



AVI SOUND INTERNATIONAL LTD.  
UNIT 170, 11120 BRIDGEPORT ROAD  
RICHMOND, BC, CANADA V6X 1T2  
TEL: (604)-276-0099 FAX: (604)-276-0409  
E-Mail: tech@avisound.bc.ca

**MODEL**                      **AVI SL-500, 250 mm (10") SUBWOOFER DRIVER**

**APPLICATIONS**        This is a dual coil subwoofer driver with shallow mounting depth for high quality performance sound systems.  
It may be connected in parallel (2 ohms), series (8 ohms) or at 4 ohms each from two amplifier channels (not recommended).  
Suggested operating range is 45 to 430 Hz.

**PERFORMANCE**        30 to 1000 Hz at -10 dB points, in optimum vented enclosure without crossover.  
45 to 430 Hz at -3 dB points, in optimum vented enclosure without crossover.  
150 watts music program material.  
100 watts AES pink noise rating.  
88.5 dB average, at 1 watt and 1 meter, in half space.  
4 ohm nominal, 2.9 ohm minimum, per coil.

**FEATURES**                Black heavy duty steel frame.  
Extended and vented pole piece with bumped and integrated bottom plate.  
Both top and bottom plates with CNC and black absorbing finish.  
Black PP Mica cone with composite rubber edge.  
4 heavy duty gold plated brass terminals, on unique yellow build-ring.  
1028 g (36.2 oz) TDK magnet.  
50 mm (2") two layer copper voice coil.

**PHYSICAL**                256 mm (10.1") overall diameter.  
98 mm (3.9") overall depth.  
234 mm (9.2") cut out hole diameter.  
92 mm (3.6") mounting depth.  
3.64 Kg (8 lbs) weight.



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**AVI SL-500 APPLICATION NOTES – Connected in parallel**

<b>T/S DATA</b>	Znom	2 Ω	Revc	1.45 Ω	Fo	37.5 Hz
	Sd	0.035 M <sup>2</sup> (54.3 in <sup>2</sup> )	Le	0.666 mH	SPL	88.5 dB
	Xmax	4.25 mm (0.17 in)	Qms	4.069	BL	8.07 TM
	Vas	39.3 L (1.4 ft <sup>3</sup> )	Qes	0.418	Pnom	100 W
	Cms	226 μm/N	Qts	0.379	Pmax	150 W

	NET VOLUME	TOTAL VOLUME	PORTS	DIA	LENGTH	FILL	Fb (Hz)	F <sub>-3</sub> (Hz)	F <sub>-10</sub> (Hz)	NOTES
<b>CLOSED A</b>	15.5 L 0.55 ft <sup>3</sup>	17 L 0.6 ft <sup>3</sup>				Typical		81	43	Qtc=0.593
<b>CLOSED B</b>	21 L 0.74 ft <sup>3</sup>	22.4 L 0.8 ft <sup>3</sup>				Typical		80	41	Qtc=0.588
<b>VENTED A</b>	26 L 0.9 ft <sup>3</sup>	29 L 1 ft <sup>3</sup>	1	75 mm 3"	290 mm 11.4"	Minimal	38	45	30	Optimum
<b>VENTED B</b>	35.2 L 1.2 ft <sup>3</sup>	37.9 L 1.3 ft <sup>3</sup>	1	75 mm 3"	240 mm 9.5"	Minimal	35	40	27	Extended Bass
<b>BANDPASS 4</b>	10.9 L 0.4 ft <sup>3</sup>	12.4 L 0.44 ft <sup>3</sup>				Minimal		49	36	Closed
	9.2 L 0.3 ft <sup>3</sup>	11.7 L 0.4 ft <sup>3</sup>	1	100 mm 4"	315 mm 12.4"	Minimal	79	131	186	Vented
<b>BANDPASS 6</b>	26 L 0.9 ft <sup>3</sup>	29 L 1 ft <sup>3</sup>	1	75 mm 3"	290 mm 11.4"	Minimal	38	41	32	Vented
	13.7 L 0.5 ft <sup>3</sup>	15.2 L 0.54 ft <sup>3</sup>	1	100 mm 4"	210 mm 8.3"	Minimal	76	112	155	Vented

Install SL-500 into the closed cavity, facing to the vented cavity.

Install SL-500 into the large vented cavity, facing to the small vented cavity. Both ports are vented to the outside.

Notes: Minimal Fill means one of each pair of opposing walls is covered with absorptive material.

Typical Fill means all walls are covered with absorptive material.



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**AVI SL-500 APPLICATION NOTES – Connected in series**

<b>T/S DATA</b>	Znom	8 Ω	Revc	5.8 Ω	Fo	37.5 Hz
	Sd	0.035 M <sup>2</sup> (54.3 in <sup>2</sup> )	Le	2.829 mH	SPL	88.5 dB
	Xmax	4.25 mm (0.17 in)	Qms	3.784	BL	16.5 TM
	Vas	39.3 L (1.4 ft <sup>3</sup> )	Qes	0.394	Pnom	100 W
	Cms	226 μm/N	Qts	0.357	Pmax	150 W

	NET VOLUME	TOTAL VOLUME	PORTS	DIA	LENGTH	FILL	Fb (Hz)	F <sub>-3</sub> (Hz)	F <sub>-10</sub> (Hz)	NOTES
<b>CLOSED A</b>	15.5 L 0.55 ft <sup>3</sup>	17 L 0.6 ft <sup>3</sup>				Typical		48	35	Qtc=0.564
<b>CLOSED B</b>	21 L 0.74 ft <sup>3</sup>	22.4 L 0.8 ft <sup>3</sup>				Typical		44	31	Qtc=0.523
<b>VENTED A</b>	21.3 L 0.75 ft <sup>3</sup>	24.4 L 0.86 ft <sup>3</sup>	1	75 mm 3"	320 mm 12.6"	Minimal	40	43	24	Optimum
<b>VENTED B</b>	30.8 L 1.1 ft <sup>3</sup>	33.7 L 1.2 ft <sup>3</sup>	1	75 mm 3"	260 mm 10.2"	Minimal	36	36	24	Extended Bass
<b>BANDPASS 4</b>	9.4 L 0.33 ft <sup>3</sup>	10.8 L 0.38 ft <sup>3</sup>				Minimal		43	35	Closed
	8.1 L 0.3 ft <sup>3</sup>	10.7 L 0.38 ft <sup>3</sup>	1	100 mm 4"	315 mm 12.4"	Minimal	84	165	197	Vented
<b>BANDPASS 6</b>	21.3 L 0.75 ft <sup>3</sup>	24.4 L 0.86 ft <sup>3</sup>	1	75 mm 3"	320 mm 12.6"	Minimal	40	42	32	Vented
	11.9 L 0.4 ft <sup>3</sup>	13.5 L 0.5 ft <sup>3</sup>	1	100 mm 4"	210 mm 8.3"	Minimal	81	143	170	Vented

Install SL-500 into the closed cavity, facing to the vented cavity.

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Typical Fill means all walls are covered with absorptive material.