

APPARATUS INDEX

EQPT LOC	APP FIG.	
	NO.	SH NO.
CIRCUIT PACK		
02	1	C1
06		
08		
12		
16		
18		
22		
26		
28	1	C1
30		
32		

DESIG	LOCATION		
	FS	APP FIG.	EQPT
RESISTOR			
R1	1D0	1	
R2	1D1		
R3	1D1		
R4	1D2		
R5	1D2		
R6	1A1		
R7	1D0		
R8	2C1		
R9	1D1	1	

DESIG	LOCATION		
	FS	APP FIG.	EQPT
RELAY			
A	1F1	1	
B	1F2	1	

TRANSFORMER			
DESIG	FS	APP FIG.	EQPT
T	1B2	1	

DESIG	LOCATION		
	FS	APP FIG.	EQPT
CAPACITOR			
C1	1D1	1	
C2	1D1		
C3	1D2		
C4	1D1		
C5	1A2		
C6	1B2		
C7	1B2		
C8	1B2		
C9	1D2		
C10	1C1	1	

VARISTOR			
DESIG	FS	APP FIG.	EQPT
RV1	1B2	1	

INDUCTOR			
DESIG	FS	APP FIG.	EQPT
L	1B2	1	

KEY			
DESIG	FS	APP FIG.	EQPT
PWR OFF		SEE APP FIG.	1

LAMP			
DESIG	FS	APP FIG.	EQPT
PWR OFF	2C1	1	

LEAD INDEX

DESIG	LOCATION	
	FS	CAD
MASTER SCANNER CKT		
SC(00)0	1E4	1G0, 1E7
SC(00)1	1F4	SEE NOTE 105
SC(00)2	1F4	SEE NOTE 105
SC(00)3	1E4	1G0, 1E7
SC(01)0	1A8	1E7
SC(01)1	1A8	1E7
SC(01)2	1A8	1E7
SC(01)3	1A8	1E7
SC(02)0	1B8	1E7
SC(02)1	1B8	SEE NOTE 105
SC(02)2	1B8	SEE NOTE 105
SC(02)3	1B8	1E7
SC(03)0	1C8	1E7
SC(03)1	1C8	SEE NOTE 105
SC(03)2	1C8	SEE NOTE 105
SC(03)3	1C8	1E7
SC(04)0	1D8	1E7
SC(04)1	1D8	SEE NOTE 105
SC(04)2	1C8	SEE NOTE 105
SC(04)3	1C8	1E7
SC(05)0	1D8	1E7
SC(05)1	1D8	SEE NOTE 105
SC(05)2	1D8	SEE NOTE 105
SC(05)3	1D8	1E7
SC(06)0	1E8	1E7
SC(06)1	1E8	SEE NOTE 105
SC(06)2	1E8	SEE NOTE 105
SC(06)3	1E8	1E7
SC(07)0	1F8	1E7
SC(07)1	1F8	SEE NOTE 105
SC(07)2	1F8	SEE NOTE 105
SC(07)3	1F8	1E7

DESIG	LOCATION	
	FS	CAD
MISC TRUNK FRAME SCANNER CKT		
SC(01)0	1A8	1E0
SC(01)1	1A8	1E0
SC(01)2	1A8	1E0
SC(01)3	1A8	1E0
SC(02)0	1B8	1E0
SC(02)1	1B8	SEE NOTE 105
SC(02)2	1B8	SEE NOTE 105
SC(02)3	1B8	1E0
SC(03)0	1C8	1E0
SC(03)1	1C8	SEE NOTE 105
SC(03)2	1C8	SEE NOTE 105
SC(03)3	1C8	1E0
SC(04)0	1D8	1E0
SC(04)1	1D8	SEE NOTE 105
SC(04)2	1C8	SEE NOTE 105
SC(04)3	1C8	1E0
SC(05)0	1D8	1E0
SC(05)1	1D8	SEE NOTE 105
SC(05)2	1D8	SEE NOTE 105
SC(05)3	1D8	1E0
SC(06)0	1E8	1E0
SC(06)1	1E8	SEE NOTE 105
SC(06)2	1E8	SEE NOTE 105
SC(06)3	1E8	1E0
SC(07)0	1F8	1E0
SC(07)1	1F8	SEE NOTE 105
SC(07)2	1F8	SEE NOTE 105
SC(07)3	1F8	1E0

MISC CKT FOR ALL FRAMES		
DESIG	FS	CAD
+24	2E3	
+24(B)	2E2	1H0, 1H7
-48	2D3	1A0
-48(A)	2D2	1A0, 1A7
GRD	2D3, 2E3	1B0
GRD(A)	2D2	1A7, 1B0
GRD(B)	2E2	1H0, 1H7
PØ	2D2	1H7

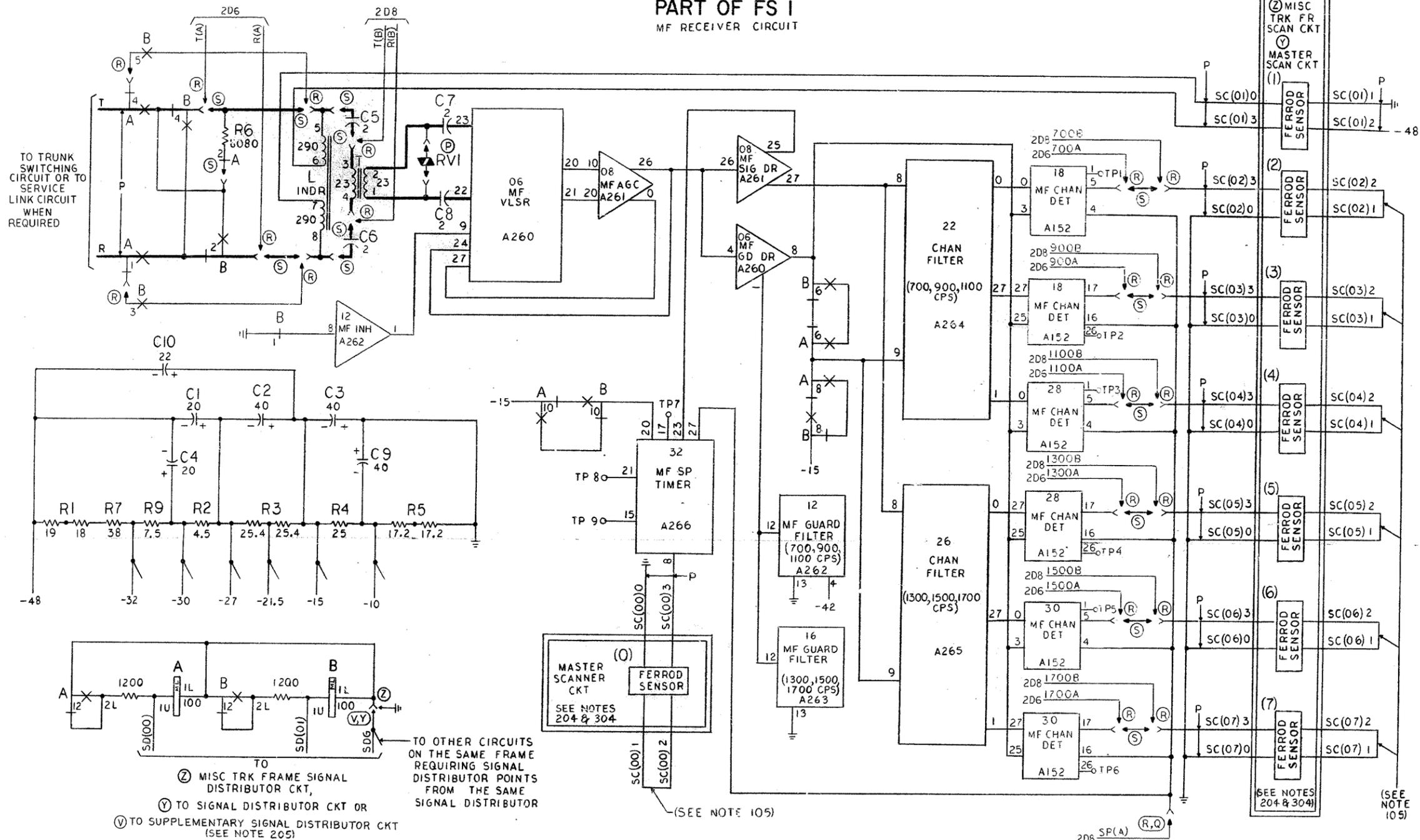
MISC TRUNK FRAME SIGNAL DISTRIBUTOR CKT		
DESIG	FS	CAD
SD(00)	1F1	1C0
SD(01)	1F1	1C0

SERVICE LINK CKT OR TRUNK SWITCHING CKT		
DESIG	FS	CAD
R	1B0	
T	1B0	

SIGNAL DISTRIBUTOR CKT OR SUPL SIGNAL DISTRIBUTOR CKT		
DESIG	FS	CAD
SD(00)	1F1	1C7
SD(01)	1F1	1C7
SDG	1F1	1G7

MF RECEIVER		DWG SIZE	ISSUE
		65	10B
BELL LABORATORIES	SD-1A246-01-	A2	

PART OF FS I
MF RECEIVER CIRCUIT

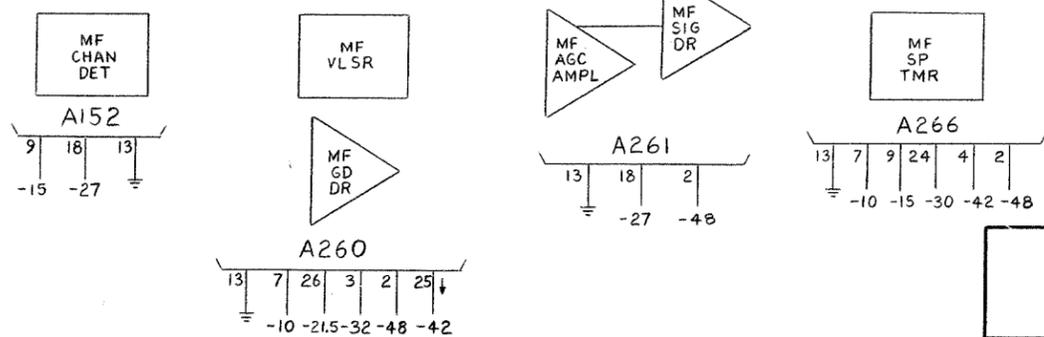


TO TRUNK SWITCHING CIRCUIT OR TO SERVICE LINK CIRCUIT WHEN REQUIRED

TO OTHER CIRCUITS ON THE SAME FRAME REQUIRING SIGNAL DISTRIBUTOR POINTS FROM THE SAME SIGNAL DISTRIBUTOR

② MISC TRK FRM SIGNAL DISTRIBUTOR CKT,
 ③ TO SIGNAL DISTRIBUTOR CKT OR
 ④ TO SUPPLEMENTARY SIGNAL DISTRIBUTOR CKT (SEE NOTE 205)

SHEET NOTES:



DRAWING ISSUE	
1	VZ JS
2D	OL JS
3A	OL JS
4B	OL JS
5D	BAK HAR MG
6AC	
7D	

ISSUE 10B

MF RECEIVER

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SD-1A246-01-B1

6S

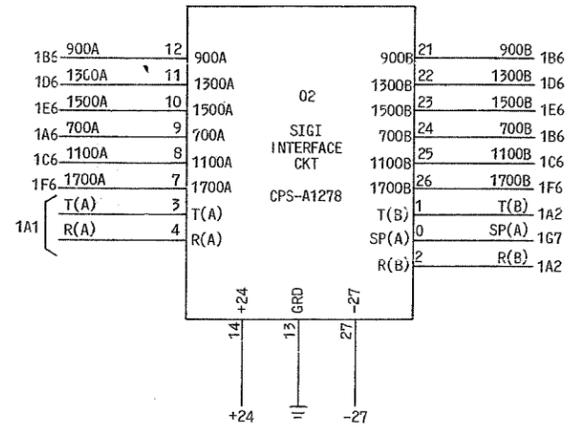
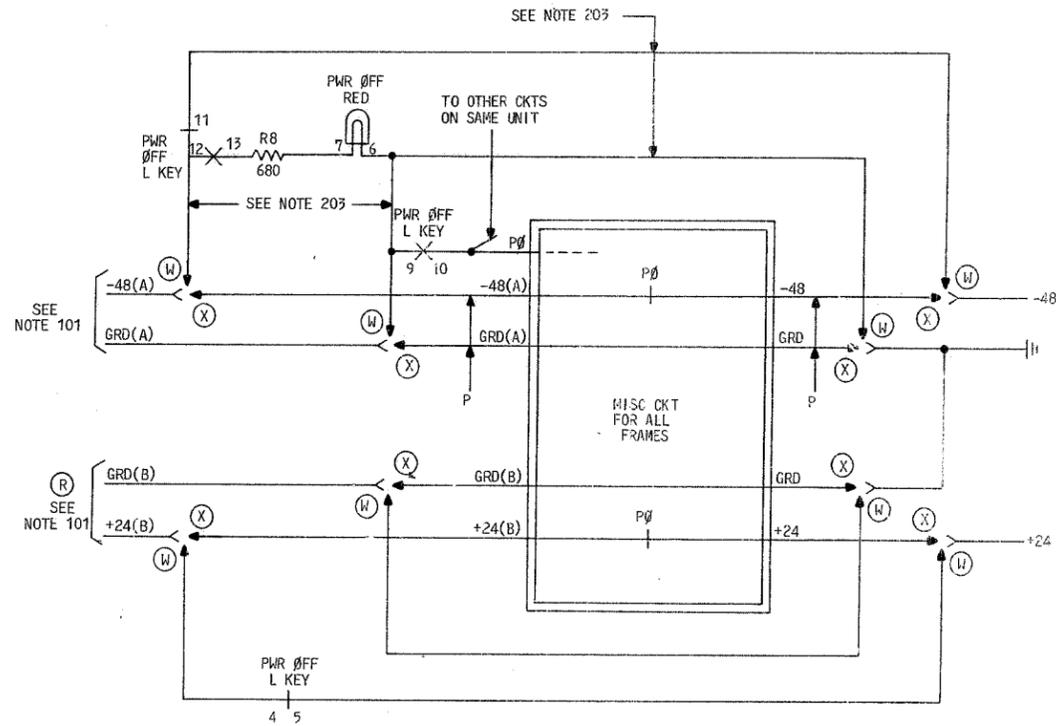
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0 1 2 3 4 5 6 7 8 9

PART OF FS 1
MF RECEIVER CIRCUIT

FS 2
SIGI INTERFACE CIRCUIT



MF RECEIVER		DWG SIZE	ISSUE
		6	9D
BELL LABORATORIES	SD-1A246-01-	B2	

APP FIG. 1

CIRCUIT PACK

EQPT LOC		02		06		08		12		16		18		22		26		28		30		32		EQPT LOC	
CODE		A1278		A260		A261		A262		A263		A152		A264		A265		A152		A152		A266		CODE	
OPTION		R																						OPTION	
ELEMENT LOC		TERM.		TERM.		TERM.		TERM.		TERM.		TERM.		TERM.		TERM.		TERM.		TERM.		TERM.		ELEMENT LOC	
TERM.		DESIG	FS LOC	TERM.																					
27																								27	
26			207				1B4						1C6						1F6					26	
25							1B3																	25	
24																								24	
23																								23	
22																								22	
21					1B3																			21	
20																								20	
19																								19	
18																								18	
17																								17	
16																								16	
15																								15	
14																								14	
13																								13	
12									1D5				1E5											12	
11																								11	
10																								10	
9																								9	
8					1B4																	1D4		8	
7																								7	
6																								6	
5											1B6				1D6			1E6						5	
4																								4	
3																								3	
2																								2	
1									1C2															1	
0																								0	

RELAY

DESIG	A	B
CODE	AL1	AL1
OPTION		
CONT ARR	LOC	CONT ARR
LOC		LOC
12	EBM 1F0	EBM 1F1
11	EBM	EBM
10	EBM 1C3	EBM 1C3
9	EBM	EBM
8	EBM 1C5	EBM 1D5
7	BM	BM
6	EBM 1C5	EBM 1C5
5	BM	BM 1A0
4	EBM 1A0	EBM 1A1
3	EBM	EBM 1C0
2	EBM 1B1	EBM 1B1
1	EBM 1B0	EBM 1C1
COIL	1F1	1F2

CAPACITOR

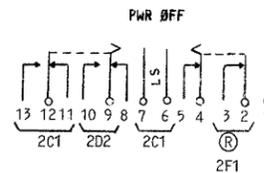
DESIG	LOC	CODE
C1	1D1	602C
C2	1D1	602A
C3	1D2	602A
C4	1D1	602C
[1] C5	1A2	437E (MYLAR)
C6	1B2	
[1] C7	1B2	437E (MYLAR)
C8	1B2	
C9	1D2	602A
Ⓣ C10	1C1	608A
Ⓢ C10	1C1	K22J60S, KEMET CO.

INDUCTOR

DESIG	LOC	CODE
L	1B2	7633R 1633G

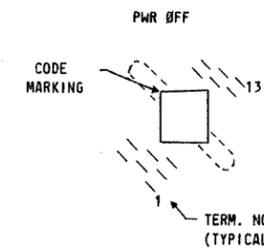
KEY

630P4



KEY TOP

630P4 (RED)



LAMP

THE FOLLOWING LAMP IS MOUNTED IN SIMILARLY DESIGNATED KEY

DESIG	LOC	CODE
PWR OFF	2C1	K2

RESISTOR

DESIG	LOC	CODE
R1	1D0	19GY
R2	1D1	186S
R3	1D1	19PT
R4	1D2	18DK
R5	1D2	19YP
R6	1A1	18FG
R7	1D0	18KM
R8	2C1	KS-19152 L2, 630
R9	1D1	KS-14603 L3C, 7.5

TRANSFORMER

DESIG	LOC	CODE
T	1B2	2616A

VARIATOR

DESIG	LOC	CODE
Ⓟ RV1	1B2	100J

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DRAWING ISSUE

ISSUE 10B

MF RECEIVER

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CIRCUIT NOTES:

101.

DESIG	FUSE AMP	POTENTIAL	ONE PER
(A)	0.75	-48 TALK	FIG. 1
(B)	0.75	+24	OPTION R

BATTERY SYMBOL	VOLTAGE RANGE
-48	-42.75 TO -52.5
+24	+20.75 TO +26.25

+24 FUSE AND -48V FUSE ARE PROVIDED AS PART OF MISCELLANEOUS CIRCUIT FOR ALL FRAMES.

102.

FEATURE OR OPTION	PROVIDE		
	APP FIG.	APP OR WRG	QUANTITY
MF RECEIVER	1		1 PER CKT
SIGI FEATURE PROVIDED	NO	S	
	YES	R	

103.

CHANGED ON ISS	IF JOB RECORDS DO NOT SPECIFY	THIS OPTION WAS FURN	SEE NOTE	USE IN CIRCUIT		
				STD	A&M	MD
1	Y OR Z	Z	303	Y		Z
	W OR X	X		W		X
2D	V	NONE		V		
2D	T,U	U		T		U
8B	R,S,Q	S	102, 208	R,S,Q		
8B	X OR XX	X		XX		X
10B	Q	S OR R		S,R		Q
10B	P	NONE		P		

X = 1633B
XX = 1633G

104.

SCAN POINT ASSIGNMENT		
FAST	SUPERVISORY	DIRECTED
0	1	2,3,4,5,6,7

105. THIS WIRING SHALL BE PROVIDED AT THE FERROD SENSORS.

EQUIPMENT NOTES:

201. ON A BAY OF WIRED-IN TRUNK UNITS THERE SHALL BE 2 SEPARATE LOCAL CABLES AS FOLLOWS:

(MFR DISC) A CABLE - FOR ALL SCANNER LEADS
C CABLE - FOR ALL BATTERY AND GROUND LEADS.

202. OFFICE RECORDS NEED NOT BE MAINTAINED FOR W AND X OPTIONS.

203. THESE LEADS SHALL HAVE SUFFICIENT WIRE TO FORM A LOOP SO THAT THE KEY MAY BE REMOVED FROM THE FRONT OF THE BAY FOR MAINTENANCE.

204. CRITICAL LEAD RESISTANCE TABLE

LEAD DESIGNATION	COMBINED SERIES RESISTANCE LIMIT
SC(00)0 SC(00)3	30
SC(01)1 SC(01)2 SC(01)0 SC(01)3	100
SC(02)0 SC(02)3	30
SC(03)0 SC(03)3	30
SC(04)0 SC(04)3	30
SC(05)0 SC(05)3	30
SC(06)0 SC(06)3	30
SC(07)0 SC(07)3	30

205. REFER TO SD-1A271-01 FOR LIMIT ON LENGTH OF LEADS TO THE ASSOCIATED SIGNAL DISTRIBUTOR CIRCUIT OR TO SUPPLEMENTARY SIGNAL DISTRIBUTOR CIRCUIT.

206. OFFICE RECORDS NEED NOT BE MAINTAINED FOR V OPTION.

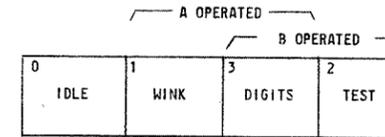
207. THIS EQUIPMENT SHALL BE SHIPPED WITH THOSE CIRCUIT PACKS USED DURING THE EQUIPMENT TEST AT THE TIME OF MANUFACTURE.

208. OPTION Q CAN ONLY BE PROVIDED WHEN CIRCUIT IS EQUIPPED WITH OPTION R.

INFORMATION NOTES:

301. UNLESS OTHERWISE SPECIFIED:
RESISTANCE VALUES ARE IN OHMS,
CAPACITANCE VALUES ARE IN MICROFARADS,
VALUES PRECEDED BY THE SYMBOL + (PLUS)
OR - (MINUS) ARE IN VOLTS.

302. CIRCUIT STATES:



303. USE Z WIRING WHEN MISCELLANEOUS TRUNK FRAME J1A033A OR J1A033B OR BOTH ARE PROVIDED. USE V OR Y WIRING WHEN MISCELLANEOUS TRUNK FRAME J1A033C OR SIMILAR FRAME IS PROVIDED AS DESCRIBED IN THE EQUIPMENT DESIGN REQUIREMENTS.

304. FERROD SENSORS ASSOCIATED WITH THE CIRCUIT ARE IDENTIFIED FOR INFORMATION PURPOSES BY A NUMBER 0, 1, 2, 3, 4, 5, 6, AND 7.

WORKING LIMITS

	TRK SUPV
MAX EXT LOOP RES	9,200
MIN INS RES	30,000
BATTERY LIMITS	-42.75 TO -52.5 +20.75 TO +26.25

DRAWING ISSUE
1 YZ JS
2D DL JS
3A DL JS
4B WE JS
5D SAK RAH MG
6AC
7D

ISSUE 10B

SD-1A246-01-2

MF RECEIVER	SD-1A246-01-D1
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SD-1A246-01															CIRCUIT REQUIREMENTS															DRAWING ISSUE	
MF RECEIVER CIRCUIT (MF RCVR)															1		V2														
APPARATUS				MECH REQ			CIRCUIT PREPARATION				TEST SET PREP		SEE TEST NOTE		DIRECT CURRENT FLOW REQ					REMARKS		1		V2							
DESIG	CODE	OPT.	FIG.	BSP FIG.	CONT PRES	ARM. TRVL	BLOCK OR INSULATE	TEST CLIP DATA		TEST SET PREP	SEE TEST NOTE	TEST WDG	TEST FOR	AFTER SOAK MA	TEST MA	READJ MA	REMARKS	1	V2												
CONN BAT.		CONN GRD		TEST WDG	TEST FOR	AFTER SOAK MA	TEST MA	READJ MA																							
RELAYS																				2D		J3									
A	AL1		1	299B																	2D		J3								
B	AL1		1	299B																	4B		J5								

TEST NOTES:
 1. FOR TESTING AND ADJUSTING THESE RELAYS SEE BSP.
 2. THE POWER REMOVAL KEY MUST BE OPERATED TO REMOVE ALL VOLTAGES BEFORE ANY RELAY IS TESTED.

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ISSUE
8B

CIRCUIT REQUIREMENTS															DRAWING ISSUE										
															1		V2								
APPARATUS				MECH REQ			CIRCUIT PREPARATION				TEST SET PREP		SEE TEST NOTE		DIRECT CURRENT FLOW REQ					REMARKS		1		V2	
DESIG	CODE	OPT.	FIG.	BSP FIG.	CONT PRES	ARM. TRVL	BLOCK OR INSULATE	TEST CLIP DATA		TEST SET PREP	SEE TEST NOTE	TEST WDG	TEST FOR	AFTER SOAK MA	TEST MA	READJ MA	REMARKS	1	V2						
CONN BAT.		CONN GRD		TEST WDG	TEST FOR	AFTER SOAK MA	TEST MA	READJ MA																	
																				2D		J3			
																				3A		J5			
																				4B		J5			
																				5D		J5			
																				6AC		J5			
																				7D		J5			

MF RECEIVER

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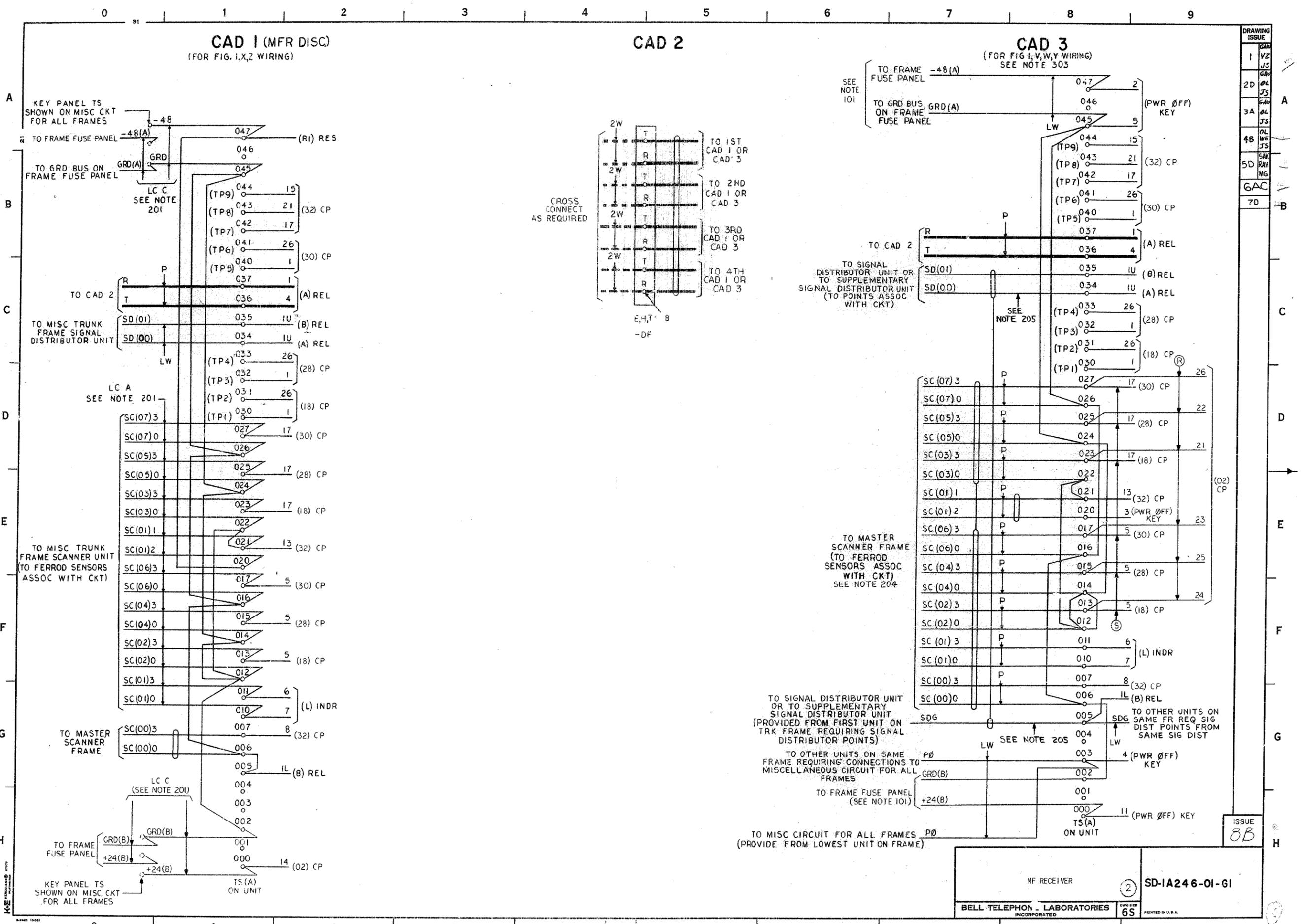
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CAD 1 (MFR DISC)
(FOR FIG. 1,X,2 WIRING)

CAD 2

CAD 3
(FOR FIG. 1,V,W,Y WIRING)
SEE NOTE 303

DRAWING ISSUE	
1	GAU
2D	04 JS
3A	04 JS
4B	04 JS
5D	04 JS
6A	04 JS
7D	04 JS

ISSUE
8B

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MF RECEIVER 2 SD-1A246-01-G1

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