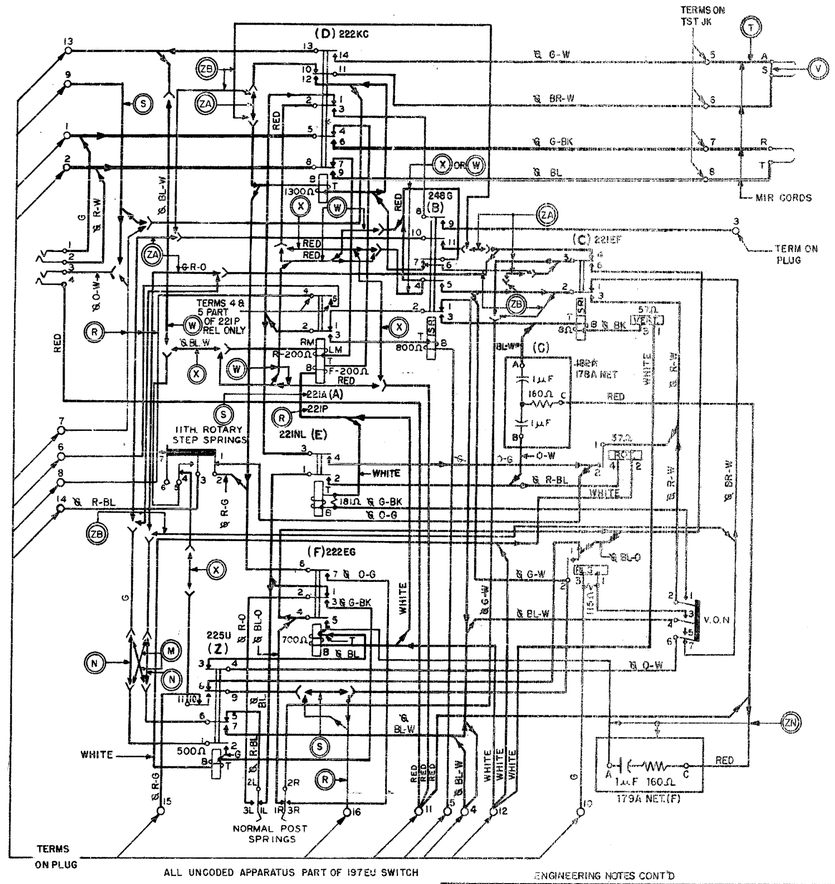
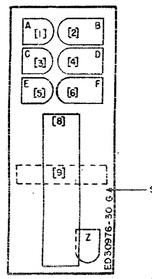
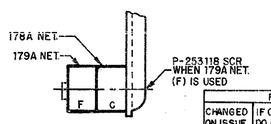
FIG. 1
SELECTOR CKT.



ALL UNCODED APPARATUS PART OF 197EU SWITCH



FRONT VIEW
SKETCH A



END VIEW OF REAR COVER
SKETCH B

ENGINEERING NOTES

51.

THIS DRAWING AGREES WITH		1	3	9	10	12	13	14	17	19	SHOP	INST
ED-30976-01	ISSUE	1	2									
SD-30976-01	ISSUE	1	2	3	4 ADV	5	6 ADV	7 (ADV) SEE NOTE 9	8 (MOD)	19 (MOD)		
BSP-AA231-207 (J32310)	ISSUE	7 (MOD)										
BSP-AA231-203 (J32302)	ISSUE	8 (MOD)										

52. ASSOCIATED WIRING DIAGRAMS
T-532052 SHELF JACK WRG - 10 CAP
T-532056 SHELF JACK WRG - 20 CAP
T-32043-11 SM TBL ALM CKT - 10 CAP
T-32043-13 SM TBL ALM CKT - 20 CAP
T-32123-11 BANK WIRING

53. SPECIFY FIGURES AND OPTIONS IN ACCORDANCE WITH THE FOLLOWING:

FEATURE OR OPTION		FIG	PROVIDE APP OR WRG	QUANTITY
DIGIT ABSORBING SELECTOR CKT		1	M M WRG	1 PER CKT
DIAL TONE AND BUSY TONE REQUIRED			X WRG	
DIAL TONE NOT REQ'D	BUSY TONE SIGNAL		X WRG	
	BUSY FLASH SIGNAL		W WRG	
3 WIRE TRUNKS			V WRG	
4 WIRE TRUNKS			T WRG	
NO. 1 & 350A OFFICES			S WRG	
355A OFFICE			R WRG & APP	

54. NORMAL POST SPRINGS SHALL BE ADJUSTED TO OPERATE ON SPECIFIED LEVELS AS FOLLOWS:
(A) LEFT NPS ONLY ON LEVELS ARRANGED FOR REPEATED ABSORPTION OF DIGITS. (UNLESS "ONCE ONLY" ABSORPTION HAS PREVIOUSLY OCCURRED).
(B) RIGHT NPS ONLY ON LEVELS ARRANGED FOR BLOCKING SERVICE. (UNLESS "ONCE ONLY" ABSORPTION HAS PREVIOUSLY OCCURRED)
(C) BOTH LEFT & RIGHT NPS ON LEVELS ARRANGED TO ABSORB ONE DIGIT ONLY

55. THE TIMED RELEASE RELAYS ASSOCIATED WITH GRP 3 ARE PART OF THE SHELF EQPT AS SHOWN ON J32310-1.

56. STARTING 2-11-52, ALL 197EU SWITCHES WERE EQUIPPED WITH P-463573 SPRING ASSEMBLIES IN PLACE OF P-25169.

57. WHEN 5-3 IS TO BE USED AS A FIRST SELECTOR WHICH HAS ACCESS TO ANY LINES EQUIPPED WITH PERMANENT SIGNAL LOCKOUT, SPECIFY ONE J32300 LIST 8 FOR EACH SWITCH THEREBY PROVIDING FOR A TIMED RELEASE FEATURE ON PERMANENT SIGNALS. THE TIMED RELEASE FEATURE PER J32300 LIST 8 SHALL NOT BE PROVIDED FOR SELS ASSOC WITH FREPAY COIN TRUNKS.

CONT'D LOWER LEFT

GRP 1,3	QUAN PER GRP	CODE	DESCRIPTION	NOTE	LINE
	1	985D	MTG PLT E/W 5K. A		1
	1	110A	COVER		
1	1	221A	REL POS 1		
	1	248G	" 2		
	1	221EF	" 3		5
	1	222KC	" 4		
	1	221NL	" 5		
	1	222EG	" 6		
3	1	221P	REL 1		10
	1	197EU	SWITCH E/W 8		
	1	225U	REL		
	1	242A	PLUG 9R		15
	1	MIR	CORD 4" LG		
	2	MIR	CORDS 4 3/4" LG		
2	1	MIR	CORD 4" LG		
					20
	1	182A 178A	NETWORK SK. B		
					25

ENGINEERING NOTES CONT'D

58. SPECIFY "ZB" WRG IN PLACE OF "ZA" WRG TO GUARD AGAINST A LOCKUP CONDITION WHICH OCCURS IF THE SWITCH FAILS TO RELEASE AT THE END OF A CALL AND IS THEN RESEIZED (SEE NOTE 59)
59. PROVIDE 2 FEET P-468054 GREEN 24BW WIRE TO MODIFY EACH SWITCH UNIT IN ACCORDANCE WITH NOTE 11.
60. SPECIFY "ZN" WRG & APP FOR CONTACT PROTECTION TO REDUCE THE SURGE EFFECT OF THE (F) RELAY WINDING UPON CONTACTS 4 AND 5 OF THE (B) RELAY AND FURNISH THE FOLLOWING MATERIAL FOR EACH SWITCH SO MODIFIED:
(A) 179A NETWORK
(B) 2 P-253118 F.H.M. SCR .138-32 X 1 5/8
(C) 1 FOOT P-468054 GREEN 24BW WIRE
(D) 1 FOOT P-468059 RED 24BW WIRE

76. (A) MOD OF BSP'S AA231-202 AND AA231-207 CONSISTS OF SPECIFYING SWITCHES PER ED-30976-01 TO MOUNT ON SHELVES PER J32302 AS AND J32310 J RESP.
(B) MOD OF SD-30976-01 CONSISTS OF ADDING "ZA" AND "ZB" OPTIONS SHOWN AS A PART OF ISSUE 8 AND THE OMISSION OF ALL OTHER CHANGES SHOWN ON THIS ISSUE AND OMITTING CHANGES PER ISSUE 15.

WIRING DIAGRAM - SCHEMATIC CROSS REFERENCE TABLE
ED- AND SD- FIG NO'S AND OPTION DESIGS ARE IN AGREEMENT
SEE BANK AND JACK WIRING DRAWINGS FOR ADDITIONAL OPTIONS

RECORD OF FIGURES, APPARATUS AND WIRING CHANGES

CHANGED ON ISSUE	IF OFF RECORDS DO NOT SPECIFY	THIS OPTION WAS FURNISHED	SEE NOTE	RATING STD	A & M	MD	SPL
14	"M" OR "N" WRG	"N" WRG		M		N	
17	ZB OR ZA WRG	ZA	58	ZB		ZA	
19	ZN WRG & APP	NONE	60	ZN			

MANUFACTURING NOTES

1. (A) WIRES NOT OTHERWISE SPECIFIED TO BE 24BW
(B) LEADS NOT OTHERWISE COLORED TO BE GREEN.
2. DESIGNATIONS ON TERMS OF APPARATUS ARE FOR WIRING INFORMATION ONLY.
3. EQUIP CKTS PER TABLE A IN ACCORDANCE WITH THE GROUPS SPECIFIED
4. THE GROUP NUMBERS OF THE SWITCH ORDERED SHALL BE STAMPED ON THE APP MTG PLATE.
5. THE GROUP NUMBER AT THE TOP OF THE STOCKLIST GRP COLUMN APPLIES TO ALL ITEMS FOR WHICH GROUP DESIGNATIONS ARE NOT SHOWN.
6. ADJUST THE NORMAL POST SPRINGS TO OPERATE ONLY ON THE LEVELS SPEC IN THE JOB ORDER.
7. [ ] INDICATES DESIGNATIONS SHOWN FOR INFORMATION ONLY AND ARE NOT TO BE STAMPED.
8. WHEN LOCAL CABLES ARE USED FOR LEADS PASSING THROUGH MTG PLT, THE ASSOC LOCAL CABLE DWG IS LC-723-0666-1 & G-2.

10 STARTING 2-11-52, ALL 197EU SWITCHES WERE EQUIPPED WITH P-463573 SPRING ASSEMBLIES IN PLACE OF P-25169
11. MODIFY SELS TO INCLUDE "ZB" OPT AND REMOVE "ZA" OPT AS FOLLOWS WHEN SPECIFED IN THE SPECIFICATION OR SUPPLEMENTARY ORDER.

LEADS TO BE CUT DEAD

COLOR	APP	DESIG	TERM	APP	DESIG	TERM
G	REL	(D)	10	REL	(D)	9
G	REL	(C)	2	REL	(C)	5
R-O	REL	(C)	4	REL	(Z)	1

LEADS TO BE ADDED

COLOR	APP	DESIG	TERM	APP	DESIG	TERM
G	REL	(B)	10	REL	(D)	10
G	REL	(B)	7	REL	(C)	5
G	REL	(Z)	1	VON		7

RECONNECTED LEADS

DISCONN FROM COLOR	APP	DESIG	TERM	RECONN TO APP	DESIG	TERM	OTHER END OF LEAD APP	DESIG	TERM
G	REL	(C)	4	REL	(D)	8	REL	(B)	11
G	REL	(B)	10	REL	(C)	4	REL	(Z)	6
G OR G-W	REL	(C)	5	REL	(C)	2	NPS		2R

RATING	GRP	EQUIPMENT	NO	OKT & FIG WIRED & EQ'D
		TABLE A		

WC		WIRING REQ'D IN ADDITION TO GRP 1 OR 3 ON ALL JOBS USING ISSUE 14 OR LATER OF THIS DWG TO IMPROVE RELEASE FUNCTIONING OF SWITCH.	1	ED-30976-30 "M" WRG (FIG 1)
WA		WIRING REQ'D IN ADDITION TO GRP 1 OR 3 FOR BUSY FLASH SIGNAL IS REQUIRED INSTEAD OF BUSY TONE SIGNAL.	1	ED-30976-30 "W" WRG (FIG 1) OMIT "X" WRG (FIG 1)
	3	SAME AS GROUP 1 EXCEPT FOR USE IN 355A OFFICES ONLY & ARRANGED FOR USE WITH OR WITHOUT EXTERNALLY MTD EQPT FOR TIMED RLS ON PERM SIG. (SEE NOTE 55) (355A ONLY)	1	ED-30976-30 FIG. 1 "R" "V" & "X" WRG "R" APP
	2	WIRING AND EQUIPMENT REQ'D IN ADD'N TO GRP 1 OR GRP 3 FOR 4 WIRE OPERATION	1	ED-30976-30 "T" APP (FIG 1) OMIT "V" WRG (FIG 1)
	1	ASSEM, EQPT AND WIRING FOR ONE DIGIT ABSORBING SELECTOR – ADJUSTABLE TO ABSORB DIGITS ONCE OR REPEATEDLY AND BLOCK SERVICE ON SPEC'D LEVELS – ARRANGED FOR PEG COUNT ON CUT-THRU – BUSY TONE SIGNAL AND 3-WIRE OPERATION (NO. 1 OR 350A ONLY)	1	ED-30976-30 FIG 1, "S" "V" & "X" WRG "S" APP

CKT	HI	JB
EQPT	DH	EB

NDD-32310-7Z 11-4-49

RT 3/26	CDB		1
IN FIG 1 RED "X" WRG WAS NOT DESIG & RED "W" WRG ADDED. 3-7-50 CL:D			
RWD 5/18	CDB		2
IN FIG. 1 "S" WRG & APP WAS NOT DESIG. "R" WRG & APP ADDED. GRP 3 ADDED. NOTE 55, REF TO S & R WRG IN NOTE 55 AND LAST 5 LINES IN TITLE ADDED. IN TABLE A GRP 1 (REF TO NO. 1 OR 350A DEF & "S" WRG & APP ADDED. 9-18-50 NDD 32310-7ACL: B FUT			
WHB 9/19	CDB		3
IN TABLE A GRP 2, REF TO GRP 3 ADDED. 9-19-50 CL:D			
WHB 3/26	CDB		4
NOTE 54 CLARIFIED "W" WRG RMVD FROM G.3 10-28-50 CL:B			
WHB 5/WD	CDB		5
IN FIG 1 & COLORS LINED OUT & COLORS FOR LOC CA ADDED. 12-15-50 CL:D			
RT 3/26	WBX		6
IN FIG 1, (B) REL, RED LEAD FROM TERMS 4 & 6 WAS NOT DESIGNATED "W" OR "X" 1-30-51 CL:D			
RWD 10	CDB		7
TABLE A GRP 3 "WITH OR WITHOUT" REMOVED "WITH" (355A, R ONLY) ADDED. GRP 1 (NO. 1 OR 350A ONLY) LEAD IN NO. 1 OR 350 A OFFICES. 3-30-51 CL:D			
WHB 4/26	WBX		8
NOTE 51 CHANGED 4-26-51 CL:D			
753 4/26	CDB		9
"N" WRG WAS NOT DESIG. "N" WRG ADDED. GRP WB & NOTE 56 ADDED. 7-2-51 CL:B(FUT)			
WHB 8/26	WBX		10
IN TABLE A, GRP WA, "GRP 1 OR 3" READ "GRP 1." NOTE 57 ADDED. 8-18-51 CL:B(FUT)			
753 8/26	CDB		11
NOTE 51 CHG'D 9-13-51 CL:B			
RCK 3/26	CDB		12
"M" WRG CONS OF LEADS REM'D 2(C) REL TO 1 (D) REL, 2 (C) REL TO 3 (E) REL, 10 (D) REL TO 4 (E) REL & 3 (E) REL TO DE WRS RMV'D. LEADS 2 (C) REL TO 5 (C) REL, 10 (D) REL TO 8 (D) REL, 1 (D) REL TO 3 (E) REL & 5 (C) REL TO 2 & WRS INSERT DESIG AS "N" WRG NOTE 56 "SPECIFY GROUP WB ON ALL JOBS USING ISS 10 OR LATER OF THIS DRAWING" RMV'D & LIST WB WIRING REQ'D IN ADDITION TO GRP 1 OR GRP 3 TO ELIMINATE FALSE LOCK UP CONDITION" V-ED-30976-30 "M" WRG (FIG 1)" RMV'D. 11-12-51 CL:A			
WHB 8/26	WBX		13
IN FIG 1 "W" WRG WAS NOT DESIGNATED. ADDED. NOTE 9 FOR TABLE A, GRP WC ADDED. IN NOTE 53 "W" WRG LINED OUT "W" WRG ADDED. 11-28-51 CL:B			
WHB 8/26	WBX		14
NOTES 10 & 56 ADDED. FIG 1 CHGD ACCORDINGLY 3-5-52 CL:B(FUT)			
753 8/26	CDB		15
DRAWING RATING WAS STANDARD. REPLACEMENT NOTE ADDED. 3-31-52 CL:B(FUT)			
753 8/26	CDB		16
IN FIG 1 "ZA" WRG WAS NOT DESIG "ZB" WRG ADDED. NOTE 9 RMV'D AND READ "ADV INFO FOR SD-30976-01 ISS 7 CONSISTS OF INDICATING LEAD CONNECTION TO TERMS 1 & (Z) REL AS "N" WRG RATED MFR DISC & INTERCHANGE LEAD CONNECTION TO TERMS 1 & (Z) REL AS "M" WRG RATED STD PER TWX OF 11-20-51 TO CPM FROM EJW AND TWX OF 11-23-51 TO EJW FROM CPM FOR FLINT, MICH NORTH OFFICE-ORDER 33588H." NOTES 11, 58 & 59 & 76 B ADDED. 2-17-53 CL:D			
REG 2/26	CDB	MD	17
IN FIG 1 G-W LEAD FROM 2R NPS TO 5 (C) WAS NOT SHOWN AS "ZA" WRG & LEAD FROM NPS 2R TO 2 (C) ADDED. IN NOTE 11 AT RECONNECTED LEADS "G OR G-W REL (C) TERM 5, REL (C) TERM 2, NPS TERM 2R" ADDED 1-20-56 CL:A			
REG 4/26	CDB	MD	18
IN FIG 1 "ZN" WRG & APP & 179A NET ADDED. SKETCH B CHGD ACCORD. NOTE 60, 76 REF TO "AND OMITTING CHANGES PER ISSUE 15" ADDED. 1-14-66 CL:D			
753 4/26	CDB		19

REPLACED BY ED-30976-31

ED-30976-30

STEP BY STEP SYSTEMS
NO. 1, 350A OR 355A
DIGIT ABSORBING SELECTOR
3 OR 4 WIRE
ARRANGED TO ABSORB DIGITS ONCE ONLY
AND/OR REPEATEDLY
AND TO RETURN OVERFLOW SIGNAL
ON SPECIFIED LEVELS
ARRANGED FOR TIMED RELEASE
ON PERMANENT SIGNAL
AND PEG COUNT ON CUT THRU
SURFACE WIRED
(D A SEL)

WESTERN ELECTRIC COMPANY, INC.

MFR DISC

R 3

ED-30976-30

PRINTED IN U.S.A.

LINE	NAME	SCHEMATIC	DWG NO	FIG	OPT WIRING	WIRED	NOTES	REMARKS
COL	E	F	G	H	I	J	K	L
1	D A SEL	SD-30976-01	ED-30976-30	AS SPECIFIED IN TABLE "A"				

CIRCUITS

SURFACE WIRING PROVIDED

LINE	NAME	NUMBER	LINE	NAME	NUMBER
COL	A	B	COL	C	D
1	SURFACE WIRING RUNNING LIST	=SWED-30976-30	7	MIR CORD DRESSING & ATTACHING	ED-30278-G

LIST OF ASSOCIATED DRAWINGS
DRAWINGS DESIGNATED = WILL NOT BE REQ'D BY THE INSTALLER

ED-30976-30