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KRELL INDUSTRIES

KRX-3

ACTIVE CROSSOVER

INSTALLATION GUIDE

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OWNERS REFERENCE

KRELL KRX-3 ACTIVE CROSSOVER

Congratulations on your purchase of the KRELL KRX-3 fully active crossover. This manual will explain the fundamental workings of the KRX-3, and assist you in your installation. Should you have any questions concerning your KRX-3, please contact your dealer or KRELL Industries for assistance.

Stereo, Two Way

When connected to two stereo, or four mono amplifiers, the KRX-3 can be used as a stand alone Stereo crossover. In this standard configuration, it is a two way unit, with provision for one crossover frequency. This crossover point, and the degree and type of slope has been set up in accordance with your current requirements. These characteristics may be altered to meet future requirements by purchasing new crossover boards, with the values you need, through your dealer. By simply ordering a new crossover characteristics board, the KRX-3 may be adapted to interface with a myriad of speakers, at any given crossover slope, including all Bessel and Butterworth filter characteristics.

Mono, Balanced

By using two KRX-3's in their Mono configuration (See the Installation portion of this manual), the units provide for fully balanced operation. As with the Stereo variant, two stereo or four mono amplifiers are required. The crossover point and slope types are again determined by the purchaser prior to ordering.

A note on Stereo Bi-Amp connections

A common practice in Stereo Bi-Amp connection is to use two identical amplifiers, dedicating one to drive the low frequency drivers, and the other amp to drive the high frequency drivers. While this is not an incorrect application, it uses the amplifiers power supplies in a grossly disproportionate manner. The low freq. amp must provide the majority of the driving current to the speakers, while the second amplifier is "coasting along", having to only drive the less demanding mid/high panels.

Whenever possible, we recommend dedicating one amplifier to each channel, with the left channel (input and output) driving the low frequency spectrum, and the right channel driving the mid/high array. We feel that in this configuration the amplifiers reach equally into their power supplies during all musical passages, providing two distinct advantages:

A. Both amplifiers are in a near identical electrical state at all times, ensuring matched sonic characteristics over the entire audio bandwidth.

B. With the aggregate power demand equally divided between the two amplifiers, the current available to the speaker system for high impact transients is greatly increased.

SINGLE CHASSIS STEREO INSTALLATION (See Figure 1)

Note: On the rear panel of the KRX-3, left connections are engraved with the letter "A", while right connections are engraved with the letter "B". This is done to avoid confusion with inverted and non-inverted connections in the Balanced Mono configuration. Note: For this installation, your cable requirements are as follows:

1pr. RCA ---> RCA
Run - PreAmp Out ---> KRX-3 In

1pr RCA ---> RCA
Run - KRX-3 High Out (L/R) ---> Amplifier High Input (L/R)

1pr RCA ---> RCA
Run - KRX-3 Low Out (L/R) ---> Amplifier Low Input (L/R)

This installation requires two stereo or four mono amplifiers. Prior to this installation, you will need to obtain special interconnection terminations on your balanced cables. The connections are as follows:

Pre-Amp to Crossover Connections

1. Turn off all system components, and disconnect your amplifier's AC mains cords.

2. Place your KRX-3 in its planned installation location in such a way as to allow access to the rear panel connections.
Caution: Do not plug the KRX-3 in at this time.

3. Connect your right channel pre-amp output to the KRX-3 "B" input, and connect the left channel pre-amp output to the KRX-3 "A" input.

Crossover to Amplifier Connections

4. Connect the KRX-3 High Out "B" line to the right channel of your right channel dedicated amplifier. Connect the KRX-3 Low Out "B" line to the left channel of your right channel dedicated amplifier.

5. Connect the KRX-3 High Out "A" line to the right channel of your left channel dedicated amplifier. Connect the KRX-3 Low Out "A" line to the left channel of your left channel dedicated amplifier.

6. Set all front panel controls on the KRX-3 to the counterclockwise (lowest gain) position.

6. Plug the AC cord into the receptacle in back of the KRX-3, and then into the wall outlet.
<u>Caution: The front panel LED (Light Emitting Diode) should light at this time. If it does not, unplug the KRX-3, and contact your KRELL dealer immediately.</u>

7. Plug the amplifiers AC cords into their wall outlets. Turn on your system components, remembering to make the amplifiers the last components to be turned on.

8. Your stereo KRX-3 is now operational. To affect the gain / attenuation in the crossover frequency bands, adjust the high and low frequency controls on the front plate of the KRX-3. *Note: You will experience an increased gain of approximately 4.5 dB. This is normal.*

DUAL CHASSIS MONO BALANCED INSTALLATION (See Figure 2)

This configuration dedicates one KRX-3 chassis for each channel, with the "A" and "B" outputs representing the Inverting and Non-Inverting signal outputs to the Balanced amplifiers.

This installation requires two stereo or four mono amplifiers. Prior to this installation, you will need to obtain special interconnection terminations on your balanced cables. The connections are as follows:

Item # 1 A&B - Pre-Amp Out ---> KRX-3 Inputs
1pr. - Female XLR ---> Twin Male RCA
The Red RCA is 0° non inverting, Pin 2 off the XLR), and the White RCA is 180° (inverting, Pin 3 off the XLR)

Item #s 2 A&B, and 3 A&B - KRX-3 Outputs ---> Amplifier Inputs
2pr. - Twin Male RCA ---> Male XLR.
The Red RCA is 0 (non inverting, Pin 2 off the XLR), and the Black RCA is 180 (inverting, Pin 3 off the XLR)

Note: In referring to XLR connections, we are inferring the standard pin-out connections, which are: Pin #1 - Shield, Pin #2 - Non Inverting, Pin #3 - Inverting.

1. Turn off all system components, and disconnect your amplifier's AC mains cord.

2. Place your KRX-3's in their planned installation location in such a way as to allow access to their rear panel connections. Determine which chassis you will dedicate to your left and right channels, and place them in a manner which will avoid confusion.

   Caution: Do not plug the KRX-3's in at this time.

3. Using *Item #1A*, connect the XLR into the Right channel Balanced output of your Pre-Amplifier. Connect the Red (Non-Inverting) RCA from the Right channel Output to the "B" Input on the dedicated Right Channel KRX-3. Connect the White (Inverting) RCA from the Right channel Output to the "A" Input on the dedicated Right Channel KRX-3.

4. Using *Item #1A*, connect the Female XLR into the Left channel Balanced output of your Pre-Amplifier. Connect the Red (Non-Inverting) RCA from the Left channel Output to the "B" Input on the dedicated Left Channel KRX-3. Connect the White (Inverting) RCA from the Left channel Output to the "A" Input on the dedicated Left Channel KRX-3.

Pre-Amp to Crossover Connections

Right Channel Chassis

5. Using Item #2A connect the Red RCA to the Right Channel KRX-3 High Out "B" Output, and the White RCA to the Right Channel KRX-3 High Out "A" Output.

   Next connect the Male XLR on the other end of Item #2A to the Right channel XLR input on the dedicated Right channel amplifier.

6. Using Item #2B connect the Red RCA to the Right Channel KRX-3 Low Out "B" Output, and the White RCA to the Right Channel KRX-3 Low Out "A" Output.

   Next connect the Male XLR on the other end of Item #2B to the Left channel XLR input on the dedicated Right channel amplifier.

Left Channel Chassis

7. Using Item #3A connect the Red RCA to the Left Channel KRX-3 High Out "B" Output, and the White RCA to the Left Channel KRX-3 High Out "A" Output.

   Next connect the Male XLR on the other end of Item #3A to the Right channel XLR input on the dedicated Left channel amplifier.

8. Using Item #3B connect the Red RCA to the Left Channel KRX-3 Low Out "B" Output, and the White RCA to the Left Channel KRX-3 Low Out "A" Output.

   Next connect the Male XLR on the other end of Item #3B to the Left channel XLR input on the dedicated Left channel amplifier.

9. Set all front panel controls on the KRX-3's to the counterclockwise (lowest gain) position.

10. Plug the AC cord into the receptacles in back of the KRX-3s, and then into the wall outlet.
    Caution: The front panel LED (Light Emitting Diodes) should light at this time. If it does not, unplug the KRX-3(s) and contact your KRELL dealer immediately.

7. Plug the amplifiers AC cords into their wall outlets. Turn on your system components remembering to make the amplifiers(s) the last components to be turned on.

8. Your Mono Balanced KRX-3's are now operational. To affect the gain / attenuation in the crossover frequency bands, adjust the high and low frequency controls on the front plates of the KRX-3s.
   Note: You will experience an minimum increased gain of approximately 4.5dB. This is normal.

FIGURE 1

KRX-3 (Single chassis Stereo configuration)

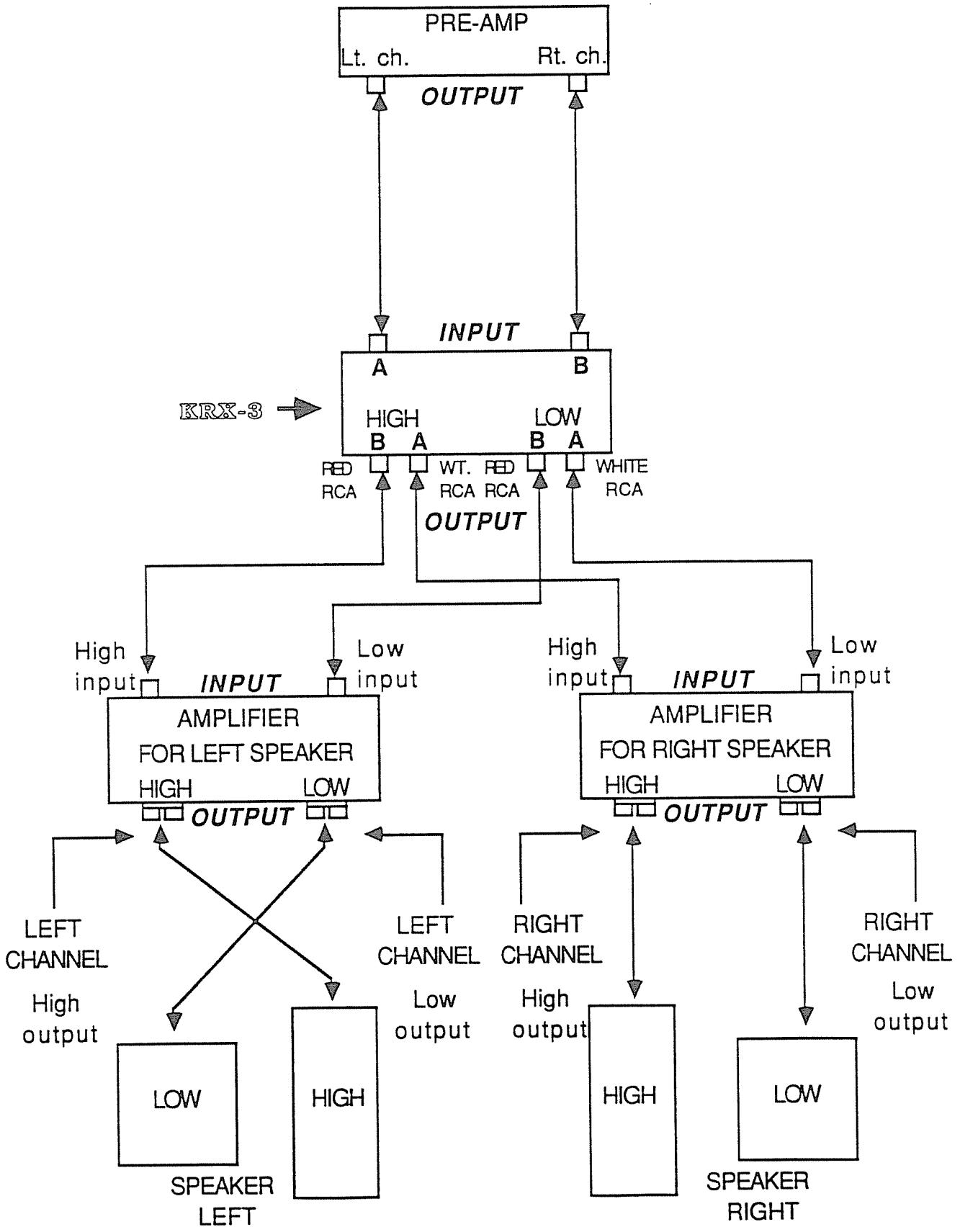

FIGURE 2

KRX-3 (Twin chassis dual-mono Balanced configuration)