

Features and Benefits

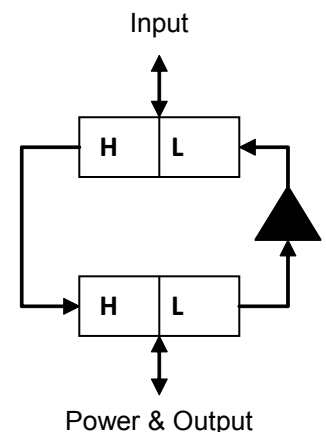
ANTRONIX®

RRA1-10 Return Path Residential Amplifier

Antronix's new Return Residential Amplifier (RRA) Series was designed for reliable subscriber premise return path amplification such as cable modems and two-way set-top boxes. The RRA is the first return amplifier to utilize the patented auto-seizing CamPort®. This SCTE compliant F-port provides maximum contact area and reliability for multimedia applications. With the capability to endure multiple high power surges, the RRA was engineered to withstand the harshest environmental threats. The lightweight powder coated AL 360 housing provides superior corrosion resistance for quality performance year after year.



- **CamPort® Auto-Seizing F-Port**
Patented auto-seizing F-port features a "Cam Activated Mechanism" to provide full contact pressure (> 2000 grams) on the center conductor for maximum reliability.
- **Ultra Low Distortion**
Highly linear push-pull return path amplification.
- **15 psi Sealed SCTE Compliant CamPort®**
Sealed brass CamPort® prevents water migration.
- **Weather Sealed Housing with RFI Gasket**
Guarantees repeatable 120 dB RFI shielding.
- **Powder Coated AL 360 Aluminum Housing**
Provides the most corrosion resistant protection against salt, fog and rust.
- **Supports 2-way digital and multimedia applications**
Ideal for two-way systems deploying cable modems and set-top boxes.
- **6 kV surge withstand on all ports**
Unique, non arc gap surge protection design, to provide maximum protection while eliminating high impulse noise, which can be caused during an arc gap discharge.
- **Local or remote powering**
Power the amplifier locally with supplied adaptor or remotely with an optional power inserter.
- **Listed wall adapter**
Self-resetting circuit protection provides safe protection against short-circuits to minimize maintenance costs.
- **Power on LED**
- **5 Year Warranty**



Electrical Specifications RRA1-10

Return Specifications	Freq (MHz)	Max	Min
Gain (dB nominal)	5-42	—	10.0 ± 1.0
Return Loss (dB)	5-42	—	18
Flatness (dB)	5-42	1.0	—
Group Delay (ns/1.5 MHz)	5.0-6.5	20	—
	6.5-8.0	15	—
	8.0-34	5.0	—
	34-42	20	—
Distortions			
1 dB Compression Point ¹ (dBmV)	5-42	74	—
Second Order ² (-dBc)	5-42	—	75
Third Order ³ (-dBc)	5-42	—	60
Forward Specifications			
Noise Figure (dB)	5-1002	5.5	—
RFI Isolation (dB)	5-1002	—	120
Insertion Loss (dB)	54-1002	1.0	—
Return Loss (dB)	54-1002	—	18
Group Delay (ns/3.58 MHz)	Ch. 2	16	—
	Ch. 3	8.0	—
	Ch. 4	5.0	—
	Ch. 5 & Up	3.0	—
Forward Distortion ⁴ (dBmV)	54-1002	-50	—

1. After amplification

2. Second Order distortion is measured at 12 MHz with three carriers (19, 25 & 31 MHz), each adjusted to +60 dBmV after amplification.

3. Third Order distortion is measured at 37 MHz with three carriers (19, 25 & 31 MHz), each adjusted to +60 dBmV after amplification.

4. Forward distortion is measured at 56 MHz with three carriers (19, 25 & 31 MHz), each adjusted to +60 dBmV after amplification

Specifications RRA1-10

General	
Nominal Impedance	75 Ω
F-connector Type	ANSI/SCTE 01 (Formerly SCTE IPS-SP-400) Compliant Sealed Brass CamPort®
Surge withstand	6 kV Ring Wave (IEEE C62.41-1991 Cat. A3, Unused Ports Terminated)
Power Adaptor	18 VDC/400 mA Output, UL Listed, PTC Short-Circuit Protected, Self-resetting
Dimensions, Weight	4.9" x 4.0" x 1.0", 1.0 lb
Environmental	
Pressure Seal	15 psi
Operating Temperature	-40 °C to +60 °C
Corrosion Resistance	Meets ANSI/SCTE Specification
Warranty	5 Years

Ordering Guide

RRA1-10/PS	1 Output Amplifier, 10 dB Return Gain, 120 VAC/60 Hz
ARPI-2000	Power Inserter for Remote Powering
ARAC-18N	AC Power Adaptor, 120 VAC/60 Hz Input, 18 VDC Output, UL Listed

