

MULTIELITE

OWNER'S MANUAL

Multi Split System Air Conditioner



Model Numbers:

MRC-052AS-2
MRC-071AS-3
MRC-100AS-4
MRC-110AS-5
MRC-135AS-5

IMPORTANT NOTE:

Please read this manual carefully before operating your new air conditioning unit and keep it available for future reference. This owner's manual only refers to the outdoor unit. When using the indoor unit, refer to the owner's manual for the indoor unit.

That's better. That's Actron.



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Owner's Manual

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FOR COMPLIANCE WITH
QUEENSLAND ELECTRICAL SAFETY
REGULATIONS 2013
This refers to electrical works only



**MUST BE INSTALLED BY A
LICENSED ELECTRICIAN**

READ SAFETY PRECAUTIONS BEFORE INSTALLATION

Thank you for purchasing this air conditioner. This manual will provide you with information on how to operate, maintain, and troubleshoot your air conditioner. Following the instructions will ensure the proper function and extended lifespan of your unit.

Please pay attention to the following signs:



WARNING

Failure to observe a warning may result in injury or death or serious injury. The appliance must be installed in accordance with national regulations.



CAUTION

Failure to observe a caution may result in injury or equipment damage.

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Product design and specifications are subject to change without prior notice for product improvement.

INTRODUCTION

- CONGRATULATIONS on your purchase of an ActronAir air conditioning unit! This unit has been designed and engineered to provide optimum air conditioning and to achieve maximum energy efficiency.
- Your air conditioning system has been manufactured from the highest quality materials. Numerous “in house” and “external” inspections and test procedures were conducted to your air conditioning to ensure satisfactory operation.

INFORMATION ABOUT THIS GUIDE

- This guide provides operation instructions specific to your split indoor unit. Read this manual thoroughly to ensure safe operation of your air conditioning system.

PRODUCT INSPECTIONS

- Fully check your air conditioning unit and all items against the bill of loading upon receiving your shipment. Inspect the unit, components and accessories for any sign of shipping damage. If there is any damage to the unit, contact ActronAir Customer Care immediately on: 1300 522 722.
- Check the unit nameplate to verify the model, serial number, electrical rated specifications and details are correct.

CODES, REGULATIONS AND STANDARDS

- The installer assumes responsibility to ensure that unit installation complies with the relevant council, state & federal codes, regulations and building code standards. All electrical wiring must be in accordance with current electrical authority regulations and all wiring connections to be as per electrical diagram provided with the unit.



SAFETY INSTRUCTIONS

1. Only qualified HVAC technicians* should install and service this air conditioning equipment. Improper service or alteration by unqualified technician could result in significant and major damage to the product or property which may render your warranty null and void. Such unqualified service could also lead to severe physical injury or death. Follow all safety instructions in this literature and all warning labels that are attached to the equipment.
2. Prevailing WH&S regulations must be observed and will take precedence to the safety instructions contained in this manual. Safe work practices and environment must be of paramount importance in the performance of all service procedures.
3. Ensure that unit installation complies with relevant council regulations and building code standards.
4. All electrical wiring must be in accordance with current electrical authority regulations and all wiring connections to be as per electrical diagram provided.
5. Secure the fans against accidental contact. Beware of pinch point and sharp edges which can cause cutting injury.
6. Always wear appropriate PPE, remove any dangling jewellery and protect long hair by wearing a cap.
7. Make sure that safety guards and panel covers are always firmly secured and not damaged.
8. This appliance is not intended for use by young children or infirm persons unless they have been adequately supervised by a responsible person to ensure that they can use the appliance safely. Young children should be supervised to ensure that they do not play with the appliance.
9. Installer must incorporate a means of electrical disconnection (isolator) in the sub mains fixed wiring in accordance with the Australian wiring rule (AS3000).
10. Secure the power cords and control cables that goes in/out the unit. Use the cable ties provided in the control box.

* Qualifications required will be appropriate Electrical, Refrigeration and Refrigerant Handling License & Training, dependent on local State/Territory regulations.

WARNING

- Ask a qualified HVAC technician to install this air conditioner. Inappropriate installation may cause water leakage, electric shock, or fire.
- The warranty will be voided if the unit is not installed by professionals.
- If abnormal situation arises (like burning smell), turn off the power supply and call your HVAC technician for instructions to avoid electric shock, fire or injury.
- **DO NOT** let the indoor unit or the controller get wet. It may cause electric shock or fire.
- **DO NOT** insert fingers, rods or other objects into the air inlet or outlet. This may cause injury, since the fan may be rotating at high speeds.
- **DO NOT** use a flammable spray such as hair spray, lacquer or paint near the unit. This may cause fire or combustion.

CAUTION

- **DO NOT** inspect the unit by yourself. Ask a qualified HVAC technician to perform the inspection.
- To prevent product deterioration, do not use the air conditioner for preservation purposes (storage of food, plants, animals, works of art, etc.).
- **DO NOT** operate the air conditioner with wet hands. It may cause electric shock.
- **DO NOT** touch the evaporator coils inside the indoor unit. The evaporator coils are sharp and may cause injury.
- **DO NOT** place items that might be affected by moisture damage under the indoor unit. Condensation can occur at a relative humidity of 80%.
- **DO NOT** expose heat-producing appliances to cold air or place them under the indoor unit. This may cause incomplete combustion or deformation of the unit due to the heat.
- If the air conditioner is used together with other heating devices, thoroughly ventilate the room to avoid oxygen deficiency.
- **DO NOT** climb onto or place objects on top of the outdoor unit.
- **DO NOT** operate the air conditioner when using fumigant insecticides. The chemicals may become layered with the unit and endanger those who are hypersensitive to chemicals.
- **DO NOT** let children play with the air conditioner.
- **DO NOT** operate the air conditioner in a wet room (e.g. bathroom or laundry room). This can cause electrical shock and cause the product to deteriorate.

NOTE: For multi split air conditioner, one outdoor unit can match different types of indoor units. All the pictures in this manual are for explanation purpose only. Your air conditioner may be slightly different. The following pages introduce several kinds of indoor units matching with the outdoor units.

Achieving Optimal Performance

Optimal performance for the COOL, HEAT, and DRY modes can be achieved in the following temperature ranges. When your air conditioner is used outside of these ranges, certain safety protection features will activate and cause the unit to perform less than optimally.

	COOL mode	HEAT mode	DRY mode
Indoor Temperature	17°C - 32°C	0°C - 30°C	17°C - 32°C
Outdoor Temperature	-15°C - 50°C	-15°C - 24°C	0°C - 50°C

Features

Compressor protection

- The compressor can't restart for 3 minutes after it stops.

Hot start

- The unit is designed not to blow cold air on HEAT mode when the indoor heat exchanger is in one of the following three situations and the set temperature has not been reached.
 - When heating started.
 - Defrosting.
 - Low temperature heating.
- The indoor or outdoor fan stop running when defrosting (Cooling and heating models only).

Defrosting

- Frost may be generated on the outdoor unit during heat cycle when outdoor temperature is low and humidity is high resulting in lower heating efficiency of the air conditioner.
- During this condition the air conditioner will stop heating operation and start defrosting automatically.
- The time to defrost may vary from 4 to 10 minutes according to the outdoor coil temperature and the amount of frost buildup on the outdoor unit.

Auto-restart

In the event of a power loss, the unit will restart automatically in its last programmed setting once power is restored.

NOTE

Lightning or any electronic interference nearby may cause the unit to malfunction. If this happens, reset the power mains (isolator). Press the **ON/OFF** button on the wired controller to restart operation.

The air conditioner turns to FAN only mode from COOL or HEAT mode.

When indoor temperature reaches the temperature setting on air conditioner, the compressor will stop automatically, and the air conditioner turns to FAN only mode. The compressor will start again when the indoor temperature rises on COOL mode or falls on HEAT mode to the set point.

Dripping water may generate on the surface of the indoor unit when cooling in a high relative humidity (relative humidity higher than 80%).

Adjust the horizontal louver to the maximum air outlet position and select HIGH fan speed.

Operation Mode selection

While simultaneously operating two indoor units or more, make sure the operation modes will not conflict with each other. The heat mode claims precedence over all other modes. If the unit initially started operates under heat mode, the other units can operate under heat mode only. For example: If the unit initially started operates under cool (or fan) mode, the other units can operate under any mode except heat. If one of the unit selects heat mode, the other operating units will stop operation and display "--".

NOTE

While simultaneously operating two indoor units or more, **Do not** use the **AUTO MODE** function as this may cause mode conflict between the units and display an error code on one of the units.

Optimal Operation

To achieve optimal performance, please note the following:

- Adjust the air flow direction correctly so that it is not directed on people.
- Adjust the temperature to achieve the highest comfort level. Do not adjust the unit to excessive temperature levels.
- Close doors and windows on COOL or HEAT modes, or performance may be reduced.
- Use TIMER ON button on the remote controller to select a time you want to start your air conditioner.
- Do not put any object near air inlet or air outlet, as the efficiency of the air conditioner may be reduced and the air conditioner may stop running.
- Clean the air filter periodically, otherwise cooling or heating performance may be reduced.
- Do not operate unit with horizontal louver in closed position.

Energy Saving Tips

Do not set the unit to excessive temperature levels.

- While cooling, close the curtains to avoid direct sunlight, closing the curtains while heating will also keep the heat in.
- Doors and windows should be kept closed to keep cool or warm air in the room.
- **Do not** place objects near the air inlet and outlet of the unit. This will reduce the efficiency of the unit.
- Set a timer and use the built-in SLEEP mode if applicable.
- If you don't plan to use the unit for a long time, remove the batteries from the remote control.
- Clean the air filter every two weeks. A dirty filter can reduce cooling or heating efficiency.
- Adjust louvres properly and avoid direct airflow.

Maintenance Procedures

This section describes the procedures that must be performed as a part of normal maintenance program. Regular servicing of equipment by qualified HVAC technician is highly recommended. Always disconnect electrical power to the unit before performing these procedures. It is always a safe practice to observe all safety warnings and cautions when conducting maintenance tasks.

DANGER

Live Electrical Connections!

It may be necessary to work with live electrical components on certain maintenance tasks. Only qualified technicians are allowed to perform these tasks.

WARNING

Hazardous Voltage!

Always make sure that all power supply, including remote controls, are disconnected before performing maintenance. Observe proper Lock-Out / Tag-Out procedures to ensure that power cannot be inadvertently energised. Failure to disconnect power before maintenance procedures can result in serious injury and/or death.

Annual Maintenance Checklists

- Perform general maintenance inspections.
- Perform scheduled start-up checks.
- Leak test refrigerant circuits.
- Inspect contacts of all contactors and relays. Replace all worn contacts as required.
- Inspect, clean and tighten all electrical connections.
- Check fans for balanced operation. Make sure that there are no loose screws / bolts, no fan blades interference and no damage to the fans and guards.
- Inspect the air filters, clean or replace as required.
- Clean and repaint any corroded panel section.
- Ensure no blockage of airflow through variable speed drive and drive fan is operating correctly.

Cleaning The Condenser Coils

Clean the coils at least once a year or more frequently if unit is located in a dusty and dirty environment, in order to maintain your system's proper operating performance. High discharge pressures are a good indication that the coils need cleaning. When using detergent or solvents to clean the coils, follow the manufacturer's instructions to avoid potential damage to the coils and to the unit.

To clean the refrigerant coils, use a soft brush and water spray, such as garden hose or pressure washer with low pressure nozzle.

DANGER

Beware of Rotating Fan Blades!

- Always make sure that all power supply, to the Outdoor Fans are turn-off and isolated.
- Observe WH&S safety procedures, do not wear loose clothing and any jewellery when working near the fans.
- Wear PPE whenever performing any maintenance procedures.
- Observe all necessary procedures when working in a confined space.

CAUTION

Do Not Use High Alkaline Detergent!

- When using detergent for coil cleaning, ensure that the alkaline level is no higher than 8.5 pH level, which can cause corrosion damage to the coils.
- Be Careful Not to Spray Water into the Electrical Components!

Coil Cleaning Procedures

- Disconnect power to the unit by following correct tag out procedure.
- Remove the louvered panels from the unit to gain access to the air inlet side of the coils.
- Use a soft brush to remove loose dirt and debris from both sides of the coils.
- Straighten bent coil fins with fin comb.
- Prepare the detergent solutions according to the manufacturer's instructions.
- Spray solution at a 90° angle to the coils, keeping a minimum nozzle spray angle of 15°, with at least a 1800mm distance from the coils and 600psi pressure.
- Spray leaving air side of the coils first then the air inlet side. Allow the solution to stand on the coils for five minutes.
- Rinse both sides of the coils with cool clean water.
- Inspect the coils, if they are still dirty, repeat the cleaning procedure.
- Clean and wipe dry the outer and inner sides of the unit, the refrigerating parts and other components.
- Ensure that the condensate drain lines are not blocked.
- Reinstall all unit panels, covers and guards.
- Restore electrical power to the unit.

Repairing Refrigerant Leaks

WARNING

- If the refrigerant leaks, turn off the air conditioner and any combustible heating devices, ventilate the room and call your HVAC technician immediately. Refrigerant can be toxic. DO NOT use the air conditioner until the leak is repaired.
- When the air conditioner is installed in a small room, measures must be taken to prevent the refrigerant concentration from exceeding the safety limit in the event of refrigerant leakage. Concentrated refrigerant causes a severe health and safety threat.

Preparation For Periods of Non-Use

1. Run the appliance on FAN mode for 12 hours in a warm room to dry all its components. Presence of moisture for a long period of time may lead to mould formation.
2. Turn off the appliance and turn off power via the main power isolator.
3. Clean the air filter according to the instructions in the previous section. Reinstall the clean, dry filter before storing.
4. Remove the batteries from the remote control (if any).

Maintenance after Extended Non-Use

1. Remove any obstacles blocking the vents of both the indoor and outdoor units.
2. Clean the air filter and the front grille of the indoor unit. Reinstall the clean, dry air filter in its original position.
3. Turn on the main power isolator at least 12 hours prior to operating the unit.

SAFETY PRECAUTIONS

If ANY of the following conditions occurs, turn off your unit immediately!

- The power cord is damaged or abnormally warm
- You smell a burning odour
- The unit emits loud or abnormal sounds
- A power fuse blows or the circuit breaker frequently trips
- Water or other objects fall into or out of the unit

DO NOT ATTEMPT TO FIX THESE YOURSELF! CONTACT Authorised SERVICE PROVIDER IMMEDIATELY!

Possible Issues

The following problems are not a malfunction and in most situations will not require repairs.

Problem	Possible Causes
Unit does not turn on when pressing ON/OFF button	The unit has a 3 minute protection feature that prevents the unit from overloading. The unit cannot be restarted within three minutes of being turned off.
	Cooling and Heating Models: If the Operation light and PRE-DEF (Pre-heating/Defrost) indicators are lit up, the outdoor temperature is too cold and the unit's anti-cold wind is activated in order to defrost the unit.
	In Cooling-only Models: If the "Fan Only" indicator is lit up, the outdoor temperature is too cold and the unit's anti-freeze protection is activated in order to defrost the unit.
The unit changes from COOL mode to FAN mode	The unit changes its setting to prevent frost from forming on the unit. Once the temperature increases, the unit will start operating again.
	The set temperature has been reached, at which point the unit turns off the compressor. The unit will resume operating when the temperature fluctuates again.
The indoor unit emits white mist	In humid regions, a large temperature difference between the room's air and the conditioned air can cause white mist.
Both the indoor and outdoor units emit white mist	When the unit restarts in HEAT mode after defrosting, white mist may be emitted due to moisture generated from the defrosting process.
The indoor unit makes noises	A squeaking sound is heard when the system is OFF or in COOL mode. The noise is also heard when the drain pump (some models) is in operation.
	A squeaking sound may occur after running the unit in HEAT mode due to expansion and contraction of the unit's plastic parts.

Problem	Possible Causes
Both the indoor unit and outdoor unit make noises	A low hissing sound may occur during operation. This is normal and is caused by refrigerant gas flowing through both the indoor and outdoor units.
	A low hissing sound may be heard when the system starts, has just stopped running or is defrosting. This noise is normal and is caused by the refrigerant gas stopping or changing direction.
The outdoor unit makes noises	The unit will make different sounds based on its current operating mode.
Dust is emitted from either the indoor or outdoor unit	The unit may accumulate dust during extended periods of non-use, which will be emitted when the unit is turned on. This can be mitigated by covering the unit during long periods of inactivity.
The unit emits a bad odour	The unit may absorb odours from the environment (such as furniture, cooking, cigarettes, etc.) which will be emitted during operations.
	The unit's filters have become mouldy and should be cleaned
The fan of the outdoor unit does not operate	During operation, the fan speed is controlled to optimise product operation.

NOTE: If your problem persists after performing the checks and diagnostics above, turn off your unit immediately and contact ActronAir on 1800 119 229 for technical support or warranty.

When troubles occur, please check the following points before contacting a qualified service technician.

Problem	Possible Causes	Solution
The unit is not working	Power failure	Wait for the power to be restored
	The power switch is off	Turn on the power
	The fuse is burned out	Contact a qualified service technician to determine the cause of fuse failure.
	Remote control batteries are dead	Replace the remote control batteries
	The unit's 3 minute protection has been activated	Wait three minutes after restarting the unit
Poor cooling performance	Temperature setting may be higher than the ambient room temperature	Lower the temperature setting
	The heat exchanger on the indoor or outdoor unit is dirty	Contact a qualified service technician to clean the affected heat exchanger
	The air filter is dirty	Remove the return air filter and clean it according to instructions.
	The air inlet or outlet of either unit is blocked	Turn the unit off, remove the obstruction and turn it back on.
	Doors and windows are open	Make sure that all doors and windows are closed while operating the unit.
	Excessive heat is generated by sunlight.	Close windows and curtains during periods of high heat or bright sunshine.
	Low refrigerant due to leak or long-term use	Contact a qualified service technician to check for leaks, repair if necessary and recharge refrigerant.

Problem	Possible Causes	Solution
The unit starts and stops frequently	There's too much or too little refrigerant in the system	Contact a qualified service technician to check for leaks, repair and recharge the system with refrigerant
	There is air, incompressible gas or foreign material in the refrigeration system	Contact a qualified service technician to check for leaks, repair and recharge the system with refrigerant
	System circuit is blocked	Contact a qualified service technician to determine which circuit is blocked and replace the malfunctioning piece of equipment
	The compressor has failed	Contact a qualified service technician to replace the compressor
	The voltage is too high or too low	Contact your electricity provider.
Poor heating performance	The outdoor temperature is lower than 7°C	Contact a qualified service technician to check for leaks, repair and recharge the system with refrigerant
	Cold air is entering through doors and windows	Make sure that all doors and windows are closed during use
	Low refrigerant due to leak or long-term use	Contact a qualified service technician to check for leaks, repair if necessary and recharge refrigerant

Error Codes

Please check the following points before contacting a qualified service technician.

Indoor Unit

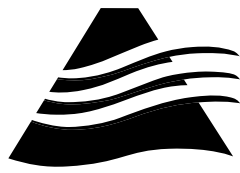
Error Codes	Operation Lamp	Timer Lamp	Causes
E0	☆ 1 time	X	Indoor unit EEPROM parameter error
E1	☆ 2 times	X	Communication malfunction between indoor and outdoor units
E3	☆ 4 times	X	Indoor fan speed malfunction
E4	☆ 5 times	X	Indoor room temperature sensor malfunction
E5	☆ 6 times	X	Evaporator coil temperature sensor malfunction
EE	☆ 8 times	X	Water-level alarm malfunction (Only for cassette and duct types)
F1	☆ 2 times	O	Outdoor ambient temperature sensor malfunction
F2	☆ 3 times	O	Condenser coil temperature sensor malfunction
F3	☆ 4 times	O	Compressor discharge temperature sensor malfunction
F4	☆ 5 time	O	Outdoor unit EEPROM parameter error
F5	☆ 6 times	O	Outdoor fan speed malfunction
F6	☆ 7 times	O	Indoor coil outlet pipe sensor malfunction (located on outdoor unit low pressure valve)
P0	☆ 1 times	☆	Inverter module (IPM) malfunction
P1	☆ 2 times	☆	Over-voltage or under-voltage protection
P4	☆ 5 times	☆	Compressor drive malfunction
P5	☆ 6 times	☆	Indoor unit mode conflict
P6	☆ 7 times	☆	Low pressure protection (for unit with matching outdoor MRC-100AS-4, MRC-110AS-5 and MRC-135AS-5)
"--"	n/a	n/a	Indoor unit mode conflict

O – ON; X – OFF; ☆ – Flash

Error Codes (continued)

Outdoor Unit

Error Codes	Causes
E0	Outdoor unit EEPROM parameter error
E2	Communication malfunction between indoor and outdoor units
E3	Communication malfunction between IPM board and outdoor main control board
E4	Outdoor temperature sensor (coil sensor, ambient sensor , Compressor discharge sensor, indoor coil outlet pipe sensor) malfunction
E5	Over-voltage or under-voltage protection
E6	PFC module protection
E8	Outdoor fan speed malfunction
F1	Indoor unit A coil outlet temperature sensor malfunction
F2	Indoor unit B coil outlet temperature sensor malfunction
F3	Indoor unit C coil outlet temperature sensor malfunction
F4	Indoor unit D coil outlet temperature sensor malfunction
F5	Indoor unit E coil outlet temperature sensor malfunction
P1	High pressure protection (For MRC-100AS-4, MRC-110AS-5 and MRC-135AS-5)
P2	Low pressure protection (For MRC-100AS-4, MRC-110AS-5 and MRC-135AS-5)
P3	Current overload protection
P4	Compressor discharge temperature protection
P5	Condenser high temperature protection
P6	Inverter module (IPM) protection



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