

XC-3

Two-Way Crossover

Basic Description

The XC-3 is an active two-way crossover for use with bi-amplified loudspeakers. The unit mounts to the rear panel of a two-channel DCA or CX amplifiers to save cost and rack space. The amplifier's DataPort provides the accessory's operating power and receives the crossover output signals, eliminating added external wiring or power transformers.

The XC-3 features 4th-order Linkwitz-Riley filters with 24 dB/octave slopes, with the low frequencies going to channel 1 and the highs to channel 2 of the amplifier. Each channel has an all-pass filter providing delay for time alignment of low-frequency and high-frequency drivers, as well as a trim control providing 0 to 20 dB of attenuation for matching levels among the various frequency bands. To compensate for screen loss or equalize for constant-directivity horns, the high-frequency channel offers up to 10 dB of boost at 20 kHz. Frequency and delay parameters for each channel are set individually.

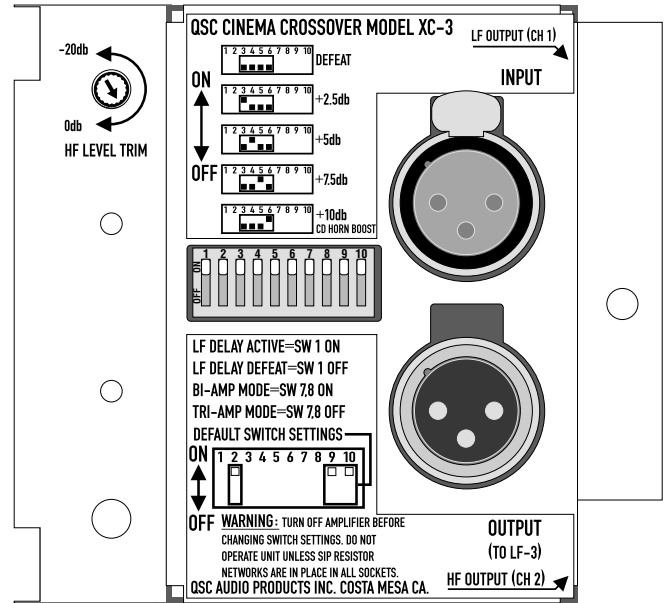
The XC-3 also has an elective low-frequency high-pass filter for use in combination with the LF-3 Low-frequency filter for three-way applications.

Compatible Amplifier Models

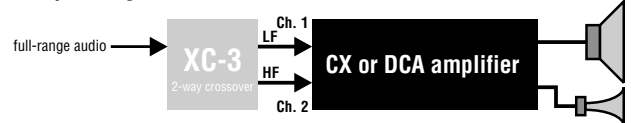
DCA 1222, DCA 1622, DCA 2422, DCA 3022, and DCA 3422
 CX 302, CX 502, CX 702, CX 902, CX 1102, CX 302V, CX 602V, and CX 1202V

LF-3 Features

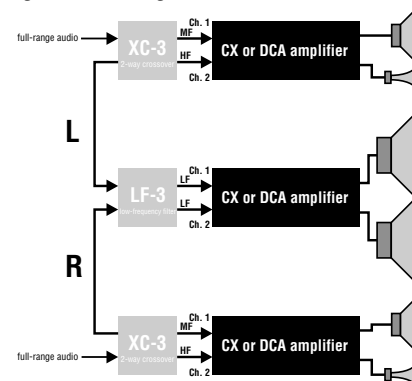
- For 2-channel DCA series or CX series amps
- Designed for bi-amp cinema or installed sound systems
- Adds crossover and time alignment functions without requiring additional rack space, cabling, or AC outlets
- Selectable crossover frequencies from 80 Hz to 1.5 kHz
- Defeatable high-pass filter for tri-amp applications, with selectable frequencies from 80 to 500 Hz
- Selectable low-frequency time-alignment delays from 0.3 to 1.8 milliseconds
- Mounts directly to back of amplifier; interfaces with amplifier via DataPort
- Precision components for accurate performance
- Active balanced XLR inputs



Bi-amp Configuration



Tri-amp Configuration Using LF-3



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XC-3 SPECIFICATIONS	XC-3
GENERAL INFORMATION	
Supply Voltage (no load)	+15 volts provided by amplifier, -15 volts provided by internal charge-pump converter.
Supply Current Requirements	Less than 50 mA
Operating Temperature	0–70° C
Input type	Electronically balanced differential
Input impedance	22.6 kΩ balanced; 11.3 kΩ unbalanced
CONTROLS (each channel)	
Crossover frequency	Selectable using SIP resistor networks: 80, 150, 200, 250, 300, 350, 400, 500, 600, 650, 800, 1000, 1200 or 1500 Hz
Optional high-pass filter (for 3-way operation)	Bypass or engage using DIP switch
High-pass frequency	Selectable using SIP resistor networks: 80, 150, 200, 250, 300, 350, 400 & 500 Hz
LF time alignment (all-pass) delay	Selectable using SIP resistor networks: 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 1.0, 1.2, 1.3, 1.4 & 1.8 milliseconds
Low frequency delay	Bypass or engage using DIP switch
HF gain adjustment	Trim potentiometer 0–20 dB attenuation
HF boost	Bypass or select using DIP switch 0, +2.5, +7.5, or 10 dB at 20 kHz, Maximum slope 6 dB/octave
CONNECTORS	
Input	Female 3-pin XLR
Output to LF-3	Male 3-pin XLR
Output to amplifier	Male HD-15 connector to amplifier DataPort
Accessory's operating power	Male HD-15 connector to amplifier DataPort
GENERAL AUDIO	
Input stage type	Electronically balanced differential
Output stage type	Balanced
Dynamic range	118 dB nominal
Total harmonic distortion	Less than 0.1%
Signal to noise ratio	Min. 103 dB
Crossover and high-pass filter type	4th-order Linkwitz-Riley alignment; -6 dB at crossover frequency
Filter roll-off slope	24 dB/octave rolloff

