

# CAT Controller Courier # 32

May 2009

## **It Is That Time Again!**

Ask yourself... is my company ready for the upcoming season? Do we know who our customers and potential customers are? Have we done a good job marketing our services? Do our customers and potential customers know what we have to offer this year? What do I know and what don't I know about my customers? Is my warehouse stocked with all of the necessary product we may need? Well CAT Controllers would like to provide you with some helpful tips to getting prepared for this season. Remember that CAT Controllers is always more than willing to help you with your physical marketing efforts, so do not hesitate to ask your sales managers for help with this year's marketing.

### Helpful Preparation Tips:

- Request a list of all licensed commercial pools in your service area from your county health departments.
- Take the list and import it into a database engine.
- Send a general customer letter with CAT Controller Cutsheets to all licensed commercial pools and existing customers.
- Follow that mailer with a CAT Controller post card mailer. (Ask CAT to Help)
- Follow up with a phone call to all of the commercial pools that you mailed.
- Drop off a physical CAT controller brochure to all existing accounts.
- Complete an Initial Pump Room Inspection ([Click Here For Initial Pump Room Inspection Sheet](#))
- Complete a full inventory of the products which you know you will need this upcoming season.
  - Proper Test Kits & Reagents (FAS/DPD)
  - pH and ORP Sensors
  - Teflon
  - Pump Feed Tubes
  - Flex Tubing
  - Pressure Sensors/Gauges
  - Flow Sensors
  - Vacuum Sensors/Gauges
  - Assorted Plugs and Screws
  - PVC Glue
  - Well Stocked Tool Bags/Boxes
  - Try to encourage and offer water quality management or lease financing.

Be prepared this year and don't let the competition pass you by. Contact your sales manager for any marketing material you may need.

Written By:

Troy McGinty  
CAT Controllers, Inc.

### **ACTIVATE YOUR CONTROLLERS NOW!**

CAT Controllers invites you to make sure that all of your CAT 4000's and CAT 5000's in the field are activated. It is that time of year, be sure to start utilizing the wireless, web-based communications of our communicating controllers. The Poolcomm website is there for you, the pool professional, to take full advantage of its helpful benefits. For the flat monthly rates, seasonal pre pays, or annual prepay rates, per your CAT 4000 or CAT 5000 controller contact Troy McGinty 800-657-2287.

- Hourly logs of your pH/ORP water chemistry.
- Graphs of your water chemistry.
- Feed Times
- Temperature
- Flow Rates
- Stratum Suction Alarms
- Set Point Logging
- Outbound alarm notifications to your e-mail or mobile phone.
- The ability to change alarm settings and set points from any internet based PC in the world.
- The ability to assign read-only and read/write access to you customers for their benefit.
- Twenty-four hour a day connection with your pools.

### **SEASONAL SPECIAL**

CAT 4000 for 5 Months of Airtime = \$125.00

CAT 5000 for 5 Months Airtime = \$150.00

Only Offered In May and June!

Please contact me, Troy McGinty, to activate your controllers and get them registered to the Poolcomm website. I will also be able to help you check your wireless coverage areas, help you troubleshoot specific applications, assist with installations, as well as consult with you regarding your company's own

water quality management program. If you have any questions, concerns, and/or ideas please contact me as soon as possible at 800-657-2287 or e-mail me at [mtmcginty@chemauto.com](mailto:mtmcginty@chemauto.com).

CAT Wireless Controllers have made quite an impact on our industry. We here at CAT would like to thank you for supporting our efforts to continue pioneering and improving the water quality management industry. We hope you take advantage of the CAT 4000 and CAT 5000 benefits and continue to do business with CAT Controllers in the future.

### **CAT STRATUM SPECIAL**

Contact your CAT Controller Sales Representative today and ask about a special Stratum offer. With the season just around the corner you must be sure to get your pools up to code!

CAT offering Safety with Simplicity at a GREAT PRICE!  
CALL NOW 1-800-657-2287

Josh Saville - Eastern Regional Sales Manager  
Paul Hammond - Western Regional Sales Manager

### **Water Balance Is The Key!**

85% of inbound troubleshooting calls to CAT are water chemistry related. We all know that every pool has a different water chemistry makeup dependent on the pool surface material and age, piping material, fill-water chemistry, sanitizer and pH maintenance products, etc. What many customers do not understand is that maintaining proper water balance is critical to achieving successful pH/ORP automation. Attention to the following key elements of water balance will allow your controllers to maintain optimal water chemistry.

#### pH

Properly balanced pH is the most important part of your water make up. An ideal pH 7.4-7.6 will help to make sure that your chlorine is working at its full potential and your pool equipment is not in danger of corrosion or scaling and insures bather comfort.

- *Regarding Controllers* - Make sure pH is at an ideal level because your ORP reading depends on whether or not you have a balanced pH. High pH = lower ORP. Low pH = higher ORP.

### Free Available Chlorine (FAC)

Maintaining free chlorine at the proper level is very important for the safety and hygiene of bathers as well as the pool surface & equipment. FAC is the active disinfectant in the pool and needs to be maintained as specified by Health Department standards. Industry ideal PPM of FAC is 2-4 ppm for pools and 3-5 ppm for spas (depending on your sanitation method).

- *Regarding Controllers* - Make sure your chlorine level is where you would like it to be at the time that you select your ORP Setpoint. There is no direct correlation between FAC and ORP. The controller (if your water is balanced correctly) will attempt to hold your FAC level by feeding the proper amount of balancing chemicals to maintain the ORP and pH setpoints which in turn will hold your FAC level.

### Total Alkalinity (TA)

Maintaining proper TA in your pool/spa is more important than many people understand. Consider TA to be a measure of the water's ability to provide a pH buffer. Failure to maintain TA within the ideal ranges of 80-120 ppm can allow dramatic swings in pH.

- *Regarding Controllers* - If TA is below 80 ppm you may start to see drastic fluctuations in pH and you will not have the ability to steady it out. If your TA is too high your controller will not be able to change the pH no matter how much acid it feeds. Be sure to keep the ideal level of TA so that your controller can balance your pH accordingly.

### Total Dissolved Solids (TDS)

TDS is a factor that is quite frequently ignored. High TDS may lessen the disinfectant's ability to oxidize contaminants. We need to be sure that we keep our TDS below the suggested 1500 ppm above your start up/fill water. Once we start getting into higher levels you may see problems in water chemistry.

- *Regarding Controllers* - The higher your TDS the lower your ORP will be. If there is a lot of extra matter in the pool the chlorine activity will slow. Remember "FREE" "ACTIVE" the less matter in the water to have to attempt to oxidize the more effective it will be, resulting in a higher ORP.

### Cyanuric Acid (CYA)

Though this chemical can only be introduced manually by us, we must be sure to keep it under control. The use of Cyanuric acid is very much important to outdoor pools that receive a lot of sun to help keep the disinfectant in the water. However, if we add too much Cyanuric Acid we will decrease the activity of our disinfectant. It is important that we are sure to keep our CYA below 50 ppm in our pool at any one time.

- *Regarding Controllers* - Any amount of Cyanuric acid will decrease your disinfectant's ability to oxidize dramatically during the day, in turn giving you a lower ORP. We must be sure to keep our

levels of Cyanuric down so we can keep a high enough ORP reading so that we know our water is safe.

*Remember folks there are many other things that will affect your water chemistry and your controller's ability to work correctly. Please contact Robert Legaspi at 1-800-657-2287 with any questions or concerns you may have about your water chemistry or your controllers. For more information on any of these subjects talked about in this article please contact Troy McGinty.*

Written By:

Troy McGinty  
CAT Controllers, Inc.

### **The Preferred Chemical Testing Method**

Chemical testing methods have changed throughout the years. First was the Orthotolidine test, otherwise known as the OTO method, which only measures total chlorine. This method is no longer accepted for public pool/spa testing. There is also the Diethyl - p - phenylenediamine, otherwise known as the DPD method, which measures both free available chlorine and total chlorine. This test is available as a colorimetric comparator and titration test. Most states now require the use of DPD tests kits. The most accurate and most reliable type of chemical testing is the Ferrous Ammonium Sulfate (FAS-DPD). This kit takes out the "guess work" of color comparisons used in the colorimetric method. This test will also give you more precise FAC readings and also allows for measuring higher FAC readings. Most test kit manufactures sell FAS-DPD test kits. Please contact your preferred manufacture for more information.

Written By:

Troy McGinty  
CAT Controllers, Inc.

### **Will Injecting CO2 Promote Algae Growth?**

Recently we have had clients that were concerned that CO2 introduced into the water to decrease pH could possibly promote algae growth. I think I can help us all better understand the scientific dynamics of CO2, Alkalinity, and Algae Growth. However, I am not a "Water Chemist" and I have asked for the assistance of Thomas Lochacki who has a Ph. D. in Chemistry and is the CEO of the National Swimming Pool Foundation on this matter.

Algae growth is primarily promoted by high phosphates, nitrates, sun light and warm temperatures. Now we are also aware from basic 7th grade chemistry that that algae needs "carbon" dioxide (CO<sub>2</sub>) to help complete the photosynthesis process. This being said, if CO<sub>2</sub> is introduced into the water as carbonic acid, the "carbon" that is introduced will raise our alkalinity. We also know that total alkalinity is "basically" the measurement of carbonates and bicarbonates in the water. This concept is where the confusion lies. We should not be fooled to think that by adding CO<sub>2</sub> or carbon into the water we will be promoting algae growth. There is plenty of CO<sub>2</sub> everywhere in our atmosphere and the minimal amount added by the CO<sub>2</sub> injection plays a role that is insignificant on this scale. If the algae need CO<sub>2</sub> it has plenty of sources. In conclusion algae, from my understanding, will not flourish/grow because of the addition of CO<sub>2</sub> into the water to control rising pH.

Written By:

M. Troy McGinty  
CAT Controllers, Inc.

I hope all of you enjoyed the May CAT Controller Courier. I am starting to run low on ideas for newsletters. Please feel free to email me any new suggestions or questions pertaining to controllers, water chemistry, WQM, or commercial pools in general! CAT thanks you for your support and wishes you the best of luck this Summer Season. Happy Memorial Day!

Sincerely,

Troy McGinty  
CAT Controllers, Inc.