XLi Series Operation Manual

Models: XLi 800, XLi 1500, XLi 2500, XLi 3500

Obtaining Other Language Versions: To obtain information in another language about the use of this product, please contact your local Crown Distributor. If you need assistance locating your local distributor, please contact Crown at 574-294-8000.

This manual does not include all of the details of design, production, or variations of the equipment. Nor does it cover every possible situation which may arise during installation, operation or maintenance.

The information provided in this manual was deemed accurate as of the publication date. However, updates to this information may have occurred. To obtain the latest version of this manual, please visit the Crown website at www.crownaudio.com.

Later versions of this manual and additional information about this product may be available at the Crown website at www.crownaudio.com.

5015442 - 04/12

Important Safety Instructions

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 a 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 is 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.
11. Only use attachments/accessories specified by the manufacturer.

12. Use only with a 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 injury from tip-over.

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 to rain or moisture, does not operate normally, or has been dropped.
15. Use the mains plug to disconnect the apparatus from the mains.
16. WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.
17. WARNING: THIS APPLIANCE SHALL BE CONNECTED TO A MAINS SOCKET OUTLET WITH A PROTECTIVE EARTHING CONNECTION.

18. DO NOT EXPOSE THIS EQUIPMENT TO DRIPPING OR SPLASHING AND ENSURE THAT NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, ARE PLACED ON THE EQUIPMENT.

19. THE MAINS PLUG OF THE POWER SUPPLY CORD SHALL REMAIN READILY OPERABLE.

TO PREVENT ELECTRIC SHOCK DO NOT REMOVE TOP OR BOTTOM COVERS. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

TO COMPLETELY DISCONNECT THIS EQUIPMENT FROM THE AC MAINS, DISCONNECT THE POWER SUPPLY CORD PLUG FROM THE AC RECEPTACLE. THE MAINS PLUG OF THE POWER SUPPLY CORD SHALL REMAIN READILY OPERABLE.

WARNING: PAY ATTENTION TO A PROCEDURE, PRACTICE, CONDITION OR THE LIKE, IF NOT CORRECTLY PERFORMED OR ADHERED TO, COULD RESULT IN PERSONAL INJURY OR DEATH.

CAUTION: PAY ATTENTION TO PROCEDURE, PRACTICE, CONDITION OR THE LIKE, IF NOT CORRECTLY PERFORMED OR ADHERED TO, COULD RESULT IN DAMAGE OR DESTRUCTION TO PART OR ALL OF THE COMPONENT.

WATCH FOR THESE SYMBOLS:

The lightning bolt triangle is used to alert the user to the risk of electric shock.

The exclamation point triangle is used to alert the user to important operating or maintenance instructions.

This device is designed and evaluated under the condition of 2000 meters tall above sea level; and, it can be only used in locations below 2000 meters tall above sea level. Using the device above 2000 meters altitude would result in high safety risk.

The device is designed and evaluated under the condition of non-tropical climate; and, it can be only used in locations in non-tropical climate areas. Using the device in tropical climate areas would result in high safety risk.

IMPORTANT

XLi Series amplifiers require Class 2 output wiring.

MAGNETIC FIELD

CAUTION! Do not locate sensitive high-gain equipment such as preamplifiers or tape decks directly above or below the unit. Because this amplifier has a high power density, it has a strong magnetic field which can induce hum into unshielded devices that are located nearby. The field is strongest just above and below the unit.

If an equipment rack is used, we recommend locating the amplifier(s) in the bottom of the rack and the preamplifier or other sensitive equipment at the top.

FCC COMPLIANCE NOTICE

This device 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.

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: 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 instruction manual, 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.

DECLARATION OF CONFORMITY

Issued By: Harman International.
1718 W. Mishawaka Rd.
Elkhart, IN 46517 U.S.A.

European Representative's Name and Address:
David J. Budge
10 Harvest Close
Yateley
GU46 6YS
United Kingdom

Equipment Type: Commercial Audio Power Amplifiers
Family Name: XLi
Model Names: XLi 800, XLi 1500, XLi 2500, XLi 3500

EMC Standards:

EN 55103-1:1997 Electromagnetic Compatibility - Product Family Standard for Audio, Video, Audio-Visual and Entertainment Lighting Control Apparatus for Professional Use, Part 1: Emissions

EN 55103-1:1997 Magnetic Field Emissions-Annex A @ 10 cm and 20 cm

EN 61000-3-2:2001 Limits for Harmonic Current Emissions (equipment input current less than or equal to 16 A per phase)

EN 61000-3-3:2002 Limitation of Voltage Fluctuations and Flicker in Low-Voltage Supply Systems Rated Current less than or equal to16A

EN 55022:2003 Limits and Methods of Measurement of Radio Disturbance Characteristics of ITE: Radiated, Class B Limits; Conducted, Class A

EN 55103-2:1997 Electromagnetic Compatibility - Product Family Standard for Audio, Video, Audio-Visual and Entertainment Lighting Control Apparatus for Professional Use, Part 2: Immunity

EN 61000-4-2:2001 Electrostatic Discharge Immunity (Environment E2-Criteria B, 4k V Contact, 8k V Air Discharge)

EN 61000-4-3:2001 Radiated, Radio-Frequency, Electromagnetic Immunity (Environment E2, criteria A)

EN 61000-4-4:2001 Electrical Fast Transient/Burst Immunity (Criteria B)

EN 61000-4-5:2001 Surge Immunity (Criteria B)

EN 61000-4-6:2003 Immunity to Conducted Disturbances Induced by Radio-Frequency Fields (Criteria A)

EN 61000-4-11:2001 Voltage Dips, Short Interruptions and Voltage Variation

Safety Standard:

IEC 60065: 2001 7th Ed. Safety Requirements - Audio Video and Similar Electronic Apparatus

I certify that the product identified above conforms to the requirements of the EMC Council Directive 89/336/EEC as amended by 92/31/EEC, and the Low Voltage Directive 73/23/EES as amended by 93/68/EEC.92/31/EEC, and the Low Voltage Directive 73/23/EES as amended by 93/68/EEC.

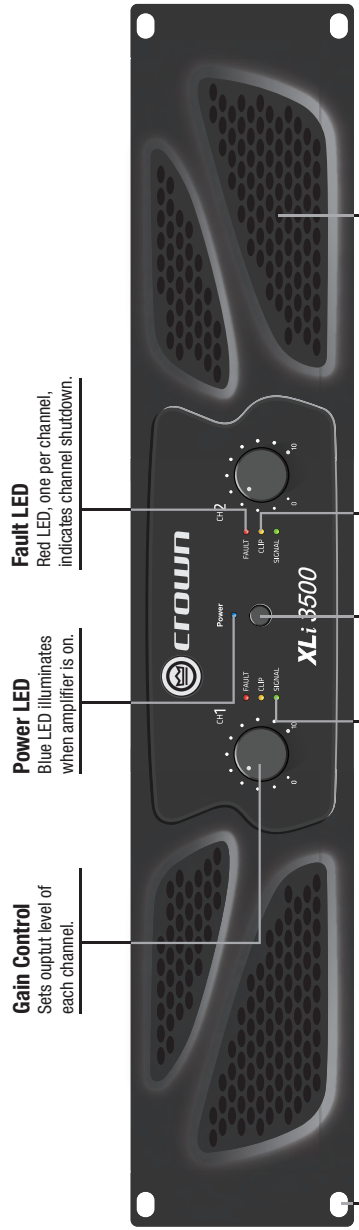
Signed 

Terry Davenport
Director of Manufacturing

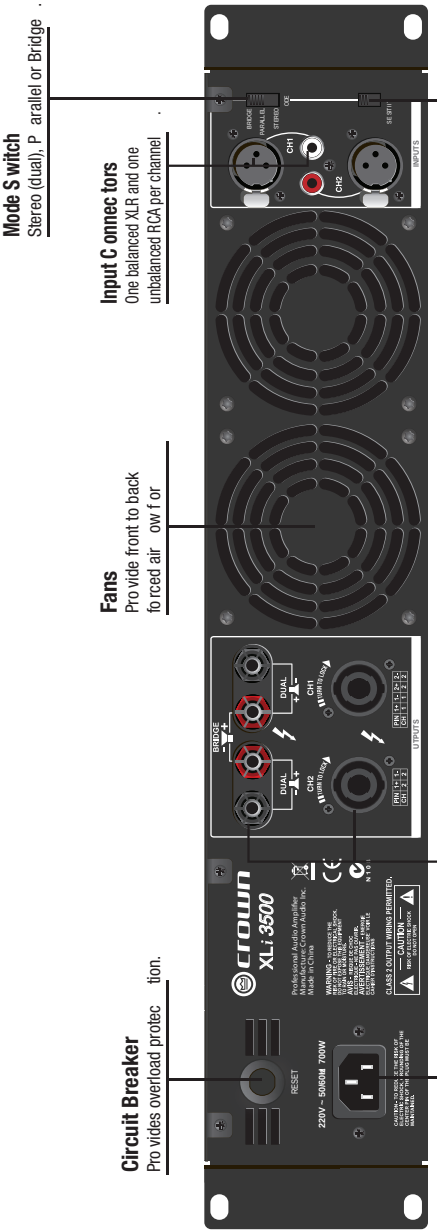
Date of Issue: March 1, 2012

Due to line current harmonics, we recommend that you contact your supply authority before connection.

Front Panel Features



Back Panel Features



Setup

Unpack and Install Your Amplifier

Please unpack and inspect your amplifier for any damage that may have occurred during transit. If damage is found, notify the transportation company immediately. Only you can initiate a claim for shipping damage. Crown will be happy to help as needed. Save the shipping carton as evidence of damage for the shipper's inspection.

We also recommend that you save all packing materials so you will have them if you ever need to transport the unit. Never ship the unit without the factory pack.

YOU WILL NEED (not supplied):

- Input wiring cables
- Output wiring cables
- Ethernet cables
- Rack for mounting amplifier (or a stable surface for stacking)

WARNING: Before you start to set up your amplifier, make sure you read and observe the Important Safety Instructions found at the beginning of this manual.

CAUTION: Before you begin, make sure your amplifier is disconnected from the power source, with the power switch in the "off" position and all level controls turned completely down (counterclockwise).

Use a standard 19-inch (48.3 cm) equipment rack (EIA RS-310B). See below figure for amplifier dimensions.

NOTE: When transporting, amplifiers should be supported at both front and back.

MAGNETIC FIELD

CAUTION! Do not locate sensitive high-gain equipment such as preamplifiers or tape decks directly above or below the unit. Because this amplifier has a high power density, it has a strong magnetic field which can induce hum into unshielded devices that are located nearby. The field is strongest on the right side and right bottom of the amplifier (facing the amplifier).

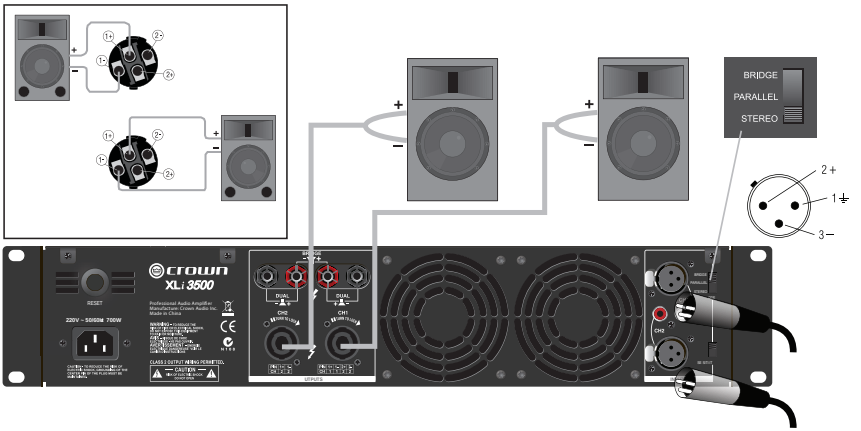
If an equipment rack is used, we recommend locating sensitive equipment at least 20 cm (8 inches) away from the amplifier.

When using an equipment rack, mount units directly on top of each other. Close any open spaces in rack with blank panels. DO NOT block front or rear air vents. The side walls of the rack should be a minimum of two inches (5.1 cm) away from the amplifier sides, and the back of the rack should be a minimum of four inches (10.2 cm) from the amplifier back panel.

Wiring

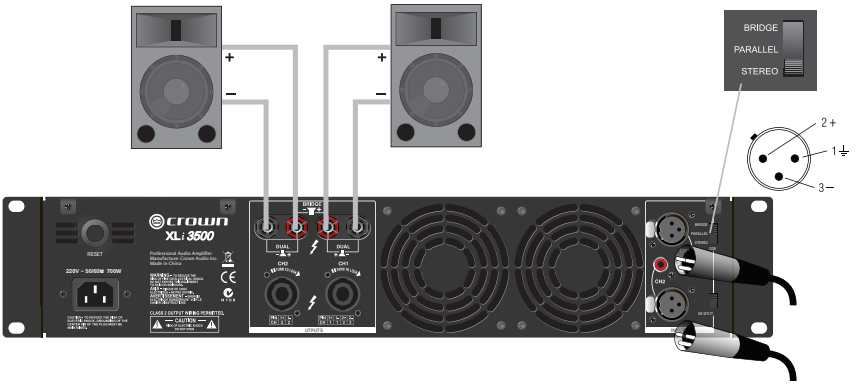
Stereo (Dual) Wiring Using the Speakon® Connectors

1. See Figure 3. On the back panel, set the Output Mode Switch to STEREO.
2. Wire the speakers to the Speakon® connectors as shown.



Stereo (Dual) Wiring Using the Binding Post Connectors

1. See Figure 4. On the back panel, set the Output Mode Switch to STEREO.
2. Wire the speakers to the binding post connectors as shown.

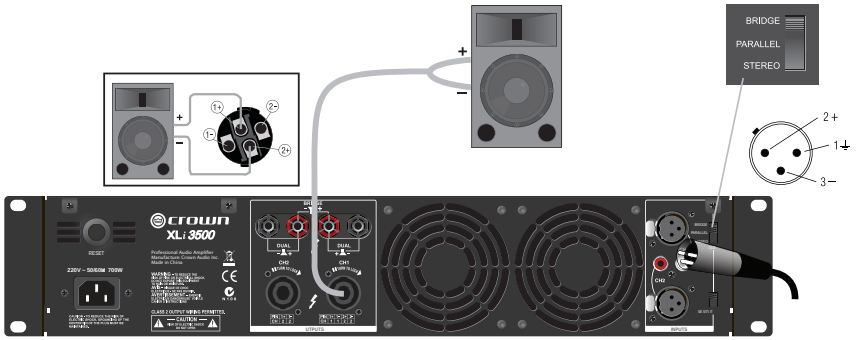


Wiring

Bridge-Mono Wiring Using the Speakon® Connectors

Bridge-mono mode doubles the output power of the amplifier.

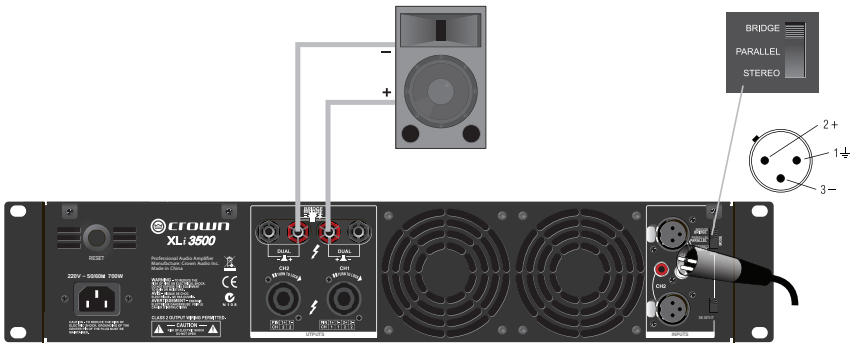
1. See Figure 5. On the back panel, set the Output Mode Switch to BRIDGE.
2. Wire the speaker to the Speakon® connector as shown.
3. Only the Channel 1 Gain Control works in Bridge-mono mode.



Bridge-Mono Wiring Using the Binding Post Connectors

Bridge-mono mode doubles the output power of the amplifier.

1. See Figure 5. On the back panel, set the Output Mode Switch to BRIDGE.
2. Wire the speaker to the binding post connectors as shown.
3. Only the Channel 1 Gain Control works in Bridge-mono mode.

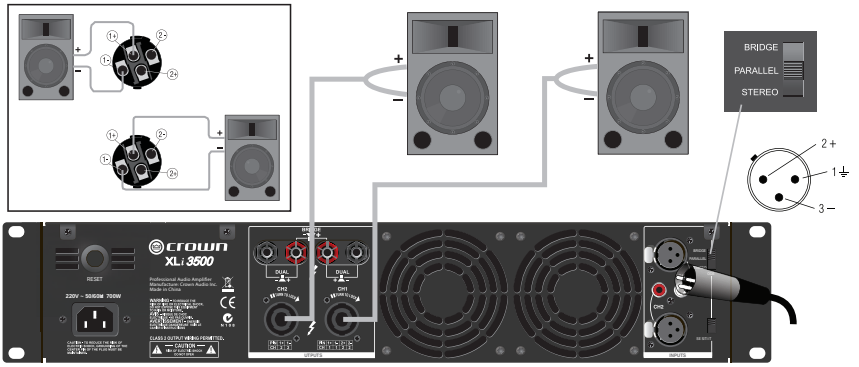


Wiring

Parallel Wiring Using the Speakon® Connectors

With this wiring, a signal sent to one of the input connectors is paralleled to both channels so that it is reproduced by both speakers.

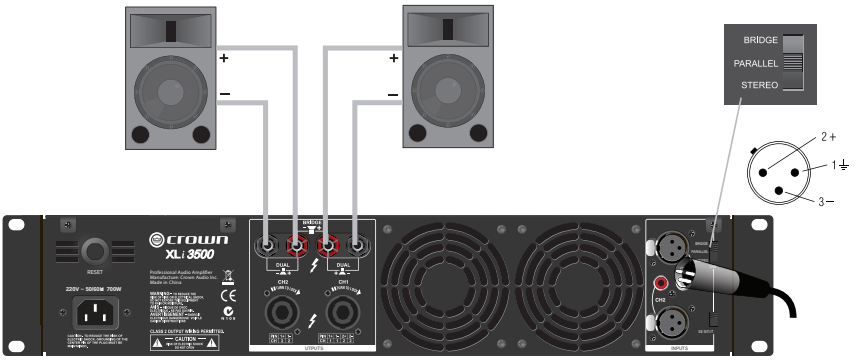
1. See Figure 7. On the back panel, set the Output Mode Switch to PARALLEL.
2. Wire the speakers to the Speakon® connectors as shown.



Parallel Wiring Using the Binding Post Connectors

With this wiring, a signal sent to one of the input connectors is paralleled to both channels so that it is reproduced by both speakers.

1. See Figure 8. On the back panel, set the Output Mode Switch to PARALLEL.
2. Wire the speakers to the binding post connectors as shown.



Specifications

Guaranteed Minimum Power	**XLi 800**	**XLi 1500**	**XLi 2500**	**XLi 3500**
1 kHz (EIA) with 0.5% THD				
4 Ω stereo (per channel) 8 Ω stereo (per channel) 8 Ω bridge mono	300W 200W 600W	450W 330W 900W	750W 500W 1500W	1350W 1000W 2700W
Performance				
Frequency Response (at 1 Watt)	20Hz - 20kHz, +0/-1dB			
Total Harmonic Distortion (THD)	< 0.5%, 20 Hz - 20 kHz			
Intermodulation Distortion (IMD) 60 Hz and 7 kHz at 4:1, from full rated output to –30 dB	≤ 0.35%			
Slew Rate	>10V/us			
Voltage Gain	29dB	31dB	33dB	36dB
Damping Factor (8 Ω), 10 Hz - 400 Hz	> 200			
Signal-to-Noise Ratio (below rated power, 20 Hz to 20 kHz, A-weighted)	> 100 dB			
Crosstalk (below rated power) At 1 kHz At 20 kHz	 –75 dB –59 dB			
Input Sensitivity for full rated power at 8 Ω	0.775V or 1.4V			
Input Impedance (nominal) Balanced Unbalanced	 20 kΩ 10 kΩ			
Connectors, Controls and Indicators				
Input Connectors	One balanced XLR and one unbalanced RCA per channel			
Output Connectors (Speaker Connectors)	4-POLE Speakon® and one pair Binding Post per channel			
Front Panel Controls	Power on/off switch, one gain control per channel			
Rear Panel Controls	Output mode switch: stereo (dual), parallel or bridge Input sensitivity switch: 0.775V or 1.4V			
Power Indicator	One blue LED			
Signal Indicator	One green LED per channel			
Clip (peak) Indicator	One yellow LED per channel			
Fault Indicator	One red LED per channel			
Construction				
Protection	Protection against short circuits, no-load, on/off muting, RF interference. Stable into reactive or mismatched loads			
Ventilation	Flow-through ventilation from front to back			
Cooling	Internal heat sinks with forced air. Fan cooled, speed regulated, thermal protection			
Dimensions (W x H x D)	19" x 3.5" x 12.4" (482 mm x 89 mm x 315 mm)			19" x 3.5" x 14.4" (482 x 89 x 366 mm)
Net Weight	25.1 lb (11.4 kg)	28.0 lb (12.7 kg)	29.7 lb (13.5 kg)	43.0 lb (19.5 kg)
Shipping Weight	29.5 lb (13.4 kg)	32.4 lb (14.7 kg)	34.2 lb (15.5 kg)	47.4 lb (21.5 kg)