SHEET INDEX

SHEET NO.	CONTENTS
1	SHEET INDEX APPARATUS INDEX LEAD INDEX CIRCUIT NOTES EQUIPMENT NOTES INFORMATION NOTES SUPPORTING INFORMATION OPTION INDEX WORKING LIMITS
2	FS1 JUNCTOR CIRCUIT
3	APP FIG. 1
4	CIRCUIT REQUIREMENTS TABLE CAD 1
5	CAD 2,3

APPARATUS INDEX

DESIG	LOCATION FS	LOCATION APP FIG.	LOCATION EQPT
COMPONENT ASSEMBLIES			
CA A		1	CA A
RELAYS			
A (0,1)	2C2	1	
B (0,1)	2C3	1	
CAPACITORS			
R (0,1)	2F3	1	
T (0,1)	2D5	1	
INDUCTORS			
L1 (0,1)	2E3	1	
L2 (0,1)	2E5	1	
L3 (0,1)	2E4	1	
NETWORK			
N (0,1)	2E2	1	CA A
VARISTOR			
RV (0,1)	2E2	1	CA A

LEAD INDEX

DESIG	LOCATION FS	LOCATION CAD
JUNCTOR FRAME SCANNER CKT		
C00	2G2	CAD 1
C03	2G2	
C04	2G5	
C07	2G5	
C10	2G2	
C13	2G2	
C14	2G5	CAD 1
C17	2G5	
JUNCTOR FRAME SIGNAL DISTRIBUTOR CKT		
SD0	2B1	CAD 1
SD2	2B3	CAD 1
SD4	2B1	CAD 1
SD6	2B3	CAD 1
JUNCTOR GROUPING FRAME CKT		
R	2F1	CAD 1
T	2D1	CAD 1
R1	2F7	CAD 1
T1	2D7	CAD 1
SERVICE LINK CKT		
R	2F1	3B3
T	2D1	3B3
R1	2F7	3B3
T1	2D7	3B3
SIGNAL DISTRIBUTOR CKT		
SD0	2B1	CAD 1
SD2	2B3	CAD 1
SD4	2B1	CAD 1
SD6	2B3	CAD 1

CIRCUIT NOTES:

101.

DESIG	FUSE AMP	POTENTIAL	ONE PER

BATTERY SYMBOL	VOLTAGE RANGE
-48	-42.75 TO -52.5

102.

FEATURE OR OPTION	PROVIDE APP FIG.	PROVIDE APP OR WRG	PROVIDE QUANTITY
JUNCTOR CIRCUIT	1		1 PER 2 CKT

103.

NETWORK VALUES		
NETWORK NO.	RESISTANCE IN OHMS	CAPACITANCE IN UF
1	1000	0.56

104.

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	SPECIAL
4B	Y OR Z	Z	303	Y		Z	
9B	W OR X	X	205	W		X	
10D	T OR V	V	105	V			T

CIRCUIT NOTES (CONT):

105.

FEATURE OR OPTION	PROVIDE APP FIG.	PROVIDE APP OR WRG	PROVIDE QUANTITY
PROVIDES CONNECTORIZED CABLING TO JUNCTOR GROUPING FRAME		T	

EQUIPMENT NOTES:

201. THERE SHALL BE 2 CIRCUITS PER PLUG-IN UNIT.

202. ON A BAY OF PLUG-IN JUNCTOR UNITS, THERE SHALL BE FOUR SEPARATE LOCAL CABLES AS FOLLOWS:
A CABLE-FOR ALL TIP & RING LEADS
B CABLE-FOR ALL SCANNER LEADS
C CABLE-FOR ALL SIGNAL DISTR LEADS
D CABLE-FOR ALL BATTERY & GROUND LEADS.
THE "A" CABLE SHALL BE LOCATED ON THE OPPOSITE SIDE OF THE BAY FROM THE CABLES B, C AND D.

203. THIS UNIT MATES WITH A 905B CONNECTOR.

204. ON ISSUE 6B,A 278A TERMINAL STRIP WAS ADDED TO PROVIDE AN IMPROVED METHOD FOR MOUNTING PIGTAIL APPARATUS.

205. ON ISSUE 9B, CAD 2 INFORMATION WAS REMOVED, AND THE 278A TERMINAL STRIP COMPONENT LAYOUT WAS REDRAWN IN APP FIG. 1, WITH THE FORMER LAYOUT DESIGNATED AS OPTION X AND THE NEW LAYOUT AS OPTION W.

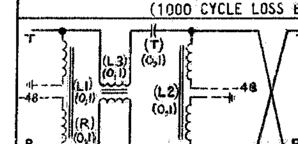
INFORMATION NOTES:

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. NUMBERS WITHIN PARENTHESES AND ADJACENT TO TERMINAL NUMBER AND APPARATUS DESIGNATIONS REFER TO CIRCUIT 0 AND CIRCUIT 1. FERROD SENSORS ASSOCIATED WITH THE CIRCUIT ARE IDENTIFIED FOR INFORMATION PURPOSES BY A NUMBER 0 AND 1. THE SUBSCRIPT ASSOCIATED WITH EACH OF THESE FERROD SENSOR NUMBERS REFER TO THE CIRCUIT NUMBER.

303. USE Z WIRING WHEN JUNCTOR FRAMES J1A031A AND J1A031B ARE PROVIDED. USE Y WIRING WHEN JUNCTOR FRAMES J1A031B AND J1A031C ARE PROVIDED.

TRANSMISSION TEST REQUIREMENTS
(1000 CYCLE LOSS BETWEEN 900 OHM LINES)



MAX. ALLOWABLE CIRCUIT LOSS (DB)
0.4 DB

ALLOWABLE INDIVIDUAL APPARATUS LOSSES (DB)

APPARATUS	DESIG	CODE	MAX. LOSS	MIN LOSS	REMARKS
CAPACITOR	T(0,1) R(0,1)	437E	17.2	15.0	SEE NOTE 1
INDUCTOR	L1(0,1) L2(0,1)	1633A	0.1		
INDUCTOR	L3(0,1)	1633E	0.15		SEE NOTE 2

NOTES:
1. THE INDIVIDUAL LOSS FOR THE (T) & (R) CAPACITORS SHALL BE WITHIN 0.5 DB OF EACH OTHER.
2. CONNECTED SERIES AIDING.

SUPPORTING INFORMATION

CATEGORY	NO.
EQUIPMENT DESIGN REQT	J-1A031 (AA251.015)
EQUIPMENT DWG	J-1A031AA

OPTION INDEX

APP OR WRG	LOCATION
Z	2A2
Y	2A2
X	APP FIG. 1
W	APP FIG. 1
V	CAD 1
T	CAD 1

WORKING LIMITS:

MAX. EXT CKT LOOP RES 1940Ω
MIN INSULATION RES 10,000Ω

DWG ISSUE	EE OR CD ISSUE	DATE ISSUED	DRAWN	APPD
1	—	12-31-62	SUM HL WJE	CHK HFM JS
2A	1A	8-7-63	HAP RCA	CHK HFM JS
3A	2A	12-12-63	LFS FES	CHK AF JS
4B	3B	5-8-64	JMJ FS	CHK AF JS
5B	4B	6-23-65	RJS RAH	CHK AF JS
6B	5B	5-16-66	SEA GWF	CHK AF MGP
7D	5B APP 1D	6-20-67	RAH HAR	ZAK AF MGP
8D	5B APP 2D	2-28-69	EB RAH	ZAK GH MG
9B	5B APP 3B	7-31-70	DH JM	ZAK GH MG
10D	5B APPX 4D	7-14-80	AS JLD	ZAK JCM PAP

ISSUE 10D

SD-1A110-01 1T99

ELECTRONIC SWITCHING SYSTEMS

COMMON JUNCTOR CIRCUIT

(JCTR) (2)

AT&TCO STANDARD

SD-1A110-01-1
5 SHEETS

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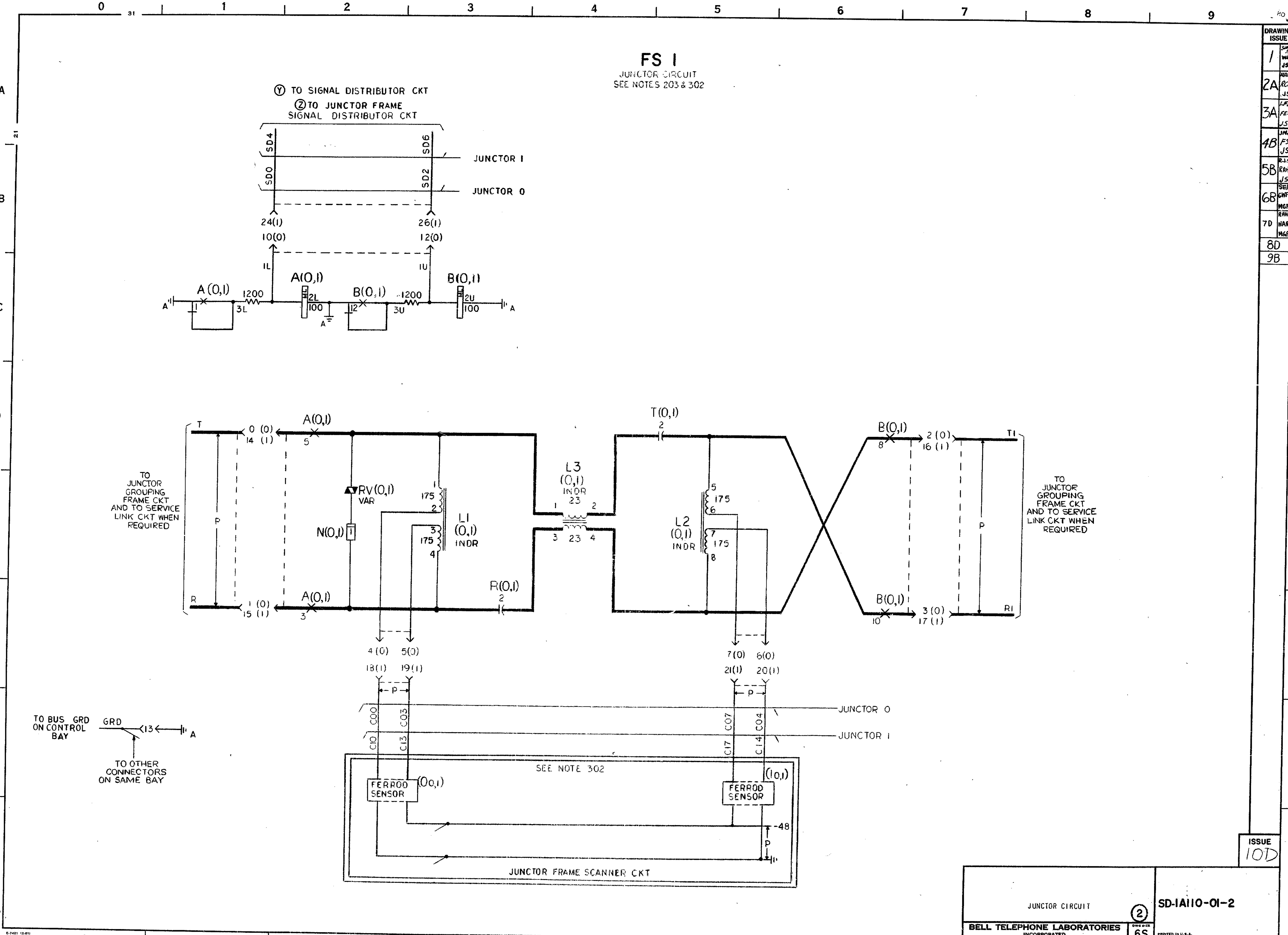
DWG SIZE 6S



FS 1
JUNCTOR CIRCUIT
SEE NOTES 203 & 302
(Y) TO SIGNAL DISTRIBUTOR CKT
(Z) TO JUNCTOR FRAME SIGNAL DISTRIBUTOR CKT
SD4
SD6
SD0
SD2
JUNCTOR 1
JUNCTOR 0
24(1)
10(0)
26(1)
12(0)
1L
1U
A(0,1)
1200
3L
2L
100
B(0,1)
3U
2U
A
TO JUNCTOR GROUPING FRAME CKT AND TO SERVICE LINK CKT WHEN REQUIRED
T
R
P
0 (0)
14 (1)
1 (0)
15 (1)
RV(0,1)
VAR
N(0,1)
175
L1
(0,1)
INDR
R(0,1)
L3
(0,1)
INDR
23
T(0,1)
L2
(0,1)
INDR
B(0,1)
2 (0)
16 (1)
3 (0)
17 (1)
T1
R1
4 (0)
5(0)
18(1)
19(1)
7(0)
6(0)
21(1)
20(1)
C00
C03
C10
C13
C07
C04
C17
C14
TO BUS GRD ON CONTROL BAY
GRD
13
TO OTHER CONNECTORS ON SAME BAY
SEE NOTE 302
FERROD SENSOR
(00,1)
(10,1)
-48
JUNCTOR FRAME SCANNER CKT

DRAWING ISSUE
1
2A
3A
4B
5B
6B
7D
8D
9B

ISSUE 10D

JUNCTOR CIRCUIT

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6S

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APP FIG. 1

RELAY

DESIG	A(0)		B(0)		A(1)		B(1)						DESIG
CODE	AM2				AM2								CODE
	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	CONT ARR	LOC	
12			EBM	2C2			EBM	2C2					12
11			EBM				EBM						11
10			EBM	2F6			EBM	2F6					10
9			EBM				EBM						9
8			EBM	2D6			EBM	2D6					8
7													7
6													6
5	EBM	2D2			EBM	2D2							5
4	EBM				EBM								4
3	EBM	2F2			EBM	2F2							3
2	EBM				EBM								2
1	EBM	2C1			EBM	2C1							1
COIL		2C2		2B3		2C2		2B3					COIL

INDUCTOR

	DESIG	LOC	CODE
[1]	L1(0)	2E3	1633A
[1]	L2(0)	2E5	
	L3(0)	2E4	1633E
[1]	L1(1)	2E3	1633A
[1]	L2(1)	2E5	
	L3(1)	2E4	1633E

CAPACITOR

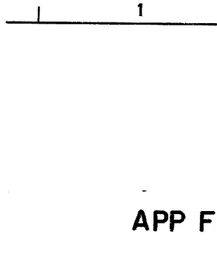
	DESIG	LOC	CODE
[1]	R(0)	2F3	437E (MYLAR)
[1]	T(0)	2D5	
[1]	R(1)	2F3	
[1]	T(1)	2D5	

COMPONENT ASSEMBLY

TERMINAL STRIP

	DESIG	LOC	CODE
(X)	A		278A

E/W



NETWORK

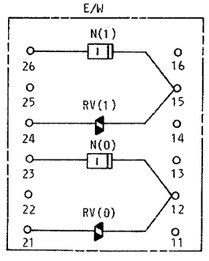
DESIG	LOC	CODE
N(0)	2E2	186B
N(1)	2E2	186B

VARISTOR

DESIG	LOC	CODE
RV(0)	2E2	317A
RV(1)	2E2	317A

	DESIG	LOC	CODE
(W)	A		278A

E/W



NETWORK

DESIG	LOC	CODE
N(0)	2E2	186B
N(1)	2E2	186B

VARISTOR

DESIG	LOC	CODE
RV(0)	2E2	317A
RV(1)	2E2	317A

DRAWING ISSUE

1	WB JS
2A	RCA JS
3A	FS FEB JS
4B	FS JS
5B	RJS RAH JS
6B	CWF MGP
7D	RAH HAR MGP
8D	
9B	

ISSUE 10D

JUNCTOR CIRCUIT (2)

SD-1A110-01-3

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SD-1A110-01-3

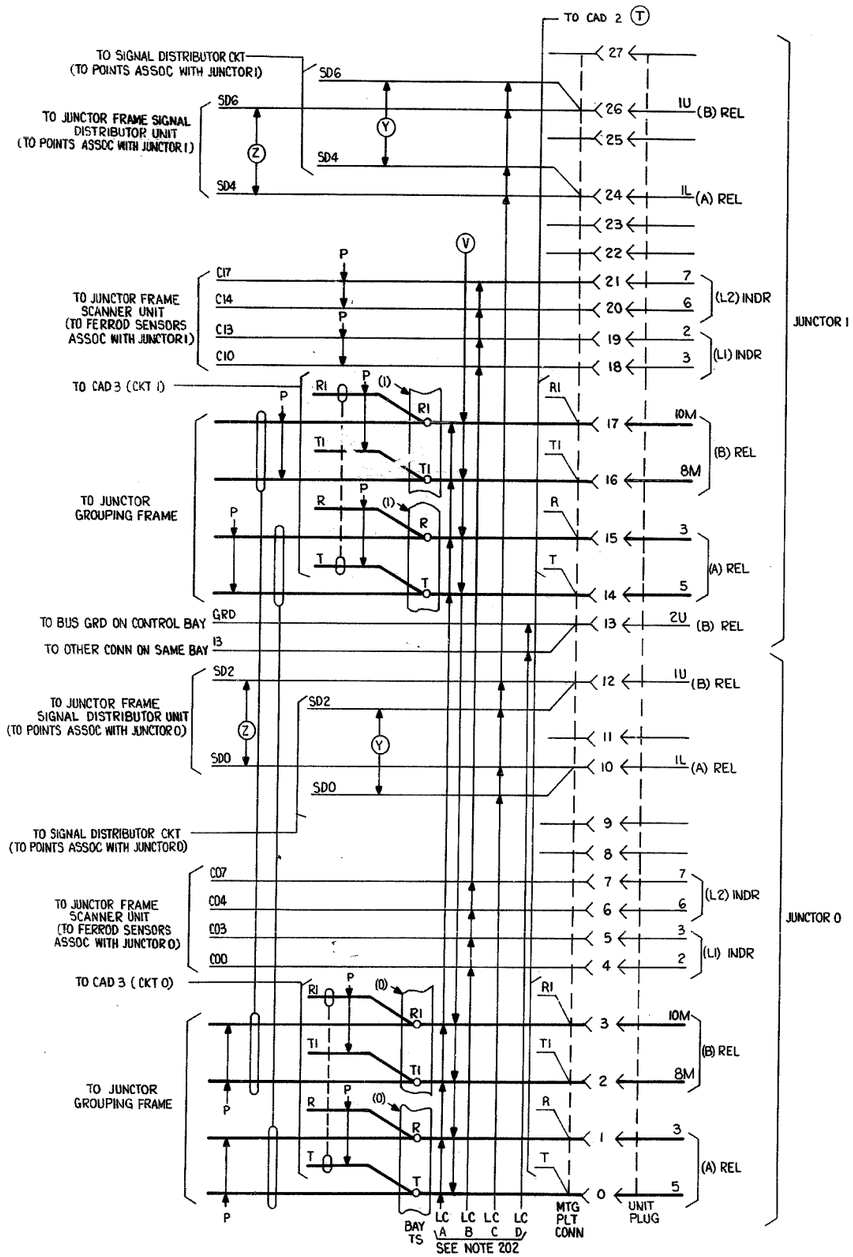
CIRCUIT REQUIREMENTS

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(0)	1/2 AM2		1		222							1/2							FOR CIRCUIT 0 MOUNTED WITH (B) (0)
A(1)	1/2 AM2		1		222							1/2							FOR CIRCUIT 1 MOUNTED WITH (B) (1)
B(0)	1/2 AM2		1		222							1/2							FOR CIRCUIT 0 MOUNTED WITH (A) (0)
B(1)	1/2 AM2		1		222							1/2							FOR CIRCUIT 1 MOUNTED WITH (A) (1)

TEST NOTES:

1. THIS CIRCUIT MUST BE REMOVED FROM THE FRAME BEFORE ANY RELAY IS TESTED.
2. FOR TESTING AND ADJUSTING THESE RELAYS SEE BSP 040-505-501.

CAD 1



DRAWING ISSUE
8D
9B

ISSUE 10D

JUNCTOR CIRCUIT (2) SD-1A110-01-4

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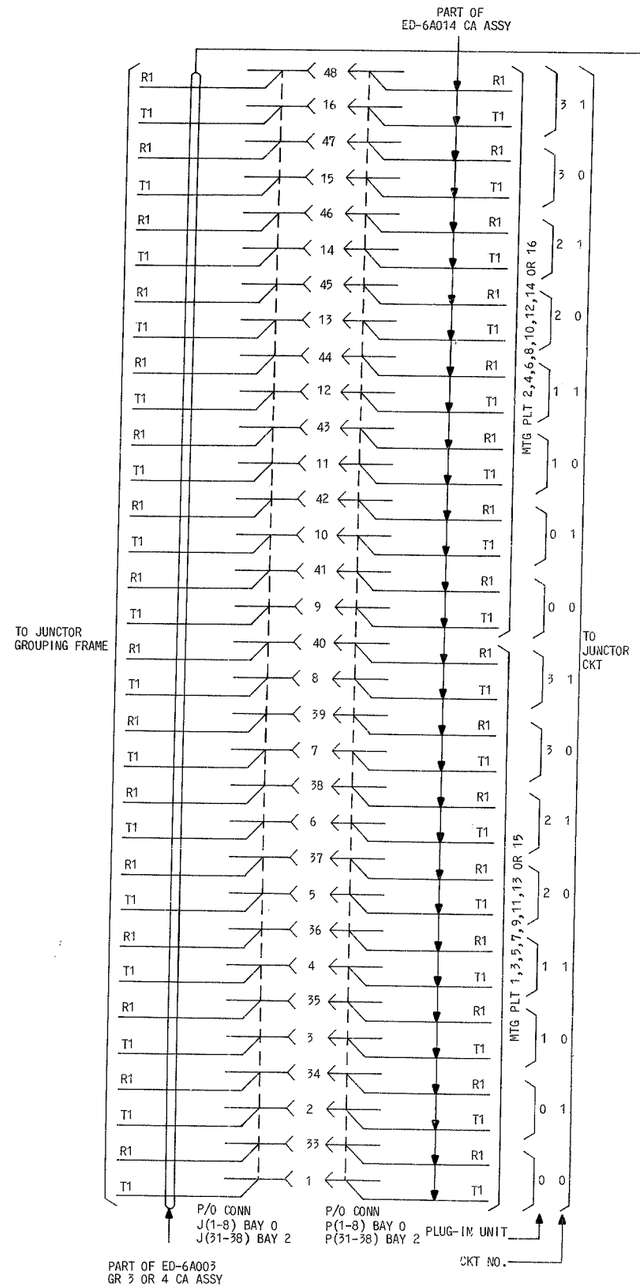
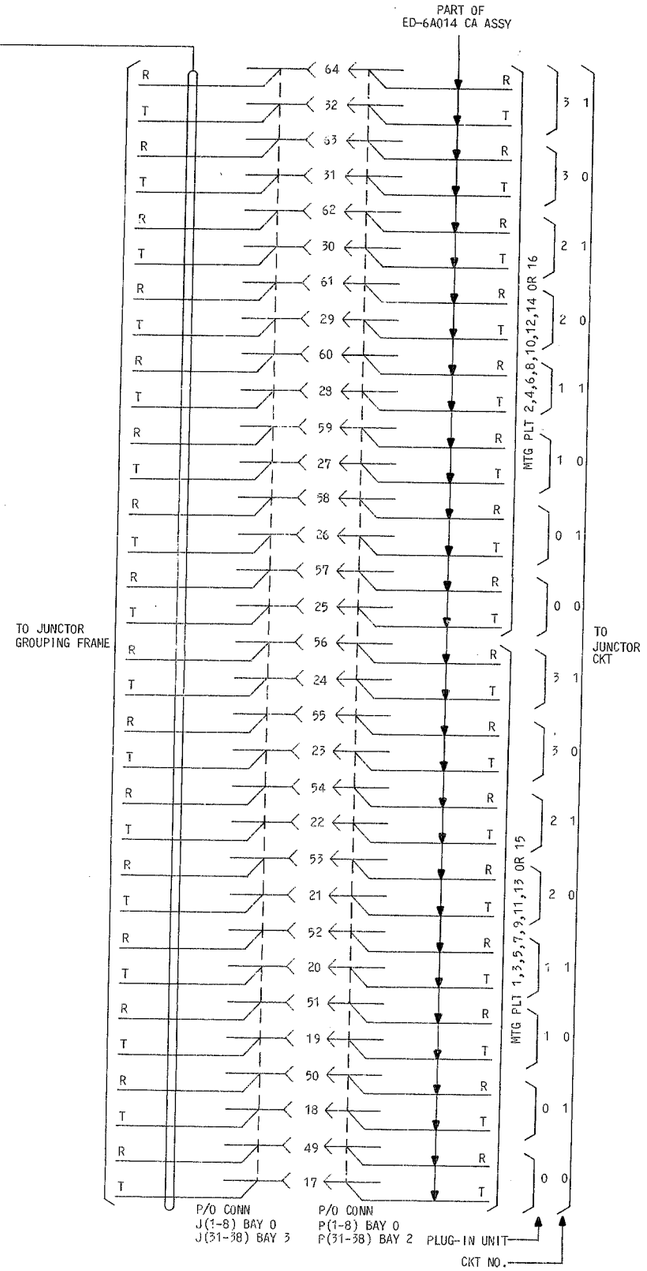
SD-1A110-01-4

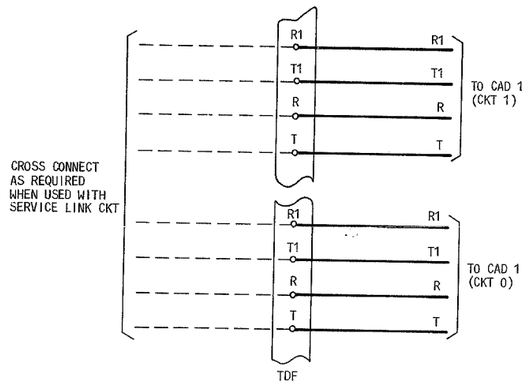
E-7433-A 14-001

CAD 2





CAD 3



JUNCTOR CIRCUIT	DWG SIZE 6S	ISSUE 10D
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