

P1 CARRIER TELEPHONE SYSTEM
ADJUSTMENTS AND MAINTENANCE
CENTRAL OFFICE TERMINAL TESTS — TRANSMITTING

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1.00 INTRODUCTION

- 1.01** This section specifies adjustments and tests required to prepare the transmitting portion of a central office terminal for service. It also specifies tests required to locate trouble which has been isolated to this portion of a terminal by the trouble locating procedures summarized in section 363-101-509.
- 1.02** To adjust a terminal, perform each adjustment in the order listed.
- 1.03** To locate a trouble in the transmitting portion of a central office terminal, perform all the steps in the order given. When requirements cannot be met, follow the procedure specified in Section 363-101-509.
- 1.04** Preparations made for each test or adjustment will remain in effect until the end of the section (Transmitting) unless otherwise specified.

2.00 ADJUSTMENT A — SIGNALING TONE OSCILLATORS

Note: If adjustment is being performed with the terminal installed and the connector does not contain the 803D or E network (signaling tone oscillators), proceed with this test although no adjustment can be made. The DECIBEL meter should read -4 for all signaling tones. If requirement cannot be met, repeat Adjustment A on the terminal containing the 803D or E network. If this terminal is adjusted properly, check cable leads between the two terminals.

- 2.01** On test set, turn REC switch to DET HI-IMP position.
- 2.02** Turn DET SENS-db switch to 0 position.
- 2.03** Connect receive cord from REC jack on test set to 2500~ test point on board A; red to 2500~, black to yellow dot.
- 2.04** On board G, turn OSC-1 potentiometer to obtain a reading of -4 on DECIBEL meter. If reading cannot be obtained, replace board G and repeat Adjustment A.
- 2.05** On board A, move red lead of receive cord from 2500~ test point to 1750~ test point.
- 2.06** On board G, turn OSC-2 potentiometer to obtain a reading of -4 on DECIBEL meter. If reading cannot be obtained, replace board G and repeat Adjustment A.

Note: If network board in position G is not equipped with the 1150-cycle potentiometer, disregard 2.07 and 2.08.

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- 2.07** On board A, move red lead of receive cord from 1750~ test point to 1150~ test point.
- 2.08** On board G, turn OSC-3 potentiometer to obtain a reading of -4 on DECIBEL meter. If reading cannot be obtained, replace board G and repeat Adjustment A.
- 2.09** Remove receive cord from terminal.

3.00 ADJUSTMENT B — TRANSMITTED CARRIER POWER

- 3.01** On test set, turn REC switch to DET 600Ω position.
- 3.02** Turn DET SENS-db switch to +10 position.
- 3.03** Connect receive cord from REC jack on test set to CARR test point on board A; red to CARR, black to yellow dot.
- 3.04** On board B, adjust potentiometer marked CARR to obtain a reading of -4 on DECIBEL meter. If reading cannot be obtained, refer to Section 363-101-509.
- 3.05** Place W1Y cord (shorting strap) across MOD test points on board B.
- 3.06** On test set, turn DET SENS-db switch to -10 position.
- 3.07** DECIBEL meter should read any position to left of -4. If requirement cannot be met, replace board B and repeat Adjustment B.

4.00 ADJUSTMENT C — COMPRESSOR

- 4.01** On board J, remove K101 or DL relay with 603A tool.

Note: The 291-type mercury relays should be kept in an upright position after being removed from the terminal or when placed in storage. This eliminates the possibility of the mercury scattering within the tube which could cause false closure of the contacts.

- 4.02** On board J, place W1Y cord (shorting strap) across TST test points.

- 4.03** On test set, turn SEND switch to AUDIO position.
- 4.04** Turn AUDIO OSC FREQ switch to 1000~ position.
- 4.05** Turn DET SENS-db switch to 0 position.
- 4.06** Operate and hold CAL OSC key.
- 4.07** Turn AUDIO OSC OUTPUT knob to obtain reading of 0 on DECIBEL meter.
- 4.08** Release CAL OSC key.
- 4.09** Turn REC switch to DET 600Ω position.
- 4.10** Turn ATTENUATOR switches to 0 positions.
- 4.11** Remove 600-ohm resistor from VF test points on board A.
- 4.12** Connect send cord from SEND jack on test set to VF test points on board A; white to left, black to right, and sleeve to yellow dot.
- 4.13** Connect receive cord from REC jack on test set to CARR test point on board A; red to CARR, black to yellow dot.
- 4.14** On board E, turn COMP potentiometer to obtain reading of -3.5 on DECIBEL meter. If reading cannot be obtained, refer to Section 363-101-509.

- **4.15** On test set, turn REC switch to DEMOD position.

- **4.16** Remove W1Y cord from MOD test points on board B.

- 4.17** Turn DET SENS-db switch to -20 position.

- 4.18** Read and record reading on DECIBEL meter plus DET SENS-db switch setting.

Example: DECIBEL meter + 2
 DET SENS-db switch -20
 Total power -18

Requirement: -17 to -21

- 4.19 Remove send cord from terminal.
- 4.20 Clip 600-ohm resistor across VF test points on board A.

Example: Reading in 4.18 —18
 6 db less power — 6
 Adjust for —24

5.00 ADJUSTMENT D—SIGNALING TONE AMPLIFIER

Turn DET SENS-db switch to —20 position. Adjust SIG potentiometer for —4 on DECIBEL meter.

- 5.01 Remove shorting strap from TST test points on board J. ←

Note: If the value cannot be obtained, refer to Section 363-101-509.

- 5.02 Replace *K101* or *DL* relay on board J.

- 5.05 Remove short from SIG test points on board J.

- 5.03 On board J, place a W1Y cord (shorting strap) across SIG test points.

- 5.06 Remove receive cord from terminal.

- 5.04 On board J, adjust the SIG potentiometer to obtain a reading of 6 db less power than obtained in 4.18.

Note: If no further adjustments or tests are to be made, refer to Section 363-101-507.