

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

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1.00 INTRODUCTION

1.01 This section specifies adjustments and tests required to prepare the receiving 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 receiving 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 (Receiving) unless otherwise specified.

2.00 ADJUSTMENT E — REGULATOR

2.01 On test set, turn SEND switch to MOD CARR position.

2.02 Turn CARR OSC RANGE switch to position that covers the frequency of the receiving filter on board C1. This frequency is shown on the bottom of board C1.

2.03 Turn CARR OSC FREQ knob until the KC dial indicates the frequency of the receiving filter on board C1.

2.04 Turn DET SENS-db switch to 0 position.

2.05 Operate and hold CAL OSC key.

2.06 Turn CARR OSC OUTPUT knob to obtain reading of 0 on DECIBEL meter.

2.07 Release CAL OSC key.

2.08 Turn AUDIO OSC FREQ switch to 1000~ position.

2.09 Turn DET SENS-db switch to -20 position.

2.10 Operate and hold B and CAL OSC keys.

2.11 Turn AUDIO OSC OUTPUT knob to obtain a reading of -6 on DECIBEL meter.

2.12 Release B and CAL OSC keys.

2.13 Repeat 2.04 through 2.12 until both requirements are maintained without readjustment.

2.14 Turn REC switch to DET HI-IMP position.

2.15 Leave DET SENS-db switch on -20 position.

2.16 Turn left-hand ATTENUATOR switch to 20 position and right-hand ATTENUATOR switch to 7 position.

2.17 Connect send cord from SEND jack on test set to CARR test point on board A; white to CARR, two black leads to yellow dot.

2.18 Connect receive cord from REC jack on test set to REC test point on board A; red to REC, black to yellow dot.

2.19 DECIBEL meter should read as follows:
 12 to 48 kc: Between -6.5 and -9.0 .
 60 to 96 kc: Between -6.5 and -10.0 .

Note: If a lower reading than required is measured (to left of -9.0), replace board C1. If DECIBEL meter reads higher than required (to right of -6.5), check for a faulty C1 or D board by replacing each in turn until requirement can be met.

2.20 Turn DET SENS-db switch to $+10$ position.

2.21 Remove receive cord from terminal.

2.22 Connect receive cord from REC jack on test set to IN test points on board F; red to left, black to right.

2.23 On board D, turn REC potentiometer to obtain a reading of -3 on DECIBEL meter. If reading cannot be obtained, replace board D and repeat Adjustment E.

2.24 Turn right-hand ATTENUATOR to 0 position.

2.25 DECIBEL meter should read between -1 and -3 . If requirement cannot be met, replace board D and repeat Adjustment E.

2.26 Turn left-hand ATTENUATOR to 30 position and right-hand ATTENUATOR to 2 position.

2.27 DECIBEL meter should read between -2.5 and -4 . If requirement cannot be met, replace board D and repeat Adjustment E.

2.28 Turn right-hand ATTENUATOR to 10 position.

2.29 DECIBEL meter should read between -8 and -12 . If requirement cannot be met, replace board D and repeat Adjustment E.

3.00 ADJUSTMENT F — EXPANDOR

3.01 Remove 600-ohm resistor from across VF test points on board A.

3.02 Remove receive cord from IN test points on board F and connect to VF test points on board A; red to left, black to right.

3.03 On test set, turn REC switch to BAL 600 Ω VF position.

3.04 Turn DET SENS-db switch to 0 position.

3.05 Turn left-hand ATTENUATOR to 20 position and right-hand ATTENUATOR to 7 position.

3.06 On board F, adjust EXP potentiometer to obtain a reading of -5 on DECIBEL meter. If reading cannot be obtained, refer to Section 363-101-509.

3.07 Remove receive cord from terminal.

4.00 TEST G — SUPERVISORY

4.01 On test set, turn DET SENS-db switch to $+20$ position.

4.02 Turn REC switch to DET HI-IMP position.

4.03 Connect the receive cord from REC jack on test set to SUPV test point on board D; red → to right, black to yellow dot.

4.04 DECIBEL meter should read between -11 and -7 . If requirement cannot be met, replace board D and repeat Adjustments E, F, and Test G.

- 4.05 On KS-14510 meter, turn selector to OHMS $\times 1$ position, short test leads together, and turn OHMS ADJ knob to read 0 ohms on OHMS scale.
- 4.06 Connect KS-14510 meter to TST test points on board J.
- 4.07 The KS-14510 meter should read 0 ohms on the OHMS scale.
- 4.08 On the test set, operate and hold the A key. (This removes carrier power from the send cord and is necessary to permit the *K101* or *DL* relay to release.)
- 4.09 Turn left-hand ATTENUATOR to 30 position and right-hand ATTENUATOR to 8 position.
- 4.10 Release the A key.
- 4.11 The KS-14510 meter should read 0 ohms on the OHMS scale.

Note: This is an indication that the *K101* or *DL* relay has operated. If requirement cannot be met, replace *K101* or *DL* relay and repeat 4.07 through 4.11. If requirement still cannot be met, refer to Section 363-101-509.

- 4.12 Remove send cord from terminal.
- 4.13 Connect 600-ohm resistor across CARR and yellow dot test points on board A.
- 4.14 If the KS-14510 meter needle falls back, indicating that the *K101* or *DL* relay has released, proceed to 4.15. If needle does not fall back, proceed as in Section 363-101-509.
- 4.15 Disconnect KS-14510 meter. Disconnect receive cord and remove 600-ohm resistor from CARR and yellow dot test points on board A.

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