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Receivers normally shipped with 97 kHz audio cutoff; 75 kHz on request, not field selectable, specify with order

**Option HR:**

Allows withstanding of unusually strong RF fields within  $\pm 1$  MHz (ex. without HR, 200  $\mu$ V / -61 dBm of desired signal with 70 mV / -10 dBm of interfering signal MAX; ex. with HR, 60  $\mu$ V / -71 dBm of desired signal with 224 mV / 0 dBm of interfering signal MAX. Beyond  $\pm 1$  MHz, HR offers no advantages).

**Output from receiver section:**

1 BNC connector, unbalanced

**Pre-emphasis on Transmitter section:**

Factory set for flat or any within 40  $\mu$ sec to 80  $\mu$ sec (75 for FCC, 50 for CCIR operation)

**Input to transmitter:**

2 BNC connectors, unbalanced, flat for composite input, 75 or 50  $\mu$ sec pre-emphasis for mono carrier enable: BNC connector

**All audio levels:**

Set on 3.5 Vp-p (1.237 Vrms / 4.1 dBm), adjustable, -5 to +6 dB range, calibrated in 1 dB steps on HPT SGN, continuously on others

**Synchronization port:**

2.5 kHz TTL level (5V square wave)

**Asynchronous AM S/N ratio:**

70 dB below reference carrier with 100% AM modulation, 75  $\mu$ sec de-emphasis (no FM modulation present)

**Synchronous AM S/N ratio:**

70 dB below reference carrier with 100% modulation (FM modulation  $\pm 75$  kHz)

**Distortion on transmitter section:**

Stereo demod., decoded and de-emphasized or mono demod., de-emphasized: <0.02%

**Distortion, receiver section:**

Stereo demod., decoded and de-emphasized:

30 Hz to 7.5 kHz: <0.05% (typ 0.025%) on "wide", <0.08% (typ 0.04%) on "medium", <0.15% (typ 0.06%) on "narrow"; at 1 kHz <0.02% (typ 0.01%) on "wide", <0.03% (typ 0.015%) on "medium", <0.05% (typ 0.025%) on "narrow"

Mono demodulated and de-emphasized:

30 Hz to 7.5 kHz: <0.1% (typ 0.06%) at 1 kHz <0.04% (typ 0.02%)

**Distortion, IMD:**

Intermodulation at demodulated output, 2 tone w/ 1 kHz difference frequency: 5-15 kHz, D2 <0.05%, D3 <0.1% 15-53 kHz, d2 <0.12%, d3 <0.3%

**Stereo separation, receiver section:**

30 Hz to 15 kHz, >60 dB (typ 65) on "wide", >50 dB (typ 55) on "medium", >45 dB, (typ 50) on "narrow"

**Stereo separation, transmitter section:**

>60 dB (typ 70)

**Crosstalk:**

50 dB or better, stereo subchannel to main channel or main channel to stereo subchannel

**Signal to noise ratio:**

Transmitter section:

88 dB (typ 90) with 75 kHz deviation & 400 Hz frequency modulation (mono) 85 dB (typ 88) with 75 kHz deviation, demodulated, de-emphasized left or right (stereo)

Receiver section:

80 dB (typ 85) w/ 75 kHz deviation & 400 Hz frequency modulation (mono) 75 dB (typ 80) with 75 kHz deviation, demodulated, de-emphasized left or right (stereo)

**Composite amplitude response, models with 97 kHz audio cutoff:**

$\pm 0.1$  dB or less, 30 Hz - 53 kHz  $\pm 1$  dB or less, 53 kHz - 75 kHz  $\pm 2$  dB or less, 75 kHz - 100 kHz

**Composite amplitude response, models with 75 kHz audio cutoff:**

$\pm 0.1$  dB or less, 30 Hz - 53 kHz  $\pm 2$  dB or less, 53 kHz - 75 kHz

**Data/subcarrier port (HPT STL only):**

$\pm 5$  dB or less, 100-200 kHz

**Composite amplitude response, models with option "DIGITAL" on receiver (900 MHz STL receivers only):**

$\pm 3$  dB or less, 30 Hz - 400 kHz

**Composite phase response:**

$\pm 0.1$  degree from linear phase, 0 Hz - 53 kHz

**Transmitter output power:**

ALC controlled within 0.5 dB on entire FM band, 0° to 40° C (32° to 104° F) and presettable SWR foldback. ALC loop and SWR foldback functions can operate off internal or external directional coupler (for example from final amp.) for whole chain control. 1 to 20 W continuously variable (20 W models) max power level can be set in 1 W steps. 2 to 40 W continuously variable (40 W models) max power level can be set in 2 W steps.

**Output frequency range:** 87.5-108 MHz

**Output connector:** "N" type female, 50 ohm

**Modulation type:** Direct FM at the carrier frequency

**Modulation capability of transmitter section:**

One stereo MPX program and subcarrier channels (up to 100 kHz baseband)

**Frequency stability:**

Better than 0.5 ppm ( $\pm 500$  Hz on FM transmitter section) 0° to 40° C (32° to 104° F)

**Frequency programmability:**

Front panel digi-switches, with internal adjustment

**Spurious emissions:**

100 dBc or more below carrier level

**Harmonic emissions:**

70 dBc or more below carrier level

**Front panel display:**

Fwd/Rev PWR (all HPT's), peak and semi-peak mod. (HPT EXO & SGN), RF in field and peak dev. (HPT FMR & STL), internal voltages (all HPT's), carrier detection (HPT FMR & STL), overmodulation (HPT SGN)

**AC input power:** 120 or 240 VAC, 50/60 Hz, 150 VA (20 W mod.), 180 VA (40 W mod.)

**Front panel size:**

483 mm (19") W x 132 mm (5¼") H (3 rack spaces)

**Overall depth:** 483 mm (19")

**Weight:** 20 W, 20 kg (45 lbs); 40 W, 21 kg (47 lbs)