

FIG. A (MFR DISC)

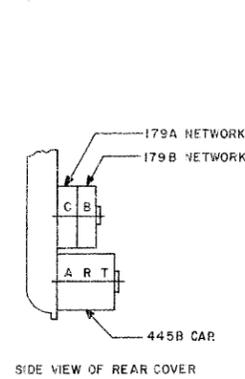


FIG. B (MFR DISC)

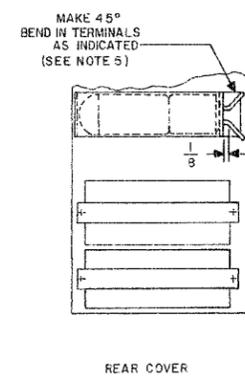


FIG. C

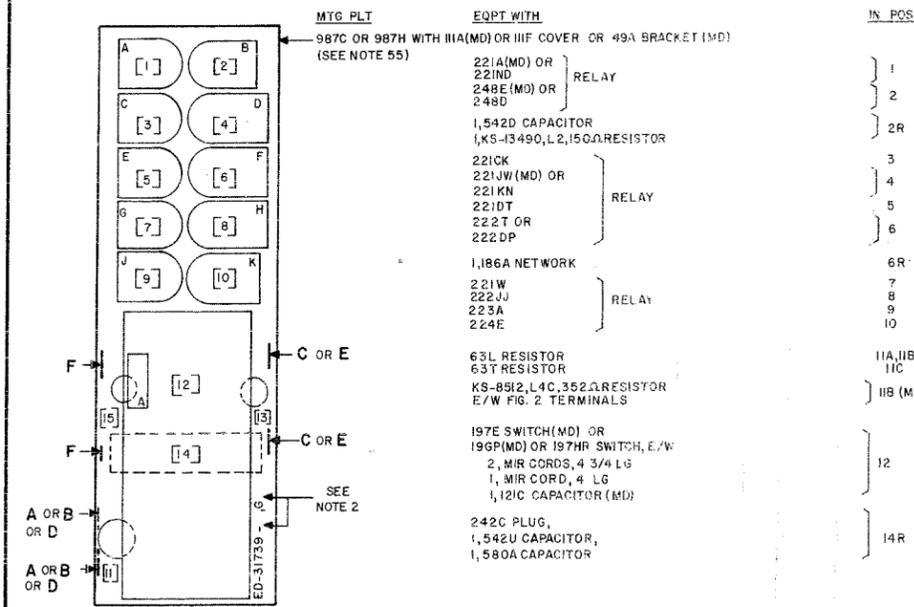
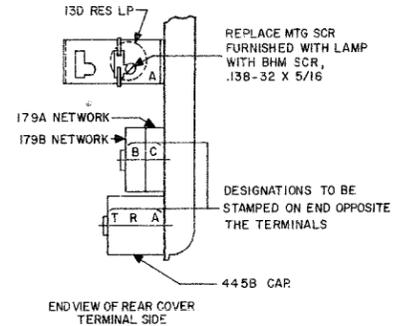


FIG. I

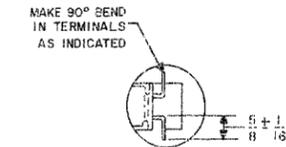


FIG. D (MFR DISC)
(SEE NOTE 5)

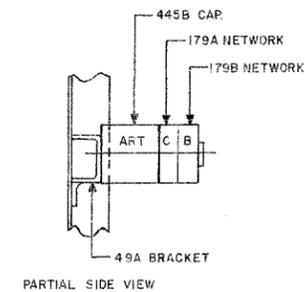
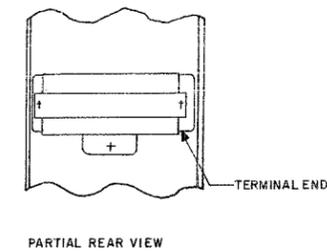


FIG. E (MFR DISC)



DIMENSIONS 12 INCHES AND OVER ARE EXPRESSED IN FEET AND INCHES. ALL OTHER DIMENSIONS ARE IN INCHES.

DWG ISSUE	REV OR CD	DATE	ISSUE	BY	CHKD	APPD
12D	12D	6-28-60	JMG	LW	FBB	WS NY
13D	13D	11-10-60	JMG	LW	FBB	WS
14D	14D	5-8-61	RT	LW	FBB	HO
15B	15B	6-23-64	GY	MEB	AAB	POB
16D	16D	6-23-64	JFK	MEB	AAB	POB
17D	17D	9-23-64	LL	MEB	AAB	POB
18B	18B	5-12-65	RD	MEB	AAB	POB
19AR	19AR	5-12-65	RD	MEB	AAB	POB
20D	20D	3-28-69	DC	MEB	AAB	POB

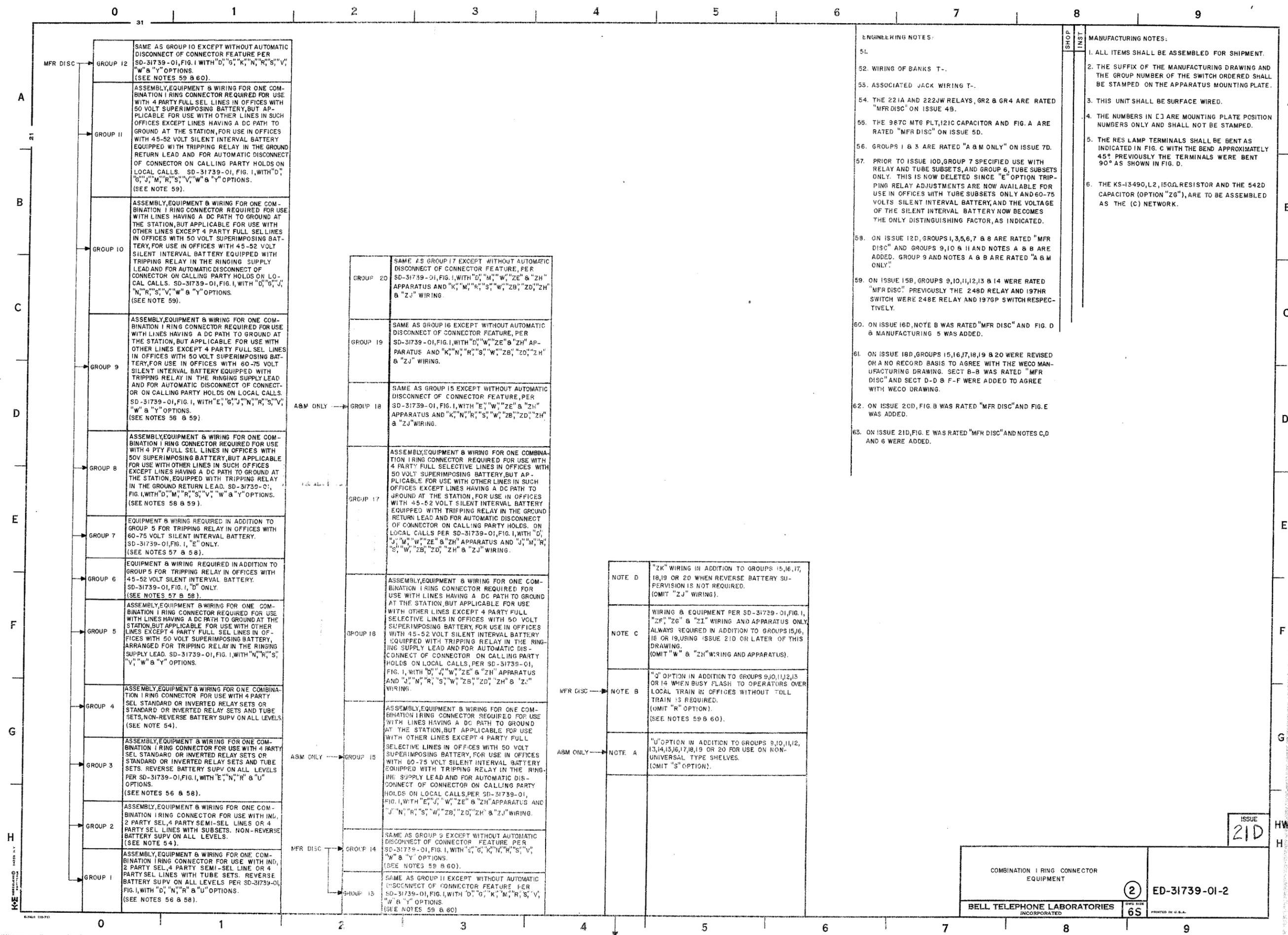
LOST DRAWING, REPRODUCED WITHOUT CHANGE 11-27-72

DWG ISSUE	REV OR CD	DATE	ISSUE	BY	CHKD	APPD
21D	21D	11-27-72	PJS	PJ	S/LCB	HW
			G	K	SEB	

EXPANDED TO TWO SHEETS ON ISSUE 21D

ISSUE 21D

ED-31739-01	1099	AT & T CO STANDARD
STEP BY STEP SYSTEMS NO. 1,350A OR 355A COMBINATION 1 RING CONNECTOR EQUIPMENT INDIVIDUAL 2 PARTY OR 4 PARTY LINES WITH OR WITHOUT REVERSE 		



GROUP 12 SAME AS GROUP 10 EXCEPT WITHOUT AUTOMATIC DISCONNECT OF CONNECTOR FEATURE PER SD-31739-01, FIG. 1 WITH "D", "G", "K", "N", "R", "S", "V", "W" & "Y" OPTIONS. (SEE NOTES 59 & 60).

GROUP 11 ASSEMBLY, EQUIPMENT & WIRING FOR ONE COMBINATION I RING CONNECTOR REQUIRED FOR USE WITH 4 PARTY FULL SEL LINES IN OFFICES WITH 50 VOLT SUPERIMPOSING BATTERY, BUT APPLICABLE FOR USE WITH OTHER LINES IN SUCH OFFICES EXCEPT LINES HAVING A DC PATH TO GROUND AT THE STATION, FOR USE IN OFFICES WITH 45-52 VOLT SILENT INTERVAL BATTERY EQUIPPED WITH TRIPPING RELAY IN THE GROUND RETURN LEAD AND FOR AUTOMATIC DISCONNECT OF CONNECTOR ON CALLING PARTY HOLDS ON LOCAL CALLS. SD-31739-01, FIG. 1, WITH "D", "G", "J", "M", "N", "R", "S", "V", "W" & "Y" OPTIONS. (SEE NOTE 59).

GROUP 10 ASSEMBLY, EQUIPMENT & WIRING FOR ONE COMBINATION I RING CONNECTOR REQUIRED FOR USE WITH LINES HAVING A DC PATH TO GROUND AT THE STATION, BUT APPLICABLE FOR USE WITH OTHER LINES EXCEPT 4 PARTY FULL SEL LINES IN OFFICES WITH 50 VOLT SUPERIMPOSING BATTERY, FOR USE IN OFFICES WITH 45-52 VOLT SILENT INTERVAL BATTERY EQUIPPED WITH TRIPPING RELAY IN THE RINGING SUPPLY LEAD AND FOR AUTOMATIC DISCONNECT OF CONNECTOR ON CALLING PARTY HOLDS ON LOCAL CALLS. SD-31739-01, FIG. 1, WITH "D", "G", "J", "N", "R", "S", "V", "W" & "Y" OPTIONS. (SEE NOTE 59).

GROUP 9 ASSEMBLY, EQUIPMENT & WIRING FOR ONE COMBINATION I RING CONNECTOR REQUIRED FOR USE WITH LINES HAVING A DC PATH TO GROUND AT THE STATION, BUT APPLICABLE FOR USE WITH OTHER LINES EXCEPT 4 PARTY FULL SEL LINES IN OFFICES WITH 50 VOLT SUPERIMPOSING BATTERY, FOR USE IN OFFICES WITH 60-75 VOLT SILENT INTERVAL BATTERY EQUIPPED WITH TRIPPING RELAY IN THE RINGING SUPPLY LEAD AND FOR AUTOMATIC DISCONNECT OF CONNECTOR ON CALLING PARTY HOLDS ON LOCAL CALLS. SD-31739-01, FIG. 1, WITH "E", "G", "J", "N", "R", "S", "V", "W" & "Y" OPTIONS. (SEE NOTES 58 & 59).

GROUP 8 ASSEMBLY, EQUIPMENT & WIRING FOR ONE COMBINATION I RING CONNECTOR REQUIRED FOR USE WITH 4 PARTY FULL SEL LINES IN OFFICES WITH 50V SUPERIMPOSING BATTERY, BUT APPLICABLE FOR USE WITH OTHER LINES IN SUCH OFFICES EXCEPT LINES HAVING A DC PATH TO GROUND AT THE STATION, EQUIPPED WITH TRIPPING RELAY IN THE GROUND RETURN LEAD. SD-31739-01, FIG. 1, WITH "D", "M", "R", "S", "V", "W" & "Y" OPTIONS. (SEE NOTES 58 & 59).

GROUP 7 EQUIPMENT & WIRING REQUIRED IN ADDITION TO GROUP 5 FOR TRIPPING RELAY IN OFFICES WITH 60-75 VOLT SILENT INTERVAL BATTERY. SD-31739-01, FIG. 1, "E" ONLY. (SEE NOTES 57 & 58).

GROUP 6 EQUIPMENT & WIRING REQUIRED IN ADDITION TO GROUP 5 FOR TRIPPING RELAY IN OFFICES WITH 45-52 VOLT SILENT INTERVAL BATTERY. SD-31739-01, FIG. 1, "D" ONLY. (SEE NOTES 57 & 58).

GROUP 5 ASSEMBLY, EQUIPMENT & WIRING FOR ONE COMBINATION I RING CONNECTOR REQUIRED FOR USE WITH LINES HAVING A DC PATH TO GROUND AT THE STATION, BUT APPLICABLE FOR USE WITH OTHER LINES EXCEPT 4 PARTY FULL SEL LINES IN OFFICES WITH 50 VOLT SUPERIMPOSING BATTERY, ARRANGED FOR TRIPPING RELAY IN THE RINGING SUPPLY LEAD. SD-31739-01, FIG. 1, WITH "N", "R", "S", "V", "W" & "Y" OPTIONS.

GROUP 4 ASSEMBLY, EQUIPMENT & WIRING FOR ONE COMBINATION I RING CONNECTOR FOR USE WITH 4 PARTY SEL STANDARD OR INVERTED RELAY SETS OR STANDARD OR INVERTED RELAY SETS AND TUBE SETS, NON-REVERSE BATTERY SUPV ON ALL LEVELS. (SEE NOTE 54).

GROUP 3 ASSEMBLY, EQUIPMENT & WIRING FOR ONE COMBINATION I RING CONNECTOR FOR USE WITH 4 PARTY SEL STANDARD OR INVERTED RELAY SETS OR STANDARD OR INVERTED RELAY SETS AND TUBE SETS. REVERSE BATTERY SUPV ON ALL LEVELS PER SD-31739-01, FIG. 1, WITH "E", "N", "R" & "U" OPTIONS. (SEE NOTES 56 & 58).

GROUP 2 ASSEMBLY, EQUIPMENT & WIRING FOR ONE COMBINATION I RING CONNECTOR FOR USE WITH INL, 2 PARTY SEL, 4 PARTY SEMI-SEL LINES OR 4 PARTY SEL LINES WITH SUBSETS. NON-REVERSE BATTERY SUPV ON ALL LEVELS. (SEE NOTE 54).

GROUP 1 ASSEMBLY, EQUIPMENT & WIRING FOR ONE COMBINATION I RING CONNECTOR FOR USE WITH INL, 2 PARTY SEL, 4 PARTY SEMI-SEL LINE OR 4 PARTY SEL LINES WITH TUBE SETS. REVERSE BATTERY SUPV ON ALL LEVELS PER SD-31739-01, FIG. 1, WITH "D", "N", "R" & "U" OPTIONS. (SEE NOTES 56 & 58).

GROUP 20 SAME AS GROUP 17 EXCEPT WITHOUT AUTOMATIC DISCONNECT OF CONNECTOR FEATURE, PER SD-31739-01, FIG. 1, WITH "D", "M", "W", "ZE" & "ZH" APPARATUS AND "K", "N", "R", "S", "V", "W", "ZB", "ZD", "ZH" & "ZJ" WIRING.

GROUP 19 SAME AS GROUP 16 EXCEPT WITHOUT AUTOMATIC DISCONNECT OF CONNECTOR FEATURE, PER SD-31739-01, FIG. 1, WITH "D", "W", "ZE" & "ZH" APPARATUS AND "K", "N", "R", "S", "V", "W", "ZB", "ZD", "ZH" & "ZJ" WIRING.

GROUP 18 SAME AS GROUP 15 EXCEPT WITHOUT AUTOMATIC DISCONNECT OF CONNECTOR FEATURE, PER SD-31739-01, FIG. 1, WITH "E", "W", "ZE" & "ZH" APPARATUS AND "K", "N", "R", "S", "V", "W", "ZB", "ZD", "ZH" & "ZJ" WIRING.

GROUP 17 ASSEMBLY, EQUIPMENT & WIRING FOR ONE COMBINATION I RING CONNECTOR REQUIRED FOR USE WITH 4 PARTY FULL SELECTIVE LINES IN OFFICES WITH 50 VOLT SUPERIMPOSING BATTERY, BUT APPLICABLE FOR USE WITH OTHER LINES IN SUCH OFFICES EXCEPT LINES HAVING A DC PATH TO GROUND AT THE STATION, FOR USE IN OFFICES WITH 45-52 VOLT SILENT INTERVAL BATTERY EQUIPPED WITH TRIPPING RELAY IN THE GROUND RETURN LEAD AND FOR AUTOMATIC DISCONNECT OF CONNECTOR ON CALLING PARTY HOLDS ON LOCAL CALLS PER SD-31739-01, FIG. 1, WITH "D", "J", "M", "W", "ZE" & "ZH" APPARATUS AND "K", "N", "R", "S", "V", "W", "ZB", "ZD", "ZH" & "ZJ" WIRING.

GROUP 16 ASSEMBLY, EQUIPMENT & WIRING FOR ONE COMBINATION I RING CONNECTOR REQUIRED FOR USE WITH LINES HAVING A DC PATH TO GROUND AT THE STATION, BUT APPLICABLE FOR USE WITH OTHER LINES EXCEPT 4 PARTY FULL SELECTIVE LINES IN OFFICES WITH 50 VOLT SUPERIMPOSING BATTERY, FOR USE IN OFFICES WITH 45-52 VOLT SILENT INTERVAL BATTERY EQUIPPED WITH TRIPPING RELAY IN THE RINGING SUPPLY LEAD AND FOR AUTOMATIC DISCONNECT OF CONNECTOR ON CALLING PARTY HOLDS ON LOCAL CALLS, PER SD-31739-01, FIG. 1, WITH "D", "J", "W", "ZE" & "ZH" APPARATUS AND "K", "N", "R", "S", "V", "W", "ZB", "ZD", "ZH" & "ZJ" WIRING.

GROUP 15 ASSEMBLY, EQUIPMENT & WIRING FOR ONE COMBINATION I RING CONNECTOR REQUIRED FOR USE WITH LINES HAVING A DC PATH TO GROUND AT THE STATION, BUT APPLICABLE FOR USE WITH OTHER LINES EXCEPT 4 PARTY FULL SELECTIVE LINES IN OFFICES WITH 50 VOLT SUPERIMPOSING BATTERY, FOR USE IN OFFICES WITH 60-75 VOLT SILENT INTERVAL BATTERY EQUIPPED WITH TRIPPING RELAY IN THE RINGING SUPPLY LEAD AND FOR AUTOMATIC DISCONNECT OF CONNECTOR ON CALLING PARTY HOLDS ON LOCAL CALLS, PER SD-31739-01, FIG. 1, WITH "E", "J", "W", "ZE" & "ZH" APPARATUS AND "K", "N", "R", "S", "V", "W", "ZB", "ZD", "ZH" & "ZJ" WIRING.

GROUP 14 SAME AS GROUP 9 EXCEPT WITHOUT AUTOMATIC DISCONNECT OF CONNECTOR FEATURE PER SD-31739-01, FIG. 1, WITH "E", "G", "K", "N", "R", "S", "V", "W" & "Y" OPTIONS. (SEE NOTES 59 & 60).

GROUP 13 SAME AS GROUP 11 EXCEPT WITHOUT AUTOMATIC DISCONNECT OF CONNECTOR FEATURE PER SD-31739-01, FIG. 1, WITH "D", "G", "K", "M", "R", "S", "V", "W" & "Y" OPTIONS. (SEE NOTES 59 & 60).

NOTE D "ZK" WIRING IN ADDITION TO GROUPS 15, 16, 17, 18, 19 OR 20 WHEN REVERSE BATTERY SUPERVISION IS NOT REQUIRED. (OMIT "ZJ" WIRING).

NOTE C WIRING & EQUIPMENT PER SD-31739-01, FIG. 1, "ZF", "ZG" & "ZI" WIRING AND APPARATUS ONLY. ALWAYS REQUIRED IN ADDITION TO GROUPS 15, 16, 18 OR 19, USING ISSUE 21D OR LATER OF THIS DRAWING. (OMIT "W" & "ZH" WIRING AND APPARATUS).

NOTE B "Q" OPTION IN ADDITION TO GROUPS 9, 10, 11, 12, 13 OR 14 WHEN BUSY FLASH TO OPERATORS OVER LOCAL TRAIN IN OFFICES WITHOUT TOLL TRAIN IS REQUIRED. (OMIT "R" OPTION). (SEE NOTES 59 & 60).

NOTE A "U" OPTION IN ADDITION TO GROUPS 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19 OR 20 FOR USE ON NON-UNIVERSAL TYPE SHELVES. (OMIT "S" OPTION).

ENGINEERING NOTES:

- 51.
52. WIRING OF BANKS T-.
53. ASSOCIATED JACK WIRING T-.
54. THE 221A AND 222JW RELAYS, GR2 & GR4 ARE RATED "MFR DISC" ON ISSUE 4B.
55. THE 987C MTE PLT, 121C CAPACITOR AND FIG. A ARE RATED "MFR DISC" ON ISSUE 5D.
56. GROUPS 1 & 3 ARE RATED "A & M ONLY" ON ISSUE 7D.
57. PRIOR TO ISSUE 10D, GROUP 7 SPECIFIED USE WITH RELAY AND TUBE SUBSETS, AND GROUP 6, TUBE SUBSETS ONLY. THIS IS NOW DELETED SINCE "E" OPTION TRIPPING RELAY ADJUSTMENTS ARE NOW AVAILABLE FOR USE IN OFFICES WITH TUBE SUBSETS ONLY AND 60-75 VOLTS SILENT INTERVAL BATTERY, AND THE VOLTAGE OF THE SILENT INTERVAL BATTERY NOW BECOMES THE ONLY DISTINGUISHING FACTOR, AS INDICATED.
58. ON ISSUE 12D, GROUPS 1, 3, 5, 6, 7 & 8 ARE RATED "MFR DISC" AND GROUPS 9, 10 & 11 AND NOTES A & B ARE ADDED. GROUP 9 AND NOTES A & B ARE RATED "A & M ONLY".
59. ON ISSUE 15B, GROUPS 9, 10, 11, 12, 13 & 14 WERE RATED "MFR DISC" PREVIOUSLY THE 248D RELAY AND 197HR SWITCH WERE 248E RELAY AND 197GP SWITCH RESPECTIVELY.
60. ON ISSUE 16D, NOTE B WAS RATED "MFR DISC" AND FIG. D & MANUFACTURING 5 WAS ADDED.
61. ON ISSUE 18D, GROUPS 15, 16, 17, 18, 19 & 20 WERE REVISED ON A NO RECORD BASIS TO AGREE WITH THE WECO MANUFACTURING DRAWING. SECT B-B WAS RATED "MFR DISC" AND SECT D-D & F-F WERE ADDED TO AGREE WITH WECO DRAWING.
62. ON ISSUE 20D, FIG B WAS RATED "MFR DISC" AND FIG. E WAS ADDED.
63. ON ISSUE 21D, FIG. E WAS RATED "MFR DISC" AND NOTES C, D AND 6 WERE ADDED.

MANUFACTURING NOTES:

1. ALL ITEMS SHALL BE ASSEMBLED FOR SHIPMENT.
2. THE SUFFIX OF THE MANUFACTURING DRAWING AND THE GROUP NUMBER OF THE SWITCH ORDERED SHALL BE STAMPED ON THE APPARATUS MOUNTING PLATE.
3. THIS UNIT SHALL BE SURFACE WIRED.
4. THE NUMBERS IN [] ARE MOUNTING PLATE POSITION NUMBERS ONLY AND SHALL NOT BE STAMPED.
5. THE RES LAMP TERMINALS SHALL BE BENT AS INDICATED IN FIG. C WITH THE BEND APPROXIMATELY 45° PREVIOUSLY THE TERMINALS WERE BENT 90° AS SHOWN IN FIG. D.
6. THE KS-13490, L2, 150Ω RESISTOR AND THE 542D CAPACITOR (OPTION "ZB"), ARE TO BE ASSEMBLED AS THE (C) NETWORK.

ISSUE 21D

COMBINATION I RING CONNECTOR EQUIPMENT

BELL TELEPHONE LABORATORIES INCORPORATED

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6S

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