



# SEISCOR T84 SERIES TELEPHONE TEST SETS



TYPICAL TEST SETUP USING THE T84 G MODEL TELEPHONE TEST SET AND T6 BREAKDOWN BASE

## APPLICATION

The Seiscor T84 Series Test Sets and accessory equipment provide telephone equipment distributors, retail stores, and I and R personnel with the capability for quickly verifying that new or used telephones and telephone equipment are either "operational" or "defective," and are correctly identified. Operational equipment can then be classified as "ready for service," and defective or misidentified equipment can be routed for appropriate disposition.

Use of these test sets results in the following improvements in service center, retail store, and I and R center operation:

- Reduces repair and maintenance costs
- Reduces lost time by eliminating the possibility of installing defective or incorrectly identified equipment
- Allows reduction in equipment inventory
- Improves customer service thereby reducing customer complaints

## DESCRIPTION

The Seiscor T84 Series of Telephone Test Sets is comprised of the following Models: A, B, B1, G, G1 and R.

All of these Test Sets are completely solid-state modular in design. All operator controls, indicators, test connectors and handset acoustic couplers are located on the front panel of the units for ease of operation.

These test sets are designed to allow equipment to be tested in a simple, logical sequence of steps. All tests are either Pass/Fail or present a digital readout of measured parameters. The test parameters are based on telephone industry standards. Variations can be made in some test parameters to meet unique requirements of telephone companies.

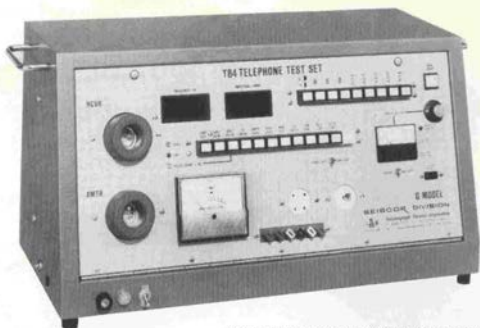
The tests that can be performed by the test sets and accessory equipment follow. Tests are separated into those that are standard, and those that are optional. The last page presents the information necessary to correlate the intended application of the test equipment to the Test Set model and accessory equipment required to accomplish the task. Reference information is also presented on this page to enable the customer to order replacement or spare assemblies.



*Seismograph Service Corporation*  
A SUBSIDIARY OF RAYTHEON COMPANY

**SEISCOR DIVISION**

P.O. BOX 3000 • TULSA, OKLAHOMA 74101 • (918) 822-3000



**T84 SERIES TELEPHONE TEST SET (G Model Shown)**  
**Power Requirements:** Approximately 75 Watts at 110 VAC 60 Hz.  
**Dimensions:** 22 inches (55.9 cm) wide, by 12 inches (30.5 cm) high,  
 by 11 inches (27.9 cm) deep.  
**Weight:** Approximately 30 pounds (13.6 Kg)



**T4 SPADE TIP CORD ADAPTER**  
**Dimensions:** 7 inches (17.8 cm) wide, by 1 3/4 inches (4.4 cm) high, by 3 inches (7.6 cm) deep.  
**Weight:** 10 ounces (283.5 gm)



**T8 KEY TELEPHONE UNIT**  
**Dimensions:** 1 inch (2.5 cm) wide, by 7 3/4 inches (19.7 cm) high, by 7 inches (17.8 cm) deep.  
**Weight:** 1 pound, 3 ounces (544 gm)

#### TYPICAL T84 SERIES TEST SET

### STANDARD TESTS

- **Lamp Test:** Verifies that the lamp circuit of "illuminating" telephones is operating.
- **Loop Test:** Simulates the loop current from the central office through the telephone network with handset off-hook. A telephone drawing less than 18 ma or greater than 55 ma will fail this test.
- **Receiver Varistor Test:** Aurally verifies that the handset receiver varistor is operational.
- **Contact Sequence Test:** Verifies proper operation of the telephone hookswitch contact sequence.
- **Rotary Dial Speed Test:** Verifies that the dial speed is 9.4 to 11.2 PPS, and that ten output pulses result whenever the number "0" is dialed.
- **Rotary Dial Percent Break Test:** Verifies that the break time interval is 58.2 to 63.8 percent and that the make time interval is 41.8 to 36.2 percent.
- **Tone Dial Test:** Verifies that each digit depressed on a tone dialing telephone is within the pass band. This is a standard test. However, the method of verification of these tones depends on the test set selected. Two different methods are provided; one method provides a digital readout of both frequency and amplitude of each tone, and the second provides an illuminated numerical verification.
- **Transmitter Output Level Test:** Verifies a "pass" condition for the handset transmitter if the output level at 1000 Hz is .42 v p-p or greater.
- **Receiver Sensitivity Level Test:** A signal of 1000 Hz at .65 v p-p is applied to tip and ring and used as a 0 dB ( $\pm 3$  dB) reference level.
- **Normal Voltage Straight Line Ring Test:** Verifies that normal straight line ringing voltage will ring the telephone with the loudness control set to the "low" position. Normal ring voltage is 95 to 105 volts at 20/30\* Hz.
- **Low Voltage Straight Line Ring Test:** Verifies that a standard low ringing voltage will ring the telephone with the loudness control set to the "low" position. Low ring voltage is 60 to 62 volts at 20/30\* Hz.
- **Bell Tap Straight Line Ring Test:** Verifies that the telephone will not ring at the bell tap voltage, with bias spring set in the "high notch" position and loudness control set to the "low" position. (This test may not apply to some telephone equipment manufacturers.) The bell tap voltage is 40 to 42 volts at 20/30\* Hz.

\*20 Hz Ring Tests are standard; 30 Hz must be specified.



**TS KEY SET ADAPTER**

Dimensions: 6 3/4 inches (17.1 cm) wide, by 3 1/2 inches (8.9 cm) high, by 4 inches (10.2 cm) deep.  
Weight: 15 ounces (425 gm)

**T9 MICROPHONE**

Dimensions: Overall length of microphone with cord, 40 inches (101.6 cm).  
Weight: 2 ounces (56.7 gm)



**T6 BREAKDOWN BASE**

Dimensions: 11 1/2 inches (29.2 cm) wide, by 2 3/8 inches (6.0 cm) high, by 14 inches (35.6 cm) deep.  
Weight: 3 pounds, 13 ounces (1.7 Kg)

175.00

## TESTING AND ACCESSORY EQUIPMENT

### OPTIONAL TESTS

- **500 Volt Breakdown Test:** 500 vdc is applied between the telephone network and base. A telephone will fail this test if the breakdown current is 225 microamperes or greater.
- **Dial Noise Test:** Verifies that the mechanical noise generated by a rotary dialing non dial-in-handset telephone is not excessive.
- **Key Telephone Set Test:** Tests six-key telephone sets to verify that the key-switch/lamp functions are operational.
- **Normal Voltage Tuned Ringer Test:** Verifies that the normal harmonic, synchronomic, or decimonic ringing voltage will ring a tuned ringer. (All voltages are rms  $\pm 5\%$ .)

Harmonic					
Freq. Hz	16-2/3	25	33-1/3	50	66-2/3
Voltage	90	100	110	125	140
Synchronomic					
Freq. Hz	20	30	42	54	66
Voltage	95	105	115	125	140
Decimonic					
Freq. Hz	20	30	40	50	60
Voltage	95	105	115	125	135

- **Low Voltage Tuned Ringer Test:** Verifies that a standard harmonic, synchronomic, or decimonic low ringing voltage will ring a tuned ringer. (All voltages are rms  $\pm 10\%$ .)

Harmonic					
Freq. Hz	16-2/3	25	33-1/3	50	66-2/3
Voltage	35	35	35	45	45
Synchronomic					
Freq. Hz	20	30	42	54	66
Voltage	35	35	45	45	45
Decimonic					
Freq. Hz	20	30	40	50	60
Voltage	35	35	45	45	45

- **Cord Continuity Test:** Verifies that modular, handset, and spade tip terminated cords have no "opens," "crosses," or "shorts."
- **Cord Noise Test:** Verifies that cords under test will not generate noise while being manually flexed.
- **Capacitor Shorted Test:** Verifies that the ringing capacitor of ringer assembly is not shorted, and that a capacitor is installed in the assembly.
- **A.N.I. Test:** Enables determining if the telephone instrument is correctly wired for Automatic Number Identification (A.N.I.).

**T84 SERIES TELEPHONE TEST SET  
CONFIGURATIONS AND  
ACCESSORY EQUIPMENT**

		STANDARD FEATURES										OPTIONAL FEATURES			
		LOOP TEST	TRANSMIT TEST	RECEIVE TEST	ROTARY/PHONE PAUSE	SPED TEST	ROTARY/PHONE PAUSE	SPED TEST	30 HZ RING TESTS	TUNED RINGER TESTS	RING VOLTAGE METER	RING CAPACITANCE SHORT	AND RINGING TEST	MODULAR SOUND TEST	1/8" VAC OUTLET
TEST SET	T84 A Model Part No. 3790-6306	X	X	X	X	X	X	X				X		X	X
	T84 B Model Part No. 3790-8200	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	T84 B1 Model Part No. 3790-8200	X	X	X	X	X	X	X			X	X	X	X	X
	T84 G Model Part No. 3790-8000	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	T84 G1 Model Part No. 3790-8200	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	T84 R Model Part No. 3790-6316	X	X	X	X	X	X	X			X		X	X	X
	T8 Spoke Tip Adapter Part No. 3790-6305														X
	T5 Key Set Adapter Part No. 3790-7805														X
	T6 Broadband Line Part No. 3790-6305													X	
	T9 Key Telephone Unit Part No. 3790-7706												X		
ACCESSORY EQUIPMENT	T8 Microphone Part No. 3790-7888														X

\* 30 Hz Ring Tests are available as an option -- must be specified when order is placed.

**REPLACEMENT/SPARE CIRCUIT  
BOARDS AND ASSEMBLIES**

		ASSEMBLY NOMENCLATURE AND PART NUMBER													
TEST SET		MISC. MOTHER BOARD: PART NO. 3790-6316	T84-44 (50V) BRN CARD: PART NO. 3790-6317	T84-50 (50V) BRN CARD: PART NO. 3790-6317	T84-50 (50V) BRN CARD: PART NO. 3790-6317	T84-50 (50V) BRN CARD: PART NO. 3790-6317	T84-50 (50V) BRN CARD: PART NO. 3790-6317	T84-50 (50V) BRN CARD: PART NO. 3790-6317	T84-50 (50V) BRN CARD: PART NO. 3790-6317	T84-50 (50V) BRN CARD: PART NO. 3790-6317	T84-50 (50V) BRN CARD: PART NO. 3790-6317	T84-50 (50V) BRN CARD: PART NO. 3790-6317	T84-50 (50V) BRN CARD: PART NO. 3790-6317	T84-50 (50V) BRN CARD: PART NO. 3790-6317	T84-50 (50V) BRN CARD: PART NO. 3790-6317
		T84 A Model	X	X	X	X	X	X	X	X	X	X	X	X	X
		T84 B Model	X	X	X	X	X	X	X	X	X	X	X	X	X
		T84 B1 Model	X	X	X	X	X	X	X	X	X	X	X	X	X
		T84 G Model	X	X	X	X	X	X	X	X	X	X	X	X	X
		T84 G1 Model	X	X	X	X	X	X	X	X	X	X	X	X	X
		T84 R Model	X	X	X	X	X	X	X	X	X	X	X	X	X
		T84 R Model	X	X	X	X	X	X	X	X	X	X	X	X	X
		T84 R Model	X	X	X	X	X	X	X	X	X	X	X	X	X
		T84 R Model	X	X	X	X	X	X	X	X	X	X	X	X	X

**ORDERING INFORMATION**

All orders should be placed through your preferred telephone equipment distributor, or ordered directly from:

Seisicor Division  
Seismograph Service Corporation  
Special Communications Products Section  
P. O. Box 1590  
Tulsa, Oklahoma 74102  
(918) 663-9945

All orders are subject to acceptance at the factory and will be billed at prices in effect at time of shipment. Prices, discounts, terms and conditions of sale are subject to change without notice.

Customized requirements such as special power source modifications, special calibration requirements, or any other special equipment modification requirements will be quoted, on request.

Terms: Net 30 days from date of invoice.

Delivery: All shipments F.O.B. factory shipping point, no freight allowed. Selection of carrier will be at the discretion of shipper unless otherwise specified by the customer.

Minimum Order: No orders will be accepted for less than \$18.00.

Authorized Service Centers have been established to provide calibration and repair of all Seisicor Telephone Test Sets and accessory equipment. Information on this service is available on request.

All equipment to be returned shall be subject to acceptance at the factory. For all returns, contact Seisicor Special Communications Products Section at address or telephone number specified.

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**SEISICOR DIVISION**

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