

SHEET INDEX (INITIATED ON ISSUE 16D)

FIG.		CONTENTS	SHEET NO.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	SHEET NO.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
		SHEET INDEX SUPPORTING INFORMATION	-A	16	17	18	19	20	21	22																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														

SUPPORTING INFORMATION

CATEGORY	NO.
EQUIPMENT DRAWINGS	SD-35514-1 J33C16AC-1 H400-107
KEYSHEET INFO	SD-31359-01 SD-31364-01 SD-31780-01 SD-32149-01 SD-32325-01

SHEET INDEX NOTES

1. WHEN CHANGES ARE MADE IN THIS DRAWING, ONLY THOSE 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.

NOTICE

NOT FOR USE OR
DISCLOSURE OUTSIDE
THE BELL SYSTEM
EXCEPT UNDER
WRITTEN AGREEMENT

ISSU

STEP BY STEP SYSTEMS

NO. 1, 35CA, 355A, 356A, 360A, 35-E-97
AND NORTH ELECTRIC CO CX OFFICES
INTERCEPTING TRUNK CIRCUIT

FOR INTERCEPTING CALLS FROM
CONNECTOR TERMINALS
AND FROM SELECTOR LEVELS
FOR USE WITH AN ANNOUNCEMENT MACHINE

(M INCT TPL CONN)(M INCT-CONN & T SEL)
(M INCT I SEL)(M INCT SEL)(M INCT IT SEL)

BELL TELEPHONE LABORATORIES

1099

AT&TCC
STANDARD

A & M ONLY FOR 350A, 356A
360A AND 35-E-97

SD-32202-01-A

2 SHEETS

CIRCUIT NOTES:

DESIG	FUSE AMP	POTENTIAL	ONE PER
A	1-1/3	-48V SIG	MAX. 20 FIG. 1, A
A	1-1/3	-48V SIG	MAX. 10 FIG. 1, B
B	1-1/3	-48V TALK	MAX. 8 FIG. 2
C	1-1/3	-48V TALK	MAX. 8 FIG. 3
D	1-1/3	-48V SIG	MAX. 9 FIG. 4
E	1-1/3	-48V SIG	MAX. 6 FIG. 6
F	1-1/3	-48V SIG	OFFICE FIG. 7
BATTERY SYMBOL		VOLTAGE RANGE	
-48		45-52V	

FEATURE OR OPTION			PROVIDE		
			FIG.	APP OR WRC	QUANTITY
INCPTRK FROM	NORTH ELEC CO TYPE CX OR CONN TERM. OTHER THAN FROM TPL CONN AND AUTO. DISC. ON CALLING PARTY HOLDS IS	REQUIRED	1, A	S, T, Z	ONE PER TRK
		NOT REQUIRED		T, 2	
	TOLL TRANS OR TOLL INT SEL LEV			T	
	INCPTRK FROM LOCAL OR PRECEDING SEL LEVELS OR TRK FINDERS IN NO. 1 A MA OFFICE CONN TO CGAMA TRUNKS OR TO RCC/PBX AUX TRK CKT			2	
INCPTRK FROM IN-TERTOLL SEL LEVELS		IN NON-PAD CONT OFF.	3	W	ONE PER TRK
		IN PAD CONT OFF.		V	
INCPTRK FOR TPL CONN CONN TO BANK MULTIPLE OR INCPTRK CKT FROM MULTI-PARTY TPL CONN MULTIPLE AND AUTO. DISC. ON CALLING PARTY HOLDS IS		REQUIRED	6	M	ONE PER TRK
		NOT REQUIRED			
WHERE TRAFFIC REGISTER IS REQD				N	ONE PER TRK
INCPTRK FROM 200 PT CONN SHELF JACKS OR AUX TRK CKT			7		ONE PER ANN CKT
CONN CKT	VOICE ALARM & CONTROL CKT (WITH 7A ANN MACHINE)	NOT REQD	9		ONE PER ANN CKT
		REQD	10		
		NOT REQD	11	J	ONE PER TRK
		REQD		K	
AUTOMATED LOOP TESTING IS EQUIPPED IN OFFICE (TPS CONNECTOR TERMINAL ONLY)				G	

NETWORK VALUES			
NETWORK		RESISTANCE	CAPACITANCE
NO.	CODE	IN OHMS	IN UF

CIRCUIT NOTES: (CONT)

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
1				T	X U
1					FIG. 4
7D	FIG. A OR B	FIG. A		FIG. A	FIG. B
7D				FIG. 6	
10D					FIG. 5
16D	S	NONE	102	S	
16D	M & N OR Y	Y	102	M, N	Y
18D				221A	145A
18D					FIG. 8
18D					FIG. 9
20B			102	FIG. 11	
21B	G	NONE	102	G	

105.
(A & M ONLY)

FEATURE OR OPTION		PROVIDE		
		FIG.	APP OR WRG	QUANTITY
INCP TRK FROM	LOCAL & TOLL PRECEDING SEL LEVELS IN 35-E-97 OFFICES	2	X	ONE PER TR
	TOLL TRANS OR TOLL INT SEL LEVELS IN 36CA OFFICES	4		ONE PER TR
	TOLL TRANS OR TOLL INT SEL LEVELS IN 35-E-97 OFFICES	1, B		ONE PER TR
	200 PT CONN SHELF JACKS OR AUX TRK CKT IN 35E97 OFFICES	7		ONE PER ANN CKT

WORKING LIMITS
MAX EXT CKT LOOP 1500 OHMS, FIG. 2
MIN INSULATION RES 15,000 OHMS

EQUIPMENT NOTES:

201. THE KS-678C CONNECTING CLIPS FOR FIG. 5 SHALL BE INSULATED BY COVERING EACH WITH A SUITABLE LENGTH OF NO. 0 BLACK NON RIGID POLYVINYL TUBING PER ASTM DESIG D922. THEY MAY BE ATTACHED TO THE CORD TIPS OF THE RECORDING TEL SET CORD WITHOUT ALTERING THE POSITION OF THE TUBING.
202. THE POWER CORD OF THE 2A TELEPHONE ANSWERING SET SHALL BE PLUGGED INTO A POWER OUTLET SEPARATELY FUSED TO 115V 60 CYCLE AC SUPPLY AT THE POWER SERVICE CABINET, AND WHICH IS NOT UNDER CONTROL OF A MAINTENANCE CUT-OFF SWITCH.
203. Y INSTALLER WIRING IS ADDED TO CAD. 1 ON ISSUE 7D, AS ALSO ARE CADS. 8, 9 AND 10. Y INSTALLER WIRING IN CADS 1 AND 9 TO CAD. 10 SHALL BE FURNISHED FOR ALL UNITS IN ORDER TO PROVIDE FOR PEG COUNT REGISTRATION ON ANY TRUNK AS REQUIRED.
204. WHEN THIS UNIT IS CONNECTED TO INTERCEPTING TRUNK CIRCUIT (SD-31995-01) IT SHALL BE WIRED DIRECTLY TO THE UNIT TERMINAL STRIP FOR FIGURES 3, 6 AND 8.
205. THE TERMINAL STRIP ON ANNOUNCEMENT SET EQUIPMENT ASSEMBLY IN CADS. 16 AND 17, ADDED ON ISSUE 15D, REFLECT A REVISION IN THE INITIAL PRODUCTION OF EQUIPMENT PER ED-95034-() WHICH PROVIDES A SHOP WIRED UNIT WITH THE UNIT TERMINAL STRIP FOR THE WIRING FOR FIG. 8. THE UNIT TERMINAL STRIP IS ALSO UTILIZED FOR WIRING LEADS TO THE (SL) RELAY OF FIG. 7 MOUNTED ON THIS UNIT, EXCEPT THAT THIS RELAY IS FURNISHED AS A LOOSE PART PER J33016AD AND MOUNTED AND WIRED TO THE UNIT TERMINAL STRIP BY THE INSTALLER. OTHER CONNECTIONS AND INFORMATION AS SPECIFIED ON THE ANNOUNCEMENT SET EQUIPMENT ASSEMBLY DRAWING ARE ALSO SHOWN TO PROVIDE THE NECESSARY COMPLETE PICTURE OF CONNECTIONS. CAD. 11 FOR FIG. 7 IS RATED MFR DISC.
206. ON ISSUE 16D CAD. 1 AND 9 ARE REVISED TO INCLUDE CONNECTIONS TO THE SW TBL ALM CKT AND MISC. ALM CKT. ALSO CADS. 2 AND 16 ARE REVISED TO INCLUDE CONNECTIONS TO THE TRK FOR CKT AND OGT TRK CKTS, RESPECTIVELY. CADS. 18 AND 19 WERE ADDED.
207. ON ISSUE 16D "N" INSTALLER WIRING WAS ADDED TO CADS 1 & 9. "N" INSTALLER WIRING IN CADS 1 AND 9 TO CAD 10 SHALL BE FURNISHED FOR ALL UNITS IN ORDER TO PROVIDE FOR PEG COUNT REGISTRATION ON ANY TRUNK AS REQUIRED.
208. ON ISSUE 18D CADS 20 & 21 WERE ADDED. THESE CADS REFLECT A REVISION IN THE INITIAL PRODUCTION OF THE ANNOUNCEMENT SET & AMPLIFIER EQUIPMENT NOW SHOWN ON DRAWING H400-107 REPLACING ED 95034-() THE NEW UNIT PER H400-107 IS A SHOP WIRED UNIT WITH KS-14160 CONNECTOR THAT WILL ACCEPT CONNECTIONS FOR SD-32202-01. THE (SL) RELAY PER SD-32202-01, FIG. 7 IS FURNISHED AND SHIPPED LOOSE AS A PART OF J33016AD MOUNTED ON A SEPARATE MOUNTING PLATE NEAR THE ANNOUNCEMENT SET.
209. WHEN CONNECTION TO RCC/PBX AUX TRK CKT IS REQUIRED CROSS CONNECT T&R LEADS ONLY.

INFORMATION NOTES:

301. UNLESS OTHERWISE SPECIFIED: RESISTANCE VALUES ARE IN OHMS. CAPACITANCE VALUES ARE IN MICROFARADS. VALUE PRECEDED BY THE SYMBOL + (PLUS) OR - (MINUS) ARE IN VOLTS.
302. CONNECT A 145C 68.1 OHM RESISTOR ACROSS OUTPUT TERMINALS OF ANNOUNCEMENT MACHINE.
303. REMOVE EXISTING STRAPS FROM TS 4 OF TEL ANN. SET.
304. TRANSFER LEAD TO (C4) CAPACITOR FROM PCHG "TAS" TO PCHG "CDD" ON 152L AMPLIFIER.
305. STRAPPING "H" SHOULD BE ADDED ON A 2A ANN. SET AS SHOWN IN FIG. 5. ON 2A SETS WHERE A BLUE LEAD IS BROUGHT THROUGH TO TOP OF TS 4 AND CONNECTED TO PCHG 12, THE BLUE LEAD SHOULD BE TRANSFERRED TO PCHG 13.
306. ALTHOUGH Z OPTION IS NECESSARY ONLY ON TRUNKS FROM CONN MULT OR FROM NORTH ELECTRIC CO. TYPE CX, IT MAY ALSO BE USED ON TRUNKS FROM TOLL SELECTORS WITHOUT AFFECTING OPERATION.
307. CONNECT A KS-13490, L1 200 OHM RESISTOR BETWEEN TERMINAL 7R OF WAFER J AND TERMINAL 2 OF WAFER F ON (S1) SWITCH OF 2A ANN. SET.
308. IN NORTH ELECTRIC CO TYPE CX OFFICES CONNECTION TO THE S SHALL BE MADE ON JOB BASIS.
309. WHEN A KS-16765, L2 ANNOUNCEMENT SET IS EMPLOYED AS THE ANNOUNCEMENT SOURCE IN CONJUNCTION WITH FIG. 8 OR FIG. 9 AN AUX AMPLIFIER PER KS-16754, L1 (MFR. DISC.) OR L4 IS REQD AND THE T & R LEADS TO THE TRUNKS SHALL BE CONNECTED TO THE T2 & R2 LEADS RESPECTIVELY OF THE AMPLIFIER CKT SD-95231-01.

FIGURES AND OPTIONS ON THIS DWG			
CKT FIG.	LOC	APP OR WIRING	LOC
1	2A2		2A1,
2	2E2	Z	2B1
3	2A7		2D1,
4	2D7	Y	2D2,
5	3A2		3G3
6	3D2	X	2G1
7	3A7	W	2B7
8	3A8	V	2B7
9	3D5	U	2D1,
10	3D8		2E7
11	3E6	T	2D1,
		S	2D1
A	2C1	N	2D1,
B	2C2	R	3F3
		K	3F6
		J	3F6
G	2A0		

INTERCEPTING TRUNK CIRCUIT

BELL TELEPHONE LABORATORIES
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SD-32202-01

65

PRINTED IN U.S.A.

ISSUE

220

FIG 1
INCP TRK FOR CONN TERM
OR TOLL TRANS AND TOLL
INT SEL LEV
(SEE NOTE 308)

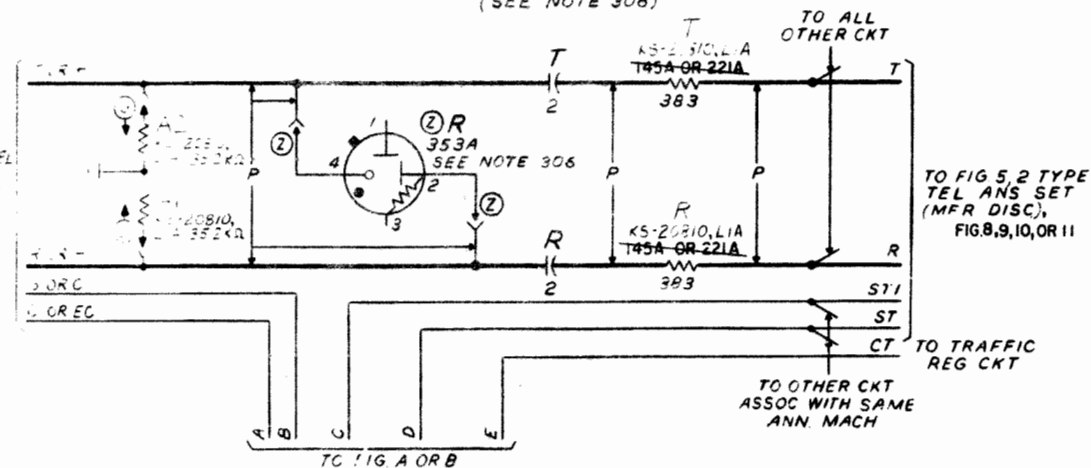


FIG A

TO FIG 1

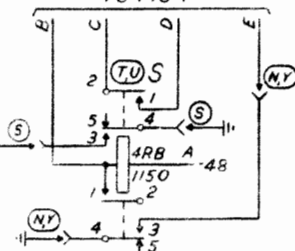


FIG B (A & M ONLY)

TO FIG 1

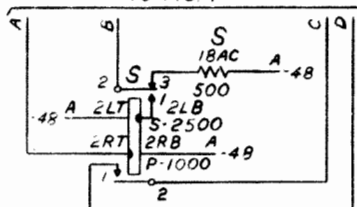


FIG 2
INCP TRK FOR LOCAL OR
TOLL PREC SEL LEV OR
TRK FOR
OR RCC/PBX AUX TRK CKT

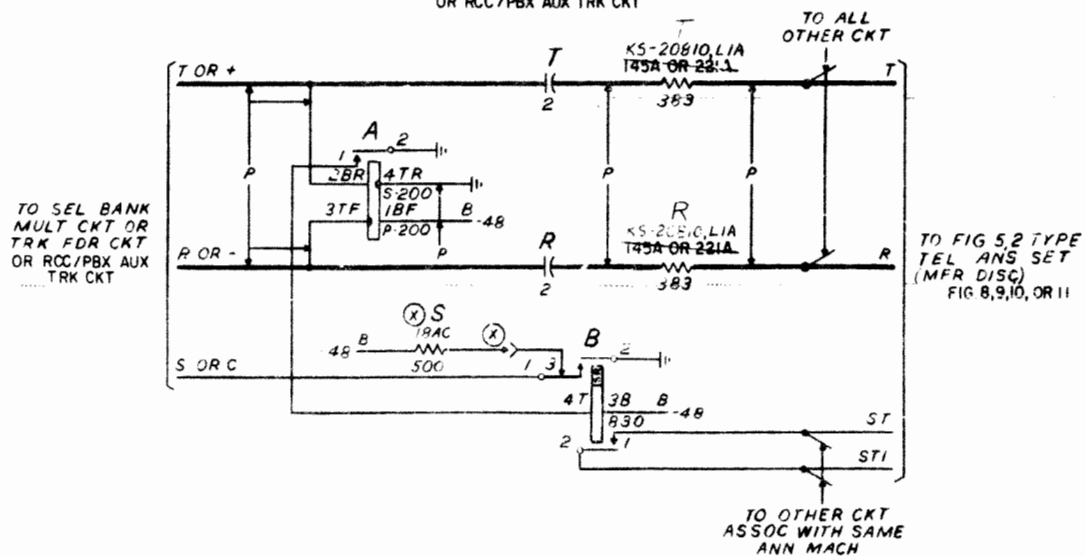


FIG 3
INCP TRK FOR
INTERTOLL SEL LEV

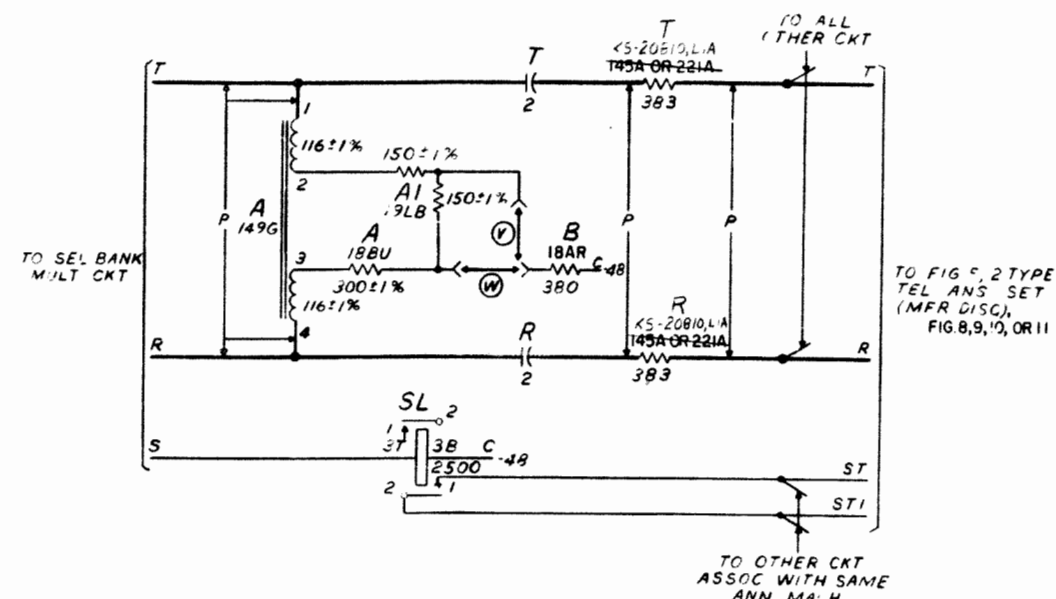


FIG 4 (A & M ONLY)
INCP TRK FOR TOLL TRANS
OR TOLL INT SEL LEV
IN 360A OFF ONLY

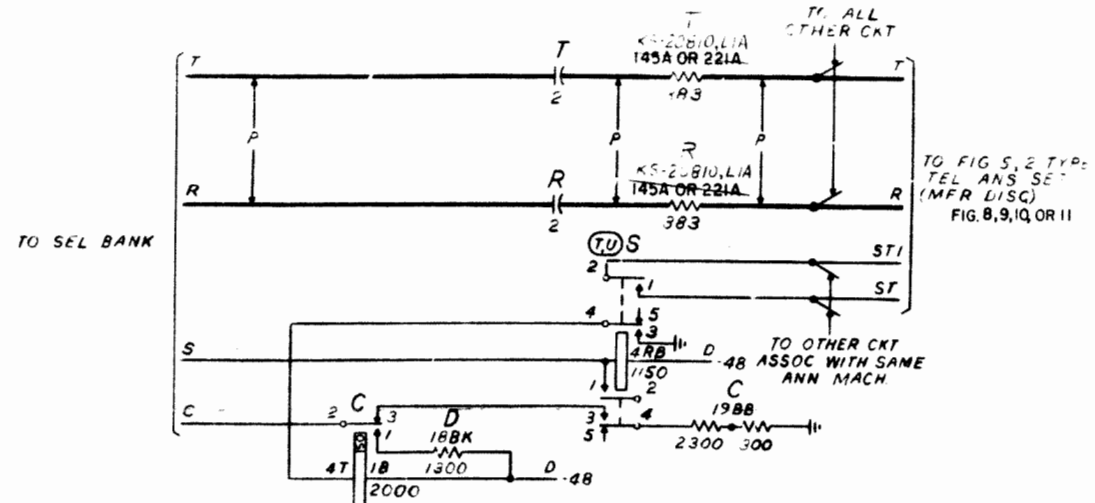


FIG. 5 (MFR DISC.)
ANN. EQUIP.

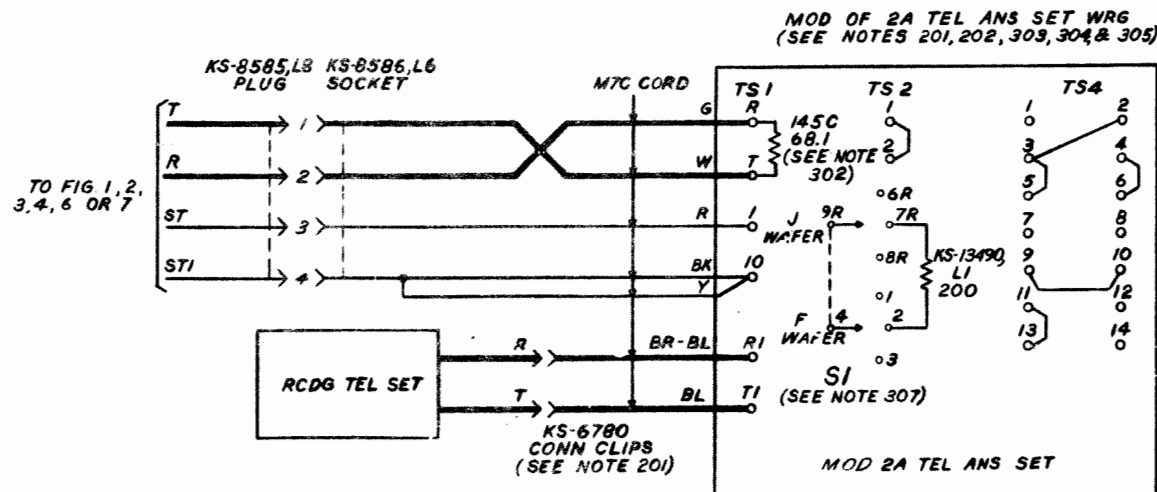


FIG. 7
INCPT TRK FOR CONN
TO CONN THRU SHELF JK
OR AUX TRK CKT

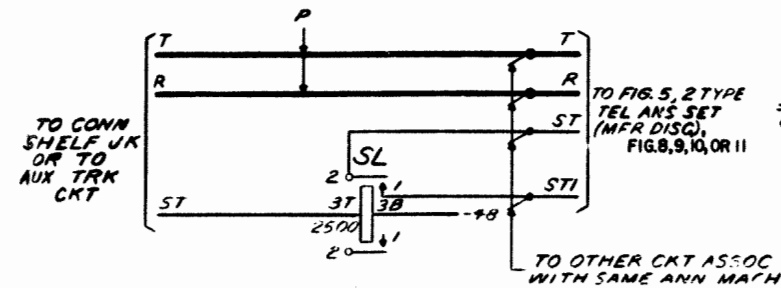


FIG. 8 (A & M ONLY)
CONN CKT
(SEE NOTE 309)

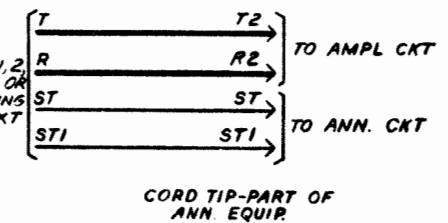


FIG. 6
INCPT TRK FOR TERM.
PER LINE CONN TERM.

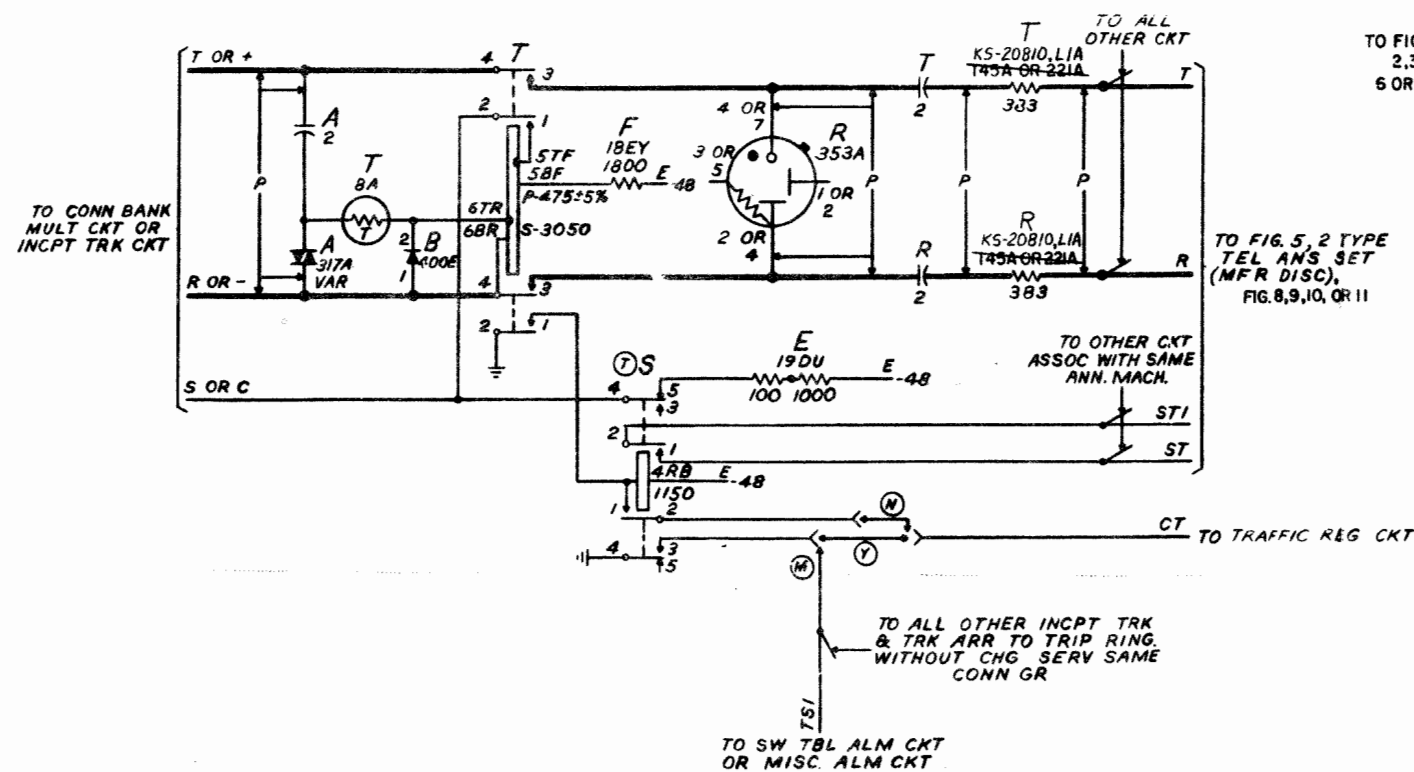


FIG. 9
CONN CKT
SEE NOTE 309

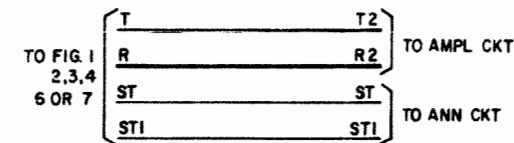


FIG. 10
CONN CKT

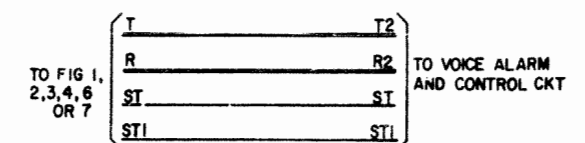
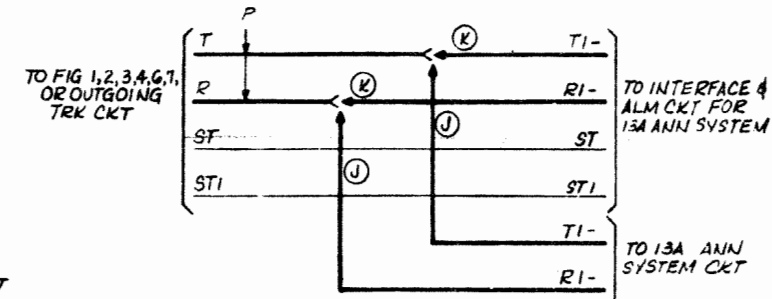


FIG. 11
CONN CKT



SD-32202-C1

CIRCUIT REQUIREMENTS

INTERCEPTING TRUNK (M INCPY TPL CONN)(M INCPY CONN & T SEL)(M INCPY SEL)(M INCPY IT SEL)(M INCPY T SEL)

APPARATUS				MECH REQ		CIRCUIT PREPARATION				TEST SET				DIRECT CURRENT FLOW REQ				REMARKS
DESIG	CODE	OPT	CKT FIG.	BSP FIG.	CONT PRESS.	ARM. TRVL.	BLOCK OR INSULATE	TEST CLIP DATA		TEST SET PREP	SEE TEST NOTE	TEST WDG	TEST FOR	AFTER SOAK		TEST READJ		
								CONN BAT.	CONN GRD					MA.	MA.		MA.	
RELAYS																		
A	UA3		2	205/136	SPL	SPL	(B)NO (B)NO (B)NO	BR(A) BR(A) BR(A)	TF(A) TF(A) TF(A)	M	3	P/S	0		14.5	13.5	ARM. TRVL MAX. 23	
										M		P/S	NO		9.5	10		
										M		P/S	R		6	6.5		
B	Y263		2	235/115	H	44			T(B) T(B) T(B)	GRD GRD GRD	1 1 1		0 H R	FS FS FS	26.5 2.5 1.2	25 2.3 1.5		
C	U476		4	132/136	H	47			T(C) T(C)	GRD GRD			0 NO		18.4 11.2	17.5 11.8		
S	EA10	U	A.4. 6	8/8	SPL	20			1B(S)	GRD	2,4		0		17.5	16.5		
S	EA33	T	A.4. 6	8/8	SPL				1B(S) 1B(S)	GRD GRD	4 2		C NO		17.5 9.4	16.5 9.9		
S	R1967	B		3/1	H	20			RT(S) 1T(S)	GRD GRD		P S	0 0		14.3 11.2	13.6 10.7		
SL	U624		3,7	101/101	H	29			T(SL)	GRD			0		6.7	6.3		
T	UA57		6	111/111	H	SPL			1T(T) 1T(T) 6T(T)	GRD GRD B/G AC		P P S	0 NO 0		17.9 11.4 5.9	17 12	ARM. TRVL MAX. 23	
							4B(T)				5	S	0		AC	AC		

TEST NOTES:
1. ADJACENT RELAYS MUST NOT BE ENERGIZED. SEE BSP.
2. CONT 3T-4T AND 3B-4B SHALL HAVE H CONT PRESS. ALL OTHERS SHALL HAVE L CONT PRESS.
3. CONT PRESS. 1T MIN 8 GRAMS TEST, 10 GRAMS READJUST.
4. INSULATE 3B(S) WHEN Y OPTION IS USED.
5. TEST AND READJUST RELAY FOR AC OPERATION BY APPLYING MIN 95V (1100-1200 RPM) RINGING CURRENT IN SERIES WITH 13B RESISTANCE LAMP (OR EQUIVALENT) AND 7000 OHMS NON INDUCTIVE RESISTOR ACROSS THE TIP AND THE RING.

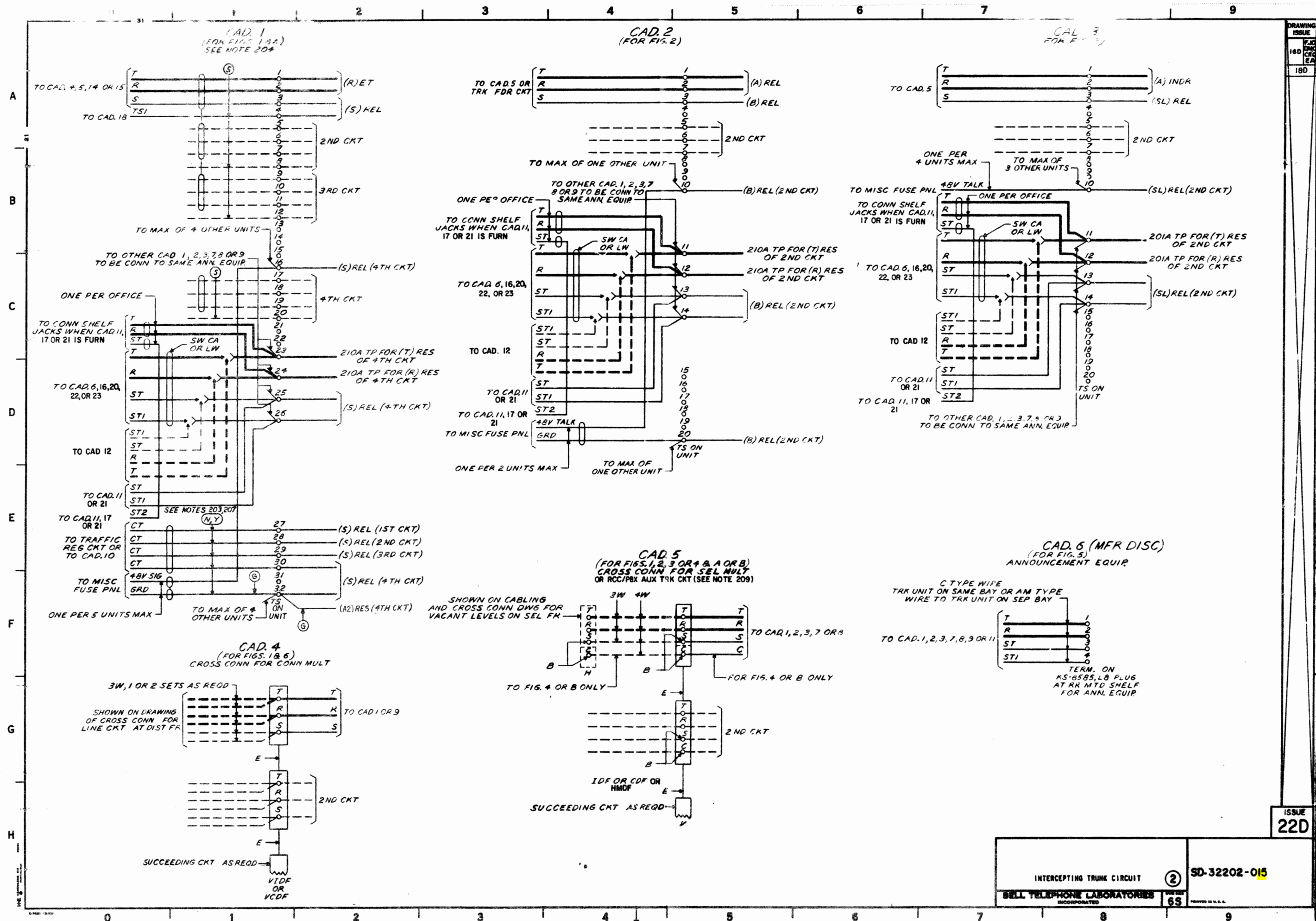
NO. 1, 350A, 355A, 356A, 360A, 35-E-97
AND NORTH ELECTRIC CO CX OFFICES
INTERCEPTING TRUNK CIRCUIT

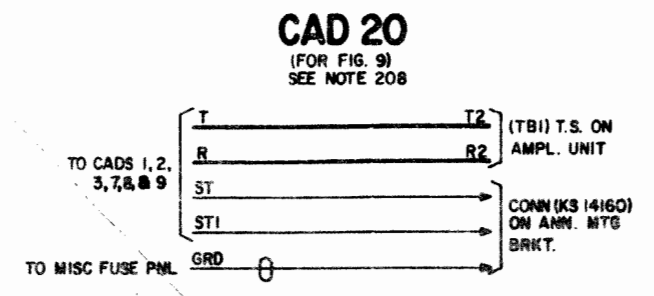
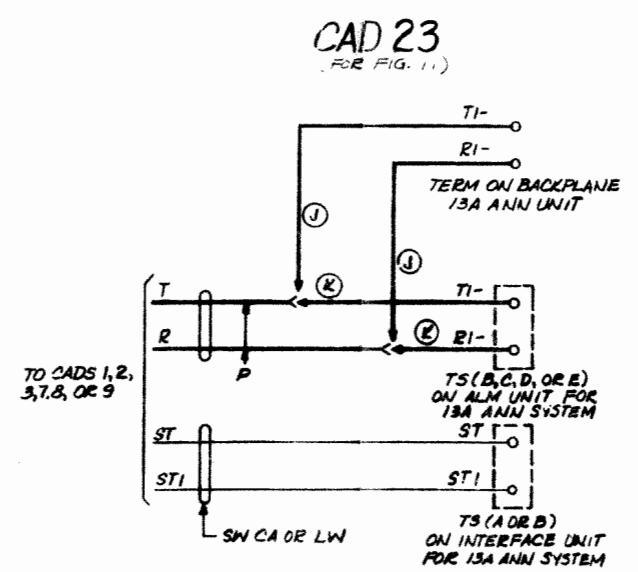
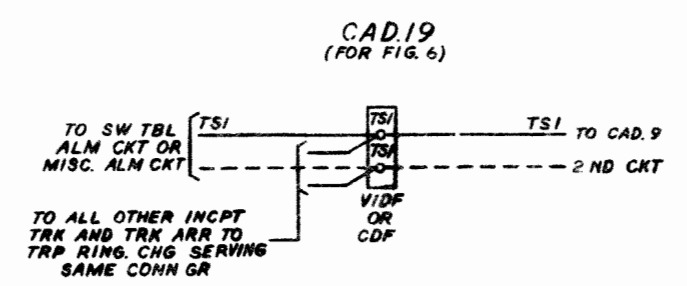
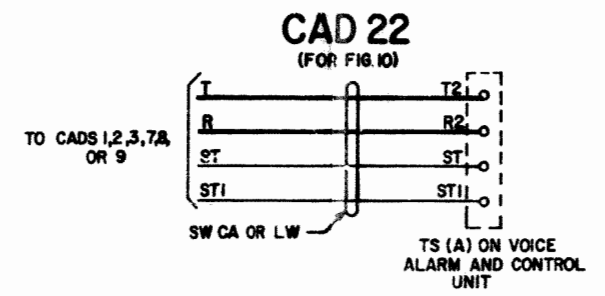
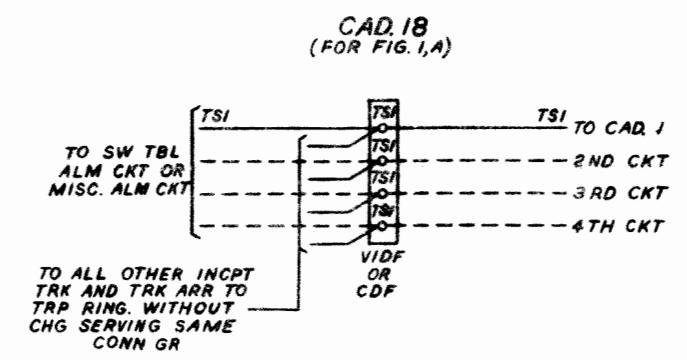
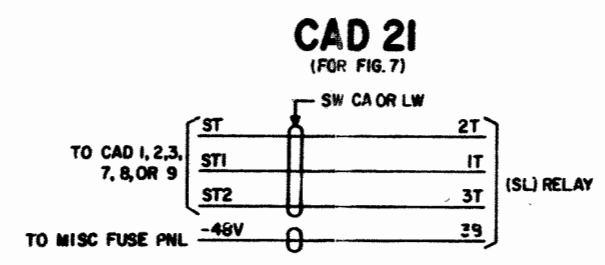
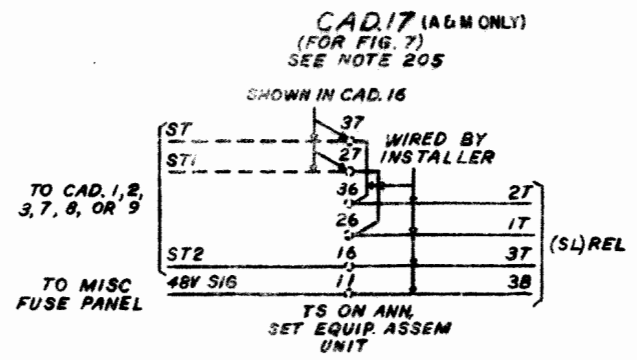
SD-32202-014

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DRAWING ISSUE

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