



SELECT PRODUCTS

MULTI-CHANNEL Crossover Application Charts

Select Products
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Spectral™ SPSY53X & Spectral™ SPSY51X

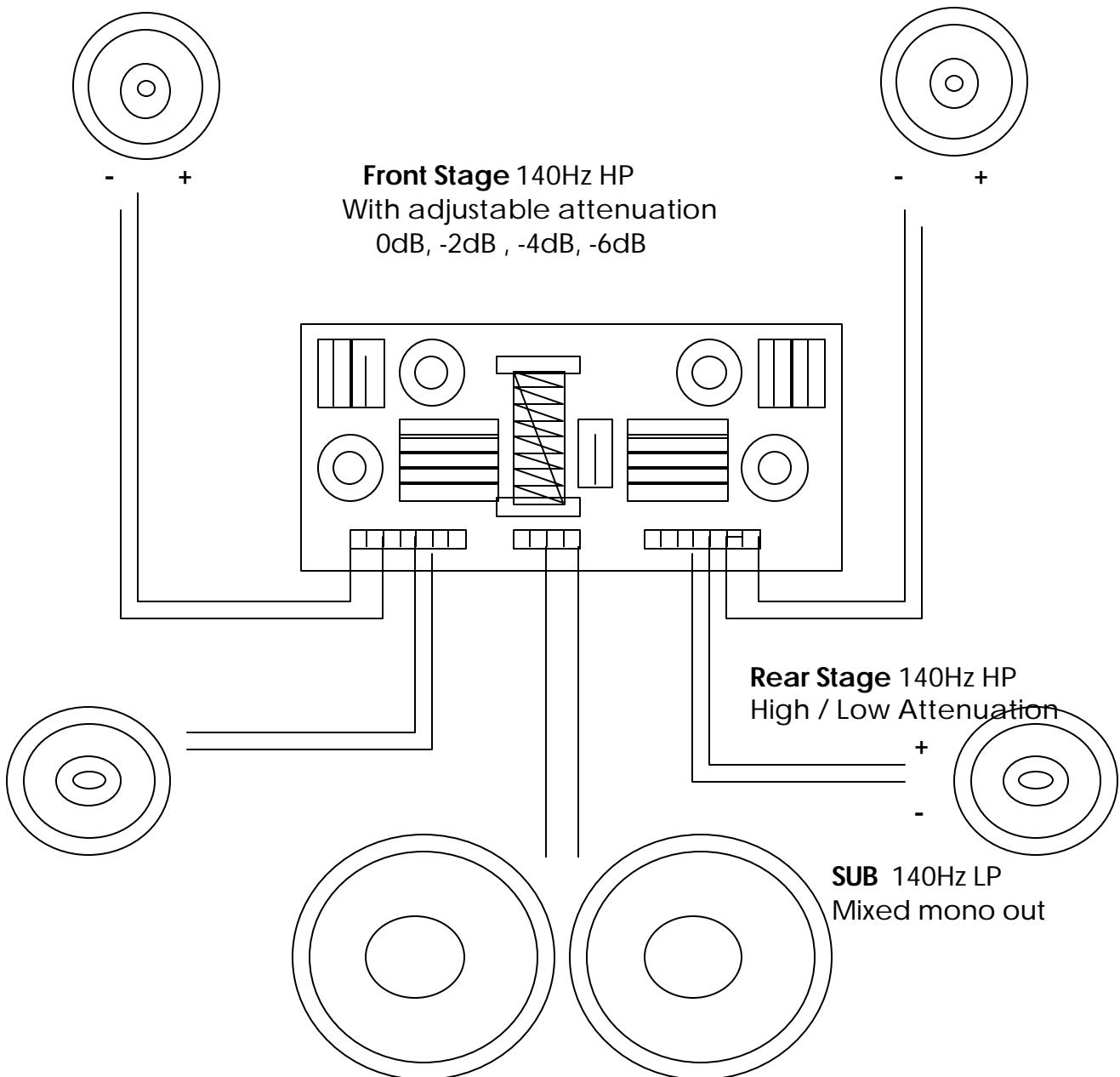
- 5-ch crossover (2 Front, 2 Rear, Mono Sub out)
- 140Hz crossover point (F/R to Sub)
- Selectable F/R input attenuation (0, -2, -4, -6dB) for bass level balancing
- Rear channel output attenuation for balancing F/R speakers
- Separate Sub input/mono output
- All channels 12dB/Octave slopes

SPSY53X ~ 250watts RMS power handling (125 x 2)

SPSY51X ~ same as above except 150watts RMS power handling (75 x 2)

NOTE: Amplifiers used for these products must have stereo/mixed mono capability.

These unique products allow you to design cost-effective, high-performance audio systems without the installation problems of multiple amps and their associated wiring/accessories. With just one amplifier you now have the capability to operate front satellites, rear satellites and a subwoofer(s) *simultaneously* off one amplifier! (Fig.1) This will significantly reduce your labor time, maximize the dollars you spend and virtually eliminate the common noise problems associated with multi-component installations.



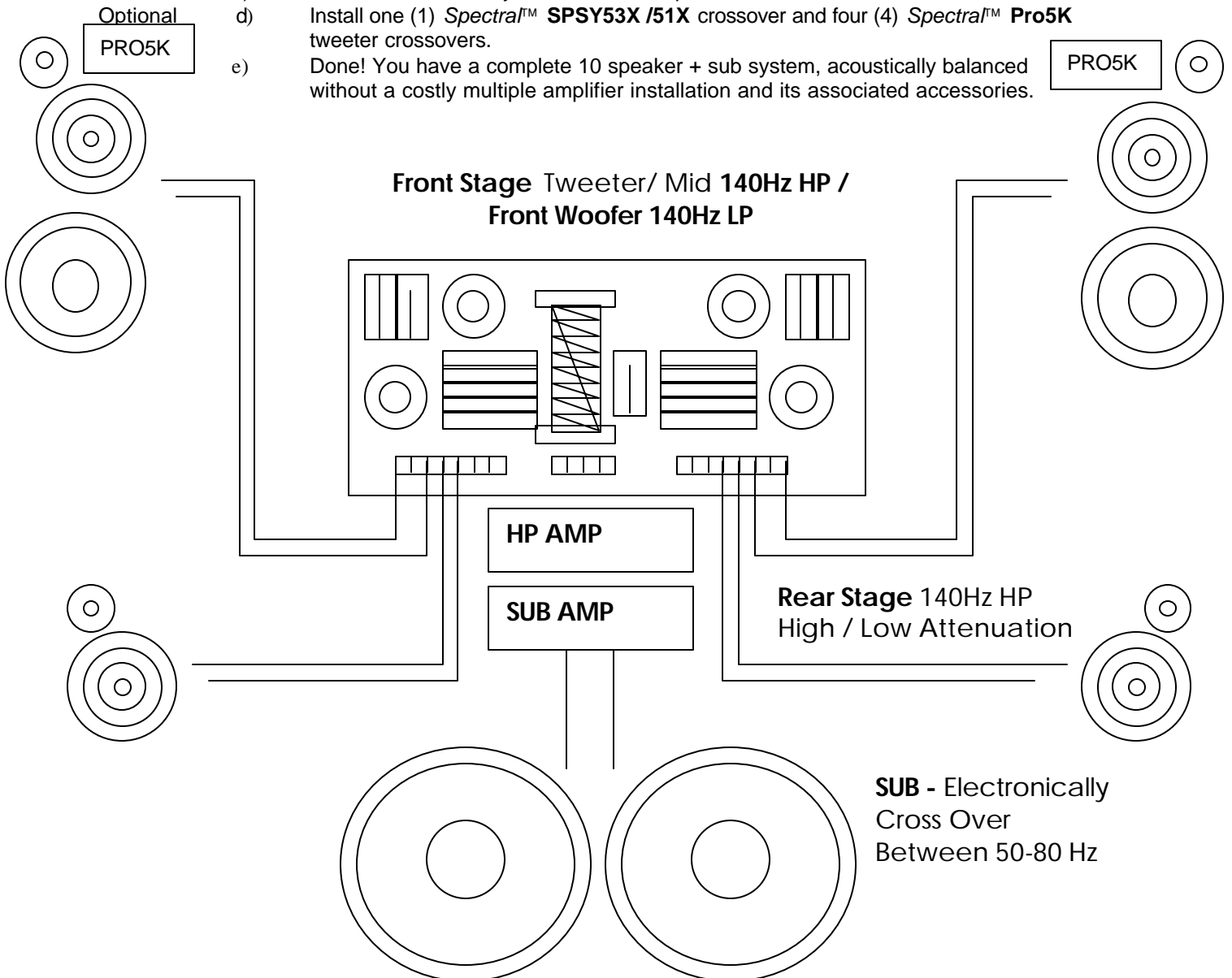
One of the most unique and useful applications for the **Spectral™** SPSY53X/51X crossovers are a front channel, three-way system with rear channel fill. (Fig.2) This application allows you to install a complete bi-amp system (1 sub amp and 1 high pass amp) with a solid, accurate, musical 3-way front channel system and an adjustable rear output channel engineered for easy system balancing. This combination of features is extremely useful, *unique to the industry* and highly adaptable for the custom car audio installer. Applications range from:

1. OEM system upgrades -
 - Basic OEM front/rear system:
 - a) Add an 8" sub to the front speakers, then add a sub system in the rear/trunk/hatch.
 - b) Install two amps (sub, front) and the **Spectral™** SPSY53X crossover.
 - c) Done! A complete system.

2. Complete competition systems designed around a two amp, 10 speaker + sub configuration

Basic bi-amp system:

- a) Install front separates and a front mounted woofer
- b) Install rear separates
- c) Install a subwoofer system, set sub amp crossover at 50Hz
- d) Install one (1) **Spectral™** SPSY53X /51X crossover and four (4) **Spectral™** Pro5K tweeter crossovers.
- e) Done! You have a complete 10 speaker + sub system, acoustically balanced without a costly multiple amplifier installation and its associated accessories.



Left output					Left Input					Subwoofer				Right Input					Right Output						
Ft. Ch. Rear					+ + + +					Mono In		Mono Out		+ + + +					Rear		Ft. Ch.				
L+	L-	Lo+	Hi+	1	0	-2	-4	-6	-	+	-	S+	S-	-	-6	-4	-2	0	1	Hi+	Lo+	R-	R+		
1	2	3	4	5	6	7	8	9	10		11	12	13	14		15	16	17	18	19	20	21	22	23	24

1. Front left channel output connector (+) ~ to front left speaker(s) positive (+) connector
2. Front left channel output connector (-) ~ to front left speaker(s) negative (-) connector

NOTE: The following connections (3 thru 5) are for left rear speaker connection. The Low/High positive (+) connectors are for rear output attenuation *relative to the front speakers only*. I.E., you will select either the low or high positive (+) connector based on your listening test after installation. If the rear speaker output is too loud, use the LOW (+) connector; if the rear speaker output is too soft, use the HIGH (+) connector. Use either connector 3 or connector 4, NOT BOTH. The use of the negative (-) connector #5 is always the same.

3. Rear left channel output connector (low output +) ~ to rear left speaker(s) positive (+) connector
4. Rear left channel output connector (high output +) ~ to rear left speaker(s) positive (+) connector
5. Rear left channel output connector (-) ~ to rear left speaker(s) negative (-) connector

NOTE: The following connections (6 thru 10) are for the left channel input connection. The 0, -2, -4, -6 positive (+) connectors (6 thru 9) are for input attenuation *relative to the sub bass level output only*. I.E., you will select one of these connectors based on your listening tests after installation. Start with the 0 setting positive (+) connector (6). If the high frequencies are too loud relative to the subwoofers, use one of the other positive (+) connectors (7 thru 9) to reduce the output. Only one of these positive (+) connectors (6 thru 9) will be used. The use of the negative (-) connector #10 is always the same.

6. Rear left channel input connector (+) 0dB attenuation ~ from left channel positive (+) output of the amplifier
7. Rear left channel input connector (+) -2dB attenuation ~ from left channel positive (+) output of the amplifier
8. Rear left channel input connector (+) -4dB attenuation ~ from left channel positive (+) output of the amplifier
9. Rear left channel input connector (+) -6dB attenuation ~ from left channel positive (+) output of the amplifier
10. Rear left channel input connector (-) ~ from left channel negative (-) output of the amplifier

NOTE: The subwoofer input (connectors 11 & 12) must be the “summed or bridged” output of the amplifier. DO NOT use either the left or right channel amplifier outputs to run the subwoofer. A “summing or bridgeable” amplifier must be used.

11. Subwoofer input connector (+) ~ Bridged or summed mode positive (+)
12. Subwoofer input connector (-) ~ Bridged or summed mode negative (-)
13. Subwoofer output connector (+)
14. Subwoofer output connector (-)

The low pass subwoofer output of connectors 13 & 14 is mono.

NOTE: The following connections (15 thru 19) are for the right channel input connection. The 0, -2, -4, -6 positive (+) connectors (16 thru 19) are for input attenuation *relative to the sub bass level output only*. I.E., you will select one of these connectors based on your listening tests after installation. Start with the 0 setting positive (+) connector (19). If the high frequencies are too loud relative to the subwoofers, use one of the other positive (+) connectors (16 thru 18) to reduce the output. Only one of these positive (+) connectors (16 thru 19) will be used. The use of the negative (-) connector #15 is always the same.

15. Rear right channel input connector (-) ~ from right channel negative (-) output of the amplifier
16. Rear right channel input connector (+) -6dB attenuation ~ from right channel positive (+) output of the amplifier
17. Rear right channel input connector (+) -4dB attenuation ~ from right channel positive (+) output of the amplifier
18. Rear right channel input connector (+) -2dB attenuation ~ from right channel positive (+) output of the amplifier
19. Rear right channel input connector (+) 0dB attenuation ~ from right channel positive (+) output of the amplifier

NOTE: The following connections (20 thru 22) are for right rear speaker connection. The Low/High positive (+) connectors are for rear output attenuation *relative to the front speakers only*. I.E., you will select either the low or high positive (+) connector based on your listening test after installation. If the rear speaker output is too loud, use the LOW (+) connector; if the rear speaker output is too soft, use the HIGH (+) connector. Use either connector 21 or connector 22, NOT BOTH. The use of the negative (-) connector #20 is always the same.

20. Rear right channel output connector (-) ~ to rear right speaker(s) negative (-) connector
21. Rear right channel output connector (high output +) ~ to rear right speaker(s) positive (+) connector
22. Rear right channel output connector (low output +) ~ to rear right speaker(s) positive (+) connector

23. Front right channel output connector (-) ~ to front right speaker(s) negative (-) connector
24. Front right channel output connector (+) ~ to front right speaker(s) positive (+) connector

Spectral™ SPSY33X & Spectral™ SPSY31X

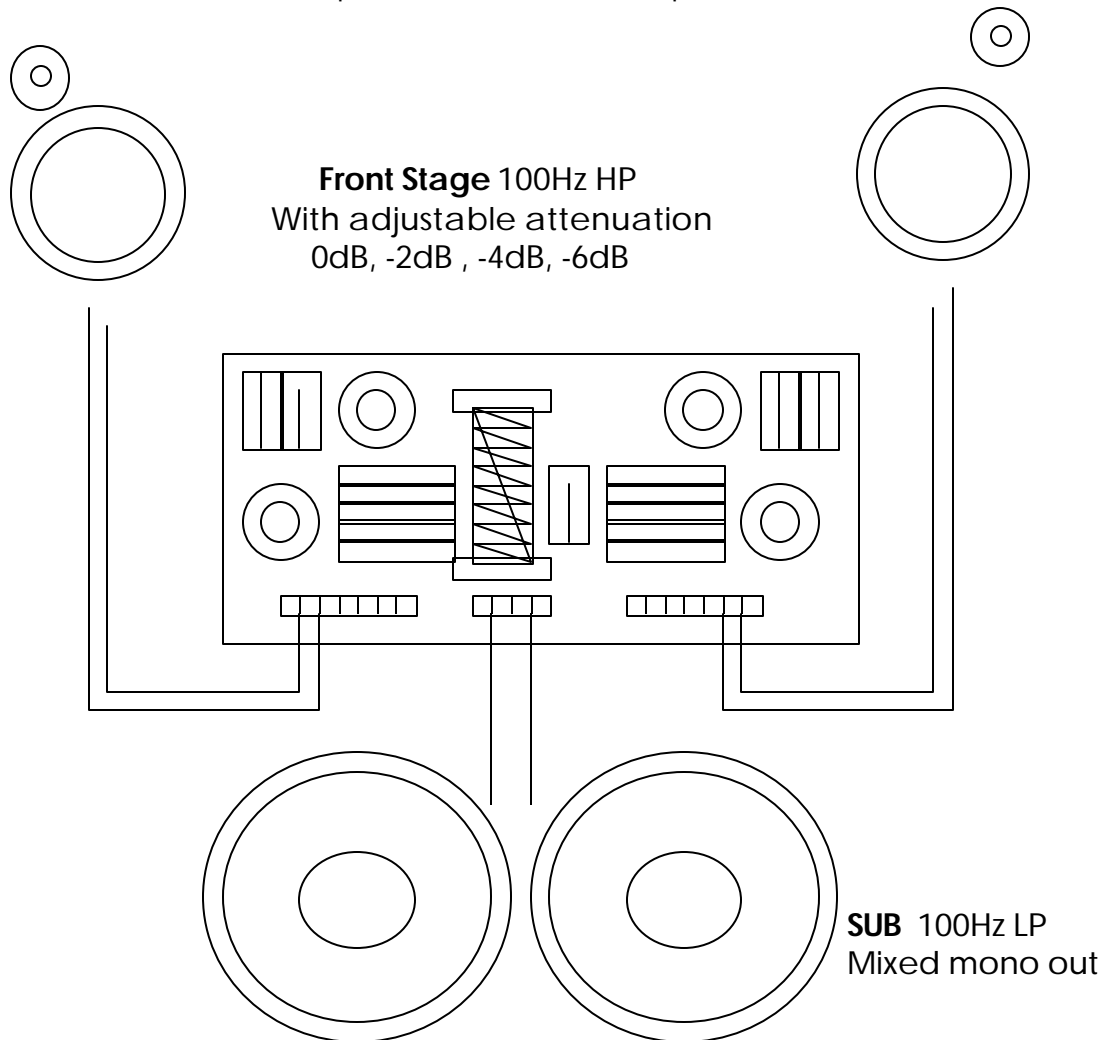
- 3-ch crossover (2 Front, Mono Sub out)
- 100Hz crossover point (Front to Sub)
- Selectable Front input attenuation (0, -2, -4, -6dB) for bass level balancing
- Independent Sub input/mono output
- All channels 12dB/Octave slopes

SPSY33X ~ 250watts RMS power handling (125 x 2)

SPSY31X ~ same as above except 150watts RMS power handling (75 x 2)

NOTE: Amplifiers used for these products must have stereo/mixed mono capability.

The uses for these incredible products are virtually endless. These products allow you to design a high-performance three way system using only one amplifier, making a bi-amp 7+ speaker system practical and affordable. Proper level matching is achieved thru the front channel "input attenuation" feature that is independent of the subwoofer output level.



Left output							Left Input				Subwoofer				Right Input				Right Output	
Ft. Ch.							+ + + +				Mono In Mono Out				+ + + +				Ft. Ch.	
L+ L-							0 -2 -4 -6 -				+ - S+ S-				- -6 -4 -2 0				R- R+	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18			

1. Front left channel output connector (+) ~ to front left speaker(s) positive (+) connector
2. Front left channel output connector (-) ~ to front left speaker(s) negative (-) connector

NOTE: The following connections (3 thru 7) are for the left channel input connection. The 0, -2, -4, -6 positive (+) connectors (3 thru 6) are for input attenuation *relative to the sub bass level output only*. I.E., you will select one of these connectors based on your listening tests after installation. Start with the 0 setting positive (+) connector (3). If the high frequencies are too loud relative to the subwoofers, use one of the other positive (+) connectors (4 thru 7) to reduce the output. Only one of these positive (+) connectors (3 thru 6) will be used. The use of the negative (-) connector #7 is always the same.

3. Rear left channel input connector (+) 0dB attenuation ~ from left channel positive (+) output of the amplifier
4. Rear left channel input connector (+) -2dB attenuation ~ from left channel positive (+) output of the amplifier
5. Rear left channel input connector (+) -4dB attenuation ~ from left channel positive (+) output of the amplifier
6. Rear left channel input connector (+) -6dB attenuation ~ from left channel positive (+) output of the amplifier
7. Rear left channel input connector (-) ~ from left channel negative (-) output of the amplifier

NOTE: The subwoofer input (connectors 8 & 9) must be the "summed or bridged" output of the amplifier. DO NOT use either the left or right channel amplifier outputs to run the subwoofer. A "summing or bridgeable" amplifier must be used.

8. Subwoofer input connector (+) ~ Bridged or summed mode positive (+)
9. Subwoofer input connector (-) ~ Bridged or summed mode negative (-)
10. Subwoofer output connector (+)
11. Subwoofer output connector (-)

The output of connectors 10 & 11 is mono.

NOTE: The following connections (12 thru 16) are for the right channel input connection. The 0, -2, -4, -6 positive (+) connectors (13 thru 16) are for input attenuation *relative to the sub bass level output only*. I.E., you will select one of these connectors based on your listening tests after installation. Start with the 0 setting positive (+) connector (16). If the high frequencies are too loud relative to the subwoofers, use one of the other positive (+) connectors (13 thru 15) to reduce the output. Only one of these positive (+) connectors (13 thru 16) will be used. The use of the negative (-) connector #12 is always the same.

12. Rear right channel input connector (-) ~ from right channel negative (-) output of the amplifier
13. Rear right channel input connector (+) -6dB attenuation ~ from right channel positive (+) output of the amplifier
14. Rear right channel input connector (+) -4dB attenuation ~ from right channel positive (+) output of the amplifier
15. Rear right channel input connector (+) -2dB attenuation ~ from right channel positive (+) output of the amplifier
16. Rear right channel input connector (+) 0dB attenuation ~ from right channel positive (+) output of the amplifier
17. Front right channel output connector (-) ~ to front right speaker(s) negative (-) connector
18. Front right channel output connector (+) ~ to front right speaker(s) positive (+) connector

The finest components are used throughout the **Spectral™** SPSY series of crossovers.

- All inductors used are low DCR units
- All capacitors are high-grade electrolytic
- All circuit boards use a wide-trace copper design

With the addition of a pair of Select Products **Spectral™** Pro5K tweeter crossovers for your front and/or rear mid/tweeter component sets. You will have a complete matched set of crossovers for your audio system. Engineered exclusively by Select Products to work together and provide you the highest possible quality and ease of installation.

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