

# AIR CONDITIONER

# ULTIMA ZONE CONTROLLER

Operation Manual



Ultima Zone Controller  
LM-ZC-2W (White)  
LM-ZC-2G (Grey)

**IMPORTANT NOTE:**

Please read this manual carefully before installing or operating your air conditioning unit.

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



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## 01. General Information

**CONGRATULATIONS!** The Zone Control Interface is manufactured from the highest quality materials and designed to ensure years of satisfactory operation.

**IN THIS MANUAL,** You will find instructions on how to program and utilise the features this control interface has to offer. Please take time to familiarise yourself with all these features, apply their functions to suit your optimum comfort requirement and achieve energy cost savings at the same time. Thoroughly read this manual in order to ensure correct utilisation of your ActronAir air conditioner.

**IMPORTANT NOTICE,** ActronAir base the development of its air conditioning products on more than 30 years of experience in HVAC, sound and continuous investments in technological innovations and product improvements, advancement in manufacturing processes and quality control through 100% functional product testing. However, ActronAir cannot guarantee that all the aspects of the product and the software included with the product respond to the requirements of final application, despite the product being developed according to state of the art technology. The customer, both end user/specifier and installer, assume all liability and risks relating to the configuration of the product in order to reach the expected results in relation to the specific design and system installation. ActronAir, based on specific agreements, may be consulted for the positive commissioning, installation and application of the unit, however in no case does ActronAir accept liability for the correct operation of the final equipment / system.

Your ActronAir air conditioning unit is one of the most advanced and innovative products in the market. Its operation is specified in the technical documentation supplied with the product or which can be downloaded from our website: [www.actronair.com.au](http://www.actronair.com.au). Your air conditioner requires set-up/configuration/programming in order to be able to operate in the best possible way to suit your requirement. Failure to complete such operations, may result in malfunction and/or damage to the unit, for which ActronAir accepts no liability.

Installation, commissioning and other technical services must only be carried out by a qualified technician. Ensure that the unit installation complies with all relevant council 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. Always use appropriate PPE for your safety and protection. Make sure that any safety guards and covers are always firmly secured and not damaged. WH&S rules and regulations must be observed at all times and will take precedence during installation process and operation of the unit.

In addition, the following instructions must be observed:

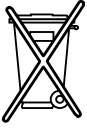
- Prevent the electrical components and electronic circuits from getting wet.
- Do not install the controlling devices in hot environments as extreme temperatures may damage the electronic equipment.
- Do not attempt to open the controller and other electronic devices in any way other than described in this manual.
- Do not drop, shake or hit the devices, which can cause irreparable damage to its internal circuits and mechanisms.
- Do not use corrosive chemicals, solvents or other aggressive detergents to clean the unit and the control interface.
- Do not use the unit for applications other than those specified in the technical manual.
- Do not install the unit in environment with highly flammable, combustible and/or explosive articles and materials.
- This control interface must be installed in a location that complies with the temperature and humidity limits specified in this manual.

ActronAir is constantly seeking ways to improve the design of its products, therefore specifications are subject to change without prior notice. Please check with ActronAir Service Department on toll free number: **1800 119 229**.

### **SPECIFICATIONS:**

- Voltage: 24VAC +/- 10%
- Data: Cat5e UTP (AWG24) Zone Data Cable with RJ45 connectors (Actron Spec)
- Storage conditions: -20 to 70°C, < 90% RH non-condensing
- Operating conditions: -10 to 60°C, < 90% RH non-condensing

## 02. Waste Electrical and Electronic Equipment Disposal Guidelines



1. Do not dispose off the waste electrical and electronic equipment with local council waste. These must be disposed off through the council designated hazardous waste collection centre.
2. The equipment may contain hazardous substances, improper or incorrect disposal may have a negative effect on human health and on the environment.

## 03. Maintenance

1. Keep the control interface clean with the use of a soft dry cloth only. If a cleaning solution is needed, use a very mild soap solution to dampen the cloth. Do not spray or squirt any liquid onto your control interface.
2. Do not use solvent base cleaner, which can cause damage to the control interface.
3. When cleaning, be careful not to accidentally press any Buttons, Turn Off the unit to ensure that no adverse unit operation is initiated by accidentally pressing any Buttons.
4. Be careful not to press hard into the display screen, as it may get damaged.
5. Ensure that the temperature sensor is always clean and free of dust or dirt build-up to maintain sensor accuracy.
6. Do not pull apart or attempt to service the control interface, should you need service to the device, contact ActronAir Service Department on 1800 119 229.

## 04. Operational Precautions

Read all instructions in this manual before operating the air conditioning unit. Failure to do so may result in damage to the unit and void your warranty.

**ACCESS PANELS AND GUARDS:** NEVER remove any access panels or guards as this could cause injury from electric shock and burns from extremely hot components. Never allow any bodily parts such as fingers or objects to protrude through the fan guards or any other opening as they could cause personal injury and damage the air conditioner.

**SUPERVISION OF CHILDREN AND INFIRM PERSONS:** 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.

**RETURN AIR FILTER:** The air conditioner must never be operated without a return air filter as this will cause a build up of dust and other contaminants on the indoor coil. This is very difficult to clean and causes the system to operate inefficiently or even fail.

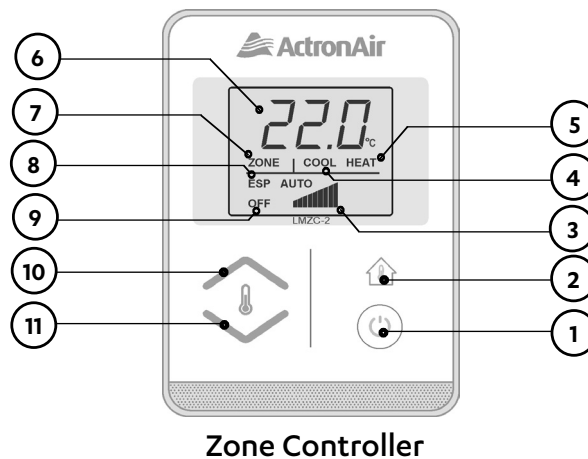
**CRANKCASE HEATER PRECAUTION (where applicable):** The main power ( Outside switch board ) to the system must be kept ON at all times to prevent damage to the outdoor compressor unit. Should the main power be disconnected or interrupted for 6 hours or longer, then no attempt should be made to start the system for 2 hours after the power has been restored to outdoor unit. This allows the compressor to warm up, and remove any liquid refrigerant that may cause damage.

## 05. System Information

Air Conditioner	
Model No.	
Serial No.	
The air conditioner model and serial number is situated on the access panel of the outdoor unit bottom left corner.	
Wall Controller	
Model No.	
The wall controller model number is situated in front of the wall controller	
Installer	
Company Name	
Phone Number	
Technicians Name	

## 06. Zone Controller Functions

### 06.01. Zone Controller









- |  |   |
|--|---|
| <p>① <b>Mode On/Off Button</b><br/>Turn the zone ON or Off.</p> <p>② <b>Room Temperature Button</b><br/>View actual room temperature.</p> <p>③ <b>Damper Position Indicator</b><br/>Indicates the position of zones air damper. (shown fully open damper)</p> <p>④ <b>COOL Indicator</b><br/>Illuminates when zone is receiving cooling.</p> <p>⑤ <b>HEAT Indicator</b><br/>Illuminates when zone is receiving heating.</p> <p>⑥ <b>Temperature Setpoint Display</b></p> | <p>⑦ <b>Zone Indicator</b><br/>Indicates that the display setting and status is applicable to particular zone only.</p> <p>⑧ <b>ESP Auto Indicator</b><br/>Illuminates when zone controller is modulating the airflow.</p> <p>⑨ <b>OFF Indicator</b><br/>Illuminates when zone is off and damper is fully closed.</p> <p>⑩ <b>Set Temperature UP Button</b><br/>Raises the setpoint for warmer temperature.</p> <p>⑪ <b>Set Temperature DOWN Button</b><br/>Lowers the setpoint for cooler temperature.</p> |
|--|---|

## 07. Turning Zone Controller On



Zone Controller

1. Turn the system On by pressing the  Button on the master Wall Controller LM7-2\* or LM24-2\*.
2. To turn the Zone On, press the  Button on Zone Controller. Alternatively, press the designated zone on the Master Wall Controller. Zone Controller display will show the Set Temperature, **ZONE** and **ESP AUTO**.
3. Set the desired temperature by pressing either the  or  Buttons ^ on the zone controller.
  - For a warmer room temperature, press the  Button.
  - For a cooler room temperature, press the  Button

### NOTES






- ^ Zone Controller temperature setting can only be adjusted 2°C below or above the Master Wall Controller setpoint temperature. This is a factory set limit, which is recommended in order to maintain system accuracy and maximize efficiency.
- Wall Controller shown above is LM7-2\*, same procedure applies with LM24-2\* model.
- \* Available in White (LM7-2W/LM24-2W) and Grey (LM7-2G/LM24-2G) variant colours.

## 08. ESP Auto Mode




Zone Controller

Indications of **COOL** or **HEAT** will show zone conditioning.  
(When zone damper is providing warm or cold air to your zone).

1. Press the  Button on until **ESP AUTO** appears on the display.
2. Set the desired temperature by pressing the  or  Buttons on the zone controller.
  - For a warmer room temperature, press the  Button.
  - For a cooler room temperature, press the  Button

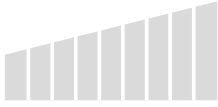
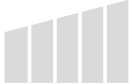

**Turning Off**

1. Press the  Button to turn off the zone. Alternatively, press the designated zone button on the Master Wall Controller. When the designated zone LED in the Master Wall Controller turns Off, the zone is Off.

**NOTES**

- In Zone Control ESP Auto mode, the controller will adjust the position of zone damper automatically in order to meet the desired temperature.
- Heating mode will be displayed when the zone starts to heat the room.
- Cooling mode will be displayed when the zone starts to cool the room.

**09. Zone Damper Blade Indicator**

Display	Status
	<b>Fully Open Damper Blade</b> Allows full airflow through in order to meet your required conditions.
	<b>Partially Closed Damper Blade</b> Regulating airflow and temperature to meet set conditions.
	<b>Partially Open Damper Blade</b> Regulating airflow and temperature to meet set conditions.
	<b>No Damper Blade Indicator</b> <ul style="list-style-type: none"> <li>• Room is satisfied with temperature.</li> <li>• Zone is turned Off.</li> <li>• Zone is waiting on Heat/ Cool mode change.</li> </ul>

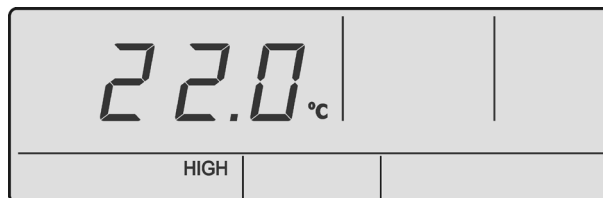
**NOTE**

When in ESP Auto, damper blade indicator will automatically adjust itself to regulate the correct amount of airflow (HEAT or COOL) in order to maintain the desired setpoint temperature.


**10. Fan Only Mode**


**NOTES**

- This mode is commonly used to circulate airflow without Cooling / Heating throughout your home.
- Quite often used on mild days to circulate fresh air through the home. Simply open a few windows and let the Fan Only Mode circulate fresh air through your home.



Wall Controller


1. Make sure the air conditioner is Off.
2. Press the  Button on the Master Wall Controller. The current fan speed setting will appear and the display backlight will turn On (if it is off).

3. Press the  Button again to select **HIGH, MED, LOW** fan speed.
4. All open zones will circulate air throughout your home.
5. If you wish to shut any particular zone in this mode, simply turn Off zone by pressing the designated zone button. Zone LED will go off.



Zone Controller

**FAn** will be displayed on zone control display when the Master Wall Controller is set to circulation operation. During this period, zone damper will be in fully open position for maximum air circulation.

If you do not want the unit to circulate airflow in your room in this mode, simply press the  Button on your zone controller or turn your zone Off at the Master Wall Controller.

## 11. Zone Temperature Display



**NOTE**

Room temperature displayed can be the temperature at a zone controller or at a remote sensor or the average of both depending on your installation set up.

### To Check Temperature at Master Wall Controller



### Average Room Temperature Display

1. Press the  or  Buttons on the Master Wall Controller and the average room temperature will be displayed for 3 seconds. **INSIDE, °C** and **“.”** will be flashing. The temperature displayed is the average of all zones that are currently on.

### Checking Individual Zone Temperature

1. While **INSIDE, °C** and **“.”** are flashing, press the zone to be checked.
  - **INSIDE** and **°C** will turn Off. The selected zone LED and **“.”** flashes.
  - During this time, the selected zone temperature is displayed.
2. To check another zone, simply press other zone button while the previous zone LED and **“.”** are flashing.



**To Check Temperature at Zone Controller**



1. Press the Button.

Actual room/zone temperature will be displayed for several seconds then display will return to setpoint temperature. During this period, the blue LED on the Button will flash indicating the room temperature is shown on the display.

**NOTES**

To display the room/zone temperature for 45 minutes, press and hold the Button for 5 seconds.

- Press any button to exit.
- The room/zone temperature display can be the temperature at the zone controller or at a remote sensor or the average of both depending on your installation set up.

## 12. Zone Open Mode



Zone Controller

1. Press the Button twice in quick succession until **OPn** appears on the display. OPn indicates that the Zone Damper blade is in maximum open position.

**Turning Off Zone**

2. Press the Button to turn off the zone. Alternatively, press the designated zone button in the Wall Controller.

**NOTE**

- It is not possible to control or adjust the temperature in this mode.
- This zone temperature will now depend on the systems operating mode (Heat or Cool).
- This mode has no control on room temperature, your sensor is ignored in this mode.
- A zone in OPn mode is like having a non-temperature controlled On/Off zone damper.
- Zone 1 cannot be put in OPn mode.

### 13. Troubleshooting

Condition	Causes or Check Points
The system does not start.	<ul style="list-style-type: none"> <li>• Check that 5 minutes has passed from the time you turned the system on, as the system has in-built safety timers.</li> <li>• Check thermostat settings are correct.</li> <li>• Check the thermostat Setpoint is set low enough for cooling or high enough for heating.</li> <li>• Check that the Wall Controller is set to correct mode for <b>COOL / AUTO / HEAT</b>.</li> </ul>
Air does not flow. (Indoor Unit)	<ul style="list-style-type: none"> <li>• Check if the unit is set in the correct mode <b>COOL / AUTO / HEAT</b>.</li> <li>• Check your Zone Controller is turned On. If using zone sensor, ensure your zone is turned On at the Wall Controller.</li> <li>• During defrost cycle of the outdoor unit (in HEAT mode), the indoor fan will not operate. Defrost cycle is indicated when <b>HEAT</b> is flashing on the Wall Controller display.</li> </ul>
OFF is displayed on my zone controller and I cannot turn the On.	<ul style="list-style-type: none"> <li>• This means the Wall Controller is turned Off. First turn on your air conditioner at the Wall Controller. You will now be able to turn on your Zone Controller.</li> </ul>

For any assistance with your ESP Ultima System, do not hesitate to contact our Customer Care Team for technical support on free call number:  
1800 119 229

## 14. Frequently Asked Questions

**Q. I cannot adjust my setpoint on my Zone Controller any more than 2° higher or lower than the Wall Controller.**

A. 2° is the default setting for master temperature offset. ActronAir recommend this 2° offset to optimise temperature control and maximize energy efficiency. Moving this setting +/- 0.2 will result in temperature inaccuracy.

**Q. Cooling and Heating seems to take a long time to achieve temperature in ESP fan mode. Am I using the correct settings?**

A. ESP Fan mode really comes into it's own when minimal zones are used. For quicker and more responsive Cooling and Heating, when using more than minimal zones, select **HIGH** or **CONT HIGH** fan speed on Wall Controller. This will boost heating and cooling and is best optimized when you want to condition more than the minimal zone set up.

**Q. Cooling and Heating is not sufficient in my zone.**

A. Air balancing is essential part of system commissioning in ESP Ultima system. The duct design may be prohibiting the correct amount of airflow reaching your area. Please contact your installer to ensure air balancing has been carried out.

**Q. There is substantial air noise coming from my outlet.**

A. If the outlet gets too noisy when the unit or zone is first turned on, the system maybe over supplying airflow to your area. Ensure ESP Fan mode is selected when minimal zones are used.

**Q. There are dashes across my control display.**

A. Make sure you have not had a power interruption. If this is still present on the display after 20 seconds, please contact your installer. Incorrect wiring or a broken circuit could also cause these symptoms.

### **FAULT CODES:**

When **E?** is displayed in the Wall Controller or Zone Controller, take note of the digits after E and contact your installer.

**E3** - System has detected less than 2 sensors (Ultima requires at least 2 sensors in circuit) or, a remote sensor is short circuit.

**E5** - No Communication. The system is constantly relaying information back and forth. This indicates the communication is not happening. Contact your installer to check your wiring and cable's integrity.



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