

Loudspeaker Test Report

Manufacturer: Next Two Ltd

Type: Cabinet

Model: Sub 200T

For: Next Two

Report No.: 1147/LS/Sub200T

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1.00 Object

1.1. The object of this Report is to present measurements of the acoustic performance of the Sub 200T device.

2.00 Scope

2.1. The following characteristics were measured

- On-axis frequency response
- Polar response
- Impedance
- Applied voltage
- On-axis 3rd octave band sound pressure level

from which the following are calculated

- a) Directivity Index (dB)
- b) Directivity factor, Q
- c) Effective octave band impedance
- d) Octave band Sensitivity (dB @ 1m, 1W/oct)
- e) Overall Sensitivity:
 - dB_A @ 1m, 1W
 - dB_{lin} @ 1m, 1W
 - Speech shape @ 1m, 1W
- f) Octave band Power Apportionment (%)
- g) Maximum Sound pressure level (dB @ 1m)
- h) Frequency response chart
- i) Impedance bode plot
- j) Polar response charts
- k) Acoustic Power chart (dB-PWL @ 1W)

3.00 Method

- 3.1. The device was mounted in Free Space as shown in figure 1 – Mounting method E.
- 3.2. The measurements were made in an anechoic chamber.
- 3.3. Measurements were made as detailed in AMS Test Method document No. IR/1a/LS/Meth.
- 3.4. All measurements were made in general accordance with BS 6840: Part 5: 1995.

4.00 Results

- 4.1. The On-axis 3rd octave frequency response of the device is shown graphically in Appendix A.
- 4.2. The Impedance bode plot of the device is shown graphically in Appendix A.
- 4.3. Polar plots of the device are shown in Appendix B.
- 4.4. The Directivity Index has been calculated using Gerzon' equal angle, weighted area method.
- 4.5. Tabulated values of Directivity index, Directivity factor, Power apportionment, Impedance, Maximum SPL and Acoustic Power are shown in the Summary data sheet.

5.00 Notes

5.1. Sensitivity

The octave band sensitivity is produced in its useful form for calculations. It should be noted that the octave band sensitivity is given as dB @ 1m, 1W/oct. To determine the output when only the overall power is known, then only the overall dBA or dBlin values should be used. For more detailed information refer to AMS Acoustics Data Sheet 'Loudspeaker Sensitivity – Interpretation of Results'.

5.2. Polar Plots

For convenience each polar plot has been normalized to 0dB. For this reason caution is advised when comparison of levels between octave bands is made. The On-axis frequency response should be used for comparison purposes.



6.00 Observations

- 6.1. The following general observations are made:
Frequency response exhibits a strong peak at 1.6kHz.

7.00 Engineers Notes

- 7.1. The following Engineers notes are made:
Measurement centre was taken as the geometric centre of the loudspeaker unit.

8.00 The following general observations are made:

Frequency response exhibits a strong peak at 1.6kHz.

9.00 Engineers Notes

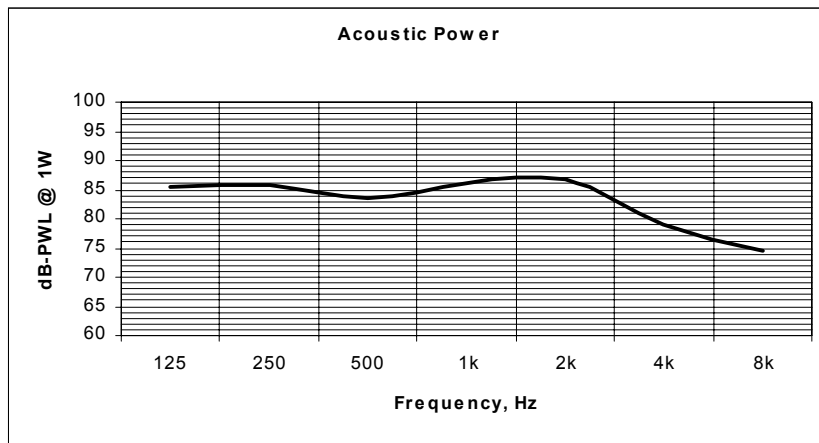
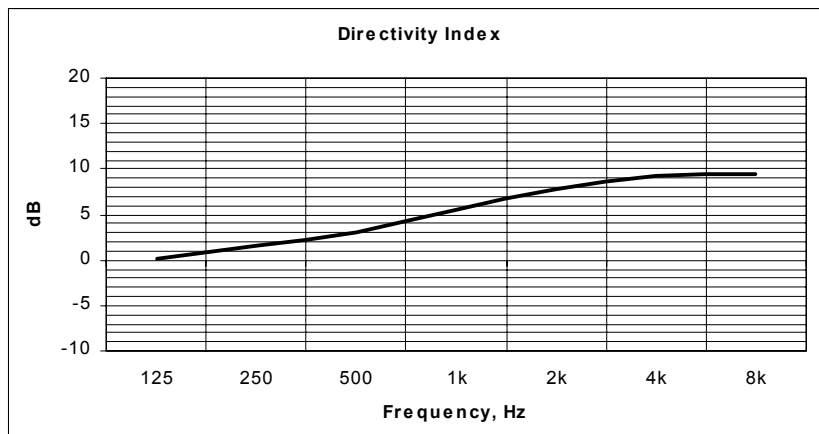
- 9.1. The following Engineers notes are made:
Measurement centre was taken as the geometric centre of the loudspeaker unit.

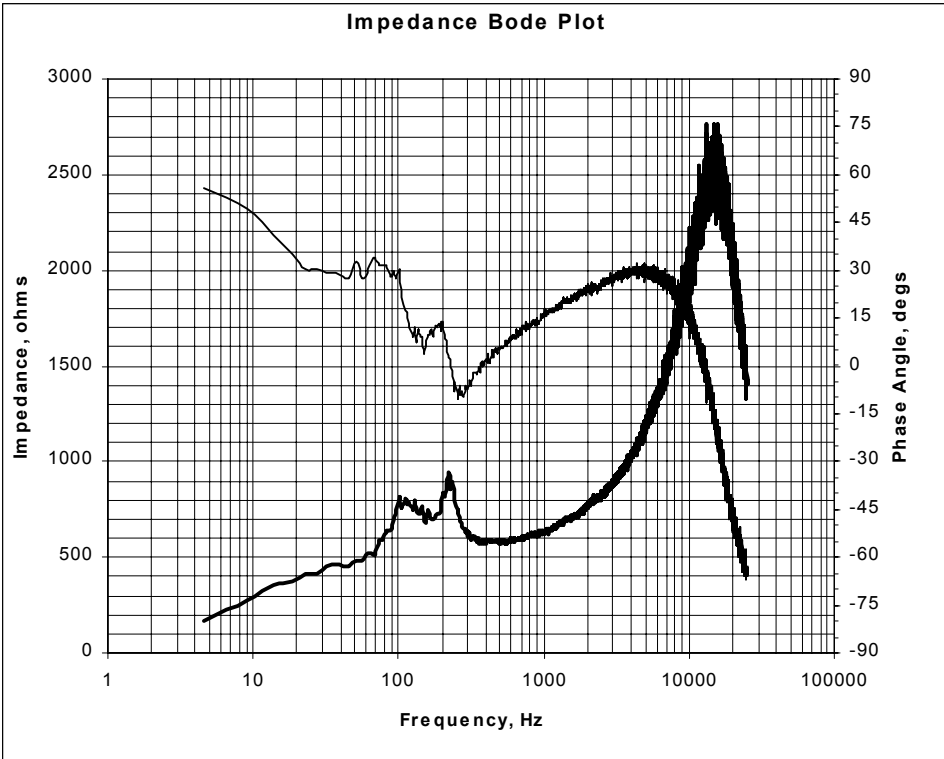
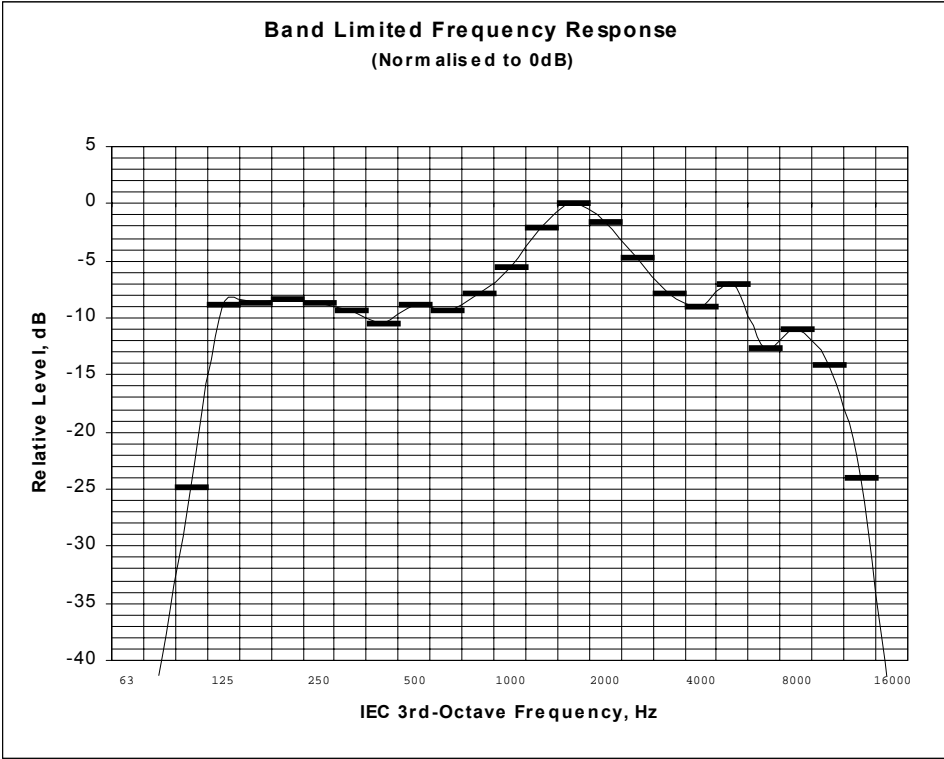
Manufacturer : Next Two Ltd
 Model Code : Sub 200T
 Mounting : Full Space, Free Field
 Transformer Tapping : 15W

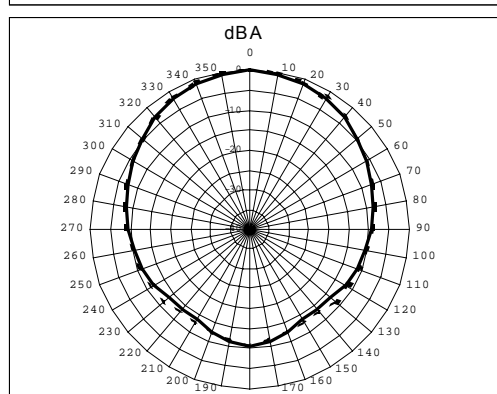
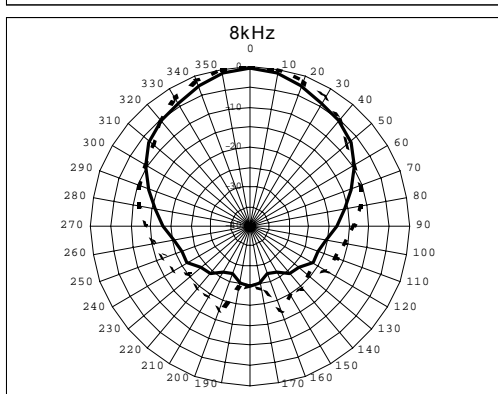
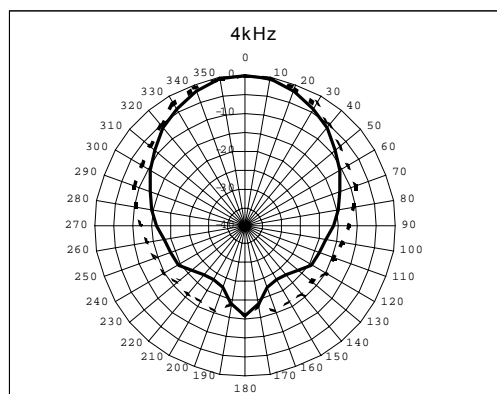
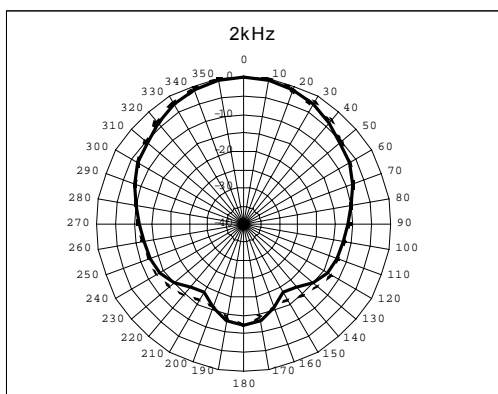
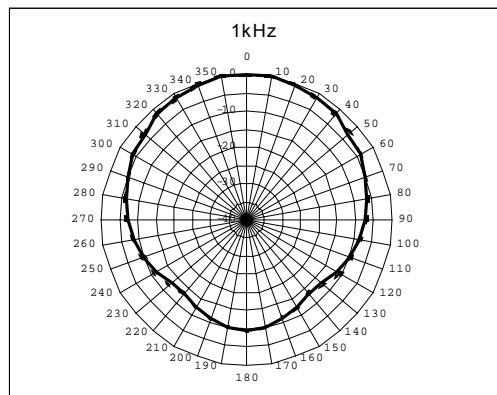
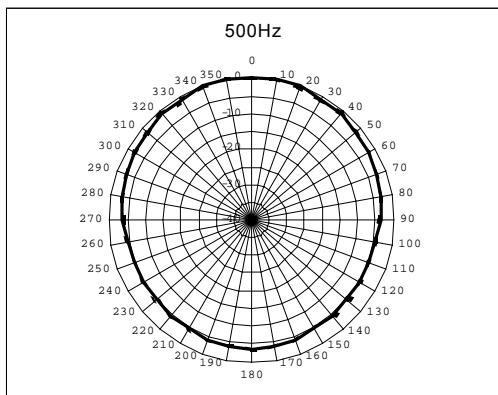
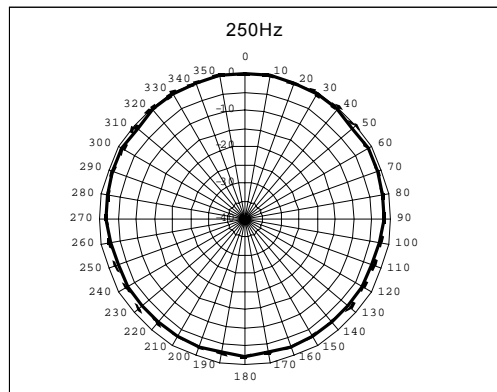
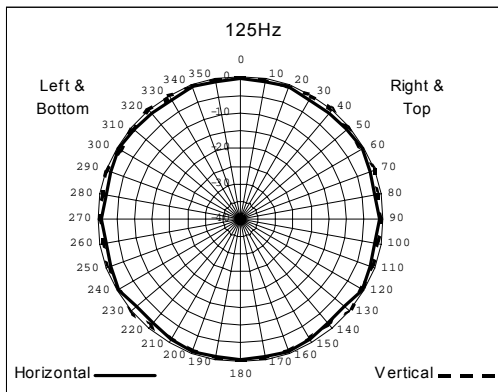
Measurement Axis Located at : 0 degrees

Parameter	Frequency (Hz)							dB	dBA
	125	250	500	1k	2k	4k	8k		
Axial Q	1.0	1.4	2.0	3.5	5.8	8.4	8.6		
Directivity Index (dB on Axis)	0.2	1.5	3.0	5.4	7.7	9.2	9.3		
Sensitivity (dB @ 1m, 1W/Oct)	83	84	83	88	91	86	84	87	87
Sensitivity(dB @ 1m, 1W)Speech Shape								85	82
Acoustic Power (dB-PWL @ 1W)	85	85	83	86	86	78	74		
Apportioned Power	0.1	0.1	0.1	0.1	0.1	0.1	-6.		
Effective Impedance (Ohms)	716	703	583	613	702	903	1442		
Maximum SPL (dB @ 1m)	86	88	87	92	95	88	84	98	98

Test Signal: Pink Noise(100Hz-10kHz)







Loudspeaker Information

Manufacturer : Next Two Ltd
Model Code : Sub 200T
Type : Cabinet
Colour : White
Serial No. : Stock 5110008
Batch No. : N/A
Other Markings : Tapping label, Next Two badge
Backbox : As Supplied
Grille : As Supplied
Weight (grammes) : 1550
Depth (mm) : 150 mm
Width (mm) : 156 mm
Height (mm) : 156 mm
Special Features : Quick release tapping connectors

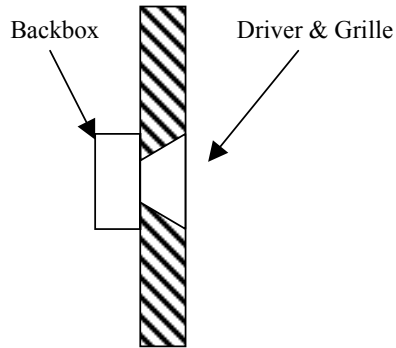
Internal Details

Driver Types/Sizes : Not known
Driver Serial No.(s) : Not known
Driver Markings : Not known
Damping Material : Not known
Available Tappings : 15W, 7.5W, 4W, 2W

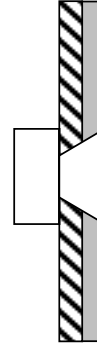
Electrical Details

Resonant Frequency(s) : 100, 220
Cross-Over Frequency(s) : Not known
dc. Resistance : -
Inductance : -
Capacitance : -

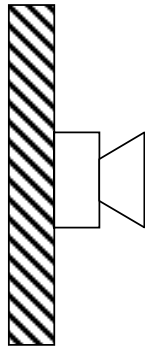
Loudspeaker Mounting Methods



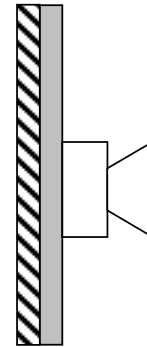
Mounting Method A
Loudspeaker Mounted
in a Reflective Baffle



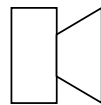
Mounting Method B
Loudspeaker Mounted
in an Absorbent Baffle



Mounting Method C
Loudspeaker Mounted
on a Reflective Baffle



Mounting Method B
Loudspeaker Mounted
on an Absorbent Baffle



Mounting Method E
Loudspeaker not Attached to any
Surface and Radiation Unaffected by
nearby Reflecting Surfaces