

# behringer SUPER-X PRO CX3400 High-Precision Stereo 2-Way-3-Way-Mono 4-Way Crossover User Guide

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## behringer SUPER-X PRO CX3400 High-Precision Stereo 2-Way-3-Way-Mono 4-Way Crossover



# 1

## **Important Safety Instructions**

- Terminals marked with this symbol carry electrical current of sufficient magnitude to constitute risk of electric shock.
- Use only high-quality professional speaker cables with 1/4" TS or twist-locking plugs pre-installed. All other installation or modification should be performed only by qualified personnel.
- This symbol, wherever it appears, alerts you to the presence of uninsulated dangerous voltage inside the enclosure voltage that may be sufficient to constitute a risk of shock.
- This symbol, wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Please read the manual.

#### Caution

To reduce the risk of electric shock, do not remove the top cover (or the rear section). No user serviceable parts inside. Refer servicing to qualified personnel.

## Caution

To reduce the risk of fire or electric shock, do not expose this appliance to rain and moisture. The apparatus shall not be exposed to dripping or splashing liquids and no objects filled with liquids, such as vases, shall be placed on the apparatus.

#### Caution

These service instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operation instructions. Repairs have to be performed by qualified service personnel.

- 1. Read these instructions.
- 2. Keep these instructions.
- 3. Heed all warnings.
- 4. Follow all instructions.
- 5. Do not use this apparatus near water.
- 6. Clean only with dry cloth.
- 7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

- 9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Use only attachments/accessories specified by the manufacturer.
- 12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid
- 13. Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed o rain or moisture, does not operate normally, or has been dropped.
- 15. The apparatus shall be connected to a MAINS socket outlet with a protective earthing connection.
- 16. Where the MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.
- 17. Correct disposal of this product: This symbol indicates that this product must not be disposed of with household waste, according to the WEEE Directive (2012/19/EU) and your national law. This product should be taken to a collection center licensed for the recycling of waste electrical and electronic equipment (EEE). The mishandling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the efficient use of natural resources. For more information about where you can take your waste equipment for recycling, please contact your local city office, or your household waste collection service.
- 18. Do not install in a confined space, such as a book case or similar unit.
- 19. Do not place naked flame sources, such as lighted candles, on the apparatus.
- 20. Please keep the environmental aspects of battery disposal in mind. Batteries must be disposed-of at a battery collection point.
- 21. This apparatus may be used in tropical and moderate climates up to 45°C.

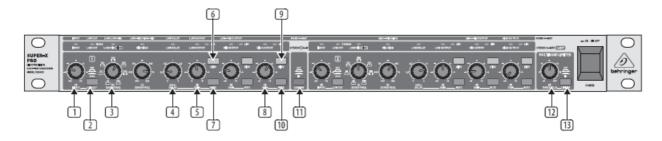
## **LEGAL DISCLAIMER**

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## **LIMITED WARRANTY**

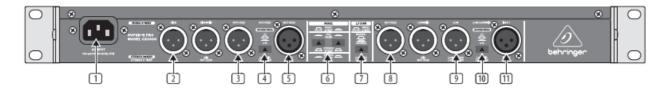
For the applicable warranty terms and conditions and additional information regarding Music Tribe's Limited Warranty, please see complete details online at <u>musictribe.com/warranty</u>.

#### **SUPER-X PRO CX3400 Controls**



- 1. INPUT control. This control adjusts the input gain from +12 to -12 dB.
- 2. LOW CUT button. This button activates the 25 Hz highpass filter protecting the woofers against low-frequency signals.
- LOW/HIGH XOVER FREQ. control. This control governs the crossover frequency between the Low and High bands. When the XOVER FREQUENCY button on the rear of the unit is pressed, the frequency range is multiplied by the factor 10.
- 4. DELAY control. This control delays the Low signal by as much as 2 ms, (11) CD HORN button. This button provides a special form of frequency which is useful to align the speaker systems in phase. correction in the High band for constant-directivity horns.
- 5. LOW OUTPUT control. Controls the output level of the Low band from6 to -6 dB.
- 6. LOW PHASE INVERT button. This button reverses the polarity of the
- 7. LOW MUTE button. Mutes the Low band.
- 8. HIGH OUTPUT control. Controls the output level of the High band from + 6 to -6 dB.
- 9. HIGH PHASE INVERT button. This button reverses the polarity of the High output.
- 10. HIGH MUTE button. Mutes the High band.
  - 1. INPUT control. This control adjusts the input gain from +12 to -12 dB.
  - LOW CUT button. This button activates the 25 Hz highpass filter protecting the woofers against lowfrequency signals.
  - 3. LOW/HIGH XOVER FREQ. control. This control governs the crossover frequency between the Low and High bands. When the XOVER FREQUENCY button on the rear of the unit is pressed, the frequency range is multiplied by the factor 10.
  - 4. DELAY control. This control delays the Low signal by as much as 2 ms, (11) CD HORN button. This button provides a special form of frequency which is useful to align the speaker systems in phase. correction in the High band for constant-directivity horns.
- 11. THRESHOLD control. This control determines the limiter threshold.
- 12. LIMITER button. This button activates all limiters. Whenever the signal
- 13. surpasses the limiter threshold, the LIM-LEDs above the Gain control light up, signaling that the CX3400 cuts back the output level.

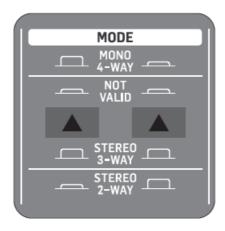
# Active control elementAs on the rear panel of the SUPER-X PRO for 2-way stereo operation



1. Use the enclosed power cord to connect the unit to the mains.

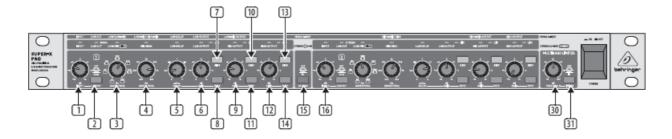
- 2. and (8) HIGH OUTPUT connector. Output for the High band signal.
- 3. and (9) LOW (LF SUM) OUTPUT connector. Output for the Low band signal.
- 4. and (10) XOVER FREQ. button. This button serves to switch over the control range of the front-panel LOW/HIGH OVER FREQ. control from 44 to 930 Hz or 440 Hz to 9.3 kHz.
- 5. and (11) INPUT connector.
- 6. MODE button. In stereo 2-way mode, the first button must be pressed, the second released. Please observe the labels on the rear panel of the unit.
- 7. LOW SUM button.

## Stereo 2-way operation



Proper selection of the two MODE buttons for stereo 2-way operationFirst, activate stereo 2-way mode by means of the two MODE buttons on the rear panel. The STEREO-LED on the front panel, above the LOW CUT button in channel 2, lights up. Subsequently, the LEDs above the active controls on the front panel light up, signaling which controls are active in the operating mode you just selected. The functions of these controls can be seen from the second strip label. In stereo mode, both channels perform the same functions.

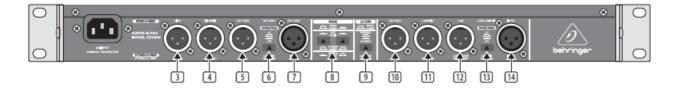
## **SUPER-X PRO CX3400 Controls**



- 1. and (16) INPUT control. This control adjusts the input gain from + 12 to -12 dB.
- 2. LOW CUT button. This button activates the 25 Hz high pass filter protecting the woofers against low-frequency signals.
- LOW/MID XOVER FREQ. control. This control governs the crossover frequency between the Low and Mid bands. When the XOVER FREQUENCY button on the rear of the unit is pressed, the frequency range is multiplied by the factor 10.
- 4. MID/HIGH XOVER FREQ. control. This control governs the crossover frequency between the Mid and High bands.
- 5. DELAY control. This control delays the Low signal by as much as 2 ms, which is useful to align the speaker systems in phase.
- 6. LOW OUTPUT control. Controls the output level of the Low band from + 6 to -6 dB.

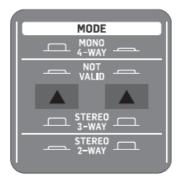
- 7. LOW PHASE INVERT button. This button reverses the polarity of the Low output.
- 8. LOW MUTE button. Mutes the Low band.
- 9. MID OUTPUT control. Controls the output level of the Mid band from + 6 to -6 dB.
- 10. MID PHASE INVERT button. This button reverses the polarity of the Mid output.
- 11. MID MUTE button. Mutes the Mid band.
- 12. HIGH OUTPUT control. Controls the output level of the High band from + 6 to -6 dB.
- 13. HIGH PHASE INVERT button. This button reverses the polarity of the High output.
- 14. HIGH MUTE button. Mutes the High band.
- 15. CD HORN button. This button provides a special form of frequency correction in the High band for constantdirectivity horns.
- 16. THRESHOLD control. This control determines the limiter threshold.
- 17. LIMITER button. This button activates all limiters. Whenever the signal surpasses the limiter threshold, the LIM-LEDs above the Gain control light up, signaling that the CX3400 cuts back the output level.

## Active control elements on the rear panel of the SUPER-X PRO for stereo 3-way operation



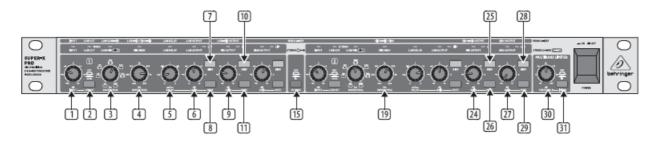
- 1. and (10) HIGH OUTPUT connector. Output for the High band signal.
- 2. and (11) MID OUTPUT connector. Output for the Mid band signal.
- 3. and (12) LOW (LF SUM) OUTPUT connector. Output for the
- 4. LOw band signal.
- 5. and (13) XOVER FREQ. button. This button serves to switch over the control range of the front-panel LOW/MID XOVER FREQ. control from 44 to 930 Hz or 440 Hz to 9.3 kHz.
- 6. MODE button. In stereo 3-way mode, both buttons must be out. Please observe the labels on the rear panel of the unit.
- 7. LOWA SUM button. In stereo mode, the two Low paths can be summed with the LOW SUM button and routed to the Low output of channel 1, which is particularly useful in systems using additional subwoofers.
- 8. and (14) INPUT connector. Input signal connector.

# **Stereo 3-Way Operation**



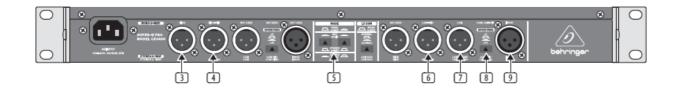
means of the two MODE buttons on the rear panel. The STEREO-LED on the front panel, above the LOW CUT button in channel 2, lights up. Subsequently, the LEDs above the active controls on the front panel light up, signaling which controls are active in the operating mode you just selected. The functions of these controls can be seen from the second strip label. In stereo mode, both channels perform the same functions.

## **Controls: Mono 4-Way Operation**



- 1. INPUT control. This control adjusts the input gain from +12 to -12 dB.
- 2. LOW CUT button.
- 3. This button activates the 25 Hz highpass filter protecting the woofers against low-frequency signals.
- LOW/LOW-MID XOVER FREQ. control. This control governs the crossover frequency between the Low and Low-Mid bands.
- 5. When the XOVER FREQUENCY button on the rear of the unit is pressed, the frequency range is multiplied by the factor 10.
- LOW-MID/HIGH-MID XOVER FREQ. control. This control governs the crossover frequency between the Low-Mid and High-Mid bands.
- 7. DELAY control. This control delays the Low signal by as much as 2 ms, which is useful to align the speaker systems in phase.
- 8. LOW OUTPUT control. Controls the output level of the Low band from + 6 to -6 dB.
- 9. LOW PHASE INVERT button. This button reverses the polarity of the Low output.
- 10. LOW MUTE button. Mutes the Low band.
- 11. LOW-MID OUTPUT control.
- 12. Controls the output level of the Low-Mid band
- 13. LIMITER button. This button activates all limiters.
- 14. Whenever the sig nal from +6 to -6 dB.
- 15. LOW-MID PHASE INVERT button.
- 16. This button reverses the polarity of the Low-Mid output.
- 17. LOW-MID MUTE button.
- 18. Mutes the Low-Mid band.
- 19. CD HORN button.
- 20. This button provides a special form of frequency correction in the High band for constant-directivity horns.
- 21. HIGH-MID/HIGH XOVER FREQ. control.
- 22. This control governs the crossover frequency between the High-Mid and High bands.
- 23. HIGH-MID OUTPUT control. Controls the output level of the
- 24. High-Mid band from +6 to -6 dB.
- 25. HIGH-MID PHASE INVERT button. This button reverses the polarity of the High-Mid output.
- 26. HIGH-MID MUTE button. Mutes the High-Mid band.
- 27. HIGH OUTPUT control. Controls the output level of the High band from + 6 to -6 dB.

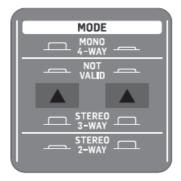
- 28. HIGH PHASE INVERT button. This button reverses the polarity of the High output.
- 29. HIGH MUTE button. Mutes the High band.
- 30. THRESHOLD control. This control determines the limiter threshold.
- 31. surpasses the limiter threshold, the LIM-LEDs above the Gain control light up, signaling that the CX3400 cuts back the output level.



## Active control elements on the rear panel of the SUPER-X PRO for mono 4-way operation

- 1. HIGH OUTPUT connector. Output for the High band signal.
- 2. HIGH-MID OUTPUT connector. Output for the High-Mid band signal.
- 3. MODE button. In mono 4-way mode, the right button must be pressed. Please observe the labels on the rear panel of the unit.
- 4. LOW-MID OUTPUT connector. Output for the Low-Mid band signal.
- 5. LOW OUTPUT connector. Output for the Low band signal.
- 6. XOVER FREQ. button. This button serves to switch over the control range of the front-panel LOW/LOW-MID XOVER FREQ. control from 44 to 930 Hz or 440 Hz to 9.3 kHz.
- 7. INPUT connector. Input signal connector.

## **Mono 4-Way Operation**



Proper selection of the two MODE switches for mono 4-way operationFirst, activate mono 4-way mode by means of the two MODE buttons on the rear panel. The MONO-LED on the front panel, above the LOW CUT button in channel 1, lights up. Subsequently, the LEDs above the active controls on the front panel light up, signaling which controls are active in the operating mode you just selected. The functions of these controls can be seen from the first strip label.

# **Specifications**

Туре	XLR, HF-filtered, electronically servo-balanced
Impedance	$>$ 50 k $\Omega$ balanced, $>$ 25 k $\Omega$ unbalanced
Max. input level	+22 dBu, balanced or unbalanced
CMRR	Typically >60 dB @ 1 kHz

Туре	XLR, HF-filtered, electronically servo-balanced
Impedance	100 $Ω$ balanced or unbalanced
Max. output level	+21 dBu, balanced or unbalanced

Bandwidth	20 Hz to 20 kHz, +0/-0.8 dB	
Frequency response	< 10 Hz to > 55 kHz, +0/-3 dB	
Signal-to-noise	+4 dBu, 20 Hz to 20 kHz, unweighted	
	Stereo mode	Mono mode
Low output	> 94 dBu	> 94 dBu
Low-mid output	_	> 98 dBu
Mid output	> 98 dBu	_
High-mid output	_	> 96 dBu
High output	> 94 dBu	> 94 dBu
Dynamic range	> 110 dB, unweighted	
THD & noise	Limiter off < 0.04 %	Limiter on < 0.5 %
	High to low:	< -95 dBu
	High to mid:	< -97 dBu
Interchannel crosstalk Mic	Mid to low: High to high-mid:	< -97 dBu
		< -96 dBu
	High-mid to low-mid:	< -97 dBu
	Low-mid to low:	< -98 dBu

Filter type	24 dB/oct., Linkwitz-Riley, state-variable	
Stereo mode Xover frequencies	X1	x10
Low / high	44 Hz to 930 Hz	440 Hz to 9.3 kHz
Low / mid	44 Hz to 930 Hz	440 Hz to 9.3 kHz
Mid / high	440 Hz to 9.3 kHz	_
Mono mode Xover frequencies	X1	x10
Low / low-mid	44 Hz to 930 Hz	440 Hz to 9.3 kHz
Low-mid / high-mid	440 Hz to 9.3 kHz	_
High-mid / high	440 Hz to 9.3 kHz	_

Low cut	Activates 25 Hz, 12 dB/octave high-pass filter, Butterworth
Mute	Mutes the individual output
Phase invert	Inverts the phase at the individual output
CD horn	Corrects CD horn frequency response above 3.5 kHz
Limiter	Activates the limiter function for all outputs

Xover frequency	Multiplies crossover frequency range by 10
Mode	Selects stereo/mono and 2/3/4-way operation
LF sum	Selects normal stereo or mono-summed low frequency operation ON = Channel 1 + 6 dB louder / Channel 2: the sa me as before

# Other important information

- 1. Register online. Please register your new Music Tribe equipment right after you purchase it by visiting musictribe.com. Registering your purchase using our simple online form helps us to process your repair claims more quickly and efficiently. Also, read the terms and conditions of our warranty, if applicable.
- 2. Malfunction. Should your Music Tribe Authorized Reseller not be located in your vicinity, you may contact the Music Tribe Authorized Fulfiller for your country listed under "Support" at musictribe.com. Should your country not be listed, please check if your problem can be dealt with by our "Online Support" which may also be found under "Support" at musictribe.com. Alternatively, please submit an online warranty claim at musictribe.com BEFORE returning the product.
- 3. Power Connections. Before plugging the unit into a power socket, please make sure you are using the correct mains voltage for your particular model. Faulty fuses must be replaced with fuses of the same type and rating without exception.

#### FEDERAL COMMUNICATIONS COMMISSION COMPLIANCE INFORMATION

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part

15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- · Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

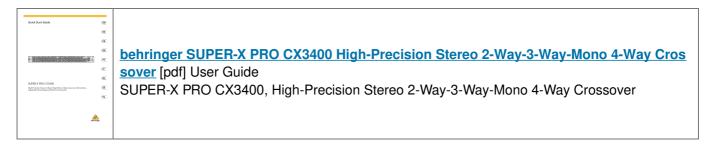
This equipment complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1. This device may not cause harmful interference, and
- 2. This device must accept any interference received, including interference that may cause undesired operation.

## Important information:

Changes or modifications to the equipment not expressly approved by MUSIC Tribe can void the user's authority to use the equipment.

#### **Documents / Resources**



## References

- Music Tribe
- Music Tribe

Manuals+, home privacy