

TYPE N2 CARRIER REPEATERS
REPEATERED HIGH-FREQUENCY LINE
GENERAL INFORMATION
INITIAL LINE-UP AND MAINTENANCE TESTS

1. GENERAL

1.01 This section outlines the operating instructions for initial line-up and maintenance tests on the repeater equipment and the high-frequency line of the N and ON carrier telephone system N2 repeatered line.

1.02 The information in this section is intended for use after the terminal and repeater equipment has been installed and the equipment and line facilities are ready for tests and adjustments preparatory to placing the carrier system in service. This information also applies to the operation and maintenance of the system while it is in service.

1.03 The testing procedures should be followed without omitting any steps in order to avoid irregularities which are likely to result from the use of any abbreviated or unauthorized procedures.

1.04 Where direct distance dialing is in operation on the trunks working over a system, it is necessary that precautions be taken to avoid false operation of switching equipment, cutoffs, and wrong numbers. When a system or 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: *In-service maintenance tests should be performed carefully to avoid hits or interruptions on the carrier channels and systems since the circuits may be carrying DATA-PHONE*, SAGE, voice-frequency telegraph, or other special service.*

*Service mark of the Bell System.

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 test equipment is important since the failure to meet test requirements may be caused by improper alignment of the testing apparatus. Test apparatus should be calibrated at such intervals as is necessary to ensure accuracy of measurement.

2. INITIAL TESTS

2.01 Initial tests are those which are made to determine that all facilities will meet their individual requirements prior to placing a system in service. The initial tests are listed in Table A and should be performed in the order shown.

3. MAINTENANCE TESTS

3.01 Maintenance tests are listed in Tables B, C, and D. The tests in Table B are made on a periodic basis to detect apparatus which has developed trouble or has aged to the point that if it remained in service it might cause impairment to service.

3.02 The tests in Table C should be performed when N2 repeaters are replaced.

3.03 The test in Table D should be performed if the overall line shows an excessive frequency error to identify the repeater or repeaters which have oscillator frequencies out of limits.

TABLE A
INITIAL TESTS

TEST	TEST TITLE	SECTION REFERENCE
1	Repeater Power Supply Point — Adjustment of Constant Current Regulator and Sealing Current Source and Check of Fuse Alarms	362-455-501 362-440-501† 362-440-502† 362-440-504†
2	Repeater Power Provisions — Check of Voltage Polarity, Current, and Current Bypass and Sealing Current	362-455-502
3	Repeater DC Voltage Measurements	362-460-501
4	Total Repeater Output Carrier Power	362-465-501
5	Span Pad and Equalizer Selection	362-465-504 362-440-503†
6	Repeater Output — Level of Individual Carriers (The measured levels may be used for slope computations.)	362-465-502
7	Method of Computing Carrier Slope*	362-400-510

* This test is not necessary if slope is determined by an N Line Deviation Test Set.

† When separate Line Build Out is provided.

TABLE B
MAINTENANCE TESTS (PERIODIC)

TEST	TEST PERIOD	SECTION REFERENCE
Repeater DC Voltage Measurements	6M	362-460-501
Total Repeater Output Carrier Power	6M	362-465-501

TABLE C

MAINTENANCE TESTS (REPEATER REPLACEMENT)

TEST	SECTION REFERENCE
Repeater DC Voltage Measurements	362-460-501
Total Repeater Output Carrier Power	362-465-501
Span Pad Check	362-465-504 (Test A only)

TABLE D

TROUBLE LOCATION

TEST	SECTION REFERENCE
Check of 304-KC Frequency	362-465-503