SPHO-30W-EN54 & SPHO-30W-EN54-DC

- Horn Loudspeaker
- 30W 100V
- High sound pressure level
- Low distortion sound
- U-bracket mounting
- Robust ABS plastic housing
- Weatherproof to IP66
- Full range sound quality
- Option with DC capacitor fitted
- Certified to EN 54-24

OVERVIEW

The SPHO-30W-EN54 is a 10 W, 100 V horn loudspeaker that delivers a high sound pressure level for both indoor and outdoor applications. It is certified to EN 54-24. The loudspeaker is equipped with a 100 V line transformer offering four power tap settings: 30W, 20W, 10W, and 5W, and 1.25 W, as well as a low-impedance (20 ohms) connection. Power tap selection is easily accessible on the rear of the loudspeaker.

The SPHO-30W-EN54 has a robust impact –resistant ABS housing, which is sealed to the IP66 environmental standard. Thus the speaker is sealed against the ingress of dust, and is sealed against high-pressure water jets for sustained weather resistance in industrial applications. In addition, the body meets the UL94 V-0 flammability standard. The speaker is coloured to match RAL7035 ‘Light Grey’.

Mounting of the speaker is provided using a stainless-steel ‘U’ bracket, which provides a number of flexible mounting options.

The PG11 cable glands on the back of the speaker allow quick and easy connection. For additional reliability, a ceramic block and a thermal fuse are provided. The unit is compliant with British Standard BS 5839, Part 8.

There is also a strap-on mast bracket available as an accessory, part number SPAC-MB-80. This mast bracket is suitable for use with masts of up to 200mm diameter.

The loudspeaker is optionally available with a DC blocking capacitor fitted, in order to provide compatibility with DC loudspeaker line monitoring systems. The part number for this DC monitoring compatible version is SPHO-30W-EN54-DC

Enhanced Acoustic Simulator for Engineers (EASE) data for this loudspeaker is available on request.

TECHNICAL DATA

Power Tappings	30W / 20W / 10W / 5 W
Impedance (100V)	333 / 500 / 1000 / 2000 Ohms
DC Capacitor (SPHO-30W-EN54-DC Version only)	4.7 µF 250 VDC
Frequency Range	592 — 6,900 Hz
Frequency Response	250 — 15,000 Hz
SPL 1W / 1m, peak	110,1 dB
SPL 1W / 4m, peak	98,1 dB
SPL Pmax / 4m, peak	112,8 dB
SPL IEC 60268-5, 1W/1m	97,0 dB
SPL IEC 60268-5, Pmax/1m	111,8 dB
SPL EN 54-24, Pmax/4m	96,0 dB
Sensitivity EN 54-24, 1W/4m	85,0 dB
Dispersion (-6dB, 500Hz) Horizontal / Vertical Plane*	360° (horizontal) / 360° (vertical)
Dispersion (-6dB, 1KHz) Horizontal / Vertical Plane*	110° (horizontal) / 110° (vertical)
Dispersion (-6dB, 2KHz) Horizontal / Vertical Plane*	65° (horizontal) / 65° (vertical)
Dispersion (-6dB, 4KHz) Horizontal / Vertical Plane*	35° (horizontal) / 35° (vertical)
Temperature range	-25 / +70 °C
Dimensions	235 x 326 mm
IP Rating	IP66
Weight (net)	2.20 kg
Colour	RAL 7035
Connector	Ceramic block
Mounting	‘U’ Mounting bracket
Maximum Cable Passage	8mm²
Compliance	EN 54-24 / BS 5839-8, Part 8

*** EN 54-24 Definitions for Speaker Reference Axis, Point, Plane + Horizontal & Vertical Planes:**

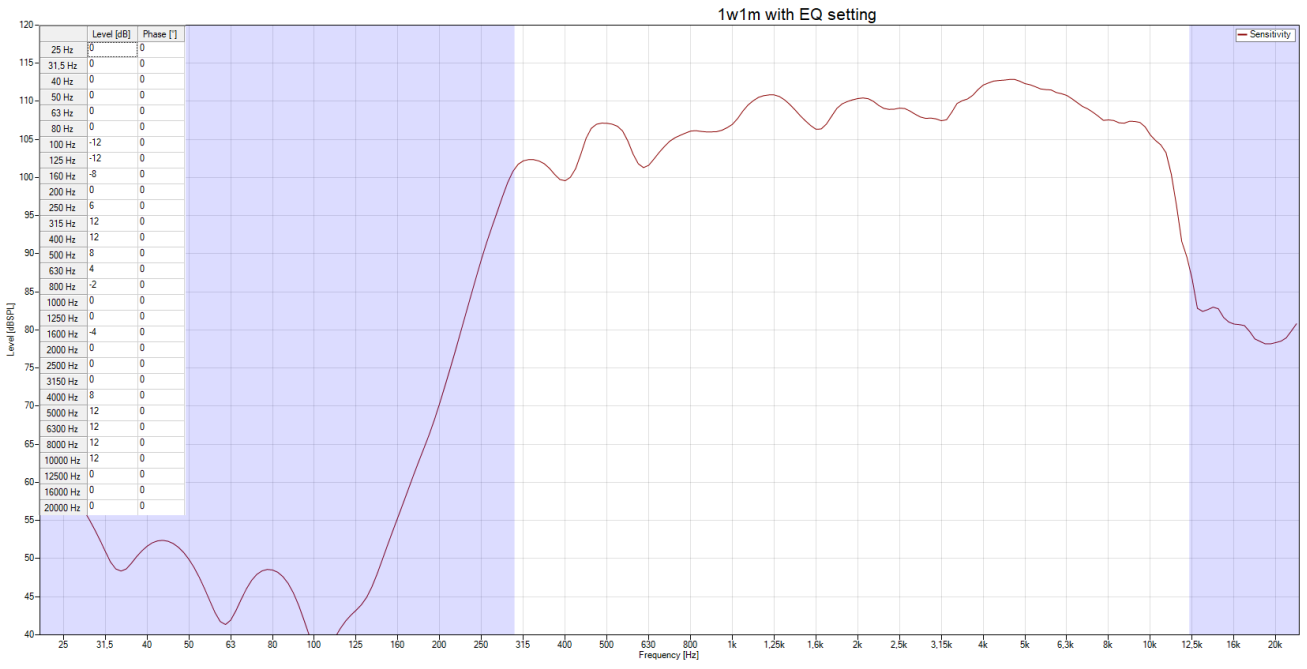
- Reference Axis: Axis is through the centre of the speaker grille surface and is perpendicular to the grille surface.
- Reference Plane: Plane is across the front of the speaker grille surface and is perpendicular to the reference axis.
- Horizontal Plane: Plane contains the reference axis and is perpendicular to the reference plane.
- Vertical Plane: Plane contains the reference axis and is perpendicular to the reference plane.
- Reference Point: Point is at the centre of the front of the speaker grille surface where all the above intersect.

All measurements in the table above relate to the Reference Axis unless otherwise stated

EN 54-24 Annex A, Measurement Environments:

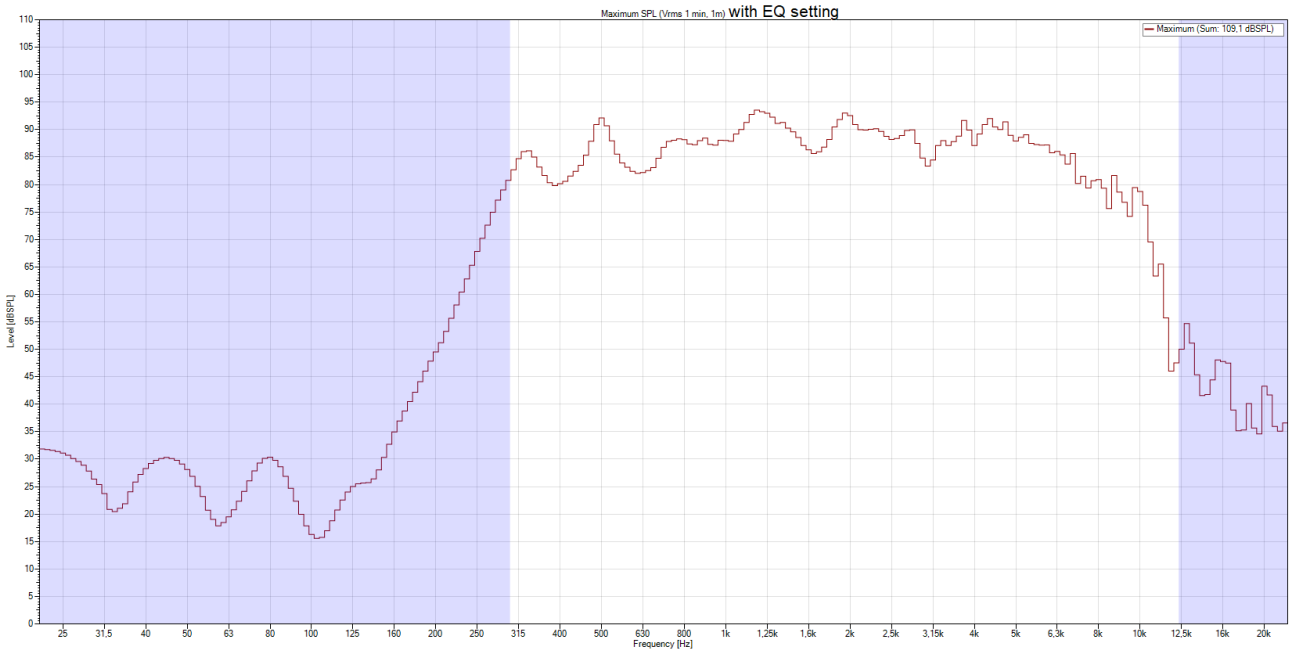
Flush-mounted loudspeakers e.g. ceiling loudspeakers, shall be measured under half-space free field conditions.
All other speakers shall be measured under free-field conditions or in a ground plane arrangement that simulates a free-field condition.

FREQUENCY RESPONSE DIAGRAM—SENSITIVITY 1W / 1m



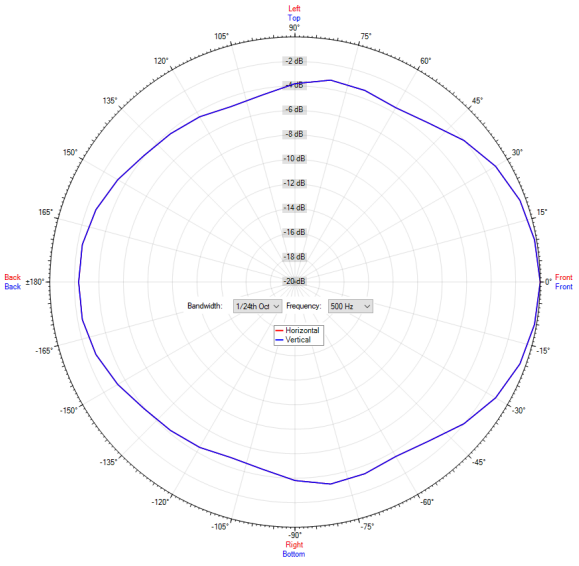
	Level [dB]	Phase [°]
25 Hz	0	0
31,5 Hz	0	0
40 Hz	0	0
50 Hz	0	0
63 Hz	0	0
80 Hz	0	0
100 Hz	-12	0
125 Hz	-12	0
160 Hz	-8	0
200 Hz	0	0
250 Hz	6	0
315 Hz	12	0
400 Hz	12	0
500 Hz	8	0
630 Hz	4	0
800 Hz	-2	0
1000 Hz	0	0
1250 Hz	0	0
1600 Hz	-4	0
2000 Hz	0	0
2500 Hz	0	0
3150 Hz	0	0
4000 Hz	8	0
5000 Hz	12	0
6300 Hz	12	0
8000 Hz	12	0
10000 Hz	12	0
12500 Hz	0	0
16000 Hz	0	0
20000 Hz	0	0

FREQUENCY RESPONSE DIAGRAM—MAXIMUM SPL (Vrms 1 min, 1m)

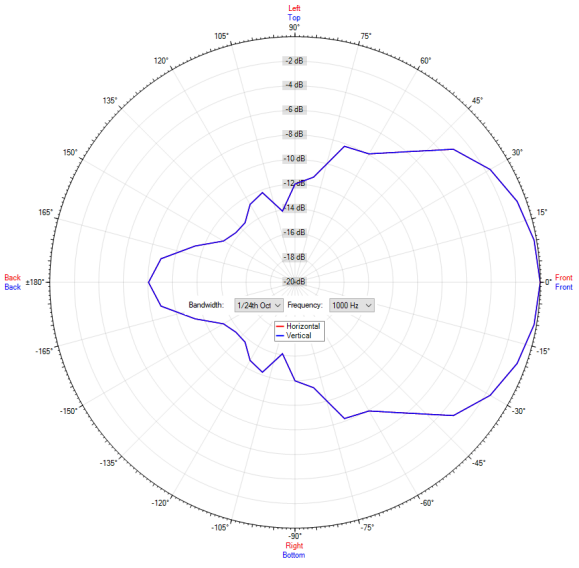


POLAR DIAGRAMS

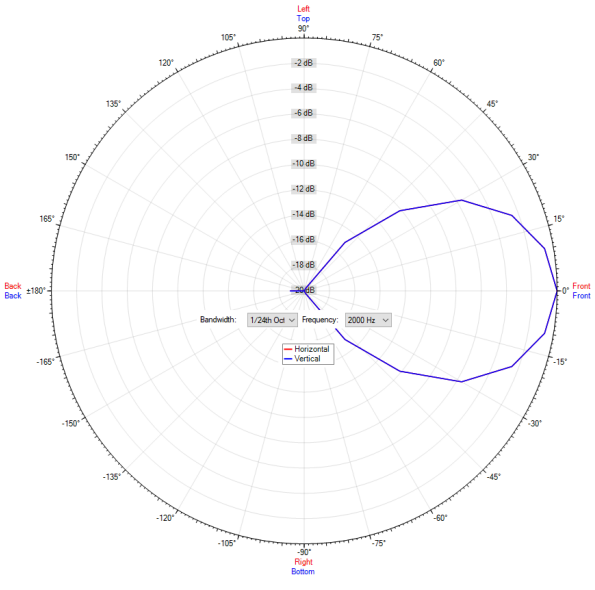
500 Hz



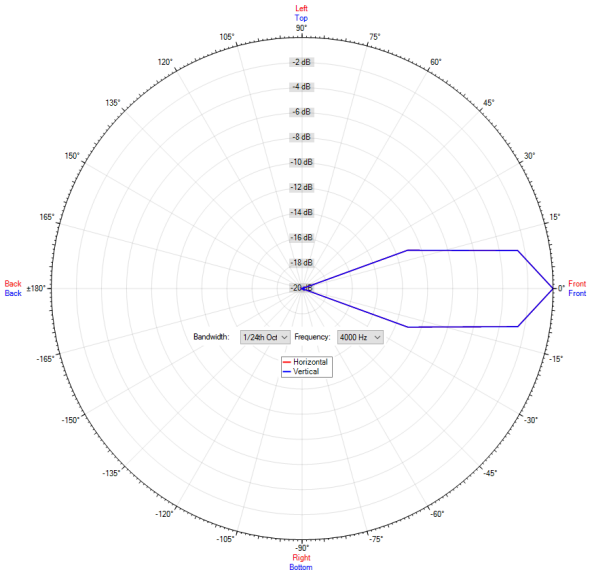
1,000 Hz



2,000 Hz

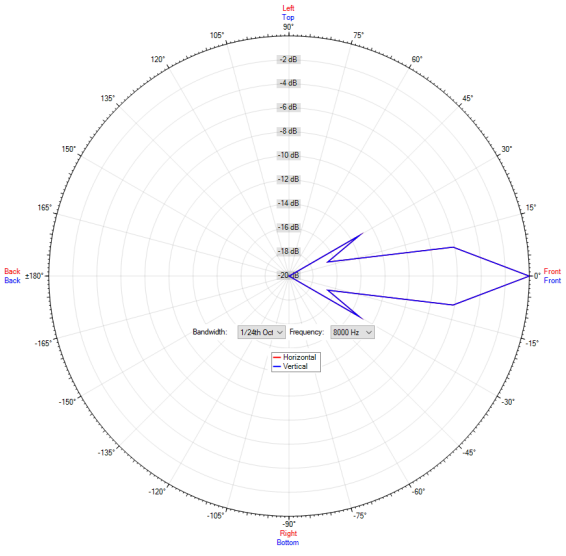


4,000 Hz

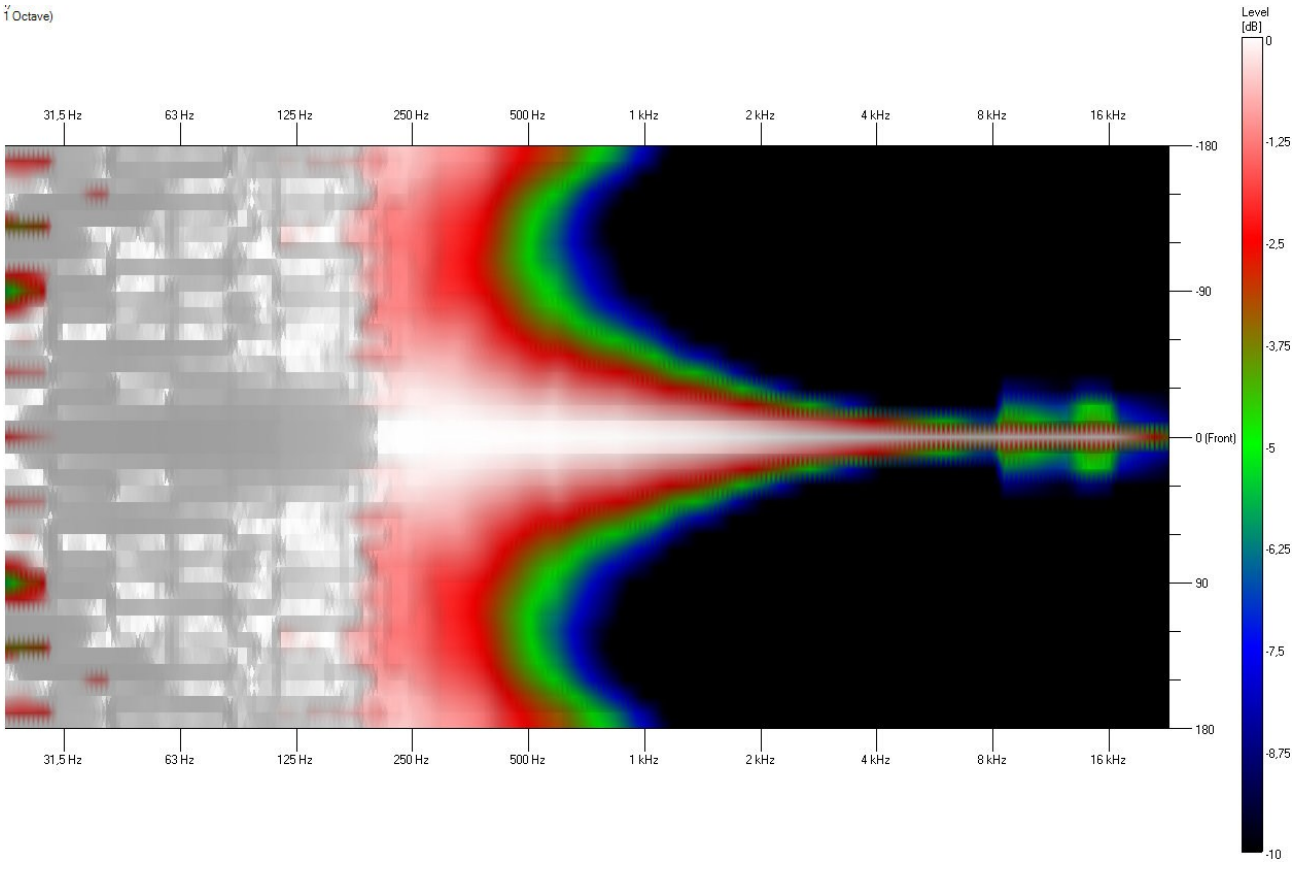


POLAR DIAGRAMS

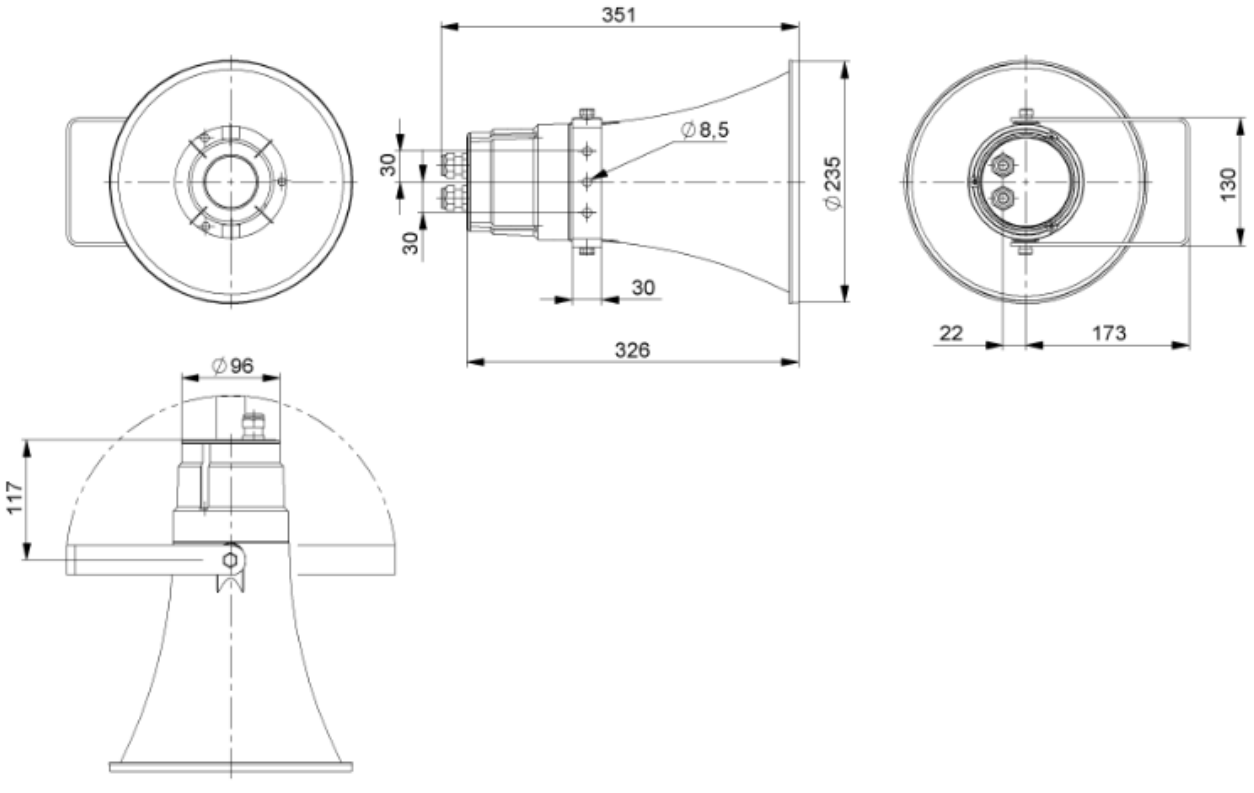
8,000 Hz



ISOBAR



DIMENSIONAL DIAGRAM



This equipment is designed and manufactured to conform to the following EU Directives:

CE

Low Voltage: 2014/35/EU
Restriction of Hazardous Substances (RoHS): 2011/65/EU & 2015/863/EU

Made for:

Zenitel GB Limited

Unit 17 - Cliffe Industrial Estate - Lewes - East Sussex - BN8 6JL - U.K.

www.zenitel.com

Version 6 ASL_Datasheet_SPHO-30W-EN54