

Description:

The PWP2 is a swimming pool, spa and pond controller that controls the filter pump run times and current output to the Copper and Silver Alloy Electrodes. The clock can be set to run for single or dual run times per day and will remember times if the power is switched off for a period of 10 days.

Ionisation:

The PWP-2 uses a process of passing a controlled current through the water between the copper and silver alloy electrodes. This process called electrolysis enables copper and silver ions to enter the water. The copper works to inhibit algae growth and the silver as an aid to fighting bacteria.

The Ions Active L.E.D. indicates that the ionisation process is working. The L.E.D.'s Polarity and Change indicate the polarity of the output current applied to the electrodes, the polarity will change periodically to allow the electrodes to wear evenly.

Controller Mounting:

Find a suitable location to mount the control box. As with all pool equipment, it should be installed out of direct weather and no closer than 3 meters from the water's edge. Lift up the two mounting tabs and use two appropriate screws to mount the control box to the wall, keeping in mind that the power cable is 1.8m long and should be plugged directly into a general power outlet, not into an extension lead. Note that direct sunlight will fade the display over a period of time.

Connect the cell housing leads to the cell housing wing-nuts, polarity is not important.

SETTINGS MENU:

All items on the LCD that flash are adjustable items, use the *Up* or *Down* buttons to modify the adjustable item. Press *Enter* to accept the adjustable value.

To enter the SETTINGS MENU push either the up or down buttons and the following will be displayed;

```
SETTINGS MENU
1) MANUAL MODE
```

All menu items are shown below, use the *Up* or *Down* buttons to scroll to different items in the menu;

```
SETTINGS MENU
1) MANUAL MODE
2) FILTER TIMER
3) IONS OUTPUT
4) CLOCK
5) SAVE & EXIT
```

1) MANUAL MODE

```
MANUAL MODE 24HR
UP=ON  DOWN=OFF
```

Ionising output is switched off in MANUAL MODE, manual mode is provided for backwashing a filter or to run filtration for 24 Hours without ionisation.

MANUAL MODE allows you to manually set the pump to 'on' by pressing the *Up* button or 'off' by pressing the *Down* button. Pressing *Enter* will return you to the SETTINGS MENU. You can also keep pressing *Enter* to toggle the pump from 'on' to 'off' and vice versa. MANUAL MODE will time out, after 24 hours the PWP2 will return to normal (automatic) operation.

2) FILTER TIMER

When the FILTER TIMER is selected the following is displayed;

```
SINGLE CYCLE
DUAL CYCLE
```

Select SINGLE CYCLE or DUAL CYCLE, Single Cycle runs the filtration once per day; Dual Cycle runs the filtration twice per day.

Single & Dual cycle sub menu;

```
FILTER CYCLE    FILTER CYCLE
START TIME  x'xx  END TIME  x'xx
```

Dual cycle sub menu;

```
2nd FILTER CYCLE    2nd FILTER CYCLE
START TIME  x'xx  END TIME  x'xx
```

Adjust the start time and end time for filter cycle 1; if dual cycle was selected then also adjust the start and end time for the 2nd cycle.

Note1: that if dual cycle is selected, take care not to overlap the 2nd filter times with the first filter times as the result will be one cycle per day.

Note2: If a 24 hour filtration is required then set a single cycle with the start & end times the same (E.g. 12:00 – 12:00).

****Factory Default is ON, DUAL CYCLE from 09:00 to 13:00 and 16:00 to 20:00**

3) IONS OUTPUT

```
IONS OUTPUT
SET FOR xxx mA
```

When you enter the IONS OUTPUT menu you may change the current output for ionisation, adjust according to copper levels as determined by a water quality test. Copper (Cu) should be in the range of 0.4 – 0.8 ppm. If the level of copper is below 0.4 ppm then increase the current output, if it is above 0.6 ppm then decrease the current output, if it is above 0.8 ppm then set the current output to 0mA.

If IONS OUTPUT is set to 50mA or higher, the following menu is displayed;

```
IONISE AT FILTER
TIMES ONLY? xxx
```

If you select 'YES' then ionisation will always occur during filtration times and you will return to the settings menu, if 'NO' is selected then a separate menu for run hours is displayed;

```
IONISING
RUN HOURS  hh:mm
```

If ionising at filtration times is producing too much copper then you can adjust the number of hours that ionisation occurs during filtration times in one hour steps; the maximum available time is calculated from the filtration settings. This feature will only be active from the start of the next filtration cycle.

****Factory default is 200mA, Ionise at filter times.**

4) CLOCK

```
TIME    hh:mm:ss
DAY     dd/mm/yy
```

This menu allows you to set the actual time of day and date.

5) SAVE & EXIT

When this menu is selected, push *Enter* to save ALL settings, the unit will return to normal operation automatically. If any of the menu items are left unattended for 3 minutes the menu will time out and automatically save all settings and return to automatic operation.

The *Enter* button.

This function is used for system back wash, pool vacuuming, spa heating, etc. The filter pump is allowed to run but the Ions Output is turned to OFF. After the four hours the system will automatically return to normal automatic run mode.

```
MANUAL MODE 4HR  
UP=ON DOWN=OFF
```

When *Enter* is pressed the display will indicate you have entered Manual mode, operation is the same as manual mode described above with the only difference being that it will timeout in 4 Hours.

Special Test Menu

This menu is for special access and should normally not be required.

To enter test mode, press and hold the *Enter* button while the power to the unit is turned on, after 2 seconds release the *Enter* button.

```
OUTPUT CURRENT:      OUTPUT CURRENT:  
NORMAL (DEFAULT)    HIGH (CAUTION)
```

When output current is set to high it enables higher values to be set under the '3) IONS OUTPUT' menu, when set to normal the maximum value is 250mA but when set to high it can be set as high as 400mA.

If you select NORMAL (DEFAULT) it will also enter the production test, will ask you to set the clock and will perform a short output current test before saving the settings then resetting itself and returning to normal operation.

Water Balance:

On new pools the conductivity of the water can be low so it may take some weeks to obtain a copper reading. As the copper level increases the conductivity will also increase and the copper level will start to rise faster. It is fine to start on 250mA but you will need to monitor the copper levels every couple of weeks and when the level has started to rise towards 0.6ppm start reducing the Ions Output. Copper levels can climb quicker with salt pools as the conductivity of the water is higher. Filter run time and Ions Output can both be used to achieve correct copper levels. If the copper level in the water exceeds 0.9ppm turn the Ions Output to Zero. Water balance should be checked at least weekly during the swimming season and monthly over the winter period.

Total Alkalinity 80 - 120 ppm

Water pH 7.0 - 7.4

Copper 0.4 – 0.8 ppm

Chlorine – 1.0ppm to 3.0ppm

Electrode Replacement:

When the electrodes erode to about 10mm in diameter it is time to replace them. Turn the power off to the PWP-2, undo the two electrode cable wing nuts, close any appropriate valves if the electrode housing is below water level then unscrew the large retaining nut on the side of the housing. Gently prize the black electrode carrier from the housing then undo the two brass electrode retaining nuts, use a cloth or gloves to handle spent electrodes. Fit replacement electrodes ensuring that two of the flat surfaces are parallel to one another and the brown silicon gaskets are located in the carrier correctly, fit washers and tightening nuts firmly. Align the carrier locator and fit into the housing then tighten lock nut. Open any closed valves and switch on power – check for leaks and tighten as required.

Technical:

Input - 240Vac 50Hz 10A 2400 Watt

Output – 240 Vac 10A 2400 Watt

Electrical Approval Certificate – Q96291

Approval Standard – AS/NZS3136:2001 Including Amendments 1&2

APVMA Approval Number 61279

Return to supplier for repair.

WARRANTY – PWP Series

The PWP-2 is covered by a limited 3 year warranty against component failure or faulty workmanship from the date of installation.

Faulty units should be returned in the first instance to the dealer from which the unit was purchased.

Damage to the unit due to misuse, power surges, lightning strikes or installation that is not in accordance with the manufacturer's instruction may void the warranty.

Warranty does not cover travel costs to or from installation site.

Return to supplier for repair

Customer Record. (To be retained by the customer)

Dealer/Installer Name.....

Model Number.....

Serial Number.....

Date Installed.....

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