

Section 2. Specifications and Performance

2.1. General Specifications

Power Requirements: (See back panel of unit for required power selected.)

- 3-phase
- 47 to 63 Hz
- 208, 240, 380 or 415 VAC.

A toggle switch circuit breaker opens all legs of the AC mains on excess current demand. The rating is:

- 20 amperes for 208 & 240 VAC units.
- 10 amperes for 380 & 415 VAC units.

Power Supply:

- High voltage: +146, -146 VDC.
- Low voltage: +5, +15, +24, -15, -24 VDC.

General Protection: Main transformer and output heat sinks include thermal switches for protection against high temperature. Amplifier automatically returns to normal operation after heat-related shutdown. Controlled slewing rate protects against RF burnouts. High input resistance protects against overloads at the input. Patented Self Analyzing (SA) temperature sensing in the output stage limits current to prevent transistor damage.

Cooling: Forced-air cooling via 4,100 ft³/min. fans. Air intake is at both sides of the amplifier with discharge through the front grill. No space is required between rack-mounted amplifiers. Air filters are removable from the rear via one fastener per side and may be eliminated if cabinet filtration is provided.

Heat Sinking: Four high-efficiency "H" section heat sinks enable even and efficient cooling of the output section.

Displays: Six front panel LEDs indicate status of amplifier:

- | | |
|-----------|---------------|
| • Ready | • Overvoltage |
| • Standby | • Overtemp |
| • Fault | • Overload |

Construction: Aluminum chassis with steel reinforcements to retain power transformer. Internal modules easily accessible with covers removed. Polyurethane textured finish in standard tan or customer-specified color.

Mounting: Standard rack mounting is accommodated by the front panel. Provisions are made for optional rack slides with built-in pivots.

Dimensions: Unit occupies six EIA 19 in. wide rack units. 10.45 in. (26.6 cm) high, 17.61 in. (44.7 cm) deep. Unit extends a maximum of 2.5 in. (6.4 cm) from the front mounting surface.

Weight: 128 lb (58 Kg)

Connectors:

- Input: 3-terminal barrier block (BNC available upon request).
- Output: 3-terminal barrier block.
- Interlock: 37-pin Dsub (supplied).
- AC Mains: NEMA twist-lock, 3-phase (supplied).

Interlock: Amplifier may function as master or slave by connecting interlock cable and setting a main board master/slave switch to the proper position. Interlock protects amplifiers from damage due to unsynchronized starts and stops.

2.2. Performance

Note: Model 7700 may function as an individual amplifier, or as module in multiple amplifier systems. These specifications are for one amplifier, unless noted otherwise. For more information on multiple amplifier systems, see Section 4, "Applications".

Output Power at Clip Point: (<0.1% THD)

- 1550 watts into 4 ohms
- 3000 watts into 2 ohms
- 5000 watts into 1 ohm.

Power Response:

- 146V peak voltage (2000V maximum with multiple modules interlocked)
- 180A peak current (500A maximum with multiple modules interlocked).

LM Distortion: Less than .05% from 1.55 to 1550 watts into 4 ohm load.

Current Output rms: 45A averaged over one hour.

DC Output: 180A peak (continuous current is load dependant).

Slew Rate: 40 V/ μ s.

Load Impedance: 1 ohm load for maximum power transfer.

Amplifier Gain: 26 dB.

Input Sensitivity: 3.0 volts input for 3800 watts output, 1 ohm. Sensitivity is adjustable.

Input Impedance: 20,000 ohms ($\pm 1\%$), differential.

Common Mode Rejection Range: ± 11 Vdc maximum.

Common Mode Rejection Ratio: 70 dB.

Current Monitor: Test points behind front panel, 20 amperes/volt sensitivity, 1,000 ohms unbalanced output. Junction temperature and heat sink temperature: Observable at test points on main circuit board, behind front panel. These signals are common to amplifier ground.

Hum and Noise:

- 400 μ V from 20 Hz–20 kHz
- 800 μ V from 10 Hz–100 kHz.

2.3. Operating Environment

Ambient Temperature: 10°C to 50°C. Maximum power output is derated above 30°C.

Cooling Air Required: 300 ft³/min per amplifier.

Humidity: 0–70% non-condensing.

Magnetic Field: 200 gauss.

Altitude: 2.5 km above sea level.

2.4. Shipping and Non-Operating Environment

Ambient Temperature: -40°C to 60°C.

Humidity: 95% non-condensing.