

# T-Series Operation Manual



- T3
- T5
- T7
- T10

**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 visit Crown at [www.crownaudio.com](http://www.crownaudio.com).

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](http://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](http://www.crownaudio.com).

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# 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.



## IMPORTANT

T-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

## 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:** T-Series

**Model Names:** T3, T5, T7, T10

**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 to 16A

**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



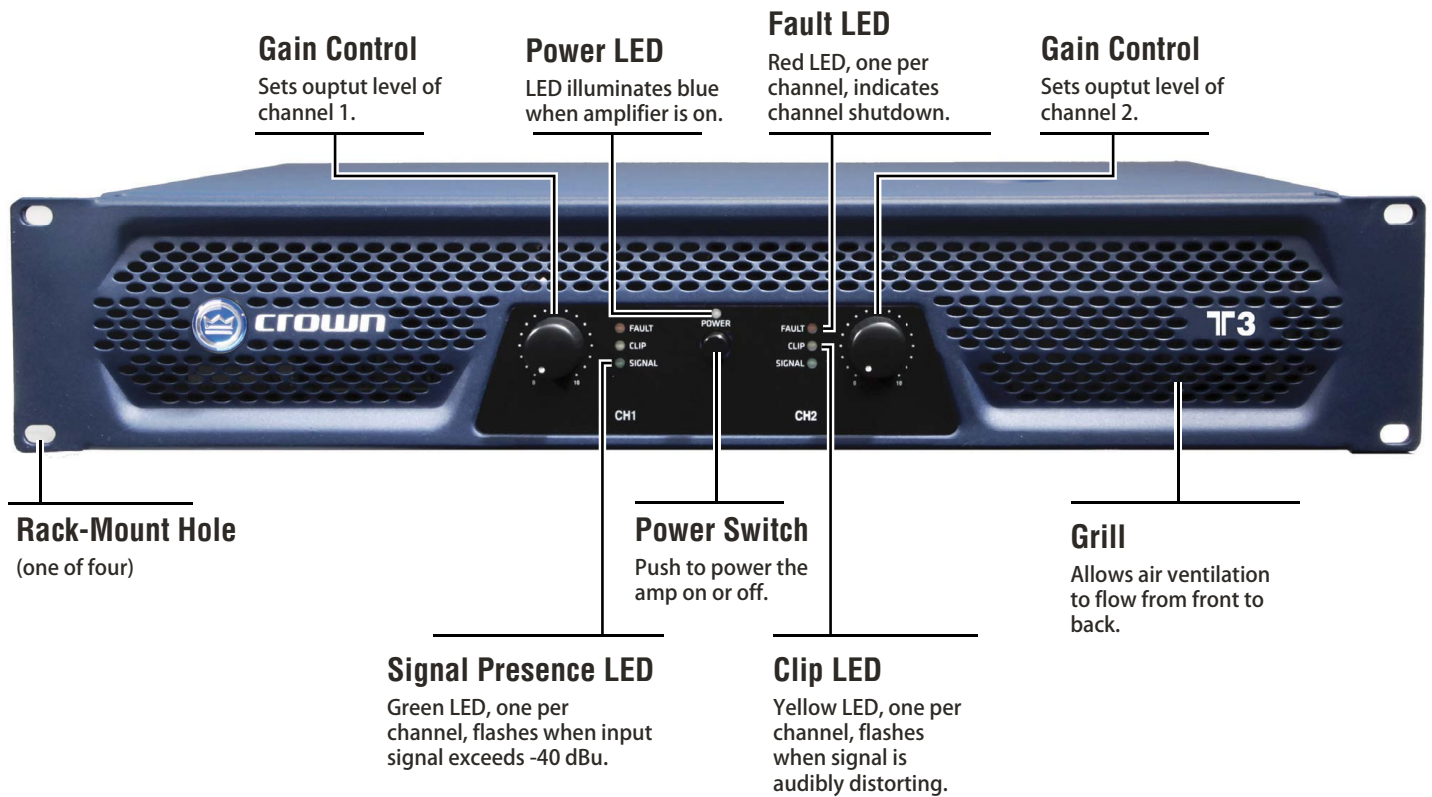
Terry Davenport  
Director of Manufacturing

Date of Issue: March 1, 2012

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# Front Panel Features



# Back Panel Features



# Installation Instructions

## Unboxing the Amplifier

Please open the packing box and check whether the equipment has been damaged during transportation. If damage is found, please notify the transportation company immediately. Only you can make a claim for shipping damage. Crown is happy to help as needed. Keep the shipping carton and use it as evidence of damage to the equipment when the shipper checks it.

In addition, we recommend that you save all packaging materials for future transportation of the device. Do not transport equipment without factory packaging. You will need the following items to install the amplifier (not provided):

- Input cable
- Output cable
- Bracket used to support the amplifier when mounted in the rack or a stable table to place the amplifier on (the amplifier should always be supported from the bottom)



**WARNING:** Before you start installing the amplifier, make sure you have read and followed the important safety instructions listed at the beginning of this manual.



**WARNING:** Before starting the installation, make sure you have disconnected the amplifier from the power supply, set the power switch of the amplifier to the "off" position, and adjusted all volumes to the lowest (fully counterclockwise) position.

## Installing the Amplifier



**CAUTION:** Before you begin, make sure the amplifier is disconnected from the power source.

Use a standard 19-inch (48.3 cm) equipment rack (EIA RS-310B). Please refer to the specifications (see "Specifications") for the specific power amplifier size.

**NOTE:** During transportation, support must be provided on the front and back of the amplifier.



Figure 1: Dimensions

## Proper Cooling

Air flow is front to back as illustrated in **Figure 2**. If using equipment racks, we recommend placing sensitive equipment at least 20 cm away from the amplifier. When using an equipment rack, be sure to use empty panels to close all open spaces. Do not block the front and rear vents. Leave at least 5.1 cm of space between the brackets on both sides and the amplifier, and at least 10.2 cm between the brackets on the back and the amplifier space.



Figure 2: Proper rack venting

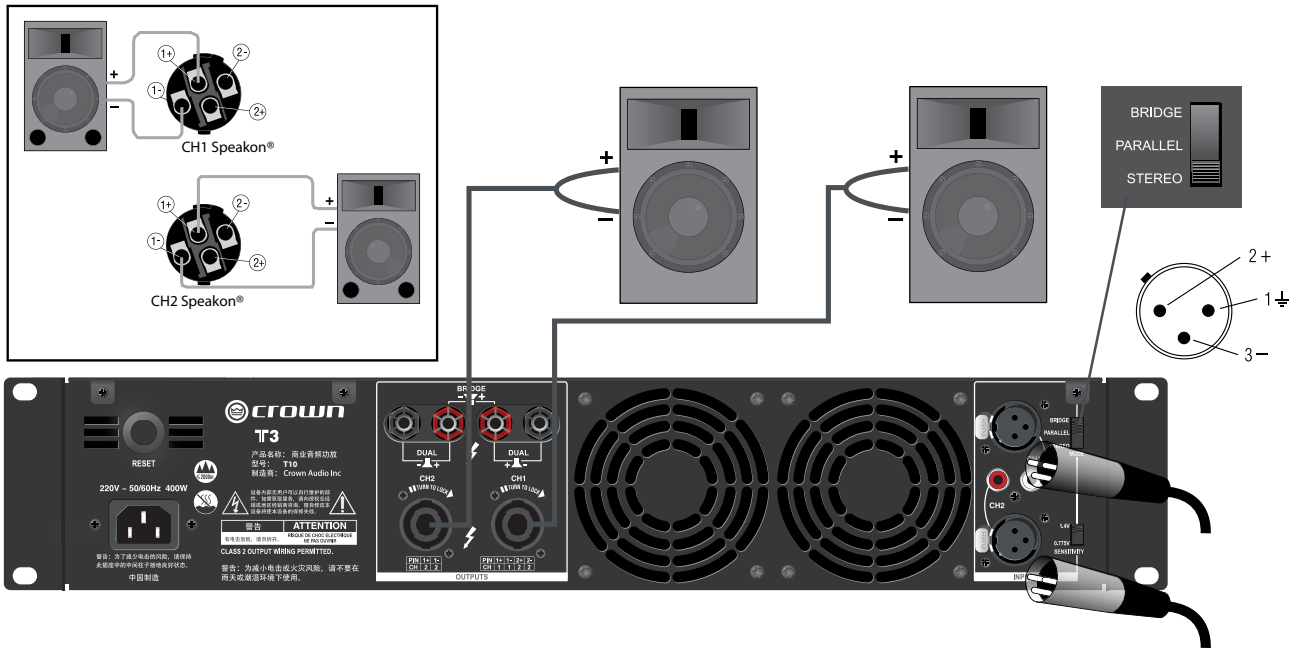


**WARNING!!!** Do not place equipment that can be damaged by strong magnetic fields near the amplifier, as it may generate unwanted noise if too close to other equipment.

# Wiring

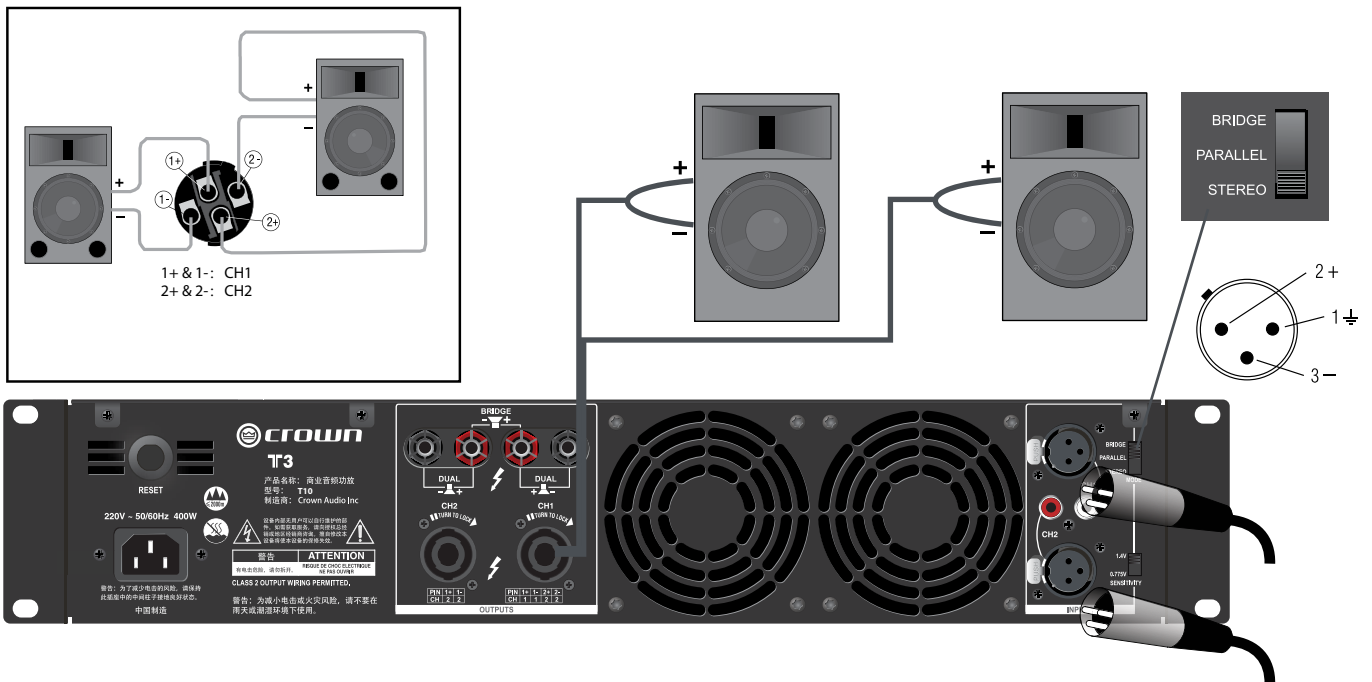
## Stereo (Dual) Wiring Using Both Speakon® Connectors

1. 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 One Speakon® Connector

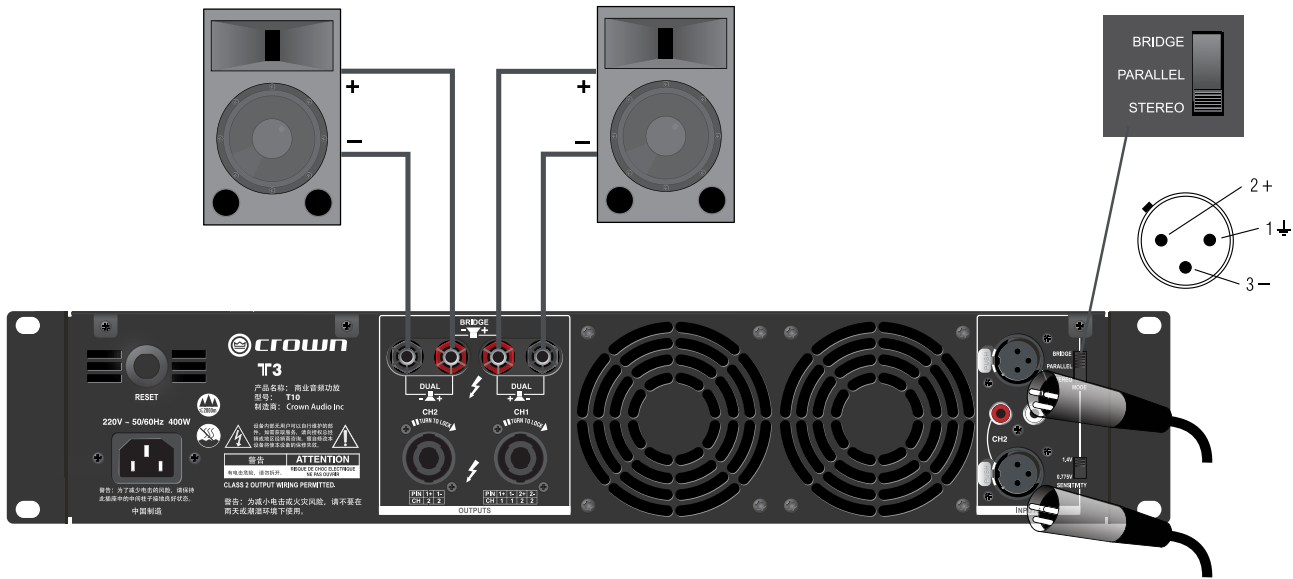
1. On the back panel, set the Output Mode Switch to STEREO.
2. Wire the speakers to the Speakon® connectors as shown.



## Wiring (continued)

### Stereo (Dual) Wiring Using Binding Post Connectors

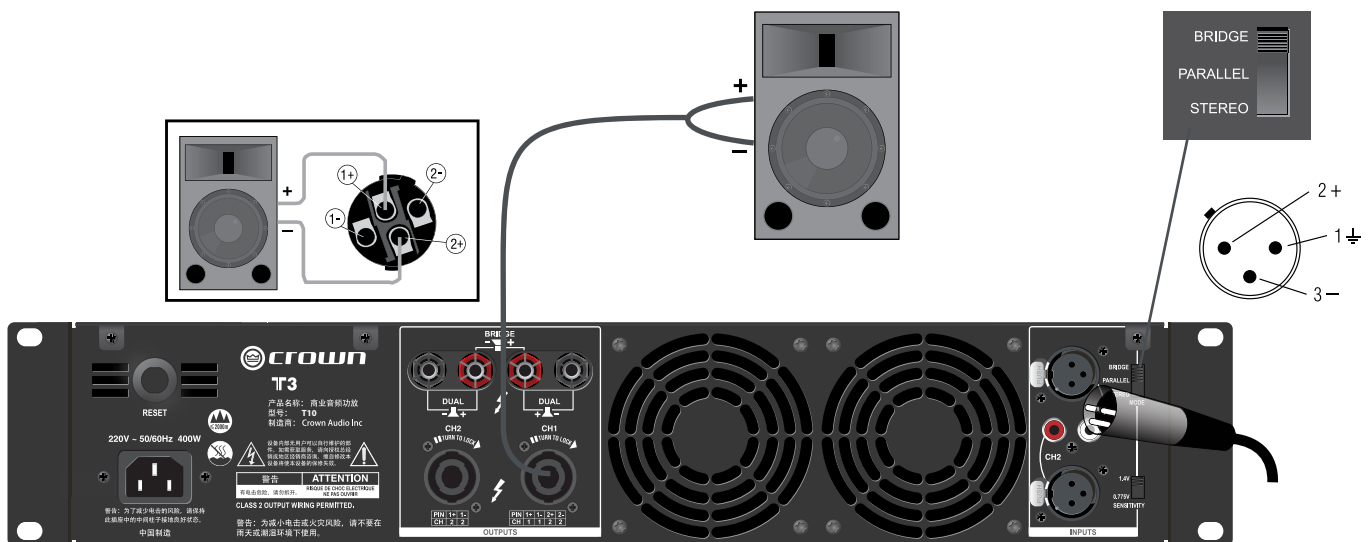
1. On the back panel, set the Output Mode Switch to STEREO.
2. Wire the speakers to the binding post connectors as shown.



### Bridge-Mono Wiring Using Speakon® Connectors

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

1. 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.

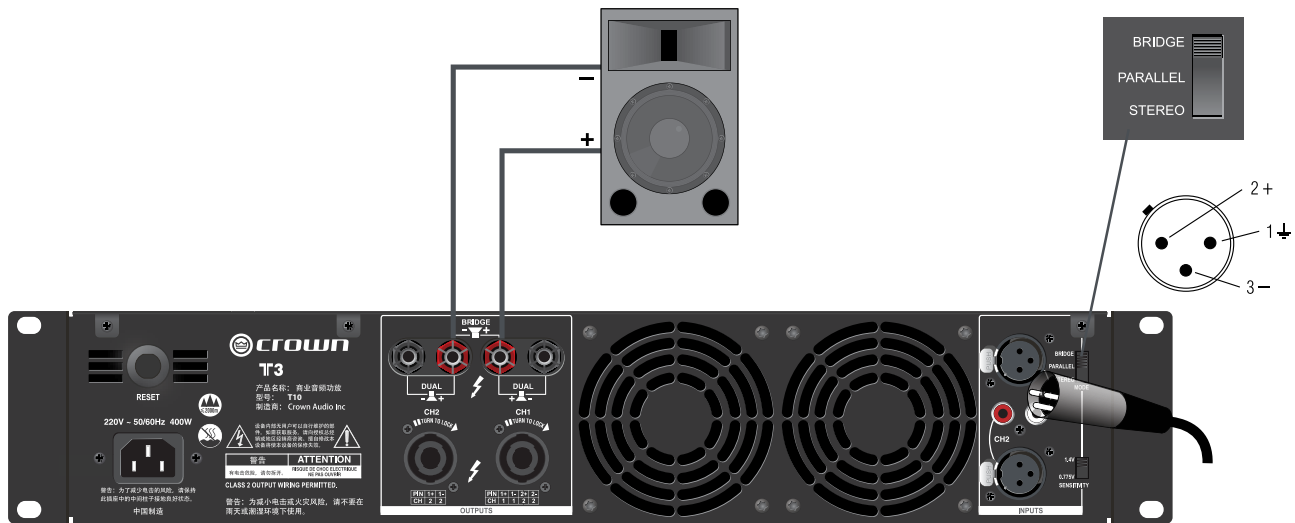


# Wiring (continued)

## Bridge-Mono Wiring Using Binding Post Connectors

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

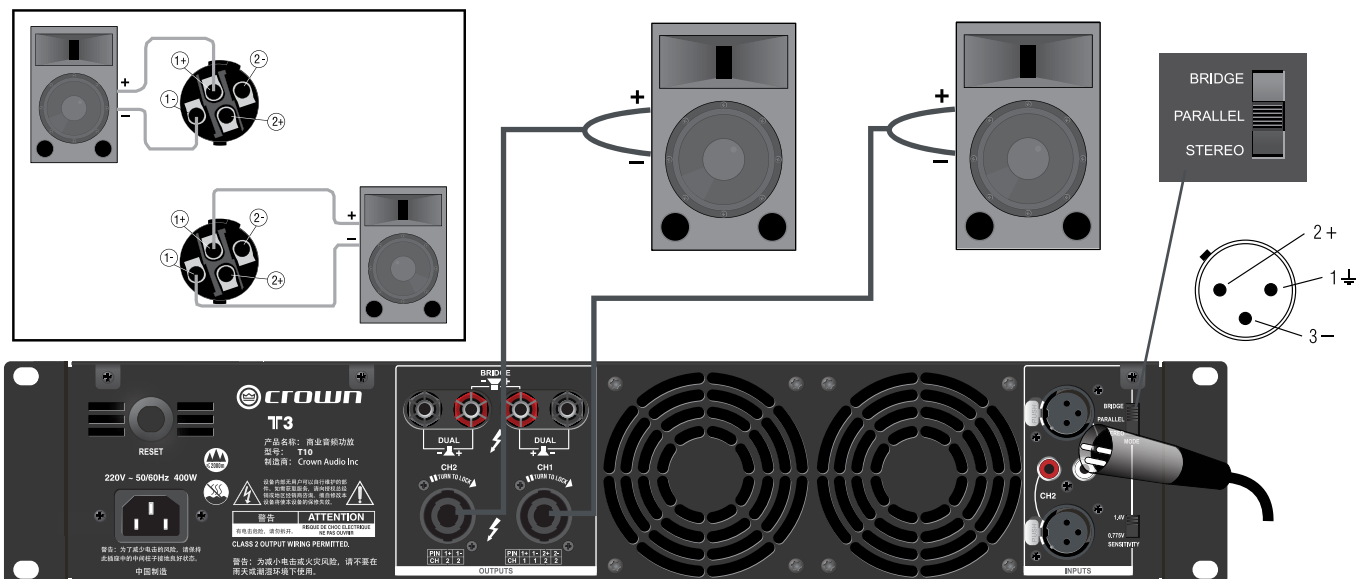
1. On the back panel, set the Output Mode Switch to BRIDGE.
2. Wire the speaker to the binding post connections as shown.
3. Only the Channel 1 Gain Control works in Bridge-mono mode.



## Parallel Wiring Using 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. On the back panel, set the Output Mode Switch to PARALLEL.
2. Wire the speakers to the Speakon® connectors as shown.

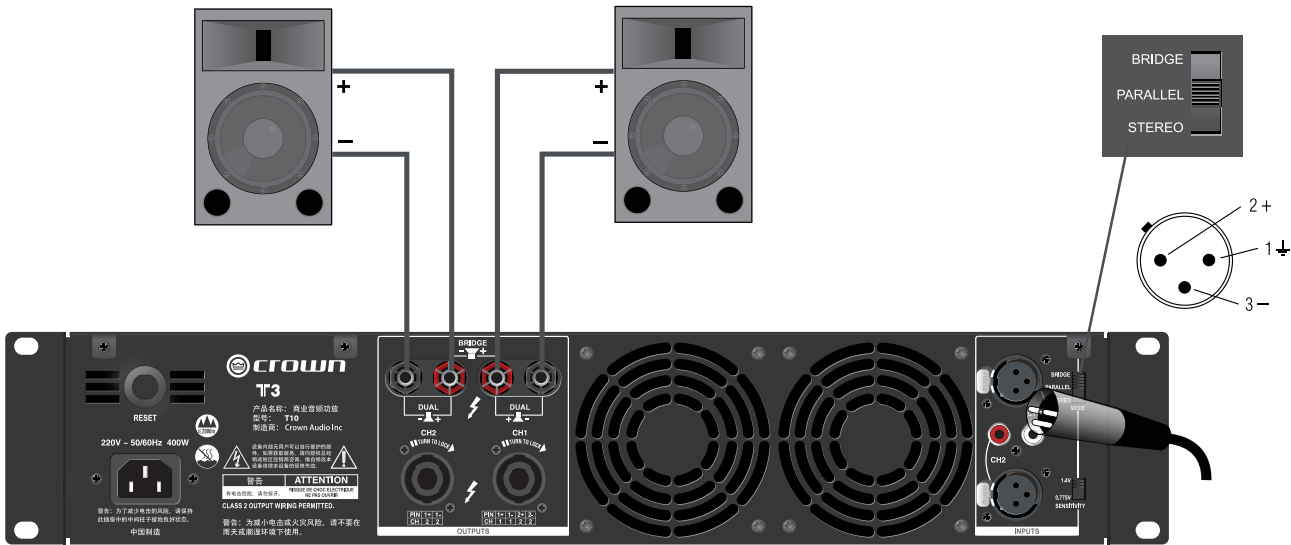


# Wiring (continued)

## Parallel Wiring Using 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. 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	T3	T5	T7	T10
4 ohms stereo (per channel) 8 ohms stereo (per channel) 8 ohms bridge mono (1 kHz (EIA) with 0.5% THD)	450W 330W 900W	750W 500W 1500W	950W 675W 2000W	1350W 1000W 2700W
<b>Performance</b>				
Frequency Response (at 1 watt)	20 Hz – 20 kHz, +0/-1 dB			
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	31 dB	33 dB	34.4 dB	36 dB
Damping Factor (8 ohms, 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: -75 dB At 20 kHz: -59 dB			
Input Sensitivity (for full rated power at 8 ohms)	0.775V or 1.4V			
Nominal Input Impedance	Balanced: 20k ohms Unbalanced: 10k ohms			
<b>Connectors, Controls and Indicators</b>				
Input Connectors	One balanced XLR and one unbalanced RCA per channel			
Output (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			
Power Cord Specifications	Plug: 10A, 250V Cord: CCC 3 x 1.5 mm <sup>2</sup>			
<b>Construction</b>				
Protection	Protection against short circuits, no-load, on/off muting, and 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 3.46 x 12.45 in (482 x 88 x 316.4 mm)		19 x 3.46 x 14.5 in (482 x 88 x 369 mm)	
Net Weight	28.0 lb (12.7 kg)	29.7 lb (13.5 kg)	38.6 lb (17.5 kg)	38.8 lb (17.6 kg)
Shipping Weight	32.4 lb (14.7 kg)	34.2 lb (15.5 kg)	42.1 lb (19.1 kg)	42.7 lb (19.4 kg)

# Warranty

## SUMMARY OF WARRANTY

Crown International, 8500 Balboa Blvd. Northridge, CA 91329 U.S.A. warrants to you, the ORIGINAL PURCHASER and ANY SUBSEQUENT OWNER of each NEW Crown product, for a period of one (1) year from the date of purchase by the original purchaser (the "warranty period") that the new Crown product is free of defects in materials and workmanship. We further warrant the new Crown product regardless of the reason for failure, except as excluded in this Warranty.

*\*Your Crown product has been purchased in China and/or other Asian countries. (This Warranty does not apply to Crown products purchased elsewhere except for purchases by military outlets. Other purchasers should contact the local Crown distributor for warranty information.)*

## ITEMS EXCLUDED FROM THIS CROWN WARRANTY

This Crown Warranty is in effect only for failure of a new Crown product which occurred within the Warranty Period. It does not cover any product which has been damaged because of any intentional misuse, accident, negligence, or loss which is covered under any of your insurance contracts. This Crown Warranty also does not extend to the new Crown product if the serial number has been defaced, altered, or removed.

## WHAT THE WARRANTOR WILL DO

We will remedy any defect, regardless of the reason for failure (except as excluded), by repair, replacement, or refund. We may not elect refund unless you agree, or unless we are unable to provide replacement, and repair is not practical or cannot be timely made. If a refund is elected, then you must make the defective or malfunctioning product available to us free and clear of all liens or other encumbrances. The refund will be equal to the actual purchase price, not including interest, insurance, closing costs, and other finance charges less a reasonable depreciation on the product from the date of original purchase. Warranty work can only be performed at our authorized service centers or at the factory. Warranty work for some products can only be performed at our factory. We will remedy the defect and ship the product from the service center or our factory within a reasonable time after receipt of the defective product at our authorized service center or our factory. All expenses in remedying the defect, including surface shipping costs in the United States, will be borne by us. (You must bear the expense of shipping the product between any foreign country and the port of entry in the United States including the return shipment, and all taxes, duties, and other customs fees for such foreign shipments.)

## HOW TO OBTAIN WARRANTY SERVICE

You must notify us of your need for warranty service within the warranty period. All components must be shipped in a factory pack, which, if needed, may be obtained from us free of charge. Corrective action will be taken within a reasonable time of the date of receipt of the defective product by us or our authorized service center. If the repairs made by us or our authorized service center are not satisfactory, notify us or our authorized service center immediately.

## DISCLAIMER OF CONSEQUENTIAL AND INCIDENTAL DAMAGES

YOU ARE NOT ENTITLED TO RECOVER FROM US ANY INCIDENTAL DAMAGES RESULTING FROM ANY DEFECT IN THE NEW CROWN PRODUCT. THIS INCLUDES ANY DAMAGE TO ANOTHER PRODUCT OR PRODUCTS RESULTING FROM SUCH A DEFECT. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

## WARRANTY ALTERATIONS

No person has the authority to enlarge, amend, or modify this Crown Warranty. This Crown Warranty is not extended by the length of time which you are deprived of the use of the new Crown product. Repairs and replacement parts provided under the terms of this Crown Warranty shall carry only the unexpired portion of this Crown Warranty.

## DESIGN CHANGES

We reserve the right to change the design of any product from time to time without notice and with no obligation to make corresponding changes in products previously manufactured.

## LEGAL REMEDIES OF PURCHASER

THIS CROWN WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE. No action to enforce this Crown Warranty shall be commenced after expiration of the warranty period.

THIS STATEMENT OF WARRANTY SUPERSEDES ANY OTHERS CONTAINED IN THIS MANUAL FOR CROWN PRODUCTS.

