



# 7548/7796 QUICK START

**AE TECHRON**<sup>®</sup>  
Precision Industrial Amplifiers — 

[www.aetechron.com](http://www.aetechron.com)

# **CONGRATULATIONS** on your

purchase of the 7548/7796 AE Techron power amplifier—a single-channel industrial amplifier designed for use in the most demanding high-power systems. AE Techron amplifiers are built and tested to the most stringent quality standards for long life and outstanding performance. The AE Techron brand is known through the world for its robust precision amplifiers, as well as its product service and support.

The 7548/7796, when operated in Controlled Voltage mode, provides precision amplification at frequencies from DC to 50 kHz at full power and DC to 100 kHz at reduced power, with low harmonic and intermodulation distortion and low noise. The 7548/7796 operates on a 208-volt (optional 400-volt) 3-phase AC mains.

## **Features**

- DC-enabled, four quadrant amplifier.
- Standard SIM (Specialized Input Module) features unbalanced BNC, balanced Phoenix-type 3-pin input, and 25-pin Interlock – I/O connectors.
- Built-in protection circuitry safely provides for sustained, full-power output. Full protection includes: Over-Voltage, Over-Temperature, temperature monitor of heat-sinks, transformers and output transistors, and immediate protection and fast recovery in the event of overheating.
- Generous, front-to-back cooling allows tight rack mounting without the need for air spaces and permits longer run times at higher duty cycles.
- Switching, bi-level power supply adapts to meet demands for high voltage or high current.

# 1 UNPACKING

Carefully unpack your amplifier from the carton and visually inspect the amplifier for damage. All amplifiers are tested and inspected for damage before leaving the factory, so if any damage is found, please notify the shipping company immediately. Save the shipping carton and materials as evidence of damage.

# 2 CHECK CONTENTS

In addition to the 7548 or 7796 amplifier, your carton should contain the following:

1. NEMA connector for power cord
2. 7548/7796 Operator's Guide CD and Quick Start sheet

# 3 MOUNTING/INSTALLATION

Use the rack "ears" located on each side of the front panel to mount the amplifier to a standard EIA (Electronic Industries Association) rack. Use standard rack mounting hardware to mount the amplifier.

Optionally, the amplifier can be placed on a bench top. To protect surfaces, use rubber feet included in the toolkit.



	<b>WARNING</b>
	<b>Never attempt to lift the amplifier without assistance. Crushing bodily injury can result if care is not taken during installation.</b>
	<b>If product is rack-mounted, cabinet may overturn if not secure.</b>

The 7548 weighs approximately 103 pounds, and the 7796 weighs approximately 153 pounds. Be sure this weight is properly supported by using rack supports at both front and rear of the amplifier and by using all the screw locations.

# 4 COOLING

When amplifier is rack-mounted, the sidewalls of the rack must be at least 2 in. (5.1 cm) away from the chassis, and the back of the rack should be at least 4 in. (10.2 cm) from the chassis.

	<b>CAUTION</b>
	<b>Do not operate the amplifier in a small, sealed chamber of any kind. Improper operation and overheating will result.</b>

Cooling capacity required is 300 ft<sup>3</sup>/min. total per amp. Allow for hot air discharge through the amplifier's rear grill or vented rear door, and provide a source of cool air for fan intakes. If rack ventilation is poor, use a vent tube to the outside of the rack. If operating while in a dusty environment, use commercial furnace filters to prevent rapid clogging of the filters on the amplifier.

# 5 CONNECTIONS

## A. Select Mode of Operation

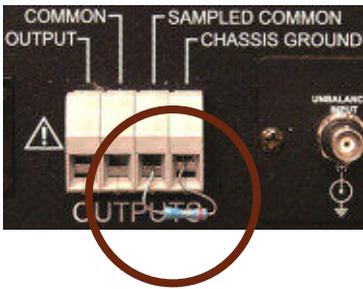
Note: the 7548/7796 amplifier ships from the factory configured to operate in CONTROLLED VOLTAGE mode. For setup instructions for operation in CONTROLLED CURRENT mode, please see the product *Operator's Manual*.

**CONTROLLED VOLTAGE:** The amplifier will provide an output voltage that is constant and proportional to the control (input) voltage. Use this mode if you want the output voltage waveform to be like the input waveform.

### CONTROLLED CURRENT:

The amplifier will provide an output current that is constant and proportional to the control (input) voltage. Use this mode if you want the output current waveform to be like the input waveform.

## B. Output Wiring



1. Connect negative terminal of the load to the SAMPLED COMMON terminal.
2. Connect the load's positive terminal to the amplifier's OUTPUT terminal.

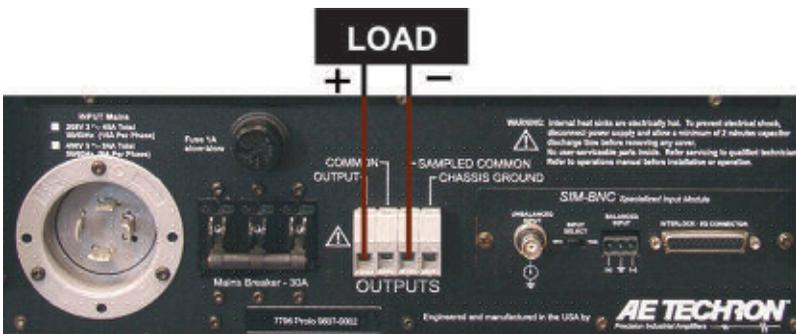
**! WARNING**

**WARNING: A factory-installed resistor connects the terminals marked "SAMPLES COMMON" and "CHASSIS GROUND." DO NOT remove this resistor except for special, multi-amp applications. If resistor is removed, dangerous output and/or damage to the load may result.**

**! WARNING**

**ELECTRIC SHOCK HAZARD.**

**Output potentials can be lethal. Make connection only with amplifier disconnected from AC Power and input signals removed.**



Connect your load across the 4-position terminal barrier block output connector using up to #4 AWG wire. Always use the appropriate wire size and insulation for the maximum current and voltage expected at the output. Never connect the output of the amplifier to any other model amplifier, power supply, signal source or other inappropriate load; fire can result.

**! CAUTION**

**Never use shielded cable for output wiring.**

## C. Input Wiring

Connect the input signal to the amplifier through the SIM-BNC Specialized Input Module. Connect using Unbalanced BNC or Balanced Phoenix connectors. Input cables should be high quality and shielded for minimal noise and possible feedback.

Refer to the balanced and unbalanced pin connector illustrations for cable wiring. NOTE: Custom wiring should only be performed by qualified personnel.



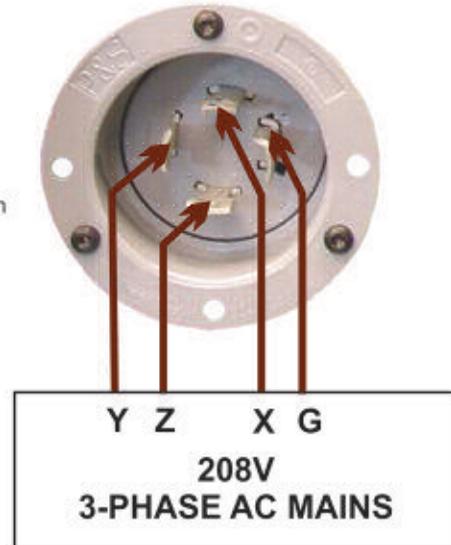
## D. AC Supply

Connect the amplifier to the proper 3-phase AC mains using the NEMA-style locking AC connector (included).

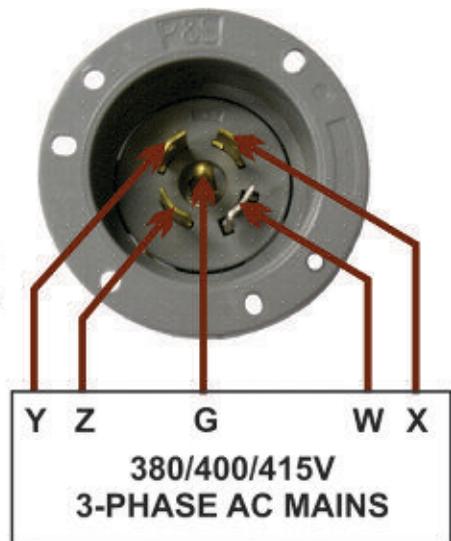
**! DANGER**

**The risk of lethal ELECTRICAL SHOCK exists when connecting AC mains! Disconnect the source before connecting AC power wires to the connector.**

X = LINE 1  
Y = LINE 2  
Z = LINE 3  
G = GROUND (green/green with yellow stripe)  
NOTE: Ground pin is L-shaped



X = LINE 1  
Y = LINE 2  
Z = LINE 3  
W = NEUTRAL (white/gray)  
G = GROUND (green/green with yellow stripe)  
NOTE: Neutral pin is L-shaped



# 6 STARTUP PROCEDURE

1. Turn down the level of your signal source.
2. Check to make sure the AC Mains Switch/Circuit Breaker is in the off position (DOWN).



3. Apply AC power to the amplifier.
4. Move the AC Mains Switch/Circuit Breaker to the on position (UP) to turn the amplifier ON. Wait for the yellow READY and green RUN LEDs to illuminate.



5. Adjust the level of your input signal source to achieve the desired output level.
6. Use the Navigation Buttons to navigate through the various voltage and current measurement functions on the LCD display.

