PureSilk Chromatalyzer
QUICK SETUP GUIDE

Read Owners Manual before operating this unit
Only electrically qualified and authorized persons are permitted to service this unit
Warranty is void if non-genuine PureSilk reagents are used

Note: Please ensure that the Chromatalyzer is connected to uninterrupted mains power (GPO). Do not connect through a timer or otherwise remotely switched power outlet as this will result in undesirable operation and excessive use of reagents.
Note: Ensure any chlorinators connected are set to 100% output.

Identify your system configuration

Pool Only – Pool volume is greater than 10,000 Litres and no spa exists
Spa Only – Volume of water is less than 10,000 Litres.
Pool and Spa Combination – A single filtration system is used for both the pool and the spa. Usually the spa is treated as part of the same body of water as the pool, and the spa overflows into the pool. The spa can be isolated from the pool for the purpose of heating. This configuration requires a "Spa Flow Switch" to be installed on the spa suction line so the Chromatalyzer can recognise when the spa is isolated from the pool.
Pool and Spa Isolated system – A separate filtration system is used for the pool and the spa, and they are always treated as two separate bodies of water. This configuration requires two Chromatalyzer units and two chlorination systems.

Initial Setup – User Variables Menu

These variables can be accessed by holding the UP button for 5 seconds.

P = Pool Volume (cubic meters)
S = Spa Volume
tP = Test Frequency for the Pool
tS = Test Frequency for the Spa
AF = Acid Feed Rate
CF = Chlorinator Feed Rate
LF = Liquid Chlorine Feed Rate
AP = Acid pump 60 second test
CP = Chlorine output 60 second test

The variable labels are shown on the left hand side (CL) display and the corresponding value for each variable is shown on the right hand side (pH) display.

- Pressing the UP button will scroll through the available variables.
- Pressing the DOWN button will change the value of the displayed variable.
- To save setting and exit this menu, wait for 10 seconds without pressing any button.

Set Pool Volume – P
The pre-set list of values represent approximate volume in cubic meters.
For example, setting 50 = 50 cubic meters, or 50,000 Litres.

Select the value that is the closest to, but not greater than the actual pool volume.
For example, for a 48,000 Litres pool – select setting 40

For a SPA ONLY configuration, set the pool volume to zero

Where the exact volume is not known, it is always best to under estimate and allow the Chromatalyzer to compensate automatically.

Set Spa Volume – S
Same as above, for example 1.5 = 1.5 cubic meters, or 1,500 Litres.
Pre-set values up to 10,000 Litres are provided.

Note: A spa with a volume greater than 10,000 Litres will need to be treated as a pool.
For POOL ONLY systems this can be set to zero or ignored.

Set Test Frequency for the Pool - tP
You must synchronize the test frequency with your daily filtration times as per the TEST FREQUENCY table. Setting this value according to the table will initiate the desired number of tests during the normal daily filtration cycle.

Set Test Frequency for the Spa – tS
Same as above. This setting will be used while the system is running in SPA MODE. It is recommended that testing be more frequent in SPA MODE, as the chlorine demand is more volatile.

Set Acid Feed Rate – AF
If the in-built peristaltic pump is used with 33% Hydrochloric acid, then this setting need not be modified.
The factory default setting is 04.
Refer to the ACID FEED RATE table if a different acid delivery system, concentration of acid or CO2 system is in use.

Set Chlorinator Feed Rate – CF (For systems using a Salt Chlorinator or similar)
The factory default setting of 03 is suitable for PureSilk Chlorinator models PS45 and PS50LS. This setting is also suitable for third party chlorination systems delivering 50gms chlorine gas per hour or less. Refer to the CHLORINATOR FEED RATE table for the correct setting for your chlorination system.

Set Liquid Feed Rate – LF (For systems using liquid chlorine delivery)
The factory default setting of 03 is suitable for systems using the factory fitted peristaltic pump and liquid chlorine (Sodium Hypochlorite) of approximately 13% concentration.
Refer to the LIQUID CHLORINE FEED RATE table for the correct settings for your system.

Test Acid Feed Pump – AP
Pressing the DOWN button will initiate a 60 second delivery of acid (or CO2 where used). This can be used for testing the peristaltic pump, priming the acid line, or flushing it with water for the purpose of servicing the peristaltic pump.

Note: The filtration system must be running and water flowing in order for this to work – otherwise there will be an audible beep.

Test Chlorinator Feed / Chlorine Pump – CP
Pressing the DOWN button will initiate a 60 second delivery of Chlorine via the Chlorinator, and/or the liquid chlorine peristaltic pump. Same as above, can be used for testing the chlorinator output, peristaltic pump (where fitted), or flushing the liquid chlorine delivery lines for service.

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QUICK OPERATING INSTRUCTIONS

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Normal Operation

The Chromatalyzer will automatically detect pool water flow and initiate tests, acid and chlorine deliveries accordingly. Where a spa flow switch is fitted to a Pool and Spa combination system, the Chromatalyzer will automatically detect when the spa is isolated from the pool system and change its behavior accordingly. During normal operation the results of the last water test will be shown in the displays. Chlorine level (ppm) is displayed on the left hand side, and pH level on the right. Green indicator lights either side of these displays show whether the CL and pH targets have been met. While a CL or pH test is in progress, these indicator lights flash to indicate that a test is in progress.

P.I.D. Control Algorithm - Incorporated in the chlorine and acid delivery formulas is a P.I.D. or Proportional Integrated Derivative which allows the system to automatically adjust to changes in chlorine and acid demand.

Chlorine Target

To display or alter the chlorine target, press the UP button once. The current chlorine target will then be shown flashing in the display. At this time you can adjust it by pressing the UP and DOWN buttons. The factory default setting is 2.0ppm which suits most domestic applications.
To save the setting, wait for 10 seconds without pressing any buttons – display will return to normal.

PH Target

Same as above, except to display or alter the pH target press the DOWN button once.
The factory default setting is 7.6 which suits most applications. Consult with your pool professional to determine which setting best suits your needs.
Please Note: Pool and Spa equipment manufacturers may void warranties if CL and pH targets are maintained outside specified ranges.

Status Lights

LOW FLOW – STANDBY
Indicates the master flow switch is not activated. No flow has been detected and the unit is in standby mode.

TEST FAULT
Indicates there has been a fault or error detected during a test – see owners manual.

CHECK CHLORINE OR FEED RATE
Indicates the chlorine target has not been met for an extended period of time (over 72 hours).
See owners manual for possible solutions.

CHECK ACID OR FEED RATE
Indicates the pH target has not been met for an extended period of time (over 72 hours).
See owners manual for possible solutions.

SPA MODE
The system has detected flow in the Spa suction line, and is running in SPA MODE. Spa volume and test frequency settings are now in use.

CL REAGENT 1
Indicates a loss of prime for the DPD1 reagent. Check level of reagent in bag, change bag when empty. Turn power to unit OFF, change reagent bags if necessary, and turn power back ON to re-prime reagents.

CL REAGENT 2
Indicates a loss of prime for the DPD2 reagent. Check level of reagent in bag, change bag when empty. Turn power to unit OFF, change reagent bags if necessary, and turn power back ON to re-prime reagents.

pH REAGENT
Indicates a loss of prime for the pH reagent. Check level of reagent in bag, change bag when empty. Turn power to unit OFF, change reagent bags if necessary, and turn power back ON to re-prime reagents.

Pool and Spa Test Frequency Table

Set the tP and tS values to suit your requirements and filtration cycle. Take care to avoid the situation where a test is performed immediately before the filtration system turns off, as this will effectively be a wasted test. The Chromatalyzer can only deliver chemicals whilst the system is running.

Matching the corresponding Test Frequency to your Filtration Cycle time will ensure that the recommended three tests per day are performed at evenly spaced intervals. This table assumes that the filtration cycle is in one block, and not split into several smaller blocks.

For Pool / Spa Combination systems, the recommended test frequency for the spa is half hour intervals (setting 03) whilst the spa is in use. For Spa only systems it may be desirable to change this to suit your filtration cycle.

RECOMMENDED tP SETTINGS FOR 3 TESTS PER DAY

Filtration Cycle Time (hours)	Test Frequency	tP or tS setting
NO TESTS	OFF	00
¾ hour	15mins	01
1	20mins	02
1 ½	**30**mins	**03 (Default tS setting)**
2	40mins	04
3	1hr	05
4	1hr 20mins	06
5	1hr 40mins	07
6	2hrs	08
7	2hrs 20mins	09
8	**2hrs 40mins**	**10 (Default tP setting)**
9	3hrs	11
10	3hrs 20mins	12
11	3hrs 40mins	13
12	4hrs	14
13	4hrs 20mins	15
14	4hrs 40mins	16
15	5hrs	17
16	5hrs 20mins	18
17	5hrs 40mins	19
18	6hrs	20
19	6hrs 20mins	21
20	6hrs 40mins	22
21	7hrs	23
22	7hrs 20mins	24
23	7hrs 40mins	25
24	8hrs	26

FEED RATE TABLES

AF Settings *(Acid Feed Rate)*

00 – ACID FEED OFF
01 – 4 x Standard Delivery (¼ strength acid, 8.25% HCL)
02 – 3 x Standard Delivery (1/3 strength acid, 11% HCL)
03 - 2 x Standard Delivery (½ strength acid, 16.5% HCL)
04 – Standard Default Delivery (33% HCL)
05 – ¾ Standard Delivery
06 – Half Standard Delivery

CF Settings *(Chlorinator Feed Rate)*

PureSilk Models	Third Party Chlorinators
CF00 – Chlorinator Feed OFF	OFF
CF01 – PS15, PS20LS, PS25 **(Default Setting)**	Less than 25 grams per hour
CF02 – PS30LS, PS35, PS40LS	Less than 40 grams per hour
CF03 – PS45, PS50LS	Less than 50 grams per hour

The following settings are generally for large or commercial systems only

CF04 – 2 x PS50LS	Less than 100 grams per hour
CF05 – 3 x PS50LS	Less than 150 grams per hour
CF06 – 4 x PS50LS	Less than 200 grams per hour
CF07 – 5 or 6 x PS50LS	Less than 300 grams per hour
CF08 – 7 or 8 x PS50LS	Less than 400 grams per hour

LF Settings *(Liquid Chlorine Feed)*

00 – Liquid Feed OFF
01 – 3 x Standard Delivery
02 – 1.5 x Standard Delivery
03 – Standard Default Delivery (For use with 12-13% Hypochlorite Solution)
04 – ¾ Standard Delivery
05 – ½ Standard Delivery
06 - ¼ Standard Delivery

Note: Factory fitted peristaltic pumps delivery approximately 50mL per minute. Consider this when selecting a setting for a non-standard liquid chlorine or acid feeding system.

<u>IMPORTANT</u>
Where a Gas Heater is installed and the condensate is returned into the pool, ensure the condensate enters after (downstream of) the Water Sample Flow Switch and the Salt Chlorinator Cell.

<u>IMPORTANT – INTEGRATED POOL COVER CAVITIES</u>
<u>DO NOT RETURN WATER INTO POOL COVER CAVITIES</u>
Where a salt chlorinator is operating and the pump speed is low, excessive chorine levels may exit the return lines at values greater than 10ppm.
Fixtures and materials located within the cavity may not be suitable for this high chlorine environment.