

PWP2 Ioniser

Instruction Manual



DESCRIPTION

The PWP2 provides a filtration pump timer and uses an ionisation 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.

INSTALLATION INSTRUCTIONS

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 and a minimum 600mm of the ground. 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 pump to the 240VAC outlet at the bottom of the pwp2 and connect the cell housing leads to the cell housing wing-nuts, polarity is not important. The cell housing is to be plumbed after any heating equipment and with the cell house openings facing the ground.

TECHNICAL

Input - 240VAC 50Hz 10A 2400 Watt

Output - 240 VAC 9.98A 2395 Watt

Electrical Approval Certificate -
ES0120422

Approval Standards - AS/NZS3136:2001

Including Amendments 1&2, AS/NZS
61000.6.3:2012 [EMC] Part 6.3

APVMA Approval Number 61279

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.

OPERATING INSTRUCTIONS

CONTROLLER INFORMATION

The pool water purifier PWP2 is suitable for swimming pools, spas and ponds up-to 100,000 litres for a standard unit.

The filter pump and ionisation is controlled for up-to 2 run times per day and will remember the settings indefinitely and the clock will remain accurate if the power is switched off for a period of up-to 10 days. The PWP2 can be used on interrupted power supplies [e.g. tariff 33 in QLD].

The ions active L.E.D. indicates that the ionisation process is working. The polarity L.E.D.'s indicate the polarity of the output current applied to the electrodes, the polarity will change every 15 minutes to allow the electrodes to wear evenly.

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 0.4ppm 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 0.6ppm 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 100 - 150 ppm

Water pH 7.4 - 7.8

Copper 0.4 - 0.5 ppm

Chlorine - 1.0ppm Plus

Water balance should be checked at least weekly during the swimming season and monthly over the winter period. Without regular checking of the water balance and the addition of pool chemicals, copper may become unsettled and can plate out of solution, causing staining on the swimming pool surface - the manufacturer and the dealer of the PWP-2 bares no responsibility for such staining as pool water chemistry is the responsibility of the pool owner/s.

CONTROLLER SETTINGS

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

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SETTINGS MENU
1) MANUAL MODE
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All items on the LCD that flash are adjustable items, use the UP or DOWN buttons to modify the adjustable item. Press the Enter button to accept the adjustable value.

All menu items are shown below, use the UP or DOWN buttons to scroll to different items in the menu;

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SETTINGS MENU
1) MANUAL MODE
2) FILTER TIMER
3) IONS OUTPUT
4) SEASON MODE
5) SYSTEM SETUP
6) SAVE & EXIT
```

1) MANUAL MODE

```
ON  xx HRS ↑↓
ENTER = AUTO
```

This menu is for the manual control of the pump, whenever you enter this menu the pump will be switched ON. You can adjust the period that manual pump mode runs for [4, 12 or 24 hours] by pressing the UP or DOWN buttons and after the required time the controller reverts to automatic operation. Note that there will be no ionisation in manual mode. To exit manual mode and return to AUTOMATIC MODE press the ENTER/MANUAL button.

2) FILTER TIMER

When the FILTER TIMER is selected the following is displayed;

```
No. OF TIMES PER
DAY TO RUN:  OFF/1/2
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Select the number of times per day you wish the pump to operate for filtration purposes. If OFF is selected then the pump will not operate, otherwise the following is displayed;

Once per day FILTER CYCLE menu:

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FILTER CYCLE
hr:mn TO hr:mn
```

Twice per day FILTER CYCLE 1 menu:

```
FILTER CYCLE 1
hr:mn TO hr:mn
```

Twice per day FILTER CYCLE 2 menu:

```
FILTER CYCLE 2
hr:mn TO hr:mn
```

Adjust the hours [hr] and minutes [mn] for the required start time and end time for each of the required filtration cycle[s], the pump will run between these times for filtration purposes.

Note 1: Take care not to overlap filter cycle 2 times with the filter cycle 1 times as the result will be one cycle per day.

Note 2: For 24 hour filtration set to run 1 time per day with the start & end times the same [E.g. 12:00 – 12:00].

Note 3: In winter mode the 2nd filter cycle does not run.

Summer Filtration Time: 8 hours is recommended.

Winter Filtration Time: 4 hours is recommended.

The above recommended times will also be dependent on whether or not a standard pool pump is being used or an energy efficient variable speed pump.

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 – 0.5 ppm. If the level of copper is below 0.4 ppm then increase the current output, if it is above 0.5 ppm then decrease the current output, if it is above 0.6 ppm then set the current output to 0mA.

4) SEASON MODE

When the season mode menu is selected the following is displayed;

SET SEASON MODE
SUMMER MODE/WINTER MODE

SUMMER MODE is the normal operation of filtration, 2 cycles per day. When selecting WINTER MODE you will be prompted to select the start month of winter and the start month of summer. At the start of winter the 2nd filter cycle is automatically disabled to allow for reduce filtration requirements in the off-season, when the summer month start the 2nd filter cycle will automatically be re-applied. You can also start winter mode in August and finish in March if required [i.e. for Northern Hemisphere]. Hint: the two filter cycles can be overlapped so if cycle 1 is from

10am-2pm and cycle 2 is from 8am to 4pm then in winter mode the time is reduced by 2 hours at the start and end.

5) SYSTEM SETUP

When the system setup menu is selected 5 options are available;

SET CLOCK
INSTALLER SETUP
FACTORY DEFAULTS
RUNTIME LOGS
EXIT

SET CLOCK – Allows you to adjust calendar date and time of day.

EXIT – Will return you to 5) SYSTEM SETUP with no changes.

RUNTIME LOGS – displays run times for pump and ionisation, NO support is offered for this feature.

FACTORY DEFAULTS – Restores ALL the settings to the factory default state.

INSTALLER SETUP – This sub-menu contains the following advanced settings;

IONISE AT FILTER
TIMES ONLY? YES/NO

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

IONISING
RUN HOURS Hr:mn

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.

AUTO IONS REDUCE
YES/NO

This feature automatically adjusts the IONS OUTPUT to a lower value after 30 days, if NO is selected you will return to 5)SYSTEM SETUP, if YES is selected then you are prompted for the fall back current;

IONS FALLBACK
SET FOR XXX mA

6) 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/MANUAL BUTTON

If at any time the ENTER/MANUAL button is pressed the pump is switched on and the following will be displayed;

ON/OFF ↑↓
ENTER = AUTO

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. Use the Up/Down buttons to turn the pump ON/OFF, after four hours the system will automatically return to normal automatic run mode.

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:
NORMAL (DEFAULT)/HIGH

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 and will perform a short output current test then resetting itself and returning to normal operation.

Normal Operation for factory default settings: Between 09:00 and 13:00 or 16:00 and 20:00 the PUMP will be on, as well as IONS ACTIVE & PUMP ON LEDs, ionising current is set for 200mA. When minutes of the day is between; 0-14 then TOP POLARITY LED is ON, 15-29 then BOTTOM POLARITY LED is ON, 30-44 then TOP POLARITY LED is ON, 45-59 then BOTTOM POLARITY LED is ON. At other times ALL LED's should be OFF.



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WARRANTY

This range of product 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. Valves and actuators are covered by a twelve month warranty at the discretion of their manufacturer.

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

If the power cord is damaged, do not use the controller; return the unit to the supplier for repair.

CUSTOMER RECORD [To be retained by the customer]

DEALER/INSTALLER NAME

SERIAL NUMBER

DATE INSTALLED

For service assistance phone



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