TYPE N3 CARRIER TELEPHONE SYSTEM
GROUP TRANSMITTER AND RECEIVER UNITS
TOTAL CARRIER POWER OUTPUT — TRANSMITTING

The carrier frequencies associated with even-numbered channels (2, 4, 6, 8, 10, and 12) in each channel group are inserted into and combined in the combining and switching unit and amplified in the group transmitter unit. The output of the group transmitter unit goes through the line terminating unit, which contains the transmitting span pad, to the transmitting cable pair. In this test, the total carrier power output of the group transmitter unit is measured with the 2J repeater test set.

The design of the N3 slope equalizers ensures that the total carrier power at the output of a fully equipped terminal remains constant regardless of the carrier slope as long as all carriers are inserted at the combining and switching unit. All 12 carriers are normally transmitted unless certain carriers are omitted to avoid interference with K systems.

A schematic of that portion of the jack arrangement on the combining and switching unit associated with the output of the transmitter and connections for making the total carrier power is shown in Fig. 1. When measuring on working systems, caution should be exercised to avoid causing hits on systems carrying Semiautomatic Ground Environment (SAGE), telegraph, or other data transmission signals.

APPARATUS:

2J Repeater Test Set, J94002J
P5K Cord, 6-inch length (14- to 20-pin adapter)

STEP	PROCEDURE
1	Check that both connectors are in the TRMTG jacks J72 and J73.
2	Connect the 2J repeater test set to the P5K cord, as shown in Fig. 2.
3	Remove the connector from J72 and connect the P5K cord and 2J repeater test set to the vacant jack.
4	Set the DBM switch on the 2J repeater test set to the W-E position. Set the rotary switch on the 2J test set for the DBM range setting which will give a maximum on-scale reading on the meter. ***Requirement:*** For high-group transmitter terminals in fully equipped systems, the meter shall indicate +12.0 ±2.0 dbm. For low-group transmitter terminals in fully equipped systems, the meter shall indicate +3.0 ±2.0 dbm. If this requirement is not met, due to the effect of the impedance of the transmitting cable pair on the 2J repeater test set (a voltage reading device), a group unit may still be considered satisfactory if the measured output is within ±1.0 db of the average of the outputs of the other group units at this location, transmitting in the same direction, in the same cable.
5	Remove the P5K cord and replace the connector in the switching jack.

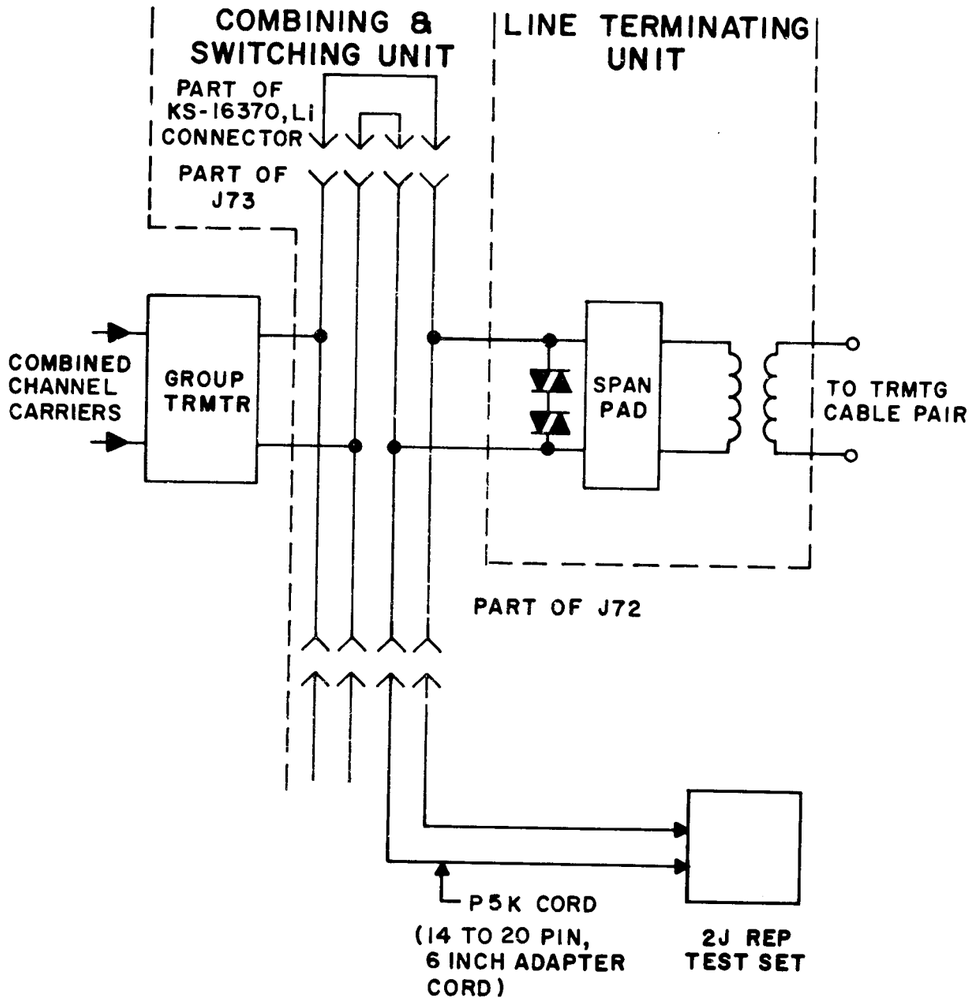

Fig. 1 – Jack Arrangement at Output of Group Transmitter Unit

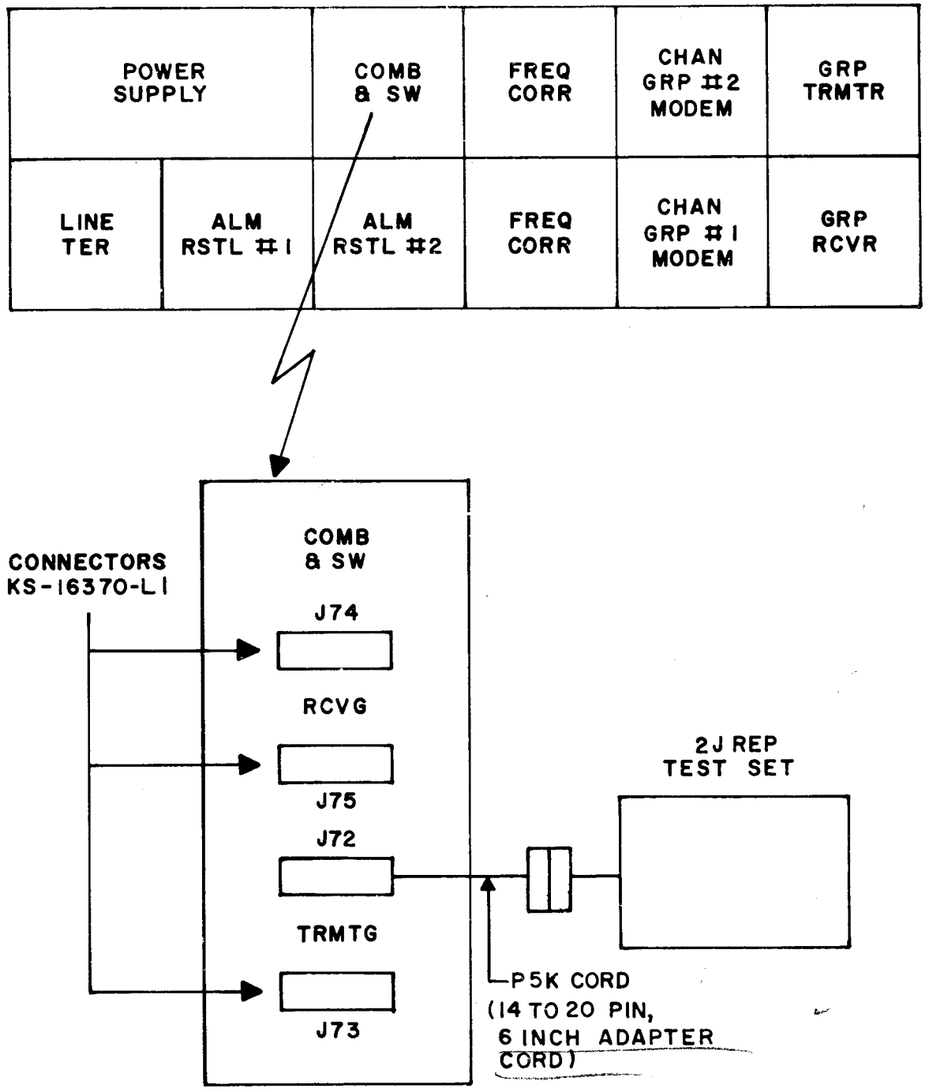

Fig. 2 – Test Setup

Fig. 1 and 2