N3 CARRIER TELEPHONE SYSTEM

CARRIER-FREQUENCY SUPPLY

INITIAL LINE-UP AND MAINTENANCE TESTS

1. GENERAL

1.01 This section outlines the initial line-up and maintenance tests for the N3 carrier-frequency supply and lists the numbers of the pertinent sections that specify testing procedures and requirements.

1.02 This section is reissued to include the latest information and to rearrange some of the tests listed in Tables A and B. Since this reissue covers a general revision, arrows ordinarily used to indicate changes have been omitted.

1.03 The tests should be performed periodically at the intervals recommended in this section. It is important that the instructions be followed carefully. The use of abbreviated or unauthorized procedures may cause irregularities which affect the performance of as many as 624 channels when 26 terminals are using the same carrier-frequency supply.

1.04 Testing apparatus should be calibrated and maintained in accordance with standard instructions as outlined in Bell System Practices. The calibration of testing apparatus is very important, since improper alignment of the testing apparatus may result in failure to meet test requirements.

Caution: All maintenance operations performed while the carrier-frequency supply is in service should be made carefully to avoid hits or interruptions. The terminals associated with the carrier-frequency supply may be transmitting DATA-PHONE, Semi-automatic Ground Environment (SAGE), VF telegraph, or other data services.

2. INITIAL LINE-UP TESTS

2.01 The initial line-up information is intended to be used after the installation of the carrier-frequency supply and before the adjustment and testing of the carrier terminals.

2.02 The following minimum complement of plug-in units should be installed before the carrier supply is powered. The ten units will normally be inserted in the REG receptacles.

1 — 4-kc Generator

1 — Doubler Amplifier

7 — Dual Amplifiers

1 — −21 Volt Power Supply

2.03 The tests indicated in the sections listed in Table A must be performed before the alignment of the associated N3 carrier terminals is begun. Where practical, tests should be made in the order of listing.

3. MAINTENANCE TESTS

3.01 The purpose of these tests is to detect deviations from normal performance before service is impaired. The tests indicated in the sections listed in Table B should be made on a periodic basis and whenever additional terminals are installed. Where practicable, tests should be made in the order of listing.

3.02 When the set of ten plug-in units listed in 2.02 is installed in the REG receptacles and a duplicate set of ten units is placed in the ALT receptacles, the carrier-frequency supply

has complete standby protection for all functions. Since the manual switches associated with the 4-kc generators and dual and doubler amplifiers can transfer the working load from REG to ALT amplifiers and vice versa, tests will normally be made on the standby amplifier.

Caution: Always transfer the load to a spare amplifier with the manual switch before removing a plug-in amplifier or 4-kc generator.

3.03 Units that fail to satisfy requirements should be removed from the carrier supply bay and replaced by spare units.

TABLE A

INITIAL LINE-UP TESTS

TEST	SECTION REFERENCE
Check that plug-in units listed in 2.02 are installed	362-901-300
Power supply unit — tests and adjustments	362-901-505
Power output and carrier-frequency accuracy tests	362-901-501
4-kc generator unit	362-901-502
Dual and doubler amplifier unit	362-901-503
Switching and alarm	362-901-504

TABLE B

MAINTENANCE TESTS

UNIT	TEST	TEST PERIOD (MONTHS)	SECTION REFERENCE
Power supply	In-service voltage test	3	362-901-505
	In-service ripple voltage test	12	
4-kc generator	Check of amplifier output current	6	362-901-502
	Check of amplifier output unbalance	6	
	Alarm sensing circuitry stability and operation tests	6	
Dual amplifier	Carrier-frequency input voltage tests	6	362-901-503
	Alarm sensing circuit input voltage tests	6	
	Check of alarm sensing circuit operation	6	
Doubler amplifier	Carrier-frequency input voltage tests	6	362-901-503
	Alarm sensing circuit input voltage tests	6	
	Check of alarm sensing circuit operation	6	
61A Oscillator (J99300BA, L2 4-kc generator)	Adjustment and check of frequency accuracy of carrier supply circuit, first check	6	362-901-501
	Adjustment and check of frequency accuracy of carrier supply circuit, subsequent checks	12	
Primary distribution	Check of carrier-frequency power at primary distribution output terminals	6	362-901-501
Switching and Alarm	In-service tests	6	362-901-504