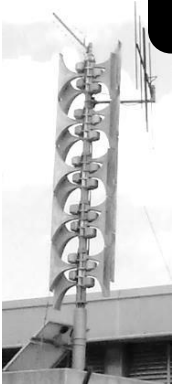


# EL3000 - Siren System

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



The EL3000 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 outputs of up to 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.

The loudspeaker array is 100% resistant to the effects of lightning and atmospheric corrosion. The EL3000 siren systems are common in Israeli towns and cities, and continually used for air raids and missile attacks on civilian population.

Israel has more than 2400 warning sirens EL3000.

## Key Features

- Ability to connect local audio signal inputs, including a local microphone or other local signal sources.
- 3000 Watts of continuous audio power (Twenty 150 Watt speakers)
- Separate class "D" 300W true RMS amplifiers with up to 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 3000W  
123dB(A) at 30m**



## Details

### Electronic part

EL3000 siren are 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.

Siren head made of weatherproof aluminum can be configured flexibly special solution for operation in extreme ambient temperatures also available. The acoustic radiator consists of a “horn” type loudspeaker and hyperbolic sound baffle. Both the loudspeaker and the sound baffle are optimized in terms of spreading typical acoustic warning signals simulating the horn sounds of conventional motor-driven rotary sirens. The highest acoustic pressure is achieved in the frequency range of these signals, thus maximizing the siren's coverage.

Usually two radiators are mounted on a steel pole. However, their arrangement is optional, which enables various radiation characteristics to be achieved, from almost circular, through elliptic up to directional characteristics.

The sound baffles are made of a special aluminum alloy, so that their durability is maximized and their weight minimized.

They are virtually always installed outside on a high spot and are exposed directly to the effects of weather (sun, rain, snow, wind...) and very often to insects (wasps, bees...) as well. Experience from using plastic sound baffles shows that their life cycle in such severe siren usage conditions is very short and the cost of their maintenance and replacement highly exceeds that for aluminum baffles. Moreover, horn loudspeakers are designed to have the maximum resistance and output possible.

### 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	3000 watts RMS
Number of Class-D Amplifiers	10
Mains Power Supply	230 VAC or 110 V +/- 10% 50/60 Hz
Battery Voltage	24V (2 x 12 V 100 AH)
Max. Charging Current	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) 64 x 150 x 50 mm
Cabinet Design	Stainless Steel or Powder-coated
Cabinet Protection	IP65
Weight incl. Batteries	148 kg
Ambient Temperature Range	-25°C ... +65°C
Humidity	0-95%, non-condensing
Cabinet Color	RAL 7035

### System

Sound Pressure Level	123dB (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.

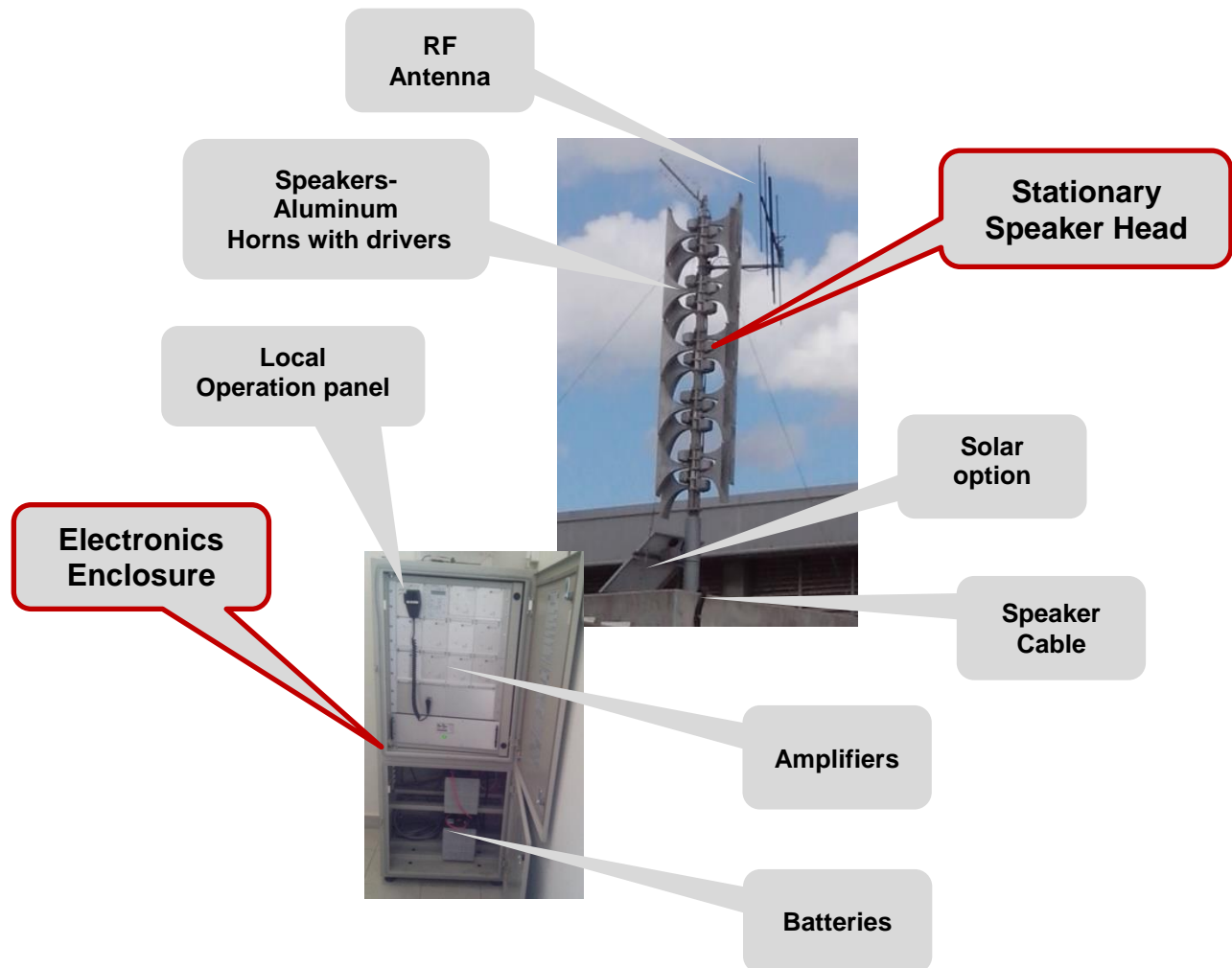
## Siren Head

- Sound Pressure Level - 123dB (A) / 30 m.
- Number of Horns/Drivers – 20
- Weight Siren Head – 180Kg
- Head Dimension (W x H x D) - 800 x 3600 x 300 mm
- Material of Horns - Aluminum (Alloy)
- Number of Class-D Amplifiers – 10
- 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.



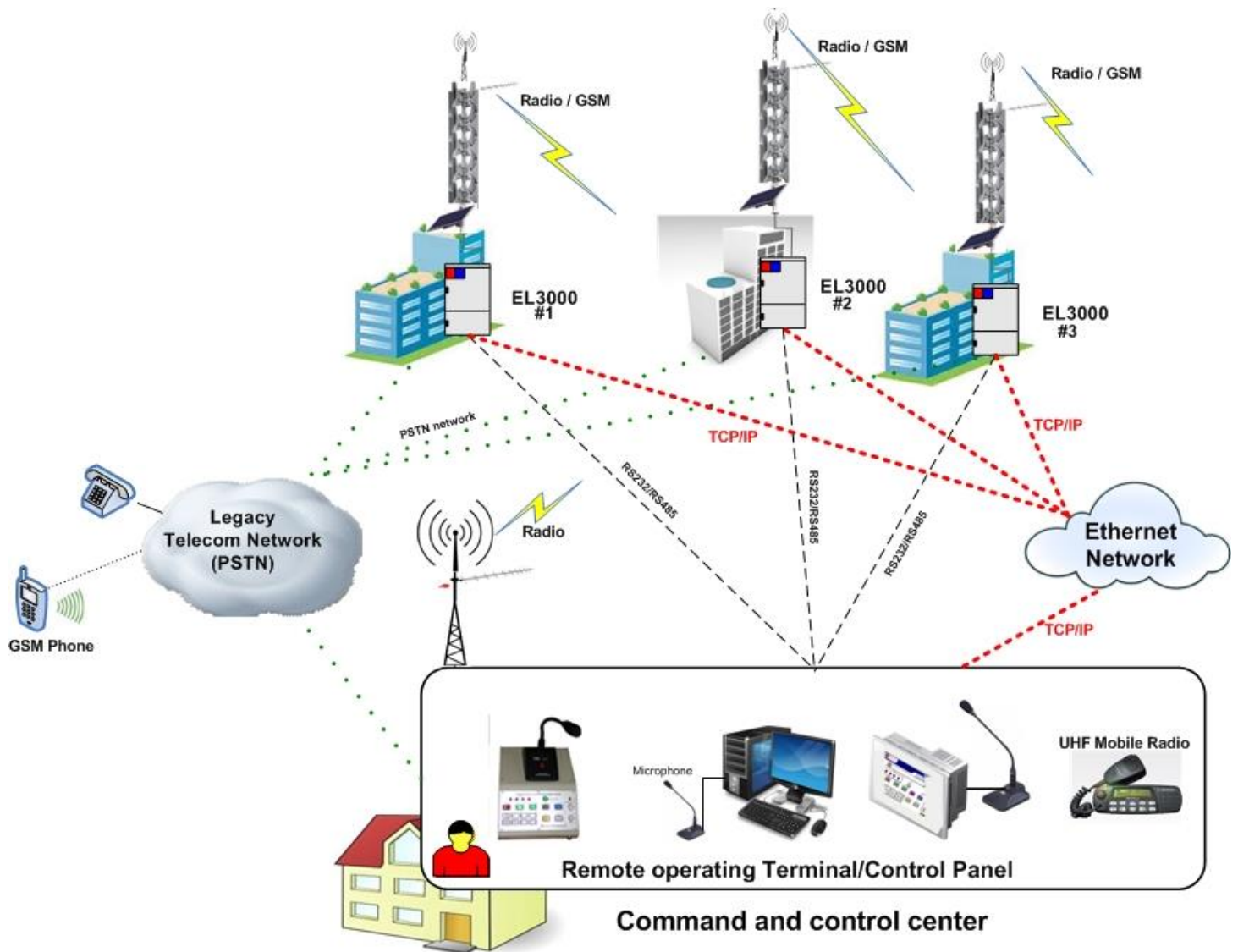
## EL3000 Siren – Control Options

### 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.
- RS-232 Serial data from PC terminal
- RS-485 data
- Parallel dry contact from dedicated cables.

### Siren Systems remote control



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