

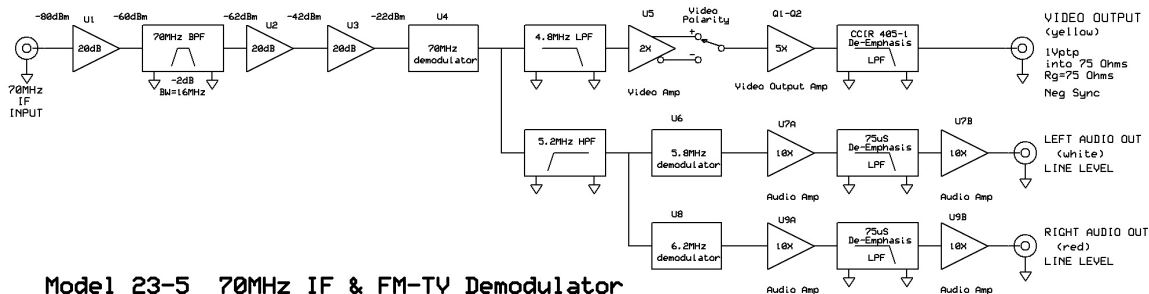


Model 23-6 70 MHz IF AMPLIFIER & FM-TV DEMODULATOR



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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