



AQUAVIC

ABN 23 093 121 076



Installing and Running your “New Millennium” Series II Ioniser

This product is not intended to be installed in classified zones which require IP ratings. It is not intended for use by persons including children with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge unless they have been given supervision or instruction concerning its use by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance. If the supply cord is damaged it must be replaced by the manufacturer, its service agent, or similarly qualified person.

Foreword:

In drafting these instructions we have assumed that the installer has a good all round working knowledge of pumps, filters and piping systems, and is comfortable with the use of PVC adhesives and basic hand tools.

Installing the Control Module:

This unit is rated for **indoor use only** and must be installed in a plant room, garage, workshop, or similarly protected environment by a licensed electrician or a suitably qualified tradesperson. Where there is no alternative other than to install outdoors, it must be fully enclosed in a weatherproof electrical enclosure. Contact **Aquavic** for details of prices and availability of approved products.

For ease of monitoring, we recommend that it should be mounted on a vertical surface 1500 mm from the floor, and in close proximity to a 230 VAC 10 Amp GPO. In the event that the flowcell is beyond the reach of the standard ELV (electrode) cable, it may be extended by up to 10 metres by adding a suitable length of twin conductor cable of similar or greater cross-sectional area. A miniature junction box or similar is ideal for this purpose and a little attention to tidying up loose cabling with cable ties will finish the job of nicely

Installing the Flowcell.

These units can be installed in the “return to pool” line (first preference) the pump’s suction line, or between the pump and the filter, but because the latter has the highest operating pressure in the system, it should only be selected if the other two are not suitable. It should be located in a **vertical** or **inclined** section of pipework as this will ensure total flooding of the electrodes at all times. If this is not possible, care should be taken to position it so that the electrodes are completely submerged when the pump is running.

Having decided on a location, carefully measure and remove a suitable length of pipework, deburr, and install the Flowcell using PVC primer and “N” (blue) or “P” (green) solvent cement. Allow 24 hours to cure before running the pump.

And finally:

Connect the low voltage leads to each electrode – it doesn’t matter which terminal lug goes to which electrode - and tighten firmly. Do not over-tighten as the flowcell body may be damaged. Finger-tight + 20% is usually sufficient. Plug the control unit into the power point, and plug the pump into the 3-pin “**Pump**” outlet in the base of the control unit.

If your system has a pH controller or chemical dosing pump, this should be plugged into the “**Aux**” outlet which is configured to run in parallel with the pump. One final check to make sure that the pool is full of water, that the pump is free to run, and all connections and plugs are secure and in place.

Set the “**Pump Run**” and “**Ioniser Run**” switches to your estimated running time (1.0 hour for every 10,000 litres of water is a good starting point) and the “**Timer Bypass**” selector switch to the “**Off**” position and turn the power on. Power availability will be confirmed by the red “**Power**” LED.

Important: Note the time at which the power was turned on as this will determine the system starting time for that day and every day thereafter. But should the power be interrupted at any time and for any reason, all functions will default to the time at which the power supply was restored. If you are in an area that is prone to blackouts or power interruptions a battery-backed timer will be required. Contact Aquavic for details.

Getting started:

Having confirmed that the power is available and that the pump, the ioniser, and the auxiliaries are running, we now take a closer look at the ioniser running time. As a general rule, the ioniser run time is usually about half that of the pump, but the ultimate arbiter is the copper level of the water. Because an ioniser must never run on 'dead' water, any ioniser run-time setting which is greater than that of the pump will be over-ridden by the pump. A copper test kit is included in this pack.

Ionising:

With reference to the "**Ionising**" lights (left to right – 1 & 2 green* 3 & 4 yellow* 5 & 6 red) the number and colour of the light (LED) in this display is directly proportional to the conductivity of the water - and to a lesser extent, the condition of the electrodes. The higher the number, the higher the current being drawn, and therefore the harder the ioniser is working. *Applies only to units made after 31st. October 2015. Was "1 & 2 yellow" and "3 & 4 green".

In the event that there are no "**Ionising**" lights on at all, this is indicative of water of very low conductivity or that the "**Ionising**" sequence has timed out. If the former, the most cost-effective way of correcting this is to add ordinary swimming pool salt to the water in (2 kilo increments for pools < 50,000 litres – 5 kilo increments to pools > 50,000 litres) until one of the 6 "**Ionising**" lights come on. Numbers 3, 4 or 5 green are ideal. Adding salt is a one-off exercise and only required to *kick-start* the pool. Allow plenty of time for the salt to dissolve and disperse evenly throughout the pool.

In the event that number 6 red "**Ionising**" light is on and/or flashing (as would be the case with a salt-chlorinated pool) the water is highly conductive and consideration should be given to either dumping all of the water and refilling with fresh, or dumping a percentage and diluting it with fresh. In the event that dumping and refilling is not an option, it may be necessary to make an alteration to the configuration of the controller's mother board. Please contact our office for advice.

Copper Level:

As mentioned above, copper levels are the means by which we ultimately judge the performance of the ioniser, and should be maintained at around **0.3 ppm to 0.6 ppm**. If, after a reasonable settling-in period, the copper levels begin to fall, increase the ioniser run-time. If the ioniser run time ultimately exceeds the pump running time, it will be necessary to increase the pump running time also.

Polarity:

A key feature of any ionising system is that to ensure an even "*burn*" of both electrodes, the polarity is electronically switched every three minutes as confirmed by the red and green "**Polarity**" lights.

Bypass:

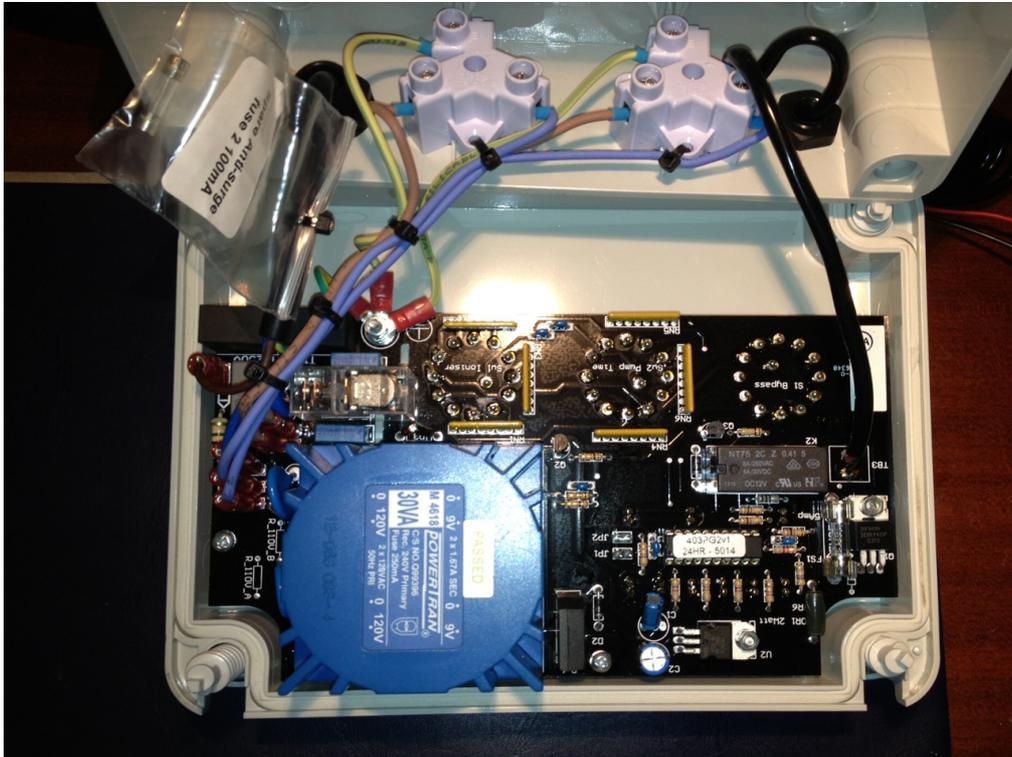
The purpose of this switch is to allow the operator to over-ride both the "**Pump run**" and the "**Ioniser Run**" set points for the purposes of testing the system, or for maintenance, or perhaps to initiate an extra pool cleaning cycle after strong winds or heavy bather loads. Its normal operating position is "**Off**".

Blackouts Protection Option:

Blackouts, or momentary loss of power, are much less common than they were, but not necessarily so for customers on rural properties, or in areas that are subjected to frequent violent weather events. Because our "**New Millennium**" Series II controllers employ "count-down" timers, loss of power supply will affect the time settings. If you're in an area subjected to frequent blackouts, we offer an optional battery-backed digital time switch which will guarantee that your preferred settings are retained.

Fuse protection:

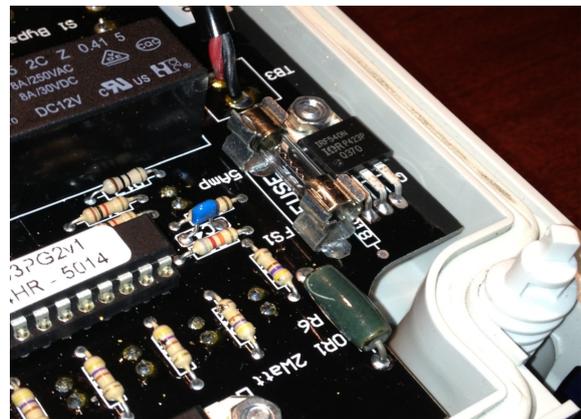
Both the high voltage and the low voltage circuits are fuse-protected. Loss of power to the Pump, Auxiliary, and to all LED's is indicative of a blown primary circuit fuse. Loss of Ionising and Polarity LED's – but not the Power LED - is indicative of a blown low voltage fuse. See pics below for location.



Overview of the Series II Motherboard. Spare HV supply fuse is in the “snap lock” plastic bag.



HV supply fuse in top LH corner of PCB



ELV fuse clearly visible lower RH corner of PCB

Important!

Access to both is by removal of the front panel, and should only be undertaken by suitably qualified personnel or by direct instruction from Aquavic, or by an accredited Aquavic Agent.

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“If you wouldn't drink it, why swim in it?”

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