TYPE N2 CARRIER TELEPHONE
TRANSMITTING AND RECEIVING GROUP UNITS
INDIVIDUAL CARRIER OUTPUT — RECEIVING

The channel carrier frequencies generated at the distant transmitting terminal are received at the line terminating unit, amplified and regulated by the group receiving unit, and fed through the line terminating unit to the channel units.

The purpose of this test is to measure the carrier power of each channel and to determine the slope at the receiving group unit output.

A bridged measurement at this point is as accurate as a terminated measurement; therefore, only a bridged measurement will be described. This measurement may be made on an in-service basis.

A schematic of the jack arrangement at the output of the receiving group unit when making this measurement is shown in Fig. 1.

When measuring on working systems, caution should be exercised to avoid causing hits on systems carrying SAGE, telegraph, or other data transmissions.

APPARATUS:

KS-15538, List 1, 2, or 3 Carrier Frequency Voltmeter
P2DH Cord (9-pin plug to banana plug)

MEASUREMENT OF INDIVIDUAL CARRIER OUTPUT

STEP	PROCEDURE
1	Energize the carrier frequency voltmeter and allow 20 minutes for it to warm up. Calibrate the set according to the procedure described in the section covering the KS-15538 carrier frequency voltmeter.
2	Operate the selector switch of the carrier frequency voltmeter to VM-BAL 135 Ω BRG.
3	Check that both connectors are in J3 and J4.
4	Remove one of the connectors (J3) and connect the carrier frequency voltmeter to the switching jack J3 with the P2DH cord as shown in Fig. 2.
5	Measure the carrier powers at the proper frequencies as given in Table A and record on Form E-4558-6. The individual channel powers will depend upon the number of channels in use in the system. The individual channel carrier power for fully and partially equipped systems should be within the requirements given here.

OWER OHMS
8.0
8.0
8.0
8.0
8.0

els in the system

scribed in Section

on Form E-4558-6
$_0 - Y_{12}$).

3.0 db of the out-

ransmission Engi-
through normal

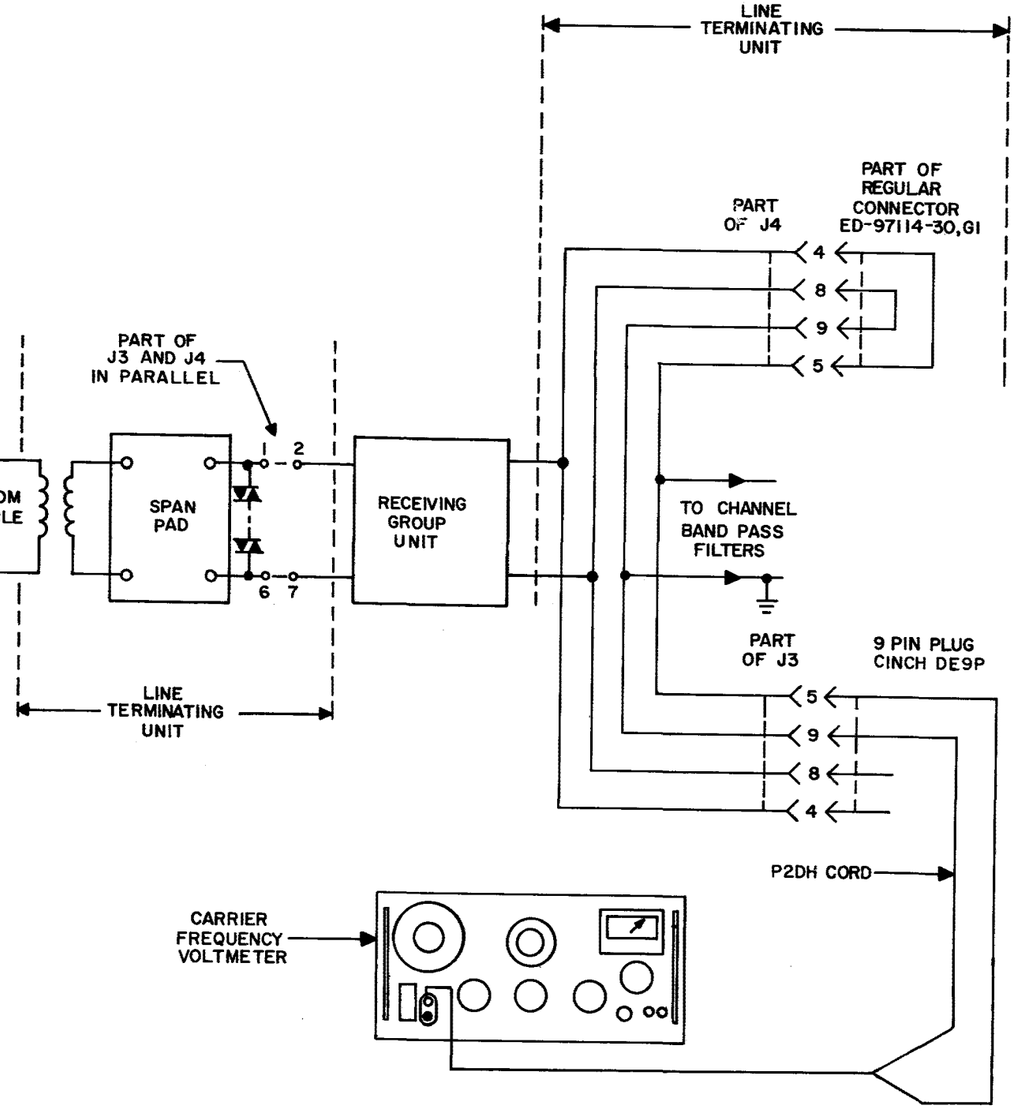

Fig. 1 – Jack Arrangement at Output of Receiving Group Unit

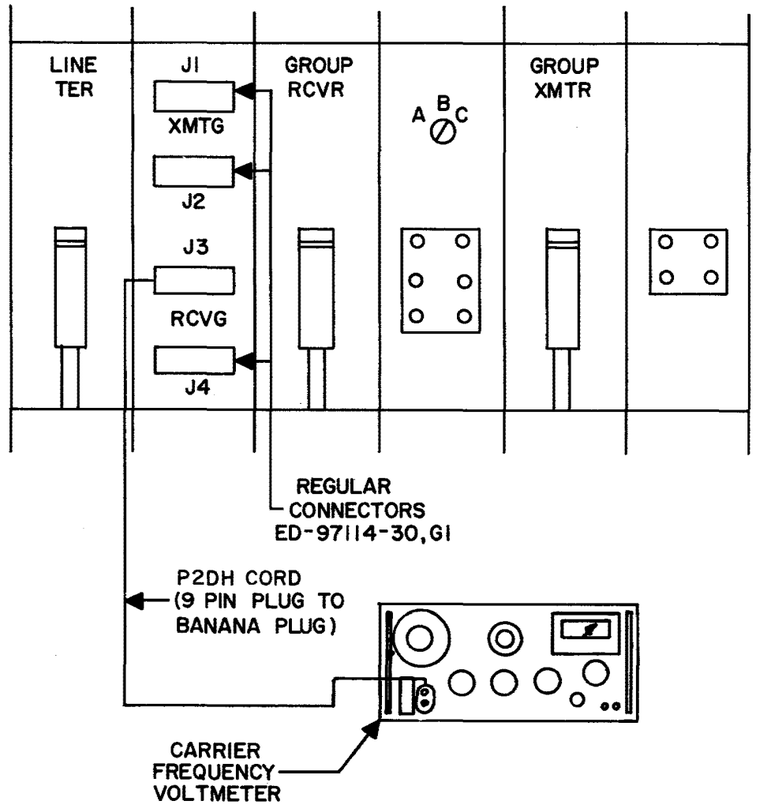

Fig. 2 – Test Setup

Fig. 1 and 2

STEP	PROCEDURE
	Requirement 1: The reading on the meter shall be:

NUMBER OF CHANNELS IN USE	INDIVIDUAL CHANNEL CARRIER POWER	
	METER READING	ACTUAL POWER INTO 75 OHMS
	db	dbm
A11	−16.5 ±8.0	−14 ±8.0
10	−15.5 ±8.0	−13 ±8.0
8	−14.5 ±8.0	−12 ±8.0
6	−13.5 ±8.0	−11 ±8.0
4	−11.5 ±8.0	−9 ±8.0

Requirement 2: The difference in powers between adjacent channels in the system shall be no greater than 3 db.

8 Determine the receiving group unit output slope using the method described in Section 362-400-510.

Requirement 1: Each of the individual channel carrier powers plotted on Form E-4558-6 shall be within approximately ±3.0 db of the computed slope line ($Y_0 - Y_{12}$).

Requirement 2: The computed slope shall be within approximately ±3.0 db of the output slope as specified by the circuit layout card.

Note: If the requirements cannot be met on initial line-up, the Transmission Engineering Department (or other appropriate group) should be notified through normal channels.

TABLE A

Channel Carrier Frequencies at Receiving Group Unit Output

CHANNEL NUMBER	FREQUENCY
	kc
1	164
2	176
3	184
4	192
5	200
6	208
7	216
8	224
9	232
10	240
11	248
12	256
13	264

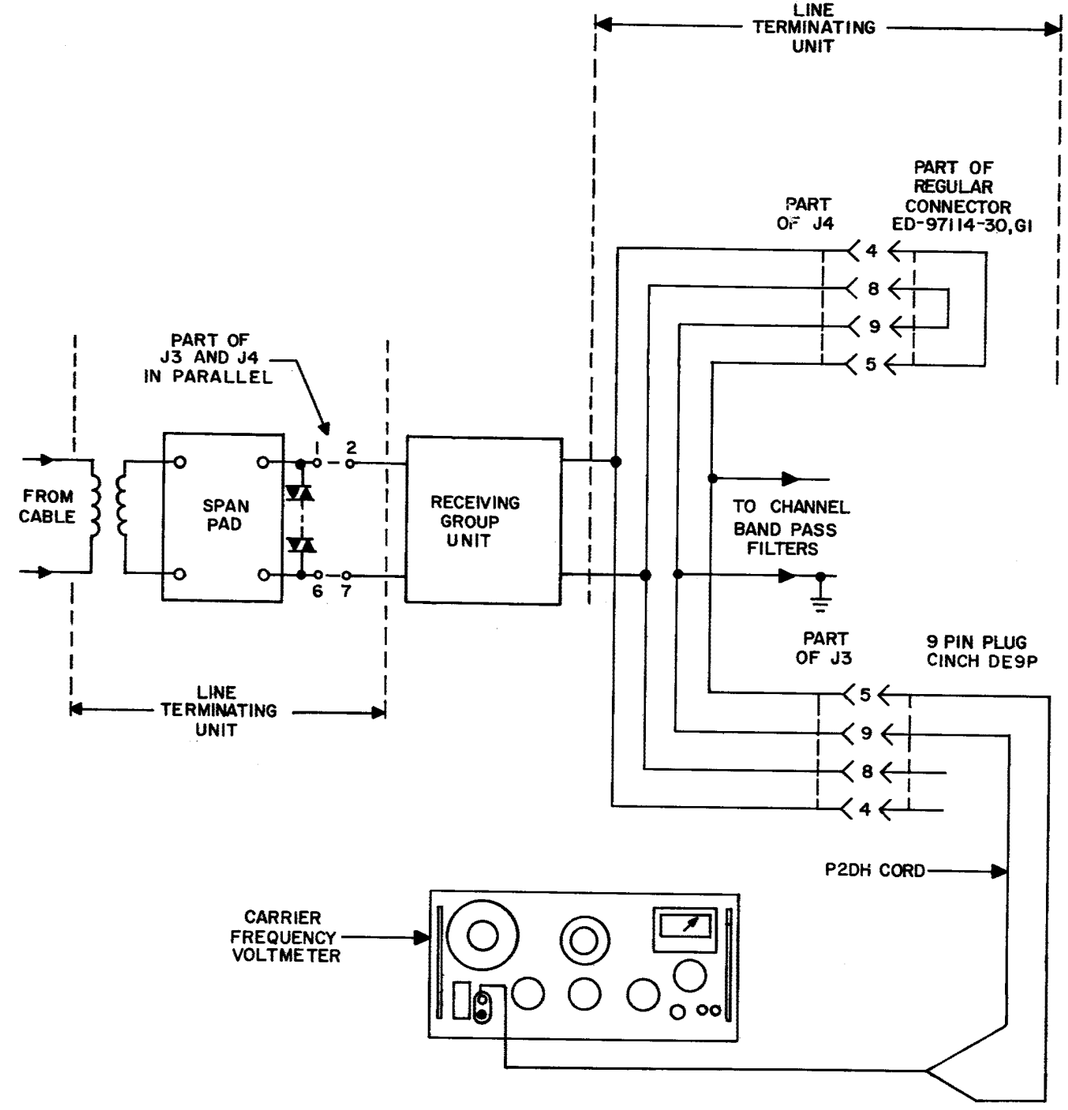

Fig. 1 – Jack Arrangement at Output of Receiving Group Unit