

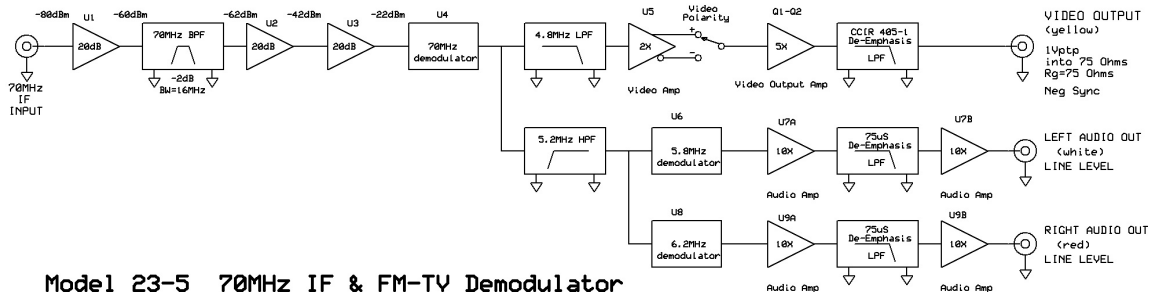


Model 23-5 70 MHz IF AMPLIFIER & FM-TV DEMODULATOR



The model 23-5 is a 70 MHz IF amplifier and FM-TV demodulator. It is intended to be used with a microwave down-converter with a 70 MHz IF output. The model 23-7 is the matching companion down-converter for the amateur radio 23cm (1240 - 1300 MHz) band. The 23-5 demodulates standard definition (480i), NTSC, composite video and also stereo audio.

The 23-5 is a "Universal" unit and was designed with a lot of flexibility to meet varying local standards. FM-TV is not completely standardized like broadcast, NTSC, VUSB-TV. Thus, several different parameters can be reset by the user by moving internal jumpers and adjusting trim pots and caps. They include: video polarity, video bandwidth, video de-emphasis (in/out), video gain, stereo audio sub-carriers' frequencies, audio de-emphasis (in/out), and audio gain.



Model 23-5 70MHz IF & FM-TV Demodulator
BLOCK DIAGRAM

Model 23-5 70 MHz IF Amplifier & FM-TV Demodulator Specifications

PARAMETER	Typical Performance	Notes
Input Sensitivity - at 23cm with model 23-7, Down-Converter (flat response)	-95 dBm -88 dBm -79 dBm	P2 picture P4 picture P5 picture
Input Sensitivity - at 23cm with model 23-7, Down-Converter (with pre/de-emphasis)	-95 dBm -89 dBm -84 dBm	P2 picture P4 picture P5 picture
Input Sensitivity - model 23-5 IF Amp alone at 70MHz (flat response)	-88 dBm -83 dBm -79 dBm	P2 picture P4 picture P5 picture
Input Sensitivity - model 23-5 IF Amp alone at 70MHz (with pre/de-emphasis)	-97 dBm -92 dBm -84 dBm	P2 picture P4 picture P5 picture
IF Input Frequency	70 MHz	
IF Bandwidth	16 MHz	
IF Input Impedance	50 Ω	
IF Gain	60 dB	
max. IF input	+15dBm	
Video FM Deviation	4 MHz	
Video Polarity	positive or negative	internal jumper select
Video Frequency Response	5 Hz to 4.6 MHz - or 7.8 MHz	internal jumper select
Video De-Emphasis	CCIR 405-1 - or - flat response	internal jumper select
Video Output	1 V _{ptp} into 75 Ω	2 V _{ptp} open circuit
Video Output Source Impedance	75 Ω	
Sound Sub-Carrier Demodulators	two -- for left & right stereo	
SSC Frequencies	5 to 7 MHz	internally tunable
Audio FM Deviation	75 kHz	
Audio Frequency Response	< 5 Hz to >15kHz	
Audio De-Emphasis	75 μ s - or - flat	internal jumper select
Audio Output	standard line level to 600 Ω	0 VU
Connectors	SMA (f) standard RCA (f)	IF Input, BNC or F optional A/V outputs
DC Supply Voltage	+12 Vdc, nominal at 400 mA	+11 to +15 V range
Dimensions & Weight	4.2" x 1.8" x 7.4" (w x h x d)	1.1 lbs

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