



GP6, GP10 and GP12 Sirens

INSTALLATION AND MAINTENANCE

1. Installation

- a. Fix siren to a firm level base at a minimum height of 3m above the ground and free of side or top obstructions.
- b. For best all round sound propagation mount the unit at a height of 4.5 to 6m with 50m clear radius all round.
- c. Figure 1 overleaf shows a polar plot of the sound output from the sirens *in free space*.

Please note that the propagation of sound in air is affected by the following factors which must be accounted for when calculating the coverage of the siren:

- Variations of the propagation speed in the air
 - Attenuation of the sound during propagation
 - Wind and turbulence of the atmosphere
 - Obstacles placed in the vicinity of siren and listener.
 - Ambient noise levels
- d. The plot assumes ideal free-field conditions.

The following losses must be taken into account during commissioning:

- Sound attenuation loss over distance in free-field conditions without obstructions.

Distance in Metres		1	30	100	200	500	1000	2000
Audibility dB(A)	GP10	140	110	100	94	86	80	74
	GP6	135	105	95	89	81	75	69

- Attenuation in decibels per kilometre due to absorption of sound in air (10°C, 90%RH).

At 500 Hz frequency the attenuation is 1.6 dB(A)/kilometre

- Absorption due to fog in decibels per kilometre.

At 500 Hz frequency the attenuation is 1.0 dB(A)/kilometre

The two figures provided for sound absorption in clear air and fog are sound losses in addition to the typical sound losses experienced over distance indicated in the table above.

- e. This equipment should only be connected to the supply voltage marked on the rating plate.

- f. **WARNING:** The equipment should be protected from access by persons, animals or foreign bodies to avoid injury to persons or damage to equipment affecting safe use.
- g. **WARNING:** This equipment contains rotating parts. Please ensure that the retaining straps on the rotor are left in place until the installation is complete and the equipment is ready to be tested for the first time.
- h. **WARNING:** Keep well clear of the siren when in operation. Extremely high noise levels are produced. Unprotected exposure could lead to permanent hearing damage. Ensure appropriate hearing protection is used when working in close proximity to siren.

2. Maintenance

- a. The siren should be periodically tested for correct function. Typically this could be quarterly or half yearly.
- b. Motor bearings are sealed and rated for a life of 25,000 hours. No maintenance is required

GP6 and GP10 Single Ended Sirens - Polar Plot of Sound Output (dBA @ 1m)

