AEQUERY

DATA CAPTURE SOFTWARE

ATS APPLIED TECHNICAL SYSTEMS

AEQUERY DATA CAPTURE SOFTWARE
REV 11/16/05

DESCRIPTION

AEQUERY is a data capture and control program for AE Series Production Monitor Displays.

Systems with up to (32) AE44-503J, Dual Line Production Monitor Displays, or AE-503DX1 Remote Display Interfaces can be connected to a computer providing Goal and Actual production data from multiple production lines throughout your plant.

Individual displays or groups of displays on the system can be monitored. Onscreen reports showing Goals, Actual counts, run times, and totals are provided. Data can be printed and saved as a CSV file for input into a spreadsheet.

Newer versions of the AE44-503J or AE-503DX1 with WC5 Firmware, allow AEQuery to Preset and Control various display functions. Also works on older versions with WC3 and WC4 Firmware.

Optional Remote dislays are available for showing the production status of each line, including totals .

This instruction manual will use the "AE44-503J" model number to mean either the "AE44-503J" or "AE-503DX1" model numbers.

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<u>**SYSTEM SPECIFICATIONS**</u>

Functions:

    When used with AE44-503J's or AE-503DX1's with WC3 firmware –

        Acquire Goal and Actual data from up to 32 displays for onscreen reports.
        Reset Run Time timers on any display or group of displays
        Save scanned data to a CSV file for used with spreadsheets or other programs
        Print scanned data
        Totalize scanned data for onscreen reports (send to optional Remote Displays)
        Diagnostic loop on any display or group of displays for onscreen reports.

    AE44-503J's or AE-503DX1's with WC5 firmware –
        Same as WC3 plus:

        Preset Goal and Actual counts on any display or group of displays.
        Preset Goal Count Rate on any display or group of displays.
        Preset Actual Count Rate on any display or group of displays.
        Toggle Run/Hold on any display or group of displays.
        Toggle Auxilliary Relays (if installed) on any display or group of displays.

Interface:

    An ATS P/N 9200-0509 or 9200-0509 Rev B RS485 to RS232 Adapter is required.
    Connects to your PC's RS232 Serial Port.

Relay Output (Optional):

    A 4-channel relay board assembly can be added to an AE44-503J with WC5 Firmware.
    These relays can then be controlled from the AEQuery Program.

Totals Output:

AEQuery can be set up to transmitt the Goal and Actual Totals to a Remote Display System. An ATS P/N 9200-0509-A RS485 to RS232 Receive Only Adapter is required. Connects to the same RS485 line running to all AE44-503J's. Its RS232 output is the connected to an AE Series Remote Display, such as the AE4X46-503J.

INSTALLATION

WIRING

All AE44-503J Displays should already be wired at this point except for the RS485 data comm wiring. Refer to the AE44-503J user's manual for more information.

Connecting the 9200-0509 RS485 to RS232 Adapter

Two-conductor cable is required. Recommended cable: Belden #8442 or equivalent. Do not use shielded cable. One pair of a CAT5 cable also works well. Remove power from the RS485 Module, and wire as follows:

RS485 Module	AEXX-503G/J
A	TB LABELED RS485(A)
B	TB LABELED RS485(B)

Plug the connector end (DB9) of the 9200-0509 module into the serial port of your computer.

Connect the power module to the the power jack on the 9200-0509 Adapter

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SETUP

Installing AEQuery

Locate the the Install.exe file on the AEQuery CD provided. Follow the on-screen instructions.

Starting AEQuery

Start AEQuery from the Program Menu.

The main screen will appear. Initial settings are required to communicate with the AE44-503J's

Be sure all AE44-503J's have been installed and their addresses properly set. Refer to the AE44-503J manual for more information.
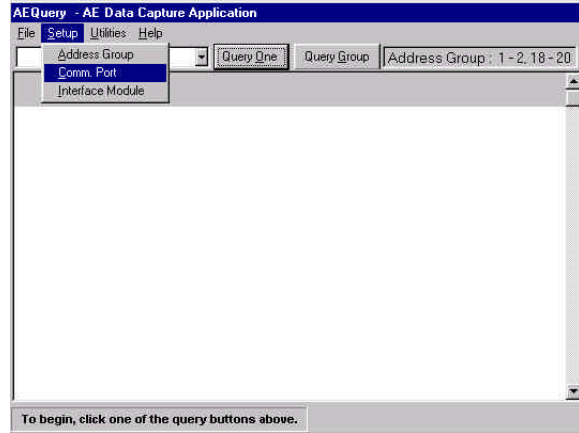
Initial Settings

Select Comm Port - Click the Setup button on top of screen. Pull down and click on Comm Port.
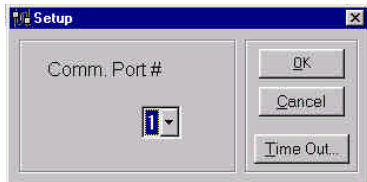
Select the desired Comm Port (1 to 8). Time Out will be set to a default value. This time determines how long the system should wait before deciding there is no data being returned.

Set up Interface Module - Click the Setup button on top of screen. Pull down and click on Interface Module.

ATS interface modules are recommended.

For the 9200-0509 Interface Module set the Switch Polarity to Negative and select an Interface Switching Delay that best matches the speed of your computer. This may have to be adjusted if your data scans show "Bad Data" , or "No Data"

For the 9200-0509 Rev B Interface Module check the box at the top of this screen. No adjustments are required when using this module
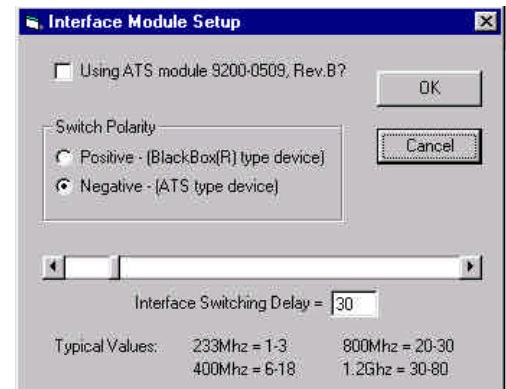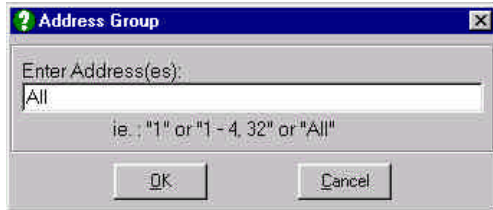
This window will appear. Check OK to accept. To switch back uncheck the box.
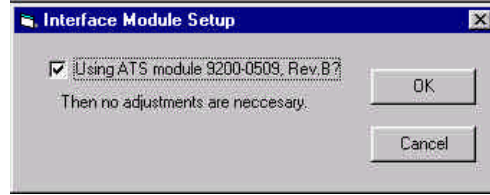
Address Group is used to set up your list of AE44-503J Production Monitors to be included in Query data scans or Totals Scans (part of Utilities).

Choose the addresses of the Production Monitors to be included or "All".

Utilities

There are four utility programs. Preset Units requires WC5 firmware and will be covered later.
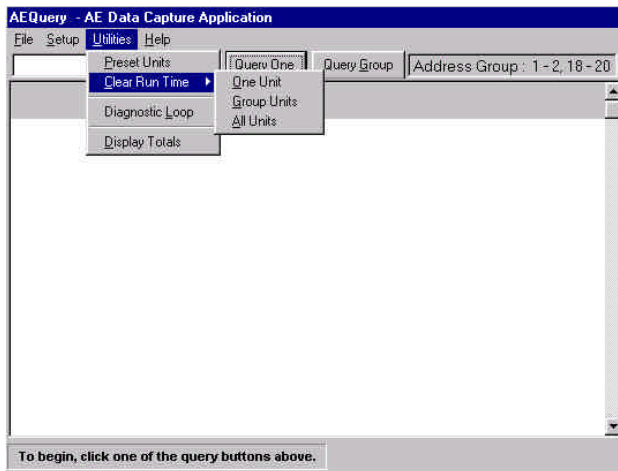
Clear Run Time – Use this utility to preset the Run Time on the AE44_503J Production Monitors. Choose from a single unit, a group of units or all units.

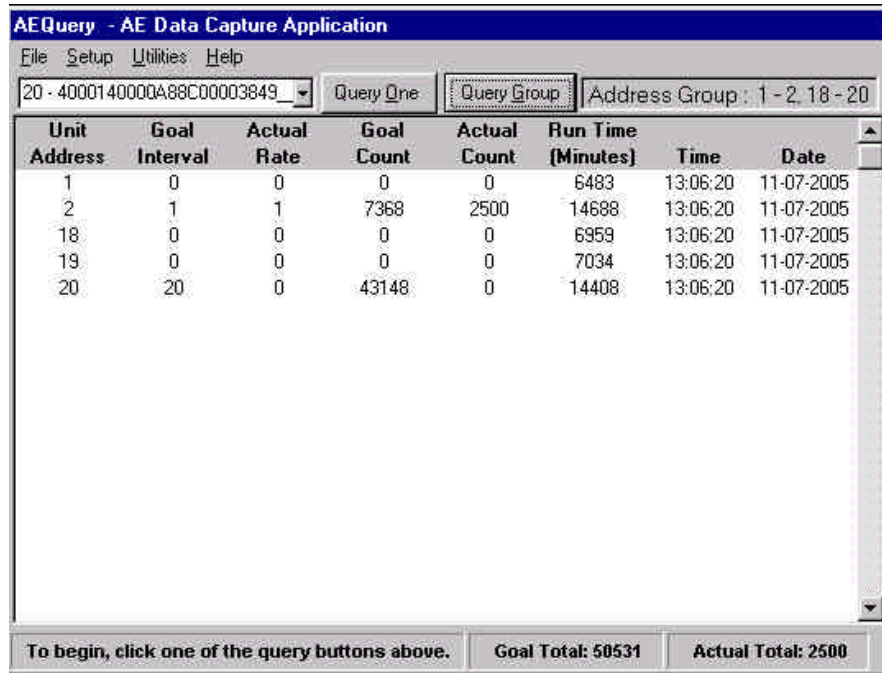Diagnostic Loop – Use this utility to continuously scan your address group.

Display Totals – This utility scans your address group and totalizes the GOAL and ACTUAL counts of each AE44-503J included in the address group.

Set the adjustable timer to periodically update the Totals to the screen and to the optional Remote Totals Display.
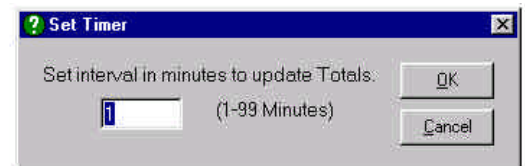
After the specified time a scan will occur and the Totals will be displayed onscreen as shown.

Be sure your address group contains AE44-503J's that are on line and properly set up. An error will be reported instead of the Totals if all selected AE44-503J's are not on line. If your system has an optional Remote Totals Display, it will be updated after each scan as well.

To stop the Totals scan, click the Utilities menu and un-check Display Totals.

Other scans

Query One and Query Group are used to get an on-demand update of a single display or group of displays. Query One might be used to check on a specific line to see if it is back online or up to capacity. Query Group might be used to get the end of shift numbers of a production group.

Both of these queries can be saved to a Comma Separated Variable (CSV) file for reviewing at a later time or for importing to a spreadsheet program.
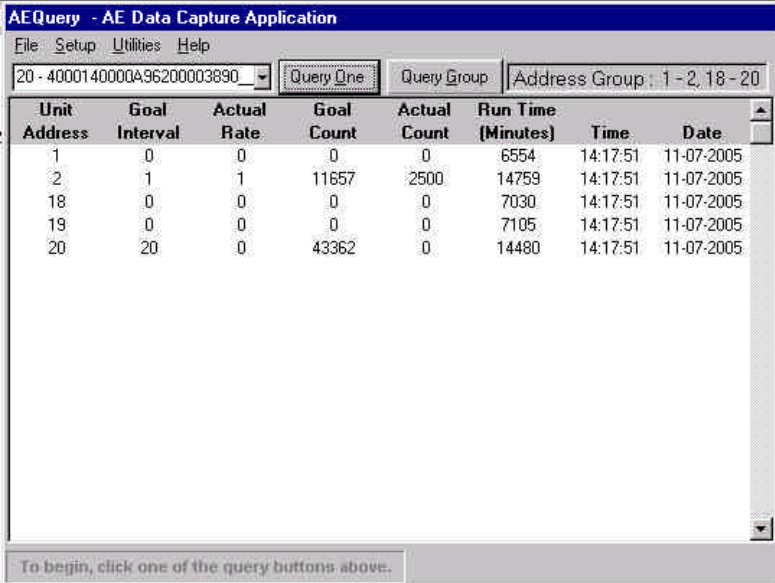
From the main display, click the Query One button. You will be prompted for a monitor's address. One or more monitors can be addressed in the Query One scan.

Click Query <u>G</u>roup. Your address group (selected during set up) will be scanned and displayed.

SAVING A SCAN TO A CSV FILE

Query <u>O</u>ne and Query <u>G</u>roup scans can be saved as a Comma Separated Variable (CSV) file.

From the <u>F</u>ile menu select Save <u>A</u>s. You will be prompted for a file name. This file can be re-opened and displayed using AEQuery or imported by a spreadsheet program.

PRINTING

Query <u>O</u>ne and Query <u>G</u>roup scans including those which have been save as a CSV file and re-opened can be printed

From the <u>F</u>ile menu select <u>P</u>rint. You will be prompted for a system printer.

OPENING A SAVED QUERY (SCAN)

Query <u>O</u>ne and Query <u>G</u>roup scans which have been save as a CSV file can be opened for viewing or printing.

From the <u>F</u>ile menu select <u>O</u>pen. You will be prompted for a file to open. Once selected the file will be opened and displayed on the AEQuery screen.

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PRESET UNITS (WC5 FIRMWARE ONLY)

AE44-503J's with WC5 Firmware have additional functions which can be controlled by AEQuery.

"Preset Units" overrides many of the functions of the AE44-503J and other AEQuery routines.

When using "Preset Units" the AE44-503J's are put into a computer controlled mode. Only the Run/Hold, Reset Goal and Reset Actual controls are available for local control. An AE44-503J can only regain full local control by resetting the unit, or by removing power for 24 hours.

To reset the unit set the Run/Hold switch to the Hold position. Press and hold the Goal Reset for about 5 seconds until the Goal count starts flashing. The flashing will stop in about 3 seconds. The AE44-503J is now in the local control mode.

Before using Presets Units, be sure the Run/Hold switch on each AE44-503J is in the Run position and theTotals scan is not running.

From the Utilities Menu select Preset Units. See the following screen.
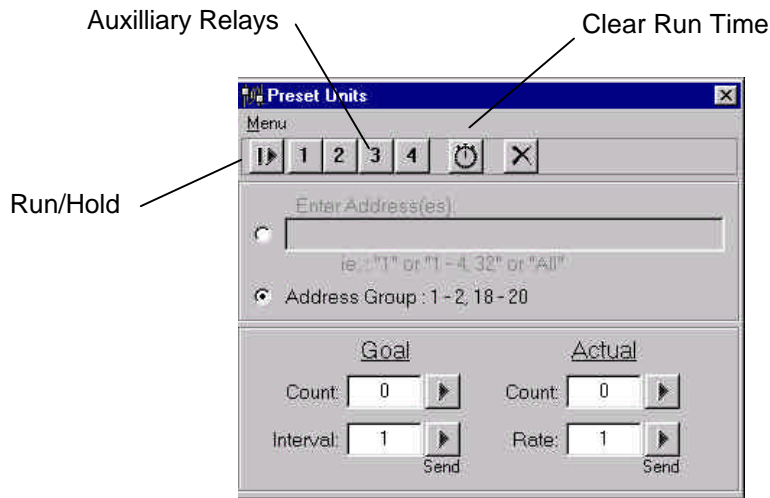
Any address, or group of addresses, or your address group defined earlier in Setup can be selected for presetting displays.

Presetting the Goal Count

Click the data field for Goal Count and enter the desired Goal Count Preset. For a Goal Count Reset, set to all 0's. Click the adjacent Send Button (right arrow) to send this update to the selected address group.

Presetting the Goal Interval

Click the data field for Goal Interval and enter the desired Goal Interval Preset. Click the adjacent Send Button (right arrow) to send this update to the selected address group. This will override any settings on the AE44-503J push-wheel switches. (See WC5 notes below)

Presetting the Actual Count

Click the data field for Actual Count and enter the desired Actual Count Preset. For an Actual Count Reset, set to all 0's. Click the adjacent Send Button (right arrow) to send this update to the selected address group.

Presetting the Actual Count Rate

Click the data field for Actual Count Rate and enter the desired Actual Count Rate Preset. Click the adjacent Send Button (right arrow) to send this update to the selected address group.

Toggle Run/Hold

Click the Run/Hold Button to toggle the Run/Hold function of the selected address group.

Clear Run Time

Click the Clear Run Time Button to clear the Run Times of the selected address group.

Toggle Auxilliary Relays (Relay Output Option required on AE44-503J)

Click the desired Auxilliary Relay Button to toggle the Relay.

WC5 NOTES

AE44-503J's or AE-503DX1's with WC5 Firmware can be internally jumpered to provide a 00.00 to 99.99 Second Goal Interval. When Presetting the Goal Interval the decimal point will be assummed to be at the hudredths location (XX.XX).

TROUBLESHOOTING

No Data/Bad Data

Check Comm Port.

> Proper Comm Port selected?
> Time Out Delay set properly?

Check Interface Module Set Up.

> Properly set for 9200-0509 or 9200-0509 Rev B Module?

> 9200-0509 Module –   Be sure 9200-0509 Rev B is not checked.
>   Switch Polarity must be Negative.
>   Interface Switching Delay properly adjusted?

> 9200-0509 Rev B Module –   Be sure 9200-0509 Rev B is checked.

Check AE44-503J Addresses - Two AE44-503J's with the same address will cause No Data and Bad Data errors.

Check 9200-0509 Interface Module.

> Cable connected?
> Power Module connected?
> Plugged into a viable RS232 Port on your computer.

Totals not getting sent.

Be sure all selected addresses in the address group are online. Remove any AE44-503J' from the address group that are not online.

Be sure the Prest Units window is not open.

TECHNICAL SUPPORT

For any questions concerning installation and operation of this product, contact our factory at:

PHONE (800) 444-7161
OR
FAX (318) 797-4864

SERVICE POLICY

It is recommended that all service for this product be done by the factory or by a factory authorized service representative. Applied Technical Systems will provide ongoing service support in and out of warranty. Send your repairs to:

APPLIED TECHNICAL SYSTEMS
849 KING PLACE
SHREVEPORT, LA 71115

APPLIED TECHNICAL SYSTEMS
WARRANTY POLICY

ATS warrants its products to be free of defects in material and workmanship for a period of 24 months from the date of purchase. ATS will repair or replace any product returned to its authorized factory service center within the warranty period so long as there is no evidence that the product has been abused, misused, damaged by lightning, overloads of any kind or water, or altered in any way.

Products returned for warranty must be returned with freight prepaid. ATS will pay normal freight charges to return the product to the customer. Special premium freight requested by the customer will be charged to the customer.

ATS disclaims any warranties expressed or implied, including merchantability and/or fitness for a particular purpose. In no event shall ATS be held liable for incidental or consequential damages.