

CHEMIGEM®

Quick Reference Operation Guide

Safety Information

Always read the warnings on Chemical Drums. When diluting always add concentrated chemical to water – NEVER ADD WATER TO CONCENTRATED CHEMICAL.

If the power cord is damaged the unit must be returned to POOL CONTROLS or its Service Agent for repair.

Before you turn on your Chemigem®

For the Chemigem to work effectively, the pH, Total Alkalinity, stabiliser (cyanuric acid) and Total Dissolved Solids must be maintained within the following recommended levels:

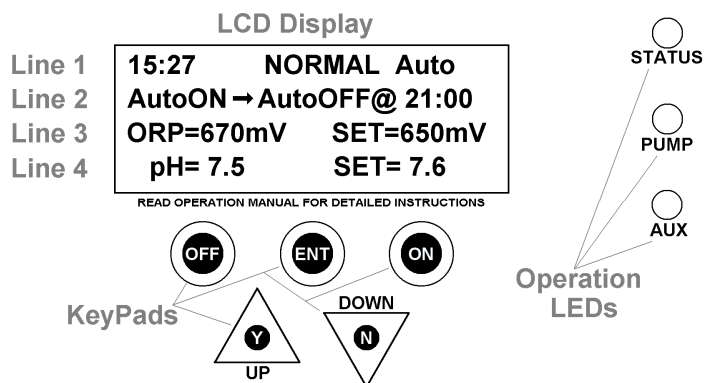
Chlorine	1.0 to 3.0ppm (mg/L)
pH	7.2 to 7.8
Total Alkalinity	80 to 300ppm (mg/L)
Stabiliser	30 to 50ppm (mg/L)
Total dissolved solids	300 to 1500ppm (mg/L)

Once the pool water is balanced as described above, you can turn on your Chemigem. The Chemigem is programmed with everything it needs to operate. All you need to do is to set the time and press the "ON" keypad to start the pump.

Chemigem uses 24-hour time with default times for operation set at 06:00-08:00 (6-8am) and 17:00-23:00 (5-11pm).

General Information

Illustrated below is a diagram of the instrument panel:



To adjust unit operation, 5 keypads are used with changes indicated on the LCD display. Each line on the LCD has a purpose:

Line 1 – shows the current time and the mode of operation. In the example above, line 1, tells you that the time is 3:27pm and the Chemigem is operating in "Normal Automatic mode"

Line 2 – shows timer information. In the example above, line 2 tells you that the "unit is turned ON and will turn OFF automatically at 21:00 (9pm)"

Line 3 – displays ORP (Chlorine) information. In the example above, line 3 tells you that the current ORP is 670mV with the unit set to provide 650mV

Line 4 – displays pH information. In the example above, line 4 tells you that the current pH is 7.5 with the unit set to provide 7.6.

Keypads – Basic Functions:

OFF – turns the unit and pump OFF

ON – turns the unit and pump ON

ENT – (short for ENTER) allows access to the Menu System and saves changes

UP/Y – adjust values, answer questions and quick access to the pH Menu

DOWN/N – adjust values, answer questions and quick access to the ORP Menu

Additional functions can be performed using the keypads – see below for details.

Operation LEDs:

These are either off (indicating OFF), green (indicating ON and correct operation) or red indicating that there is a problem. Any red LEDs will usually be accompanied by an explanation on the LCD display.

Chemigem Menu System

The Chemigem is operated via a Menu System. To access the Menu, press ENT. Navigate between Menus by pressing UP or DOWN and select the one you want by pressing ENT. Use UP/DOWN to adjust values and ENT to confirm your selection.

The Chemigem has the following menus:

TIMER – manages all automated timer functions, namely:

- **SET TIME** – allows you to set correct local time:
 1. Press ENT – display will show "TIMER MENU"
 2. Press ENT again to select this menu - display will show "SET TIME". This is what is needed, so press ENT again to confirm.
 3. Display will show "HOURS". Use UP or DOWN to set correct hour and press ENT to lock it in. Display will show "MINUTES" - use UP or DOWN to set the correct minutes and press ENT to confirm. The time is now set and the display will revert to normal.
- **TIMER DEFAULTS** – allows you to choose a default set of active timer periods, comprised of up to 4 Filter Cycles (see below). Select the default set that gives you the running period and ON/OFF times that suit you.
- **FILTER CYCLES** – allows you to select the number of Filter Cycles (active timer periods) to be run each day. Each Filter Cycle has an ON and OFF time and you can have up to 4 Filter Cycles active each day. The more Filter Cycles you select, the longer the system will run each day (great for summer) and it's easy to reduce the number of Filter Cycles for winter.
- **ADJUST CYCLES** – allows you to adjust the ON and OFF times for each active Filter Cycle, providing additional control over total daily running time.

pH CONTROL – allows you to do a manual feed of acid and adjust the pH settings. See below for more details on how to operate this menu.

ORP CONTROL – allows you to do a manual feed of chlorine and adjust the ORP settings. See below for more details on how to operate this menu.

POOL – allows you to input information specific to your pool (eg volume, construction type) See below for more details on how to operate this menu.

SuperCHLOR – uses the information from the POOL menu to estimate quantities of chemicals required to superchlorinate your pool (for a “shock” treatment.)

LIGHT – allows for timed pool light operation

PROBE – allows Service Technician to change the Chemigem Probe. NOTE: For technician use only!

What is ORP?

ORP stands for Oxidation Reduction Potential.

Chemicals like chlorine destroy pathogens (eg harmful bacteria) in water by oxidising them.

The level of oxidation available in the water can be measured chemically with an ORP sensor, which produces a voltage related to the ORP of the water. For the Chemigem’s sensor, this voltage is a measure of the activity (effectiveness) of Chlorine in the water.

Varying the ORP will affect how long it takes to destroy harmful bacteria in pool water. For example, if ORP is maintained at 650mV, E-coli type bacteria will be destroyed in around one second. However, if the ORP is lowered to 550mV, the same organisms may take up to 2 hours to be eliminated.

General Operation and Chemigem®

Default Settings

Chemigem continuously measures the pool pH and ORP and makes decisions about whether to add chemical or not. If the pH exceeds the set point, the unit opens the acid valve and feeds a small dose of acid into the pool to lower the pH. If the ORP falls below the set point, the unit opens the chlorine valve and feeds a small dose of chlorine into the pool to increase the ORP.

The Chemigem default settings (which can each be adjusted using the menus described above) are:

Filter cycles: total of 8 hours per day;

Cycle times: 06:00 to 0800hrs and

17:00 to 23:00hrs

pH 7.6

ORP (chlorine) 650mV

POOL Menu - Pool Information

The default settings are for a concrete/plaster pool with a volume of 50,000 litres with a family of four swimming for about 2 hours a day. The Chemigem POOL MENU allows you to enter information about the specific pool the unit is installed on – eg fibreglass or liner, larger or smaller volumes and bather loads. If you need to superchlorinate your pool, the Chemigem SuperCHLOR menu will use this information to calculate how much of each chemical to add.

pH Control Menu

The UP/Y keypad is a shortcut to the pH Control Menu. If you wish to use this menu:

1. From the normal display press UP/Y
2. Display reads “Adjust pH Control” and prompts you to press ON or OFF.
3. Press ON to continue. (If “OFF” is pressed, the unit exits the pH Control Menu and reverts to normal display).
4. Display reads “Manual Feed Y/N?”

Manual Feed

5. Press the UP/Y keypad – display reads “Feed 5 Sec/50mL”. Press ENT to select this dose, or increase dose by pressing the UP/Y keypad.
6. Once manual feed is complete, display will read “Wait for 2 Sec” and then ask “Calibrate Probe?”. Press N/Down keypad to exit pH Control Menu at this point or press Y/UP keypad to calibrate probe.
7. Display will read “Probe pH = 7.8 Adjust to 7.8 + 0.0”. Use the UP and DOWN keypads to make changes and then press ENT to confirm.
8. The Chemigem will automatically revert to the normal display after a few seconds.

Adjusting pH Setting

9. When display asks “Manual Feed Y/N?” press the DOWN/N keypad and the display will read “Adjust Set Point?” Press the UP/Y keypad if you wish to do so. Display will read “Set point 7.6” Use the UP and DOWN keypads to make changes and then press ENT to confirm.
10. Once the Set Point adjustment is complete, display will read “Wait for 2 Sec” and then ask “Calibrate Probe?”. Press N/Down keypad to exit pH Control Menu at this point or press Y/UP keypad to calibrate probe.
11. Display will read “Probe pH = 7.8 Adjust to 7.8 + 0.0”. Use the UP and DOWN keypads to make changes and then press ENT to confirm.
12. The Chemigem will automatically revert to the normal display after a few seconds.

ORP Control Menu

The DOWN/N keypad is a shortcut to the ORP Control Menu. If you wish to use this menu:

1. From the normal display press DOWN/N
2. Display reads “Adjust ORP Control” and prompts you to press ON or OFF.
3. Press ON to continue. (If “OFF” is pressed, the unit exits the ORP Control Menu and reverts to normal display).
4. Display reads “Manual Feed Y/N?”

Manual Feed

5. Press the UP/Y keypad – display reads “Feed 5 Sec/50mL”. Press ENT to select this dose, or increase dose by pressing the UP/Y keypad.
6. Once manual feed is complete, display will read “Wait for 2 Sec” and then the Chemigem will revert to the normal display.

Adjusting ORP Setting

7. When display asks “Manual Feed Y/N?” press the DOWN/N keypad and the display will read “Adjust Set Point?” Press the UP/Y keypad if you wish to do so. Display will read “Set point 650mV” Use the UP and DOWN keypads to make changes and then press ENT to confirm.
8. Once the Set Point adjustment is complete, display will read “Wait for 2 Sec” and then the Chemigem will revert to the normal display.

Pool Controls’ dedicated Service Team is here to help!

Call 1300 550 010

or visit www.poolcontrols.com.au