.
If you select this function in the Dry or Fan mode, it will return to the Auto mode.

- 3 If you wish to stop the Turbo function before the end of the 30-minute period, press the  button one or more times until **TURBO** disappears.


Result: The air conditioner is reset automatically to the previous mode, temperature and fan settings.

- 4 To control the direction of the air flow, refer to pages 13.




Adjusting the Air Flow Direction Vertically


Depending on the position of the indoor unit on the wall of your room, you can adjust the position of the outer air flow blade on the bottom of the unit, thus increasing the efficiency of the air conditioner.

- 1 Press the  button one or more times as required.

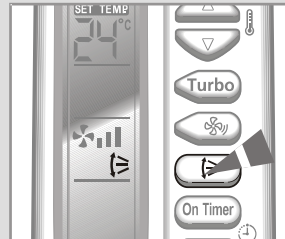
Result: The outer blade is adjusted vertically.

- 2 If you want the blade to move up and down automatically when the air conditioner is operating, press the  button.

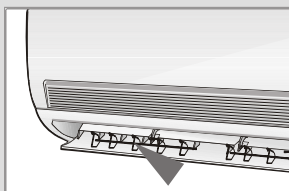
Result: The blade move up and down, around the base position set.

- 3 To stop the blade moving up and down, press the  button again.

Note	If you switch the air conditioner...	Then the blade is...
	Off	Closed completely.
	On again	Set to the initial position powered.



Adjusting the Air Flow Direction Horizontally



There are two sets of inner air flow blades. Just as the outer air flow blade can be adjusted vertically, the inner blades can be adjusted horizontally.

- 1 Adjust each set of inner blades to the required position, by pushing or pulling them sideways.

Setting the On Timer



The On Timer enables you to switch on the air conditioner automatically after a given period of time. You can set the period of time from 0.5 hour to 24 hours.

- 1 To set the operating time, press the **On Timer** button one or more times until the required time is displayed. Possible time is between 0.5 hour and 24 hour inclusive.

- 2 Press the **Set/Cancel** button to complete the setting.

Result:

- ◆ The remaining time is displayed.
- ◆ Blinking of the timer indicator stops.
- ◆ The selected mode and the temperature on the display disappear after 10 seconds.
- ◆ The air conditioner will switch on automatically when the counter displayed on the remote control reaches the set time and disappears the On Timer setting.

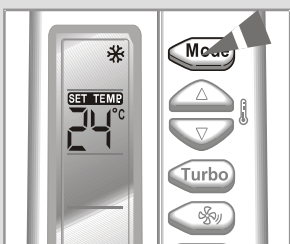
- 3 To select an operating mode in advance, press the **Mode** button until the desired mode is displayed at the top of the remote control.

Result:

The air conditioner will run in the selected mode when it is turned on.

Note

If you don't operate the remote control after setting the On Timer, it will be turned off automatically after 25 hours.



To Cancel the On Timer

If you no longer wish to use the On Timer that you have set, you can cancel it at any time.

- 1 To cancel the On Timer, press the **On Timer** button one or more times until the timer setting disappears.

- 2 Press the **Set/Cancel** button.

Note

If you want to turn on the air conditioner before the timer reaches the setting time, press the **Set/Cancel** button.

Setting the off Timer

The Off Timer enables you to switch off the air conditioner automatically after a given period of time. You can set the period of time from 0.5 hour to 24 hours.

- 1 To set the operating time, press the **Off Timer** button one or more times until the required time is displayed. Possible time is between 0.5 hour and 24 hour inclusive.

- 2 Press the **Set/Cancel** button to complete the setting.

Result:

- ◆ The remaining time is displayed.
- ◆ Blinking of the timer indicator stops.
- ◆ The air conditioner will switch off automatically when the counter displayed on the remote control reaches the set time and disappears the Off Timer setting.

Example If you would like to turn the air conditioner on after 2 hours and to operate it for 2 hours:

1. Press the **On Timer** button until '2 Hr' is displayed.
2. Press the **Set/Cancel** button.
3. Press the **Off Timer** button until '4 Hr' is displayed.
4. Press the **Set/Cancel** button.

Note

You can see or change the setting mode and/or the temperature by pressing the **Mode** button or the **Temp** button after setting the Off Timer.



To Cancel the Off Timer

If you no longer wish to use the Off Timer that you have set, you can cancel it at any time.

- 1 To cancel the Off Timer, press the **Off Timer** button one or more times until the timer setting disappears.

- 2 Press the **Set/Cancel** button.

Note



If you want to turn off the air conditioner before the timer reaches the setting time, press the **Set/Cancel** button.





Selecting Bio Sleep Mode

Bio Sleep mode helps users to fall asleep well after going to bed whether being too hot to sleep or being awakened by coldness. The Bio Sleep Mode can be selected only when the air conditioner is switched on or off in cool mode.

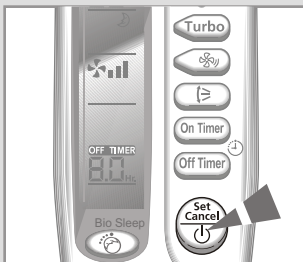


Selecting Bio Sleep mode, as a result, the Off Timer will switch off the air conditioner after 8 hours automatically, or you can press the  button to set Off Timer in the range from 0.5 hour to 12 hours. then press the  button to confirm this selection, during the period of Bio Sleep mode, the possible temperatures are between 16°C and 30°C inclusive, but the fan speed and the direction of the air flow is nonjustable.

- 1 Press the  button one or more times until  is displayed on your remote control.






Result:

- ◆ The indoor unit beeps
- ◆ If Bio Sleep is selected after switching on the unit, the air conditioner will run in Cool mode. During this period, the temperature displayed is one you set for the Cool mode. If Bio Sleep is selected before switch on the unit, the air conditioner starts running in Cool mode and the temperature is set to 26°C.
- ◆ The fan is running in auto mode.



To Cancel the Bio Sleep

If you no longer wish to use Bio Sleep that you have set, you can cancel it at any time.

- 1 press the  button to switch off the air conditioner.
- 2 To cancel a selected Bio Sleep mode, you can also press the  button, the  button, the  button, or  button, the air conditioner will run in cool mode.

Selecting Bio Sleep Mode

In cool mode

Bio Sleep Mode keeps the skin temperature at the best during the 3 stages such as, Falling Asleep stage → Sound Sleep Stage → Wake Up Stage in order.

① **Falling Asleep Stage :**

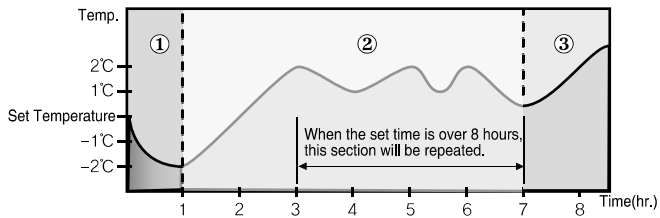
This stage supports environment to quickly cool down. Together with comfortable intermittent air, you will be able to fall asleep quickly.

② **Sound Sleep Stage :**

This stage helps users to take deep sleep and keep the healthy skin by controlling wavy temperature control and insensible air stream.

③ **Wake Up Stage :**

This stage supports comfortable intermittent air to the room to raise human body temperature for refreshing wake up.



※ The above temperature graph might be indicated differently from the temperature indicator of indoor unit depending on the user's location.

- ▶ The recommended temperature is set between 25°C and 27°C, and 26°C is the most ideal temperature for comfortable sleep.
- ▶ Airflow blades(left and right swing) and fan speed are controlled automatically as the above 3 stages in Bio Sleep Mode.
- ▶ Set Off timer in Bio Sleep Mode over 5 hours. You feel disturbed sleep if the Bio Sleep is set too short or long because the basic off timer is set for 8 hours.If the Bio Sleep Mode is set less than 4 hours, the operation will be stopped after the set time. If the Bio Sleep Mode is set over 5 hours, it will run as Wake Up stage for the last one hours before stop.

Operating Recommendations

When you use your air conditioner, it is recommended to read the following :

Topic	Recommendation
Power failure	If power failure occurs when the air conditioner is operating, the air conditioner turns off. When the power returns, the air conditioner starts up again automatically.
Protection mechanism	When the air conditioner is started immediately after being plugged in or stopped, the normal operation starts up after 3 minutes for the reason of protection.

Temperature and Humidity Ranges

The following table indicates the temperature and humidity ranges within which the air conditioner can be used.

If the air conditioner is used at...	Then...
High temperatures	The air conditioner may stop operating for the reason of protection.
Low temperatures	Water may leak and some malfunction may occur if the heat exchanger freezes.
High humidity levels	Water may condense and drip from the surface of the indoor unit if you don't use the air conditioner for a long time.

Operation	Outdoor Temperature	Indoor Temperature	Indoor Humidity
Cooling	19°C to 54°C approx.	16°C to 32°C approx.	80% or less
Dehumidifying	19°C to 54°C approx.	16°C to 32°C approx.	-

* If you use the air conditioner over 32°C(indoor temperature), the cooling capacity may drop.

Technical Specifications

Design and specifications are subject to change without notice

Model	power supply	Net Dim.(mm)	
		Indoor Unit	Outdoor Unit
AS12**	230V,50Hz	W825xD193xH285	W720xD265xH548
AS13**			
AS18*C*			
AS18*K*			
AS18**	230V,50Hz	W1065xD223xH298	W790xD285xH548
AS19**			
AS24**	230V,50Hz	W1065xD223xH298	W880xD310xH638

E-18

Note : All specifications are as per rated condition, i.e. Indoor temp. : 27°C and outdoor temp: 35°C.
Current and power vary as the outdoor temperature vary

Operating Your Air Conditioner Without the Remote Control

Your air conditioner can be operated directly from the indoor unit if the remote control is lost or broken.

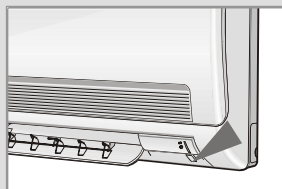
- 1 To switch the air conditioner on, press the ON/OFF switch on the right side of the indoor unit.

Result:

- ◆ The OPERATION indicator on the indoor unit comes on.
- ◆ The indoor unit beeps.
- ◆ The air conditioner starts up in the auto.





- 2 To switch the air conditioner off, press the ON/OFF switch again.

Note Even if the air conditioner has been switched on via the ON/OFF switch, operations can still be controlled using the remote control as usual.

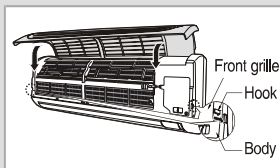
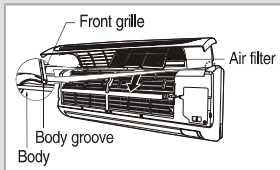
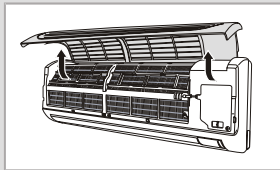


Solving Common Problems

Before contacting the after-sales service, perform the following simple checks. They may save you the time and expense of an unnecessary call.

Problem	Explanation/Solution
The air conditioner does not operate at all	<ul style="list-style-type: none"> ◆ Check that the breaker used for the air conditioner is switched on. ◆ Check that the operation indicator on the indoor unit is on; if necessary press the button on the remote control. ◆ Check whether the Timer indicator on the indoor unit is switched on. If so: <ul style="list-style-type: none"> - Wait until the switch-on time is reached and the air conditioner starts up automatically - Cancel the timer (see pages 16 and 17 for further details)
The air conditioner does not operate with the remote control	<ul style="list-style-type: none"> ◆ Check that there are no obstacles between you and the indoor unit. ◆ Check the remote control batteries. ◆ Check that you are close enough to the indoor unit (seven meters/yards or less).
No beep is heard when you press the  on the remote control	<ul style="list-style-type: none"> ◆ Check that you are pointing the remote control at the remote control sensor in the right of the indoor unit. ◆ Replace the remote control batteries if necessary.
The air conditioner does not cool	<ul style="list-style-type: none"> ◆ Check that the correct operating mode has been selected (Auto, Cool). ◆ The room temperature may be too low. ◆ Dust may be blocking the air filter guard; refer to page 22 and 23 for cleaning instructions. ◆ Check that there is no obstacle in front of the outdoor unit.
The fan speed does not change when you press the  button	<ul style="list-style-type: none"> ◆ Check that the operating mode is set to the Auto, Cool or Fan mode ; in the Dry mode, the fan speed changes automatically.
The air flow direction does not change when you press the  button	<ul style="list-style-type: none"> ◆ Check that the air conditioner has been switched on; if necessary, press the  button on the remote control.
The timer is not correctly triggered	<ul style="list-style-type: none"> ◆ Check that the timer has been programmed correctly; see pages 16 and 17.
Odour is permeated in the room during air conditioning	<ul style="list-style-type: none"> ◆ Air the room. ◆ You can use the Fan mode.

Cleaning Your Air Conditioner



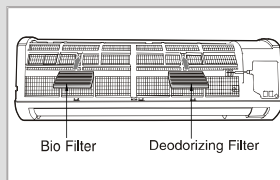
For the best use of your air conditioner, you must clean it every 2 weeks to remove the dust that accumulates on the air filter.

IMPORTANT Before cleaning your air conditioner, check if you have turned off the circuit breaker.

- 1 Open the upper front grille by pulling the lower right and left tabs of the grille.
- 2 Pull air filters out of each tab of the grille.
- 3 Remove all dust on the air filters with a vacuum cleaner or brush.
- 4 When you finish, insert air filters by fixing them to each tab of the grille.
- 5 To close the front grille, fix it to hooks and push down the lower right and left tabs of the grille.
- 6 Clean the front grille with a damp cloth and mild detergent (do NOT use benzene, solvents or other chemicals).

Note If you have not used the air conditioner for a long time, select the Fan mode for 3 to 4 hours to dry the inside of the air conditioner.

Cleaning Deodorizing and Bio Filter (Option)



There are Deodorizing and Bio filters inside your air conditioner. They remove odors and dust in your room. You should clean the filters every 3 months.

- 1 Open the upper front grille by pulling the lower right and left tabs of the grille.
- 2 Pull out the deodorizing and Bio filter.
- 3 Wash the filters with clean water, then dry them in the shade.
- 4 Insert the filters in their place.
Note You can change the position of filters with each other.
- 5 Close the front grille.

Q & A for Non-trouble

Classification	Class	Description
Cooling	Q	The cooling is weak.
	A	When it is hot outside, its cooling capacity decreases due to the increase of the ambient temperature. When the dust filter gets blocked or warm outside air gets in, the cooling capacity will decrease. So, make sure to clean the dust filter frequently, prevent heat loss by closing the doors and insulate the cooling area by using curtains, blinds, shades or window tinting.
	Q	The cooling is good generally. But, it gets weak when it is considerably hot.
	A	It occurs when the outdoor unit is exposed to direct sun light and heat-up air is not ventilated well. So, set up a sunblind over the outdoor unit and keep stuff away from the unit to increase the ventilation. When the cooling capacity decreases during a heat wave, clean the heat exchanger of the outdoor unit or spray some cold water to the heat exchanger to increase the cooling capability.
	Q	The cooling is weak. Does it need refrigerant charging?
	A	It is not correct charging refrigerant regularly. Except that you have moved in several times or the connection pipes are broken, the refrigerant does not run low. So, when refrigerant is additionally charged, it could be costly and cause a product's failure. When the refrigerant leaks, all of it will escape in a short time resulting in cooling failure and no water coming out of the drain hose. So, if water comes out from the drain hose, it indicates the normal operation of the product and it does not need refrigerant charging.
Leakage	Q	It fails to do cooling.
	A	When the air conditioner is set to Ventilation or the desired temperature is set higher than the current temperature, it fails to do cooling. In this case, select Cooling or set the desired temperature lower.
	Q	It floods the floor.
	A	Place the drain hose properly. When it is not placed properly, the drain water would flow back flooding the floor. So, straighten out the drain hose for the water to be drained well.
	Q	Water drips at the drain connection (service valve) of the outdoor unit.
	A	When a glass bottle is taken out of the refrigerator, moisture gets condensed on its surface due to the temperature differences. The same principle applies to the air conditioner. When cold refrigerant goes through the copper tube, moisture gets condensed on the surface of the tube and the connection areas. To prevent the water condensation, the pipes are insulated. But, the connection areas of the outdoor unit are not insulated for the purpose of maintenance or repair, and water gets condensed due to the temperature differences and drips down. Generally, it evaporates right away. But, when it drips much during muggy days, put a water pan on the floor.
Smells	Q	It leaks even though a drain pump is used.
	A	It occurs when the drain pump is plugged out or it is out of order. Check the power of the drain pump and the position of the drain hose, and when the pump is faulty, contact the drain pump manufacturer. Samsung Electronics do not manufacture drain pumps. So, we are not able to correct the drain pump problems.
	Q	Whenever the air conditioner is turned on, it irritates my eyes and gives me a headache.
Smells	A	There are no components in the air conditioner irritating the eyes and sending out chemical smells. But, when the air conditioner is turned on, other smell sources are sucked into the air conditioner and get out of it. So, find and root out the smell sources. Generally, it occurs at a interior renovated place, a pharmacy, a gasoline handling place, a tire shop, a second-hand book shop or an electronic component handling place; when its chemical or musty smells are sucked in and sent out, it can be misled that the air conditioner generates them. So, find and root out the problem or refresh the room frequently.

Classification	Class	Description
Smells	Q	Whenever the air conditioner is turned on, it stinks.
	A	There are no components in the air conditioner sending out chemical smells. But, when the air conditioner is turned on, other smell sources are sucked into the air conditioner and get out of it. So, find and root out the smell sources. Generally, when the drain hose is taken out to the washing room or there are sources of smells such as a diaper bin, a shoe shelf or a socks bin, bad smells generate. Also, it occurs where glass cleaners or air fresheners are used; when they are sucked in interacting with dusts and moistures inside, bad smells generate. These kinds of organic materials are noxious to human bodies. So, we recommend against the use of them.
	Q	Whenever the air conditioner is turned on, it smells sour.
	A	When the room is papered recently, its paste smells would be sucked inside. Also, when the air conditioner is installed in the study room of young boys loving sweat-generating activities such as the basketball, excessive sweats evaporate and get sucked into the air conditioner resulting in bad smells. So, find and root out the problem or refresh the room frequently.
	Q	Whenever the air conditioner is turned on, it smells musty.
	A	It is due to the improper keeping of the product after its use. When keeping the product, dry up the inside with the operation of Ventilation to prevent must. When the product is kept without drying up the inside with Ventilation, mold would grow inside resulting in must. So, open the windows and switch on the Ventilation function to get rid of the saturated smell inside.
	Q	Whenever the air conditioner is turned on, it sends out bad smells such as stale smells.
	A	It occurs generally when there are pet animals in the house. Their smells stay at the same place. But, when the air conditioner is turned on, the air gets circulated resulting in the circulation of the smells. So, find and root out the problem or refresh the room frequently.
	Q	It sends out bad smells.
Operation	A	When the air filter is filthy, it could send out bad smells. So, clean the filter and ventilate the room with the windows open while operating the Ventilation function.
	Q	It won't start.
	A	There is a power failure or it is plugged out. Also, check if the power distribution panel is switched off.
	Q	It goes off during operation.
	A	When the hot air does not escape properly, it goes off during operation. It occurs when it does not ventilate properly because the outdoor unit is covered, the back of the outdoor unit is blocked by a cardboard or a plywood panel, and the front of the outdoor unit is blocked by the closed window or other obstacles. Clear the above obstacles from the outdoor unit.
	Q	It generally works properly. But, when it's considerably hot, it goes off during operation.
	A	It occurs when the outdoor unit is exposed to direct sunlight and the hot air does not escape properly. Set up a sun blind over the outdoor unit and clear the neighboring obstacles from the outdoor unit to provide good ventilation. When it goes off frequently during a heat wave, it would prevent the turn-off and increase the cooling capacity cleaning the outdoor unit or spraying some water to the heat exchanger.
	Q	The remote controller won't operate.
A	A	When the batteries run out or the transmitter or receiver of the remote controller is blocked by obstacles, change the batteries or keep the obstacles away from the controlling area. Also, the remote controller may not work under intensive light from a 3-wave length lamp or a neon sign due to the EMI. In this case, take the remote controller closer to the receiver.

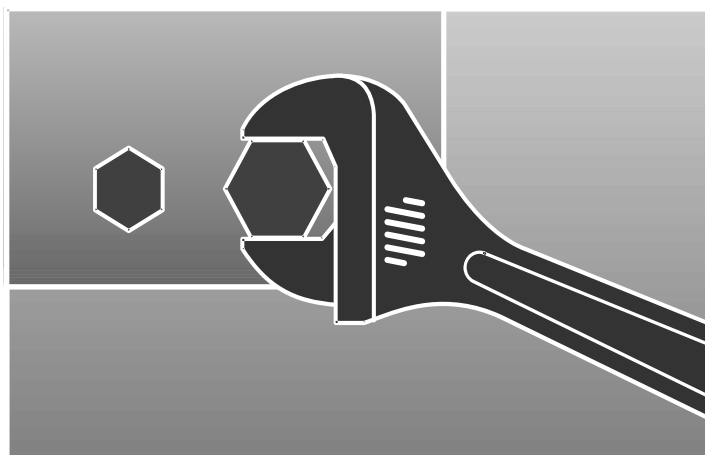
Classification	Class	Description
Installation	Q	Who installs the air conditioner? (Relocation/Re-installation)
	A	When relocating or re-installing the air conditioner, make sure to contact Samsung Electronics Service Center or Authorized Service Agent and have them to do the job. (If not, it could cause personal injury or product damage.) The cost for the relocation/re-installation of the air conditioner is subject to the customer's expense. There is a cost table. But, our service engineer needs to visit to total up the cost correctly. When you move in, make sure to contact Samsung Electronics Service Center or Authorized Service Agent in advance to streamline the process.
	Q	Is it possible to install the outdoor unit outside?
	A	It is possible to install it at a designated place in the apartment or on the rooftop nearby. But, it's illegal hanging an angle iron case with the outdoor unit in it outside the apartment. Also, it is illegal obstructing passers-by with the outdoor unit installed outside.
	Q	What can be done to install the outdoor unit facing the road because it is a commercial building?
	A	The following is an excerpt from Building Code going into effect from JUNE 1st 2005. "The exhaust pipe of a cooling or ventilation facility installed in a building adjacent to the streets of commercial or residential areas shall be installed higher than 2 m to prevent the exhaust air from blowing directly to passers-by and the current facilities shall be corrected by MAY 31st 2005." So, please install it higher than 2 m or not to blow the hot exhausting air directly to passers-by.
	Q	What about installing a windscreen during installation not to blow hot air directly to passers-by?
	A	When the hot air from the front of the outdoor unit is blocked, the product's performance will be affected and it will fail to operate properly. So, keep it at least 300mm away from its surrounding walls and give it good ventilation.



INSTALLATION MANUAL

AS12 **
AS13 **
AS18 **
AS19 **
AS24 **

SPLIT-TYPE AIR CONDITIONER (Cooling)



Safety Precautions

You should take the following safety precautions when using your air conditioner.



WARNING

- If you don't follow the safety precautions, you may get the risk of an electric shock, injury or death.
- The manufacturer or qualified service personnel must install this air conditioner.
- Unplug the electric power before repairing, installing or cleaning.

INSTALLING THE AIR CONDITIONER

- ◆ Users should not install the air conditioner by themselves. Ask the dealer or authorized company to install the air conditioner except the window-type air conditioner in U.S.A and Canada.
- ◆ If you don't install the air conditioner properly, it may cause a fire, a water leakage or an electric shock.
- ◆ You must install the air conditioner according to the national wiring regulations and safety regulations.
- ◆ Install the indoor unit higher than 2.5m from the floor to avoid the injury caused by the operation of the fan. (except the window-type air conditioner)
- ◆ The manufacturer is not responsible for the accidents or injury caused by an incorrect installation.
- ◆ When installing the built-in type air conditioner, keep all electric cables such as the power cable and the connection cord in pipes, ducts, or cable channels to protect them from the danger of impact or any other incidents.

POWER SUPPLY AND CIRCUIT BREAKER

- ◆ If the power cord of the air conditioner is damaged, it must be replaced by the manufacturer or a qualified person in order to avoid a hazard.
- ◆ The air conditioner must be plugged into an independent circuit if applicable or connect the power cable to the auxiliary circuit breaker. An all pole disconnection from the power supply must be incorporated in the fixed wiring with a contact opening of >3mm.
- ◆ Do not extend an electric cord to the air conditioner.
- ◆ The air conditioner must be plugged in after you complete the installation.

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■ Accessories	6
◆ INSTALLING THE UNIT	
■ Fixing the Installation Plate	7
■ Purging the Unit.....	7
■ Connecting the Assembly Cable	8
■ Installing and Connecting the Indoor Unit Drain Hose.....	9
■ Installing and Connecting the Indoor Unit Assembly Piping	10
■ Cutting/Extending the Piping	11
◆ COMPLETING THE INSTALLATION	
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■ Performing the Gas Leak Tests	13
■ Fixing the Indoor Unit in Place	13
■ Fixing the outdoor Unit in Place	14
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Deciding the Installation Place

You should observe the following restrictions when you decide the installation place.

General

Do NOT install the air conditioner under the following conditions;

- ◆ Combustible gases
- ◆ Saline air
- ◆ Machine oil
- ◆ Sulfide gas
- ◆ Special environmental conditions

If you have no alternative place to install it, first consult your dealer or a qualified person.

for Shortening Connecting Pipe ,use 5% silver Brazing rod.

Indoor Unit

- ◆ There must be no obstacles near the air inlet and outlet.
- ◆ Install the indoor unit on a surface that can support its weight.
- ◆ Choose a place where you can easily connect the pipes and cables to the outdoor unit.
The recommended length of the pipes and cables is 5 meters. The maximum length is 'L' meters.
- ◆ Leave sufficient space below the indoor unit to remove the filters easily.
- ◆ Maintain sufficient space around the indoor unit as seen in the picture on page 5.
- ◆ Make sure that the water dripping from the drain hose runs off correctly and safely.
- ◆ Install the indoor unit higher than 2.5m from the ground.

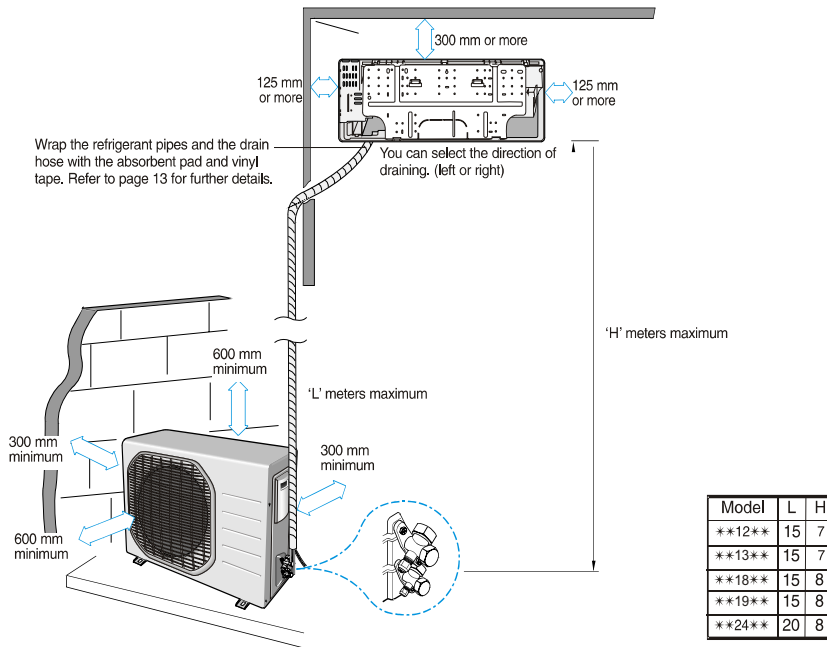
Outdoor Unit

- ◆ NEVER place the outdoor unit on its side or upside down. The compressor lubricating oil may run into the circuit and damage the outdoor unit seriously.
- ◆ Choose a dry and sunny place avoiding direct sunlight or strong winds.
- ◆ Do not obstruct the passage.
- ◆ Avoid a place that may disturb your neighbor. A noise may occur from the outdoor unit and the discharged air may run into the neighborhood.
- ◆ Choose a place where you can easily connect the pipes and cables to the indoor unit. The recommended length of the pipes and cables is 5 meters. The maximum length is 'L' meters.
- ◆ Install the outdoor unit on a flat and stable surface. Otherwise it may slant and make some noise and vibration.
- ◆ Install the outdoor unit on a hard and even place that can support its weight.
- ◆ Place the outdoor unit so as to let the discharged air out properly.
- ◆ Maintain sufficient space around the outdoor unit as seen in the picture on page 5.
- ◆ When you install the outdoor unit at a height, you should firmly fix it in its place. The maximum height is 'H' meters.
- ◆ Make sure that the water dripping from the drain hose runs off correctly and safely.

CAUTION

- ◆ ***The air conditioner must be installed according to the national electrical rules.***
- ◆ ***Max input power & current is measured according to IEC standard and input power & current is measured according to ISO standard.***

Observe the clearances and maximum lengths as seen in the picture below when installing the air conditioner.



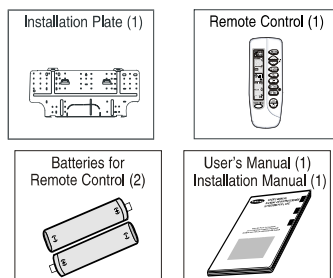
* The appearance of the unit may be different from the diagram depending on the model.

Accessories

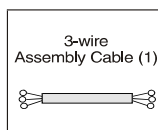
The following accessories are supplied with the air conditioner.

- *The number of each accessory is indicated in parentheses.*

Accessories in the Indoor Unit Case

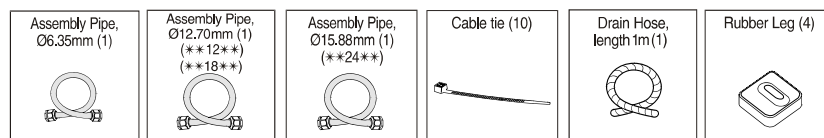


Accessories in the Outdoor Unit Case



- *The flare nuts are attached to the end of each pipe of an evaporator or a service port. Use the nuts when connecting the pipes.*
- *The 3-wire assembly cables are optional. If they are not supplied, use the standard cable.*
- *The rubber leg is only included when the air conditioner is supplied without the assembly pipe as seen in the picture below.*

The following connection accessories are optional. If they are not supplied, you should prepare them before installing the air conditioner.



- *If these accessories are supplied, you can find them in the accessory box.*

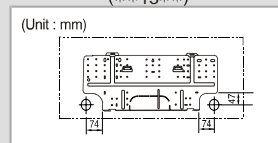
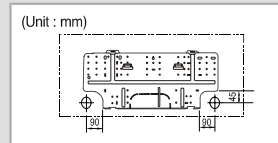
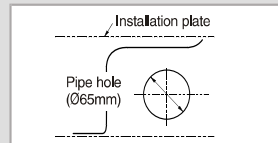
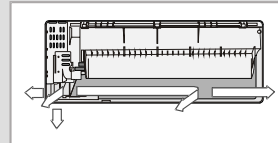
Fixing the Installation Plate

Before fixing the installation plate to the wall or window frame, you must determine the position of the 65-mm hole through which the cable, pipe and hose pass to connect the indoor unit to the outdoor unit.

When facing the wall, the pipe and cable can be connected from the:

- ◆ *Right*
- ◆ *Left*
- ◆ *Underside (right)*
- ◆ *Rear*

1	Determine the position of the pipe and drain hose hole as seen in the picture and drill the hole with an inner diameter of 65mm so that it slants slightly downwards.	
2	If you fix the indoor unit to a...	Follow step(s)...
	Wall	3.
	Window frame	4 to 6.
3	Fix the installation plate to the wall giving attention to the weight of the indoor unit.	
	➤ If you mount the plate on the concrete wall with anchor bolts, the anchor bolts must not be projected by more than 20mm.	
4	Determine the positions of the wooden uprights to be attached to the window frame.	
5	Attach the wooden uprights to the window frame giving attention to the weight of the indoor unit.	
6	Attach the installation plate to the wooden uprights using tapping screws as seen in the picture.	



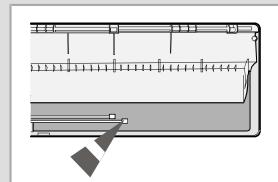
Purging the Indoor Unit

On delivery, there may be inert gas inside the indoor unit. You should purge the gas from the indoor unit before connecting the assembly pipe.

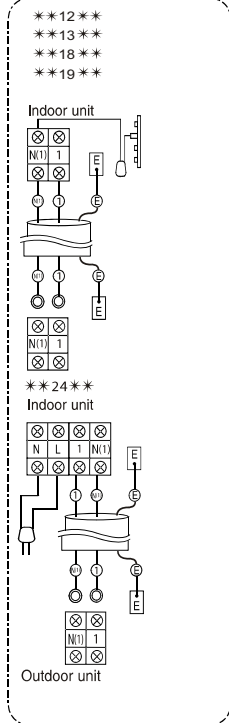
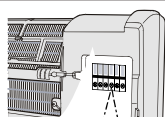
Unscrew the caps at the end of each pipe.

Result: All inert gas exhausts from the indoor unit.

- *To prevent dirt or foreign substance from getting into the pipes during installation, do NOT remove the caps completely until you are ready to connect the pipes.*



Connecting the Assembly Cable



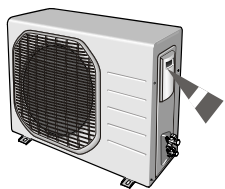
The outdoor unit is powered from the indoor unit through the assembly cable. If the outdoor unit is more than 5 meters away from the indoor unit, you must extend the cable. The maximum length of the cable is 15(20) meters.

- 1 Extend the assembly cable if necessary.
- 2 Open the front grille by pulling on the tabs on the lower right and left sides of the indoor unit.
- 3 Remove the screw securing the connector cover.
- 4 Pass the assembly cable through the rear of the indoor unit and connect the assembly cable to terminals as seen in the picture.
➤ Each wire is labeled with the corresponding terminal number.
- 5 Pass the other end of the cable through the 65mm hole in the wall.
- 6 Close the connector cover tightening the screw carefully.
- 7 Close the front grille.
- 8 Remove the terminal board cover on the side of the outdoor unit.
- 9 Connect the cables to the terminals as seen in the picture.
➤ Each wire is labeled with the corresponding terminal number.
- 10 Connect the earth conductor to the earth terminals.
- 11 Close the terminal board cover tightening the screw carefully.
- 12 Connect the power cable to the indoor unit.

Power cable specification

Model	Interconnection cable
12 **13** **18** **19**	3G, Not less than 1.5mm ²
24	3G, Not less than 2.5mm ²

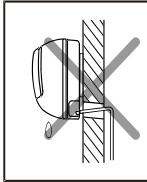
- **Connect the power cable to the auxiliary circuit breaker. If every pole fails to connect to the power supply, it must be incorporated in a wire with a contact opening of ≥3mm.**



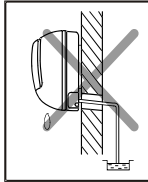
* The designs and shape are subject to change according to the model.

Installing and Connecting the Drain Hose of the Indoor Unit

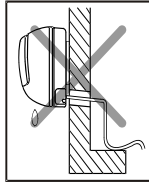
When installing the drain hose for the indoor unit, you should check if condensate draining is adequate. When you pass the drain hose through the 65-mm hole drilled in the wall, check the following.



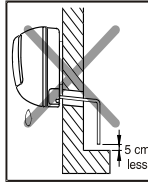
The hose must NOT slant upwards.



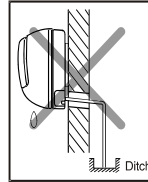
The end of the drain hose must NOT be placed under water.



Do NOT bend the hose in different directions.



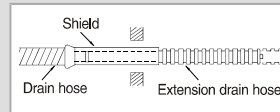
Keep a clearance of at least 5cm between the end of the hose and the ground.



Do NOT place the end of the drain hose in a hollow.

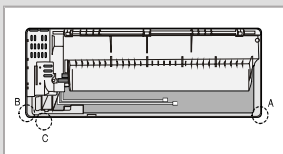
To install the drain hose, do the following.

- 1 If necessary, connect the 2-meter extension drain hose to the drain hose.
- 2 If you use the extension drain hose, insulate the inside of the extension drain hose with a shield.
- 3 Fit the drain hose into 1 of 2 drain hose holes, and then fix the end of the drain hose with a clamp tightly.
 - If you don't use the other drain hose hole, block it with a rubber stopper.
- 4 Pass the drain hose under the refrigerant pipe keeping the drain hose tight.
- 5 Pass the drain hose through the hole in the wall. Check if it slants downwards as seen in the picture.



- **The hose will be fixed permanently into position after finishing the installation and the gas leak test; refer to page 12 for further details.**

Installing and Connecting the Assembly Pipe of the Indoor Unit



There are 2 refrigerant pipes of different diameters:

- ◆ *The smaller one is for the liquid refrigerant*
- ◆ *The larger one is for the gas refrigerant*

A short pipe is already fitted to the air conditioner. You must extend the pipe using the assembly pipe. (Optional)

The connection procedure for the refrigerant pipe varies according to the exit position of the pipe when facing the wall:

- ◆ *Right (A)*
- ◆ *Left (B)*
- ◆ *Underside (C)*
- ◆ *Rear*

- 1 Cut out the appropriate knock-out piece on the rear of the indoor unit unless you connect the pipe directly from the rear.
- 2 Smooth the cut edges.
- 3 Remove the protection caps of the pipes and connect the assembly pipe to each pipe. Tighten the nuts first with your hands, and then with a torque wrench applying the following torque.

Outer Diameter	Torque (kgf•cm)
6.35 mm	140~170
12.70 mm	380~420
15.88 mm	440~480

 - If you want to shorten or extend pipes, refer to page 11.
- 4 Cut off the remaining foam insulation.
- 5 If necessary, bend the pipe round along the bottom of the indoor unit. Then pull it out through the appropriate hole.
 - ◆ The pipe should not be projected from the rear of the indoor unit.
 - ◆ The bending radius should be more than 100mm.
- 6 Pass the pipe through the hole in the wall.
- 7 For further details on how to connect to the outdoor unit and purge the air, refer to page 12.

➤ ***The pipe will be insulated and fixed permanently into position after finishing the installation and the gas leak test; refer to page 13 for further details.***

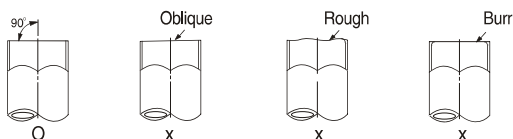
Cutting or Extending the Pipe

A 5-meter pipe is supplied with the air conditioner. (Optional)
The length of the pipe can be:

- ◆ Extended up to 15 (20) meters
- ◆ Shortened as required
- ✦ If you need a pipe longer than 5 meters:
 - ◆ You must extend the assembly cable.
 - ◆ You must add refrigerant to the pipes; otherwise, the indoor unit may freeze.

1 Make sure that you prepared the required tools. (pipe cutter, reamer, flaring tool and pipe holder)

2 If you want to shorten the pipe, cut it using a pipe cutter ensuring that the cut edge remains at 90° with the side of the pipe. There are some examples of correctly and incorrectly cut edges below.

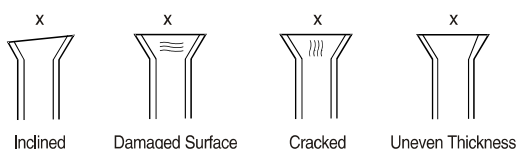


3 To prevent a gas leak, remove all burrs at the cut edge of the pipe using a reamer.

4 Put a flare nut slightly into the pipe and modify the flare.

Outer Diameter (D)	Depth (A)
6.35 mm	1.3 mm
12.70 mm	2.0 mm
15.88 mm	2.2 mm

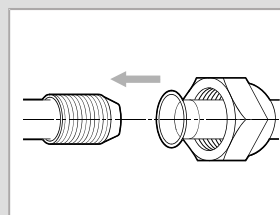
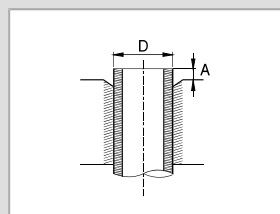
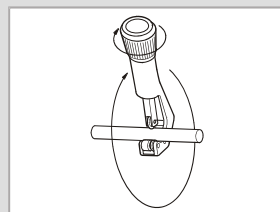
5 Check if you flared the pipe correctly. There are some examples of incorrectly flared pipes below.



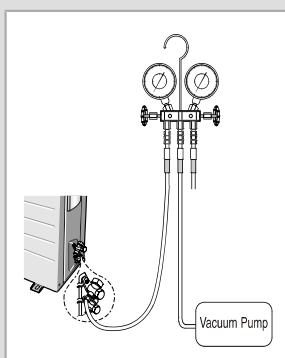
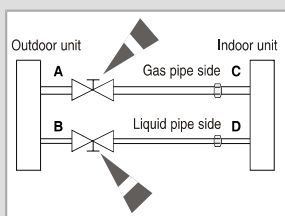
6 Align the pipes to connect them easily. Tighten the flare nuts first with your hands, and then with a torque wrench applying the following torque.

Outer Diameter	Torque (kgf•cm)
6.35 mm	140~170
12.70 mm	380~420
15.88 mm	440~480

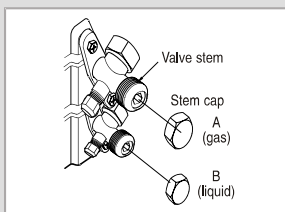
7 For further details on how to connect to the outdoor unit and purge the air, refer to page 12.



Purging the Connected Pipes



※ The designs and shape are subject to change according to the model.



Model	A
12	10
13	10
18	15
19	15
24	15

The outdoor unit is loaded with sufficient R22 refrigerant for a 5-meter pipe. You should purge the air in the indoor unit and in the pipe.

If air remains in the refrigerant pipes, it affects the compressor. It may cause reduction of cooling capacity and malfunction. Refrigerant for air purging is not charged in the outdoor unit.

Use Vacuum Pump as seen in the picture.

- 1 Connect each assembly pipe to the appropriate valve on the outdoor unit and tighten the flare nut.
- 2 Tighten the flare nut first with your hands, and then with a torque wrench applying the following torque.

Outer Diameter	Torque (kgf•cm)
6.35 mm	140~170
12.70 mm	380~420
15.88 mm	440~480
- 3 Connect the charging hose of low-pressure side of manifold gauge to a gas service port as seen in the picture.
- 4 Open the valve of the low pressure side of manifold gauge counterclockwise.
- 5 Purge the air in the connected pipes using vacuum pump for about 10 minutes.
 - Close the valve of the low pressure side of manifold gauge clockwise.
 - Make sure that pressure gauge show -0.1MPa(-76cmHg) after about 10 minutes.
 - This procedure is very important to avoid a gas leak.
 - Turn off the vacuum pump.
 - Remove the hose of the low pressure side of manifold gauge.
- 6 Set a valve cork of liquid and gas service port to the open position.
- 7 Mount the valve stem nuts and the service port cap to the valve, and tighten them at the torque of 183kgf•cm with a torque wrench.
- 8 Check for a gas leak.
 - At this time, especially check for a gas leak from the 3-way valve's stem nuts and from the service port cap.

Adding Refrigerant

You must add refrigerant if the pipe is longer than 5 meters.

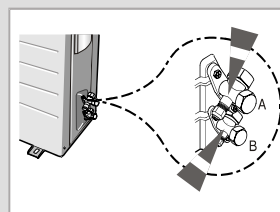
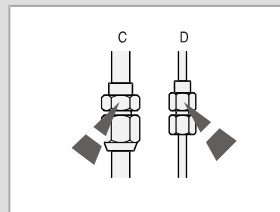
If you use a pipe...	Then...
longer than 5 meters,	'A'g of refrigerant R22 must be added for each extra metre.
shorter than 5 meters,	The purge time is normal.

Refer to the Service Manual for further details.

Performing the Gas Leak Tests

You must check if there is a gas leak before completing all the installation process. (connecting the assembly pipe and hose between indoor unit and outdoor unit, insulating the cables, hose and pipe, and fixing the indoor unit to the installation plate)

To check for gas leaks on the...	Using a leak detector, check the...
Indoor unit	Flare nuts at the end of sections C and D.
Outdoor unit	Valves on sections A and B.

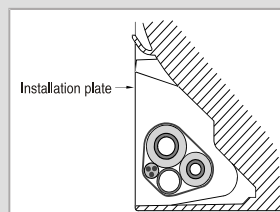
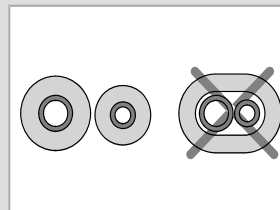


※ The designs and shape are subject to change according to the model.

Fixing the Indoor Unit in Place

After checking for a gas leak in the system, you can insulate the pipe, hose and cables. Then place the indoor unit on the installation plate.

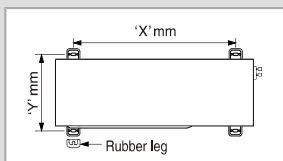
- 1 To avoid condensation problems, place heat-resistant polyethylene foam separately around each refrigerant pipe in the lower part of the indoor unit.
- 2 Wrap the refrigerant pipe and the drain hose in the rear of the indoor unit with the absorbent pad.
 - Wind the pipe and hose three times to the end of the indoor unit with the absorbent pad. (20-mm interval)
- 3 Wind the pipe, assembly cable and drain hose with insulation tape.
- 4 Place the bundle (the pipe, assembly cable and drain hose) in the lower part of the indoor unit carefully so as not to be projected from the rear of the indoor unit.
- 5 Hook the indoor unit on the installation plate and move the unit to the right and left until it secures in place.
- 6 Wrap the rest of the pipe with vinyl tape.
- 7 Attach the pipe to the wall using clamps (Optional).



Fixing the Outdoor Unit in Place

You should install the outdoor unit on a stable base to avoid the generation of noise and vibration, especially when installing the outdoor unit close to your neighbor.

If you install the outdoor unit in a place exposed to strong winds or at a height, you must fix it to the appropriate support (wall or ground).



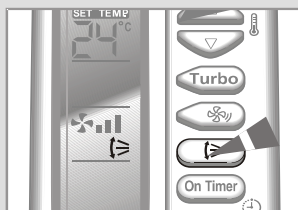
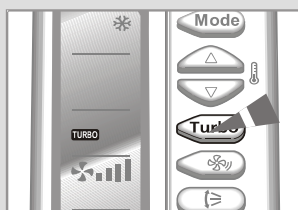
Model	X	Y
12	538	290
13	538	290
18	543	310
19	543	310
24	660	340

- 1 Place the outdoor unit as indicated on the top of the unit to let the discharged air out properly.
- 2 Fix the outdoor unit to the appropriate support using anchor bolts.
- 3 If the outdoor unit is exposed to strong winds, install shield plates around the outdoor unit, so that the fan can operate correctly.

➤ **Secure the rubber leg in order to prevent the generation of noise and vibration.**

Final Checks and Trial Operation

To complete the installation, perform the following checks and tests to ensure that the air conditioner is operating correctly.



- 1 Review all the following elements in the installation:
 - ◆ Installation site strength
 - ◆ Piping connection tightness to detect any gas leakages
 - ◆ Connection wiring
 - ◆ Heat-resistant insulation of the piping
 - ◆ Drainage
 - ◆ Earthing wire connection
 - ◆ Correct operations (follow the steps below)
- 2 Press the button.

Result:

 - ◆ The indicator lights on the indoor unit flash at half-second intervals.
 - ◆ While the indoor unit opens, the indoor unit fan runs to start.
- 3 Press the button.

Result: The outdoor unit operates in cooling as following the room temperature.
- 4 Air flow direction Press the button and check that the air flow blades work properly.

Providing Information for User

After finishing the installation of the air conditioner, you should explain the following to the user. Refer to appropriate pages in the User's Manual.

- | | |
|---|---|
| 1 | How to start and stop the air conditioner |
| 2 | How to select the modes and functions |
| 3 | How to adjust the temperature and fan speed |
| 4 | How to adjust the airflow direction |
| 5 | How to set the timers |
| 6 | How to clean and replace the filters |

➤ ***When you complete the installation successfully, hand over the User's Manual and this Installation Manual to the user for storage in a handy and safe place.***



Contact SAMSUNG WORLDWIDE

If you have any comments or questions regarding a Samsung products, contact
SAMSUNG customer care center

Address : 6th floor,
IFCI Tower, Nehru Place,
New Delhi-110019

Tel. : 3030 8282, 1800 110011

Web Site : www.samsung.com/in

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