

POWERED SUBWOOFER GENERAL INFORMATION INDEX

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MANUFACTURER & MODEL	RETAIL PRICE	MANUFACTURER'S WARRANTY	DIMENSIONS LxWxH (inches)	EXTERNAL VOLUME (cubic feet) / (liters)	WEIGHT (lbs) / (kilograms)	DRIVER CONFIG	AMPLIFIER POWER RATING	SYSTEM TYPE	MULTIPLE MODES?	BUILT IN PEQ?
B&W: ASW-610XP	\$1 199	5 years / 2 electronics	14.8x12.8x12.8	1.4 / 39.6	34.4 / 15.6	1x10"	500w	sealed	NO	YES
BIC ACOUSTECH: PL-200	\$279	8 years / 2 electronics	19.5x14.75x17.25	2.88 / 81.6	47 / 21.3	1x12"	250w	bass reflex	NO	NO
ELEMENTAL DESIGNS: A7S-450	\$849	1 year	23.5x22.25x22.75	6.88 / 195	130 / 59	1x18"	1300w	sealed	NO	NO
EMOTIVA: X-REF12	\$699	5 years	15.5x14.625x15.625	2.05 / 58.5	44 / 20	1X12"	600w	sealed	NO	YES
EPIK SUBWOOFERS: EMPIRE	\$799	3 years	24x18x22	5.5 / 156	125 / 56.7	2x15"	600w	sealed	NO	NO
KLIPSCH: SW-311	\$1 599	2 years	16.25x13x13.4375	1.64 / 46.4	37 / 16.8	1x10"	500w	reflex (PR's)	NO	YES
OUTLAW AUDIO: LFM-1 EX	\$649	3 years	24x17x22.75	5.31 / 150	80 / 36.3	1x12"	350w	bass reflex	YES	NO
PREMIER ACOUSTICS: PA-150	\$349	5 years / 2 electronics	19x18x21	4.2 / 119	69 / 31.3	1x15"	250w	bass reflex	NO	NO
RBH SOUND: SX-12	\$1 099	5 years / 1 electronics	21.125x17.7x19.625	4.25 / 120	53 / 24	1x12"	350w	bass reflex	NO	NO
RYTHMIK AUDIO: FV15HP	\$1 199	5 years / 2 electronics	26x18x24	6.5 / 184	110 / 49.9	1x15"	600w	bass reflex	YES	YES
SVS: PB13-ULTRA SLEDGE DSP	\$1 999	3 years	29.25x20.5x22.5	7.8 / 221	155 / 70.3	1x13.5"	1000w	reflex / seal	YES	YES
VELODYNE: DD18+	\$4 999	5 years / 3 electronics	25.6x20.67x22.72	6.9 / 197	142 / 64.4	1X18"	1250w	sealed	NO	YES
Tested by Gene DellaSala, Mark Sanfilipo & Paul Apollonio										
MANUFACTURER & MODEL	RETAIL PRICE	MANUFACTURER'S WARRANTY	DIMENSIONS LxWxH (inches)	EXTERNAL VOLUME (cubic feet) / (liters)	WEIGHT (lbs) / (kilograms)	DRIVER CONFIG	AMPLIFIER POWER RATING	SYSTEM TYPE	MULTIPLE MODES?	BUILT IN PEQ?
Aperion Audio: Bravus 10D	\$799	10 years /3 electronics	13.5x15x13.5	1.58/44.8	44/20	2x10"	300w	sealed	YES	NO
Axiom Audio: EP400v3	\$1 145	5 years	13.8x10.5x16.8	1.41/39.9	48/22	1x8"	500w	sealed	YES	NO
Axiom Audio: EP500v1	\$1 270	5 years	19.5x15x19.5	3.3/93.5	72.6/32.9	1 x 12"	500w	ported	NO	NO
Axiom Audio: EP600v1	\$1 860	5 years	45.5x 15x 17	6.7/190.1	103/46.9	1 x 12"	600w	ported	NO	NO
Emotiva: Xref-10	\$499	5 years transferrable	13.6x12.6x13.6	1.35/38.2	33/15	1x10"	300w	sealed	YES	NO
Emotiva: Ultra 12	\$499	5 years transferrable	14.5x14.5x15.25	1.86/52.5	38/17.2	1 x12"	300w	sealed	NO	NO
Funkywaves: FW 12.X	\$1 750	not specified	24x14.5x24	4.83/136.9	115/52.1	1x12"	2000w	ported	NO	NO
HSU: VTF-15H	\$879	7 years / 2 electronics	25x18x26	6.8/191.7	120/54	1x15"	350w	ported	YES	NO
Lava: LSP12	\$338	5 years	16.4x13.8x18.9	2.5 / 70.8	44.7 / 20.3	1 x 12"	250w	ported	NO	NO
JL Audio: f110	\$2 100	5 years	15.6x12.9 x17.3	2.01 / 57	67/30	1x10"	900w	sealed	YES	YES
SVS: PB12-Plus DSP	\$1 349	3 years	25x 19x21	5.77/163.5	127/ 57.6	1 x 12.5"	800w	portes	YES	YES
Velodyne: DD-15	\$3 999	5 years	20x18x17.8	1.64 / 46.4	100/45	1x15"	1250w	sealed	YES	YES
Velodyne: DD-15+	\$4 399	5 years	20x18x22	4.6/129.8	120/54	1x15"	1250w	sealed	YES	YES
Veldoyne: DD-18	\$4 999	5 years	21.3x23x19.3	5.5/155	120/54	1x18"	1250w	sealed	YES	YES

CEA2010 MAX CLEAN RMS SUBWOOFER OUTPUT

ALL DATA COLLECTED OUTDOORS / GROUND PLANE AND REFERENCED TO 2 METER RMS dB SPL VALUES

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MANUFACTURER & MODEL	CEA2010 CENTER FREQUENCY												BANDWIDTH UNIFORMITY	FREQUENCY RANGE
	10hz	12.5hz	16hz	20hz	25hz	31.5hz	40hz	50hz	63hz	80hz	100hz	125hz	20-80Hz	+/-3dB Window
B&W: ASW-610XP	/	/	/	85,1	90,0	96,1	101,5	105,9	108,9	108,1	106,2	104,9	+/-11.9dB	50-125Hz
BIC ACOUSTECH: PL-200	/	/	/	84	96,2	102,5	107,7	110,4	108,1	106,5	105,3	103,8	+/-13.2dB	40-100Hz
ELEMENTAL DESIGNS: A7S-450	/	90	94,6	100,4	106,8	112,5	117,8	121	120,1	118,3	116,8	115,8	+/-10.3dB	40-125Hz
EMOTIVA: X-REF12	/	/	/	81,0	89,5	99,1	103,5	107,6	108,5	107,7	106,3	105,1	+/-13.8dB	40-125Hz
EPIK: EMPIRE	/	93,5	98,2	102,2	105,8	109,7	113,2	116,4	119,2	121,6	123,3	124,2	+/-9.7dB	63-125Hz
KLIPSCH: SW-311	/	/	/	84,2	97,9	102,6	105,3	108,6	111,4	112,2	111,5	110,6	+/-14dB	50-125Hz
OUTLAW AUDIO: LFM-1 EX: 18hz	/	/	97,5	102,1	104,7	107,2	110,5	112,4	113,3	113,3	112,9	112,8	+/-5.6dB	31.5-125Hz
OUTLAW AUDIO: LFM-1 EX: 25hz	/	/	86,9	101,0	107,3	110,7	112,3	113,7	113,8	113,7	113,1	112,8	+/-6.4dB	31.5-125Hz
PREMIER ACOUSTICS: PA-150	/	/	/	93,6	98,6	105,4	109,3	114,4	118,0	117,8	116,9	116,0	+/-12.2dB	50-125Hz
RBH SOUND: SX-12	/	/	/	87,7	98,0	108,0	111,1	113,7	112,7	112,1	111,7	111,6	+/-13dB	31.5-125Hz
RYTHMIK AUDIO: FV15HP: 1 PORT MODE	/	98,5	104,0	108,3	111,7	115,3	117,8	118,0	117,9	117,8	117,6	117,2	+/-4.9dB	31.5-125Hz
RYTHMIK AUDIO: FV15HP: 2 PORTS MODE	/	89,8	102,1	108,1	113,1	117,0	119,5	119,1	118,8	118,4	118,2	118,1	+/-5.7dB	31.5-125Hz
SVS: PB13-ULTRA: 15HZ MODE	/	89,3	105,1	109,2	111,1	113,6	116,4	116,7	115,9	114,8	113,8	113,4	+/-3.8dB	25-125Hz
SVS: PB13-ULTRA: 20HZ MODE	/	/	97,4	110,6	113,5	115,5	117,5	117,8	116,6	115,3	114,4	114,1	+/-3.6dB	25-125Hz
SVS: PB13-ULTRA: SEALED MODE	/	84,6	91,5	97,6	104,0	110,0	113,8	115,2	114,7	114,0	113,4	113,0	+/-8.8dB	31.5-125Hz
VELODYNE: DD18+ SERVO GAIN 1	84,6	89,2	98,8	103,4	108,3	113,0	115,8	116,8	115,3	113,5	112,1	110,5	+/-6.7dB	31.5-125Hz
VELODYNE: DD18+ SERVO GAIN 8	86,1	92,5	98,9	103,6	108,2	112,9	115,3	116,3	115,1	113,4	112,0	110,6	+/-6.4dB	31.5-125Hz
HIGHEST RECORDED VALUE														

Tested by Paul Apollonio														
MANUFACTURER & MODEL	CEA2010 CENTER FREQUENCY												BANDWIDTH UNIFORMITY	FREQUENCY RANGE
	10hz	12.5hz	16hz	20hz	25hz	31.5hz	40hz	50hz	63hz	80hz	100hz	125hz	20-60Hz	+/-3dB Window
Funkywaves: FW 12.X	/	/	/	107,0	112,3	112,4	114,0	113,9	113,1	/	/	/	+/-3.5dB	25-63Hz
HSU: VTF-15H	/	/	/	100,9	106,8	110,0	112,7	112,7	112,6	/	/	/	+/-5.9dB	25-63Hz
SVS: PB12-Plus DSP	/	/	/	107	109,5	111,5	114,3	115,3	115,3	/	/	/	+/-4.2dB	25-63Hz

Reverse Sweep MAX CLEAN RMS SUBWOOFER OUTPUT

ALL DATA COLLECTED OUTDOORS / GROUND PLANE AND REFERENCED TO 2 METER RMS dB SPL VALUES

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MANUFACTURER & MODEL	CEA2010 CENTER FREQUENCY									BANDWIDTH UNIFORMITY	FREQUENCY RANGE
	20hz	25hz	31.5hz	40hz	50hz	63hz	80hz	100hz	125hz	20-80Hz	+/-3dB Window
Aperion Audio: Bravus 10D	75,0	80,0	88,0	96,0	100,0	101,0	104,0	102,0	100,0	+/-14.5dB	40-125Hz
Axiom Audio: EP400v3	88,0	91,0	94,0	96,0	96,0	95,0	95,0	94,0	93,0	+/-3.5dB	25-125Hz
Axiom Audio: EP500v1	88,0	97,0	99,0	100,0	100,0	99,0	99,0	99,0	100,0	+/-6dB	25-125Hz
Axiom Audio: EP600v1	95,0	100,0	104,0	105,0	101,0	100,0	97,0	99,0	99,0	+/-3dB	20-125Hz
Emotiva: Xref-10	84,0	89,0	91,0	98,0	101,0	102,0	104,0	102,0	101,0	+/-10dB	40-125Hz
Emotiva: Ultra 12	84,0	92,0	96,0	102,0	106,0	107,0	104,0	104,0	102,0	+/-11.5dB	40-125Hz
JL Audio: f110	91,0	97,0	101,0	102,0	101,0	100,0	97,0	95,0	92,0	+/-5.5dB	31.5-100Hz
Lava: LSP12	65,0	78,0	88,0	101,0	105,0	110,0	105,0	100,0	95,0	+/-20dB	31.5-125Hz
RBH Sound SX-12	91,0	100,0	106,0	109,0	111,0	109,0	109,0	108,0	107,0	+/-10dB	31.5-125Hz
Velodyne: DD-15	90,0	94,0	98,0	104,0	107,0	111,0	109,0	111,0	109,0	+/-10.5dB	40-125Hz
Velodyne: DD-15+	97,0	101,0	105,0	111,0	111,0	112,0	108,0	107,0	104,0	+/-7.5dB	25-125Hz
Velodyne: DD-18	94,0	99,0	105,0	111,0	114,0	114,0	114,0	113,0	111,0	+/-10dB	25-125Hz
Velodyne: DD-18+	102,0	107,0	111,0	114,0	115,0	114,0	112,0	110,0	110,0	+/-5dB	31-125Hz
SVS PB-13Ultra (20Hz tune)	109,0	112,0	113,0	116,0	115,0	114,0	112,0	110,0	109,0	+/-3.5dB	25-100Hz
HIGHEST RECORDED VALUE											

All subwoofers tabulated above were tested by: Gene DellaSala ,except the DD-18 and LSP12 which were tested by Mark Sanfilipo, and the RBH SX-12 & SVS PB-13Ultra by Josh Ric

Subwoofers tested using a continuous reverse sine-wave sweep tend to track closely in SPL to CEA-2010 tests at low frequencies where the subwoofer is driver limited but CEA-2010 tends to yield higher SPL #s at higher frequencies where the subwoofer is amplifier limited

AUDIOHOLICS "BASSAHOLIC" SUBWOOFER RATINGS

MAXIMUM SUGGESTED ROOM SIZE TO ENSURE ADEQUATE OUTPUT HEADROOM

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MANUFACTURER & MODEL	31.5-63Hz SPL 25Hz SPL ROOM SIZE	MINIMUM PASSING CRITERIA BASED ON CEA2010 2 METER GROUNDPLANE PEAK OUTPUT CONVERTED TO 4 METER 1/8TH SPACE			
		<109db	>109db	115db	123db
		<103db	>103db	109db	117db
		SMALL	MEDIUM	LARGE	EXTREME
		<1500cu ft	1500-3000cu ft	3000-5000cu ft	>5000cu ft
B&W: ASW-610XP		CERTIFIED			
BIC ACOUSTECH: PL-200			CERTIFIED		
ELEMENTAL DESIGNS: A7S-450				CERTIFIED	
EMOTIVA: X-REF12		CERTIFIED			
EPIK: EMPIRE				CERTIFIED	
KLIPSCH: SW-311			CERTIFIED		
OUTLAW AUDIO: LFM-1 EX: 18hz				CERTIFIED	
OUTLAW AUDIO: LFM-1 EX: 25hz				CERTIFIED	
PREMIER ACOUSTICS: PA-150			CERTIFIED		
RBH SOUND: SX-12			CERTIFIED		
RYTHMIK AUDIO: FV15HP: 1 PORT MODE					CERTIFIED
RYTHMIK AUDIO: FV15HP: 2 PORTS MODE					CERTIFIED
SVS: PB13-ULTRA: 15HZ MODE					CERTIFIED
SVS: PB13-ULTRA: 20HZ MODE					CERTIFIED
SVS: PB13-ULTRA: SEALED MODE				CERTIFIED	
VELODYNE: DD18+					CERTIFIED
Funkywaves: FW 12.X				CERTIFIED	
HSU: VTF-15H				CERTIFIED	
SVS: PB12-Plus DSP				CERTIFIED	
Aperion Audio: Bravus 10D		CERTIFIED			
Axiom Audio: EP400v3		CERTIFIED			
Axiom Audio: EP500v1			CERTIFIED		
Axiom Audio: EP600v1			CERTIFIED		
Emotiva: Xref-10		CERTIFIED			
Emotiva: Ultra 12		CERTIFIED			
JL Audio: f110			CERTIFIED		
Lava: LSP12		CERTIFIED			
Velodyne: DD-15			CERTIFIED		
Velodyne: DD-15+				CERTIFIED	
Veldoyne: DD-18				CERTIFIED	

VALUES ARE THE AMOUNT THAT CEA2010 PASSING RESULTS RECORDED COMPARED TO DURING THE MAXIMUM LEVEL LONG TERM SWEEP
POSITIVE VALUES INDICATE HIGHER OUTPUT WITH CEA2010 / NEGATIVE VALUES INDICATE LESS OUTPUT RECORDED VIA CEA2010

MANUFACTURER & MODEL	CENTER FREQUENCY											
	10hz	12.5hz	16hz	20hz	25hz	31.5hz	40hz	50hz	63hz	80hz	100hz	125hz
B&W: ASW-610XP	/	/	/	-3,7	-2,8	-0,6	0,8	1,8	3,2	4,1	2,6	3,6
BIC ACOUSTECH: PL-200	/	/	/	-3,1	1,1	0,6	1,4	2,8	4,4	4,6	4,5	6
ELEMENTAL DESIGNS: A7S-450	/	-1,2	-4,3	-2,5	-0,2	0,6	1	1,4	2,2	2,4	2,4	1,5
EMOTIVA: X-REF12	/	/	/	-2,3	-4,8	-0,6	0,1	3,0	4,5	6,5	6,7	7,9
EPIK: EMPIRE	-1,5	5,4	-0,3	0,1	-0,2	0,4	2,4	3,7	4,1	4,3	5,1	4,8
KLIPSCH: SW-311	/	/	/	11,1	4,0	2,8	3,5	4,7	4,7	4,2	2,2	3,1
OUTLAW AUDIO: LFM-1 EX: 18hz	/	/	0,5	0,3	1,7	2,5	2,8	2,6	2,0	2,8	2,9	4,5
OUTLAW AUDIO: LFM-1 EX: 25hz	/	/	-2,1	1,5	0,8	1,5	1,7	1,9	1,7	2,6	2,1	3,4
PREMIER ACOUSTICS: PA-150	/	/	/	-1,6	-0,8	2,0	2,0	2,3	2,0	2,9	3,4	2,6
RBH SOUND: SX-12	/	/	/	-3,4	-0,7	2,2	1,9	2,9	3,9	3,5	3,3	4,5
RYTHMIK AUDIO: FV15HP: 1 PORT MODE	/	0,7	0,0	0,7	0,9	2,9	5,2	4,6	4,9	6,9	10,3	11,9
RYTHMIK AUDIO: FV15HP: 2 PORTS MODE	/	4,3	1,2	1,2	1,0	2,3	4,7	3,2	3,2	4,6	7,9	9,4
SVS: PB13-ULTRA: 15HZ MODE	/	-3,2	0,3	1,3	1,7	1,4	1,6	3,4	3,0	3,8	3,7	4,8
SVS: PB13-ULTRA: 20HZ MODE	/	/	-2,1	1,3	1,6	2,1	1,6	2,7	3,3	4,1	4,2	5,1
SVS: PB13-ULTRA: SEALED MODE	/	-6,8	-4,9	-2,6	-0,6	0,5	1,4	4,1	3,3	4,1	4,2	5,2
VELODYNE: DD18+ SERVO GAIN 1	-4,6	-5,4	-0,7	0,1	0,5	0,0	-0,3	3,2	4,5	4,8	4,7	5,7
VELODYNE: DD18+ SERVO GAIN 8	-3,0	-1,0	-0,2	0,8	0,9	1,3	1,7	2,2	2,2	1,7	1,0	0,8
TOTAL RANGE OF VARIATION ALL UNITS / SPL dB	3,1	12,2	6,1	14,8	8,8	5,3	5,5	3,3	6,5	8,5	9,3	11,1
AVERAGE RANGE OF VARIATION ALL UNITS / SPL dB	-3,0	-0,9	-1,1	0,0	0,2	1,3	2,0	3,0	3,4	4,0	4,2	5,0
TOTAL AVERAGE VARIATION ALL UNITS / ALL FREQS	2,1											
LEAST GAIN OR MOST LOSS												
MOST GAIN OR LEAST LOSS												