



ELECTRONIC SIREN SES



> SES 250

> SES 500

> SES 1000

> SES 2000

> SES 4000

▶ WHY IS THE SES REQUIRED?

There is a great number of situations where human lives and values must be saved.

- Fires
- Flooding
- Fire alarm
- Toxic gases
- Chemical hazard
- Smog
- Storms
- NBC hazard transmissions
- Radioactive radiation

▶ APPLICATIONS

- Civil and catastrophe protection
- Fire brigades
- Industries
- Nuclear power plants
- Chemical plants
- Dams
- Prisons
- Events
- Large area transmissions



Siren system in Bühl (Germany)

▶ YOU CAN RELY ON OUR EXPERIENCE AND KNOW-HOW

The SES is our newest development and is based on our experience with over 600 electrical sirens we provided to Belgium.

Different construction stages and Options are available for different purposes.

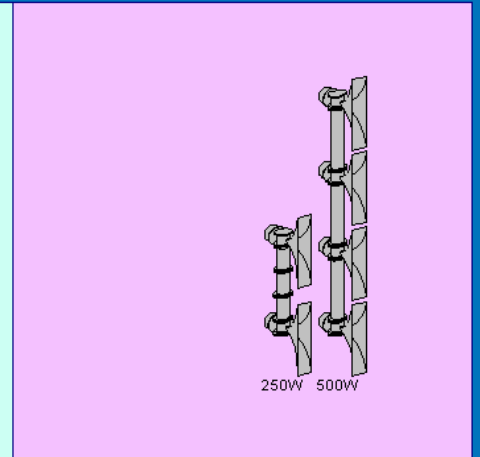
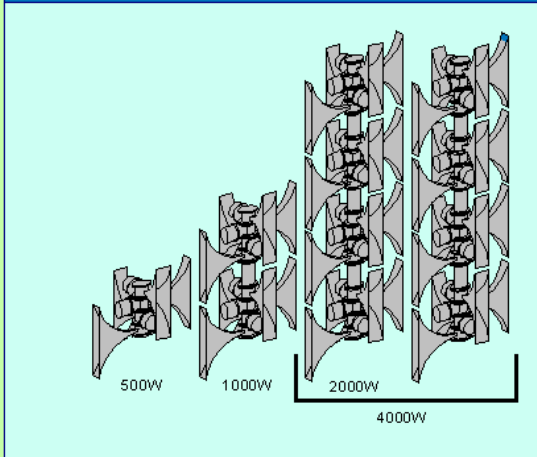
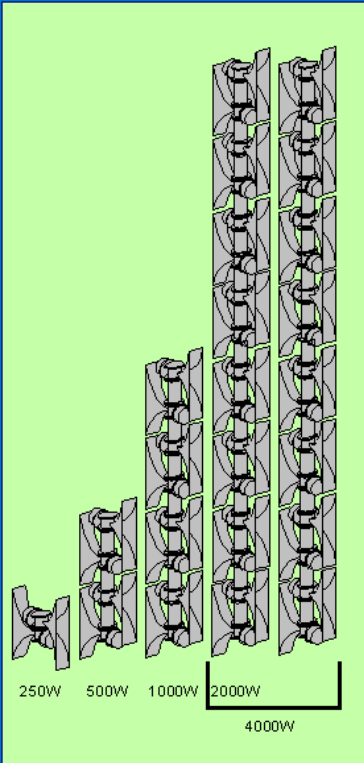
Model range M05 - Economy Version with limited options.

Model range M10 - High End Version with Systemcontrollboard UP 98.

Technical data

▶ LOUDSPEAKER

	SES 250	SES 500	SES 1000	SES 2000	SES 4000
Soundlevel dB at a distance of 30m					
Omnidirectiona	103	109	115	121	127
Soundlevel dB(A) SPL at a distance of 30m:					
Omnidirectional 180° (AV)	103	108	113		
Omnidirectional 90° (AV)	---	106,5	111,5		
Directet by single (Peak)	111	116	---		
Basic frequency:			410 / 425Hz		
Temperature range:			-50°C bis +70°C		
Number of Horns:	2	4	8	16	32
Total weight in kg:					
Omnidirectional 180°	24	45	94	190	2 x 190
Omnidirectional 90°	---	37	75	150	2 x 150
Directet by single	29	35	---	special design	
Cubicle unit (w x h x d) in mm					
Omnidirectional 180°	830x770x160	830x1420x160	830x2715x160	830x5430x160,2x 830x5430x160	
Omnidirectional 90°		830x 970x830	830x1600x830	830x3200x830,2x 830x3200x830	
Directet by single	630x1270x160	630x2570x160		special design	



▶ ELECTRONICS

	SES 250	SES 500	SES 1000	SES 2000	SES 4000
Power output RMS	250W	500W	1000W	2000W	4000W
potential-free Input for siren signals			2		
potential-free clock input			1		
Power supply			230V AC		
Power input in stand-by mode			6VA		
current consumption durin power failure in stand by mode	65 mA	65mA	65mA	65mA	65mA
Number of alrams during power failure at a temperature above 0°C			120mA/M05		
Temperature range for electronics			Minimum 20 siren alarms each over 10 days		
Temperature range for battery			-40° C to +70° C		
Cubicle unit (w x h x d in mm)	600x600x210		-25° C to +60° C		
degree of protection			IP 54		
Weight in kg	54	67	84	162	2x162
Battery			lead acid gell		
nominal capacitat C20	2x12V 25Ah	2x12V 40Ah	2x12V 55Ah	2x12V 115Ah	4x12V 115Ah



SERIES M05 AND M10

- OPT - SES 010 Live voice. Hand held microphone with speakbutton and preamp
- OPT - SES 020 Solarpower operation with 2 12V/75W modules and mounting material dimension (LxHxD) 1000x1200x50 weight 18kg
- OPT - SES 030 Antenna over-voltage protector. Mounted on the antenna connector inside siren housing
- OPT - SES 040 Mounting and wiring for remote control receiver
- OPT - SES 050 Programming adapter for M05. For software download and power reduction incl. Download software RS485 – USB Adapter
- OPT - SES 060 Optocoupler – Input OPK2. Enhanced about 2 remotecontrol Inputs
- OPT - SES 070 Optocoupler – Input OPK5. Enhanced about 5 remotecontrol Inputs
- OPT - SES 080 Security – cylinder lock SZ2485 for siren housing



SERIES M10

- OPT - SES 110 Radiocode decoder-encoder 5/7 tone ZVEI and CCIR, FSK / FFSK after customers specification
- OPT - SES 120 Mounting, wiring and voltage converter SPW 12V/4A for Radio mounting
- OPT - SES 130 Transceiver Motorola GM340, incl. standard configuration
- OPT - SES 140 140 Internal operation and control panel. 7 different siren programs can be released manually. 5 digital stored voice message with option voice memory only. Statusdisplay of operation and errors.
- OPT - SES 150 External operation and control panel. Function like internal operation and control panel Up to 100m displaceable. Additional possibility of live voice
- OPT - SES 160 Digital speech memory. For 8 different recordings together 180 sec. 1,5MB permanet memory.
- OPT - SES 170 Sum error. Potential free relais contact 100mA
- OPT - SES 180 Alarm activ. Potential free relais contact 100mA
- OPT - SES 190 Sabotage contact
- OPT - SES 200 Programming and service adapter for M10. For software download, power reduction, service and error diagnostic incl. Download software and service programm RS485 – USB Adapter RS232 – USB Adapter



FACTORS

-Terrain
-The acoustic irradiated
-surrounding property
are most important for the choice of the Siren-construction stage and the radiative-trait



IMPORTANT!

Objects like trees, bushes and building parts may not be located before the Sirenhorns. Little trees grow huge with the years!



LEVEL

Outdoors, a Sirensignal should at least have a sound pressure level of 66dB SPL.

in many cases a sound pressure level under 66dB SPL is not noticed within buildings, therefore a level of at least 71dB SPL should be aimed.

In any case, the Sirenlevel should at least lie around 10dB higher than the average of the surrounding sound.



ATTENTION!

Very high sound pressure level can damage the hearing.
If there can be people nearby the Siren, then limited values may not be exceeded.
This should be considered by your selection of the siren-construction stages and radiative-trait.

Already a sound pressure level of 130dB SPL over 1 second can cause hearing damage.

For maintenance or Servicework a protection of the ears is necessary.



CONSTRUCTION STAGES

250W 500W 1000W 2000W 4000W



RADIATIVE-TRAIT

Omnidirectional

180° assembly 90° compact assembly

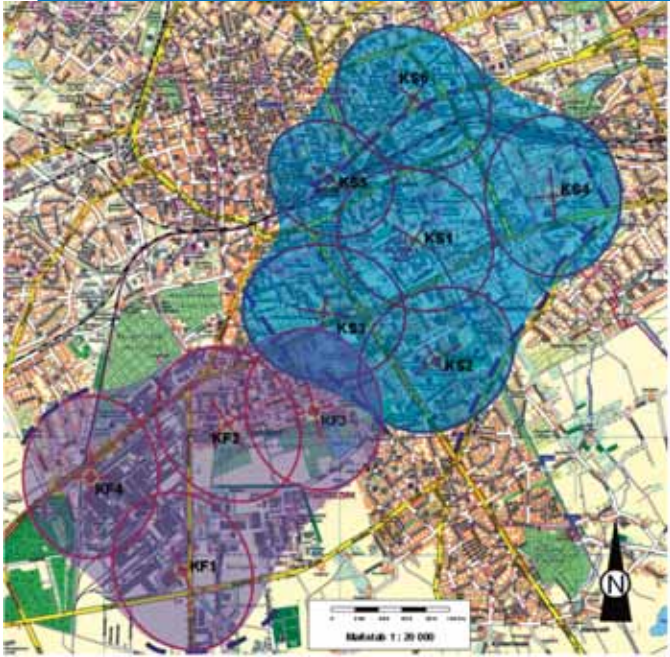
Directet

0° assembly

Herefrom a great number of construction versions can be created, which are suited for the different local conditions.

>>> PLANUNG

▶ STRATEGY . . .



For the design you need a topographic map and the following graphics.

After the size of the relevant area was determined, select now the sound wheels from the graphics.

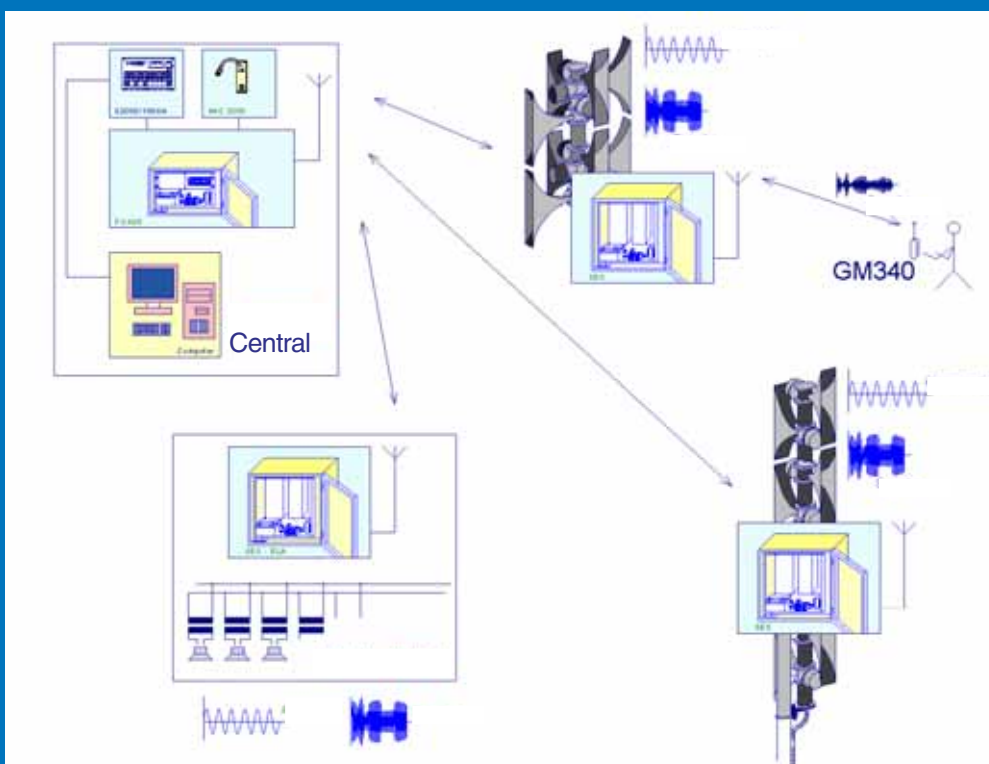
Please map the sound wheels.

to prevent sound holes, the wheels should have a minor overlap

in geographical and surrounding property unfavorable situations its often a better way to place more sirens with lesser achievement distributed than to place one Siren with a high achievement in the center.

>>> CONTROL CENTER

▶ ALERTING CONCEPT



Developed and produced in our Factory.

Approved concepts. Used all over the world.

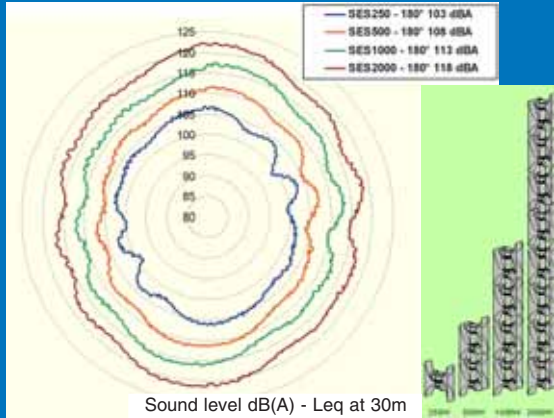
Customized software solutions.

> RANGE

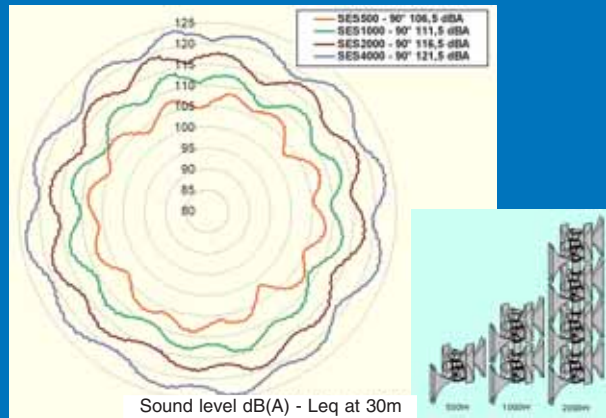


OMNIDIRECTIONAL RADIATION

180° assembly

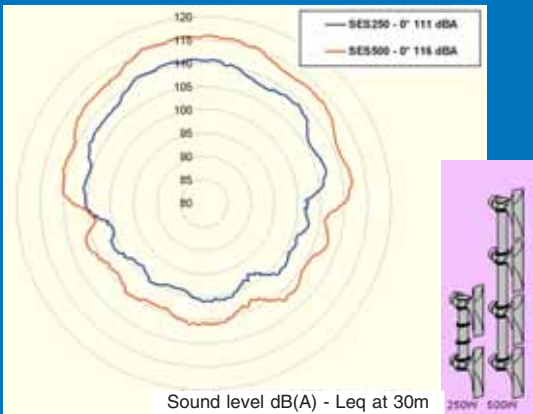


90° compact assembly



DIRECTIONAL RADIATION

0° assembly



SONNENBURG
ELECTRONIC AG
Kommunikation mit Sicherheit



Lauterbachstraße 45
D-84307 Eggenfelden

FON +49(0) 87 21.95 88-0
FAX +49(0) 87 21.95 88-60

info@sonnenburg.de
www.sonnenburg.de

Take advantage of the experience and high production expertise of one of the leading European communication systems manufacturers.

- > Quality-controlled equipment
- > First-class prices
- > Quick installation

We look forward to making your surroundings safer!

