Neptune

for swimming pools

By **Pool Pro**

Installation & Operating Guide

DIGITAL SALT WATER CHLORINATOR
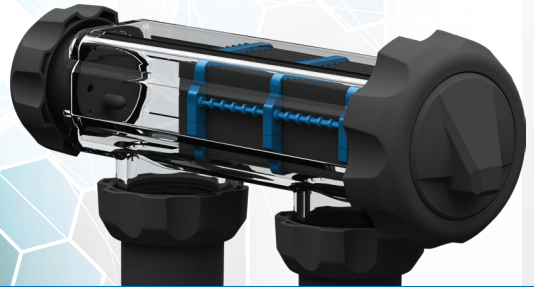
Neptune
for swimming pools

DIGITAL SALT WATER CHLORINATOR

Proudly **Australian** owned and operated

3 YEAR WARRANTY

ANOTHER **HIGH QUALITY PRODUCT** SUPPLIED BY POOL PRO

Congratulations on your recent purchase of your new Neptune Digital Salt Water Chlorinator. Thank you for supporting Pool Pro Products. Please read this manual carefully before installing, maintaining or troubleshooting your Neptune Digital Salt Water Chlorinator.

While every effort has been made to ensure that the information contained in this guide is accurate and complete, no liability can be accepted for any errors or omissions. Pool Pro reserves the right to change the specifications described herein at any time without prior notice.

CONTENTS

WARNINGS

This manual contains important information about the installation, operation and safe use of this product, and should be given to the owner and/or operator of this equipment. When installing and using this electrical equipment, basic safety precautions should always be followed. Failure to follow safety warnings and instructions in this manual can result in serious injury and/or damage to your equipment. Read and follow all warnings and instructions.

- The power supply internally contains live electrical components. There is a danger of electric shock if opened.

- If the carton or product has been damaged or is wet: do not install the product, contact your Pool Pro stockist.

- The product must be installed in accordance with AS/NZS 3000 Wiring Standards and must be installed at least 3.5m away from the pool.

- **CHLORINE GAS BUILDUP CAN OCCUR WITH IMPROPER WIRING:** To reduce the risk of personal injury, the power pack is designed so that the electrolytic cell will only receive power when the pool pump is on. Otherwise, dangerous chlorine gas build-up can occur. If the pump is not installed to the AC Socket (pump outlet) on the power pack then the installer must ensure that the electrolytic cell is never energised when the pool pump is OFF or water is not flowing through the unit. A venturi pipe is installed within the cell housing to eliminate any possible gas build up, however it is RECOMMENDED that the cell housing be installed horizontally to create a natural gas trap that acts as a safety device. Installation in any other way may cause explosion, injury or death if the installer does not allow for gas removal.

- If you perform a backwash manually (without using the Backwash function on the chlorinator) you must turn the chlorinator's output down to the lowest percentage setting via the "Chlor Setting" function.

- The pump rating must not exceed 8amps.

- Salt water may damage electrical components in the power pack.

- We DO NOT recommend the use of valves on the inlet or outlet of the cell housing. If you do use a valve it is important that the valve cannot deadhead (lock closed) while the pump is running. It is the installer's responsibility to ensure some form of flow control is installed in this instance and it disables the pump.

- Ideal salt levels range between 3000-3500ppm (parts per million). **Salt levels below 3000ppm and above 4000ppm may damage equipment and void any warranty.**

- Do not permit children, or persons with reduced physical, sensory or mental capabilities to use or perform maintenance on this product. To reduce the risk of accidents or incidents, service on the unit should only be performed by your local Pool Pro Professional.
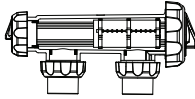
PACKAGING CONTENTS
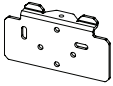
Wall mounting bracket
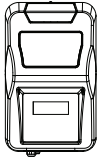
Power pack

Cell housing with unions

2 x 50/40 reducing bushes
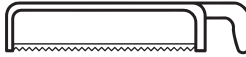
2 x green wall plugs with screws

User manual

TOOLS NEEDED

Drill with 6mm drill bit

Basic PVC fittings

Hacksaw

PVC primer & glue

No.2 Phillips head screwdriver

INSTALLATION DIAGRAM

PREPARING THE POOL

Have your pool water tested by your local Pool Pro Professional. Ideal salt levels range between 3000-3500ppm (parts per million). Salt levels below 3000ppm and above 4000ppm may damage equipment and void any warranty.

For new pool installations, consult your pool builder or your local Pool Pro Professional before adding salt. Some pool builders do not recommend the addition of salt for a period of time following completion of the swimming pool.

Use *Pool Pro Ultrafine Pool Salt* or *Pool Pro Premium Pool Salt* at the rate of 3.5kg per 1000L of pool water. Mineral/magnesium chloride salts can also be used, including *Neptune Mineral Salt*. Add 20%-30% extra product for mineral/magnesium salts.

Add salt to the shallow end of the pool. Use a pool brush to completely dissolve the salt. Run the pool pump in the first 8-12 hours to also help dissolve the salt.

NOTE: Never add salt/minerals directly to the skimmer box. High concentrations of salt/minerals passing through pool equipment may cause damage. Remove automatic pool cleaner from the pool before adding salt or other chemicals.

INSTALLING THE CELL

Check the O-Ring is installed in the cell housing and use a silicone based lubricant (do not use petroleum based lubricants). It is recommended that the cell is installed horizontally and the direction of water flow through the cell housing is entering from the closed end of the cell housing and exiting from the end closest to the cell locking ring (to reduce water hammer). Use pressure PVC solvent cement to glue cell unions to the pipework. The cell must be installed so it is the last piece of equipment in the return line to the pool.

A shut-off valve on the inlet or outlet of the cell housing is NOT recommended. If a valve is required, it is recommended to install a non-return valve.

INSTALLING THE CHLORINATOR POWER PACK

The power pack must be installed outside of the pool zone, no more than 1.5m from the cell, at least 1m above ground, away from chemicals and fertilisers (fumes may damage the power pack) and in accordance with AS/NZS 3000 Wiring Standards.

Mount the power pack with the mounting bracket, green plugs and screws provided, in a well ventilated position away from direct sunlight and rain (not in a closed unventilated shed). If mounting on a post, install a waterproof non-metal flat panel as a backing plate.

Connect the lead from the cell electrode to the cell plug under the power pack, ensuring a firm snap lock connection.

Plug the power pack into a 3 pin 10Amp weatherproof, RCD (Residual Current Device) protected socket as per the AS/NZS 3000 Wiring Standards. Plug pump into the AC socket at the bottom of the power pack.
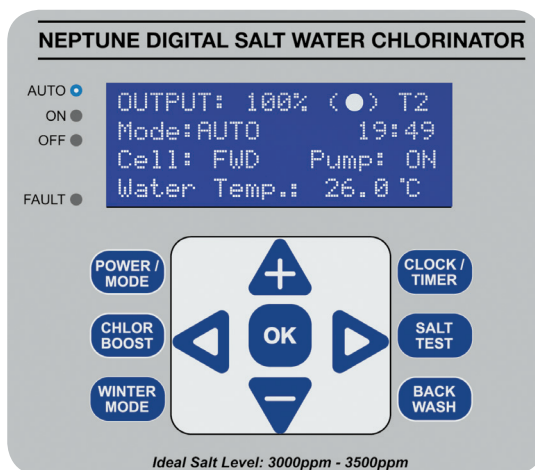
RECOMMENDED WATER BALANCING

Consult your local Pool Pro Professional to correctly balance your pool water. Follow instructions on the packaging of each chemical. Always add chemicals to water, never add water to chemicals.

	Recommended Values	To Increase Value	To Decrease Value	Test Frequency
pH	Concrete: 7.2 – 7.6 Fibreglass/ Vinyl: 7.0 – 7.2	Add Pool Pro pH Increaser (Soda Ash)	Add Pool Pro Hydrochloric Acid	Weekly
Free Chlorine	1 – 3ppm	Increase the chlorine output on the chlorinator unit	Add Pool Pro Chlorine Out and decrease the chlorine output on the chlorinator unit	Weekly
T.A. (Total Alkalinity)	Concrete: 80 – 150ppm Fibreglass/Vinyl: 80 – 120ppm	Add Pool Pro pH Buffer	Add Pool Pro Hydrochloric Acid	Fortnightly
Calcium Hardness	Concrete: 250 – 300ppm Fibreglass/Vinyl: 150 – 200ppm	Add Pool Pro Hardness Raiser	Add Pool Pro Calcium Remover	Fortnightly
Stabiliser	30 – 60ppm	Add Pool Pro Stabiliser or Pool Pro Rapid Stabiliser	Contact your Pool Pro Professional for advice	Fortnightly
Salt	3000 – 3500ppm	Add Pool Pro Ultrafine or Premium Pool Salt	Partially empty the pool and refill it	Fortnightly

This is a guide only, does not constitute and should not be used as an alternative to specific professional advice. Pool Pro and The POPS Group Pty Ltd accept no liability for any damage, loss or harm associated with the use of this guide.

CONTROL PANEL OPERATION

NEPTUNE DIGITAL SALT WATER CHLORINATOR

```
OUTPUT: 100% (●) T2
Mode:AUTO        19:49
Cell: FWD    Pump: ON
Water Temp.: 26.0 °C
```

Ideal Salt Level: 3000ppm - 3500ppm

BUTTON	FUNCTION
POWER / MODE	Sets the chlorinator's operating mode between AUTO, ON and OFF. This is displayed on the LCD screen next to "Mode".
CHLOR BOOST	Sets the chlorinator and pump to operate for 8 hours at 100% output. Defaults to 8 hours but can be modified.
WINTER MODE	Reduces the chlorine output to 50%. Defaults to 50% but can be modified.
CLOCK / TIMER	Sets the clock (time of day) and the timer (chlorinator operating times).
SALT TEST	Measures the salt level of the pool water. Also shows the salt value.
BACK WASH	Runs a backwash process to clean the media inside the pool filter system.
OK	- Enters the Main Menu if pressed when the LCD screen is displaying the Main Screen (see section "Main Screen" on page 9). - Saves any changes made to the settings.
+	- Scrolls up any menus. - Adjusts values of any options selected.
−	- Scrolls down any menus. - Adjusts values of any options selected.
◄	- Exits menus. - Returns to the previous screen.
►	Used during service by qualified Pool Pro Professionals.

INITIAL START-UP

Turn on the chlorinator unit by pressing the **POWER / MODE** button. Wait for the chlorinator unit to run through a start-up sequence.

SETTING THE CLOCK (time of day)

1. "START UP CLOCK SET" will display on the LCD screen.

2. "HH" will flash. Press ➕ or ▼ to change the hour. Press **OK** to save.

3. "MM" will flash. Press ➕ or ▼ to change the hour. Press **OK** to save.

SETTING THE TIMER / RUN PERIOD (daily run times of the chlorinator)

1. "START UP RUN PERIODS" will display on the LCD screen. "2 CYCLES/DAY" will flash.

2. Press ➕ or ▼ to scroll through the cycles.
   Select from the following cycles for your chlorinator to operate:
   (a) "2 CYCLES/DAY" = 6am - 10am and 4pm - 8pm
   (b) "1 CYCLE AM" = 8am - 4pm
   (c) "1 CYCLE PM" = 8pm - 4am

3. Press **OK** to save or press ◀ to exit without saving. If these cycle times are not suitable, you can change them in the Clock/Timer function – see page 11-12.

SETTING UP THE POOL SIZE

1. "START UP INFORMATION" will display on the LCD screen. The litre quantity for "POOL SIZE" will flash.

2. Press ➕ or ▼ to change the litre quantity by 1,000L increments, hold ➕ or ▼ to change the litre quantity by 5,000L increments.

3. Press **OK** to save or press ◀ to exit without saving.

SETTING UP THE MINERAL TYPE (if your pool uses salt or mineral mix)

1. "START UP INFORMATION" will display on the LCD screen. "SALT" will flash.

2. Press ➕ or ▼ to change the type of mineral used in the pool water. Select from "SALT" or "MINERAL MIX".

3. Press **OK** to save or press ◀ to exit without saving.

THE MAIN SCREEN

The Main Screen displays the current settings for the chlorinator.

```
OUTPUT: 100% (●) T2
Mode:AUTO          19:49
Cell: FWD    Pump: ON
Water Temp.: 26.0 ℃
```

Output = The output percentage.
(●) symbol = Normal operation.
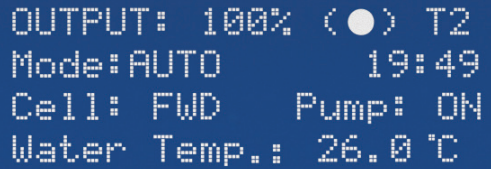**T1 or T2** = "Single Timer Cycle" or "Dual Timer Cycle" is selected.
Mode = ON, OFF or AUTO.
HH:MM = The time of day in 24 hour format.
Cell = Cell status (FWD, REV or OFF).
Pump = The status of the pool pump AC socket (ON or OFF).
Water Temp = Pool water's temperature.

MAIN MENU

To access the main menu, press the **OK** button and press ➕ or ▼ to scroll through the menu. Press **OK** to select a menu option or press ◀ to exit the screen. If there is no activity for more than 60 seconds in any screen, you will be taken back to the Main Screen. All menu items are:

1 Backwash	6 Clock/Timer	11 Service Menu
2 Brightness	7 Contrast	12 Spa Mode
3 Cell Cleaning	8 Power/Mode	13 Winter Mode
4 Chlor Boost	9 Pump Setting	
5 Chlor Setting	10 Salt Test	

Some of the menu items have shortcut buttons on the touchpad, allowing quick access without going through the main menu. The shortcut buttons are Chlor Boost, Winter Mode, Clock/Timer, Salt Test and Back Wash.

BACKWASH

This function runs a backwash process to clean the media inside the pool filter system.

IMPORTANT: Never operate the filter's multi-port valve lever while the pump is running, as it may cause damage and leaking. The pump will start and stop as you require. Ensure all valves, valve handles, lids, baskets etc are in the correct positions as per the requirements of the manufacturer of the equipment.

1. Press the **BACK WASH** shortcut button or enter Backwash via the Main Menu. The LCD screen will display "BACKWASH MODE".

2. Rotate the filter's multi-port valve lever to the 'Backwash' position and ensure the handle locks in place. This step is not applicable for cartridge filters.

3. Press **OK** to begin the backwash cycle. The pump will start and run for 2 minutes.

   A countdown timer will display on the LCD screen. Press ➕ to increase the run

time if desired (up to 3 minutes). If you need to stop the pump during the cycle, press ▼ to stop the pump immediately. Press ➕ to start the pump again.

4. When the cycle has finished the pump will stop. Ensure the water in the filter's sight glass is clear, then press **OK** . The LCD screen will display "RINSE MODE".

5. Rotate the filter's multi-port valve lever to the 'Rinse' position and ensure the handle locks in place. This step is not applicable for cartridge filters.

6. Press **OK** to begin the rinse cycle. The pump will start and run for 1 minute. A countdown timer will display on the LCD screen. Press ➕ to increase the run time if desired (up to 3 minutes). If you need to stop the pump during the cycle, press ▼ to stop the pump immediately. Press ➕ to start the pump again.

7. When the cycle has finished the pump will stop. Ensure the water in the filter's sight glass is clear, then press **OK**. The LCD screen will display "BACKWASH COMPLETED".

8. Rotate the filter's multi-port valve lever to the 'Filter' position and ensure the handle locks in place. This step is not applicable for cartridge filters.

9. Press **OK** to confirm the filter's multi-port valve lever is set to the 'Filter' position.

10. The LCD screen will display "Final check on all valves/lid positions". Check all other valves and lids on all equipment are in the correct position. Press the **BACK WASH** shortcut button to finish the cycle and return to the Main Screen.

BRIGHTNESS

This function adjusts the brightness of the LCD screen.

1. Press the **OK** button to enter the Main Menu. Press ➕ or ▼ to scroll through the menu. Press **OK** to select Brightness.

2. Press ➕ or ▼ to adjust the brightness.

3. Press **OK** to save or press ◀ to exit without saving.

CELL CLEANING

This function helps to clean calcium build-up that can occur on the cell plates.

1. Press the **OK** button to enter the Main Menu. Press ➕ or ▼ to scroll through the menu. Press **OK** to select Cell Cleaning.

2. Press ➕ or ▼ to adjust the frequency of the cell's cleaning cycle.

3. Press **OK** to save or press ◀ to exit without saving.

CHLOR BOOST

This function sets the chlorinator and pump to operate for 8 hours at 100% output, known as Chlor Boost or Superchlorination (extra sanitising time).

1. Press the **CHLOR BOOST** shortcut button or enter Chlor Boost via the Main Menu.

2. The cycle will automatically begin and run for 8 hours by default.

3. Press ➕ or ▼ to adjust the run time. You cannot use any other functions while the Chlor Boost function is running.

4. Press **CHLOR BOOST** to stop the cycle if needed, otherwise the chlorinator will revert back to normal settings once the cycle has finished.

CHLOR SETTING

This function controls the chlorine output of the chlorinator. Used for running the pump for longer hours (i.e. with a variable speed pump or for additional filtration).

1. Press the **OK** button to enter the Main Menu. Press ➕ or ▼ to scroll through the menu. Press **OK** to select Chlor Setting.

2. Press ➕ or ▼ to adjust the chlorine output percentage.

3. Press **OK** to save or press ◀ to exit without saving.

CLOCK/TIMER

This function changes the time of day (clock) and the chlorinator run times (timer).

CLOCK SETTINGS:

1. Press the **CLOCK / TIMER** shortcut button or enter Clock/Timer via the Main Menu.

2. Press the **CLOCK / TIMER** shortcut button again. "CLOCK SETTING" will be displayed on the LCD screen.

3. The hours will flash. Press ➕ or ▼ to adjust the hour. Press **OK** to save.

4. The minutes will flash. Press ➕ or ▼ to adjust the minutes.

5. Press **OK** to save or press ◀ to go back to the hours. Press ◀ again to exit without saving.

TIMER SETTINGS:

Select a timer cycle and then program the times for the cycle/s. For maximum efficiency set the cycle times to run early morning and evening. To run the chlorinator in the "ON" power mode and override the internal timers, leave all timer settings as 00:00.

Ideal Summer settings: 6am - 10am and 4pm - 10pm (less hours for small pools, more hours for extreme weather). **Ideal Winter settings:** See Winter Mode on page 14.

1. Press the **CLOCK / TIMER** shortcut button or enter Clock/Timer via the Main Menu.

2. Press ➕ to change between SINGLE CYCLE (chlorinator runs once per day) or DUAL CYCLE (chlorinator runs twice per day).

3. Press **OK** to save the timer cycle and enter the timer program.

4. **To set the ON/START time for TIMER 1:**

   "TIMER 1: ON TIME" will display on the LCD screen. The hours will flash on the LCD screen. Press ➕ or ▼ to adjust the hour. Press **OK** to save. The minutes will flash. Press ➕ or ▼ to adjust the minutes. Press **OK** to save and continue to Step 5, or press ◀ to go back to the hours and repeat Step 4. Press ◀ again to exit without saving.

5. **To set the OFF/STOP time for TIMER 1:**

   "TIMER 1: OFF TIME" will display on the LCD screen. The hours will flash on the LCD screen. Press ➕ or ▼ to adjust the hour. Press **OK** to save. The minutes will flash. Press ➕ or ▼ to adjust the minutes. Press **OK** to save and continue to Step 6, or press ◀ to go back to the hours and repeat Step 5. Press ◀ again to exit without saving.

6. If you chose SINGLE CYCLE, you will be taken back to the Main Screen.
   If you chose DUAL CYCLE, continue to the next step.

7. **To set the ON/START time for TIMER 2:**

   "TIMER 2: ON TIME" will display on the LCD screen. The hours will flash on the LCD screen. Press ➕ or ▼ to adjust the hour. Press **OK** to save. The minutes will flash. Press ➕ or ▼ to adjust the minutes. Press **OK** to save and continue to Step 8, or press ◀ to go back to the hours and repeat Step 7. Press ◀ again to exit without saving.

8. **To set the OFF/STOP time for TIMER 2:**

   "TIMER 2: OFF TIME" will display on the LCD screen. The hours will flash on the LCD screen. Press ➕ or ▼ to adjust the hour. Press **OK** to save. The minutes will flash. Press ➕ or ▼ to adjust the minutes. Press **OK** to save and return to the Main Screen or press ◀ to go back to the hours and repeat Step 8. Press ◀ again to exit without saving.

CONTRAST

This function adjusts the contrast of the LCD screen.

1. Press the **OK** button to enter the Main Menu. Press **+** or **▼** to scroll through the menu. Press **OK** to select Contrast.

2. Press **+** or **▼** to adjust the contrast.

3. Press **OK** to save or press **◀** to exit without saving.

POWER/MODE

This function changes the operating mode of the chlorinator. Auto = running on the timer settings. On = manually running, not using the timer settings. Off = Not running manually or on the timer settings.

1. Press the **POWER / MODE** button to change between AUTO, ON and OFF.

2. The mode can also be accessed via the main menu. Press the **OK** button to enter the Main Menu. Press **+** or **▼** to scroll through the menu. Press **OK** to select Power/Mode.

3. Press **+** or **▼** to adjust the power/mode.

4. Press **OK** to save or press **◀** to exit without saving.

PUMP SETTING

This function protects the pool pump if there is no water flow. It adjusts the time that the pump runs after the cell has detected that there is no water flow.

1. Press the **OK** button to enter the Main Menu. Press **+** or **▼** to scroll through the menu. Press **OK** to select Pump Setting.

2. Press **+** or **▼** to adjust the off time of the pump (3-10 minutes). The "OFF" option disables this feature so the pump will NOT be turned off when there is no water flow. The "OFF" option is ideal for pools with a flow switch or an external pump control.

3. Press **OK** to save or press **◀** to exit without saving.

SALT TEST

This function measures the salt level in the pool water. **This function is a guide only.** Have your pool water tested by your local Pool Pro Professional in order to add correct levels of salt/minerals, depending on the test results.

1. Ensure the cell is clear of calcium deposits (which may affect test results).

2. Press the **SALT TEST** shortcut button or enter Salt Test via the Main Menu.

3. The chlorinator will run a salt test in the FWD direction and display the test results and any action needed to be taken. The chlorinator will discharge the cell and then run a salt test in the REV direction, and display the test results and any action needed to be taken.

4. The chlorinator will then return to the Main Screen automatically.

SERVICE MENU

This function shows details about your Neptune Digital Salt Water Chlorinator.

1. Press the **OK** button to enter the Main Menu. Press **+** or **▼** to scroll through the menu. Press **OK** to select Service Menu.

2. Press **+** or **▼** to scroll through the following details: Model, Run Hours, Pool Size, Internal Temperature, Polarity, Output, Mineral Type, Factory Defaults, Software Version. Contact your distributor or your local Pool Pro Professional for further information regarding the Service Menu.

SPA MODE

This function allows you to adjust the settings for a spa.

1. Press the **OK** button to enter the Main Menu. Press **+** or **▼** to scroll through the menu. Press **OK** to select Spa Mode.

2. Press **+** or **▼** to adjust the setting between ON or OFF.
   ON = 10% chlorine output. **OFF** = 100% chlorine output.

3. Press **OK** to save or press **◄** to exit without saving.

4. The Main Screen will display "Mode: SPA" when this function is activated.

5. Repeat these steps to turn off Spa Mode.

WINTER MODE

This function reduces the chlorine output to 50% (defaults to 50% but can be modified).

1. Press the **WINTER MODE** shortcut button or enter Winter Mode via the Main Menu.

2. Press **+** or **▼** to adjust the output percentage.

3. Press **OK** to save or press **◄** to exit without saving.

4. The updated chlorine output will display on the Main Screen next to "OUTPUT".

5. Press the **WINTER MODE** shortcut button to turn Winter Mode off and return to 100% output.

MAINTENANCE

General Maintenance

1. Never cover the chlorinator unit with towels or similar. The chlorinator has air vents to keep it cool. Covering the vents may cause damage to the chlorinator.

2. The chlorinator should always be in an undercover area away from the elements.

3. The chlorinator should never be in a closed shed or similar environment near chemicals or fertilisers. Fumes from chemicals and fertilisers may cause damage to the chlorinator and may void the warranty.

4. Annually check all plug connections are tight and in sound condition.

Cell Maintenance

The cell may require cleaning if it contains debris or is being used in an area with hard water. Hard water can cause calcium build-up on the cell, the sensor, or the cell plates.

1. Press the **POWER / MODE** button to OFF.

2. Switch off the chlorinator and unplug at the power point.

3. Unscrew the cell's locking ring and remove the cell's electrode.

4. Check for pool debris, especially after backwashing. Check for calcium build-up on the electrode. Do not scratch or bend the cell plates.

5. If calcium build-up is present, use *Pool Pro Cell Cleaner* to clean the cell. We do not recommend the use of Hydrochloric Acid to clean the cell.

6. Check the cell's O-Ring is clean, greased with silicone grease (never use petroleum based lubricants) and securely located in the cell housing.

7. Reinstall the cell into the housing and hand tighten the locking ring securely.

8. Plug the chlorinator into the power point and press the **POWER / MODE** button to turn the chlorinator on. The chlorinator will return to its previous settings.

Power Pack Maintenance

1. Ensure the chlorinator is plugged into a weatherproof RCD protected 10amp outlet.

2. Ensure the pool pump is plugged into the bottom AC socket of the chlorinator unit.

3. Check all plugs and cords for damage. If any are damaged, they must be replaced by the manufacturer or a similar qualified person. If the chlorinator is hard wired, a qualified electrician is required.

4. Periodically turn the chlorinator off and apply an insect surface spray on the WALL or POST that the chlorinator is mounted to, to keep insects from entering the chlorinator unit. DO NOT spray directly into the air vents or on the chlorinator unit.

TROUBLESHOOTING

Fault Indication	Potential Cause	Remedy
Fault LED "ON".	Numerous causes.	See the LCD screen for the reason then go to that section in this troubleshooting guide.
Internal temperature high.	No air flow around the power pack or excessively high salt.	Ensure power pack is mounted in a well ventilated area away from chemicals and fertilisers. Check Water Balancing table (Page 6).
High salt warning.	Salt too high or short on cell plates.	Check Water Balancing table (Page 6). Check the cell is clear of debris (e.g. wire, metal, touching plates, etc).
Low salt or clean cell or faulty cell.	Low salt level.	Check Water Balancing table (Page 6).
	Build-up of calcium on the cell plates.	Calcium build-up needs to be removed. See Cell Maintenance (Page 15).
	Water temperature is low.	Winter water temperature can be very low. For every 1°C below 28°C the output can drop 2-3% .
	Insufficient water flow through the cell.	Ensure a full chamber of water is passing over the cell. You may need to backwash your filter. See Backwash (Page 9-10).
	The cell could be damaged or at the end of its life.	Damaged coating will reduce cell life and reduce output. If all conditions are correct then the cell could be at the end of its life.
	Level low in one direction but OK in the other.	Cell may need cleaning. See Cell Maintenance (Page 15) or the cell may have run its life in one direction.
Water temperature low.	Water temperature is below 10°C.	The power pack will lower output when water temperature goes below 10°C to protect the cell plates.
Water temperature high.	No water flow.	Check for possible closed valve, pump fault, burst pipe.
Water temperature sudden increase.	No water flow.	Check for possible closed valve, pump fault, burst pipe.
Water flow fault.	No water flow or low water flow.	Air in the cell housing, check for closed valve, pump fault, burst pipe, etc. If none detected contact your local Pool Pro Professional for diagnosis.
	Low speed pump not supplying sufficient water to cell housing.	Increase the speed of the pump until housing is filled.

Fault Indication	Potential Cause	Remedy
No current flow – no output.	Faulty Control or Main PCB.	Check circuit breaker, possible faulty PCB - call for service.
Everything displays OK but not turning on.	Incorrect timer settings.	Press Power/Mode button until in ON mode. Does it work now?
	Yes, it works now.	Check Timer Settings (Page 11-12).
	No, it does not work.	If the Fault LED is on, see LCD screen for the reason then go to that section in this troubleshooting guide. If only LCD screen is on but nothing works - call for service.
Not operating at all - comes on but turns off.	Circuit breaker resets but trips again.	1. Excessively high salt - check salt and lower if needed. 2. Short across cell plates - check cell plates for any metal lying across plates. 3. Faulty rectifiers, transformer or cell cable - call for service.
Not operating at all - no lights.	Not plugged into a power point or power point is off.	Check the power pack's power cord goes into wall outlet and outlet is turned on.
	Plugged into power point and turned on but still no power.	Test wall outlet with a working appliance.
	Wall outlet working but still no power.	Check circuit breaker at bottom of power pack. Press white button to reset if tripped.
	Pressed and reset but still no power.	If you have checked all of the above then there is an internal fault - call for service.
	Circuit breaker stays out in a tripped state.	Faulty circuit breaker - call for service.
Sign of melting or burning of the cell connector plug.	Possible moisture entry to the plug.	If melted then it will need replacing otherwise clean with WD40 or similar. Return for service if melted.
Power pack only works in one direction. No output in one direction.	Faulty rectifiers, transformer or PCB.	Return unit for service.
Timer functioning incorrectly in Auto mode.	Incorrect settings.	Make sure Power/Mode is set to Auto. Refer to Timer Settings (Page 11-12).
Pool pump outlet not functioning properly or pump always on.	Pump not plugged into chlorinator.	Check pump is plugged into the bottom of the power pack. Check chlorinator is set in Auto mode and not Manual for normal running.

Fault Indication	Potential Cause	Remedy
Cell not cleaning, excessive calcium build up on cell or power pack not changing direction.	Excessively high calcium, change of direction time set too high or faulty PCB.	1. See Calcium Hardness levels in Water Balancing table (Page 6) and adjust water accordingly. 2. Change the Cell Cleaning times (Page 10). 3. Manually try changing direction by holding both [<] and [>] buttons in for 3 seconds (you must be in the Main Screen for this to work). Failure for this to work could indicate a faulty PCB - return for service.
Output reading is less than 100%.	Low salt level.	Check salt level. See Salt Test (Page 13).
	Build up of calcium on the cell plates.	Calcium build-up needs to be removed. See Cell Maintenance (Page 15).
	Water temperature is low.	Winter water temperature can be very low. For every 1°C below 28°C the output can drop 2-3%.
	Insufficient water flow through the cell housing.	Ensure a full chamber of water is passing over the cell. You may need to backwash your filter. See Backwash (Page 9-10).
	The cell could be damaged or at the end of its life.	Damaged coating will reduce cell life and output. If all conditions are correct then cell could be at the end of its life.
	Level low in one direction but OK in the other.	Cell may need cleaning. See Cell Maintenance (Page 15) or the cell may have run its life in one direction.
	Continuous build up of calcium.	See Cell Maintenance (Page 15).
Low or no chlorine output.	Unit not working correctly.	Go through Troubleshooting from the beginning.
	Unit not set correctly.	Check basic settings such as output control and timer running hours. Go through all settings on pages 9-14 and balance water accordingly.
	Salt level is too low.	Check Salt in the Water Balancing table (Page 6).
	pH is too high.	Check pH in the Water Balancing table (Page 6).
	Stabiliser is too low.	Check Stabiliser in the Water Balancing table (Page 6).
	Cell at the end of its life.	If full output is not reached then it could be a failing cell.
Timer loses time when mains power removed.	Battery life expired.	Replace battery - return for service.

#	CODE	DESCRIPTION
1	PPNDC15PP	15 Power Pack
1	PPNDC25_35_45PP	25/35 Power Pack
1	PPNDC55PP	45/55 Power Pack
2	PPN00895	Neptune Wire Loom-Multi PCD TB-GND Pin 1 to LCD PCB RB-GND Pin 1 Black
3	PPN00364	Front Case
4	PPN00365	Top Vent Cover
5	PPN00367	Front Flap
6	PPN00437	Decal Sticker (Set Of 2)
7	PPN00693	Multi Triac Main PCB
8	PPN00496	LCD Display PCB
9	PPN00356	Aluminium Base
10	PPN00453-2	Mounting Bracket
11	PPN00024-1	Transformer 440VA (45/55g)
11	PPN00023-1	Transformer 300VA (25/35g)
11	PPN00022	Transformer 220VA (15g)
12	PPN00498	AC Socket Round - Pump Outlet Flush Mount White (Side Wire Entry)
13	PPN00034	Cable Grommet 6N-4
14	PPN00501	Grommet Rubber Aux Hole Up To 19mm
15	PPN00488	Cell Plug SL-10 Male End Complete With Power Supply Looms - Grease Filled
16	-	Neptune Screw Stainless M3 x 12 S/S (Fan)
17	PPN00018L	Circuit Breaker 91L-Series 3A (15/25/35/45g)
17	PPN00019L	Circuit Breaker 91L-Series 5A (55g)
18	PPN00637	Mounting Bracket Screw 4mm x 16 S/S
19	PPN00368	Bottom Vent Cover
20	PPN00369	Fan Support Plate
21	PPN00370	Snap Fit Gauze
22	PPN00050	Earth Screw M5 S/S
23	PPN00051	Earth Nut M5 S/S
24	PPN00049	Internal Tooth Washer For Earth M5 S/S
25	PPN00011	Power Cord-AU
26	PPN00323	Fan 40x40x10mm (55G)
27	PPN00027	Thermostat 100DegC
30	PPN00047	Neptune Washer - 37x37x2.5 Zinc Plated
31	PPN00207	Neptune Wire Loom - Circuit Breaker Load to Thermostat Brown
32	PPN00223	Neptune Wire Loom - AC Socket N to PCB N Blue
33	PPN00224	Neptune Wire Loom - AC Socket L to PCB PUMP-L Brown
34	PPN00348	Neptune Wire Loom - Circuit Breaker LINE to PCB A Brown

35	-	Neptune Wire Loom - Terminal Block 1 Pin 2 to Terminal Block 2 Pin 2 Red
36	PPN00485	Neptune Ribbon Cable with Red line and Header Sockets
37	PPN00008	Wire Loom CC-05 - Earth Wire CPP/CPPS/Neptune Models
38	PPN00036	CPP/CPPS/Neptune Cable Tie 3mm
39	PPN00560	CPP/CPPS/Neptune Green Wall Plugs
40	PPN00217	CPP/CPPS/Neptune Screws Wall SS 5x25
41	PPN00053	Neptune Screw Stainless M4 x 8 S/S (Front Cover)
42	PPN00052	CPP/CPPS/Neptune Screw Stainless M3x6 S/S (SCR/Triac Connection & PCB)
61	PPSL-CELL15RP	15g/hr Cell Only
61	PPSL-CELL25RP	25/hr Cell Only
61	PPSL-CELL35RPB	35g/hr Cell Only
61	PPSL-CELL45RPB	45g/hr Cell Only
61	PPSL-CELL55RPB-C	55g/hr Cell Only
62	PPN00379	3-Way Cell Housing - Smokey
63	OR925	Cell Housing NDC O-Ring EPDM Rubber
64	PPN00380	Cell Cap Locking Ring NDC
65	PPSCCAP	Cell Cap (Includes Cable, Cover, Cap, Brassware, Washers, Resin Filled)
66	PPN00530	Cell Clip 11 Plate Blue (15/25g)
66	PPN00666-2	Cell Clip 15 Plate Blue (35/45/55g)
67	PPN00322	Cell Spacer Rod Blue
68	PPN00691-1	Cell Blanking Bush
69	PPN00461-1	Cell Adapter Tail O-Ring
70	PPN00382	Cell Adapter Tail
71	PPN00381	Cell Nut Small
72	PPN00670-1	PVC Reducing Bush 50x40mm

CHLORINE PRODUCTION SPECIFICATIONS

Model	Chlorine Output	Cal. Hypo. Equivalent (65%)	Sod. Hypo. Equivalent (12.5%)	Chlorine Output	Cal. Hypo. Equivalent (65%)	Sod. Hypo. Equivalent (12.5%)
		PER HOUR			OVER 8 HOURS	
NDC15	15g	23g	120ml	120g	184g	0.96L
NDC25	25g	38g	200ml	200g	304g	1.60L
NDC35	35g	54g	280ml	280g	432g	2.24L
NDC45	45g	69g	360ml	360g	552g	2.88L
NDC55	55g	85g	440ml	440g	680g	3.52L

TECHNICAL SUPPORT

For product support contact your local distributor or Pool Pro direct on Ph 1800 143 788 Fax 1800 778 820 Email service@poolpro.com.au Web www.poolpro.com.au.

Information in this guide is intended to provide general information on a particular subject(s) in good faith and is not an exhaustive treatment of such subject(s). Its use is beyond the control of the author, contributor, publishers and distributors and should not be relied upon without consulting your local Pool Pro Professional for comprehensive advice. This guide includes subject(s) that should only be performed by or under the direction and advice of your local Pool Pro Professional and under no circumstances should the guide be used as a substitute for such professionals.

No representations or warranties are made that the content, advice and recommendations in this guide are current, free from errors or omissions, or appropriate for the user's circumstances or abilities. No liability or responsibility is accepted for any loss suffered as a result of any user's reliance on such content.

Installations and repairs should only be carried out by qualified persons or Pool Pro appointed agents. Pool Pro reserves the right to refuse warranty if any damage caused to the chlorinator or auxiliary pool equipment that is not a result of a manufacturer's defect.

WARRANTY

Pool Pro warrants the Neptune Digital Chlorinator range (domestic) only for the original purchaser and is non-transferable. Pool Pro warrants the power pack and cell to be free of manufacturer's defects in materials and workmanship for a total period of three (3) years or up to 10,000 hours (whichever comes first) from the date of original purchase for domestic applications only (non-commercial applications on a single-dwelling residential site). Domestic models are warranted for a period of one (1) year from the date of original purchase on a commercial installation. Commercial models are warranted for a period of two (2) years or up to 10,000 hours (whichever comes first) from the date of original purchase.

Warranty excludes damage caused by negligence, improper use, failure to undertake regular maintenance, lack of care when using the product, foreign matter entering the cell, water or foreign matter entering the power pack or junction box, incorrect water balancing, incorrect installation, incorrect flow rates, inadequate ventilation, nor does it cover normal wear and tear of the cell and power pack components, incorrect power supply, corrosive and aggressive climate or location, insect or vermin infestation, lightning strikes, flooding or any other event beyond the control of the manufacturer.

This product is only warranted for its intended use, in swimming pool and spa installations. Water quality must be maintained in accordance with AS 3633-1989 Australian Standard Private Swimming Pools Water Quality and the product must be installed in accordance with AS3000 Wiring Standards. Failure to comply with these standards will void warranty.

The removal and return of the chlorinator to Pool Pro or a Pool Pro authorised

nominated repair agent is the responsibility of the purchaser/warranty claimant. Repairs under warranty can only be performed by an authorised nominated Pool Pro repair agent. Proof of purchase must be shown to validate warranty.

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.

In the unlikely event that you have a problem with any Pool Pro product, simply contact the original place of purchase.

✂ —

This warranty form and a copy of your original purchase receipt must be lodged within 30 days from date of purchase or any warranty claim may be voided. Post the Warranty Registration Form and a copy of the purchase receipt to:
The POPS Group Pty Ltd (Pool Pro Products)
PO Box 4183, Loganholme QLD 4129, Australia

Warranty Registration Form

Neptune for swimming pools By **Pool Pro**

Thank you for purchasing a Pool Pro product!

All fields **MUST** be completed in **BLOCK CAPITALS** and **BLACK INK** and be **LEGIBLE**.
Failure to complete all sections may void any warranty claim.
Please attach a copy of your original purchase receipt when lodging this form.

Item purchased:

☐ Pump   ☐ Sand Filter   ☐ Pool Cleaner   ☐ Cartridge Filter   ☐ Chlorinator

☐ Other   *If other please describe:* _____

Item Make	
Item Model	
Serial Number (if applicable)	
Purchased From (store name)	
Purchase Date	
Price Paid	
Your Name (first & last names)	
Your Address (incl. suburb & postcode)	
Daytime Telephone Number	
Email Address	

☐ Tick if you would like to receive updates of our new products as they become available.