

50-90577-01  
EO-9054-01  
*assembly equipment*

GENERAL TESTING APPARATUS REQUIREMENTS

1. GENERAL

- 1.01 This section covers the testing apparatus generally required in carrying out transmission tests on the exchange area circuits and equipment, associated with local and toll offices in manual, step-by-step and panel areas.
- 1.02 This section is reissued to include reference to an auxiliary transmission test set J-94716-A which is now standard.
- 1.03 Operating information now specified in the various sections covering testing methods is based on the equipment and circuit arrangements of two preliminary models of the new standard auxiliary test set, and this information is retained since duplicates of the preliminary models have been constructed and are in use in the field.
- 1.04 This section coordinates the key settings and jack designations specified for the preliminary sets with those provided on the standard auxiliary test set.

2. TRANSMISSION MEASURING SETS

2.01 The description and operation of the various types of transmission measuring sets used in the testing work are covered in the following sections:

Type of Measuring Set	Section No.
No. 1-A	K30.01
No. 1-B	K30.02
No. 1-C	K30.03
No. 3-B	K30.10

2.02 The No. 3 type transmission measuring set and associated oscillator are, in general, used in testing exchange area circuits and equipment and the testing methods are set up on this basis. However, where a No. 3 type set is not available, a No. 1 type measuring set and associated oscillator may be used.

3. OSCILLATORS

3.01 The description and operation of the oscillators associated with the various types of transmission measuring sets mentioned in 2.02 are covered in the following sections:

Type of Oscillator	Section No.
No. 2-A	K31.01
No. 2-B	K31.02
No. 3-A	K31.10
No. 3-B	K31.11

4. AUXILIARY TESTING APPARATUS

4.01 To facilitate certain phases of the testing work, it is often desirable to utilize auxiliary apparatus or circuits. The more important of these are covered below.

No. 220 Plug

4.02 The No. 220 plug is used to replace the operator's telephone set when testing operators' telephone circuits. This plug provides a 40-ohm resistance in place of the operator's transmitter and a 200-ohm resistance in place of the operator's receiver.

4.03 The description and operation of the No. 220 plug are covered in Section K39.01.

Auxiliary Transmission Test Units and Sets

4.04 The principle functions of the auxiliary transmission test set are to provide various holding bridges and control arrangements and to place circuits to be tested in the talking condition, either directly or in association with central office testing equipment. The test set does not, in itself, apply any test conditions.

4.05 Three arrangements of auxiliary test units or test sets are in use. Tables 1 and 2, give respectively, corresponding key settings and jack designations for the three arrangements. The features of these three sets are covered in the following paragraphs.

Auxiliary Test Unit - Section K25.01

4.06 This auxiliary test unit, the circuit of which is shown in Section K25.01, is an earlier model of the present standard auxiliary test set and is generally suitable for use with panel circuits only. All the specified test settings in Section K25.01 are based on this arrangement, but can be converted for use with the later model (shown in Section K20.11) or the standard set (J94716A) by use of Tables 1 and 2.

Auxiliary Test Unit - Section K20.11

4.07 This auxiliary test unit, the circuit of which is shown in Section K20.11 (this section), is a preliminary model of the present standard auxiliary test set and is suitable for use with both panel and step-by-step circuits. Figure 1 shows the face equipment and Figure 2 shows the circuit diagram.

SECTION K20.11

4.08 All testing methods in the standard and provisional standard sections of subdivisions K23, K24 and K28 are based on this arrangement. Those settings can be converted for use with the standard set (J94716A) by the use of Tables 1 and 2.

Auxiliary Transmission Test Set - J94716A

4.09 The description and operation of this set are covered in Section K39.02.

Other Apparatus

4.10 Other apparatus, such as No. P3C cords, switchboard cords, patching cords, retardation coils, etc., are required in the testing work. The use of such apparatus is covered in detail in the various sections.

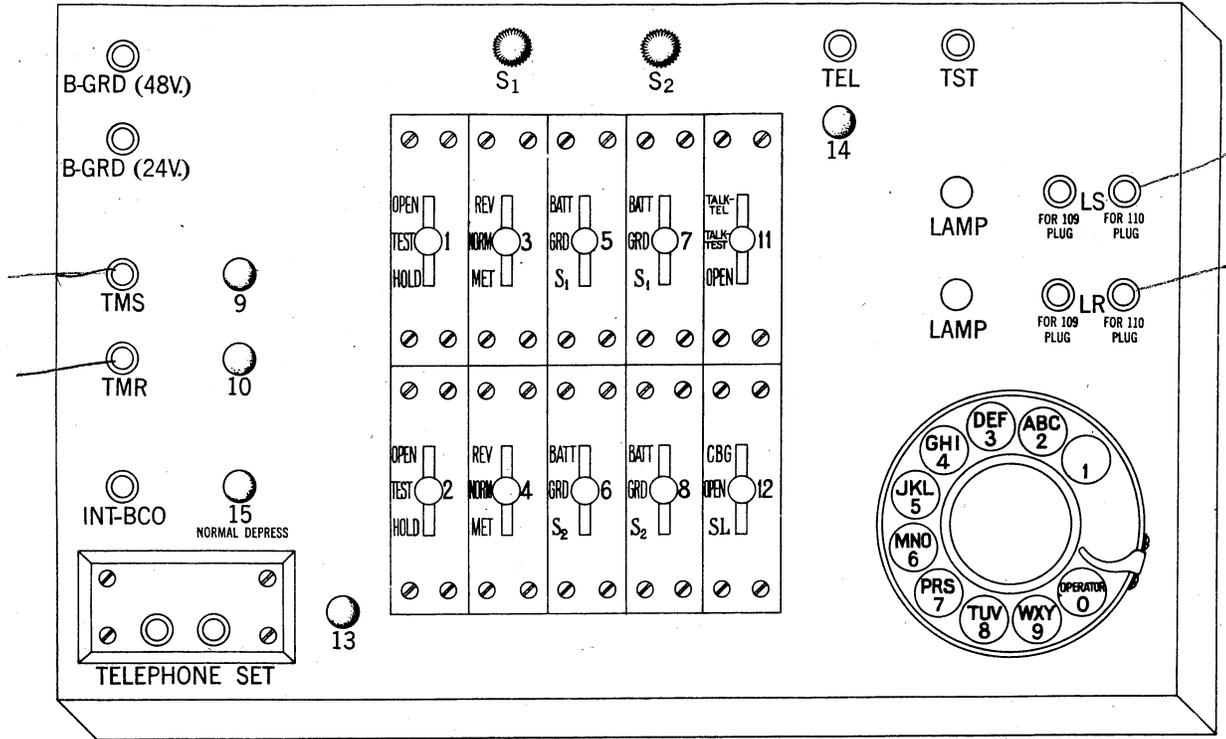
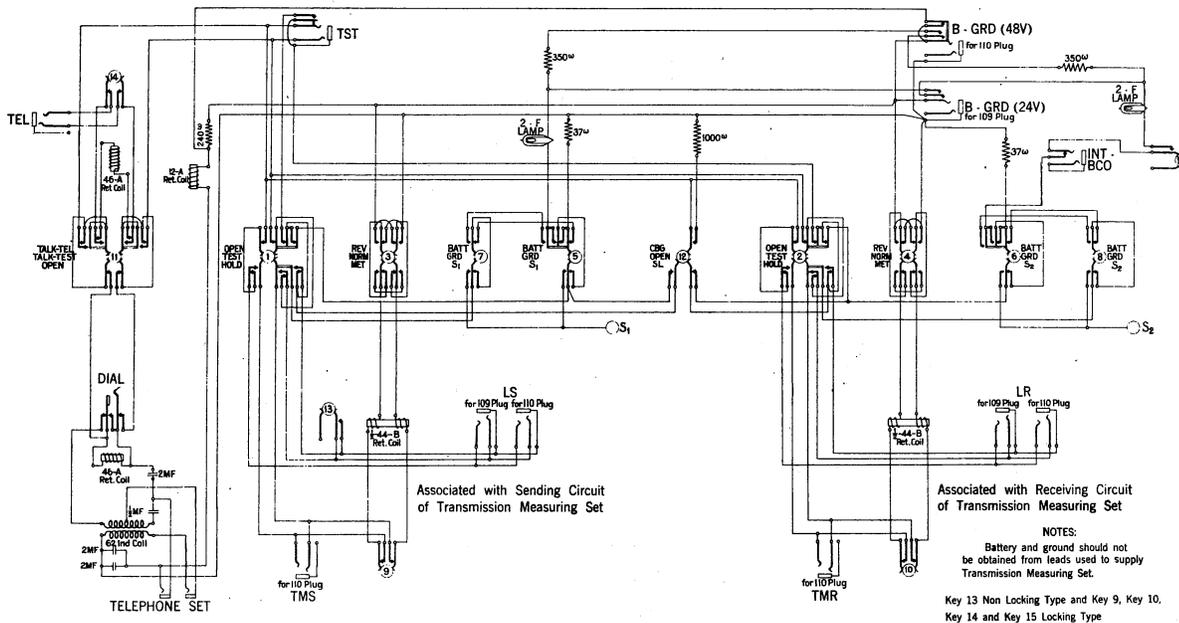


FIG. 1. - AUXILIARY TEST UNIT - FACE VIEW



NOTES:  
Battery and ground should not be obtained from leads used to supply Transmission Measuring Set.  
Key 13 Non Locking Type and Key 9, Key 10, Key 14 and Key 15 Locking Type

FIG. 2. - AUXILIARY TEST UNIT - CIRCUIT DIAGRAM

TABLE 1

Corresponding Key Settings  
Non-Standard Auxiliary Test Units  
and  
J-94716-A Auxiliary Transmission Test Set

Aux. Test Unit (Non-Standard) per Section K25.01		Section K20.11		Aux. Trans. Test Set - J-94716-A Section K39.02		Key	Position
Key	Position	Key	Position	Key	Position	Key	Position
1 & 2	OPEN TEST HOLD	1 & 2	OPEN TEST HOLD	1 & 2	OPEN Normal HOLD		
3 & 4	REV NORM MET	3 & 4	REV NORM MET	3 & 4	REV Normal MET		
5	BATT GRD S1	5	BATT GRD S1	5	BAT Normal S1		
6	BATT GRD S2	6	BATT GRD S2	6	BAT Normal S2		
7 & 8	BATT GRD OPEN	7 & 8	BATT GRD -	7 & 8	BAT Normal -		
		7	BATT GRD S1	7	BAT Normal S1		
		8	BATT GRD S2	8	BAT Normal S2		
9	Depressed Normal -	9	Depressed Normal -	9	OSB Normal		
10	Normal Depressed -	10	Normal Depressed -		ORB		
11	OPEN O-SEC TALK	11	TALK-TEL - TALK-TEST	11	TLK - Normal		
		11	TALK-TEL TALK-TEST OPEN	11	TLK Normal -		
12	CBG OPEN -	12	CBG OPEN SL	12	CG Normal SL		DISC-T
		13	Normal Depressed -	-	(See Note)		
		14	Normal Depressed -			13	Normal DISC-L
		15	Normal Depressed -	14	Normal ORS		

NOTE: Use 109 or 110 plug with ring and sleeve strapped in a spare LR jack.

TABLE 2  
 Corresponding Jack Designations  
 Non-Standard Auxiliary Test Units  
 and  
 J-94716-A Auxiliary Transmission Test Set

<u>Aux. Test Unit (Non-Standard) per</u>		<u>Aux. Trans. Test Set J-94716-A</u>
<u>Section K25.01</u>	<u>Section K20.11</u>	<u>Section K39.02</u>
TEL SET	TEL SET	TEL
TMS	TMS	TMS
TMR	TMR	TMR
LS	LS (2 jacks)	LS (4 jacks)
LR	LR (2 jacks)	LR (4 jacks)
-	LR (With spl. tip-sleeve cord)	TL3 (with standard cord)
-	INT-BCO	TL4
TST	TST	TST
TEL	TEL	TLK
B-GRD	B-GRD (24V)	BAT-G (24V)
-	B-GRD (48V)	BAT-G (48V)