EARTHQUAKE

The Sound That Will *MOVE* You...

Magma

DB-R

Subwoofers Installation & Reference Manual

DBX-R

Tremor-XR

www.earthquakesound.com

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A THANK YOU NOTE

Dear Valued Customer,

Congratulations! You are the proud owner of a high-quality Earthquake Subwoofer.

Earthquake Sound Corporation, located in Menlo Park California at the heart of the San Francisco Bay Area; specializes in manufacturing high end car audio products ranging from the smallest titanium tweeter to the world's largest amplifier. In its dedication to excellence, Earthquake has maintained extensive programs in research and development to provide you with the highest quality mobile audio products.

This owners manual is designed to better acquaint you with Earthquake products and to guide you through all phases of system design and application. It is imperative that you read this manual in its entirety. Earthquake technicians and staff are looking forward to answering any questions you might have.

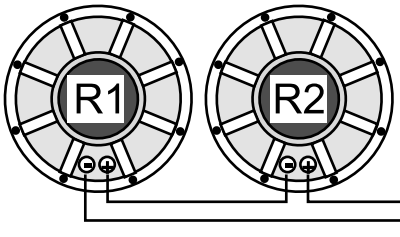
CAUTION: Earthquake Audio products are capable of producing over 140dB and are commonly used for high powered audio systems. Prolonged exposure to SPL levels of over 100dB will cause permanent haring damage. We at Earthquake ask you to please exercise extreme caution when using our product for competition or every day use.

SUBWOOFER SPECIFICATIONS

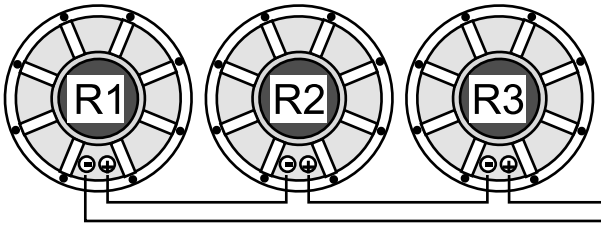
MODEL	SIZE	MAX POWER Watts	VOICE COIL	FS Hz	REVC Ohms	BL Tm	QMS	QES	QTS	VAS Cubic Feet
MAGMA-12	12"	1500	Dual 3" (2x3.2 ohms)	30.33	5.74	22.8	9.9846	0.404	0.389	5.71
MAGMA-15	15"	1500	Dual 3" (2x3.2 ohms)	26.32	5.72	25.5	9.8194	0.405	0.389	5.23
DBX-8DR	8"	500	Dual 2" (2x4 ohms)	34.31	7.2	15.7	4.0719	0.501	0.446	0.63
DBX-10R	10"	800	Single 2" (4 ohms)	29.28	10.5	21.9	5.0278	0.604	0.54	0.8
DBX-10DR	10"	800	Dual 2" (2x4 ohms)	29.28	10.5	21.9	5.0278	0.604	0.54	0.8
DBX-12R	12"	1000	Single 2" (4 ohms)	27.67	7.4	25.5	5.3063	0.326	0.307	2.84
DBX-12DR	12"	1000	Dual 2" (2x4 ohms)	27.67	7.4	25.5	5.3063	0.326	0.307	2.84
DBX-15DR	15"	1500	Dual 2" (2x4 ohms)	27.04	8.31	28.5	4.1061	0.482	0.432	4.98
DB-10R	10"	500	Single 2" (4 ohms)	29.95	4.21	12.5	6.5977	0.61	0.558	1.3
DB-12R	12"	600	Single 2" (4 ohms)	27.09	4.21	11.7	6.9574	0.697	0.634	3.19
DB-15R	15"	800	Single 2" (4 ohms)	26.33	3.6	12.7	7.4238	0.817	0.736	5.71
TREMOR-8XR	8"	500	Single 2.5" (8 ohms)	29.38	6.78	15.6	3.5313	0.46	0.407	0.75
TREMOR-10XR	10"	800	Single 2.5" (8 ohms)	28.33	6.67	16.2	4.6012	0.558	0.498	1.3
TREMOR-12XR	12"	800	Single 2.5" (8 ohms)	27.01	6.67	17	5.3508	0.722	0.636	2.4
TREMOR15XR	15"	1000	Single 2.5" (8 ohms)	26.33	5.98	12	7.4238	0.837	0.736	4.9

SERIES

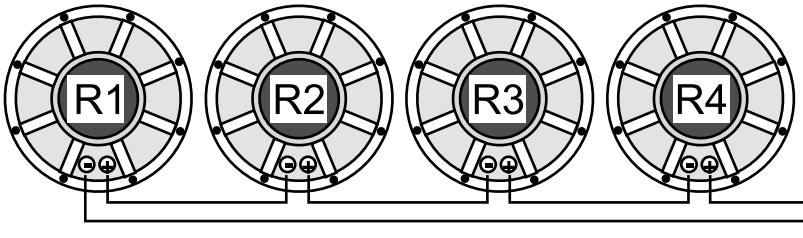
According to Ohm laws, when speakers are wired in series. The total impedance (R) of the speakers equals the sum of the impedances of every speaker.



R(total) = R1+R2



R(total) = R1+R2+R3



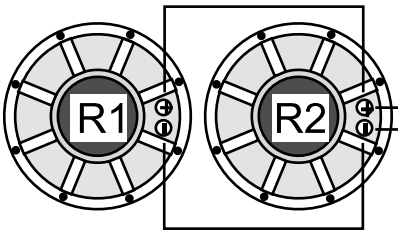
R(total) = R1+R2+R3+R4

PARALLEL

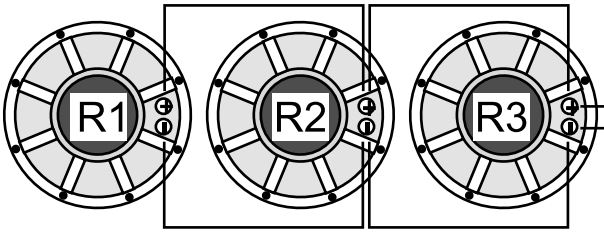
According to Ohm laws, when speakers are wired in parallel. The formula is:

$$\frac{1}{R}=\frac{1}{R1}+\frac{1}{R2}+\frac{1}{R3}+\cdots\cdots+\frac{1}{Rn}$$

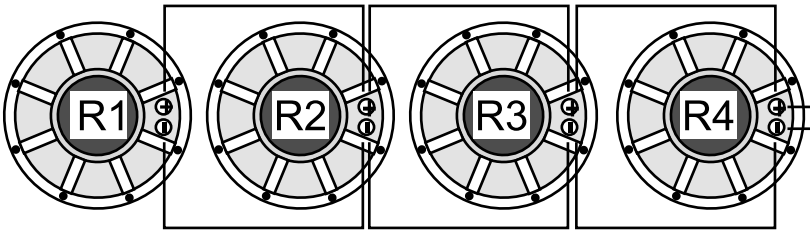
Where R = total system inpedance



$$\frac{1}{R}=\frac{1}{R1}+\frac{1}{R2} \qquad \text{where R} = \frac{R1xR2}{R1+R2}$$



$$\frac{1}{R}=\frac{1}{R1}+\frac{1}{R2}+\frac{1}{R3} \qquad \text{where R} = \frac{R1xR2xR3}{(R1xR2)+(R1xR3)+(R3xR2)}$$



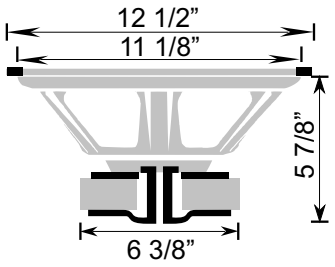
$$\frac{1}{R}=\frac{1}{R1}+\frac{1}{R2}+\frac{1}{R3}+\frac{1}{R4}$$

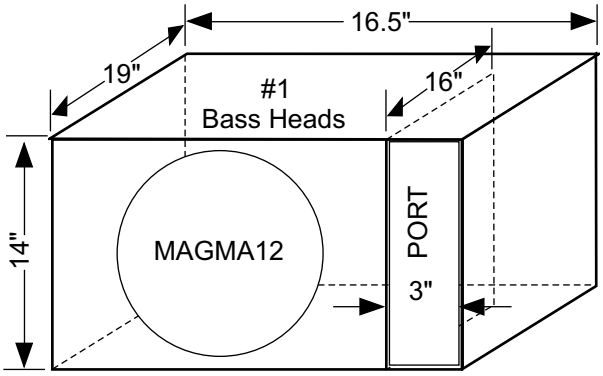
$$\text{where R} = \frac{R1xR2xR3xR4}{(R1xR2xR3)+(R1xR2xR4)+(R1xR3xR4)+(R2xR3xR4)}$$

#1 in Sound Quality, #1 in SPL...

"In sound quality and low frequency extension, the Earthquake MAGMAs excel leaving all other woofers behind" May 1999 CA&E. "With nearly 22mm of linear excursion (four times longer than other sub), and a hefty 3" 4-layer dual voice coil; the MAGMAs make sealed box bass an octave lower than any other woofer."
May 1999 CA&E.

MAGMA12





SPL
SLAPS
TUNED
V = 1.1 ft3
FB = optimum
using SLAPS-12
passive radiator

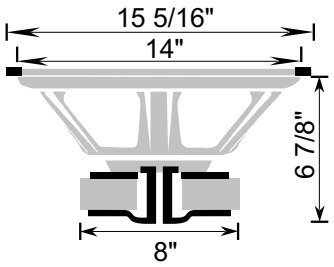
LOW BASS
SLAPS
TUNED
V = 1.4 ft3
FB = optimum
using SLAPS-12
passive radiator

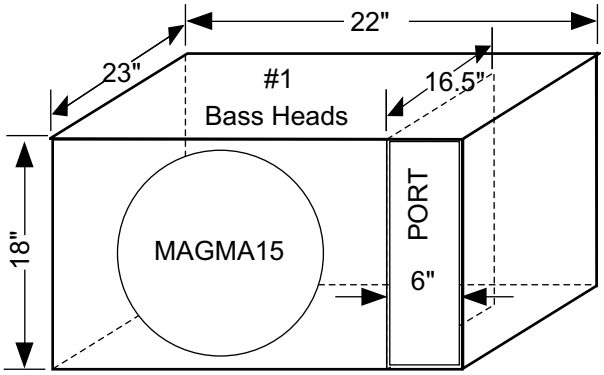
SPL
SEALED
V = 0.8 ft3
Q = 0.81
F3 = 42Hz
Fc = 48Hz

NORMAL
SEALED
V = 1.0 ft3
Q = 0.76
F3 = 42Hz
Fc = 44Hz

LOW BASS
SEALED
V = 1.2 ft3
Q = 0.7
F3 = 41Hz
Fc = 42Hz

MAGMA15





SPL
SLAPS
TUNED
V = 1.5 ft3
FB = optimum
using SLAPS-15
passive radiator

LOW BASS
SLAPS
TUNED
V = 2.5 ft3
FB = optimum
using SLAPS-15
passive radiator

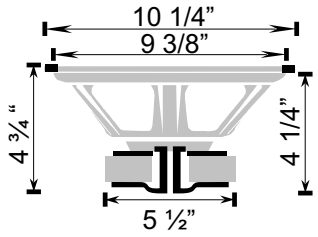
SPL
SEALED
V = 1.5 ft3
Q = 1.2
F3 = 47Hz
Fc = 63Hz

NORMAL
SEALED
V = 2.0 ft3
Q = 1.0
F3 = 44Hz
Fc = 57Hz

LOW BASS
SEALED
V = 2.5 ft3
Q = 0.9
F3 = 42Hz
Fc = 53Hz

Specifications are subject to change without notice. Dimensions shown are external Dimensions using 3/4" MDF.

DBR-10



VB = 0.7 ft3
FB = 45Hz
PD = 3” #1 “SPL”
PL = 8.5” Ported Box

VB = 1.25 ft3
FB = 35Hz
PD = 3” #1 Low Bass
PL = 10” Ported Box

VB = .75
Q = .85 #2 Low Bass
F3 = 47Hz sealed Box
Fc = 56Hz

4TH ORDER
Band Pass

VB = 1.0 ft3
FB = 55Hz
PD = 4”
PL = 4”

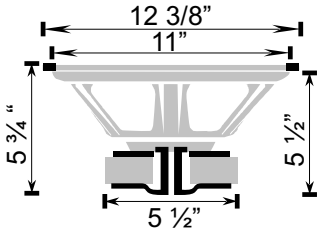
VB = .8 ft3
Q = .87
F3 = 55Hz
Fc = 38Hz

7TH ORDER
Band Pass

VB = .75 ft3
FB = 70Hz
PD = 4”
PL = 8”

VB = 2.8 ft3
FB = 30Hz
PD = 4”
PL = 12”

DBR-12



VB = 1.0 ft3
FB = 45Hz
PD = 3” #1 “SPL”
PL = 7” Ported Box

VB = 1.75 ft3
FB = 40Hz
PD = 4” #1 Low Bass
PL = 10” Ported Box

VB = 0.9 ft3
Q = 1.3 #2 “SPL”
F3 = 53Hz Sealed Box
Fc = 74Hz

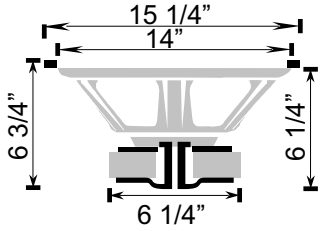
VB = 1.7 ft3
Q = .9 #2 Low Bass
F3 = 45Hz Sealed Box
Fc = 57Hz

4TH ORDER
Band Pass

VB = 1.4 ft3
FB = 60Hz
PD = 5”
PL = 7”

VB = 1.8 ft3
Q = .95
F3 = 56Hz
Fc = 35Hz

DBR-15



VB = 2.5 ft3
FB = 45Hz
PD = 4” #1 “SPL”
PL = 5” Ported Box

VB = 4.0 ft3
FB = 35Hz
PD = 4” #1 Low Bass
PL = 4” Ported Box

VB = 1.5 ft3
Q = 1.2 #2 “SPL”
F3 = 55Hz Sealed Box
Fc = 76Hz

VB = 3.0 ft3
Q = .9 #2 Low Bass
F3 = 45Hz Sealed Box
Fc = 54Hz

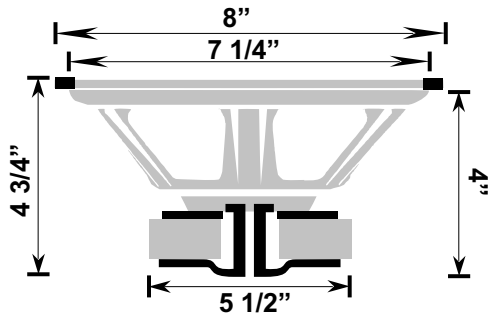
4TH ORDER
Band Pass

VB = 3.0 ft3
FB = 55Hz
Two ports at
4” x 4” each

VB = 3.0 ft3
Q = .9
FO = 55Hz
Fc = 34Hz

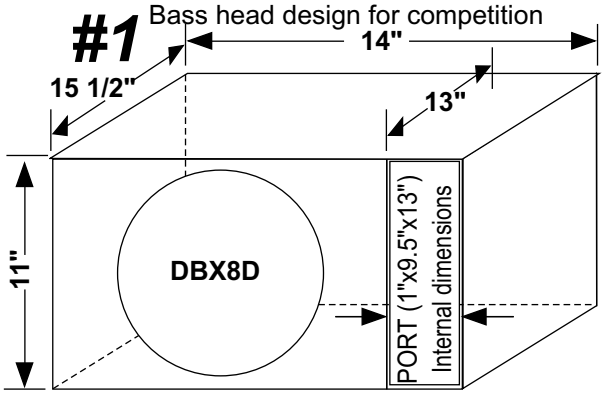
Specifications are subject to change without notice. Dimensions shown are external Dimensions using 3/4" MDF.

DBXR-8D

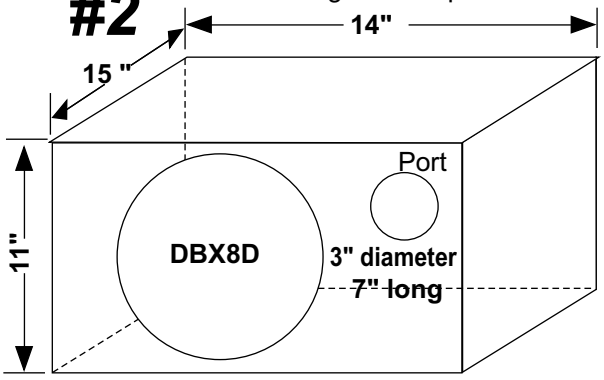


(External Dimensions using 3/4" MDF)

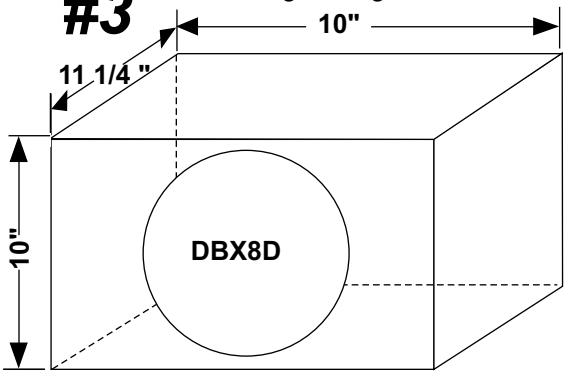
#1 Bass head design for competition



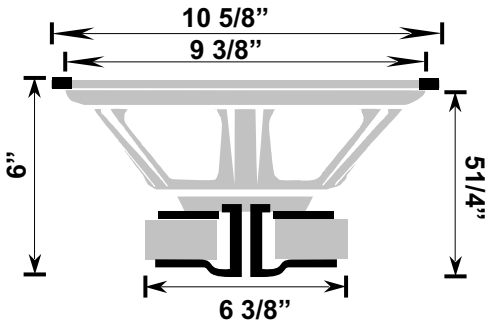
#2 Port tuned design for deep bass



#3 Sealed design for tight bass

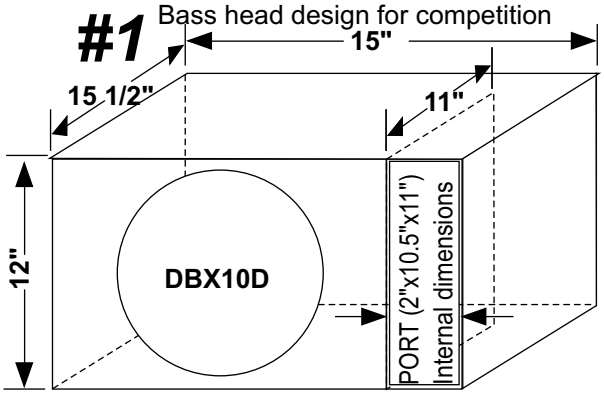


DBXR-10D & DBXR-10

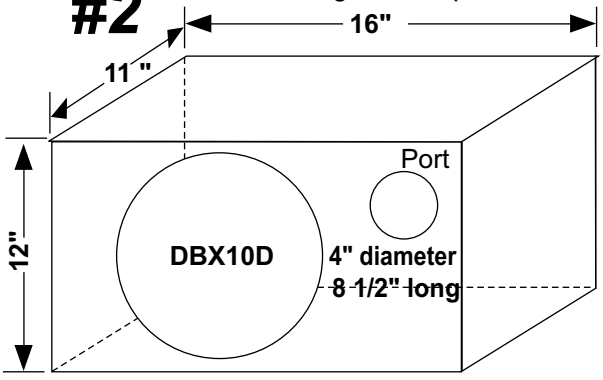


(External Dimensions using 3/4" MDF)

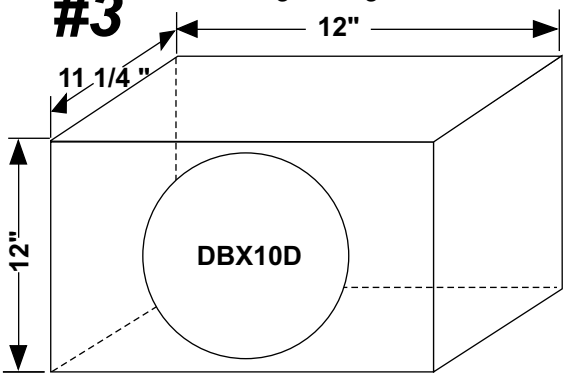
#1 Bass head design for competition



#2 Port tuned design for deep bass



#3 Sealed design for tight bass



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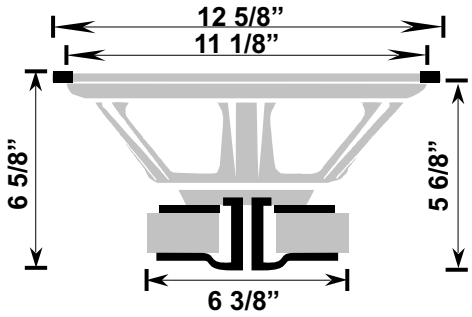
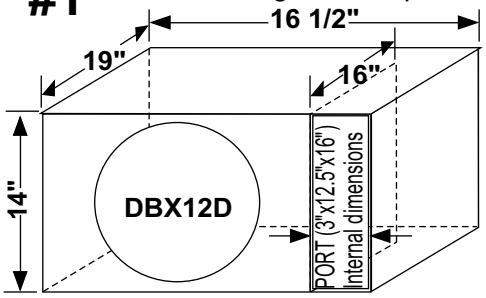
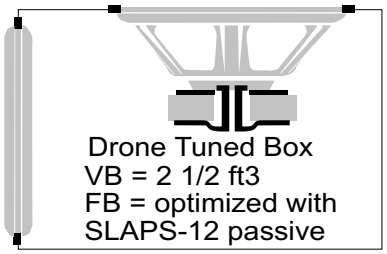
DBXR-12D & DBXR-12



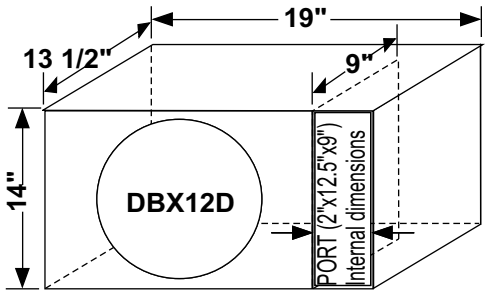
#1 Bass head design for competition



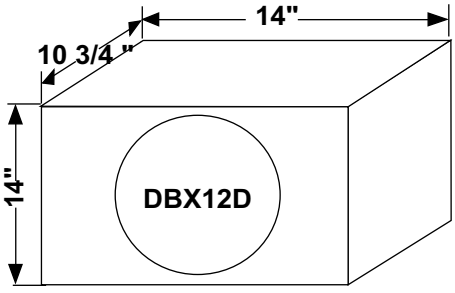
#1 Passive tuned design for



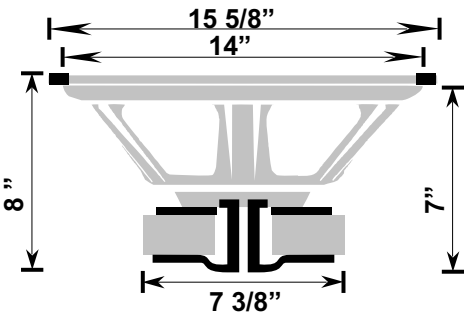
#2 Port tuned design for deep bass



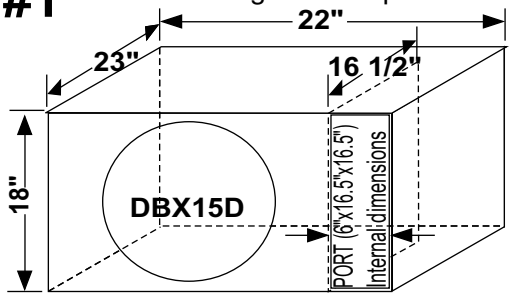
#3 Sealed design for tight bass



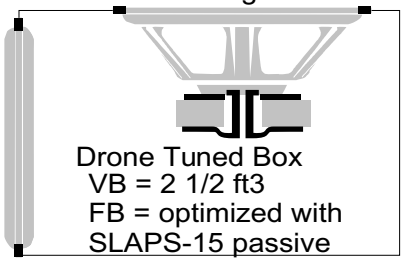
DBXR-15D



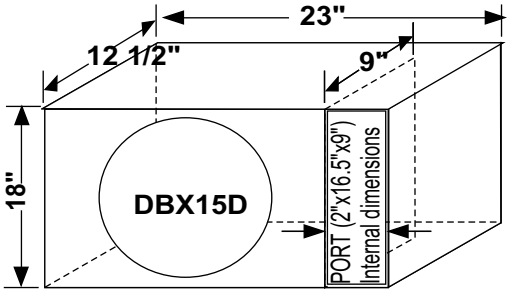
#1 Bass head design for competition



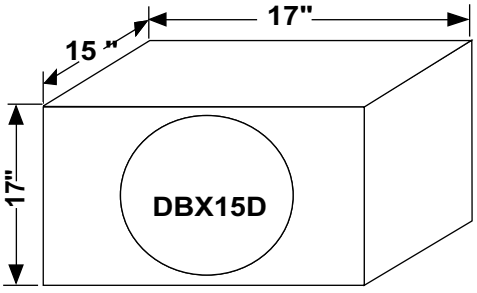
#1 Passive tuned design for



#2 Port tuned design for deep bass



#3 Sealed design for tight bass



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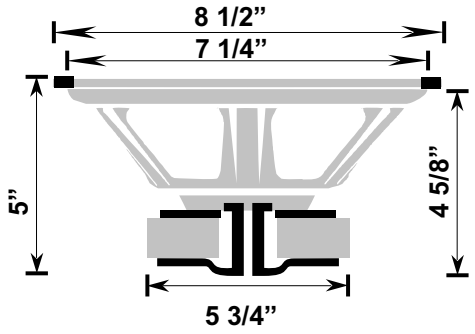
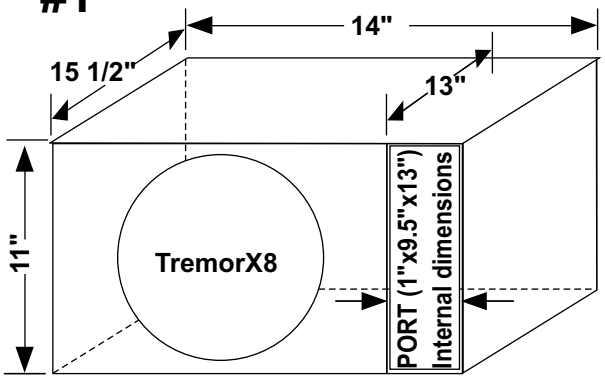
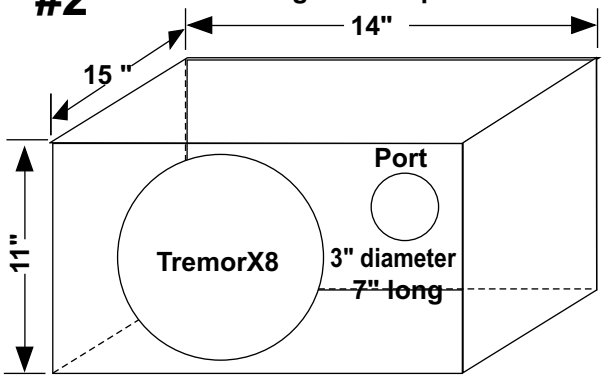
TremorX-8



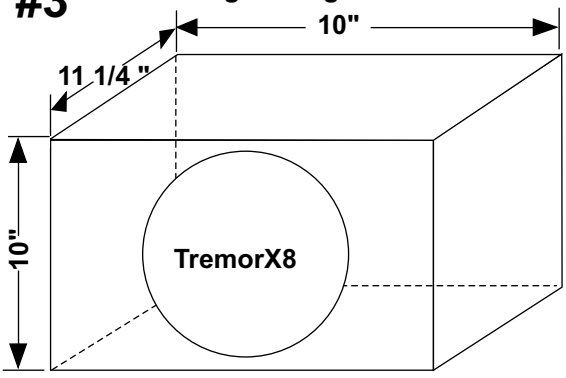
#1 Bass head design for competition



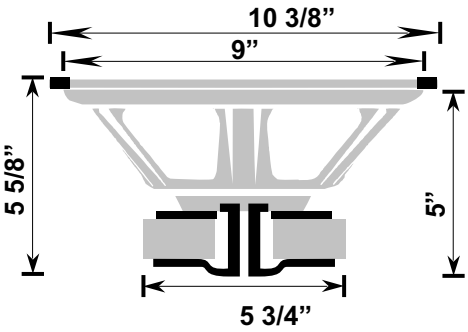
#2 Port tuned design for deep bass



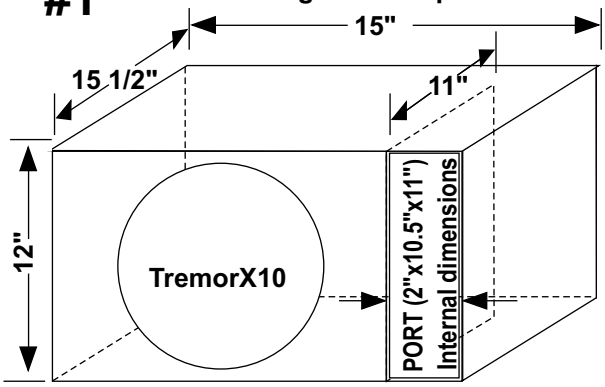
#3 Sealed design for tight bass



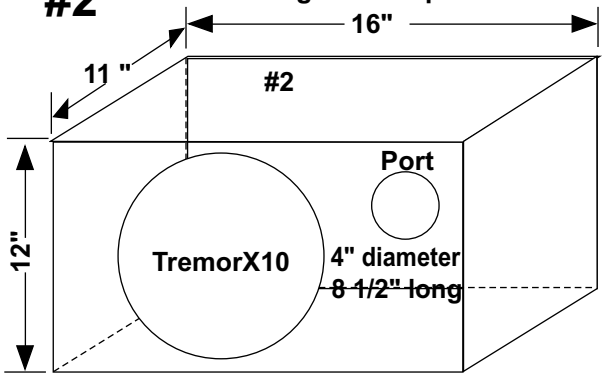
TremorX-10



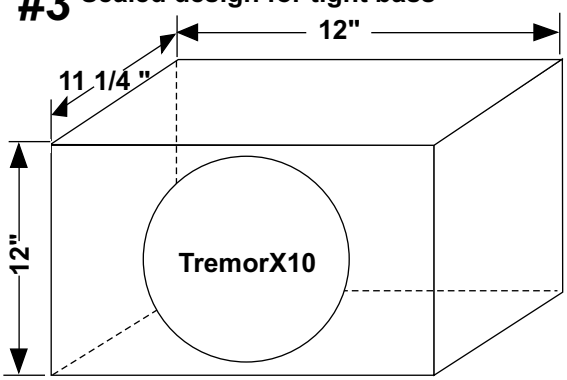
#1 Bass head design for competition



#2 Port tuned design for deep bass



#3 Sealed design for tight bass



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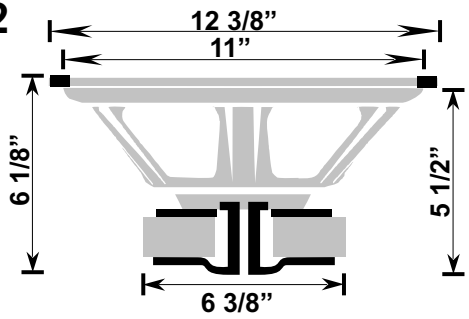
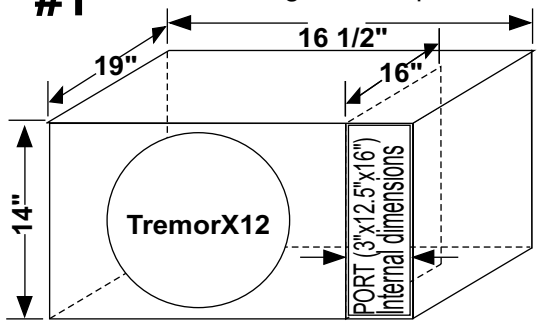
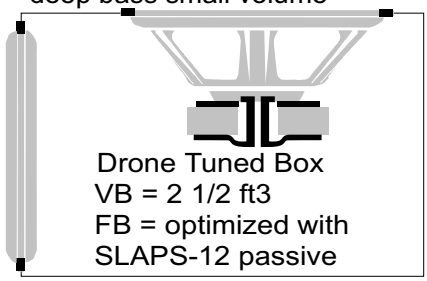
TremorX-12



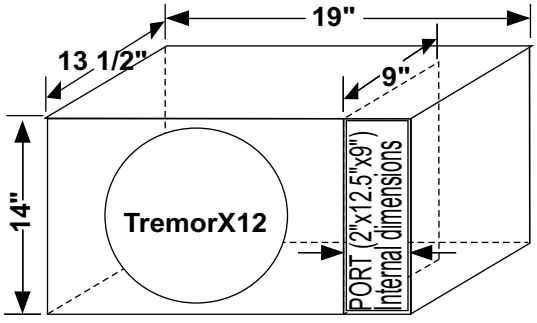
#1 Bass head design for competition



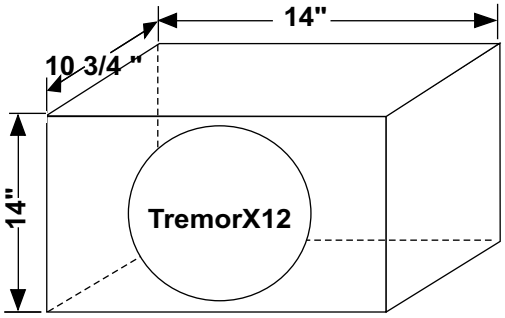
#1 Passive tuned design for deep bass small volume



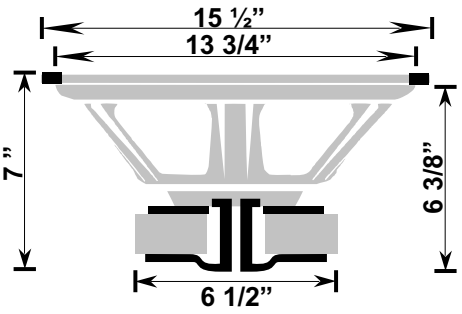
#2 Port tuned design for deep bass



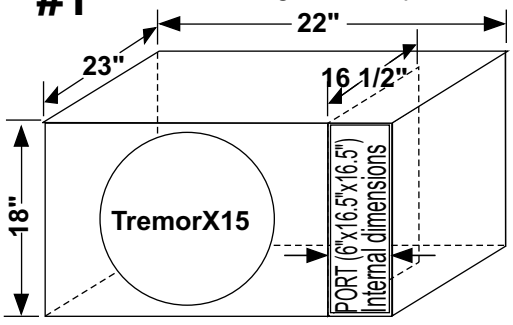
#3 Sealed design for tight bass



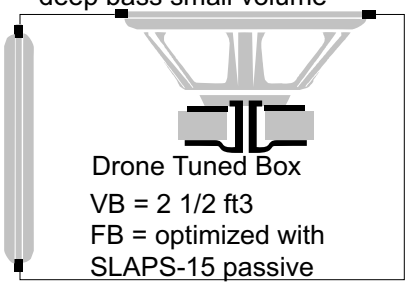
TremorX-15



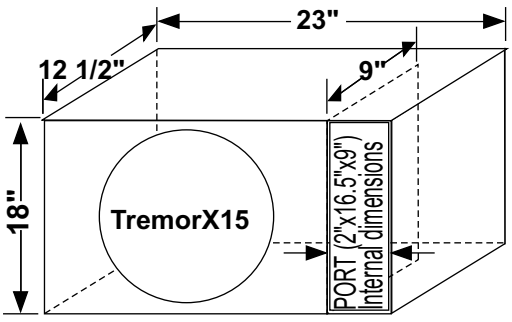
#1 Bass head design for competition



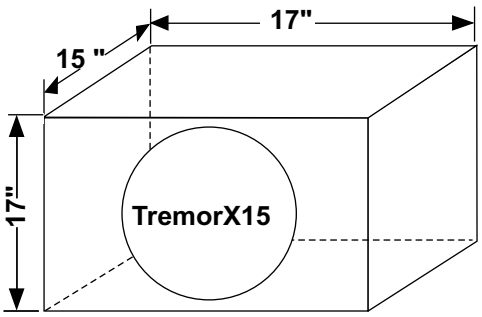
#1 Passive tuned design for deep bass small volume



#2 Port tuned design for deep bass



#3 Sealed design for tight bass



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