

## Success Story in Egypt ...

### Mass Notification and Warning system for Middel East oil refinery



#### **Mass Notification and warning system from SOULCO and American Signals!**

*SOULCO Jointly with US Company American Signals of offered to MIDOIR (The largest oil refinery in Egypt) a fully integrated Notification and Warnings system, a reliable solution that meets MIDOR hazard communications needs. SOULCO team in Egypt in cooperation with American Signals specialist provide detailed system integration planning, detailed project scope layout, and coordinate the interface to existing equipment, and develop layouts necessary for new equipment with American Signal products ensuring complete and reliable warning, public address and inter-communications to meet MIDOR project goals In Mass notification and alarming systems no other plant communications system can measure up to the command and control capabilities of the CompuLert™ software of American Signals, for this Soulco Egypt used this system to provide a solid solution of notification and public address covering hazardous area more than 3 million square meters, that represent Midor oil Refinery north of Egypt.*

#### **Solution Description**

*At MIDOR oil refinery site SOULCO and its experienced communication team in Egypt in cooperation with American Signal Corporation design team worked closely to upgrade MIDOR's Emergency Serine, do the needed analysis and study that grantee a professional design, supply in time, installation according to the international standards, well defined professional testing and commissioning methodology that lead to a best in clause project for emergency sirens to cover all over the refinery outdoor / indoor and MIDOR site boundaries, The study conducted by our team included; site survey to evaluate the concerns of MIDOR team in regard to warning system implementation. Topography for coverage, traffic patterns, noise levels, special needs locations, MIDOR owned property for the Installations of systems, etc.*



Our design includes

- *Two redundant Central Station. The American Signals Central Station Controller is a Status Encoder that is capable of activating siren sites via TTS, DTMF, or FSK individually, in groups or all at once. The Central Station Controller is designed for ease of use and simplicity of activation; inserting and turning the key unlocks the control panel and pushing the appropriate button activates predetermined sites with pre-programmed audible alerts. The Central Station Controller equipped with battery backup to provide a minimum of eight hours of continuous operation in the event of main power failure. It has a key lock to secure the controller's keypad and ten programmable function keys on the face of the unit. The keys may be programmed to execute a variety of activation commands across the managed sirens and HPSAs. In which Soulco team in cooperation with American Signals generated several Arabic and English recorded messages in a form of firmware in bided*

*within the system that represent the alarming and notifications as required by the security and safety team of Midor*

- *Three Omni Directional High Power Speech array ; For Outdoor areas, based on the analyses of the warning system coverage layout map and the noise level diagram we built out outdoor warning solution consists of 3 large systems (I-Force 3200) High Power Speech Intelligibility , The I-Force 3200 designed for community. Industrial nuclear, petrochemical, or other applications that require high levels of sound pressure level output with superb acoustical performance and brilliant voice notification broadcasting that can cover a radios more than 1.8 KM, the IForce-3200 produce 126 decibels; The Electronic Controls for the I Force 3200 have a self-contained, regulated battery charging system that assures full siren operation during AC outages.*

- *Thirty indoor environment-resistant loudspeakers; for indoor coverage Soulco installed a high intelligibility voice and siren tone transmission in medium power indoor and outdoor industrial communications systems. 60 /30/15 Watts Continuous – 60° dispersion angle 121 dB at 30 Watts/ 1 meter – 108 dB at 1 Watt/1 meter the indoor notifications sirens controlled by a high capacity control cabinet model ISC-3 Electronic industrial control assembly. Includes, Stainless Steel enclosures, battery charging system, 6 of 13 programmable tones, public address, 1200 watts of audio power to provide signal and voice communication to multiple speaker units .relay output for activation of strobe lights, RS-232 & RS-485 to network multiple units together, as well as provide analog output to message signs.*

- *Five kilo meters of outdoor steel armored cable 10 pairs as a communication cables between the supplied six communication cabernets all over Midor facility and the command center. This in addition to more than Four Kilo meters of indoor cables that connect the indoor sirens and speakers into the communication cabernets*

*Full integration between with the existing PBX system and the control center, to allow public address over the existing voice system.*



**“SOULCO PROVES PROMISING RESULTS WITH GREAT POTENTIAL APPLICATIONS”**