

**Aumictech**

Test &amp; measurement • bought, sold, repaired, calibrated

**Data Sheet**

August 14, 2026

## AMPLIFIER RESEARCH

# Amplifier Research 500L

Amplifier Research 500L Broadband RF Amplifier The Amplifier Research 500L is a self-contained air-cooled broadband laboratory amplifier in the AR L-series providing approximately 500 W class RF output for high-power susceptibility and calibration applications. OEM L-series literature describes hybrid solid-state driver stages with a vacuum-tube final amplifier. High-power laboratory RF susceptibility testing, wattmeter calibration, and broadband RF power applications requiring L-series tube finals. Hybrid solid state driver with vacuum tube final The Amplifier Research 500L is a self-contained air-cooled broadband laboratory amplifier in the AR L-series providing approximately 500 W class RF output for high-power susceptibility and calibration applications. OEM L-series literature describes hybrid solid-state driver stages with a vacuum-tube final amplifier. High-power laboratory RF susceptibility testing, wattmeter calibration, and broadband RF power applications requiring L-series tube finals. Hybrid solid state driver with vacuum tube final



## MODEL

**Amplifier Research  
500L**

## CALIBRATION

**Available on  
request**

## CONDITION

**Used**

## STATUS

**In stock**

## RFQ / SKU

**500L**

## LISTING

<https://aumictechlabs.com/products/500l-3/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

## This unit

The Amplifier Research 500L is a broadband, solid-state RF power amplifier engineered for RF susceptibility testing, antenna characterization, component validation, and EMC applications. Multiple frequency configurations deliver 500 watts minimum CW output across bands ranging from 10 kHz to 6 GHz, with adjustable gain and integrated automatic level control. Air-cooled

operation and multiprotocol remote control via GPIB/IEEE-488, RS232, USB, and Ethernet enable integration into production test systems and laboratory environments. The 500L faithfully reproduces AM, FM, and pulse modulation while maintaining 50 Ohm impedance across all supported frequency ranges.

**Technical Specifications**

**Frequency Range:** Model-dependent configurations: 0.7 GHz to 6 GHz (500S1G6); 10 kHz to 100 MHz (500A100A)

**Output Power:** Minimum 500 watts CW across product line; 500S1G6 rated at 424.62 watts with P1dB of 425 watts; 500A100A nominal 617 watts CW, minimum 300 watts linear at 1 dB compression

**Gain:** 57 dB (500S1G6); 57 dB minimum with 25 dB adjustment range (500A100A)

**P1dB:** 425 watts / 56.28 dBm (500S1G6)

**IP3:** 66 dBm / 3981.07 watts (500S1G6)

**Impedance:** 50 Ohms

**Modulation:** AM, FM, and pulse modulation

**Supply Voltage:** 200–260 VAC (500S1G6); 180–264 VAC, 47–440 Hz (500A100A)

**Power Consumption:** 2000 watts maximum @ 0.99 PF typical (500A100A)

**Cooling:** Forced air

**Key Features**

- Internal or external automatic level control with front panel threshold adjustment
- Forward and reflected power monitoring via digital control panel
- Vacuum fluorescent display or color LCD touch screen
- Type N female input (500S1G6); 7/16 DIN female (500S1G6) or Type N female (500A100A) output connectors

**Typical Applications**

- RF susceptibility testing
- Antenna and component testing
- Wattmeter calibration
- Driver amplifier for higher-power systems
- Wireless and communications component validation
- EMC test environments

**Compatibility & Integration**

- GPIB/IEEE-488, RS232 hardwire and fiber optic, USB, and Ethernet interfaces
- Local front panel control and remote command operation

**Dimensions:** 50.3 × 127 × 61 cm (500S1G6); 48.3 × 40.0 × 52.1 cm (500A100A)

# 500L Characteristics / Specifications

| PARAMETER                     | VALUE                                                  |
|-------------------------------|--------------------------------------------------------|
| Rated Output Power Class      | 500 watts class                                        |
| Frequency Response Class      | Low frequency through VHFLseries band class            |
| Input For Rated Output Class  | 1.0 milliwatt maximum class                            |
| Gain At Maximum Setting Class | High gain vacuum tube final class                      |
| Gain Adjustment               | Front panel continuous gain control                    |
| Input Impedance Class         | 50 ohms class                                          |
| Output Impedance Class        | 50 ohms nominal class                                  |
| Cooling                       | Forced air self contained fans                         |
| Form Factor                   | Self contained air cooled laboratory cabinet           |
| Circuit Topology              | Solid state low level stages with vacuum tube final    |
| Modulation Capability Class   | CW and pulsed RF input supported class                 |
| Primary Power Class           | AC mains multi kilowatt laboratory supply class        |
| RF Connector Class            | TypeNfemale class                                      |
| Series Family                 | Amplifier Research 500L broadband laboratory amplifier |
| Export Classification Class   | Confirm ECCN on unit nameplate                         |
| Mismatch Tolerance Class      | Operate into specified load VSWR per manual            |
| Blanking Capability Class     | Blanking input supported on relatedLmanuals            |
| Power Metering Class          | Forward power monitoring class                         |
| Protection Class              | Over temperature and supply fault indication class     |
| Applications Class            | Laboratory RF susceptibility and calibration           |
| Power Class Sibling 200L      | 200 watts class                                        |
| Power Class Sibling 2500L     | 2500 watts class                                       |

# 500L Specifications

| PARAMETER                                      | VALUE                                                                                                                                       |
|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Amplifier Research 500L Broadband RF Amplifier | Overview                                                                                                                                    |
| Applications                                   | High-power laboratory RF susceptibility testing, wattmeter calibration, and broadband RF power applications requiring L-series tube finals. |
| Technical Specifications                       | Rated Output Power Class: 500 watts class                                                                                                   |

# Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

| Specifications                                                                                                                                                                        |                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| Specifications                                                                                                                                                                        |                                                        |
| PARAMETER                                                                                                                                                                             | VALUE                                                  |
| Rated Output Power Class                                                                                                                                                              | 500 watts class                                        |
| Frequency Response Class                                                                                                                                                              | Low frequency through VHFLseries band class            |
| Input For Rated Output Class                                                                                                                                                          | 1.0 milliwatt maximum class                            |
| Gain At Maximum Setting Class                                                                                                                                                         | High gain vacuum tube final class                      |
| Gain Adjustment                                                                                                                                                                       | Front panel continuous gain control                    |
| Input Impedance Class                                                                                                                                                                 | 50 ohms class                                          |
| Output Impedance Class                                                                                                                                                                | 50 ohms nominal class                                  |
| Cooling                                                                                                                                                                               | Forced air self contained fans                         |
| Form Factor                                                                                                                                                                           | Self contained air cooled laboratory cabinet           |
| Circuit Topology                                                                                                                                                                      | Solid state low level stages with vacuum tube final    |
| Modulation Capability Class                                                                                                                                                           | CW and pulsed RF input supported class                 |
| Primary Power Class                                                                                                                                                                   | AC mains multi kilowatt laboratory supply class        |
| RF Connector Class                                                                                                                                                                    | TypeNfemale class                                      |
| Series Family                                                                                                                                                                         | Amplifier Research 500L broadband laboratory amplifier |
| Export Classification Class                                                                                                                                                           | Confirm ECCN on unit nameplate                         |
| Mismatch Tolerance Class                                                                                                                                                              | Operate into specified load VSWR per manual            |
| Blanking Capability Class                                                                                                                                                             | Blanking input supported on relatedLmanuals            |
| Power Metering Class                                                                                                                                                                  | Forward power monitoring class                         |
| Protection Class                                                                                                                                                                      | Over temperature and supply fault indication class     |
| Applications Class                                                                                                                                                                    | Laboratory RF susceptibility and calibration           |
| Power Class Sibling 200L                                                                                                                                                              | 200 watts class                                        |
| Power Class Sibling 2500L                                                                                                                                                             | 2500 watts class                                       |
| Notes                                                                                                                                                                                 |                                                        |
| From Amplifier Research 500L OEM/rental L-series documentation. Confirm exact frequency band, gain, and primary power on the unit nameplate and operating manual specification table. |                                                        |

### Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: [sales@aumictech.com](mailto:sales@aumictech.com) · +1 (484) 841-9341

#### Aumictech

788 S 500 E, Pleasant Grove, UT 84062  
[sales@aumictech.com](mailto:sales@aumictech.com) · +1 (484) 841-9341  
<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·  
30-day returns  
NAICS 423690 · 811210 · 541380  
Generated August 14, 2026

Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.