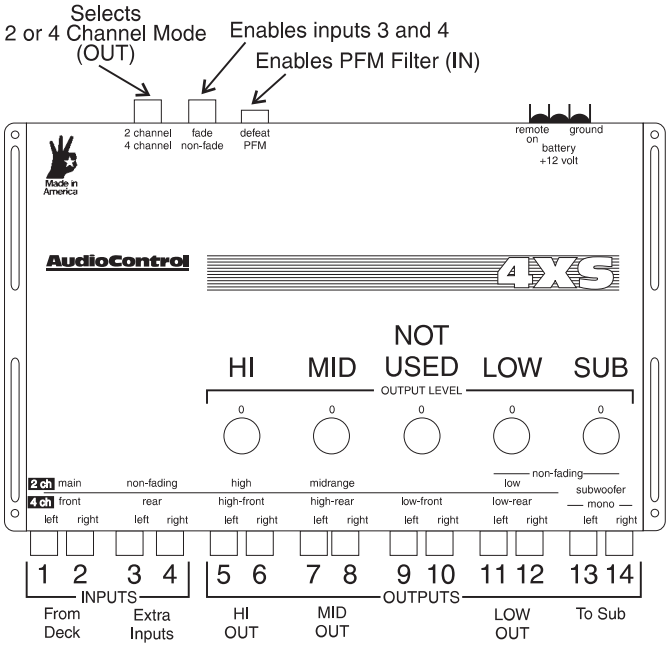
A NEW STEREO THREE-WAY CROSSOVER: the 4XS

The AudioControl 4XS is a two channel, three-way crossover with:

- ❑ bass output in either stereo (low output) or mono (sub output)
- ❑ mono subwoofer output with a built-in amplifier bridging adaptor
- ❑ resistor module programmable crossover frequencies
- ❑ Programmable Frequency Match (adjustable sub sonic) filter so that you can drive your subwoofers harder and closer to their limits with less possibility of suspension or voice coil damage due to overe7⁄8cursion (and with higher acoustic output levels)!
- ❑ a four-channel, 2-way crossover with mono subwoofer output and non-fading bass (you gotta press a switch to do this!).



Programmable Frequency Match Filter (PFM)

- ❑ a steep (18 dB/octave) low-cut filter
- ❑ stops power-wasting subsonics (Your bass system can't reproduce them anyway!)
- ❑ stops subwoofer suspension pulverization
- ❑ resistor module frequency programming
- ❑ pick a cutoff frequency based on system usage:

Listening Philosophy	PFM Freq
music-loving jazz fan	1/2 to 1/3 octave below the system's -3 dB frequency
"if you can't crank it, yank it"	same as the system's -3 dB frequency

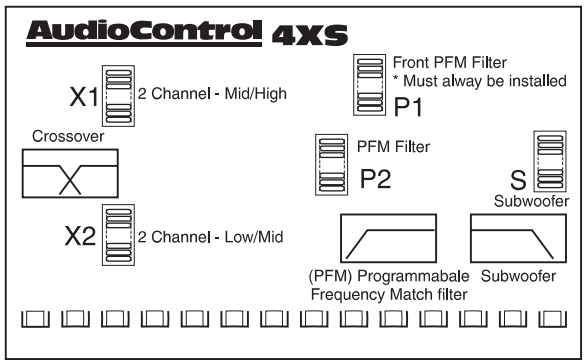
You can determine the -3 dB frequency for the system by:

- ❑ measuring it with a real-time analyzer
- ❑ feeding the system a low-level sine-wave sweep and looking for the system resonance by feeling the sub woofer's cone motion with your fingers (cone motion ma7⁄8imum at resonance).

Crossover Points

Figure 2 shows the module locations inside the 4XS. Each module does the following:

Module	Function
X1	mid-high crossover frequency
X2	low-mid crossover frequency
S	subwoofer high-frequency rolloff
P1	Not used, but must be installed. Use any module
P2	low-cut frequency for **both** the low and subwoofer outputs



The resistor values for any frequency (crossover or PFM) for any of the modules may be found by means of the following formula:

R (Kilohms) = 7200 ÷ frequency (Hz)

NOTE: the resulting resistor value is measured in Kilohms (thousands of ohms). Each module requires si7⁄8 equal-value 1/4 watt, 5% tolerance resistors.

E7⁄8ample: Find the resistor value for 1000 Hz.

R (Kilohms) = 7200 ÷ 1000

R (Kilohms) = 7.2

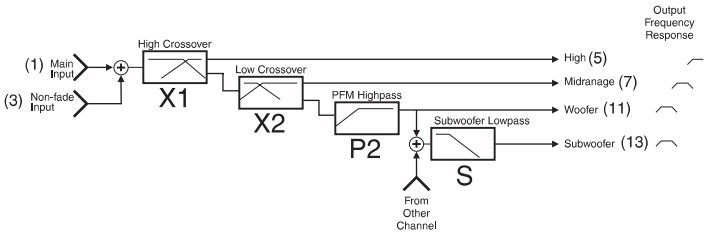
R = 7.2 K = 7200 ohms.

The nearest standard resistor value is 7500 ohms (so the actual crossover frequency is 7200 ÷ 7.5 or 960 Hz).

22410 70th Avenue West • Mountlake Terrace, WA 98043 • Phone 425-775-8461 • Fax 425-778-3166

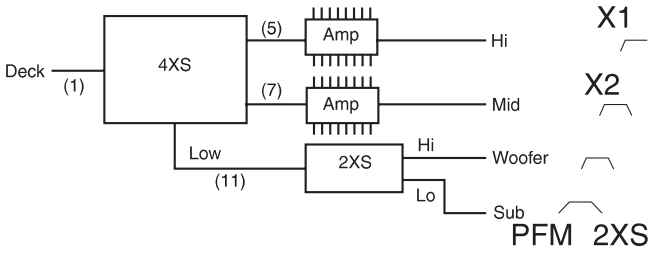
Understanding the 4XS' Outputs

Remember that all AudioControl Crossovers give you a choice of running your bass in stereo or in mono. The 4XS low output is stereo while the subwoofer output is mono. **Important point - Both outputs go equally as low** (down to the P2 PFM filter frequency)**.**



Note: Numbers match diagram on previous page.

Typical Systems

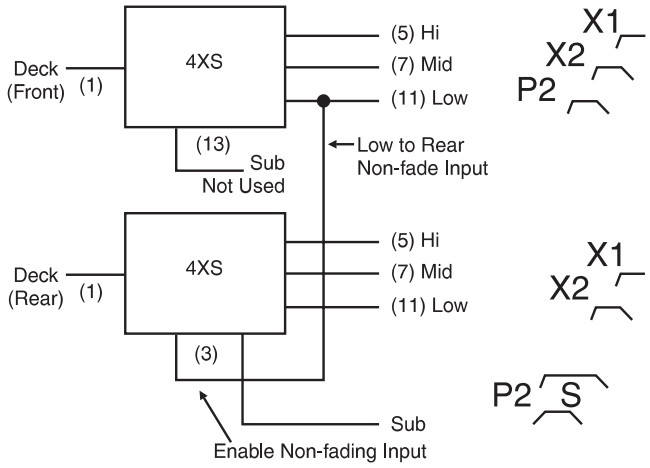


4XS + 2XS for Stereo 4-way

X1 = 3500	Tweeters	3500 Up
X2 = 300	Mids	300 Up
2XS = 70	Mid Woofer	70-300
P2 = 30	Subs	30-70

S = not critical - use any module
P1 = not critical - use any module

Two 4XS
For Front/Rear
3-way with Sub and Non-fading Bass



Note: Both 4XS set for:
2 Channel Mode
PFM
Non-fade input enabled

Front 4XS

X1 = 300	Front Satellite Mids & Tweeters	300 - up (5)
X2 = 60	Front midbass	60 - up (7)
P2 = 20	Non-fading bass to rear	20 - 60

Rear 4XS

X1 = 300	Front Satellite Mids & Tweeters	300 - up (5)
X2 = 100	Rear small midbass	100 - 300 (7)
S = 60	Subwoofer (matches lower limit	30 - 60 (13)
P2 = 30	of front midbass)	
	Install any module at P1	

22410 70th Avenue West • Mountlake Terrace, WA 98043 • Phone 425-775-8461 • Fax 425-778-3166