



ES3 V3

FRESH WATER SANITISING SYSTEM



USER MANUAL

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1. IMPORTANT SAFETY & WARNING INFORMATION

1.1 Important Warnings

- This manual should be retained by the operator and or the owner of this equipment.
- This equipment shall be installed according to AS/NZS 3000 wiring rules and outside the pool zone. Please refer to the ES3 installation guide.
- The Electronic Control Unit should not be opened by an unauthorised person. There is a danger of electrical shock if opened and any warranty will be voided.
- The Enviroswim ES3 system should only be operated when the wet cell is completely full of water and the water is flowing.
- The system should never operate without the pool pump operating.

1.2 Important Safety Information

- Children should be supervised to ensure they do not operate or touch the equipment.
- Never put undiluted chemicals into your pool, always dilute in a bucket of water first.

ALWAYS ADD CHEMICALS TO WATER. Never add water to chemicals.

NEVER STORE CHEMICALS IN THE VICINITY OF YOUR ENVIROSWIM CONTROL BOX

1.3 Helpful Hints & Recommendations

- Read and keep your manual in a safe place.
- Clean your pool filter, skimmer and pump lint basket regularly.
- If using a VARIABLE SPEED PUMP, please ensure there is adequate water flow and the wet cell is filled with water at all times when in use.
- When a large number of swimmers are using the pool, switch the unit on to manual if the system is not already operating.
- Ensure your copper levels are between **0.2-0.4ppm**. Check weekly and only check your copper levels when your pH is between **7.2 – 7.6**. Please use the copper test kit supplied with your Enviroswim ES3 system.
- Maintain the TDS (Total Dissolved Solids) level between **1,000 – 1,500ppm**, for optimum performance, longevity of the oxidiser cell plates and to enjoy a Fresh Water Experience.

**Do not use: Stabiliser (Cyanuric Acid)
Bromine Compounds
Soda Ash (Sodium Carbonate)**

**Aluminium based or any other Flocculants
Granular Chlorine or tablets
Forms of Volcanic Filtration Media (Zeolite)**

Do not put un-dissolved chemicals into your pool

2. GENERAL OVERVIEW

Thank you and congratulations on purchasing your Enviroswim ES3 Freshwater Sanitiser, the world's safest and most effective sanitiser. Please take the time to read the entire manual before operating your new system. Your system must be installed and operated as per the ES3 User Manual & Installation Guide.

While every effort has been made to ensure that the information supplied in this manual is accurate and complete, no liability will be accepted for any errors or omissions. Enviroswim reserves the right to change the specifications of hardware and or software or documentation at any time without prior notice.

The ES3 sanitises swimming pools up to and including 100,000 L. Please consult us for larger pools and commercial applications.

The ES3 is designed to operate **1 hour per 10,000 L** of water per day.

Ensure pH levels are not above 7.6 for extended periods of time. If you test copper levels when your pH is high you will not obtain an accurate reading.

The Enviroswim ES3 is not designed to chemically maintain the balance of your pool water. It is designed to sanitise correctly balanced water. Please ensure you balance and check your water regularly, adjusting where necessary. During periods of intense use or when your pool water has been significantly diluted or contaminated, more frequent testing and management may be required.

Please note the copper and silver electrodes are consumables and will be required to be replaced from time to time. The rate of usage of these electrodes will vary depending on the size of your pool, ioniser control setting, run time, bather load and the environment. For an average residential size pool (40,000L) with normal environmental influences, rods will typically last 2 years.

Thank you again for choosing the world's leading swimming pool sanitiser.

For further information please visit our website.

enviroswim.com

For purchasing consumables, please visit our online store.

enviroswim.com/online-store

Happy Freshwater Swimming from the Enviroswim Team.

2. GENERAL OVERVIEW cont.

2.1 Contents

1 x ES3 Electronic Control Box



1 x Complete Oxidiser/Ioniser Wet Cell Housing



1 x Ultrasonic Chamber



1 x Enviroswim Copper Test Kit



4 x 50/40 mm Reducing Bushes



Documentation:

- 1 x Installation Guide
- 1 x Users Manual

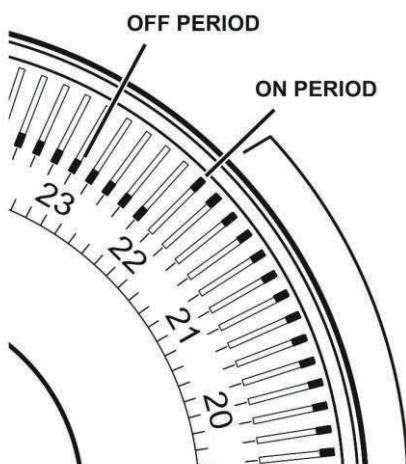
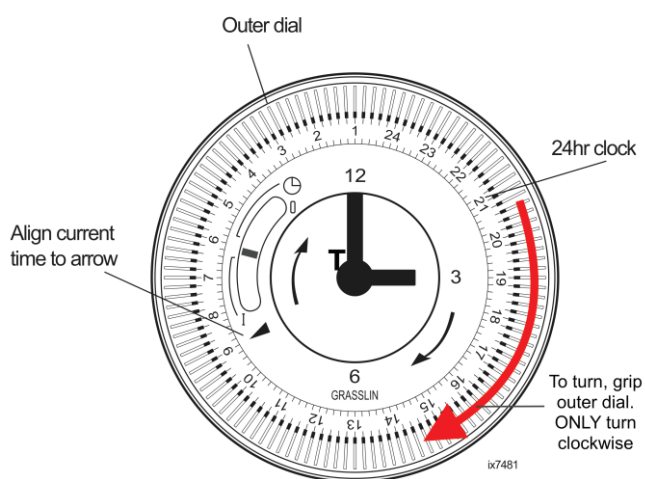
3. SYSTEM OPERATION

3.1 Electronic Control Unit



- | | |
|---|-------------------------------|
| 1. Time Clock | 6. Ioniser Timer Control |
| 2. AUTO/ OFF/MANUAL Switch | 7. Ioniser Polarity Indicator |
| 3. ON/OFF – Enviroswim Functions Switch | 8. Oxidiser Amperage Display |
| 4. Fuse | 9. Oxidiser Output Control |
| 5. Ultrasonic Operation Indicator | |

3.1.1 Time Clock



If using the Timer:

The outer dial should be set to the current time. Rotate the dial slowly in a clockwise direction until the correct hour is aligned with the arrow printed on the dial.

Note the outer dial is printed with the 24hr clock.

8.00am = 8 on the dial

8.00pm = 20 on the dial

ONLY ROTATE TIMECLOCK BY THE OUTER DIAL

DO NOT ATTEMPT TO ROTATE THE DIAL IN AN ANTI-CLOCKWISE DIRECTION

PROGRAMMING SWITCHING TIMES

Set tappets to outer edge for ON periods and set tappets to inner edge for OFF periods.

Multiple ON/OFF periods can be set if required. The Time Clock has a battery backup and will retain the time.

3. SYSTEM OPERATION cont.

3.1.2 AUTO/OFF/MANUAL (A/O/M) Switch

- AUTO position - the ES3 system and pump will run, as per the settings on the time clock.
- OFF position - turns all functions off. The time clock will not function but will keep time.
- MANUAL position - turns the pump and ES3 System on, bypassing the time clock.

3.1.3 ON/OFF Switch

- The ON/OFF switch turns the ES3 System ON or OFF.
- For your system to operate correctly this should be in the ON position.
- By selecting the OFF position and the A/O/M switch to AUTO function (3.1.2), your pump will still run via the time clock.
- To backwash your pool, switch to OFF and the A/O/M switch to MANUAL function (3.1.2). The pump will run manually.

3.1.4 Fuse

- Only replace with 240v 5A **slow blow**. Before changing fuses, ensure electrical supply to the Enviroswim is turned off.

3.1.5 Ultrasonic Indicator LED

- LED cycles through several colours (Red, Green, Blue) indicating normal operation.

3.1.6 Ioniser Timer Control

- This control is time based.
- Copper levels can be increased 2 ways, by increasing the run time and/or increasing the ioniser setting.
- The “MAX-Start up” setting is for commissioning your Enviroswim ES3 system. This should only be used to build up a residual of copper/silver when your pool is first commissioned, or your pool has been drained.
- Every pool has its own demand for sanitisation. Once the commissioning process has been completed, most pool owners set their ioniser at 20-40%.

3. SYSTEM OPERATION cont.

3.1.7 Ioniser Polarity Indicator

- This LED indicator changes colour from red to green every 5-6 minutes of run time. It assists cleaning and even wear on your electrodes.
- This LED is not always on, even when the system is running. It is only on for a percentage of the run time, dependent on the ioniser timer control setting.

3.1.8 Oxidiser Digital Display

This display shows the status of the oxidiser plates and conductivity of your pool water. It displays a range of values and operating codes.

Normal Operation Oxidiser Codes:

- **d6** – System in degas Mode. The system reverses polarity every 24 hours of run time. The d6 will display for a few minutes while in degas mode.
- **01-15** – Indicates amperage current being applied to the oxidiser plates. For swimming pools when the oxidiser knob is in the MAX position, this should display 15 amps.

Please find further information regarding error codes in trouble shooting section on page 16.

3.1.9 Oxidiser Output Control

- This control is used to adjust the current being applied to the oxidiser plates. For normal pool operation this should be **set to MAX**.
- For spa use this output may need to be reduced depending on the specific spa usage and setup.
- Extended run times and/or high salt levels and/or not removing your pool cover frequently may result in excessive chlorine levels. Please reduce oxidiser output. (For pool covers please see section 6.7, page 14).

4. ENVIROSWIM PARAMETERS & WATER BALANCE

4.1 Enviroswim Operating Parameters

- Total Dissolved Solids (TDS) 1,000 – 1,500ppm
- Copper 0.2 – 0.4ppm
- Run times 1 hour per 10,000L of water per day during swimming season.
Reduce run time by 25% or more once swimming season has finished.
- Oxidiser level 0.5ppm Maximum
The oxidiser level can be tested using a standard pool chlorine test kit.
Note: A chlorine test kit reads the "Redox" or "oxidation-reduction potential (**ORP**)" of the water, which may be a combination of chlorine, oxygen and other oxidisers present in the water.

4.2 Water Balance Standards

All swimming pools need to have the water balanced to protect the interior of your pool, bather comfort and to maintain the effectiveness of any sanitiser.

- pH 7.2 - 7.6
- Total Alkalinity 60-150ppm
- Calcium Hardness 170 -250ppm

IMPORTANT – HIGH Ph AFFECTS THE EFFICACY OF ANY SANITISER
e.g. Chlorine is only 3% effective at a pH of 8.0, compared to 75% effective at a pH of 7.0.

– A high pH will also accelerate fiberglass gelcoat fading

5. INITIAL START UP - COMMISSIONING

5.1 New Pool Start Up or Pool Refills

Once the pool has been filled with water the Total Dissolved Solids (TDS) of the water needs to be raised to **1,000-1,500ppm**. The ideal level for startup is **1,200ppm**.

This is **NOT A SALTWATER CHLORINATOR**. Do not put excessive amounts of salt in your pool. There will be a minimal amount of TDS in municipal water, and this varies from location to location.

Please ensure you have installed the Enviroswim ES3 as per the installation guide supplied.

1. Fill the pool with water.
2. Check and adjust total alkalinity, pH and calcium hardness as per standard water balance.
 - Total Alkalinity **60 -150ppm**
 - pH **7.2 - 7.6**
 - Calcium Hardness **170-250ppm**

Note: Never add Calcium Hardness Increaser and Alkalinity Increaser on the same day.
3. Turn the ON/OFF switch to **ON**.
4. Turn the AUTO/OFF/MANUAL switch to **MANUAL**.
5. Turn the oxidiser output control to **MAX**.
 - The oxidiser display should read **"15"** at all times.
 - If the oxidiser display reads less than **"15"**, first check the TDS levels. If below 1,000ppm, add 5Kg of salt per 10,000L to raise the TDS gradually until reaching recommended levels.
6. Turn the Ioniser Control to **100%** - for initial startup.
7. Run the system **1 hour per 1,000L** to enable residual sanitisers to build up. E.g., A 50,000L pool should be run continuously for 50 hours.
 - Check the copper levels. If you have obtained a minimum **0.2ppm** copper reading, then you are ready to switch to **AUTO** mode.
 - If you have not achieved a minimum 0.2ppm copper reading please run the system as is for an additional 24 hours and check copper levels again. Repeat till the minimum copper level is achieved.
 - **NOTE: PLEASE MEASURE AND ADJUST pH 8 HOURS BEFORE CHECKING COPPER LEVELS. HIGH pH WILL MASK YOUR TRUE COPPER READING.**
8. Once you have achieved the desired copper level, reduce the Ioniser control to **"20-40%"** as a starting point.
9. Set your time clock to **1 hour of run time per 10,000L** of water. These are our guideline operating settings but will vary from pool to pool depending on the environment, bather load and pool interiors and their quality.
10. Turn the AUTO/OFF/MANUAL switch to the **AUTO** position.
11. Enjoy swimming in your Enviroswim freshwater pool.

- DO NOT USE STABILISER
- DO NOT USE BROMINE COMPOUNDS
- DO NOT USE FLOCCULANTS
- DO NOT USE SODA ASH

- DO NOT USE GRANULAR CHLORINE
- DO NOT PUT UNDISSOLVED CHEMICALS INTO THE POOL
- DO NOT USE ZEOLITE IN MEDIA FILTERS

5. INITIAL START UP – COMMISSIONING cont.

5.2 Salt Water Conversion - Startup

Saltwater pools have an extremely high Total Dissolved Solids (TDS), which is mainly pool salt. This can be 4,000ppm or in some cases significantly higher. The definition of fresh water is a TDS of less than 1,500ppm or in some cases a salinity of less than 1,000ppm. These figures do vary around the world and each E.P.A body may have slightly different variations.

The water in your pool is, in simple terms, the fuel for your sanitiser to operate as it is meant to.

The Enviroswim ES3 System needs pool water that is low in TDS (fresh water).

To convert a saltwater pool to be a freshwater pool you need to dilute the current TDS levels to the Enviroswim's freshwater parameters (1,000-1,500pp).

The best way to reduce TDS is to dilute your pool water with fresh water.

Please ensure you have installed the Enviroswim ES3 as per the installation guide.

1. Take a sample of your saltwater pool to a pool shop and ask them to test the total dissolved solids (TDS).
2. Work out the percentage of water you will need to drain from your pool to lower the TDS to 1,000-1,500ppm. E.g. If your TDS is 4,500 you will need to drain two thirds of the salty water and replace it with fresh tap water (or other fresh water source).
3. It is recommended you check with a pool builder or Engineer before draining excessive amounts of water from your swimming pool.
4. [Now refer to instructions in previous section 5.1 for startup.](#)

PLEASE SEE PREVIOUS PAGE FOR PRODUCTS THAT YOU SHOULD NOT USE IN YOUR POOL

6. MAINTENANCE

The Enviroswim ES3 system is very low maintenance. The Ionisers (copper/silver electrodes) are consumable and require periodic replacement.

The ultrasonic chamber is maintenance free.

The oxidiser cell plates are self-cleaning. If you continually run a high pH, calcium scaling will occur on the plates, and this will reduce the life expectancy of your plates.

6.1 Fuse

Fuse replacement: 240Volt, 5 amp, slow blow.

WARNING: There is a risk of electrical shock, fire and damage to the system if an incorrectly sized fuse is installed.

6.2 Replacement of Ionisers (electrodes)

- The Ionisers (copper/silver electrodes) are a consumable and will require periodic replacement.



- The life of the electrodes will depend on many factors including, pool use, water balance, dirt and other debris that are allowed to build up in the pool.
- The electrodes should be replaced before they disappear completely.

- NOTE: ONLY USE GENUINE ENVIROSWIM ELECTRODES AND SPARE PARTS. ENVIROSWIM WILL NOT BE HELD LIABLE FOR THE PERFORMANCE OR EFFECTIVENESS OF THE SYSTEM WHEN NON-GENUINE SPARE PARTS AND CONSUMABLES ARE USED.

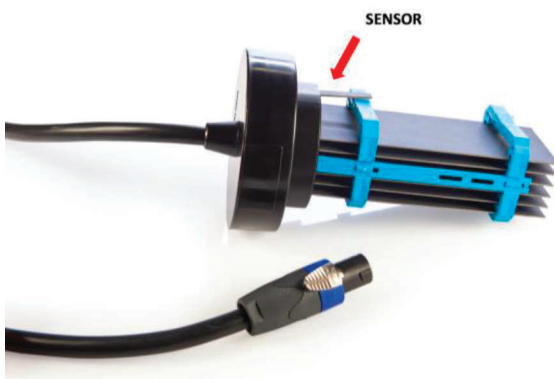
REPLACEMENT ELECTRODES CAN BE PURCHASED AT OUR ONLINE STORE AT THE BELOW LINK:

envirowswim.com/online-store

6. MAINTENANCE Cont.

6.3 Oxidiser Cell Plates - Cleaning

- The oxidiser cell plates are self-cleaning. If you need to clean them, it indicates issues in the pool water, which will also need to be addressed. Cleaning the plates addresses the symptom, not the underlying issue. For example, scaling on the plates generally indicates that the pH has been high (above 7.6) for extended periods, or the pool is not grounded correctly.
- Plates should only be cleaned if there are signs of calcium build up on the plates or sensor, if your system is unable to draw the 15 amps, or if the oxidiser output display is fluctuating. Cleaning them regularly shortens their life span. We recommend resolving the underlying pool issue.



Please check the following:

- TDS is within range **1,000 – 1,500ppm**.
 - All connections are correct and secure.
-
- Remedial action to remove scale from plates is by soaking plates only (not black plastic parts)
 - Clean plates by soaking in a **75/25% ratio water/hydrochloric acid solution**. A plastic bucket or a 1.25 Litre soft drink bottle with the top cut off is an ideal size for bathing the plates.
REMEMBER: Always add acid to Water. Never add water to chemicals.
 - Do not leave the plates in the solution for extended periods of time, 3 minutes should be adequate.
 - Never use metal objects to clean the plates, as this will damage the plate coating.
 - Leaving calcium scale on your plates will shorten the life of the plates.
 - **Note:** Only use genuine Enviroswim electrodes and spare parts. Enviroswim will not be held liable for the performance or effectiveness of the system when non-genuine spare parts and consumables are used.

REPLACEMENT OXIDISER PLATES CAN BE PURCHASED AT OUR ONLINE STORE AT THE BELOW LINK:

enviroswim.com/online-store

6. MAINTENANCE Cont.

6.4 Copper Testing

- **NOTE: HIGH pH will mask your copper test results.** Please ensure you pH is below 7.6 before doing a copper test.
- Copper levels should read 0.2 - 0.4ppm.
- We strongly advise that you use the test kit and instructions supplied with your Envirosnim system.
When using the supplied test kit ensure you look down the test vial when comparing to the colour chart.
Note: The test kits have a two-year shelf life.
- If taking a sample of pool water to a pool shop for testing, ensure pH is within set parameters for 24 hours prior.
Some pool shop testing equipment can also give a false reading due to the silver in the water.
- If your copper reading is above 0.4 ppm turn the ioniser control to the 0 setting (OFF). Only turn the ioniser control back ON once your copper level reaches 0.3 or lower.
- In normal operating circumstances your ioniser control should NOT be left in the 100% setting, unless you need to build your copper levels up. Never leave on this setting for more than 7 days unless you are discussing with a service technician.
- NOTE: Envirosnim will not be held responsible for high copper levels.

Envirosnim Copper Test Kit Instructions

1. Fill tube (0106) to the 10 mL line with sample water.	2. Add 5 drops of *Copper A (P-6367) to tube.	3. Cap and invert tube to mix.	4. Remove cap and add 5 drops of *Copper B (P-6368) to tube.	5. Cap and invert tube to mix.
6. Insert tube into holder. Wait 3 minutes for full color development.		7. Remove cap. Place bottom of tube on the white area of the color chart. Match color by looking down into the tube. Look Down NOTE: Always empty and rinse tubes promptly after testing to avoid staining.		

REPLACEMENT COPPER TEST KITS CAN BE PURCHASED AT OUR ONLINE STORE AT THE BELOW LINK
envirosnim.com/online-store



6. MAINTENANCE Cont.

6.5 Adjusting and Maintaining Water Balance

Water balance is applicable to all sanitised pools. This is an industry standard.

IMPORTANT – HIGH pH EFFECTS THE EFFICACY OF ANY SANITISER.

E.g. Chlorine is only 3% effective at a pH of 8.0, compared to 75% effective at a pH of 7.0.

	Ideal Range	Measuring	Adjusting
Alkalinity	60-150 ppm	Pool shop or test kit Frequency: 3 Monthly	Lower by adding Hydrochloric acid. Raise by adding Sodium Bicarbonate
pH	7.2 – 7.6	Pool shop or test kit Frequency: 7-14 Days	Lower by adding Hydrochloric acid Raise by adding Sodium Bicarbonate.
Water Hardness	170 – 250 ppm	Pool shop Frequency: 3 Monthly	Lower by diluting the pool water. Raise by adding Calcium Chloride

Suggested testing frequencies are recommendations only for average use domestic pools. More frequent testing may be required.

REMEMBER: Always add acid to Water. Never add water to acid.

6.6 Winterise Your Pool

Winterising your Enviroswim pool is an area where savings can be made. Once the water becomes too cold for bathing, the daily run time of the pump/Enviroswim can be reduced to save on electricity.

The winterised run time depends on the pool's surrounding environment as the pump will need to run long enough for the filter to remove dirt and organic material that enter the pool. The residual copper & silver will take care of algae and bacteria as they continue to work 24/7 regardless of the pump run time.

It is important to continue to balance water, including the pH (ensuring pH below 7.6, as a high pH will give you a false copper reading) & check copper levels regularly during the winter.

Always run the oxidiser on maximum (15) during winterisation, whilst still checking O.R.P level periodically.

Vacuum the pool when required to avoid sediment building up which can stain and cause extra demand on the system.

Follow these guidelines and you will save money and have a great pool ready for the coming summer.

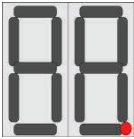
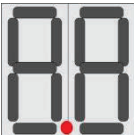
6.7 Pool Covers

We recommend that your Enviroswim System is turned off whilst the pool cover is being used. Continue to run your pump and filtration system, run time will be reduced depending on the debris that enters your pool. The water balance still needs to be checked periodically and adjusted if required.

7. TROUBLESHOOTING

Symptom	Possible Causes	Remedy
Blown Fuse Enviroswim not running (no lights). Pump still running, plugged into control box.	<ul style="list-style-type: none"> ○ In-Rush Current from pool pump. ○ Undiluted chemicals added to pool or skimmer basket. ○ Short circuit on Oxidiser Plates. ○ Internal electrical fault. 	<ul style="list-style-type: none"> ○ Have pump checked. ○ Turn off power to control box. Replace fuse and allow clean water to circulate through the system before switching back on. ○ Check for any visible debris in wet cell and remove them. ○ Contact Enviroswim.
Copper level too low	<ul style="list-style-type: none"> ○ Low conductivity (TDS). ○ Copper/silver electrodes worn away. ○ Pool or equipment leaking. ○ Scale build up on electrodes. ○ System not running long enough. ○ Ioniser setting too low. ○ pH high. 	<ul style="list-style-type: none"> ○ Increase TDS to 1,000-1,500ppm. ○ Replace with new electrode kit. ○ Repair leak. ○ Clean rods – correct water balance. ○ Increase run time. ○ Increase ioniser setting. ○ Adjust pH to correct level.
Excessive scale on oxidiser plates	<ul style="list-style-type: none"> ○ pH too high. ○ High calcium content (water hardness) in pool water. 	<ul style="list-style-type: none"> ○ Adjust pH to correct level. ○ Dilute Pool water with fresh water.
Cloudy water	<ul style="list-style-type: none"> ○ Insufficient run time. ○ Poor water balance. ○ Oxidiser plates have excessive scale build up. ○ High bather load. 	<ul style="list-style-type: none"> ○ Increase run time. ○ Adjust water to correct levels. ○ Clean oxidiser plates. ○ Run pool on manual while swimming.
Algae in pool	<ul style="list-style-type: none"> ○ Low copper levels. ○ Phosphates in water. ○ Poor water circulation. ○ pH too high. 	<ul style="list-style-type: none"> ○ Increase run time or Ioniser setting. ○ Phosphate treatment required. ○ Check/clean filter, skimmer box, pump lint basket. Ensure pump is operating correctly and not at low speed if variable speed. ○ Adjust pH to correct level.

7. TROUBLESHOOTING cont.


Fault Mode	Possible Causes	Remedy
<p>Oxidiser Display</p> <p>OL</p> <p>Current no longer being applied to oxidiser plates</p>	<ul style="list-style-type: none"> Excessive TDS greater than 2,500ppm. Undiluted chemicals added to skimmer. Short circuit across oxidiser connections or plates. Short Circuit across Ioniser connections or electrodes. 	<ul style="list-style-type: none"> Dilute pool water to reduce TDS to below 1,500ppm. Allow clean water to circulate through the system before switching back on. Remove short circuit. Remove short circuit.
<p>Oxidiser Display</p> <p>OF</p>	<ul style="list-style-type: none"> No current applied to oxidiser plates. 	<ul style="list-style-type: none"> Check cable is plugged in correctly. Turn oxidiser knob to max.
<p>Oxidiser Display</p> <p>Pb</p> <p>Current no longer being applied to oxidiser plates</p>	<ul style="list-style-type: none"> Air in system. Insufficient water flow. TDS (total dissolved solids) low. Calcium build up on oxidiser plates or sensor. 	<ul style="list-style-type: none"> Check cable is plugged in correctly. Check for leaks and prime pump. Check/clean filter, skimmer box, pump lint basket. Ensure pump is operating correctly. Increase speed of Variable speed pump if applicable. Check TDS levels, add salt if needed. Clean Oxidiser Plates and sensor.
<p>Oxidiser Display</p> <p>tp</p> <p>High temperature within the ES3 control box.</p>	<ul style="list-style-type: none"> Ventilation grills blocked. Ventilation fan failure. Electronic temperature control issue. 	<ul style="list-style-type: none"> Clean grill, remove blockage. Check fan runs on startup. Check fan is running when display reduces from '15'. Fan failure or temperature control issue requires workshop repair.
<p>Oxidiser Display</p> <p>Low Oxidiser numbers</p>	<ul style="list-style-type: none"> Oxidiser knob not on max. TDS (total dissolved solids) low. Build up on Oxidiser Cell Plates/Sensor. Damage/wear to Oxidiser Cell Plates. 	<ul style="list-style-type: none"> Turn Oxidiser knob to Max. Check TDS levels, add salt if needed. Clean Oxidiser Cell Plates (see page 12). Replace Oxidiser Cell Plates.
<p>Oxidiser Display</p>  <p>TDS Indicator (low)</p>	<ul style="list-style-type: none"> Low Total Dissolved Solids (TDS) Levels. 	<ul style="list-style-type: none"> Increase the TDS by adding pool salt (check TDS levels first).
<p>Oxidiser Display</p>  <p>TDS Indicator (high)</p>	<ul style="list-style-type: none"> High Total Dissolved Solids (TDS). 	<ul style="list-style-type: none"> Dilute the swimming pool to reduce TDS (check TDS levels first).
<p>Ultrasonic LED</p> <p>Rapid flashing blue & red</p> <p>Ioniser fault</p>	<ul style="list-style-type: none"> Check there is ioniser rods left. No water on ionisers. Bad connections. 	<ul style="list-style-type: none"> Purchase new ionisers. Check pool pump and waterflow. Ensure all plugs/connections correct and secure.

8. SPECIFICATION, STANDARDS and WARRANTY

8.1 Specifications

- Enviroswim T.D.S. operating parameters: 1,000-1,500ppm.
- Enviroswim recommended copper levels: 0.2-0.4ppm.
- Enviroswim ES3 system sanitises swimming pools up to 100,000 litres.
- Enviroswim run time – 1 hour per 10,000 litres (environment dependent).
- Enviroswim tested and complies with CISPR 14 Electromagnetic Compatibility.
- Enviroswim tested and complies with CE.
- Electrical requirements 220/240 volts ac 10 amp GPO.
- Electrical consumption of Enviroswim approx. 200 watts +/- 20% this is dependent of conductivity of the pool water.
- Pool pump outlet should not exceed 8amp, connected load.
- Recommend surge protector for power spikes and lightning strikes.
- Enviroswim Control (Power) Box is IP23 rated.

8.2 Standards

Type	Standard	Description
Electrical	AS/NZS 3136	Electrical Equipment for Spa and Swimming Pools
	EN 55014-2 EN 61000-3-2 EN 61000-3-3	Electromagnetic Compatibility
Chemical		Australian Pesticides and Veterinary Medicines Authority Approval no. 58847
Efficacy	NATA Accredited NSF/ANSI 50	Approved as hybrid system by the National Sanitization Foundation (USA) Cert# 4D640-02
	NZS5826	New Zealand Pool Water Quality Standards
HSO		NZ Drinking Water Standards 2005

8. SPECIFICATION, STANDARDS, and WARRANTY.

8.3 Warranty

The Enviroswim ES3 Control Box has a 2 year back to base warranty.

Please register your Enviroswim warranty at:

<https://www.enviroswim.com/warranty-registration/>

THIS EQUIPMENT HAS BEEN MANUFACTURED AND TESTED TO THE HIGHEST STANDARD AND AS SUCH CARRIES THE FOLLOWING WARRANTY.

The Enviroswim ES3 Control Box will be repaired at no charge for a period of 2 years (24 Months) from the date of purchase should it be found, after examination, that the failure has been caused by faulty workmanship or materials. This is a back to base warranty. The Ioniser electrodes and oxidiser plates are consumable items and therefore will need replacing from time to time depending on the size of swimming pool. The Ioniser rods and oxidiser plates do not carry any warranty.

Harmful operating conditions beyond the control of the manufacturer including improper voltage, excessive water pressure or any external condition that adversely affects the performance of the equipment renders this warranty null and void.

Defective equipment must be returned to the manufacturer as soon as the purchaser becomes aware of the defect. The manufacturer will not be responsible for any goods damaged in transit.

Should the equipment be found to be defective after inspection, it will be repaired or replaced free of charge. However, if it is found that the terms of this warranty are not satisfied upon inspection of the equipment, then the usual charges of the manufacturer for repair or replacement will be incurred by the customer, including all transport costs.

Any liability of the manufacturer pursuant to the Trade Practices Act 1974, as amended for a breach of a condition or warranty shall be limited to replacing or acquiring the equipment (or part thereof) where the same has been supplied.

The maximum liability incurred by the manufacturer shall not in any case exceed the contract price for the equipment or the product parts or components thereof claimed to be defective. Further, the manufacturer shall not be liable for any loss, damage or delay directly or indirectly caused by any malfunction of or defect of or failure of the equipment other than as expressly provided in this warranty.

Products sold by the manufacturer are designed for use with swimming pool water balanced in accordance with our operating instructions in this manual.

The manufacturer will not be held liable for damage caused by, but not limited to, corrosion, scaling or misuse.

The following may void warranty:

- Installation is carried out incorrectly.
- Not using genuine Enviroswim parts.
- The Control Unit is not protected from the elements.
 - The Control Unit is operated in a position/area with inadequate ventilation.
 - Water has been allowed to enter the Control Unit or Cable connections.
 - Insect infestation or penetration by dust, sand or other foreign particles inside the Control Unit.
- Damage beyond our control.
- Equipment that has been misused, neglected, damaged, repaired without authorisation or altered in any way.

When making a warranty claim, please email info@enviroswim.com and note the following information is to be provided or claim may not be approved. This information will expedite the processing of your claim.

- | | |
|------------------------------|------------------------|
| – Control Unit Serial Number | – Installation Date |
| – Your Full Name | – Your Phone number |
| – Your Address Details | – Details of the Issue |

Enviroswim reserves the right to modify any model without notice.

9. POOL SHOPS and SERVICE TECHNICIAN INFORMATION

If using a pool shop or service technician to look after and maintain your swimming pool, please give them this page.

THIS IS NOT A SALTWATER CHLORINATOR

OPERATING PARAMETERS

- Total Dissolved Solids (TDS) 1,000 – 1,500ppm.
If below 1,000ppm, add 5Kg of salt per 10,000L to raise the TDS gradually until reaching recommended levels.
- Copper 0.2 – 0.4ppm
Note: A High pH will mask your true copper reading please lower pH 8hrs before checking copper levels
- Run times 1 hour per 10,000L of water – swimming season
If using a variable speed pump this may need to be increased.
Please refer to 6.6 Winterise Your Pool (page 14)
- Oxidiser Recommended level 0.0 – 0.5ppm (500mv O.R.P) Target Level
The Oxidiser level can be tested using a standard pool chlorine test kit.
Note: A chlorine test kit reads the "Redox" or "oxidation-reduction potential (ORP)" of the water, which may be a combination of chlorine, oxygen and other oxidisers present in the water.
- Total Alkalinity 60 - 150ppm
- Calcium Hardness 170 - 250ppm
- pH 7.2 - 7.6

IMPORTANT – HIGH pH AFFECTS THE EFFICACY OF ANY SANITISER.

E.g. Chlorine is only 3% effective at a pH of 8.0 compared to 75% effective at a pH of 7.0.

All swimming pools need to have the water balanced to protect the interior of your pool, bather comfort and to maintain effectiveness of any sanitiser.

- DO NOT USE Stabiliser
- DO NOT USE Bromine Compounds
- DO NOT USE Flocculants
- DO NOT USE Soda Ash
- DO NOT USE Granular Chlorine
- DO NOT PUT undissolved chemicals into the pool
- DO NOT USE Zeolite in media filters

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[illegible]

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