ZODIAC®



Owner's Quick Reference Guide

eXO® all models
Clearwater Duo™ all models

FOR YOUR SAFETY This product must be installed and serviced by a contractor who is licensed and qualified in pool equipment by the jurisdiction in which the product will be installed, where such state or local requirements exist. In the event no such state or local requirement exists, the maintainer must be a professional with sufficient experience in pool equipment installation and maintenance, so that all of the instructions in this manual can be followed exactly. Before installing this product, read and follow all warning notices and instructions that accompany this product. Failure to follow warning notices and instructions may result in property damage, personal injury, or death. Improper installation and/or operation will void the warranty. Improper installation and/or operation can create unwanted electrical hazard which can cause serious injury, property damage, or death.

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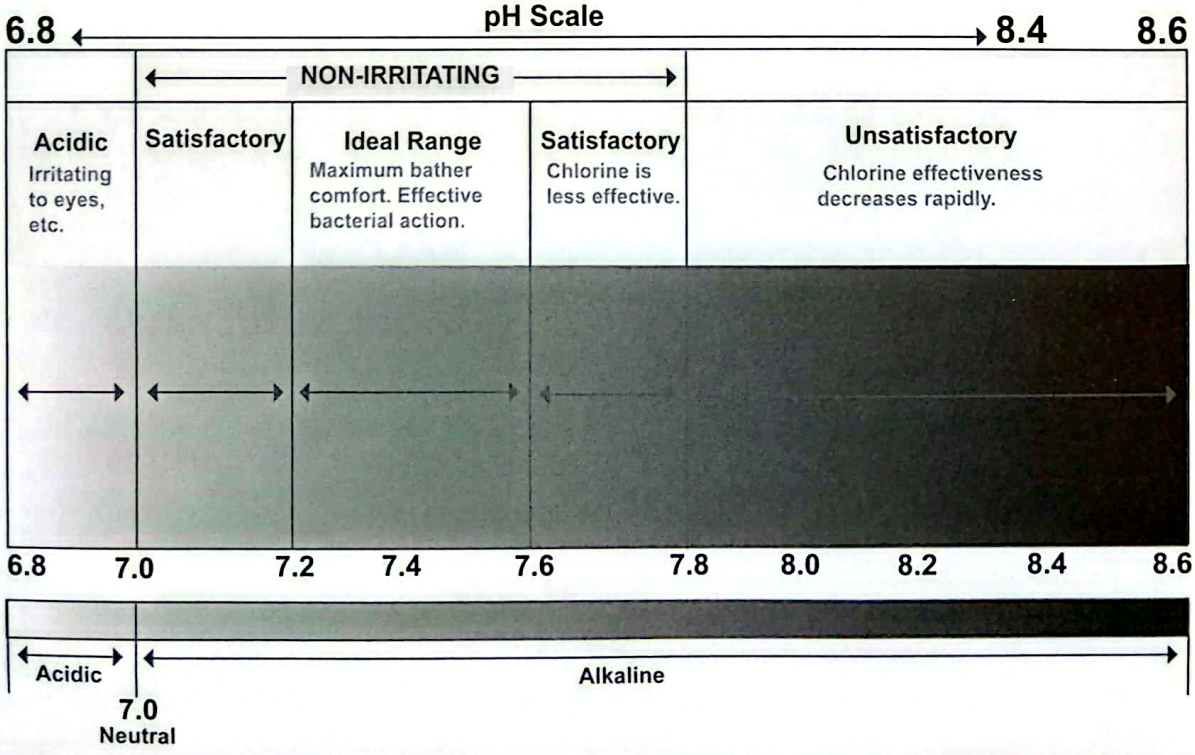
For detailed instructions, please download the complete manual.

- Turn off all circuit breakers supplying power to the equipment in order to prevent the possibility of electric shock.
- Chlorine generating devices are designed for domestic (residential) swimming pool use only. Contrary use could affect performance, void warranty, and may result in property damage, serious injury, or death.
- Operating a chlorine generator without water flowing through the cell may cause a build up of flammable gases, resulting in fire or explosion.
- Keep equipment out of reach of children.
- A damaged supply cord should only be replaced by the manufacturer, service agent or electrician.
- When installing and using this electrical equipment, always follow basic safety precautions.
- Before performing installation, disconnect all power.
- Connect to a circuit that is protected by a ground-fault circuit interrupter (GFCI).
- It is important that the appliance is operated by people who are competent and qualified (both physically and mentally), after having read the instructions for use. All persons not meeting these criteria must not approach the appliance in order to avoid exposure to dangerous hazards.

Proper pH in your Pool

pH Regulation

The chlorine efficacy depends on the pH. It is important to maintain the pH in your pool water between 7.0 and 7.4. If not maintained in this range, the amount of chlorine needing to be produced is dictated by the pH level in the pool. As the pH level rises, the amount of chlorine must be increased to compensate. For perfect balance, ensure the alkalinity is always within the ideal range of 80-140 ppm. This will aid in keeping pH balance stable.



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Check your Water Balance

For ideal Pool Water Conditions

- Fill pool with water from the mains water supply.
- Do not use rain water or well water.
- Do not add salt directly into the skimmer.
- Do not initiate electrolysis until salt has fully dissolved.
- Hardness Reading is True Hardness, not Total Hardness. If installed on pools containing magnesium salts, total hardness reading will be much higher than for a salt water pool. Please consult your local pool care professional for additional guidance.

Test and maintain correct water balance throughout the season as indicated below:

	Free Chlorine	pH	Total Alkalinity (ppm)	Calcium Hardness (ppm)	Cyanuric Acid (ppm)	Salt Level (ppm)	Metal (ppm)
Australian Standard	1 -3	7.2 - 7.8	60 - 200	100 - 400	up to 50	4000 - 7000	-
South African Standard	1 -3	7.2 - 7.8	80 - 120	175 - 275	30 -50	4000	< 0.10
Ideal range	1 - 3	7.4	80 - 140	90 - 300	up to 50	4000 at 27°C	< 0.10
To Increase	Add chlorine or increase equipment output	Add buffer or soda ash (sodium carbonate)	Add sodium bicarbonate	Add calcium chloride	Add cyanuric acid	Add salt or minerals	-
To Decrease	Add sodium thiosulfate or chlorine reducer	Add muriatic acid	Add muriatic acid or dry acid	Partially drain and refill pool	Partially drain and refill pool	Partially drain and refill pool	Use appropriate metal remover
In Season Testing Frequency	Weekly	Weekly	Weekly	Weekly	Weekly	Monthly	Monthly

Winterizing

The chlorinator has a protective system which limits disinfectant production during unfavorable operating conditions, such as cold water in Winter or lack of salt.

Active winterization - Leave the filter pump and chlorinator running during the winter (safe for temperatures above 10°C). If temperatures drop below 10°C, the chlorination cell needs to be deactivated.

Passive winterization - Shut down the pool. Water levels will need to be lowered and the piping will need to be drained. The cell electrode can be left in place with isolation valves open.

Winterizing the Probes

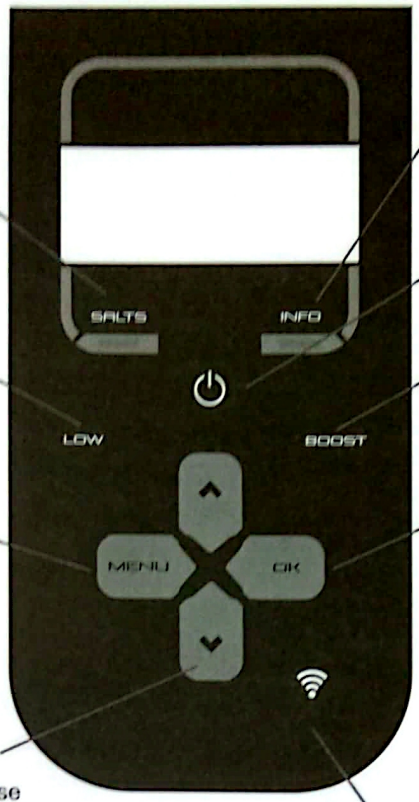
Probes should not remain dry during months of inoperation. Store probes in a potassium chloride (KCl) solution (or at least tap water) using the plastic probe cap to secure.

Reopening the pool

1. Adjust the water level (too much or too little).
2. Check the water balance (TAC/TH/pH/Salinity/Chlorine/Stabilizing Agent/Copper/Metals) and adjust to obtain balanced, disinfecting water.
3. Check the condition of the equipment (pump, filter, chlorinator, electrolytic cell).
4. Where necessary, check the sensors, clean if needed and re-calibrate
5. Once the salt level has reached the required level (4000 ppm is ideal) and has dissolved in the water, restart the salt chlorinator.

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Controller User Interface



LED lit = low salt or poor water conductivity (low water temperature, cell aged or worn)

LED lit = information or error message

On, Off Standby mode

Activate reduced chlorine production mode

Activate 100% chlorination for 24 hours

Choose a menu option (press) OR Resolve an error message (press and hold 4 seconds)

Display User menu

Browse up/down current displayed menu OR Increase / decrease a setting OR Lock/unlock the UI (press and hold both buttons simultaneously)

Wi-Fi to Phone direct connection to the iAqua-Link® app (iQ models only)

menu	• Press to access Main menu
OK	• Press validate entry or continue • Press and hold (4 seconds) to delete an error message
⏻	• Press to turn on the screen or toggle between ON and STANDBY mode • Press and hold (3 seconds) to turn OFF from ON or STANDBY mode
▲ ▼	• From Main menu: Increase or decrease production • From menus: browse options, change values • Press and hold (4 seconds) Up/Down buttons simultaneously to lock or unlock the controller
LOW	• Activate LOW mode: reduce chlorine production (0 - 30%) • LOW ON message displayed
BOOST	• Activate BOOST mode: chlorine production at 100% for 24 hours • BOOST ON message displays time remaining
INFO	• Steady LED (blue) indicates on-screen informational message • Flashing LED (blue) indicates error with action required
SALTS	• Steady LED (blue) indicates low water conductivity error
▲ OK	• Press and hold (4 seconds) simultaneously to activate WI-FI DIRECT mode for connecting to iAquaLink® app

Programming Tips

Help Menu

The chlorinator displays error messages when there is a problem. Access the Help menu to view suggested solutions for resolving issues.

1 Press MENU.

2 Use ▲ ▼ to select "Help Menu" then press OK.

3 Use ▲ ▼ to select the error message then press OK.

4 Scroll through suggested solutions. The system automatically returns to "Troubleshooting" menu after scrolling all suggestions.

5 Press MENU to exit.

Timers

Timers are used to define how long the filter pump operates and how long the chlorinator produces chlorine. Filtration operating times must be sufficient to correctly treat the water.

Recommended single speed pump filtration time:

- In Season: 8-10 hours per day.
- Off Season: 4-5 hours per day.

Recommended variable speed pump filtration time (operating around 1400 - 1600 rpm):

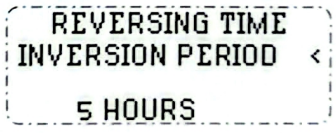
- In Season: 12-14 hours per day
- Off Season: 12-14 hours per day

Recommended salt water chlorinator filtration time:

- In Season: 8-10 hours per day
- Off Season: 4-5 hours per day

Current Setpoints

Current temperature and chemical setpoints are displayed on the Home screen whenever the controller is ON.



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Error Messages & Troubleshooting

When there is an error condition, a message is displayed on the screen and the [INFO] LED or [SALTS] LED will flash. When the error situation is corrected, the error message and flashing ends automatically.

Message	Possible Cause	Solution
NO FLOW CHECK PUMP ("INFO" indicator lit during the production timers)	• Filter pump failure • Filter and/or the skimmer(s) are dirty • By-pass valve(s) closed • Flow switch defective	• Check the pump, the filter, the skimmer(s), and the by-pass valve(s). Clean them if necessary • Check the wire connections to the flow switch • Check that the flow switch is working correctly (replace it if necessary; contact the retailer)
CHECK OUTPUT	• Cell power cord disconnected or not properly connected to the cell or device • Cell plates worn, calcified or out of order • Power supply issue at the controller	• Switch off the chlorinator ("Power" button) and switch off the power supply to the control box, then check the wires are properly connected (mains power supply, cell, etc.) • Replace the cell
LOW CONDUCTIVITY ("SALTS" indicator lit)	***DEVICE HAS A TEMPERATURE SENSOR*** • Water temperature is higher than 18°C and conductivity is low • Lack of salt (< 4g/L) due to water loss or dilution (filter backwash, water renewal, rain, leaks, etc.) • Age of the cell (voltage across cell terminals varies over time) • Cell is calcified, worn or out of order ***DEVICE WITHOUT TEMPERATURE SENSOR*** • Water temperature is low • Lack of salt (< 4g/L) due to water loss or dilution (filter backwash, water renewal, rain, leaks, etc.) • Age of the cell (voltage across cell terminals varies over time) • Cell is calcified, worn or out of order	• Check the water temperature • Check the condition of the cell • Check the water salinity • Add salt to the water, if necessary
OVERHEAT ("INFO" indicator lit)	• The temperature inside the controller is too high. If the temperature does not come down, chlorination is slowed (>85°C) then stopped (> 90°C) in order to protect the electric circuits.	• If the box is installed outdoors, protect it from direct sunlight. • Chlorination will resume automatically once the temperature has fallen back down. • Power supply issue at the controller.
LOW TEMPERATURE ("INFO" indicator light is lit, the temperature on the display flashes)	• Water temperature measured by the chlorinator temperature sensor is less or equal to 10°C; production stops in order to protect the cell.	• Chlorination will automatically resume at the Low Mode chlorination rate between 10 and 15°C • Chlorination will automatically resume at the normal chlorination rate above 15°C
--- (no chlorine being produced)	• Chlorination is in reversing period • Chlorination setting is lower than 100% • Chlorination is in stop phase	• Wait until chlorination recommences
Additional messages when a pH Link or Dual Link controller is installed		
pH LOW ("INFO" indicator lit)	• The pH level is less than 5 • The pH sensor is disconnected, dirty, uncalibrated or not working • Low alkalinity: the pH Down injection rate is causing large pH variations	• Check the pH level in the pool using a photometer or test strip • Check the pH sensor wiring on the control box and on the sensor holder • Check the operation of the sensor using a sensor tester (ask your pool specialist) • Clean and calibrate the sensor • Replace the sensor • Check and adjust alkalinity
pH DOSING STOP ("INFO" indicator flashing)	• The pH setpoint has not been reached after 5 cumulative hours of injection • The pH sensor is disconnected, dirty, uncalibrated or not working • The pH minus container is empty • The peristaltic pump is not primed • High alkalinity: Acid injection does not help to lower the pH	• Check the pH level in the pool using the test strip • Check the pH sensor wiring on the control box and on the sensor holder • Check the operation of the sensor using a sensor tester (ask your pool specialist) • Clean and calibrate the sensor • Replace the pH container • Test the peristaltic pump (ask your pool specialist) • Replace the pH sensor • Lower the alkalinity. Contact your local pool specialist for instructions.
ORP STOP ("INFO" indicator flashing)	• The ORP setpoint has not been reached after 36 cumulative hours of chlorination • The ORP sensor is disconnected, dirty, uncalibrated or not working • High cyanuric acid concentration: (1) lowers the ORP reading at the sensor; (2) lowers the efficacy of chlorine • pH too high • Total chlorine concentration too high: chloramines lower the ORP reading at the sensor • Device incorrectly sized for the pool • Cell is calcified, worn or out of order	• Check the chlorine level in the pool using a photometer or test strip • Check the ORP sensor wiring on the control box and on the sensor holder • Check the operation of the sensor using a sensor tester (ask your pool specialist) • Clean and calibrate the sensor • Drain the pool and shock chlorinate. Contact your local pool specialist for instructions. • Check the condition of the cell • Replace the ORP sensor

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Clean and Recalibrate Sensors (pH Link and Dual Link)

To maintain accurate and reliable operation, the sensors must be calibrated before using the controller with pH/Dual Link module. After initial calibration, it is recommended to recalibrate sensors every few months. Always clean sensors prior to calibration.

Clean the Sensors

Sensor(s) must be cleaned before calibration, including prior to initial use after installation.

1 Turn off the filter pump.

2 Close all valves.

3 Remove the sensor and the sensor holder from the POD.

4 Rinse the sensor with tap water for 1 minute. Shake off excess water to dry.

NOTE: To avoid damaging the active sensor, do not rub or dry with a cloth.

5 Brush the junctions and metal strip using a toothbrush for 1 minute.



6 Prepare a diluted hydrochloric acid solution by pouring 50 mL tap water into 1 mL (10 drops) of commercially-available hydrochloric acid (HCl 37%).

⚠ WARNING

- Hydrochloric acid is a hazardous chemical that may cause burns, lesions, and irritations. Handle with extreme care using protective equipment (gloves, goggles, coveralls). Refer to the substance SDS sheet for more information.
- Always pour acid into water.
- Once cleaning is complete, dispose of the solution according to standard in effect in the country of use.

7 Wash the sensor in the diluted hydrochloric acid solution for 2 minutes.

8 Rinse sensor in clean tap water for 1 minute. Shake off excess water.

Calibrate the pH Sensor

The pH sensor (blue) can be calibrated in 1 or 2 points. We recommend 2-point calibration for a more reliable measurement throughout the season.

1 Turn on power to the controller.

2 Turn off the pool pump and close valves as necessary to isolate the cell and sensors.

3 Unscrew the pH sensor from the POD.

4 Rinse the end of the sensor with tap water. Shake off excess water. Do not touch the glass bulb at the end of the pH sensor.

5 Start calibration via the controller User Interface:

- Press MENU
- Use ▲▼ to select pH Setup then press OK
- Use ▲▼ to select pH Calibration then press OK

6 Once calibration is complete, replace the sensor on the POD. If calibration is unsucessful, see *Troubleshooting*.

Calibrate the ORP Sensor

1 Turn on power to the controller.

2 Turn off the pool pump and close valves as necessary to isolate the cell and sensors.

3 Unscrew the ORP sensor from the POD.

4 Rinse the end of the sensor with tap water. Shake off excess water. Do not touch the the end of the ORP sensor.

5 Place the probe in a sample of ORP 470 mV buffer solution for one minute.

6 Start calibration via the controller User Interface:

- Press MENU
- Use ▲▼ to select ORP Setup then press OK
- Use ▲▼ to select ORP Calibration then press OK

7 Once calibration is complete, replace the sensor on the POD. If calibration is unsucessful, see *Troubleshooting*.

For detailed instructions on calibration and user interface screens, please download and refer to the complete manual.

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