# TELECOMMUNICATIONS TEST EQUIPMENT

### **Transmission Impairment Measuring Set (TIMS)**

Models 4943A and 4944A



- Portable for field service tests
- Analog testing of voice/data channels

- Master-slave for remote end-to-end testing
- Automatic self check









### Gives You a Permanent Record of Your Measurements

The analog output circuit allows you to display the measured signal on a CRT display or record it on an X-Y recorder or strip chart recorder. Built-in storage and internally generated graticule lines allow you to use non-storage oscilloscopes or uncalibrated CRT display.

MASTER-SLAVE operation allows remote end-to-end testing without adding an external controller. The Slave unit operates unattended, with measurements in both directions controlled and displayed by the Master unit. Adding the HP-IB option provides automatic testing.

### 4943A Specifications

For detailed specifications ask your local HP Sales Office for a 4943A TIMS Data Brochure.

#### General

Power:100, 120, 220, 240 V AC +5% -10%, 48 to 66 Hz. Size: 196 H x 338 W x 591 W mm D (7.7" x 13.3" x 23.3").

Weight: 12.2 kg (27 lb).

Options	Price
010: HP-IB Interface	\$550
012: Nonlinear distortion replaces phase jitter	\$600
<b>015</b> : 18055A Transit Case	\$550
019: 10491B 19" Rack Mount	\$150
910: Extra set manuals	\$125

## 4943A Transmission Impairment \$9950 Measuring Set

Measures level and frequency, message circuit noise (C-message and 3 kHz Flat), 1 level impulse noise, signal-to-noise ratio, envelope delay, phase jitter. Analog outputs with internal storage and internally generated graticules, two holding coils, MASTER-SLAVE feature, and portable mainframe. Low frequency phase jitter, either 4-20 Hz or 20-300 Hz, available on special order.



1944A



### **4944A TIMS**

## Measures All Parameters for C & D Conditioned Channels

The 4944A TIMS measures all parameters including nonlinear distortion, tariffed for C- and D-conditioned leased data lines. Non-linear distortion is measured using the four tone intermodulation distortion technique. This technique is licensed under Hekimian Laboratories, Inc. USA Patent No. 3862380. The 4944A TIMS computes the 2nd and 3rd order products and automatically corrects the readings for noise.

Applications for the 4944A TIMS include circuit routining, circuit troubleshooting and installation testing. The portable 4944A is designed for both field service use and test center use.

#### 4944A Specifications

For detailed specifications ask your local HP Sales Office for a 4944A TIMS Data Brochure.

### General

Power: 100, 120, 220, 240 V AC, +5% -10%, 48 to 66 Hz. Size: 196 H x 338 W x 591 mm D (7.7" x 13.3" x 23.3"). Weight: 12.2 kg (27 lb).

Options	Price
001: Deletes nonlinear distortion	\$800
010: HP-IB Interface	\$550
<b>015:</b> 18055A Transit Case	\$550
019: 10491B 19" Rack Mount	\$150
910: Extra set of manuals	\$125
4944A Transmission Impairment Measuring Set	\$9950

Measures level and frequency, message circuit noise (C-message and 3 kHz Flat), signal-to-noise ratio, 1 level impulse noise, envelope delay, non-linear distortion, two holding coils, MASTER-SLAVE feature, and portable mainframe.