TYPE O CARRIER TELEPHONE SYSTEM — REPEATERS
GENERAL INFORMATION
INITIAL LINE-UP AND MAINTENANCE TESTS

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1. GENERAL

1.01 This section covers the operating instructions for initial and maintenance tests on the repeater equipment of the O carrier telephone system.

1.02 This information is intended to be used after the terminals and repeater equipments have been installed and the equipment and line facilities are ready for the tests and adjustments preparatory to placing the carrier system in service. Information is also included for the operation and maintenance of the system while it is in service.

1.03 The extended application of direct distance dialing and the related signaling equipment emphasize the necessity for closely following operating procedures which reduce to a minimum the number of circuit interruptions and irregularities which affect the operation of the signaling equipment. The necessity of applying test and operating procedures without omitting any steps is important in order to avoid irregularities which are likely to result from the use of abbreviated or unauthorized procedures.

1.04 Where direct distance dialing is in operation on the trunks working over a system, it is necessary that certain precautions be taken to avoid false operation of switching equipment, cutoffs, and wrong numbers. When a system or a channel is taken out of service, all trunks should be made busy to traffic at the secondary testboard or its equivalent at each end of the trunk. ***Caution should be exercised to avoid causing hits on systems carrying DATA, SAGE or telegraph transmission.***

1.05 Testing and switching apparatus should be calibrated and maintained in accordance with standard instructions as outlined in Bell System Practices. The calibration of testing apparatus is important since the failure to meet test requirements may be due to errors caused by testing apparatus. Testing apparatus should be calibrated at such intervals as is necessary to insure accuracy of measurement.

1.06 In trouble clearance, it is suggested that the high-frequency line characteristics be investigated only as a last resort since the necessary test equipment may not be available at all O carrier offices.

2. INITIAL TESTS

2.01 Initial tests include those tests which are made on the open-wire facilities, testing apparatus, power supply, order wires, alarm circuits, terminals and repeaters prior to the initial line-up.

2.02 Section 362-205-501 gives the procedures for properly preparing and placing a repeater for service.

2.03 Details regarding all initial tests are not included in this section but should be covered by instructions applying to the specific project and prepared by the Operating Company.

2.04 The following additional initial steps should be taken to reduce delays in line-up procedures:

(1) Circuit layout or equivalent information should be available showing the following data:

(a) Open wire pair assignments.

(b) Resistor value at dc power supply points.

(c) Type of repeater.

(d) Design noise requirement if other than standard requirement.

3. MAINTENANCE TESTS

3.01 The tests listed in Table I are made on a periodic basis to detect apparatus which has developed trouble or has aged to the point where, if it remained in service, it might cause impairment to service. Also, they will indicate variations in the high-frequency line which need corrective measures.

TABLE I

TEST	TEST PERIOD	SECTION REFERENCE
Tube Tests	6M	362-210-501
Filament Voltage	6M	362-210-501
Carrier Line-up	A	362-215-501 362-215-505

6M — 6 Months
A — Annual

3.02 The tests listed in Table II should be made when electron tubes have been replaced in a repeater unit.

TABLE II

COMPONENT	TUBE REPLACED	SECTION REFERENCE
Repeaters	Any	362-210-501 362-215-501 362-215-505

3.03 The tests listed in Table III should be made when plug-in units have been replaced.

TABLE III

UNIT REPLACED	TEST TO BE MADE	SECTION REFERENCE
Repeater Amplifier Unit	All	362-215-501 362-215-505
Repeater Oscillator Unit	All	362-215-501 362-215-505