SHEET INDEX & ISSUE TABLE

SHEETS OF THIS DRAWING AGREE WITH DESIGN INFORMATION AS FOLLOWS:

SD-31739-01		ISS	14		14	16 MOD		17 MOD	18	18	18	19	19	19	19	
ED-31739-01		ISS	14		14	16		18 MOD	19	20	20	21	21	21	21	
BSP 814-435-150		~~ISS~~	~~10~~		~~10~~	~~10~~		~~10~~	~~10~~							
(J32311)		~~APPX~~						~~4~~	~~4~~							
ED-31739-32 SHEET	A1	ISSUE	1	2	2E1	3	4	5	6	7	8	9	10	11	12	
	B1		1		1	3	3	5	5	5	5	9	10	10	10	
	C1		1		1	3	4	5	6	7	8	9	9	9	9	

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.

RECORD OF FIGURES, APPARATUS AND WIRING CHANGES

CHANGED ON ISSUE	IF OFFICE RECORDS: SPECIFY	DO NOT SPECIFY	THIS OPTION WAS FURNISHED	ITEM NBR	RATING: STD	A & M	MD	SPL
3		ZA WRG OR ZB WRG & APP	ZA WRG		ZB		ZA	
3		ZC OR ZD WRG	ZC WRG		ZD		ZC	
3		G OR ZE APP	G APP		ZE		G	
9		ZF OR ZG	W		W,ZF,ZG			
9		ZH OR ZI	ZH		ZH, ZI			
9		ZJ OR ZK	ZJ		ZJ, ZK			

SHEET LOCATION OF FIG. AND OPT.

FIG.	APPEARS ON SHEET	OPT.	APPEARS ON SHEET	OPT.	APPEARS ON SHEET
1	B1	D	B1	ZE	B1
		E	B1	W	
		J	B1	ZE	
		K	B1	ZF	
		M	B1	ZG	
		N	B1	ZH	
		Q	B1	ZI	
		R	B1	ZJ	
		S	B1	ZK	
		U	B1		
		ZA	B1		
		ZB	B1		
		ZC	B1		
		ZD	B1		

SD-ED DWG CROSS REFERENCE TABLE

SCHEMATIC FIGURES AND OPTIONS NOT SHOWN BELOW AGREE WITH LIKE DESIGNATED WIRING DIAGRAM FIGURES AND OPTIONS. LOCALLY ASSIGNED WIRING DIAGRAM FIGURES AND OPTIONS (PREFIXED WITH LETTER "H") AND NOT LISTED BELOW HAVE NO SCHEMATIC EQUIVALENT. ITEMS IN PARENTHESIS ( ) ARE FOR INFORMATION ONLY.

SD-31739-01 LINE	FIG	OPTION	ED-31739-32 FIG	WRG	APP	REMARKS
1	(1)	V,~~W~~,Y	(1)	—	—	
5						
10						
15						

TABLE A-DESCRIPTION OF GRP

COL	A: EQUIPMENT		B: TRI BAT	ARR FOR PREVENTION OF ROTARY OVERSTEP	ARR FOR AUTO DISC	RATING OR AFTER DATE	C: GRP	D: NO.	E: CIRCUITS (ED-31739-3.)	F: FIGURES EQUIPPED: FIG	G: WRG	H: APP
ASSEM, WRG & EQUIP FOR ONE COMB 1 RING CONN FOR	355A FULL SELECTIVE OFFICE EMPLOYING 50V SUPERIMPOSING BATTERY & CONN HDR SERVES SOME 4 PARTY LINES. (SEE NOTE 53)		48V	NO	YES	MFR DISC	11	1		1	J,M,R,S,W	D,J,M,W
					NO		13	1		1	K,M,R,S,W	D,M,W
	ALL OTHER SUBSCRIBER 1 RING SERVICE.		60V		YES		9	1		1	J,N,R,S,W	E,J,W
					NO		14	1		1	K,N,R,S,W	E,W
			48V		YES		10	1		1	J,N,R,S,W	D,J,W
					NO		12	1		1	K,N,R,S,W	D,W
	355A FULL SELECTIVE OFF EMPLOYING 50V SUPERIMPOSING BATTERY & CONN HDR SERVES SOME 4 PARTY LINES. (SEE NOTE 53)		48V	YES	YES		17	1		1	J,M,R,S,ZB, ZD,ZH,ZJ,W	D,J,M,W, ZE,ZB,ZH
					NO		20	1		1	K,M,R,S,ZB, ZD,ZH,ZJ,W	D,M,ZE, ZB,ZH,W
	ALL OTHER SUBSCRIBER 1 RING SERVICE		60V		YES	A & M ONLY	15	1		1	J,N,R,S,ZB ZD,ZH,ZJ,W	E,J,ZE,W ZB,ZH
					NO		18	1		1	K,M,R,S,ZB ZD,ZH,ZJ,W	E,ZE,ZB, ZH,W
			48V		YES		16	1		1	J,N,R,S,ZB, ZD,ZH,ZJ,W	D,J,ZE, ZB,ZH,W
					NO		19	1		1	K,N,R,S,ZB ZD,ZH,ZJ,W	D,ZE,ZB, ZH,W
	WIRING & EQUIPMENT REQUIRED IN ADDITION TO GROUP 15,16,18 OR 19 ON ALL JOBS USING ISSUE 9 OR LATER						A	1 OMIT 1		(1) (1)	ZI, ZG, ZI W, ZH	ZF, ZG, ZI W, ZH
	WRG REQD IN ADD. TO GR 9,10,11,12,13,14,15,16,17,18,19 OR 20 FOR USE IN 355A OFFICES FOR SHELVES PRIOR TO J32311E-					A & M ONLY	WA	1 OMIT 1		(1) (1)	J S	
	WRG REQD IN ADD. TO GR 9,10,11,12,13 OR 14 FOR BUSY FLASH TO OPERATOR OVER LOCAL TRAIN IN OFF WITHOUT TOLL TRAIN					MFR DISC	WB	1 OMIT 1		(1) (1)	R Q	
	WRG REQD IN ADD. TO GR 15,16,17,18,19 OR 20 WHEN REVERSE BATTERY SUPERVISION IS NOT REQUIRED.						WC	1 OMIT 1		(1) (1)	ZJ ZJ	

(CONT FROM RIGHT)
IN SH A1: TBL A, GR 9 TO 20 REF TO "W" WRG & APP ADDED. IN SD-ED TBL "W" OPT LINED OUT FOR SD. IN SH B1: LOC 00, 04, 08 & 35 "W" OPT; LOC 00, 01, 08 & 35 "ZG" OPT; LOC 02 "ZH" OPT; LOC 02 & 04 "ZI" OPT; LOC 04 "ZF" OPT ADDED. LOC 02 TERM 5 & 8 PT BK & PT Y TO LOC 16 RESP RMV. LOC 10, TERM 1 & 2, PT Y & PT BK TO LOC 16 RESP ADDED AS "ZI" OPT.
6-10-73 CL AD
10

IN SH A1, RECORD OF FIGURES, APPARATUS AND WIRING CHANGES TBL, THIS OPT WAS FURNISHED COL, ZH READ Z.I.
7-23-73 CL AD
11

IN SD-ED TBL Y OPT READ T FOR SD.
3-31-78 CL:DD
12

ENGINEERING NOTES (CONT)

54. FOR FIELD MODIFICATION TO ARRANGE SWITCHES TO ELIMINATE THE POSSIBILITY OF ROTARY OVERSTEP ON THE LAST DIGIT DIALED, MODIFY GR 11,13,9,14,10 OR 12 TO AGREE WITH GR 17,20,15,18,16 OR 19 RESP. CONVERT THE 197GP SW ("G" APP) TO 197HR SW ("ZE" APP) BY ORDERING THE FOLLOWING MATERIAL:
    1-PARTS KIT OF D-179971
    1-63T RES
    1-P-251741 RHM SCR .138-32 X 2 1/8"
    1-P-160958 RHM SCR .138-32 X 1 3/8"
    } SEE SECT D-D
55. 49A BRACKET INTRODUCED IN MFR APPROX 6-2-69

ENGINEERING NOTES

51. FOR APPLICATION OF FIGURES & OPTIONS SEE TABLE A.
52. ASSOCIATED WIRING DIAGRAMS
    JACK WIRING T-532511
    BANK WIRING T-32128-14
53. (A) NO LINES HAVING DC PATH AT STATION END (SUCH AS PREPAY COIN OR 2 PTY MR LINES) CAN BE SERVED BY THIS CONNECTOR HDS GRP.
    (B) WHEN INCPT CKTS ARE USED AND "W" WRG & APP IS FURNISHED, INCPT CKTS MUST TRIP RINGING BY COLD CATHODE TUBES OR MOMENTARY BATTERY ON ONE SIDE OF THE CKT. STANDARD INCPT CKTS SINCE 1953 ARE SO ARRANGED.

ISSUE NOTES

CKT N1
EQPT H1

NDD-32311-8Q 12-27-61
1

NOTES 53 & 54 ADDED. IN TABLE A REF TO SAME ADDED.
5-3-62 CL:D.
2

TABLE A REVISED. NOTE 53 CHGD. NOTE 54 RMVD. IN TABLE A, GRP WB, REF TO "355A OFF ONLY" RMVD.
2-18-63 CL:E
2E1

IN TBL A GROUPS 9 TO 14 & WB RATED "MFR DISC". GROUPS 15 TO 20 ADDED & ASSOC CHANGES MADE IN FIG. T & SL. ON SH A1 NOTES 54 & 76 ADDED. ON SH C1 SECT A-A & SECT B-B RATED "MFR DISC" & SECT C-C & SECT D-D ADDED. DWG WAS RATED STANDARD.
11-12-64 CL:BD
3

IN SL LINES 134 & 136 ADDED. LINE 135 "11A,13" READ "11A,13, 11B" IN LINE 139 GRPS 9,10,11 & REF TO POS 11B RMV.
3-1-65 CL:DD
4

ON SH A1 TBL A GRPS 15-20, ZB APP ADDED & ZH WRG & APP RMVD. "ARR FOR PREVENTION OF ROTARY OVERSTEP" COL ADDED IN NOTE 54 REF TO 63T RES & P-251741 RHM SCR ADDED. NOTE 76 REVISED. SH B1 FIG 1 LOC 27 ADDED AND LOC 26 RMV. SH C1 SL & SECT D-D CHG ACCORD.
6-4-65 CL:AR
5

ON SH C1, SECT C-C RATED "MFR DISC" & SECT E-E ADDED. IN SL LINE 139, COL Z-POS 14,15 READ 13. NOTE 75 REMOVED & READ: (A) MODIFICATION OF SD-31739-01 CONSISTS OF SHOWING 63T (D) RES ACROSS RON SPRINGS (ZB OPT) & OMITTING "ZH" OPTION PER TWX R.J. JAEGER JR. TO J. DASHEN DATED 3-24-65. (B) MODIFICATION OF ED-31739-01 CONSISTS OF SHOWING 63T (D) RES INSTEAD OF KS-8512 LM (K) RES IN POS 11C PER TWX A. A. BURGESS TO J. DASHEN DATED 4-26-65."
7-14-65 CL:DD
6

SH A1 NOTE 55 ADDED. SH C1 IN SL LINE 141 COL 3 Y & Z "11A" & "COVER E/W SK B" LINED OUT "49A" & "BRACKET E/W SK. C" ADDED. SK. C ADDED.
5-21-69 CL:DD
7

SH C1 IN SL. LINE 150 LINED OUT & LINE 153 ADDED. SK B, END VIEW, P-429699 SCR" LINED OUT AND P-139807 SCR" ADDED. MFG NOTE 4 "P 429699" LINED OUT & "P 139807" ADDED.
5-18-71 CL:DD
8

IN TITLE BOX "WITH OR WITHOUT REVERSE BATTERY SUPERVISION" ADDED. GRP A WC ADDED. IN GRP 16 TO 20 "ZH, ZJ WRG & ZJ APP" ADDED. SH B1 FIG 1 "ZF, ZG & ZI WRG & APP, DESIG W. ZH WRG & APP, DESIG ZJ & ZK WRG ADDED. SH C1 SK C RATED "MFR DISC" SL LINES 157 TO 164 & NOTE 8 ADDED.
NDD-31739-3266-1
12-6-72 CL:DD
9

SHEET ISSUE: 1, 2, 2E1, 3, 4, 5, 6, 7, 8

LINE	NAME	SCHEMATIC	DWG NUMBER	FIG	OPT WIRING	WIRED	NOTES	REMARKS
COL	J	K	L	M	N	P	R	S
21	COMB CONN 1R	SD-31739-01	ED-31739-32	AS COVERED IN TABLE "A" FOR GRPS SPEC IN THE ORDER				
22								
23								
24								
25								

CIRCUITS

SURFACE WIRING PROVIDED BY THE SHOP

LINE	NAME	NUMBER	LINE	NAME	NUMBER
4			14		
3			15		
2	MIR CORD DRESSING & ATTACHING	ED-30278-01	12		
1	SURFACE WIRING RUNNING LIST	=SWED-31739-32	11		
COL	T	U	COL	T	U

LIST OF ASSOCIATED DRAWINGS

TABLE S — DRAWINGS DESIGNATED = WILL NOT BE REQUIRED BY THE INSTALLER

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

4D99

STEP BY STEP SYSTEMS
NO. 1, 350A OR 355A
ASSEMBLY, WIRING AND EQUIPMENT FOR COMBINATION CONNECTOR
ONE RING
WITH OR WITHOUT REVERSE BATTERY SUPERVISION
SURFACE WIRED
(COMB CONN 1R)

WESTERN ELECTRIC COMPANY, INC. DWG. SIZE 65

ISSUE 12

STANDARD NO. 1, 355A
STD FOR A&M ONLY NO. 350A

ED-31739-32

3 SHEETS — SHEET A1

PRINTED IN U.S.A.

HW-6608-PS-2 (3-60) EXP. CL.

ED-31739-32

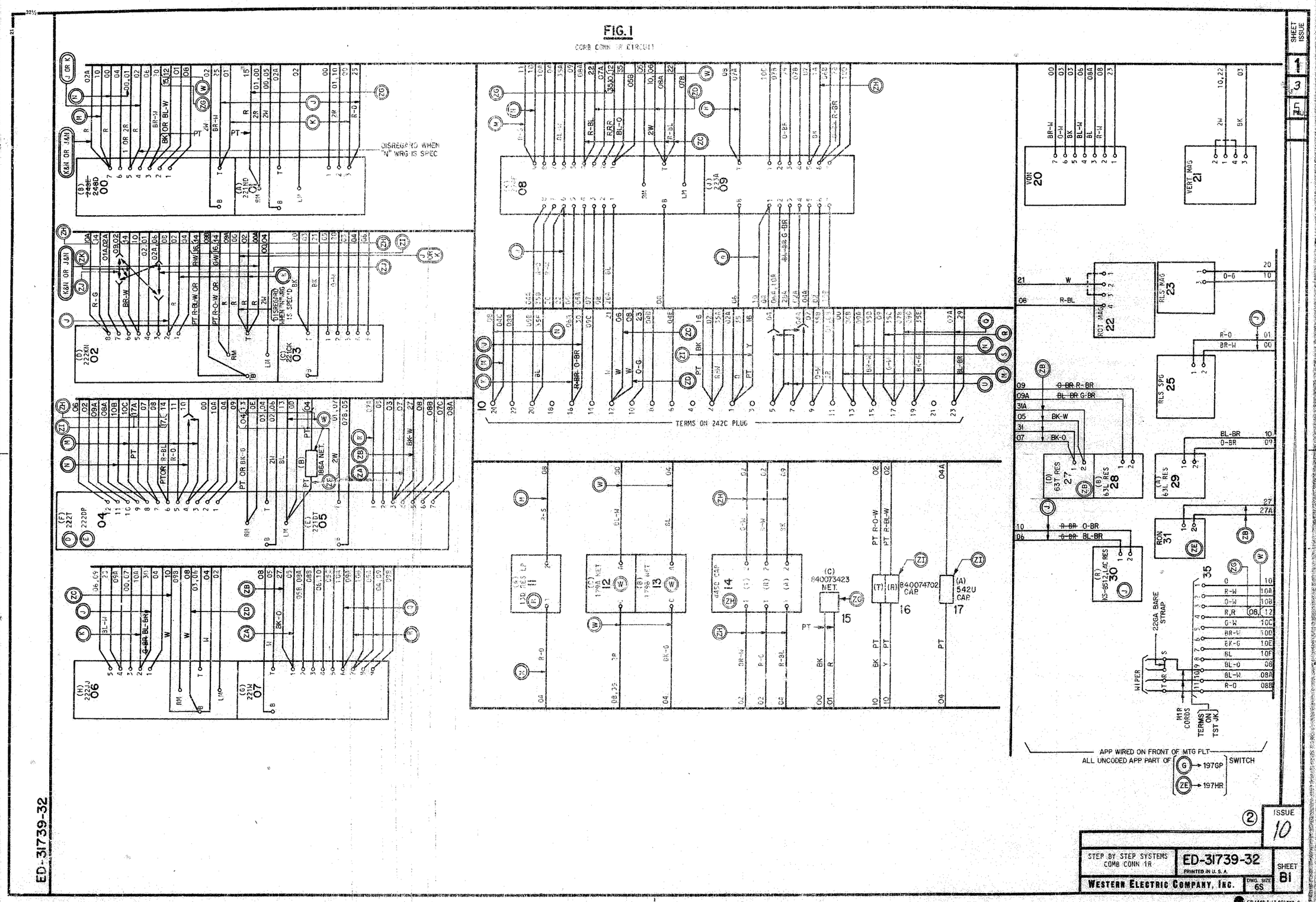
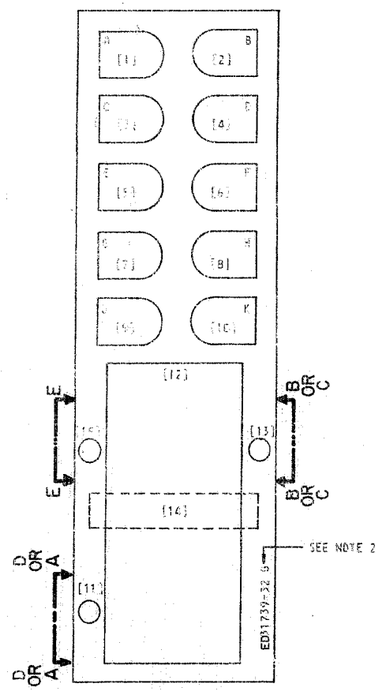


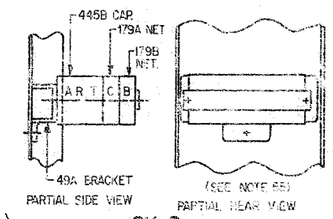
FIG. 1
COMB CONN 1R CIRCUIT
DISREGARD WHEN "N" WRG IS SPEC
TERMS ON 242C PLUG
APP WIRED ON FRONT OF MTG PLT
ALL UNCODED APP PART OF
SWITCH
197GP
197HR
ED-31739-32
STEP BY STEP SYSTEMS
COMB CONN 1R
ED-31739-32
PRINTED IN U. S. A.
WESTERN ELECTRIC COMPANY, INC.
DWG. SIZE 6S
SHEET B1
ISSUE 10
SHEET ISSUE

STOCKLIST

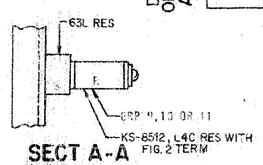
W GRP	X QUAN PER GRP	Y CODE	Z DESCRIPTION	AS NOTE	AR	COL NUMBER
9,10,11,12,13,14,15, 16,17,18,19,20	1	987H	MTG PLT E/W SK A			
9,10,11,12,13,14,15, 16,17,18,19,20	1	221ND	REL POS 1			155
9,10,11,12,13,14,15, 16,17,18,19,20	1	~~248E~~ 248D	REL 2			
9,10,11,12,13,14,15, 16,17,18,19,20	1	221CK	REL 3			
9,10,11,12,13,14,15, 16,17,18,19,20	1	222KN	REL 4			
9,10,11,12,13,14,15, 16,17,18,19,20	1	221DT	REL 5			
10,11,12,13,16,17,19,20	1	222T	REL 6			
9,14,15,18	1	222DP	REL 6			
9,10,11,12,13,14,15, 16,17,18,19,20	1	221W	REL 7			
9,10,11,12,13,14,15, 16,17,18,19,20	1	222JJ	REL 8			
9,10,11,12,13,14,15, 16,17,18,19,20	1	223A	REL 9			
9,10,11,12,13,14,15, 16,17,18,19,20	1	224E	REL 10			
15,16,17,18,19,20	1	197HR	SWITCH E/W 12			
9,10,11,12,13,14	1	197GP	SWITCH E/W 12			
9,10,11,12,13,14,15, 16,17,18,19,20	1	M1R	CORD 4" LONG			
9,10,11,12,13,14,15, 16,17,18,19,20	2	M1R	CORD 4 3/4" LONG			
9,10,11	1	KS-8512	L4C RES 352Ω WITH FIG.2 TERM 11B			
9,10,11,12,13,14,	2	63L	RES 11A,13			135
15,16,17,18,19,20	2	63L	RES 11A,11B			
9,10,11,12,13,14, 15,16,17,18,19,20	1	242C	PLUG 14R			
15,16,17	1	KS-8512	L4C RES 352Ω WITH FIG.2 TERMS ~~13~~ 15			
15,16,17,18,19,20	1	63T	RES 11C			140
9,10,12,14,15,16,18,19	1	~~111A~~ 49A	~~COVER E/W~~ BRACKET E/W SK C			
11,13,17,20	1	111F	COVER E/W SK B			
9,10,11,12,13,14,15, 16,17,18,19,20	1	179A	NET.			
9,10,11,12,13,14,15, 16,17,18,19,20	1	179B	NET.			145
9,10,11,12,13,14,15, 16,17,18,19,20	1	445B	CAP.			
11,13,17,20	1	13D	RES LP	5		
						150
11,13,17,20	~~1~~	~~P-429699~~	~~BHM SCR .138-32 X 5/16"~~	~~4~~		
	1	P-139807	BHM SCR .138-32 X 11/32"	4		
						155
A	OMIT 1	49A	BRACKET E/W SK C			
A	OMIT 1	179A	NET.			
A	OMIT 1	179B	NET.			
A	OMIT 1	445B	CAP			160
A	1	840073423	NET. POS 4R			
A	1	186A	NET. 6R			
A	1	542U	CAP 6R			
A	1	840074702	CAP 4R			
						165
						170



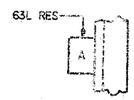
FRONT VIEW
SK. A



SK. C
(MFR DISC)



SECT A-A
(MFR DISC)



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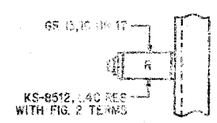
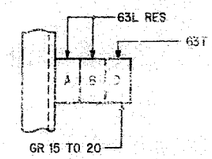
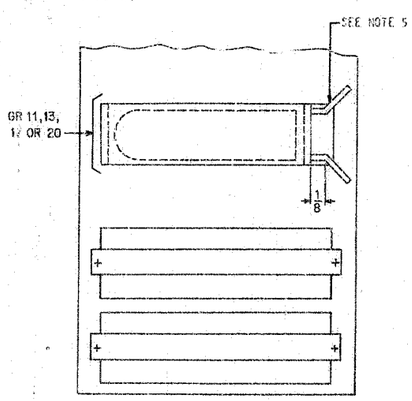
(MFR DISC)

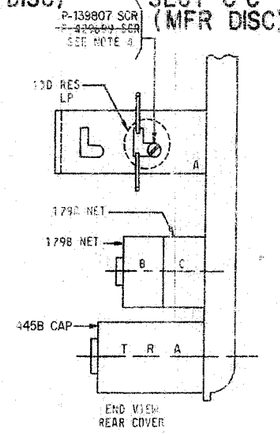


SECT C-C
(MFR DISC)

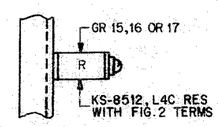


SECT D-D





SK. B



SECT E-E

SHOP	INST	MANUFACTURING NOTES CONVENTIONS
		------CONNECTION FURNISHED AS PART OF COMPONENT.
X		1. WIRES NOT OTHERWISE SPECIFIED TO BE 24BW WIRE RUN AS SURFACE WIRING & COLORED GREEN UNLESS OTHERWISE SPECIFIED.
X		2. THE GROUP NUMBER OF THE SWITCH ORDERED SHALL BE STAMPED ON THE APPARATUS MTG PLT.
X	X	3. [ ] INDICATES MTG POSITION NUMBERS AND ARE NOT TO BE STAMPED.
X		4. THE MOUNTING SCREW FURNISHED WITH THE 13D RES LAMP SHALL BE DISCARDED & REPLACED BY B.H.M. SCREW ~~P-429699~~ P-139807.
X		5. THE RES LAMP TERMINALS SHALL BE BENT AS INDICATED IN SK B WITH THE BEND APPROX 45 DEGREES; PREVIOUSLY THE TERMINALS WERE BENT 90 DEGREES.
	X	6. THIS DRAWING SHOWS NO LEADS TO BE RUN BY THE INSTALLER.
	X	7. WHEN SWITCH IS MODIFIED FROM GR 11,13,9,14, 10 OR 12 TO GR 17,20,15,18,16 OR 19 RESP, INSTALLER SHALL RESTAMP CODE OF SWITCH FROM 197GP TO READ 197HR.
X		8. PT-LEADS FURNISHED WITH COMPONENT.

SHEET ISSUE: 1, 3, 5, 6, 7, 8

ISSUE 9

STEP BY STEP SYSTEMS
COMB CONN 1R

ED-31739-32
PRINTED IN U.S.A.

SHEET CI

WESTERN ELECTRIC COMPANY, INC.

DWG. SIZE 6S

ED-31739-32