P1 CARRIER TELEPHONE SYSTEM

ADJUSTMENTS AND MAINTENANCE

REPEATERS

PREPARATION FOR REPEATER AND TEST SET

1.00 PREPARATION FOR TEST SET

1.01 Ground the test set with 1W13B cord or equivalent, except when preparing for test at an in-service location where power is supplied to the repeater over the cable. *In this case, do not ground the test set.*

1.02 Operate BAT switch to ON position.

1.03 Turn BATTERY TEST switch to positions A1, A2, A3, A4, and B1, and observe that DECIBEL meter needle is to the right of the BAT mark for each position (see Fig. 1).

1.04 Turn BATTERY TEST switch to B2 position.

1.05 Remove the receive cord from the test set and turn the DET SENS-db switch to the +10 position. Turn ADJ B2 potentiometer until DECIBEL meter needle lines up with the BAT mark.

Note: Recheck these requirements at periodic intervals during the time the test set is turned on. If requirements in 1.03 and 1.05 cannot be met, replace test set batteries and repeat 1.03, 1.04, and 1.05.

1.06 Return BATTERY TEST switch to NORM position.

1.07 Turn NOISE FLT switch to OUT position.

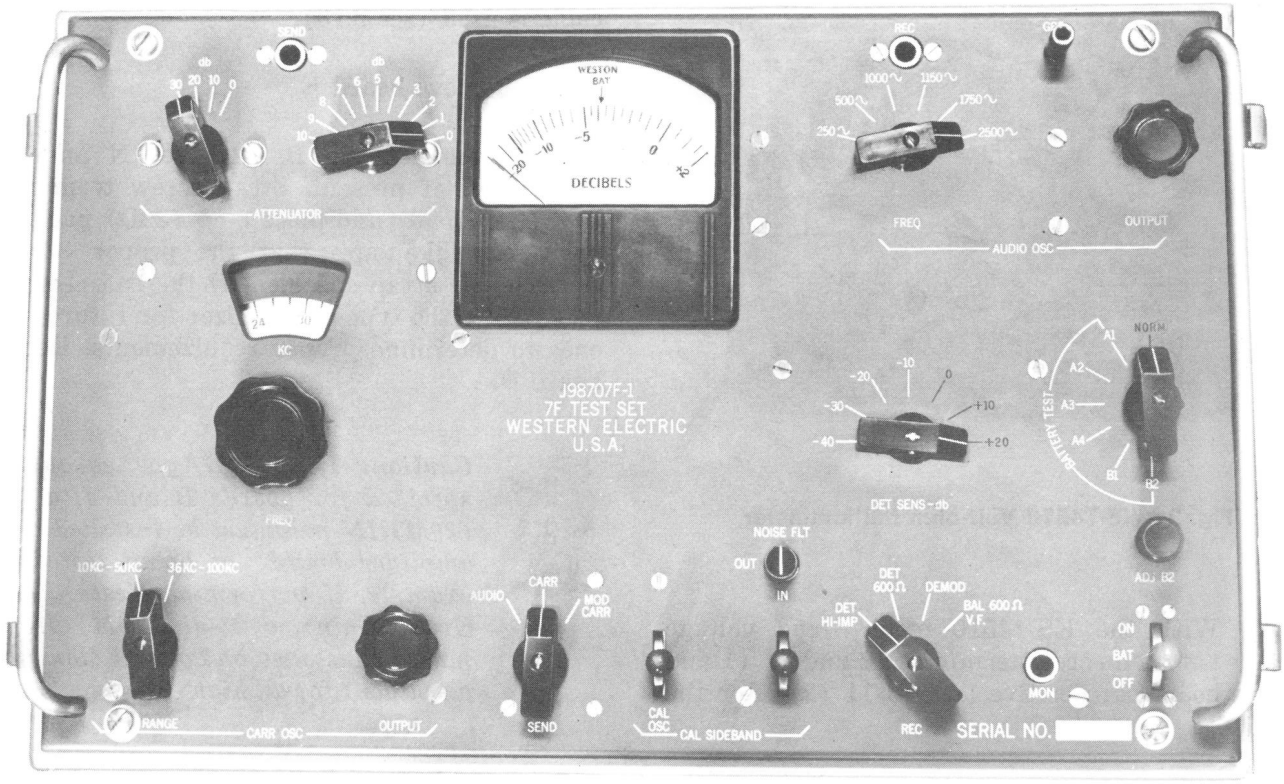

Fig. 1 — 7F Test Set

2.00 PREPARATION FOR REPEATER

2.01 On KS-14510 meter, turn selector switch to DC VOLTS, 60 position (see Fig. 2).

Caution: Do not remove board E when making voltage measurements covered in 2.02.

Fig. 2 — KS-14510 Volt-ohm Milliammeter

2.02 With the KS-14510 meter, read voltage between screw terminals 12 and 11 (1 and 2) on board E; positive lead to 11 (2). For the 800AA line board, use screw terminals 27 and 26 (1 and 2); positive test lead to 26 (2).

Note: Numbers shown in parentheses are binding posts on 386A apparatus case terminal block.

Requirement: 21.5 to 23.5 volts

2.03 Move negative test lead to screw terminal 25 (3) on board E. For the 800AA line board, remove board E and move negative test lead to terminal connector 27 on the rear of board E.

2.04 On KS-14510 meter, turn selector to DC VOLTS, 12 position.

Requirement: 5 to 7 volts

If requirement cannot be met, replace board E.

2.05 If adjustment is being performed at repeater location, remove carrier lines from binding posts 7, 8, 9, and 10 on 386A apparatus case terminal block, except when power over the cable is used (see 2.13).

2.06 Remove board E.

2.07 Remove board B. Remove IN and OUT pads if present. Strap screw terminals 1 to 3 (OUT pad) and place 8-db (29D) pad in IN position. Make sure that the proper 337-type equalizer or strap specified by the engineer is in place. Note the type of equalizer for future reference to determine proper requirements. Reinsert board B.

Caution: If no 337-type equalizer is specified for boards B and J, a 24-db (29M) IN pad must be installed on the amplifier board not being tested. For example, if performing Test A (High Group Gain), a 24-db (29M) IN pad must be installed on board J (low group amplifier) for all high group tests.

2.08 Remove board J and IN and OUT pads if present. Make sure that the proper 337-type equalizer or strap specified by the engineer is in place. Note the type for future reference to determine proper requirements. Strap screw terminals 1 to 3 (OUT pad). Install a pad in the IN position as follows:

Equalizer	Strap	IN Pad
None	7 - 9	24 db (29M)
337A, B, C	None	8 db (29D)

2.09 Replace board J.

2.10 Insert dummy regulator boards [800AF equipped with 14-db (29G) pads] into positions C and H.

2.11 Reinsert board E.

2.12 The adjusting procedure is based on the high group frequencies (60 to 96 kc) being transmitted from the central office. If the low group frequencies are transmitted from the central office (reverse direction), the procedure is similar; when different binding posts or values are used, they are indicated by REV.

2.13 When power over the cable is being used as the power source for the repeater, do not disconnect the line toward the source of power from binding posts 9 and 10 (7 and 8 REV) on the 386A apparatus case terminal block. Remove the other line from binding posts 7 and 8 (9 and 10 REV).

2.14 Connect the receive cord to the LGT LINE test points (13 and 12) (HGT LINE, 14 and 12 REV) and measure the input power to the repeater. If the input power is greater than —30 dbm (for example, —20 dbm), remove the line boards (board A) from all central office terminals (remote terminals REV).

2.15 At this time, check to be certain that all repeater boards are pushed as far back as they will go in the connector.