

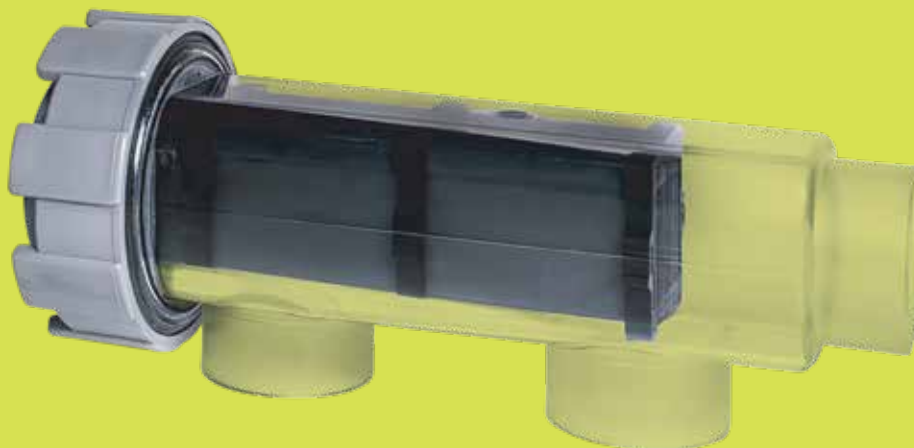


Lincoln

Eco Chlorinator

auto self cleaning

User Manual



PROVEN TECHNOLOGY • EFFICIENT & RELIABLE • EASY TO OPERATE

STATEMENT

- A. This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and maintenance shall not be made by children without supervision.

- B. The appliance must be permanently connected to fixed wiring according to the national wiring rules. The appliance must be installed, maintained and serviced by a qualified licensed electrician. Equipotential bonding must be carried out.

- C. Means of disconnection from the supply mains having a contact separation in all poles that provide full disconnection under overvoltage category III conditions must be incorporated in the fixed wiring in accordance with the wiring rules.

- D. The appliance should be supplied through a residual current device RCD having a rated residual operating current not exceeding 30ma.

- E. Parts containing live parts, except parts supplied with safety extra-low voltage not exceeding 12V, must be inaccessible to a person, in the bath or spa.

- F. Parts incorporating electrical components, except remote control devices, must be located or fixed so that they cannot fall into the bath or spa.

- G. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified person in order to avoid a hazard.

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SPECIFICATION

Model No	Eco 20	Eco 30	Eco 40
Voltage Input	240V AC	240V AC	240V AC
Amps Input	8.6A	9.0A	9.1A
Frequency	50	50	50
Voltage output	8V DC	8V DC	8V DC
Amps Output	9.5A	14A	18.5A
Chlorine Production	20gr/hr	30gr/hr	40gr/hr
Weight	8.5kg	8.7kg	8.9kg
Dimensions	27cm H 20cm W 17cm D	27cm H 20cm W 17cm D	27cm H 20cm W 17cm D

Pump Outlet Rating for all model sizes 240V @ 8amps MAX

INSTALLATION

Position the chlorinator power module at least 1m above ground and at least 2m from the pool edge.

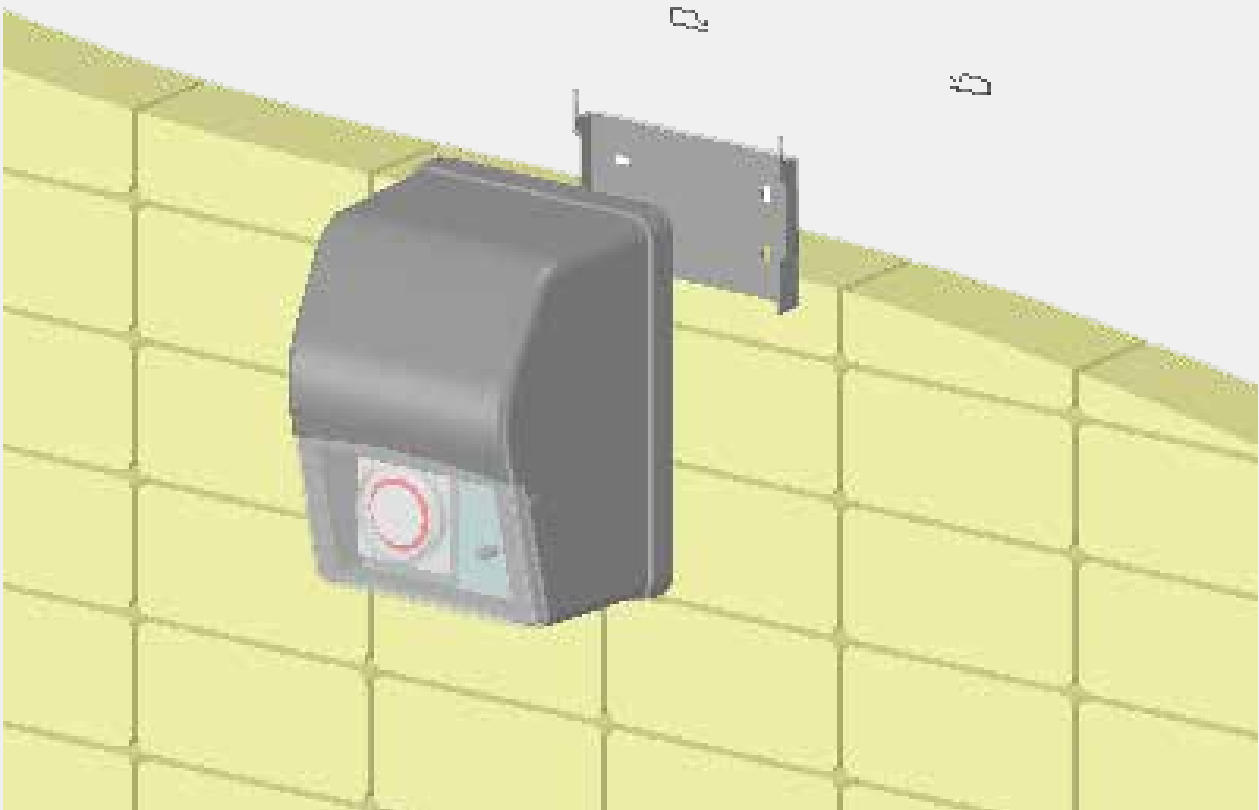
Mount the stainless steel bracket to a solid structure with the screws provided and fit the power module over the two raised pins on the bracket, secure with the 2 locking clips provided.

Protect the chlorinator module and cell housing from direct sunlight and rain where possible for extended life.

Connect the mains plug from the chlorinator power pack into a RCD Protected 240V mains 10A outlet.

Remove the WHITE J-Box Cover at the bottom of the Power module and connect the cell cable, RED to RED, BLACK to BLACK, WHITE to WHITE.

Connect the mains plug from the pump into the pump outlet on the bottom of the chlorinator power pack.



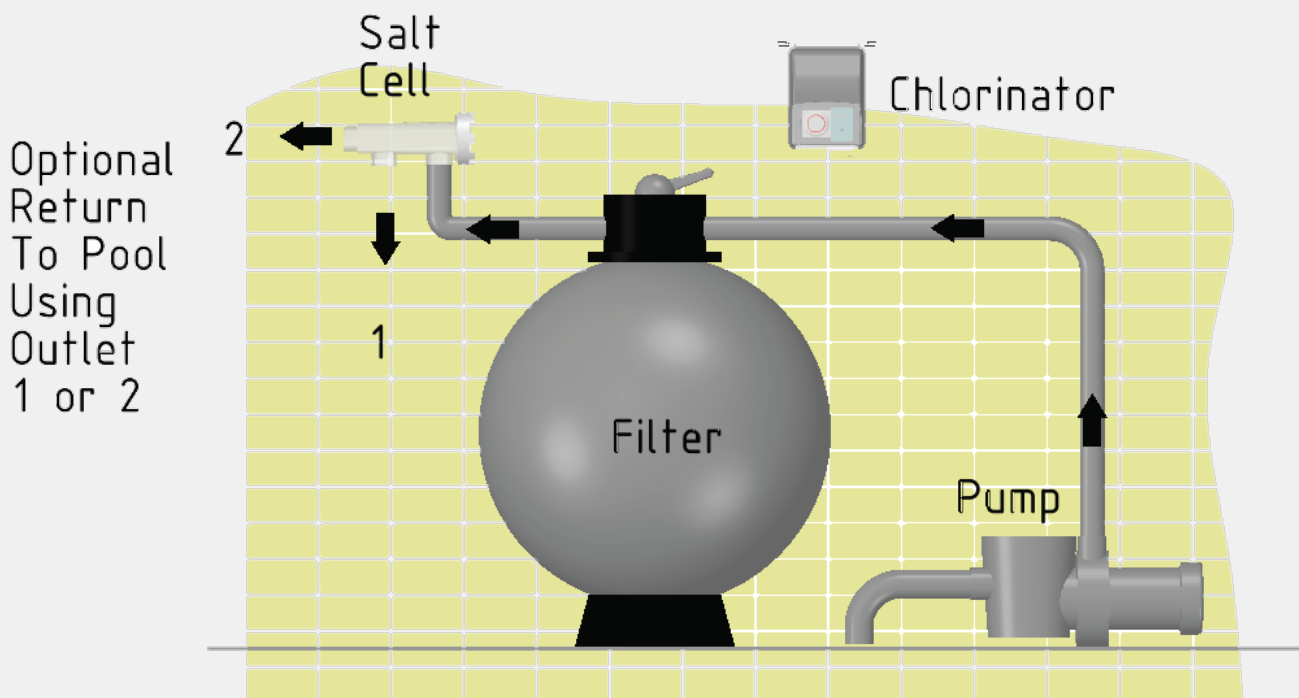
PLUMBING

Plumbing should be performed by a qualified Plumber or a pool industry service technician where possible. It can however be done by the home handyman taking due care and attention.

Warning: Do Not apply Priming Fluid to the Clear Cell Housing

All pipe work should be primed with priming fluid before glue is applied, any high pressure PVC glue will work, make sure both surfaces are well coated before mating the connections as you will only have a few seconds before the glue bond will take.

Piping from the Filter to the Cell should enter the pipe connection closest to the cell head as per the image below as this is where the water sense probe has been installed during manufacture. NOTE: When plumbed from the other direction and used with variable speed pumps having very low flow rates the water probe may not get covered with water causing the chlorinator to display Priming Cell.



TIMER

Setting the Time

Remove the clear cover from the timer

To adjust the timer to correct time of day, turn the timer in a Clockwise direction, the Hour & Minute hands will start to move.

The illustration below shows the Time of day set too 4.30pm indicated by the arrow (6 = 6am, 12 = MIDDAY, 18 = 6pm, 24 = Midnight etc)

Setting Operating Times

There are 96 levers around the face of the Timer, each lever will operate the chlorinator for 15minutes, the illustration below shows operating times set for 6 - 10am and 4 - 8pm



OPERATION

Chlorine Control

The Control Knob on the front of the chlorinator is used for chlorine control, Fully anti-clockwise is 0% and fully clockwise is 100%. There are 10 LED segments to indicate percentage production, every LED segment = 10% chlorine production

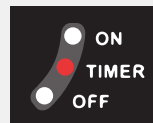
Manual Operation

To manually operate the Chlorinator & Pump move the RED tab on the timer to the upper position



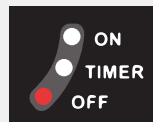
Automatic Operation

To Automatically operate the Chlorinator & Pump from the Timer settings move the RED tab on the timer to the middle position



Turn OFF

To turn the Chlorinator & Pump OFF move the RED tab on the timer to the lower position



The illustration below shows the chlorinator set for Automatic operation and chlorine production @ 50%



WATER QUALITY

Your water **BALANCE** should be kept within the following levels for trouble free operation

SALT - Sodium, Mineral or Magnesium

Measurement Interval - once a month

4000 mg/L

pH

Measurement Interval - once a week

7.2 - 7.8 Controlling your pH is most important so that you have good active levels of chlorine throughout the water, high pH above 8.0 will reduce the effectiveness of chlorine

When pH is high, Adding Hydrochloric acid will lower the pH

When pH is low, Adding Sodium bicarbonate will raise the pH

Stabiliser

Measurement Interval - Every 4 - 6 weeks

Stabiliser level should be kept between 30-70 mg/L, levels higher than this aren't required. Stabiliser should be measured by your pool shop every 4-6 weeks but most importantly in summer when UV levels are highest

Chlorine

Measurement Interval - once a week

Chlorine (Free Chlorine) should be measured once weekly and kept between 2 - 3 mg/L for effective disinfection, adjust the chlorinator output percentage or the pump run time to either increase or decrease this level as required

Total Alkalinity

Measurement Interval - 4 -6 weeks

80 - 150mg/L

Calcium Hardness

Measurement Interval - every 3 months

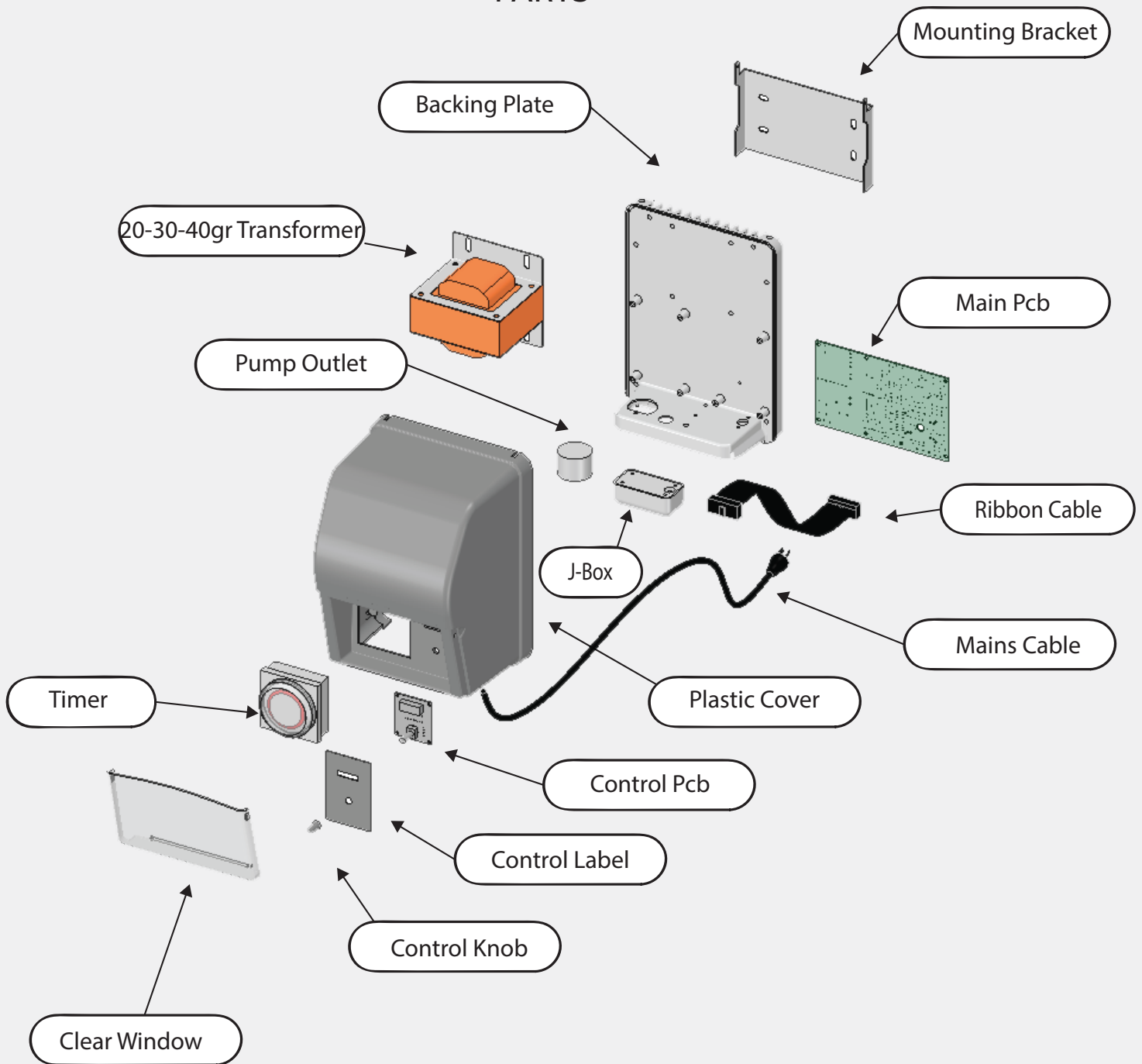
175 - 300mg/L

TROUBLESHOOTING

Before troubleshooting, remove power from the chlorinator by turning off at the wall or removing the mains plug, wait for 10 seconds then re-apply power, this will reset the internal processor to its default state.

PROBLEM	CAUSE	REMEDY
Lights are scrolling 0 - 100%	Priming cell No water is flowing through the cell	Make sure water is flowing through the cell, pump may not be operating
Chlorine output will not reach 100%	Salt level not high enough	Salt level should be 4000mg/L
	Water temp is low	Winter water temps will reduce output
	Cell has too much calcium deposit on plates	Clean the cell with cleaning solution or high pressure hose
	Cell could be at end of life	If salt level is correct, water temp is high and cell is clean you may require a new cell
No chlorine measured in the water	Not enough Stabiliser in the water	Add Stabiliser until you have 30 - 70mg/L
	Chlorinator isn't operating long enough or at high enough output	Increase operating hours or percentage output
	Dirty cell	Clean the cell with cleaning solution or high pressure hose
Lights are Flashing	Lights will flash when the chlorinator is turned ON	No action required
	Lights will flash when you have a high salt condition	Reduce salt level to 4000mg/L
Lights are Flashing and output will only acheive 70%	Auto power reduction due to High salt condition 5000mg/L or above	Reduce salt level to 4000mg/L
Pump is always ON	The pump may have been connected to the mains before the chlorinator	Make sure the pump is plugged into the 240V socket on the chlorinator
	Tab on the TIMER has been set to the wrong position	See page 7 for instruction

PARTS



Part No	Description
1.	Mounting Bracket
2.	Backing Plate
3.	20 - 30 - 40gr Transformer
4.	Pump Outlet
5.	Timer
6.	Clear Window
7.	Control Knob
8.	Control Pcb
9.	Plastic Cover
10.	J-Box
11.	Mains Cable
12.	Ribbon Cable
13.	Main Pcb
14.	Control Label

WARRANTY

Your Lincoln Chlorinator carries the following warranty should a fault occur due to faulty materials or manufacture

Lincoln warrants the original purchaser of the control panel and cell electrode, whether personal or commercial use, for a period of (see warranty period below), from the date of purchase should the purchaser disclose that this particular equipment failed due to faulty materials or manufacture.

The equipment under warranty claim must be returned to Lincoln for repair or replacement. Costs associated with freight and incidental charges resulting from goods being returned to Lincoln are at the customers expense and Lincoln will cover the cost of returning the equipment to the customer.

The warranty does not apply to any materials supplied or workmanship performed by others in the process of installing the equipment. Nor does it apply if the equipment has been repaired or altered by anyone other than Lincoln personnel or a Lincoln Representative. This warranty does not apply if the equipment has been subject to misuse or misapplication.

The warranty applies to materials and manufacture only. This warranty does not cover an act of god, i.e. storm and tempest, lightning strike, floods, tsunami, earthquake etc. Lincoln or its agent will replace at no charge, all parts, which show faulty materials or manufacture faults. The foregoing constitutes the entire liability of Lincoln to the original owner of the equipment. There are no other warranties, expressed or implied, including but not limited to the implied warranties of merchantability or fitness for a particular purpose other than those contained herein.

In no event will Lincoln be liable to the original or subsequent owners either directly or as an indemnitor, or any direct, incidental consequential loss, damage or economic loss, damage or injury to any person or property arising out of or relating to the equipment or any parts supplied in the equipment, except as expressly stated herein. No other person, or company or organisation is authorised to make any warranties, guarantees or representations, or allowed to allow any exceptions to this warranty, or assume any other liability or obligation on behalf of Lincoln in connection with the equipment. This warranty shall not extend to any expenditure incurred.

Warranty Period

Domestic	Power pack and Cell electrode	2 Years
Commercial	Power pack and Cell electrode	1 Year



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