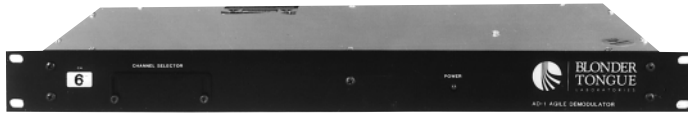


AD-1 Series

Agile Audio/Video Demodulator



○ Features & Benefits

- Rack Mountable - 1 EIA (1.75") Rack Space
- UL Listed with Three Year Product Warranty
- 250 kHz Tuning Increment - Supports Broadcast, CATV and UHF Assignments Including HRC & IRC
- AGC Circuitry Automatically Compensates for Input Level Variations
- 4.5 MHz Audio Subcarrier and Broadband Multiplex Audio Output Permits Use with BTSC Stereo Applications

The AD-1 Series are professional quality, agile audio/video demodulators. These units provide audio and video output from any channel in the 54 to 88 and 108 to 806 MHz frequency range. The AD-1 Series is ideal for signal monitoring and signal conditioning (audio/video processing and remodulation) applications. Agile channel selection permits on-the-fly channel changes.

The AD-1 Series takes a single channel in the 54 to 88 and 108 to 806 MHz frequency range and demodulates the audio and video information. Baseband audio and video, as well as 4.5 MHz audio subcarrier and multiplex audio, are provided as outputs. The AD-1 features phase locked loop synthesized frequency control with a tuning increment of 250 kHz. Channel selection is accomplished with the use of simple to use front panel accessible dip switches. A Nyquist filter provides stable, accurate demodulation of the vestigial sideband signal. Additionally, this filter minimizes distortion and preserves the timing of the signal. Delayed AGC circuitry automatically compensates for input signal variations. The AD-1 Series also utilizes a quasi-synchronous video detector that has low differential gain and minimal phase distortion. A quadrature audio detector delivers a very low distortion audio output. Broadband multiplex audio and 4.5 MHz audio subcarrier outputs permit use in BTSC stereo applications.

○ Specifications

RF

- Input Frequency Range
 - Standard: 54-88 & 108-806 MHz
 - Option 17: Sub-band Input: 7-49 MHz
- Channels:
 - VHF, UHF (Input) CATV (STD,HRC,IRC)
- Tuning Increment: 250 kHz
- Input Level - Max: +20 dBmV
- Noise Figure
 - VHF: 8-11 dB
 - UHF: 10 dB
- Image Rejection - Min
 - VHF: 65 dB
 - UHF: 50 dB
- Input/Output Impedance: 75 ohm

Video

- Frequency Response f_v+25 Hz to $f_v+4.0$ MHz:
 - Settable to ± 1.0 dB
- Output Level: 1.0 V p-p
- Differential Gain: 3.0 %
- Differential Phase: 1.5 °
- Group Delay Response: ± 50 ns
- Output Impedance: 75 ohm
- Output Return Loss: 25 dB

Audio

- Baseband Frequency Response:
 - 50 Hz to 15 kHz: ± 0.75 dB
 - Output Level: 500 mV RMS
 - Impedance: 600, Unbalanced ohm
- Multiplexed Frequency Response:
 - 50 Hz to 100 kHz: ± 0.2 dB
 - Output Level: 500 mV RMS
 - Impedance: 600, unbalanced ohm
- 4.5 MHz Subcarrier
 - Output Level: +35 dBmV
 - Impedance: 75 ohm
- Audio Signal-to-Noise: 57 dB
- Total Harmonic Distortion: 0.6 %

General

- Power Requirements
 - Voltage: 117, $\pm 10\%$ VAC
 - Frequency: 60 Hz
 - Power: 16 W
- Fuse: 1/4 A
- Temperature Range: 0 to +50 °C

Mechanical

- Dimensions (WxHxD):
 - 19.0 x 1.75 x 14.5 in.
 - 483 x 44 x 368 mm
- Weight: 5.5 lbs., 2.50 kg

Connectors (Rear Panel)

- RF Input
 - Standard - VHF/UHF: "F" Type, Female
 - Option 17: Sub-band Input: "F" Type, Female
- Video Output: "F" Type, Female
- Baseband Audio Output: RCA Phono, Female
- Multiplexed (MPX) Audio Output: RCA Phono, Female
- 4.5 MHz Subcarrier Audio Output: "F" Type, Female
- Serial Data Input & Output
 - Option 20: Serial Input: RJ-12, Female

Controls (Front Panel)

- Frequency Selection: DIP Switches
- Video Response: Controls

Controls (Top Cover & Rear Panel)

- Sub-band Input Channels Option 17: Slide Switch

Indicators (Front Panel)

- Power ON: LED, Green

Refer to product instruction manual for additional specification measurements and notes.

○ Ordering Information

Model	Stock No.	Description
AD-1B	5932	Agile Audio/Video Demodulator 54-88/108-806 MHz
AD-1-OPT 17	59257	AD-1 Option: Sub-Band Input, 7-49 MHz
AD-1-OPT 20	59250	AD-1 Option: Digital Control, Serial RS-232
AD-1-OPT 09	59259	AD-1 Option: Balanced Audio, 600 Ohm