TYPE O AND ON CARRIER TELEPHONE SYSTEMS—TERMINALS AND JUNCTIONS

GROUP UNIT LINEUP—RECEIVING

ADJUSTMENT OF GROUP RECEIVING UNIT—TERMINALS

The purpose of this test is to measure and adjust if necessary the output of the group receiving unit.

This section is reissued to change Fig. 1. This reissue does not affect the Equipment Test List.

From the control amplifier and rectifier circuit, located in the group receiving unit (Fig. 1), bias is supplied to the regulating amplifier. The OUT potentiometer in the control amplifier controls the output level of the group receiving unit. Changing this potentiometer changes the feedback and hence the gain of the control amplifier which in turn changes the bias on the regulating circuit. Lower control amplifier gain reduces the bias and raises the group receiving circuit output level.

APPARATUS:

1—KS-14510 Volt-Ohm-Milliammeter (VOM)

1—Hewlett-Packard 400-Type Vacuum Tube Voltmeter (VTVM)

1—W2DW Cord (Used to Connect VTVM to Test Points)

4—P1M Cords (Needed at Distant Terminal)

STEP	PROCEDURE
	A. Adjustment
1	To make this test, the group must be out of service. The transmitting circuit tests at the distant terminal must be completed before making this test.
2	At distant point, ground all the T jacks.
3	At test point, when testing an OA terminal in an O system, the slope switch should be set to the value specified on the channel group layout card.
	OA-LGT—Turn the REG potentiometer on the group receiving unit to the extreme counterclockwise position.

STEP	PROCEDURE
	OA-HGT—On the group receiving unit, connect the VOM between the REG jack and +130V jack. Starting on the 300-volt scale, adjust the REG potentiometer to obtain a reading of 1.0 volt (dc). Allow 3 minutes for the amplifier to stabilize; then proceed with the test.
4	At test point, connect the VTVM to the OUT jack located on the group receiving unit. Wait at least 3 minutes after the T jacks have been grounded before measuring, to enable the regulator to stabilize. Measure the output. ***Requirement:*** Test +1.8 through +5.5 dB; line up +3.5 dB.
5	Adjust the OUT potentiometer on the group receiving unit to meet the requirement. Wait at least 3 minutes and recheck Step 4, and then readjust if necessary to meet the requirement. In the case of OA HGT, the REG adjustment and the OUT adjustment are interdependent. Recheck the REG jack voltage reading in accordance with Step 3. Repeat Steps 3, 4, and 5 until both requirements are met.
6	Remove all test connections.
	B. Trouble Location
7	Test tubes in accordance with Section 362-110-503.
8	Measure received carriers at the IN jack of the group receiving unit with a selective detector arranged for 135-ohm bridging. ***Requirement:*** -31.0 through -46.0 dBm for unmodified J98706C, D, E, and F repeaters. -19.0 through -34.0 dBm for J98706CA, DA, EA, FA, and modified C, D, E, and F repeaters.
9	Measure individual carriers (184 and 192 kHz) at the OUT jack of the group receiving unit with a selective detector arrangement for 135-ohm bridging. ***Requirement:*** +4.0 through +10.0 dBm.
10	Measure the carrier leak of the group receiving unit output at the OUT jack with a selective detector arranged for 135-ohm bridging. ***Requirement:*** -15 dBm maximum.
11	If the requirements of Steps 7 through 10 cannot be met, replace the group receiving unit.

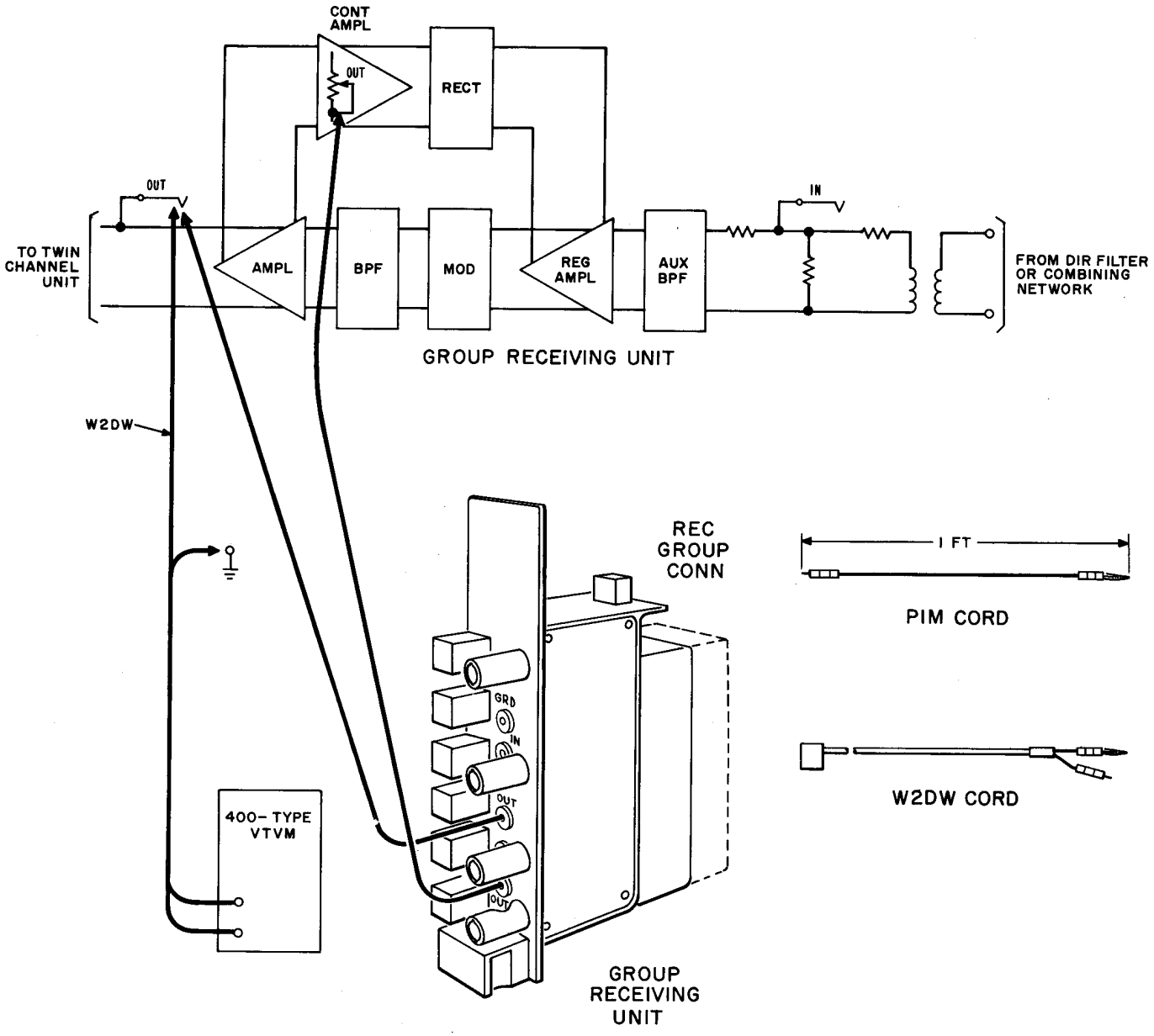

Fig. 1—Adjustment of Group Receiving Unit, Terminals