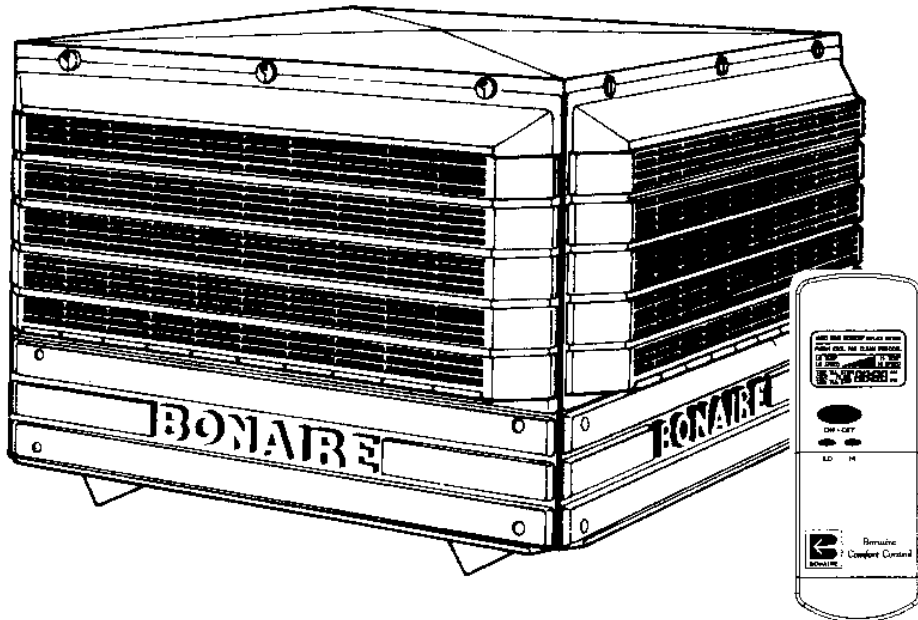




# BONAIRE

FRESH AIR CONDITIONING

## Operation & Maintenance Instructions



THE  
*Envir*  *tech*  
SERIES

DUCTED EVAPORATIVE AIR CONDITIONING  
ULTIMATE

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## CONGRATULATIONS ON YOUR CHOICE

We're delighted you've chosen a Bonaire Evaporative Airconditioner to cool your home. It is an airconditioner we are very proud of. Designed and made in Australia by Southcorp Heating and Cooling an 100% Australian owned company, it embodies the latest advances in evaporative airconditioning technology in a stylish, compact cabinet.

Your air conditioner includes the world's first remote control allowing you to control your air conditioner without the need for special wiring. This allows you the flexibility to move the comfort controller from room to room to suit your needs.

If you have more than one Bonaire Designer Series air conditioner it is possible to operate all air conditioners from the one comfort controller.

## COMFORT

Comfort is a combination of four major factors; air temperature, air quality and cleanliness, air speed and humidity. Evaporative air conditioning cools the air by a process of evaporation which is controlled by the humidity in the air, therefore your Bonaire will cool the air differently every day of the year. Your Bonaire uses only 100% fresh outside air which is filtered, and when cooling is also washed. You will immediately appreciate the benefit of this constant flow of fresh air - with or without cooling.

Your Bonaire installer will have placed the outlets in such a position that you will feel the air flow. These outlets are adjustable and you may wish to change or redirect the air to suit yourself. There may be a few days per year when the humidity is very high and the cooling effect of your Bonaire evaporative air conditioner is reduced, on these days experiment with the cooling, you may find it more comfortable to turn the cooling off and leave the fan running.

## INFORMATION

The information contained in the following pages has been prepared to ensure you enjoy trouble free operation of your Bonaire Evaporative Airconditioner.

## BONAIRE ENVIROTECH SERIES OPTIONS

The following options are available for your Bonaire airconditioner:

- Louvre Panels: Coloured Louvre Panels in tones to match your roof and blend with the environment are available.
- Winter Covers: Bonaire Winter Covers are available to protect your unit and prevent draughts through the system during the Winter season. Coloured Winter Covers are available to match your choice of Louvre Panel.
- Dry Tank Option: The Bonaire dry tank option automatically drains the water from the tank in the air conditioner when the cooling is turned off, flushing any sediment and leaving the tank empty.
- For Bonaire air conditioner Options contact your local Authorised Bonaire Specialist Dealer for details.

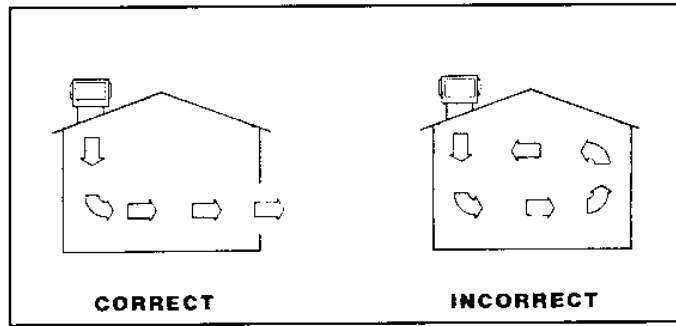
## KEY OPERATIONAL POINTS

Normally during the first 10 days of operation resins are washed from new filter material. A slight odour may be present during this period. Performance of your Bonaire Air-conditioner will improve during this process.

- 1. BUILDING VENTILATION:** Always ensure that adequate windows and doors are open (to allow hot stale air to be expelled from the building). See page (4).
- 2. TURNING THE UNIT ON:** Press the ON/OFF button. Your airconditioner will operate on your previous settings. If your previous setting was cooling there may be a three minute pre-cool delay.
- 3. COOLING:** Press the "COOL" button to switch on or off the cooling.
- 4. PAD CLEAN:** Press the "PAD CLEAN" button to automatically clean your filters.
- 5. TURNING THE UNIT OFF:** Press the "ON/OFF" button.
- 6. COMFORT CONTROLLER LOCATION:** Due to the construction of some buildings there may be some locations within the building where the comfort controller operation is not effective.

## OPENING WINDOWS AND DOORS

- Ensure that windows and doors or air discharge outlets are open to allow room air to escape from the building (required for the evaporative air conditioning process).  
For maximum comfort open the windows on the downwind side of the building.
- If insufficient ventilation is provided, conditions within the building may become uncomfortable.

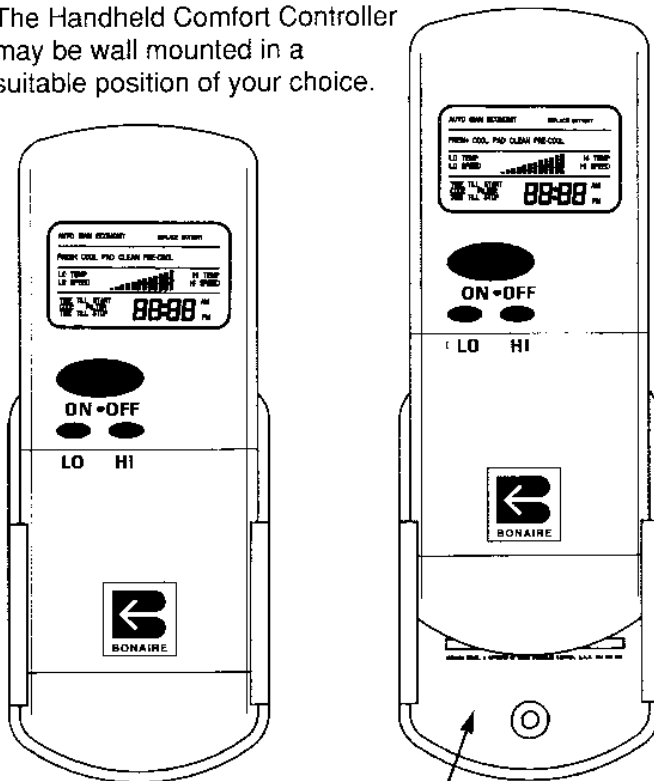


The following is a guide of minimum free area to allow air to exhaust from building.

MODEL	MODEL	MODEL
VSM 45 _____ .68m <sup>2</sup>	VSM 57 _____ 1.12m <sup>2</sup>	VSL 66 _____ 1.7m <sup>2</sup>
VSM 52 _____ 1.01m <sup>2</sup>	VSL 63 _____ 1.35m <sup>2</sup>	VSL 72 _____ 1.9m <sup>2</sup>

## HANDHELD COMFORT CONTROLLER

- Designed for simple operation so that making life comfortable is easy.
- The Handheld Comfort Controller may be operated from a convenient location within the building.
- The Handheld Comfort Controller may be wall mounted in a suitable position of your choice.

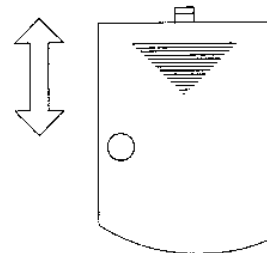
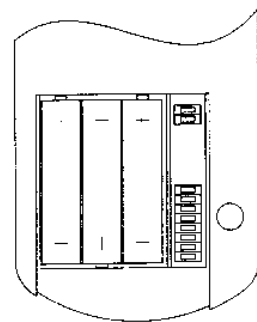


Wall mounting bracket

## BATTERY REPLACEMENT

"REPLACE BATTERY", appears and flashes in the display, replace the comfort controller batteries.

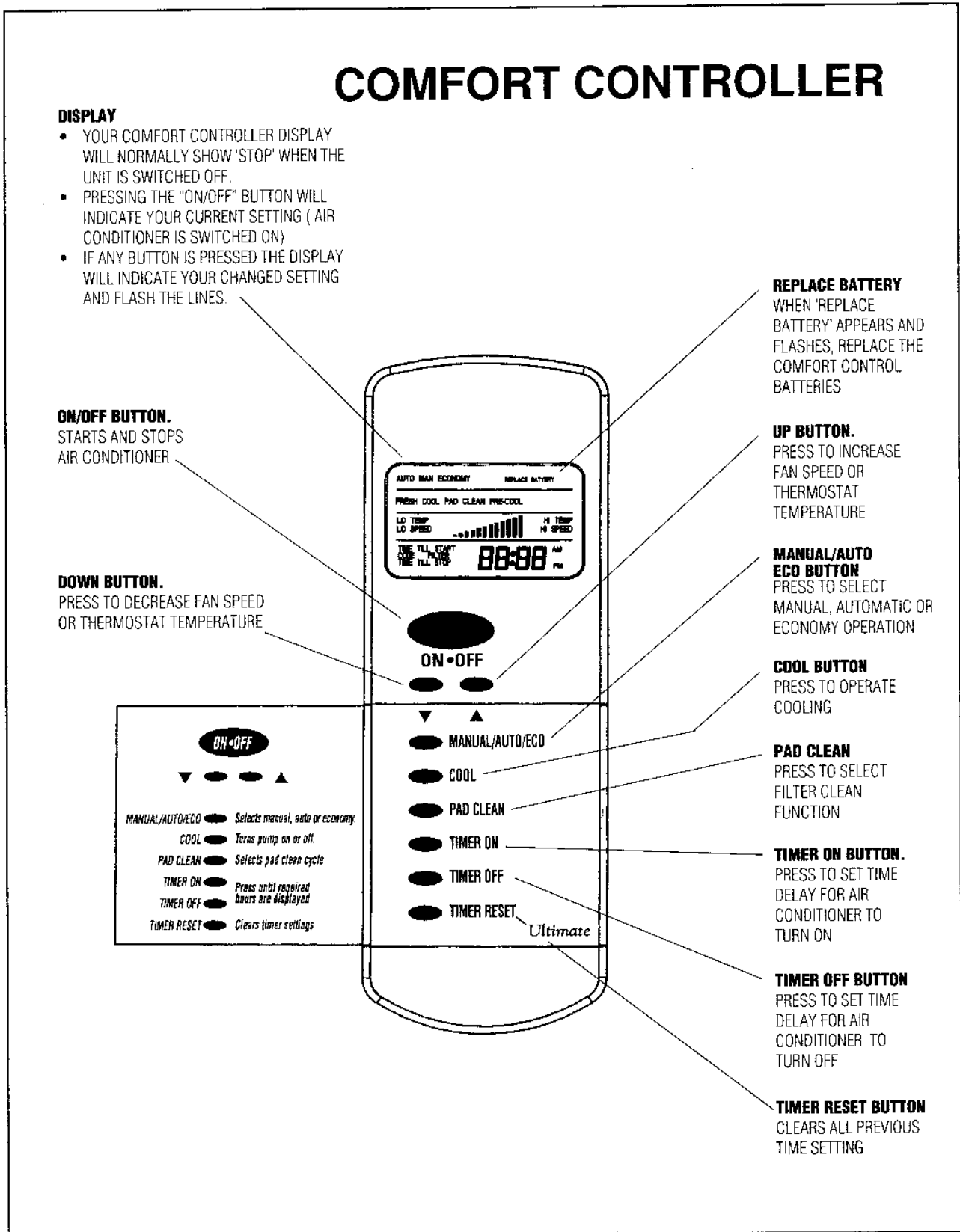
- Use only 3 good quality AAA batteries.
- Do not use re-chargable batteries.
- Do not mix old and new batteries.



# LOCATION OF CONTROLS

## Access to your Controls

To access AUTO, MAN, ECONOMY, FRESH, COOL, PAD CLEAN or TIMER functions the control door has to be opened. To open lift the right side of the door.



# OPERATION MODE - MANUAL, AUTO & ECONOMY

Your air conditioner can be operated in three different modes either manual, automatic or economy.

## MANUAL MODE

In this mode, you can control the fan and pump settings manually. To select the manual operation press the "MANUAL/AUTO/ECO" button until "MANUAL" is shown in the display. In manual mode, you can select your desired comfort level by controlling fan speed (12 graduated bars-from LO SPEED to HI SPEED) and pump (FRESH or COOL). To select fan speed press and hold the "▽" or "△" button until your desired fan speed is reached. To turn on the pump, press the "COOL" button until "COOL" is shown in the display. To turn off the pump (fan only), press the "COOL" button until "FRESH" is indicated.


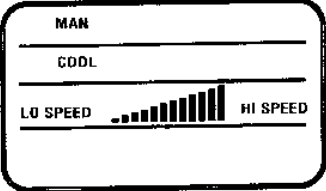


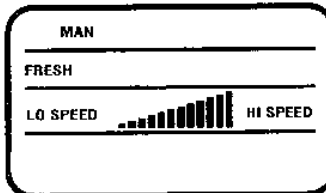
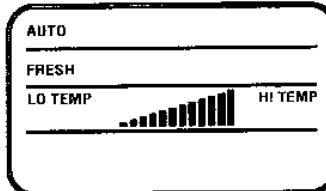
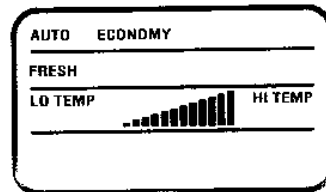
## AUTO MODE


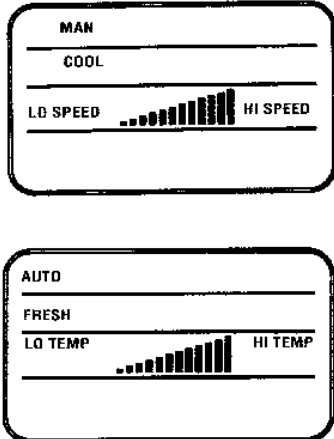

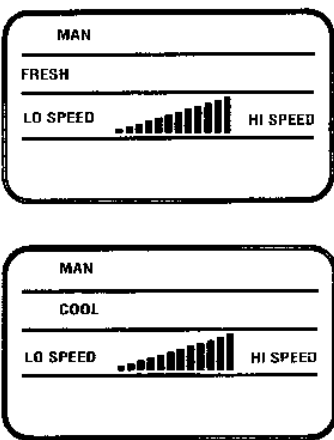

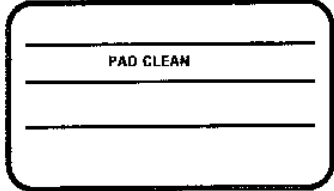

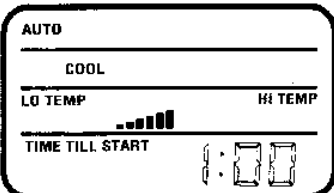

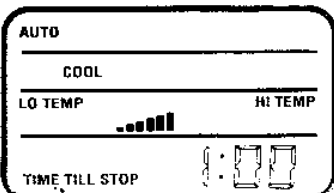
In this mode, the air conditioner automatically controls the fan and pump settings. All you need to set is your desired comfort level. To select the automatic operation press the "MANUAL/AUTO/ECO" button until "AUTO" is shown in the display. In auto mode you can select your desired comfort level. (12 graduated bars - from LO TEMP to HI TEMP). To adjust the desired comfort level press and hold the "▽" or "△" button until your desired comfort level is reached.


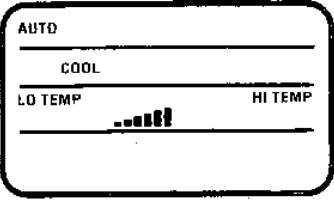


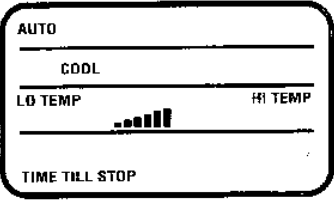
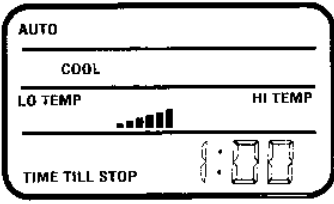
## ECONOMY MODE

As per Auto mode but uses less power. To select the automatic economy operation press the "MANUAL/AUTO/ECO" button until "AUTO" and "ECONOMY" are shown in the display. In economy mode, you can select your desired comfort level by pressing the "▽" or "△" button.

**NOTE:** There may be a short delay before the fan and the pump start in **AUTO** or **ECONOMY** mode.

FUNCTION	BUTTON PRESSED	DISPLAY
<p><b>Turning the Unit ON</b> Press the ON/OFF button. Your air conditioner will operate on your previous settings. If your previous setting was cooling there may be a three minute pre-cool delay.</p> <p><b>Turning the Unit OFF</b> • Press the 'ON/OFF' button</p>	 <b>ON • OFF</b>	 
<p><b>Changing the Mode of Operation</b></p> <ul style="list-style-type: none"> <li>• To control the fan speed and pump manually, press the 'MANUAL/AUTO/ECO' button until 'MAN' is shown in the display</li> <li>• To control the fan speed and pump automatically press the 'MANUAL/AUTO/ECO' button until 'AUTO' is shown in the display</li> <li>• Economy mode will automatically control the fan speed and pump whilst minimising power consumption. To select economy mode, press 'MANUAL/AUTO/ECO' button until 'AUTO' and 'ECONOMY' are shown in the display</li> </ul>	 <b>MANUAL/ AUTO/ ECO</b>	  

FUNCTION	BUTTON PRESSED	DISPLAY
<p><b>Changing the Fan Speed - Manual Mode:</b></p> <ul style="list-style-type: none"> <li>To adjust the Fan speed press the '▽' or '△' button until your desired fan speed is shown in the display</li> <li>To cool the building quickly press the '△' button until the highest bar is indicated in the display</li> </ul> <p><b>Changing the Comfort Setting - Auto/Economy Mode</b></p> <ul style="list-style-type: none"> <li>To adjust your comfort setting press the '△' or '▽' until your desired comfort level is reached. When 'FRESH' is indicated in the display, only the fan is turned on. When "COOL" is indicated in the display both pump and fan are turned on.</li> </ul>		
<p><b>Fan Only Operation - Manual Mode</b></p> <ul style="list-style-type: none"> <li>To operate the air conditioner fan without cooling, press the 'COOL' button until 'FRESH' is shown in the display</li> <li>When conditions produced inside the building are too cold the unit may operate best on 'FRESH'. Filtered fresh air is supplied to the building to give the desired comfort level.</li> </ul> <p><b>Cooling - Manual Mode</b></p> <ul style="list-style-type: none"> <li>Press the 'COOL' button to switch on the cooling</li> </ul>		
<p><b>Cleaning the Pads</b></p> <ul style="list-style-type: none"> <li>To automatically clean your filters press the 'PAD CLEAN' button. The cleaning cycle will take approximately 35 minutes after which your air conditioner will return to it's previous setting.</li> <li>To cancel 'PAD CLEAN' press any buttons</li> </ul>		
<p><b>Setting the Timer to turn your air conditioner ON - Manual/Auto/Eco mode</b></p> <p>To set your air conditioner to turn on automatically:</p> <ol style="list-style-type: none"> <li>Run your air conditioner on the setting you want the air conditioner to start on.</li> <li>Press the 'TIMER ON' button. The words TIME TILL START and the numbers 1:00 (indicating 1 hour) will be displayed</li> <li>To increase the length of time press the 'TIMER ON' button until the desired time interval is displayed (maximum of 12 hours).</li> <li>The air conditioner will turn off after a short delay.</li> </ol> <p><b>NOTE:</b> If you wish to clear your timer setting press the 'TIMER RESET' button.</p>		
<p><b>Setting the Timer to turn your air conditioner OFF - Manual/Auto/Eco mode</b></p> <p>To set your air conditioner to turn off automatically:</p> <ol style="list-style-type: none"> <li>Press the 'TIMER OFF' button. The words TIME TILL STOP and the numbers 1:00 (indicating 1 hour) will be displayed</li> <li>To increase the length of time press the 'TIMER OFF' button until the desired time interval is displayed (maximum of 12 hours).</li> </ol> <p><b>NOTE:</b> If you wish to clear your timer setting press the 'TIMER RESET' button.</p>		

FUNCTION	BUTTON PRESSED	DISPLAY
<p><b>Resetting the Timer - Manual/Auto/Eco mode</b></p> <ul style="list-style-type: none"> <li>If you wish to clear the timer settings press 'TIMER RESET' button. Timer events are also cleared by pressing the 'ON/OFF' button.</li> </ul>	 <b>TIMER RESET</b>	
<p><b>Setting the Timer to turn your air conditioner ON and then OFF - Manual/Auto/Eco mode</b></p> <p>To set your air conditioner to turn on and then turn off automatically:</p> <ol style="list-style-type: none"> <li>Follow the above procedure <b>"Setting the Timer to turn your air conditioner ON"</b>.</li> <li>To now set the period that the air conditioner will run press the 'TIMER OFF' button. The words <b>TIMER TILL STOP</b> and the numbers 1:00 (indicating 1 hour) will be displayed.</li> <li>To increase the length of time press the 'TIMER OFF' button again.</li> </ol> <p>Your air conditioner has now been set to automatically turn on and then off.</p>	 <b>TIMER ON</b>   <b>TIMER OFF</b>	  

## Power Supply Interruption

- The unit will not operate if power supply is interrupted (due to supply failure). In such a case it is possible that the display will still indicate the air conditioner is operating.
- When power is restored the air conditioner will be in the OFF mode.
- To regain full control of your air conditioner press any button on the hand held Comfort Controller. Your air conditioner will commence operation on the settings indicated on the display

## CONFIGURING YOUR COMFORT CONTROL

The "pre-cool start" feature has to be configured before you operate your air conditioner. This feature may never need to be altered if you are happy with the factory settings.

### PRE-COOL STARTS

Your comfort controller is supplied with "pre-cool start" disabled.

The "pre-cool start" features ensures the filter pads are wet prior to starting the fan. This means that after starting your air conditioner there may be a delay of up to 3 minutes before the fan starts. During a "pre-cool start" cycle the word "PRE-COOL" will flash.

- In manual or economy mode operation, if you have recently run your air conditioner on cooling or you start your air conditioner on "FRESH" there will not be a "pre-cool start" cycle.
- In automatic mode operation, if you start your air conditioner on "COOL" or "FRESH", there will be a "pre-cool start" cycle.

#### To enable the "PRE-COOL START" feature:

- turn on the comfort controller
- simultaneously hold down the COOL and PAD CLEAN buttons for 5 seconds
- The words "PRE-COOL" and "START" will flash when you have enabled "PRE-COOL START"

#### To disable the "PRE-COOL START" feature:

- turn on the comfort controller
- simultaneously hold down the COOL and PAD CLEAN buttons for 5 seconds
- The words "PRE-COOL" and "STOP" will flash when you have disabled "PRE-COOL START"



## COMFORT CONTROL TROUBLE SHOOTING

SYMPTOMS	REMEDIES
• The fan or the pump is still running when 'STOP' is shown in the display.	• Press the "ON/OFF" button to switch on the unit and then switch off.
• The fan is still running when 'PAD CLEAN' is indicated in the display.	• Press the "ON/OFF" button to switch off and on the unit and then press the "PAD CLEAN" again to resume the function.
• The fan and the pump are not running when the unit is turned on in MANUAL mode.	• Press the "ON/OFF" button to switch off the unit and then switch on.
• The EAC will not turn on and the display is blank.	• Replace the comfort control batteries
• The unit does not respond to the comfort control.	• Turn the power off at the fuse box for one minute and then on.
• The comfort control display is 'locked up' (ie. pressing buttons does not change the display)	• Replace the comfort control batteries

## MAINTAINING YOUR BONAIRE EVAPORATIVE AIR CONDITIONER

- Correct maintenance of your Bonaire Evaporative Air Conditioner is vital to the continued cooling efficiency and long life. It is also important in the control of sediment accumulation, and algae growth within the unit.
- Bonaire recommend two general services a year; Pre-Season, and Post Season. However in harsh conditions more frequent maintenance service may be required.

### Pre-season Checklist

- For the pre-season service, points outlined in the maintenance list (pages 9-11) should be checked.
  1. Fan \_\_\_\_\_
  2. Motor and Bearings \_\_\_\_\_
  3. Water Level \_\_\_\_\_
  4. Water Distribution \_\_\_\_\_
  5. Bleed-off \_\_\_\_\_
  6. Filters \_\_\_\_\_
  7. Water Tank \_\_\_\_\_
  8. Electrical \_\_\_\_\_
  9. Batteries \_\_\_\_\_

### Post Season checklist

- For the post season service the points outlined in the maintenance list should be checked
  1. Fan \_\_\_\_\_
  2. Motor and Bearings \_\_\_\_\_
  3. Water Level \_\_\_\_\_
  4. Water Distribution \_\_\_\_\_
  5. Bleed-off \_\_\_\_\_
  6. Filters \_\_\_\_\_
  7. Water Tank \_\_\_\_\_
  8. Electrical \_\_\_\_\_

- Upon completion of the Post Season service, fit your Bonaire Winter Covers (optional) to prevent draughts and loss of warm air through the system during the Winter season.

# MAINTENANCE SERVICE

*Dealer Stamp*

## MAINTENANCE LIST

### **NOTE:**

Prior to commencing maintenance isolate the unit at the power source.

### **1. Fan:**

Ensure that the Fan blade is free from obstruction and rotates; and is tight on the Fan shaft.

### **2. Motor and Bearings:**

Ensure that the motor spins freely checking the bearings for noise.  
If motor bearings are noisy contact your local authorised Bonaire Service Agent for motor replacement.

**NOTE:** Motor bearings are sealed ball races and require no oil or grease.

### **3. Water level:**

Ensure the Float valve is correctly adjusted so that the water level is 20-25mm from the top of the overflow standpipe.

- If the Float valve is leaking, check the seat of the valve for possible impediment.
- Should impediment be present depress the float thereby flushing the valve seat.
- Should further treatment be necessary the valve can be dismantled removing the split pin in the body and removing the plunger. There is a rubber seal on the front of the plunger which should be cleaned or replaced.

### **4. Water Distribution:**

Ensure that all distributor trough slots, (top of the louvre panels) and the supply lines are clear. Also check that the pump filter is clean. It can be cleaned by lightly rubbing the outside of the filter.

## MAINTENANCE LIST Cont.

### 5. Bleed-off:

Ensure that an adequate 'bleed-off' rate is maintained during the operating season. Refer to Installation Instructions supplied with the unit.

The bleed-off prevents the build up of dissolved solids and impurities within the unit. If a build up of impurities is noticed, then the rate of bleed-off should be increased.

### 6. Filters

Check the condition of the filters. Ensure that they are cleaned at regular intervals.

- Remove the complete Louvre panel assembly and hose down as a unit to wash away any build up of impurities - a screw driver is required to remove the Louvre panel.
- In dusty environments the filters may have to be cleaned frequently.
- Filters may need replacing frequently where conditions are harsh; (i.e. poor water quality or extremely dusty environments) - Contact your Bonaire Service Agent for Genuine Bonaire Filters.

### 7. Water Tank:

It is important to ensure that the water tank is kept clean, free of sediment, or algae growth.

- It is recommended that the water tank be drained and cleaned post-season. In harsh conditions / poor water quality, more frequent draining may be necessary.
- To drain the tank 'turn off' the water to the unit at the isolating valve fitted by the installer adjacent to the unit.
- Remove the standpipe. The standpipe is a push-in fit to the bush, which has an "O" ring to stop leaking.
- Be careful when removing the standpipe, hold the bush while you rotate the standpipe then pull upwards.
- Clean the tank with a wet cloth and household disinfectant. Rinse tank with clean water.
- When replacing, place some vaseline on the "O" ring to enable easier entry of standpipe.
- In areas of extremely poor water quality, Bonaire recommends the fitting of a dump valve or dry tank option - Contact your Bonaire Service Agent for details.

### 8. Electrical

The only maintenance that should be required on the electrical system is battery replacement in the comfort controller.

**NOTE:** If the electric motor cuts out frequently on overload, contact your Bonaire Service Agent.

- Electrical connections should only be handled by a certified electrician.

### 9. Cleaning of Comfort Controller:

Use only a soft cloth to clean your comfort controller. Do not use water or cleaning agents.