

# Serene 2 Wall Hung Split System

Owner's Manual



## Model Numbers:

WRC-026CS/WRE-026CS

WRC-035CS/WRE-035CS

WRC-050CS/WRE-050CS

WRC-072CS/WRE-072CS

WRC-085CS/WRE-085CS



### **IMPORTANT NOTE:**

Please read this manual carefully before installing or operating your air conditioning unit. Make sure to save this manual for future reference.



### **CAUTION:**

The system is charged with flammable refrigerant, safety checks are necessary to ensure that the risk of ignition is minimised.



*That's better. That's Actron.*

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Product design and specifications are subject to change without prior notice for product improvement. Drawings are for illustration purposes only and may vary depending on the model purchased.

### READ SAFETY PRECAUTIONS

Incorrect system operations due to ignoring instructions can cause serious damage or injury. The seriousness of potential damage or injuries is classified as either a **WARNING** or **CAUTION**.



**CAUTION**

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



**WARNING**

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

## 01. General Information

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 unit to ensure satisfactory operation.

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

## 02. Safety Instructions

- Only licensed HVAC technicians\* should service this air conditioning equipment. Improper service or alteration by an 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.
- Prevailing WH&S regulations must be observed and will take precedence to the safety instructions contained on this manual. Safe work practices and environment must be the paramount importance in the performance of all the service procedures.
- 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.

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

### DANGER

#### **Hazardous Voltage - Risk of Electrocutation.**

Turn Off the power from main isolator before proceeding with any service and maintenance work of the unit. Observe proper LOCK-OUT/TAG-OUT (LOTO) procedures for electrical appliances in order to prevent accidental switching-on of the power supply. Extreme care and caution must be observed should there be a need to work on live circuit.

### WARNING

- If any 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.

### 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.

 **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.

 **WARNING**

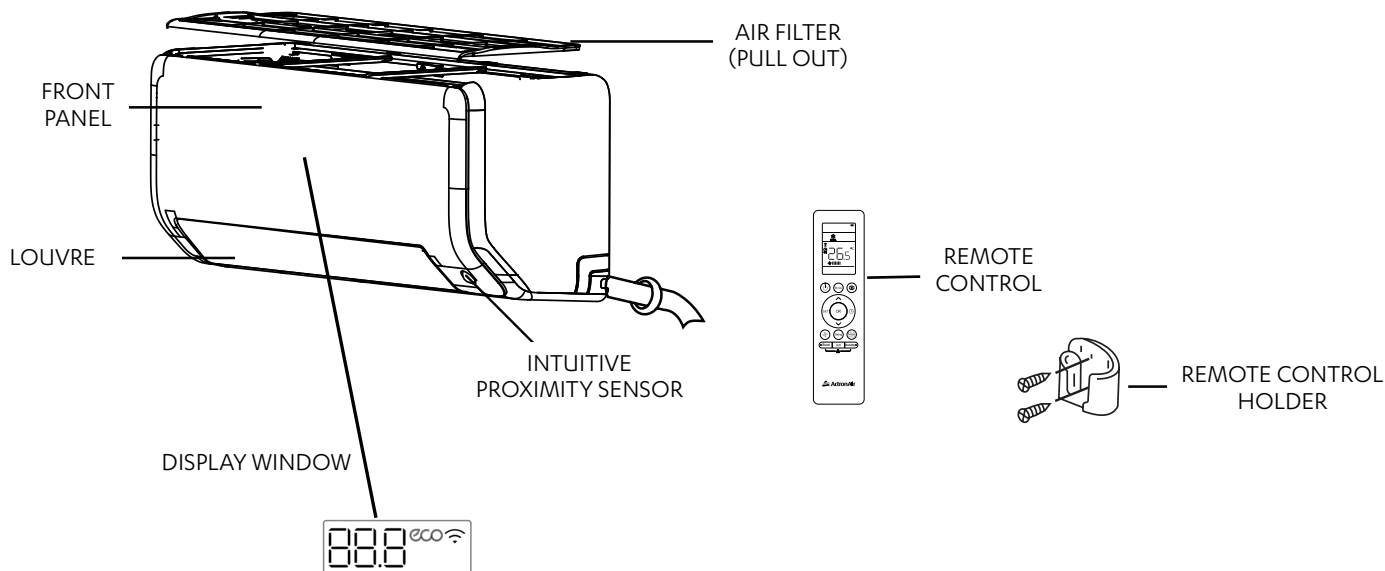
This air-conditioning unit contains R-32 refrigerant (CLASS A2L) which is mildly flammable.

**NOTE**

- Service, maintenance, repairs and decommissioning of this unit must be performed by a licensed HVAC technician; qualified to handle R-32 refrigerant.
- R-32 refrigerant is odourless, if the refrigerant gas comes into contact with fire, it may emit a poisonous gas.
- Do not continuously operate open flames and ignition sources in the room.

### 03. Unit Specification and Features

#### 03.01. Unit Parts



| Display Code | Display Code Explanation  |
|--------------|---|
| 888          | Display window for indicating temperature, operation features and error codes.  |
| ON           | Displayed for three seconds when: <ul style="list-style-type: none"> <li>• <b>TIMER ON</b> is set</li> <li>• <b>IONISER, SWING, TURBO, ECO, BREEZE AWAY, INTUITIVE PROXIMITY SENSOR</b> or <b>QUIET</b> feature is turned on</li> </ul>   |
| OF           | Displayed for three seconds when: <ul style="list-style-type: none"> <li>• <b>TIMER OFF</b> is set</li> <li>• <b>IONISER, SWING, TURBO, ECO, BREEZE AWAY, INTUITIVE PROXIMITY SENSOR</b> or <b>QUIET</b> feature is turned off</li> </ul> |
| dF           | Displayed when the system is defrosting   |
| CL           | Displayed when Active Clean feature is turned on  |
| FP           | Displayed when Freeze Protection mode is turned on  |
| eco          | Displayed when ECO+ feature is activated  |
| Wi-Fi        | Displayed when Easyconnect is installed   |
| --           | Displayed when Indoor unit is in mode conflict with another operating indoor unit (applicable to multi-split "MRC" installations only)  |

**NOTE**

Refer to remote manual for full features list.

## 04. Operating Conditions

Optimal performance for the **COOL**, **HEAT**, and **DRY** mode can be achieved in the temperature ranges shown in the table below. If the unit is used outside of these ranges, certain safety protection features will activate and cause the unit to perform at a reduced capacity.

|                     | <b>COOL Mode</b> | <b>HEAT Mode</b> | <b>DRY Mode</b> |
|---------------------|------------------|------------------|-----------------|
| Indoor Temperature  | 17°C to 32°C     | 0°C to 30°C      | 10°C to 32°C    |
| Outdoor Temperature | -15°C to 60°C    | -25°C to 30°C    | 0°C to 60°C     |

### NOTE

Room relative humidity should be less than 80%. If the air conditioner operates in room with relative humidity greater than 80%, the surface of the air conditioner may attract condensation. Please sets the vertical air flow louvre to its maximum angle and set HIGH fan mode.

**To further optimize the performance of your unit, do the following:**

- Keep doors and windows closed.
- Limit energy usage by using **TIMER ON** and **TIMER OFF** functions.
- Do not block air inlets or outlets.
- Regularly inspect and clean air filters.

## 05. Features

### **Auto-Restart**

If the unit loses power, it will automatically restart with the prior settings once power has been restored.

### **Anti-mildew**

When the unit is turned off after **COOL**, **AUTO** or **DRY** mode, the unit will continue to operate a low power to dry up condensed water to prevent mildew growth.

### **Easyconnect Control (Optional)**

Allows you to control the unit using a mobile phone and a wireless connection. Installation is required to be undertaken by a licensed technician. Easyconnect is an accessory that may be purchased separately.

### **Louvre Angel Memory**

When turning on your unit, the louvre will automatically resume its former angle. Aim the louvre higher to avoid direct airflow. This setting is found under the **SET** menu.

### **Active Clean Function**

It washes away dust, mold and grease when it adheres to the heat exchanger, by automatically freezing and then rapidly thawing frost. Active Clean function is used to produce more condensed water to improve the cleaning effect. After cleaning, the internal blower fan operates with hot air to blow-dry the evaporator and prevent the growth of mold.

When this function is turned on, the indoor unit will display **CL**. After 20 to 45 minutes, the unit will turn off automatically and Active Clean function will be deactivated.

**Breeze Away**

This feature stops direct air from blowing onto you.

**Refrigerant Leakage Detection**

The indoor unit will automatically display **ELOC** when it detects refrigerant leakage. Switch system off and contact service or installer.

**Intuitive Proximity Sensor**

This feature detects the occupancy of the people in the room. When in **COOL** mode, if you are away for 30 minutes, the unit will automatically lower the frequency of the unit to save energy. The unit will automatically resume operation after sensing activity in the room.

**LED Display**

Press the LED button on the remote control to turn off the indoor unit panel display and cancel the 'beep' noise.

**Freeze Protection**

When the unit is on **HEAT** mode and indoor temperature drops below 8 °C - **FP** will be displayed and system will enter freeze protection mode.

**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.

**05.01. Setting Vertical Angle of Air Flow**

While the unit is on, use the **SWING** button on the remote control to set the vertical angle airflow direction. Refer to Remote Control manual for more details.

**05.02. Setting Horizontal Angle of Air Flow**

While the unit is on, press and hold the **SWING** button on the remote control to set the vertical angle airflow direction. Refer to Remote Control manual for more details.

**NOTE**

- When using **COOL** or **DRY** mode, do not set vertical louvre to the minimum angle for long periods of time. This can cause water to condense on the louvre blade, which may drop on your floor or furnishings.
- When using **COOL** or **HEAT** mode, setting the vertical louvre to the minimum angle can reduce the performance of the unit due to restricted air flow.
- Do not move louvre by hand. This will cause the louvre to become out of sync. If this occurs, reset mains power supply isolator to restart the unit. This will reset the louvre.

**CAUTION**

Do not put your fingers in or near the blower. The high-speed fan inside the unit may cause injury.

### 05.03. Sleep Operation

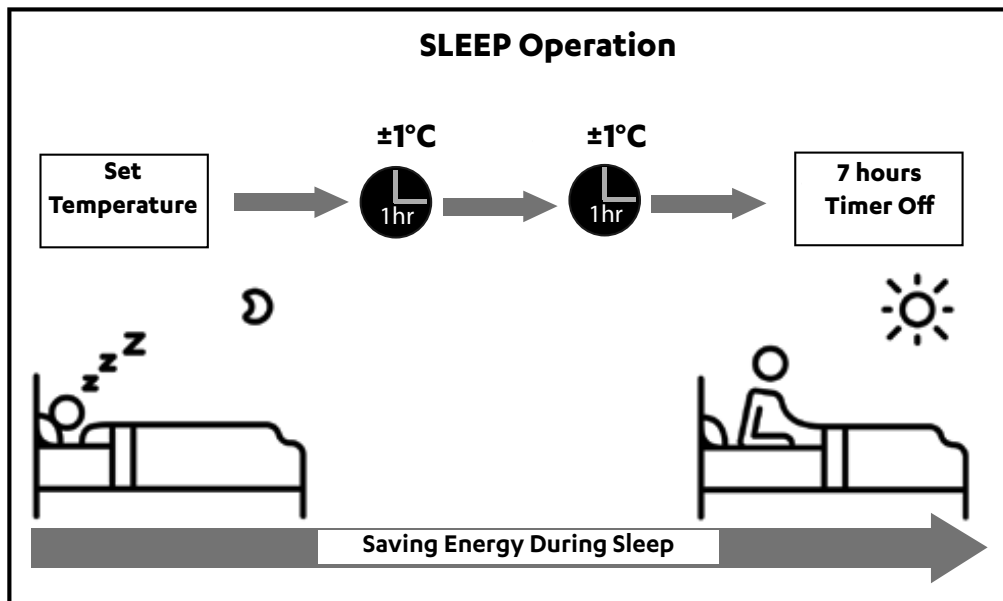
The SLEEP function is used to decrease energy usage while you sleep and do not need the same temperature settings to stay comfortable. This function can only be activated via the remote control.

Press the **SLEEP** button when you are ready to go to sleep. When in **COOL** mode, the unit will increase the temperature by 1°C after 1 hour, and will increase an additional 1°C after another hour. When in **HEAT** mode, the unit will decrease the temperature by 1°C after 1 hour, and will decrease an additional 1°C after another hour.

It will hold the new temperature for 7 hours, then the unit will turn off automatically.

#### NOTE

The SLEEP function is not available in **FAN** or **DRY** mode.





## 06. Manual Operation

### How to operate your unit without the remote control

In the event that your remote control fails to work, your unit can be operated manually with the **MANUAL CONTROL** button located on the indoor unit (shown in image below). Note that manual operation is not a long-term solution, and that operating the unit with your remote control is strongly recommended.

To operate your unit manually:

1. Locate the **MANUAL CONTROL** button as shown on the image on the next page.
2. Press the **MANUAL CONTROL** button one time to activate **FORCED AUTO** mode. The display will show **24.0c**.
3. Press the **MANUAL CONTROL** button again to activate **FORCED COOLING** mode. The display will show **fc**.
4. Press the **MANUAL CONTROL** button a third time to turn the unit Off.

### FORCED AUTO MODE

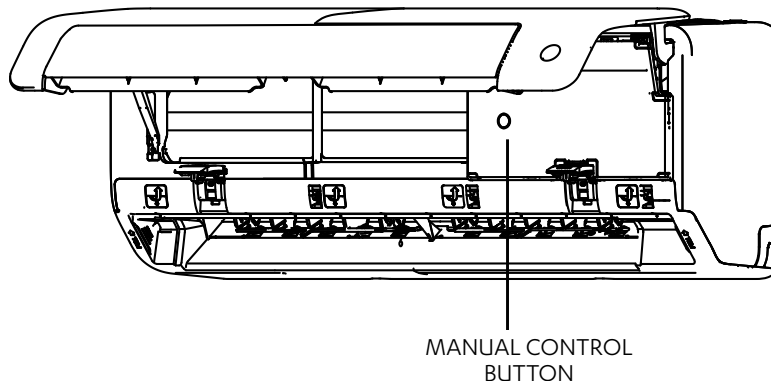
The unit will go to **AUTO** mode with 24 °C set point.

### FORCED COOL MODE

The outdoor unit will run at minimum capacity and indoor fan in low speed. After 30 minutes, the system will go to **AUTO** mode with 24 °C set point.

### CAUTION

The manual button is intended for testing purposes and emergency operation only. Please do not use this function unless the remote is lost and it is absolutely necessary. To restore regular operation, use the remote control to activate the unit.



## 07. Care and Maintenance

### NOTES

Apart from filter cleaning, all other general maintenance and care of systems should be undertaken by a licensed technician.

Service, maintenance, repairs and decommissioning of this unit must be performed by a licensed HVAC technician; qualified to handle R-32 refrigerant.

### Maintenance Procedures

This section describes the procedures that must be performed as a part of normal maintenance program. Regular servicing of equipment by licensed technician is highly recommended. Regular servicing of your unit helps in maintaining its optimum performance and reliability. **The checklist and service periods provided on this manual are guides only, as some sites may require more frequent servicing.** 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.

### 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. This unit is charged with R-32 mildly flammable refrigerant.

### DANGER

#### Live Electrical Connections!

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

#### 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.

### 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.

### 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 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.



#### **WARNING**

##### **Do Not Use High Alkaline Detergent!**

When using detergent for coil cleaning, ensure that the alkaline level is no higher than 8.5, which can cause corrosion damage to the coils.

##### **No Water into the Electrical Compartments!**

Ensure consideration is given to the possibility of water entering the electrical compartments during cleaning of the condenser coil.

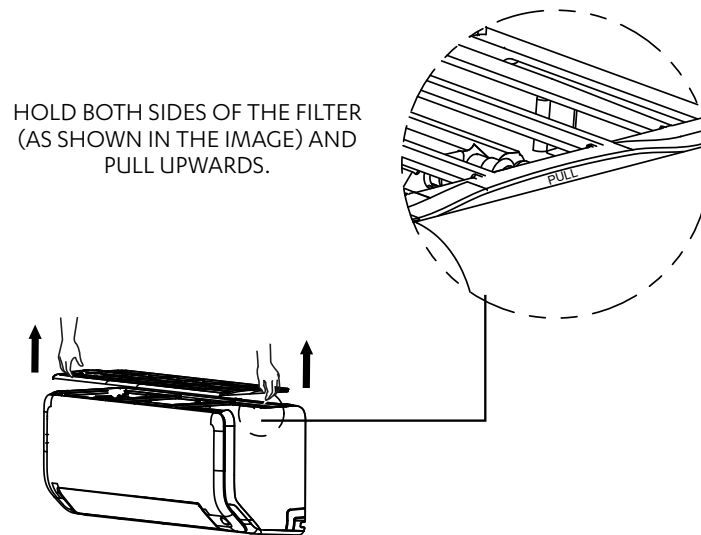
### Coil Cleaning Procedures

- Disconnect power to the unit.
- Remove the louvred 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 600 psi 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 after ensuring all electrical components are dry.

**Air Filter Cleaning Procedure**

A clogged air conditioner can reduce the cooling efficiency of your unit, and can also be bad for your health. Make sure to clean the filter once every two weeks. (Refer to image on next page)

1. The air filter is at the top of the indoor unit.
2. Grip the tab on the end of the filter, lift it up, then pull it towards yourself. (See image below)
3. Clean the air filter with warm, soapy water. Be sure to use a mild detergent.
4. Rinse the filter with fresh water, then shake off excess water.
5. Dry it in a cool, dry place, and refrain from exposing it to direct sunlight.
6. Slide the air filter back into place and clip it into the indoor unit.

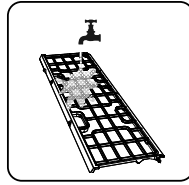


Filter is held in place by mag pull magnets, which helps in easily re-fitting the filter after cleaning.

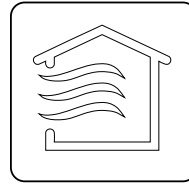


**Maintenance – Long Periods of Non-Use**

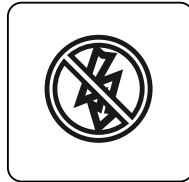
If you plan to not use your air conditioner for an extended period of time, do the following:



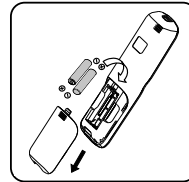
Clean Filter



Turn on FAN function until unit dries out completely



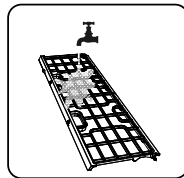
Turn off the unit and isolate the power



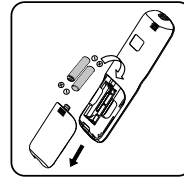
Remove batteries from remote control

**Maintenance – Pre-Season Inspection**

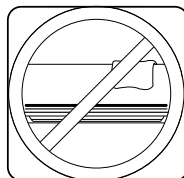
After long periods of non-use, or before periods of frequent use, do the following:



Clean Filter



Replace Batteries



Make sure nothing is blocking all air inlets and outlets

**CAUTION**

- Any unit repairs, maintenance and cleaning of outdoor unit should be performed by qualified HVAC technician.
- Filter cleaning can and should be regularly performed by product owner as required.

## 08. Troubleshooting



### SAFETY PRECAUTIONS

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

- 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!**

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

| Fault   | Possible Causes   |
|---|---|
| <b>Unit does not turn on when pressing ON/OFF button</b>      | 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.  |
| <b>The unit changes from COOL/HEAT mode to FAN mode</b>       | The unit may go into a defrost setting, to prevent frost forming on the unit. During this operation <b>dF</b> will be displayed on the indoor unit. Once the temperature increases, the unit will start operating in the previously selected mode again.  |
|   | The set temperature has been reached, at which point the unit turns off the compressor. The unit will continue operating when the temperature fluctuates again.   |
| <b>The indoor unit emits mist</b>                             | In humid regions, a large temperature difference between the room's air and the conditioned air can cause mist.   |
| <b>Both the indoor and outdoor units emit mist</b>            | When the unit restarts in <b>HEAT</b> mode after defrosting, mist may be emitted due to moisture generated from the defrosting process.   |
| <b>The indoor unit makes noises</b>                           | A rushing air sound may occur when the louvre resets its position.  |
|   | A squeaking sound may occur when running the unit due to expansion and contraction of the unit's plastic parts.   |
| <b>Both the indoor unit and outdoor unit make noises</b>      | Low hissing sound during operation: This is normal and is caused by refrigerant gas flowing through both indoor and outdoor units.  |
|   | Low hissing sound 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.   |
|   | Squeaking sound: Normal expansion and contraction of plastic and metal parts caused by temperature changes during operation can cause squeaking noises.   |
| <b>The outdoor unit makes noises</b>                          | The unit will make different sounds based on its current operating mode.  |
| <b>Dust is emitted from either the indoor or outdoor unit</b> | 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. At the end of a cycle, the outdoor fan will run in reverse, expelling dust and debris from coil surface. |
| <b>The unit emits a bad odour</b>                             | The unit may absorb odours from the environment (such as furniture, cooking, cigarettes, etc.) which will be emitted during operations.   |
|   | The unit's filter have become mouldy and should be cleaned.   |
| <b>The fan of the outdoor unit does not operate</b>           | During operation, the fan speed is controlled to optimize product operation.  |

When troubles occur, please check the following points before contacting a repair company.

| Fault   | Possible Causes   | Remedies   |
|---|---|--|
| <b>Poor Cooling Performance</b>   | Temperature setting may be higher than ambient room temperature.  | Lower the temperature setting.   |
|   | The heat exchanger on the indoor or outdoor unit is dirty.  | Contact a qualified service technician.  |
|   | The air filter is dirty.  | Remove the 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.                                   |
|   | Too many sources of heat in the room (people, computers, electronics, etc.).  | Reduce amount of heat sources.   |
|   | Low refrigerant due to leak or long-term use.   | Contact a qualified service technician.  |
|   | <b>QUIET</b> mode is activated.   | <b>QUIET</b> mode can lower product performance by reducing operating frequency. Turn off <b>QUIET</b> mode. |
| <b>The unit is not working</b>  | Power failure.  | Wait for the power to be restored.   |
|   | The power is turned off.  | Turn on the power.   |
|   | The fuse is burned out.   | Contact a qualified service technician.  |
|   | Remote control batteries are dead.  | Replace batteries.   |
|   | The Unit's 3-minute protection has been activated.  | Wait three minutes after restarting the unit.  |
|   | Timer is activated.   | Turn timer off.  |
| <b>The unit starts and stops frequently</b>   | There's too much or too little refrigerant in the system.   | Contact a qualified service technician.  |
|   | Incompressible gas or moisture has entered the system.  | Contact a qualified service technician.  |
|   | The compressor is broken.   | Contact a qualified service technician.  |
|   | The voltage is too high or too low.   | Contact a qualified service technician.  |
| <b>Poor Heating Performance</b>   | The outdoor temperature is too low.   | Operate system at a lower set temperature, then gradually increase set temp to desired level.                |
|   | 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.  |
| <b>Indicator lamps continue flashing</b>  | <p>The unit may stop operation or continue to run safely. Some error codes will allow the unit to continue operating. If the indicator lamps continue to flash or error codes appear, wait for about 10 minutes. The problem may resolve itself.</p> <p>If not, disconnect the power, then connect it again. Turn the unit on.</p> <p>If the problem persists, disconnect the power and contact a qualified service technician.</p> |  |
| <b>Error code appears in the window display of indoor unit:</b><br><b>E(x), P(x), F(x)...</b><br><b>EH(xx), EL(xx), EC(xx)...</b><br><b>PH(xx), PL(xx), PC(xx)...</b> |   |  |

**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.

## 09. Display / Error Codes

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

| Display   | Timer Lamp | Running Lamp | Information  |
|-----------|------------|--------------|--|
| dF        | --         | --           | Defrost  |
| CL        | --         | --           | Filter cleaning reminder(power on display for 15 seconds)  |
| CL        | --         | --           | Active clean   |
| rF        | --         | --           | Filter replacement reminder(power on display for 15 seconds)   |
| FP        | --         | --           | Heating in room temperature under 8°C  |
| FC        | --         | --           | Forced cooling   |
| AP        | --         | --           | AP mode of WIFI connection   |
| CP        | --         | --           | Remote switched off  |
| EH00/EH0A | 1 time     | OFF          | Indoor unit EEPROM parameter error   |
| EL01      | 2 times    | OFF          | Indoor/outdoor unit communication error  |
| EH02      | 3 times    | OFF          | Zero-crossing signal detection error   |
| EH03      | 4 times    | OFF          | The indoor fan speed is operating outside of the normal range  |
| EC51      | 5 times    | OFF          | Outdoor unit EEPROM parameter error  |
| EC52      | 5 times    | OFF          | Condenser coil temperature sensor T3 is in open circuit or has short circuited                                       |
| EC53      | 5 times    | OFF          | Outdoor room temperature sensor T4 is in open circuit or has short circuited   |
| EC54      | 5 times    | OFF          | Compressor discharge temperature sensor TP is in open circuit or has short circuited                                 |
| EC56      | 5 times    | OFF          | Evaporator coil outlet temperature sensor T2B is in open circuit or has short circuited(for free-match indoor units) |
| EH60      | 6 times    | OFF          | Indoor room temperature sensor T1 is in open circuit or has short circuited  |
| EH61      | 6 times    | OFF          | Evaporator coil middle temperature sensor T2 is in open circuit or has short circuited                               |
| EC07      | 12 times   | OFF          | The outdoor fan speed is operating outside of the normal range   |
| EH0b      | 9 times    | OFF          | Indoor PCB/Display board communication error   |
| EL0C      | 8 times    | OFF          | Refrigerant leakage detection  |
| PC00      | 7 times    | FLASH        | IPM malfunction or IGBT over-strong current protection   |
| PC01      | 2 times    | FLASH        | Over voltage or over low voltage protection  |
| PC02      | 3 times    | FLASH        | Top temperature protection of compressor or High temperature protection of IPM module or High pressure protection    |
| PC04      | 5 times    | FLASH        | Inverter compressor drive error  |
| PC08      | 1 time     | FLASH        | Current overload protection  |
| PC40      | 6 times    | FLASH        | "Communication error between outdoor main chip and compressor driven chip"   |
| PC03      | 7 times    | FLASH        | Low pressure protection  |
| FH0P      | -          | -            | AP mode is activated but there is no WIFI kit installed  |
| --        | 1 times    | ON           | Indoor units mode conflict(match with multi outdoor unit)  |



## 10. Maintenance Frequency Checklist

Regular servicing of equipment by a qualified technician is recommended every 12 months for residential applications and every quarter for commercial applications. Regular servicing of your unit helps in maintaining its optimum performance and reliability. **The following checklist and service periods are provided as a guide only, as some sites may require more frequent servicing.**

| Electrical             |                   |       |       |      |   |   |
|------------------------|-------------------|-------|-------|------|---|---|
| Parts                  | Service Frequency |       |       |      | Detail of Service Check                                     | Service Methods   |
|                        | 1 Mth             | 3 Mth | 6 Mth | 1 Yr |   |   |
| Printed Circuit Boards |                   |       |       | ✓    | Visual Inspection.  | Tighten Terminals as necessary on printed circuit boards. |
| Electrical Connections |                   |       |       | ✓    | Check all electrical terminals, mains, communications, etc. | Re-tighten if loose.                                      |
| Magnetic Contactor     |                   |       |       | ✓    | Check for loose terminal connections.                       | Tighten electrical terminals. Remove any dust.            |

| Indoor Unit                  |                   |       |       |        |   |  |
|------------------------------|-------------------|-------|-------|--------|---|--|
| Parts                        | Service Frequency |       |       |        | Detail of Service Check   | Service Methods  |
|                              | 1 Mth             | 3 Mth | 6 Mth | 1 Yr   |   |  |
| Casing/Panels and Frames     |                   |       |       | ✓      | Visual check for damage, rust and dust accumulation.                            | For highly corrosive environment, wash panels quarterly with water and neutral detergent solution. Wax panels. Repair / re-paint where required. |
| Insulation                   |                   |       |       | ✓      | Visual check for insulation conditions.   | Repair / replace insulation material.  |
| Fan                          |                   |       |       | ✓      | Visual check for run out of balance and dust attached.                          | Clean off dust as necessary to negate possibility of fan running out of balance.   |
| Motor                        |                   |       |       | ✓<br>Ω | Visual check on wiring. Insulation resistance check to be carried out annually. | Measure insulation resistance to earth with Megger. Insulation resistance should be more than 1MΩ.   |
| Heat Exchanger               |                   |       |       | ✓      | Check for clogging by dust. Check for leaks / damage.                           | Clean air inlet side as necessary. Straighten any bent fins using fins comb.   |
| Drain Pan/ Condensation line |                   |       |       | ✓      | Check for obstructions and free flow of water.                                  | Clean to eliminate obstructions/ sludge and check condition of pan. Pour water to ensure free flow.  |
| Filter*                      | ✓                 |       |       |        | Check for clogging by dust.   | Clean / Replace Filter.  |
| Temperature Readings         |                   |       |       | ✓      | Measure air on and air off.   | Place temperature probe in return and supply air of unit. Be careful not to touch the fan blower whilst checking temperature with thermometer.   |

\*Service period for filter cleaning may vary depending on operating time and surrounding environment

| Outdoor Unit                         |                   |       |       |        |  |   |
|--------------------------------------|-------------------|-------|-------|--------|--|---|
| Parts                                | Service Frequency |       |       |        | Detail of Service Check  | Service Methods   |
|                                      | 1 Mth             | 3 Mth | 6 Mth | 1 Yr   |  |   |
| Casing/ Panels and Frames            |                   |       |       | ✓      | Visual check for damage, rust and dust accumulation.   | For highly corrosive environment, wash panels quarterly with water and neutral detergent solution. Wax panels. Repair / re-paint where required.    |
| Insulation                           |                   |       |       | ✓      | Visual check for insulation conditions.  | Repair / replace insulation material.   |
| Fan                                  |                   |       |       | ✓      | Visual check for run out of balance and dust accumulation.   | Clean off dust as necessary to negate possibility of fan running out of balance.  |
| Motor                                |                   |       |       | ✓<br>Ω | Visual check on wiring. Insulation resistance check to be carried out annually.  | Measure insulation resistance. Should be more than 1MΩ.   |
| Heat Exchanger                       |                   |       |       | ✓      | Check for clogging by dust. Check for leaks / damage.  | Clean air inlet side as necessary. Straighten any bent fins using fins comb.  |
| Condensate Drain Line (if available) |                   |       |       | ✓      | Check for obstructions & free flow of water.   | Clean to eliminate obstructions/ sludge and check condition of drain line. Pour water to ensure free flow.  |
| Compressor                           |                   |       |       | ✓<br>Ω | Check for high / low pressure. Measure insulation resistance. Check compressor for abnormal noise/vibrations.            | Measure insulation resistance. Should be more than 1MΩ. Ensure to isolate first the VSD from the compressor before measuring insulation resistance. |
| Compressor drive                     |                   |       |       | ✓      | For variable drive compressor check full operation of drive from minimum hertz to maximum, check fan operation of drive. | Check compressor amperage & running frequency feedback from outdoor board seven segment display.  |
|                                      |                   |       |       | ✓      | Ensure drive fresh air path is clear and drive fan is operating correctly.   | Check ventilation holes on top and bottom of drive cover are clear of leaves, pebbles or dirt.  |
| Refrigeration Operational Readings   |                   |       |       | ✓      | Make note of operational reading in test cool/heat mode.   | Check operating pressures, record super heat and sub-cool values.   |
| Safety Devices                       |                   |       |       | ✓      | Check calibration of safety devices.   | Check resistance of sensors, pressure cut in / cut out of pressure controls.  |
| Faults                               |                   |       |       | ✓      | Check for any previous fault history on unit.  | Investigate any causes for previous faults, reset fault history.  |

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Owner's Manual - Wall Hung Split System  
Doc. No.9590-4011 **Ver. 5 220616**