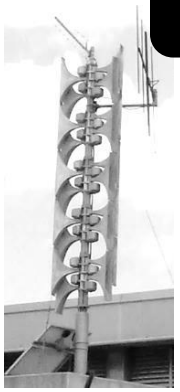
ELPAM ELECTRONICS Ltd.

EL600 - Siren System



Alarm siren System for Public warning and notification for any emergency situations

The EL3000 series, high power electronic sirens offered by ELPAM Electronics Ltd.
The EL3000 is acoustic warning systems used to provide warnings in emergency states. The EL3000 designed to satisfy warning and notification requirements for Civil Defense, Military facilities and as Public Address System.
The EL3000 systems enable providing up to outputs of 3000W.
The EL3000 systems have interfaces and basic options for monitoring and controlling the system.
Internal 'Quiet Test' performs a complete full power test of the siren. The status report read in the siren control panel or communicated to the control station.
The siren controller is fully autonomous with battery backup for at least seven days with no AC supply.
Use of Solar power done with or in place of AC.

Early warning and emergency notification solutions for:

Tsunami, Tornado, Earthquake, Flood and Water dam

Key Features

- Ability to connect local audio signal inputs, including a local microphone or other local signal sources.
- 600 Watts of continuous audio power (4 x 150 Watt speakers)
- Separate class "D" 300W true RMS amplifiers with more than 90% power efficiency.
- Local activation capability.
- Power supply from maintenance-free batteries.
- An RS232 port.
- Enhanced automatic testing routines, including so-called "silent" siren tests, complete functionality tests.
- Different local activation options.
- Different remote activation options.
- Intelligent battery recharging, charging current optimizing based on modern algorithms recommended by manufactures to prolong battery life.
- A stainless steel cabinet.
- Solar operation to keep the batteries charged in applications where AC is not available.
- Microphone for on-site announcements.
- 2 batteries.
- Very low standby power requirements.
- System function surveillance via microprocessor.
- Very High MTBF (Mean Time Between Failures)
- Activation of up to 7 individual alert signals and live PA.
- Built-in tone generator providing for six standard, pre-configured tones
- Weather-proof Siren Horns.
- Modular Siren Head Construction.
- 360° Omnidirectional Sound Propagation.
- Extremely high dB/W sound pressure level.
- Operating Types: Local activation, Remote activation, Activation via remote control panel and Voice announcements.
- Integrated batteries allow operation independent of mains power.
- Local operating unit, including LCD display and keypad.

Power output:
600W
109dB(A) at 30m Max

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Key Features (cont.)

- Control options:
  Radio VHF/UHF (FSK) - MDS-25, DTMF, PSTN network or leased lines
  IP (LAN/WAN, VPN, WiFi, WiMax)
  GSM/GPRS/3G/ LTE/CDMA
  interfaces: I2C, USB, RS232,RS485/422, CAN
- Type of sounds:
  64 alarm signal (pre-recorded on SD card), 64 voice messages
  pre-recorded on SD card) real-time voice messages from the control center

Details

Electronic part

EL3000 siren is integrated in a cabinet made of stainless steel. Cabinets for indoor and outdoor installation,
No moving parts such as fans or hard disks.

The electronic part of the siren consists of control modules:

- Amplifier modules (Amplifier output is 2 x 150W).
- Power supply/Battery charger unit.
- Communication and auxiliary modules.

The electronics of the siren are fed from two 12V maintenance-free batteries, which are continuously recharged from a 230/120V circuit.
The batteries are capable of ensuring 72 hour siren operation following a power failure.
In addition it is possible to use solar panels to charge the batteries.

Acoustic part

Acoustic Features:

- Omni-directional or directional sound propagation.
- Up to 7 customized alert signals can be programmed.
- Voice/text announcements – pre-recorded text messages and/or live voice.
- Messages via microphone.
- Extremely high dB/W sound pressure level.

Operating Types

- Local activation.
- Remote activation.
- Activation via remote control panel.
- Voice announcements.

Types of Signals

- Alarm.
- All Clear.
- Chime.
- Important Message.

Specifications

General/Electrical/Siren Cabinet

Audio Output Power	600 - 3000 watts RMS
Number of Class-D Amplifiers	2 for 600W (10 for 3000W)
Mains Power Supply	230 VAC or 110 V +/- 10% 50/60 Hz
Battery Voltage	24V (2 x 12 V 100 AH)
Max. Charging Current	Up to 20A
Live PA Announcements	Available
Local Activation and Display	Local operating unit with LCD display and membrane keyboard
Cabinet Dimensions	(W x H x D) 600 x 600 x 350 mm
Cabinet Design	Stainless Steel or Powder-coated
Cabinet Protection	IP65
Weight incl. Batteries	84 kg
Ambient Temperature Range	-25°C … +65°C
Humidity	0-95%, non-condensing
Cabinet Color	RAL 7035

System

Sound Pressure Level	109dB (A)/30M
Fundamental Frequency	415Hz/425Hz
Siren Sound/Signal	Customer Specification
Digital Text messages	Customer Specification
Standby-time	up to 7 days
Number of Alarms available within 48h without Mains Power Supply	up to 20

Amplifier

Class-D Amplifier	
Output Power	300 Watt at 8 Ohm
Bandwidth	100 Hz – 20 kHz
Effectiveness	Above 97%
Distortion less	Less 4%
Overload Protection	
Short Circuit Protection	
Status-LEDs	

Communication

RS232/RS485 interfaces	For connecting external end devices such as sensors
DTMF interfaces	

Operating types

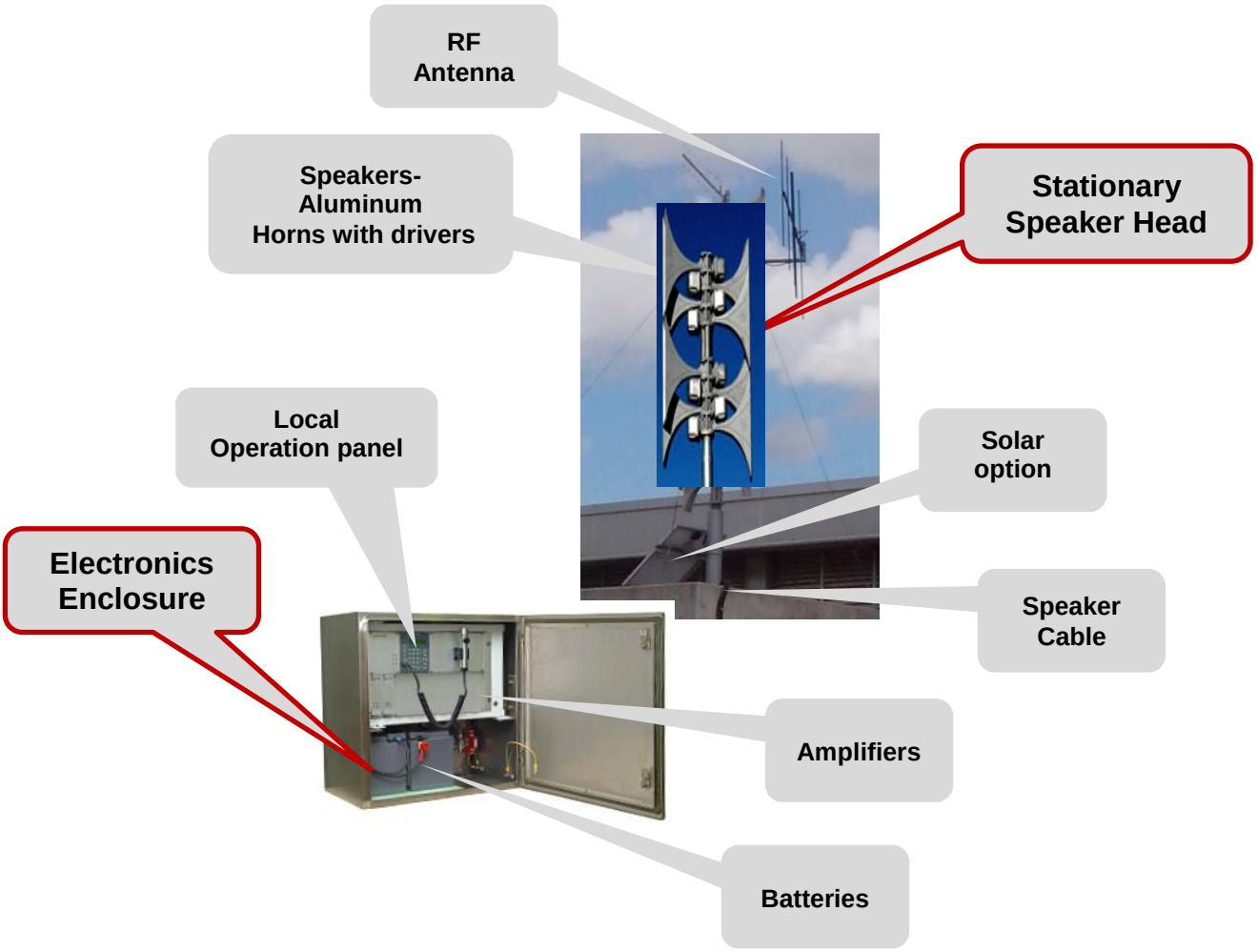
- Local activation.
- Remote activation.
- Activation via remote control panel.
- Voice announcements.

Siren Head

- Sound Pressure Level - 109dB (A) / 30 m.
- Number of Horns/Drivers – 20
- Weight Siren Head – 28Kg
- Head Dimension (W x H x D) - 300 x 950 x 850 mm
- Material of Horns - Aluminum (Alloy)
- Number of Class-D Amplifiers – 2
- All sirens have 360° (degree) Omni-directional sound propagation.
- Directional Sound propagation possible.
- Modular Siren Head Construction.
- Water-proof Siren Horns.
- Use for Pole and Building Installation.

Options

- Solar panel.
- Operator's control panel for remote activation and status monitoring.



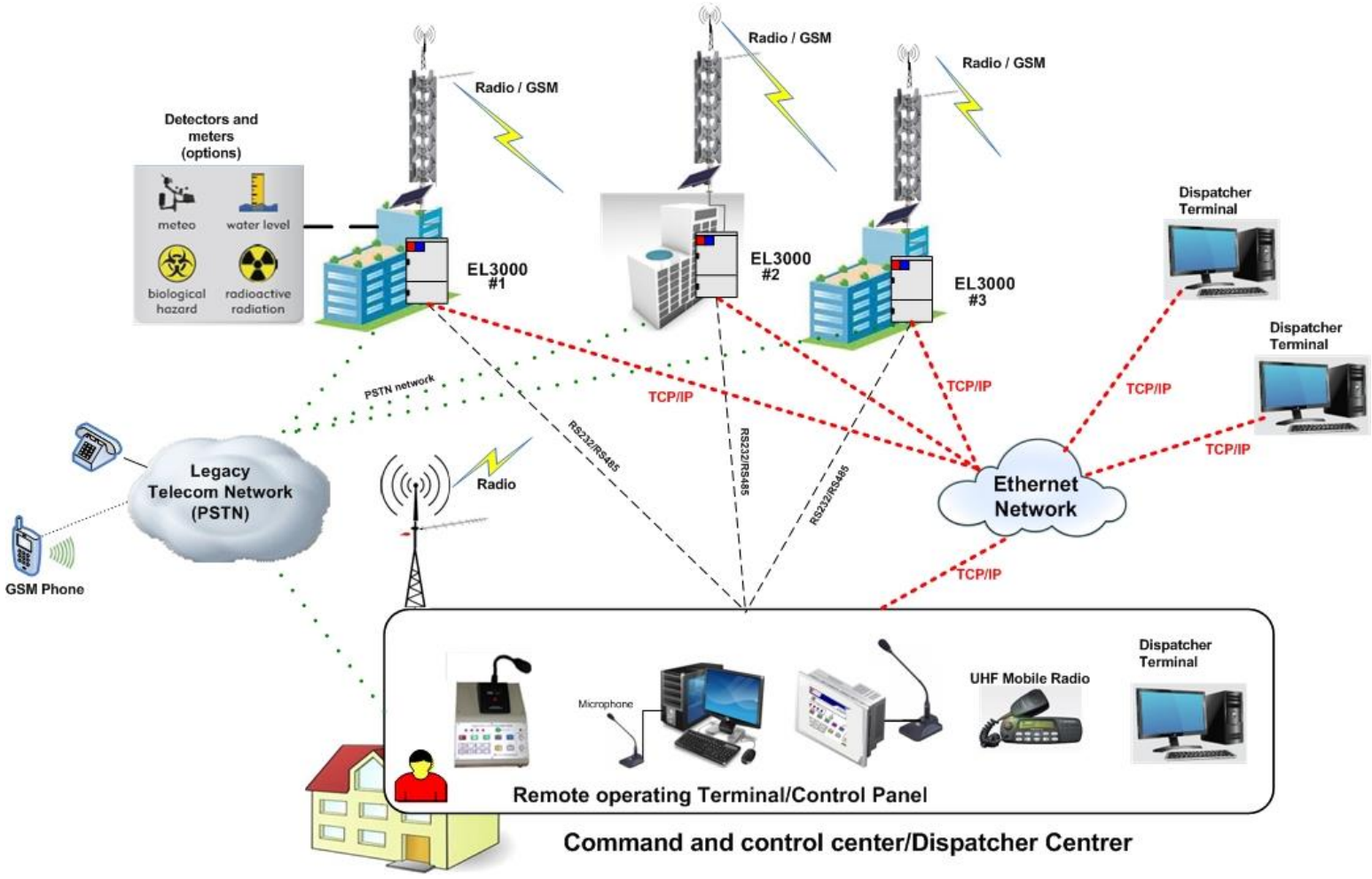
EL3000 Siren – Control Options

Control Methods

The siren control communication network can be implemented using any one of the following systems or with a combination of two of these systems.

- Leased line using DTMF
- Land Mobile Narrow Band FM Radio. Operating frequencies VHF or UHF Data and voice.
- Fiber optic networks. Data and voice.
- TCP/IP. Data and VoIP (LAN/WAN, VPN, WiFi, WiMax).
- RS-232 Serial data from PC terminal
- RS-485/422 data
- Parallel dry contact from dedicated cables.
- GSM/GPRS/3G/ LTE/CDMA
- interfaces: I2C, USB, CAN

Siren Systems remote control



All information and specification are subject to change without notice, and may contain typographical or other errors.

Ref: ELP-MA-133