



LOGIC
Technologies, Inc.

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Inside this Issue:

P1 Reports you should know about

Ideas for Articles of Interest?

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The

Controller

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Reports you should know about.

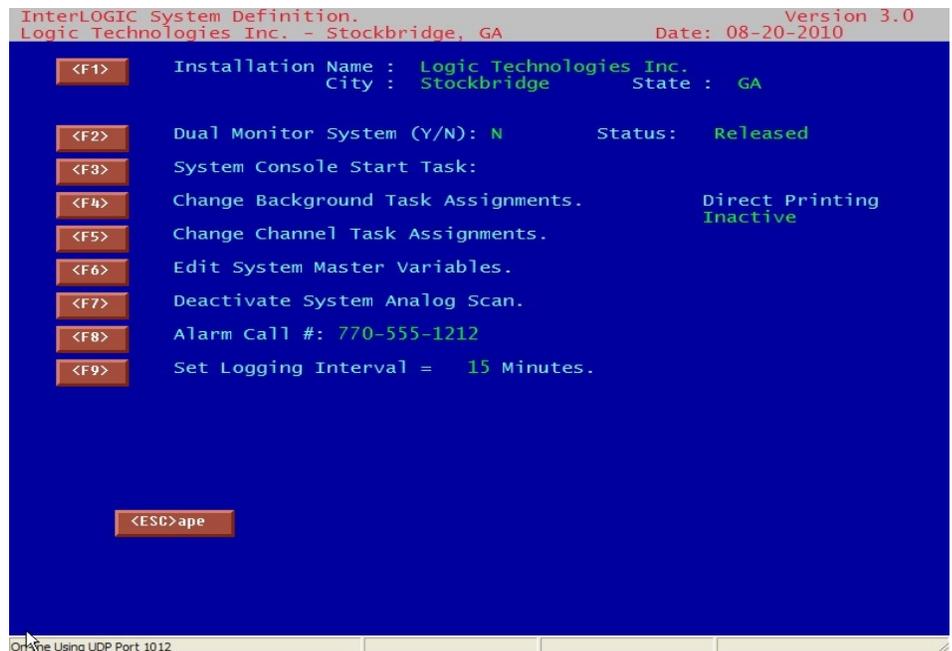
by Russ Nagel

Your refrigeration control computer provides many different reports that most operators are unaware of. Some of these reports can be printed and kept on hand for reference purposes. Others can be printed daily and kept as records.

Before the details of the reports are discussed, there are a couple of items that need to be covered. First, you always want to generate reports from a remote computer.

The second item is how often the system records analog data. The operating system records the value of all analog points at specified intervals. The most common time interval for recording analog data is every 15 minutes. See item <F9> in the picture below.

The time interval is set on the System Master Information page. To navigate to this page from the main screen, select <F5> - System Utilities, <F1> - Modify System Master Information. Item <F9> - Set Logging Interval, is where this value is controlled. It should be



set for 15 minutes. Every Sunday at midnight, the system will create an archive of the data file built during the week.

For many reports, the computer can use data from the current week, or sometime in the past, maybe even two years ago! It's time for an explanation of the difference between current and archived files. The screen below shows the operator can choose between <A>rchived and <C>urrent files.

August 20th. You need temperature data from three of the temperature sensors in freezer #1 from Tuesday of this week. In this case, the operator will need to look at the current (or active) data file. Any time prior to this week will require an archived file.

When choosing archived data, the computer will ask what year to display the archived data for. The operating system will then display the available archives for

Reports are located in two different sections of the operating system. The first group of reports can be found by selecting <F4> - Reports Menu from the main screen. The second group of reports are available (from the main screen) by selecting <F5> - System Utilities, <F7> - Signal Database & Utilities, <F9> - General Reports Menu. The reports listed under <F4> - Reports Menu, from the main screen will be covered first.

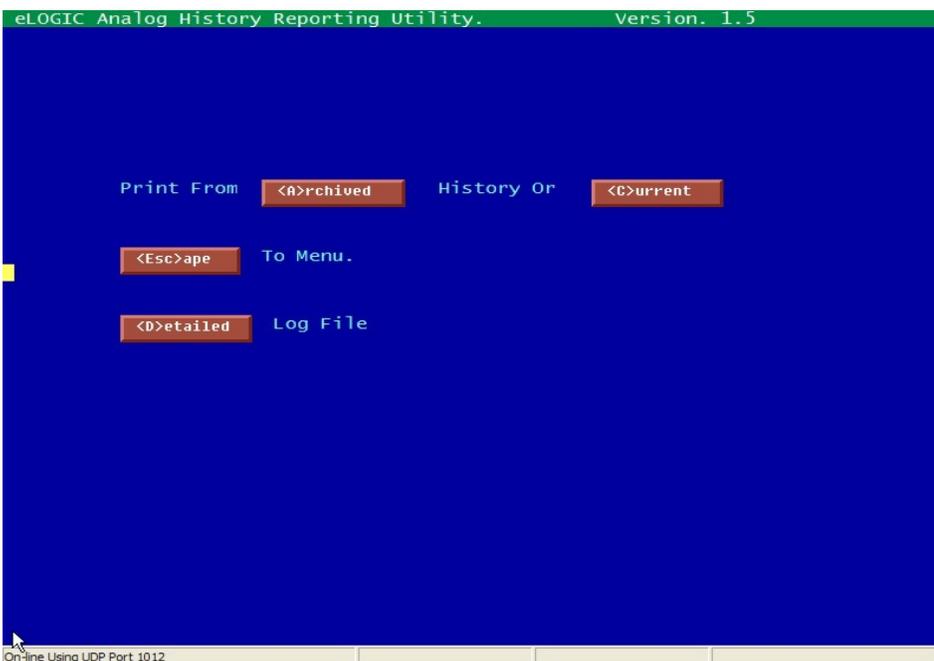


Fig. 1

Current (or active) means the week you are progressing through at the moment. Archived means weekly data the computer has already saved. The main computer archives the active analog data file at the end of each week. Remote computers can also be configured to save analog data on a weekly basis.

Example: Today's date is Friday

that year. The dates shown represent the day the file was archived. Remember, the data is archived at the end of the week. Use the mouse to select the week that contains the necessary data. WAIT A FEW SECONDS! The system will then display dates available (along the bottom of the screen) and prompt the user for the necessary information to generate the report.

Group One

Eight reports are available by selecting <F4> - Reports Menu. Some of the eight reports will be discussed in the newsletter, but the operator should familiarize himself with all the reports available.

The first three reports are all examples of reports that should be printed and kept on hand for reference.

<F1> - Evaporator Control Report. This report contains important details about the configuration of each valve group, such as the valve group description, temperature set point and valve and fan I/O control points.

<F2> - Evaporator Defrost Times Report. This report contains an easy to read format of the scheduled defrost times for all the evaporators on a defrost schedule.

<F3> - Evaporator Temperature Schedule Report. This report shows the scheduled

temperature changes (if used) for each evaporator in an easy to read format.

<F7> - System Analog History Report. This report allows the operator to print a report with up to eight analog signals. The operator has to choose between archived and current files. The system will prompt the operator for the quantity of signals to print. Next, the system asks for the analog number of the signal. The analog number is the number found by selecting (from the main screen) <F1> - Process Displays, <F1> - View Current Analog Values, (leftmost column). Finally, the system will prompt the user for dates used in this report. Available dates will be displayed along the bottom of the screen. After the operator enters days and time, the report will be generated.

<F8> - Current Analog Values Report. This report allows the operator to record a sensor reading taken with an independent sensor and compare that reading to the value shown by the refrigeration control system. A hard copy of this report should be generated and filled out when checking ammonia sensors. The hard copy can go in the PSM manual. Another good time to use this report is for customers with sensitive temperature requirements, such as turkey storage, approaching Thanksgiving.

Group Two

A second group of reports are

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 who has many years of experience 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, April 13 thru Friday, April 15

Wednesday, May 11 thru Friday, May 13

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.

Call for more information regarding advanced classes.

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

available from the main menu by selecting <F5> - System Utilities, <F7> - Signal Database & Utilities, <F9> - General Reports Menu. The report in this group most operators are familiar with is the System Alarms Activity Report. This option will generate a hard copy of the alarm history file. The operator can clear the alarm history after generating the report, or simply print a report and leave the alarm history intact. Even if hard copies of the alarm history are not generated, the ALARM HISTORY SHOULD BE CLEARED ON A WEEKLY BASIS. The best time to do this is Friday afternoon, especially in facilities that don't have weekend coverage. Other reports of interest on the System General Reports menu are:

<F1> - Analog Setup Information Report. This report gives detailed information about each analog point, such as alarm high and low values, appropriate alarm dead band, the formula used to convert sensor data from a raw (number only) value, to units we normally use everyday (Ex: Deg. F or PSI). Any outputs that are controlled by the analog point, along with dead band associated with the control point are also listed in this report.

<F5> - I/O Device Reference Listing. This report lists the I/O points, along with their description, in sequential order.

Both of these reports, **Analog Setup Information** and **I/O**

Device Reference Listing, are good reports to have hard copies of.

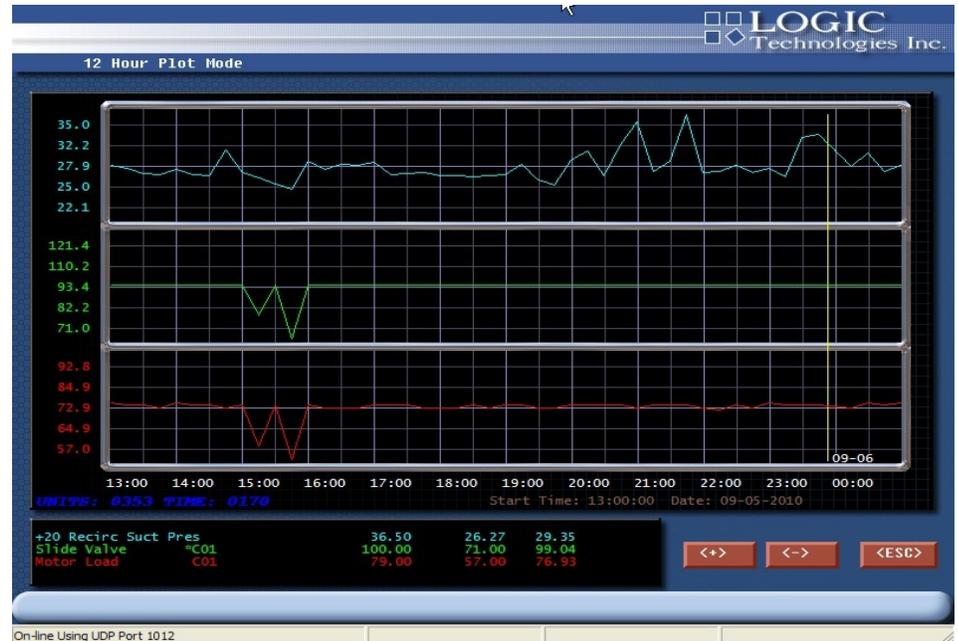
Another good report that isn't grouped with the others is called View Analog History Trend, shown on this page. It can be accessed with the following keystrokes from the main screen, <F5> - System Utilities, <F7> - Signal Database & Utilities, <F3> - View Analog History Trend.

This report will allow the operator to select three analog signals and plot them on a graph. Plotting three analog signals in this way can be useful for troubleshooting purposes.

The operator can choose signals such as compressor slide valve position, vessel pressure and

compressor motor amps for comparison. Comparing three signals like this in a graphical format can be much more informative than looking at a column of numbers. In order to generate this report, the computer prompts the user for

many of the standard inputs we have already covered, such as current or archived data, number of signals, analog signal number and finally time and date information.



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