

**ozone****swim**<sup>®</sup>

1000, 2000 & 3000 SERIES

# USER MANUAL

## Important Safety Information

This manual contains important information about the operation and safe use of this product.

**READ AND FOLLOW ALL INSTRUCTIONS. IMPORTANT SAFETY INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS**

### WARNING

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning the use of the appliance by a person responsible for their safety. Children should be supervised to ensure they do not play with the appliance.

### WARNING

Do not open Electronic Control Unit. There is no user-serviceable part in the control box. Repairs are only to be made by an Ozone Swim qualified technician, if the supply cord is damaged, it shall only be replaced by the manufacturer or its service agent or similarly qualified person to avoid a hazard.

### WARNING

Do not operate electrolytic cell without proper flow or water circulation as this may cause damage to the unit.

### CAUTION

This unit is not intended for use with temporary or fold-able/storable pools. All pipe-work associated with this system is intended to be fixed and should remain intact following installation by qualified personnel.



## Ozone Swim Pool Purification Systems

Congratulations on your choice of an Ozone Swim pool purification system for your swimming pool. The Ozone Swim you have purchased is designed for easy and simplistic operation and maintenance.

Please take the time to read these instructions thoroughly before attempting to operate your unit. Should you require additional information or further assistance do not hesitate to contact your local Ozone Swim representative or visit our website [www.ozoneswim.com.au](http://www.ozoneswim.com.au)

**Note:** If you are using this system for pools with integrated Spa, you may require a degas vessel if the pool return goes to the spa first. Alternately, your installer may fit a flow switch to idle the system while the spa is in use.

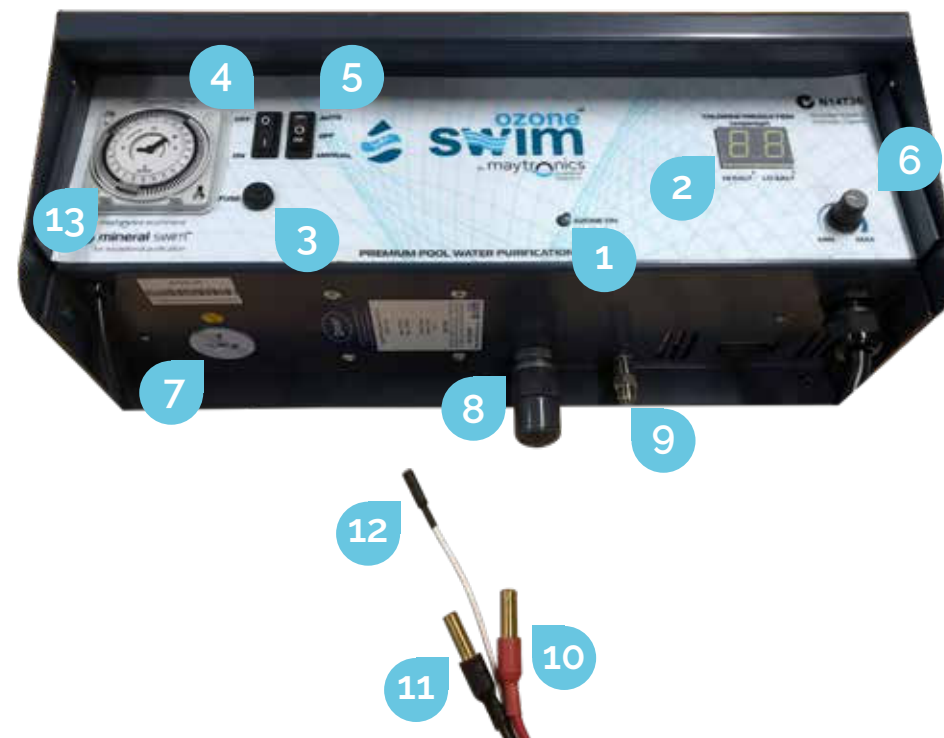
**Note:** For installations where the filter/chlorination system is below the level of the pool, a drain valve must be fitted to keep the ozone outlet line dry should any water backflow through the line. This drain valve is available from Maytronics.

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## 1.1 Control Unit Features

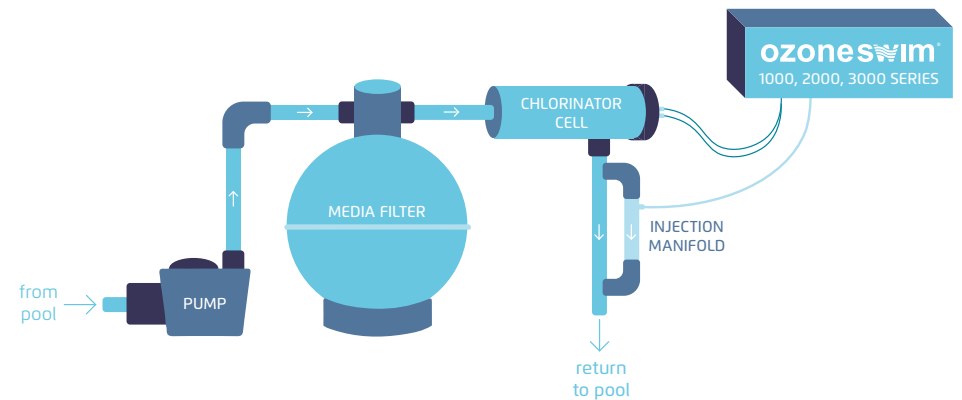


1	Ozone run indicator	8	Air Filter
2	Chlorine Cell Output display	9	Ozone Output
3	Fuse	10	Positive Cell Lead (Red)
4	Sanitation Switch	11	Negative Cell Lead (Black)
5	Master Switch	12	Gas Sensor Connector (White)
6	Chlorine Cell Output Control	13	Timer
7	Pump Outlet Socket		



# INSTALLATION

## 2.1 Installation Guide



**Note:** If this system is installed below water level, ensure you have a drain valve fitted to the ozone outlet.

### Step 1:

Mount Ozone Swim control unit a maximum of 1.5 meters from the filter and chlorine cell. Fit two screws 380mm apart (screws supplied for control box). Install the Ozone Swim control unit a minimum of 900mm above ground level in an area protected from the elements to eliminate possible damage from severe weather conditions. (if system is below water level, install drain valve as per instructions)

### Step 2:

Plumb chlorine cell onto return pipe after filter, ensuring there is a gas trap (see images below)

### Step 3:

Plumb Ozone injector manifold after chlorine cell on the return line of the pool ensuring direction of ozone injector manifold is correct.

**Step 4:**

Connect supplied Teflon tubing (see label on Teflon tubing for direction ensuring non-return valve is in the correct direction) onto the ozone injector manifold by connecting to the compression fitting on venturi.

**Step 5:**

Connect the chlorine cell cable to the three colour coded terminals located on chlorine cell. (Terminals need to be slightly crimped for snug fit).

**Step 6:**

Ensure appropriate salt/mineral levels are achieved (3500ppm) and dissolved. (confirm with builder that chemicals can be added to the pool).

**Step 7:**

Leave plumbing to cure for a 24-hour period for best results.

**Step 8:**

Set timer on Ozone Swim system to recommended run time for pool size and environment (refer to page 12).

**Step 9:**

Plug pump power cable into Ozone Swim unit below timer. Turn unit ON to manual. Ozone light should be on. Check all plumbing for visible leaks.

**Step 10:**

Adjust the Chlorine cell output to recommended output.

**Note:** We recommend running your system at maximum output for the first week of operation.

**Step 11:**

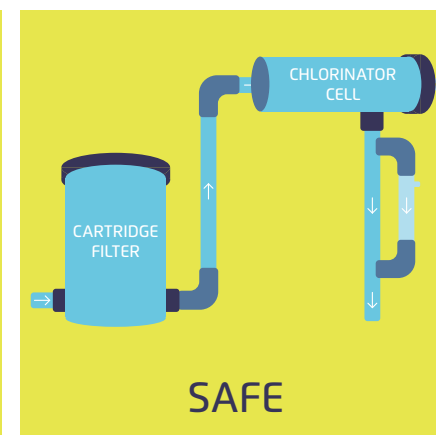
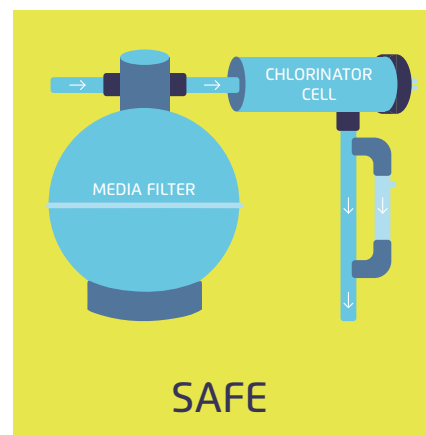
Set the master switch to the Auto position.

## 2.2 Important Notes

### Chlorinator Cell Housing Installation

The Ozone Swim cell housing must be plumbed into the return line of the pool filter system after the filter and any diversion valves.

In situations where a heater is incorporated, the Ozone Swim cell housing must be installed after the heater. Should a solar heating system be installed, the housing must be plumbed after the solar diverters and after the water exits the solar system and re-joins the main stream pool return line. Ensure there is a gas trap by always installing the chlorinator cell at a higher level than the filter (see below).

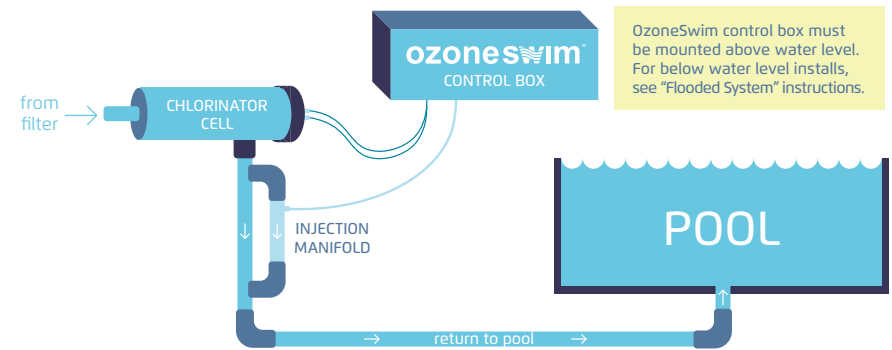


## Pump Outlet Socket

A 240 volt pump output power socket is supplied and located on the left-hand underside of the power supply. Your pool pump power supply lead should be plugged in to the socket so that when the time clock switches at the designated times both the Ozone Swim and the and pump will activate in unison.

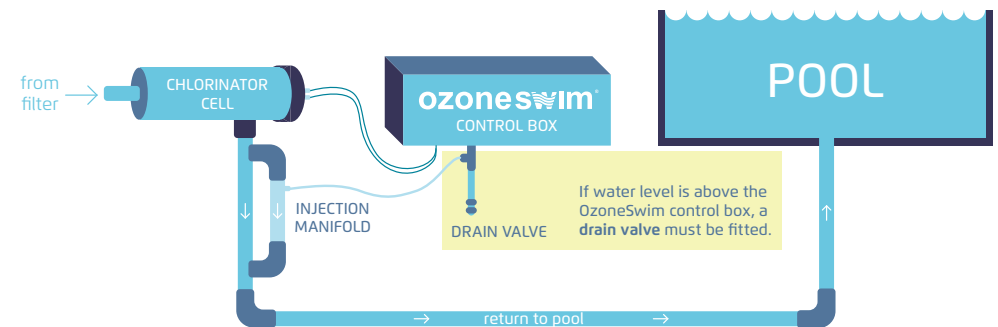
The pump socket is designed to operate a single pool pump of maximum 1.5 hp (horse power) only. Do not attempt to operate any equipment other than your pool pump from this socket as damage might occur to the power supply unit that is not covered under warranty.

## Standard "Non-Flooded" Installation

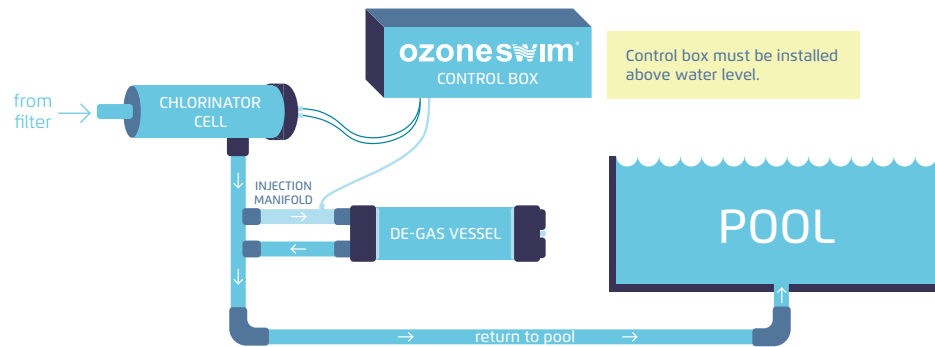


## Flooded Installation

For installations where control box is below water level)



## Installation with De-Gas Chamber





## 3.1 Operating Instructions

### Salt/ Mineral Requirements

All combination units require 3500-4500ppm salt/mineral levels. Using only refined swimming pool salt or minerals, add the desired quantity to the swimming pool water. To assist in the rapid dissolving and mixing, sweep or brush the solids until they are fully dissolved.

**Note:** Undissolved salt may result in staining of your pool's interior walls.

### Achieving the correct salt/mineral levels

For best results, the salt concentration in the pool water is required to be within an average range of approximately 3,500 to 4,500 parts per million (ppm). These figures are temperature dependant. In summer time as temperature rise salt levels may require slight reduction while in winter time the reverse may be true to allow optimum performance of the unit.

### New Pools

- Ensure the salt/mineral cell is switched off until the salt/minerals have been completely dissolved in the pool.
- To achieve the correct salt/mineral levels in new pools you need to know the pool capacity, you can then work out the amount of salt/minerals required in kilograms (2 x 20kg bags per 10,000L).
- For example: pool size 60,000L = 240KG of salt/minerals.

### Existing Pools

To establish the salt level in an existing pool, take a water sample to your local pool shop for testing, they will tell you the current salt/mineral levels and advise the correct course of action required.

## Master Switch

- Off** The system will not operate
- Auto** The time clock will automatically switch your pool equipment on or off at your designated times.
- Manual** The timer is by-passed, the system will operate all functions permanently

- Set the sanitation switch to the "on" position
- Set the master switch to "manual" position to turn the unit on
- Once the salt/minerals have been added and dissolved turn the cell production dial to the required position based on the season and the size of the pool (set to max output to start with and adjust down as required)
- Set the timer (see setting the timer) to run for the recommended times (4-6 hours for winter / 8-10 hours for summer) switch the system to auto and the unit will now be controlled by the timer
- To set current time, rotate minute hand clockwise until arrow head aligns with correct time.

**Note:** This will need to be reset whenever the power is disconnected from the unit and for daylight saving time changes.

**Note:** Only rotate clockwise to set. Rotating incorrectly will damage the time clock.

- To set ON/OFF times, move required tappets to appropriate position. Inner position for OFF and outer position for ON.

**Note:** proper operation requires that the appropriate switch settings below are enabled

- Each of the tappets on outer edge of the timer represents 15-minute intervals.

**Note:** If you require your Ozone Swim to be connected to an off-peak tariff we recommend the use of an appropriate battery backup time clock for that purpose.



## Checking Chlorination Output

The chlorine cell output controller regulates the amount of chlorine production relevant to the position it has been set to. By adjusting the cell output controller clockwise, you increase chlorine production and by turning anti clockwise you reduce production. Do not attempt to turn the controller beyond its stops as this could cause damage to your unit that is not covered by warranty.

To ensure your Chlorinator is working correctly, follow the steps below

- Ensure the cell production is at maximum
- With the unit running take a sample of water from the skimmer box and conduct a chlorine test, note the result
- Take a sample of water from directly in from of the return to the pool outlet and conduct a chlorine test, note the result
- If the latter is higher in chlorine than the first test, your Ozone Swim is efficiently producing chlorine (if not please see TROUBLESHOOTING)

## Checking Ozone Output

To ensure your Ozone is working follow the steps below

- Check that the green ozone light is on
- Check that there is suction at the air filter on the bottom of the power pack
- Check there is bubbles at the return jets when the system is running

## Cell output display definitions

Your Ozone Swim is fitted with digital display. During operation of your Ozone Swim the display will illuminate relevant to the degree at which the chlorine output control has been adjusted. You can increase or decrease chlorine output to suite your pool's requirements. As you increase the output (by turning the control knob clockwise), the display will indicate the Amps reading to the cell, you have full control of chlorine production merely by adjusting the chlorine controller and illuminating the number of lights to satisfy your chlorine demand.

The Ozone Swim also has on board diagnostics to indicate any issues with the system (see table below for definitions)

1-xx	A value in the range of 1-15, 25 or 28 indicates the Amperage current being applied to the cell
OF	Cell output control knob is turned off, the Ozone Swim's chlorination has been manually switched off
dg	Automatic cleaning cycle beginning, the self-cleaning function is beginning, this is only displayed for a short period
Pb	(flashing) there is insufficient water flow through the cell to produce, if this persist please refer to troubleshooting
OL	(flashing) Overload condition (see troubleshooting)



# MAINTENANCE

## 4.1 Maintenance

### Replace the check valve in the Ozone

Every 12 months or as required, the Teflon check valve prevents water from returning to the system, flooded systems (below water level) require a water trap (drain valve) to protect the system in the event that the check valve fails, to replace the check valve simply pull the delivery line off the check valve at both ends and replace with new check valve.

### Ozone Filter Replacement

Regularly (every 3-6 months) replace the Ozone air filter located under the control unit, to remove the filter turn it anticlockwise, remove the old cotton wool and replace with half a standard cotton wool ball, only hand tighten the filter when refitting.

### Electrode (Cell) Cleaning

Although you have a reverse cycle (Automatic cell cleaning) System, it is recommended from time to time that the cell be checked for any accumulation of calcium or other deposits that may have built up. We recommend cleaning the cell once or twice a year subject to your pool's application and location

## 4.2 Water Chemistry (balancing Information)

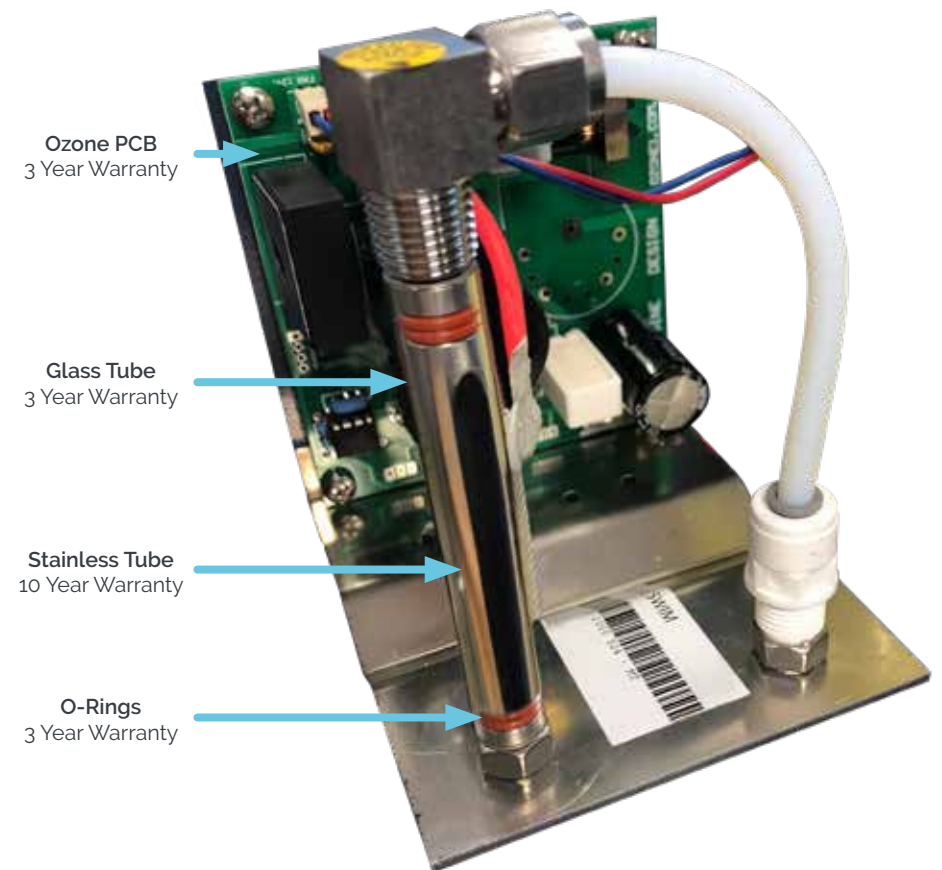
Regular water testing must be performed to ensure the water is within the recommended ranges (see below):

Chlorine	1-3 ppm
pH	7.2 - 7.4
Total Alkalinity	80 - 120 ppm
Hardness	150 - 350 ppm
Cyanuric Acid (CA)	30 - 50 ppm
Phosphates	0 - 300 ppb

# WARRANTY

## 5.1 Warranty Information

The Ozone Swim 1000, 2000 & 3000 series systems have a three (3) year parts replacement warranty (1 YEAR IN-FIELD) on the control box, chlorine cell/electrode, electronics and seals. Plus, a 10-year (1 YEAR IN-FIELD) warranty on the corona discharge unit (see below).







## 6.1 Troubleshooting

Fault	Potential Causes	Action Required
Cell output display flashing "Pb" continuously (no water flow)	<ul style="list-style-type: none"> <li>Pump turned off or disconnected</li> <li>Valves closed</li> <li>Gas sense wire at cell disconnected</li> </ul>	<ul style="list-style-type: none"> <li>Ensure pump is on</li> <li>Ensure correct valves are open,</li> <li>Reconnect sense wire at cell</li> </ul>
Low salt indicator flashing	<ul style="list-style-type: none"> <li>Salt level in pool has dropped too low</li> <li>Pool water temperature is low</li> <li>Cell has calcified</li> <li>Cell has failed</li> </ul>	<ul style="list-style-type: none"> <li>Take sample of water to pool shop and check salt level – add salt as recommended</li> <li>Add salt and turn chlorinator output down until the water is warmer</li> <li>Ensure cell is clean</li> </ul>
High Salt indicator flashing	<ul style="list-style-type: none"> <li>Too much salt has been added to the pool</li> </ul>	<ul style="list-style-type: none"> <li>Take a sample to your local pool shop to confirm salt levels and remove and replace water as required</li> </ul>
No display	<ul style="list-style-type: none"> <li>No mains power</li> <li>Ozone Swim plug removed from power point</li> <li>Ozone Swim fuse blown</li> <li>Unit is turned off</li> </ul>	<ul style="list-style-type: none"> <li>Ensure there is mains power available</li> <li>Ensure Ozone Swim is plugged into power point and its turned on</li> <li>Check fuse condition and call technician if blown</li> <li>Ensure manual mode and sanitation are switched on</li> </ul>
Low/No Chlorine	<ul style="list-style-type: none"> <li>Insufficient run times</li> <li>Incorrect cell production setting</li> <li>Low/high Salt levels</li> <li>Loose connections at the cell (red &amp; black)</li> </ul>	<ul style="list-style-type: none"> <li>Adjust run times to allow more production</li> <li>Increase cell production</li> <li>Check/adjust salt levels to be within required range</li> <li>Disconnect leads, then reconnect leads firmly</li> </ul>
No Ozone light	<ul style="list-style-type: none"> <li>LED failed</li> <li>Ozone Module Failed</li> </ul>	<ul style="list-style-type: none"> <li>Call Ozone Swim technician</li> </ul>
Cell output flashing "OL"	<ul style="list-style-type: none"> <li>Possible short circuit in cell (debris).</li> <li>Extremely high salt levels</li> </ul>	<ul style="list-style-type: none"> <li>Remove cell and check for any debris and clean</li> <li>Check and adjust salt levels</li> </ul>
Water dripping out of drain valve (Flooded systems)	<ul style="list-style-type: none"> <li>Teflon Check valve has failed</li> </ul>	<ul style="list-style-type: none"> <li>Replace Teflon Check valve</li> </ul>

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3136 - AS/NZS 3100. To comply with this standard the chlorinator must not be installed in the pool zone. Trademarks: Throughout this document trademark names may have been used. Rather than placing a trademark symbol in every occurrence of a trademark name, we state that we are using the names only in an editorial fashion and to the benefit of the trademark owner with no intention of infringement of the trademark. Notice of Liability: While every effort has been taken to ensure the accuracy of this document, neither Ozone1 Pty Ltd nor any of its official representative shall have any liability to any person or entity with respect to any liability, loss or damage caused or alleged to be caused directly or indirectly by the information contained in this guide. Should you find any error or inconsistency, please notify us accordingly. Ozone1 Pty Ltd reserves the right to make changes to features and specifications at any time without prior notification in the interest of ongoing development and improvement.