

ExpertALERT™ Upgrade History

Covering ExpertALERT versions since 2.5

The following application note is compilation of upgrades to ExpertALERT™ since version 2.5 was released. For more information on any upgrade item, contact Azima DLI Support at support@AzimaDLI.com.

ExpertALERT 2.7

- Support for Sybase SQL Anywhere 7.0.s built-in database replication to easily share database information between users even in remote locations via the Internet
- Improved machine status icons in the database tree to quickly identify problem machines
- Improved sorting of machines by machine name, machine identifier, severity or test date,
- Two new Master Machine Lists to fully utilize the capabilities of our Report Editor
- New reporting capabilities to quickly access the information that users require to make decisions on the condition of their rotating equipment.

ExpertALERT 3.0

New Graphical Plots

Cepstrum

- The Cepstrum is essentially a spectrum of a spectrum and is useful for extracting periodicities from a spectrum. Cepstrum is used by system to automatically extract bearing tones from a spectrum.

Bode

- Used to identify critical shaft speeds
- Used in “run up” and “coast down” tests
- The bode plot is 1X amplitude vs. RPM and 1X phase vs. RPM
- Testing requires the DLI Watchman® DCX™ or DCA-50/60

Process Parameter Analysis

- User defined alarm text
- Calculated process points
 - User defined equations
 - User defined alarm text

Process parameters such as temperature, pressure and flow rate are useful indicators of machine health that complement vibration analysis. These parameters may be hand entered in the software, collected via sensors or integrated via OPC.

Users may now include measured parameters in equations to calculate items such as efficiency, pressure differentials, flow rates and other indicators of machine and process health. Linear speed measurements may be converted to RPM (such as in a paper machine) and used to normalize vibration data

Data Collector Improvements

Note: these do not require data collector upgrades

- User can order route (DCA-31™, DCX, DCA-50)
- Time Synchronous Averaging (DCX, DCA-50)
 - This is useful for troubleshooting gearboxes
- Support of multiple demodulation filters
 - Demodulation is useful for detecting faults in rolling element bearings and gearboxes. It is especially useful for slow speed shafts.
- Lines of resolution increased to 25,600 (DCX, DCA-50 and Sprite™)
- Increased battery life (DCX)

Expert System Improvements

- Improved Data Normalization User Interface
- User can normalize each spectrum individually if desired.
- Improved interface for writing user defined “rules”

Proximity Probe Analysis - Orbits

- 1x filtered
- Poincare map
- Animated orbits

Improved Graphical Plot Displays

- Vector plot format for better print quality
- Print graphs to files for easy emailing and embedding in reports
- Improved control over batch plotting functions
- Vector plot formats maintain aspect ratios, meaning that the plot will look correct no matter how large or small you make it. The ability to print these plots to small files makes them easy to email, embed in MS Word or Web pages or share with associates who do not have ALERT software. The plots can be viewed using any image viewing software.
- Expert Fault Trend plots can be customized.
- Process point trend plots can be customized.

Test Locations / Bearing Fault Frequencies

- Up to 4 bearings can be assigned to each test location (Note that the automated diagnostics system does not require bearing information to diagnose bearing wear.
- A machine may have up to 99 test locations
- Machine lists can be dragged and dropped into surveys.

ExpertALERT 3.10

Expert Automated Diagnostic System upgrade

- Analysis of time domain data to include high crest factor detection
- Clipping detection
- Ability to include new time domain analysis rules in the future.

User Defined Points

Technology Integration is an important aspect of a successful condition monitoring program. In ALERT™, the user now has an easy way to link relevant information to a machine in the database. With a simple mouse click, users can access infra red thermography images, oil analysis results, maintenance manuals, digital images, historical reports, repair logs etc. The most important aspect of the integration technology is that it is not dependent on the 3rd party software being used. ALERT can link to anything!

- Link to external applications, documents, websites, etc,
- Linked items will replicate to remote sites.

TREND AND ALARMING OF NARROWBAND PEAKS

- Vibration specialists are frequently concerned with the change of amplitude of a specific vibration narrowband peak over time. Now ALERT allows users to specify any peak from the vibration spectrum as a “process point”, where a peak’s absolute amplitude and deviation from average can be trended and alarms points may be associated.

ONLINE MONITORING SUPPORT

- SpriteMAX and DLI Online systems are now configured through ExpertALERT™.
- Setup and configure various data sources for your online data.
- With this upgrade, both walk-around and online monitoring data can be integrated into your centralized ALERT database.

IMPROVED TREND PLOTS

- ALERT fault trends have had a number of additions, including improved fault-trend Y-axis presentations and user-defined date ranges and test filtering.

WINDOWS SERVER 2003 & TERMINAL SERVICES

- ALERT now runs on Windows Server 2003/2005 in a Windows Terminal Services environment.
- This allows your plant to manage a single ALERT installation on your network server and provide it to multiple workstation computers.

DATA MANAGEMENT

- Manage Datasets Easier – Access and delete specific data sets from ALERT’s list view, saving several steps in managing your data.

ExpertALERT 3.20/3.21

NEW Patented Technology: Synthesized baselines for expert diagnostic system:

- For machines without baselines average spectra, the diagnostic system creates specific baseline determinations based on the machine type, gear or belt ratios, and other considerations. Diagnostic quality for these machines is drastically improved!

ALERT RTA Viewer:

- If you use ALERT Real Time Analyzer (RTA) on your DCA-50, 60 or DCX, now data files may be viewed on your ExpertALERT system. Using the User Defined Point feature, RTA files can be associated with a machine in your database, and retrieved from the machine tree.

Integrated Technical Support

Need a question answered, a click of a button from the ExpertALERT window will link you to the Azima DLI online knowledge base. From there you can search a variety of solutions to frequently asked questions, or chat live with one of available support agents.

DCA-60 Support

- Azima DLI's newest data collector, the DCA-60 is now fully supported in ExpertALERT. Load and unload machine routes and data by Ethernet, USB Cable or USB Thumb Drives.

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