

APPARATUS		MECH. REQ.			CIRCUIT PREPARATION					DIRECT CURRENT FLOW REQ		REMARKS					
DESIG	CODE	BSP FIG.	CONT. PRESS.	ARM. TRVL.	SEQ SW. POS.	BLOCK OR INSULATE	TEST CLIP DATA		TEST SET PREP.	SEE TEST NOTE NO.	TEST WDG.		TEST FOR	AFTER SOAK MA	TEST MA	READJ MA	
							CONN.	BAT.	CONN.	GRD.							
RELAYS																	
FIG. 1																	
CO	R1661	5/5	H	30					RT(CO)	GRD		0		28	26.5		
L	R1656	4/4	L	25		(TK)0			RB(L)	LB(L)	M	P/S	O	14	13.3		
						2B(L)			RB(L)	LB(L)	M	P/S	NO	7.1	7.5		
										LB(L)	GRD.	S	O	43.5			
										LB(L)	GRD.	S	NO	19			
TK	R1669	40/6	H	30					RT(TK)	GRD.		0		18	17		
FIG. 2																	
LF	R1666	26/8	H	30					LT(LF)	LB(LF)	B/C	3	S	0	80	73	
						3B(LF)				RT(LF)	GRD.	3	P	0	35		
FIG. 3																	
MAGNETS																	
STEP	206CJ					(B3)0			1(STEP)	G/V	1						REQ. FOR RUNING
						(B3)0			2(STEP)	G/V	1						REQ. FOR STEPPING
RELAYS																	
A	N4					(B)NO	3T(LF)	1B(LF)	M	M	P/P2	0		18	17		BASE GAP 6 ± 1
						(B)NO	3T(LF)	1B(LF)	M	M	P/P2	NO		14	15		
B	149BD	A				(B1)NO		1B(PH)	GRD.	2							
B1	R1059	11/3	H	20		(B)0(B)NO		RT(B1)	GRD.			0		46.5	44		
B2	178AW	D/D						2T(LK)	GRD.			0		64.5	56		
								2T(LK)	GRD.			NO		39.5	42		
B3	178AF	D/D						1T(B2)	GRD.			0		27.5	24		
								1T(B2)	GRD.			NO		17	18		
BC	B1050			30				1M(BC)		BAT.		0	150	19.5	18.5		
								1M(BC)		BAT.		R	150	10.4	11		

TEST NOTES:

- TEST AND READJUST IN ACCORDANCE WITH BSP FOR 206 TYPE SWITCHES.
- AFTER 70 MA SOAK RELAY SHALL RELEASE WITHIN 3 SEC. ON 0.5 MA, THEN OPERATE ON 29 MA AND NOT RELEASE WITHIN 5 SEC. WHEN CURRENT IS REDUCED TO 3 MA.

- PRIOR TO ISSUE 11-D THE ADJUSTMENT WAS

TEST	READJUST
SEC. OPR. 85	80
PRI. OPR. 31.5	

APPARATUS		MECH. REQ.			CIRCUIT PREPARATION				SEE TEST NOTE NO.	DIRECT CURRENT FLOW REQ.				REMARKS	DWC ISS.
DESIG	CODE	BSP FIG.	CONT. PRES.	ARM TRVL.	SEQ. SW. POS.	BLOCK OR INSULATE	TEST CLIP DATA	TEST SET PREP.		TEST WDG.	TEST FOR	AFTER SOAK	TEST MA		
BT	R1662	26/7	H	30		4T(BT)	RT(BT)	GRD		0		58	56		16
DT	R204	11/14	H	35		3(SR)	RT(DT)	GRD		0		45	29		
LK	R180	1/1	H	15		(B3) NO	RB(LK)	BAT.		0		59	45		
LO	E149J	2/2	H	15			RT(LO)	GRD		0		33	29		
PH	R1667	31/31		15		(B) NO (B, NO	RT(PH)	GRD	3/4%	0		30	28.3		
							RT(PH)	GRD.		NO		16	17		
RC	R130I	8/8	H	20		3T(RS)	RT(RC)	GRD		0		38	32		
RS	R1654	10/10	H	15		A(RT) & 3T(RS)	RT(RS)	GRD.	P	0		60	42		
RT	114CF						3B(RC)	GRD.	1	0		26	24.5	ARM. TRAVEL 20 ±3	
							3B(RC)	GRD.		NO		20.5	22		
SR	149CR	C				(B3) 0 (B3) 0	1T(PH)	GRD	2	0		195	185	MAX. ARM. TRAVEL 30	
							1T(PH)	GRD.	2	NO		66.5	69	MAX. ARM. TRAVEL 30	
T	178CN	E/E					2(SR)	GRD	7	0	100	37.5	35.5		
							2(SR)	GRD.	7	NO	100	23	26.5		
TI	R1655	10/4	H	25			RB(TI)	BAT.	P	0		24.5	23	INSULATE 2B & BLOCK (B2) 0 WHEN "W" WIRING IS USED.	
						2B(TI)	LB(TI)	GRD.	S	0		41.5			

TEST NOTES:

- TEST DURING SILENT INTERVAL OF RINGING.
- MINIMUM CONTACT PRESSURE SPRING I AGAINST SPRING 330 GRAMS RELAY SHALL NOT BREAK BACK CONTACT ON TEST 135 MA READJUST 145 MA.
- ARMATURE NEED NOT TOUCH CORE ON OPERATE CURRENT.
- WITH THE SPECIFIED TEST OR READJ. CURRENT, THE CONTACTS SHALL NOT MAKE WITH A 6 GAUGE INSERTED BETWEEN THE STOP PINS AND THE CORE BUT BOTH CONTACTS MAKE WITH A 4 GAUGE INSERTED IN PLACE SEE OF THE 6 GAUGE.

(A & M ONLY)
NOTE 6

(A & M ONLY)
SEE NOTE 6

- PRIOR TO ISSUE 7-B, NOTE 4 WAS NOT SHOWN AND THE ARM. TRAVEL FOR (PH) RELAY WAS 15.
- NOTES 4 & 5 ARE RATED "A & M ONLY" ON ISSUE 8-D. PRIOR TO ISSUE 8-D, NOTES 4 & 5 WERE PART OF THE CIRCUIT REQUIREMENTS AND THE ARM. TRAVEL OF THE (PH) RELAY WAS 20.
- PRIOR TO ISSUE 11-D THE ADJUSTMENT WAS:

TEST	READJUST
0 - 29.5	20
NO - 19.5	21

APPARATUS		MECH. REQ.			CIRCUIT PREPARATION				SEE	DIRECT CURRENT FLOW REQ.					REMARKS	DWC ISS.	
DESC	CODE	BSP FIG.	CONT. PRESS	ARM TRVL	SEQ SW. POS.	BLOCK OR INSULATE	TEST CLIP DATA		TEST SET PREP	TEST NOTE NO.	TEST WDG	TEST FOR	AFTER SOAK MA	TEST MA			READ MA
							CONN	BAT									
FIGS. 3A & 3B																16	
CH	M2	44/4 36	H	45 45		I(SR)		RT(CH)GRD.						80 75	OPERATE UNIT		
								LB(CH)GRD.	3		O			80 75	RESTORE UNIT. REL. WDG. ALONE		
								LB(CH)GRD.			O			170 160	2 RESTORE UNITS IN PARALLEL		
								LB(CH)GRD.			O			260 245	3 RESTORE UNITS IN PARALLEL		
F	R1657	23/44	H	40		3T(F)	RB(F)					O		71.5 60			
ST	R1658	45/45	H	30		(B3)O		RT(ST)GRD.			P	O		75 53			
						(B3)O		LB(ST)GRD.			S	O		61.5 50.5			
FIG. 3C																	
CH	M2	44/4 36	H	45 45		I(SR)		RT(CH)GRD.				O		80 75	OPERATE UNIT		
								LB(CH)GRD.	3		O			80 75	RESTORE UNIT. REL. WDG. ALONE		
								LB(CH)GRD.			O			170 160	2 RESTORE UNITS IN PARALLEL		
								LB(CH)GRD.			O			260 245	3 RESTORE UNITS IN PARALLEL		
F	R1657	23/44	H	40		3T(F)	RB(F)					O		71.5 60			
S	149CP	C									I	O		25 23.5	MAX. ARM TRAVEL 25		
											I	R		O.C. O.C.			
SI	178AS	F/F						I(S)GRD.				O		50 35			
								I(S)GRD.				NO		26.5 26			
ST	R1658	45/45	H	30		(B3)O		RT(ST)GRD.			P	O		75 53			
						(B3)O		LB(ST)GRD.			S	O		61.5 50.5			
FIG. 4																	
CT	R721	11/1	H	15				RT(CT)GRD.				O		13.7 13			

TEST NOTES:

1. CONNECT GROUND THRU TEST SET TO IT(F) OF LAST LINK.
- 2.
3. NUMBER 1 SPRING SHALL HAVE SUFFICIENT TENSION TO HOLD THE ARMATURE AGAINST THE ADJUSTING NUT WHEN RESTORE UNIT IS UNOPERATED.

750A P.B.X. LINE & LINK CIRCUIT

FIG. 3C
CHAIN CRT. FOR LAST LINK

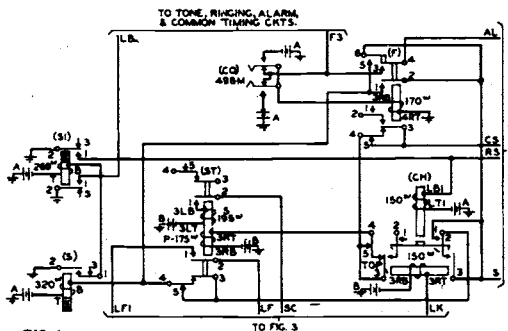


FIG. 3B
CHAIN CRT. FOR INTERMEDIATE LINK

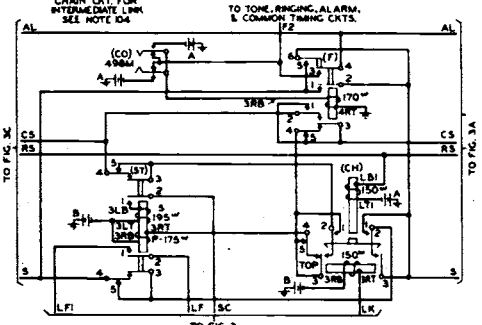
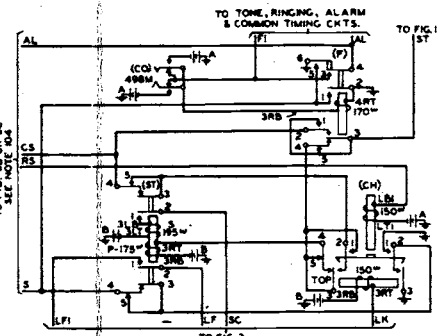


FIG. 3A
CHAIN CRT. FOR 1ST LINK



- CIRCUIT NOTES:
- PROVIDE ONE 1/4 AMP FUSE FOR EACH 3 LINE CRT, FIG. 1, THE ASSOCIATED CONNECTION CRTS., FIGS. 4, AND THE ASSOCIATED CTI RELAYS IN THE LINK CRTS. PROVIDE ONE 1/4 AMP FUSE PER LINK CRT, FIG. 3, AND BAT. DESIGNATED "B" IN ASSOCIATED CHAIN CRT, FIG. 3A, 3B, OR 3C. PROVIDE ONE AMP FUSE FOR BAT. DESIGNATED "A", FIGS. 3A, 3B, AND 3C.
 - PROVIDE ONE FIG. 1 PER LINE. FOR KEYLESS STATIONS CONNECT FIG. 1 TO STATION CIRCUIT. OTHERWISE CONNECT FIG. 1 TO TRUNK CIRCUIT.
 - PROVIDE ONE FIG. 2 AND ONE FIG. 4 PER LINE PER LINK.
 - WHEN ONLY TWO LINKS ARE REQUIRED OMIT FIG. 3B AND CONNECT FIG. 3A TO 3C.
 - "E" LEADS NOT CONNECTED TO (C7) RELAYS SHALL BE STRAPPED TO THE "B" LEAD.
 - THE MANUFACTURE OF "X" WIRING FOR USE IN THIS CRT. HAS BEEN DISCONTINUED. "X" WIRING IS SUPERSEDED BY "Y" WIRING ON ISSUE 7-B. PRIOR TO ISSUE 7-B, "X" WIRING WAS NOT SHOWN AND "Y" WIRING WAS PART OF FIG. 3.
 - LEADS MARKED "C" SHALL BE RUN IN SEPARATE CABLE.
 - THE MANUFACTURE OF "V" WIRING FOR USE IN THIS CRT. HAS BEEN DISCONTINUED. "V" WIRING IS SUPERSEDED BY "W" WIRING ON ISSUE 7-B. PRIOR TO ISSUE 7-B, "V" WIRING WAS NOT SHOWN AND "W" WIRING WAS PART OF FIG. 3.
 - (A) PROVIDE "S" WIRING AND APPARATUS WHEN POWER CHARGE CONTROL FEATURE IS REQ. (B) PROVIDE ONE (C6) RELAY PER P.B.X.
 - PRIOR TO ISSUE 9-D, "S" WIRING AND APPARATUS WAS DESIGNATED "W" AND "A" WIRING WAS DESIGNATED "V". THE MANUFACTURE OF "S" WIRING IS DISCONTINUED AND IS SUPERSEDED BY "S" WIRING AND APPARATUS ON ISSUE 9-D.
 - THE MANUFACTURE OF "W" WIRING AND APPARATUS FOR USE IN THIS CRT. HAS BEEN DISCONTINUED. "W" WIRING AND APPARATUS IS SUPERSEDED BY "Y" WIRING AND APPARATUS ON ISSUE 10-D. PRIOR TO ISSUE 10-D, "W" WIRING AND APPARATUS WERE NOT SHOWN AND "Y" WIRING AND APPARATUS WERE PART OF FIG. 3.
 - PROVIDE THE .02 M.F. CONDENSER WHEN THE (A7) VACUUM TUBE IS USED IN THE TONE, RINGING, ALARM, AND COMMON TIMING CRTS. OTHERWISE PROVIDE THE .04 M.F. CONDENSER.

FIG. 1
LINE CRT. SEE NOTE 102

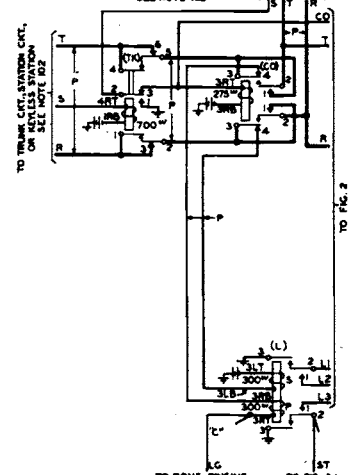


FIG. 2
LINE FINDER CRT. SEE NOTE 103

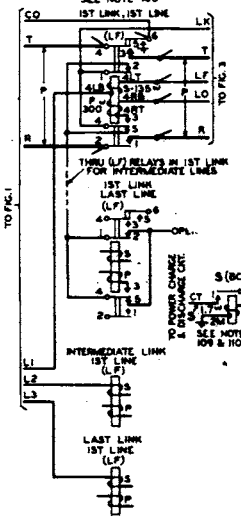


FIG. 3
LINK CRT.

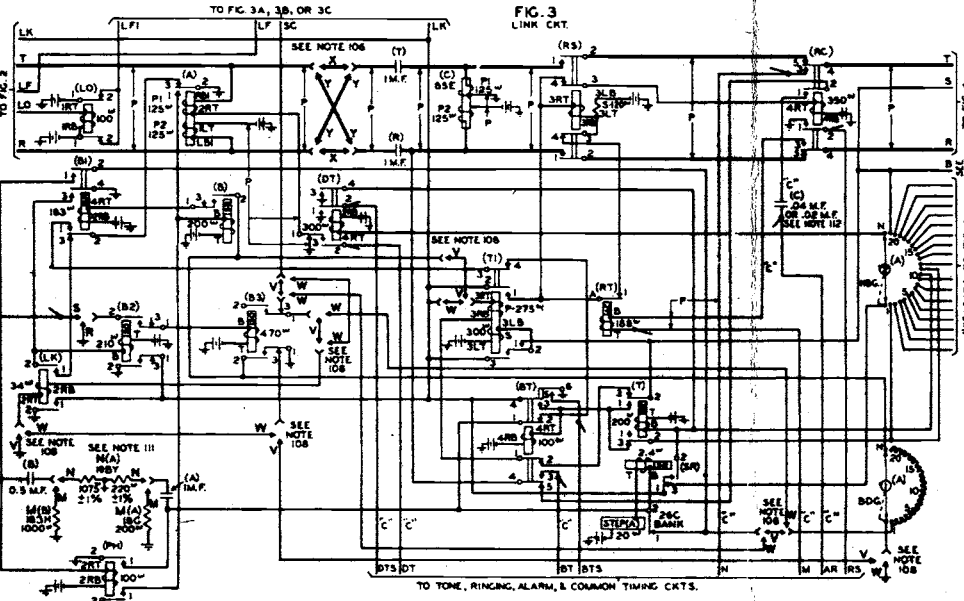
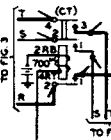


FIG. 4
CONNECTOR CRT. SEE NOTE 103



TRANSMISSION TEST REQUIREMENTS
(1000 CYCLE LOSS BETWEEN 800" LINES)

TEST POINT	(A)	(B)	(C)
MAX. ALLOWABLE CIRCUIT LOSS			
ALLOWABLE INDIVIDUAL APPARATUS LOSSES			
RELAY	A	N4	0.3
RET. COIL	C	85E	0.3

WORKING LIMITS
MAX. EXT. STATION CONDUCTOR RES. 200"
MIN. INSULATION RES. 70000"

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16-D DWG. ISS.
16-D C.D. ISS.

FIG. 1K

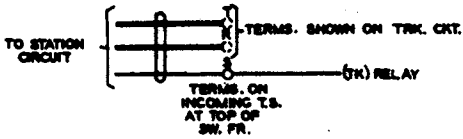


FIG. 3K & 4h

