

MINISPLIT FLOOR/CEILING

AIR CONDITIONER

Owner's Manual

MODELS

PCC/POC 12

PCC/POC 18

PCC/POC 24

PCC/POC 36

PCC/POC 48

PCC/POC 60



Please read this owner manual carefully before using the air conditioner. It will tell you how to use the unit properly and help you if any trouble occurs.

CONTENTS

Safety Precautions	3
Installation	5 5
Name of Parts	6
Maintenance Before Maintenance Cleaning the Unit Cleaning the Air Filter	11 11
Trouble Shooting Guide Normal Function of the Air Conditioner	



QUALITY POLICY

We will continuously strive to satisfy our customers with consistent reliability in product, service and support.

SAFETY PRECAUTIONS

- Please read the following warnings and cautions carefully before operating the system and use it correctly.
- Installation and maintenance of this air conditioning system should only be carried out by trained and qualified personnel.
- This manual contains information which explains the functions, operation procedure and precautions for operating the air condition system.
- This manual classifies precautions into two categories. They are all important to ensure safe and reliable operation.

⚠ WARNING

Failure to follow a warning may result in death or serious injury.

↑ CAUTION

Failure to follow a caution may result in serious injury or property damage, and in certain conditions, may result in a grave consequence

■ Electrical connections

All electrical wiring and connections must comply with local codes and standards. Power supply cord and interconnection cord used must not be lighter than Polychloroprene sheated cord (245 IEC 57 or H05RN-F). Disconnecting device must have a contact separation of at least 3 mm.

■ The following symbols are often used in this manual.

\bigcirc	Strictly prohibited.	0	Be sure to follow the instructions.
(1)	Be sure to earth the air conditioner.	©	Be sure to disconnect the power plug.
	Do not touch the air conditioner with a wet hand.	•	Do not cause the air conditioner (including the remote controller) to get wet.

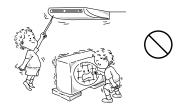
↑ WARNING

Do not expose your body directly to the cool (or hot) air for prolonged period; do not cool (or heat) the room too much.



This could effect your physical condition and cause health problems.

Do not put a finger, a rod or other objects into the air outlet or inlet.



As a fan is rotating at a high speed, it will cause injury.

Do not attempt to repair, relocate, modify or reinstall the air conditioner by yourself.



Incorrect work will cause electric shocks, fire etc. For repairs and reinstallation, consult the shop where you bought the air conditioner.

If anything abnormal such as a burning smell occurs, stop the operation immediately and turn the breaker off.



Continued abnormal operation will cause troubles, electric shocks, fire etc. If anything is abnormal consult the shop where you bought the air conditioner.

Do not attempt to extend the power cord by joining it to another cord, or by using an extension cord. Do not put any other loads on the power supply socket.



Do not damage or attempt to modify the power cord. Do not use the cord in a damaged state or tie in a bundle.



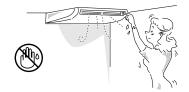
⚠ CAUTION

Before cleaning, be sure to stop the operation and turn the breaker off.



As the fan is rotating at a high speed, cleaning during operation may cause injury.

Do not operate the air conditioner with a wet hand.



It may cause an electric shock.

Ventilate the room from time to time.



Be careful especially when using a burning appliance in the same room. Insufficient ventilation may cause shortage of oxygen.

Do not use the air conditioner for food preservation purpose.





Do not connect the air conditioner to a power supply different form the specification.





It may cause trouble or fire.

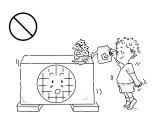
After a long use, check the unit fixing for damage.



Do not wash the unit with water.



Do not place a vessel containing water on the unit.



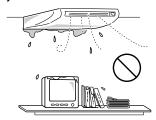
Do not stand or sit on the outdoor unit, do not place any object on the unit.



Do not place a burning appliance in a place exposed to the air flow form the unit or under the indoor unit.



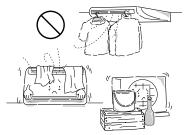
Do not place anything under the indoor or outdoor unit which must be kept away from moisture.



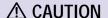
Do not expose plants or animals directly to the air flow.



Do not block air inlets or outlets.



INSTALLATION

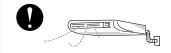


The air conditioner must be earthed in accordance with the local codes.



Incomplete earthing may result in electric shock. Do not connect the earth line to a gas pipe, lightening rod or a telephone earth line.

Arrange the drain hose to ensure smooth drainage.



Incomplete drainage may cause wetting of the building, furniture etc.

Do not install the air conditioner in places where flammable gas may leak.



If leaked gas should accumulate near the unit, fire may occur.

Depending on the environment and local codes, an earth leakage breaker must be installed.





⚠ WARNING

Do not attempt to install the air conditioner yourself.



Consult the service shop or qualified technician. Incorrect installation will result in water leakage, electric shock or fire. For installation, consult the service shop where you bought the unit or a qualified technician.

INSTALLATION SITE

■ To install the air conditioner in the following types of environments, consult the shop.

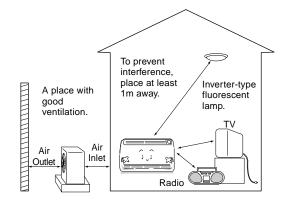
- Places with an oily ambient or where steam or soot occurs.
- Salty or corrosive environments such as coastal areas.
- Places where sulfide gas occurs such as hot springs.

The drain from the outdoor unit must be discharged to a place of good drainage.

CONSIDER NUISANCE TO YOUR NEIGHBOURS FROM NOISES

■ For installation choose a place as described below.

- A place solid enough to bear the weight of the unit and which does not amplify the operation noise or vibration.
- A place from where the air discharged from the outdoor unit or the operation noise will not annoy your neighbours.



ELECTRICAL WORK

• For power supply, be sure to use a separate power circuit dedicated to the air conditioner.

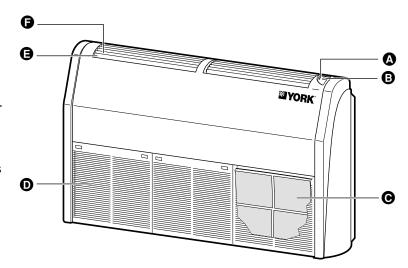
SYSTEM RELOCATION

• Relocating the air conditioner requires specialized knowledge and skills. Please consult the shop where you bought the air conditioner if relocation is necessary for moving or remodelling.

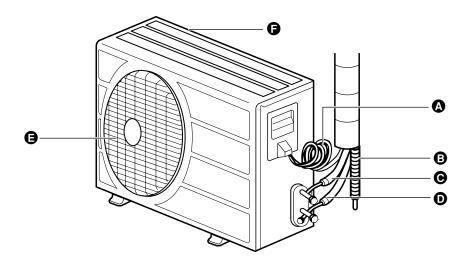
NAME OF PARTS

INDOOR UNIT

- A Indicator Lamp
- B Remote Control Receiver
- Filter
- Front Grille
- Louver Horizontal Blades
- Flap Vertical Blades



OUTDOOR UNIT



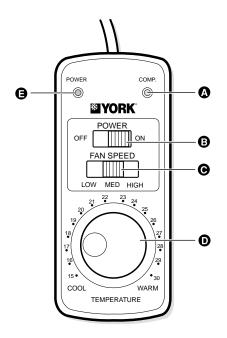
- A Connecting Cable
- Additional Drain Hose
- Refrigerant Piping

- Refrigerant Piping
- Air Outlet
- Air Inlet

REMOTE CONTROL

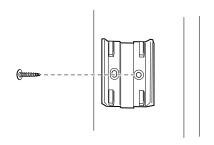
■ Remote Control Part

- A Light to show the status of Compressor
 - Compressor ON
 - Compressor OFF
- B Power ON/OFF button
- Switch Fan Speed 3 levels
 - LOW
 - MED
 - HIGH
- Turn over button
 - To set the temperature (15-30°C)
- **■** Light to show the status of Air Conditioning
 - Power ON
 - Power OFF

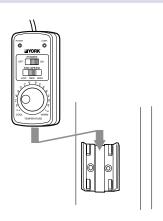


■ Remote Control Bracket

Mount remote control bracket by screw.



Put the remote control into the bracket.

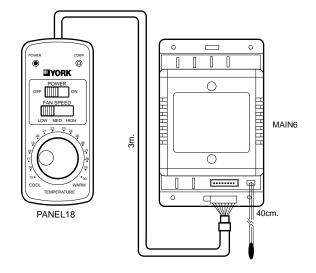


■ Function Specification

- Main control is analog control.
- Power ON/OFF by POWER switch ON control panel.
- FAN SPEED control for LOW, MEDIUM and HIGH by switch ON control panel.
- TEMPERATURE control for 15°C 30°C range.
- TEMPERATURE control accuracy ±1°C.
- 3 minutes (±30 sec.) COMPRESSOR protection control.
- Control board protection by fuse 2A. for all load.
- 180 240VAC 50/60Hz working voltage range.

■ Body Specification

- PCB main A019 A82 x 122 mm. (MAIN6).
- PCB control A019C S41 x 99.5 mm. (PANEL18).
- 1 PCS 2 position slide switch for POWER control.
- 1 PCS 3 position slide switch for FAN SPEED control (direct control 3A(max)).
- 2 LEDS 3 mm. (height 12 mm.) display.
- 1PCS green transparent color for COMPRESSOR.
- 1PCS red transparent color for POWER.
- Cable wire & cable sensor.
- 8CORE 3 m. connector cable fix end with PANEL18.
- 40 cm. room temperature sensor.
- 1RELAY 5A/250V output AC control for magnetic contractor of compressor.



■ Operation Description

T_{ROOM}: Room temperature

T_{SET}: Setting temperature

According to the difference between the T_{ROOM} and T_{SET} , the compressor will be turn ON/OFF as following condition, besides, there is various protections during the compressor ON/OFF.

- 1. When T_{ROOM} (T_{SET}+1°C), and the compressor has been rested for 3 minutes period. the compressor will turn on.
- 2. When T_{ROOM} (T_{SFT}+1°C), the compressor will turn off.

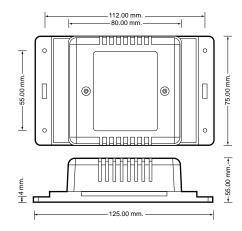
Each time the compressor is off, there will always be a time delay 3 minutes before the compressor can restart.

■ Main Unit Dimention

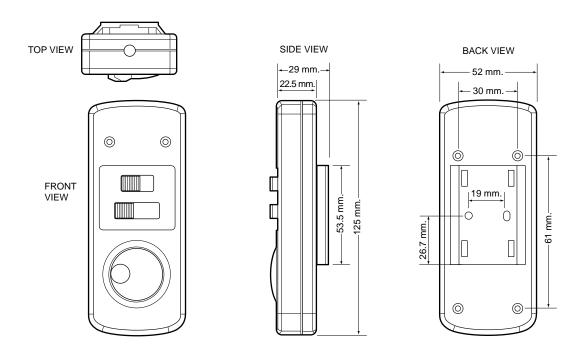
Engineering Data

1. Operating voltage : 180VAC to 240VAC.

Frequency : 50/60Hz
 Fan switch rating : 3AMP
 COMP. switching relay rating : 5AMP.



■ Control Panel Dimension

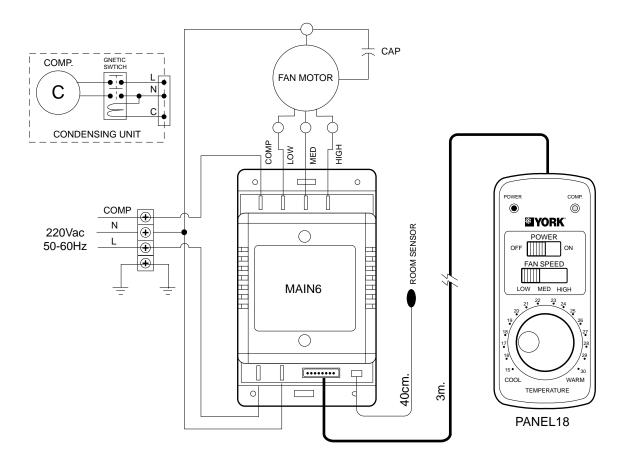


TEMPERATURE SENSOR: Return air or in-door sensor:

With 40 cm. long cable and connector



■ Wiring Diagram



LEGEND	
L	– LINE
N	– NEUTRAL
G	– GROUND
LOW	 LOW FAN SPEED
MED	 MEDIUM FAN SPEED
HIGH	 HIGH FAN SPEED
C,COMP.	COMPRESSOR
CAP	 START CAPACITOR

MAINTFNANCF

The units are designed to operate for long periods of time with a minimum of maintenance. However, the following operation must be performed regularly.

	Maintenance Operations	Recommended Frequency
Air filter	Clean	Every month or more often if necessary
Unit casing	Clean	Every month or more often if necessary
Drain pan and evacuation piping	Clean and check for obstructions	Each season before start up*
Indoor/outdoor coils	Clean	Each season before start up*
Compressor	No need	

^{*} This operation must be carried out by qualified personnel only.

BEFORE MAINTENANCE



Turn off the main breaker or disconnect the main power supply.

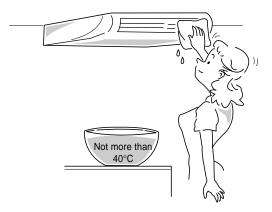


Notes

- Don't spill water : There is a danger of electric shock.
- Don't used petrol, paint thinner, benzene or polishing agents: They may deform or scratch the unit.

CLEANING THE UNIT

Wipe the unit with a soft dry cloth only. If the unit is very dirty, wipe it with a cloth soaked in warm water (Not more than 40°C).

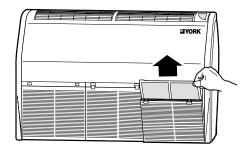


CLEANING THE AIR FILTER



Remove the air filter

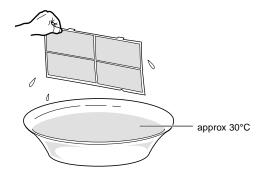
Open front grill and pull fillter outward front grill.





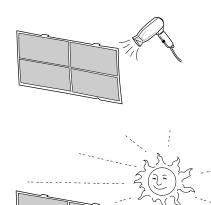
Cleaning

If the fillter is very dirty, clean it with water (approx 30°C).



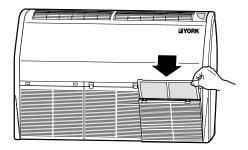


Drying the air filter by hair drying or direct sunlight.





Reinstall the air filter



TROUBLE SHOOTING GUIDE

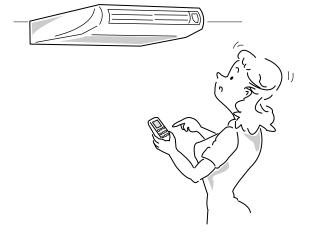
Problem	Probable cause and remedy
A. The air conditioner does not run.	Check that the fuse has not blown or that main circuit breaker has not tipped.
	2. Is the main switch in the off position?
	Have you made a mistake when using the programming function?
B. The unit does not cool efficiently.	The room was probably very hot when you started the air conditioning unit wait a little while to give the unit enough time to cool the room.
C. There is bad smell in the room.	Have you programmed the right temperature?
	Check that the smell is not made by humidity coming from the wall, carpets, furniture, or other fabrics in the room.
D. The air conditioner is noisy.	There is a noise like running water. The noise is made by refrigerant liquid circulating in the cooling circuit.
E. Condensation water seems to be running out of the unit.	Condensate is produced when the air conditioner cools air in the room.
F. Clicking sound is heard from the air conditioner.	In heating or cooling operation, any plastic parts may expand or shrink due to a temperature change. In this event, a clicking sound may occur.

NORMAL FUNCTION OF THE AIR CONDITIONER

The following symptoms do not indicate air conditioner malfunction

1. The system does not operate

- The system does not restart immediately after the ON/OFF button is pressed.
 - If the OPERATION lamp lights, the system is in normal condition.
 - The safety device operates to prevent overload of the system. After 3 minutes, the system will turn on again automatically.
- The system does not restart immediately when TEMPERATURE SETTING changed. If the OPERATION lamp lights, the system is in normal condition. If the timer light is flashing operation is being delayed by the safety device. It does not restart immediately because the compressor has been stopped and requested to start within the delay period. A safety device operates to prevent overload of the system. After 3 minutes, the system will turn on again automatically.
- The system does not start immediately after the power supply is turned on.
 Wait one minute until the microcomputer is prepared for operation.



1.1.1 White mist comes out of a unit

When humidity is high during cooling operation (In dusty locations or after construction work) If the inside of an indoor unit is contaminated, the temperature distribution inside a room may become uneven. It is necessary to clean the inside of the indoor unit.

The unit should be cleaned by a qualified service person familiar with the unit.

When the system is changed over to HEATING OPERATION or after DEFROST OPERATION. Moisture generated on the coil by the DEFROST becomes vapour and exists.

1.1.2 Noise of air conditioners

A continuous flow "Shuh" sound is heard when the systems is in COOLING or DEFROST OPERATION.

This is the sound of refrigerant gas flowing through both indoor and outdoor units.

A "Shuh" sound which is heard at the start or immediately after operation. It may also be heard at the start or immediately after a DEFROST OPERATION.

This is the noise of refrigerant caused by the start and stop of the flow.

A "Pishi-pishi" squeaking sound is heard when the system is in operation or just after operation.

Expansion and contraction of plastic parts caused by temperature change makes this noise.

1.1.3 Dust from the units

 Dust may blow out from the unit when starting after long off cycles.

Dust absorbed by the unit blows out.

The units give off odours The unit absorbs the smell of rooms, furniture, cigarettes, etc., and then emits them.









DE - COMMISSIONING DISMANTLING & DISPOSAL

This product contains refrigerant under pressure, rotating parts, and electrical connections which may be a danger and cause injury!

All work must only be carried out by competent persons using suitable protective clothing and safety precautions.



Read the Manual



Risk of electric shock



Unit is remotely controlled and may start without warning

- 1. Isolate all sources of electrical supply to the unit including any control system supplies switched by the unit. Ensure that all points of electrical and gas isolation are secured in the OFF position. The supply cables and gas pipework may then be disconnected and removed. For points of connection refer to unit installation instructions.
- 2. Remove all refrigerant from each system of the unit into a suitable container using a refrigerant reclaim or recovery unit. This refrigerant may then be re-used, if appropriate, or returned to the manufacturer for disposal. <u>Under No circumstances should refrigerant be vented to atmosphere.</u> Where appropriate, drain the refrigerant oil from each system into a suitable container and dispose of according to local laws and regulations governing disposal of oily wastes.
- 3. Packaged unit can generally be removed in one piece after disconnection as above. Any fixing down bolts should be removed and then unit lifted from position using the points provided and equipment of adequate lifting capacity. Reference MUST be made to the unit installation instructions for unit weight and correct methods of lifting. Note that any residual or spilt refrigerant oil should be mopped up and disposed of as described above.
- 4. After removal from position the unit parts may be disposed of according to local laws and regulations.

