

VRA500B

VoIP Integrated Residential Amplifier



Overview

The Antronix VoIP Residential Amplifier provides a passive VoIP port for reliable voice service, even when power is disrupted to the amplifier. The 5 output port amplifier has 4 amplified output ports with unity gain in the forward and return band plus one passive VoIP output port. This amplifier utilizes the Antronix patented CamPort[®]. This auto-seizing F-port ensures maximum contact area and reliability for multimedia applications. The all-ports-down configuration allows for ease of installation in a NID enclosure.

Ordering Guide

VRA500B/AC	4 amplified unity gain outputs + 1 VoIP port. AC power adaptor included.
ARPI-2000	Power inserter for remote powering
ARAC-12N-5	AC Power adaptor, 120 VAC/60 Hz Input, 12 VDC output, 500mA

Features & Benefits

- **Passive VoIP Port**
The passive VoIP port provides a passive 4.0dB loss, even when power is disrupted to maintain critical voice service.
- **Unity Gain Forward and Return**
Active gain in the forward and return band provides unity gain in both directions for ease of installation.
- **CamPort[®] Auto-Seizing F-Port**
Patented auto-seizing brass F-port features a "Cam Activated Mechanism" to provide full contact pressure (> 2000 grams) on the center conductor for maximum reliability.
- **All-Ports-Down Configuration for NID Enclosures**
The all ports facing down configuration provides clean wiring within a NID enclosure.
- **3 dB Noise Figure**
Provides clean amplification of weak signals to overcome the poor noise figure in TV tuners and converters.
- **6 kV Surge Protection**
Unique surge protection on all RF ports without the use of arc gaps which may cause high impulse noise during discharge.
- **Low Intermodulation Ferrites**
Proprietary ferrite blend inhibits re-magnetization of the core due to voltage spikes from impulse noise or lightning. This prevents high-level return carriers from affecting forward path video signals.
- **Zinc Diecast Housing with Soldered Back Plate**
Provides corrosion resistance for both indoor and outdoor applications and repeatable 120 dB RFI shielding.
- **Optional Power Inserter for Remote Powering**
The amplifier can be powered remotely with a dual isolation compartment power inserter for high AC to RF isolation to prevent ingress.
- **PTC Short-Circuit Protected UL Listed Adaptor**
Self-resetting circuit protection provides safe protection against short-circuits to minimize maintenance costs.

■ ■ ■ Electrical Specifications

Forward Gain Specifications	Frequency (MHz)	Spec.	Unit
Gain (Outputs 1 - 4)	52 - 1002	0 ± 1.0	dB nom.
Return Loss	52 - 1002	18	dB
Port to Port Isolation	52 - 1002	22	dB
Noise Figure	52 - 1002	3.0	dB
RFI Isolation	5 - 1002	-120	dB
Group Delay	Ch. 2	30.0	ns/3.58 MHz
	Ch. 3	10.0	ns/3.58 MHz
	Ch. 4	5.0	ns/3.58 MHz
	Ch. 5 & up	3.0	ns/3.58 MHz

Distortions¹			
Composite Triple Beat		75	- dBc
Composite Second Order		62	- dBc
Cross Modulation		75	- dBc
Hum Modulation		80	- dBc

Return Specifications	Frequency (MHz)	Spec.	Unit
Gain (Outputs 1 - 4)	5 - 42	0 ± 1.0	dB nom.
Return Loss	5 - 42	18	dB
Port to Port Isolation	5 - 42	24	dB
Group Delay	5.0 - 6.5	20.0	ns/1.0 MHz
	6.5 - 8.0	15.0	ns/1.0 MHz
	8.0 - 34	5.0	ns/1.0 MHz
	34 - 42	20.0	ns/1.0 MHz

VoIP Port Specifications	Frequency (MHz)	Spec.	Unit
Insertion Loss	5 - 1002	4.0 ± 1.0	dB nom.
Return Loss	5 - 1002	18	dB

1. +10 dBmV flat input, 79 analog channels from 55 MHz to 550 MHz. Digital channels from 550 MHz to 750 MHz at 6 dB below the analog channels.

■ ■ ■ General Specifications

Nominal Impedance	75 Ω
F-Connector Type	ANSI/SCTE 01 (formerly SCTE IPS-SP-400) Brass Compliant Sealed CamPort [®]
Surge Withstand	6 kV Combo Wave (IEEE C62.41-1991 Cat. B3) on Input Port 6 kV Ring Wave (IEEE C62.41-1991 Cat. A3) on Output Ports and VoIP Port
Power Adaptor	12 VDC/500 mA output, UL, PTC short-circuit protected, self-resetting
Dimensions / Weight	4.9" W x 2.9" H x 1.35" D / 0.68 lb.

■ ■ ■ Environmental Specifications

Pressure Seal	15 psi
Operating Temperature	-40 °C to +60 °C
Corrosion Resistance	Meets ANSI/SCTE specifications

Specifications subject to change without notice.