



475 Agile Demodulator with Synchronous Detection 860MHz

475/475T

Demodulator

Technical Specifications

- **Selectable Channels • 806MHz**
- **Synchronous Detection • Zero Chopper**
- **Nyquist SAW Video Detection**

Processor Features

CADCO 475 demodulator (475T with optional T-channels) precisely demodulates an RF video/audio television signal to baseband video and audio. Designed for CATV applications, the 475 economically satisfies many TV station, LPTV and MMDS requirements. The 475 features multiple output configurations such as video/4.5MHz audio subcarrier (System M/N) separately selectable or as a composite and two additional standard video only ports. The 475 contains a Synchronous Detector and Zero Chopper (the Zero Chopper is the zero carrier reference signal used to accurately set depth of video modulation without a spectrum analyzer). Composite and Vertical Sync are externally available for frame synchronization of auxiliary equipment.

- Frequency Agile
- Microprocessor Controlled
- Selectable Input Channels: VHF/UHF Off-Air, Off-Cable and Off-Cable HRC and Sub-low channels T7 Through T14 optional (System M/N)
- External Composite IF Loop
- Multiple Video Output Ports
- Composite and Vertical Sync Output Ports
- 4.5 MHz Aural Subcarrier Output (System M/N)
- Optional RS-232 Control with Daisy Chain Capability
- Composite Video and Aural Subcarrier Output Port

Video Section

Input: C3F Neg	System M/N
Input Impedance	NTSC
Input Frequencies	75 ohms, unbalanced
(T-option)	54 - 860 MHz
R.F. Bandwidth	7 - 54 MHz
Input A.G.C. Range	6.0 MHz
Input A.G.C. Type	-10 to +20 dBmV, +50 to +80dB μ V
Recommended Input	Sync Tip Ref
Noise Figure	0 to +10 dBmV, +60 to +70dB μ V
Adjacent Channel Rejection	9dB VHF, 10dB UHF
Image Rejection	60dB
	60dB

IF Section

Video IF Level	+37 dBmV, +97 dB μ V
Audio IF Level	+22 dBmV, +82 dB μ V
Return Loss	>14 dB
IF Frequency: Video Carrier	45.75 MHz
IF Frequency: Audio Carrier	41.25 MHz
Video-Sound Spacing	+4.5 MHz
Vestigial Sideband Width	0.75 MHz

Output Section

Video Output, Adjustable : 75 ohms	0.5 - 1.4 V P-P
Frequency Response @NTSC 4 MHz	+/- 1 dB
Differential Gain	5% max
Differential Phase	5 Deg max
Signal to Noise Weighted CCIR	50 dB min
Audio Output, Adjustable 600 ohms	0.5-1.4 V P-P
Distortion: @ 1 KHZ	1% max
Signal to Noise, w/ deemphasis	50 dB min

Mechanical and Power

Rack Mounting	For Standard 19" Rack Mounts
Standard Dimensions	19"W x 1.75"H x 14"D
Metric Dimensions	(48.26cm x 4.44cm x 35.56cm)
Weight	12 pounds (5.4 kg)
Power	115/240 VAC 50/60 Hz 6 watts
Operating Temperature	40 to 110 degrees F

Channel Tuning

Demodulator 475: Input tunes all channels 54 to 550 MHz and 470 to 806 MHz read by off-air channel number or off-cable channels including A-1 and A-2 read as channels 99 and 98.

Demodulator 475T: Input tunes all channels the same as model 475. In addition Channels T-7 through T-13 are accessed with a rear panel switch and read as channels 7 through 13 respectively.