



# A C I D E

AQUAVIC MADE IN AUSTRALIA  
QUERCUS MAGNAE A GLANDIBUS CRESCANT



THE OFFICIAL MOUTHPIECE OF THE AQUAVIC IONISER USER'S GROUP

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## From the Director:

According to the calendar our winter solstice occurred on June 21<sup>st</sup> at 2.26 pm. and with daytime temperatures barely making it to two figures, and most of the pools down south hibernating, it seemed like an ideal time to reflect on the season that was. With most of our family back in Oz, and the others coming over for Christmas, rather than visit North America yet again, we decided to take a couple of weeks off and revisit the magnificent South West corner of WA.

Before departure, we'd been watching the weather closely on the 7 o'clock news each night (ABC of course) and our expectations were that the nights would be cool, the sun would be shining, and the daytime temperatures would be in the mid twenties. Unfortunately, shortly after arriving, the skies darkened and we experienced showers off and on over the next 2 weeks. And to add insult to injury, the day we were due to fly out, the skies cleared, the sun came out – and has pretty much been out ever since we left! Talk about timing.

On the other hand, we welcomed the opportunity to catch up with one of our original customers in Fremantle, and had a very pleasant evening playing catch-up and dining on cray tails and French champagne left over from their daughter's wedding. What a great night that was and well worth the trip across the Nullarbor. A great big thank you to Pauline and Paul for your hospitality.

And also a very big thank you to Karl for the offer of his house and car while he was in Germany. We were blown away by the generosity of the offer but unfortunately had already booked our accommodation and car. What an incredibly generous offer. One of the upsides of this "job" is that you get to meet the nicest and most generous people.

Coincidentally, on going back over our old newsletters, I found that it was almost 10 years to the day that we were last visited Fremantle and the SW corner. How time flies when you're having fun.

## Electrodes:

Over the past 20+ years that we've been involved with ionisers – 17 of trading as Aquavic – it never fails to concern me that many people – pool owners and service people alike – do not seem to be able to grasp the fact that *ionisers must not run on dead water*. Why? As the copper and silver ions are released within the flowcell, they want to travel from one electrode to the other, across the water-filled gap that separates them, but the flowing water catches them in transit, and whisks them away and into the pool.

Unfortunately, if the water is not flowing at the time of release, the ions simply travel very quickly from one electrode (the anode) directly to the other (the cathode) where they, along with other particles of opposite charge, accumulate and develop a heavy peppermint green crust of ever-increasing thickness,

until the point is reached where the system no longer functions and the copper levels gradually fall. If left too long, the consequences can be spectacular. The series of pics below tell the sorry tale.

**Pic 1:** is a perfect example of the consequences of “Dead Water Ionising”.

**Pics 2 & 3:** reveal just what was lurking beneath that peppermint green crust.

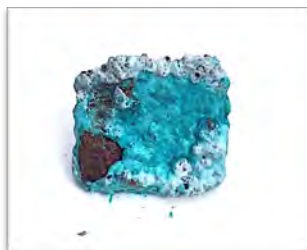
**Pic 4:** shows what the electrodes looked like when originally installed.



**Pic 1:**



**Pic 2:**



**Pic 3:**



**Pic 4:**

**Pic 5:** shows the sum total of the ‘crud’ that was removed from 6 pairs of badly fouled electrodes which were allowed to run on a dead water for a period of around 3 months. Suffice to say that what was left of the electrodes was not worth saving, and six new pairs had to be installed to restore the status quo.



**Pic:5**

#### **Interlock Explained:**

Pump failure excepted, unless the ioniser and the pool pump have been plugged into separate power outlets, it is not possible to run a **New Millennium Series II** ioniser on dead water as the pump and ionising cycles are electronically interlocked by the software. Our **New Millennium Series 1** ionisers, however, are not so equipped, but are supplied with a “piggy-back” plugs which mechanically interlocks both. However, we have found that occasionally, “*somebody*” has plugged the pump and the ioniser into separate outlets, usually with dire consequences similar to that shown above.

So, if you are the owner of a Series 1 – or an ioniser of another manufacturer for that matter - check now that the pump is piggy-backed into the ioniser.

### Indoor or Protected Use Only:

And whilst on the subject of matters electrical, it is important to ensure that, if using off-the-shelf plug-in timers, that they are registered for outdoor use. We see so many that have been purchased from a local hardware outlet that are clearly for indoor Christmas lights, not the great outdoors. Apart from the fact that water ingress will eventually destroy them, they are all accidents just waiting to happen.

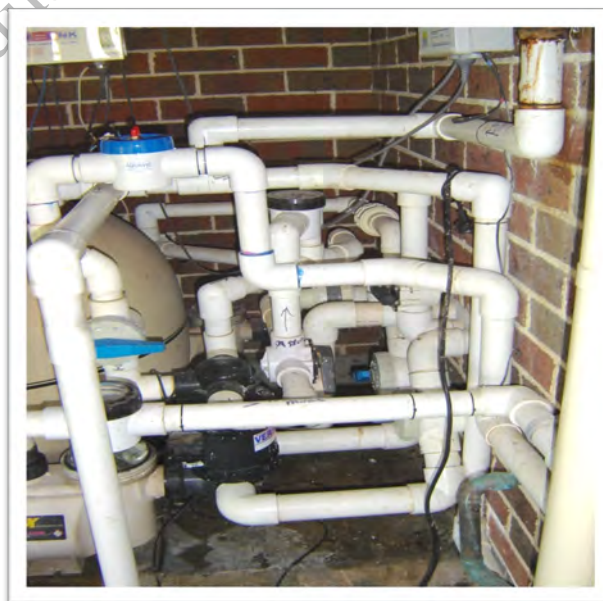
BTW, a question that still crops up from time is why, in this day and age, do we use knobs instead of touch pads and LCD displays on our **New Millennium** Ionisers. Some time ago we addressed this very question and include here again the transcript of a telephone conversation between a pool shop proprietor and an obviously frustrated customer with a touch pad control unit. It is a very clear illustration of the advantages of our simple no-frills controllers over complex touch pad LCD models and is a verbatim record of a telephone conversation between an in-house pool serviceman, and a technically challenged customer. The pool serviceman opens the batting, and it was all down hill from there. It went like this:

*'Press the "UP" button – no, not that one, the one above it - ? - that shouldn't have happened - there should be an arrow - no, an arrow pointing UP – OK, let's hit RESET – oh, you've already done that – same result? – Bugger. OK. - Hit the big switch and we'll start again - now, turn the power on and tell me what's on the display – no, .no, no. The toggle switch – what's a toggle switch? - no, it doesn't say ON – it has a funny little symbol that means ON – describe it? (under his breath but clearly audible at the counter) Shit. Here we go again! – Now listen, what's on the screen at the moment?.....!'*

**And this conversation went on for the 10 minutes that it took to serve me. If ever there was a case against touch pads and LCD screens.....! Call me old fashioned if you will but owners of our *New Millennium* ionisers would not have found it necessary to make the call in the first place.**

### Tags:

We have done many site visits over the years and one thing that continues to bug me is unidentified pipework. In most cases the pipe runs can be identified by instinct and trial and error, but once the pipework goes subterranean, the task can become quite time-consuming – or, in some extreme examples, the pipework is so incredibly complex that it's virtually impossible to identify its function. **Pic 5** is one such example and arguably the most complex that I've come across in two decades – and I've seen a few.



**Pic 5: Spaghetti Junction!**

**Pic 6:** is an example of the subterranean version. It clearly illustrates a simple system “as found” during a site visit, and, as can be seen, there are 5 pipes that disappear into the ground – and none have any identification! Reading from left to right, the first pipe, which is connected to the heater, disappears into the ground. It should be heading back to the pool, but...? The second pipe, which is just past the 3-way valve with the black locking ring, also simply disappears into the ground going God knows where.

The third pipe, which is downstream of the ioniser’s flowcell, also disappears into the ground, but almost certainly serves the pool’s jets. And as the next pipe is connected to the suction side of the pump, it can safely be assumed that it is connected to the skimmer box. The last, that angled pipe behind the filter, is the filter’s backwash pipe and probably goes to sewer (or possibly storm water) and is of no concern. But once the overburden and detritus was removed, the picture became very much clearer. As can now be seen in Pic 7, the heater pipe, which appeared to just disappear in the terra firma, actually does a 90 deg, turn and TEEs into the return-to-pool pipe upstream of the flowcell. This is but a very simple example of what is out there, but the moral of the story is identify your pipework. If you can’t, send me a pic.



Pic 6:



Pic 7:

### Hint:

And whilst on the subject of identifying pipework, if you’re in the process of building a new (in ground) pool, I strongly recommend that you photograph every pipe, bend, joiner and elbow, everything that will eventually be buried and lost to view. It may save you quite a lot of angst at a later date.

### And Finally, another “First”:

Replacing salt chlorinators with **New Millennium** ionisers is now a common occurrence, but after more than two decades in the business, we have never been called upon to replace a swimming pool ozonator. However, a word-of-mouth referral from an customer in the NE resulted in another up-country trip to replace her neighbour’s non-functioning ozonator with one of our **New Millennium** Series II ionisers. The cocktail of dam water, bore water and tank water made life interesting, and we almost walked away from the job, but we didn’t. and understand that all is now is order and the pool is fine. Yet another blow for our Pool Algaecide and Sanitising Systems - our **New Millennium** Ionisers.



The Director