8½ inch HIGH POWER FULL RANGE LOUDSPEAKER

APPLICATION

A full range loudspeaker for studio monitoring equipment and domestic bass reflex enclosures for high fidelity reproduction from 45 Hz to 19 kHz.

TECHNICAL DATA

Rated impedance	8 Ω
Voice coil resistance	6,4 Ω
Frequency range	45 to 19 000 Hz
Resonance frequency	50 Hz
Power handling capacity measured without filter	
loudspeaker mounted in sealed enclosure < 30 l	20 W
loudspeaker mounted in sealed enclosure > 30 l	10 W
Operating power	1,3 W
Sweep voltage, frequency range: 35 to 20 000 Hz	6,3 V
Energy in air gap	203 mJ
Flux density	0,9 T
Air-gap height	6 mm
Voice coil height	8,9 mm
Core diameter	34 mm
Magnet material	ceramic
diameter	92 mm
mass	0,4 kg
Mass of loudspeaker	1,32 kg

The loudspeaker has a paper dual cone and surround and a cork gasket on the flange.

Connection to the loudspeaker by means of 2,8 mm (0,11 inch) tag connectors or by soldering.

Dimensions in mm

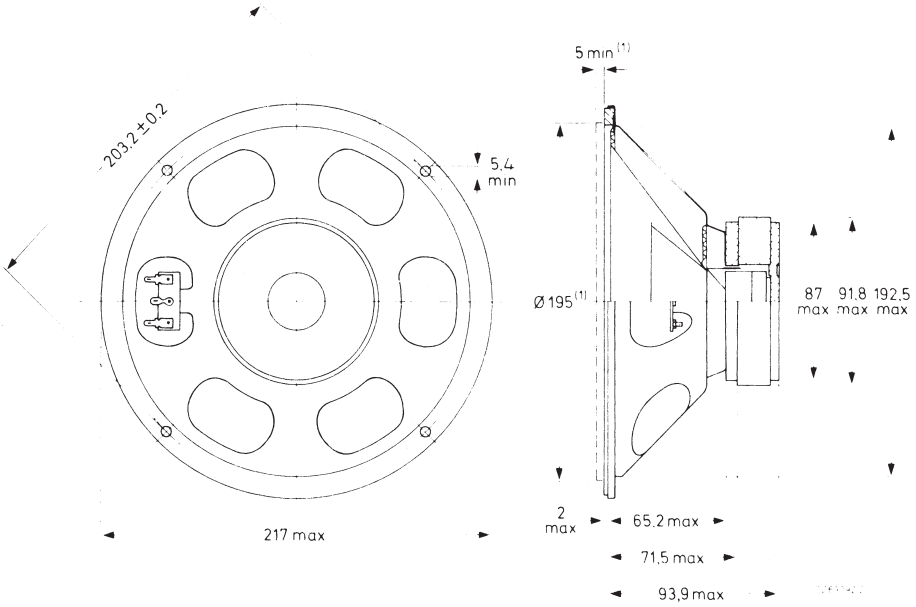


Fig. 1.

(1) Baffle hole and clearance depth required for cone movement at the specified power handling capacity.

One tag is indicated by a red mark for in-phase connection.

AVAILABLE VERSION

9710/M8, catalogue number 2422 257 48121	this number applies to bulk packed loudspeakers, minimum packing quantity 8 per unit.

FREQUENCY RESPONSE CURVES (see Fig. 2)

Curve a: Sound pressure measured in anechoic room, loudspeaker mounted on IEC baffle.
Curves d2 and d3: 2nd and 3rd harmonic distortion, measured at the operating power of 1,3 W in anechoic room, loudspeaker mounted in sealed 80 l enclosure, filled with 1 kg of glass wool.

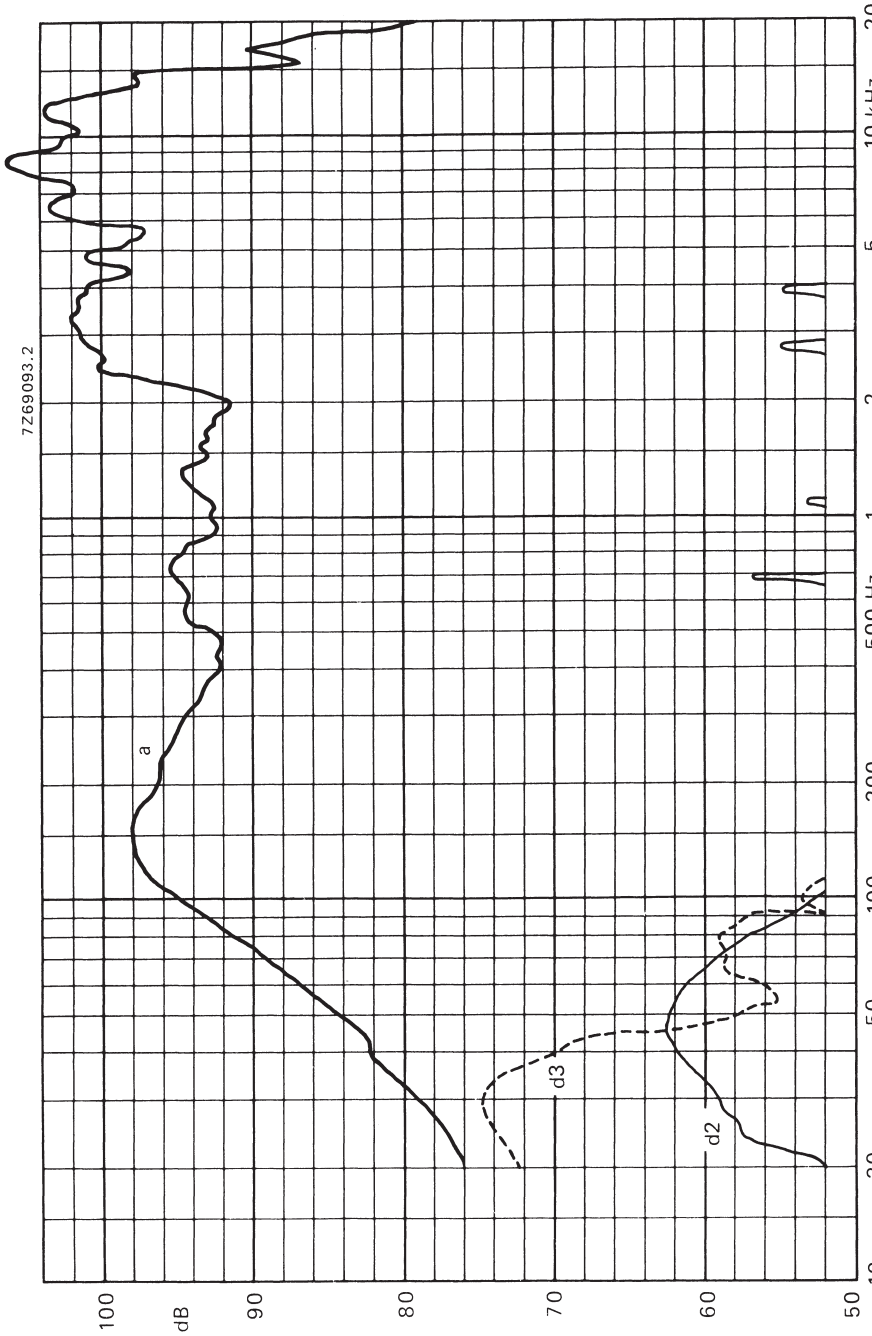

7Z69093.2
a
d3
d2
dB
100
90
80
70
60
50
10
20
50
100
200
500 Hz
1
2
5
10 kHz
20

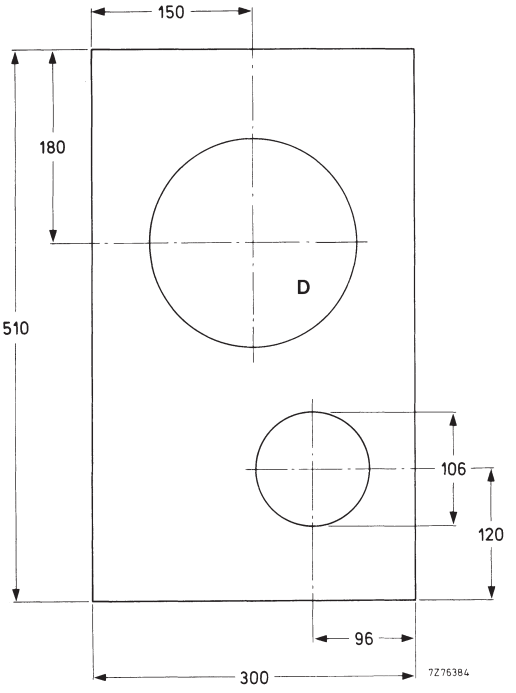
Fig. 2.

System 4

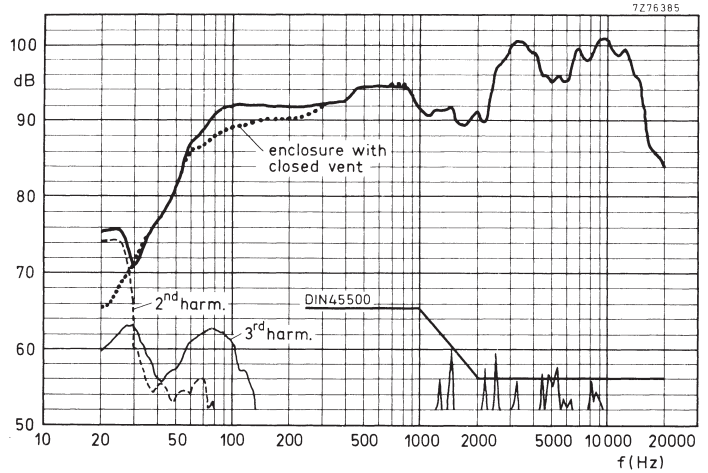
40 - 20 000 Hz

Full range speaker 9710/M8

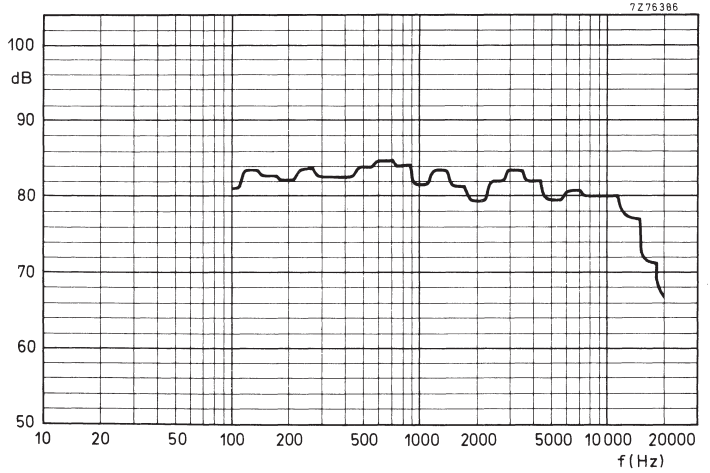
Power handling capacity	=	25 W
Rated impedance	=	8 Ω
Operating power	=	1,1 W
Resonance frequency	=	23 Hz/83 Hz
Frequency range	=	40-20 000 Hz
Enclosure volume	=	40 litres
Internal dimensions	=	515×305×280 mm
Internal depth of enclosure	=	280 mm
Material thickness	=	27 mm
Damping material	=	glass wool 2 layers on back wall 510×300×40 mm
Reflex port	=	106 mm o.d. 100 mm i.d. 161 mm long (e.g. PVC or cardboard tube)



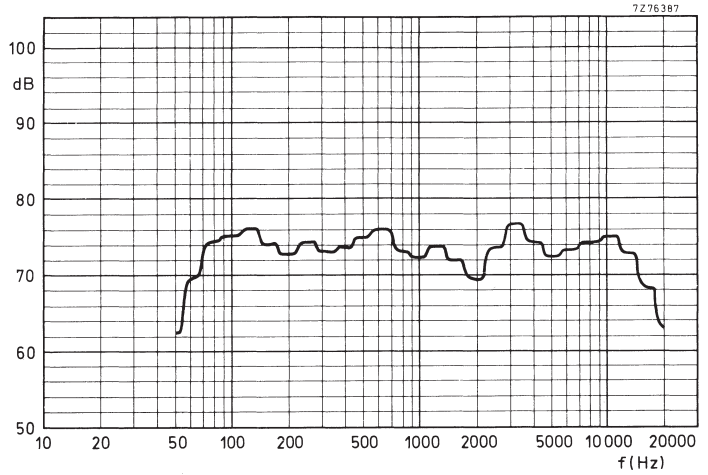
Baffle board layout
(see Table 7.3 for hole size)



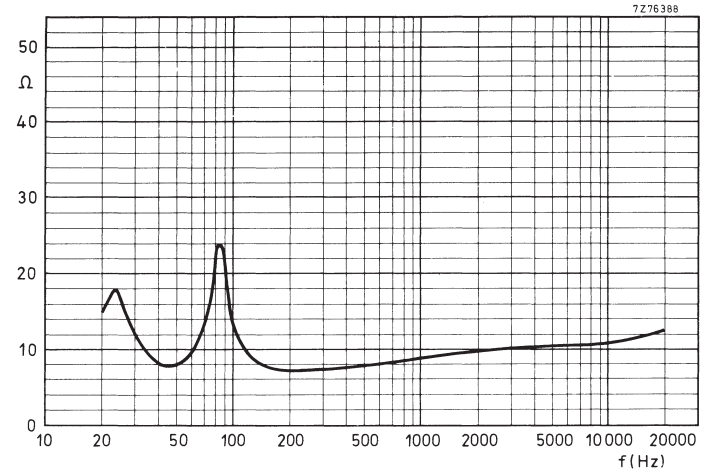
Frequency response and distortion measured in anechoic room.



Energy response in reverberant room.



Frequency response measured in living room.



Impedance curve.