SHEET INDEX

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SUPPORTING INFORMATION

CATEGORY	NO.
CIRCUIT PACK SCHEMATICS	SD-18000-01
EQUIPMENT DWG	J18004AA
EQUIPMENT DESIGN REQUIREMENTS	J18004
MAINTENANCE BSP	250-103-501
KEYSHEET DRAWING TSS-TSPS NO. 1	SD-18001-01

SHEET INDEX NOTES

1. WHEN CHANGES ARE MADE IN THIS DRAWING, ONLY THOES SHEETS AFFECTED WILL BE REISSUED.
2. THIS SHEET INDEX WILL BE REISSUED AND BROUGHT UP TO DATE EACH TIME ANY SHEET OF THE DRAWING IS REISSUED, OR A NEW SHEET IS ADDED.
3. THE ISSUE NUMBER ASSIGNED TO A CHANGED OR NEW SHEET WILL BE THE SAME ISSUE NUMBER AS THAT OF THE SHEET INDEX.
4. SHEETS THAT ARE NOT CHANGED WILL RETAIN THEIR EXISTING ISSUE NUMBER.
5. THE LAST ISSUE NUMBER OF THE SHEET INDEX IS RECOGNIZED AS THE LATEST ISSUE NUMBER OF THE DRAWING AS A WHOLE.

DWG ISS	CD ISS	DWG ISS	CD ISS	DWG ISS	CD ISS
1	1				

DWG ISS	CD ISSUE	DATE ISSUED	DRWN	APPD
2A	1 APP 1A	M-22-68	RB WM	ETE RJJ POB

APPARATUS INDEX

EQPT LOC	APP FIG NO.	APP FIG SH NO.
CIRCUIT PACK		
2	1	4
6	1	4
8	1	4
12	1	4
16	1	4
18	1	4
22	1	4
26	1	4
28	1	4
30	1	4
32	1	4
DESIG		
FFT	1	4

DESIG	LOCATION FS	APP FIG	EQPT
RELAYS			
A	3F2	1	
B	3F3	1	
C	3F1	1	
D	3F0	1	
R	3A1	1	

AMPLIFIERS			
	3E5	1	6
	3C5	1	8
	3C5	1	8
	3B3	1	12

CAPACITORS			
C1	3F5	1	
C2	3F5	1	
C3	3G5	1	
C4	3E4	1	
C5	3C3	1	
C6	3E3	1	
C7		1	
C8		1	
C9		1	
C10		1	
C11		1	
C12	3G4	1	
C13	3G4	1	

DESIG	LOCATION FS	APP FIG	EQPT
INDUCTORS			
L	3D3	1	

KEYS			
PWR OFF	SEE APP FIG. 1	1	

LAMPS			
PWR OFF	3A4	1	

RESISTORS			
R1	3E4	1	
R2	3F4	1	
R3	3F4	1	
R4	3G4	1	
R5	3G4	1	
R6	3E2	1	
R7	3E4	1	
R8	3A4	1	
R9	3E4	1	
R10	3A5	1	
R11	3B7	1	

DESIG	LOCATION FS	APP FIG	EQPT
TRANSFORMERS			
T	3C3	1	

2

SD-18011-01 1R01

TRAFFIC SERVICE SYSTEMS

TRAFFIC SERVICE POSITION SYSTEM NO. 1
MF RECEIVER CIRCUIT

AT&TCO STANDARD

SD-18011-01-1
8 SHEETS

BELL TELEPHONE LABORATORIES INCORPORATED 6S

CIRCUIT NOTES:

101.

DESIG	FUSE AMP	POTENTIAL	ONE PER
	1-1/3	-48	CIRCUIT
	1-1/3	+24	CIRCUIT
	0.5	+130	CIRCUIT

BATTERY SYMBOL	VOLTAGE RANGE
-48	42.75-52.5V
+24	20.75-26.25V
+130	125-135V

102.

FEATURE OR OPTION	PROVIDE		
	APP FIG.	APP OR WRG	QUANTITY
MF RECEIVER	1		1 PER CIRCUIT

103.

RECORD OF APP 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	

104.

NETWORK VALUES		
NETWORK NO.	RESISTANCE IN OHMS	CAPACITANCE IN UF
1	473	.13

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

106.

SCAN POINT ASSIGNMENT		
FAST	SUPERVISORY	DIRECT
0	1	2,3,4,5,6,7,8

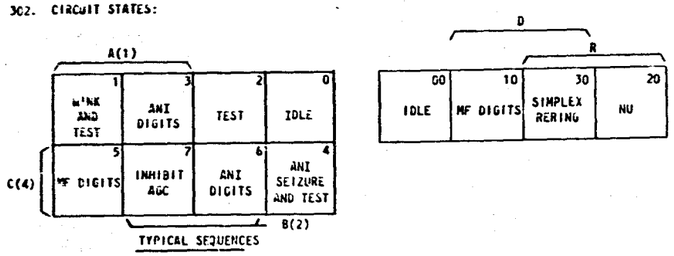
EQUIPMENT NOTES:

201. ALL LEADS TERMINATING ON THE (PWR OFF) KEY SHALL HAVE ENOUGH WIRE TO FORM A LOOP SO THAT THE KEY MAY BE REMOVED FROM THE FRONT OF THE KEY FOR MAINTENANCE.

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:



LOOP MF CALL: 0-1-5-7-3-2-0
E&M OR DP WITH ANI: 0-4-6-2-0
LOOP MF (ANI FAILURE): 0-1-5-1-0
RERING: 00-10-20-10-00

INFORMATION NOTES: (CONT)

303. FERROD SENSORS, ASSOCIATED WITH THIS CIRCUIT ARE IDENTIFIED BY A FUNCTIONAL DESIGNATION FOR INFORMATION PURPOSES ONLY.

OPTION INDEX

APP OR WRG	LOCATION

WORKING LIMITS:

1.

	TRK SUPV
MAX EXT CKT LOOP RES	9200
MIN INS RES	30,000
BATTERY LIMITS	42.75-52.5V

2. EACH OUTPUT (FROM CIRCUIT PACKS A152 AND A154) SHALL BE CONNECTED TO A SCANNER 0 TYPE FERROD SENSOR WITH 100 OHMS MAXIMUM EXT CIRCUIT RESISTANCE.

DRAWING ISSUE: 1 (NEW ALD 6-81) 24

2

MF RECEIVER CIRCUIT 2 SD-IB011-01-2

BELL TELEPHONE LABORATORIES INCORPORATED 6S

SD-IB011-01-2

FS 1
MF RECEIVER CIRCUIT

DRAWING ISSUE 1 MLR MLR 6-N 2A

TO CENTRAL PULSE DIST CKT

CPD(03)N

CPD(00)P

BPFF & RESET TIMER FFT 2 A611

PWR OFF L KEY

+24

TO MISC CKT

TO OTHER UNITS ON SAME FRAME REQUIRING POWER OFF INDICATIONS

PWR OFF L KEY

PWR OFF RED (SEE NOTE 201)

R8 680

R10 8250

-48

PWR OFF L KEY

MASTER SCANNER CIRCUIT (8)

FERROD SENSOR

SC(08)3 SC(08)0 SC(08)2 SC(08)1

SEE NOTE 105

INHIBIT 12 A262

MASTER SCANNER CIRCUIT (1)

FERROD SENSOR

SC(01)0 SC(01)3 SC(01)1 SC(01)2

+130 PWR OFF L KEY

P11 2000 2000

MF SP TIMER 32 A266

TP9 TP7 TP6

MASTER SCANNER CIRCUIT (0) (2) (3) (4) (5) (6) (7)

FERROD SENSOR

SC(00)3 SC(00)0 SC(00)2 SC(00)1

SC(02)3 SC(02)0 SC(02)2 SC(02)1

SC(03)3 SC(03)0 SC(03)2 SC(03)1

SC(04)3 SC(04)0 SC(04)2 SC(04)1

SC(05)3 SC(05)0 SC(05)2 SC(05)1

SC(06)3 SC(06)0 SC(06)2 SC(06)1

SC(07)3 SC(07)0 SC(07)2 SC(07)1

SEE NOTE 105

TO POSITION LINK CKT

T1

C5 2-2.5

T

C7 2-2.5

C8 2-2.5

MF VARIOLOSSER 6 A260

MF AGC 8 A261

MF SIG DR 8 A261

L 5 INDR 290

R6 8080

C6 A B 2-2.5

C7' 19 ±1%

R1 18 ±1%

R7 38 ±1%

R9 7.5

R2 4.5 ±2%

R3 25.4 25.4

R4 25 ±1%

R5 17.2 ±1% 17.2 ±1%

C4 16-24

C1 16-24

C11 16-24

C2 16-24

C10 16-24

C3 16-24

C12 16-24

C9 16-24

C13 16-24

MF SD DR 6 A260

MF GUARD FILTER (700, 900, 1100) 12 A262

MF GUARD FILTER (1300, 1500, 1700) 10 A263

CHAN FILTER (700, 900, 1100) 22 A264

CHAN FILTER (1300, 1500, 1700) 26 A265

TP1 MF CHAN DET 18 A152-0

TP2 MF CHAN DET 18 A152-1

TP3 MF CHAN DET 28 A152-0

TP4 MF CHAN DET 28 A152-1

TP5 MF CHAN DET 30 A152-0

TP6 MF CHAN DET 30 A152-1

TO SIGNAL DISTRIBUTOR CKT

SD(03) SD(02) SD(00) SD(01) SDG

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

POWER AND FUSING DATA TABLE

CPS	EQPT LOCATION	GRD TERM.	-10 TERM	-10 DESIG	-15 TERM	-15 DESIG	-21.5 TERM	-21.5 DESIG	-27 TERM	-27 DESIG	-30 TERM	-30 DESIG	-32 TERM	-32 DESIG	-42* TERM	-42* DESIG	-48** TERM	-48** DESIG	+24*** TERM	+24*** DESIG
A152	ALL	13			9				18											
A260	ALL	13	7				26						3		25		2			
A261	ALL	13							18								2			
A262	ALL	13													4					
A263	ALL	13																		
A26	ALL	13	7		9										4		2			
A611	ALL	13																	14	

* -42 VOLTS IS DEVELOPED IN CP A260 AND SUPPLIES CP A262 AND CP A26.

** VOLTAGE IS SUPPLIED ONLY VIA CONNECTION TO 3B OF (PWR OFF) KEY.

*** VOLTAGE IS SUPPLIED ONLY VIA CONNECTION TO 10B OF (PWR OFF) KEY.

SD-1B011-01-3

MF RECEIVER CIRCUIT 2 SD-1B011-01-3

BELL TELEPHONE LABORATORIES INCORPORATED 6S

APP FIG. 1

CIRCUIT PACK

EQPT LOC		2		6		8				12				16		18				22				26		28		30		32						EQPT LOC
DESIG		FFT																																		DESIG
CODE		A611		A260		A261				A262				A263		A152				A264				A265		A152		A152		A266						CODE
OPTION																																				OPTION
ELEM IDENT																																				ELEM IDENT
TERM.		DESIG	FS LOC	DESIG	FS LOC	DESIG	FS LOC	DESIG	FS LOC	DESIG	FS LOC	DESIG	FS LOC	DESIG	FS LOC	DESIG	FS LOC	DESIG	FS LOC	DESIG	FS LOC	DESIG	FS LOC	DESIG	FS LOC	DESIG	FS LOC	DESIG	FS LOC	DESIG	FS LOC	DESIG	FS LOC		TERM
27							3C5														3D7				3C7										27
26							3C5																												26
25							3C5																												25
24																																			24
23																																			23
22																																			22
21					3C4																														21
20					3C4																														20
19																																			19
18																																			18
17																	3D8									3F8		3G8							17
16																	3D8									3F8		3G8							16
15																																			15
14																																			14
13																																			13
12											3F6				3G6																				12
11																																			11
10																																			10
9																																			9
8					3E5																										3C9				8
7																																			7
6																																			6
5			3J1														3D8									3E8		3G8							5
4																	3D8									3E8		3G8							4
3																																			3
2			3J1																																2
1					3E5						3B3										3D7				3C7										1
0							3C5														3D7				3C7										0

RELAY

DESIG		A		B		C		D				R	
CODE		AL1		AL1		AL1		AL1				AF148	
OPTION													
	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC
12	EBM	3F1	EBM	3F2	EBM	3F0	EB4	3F0			M	3B0
11	EMB	3B2	EMB	3B3	EMB	3B2	EMB	3B1				
10	EBM	3B2	EBM		EBM	3A8	EB4				M	
9	EMB		EMB		EMB		EMB					
8	EBM	3B7	EBM	3A7	EBM	3A7	EB4				EB4	3B0
7	BM	3E1	BM		EM	3E2	B4	3D6			B	3D6
6	EBM	3D6	EBM	3D6	EBM	3D5	EB4				EB4	3B3
5	BM	3C2	BM	3E6	BM	3D6	B4	3B6			B	3A1
4	EBM	3G2	EBM	3D1	EBM	3C1	EB4	3C7			EB4	3C7
3	EMB	3D6	EMB		EMB		EMB	3C1				
2	EBM	3E7	EBM	3E1	EBM	3E0	EB4				M	3B7
1	EMB		EMB		EMB		EMB	3E1				
COIL		3F2		3E3		3F1		3F0				3J1

LAMP

DESIG	LOC	CODE
PWR OFF	3A4	A3

CAPACITOR

DESIG	LOC	CODE
C1	3F5	608A
C2	3F5	608A
C3	3G5	608A
C4	3E4	608A
[1] C5	3C3	437E
[1] C6	3E3	437E
[1] C7	3C4	437E
[1] C8	3C4	437E
C9	3G4	608A
C10	3E5	608A
C11	3F4	608A
C12	3G5	608A
C13	3G4	608A

NETWORK

DESIG	LOC	CODE
R	3C7	185A

INDUCTOR

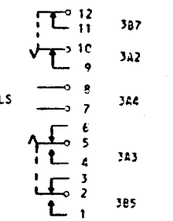
DESIG	LOC	CODE
L	3D3	1632G

RESISTOR

DESIG	LOC	CODE
R1	3E4	19GY
R2	3F6	18GS
R3	3F6	19PT
R4	3G4	18DK
R5	3G4	19YP
R6	3E2	18FG
R7	3E4	18KM
R8	3A4	KS-19152,L2,680
R9	3E4	KS-14603,L3C,7.5
R10	3A5	1440,8250
R11	3B7	19YH

KEY

630P



TRANSFORMER

DESIG	LOC	CODE
T	3C3	261EA

MF RECEIVER CIRCUIT (2)

SD-1B011-01-4

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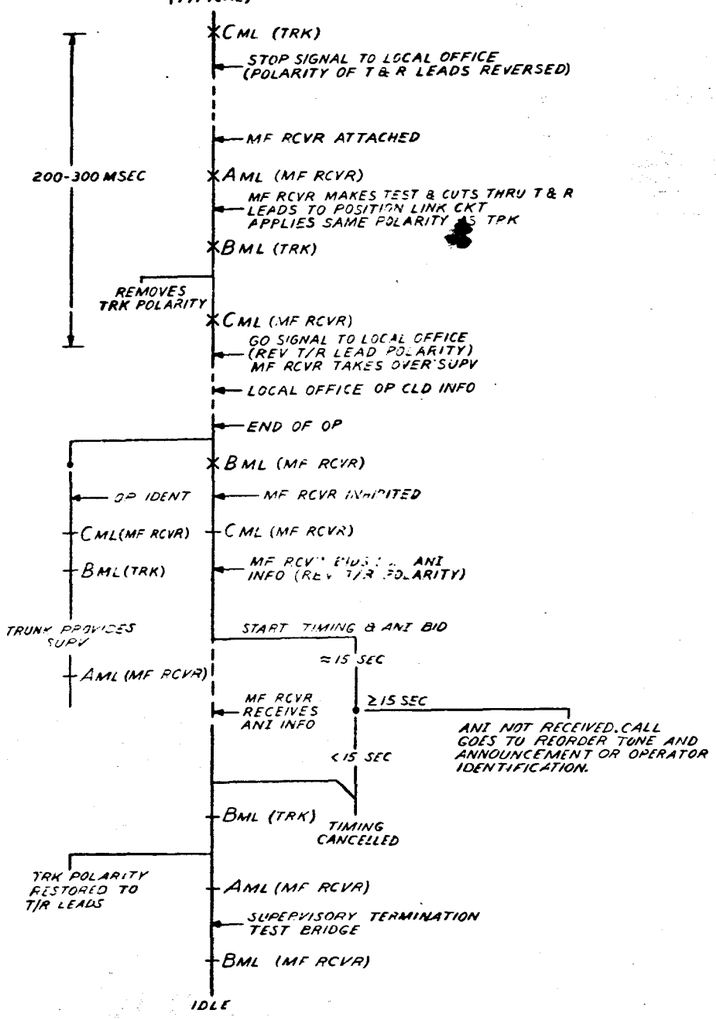
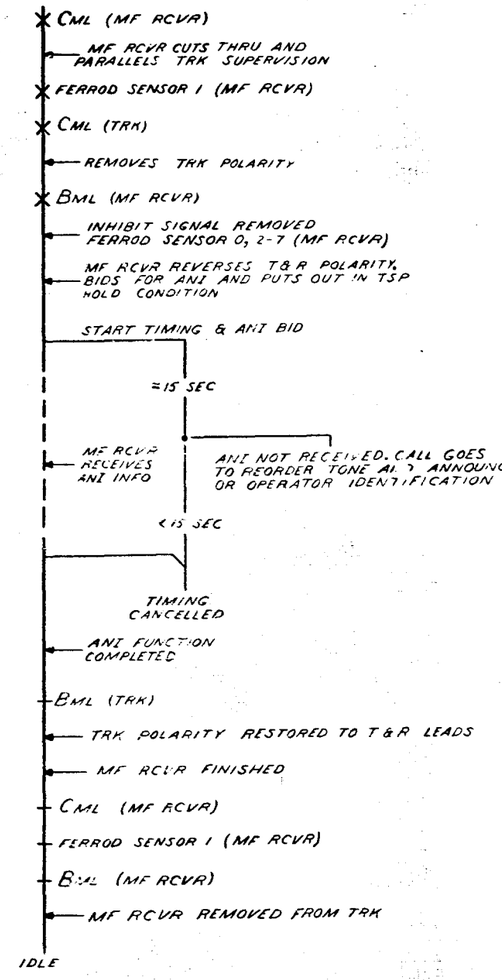
SD-1B011-01-4

2

SC 1
LOOP MF CALL & LOOP MF (TYPICAL)



SC 2
LOOP DP CALL



SHEET NOTES:

1. THE SUBSCRIPT ML INDICATES THAT THE RELAY WAS OPERATED UNDER THE DIRECTION OF THE STORED PROGRAM CONTROL VIA THE SIGNAL DISTRIBUTOR CIRCUIT.

DRAWING ISSUE: 1 CZ ES GM; 2A

2

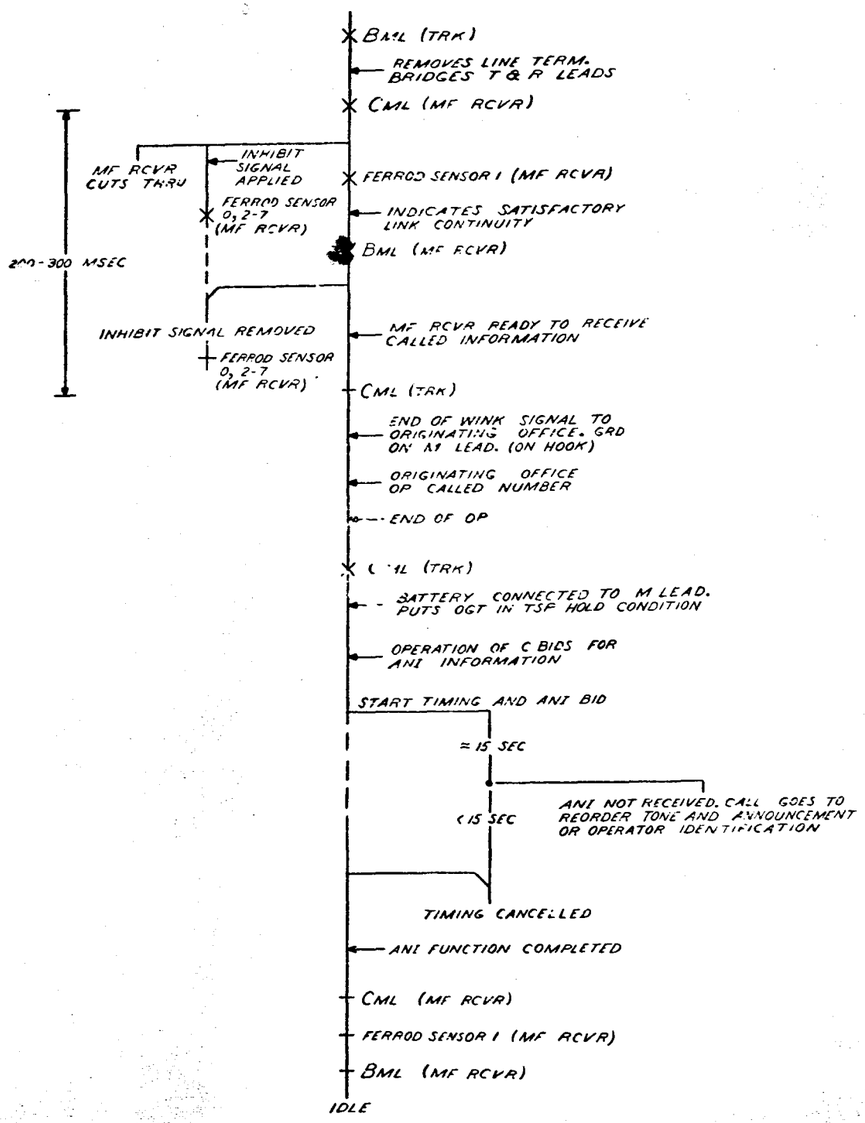
MF RECEIVER CIRCUIT (2) SD-1B011-01-5

BELL TELEPHONE LABORATORIES INCORPORATED 6S

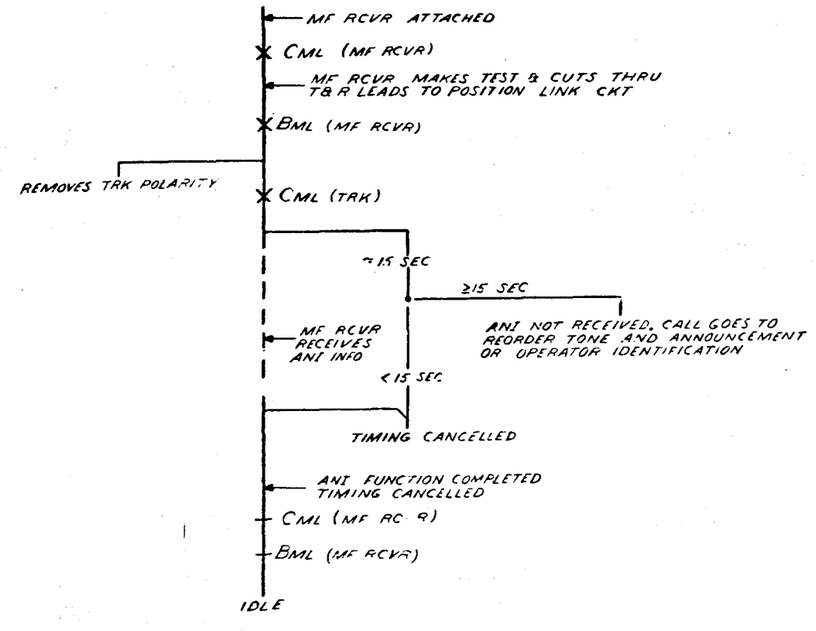
SD-1B011-01-5

DRAWING ISSUE 2A

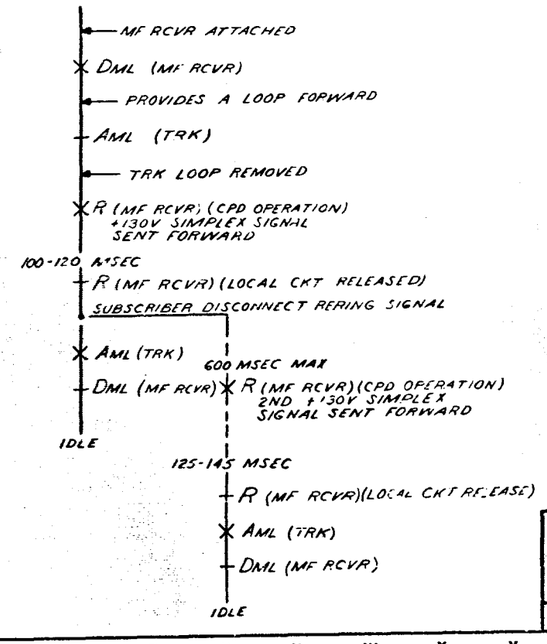
SC 3
EM MF



SC 4
E&M DP WITH ANI



SC 5
RERING AND DISCONNECT ON RESIDUAL TYPE CALLS
SUBSCRIBER FLASHING (1 RERING SIGNAL)
SUBSCRIBER DISCONNECT (2 RERING SIGNALS)



SHEET NOTES:

1. THE SUBSCRIPT ML INDICATES THAT THE RELAY WAS OPERATED UNDER THE DIRECTION OF THE STORED PROGRAM CONTROL VIA THE SIGNAL DISTRIBUTOR CIRCUIT.

SD-IB011-01-6

2

MF RECEIVER CIRCUIT

SD-IB011-01-6

BELL TELEPHONE LABORATORIES INCORPORATED 6S

SD-1B011-01

CIRCUIT REQUIREMENTS

TRAFFIC SERVICE POSITION SYSTEM NO. 1 MF RECEIVER CIRCUIT

DRAWING ISSUE: 1 AB AR GAE; 2A

APPARATUS DESIG	APPARATUS CODE	APPARATUS OPT.	APPARATUS FIG.	MECH REQT: BSP FIG.	MECH REQT: CONT PRES	MECH REQT: ARM. TRVL.	CIRCUIT PREPARATION: BLOCK OR INSULATE	CIRCUIT PREPARATION: TEST CLIP DATA: CONN BAT.	CIRCUIT PREPARATION: TEST CLIP DATA: CONN GRD	TEST SET PREP	SEE TEST NOTE	DIRECT CURRENT FLOW REQT: TEST WDG	DIRECT CURRENT FLOW REQT: TEST FOR	DIRECT CURRENT FLOW REQT: AFTER SOAK MA	DIRECT CURRENT FLOW REQT: TEST MA	DIRECT CURRENT FLOW REQT: READJ MA	REMARKS
RELAYS																	
A	AL1		1								1&2						
B	AL1		1								1&2						
C	AL1		1								1&2						
D	AL1		1								1&2						
R	AF1A2		1	280				L(R)	U(R)	B/G	1,3		O		41	39	
								L(R)	U(R)	B/G	1,3		M		26.8	25.5	
								L(R)	U(R)	B/G	1,3		R		10.7	11.3	

TEST NOTES:

1. OPERATE (PWR OFF) KEY BEFORE TESTING ANY RELAYS.
2. FOR TE[illegible] OF ML RELAYS (AL1), SEE BSP 040-505-501.
3. REMOVE CP 4611 FROM CONNECTOR.

MF RECEIVER CIRCUIT — SD-1B011-01-7

BELL TELEPHONE LABORATORIES INCORPORATED

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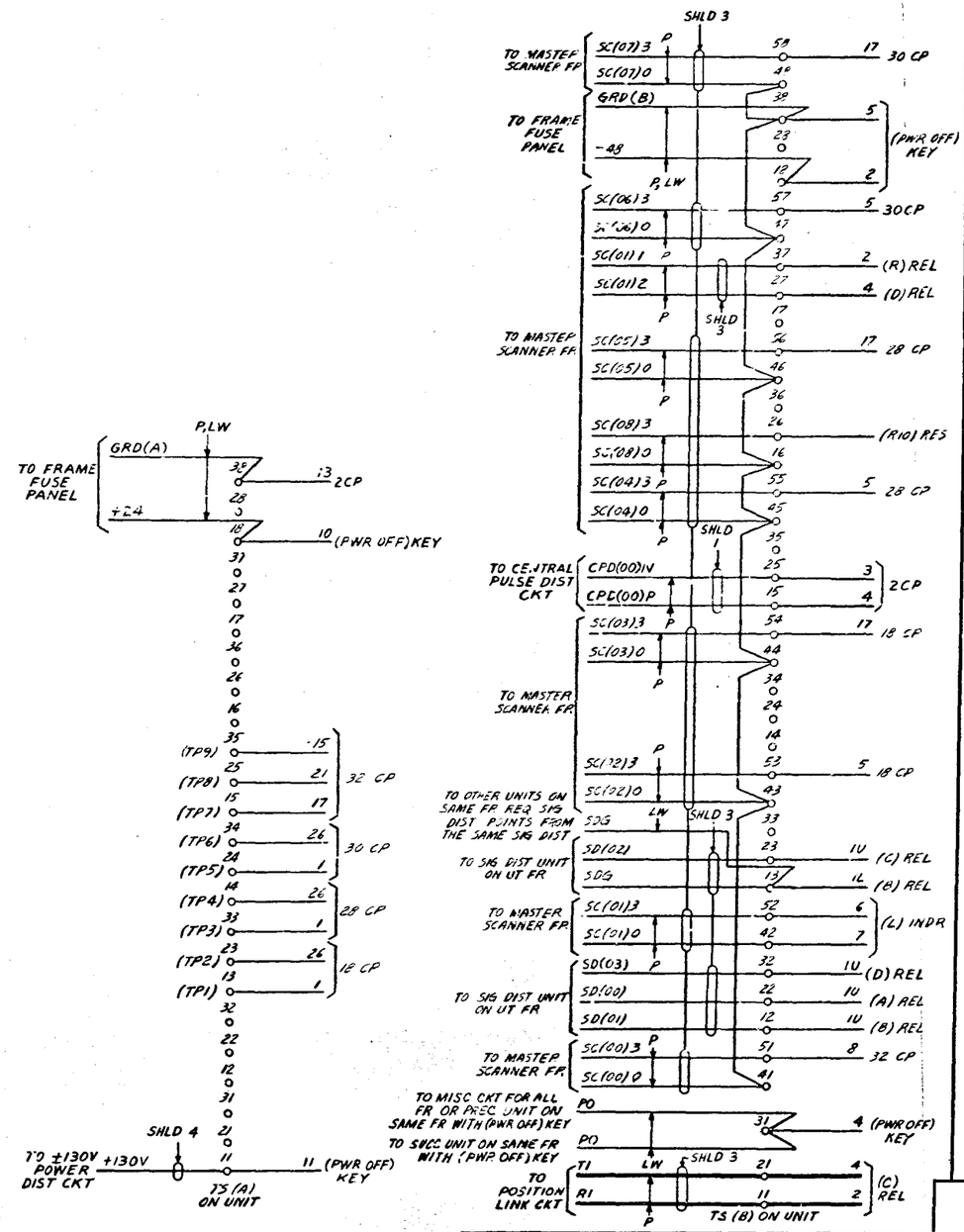
CAD 1



2

MF RECEIVER CIRCUIT (2) — SD-1B011-01-7

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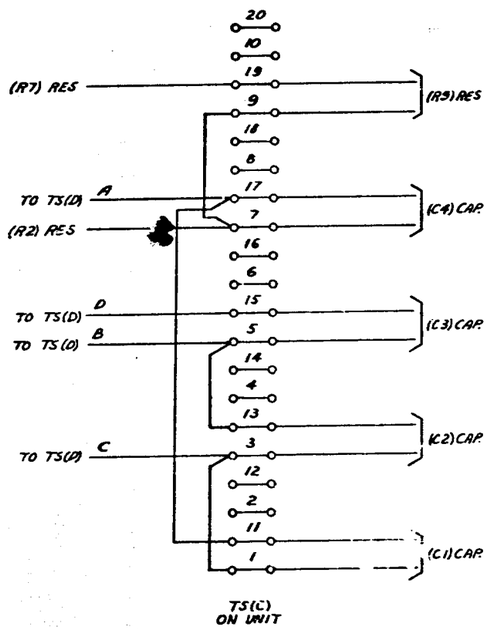
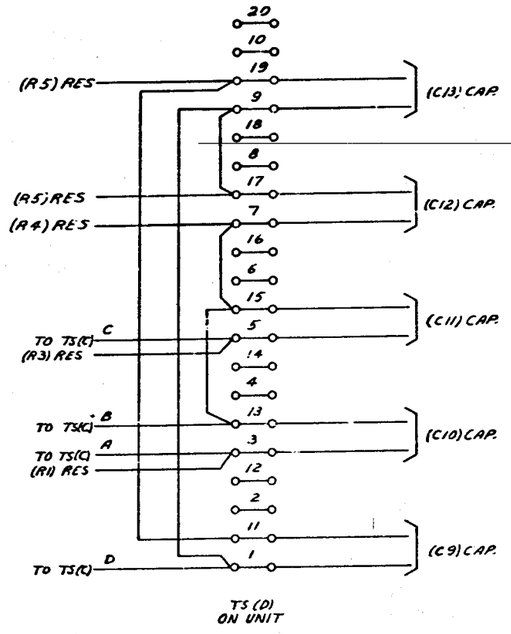
CAD 2



TS(C)
ON UNIT



TS (D)
ON UNIT

DRAWING ISSUE 2R

S-1B011-01-8

MF RECEIVER CIRCUIT	SD-1B011-01-8
BELL TELEPHONE LABORATORIES INCORPORATED	6S

2