MOSCAD Ensures Instant Response to Fire Alarms

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Background

In modern cities, fires can be disastrous if they are not dealt with immediately. Slow response can cause loss of life and property. The location of the fire must be pinpointed quickly and the closest

station must be sent to respond in the shortest amount of time with the right equipment. Municipal Fire Department control center personnel work under great stress and require control, monitoring and dispatch equipment that provides error-free and swift response.

Motorola's Fire Dispatch System

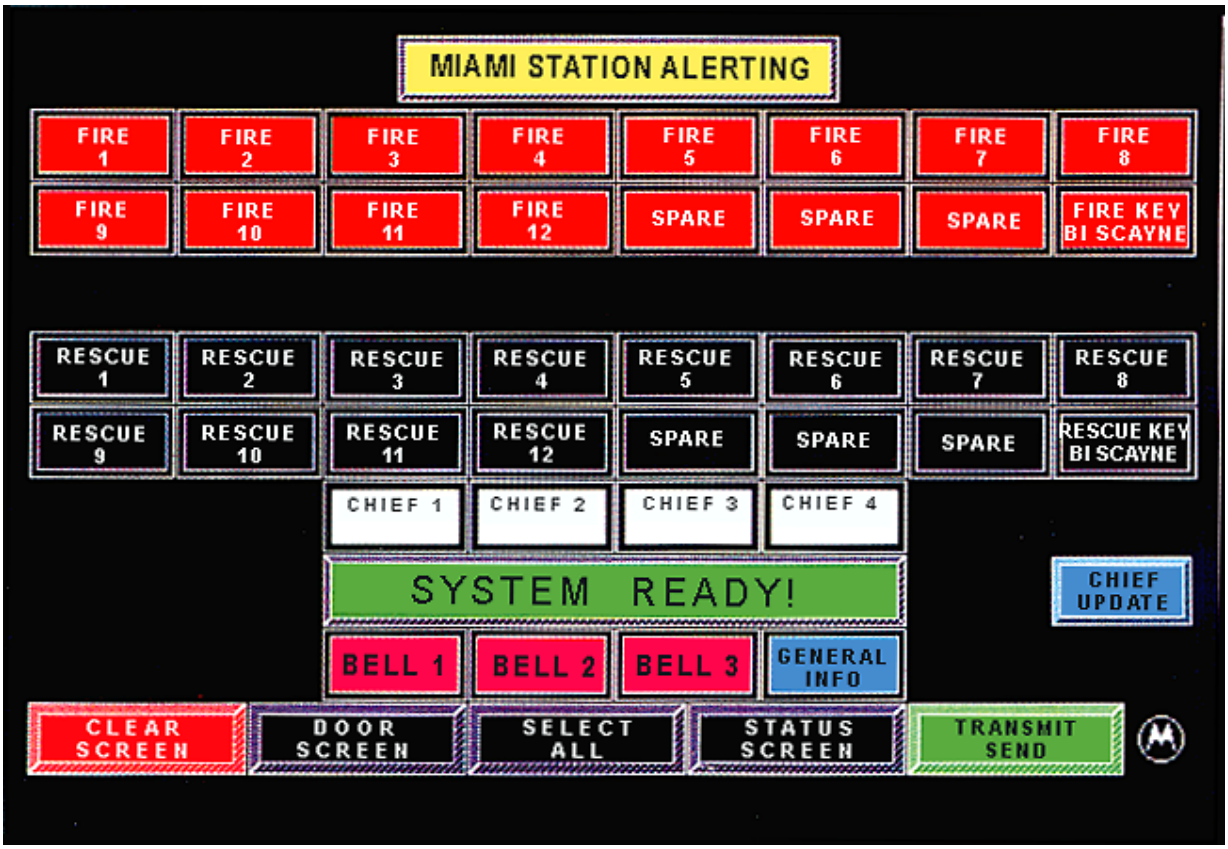
Motorola entered this growing market with its MOSCAD system, that has proven itself, by its reliability, in many varied applications. This radio based Fire Station Dispatch System provides a system that is reliable, fast and user-friendly. The system is comprised of MOSCAD-driven Touch Screen terminals for the dispatchers, printer for output of system events log with date and time for each event, RTUs in each fire station and a Field Interface Unit (FIU) at the Control Center.

The dispatcher touch screens display a button for each fire station. The dispatcher presses the button for the closest station and then presses the alarm button and speaker button to radio important information over the station's public address system. It is of utmost importance that voice communications to the fire stations proceed as soon as possible after the station(s) have been selected. The system sends an alert tone before voice dispatch. A single data burst will turn on the site(s) and voice dispatch occurs after acknowledgment that at least one site has turned on its public address system. The number and types of monitoring and control functions are virtually unlimited because of the MOSCAD RTU input and output capabilities.

The system's Control Center receives, transmits, collects and stores data from the touch screens to the RTUs and back. It also polls and interrogates the RTU periodically or by request. The MOSCAD RTU, located in each fire station, processes on-site events, public address (PA) speakers status and transmits power status information to the Control Center.

Such a system is operating today in Kansas City, for 19 fire stations. They have three 9" color touch screens for system operation and a printer to log their system's activities. Their Control Center has the capability of activating the PA system in each fire station for voice dispatch and a display of each fire station's status.

The City of Miami, because of its size and complex logistic and social problems, recently ordered a system that includes a Computer Aided Dispatch (CAD) interface (found in almost every city). Their system has two 9" color touch screen terminals and a printer for Miami's fourteen fire stations connected to its Control Center. Aside from activating the PA system in each station and a display of each station's status, the Miami system allows the Control Center to control up to 6 doors in each of the stations, displays the location of up to four Fire Chiefs per station and has multi tone capability from an internal tone/chime generator mounted in each MOSCAD module. *(See touch screen on next page)*



Touch Screen Display

System Advantages

- Reduces operational costs – A radio-based system does not incur monthly charges for wire transmission.
- Uses existing trunked systems – Eliminates infrastructure costs of a dedicated system. In addition, the system features backup repeaters and failsoft operation. Using a trunked infra-structure also gives the flexibility to use separate talk groups for data and voice dispatch without incurring additional repeater system costs. Separate talk groups allow monitoring and control even during voice dispatching.
- Interfaces with CAD systems – via RS-232 using ASCII protocol. The CAD is controlled and monitored through the system's touch screens.
- Interfaces with paging systems – selectively calls, through MOSCAD RTUs, rural volunteer fire fighters to rush to their assigned stations.
- Provides multiple operator position operation – The CPU's 68302 microprocessor acts as a data engine to control three RS-data ports and easily supports an eight CPU configuration. Those CPUs provide sixteen RS-232 ports to support multiple radios, printers, computers, operator touch screens or CAD systems. (Additional CPUs may be added if required).
- Provides back-up operation from separate locations – Wide Area Network (WAN) capability of the MDLC protocol in the MOSCAD RTUs, allows multiple dispatch systems for monitor and control. This permits the use of backup or mobile dispatch systems, in the event of a disaster at the main control center.
- Touch-screen display for user-friendly operation provides a control console that is easy to operate under stress to give the dispatcher the confidence he needs when emergency situations demand error-free performance.

Interactive touch screen panels provide:

- Fire Station acknowledgments of dispatch messages.
- Activation of public address system, in station, for voice dispatch
- Intuitive operational feedback.
- Actual names for descriptions of locations.
- Fire Station status of AC power, communications failure and last command status.
- Current location of Fire Chiefs.
- Immediate printout of all alarms and events.
- Monitoring auxiliary equipment, i.e. firefighting equipment/ambulance in/out status, doors and locks open/secure status.

Other Advantages

Supplying fire station dispatch systems to municipal fire departments is a very promising market with many opportunities for a wide variety of applications. The market is large, the need is great and Motorola can provide the proven solution.

Motorola helps put out the fire.