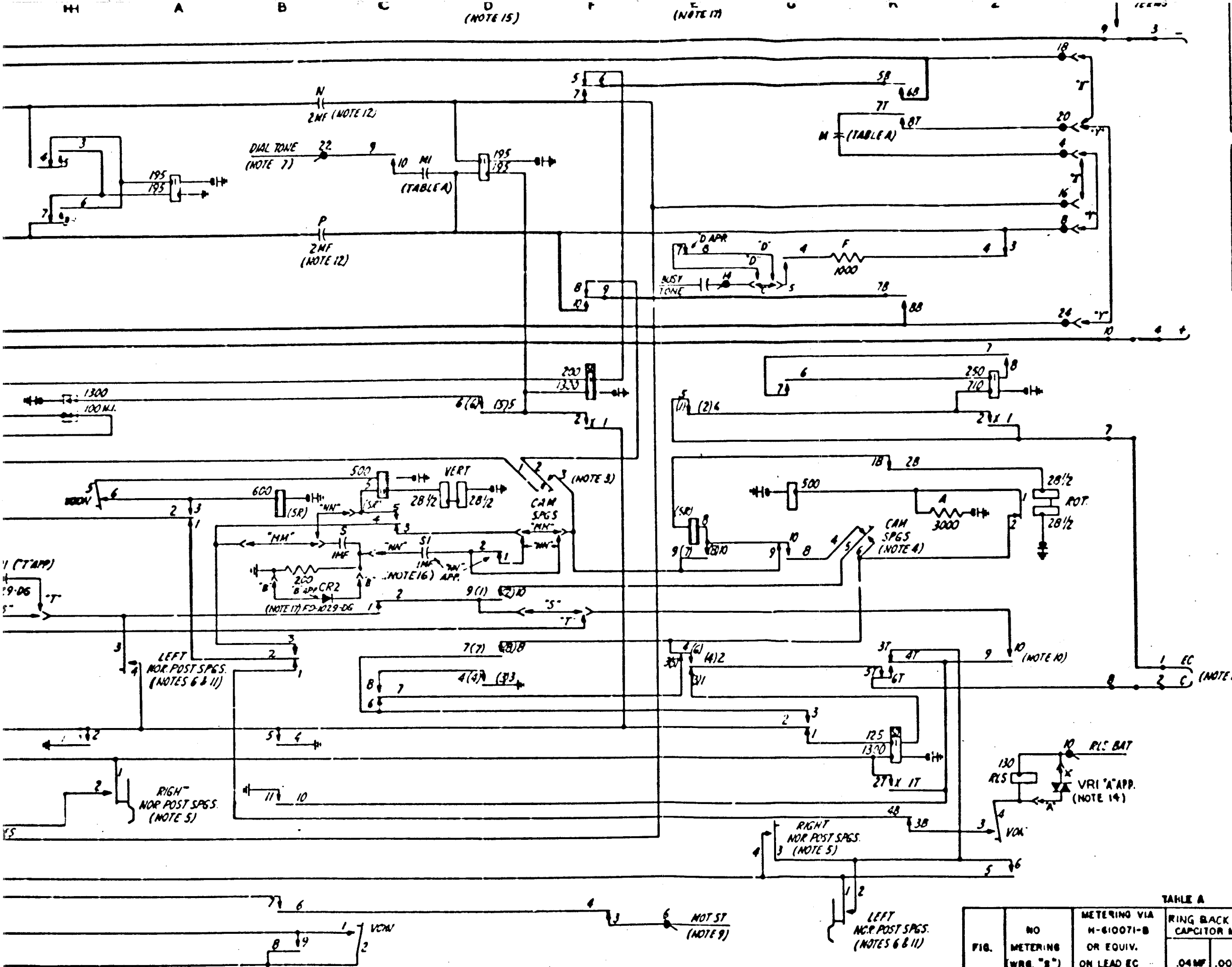


77-THIS CIRCUIT IS FOR 1000 OHM LOOP OPERATION ONLY.

TABLE A					
NO METERING (Wdg. "S")	METERING VIA M-6100T-S OR EQUIV. ON LEAD EC (Wdg. "T")	RING BACK TONE CAPACITOR MI		DIAL TONE CAPACITOR MI	
		.04 MF	.008 MF	ELECTRONIC GENERATOR	VIBRATOR .008 MF
1		1			1
2		1			1
3	1	1			1
4	1	1			1
5		1			1
6		1			1
7		1			1
8		1			1
9		1			1
10		1			1
11		1			1
12		1			1
13		1			1
14		1			1
15		1			1
16		1			1
17		1			1
18		1			1
19		1			1
20		1			1
21		1			1
22		1			1
23		1			1
24		1			1
25		1			1
26		1			1
27		1			1
28		1			1
29		1			1
30		1			1
31		1			1
32		1			1
33		1			1
34		1			1
35		1			1
36		1			1
37		1			1
38		1			1
39		1			1
40		1			1
41		1			1
42		1			1
43		1			1
44		1			1
45		1			1
46		1			1
47		1			1
48		1			1
49		1			1
50		1			1
51		1			1
52		1			1
53		1			1
54		1			1
55		1			1
56		1			1
57		1			1
58		1			1
59		1			1
60		1			1
61		1			1
62		1			1
63		1			1
64		1			1
65		1			1
66		1			1
67		1			1
68		1			1
69		1			1
70		1			1
71		1			1
72		1			1
73		1			1
74		1			1
75		1			1
76		1			1
77		1			1
78		1			1
79		1			1
80		1			1
81		1			1
82		1			1
83		1			1
84		1			1
85		1			1
86		1			1
87		1			1
88		1			1
89		1			1
90		1			1
91		1			1
92		1			1
93		1			1
94		1			1
95		1			1
96		1			1
97		1			1
98		1			1
99		1			1
100		1			1

CURRENT DRAIN DATA	AMPS.
HOLDING CURRENT	0.33

DESIGNED AUTO ELECT LABS, INC.		T-1 DR. 2-73		CONNECTOR CIRCUIT PABX-REVERSE BATTERY SWITCH THRU ON SPECIFIED LEVELS 1 & 2 DIGIT 1 RUNKS BAT. OR GRD. CONNECTED GEN.		SIZE D
V.J. CAMERA		CR. N.Y.		H-580089-B		SHEET / OF /
APP'D.		INDEX 6-26-63		DATE 6-6-63		
L.L. SMITH 6-13-63		SCALE: DO NOT SCALE FOR PRELIMINARY AND UNLESS		H-580089-B		AUTOMATIC ELECTRIC COMPANY NORTHLAKE, ILL., U.S.A.
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B		H-580089-B		
SHEET / OF /		H-580089-B		H-580089-B		SHEET / OF /
SHEET / OF /		H-580089-B				



MAX. ALLOWABLE CKT. LOSS (DB) 0.5			
SUFFIX			
* INDICATES APP. FOR WHICH INDIV. LOSSES ARE NOT REQ.			
ALLOWABLE INDIVIDUAL APPARATUS LOSSES (DB)			
APPARATUS	DESIG.	MAX. LOSS	MIN. LOSS
RELAY 43/195	A	0.2	
RELAY 45/195	D	0.2	
CAPACITORS 2MF	P&H	14.5	11.5

MANUFACTURING NOTES (CONT'D)

15- PRIOR TO ISSUE 3, RELAY D HAD 8 SPRINGS NUMBERED AS IN (). BEGINNING WITH ISSUE 3, RELAY D SPRING NUMBERS NOT IN () ARE USED.

16- PRIOR TO ISSUE 3, WIRING "MM" WERE PART OF CIRCUIT, AND WITHIN APPARATUS "NN" WERE NOT SHOWN. WIRING & APPARATUS "NN" SUPERSEDE WIRINGS "MM".

17- ISSUES 3, WIRING & APPARATUS "B" WERE PART OF WIRING & APPARATUS "A", WIRING "C" WAS PART OF CIRCUIT, RELAY E HAD 8 SPRINGS (NUMBER IN PARENTHESES), AND WIRING AND APPARATUS "D" WERE NOT SHOWN. WIRING & APPARATUS "D" SUPERSEDE WIRING "C" AND WIRING & APPARATUS "B".

OPTIONS			NOTES
OPTION	ISSUES FIRST USED	ISSUES LAST USED	
A	2		14
B	2	3	17
C	1	3	17
D	4		17
E			
F			
G			
H			
I			
J			
K			
L			
M	1	2	16
NN	3		16
O			
P			
Q			
R			
S	1		TABLE
T	1		TABLE
U			

FIG.	NO. METERING (WRG. "B")	METERING VIA H-610071-B OR EQUIV. ON LEAD EC (WRG. "Y")	RING BACK TONE CAPACITOR M		DIAL TONE CAPACITOR M1	
			.04MF	.005MF	ELECTRONIC GENERATOR .04MF	VIBRATOR .005MF
1A	N		N			N
2A	N			N		N
3A		N	N			N
4A		N		N		N

NOTE 1

SUFFIX	
--------	--

INDICATES APP. FOR WHICH INDV. LOSSES ARE NOT REQ.			
ALLOWABLE INDIVIDUAL APPARATUS LOSSES (DB)			
APPARATUS	DESIG.	MAX. LOSS	MIN. LOSS
RELAY 43/195	A	0.2	
RELAY 43/195	D	0.2	
CAPACITORS 2MF	P&N	14.5	11.5

MANUFACTURING NOTES (CONT'D)

- 15- PRIOR TO ISSUE 3, RELAY D HAD 8 SPRINGS NUMBERED AS IN (). BEGINNING WITH ISSUE 3, RELAY D SPRING NUMBERS NOT IN () ARE USED.
- 16- PRIOR TO ISSUE 3, WIRINGS "MM" WERE PART OF CIRCUIT, AND WIRING 8 APPARATUS "NN" WERE NOT SHOWN. WIRING 8 APPARATUS "NN" SUPERSEDE WIRINGS "MM".
- 17- ISSUES 3, WIRING 8 APPARATUS "B" WERE PART OF WIRING 8 APPARATUS "A", WIRING "C" WAS PART OF CIRCUIT. RELAY E HAD 8 SPRINGS (NUMBER IN PARENTHESES), AND WIRING 8 APPARATUS "D" WERE NOT SHOWN. WIRING 8 APPARATUS "D" SUPERSEDE WIRING "C" AND WIRING 8 APPARATUS "B".

- 18- INDICATES INSIDE TERMINAL (START OF WINDING) (SO) SLOW TO OPERATE (SR) SLOW TO RELEASE
- 19- JACK TERMINAL
- 20- JACK TERMINAL (COMMON)

MANUFACTURING NOTES:

- 1- SHELF JACKS 9 & 11, 21 & 23 MAKE CONTACT WHEN SWITCH IS REMOVED.
- 2- CONTACTS "X" OPERATE FIRST.
- 3- CAM SPRINGS OPERATE ON 10TH ROTARY STEP ON CODE CALL LEVEL.
- 4- CAM SPRINGS OPERATE ON 11TH ROTARY STEP ON AUTOMATIC ROTARY LEVELS.
- 5- RIGHT NORMAL POST SPRINGS OPERATE ON AUTOMATIC ROTARY SWITCH THRU LEVELS (RESTRICTED).
- 6- LEFT NORMAL POST SPRINGS OPERATE ON ONE DIGIT (NOT RESTRICTED) AUTOMATIC ROTARY LEVELS WITHOUT SWITCHING THRU WHEN DISCRIMINATING SERVICE IS REQUIRED. (NOTE 11).
- 7- BUSY & DIAL TONES TO BE INSULATED WITH CAPACITORS.
- 8- FOR NON-RESTRICTED LINES, CONNECT C & EC LEADS TOGETHER AT LINE EQUIPMENT. WHEN DISCRIMINATING SERVICE IS NOT USED, STRAP JACKS 9&15.
- 9- IF DIAL TONE START IS REQUIRED, STRAP DIAL TONE START & MOTOR START IN POWER EQUIPMENT.
- 10- WHEN GROUP HUNTING IS REQUIRED AFTER 2ND DIGIT, STRAP EC & C ON ALL TRUNKS IN GROUP EXCEPT LAST ONE. IF RESTRICTED SERVICE IS REQUIRED ON TWO DIGIT GROUP HUNTING TERMINALS, ADJUST SPRINGS 9&10 OF "2" RELAY NOT TO MAKE CONTACT. (NOTE 13).
- 11- IF RESTRICTED SERVICE IS REQUIRED ON ONE DIGIT ROTARY (WITHOUT "SWITCH THRU"), ADJUST LEFT NORMAL POST SPRINGS 1&2 BUT NOT 3&4 TO MAKE CONTACT PER NOTE 6.
- 12- CAPACITORS M&P TO BE MATCHED WITHIN 5%.
- 13- WHEN FIGURE 3&OR 4&15 SPECIFIED, DISREGARD NOTE 10. TWO DIGIT TRUNK HUNTING CANNOT BE USED WITH SUBSCRIBER EC LEAD RETAINING.
- 14- PRIOR TO ISSUE 2, RELEASE-MAGNET COIL HAD NON-INDUCTIVE WINDING, AND WIRING 8 APPARATUS "A" WERE NOT SHOWN. BEGINNING WITH ISSUE 2, OMIT RELEASE-MAGNET COILS NON-INDUCTIVE WINDING AND USE WIRING 8 APPARATUS "A" FOR FIELD CONVERSION, VARIATOR VRI MAY BE ADDED WITHOUT RELEASE-MAGNET COIL CHANGE.

INSTALLING NOTES:

- 76- INSTALLER TO USE "X" WIRING FOR BATTERY CONNECTED & "Y" WIRING FOR GROUND CONNECTED GENERATOR.
- 77- THIS CIRCUIT IS FOR 1000 OHM LOOP OPERATION ONLY.

1 EC
2 C (NOTE 10)

TABLE A		
RING BACK TONE CAPACITOR M	DIAL TONE CAPACITOR MI	VIBRATOR
.04 MF	.008 MF	.008 MF
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*
*	*	*

OPTIONS		
OPTION	ISSUES	NOTES
	FIRST USED	
A	2	14
B	2	17
C	1	17
D	4	17
E		
F		
G		
H		
I		
J		
K		
L		
M	1	16
N	3	16
O		
P		
Q		
R		
S	1	TABLE
T	1	TABLE
U		
V		
W		
X	1	76
Y	1	76
Z		

CURRENT DRAIN DATA AMPS.
HOLDING CURRENT 0.33

6-13-63
M.Z.

STOCKLIST DH-580089-831 (FIG. 3A)
STOCKLIST DH-580089-830 (FIG. 1A)
JUMPER LIST JL-580089-B

DESIGNED AUTO ELECTRIC LABS, INC.		DR. J.J. 6-13-63		CONNECTOR CIRCUIT PABX-REVERSE BATTERY SWITCH THRU ON SPECIFIED LEVELS 1 & 2 DIGIT TRUNKS BAT. OR GRD. CONNECTED GEN.	
V.J. CIMERA		CR. M.V.			
APP'D. L.L. SMITH		INDEX. 6-26-63			
SCALE: 6-13-63		DATE: 6-4-63		H-580089-B	
SHEET 1 OF 1		SHEET 1 OF 1		D	

AUTOMATIC ELECTRIC COMPANY
NORTLAKE, ILL. U.S.A.