

# 223s/223xs Crossover

Stereo 2-Way/Mono 3-Way Crossover

**dbx**  
by HARMAN



## More sound to your amps and speakers

The secret to making speakers sound great lies with the crossover you use. With the dbx® 223s and 223xs Crossovers you'll get great performance, ultra low-noise, rugged reliability and four decades of dbx knowledge and expertise in building the world's finest processors. The 223 uses precision filters to separate the audio signal and direct the correct frequencies to your loudspeaker drivers. By directing only the specific frequency bands to each speaker driver the 223 leaves your amplifiers free to use their full power on the usable signal eliminating distortion and giving your PA system a cleaner and better sound.

The dbx 223 is a dual channel crossover with all the features you would expect from a professional product. They feature Linkwitz-Riley 24dB per octave filters, independent output gain controls for level matching, output phase inversion, 40 Hz low cut filter, and optional mono summing of the low frequency (subwoofer) output. Everything in the design exudes great precision from the solid "click" controls to the high quality ¼" TRS (223s) and XLR (223xs) inputs and outputs.

## Features

- ▶ TRS differentially balanced ins and outs (223s)
- ▶ XLR balanced ins and outs (223xs)
- ▶ Mode switch for stereo 2-way or mono 3-way operation
- ▶ Low frequency summed (subwoofer) output
- ▶ x10 range switch on both channels
- ▶ 40 Hz high pass (low cut) filter both channels
- ▶ Phase reverse switch on all outputs
- ▶ Individual level controls on all outputs
- ▶ 24dB per octave Linkwitz-Riley filters (the professional standard)
- ▶ Stereo/Mono status LEDs indicate the selected mode
- ▶ dbx 2 year parts and labor as standard
- ▶ CSA NRTL/C approved
- ▶ CE compliant

### Who uses this product:



BANDS



DJs



SOUND  
INSTALLATION



STUDIO

dbx Professional  
Products

8760 S. Sandy Pkwy.  
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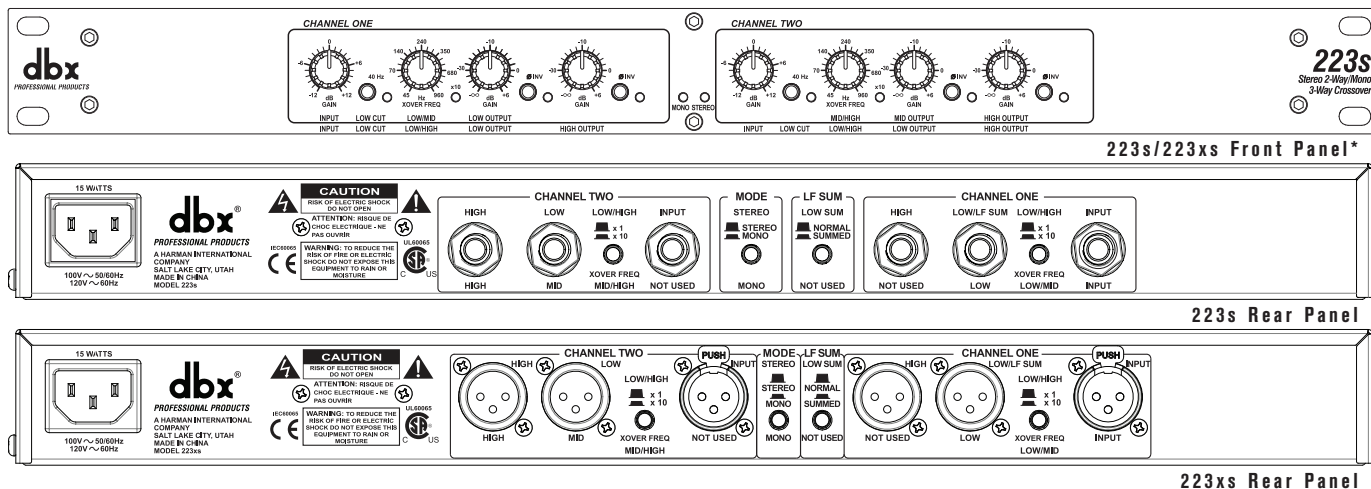
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\* Note: There are no differences between the 223s and the 223xs front panels. Therefore, the 223s is shown to represent both the 223s and the 223xs.

## Specifications

### INPUTS:

Connectors: 1/4" TRS (223s) / Female XLR (223xs) (pin 2 hot)  
Type: Electronically balanced/unbalanced, RF filtered  
Impedance: >50k $\Omega$  Balanced, >25k $\Omega$  unbalanced  
Max Input Level: >+22dBu balanced or unbalanced

### OUTPUTS (223s):

Connectors: 1/4" TRS  
Type: Impedance-balanced/unbalanced, RF filtered  
Impedance: Balanced 200 $\Omega$ , unbalanced 100 $\Omega$   
Max Output Level: >+21dBu balanced/unbalanced into 2k $\Omega$  or greater

### OUTPUTS (223xs):

Connectors: XLR  
Type: Electronically-balanced/unbalanced, RF filtered  
Impedance: Balanced 60 $\Omega$ , Unbalanced 30 $\Omega$   
Max Output Level: >+20dBu balanced/unbalanced into 600 $\Omega$  or greater

### CROSSOVER FREQUENCIES:

Stereo Mode:  
Low/High: 45 Hz to 960 Hz or 450 Hz to 9.6 kHz (x10 setting)  
Mono Mode:  
Low/Mid: 45 Hz to 960 Hz or 450 Hz to 9.6 kHz (x10 setting)  
Mid/High: 45 Hz to 960 Hz or 450 Hz to 9.6 kHz (x10 setting)  
Filter Type: Linkwitz-Riley, 24 dB/octave, state-variable

### FUNCTION SWITCHES:

Front Panel:  
Low Cut: Activates 40 Hz Butterworth, 12 dB/octave high-pass filter, one switch per channel  
Phase Invert: Inverts the phase at the output, one switch per output  
Rear Panel:  
x10: Multiplies crossover frequency range by 10, one switch per channel  
Mode: Selects stereo/mono and 2/3-way operation.  
LF Sum: Selects normal (stereo) or mono-summed low frequency operation

### INDICATORS:

Stereo Operation: Green LED  
Mono Operation: Yellow LED  
Low Cut: Red LED per channel  
x10: Green LED per channel  
Phase Invert: Red LED per output (3 per channel)

### SYSTEM PERFORMANCE:

Bandwidth: 20Hz to 20kHz, +0/-0.5dB  
Frequency Response: < 3Hz to > 90kHz, +0/-3dB  
Dynamic Range: >106dB, unweighted, any output  
THD+N: < 0.004% at +4 dBu, 1 kHz  
< 0.04% at +20 dBu, 1 kHz  
Interchannel Crosstalk: <-80dB, 20Hz to 20kHz  
Common Mode Rejection: >40dB, typically >55dB @ 1kHz  
Signal-to-Noise: Ref: +4dBu, 22kHz measurement bandwidth  
Stereo: Mono:  
> 94dB > 94dB  
> 93dB > 93dB  
> 91dB > 91dB

### POWER SUPPLY:

Power Requirements: 15 Watts  
Operating Voltage: 100 VAC 50/60Hz; 120VAC 60Hz; 230 VAC 50/60 Hz  
Operating Temperature: 32°F to 113°F (0°C to 45°C)

### PHYSICAL:

Dimensions: 1.75" x 6.9" x 19" (4.5cm x 17.5cm x 48.26cm)  
Weight: Net Weight: 3.7 lbs/1.7 Kg  
Shipping Weight: 5.4 lbs/2.5 Kg

dbx engineers are constantly working to improve the quality of our products. Specifications are, therefore subject to change without notice.