CIRCUIT NOTES:

101.

FEATURE OR OPTION	IMP	FOR USE WITH	RATING	PWR dbm	PROVIDE FIG.	APP OR WRG	QUANT. PER APPEARANCE	PER BLOCK DIAG.
TESTING POWER SUPPLY JACK CIRCUIT ONE OUTLET PER MW DIST NETWORK SEE NOTE 108 [(FOR TANDEM OUTLETS SEE NOTE 105) MFR DISC.]	600 OHMS	241 TYPE PLUG	MD	-25	1,8,10	D	1	2
			MD	-35	1,8,10	E	1	2
				0	1,6,10		1	1
				-15	1,8,10	B	1	2
			MD	-25	1,8,12	K	1	2
			MD	-35	1,8,12	M	1	2
				+7	1,6,11		1	1
				-25	1		2	
					8	F,P	2	3
					10		1	
				-25	1		2	
					8	P	1	3
					12		1	
				-2'	1		2	
					8	F,R	2	3
					10		1	
				-26	1		2	
					8	R	1	3
					12		1	
				-35	1		2	
					8	F,S	2	3
					10		1	
				-35	1		2	
					8	S	1	3
					12		1	
		310 TYPE PLUG		+7	2,6,11		1	1
				0	2,6,10		1	1
				-15	2,8,10	B	1	2
				-16	2,12		1	
			MD	-25	2,8,12	K	1	2
			MD	-35	2,8,12	M	1	2
			A&M	+4	2,6,8,11	H	1	2
			A&M	-13	2,6,8,10	A	1	2
			A&M	-16	2,8,10	F	1	2
			MD	-25	2,8,10	D	1	2
			MD	-35	2,8,10	E	1	2
				-25	2		2	
					8	F,P	2	3
					10		1	
				-25	2		2	
					8	P	1	3
					12		1	
				-26	2		2	
					8	F,R	2	3
					10		1	
				-26	2		2	
					8	R	1	3
					12		1	
				-35	2		2	
					8	F,S	2	3
					10		1	
				-35	2		2	
					8	S	1	3
					12		1	
	900 OHMS	310 TYPE PLUG		0	2,7,14		1	1
				-15	2,8,14	G	1	2
			MD	-25	2,8,16	N	1	2
			A&M	0	2,7,14		1	1
			A&M	-15	2,8,14	G	1	2
			MD	-25	2,8,14	J	1	2
				-25	2		2	
					8	U,Q	2	3
					14		1	
				-25	2		2	
					8	Q	1	3
					16		1	
				-35	2		2	
					8	U,T	2	3
					14		1	
				-35	2		2	
					8	T	1	3
					16		1	
REP. COIL FOR ISOLATION (SEE NOTE 107)	600 OR 900	ANY OF ABOVE CKTS.			17		1	1 OR 2 OR 3
RECEIVING JACK CIRCUIT	600	FOR USE WITH 241 TYPE PLUGS			3		1	
	900	FOR USE WITH 310 TYPE PLUGS			13		1	
					5		1	
SENSITIVITY CONTROL FOR AMP-RECT CKT					9		1	

RECORD OF FIGURES, WIRING AND APPARATUS CHANGES								
CHANGED ON ISS	IF JOB RECORDS DO NOT SPECIFY	THIS OPTION WAS FURN	SEE NOTE	USE IN CIRCUIT STD	A & M	MD	

102.

PAD PER FIG. 8 LOSS	IMP OHMS	RES (A)&(B)	RES (C)&(D)	OPTION	RES CODE	RATING
15	600	816	856	B	221A	
25	600	2670	673	D		MD
35	600	8450	∞19	E		MD
13	600	634	942	A		
16	600	920	825	F		
3	600	106	3480	H		
9	600	370	1260	K		MD
19	600	1320	750	M		MD
9	900	556	1890	N		MD
15	900	1230	1290	G		
16	900	1380	1240	U		
25	900	3970	1010	J		MD
9	600	369.5	1260	P	106C SEE NOTE 301	
9	900	554.3	1890	Q		
10	600	427.0	1155	R		
19	600	1320	751.5	S		
19	900	1980	1127.5	T		

FIGURES AND OPTIONS ON THIS DWG CKT FIG.		APP OR WIRING	
1	14	A	P
2	15	B	S
3	16	D	T
4	17	E	U
5	18	F	
6	19	G	
7		H	
8		J	
9		K	
10		M	
11		N	
12		P	
13		Q	

103. TESTING POWER SUPPLY JACKS PER FIG. 1 AND 2 SHOULD BE DESIGNATED WITH FREQUENCY OR FUNCTION, POWER AND IMPEDANCE.

FOR EXAMPLE:

1. (1000) (-15) (600)
2. (1000) (0) (900)
3. (CAL) (-16) (600)

FOR TYPICAL JACK LAYOUT (VFPB), SEE FIG. A OF NOTE 202.
FOR TYPICAL APPLICATIONS SEE BD1, BD2, AND BD3.

104. PRIOR TO ISS 3B, CONNECTION OF FIG. 10 TO G dbm GENERATOR OUTLETS DID NOT SPECIFY IMPEDANCE.

105. EACH OUTLET SHOULD BE SUPPLIED FROM A SEPARATE DIST NETWORK, EXCEPT THAT A CAL JACK IS ADDED FOR LEVELS BELOW -16 dbm (SEE FIG. BD3). HOWEVER, IN RARE CASES IF OUTLETS MUST BE FED IN TANDEM FROM A SINGLE DIST NETWORK, THE FOLLOWING MUST BE OBSERVED. THE TANDEM OUTLETS MUST BE IN A SINGLE BAY LINE-UP, AND ADJUSTMENT MUST BE MADE BY MEASURING AT JACK NEAREST CENTER OF TANDEM ARRAY. FURNISH FIGURES AS SPECIFIED IN NOTE 101 PLUS ADDITIONAL FIGS. 1 OR 2 AS REQUIRED, WITH SPECIFIED FIG. 6 OR 7 CONNECTED TO LAST OUTLET JACK. ALL OUTLETS MUST MEET ACCURACY REQUIREMENTS AS GIVEN IN BSP SECTIONS 103-335-500 AND 103-335-512. TO MEET BSP ADJ. REQT, PAIR RESISTANCE BETWEEN 1ST AND LAST OUTLET SHOULD NOT EXCEED 1.4 OHMS IN 600-OHM CKT, OR 2.1 OHMS IN 900-OHM CIRCUIT. SEE THE TABLE OF NOTE 204 FOR EQUIVALENT FOOTAGE OF VARIOUS WIRE GAUGES. (MFR DISC.)

106. TERMINALS ARE OPTIONAL. WHEN REQUIRED, ARE LOCATED IN BAY TERMINAL BLOCK. NUMBERS ASSIGNED BY APPROPRIATE APPLICATION SCHEMATIC. PRIOR TO ISSUE 5B, TERMINALS WERE NOT SHOWN IN T OR R LEADS IN FIGS. 1 AND 2.

107. THE REPEAT COIL MAY BE USED WITH ANY ARRANGEMENT WHICH MAY BE USED FREQUENTLY FOR CALIBRATING UNBALANCED TEST EQUIPMENT, I.E., ONE WHICH HAS ONE TERMINAL GROUNDED.

108. EACH OUTLET SHOULD BE SUPPLIED FROM A SEPARATE DIST NETWORK, EXCEPT THAT A CAL JACK IS ADDED FOR LEVELS BELOW -16 dbm (SEE FIG. BD3).

109. THIS FIG. PERMITS A TERMINATED MEASUREMENT ONLY. IT MAY NOT BE USED FOR A BRIDGED MEASUREMENT.

FIG. 1
TESTING POWER SUPPLY JK CKT FOR USE WITH 241 TYPE PLUGS (SEE NOTE 108)

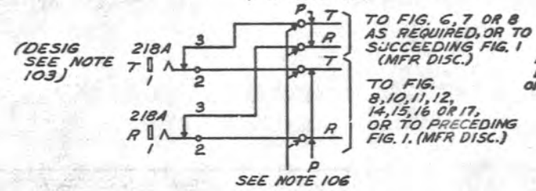


FIG. 8
PAD
FOR OPTIONS, VALUES AND CODES OF RESISTORS SEE NOTE 102

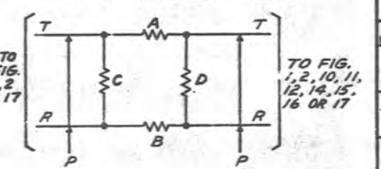


FIG. 2
TESTING POWER SUPPLY JK CKT FOR USE WITH 310 TYPE PLUGS (SEE NOTE 108)

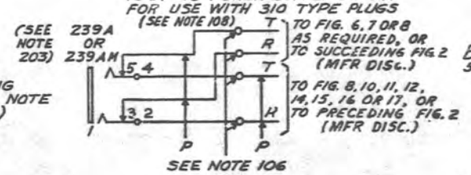


FIG. 9
SENSITIVITY CONTROL FOR AMP-RECT CKT (ANALOG MEAS CKT)

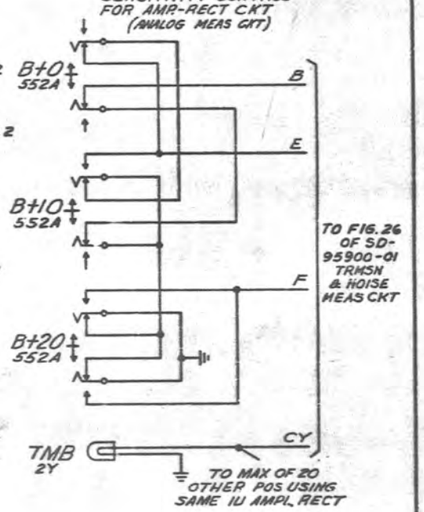


FIG. 3
600 OHM RECEIVING JACK CKT FOR USE WITH 241 TYPE PLUGS (ANALOG MEAS CKT)

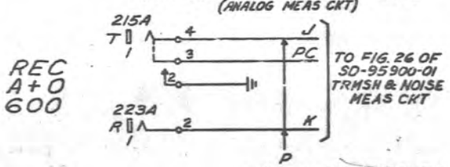


FIG. 4 (MFR DISC.)
600 OHM RECEIVING JK CKT FOR USE WITH 310 TYPE PLUGS

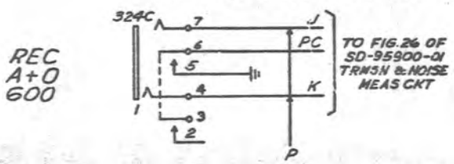


FIG. 5
900 OHM RECEIVING JK CKT FOR USE WITH 310 TYPE PLUGS (ANALOG MEAS CKT)

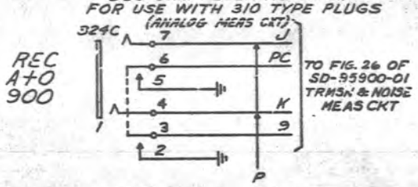


FIG. 6
IDLE LOAD RESISTOR 600 OHM

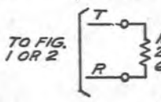
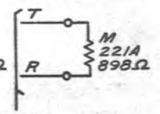
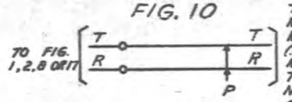


FIG. 7
IDLE LOAD RESISTOR 900 OHM



B+0 B+10 B+20

FIG. 10



DWG ISSUE	CD ISSUE	DWG	CD	DWG	CD
1	1	2A	2A	3B	3A
4D	3C APP ID	6B	3B APP 2B		

DWG ISSUE	CD ISSUE	DATE ISSUED	DRWN	APP'D
6B	4B	11-16-66	ZEM HH	DMC RDS WFD
7D	4B APP 1D	7-12-67	SDM CAS	DMC RDS WFD
8B	4B APP 2B	4-28-71	CAS -	SEG EGS WFD
9B	4B APP 3B	8-7-73	DK -	DC WCE WCE

ED-63770-31
ED-97266-(30)
J99300Y-( )
J99300W-( )
J99285L-( )
J99285K-( )
J99285J-( )
J99285H-( )
J68832L-( ) J98615CH-( )
J68832J-( ) J98615CG-( )
~~J98615F-( )~~ J98615CF-( )
~~J98615E-( )~~ J98615CE-( )
~~J98615B-( )~~ J98615CD-( )
~~J98615C-( )~~ J98615CC-( )
~~J98615B-( )~~ J98615CB-( )
~~J98615A-( )~~ J98615CA-( )
ED-97128-30

EQUIPMENT INFO

ISSUE 9B

PARTIALLY REPLACES SD-59432-01.

SD-95162-02 IN20

COMMON SYSTEMS
TRANSMISSION MEASURING
1000 HZ OUTLETS, RECEIVING JACKS AND CONTROLS

AT & TCO STANDARD

(2)

BELL TELEPHONE LABORATORIES INCORPORATED

SHEET SIZE 6S

SD-95162-02-1
2 SHEETS

SD-95162-02-1

FIG. 11

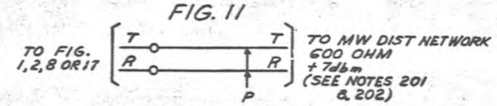


FIG. 12

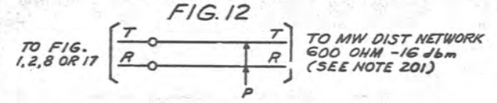


FIG. 13
600 OHM RCVG JK CKT FOR USE WITH 310 TYPE PLUG (ANALOG MEAS CKT)

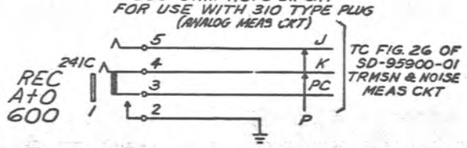


FIG. 14

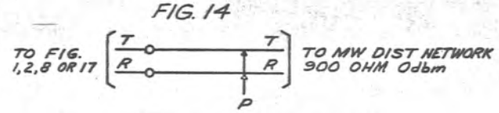


FIG. 15 (MFR DISC.)

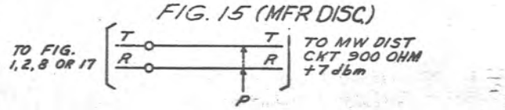


FIG. 16

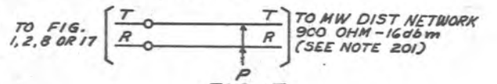


FIG. 17
REPEATING COIL FOR ISOLATING UNBALANCED TERMINATIONS (1 TERMINAL GROUNDED) 111C OR 119E REP COIL 600:600

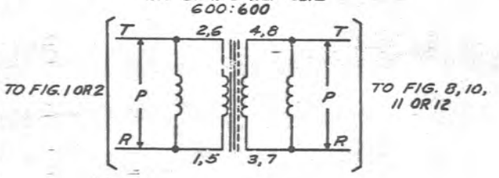


FIG. 18
(SEE NOTE 109)
600 OHM RECEIVING JACK CIRCUIT FOR USE WITH 241 TYPE PLUGS (DIGITAL MEAS CKT)

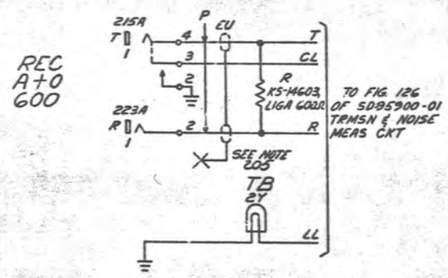
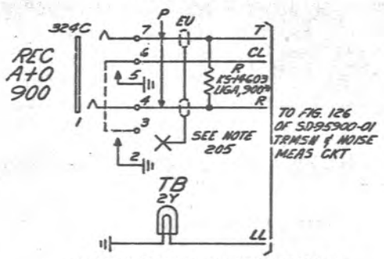
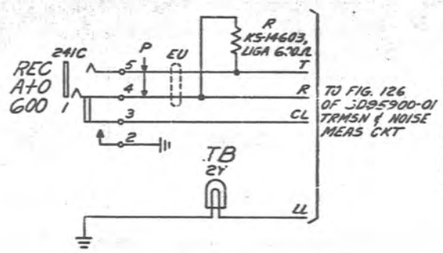


FIG. 19
(SEE NOTE 109)
900 OHM RECEIVING JACK CIRCUIT FOR USE WITH 310 TYPE PLUG (DIGITAL MEAS CKT)

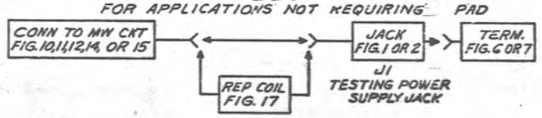


* 900 OHM RESISTOR SHALL CONSIST OF (2) 1800 OHMS KS-14603, L1GA RESISTORS IN PARALLEL IN ORDER TO ACHIEVE REQUIRED ACCURACY WITH STANDARD VALUE RESISTORS.

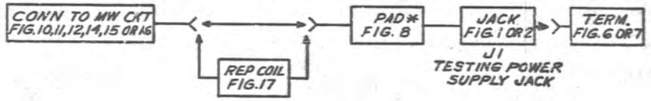
FIG. 20
(SEE NOTE 109)
600 OHM RECEIVING JACK CIRCUIT FOR USE WITH 310 TYPE PLUG (DIGITAL MEAS CKT)



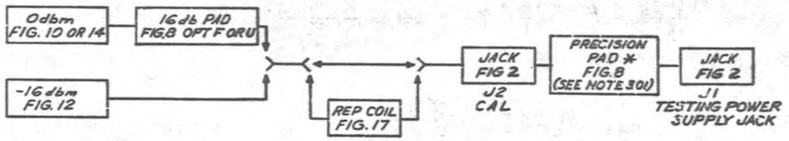
BD1
FOR APPLICATIONS NOT REQUIRING PAD



BD2
FOR APPLICATIONS REQUIRING A PAD (±.07 DB AVG)



BD3
FOR APPLICATIONS REQUIRING A PRECISION PAD (±.02 DB AVG)



* PAD TO BE SUPPLIED PER APPROPRIATE OPTION IN NOTE 102

EQUIPMENT NOTES:

201. KEEP TESTING POWER SUPPLY JACK OUTLETS ARRANGED IN ORDER OF INCREASING POWER, LEFT TO RIGHT, AND PHYSICALLY SEPARATED FROM EACH OTHER TO AVOID ERROR IN THEIR USE (SEE FIG. A OF NOTE 202).

202. DESIGNATION OF +7 dbm OUTLET SHOULD BE STAMPED AGAINST A RED BACKGROUND TO AID IN READY IDENTIFICATION (SEE FIG. A).

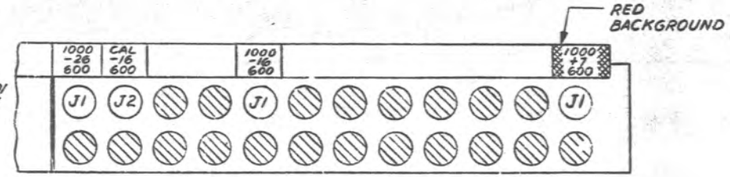


FIG. A

JACK STRIP LAYOUT (INCREASING POWER, LEFT TO RIGHT) AND DESIGNATIONS FOR MW OUTLETS IN VFPa APPLICATION. BLANK SPACES MAY BE EQUIPPED AS REQUIRED, EXCEPT NO ADDITIONAL MW JACKS MAY BE INSTALLED.

203. THE 239A JACK HAS SOLDER TERMINALS, THE 239AM JACK HAS WIRE-WRAP TERMINALS. EQUIPMENT INFORMATION SHOULD SPECIFY WHICH TYPE OF JACK IS REQUIRED.

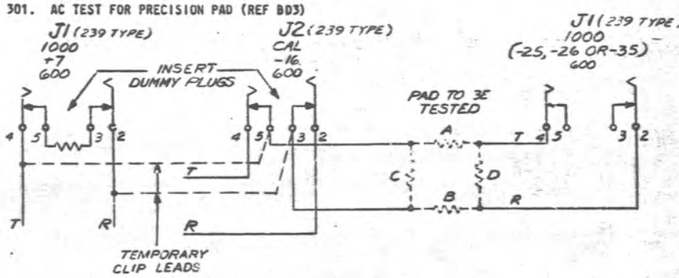
204. (MFR DISC.) THE FOLLOWING TABLE SHOWS THE MAXIMUM ALLOWABLE FOOTAGE BETWEEN THE FIRST AND LAST OUTLET JACKS. SEE NOTE 105.

WIRE GAUGE	PAIR FT. PER 0.01 db	
	600 Ω CKT	900 Ω CKT
16	175	260
18	110	165
19	85	130
20	70	100
22	40	65
24	25	40
26	15	25

205. THE SHIELD IS NOT GROUNDED IN THIS CIRCUIT.

INFORMATION NOTES:

301. AC TEST FOR PRECISION PAD (REF BD3)



NOTE:

TO PREPARE FOR TESTING PADS IN OUTLETS HAVING LEVELS LOWER THAN -16 DBM (MEASURING LIMIT OF 22A MW REF METER), PERFORM FOLLOWING STEPS (STEP 3 MUST PRECEDE STEP 4).

1. INSERT DUMMY PLUG INTO J2(CAL, -16,600) JACK.
2. INSERT 22A MW REF METER INTO J1(1000, -25 OR -26 OR -35,600) JACK.
3. TEMPORARILY CONNECT CLIP LEADS FROM PAD SIDE OF J2 JACK (TERMINALS 5 AND 3 OF 239 TYPE JACK) TO INPUT SIDE OF J1(1000, +7,600) JACK (TERMINALS 4 AND 2 OF 239 TYPE JACK).
4. INSERT DUMMY PLUG INTO J1(1000, +7,600) JACK.
5. AFTER COMPLETING CHECK, REMOVE PLUGS AND CLIP LEADS IN REVERSE ORDER (STEPS 4,3,2,1).

DRAWING ISSUE

6B	ZS NA AH
7D	SW CX WF
8B	

ISSUE 9B

1000 HZ OUTLETS, RECEIVING JACKS AND CONTROLS (2)

BELL TELEPHONE LABORATORIES INCORPORATED

SD-95162-02-2

SD-95162-02-2