

# NADY™ AUDIO

## OWNER'S MANUAL

CROSSOVER



# CX-23SW

## 3-WAY STEREO PLUS SUBWOOFER

# CX-23SW

## 3-WAY STEREO+SUBWOOFER CROSSOVER



Congratulations on your choice of crossover — you have purchased one of the finest stereo crossovers on the market today. This unit was developed using the expertise of professional sound engineers and working musicians. You will find that your new NADY AUDIO CX-23SW has superior performance and greater flexibility than any other crossovers in its price range. Please read this manual carefully to get the most out of your new unit.

Thanks for selecting NADY AUDIO as your choice in crossovers.

### FEATURES

Crossovers provide precise frequency dividing for multi-amplified speaker applications, and are valuable tools in many professional live sound uses. The CX-23SW offers 3-way active LOW/MID/HIGH outputs for each stereo channel and a mono subwoofer output. It is simple to set up and operate and is the perfect choice for basic multi-amp, multi-speaker stereo installations.

- Single rack space (1U)
- Shielded internal power supply with AC voltage select switch (~115V/60Hz or ~230V/50Hz)
- Phase inversion switches
- Low-cut subsonic filters for low frequency driver protection
- Servo-balanced XLR inputs/outputs
- Superior performance with transparent audio

### CONTENTS

Features .....	2
Warning .....	3
Controls and Connections .....	4
Specifications .....	5
Typical Set-up.....	6

Date of Purchase \_\_\_\_\_

Dealer's Name \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_

Model # \_\_\_\_\_

Serial # \_\_\_\_\_

## WARNING



An equilateral triangle enclosing a lightning flash/arrowhead symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure which may be of sufficient magnitude to constitute a risk of electric shock.



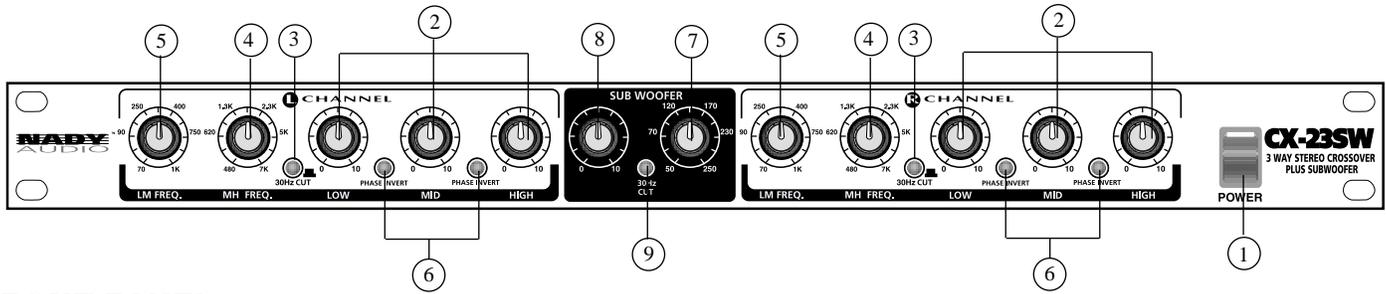
An equilateral triangle enclosing an exclamation point is intended to alert the user to the presence of important operating and service instructions in the literature enclosed with this unit.

## IMPORTANT SAFETY INSTRUCTIONS

When using this electronic device, basic precautions should always be taken, including the following:

1. Read all instructions before using the product.
2. Do not use this product near water (e.g., near a bathtub, washbowl, kitchen sink, in a wet basement, or near a swimming pool, etc.).
3. This product should be used only with a cart or stand that will keep it level and stable and prevent wobbling.
4. This product, in combination with headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.
5. The product should be positioned so that proper ventilation is maintained.
6. The product should be located away from heat sources such as radiators, heat vents, or other devices (including amplifiers) that produce heat.
7. The product should be connected to a power supply only of the type described in the operating instructions or as marked on the product. Replace the fuse only with one of the specified type, size, and correct rating.
8. The power supply cord should: (1) be undamaged, (2) never share an outlet or extension cord with other devices so that the outlet's or extension cord's power rating is exceeded, and (3) never be left plugged into the outlet when not being used for a long period of time.
9. Care should be taken so that objects do not fall into, and liquids are not spilled through, the enclosure's openings.
10. The product should be serviced by qualified service personnel if:
  - A. The power supply cord or the plug has been damaged.
  - B. Objects have fallen into, or liquid has been spilled onto the product.
  - C. The product has been exposed to rain.
  - D. The product does not appear to operate normally or exhibits a marked change in performance.
  - E. The product has been dropped, or the enclosure damaged.
11. Do not attempt to service the product beyond what is described in the user maintenance instructions. All other servicing should be referred to qualified service personnel.

# CONTROLS AND CONNECTIONS



## FRONT PANEL

### 1. POWER SWITCH:

To turn the unit ON or OFF, press the upper or lower portion of this button. The internal power LED illuminates when the unit is turned "ON". *(Caution: Always turn the Crossover ON before the amplifier, and turn it OFF after the amplifier or transients harmful to the speakers may result.)*

### 2. L/M/H OUTPUT LEVEL CONTROLS:

These are used to adjust the output level of each way: LOW, MID and HIGH.

### 3. LOW CUT BUTTONS FOR LOW WAY:

These insert low cut filters in the LOW way of each stereo channel with a 12dB/Octave, 30 Hz HPF to minimize problems from subsonic frequencies in the signal, to suppress hum, and to prevent low frequency speaker resonance.

### 4. MH CROSSOVER FREQUENCY CONTROLS:

These select the crossover frequencies of the MID and HIGH ways. They're a low cut for the HIGH and a high cut for the MID. You can select the frequencies between 480 Hz to 7 kHz.

### 5. LM CROSSOVER FREQUENCY CONTROLS:

These select the crossover frequencies of the LOW and MID ways. They're a low cut for the MID and a high cut for the LOW. You can select the frequency between 70 Hz to 1 kHz.

### 6. PHASE BUTTONS:

These allow switching the polarity to invert the signal phase on the MID and HIGH ways. This is done after the output levels are set to correct audible phase problems.

*Caution: Before pressing the PHASE BUTTON, always lower the outputs of your power amplifiers to avoid possible speaker damage.*

### 7. SUB CROSSOVER FREQUENCY CONTROL:

This selects the crossover frequency of the SUB WOOFER way. You can select the frequency between 50 Hz to 250 Hz.

### 8. SUBWOOFER OUTPUT LEVEL CONTROL:

This is used to adjust the SUB WOOFER output level.

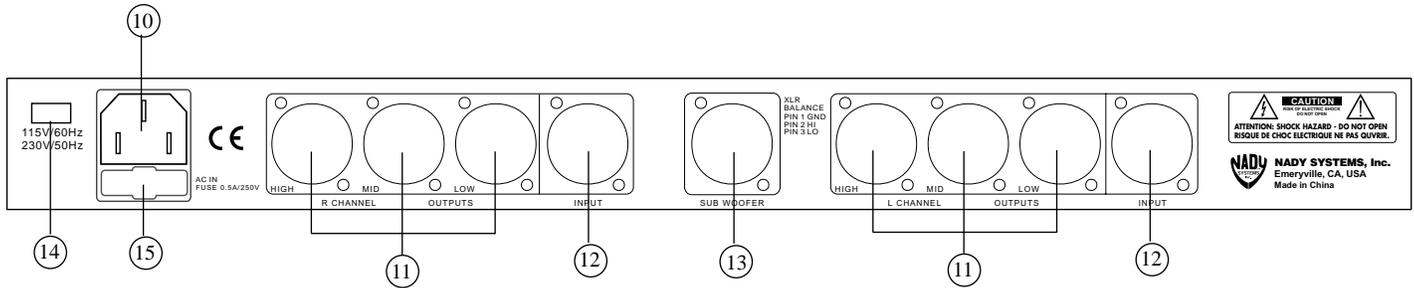
### 9. SUBWOOFER LOW CUT BUTTON:

This inserts a low cut filter in the SUBWOOFER way with a 12dB/Octave, 30 Hz HPF to minimize problems from subsonic frequencies in the signal, to suppress hum, and to prevent low frequency subwoofer speaker resonance.

## PLEASE READ THIS MANUAL BEFORE OPERATING THIS UNIT

*Caution : To prevent malfunctioning and/or possible equipment damage: Before plugging the unit into the power source: (1) the voltage selector switch should be set for the correct voltage for your area (115V or 230V) and (2) all equipment connected to the crossover outputs should be turned off or all the inputs turned down.*

# CONTROLS AND CONNECTIONS



## REAR PANEL

### 10. POWER CONNECTOR

The IEC jack is used to connect the power cord to the AC Power Source.  
*(Caution: Do not remove the center grounding pin.)*

### 11. L/M/H OUTPUT CONNECTORS:

Connect to your amplifiers via these balanced XLR output jacks.

### 12. BALANCED INPUT CONNECTORS (Combo 1/4" TRS & XLR):

Connect your L/R stereo input signal to these balanced combo jacks. These combination 1/4" TRS (Tip/Ring/Sleeve) phone jacks and XLR jacks are compatible with either type balanced connector and are wired as Tip/Pin 3 = (+), Ring/Pin 2 = (-), and Sleeve/Pin 1 = Ground.

### 13. SUBWOOFER OUTPUT CONNECTOR:

Connect to your subwoofer amplifier via this balanced XLR output jack.

### 14. AC VOLTAGE SELECTOR SWITCH:

Before plugging in the power cord, check to see that the unit is set for the proper voltage for your area: ~115V (60Hz) or ~230V (50Hz).

### 15. FUSE COMPARTMENT :

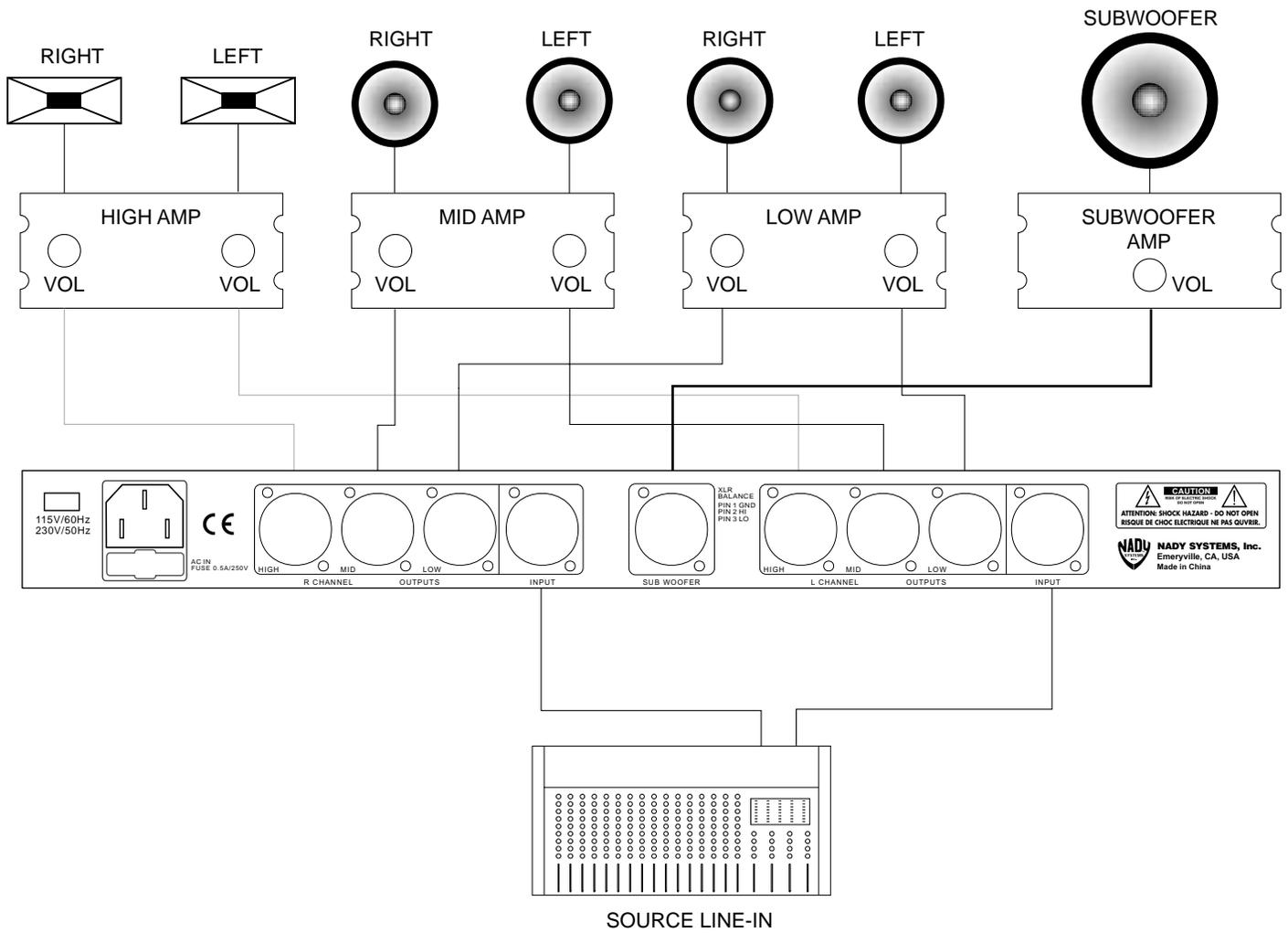
Replace with only the same type fuse (0.5A/250V). If it blows continuously, do not use the unit until it has been serviced by qualified personnel.

# SPECIFICATIONS

<b>Crossover Type</b> .....	Stereo 3 ways + Subwoofer
<b>Crossover Frequencies Subwoofer</b> .....	50 - 250Hz
<b>LM</b> .....	70 – 1000Hz
<b>MH</b> .....	480 – 7000Hz
<b>Filter Type (Slope)</b> .....	2nd order, 12dB/Octave
<b>Inputs Type</b> .....	Balanced Combo 1/4" TRS & XLR
<b>Impedance</b> .....	100K Ω
<b>Outputs Type</b> .....	Balanced XLR
<b>Impedance</b> .....	220 Ω
<b>Low Cut Filters</b> .....	30Hz/ - 3dB, 12dB/Octave
<b>Frequency Response</b> .....	25Hz - 25KHz +/-1dB
<b>Total Harmonic Distortion (THD) + Noise</b> .....	< 0.05 %
<b>S/N Ratio</b> .....	> 80 dB
<b>Fuse</b> .....	0.5 A/ 250V, 5x20mm glass type
<b>Dimensions</b> .....	19" x 1.73" x 5.9" (483 X 44 X 150mm)
<b>Weight</b> .....	4.4 lbs. (2.2 Kg)

*Specifications and design subject to change without prior notice for improvement purposes*

# TYPICAL SET-UP



## **SERVICE FOR YOUR NADY AUDIO PRODUCT**

**(U.S.)** Should your NADY AUDIO product require service, please contact the Nady Service Department via telephone at (510) 652-2411, or e-mail at [service@nadywireless.com](mailto:service@nadywireless.com).

**(International)** For service, please contact the NADY AUDIO distributor in your country through the dealer from whom you purchased this product.

DO NOT ATTEMPT TO SERVICE THIS UNIT  
YOURSELF AS IT CAN BE DANGEROUS  
AND WILL ALSO VOID THE WARRANTY.

