



LOGIC
Technologies, Inc.

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"Advanced and reliable technology solutions at an affordable cost"

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Ideas for Articles of Interest?

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The

Controller

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Understanding Your UPS

by Russ Nagel

The Logic Technologies System Uninterruptible Power Supply (UPS) is like your car battery, you only think about it when it doesn't work. Hopefully, your UPS is working at the moment and this is a good time to get more familiar with it. We communicate with the UPS through one of the communication channels (see the June 2009 and August 2009 issues of The Controller). To verify that your communication channel with the UPS is working, you will need to go to the analog database screen. From the main page, select F1, F1. You will have one analog point dedicated to reading the input voltage for the UPS, it will

will see a blue screen. The UPS is waiting for a command. The first item to check is the time and date. This will be helpful when you start having problems. The command to change the time and date is **date**. This will display the current time and date, then the operator can change both the time and the date. The format to set the time and date is: [month]/[day]/[year]. Another command you may want to try is **al** which is short for **alarmlog**. This will display the alarm history. This will be helpful when the UPS is beeping at you and you don't know how to interpret the beeps.

Terminating communications with the UPS depends on how you are communicating with it. If you are using your remote

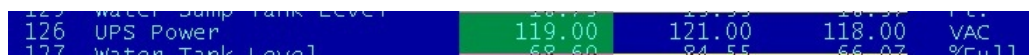


Fig. 1

look similar to figure 1. Once communication with the UPS has been verified, it's time to read the status of the UPS. To navigate to the screen that allows you to communicate with the UPS select F5,F7,F7 from the main screen. The password is **power**. Once you are logged on to the UPS you

computer you will go to *Utilities* at the top of the screen, then move down to *Disconnect Remote Link*. If you are standing at the main panel select Shift+F10 to disconnect from the UPS.

A few more points about the UPS. Don't wait until it is

being to try what has been covered in this article, get familiar with the UPS now, while it's quiet. There are many more commands than the ones I have talked about in this article. To get a copy of the UPS manual you can email us at:

support@logictechnologies.com.

When you decide its time for new batteries, remove the cover from the UPS. Get the model number and serial number off the battery, and get the model and serial numbers off the UPS. Then call technical support with the model and serial numbers so someone can have new batteries sent to you.

Upgraded Training Facilities for Logic Technologies, Inc.

by Russ Nagel

We have recently upgraded our training facility to enhance student learning by making the class more interactive. The classroom now includes six individual computers connected to the company network. Each computer gives the student the ability to log on to the training computer and follow along individually with the presentation on the main viewing screen. Students also have the ability to navigate the system independently of what is happening on the instructors screen.



A second projection board displays the outline of the current topic being discussed. This helps students maintain a big picture mindset while details are being covered.

command prompt.
3. Common commands, used for troubleshooting, issued from the command line.
4. Understand how to create analog formulas.



Fault simulations can be created, giving students hands on experience dealing with issues they may face in the field. Students also get experience performing several common tasks:

1. Proper response to alarms.
2. Getting to/returning from the

5. Understanding Engineering Console (ECON) capabilities and how they can help the operator.

Because there are only six workstations, classes are now limited to six students.

How to Monitor a Digital Input or Output

by Russ Nagel

There is a simple technique available that will allow an operator to get a rough idea of when a digital output is on or off. This technique will work just as well with an input. We will set up a point in the analog database to monitor the digital I/O. As you already know, the analog database records its values every fifteen minutes, so the data will have some amount of error.

The percentage of error depends on how long of a time period your sample spans and how often the value of the signal changes. Fortunately, most of the signals we might be interested in monitoring will be on or off for an hour or more. Also, this data may be recorded for a few weeks or a few months. With this in mind, we should still be able to get some useful information.

The next question is why? Suppose you want to get a timeline of when an air unit is in cooling mode. This can be easily accomplished by monitoring the activity of the liquid solenoid valve. To get started, follow the steps outlined below.

1. Determine the I/O number of the output you want to watch. The I/O numbers can be found by looking at your prints. You can also get the I/O information from the Signal (I/O)

Training Info & Schedule

Operator Level Sessions

This class session provides in-depth coverage of the use of our system to maintain the daily operations of a refrigerated facility. The class is conducted by Gordon Simpson designing refrigeration control systems. In effect, the classes are taught in layman's terms by someone who fully understands the issues faced by refrigeration operators.

Wednesday, July 11 thru Friday, July 13

Wednesday, August 8 thru Friday, August 10

Advanced SST Sessions

This class session provides in-depth coverage of the screen and report development tools provided by our system. These classes also briefly cover the script language used to develop control algorithms. These classes are conducted by senior members of our engineering staff. Prior technical expertise is a pre-requisite for this course.

Wednesday, Sept 12 thru Friday, August 14

Training Enrollment

Operator training sessions are \$450 per person and advanced training sessions are \$750 per person. We provide lunch for each class day; however, all other travel expenses are your responsibility.

Seating is limited so make your reservations early by contacting Kim Smith or Cindy Gaffney @ 770-389-4964

Maintenance Utility screen. To get there, start at the main screen. Select F5,F7,F2, then enter your code, typically the code number 1 is used here. Page down until you find the parameter you want to record. The I/O numbers are the first (leftmost) column on this screen. Record the I/O number.

2. Go to your analog database screen. From the main screen, select F1,F1. Page down until you get to the end of your analog database. Select the last item in your analog database. Select the **<N>ext** button at the bottom of the page. This will show you a blank entry in the analog database.

3. Use your mouse to select line two. Enter the number you recorded in step one and select enter.

4. Use your mouse to select line one. In the field on line one, enter the '=' symbol and select enter twice.

5. Use the mouse to select the **<C>alibrate** button.

6. Select the **<F>ormula** button and enter **!io[%io]** select enter two times. Escape out of this screen.

7. Select line three to activate the analog scan for that analog database point.

This analog point is now recording, the state of the digital I/O. You can observe when this value changes by

going to your newly created analog and selecting **<T>rend**.

There are a couple of issues we need to keep in mind. First, the system is configured for a limited amount of analog points. Adding four or five more items to the analog database is not likely to cause any problems. If it is necessary to add more than five points, call technical support here at Logic Technologies, Inc. We can take a look at how many points the system is configured for and advise you the best way to proceed.

Second, a procedure has to be followed to eliminate an added analog data point. Otherwise, the system may generate an

alarm and shut down the analog scan.

When removing an added point follow these procedures. While at the point in the analog database:

1. Go to line three and set the scan active flag to inactive.
2. Erase the formula you added earlier.
3. Select line two and remove the point from the I/O database.
4. Select line one and remove the description.

At this point the item you added to the analog database has been removed.

Safety Note: Don't acknowledge that Alarm!

by Russ Nagel

Don't acknowledge that alarm unless you know exactly what it means. Your level of experience determines how often this situation might present itself. Even experienced operators can get an alarm message they aren't familiar with. While it may be necessary (flashing light or screaming buzzer) to acknowledge the alarm, don't forget about it. Find someone within your organization who can tell you what it means and how to handle it.



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