

Monitoring and remote control of pools turns 30 years old!

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Do you remember what you were doing in 1991-92? Some commercial pool owners and their service providers remember the humble beginnings of what is now one of the hottest trends in aquatics - remote monitoring and control. As a brief overview, the four major categories of remote monitoring, control and communications are:

- Remote Monitoring, optimally in real-time, and from a wide variety of mobile devices.
- Digital log keeping down to 1-minute increments, with the ability to easily review stored logs.
- Full two-way remote control of any connected device (pumps, filters, heaters, chlorinators, and water fill).
- Escalating alert notification of any out-of-range parameter until the issue is resolved.

Getting one or two of these is nice... but the real goal is to achieve all of them.

The early origins were primitive by today's standards, and were based on phone line connections, which were relatively expensive, slow, and kind of a pain to set up. Some leading models of early communicating controllers would answer the phone, speak in a synthesized voice, and tell you the readings, the current alarms, etc. While it was one-way communication, and you couldn't really take any direct action or change settings, you knew there was a problem... that was still awesome. The '92 controller brochure read: "Your Pool Can't Wait to Talk to You."

Fast forward a few years to the late 1990s, and some manufacturers came out with a new generation of communicating controllers. These allowed two-way communication for the first time, but lost the voice and alert notification capabilities, which was a shame. One could monitor and store logs, and could change a few settings; they couldn't change much more remotely. Again, it was providing a unique service enjoyed by many premier pools and condos

alike, but we knew there could be more.

Fast forward again to the mid-2000s, when a leading manufacturer came out with a new line of interactive chemistry controllers. The ability to communicate took a quantum leap. The phone lines went away, and the communication protocol switched to ethernet. Many became big fans. We quickly found out that by switching to ethernet, we traded synthesized voices and pager alerts, for the ability to communicate via text and email. THAT was a game changer. At that time many hundreds of customers got connected, started monitoring their own facilities, and monitoring programs expanded exponentially, providing monitoring, remote control, and “cyberservice.”

Then circa 2013, major innovations were developed including phone apps that allowed customers to be in constant contact with their pools on property, across town, and around the world. This filled a huge gap because folks didn't always carry around a laptop, but always wanted to stay connected to their pools. Calibrations by phone were not allowed for security reasons, but it was another game changer for sure.

A few years later gigabit speed and proprietary connection protocols were introduced, which provided much desired layers of security for connections and data (requested by some, but absolutely required by the most discerning public or military facilities). Extensive 1-year on-board data storage was added, as were tremendously simplified ways for controllers to connect to any local open network...whether wired or wireless. There are other simple communication solutions for facilities where the IT department completely locks down all internet traffic.

During all these years many folks had been monitoring using proprietary programs, loaded onto their computers, which allowed all to look at pool readings down to increments of seconds or minutes. They could program hundreds of controller parameters, change alert notification recipients and timing, and monitor in real time while logging and controlling all parameters (chemistry, system flow, filter cleanliness, water autofill flow, water consumption, pump vital signs (TDH) and much more). While the programs were free, they were intricate, and customer tended to outsource the entire remote controller programming and log-keeping process. So, major monitoring centers handling many thousands of pools were established, making customers' data available as needed to protect their facilities from frivolous liability issues, or to resolve

an intermittent hiccup.

More recent innovations include web-based interfaces giving customers an easier and quicker way to connect with their controllers, giving them total access to their systems via their smart phones, tablets and PC's...without loading or navigating any complex programs.

Finally, you have the culmination of the four major categories of aquatic remote control and communications mentioned above, complete with proactive readings recap, graphs on all parameters, controller calibrations, test kit readings, and more... wow.

What started out as a nice "feature" for a few customers to assure high standards at their facilities has transformed into a "must have" industry requirement to be able to handle the crazy pace of today's litigious society. Leading service companies are implementing communicating control systems into their service strategy and are streamlining routes and optimizing their efforts to provide the best customer service with the least amount of manpower.

We'd like to say we've finally arrived at the end... but many are already working on the next step.

Jump on board..."Your Pool Can't Wait to Talk to You."



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