

# TELECOMMUNICATIONS TEST EQUIPMENT

Transmission Impairment Measuring Sets (TIMS) (Cont.)

Model 4935A/4936A



- Psophometric (P. 53)
- Sound, unweighted (J. 16)
- Sound, weighted (J. 16)
- Quasi peak and quasi rms detectors

4936A

## 4935A

**Stored frequencies:** 404 Hz, 1004 Hz, 2804 Hz, 2713 Hz.

**SF skip skips band:** 2600 Hz  $\pm$  150 Hz.

**Level flatness:** from -40 to +10 dBm.

- 20-200 Hz  $\pm$  1.0 dB
- 200 Hz-15 kHz  $\pm$  0.2 dB
- 15 kHz-85 kHz  $\pm$  0.5 dB

### Receiver

**Frequency range:** 20 Hz to 110 kHz.

**Resolution:**  $\pm$  1 Hz to 10 kHz.  
 $\pm$  10 Hz, > 10 kHz.

**Level range:** -60 to +13 dBm.

**Level accuracy:** from -40 to  $\pm$  13 dBm.

- 20-50 Hz  $\pm$  1.0 dB
- 50-200 Hz  $\pm$  0.5 dB
- 200 Hz-15 kHz  $\pm$  0.2 dB
- 15 kHz-85 kHz  $\pm$  0.5 dB

## 4936A

**Stored frequencies:** 300 Hz, 820 Hz\*, 2000 Hz, 3000 Hz.

**Tone blanking:** SF skip skips 2280 Hz  $\pm$  150 Hz.

**Level flatness:** from -40 to +10 dBm.

- 20-100 Hz  $\pm$  1.0 dB
- 200 Hz-15 kHz  $\pm$  0.2 dB
- 15 kHz-85 kHz  $\pm$  0.5 dB

### Receiver

**Frequency range:** 20 Hz to 110 kHz.

**Resolution:**  $\pm$  1 Hz, to 10 kHz.  
 $\pm$  10 Hz, > 10 kHz.

**Level range:** -70 to +13 dBm.

**Level accuracy:** from -40 to  $\pm$  13 dBm.

- 20-50 Hz  $\pm$  1.0 dB
- 50-100 Hz  $\pm$  0.5 dB
- 100 Hz-4 kHz  $\pm$  0.1 dB
- 4 kHz-15 kHz  $\pm$  0.2 dB
- 15 kHz-85 kHz  $\pm$  0.5 dB

\*1020 Hz tone and notch is available as an option.

## Noise Measurements

### 4935A

**Level Range:**

**Message Circuit Noise:** 0 to 100 dBm.

**Noise With Tone:** 10 to 100 dBm.

**Noise to Ground:** 50 to 130 dBm.

**Detectors:** Quasi rms.

**Notch filter:** > 50 dB rejection from 995 to 1025 Hz.

### 4936A

**Level Range:**

**Noise:** -90 to +10 dBm.

**Noise with tone:** -80 to +10 dBm.

**Detectors:** Quasi rms.

Quasi peak—monitored by analog outputs.

**Notch filter:** > 50 dB rejection from 800-855 Hz\*.

## 3 Level Impulse Noise

### 4935A

Threshold ranges @ 600  $\Omega$

Low 30 to 109 dBm

Mid 4 dB above Low to 109 dBm

High 8 dB above Low to 109 dBm

**Range of tone:** -40 to +13 dBm

### 4936A

Threshold ranges @ 600  $\Omega$

Low -60 to 16 dBm

Mid 3 dB above Low to 16 dBm

High 6 dB above Low to 16 dBm

**Range of tone:** -40 to +13 dBm

## Peak to Average Ratio

### 4935A

**Transmitted level range:** -40 to 0 dBm.

**Received level range:** -40 to +3 dBm.

**P/AR range:** 0 to 120 P/AR units.

**Resolution:** 1 P/AR unit.

### General

**Impedance:** 135  $\Omega$ , 600  $\Omega$ , 900  $\Omega$ .

**Filters:** C Message

3 kHz Flat

15 kHz Flat

Program

50 kBit

### 4936A

Not offered

### General

**Impedances:** 150  $\Omega$ , 600  $\Omega$ , 900  $\Omega$ .

**Filters:** Psophometric (P. 53).

275-3250 Hz Flat (0.71 Impulse Noise).

Sound Unweighted (J. 16).

Sound Weighted (J. 16).

\*With option 1020 Hz tone notch is same as 4935A.