

# Television Demodulator

## TV1350



TV1350.

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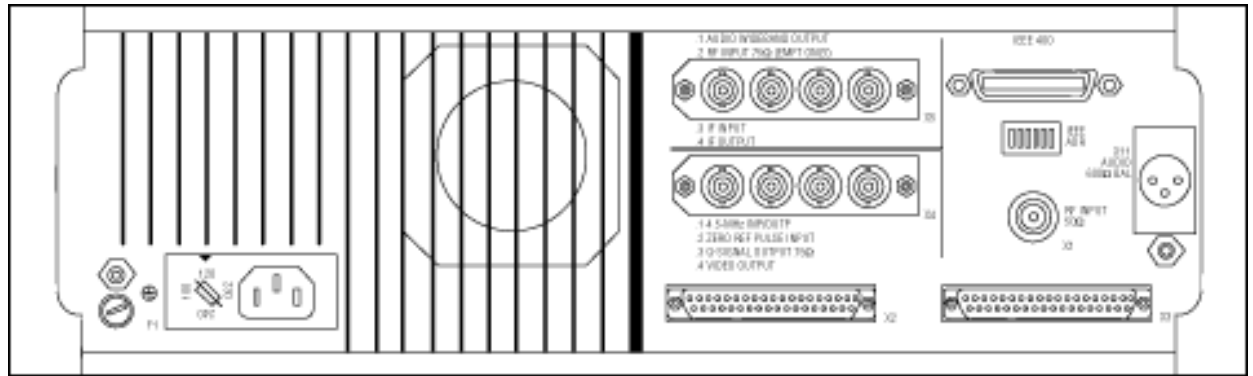
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### Characteristics

TV1350 Television Demodulator	
Frequency Range	Bands I, II, III, IV/V, cable channels from 54 to 880 MHz for HRC or IRC, 38.9 and 45.75 MHz IF
Channel Selection	Manual or remote entry of channel number, automatic search or IEEE-488 bus (optional). Frequency Processing Synthesizer
Frequency Processing	By synthesizer
Frequency Error	$\leq \pm 2.5$ kHz $\leq \pm 30$ kHz (AFC)
Inputs	
RF	Type N female, 50 Ohm
RF	BNC female, 50 and 75 Ohm
IF	BNC female
Input Voltage Range	
RF	0.15 to 30 mV or 0.5 to 100 mV, switchable
IF	5 to 100 mV
Return Loss	
IF	$\geq 20$ dB
50 Ohm, RF	$\geq 12$ dB, <300 MHz; $\geq 10$ dB, >300 MHz
75 Ohm, RF	$\geq 8$ dB

RF Input Attenuation	0/10/20 dB, automatic or manual adjustment
Noise Figure	$\leq 9$ dB, VHF; $\leq 12$ dB, UHF; (with RF input attenuation 0 dB)
Video S/N Ratio rms measurement, CCIR-weighted, HP 10 kHz, ref. to black-to-white transition	$\geq 60$ dB (3 mV input level) $\geq 64$ dB, (10 mV input level and reduced IF gain)



TV1350 Rear Panel.

### Video Channel

**Non-linearity** -  $\leq 2\%$  differential gain,  $\leq 2^\circ$  differential phase, 10 to 75% modulation depth, synchronous detection.

### Chrominance/Luminance Delay -

$\leq \pm 20$  ns (via IF input 1).

$\leq \pm 25$  ns (w/o SAW filter). Additional ripple of SAW filter  $\leq \pm 50$  ns.

**Tilt (50 Hz)** -  $\leq 0.5\%$ .

**Gain Control** - Automatic or manual,  $\geq 34$  dB dynamic range, typ. 40 dB, plus 2 x 10 dB input attenuation for TV1350.

### Audio Channel

**Intercarrier Frequency** - 4.5 MHz.

**Intercarrier S/N** -  $\geq 46$  dB 0-4 MHz, sine modulation;  $\geq 52$  dB without vision modulation.

**Frequency Response** -  $\leq \pm 0.5$  dB flatness, referred to 50  $\mu$ s de-emphasis.

**Harmonic Distortion** -  $\leq 1\%$ , typ. 0.5%, at  $\pm 50$  kHz deviation

and 5 kHz modulation frequency.

**Stereo Crosstalk** - Down  $\geq 36$  dB.

**Channel Crosstalk** - Down  $\geq 70$  dB.

### Outputs

**Video In-phase** - 1 V<sub>p-p</sub>, CVS with standard modulation; 75 Ohm; BNC front and rear panel connectors.

**Video Quadrature** - 1 V<sub>p-p</sub> with standard modulation and 90° phase shift of switching carrier; 75 Ohm; BNC front and rear panel connectors.

**IF Output** - 200 mV rms  $\pm 3$  dB; 50 Ohm; BNC rear panel connector.

**Audio Output** - +6 dBm  $\pm 0.5$  dB, with  $\pm 30$  kHz deviation and 500 Hz modulation frequency.

### Front Panel Indication

**Analog Meter** - Input level with marking of optimal level range; deviation of sound (50 kHz and 100 kHz fsd); marker for correct video output level.

**LEDs** - Selected channel, no video carrier, no sound carrier, no pilot and stereo.

**Zero Reference Pulse** - For checking of residual carrier, field-repetitive, can be enabled in lines 15 to 328 (factory-set) of field blanking interval or triggered by external pulse.

**Error Referred to CVS in Case of Synchronous Detection** -  $\leq 1.5\%$ .

**Loudspeaker** - Front panel volume control.

**Power Supply** - 110/120/220/240 V AC  $\pm 10\%$ , 47-63 Hz.

### Temperature -

Rated: +40°F to +115°F (+5°C to +46°C).

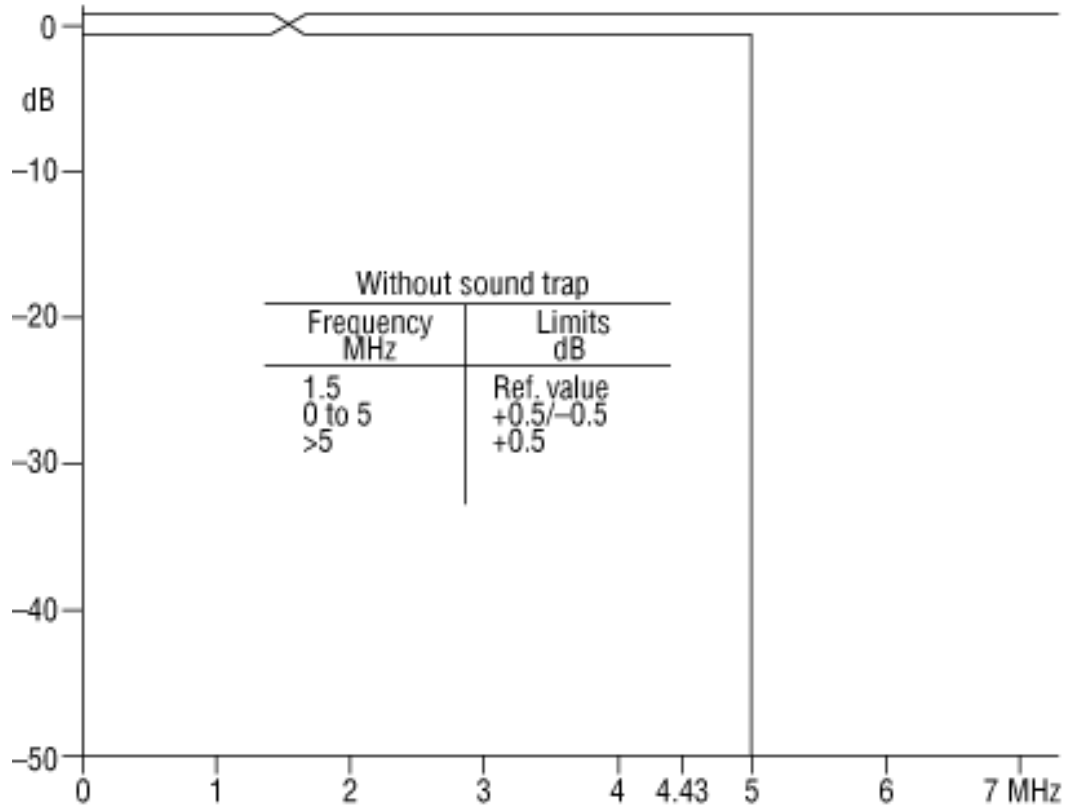
Operating: +32°F to +115°F (0°C to +46°C).

Nonoperating: -40°F to +158°F (-40°C to +70°C).

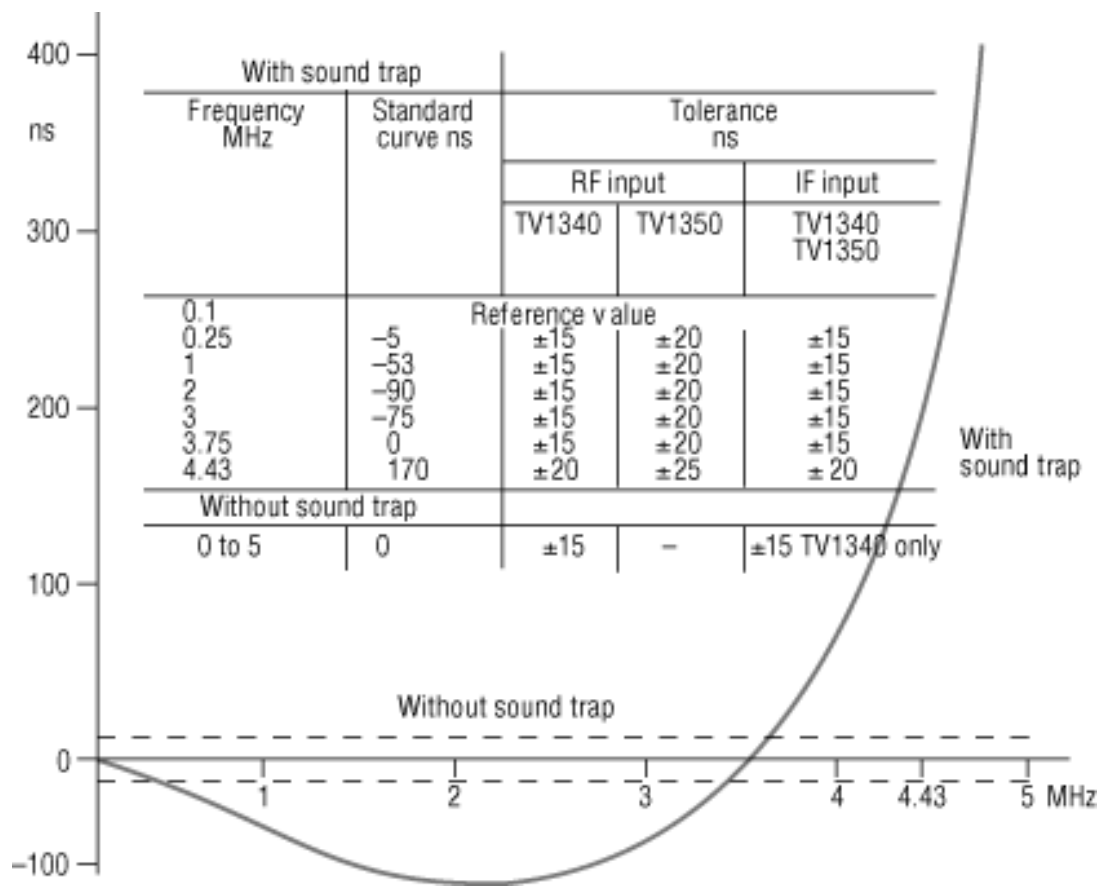
### Physical Characteristics

Dimensions	mm	in.
Height	147	5.7
Width	450	17.7

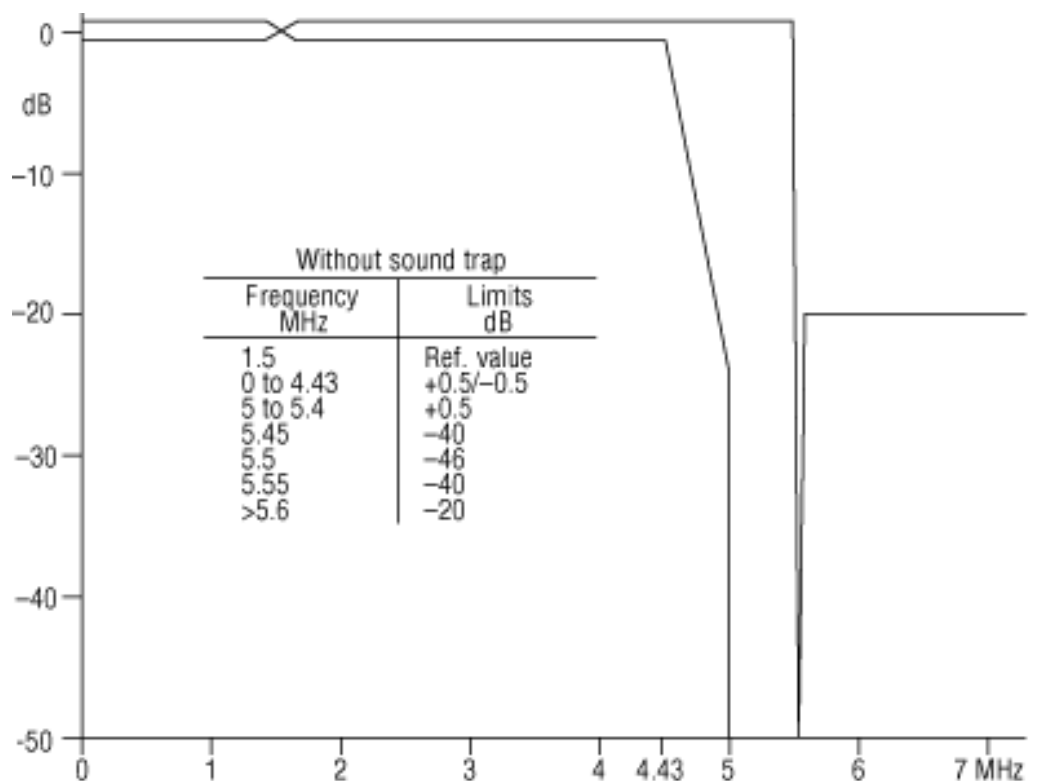
Depth	525	20.7
<b>Weight</b>	<b>kg</b>	<b>lb.</b>
Net	16	36



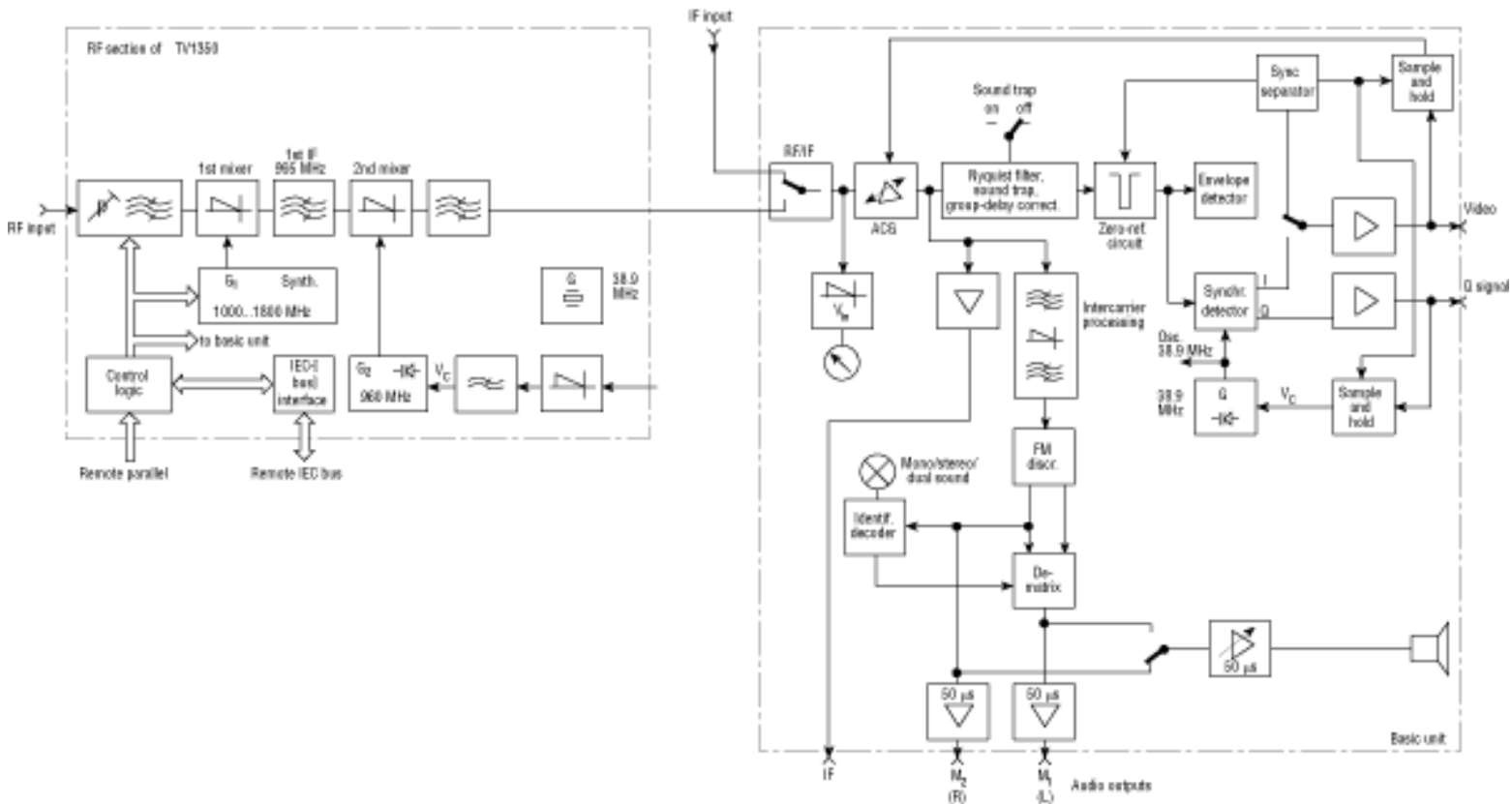
Tolerance of overall amplitude characteristic (RF, IF, VF) without sound trap.



Group-delay characteristic of TV1350, curve with sound trap, dashed line for operation without sound trap. Additional ripple with SAW filter  $\leq \pm 30$  ns.



Tolerance of overall amplitude characteristic (RF, IF, VF) with sound trap. TV1350 only: Additional ripple with SAW filter  $\leq \pm 0.3$  dB.



Functional diagram of TV Test Receiver TV1350.

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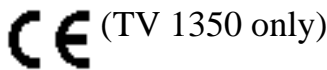
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21W-7248-3Ap1, 04/1996, 08/01/2000