KELTRON®

KELTRON LS 7000 ALARM MANAGEMENT SYSTEM

Keltron Alarm Monitoring, Dispatch, and Reporting Software

OVERVIEW

The Keltron LS 7000 Alarm Management System software and computers make up the dispatch portion of a Keltron Life Safety Event Management Solution. It is a suite of software applications for receiving, monitoring, and managing fire and life safety incidents in multi-building or multi-alarm panel building environments.

The system includes UL 864 recognized servers and workstations with UL listed software that presents operators with accurate, point-addressable event information and provides appropriate incident response directions to enable the fastest and most reliable response to fire and life safety events.

The software is updated on a regular basis to enhance and upgrade the system's features and functionality. This ensures that the Keltron system benefits from the latest technology and includes customer feedback.

Benefits

Whereas an alarm receiver simply reacts to incoming events, an alarm management system enables dispatchers and administrators to be proactive, faster, and more accurate in responding to incidents, substantially improving the effectiveness of their response. The Keltron alarm management system is specifically designed to:

- *Improve dispatcher accuracy, speed, and efficiency*
- *Reduce operator/dispatcher overload*
- *Provide operational analysis for decision-making*
- *Centralize command and control over life safety event monitoring, dispatch and reporting*
- *Support site-specific needs with customizable programming and flexible configurations*
- *Combine multiple brands of alarm systems and signaling technologies in a single system*

Features

The Keltron LS 7000 alarm management system includes a wide range of unique and innovative features to enhance overall usability and provide the performance, accuracy and efficiency required in a mission-critical system:

- *Multiple operating modes that manage and reduce dispatcher overload*
- *Prioritized alerts and notifications*
- *Event segregation that routes different events to different departments*
- *Customizable features to adapt the system to specific environments*
- *Manages events from unprogrammed devices*
- *Extensive graphics capability*
- *Intuitive user interface*
- *Comprehensive history tracking and reporting*

SOFTWARE SYSTEM ARCHITECTURE

The Keltron LS 7000 alarm management system is a suite of software applications that run on UL 864 recognized computers. The diagram below shows where in the process the Keltron alarm management system fits in:

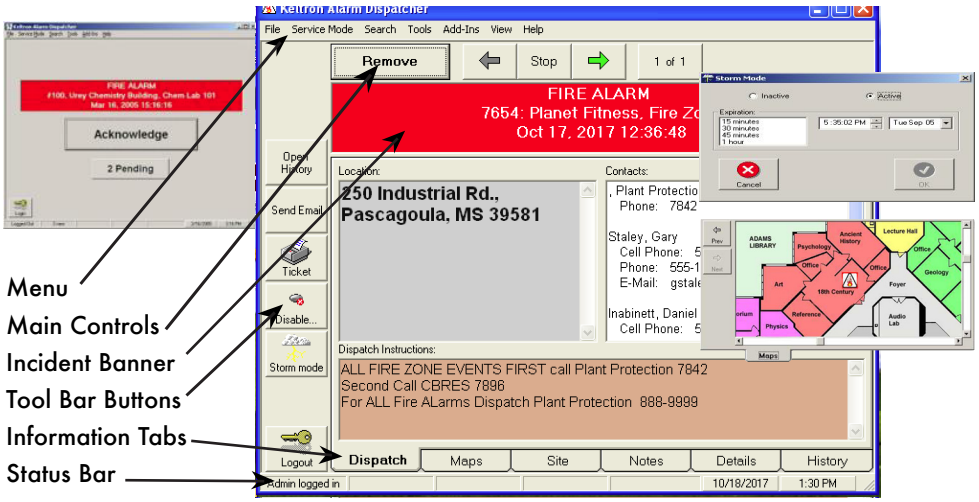
Existing FACPs → Keltron Transceivers → Keltron Alarm Receivers → Keltron LS 7000 Alarm Management System → Your Dispatchers

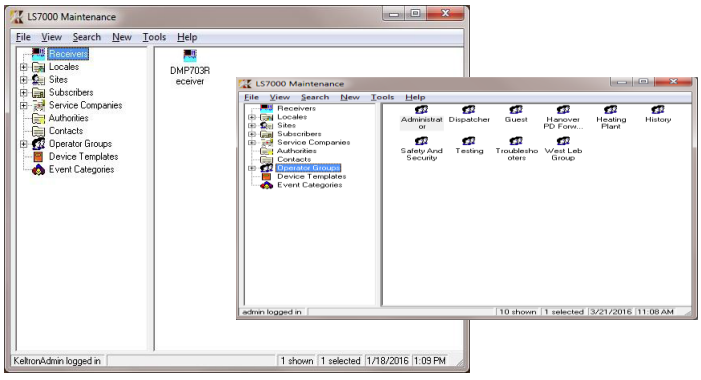
SOFTWARE APPLICATIONS

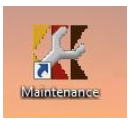
The Keltron LS 7000 alarm management system is an application suite, not a single software program. Each application is comprised of functional modules that are reliable, efficient and secure. The system provides dispatchers and administrators with direct access to event information, displaying the most appropriate actions for optimal response to fire, security and life safety incidents.

Dispatcher application

Essential to fast, accurate response during a fire or life safety event is the information presented to the dispatcher or operator. The Keltron dispatch application attracts attention and presents comprehensive event information on a single dispatch screen with multi-tab access to supplementary information.







Maintenance application

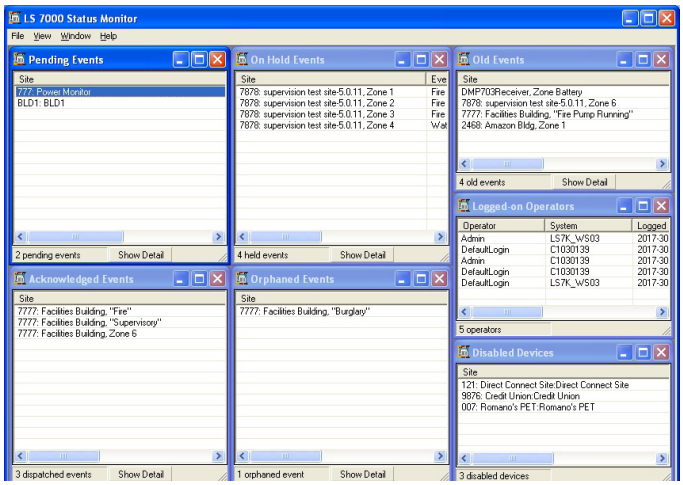
The maintenance application enables the system administrator to program the Keltron LS 7000 system to fit the facility's specific preferences. It is designed with programming wizards, templates, flexible graphics options, and libraries of sounds and icons to facilitate input and customize presentation of essential information about specific devices, locales and sites.

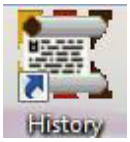
SOFTWARE APPLICATIONS

Monitor application

The monitor application is a window into the real-time status of the events in process in the Keltron LS 7000 system. It enables supervisory and administrative personnel to remotely observe active events in the system for accuracy of pre-programmed information, effective operator response, and staff workload.

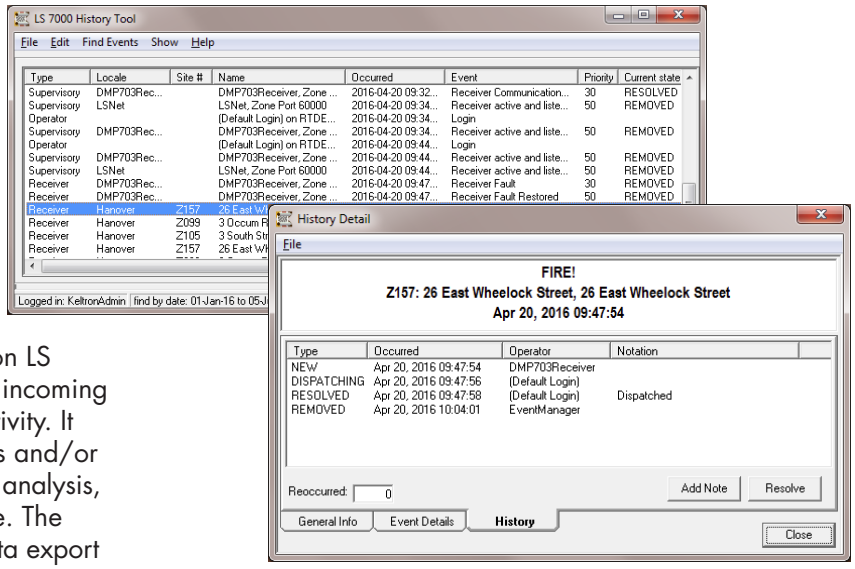
As the event moves from Pending to Acknowledge to Resolution, it appears in real time in each panel on this screen.





History/reporting application

The history application records and stores all Keltron LS 7000 alarm management system activity including incoming events and both operator and automatic system activity. It provides easy-to-use, flexible, searchable overviews and/or targeted views of historical data for event and trend analysis, problem resolution, or field equipment maintenance. The application includes both report generation and data export functionality.



Receiver interfaces application

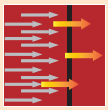
To facilitate transition from legacy to more modern alarm signaling, the Keltron alarm management system simultaneously receives signals from multiple sources: directly from Keltron Ethernet (IP) transceivers, and through receiver interfaces to both Keltron and third-party receivers for other signaling technologies. This reduces monthly monitoring costs, leverages existing communications infrastructure, and can monitor both fire and security panels.

UNIQUE FEATURES AND FUNCTIONALITY

The Keltron LS 7000 alarm management system includes many unique features that are designed to provide efficiency, flexibility, and scalability to the life safety event management process. Its powerful features offer a wide range of benefits to the user including:

Event segregation - enables a more efficient operator response by sending specific events to their most appropriate responders, to reduce dispatcher overload: e.g. fire alarms to the dispatchers and/or fire station and troubles directly to the maintenance department.

Storm mode - enables operators to concentrate on high priority events by temporarily suppressing the display of system-wide trouble signals during severe weather events where widespread power outages may occur, while capturing them in the history database.



Trouble shunt - allows operators to respond only to high priority events during testing and inspection. While in trouble shunt, troubles and trouble restores are automatically acknowledged and resolved by the system, but other higher priority signals such as fire alarms, are displayed and dispatched normally.

Event rotation display - ensures that off-normal events are not lost in the system by maintaining visibility into any received events that have not been restored by the dispatcher. This enables maximum operator awareness with a minimum of invasiveness and tracks device and zone state changes.

Automatic swinger suppression - when a fluctuating electrical condition causes repeated identical events between operator acknowledgments, the Keltron system intelligently captures this behavior, and displays it to the operator as a single event to acknowledge, reducing the chance of obscuring a higher priority alarm. The event count and recurrence times are all recorded in history.

Group acknowledge - during severe weather conditions or power outages, devices may generate large numbers of trouble signals that can overwhelm operators. This feature enables operators to acknowledge and resolve these troubles with a single command, so that they can concentrate on higher priority events. The Keltron system's log printers and history files record complete information.

Pending alarm alert - while an operator is dispatching an alarm, other alarms may be pending. To remind the operator that there are other alarms waiting to be acknowledged, the system sounds alerts to ensure they are not forgotten.

Integration capabilities - to fulfill the increasing requirement for interoperability with other building systems, the Keltron LS 7000 provides interfaces that accept data from third party systems and/or transmit compatible data to other Keltron or third-party systems.

Emergency communications - the Keltron alarm management system may be programmed to generate outgoing emails or text messages either automatically in response to a given alarm or manually by an operator. Messages can be sent to a large number of recipients using standard email protocols, SMS (Short Message Service), and other text-messaging protocols.

Graphics/maps/audibles - the Keltron alarm management system provides libraries of audibles, icons and colors to enable system owners to fully customize their Keltron systems. The system accepts all Windows graphics formats to provide operators with the benefit of pictorial recognition.

OVERALL SYSTEM INFORMATION

Computers

System platform, security and stability

The Keltron LS 7000 dedicated purpose computers run in a MS Windows operating system environment. Keltron provides a UL 864 recognized computer on which to run the Keltron LS 7000 system software and includes guidelines for using it securely.

Open database connectivity

The customer-programmed information and history databases conform to the ODBC/SQL standard. This means that the Keltron LS 7000 databases can export information to third-party ODBC/SQL-compliant applications to produce user-defined, comprehensive reports.

Computer redundancy

Includes redundant, Keltron LS 7000 servers with RAID 1 arrays that use mirroring to ensure data integrity and availability and protect against system downtime in the event of a hard drive failure.

Configurations

All-In-One configuration

For smaller, single-user systems, Keltron provides a UL 864 recognized all-in-one computer/workstation.

Redundant configurations

The Keltron alarm management system may be configured to operate using redundant servers for mission critical, failsafe operation. The system servers operate in a primary and secondary mode where the primary server monitors all incoming alarm data and provides database replication information to the secondary server. Upon failure of the primary server, all switchable serial data inputs are switched by a Keltron auto-failover switch from the primary to the secondary server.

EOC configuration

To provide life safety event monitoring capability in the event of loss of access or total failure at the primary system location, the Keltron alarm management system can be configured to operate in a separate building from the primary system.

Other system functionality

Database support functions

The database support utility enables online backup and restore of both the main and history databases.

Export history data

The export feature of the History Editor enables the user to take any portion of a history report and export the data to a third-party software package such as Microsoft Excel or Access.

System supervision

Within the Keltron LS 7000 system, all software receiver interfaces, workstation connections, connected receivers and field panel connections are supervised. Faults are reported to the system operator to enable expedient response, minimize down time, and reduce maintenance costs.

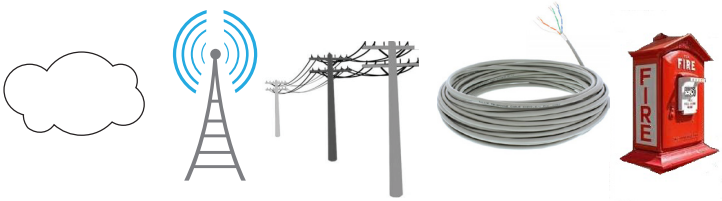
Event and screen printing functions

The Keltron LS 7000 provides a dedicated and time stamped event log using a logging printer so printouts are chronological and uninterrupted. Screen printing is also supported.

MULTIPLE COMMUNICATIONS TECHNOLOGIES

In addition to receiving signals directly from Keltron Ethernet (IP) transceivers, the Keltron LS 7000 alarm management system can receive signals from specialized Keltron alarm receivers to simultaneously support the following signaling technologies:

Ethernet (IP)
Active network radio
Distributed multiplex: copper or fiber
Direct wire: copper or fiber
Cellular
Digital communicator
Reverse polarity
End-of-line resistor
Coded signals



KELTRON LS 7000 CASE STUDIES

The basic Keltron LS 7000 alarm management system configuration consists of a single UL 864 recognized computer which operates as both the server and the workstation. Depending on the requirements of an individual facility, the system may be expanded to include optional remote workstations and redundant server configurations. The following are examples of current Keltron alarm management system installations:

Healthcare facility
Single user interface

Objective: this system is deployed to enable the healthcare company's main dispatch station to monitor a single FACP in a remotely located building, where the only communications path from the dispatch center is via their Ethernet (IP) network.

Solution: Keltron provided a single Keltron Ethernet (IP) transceiver to send addressable signals from the FACP to the Keltron LS 7000 all-in-one computer at the continuously-manned dispatch center.

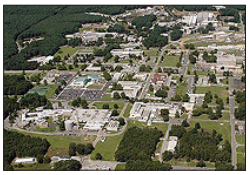
Benefit: although the remote building is also monitored at a central station, the healthcare company wanted a cost-effective, easy-to-install system that enables direct visibility into all activity at the building.

University campus
Multi-user interface

Objective: this system is deployed on a campus with more than 150 buildings that have different models and brands of FACPs and where some campus areas are connected by Ethernet (IP) and some are connected by an older copper infrastructure. The system needed to satisfy the requirements of multiple stakeholders and operators from - the local fire department, campus police, maintenance department, and facilities management department - each with its own use for the system information.

Solution: Keltron provided a multi-user Keltron LS 7000 system consisting of multiple workstations with event segregation. Until the migration to IP from copper communications infrastructure is complete, the system simultaneously receives both Keltron Ethernet (IP) transceivers and legacy communications signals.

Benefit: the local fire department receives the fire alarms, the campus police receive the security alarms, maintenance receives troubles, and facilities management monitors the entire system for administrative requirements. The campus leverages its existing equipment and infrastructure while taking advantage of new technologies.



Government complex
Fully redundant system

Objective: this system protects a large government complex with more than 300 buildings for mission-critical research equipment and hazardous materials that requires a fully redundant system with no single point of system failure.

Solution: redundant Keltron LS 7000 servers configured with an auto-failover smart switch to receive signals from a mix of Ethernet (IP) and radio transceivers. A single Keltron LS 7000 system that is synchronized with the primary Keltron LS 7000 System is on standby at the facility's emergency operations center.

Benefit: since any interruption in service would be extremely costly both in time and money, the Keltron system provides the most reliability with the least risk.

Contact us at info@keltroncorp.com or call 800-966-6123.

About Keltron

Keltron Corporation develops and manufactures UL-listed life safety event management systems for campus, multi-building facility and municipal environments to improve dispatch and response to fire and life safety incidents. Keltron solutions support and unify within a single view, multiple models and brands of alarm panels and multiple alarm signaling technologies to provide an integrated system of fire and life safety alarm monitoring, dispatching and reporting. Made in the USA. Keltron is an ISO 9001-certified company.

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