

METHOD OF SETTING UP RINGING OPTIONS	SPECIAL GEN. SH. MULT. 16	DIR. GEN. SH. MULT. 15	NORMAL GEN. SH. MULT. 5	ADD "A" STRAP 77-87 RLY. II	STRAP SHELF MULT. 16 TO 5	STRAP SHELF MULT. 15 TO 5	SEE NOTES
1 IMMEDIATE RING LOCAL SPECIAL RING TRK.	*	*	*				
2 IMMEDIATE RING LOCAL IMMEDIATE RING TRK.		*	*	*			52, 54
3 IMMEDIATE RING LOCAL NORMAL RING TRK.		*	*	*	*		52
4 NORMAL RING LOCAL NORMAL RING TRK.			*	*	*	*	52, 53
5 NORMAL RING LOCAL SPECIAL RING TRK.	*		*		*	*	53

FIG.	SHELF WRG.	SWITCH WRG.	NOTES
1A	*	*	BATTERY CONNECTED GENERATOR 5
2A	*	*	GROUND CONNECTED GENERATOR 5
3A		*	LISTED NO. CONN. BAT. CONN. GEN. 12, 60

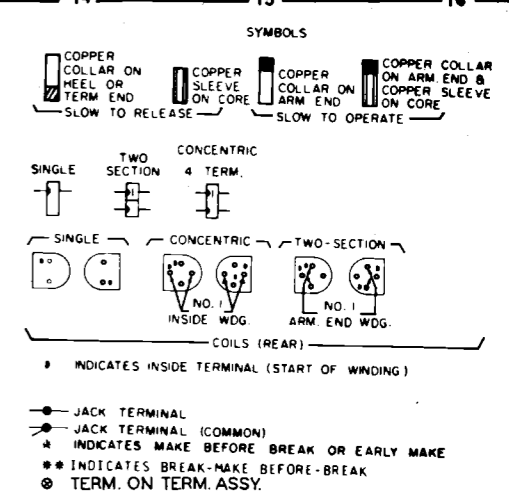
APP. AND/OR WIRING	ISSUES		WAS PART OF	SUPERSEDED BY	WIRED BY		FIGURE OR SUFFIX	TABLE	NOTES
	FIRST USED	LAST USED			FACTORY	INSTALLER			
A	I				*		1A,2A,3A	A	54
B					*		3A	B,D	57 61
C	I				*		1A,2A	B,D	57 61
D	I				*		1A,2A,3A		58
E	I				*		1A,2A	B	
F	I				*		3A	B	
G	I				*		3A	B	
H	I	I	J	*					
I					*				
J	2			*					
K	1	2	L	*			1A,2A,3A		
L	3			*			1A,2A,3A		
M					*				
N	1				*		3A		60
O					*				
P					*				
Q					*				
R					*				
S	4			*			1A,2A,3A	D	61
T	4			*			1A,2A,3A	D	61
U	1			*			2A	B	5
V	4	4	S	W	*		1A,2A,3A	D	
W	5			*			1A,2A,3A	D	
X	1			*			1A	B	5
Y					*				
Z					*				
LPR	1			*			1A,2A,3A		11,59
BI	1			*			1A,2A,3A		7
DB	1			*			1A,2A,3A		7
NT	1			*			1A,2A,3A		51
DI	1			*			3A		12,91
D2	1			*			3A		91

FIG.	OPTION					DESCRIPTION	
	C	D	F	G	T		
1A, 2A	*	*				FACTORY WIRED (NOTE 57 & TABLE B) (2000 OHM TIP GROUND)	OPEN "C" LEAD DIVERT FUNCTION
	*	*				(SECOND READ OUT) INSTALLER WIRED (NOTE 57 & TABLE B) REMOVE "D" WRG. & ADD "C" WRG. CANNOT BE USED WHEN 2000 OHM RING BATTERY IS USED FOR LISTED NUMBER	
	*	*				(THIRD READ OUT) INSTALLER WIRED (NOTE 57, 61 & TABLE B) REMOVE "D" WRG. & ADD "A" WRG. CANNOT BE USED WHEN 1000 OHM ON TIP & RING IS USED FOR LISTED NUMBER	
3A	*	*				(FOURTH READ OUT) INSTALLER WIRED (NOTE 57, 61 & TABLE B) REMOVE "D" WRG. CANNOT BE USED WHEN OPEN BETWEEN TIP & RING IS USED FOR LISTED NUMBER	LISTED NUMBER DIVERT FUNCTION
	*	*				FACTORY WIRED (NOTE 57 & TABLE B) 2000 OHM RING BATTERY	
	*	*				(SECOND READ OUT) INSTALLER WIRED (NOTE 57 & TABLE B) REMOVE "C" WRG. & ADD "D" WRG. CANNOT BE USED WHEN 2000 OHM TIP GROUND IS USED FOR OPEN "C" LEAD DIVERT	
3A	*	*				(THIRD READ OUT) INSTALLER WIRED (NOTE 57, 61 & TABLE B) REMOVE "C" WRG. & ADD "H" WRG. CANNOT BE USED WHEN 1000 OHM BETWEEN TIP & RING IS USED FOR OPEN "C" LEAD DIVERT	LISTED NUMBER DIVERT FUNCTION
	*	*				(FOURTH READ OUT) INSTALLER WIRED (NOTE 57, 61 & TABLE B) REMOVE "C" WRG. CANNOT BE USED WHEN OPEN BETWEEN TIP & RING IS USED FOR OPEN "C" LEAD DIVERT	
	*	*				(FOURTH READ OUT) INSTALLER WIRED (NOTE 57, 61 & TABLE B) REMOVE "C" WRG. CANNOT BE USED WHEN OPEN BETWEEN TIP & RING IS USED FOR OPEN "C" LEAD DIVERT	

A MAXIMUM OF FOUR DIFFERENT ATTENDANT'S READ OUT CAN BE OFFERED FOR ANY ARRANGEMENT OF OPEN "C" LEAD DIVERT FUNCTION AND/OR LISTED NUMBER DIVERT FOR EACH CUSTOMER.

OPERATING NOTES:
 91- TO TEST OPERATE TIME OF RELAY "Z", MAINTENANCE MAN TO DIAL AN IDLE TERMINAL AND CHECK THAT RELAY "U" OPERATES BEFORE RELAY "Z". IF MORE TIME IS REQUIRED, REMOVE STRAP "DI" AND ADD STRAP "D2" TO INCREASE OPERATING TIME APPROXIMATELY 50 TO 60 MILLISECONDS. TO INCREASE AN ADDITIONAL 50 TO 60 MILLISECONDS, REMOVE STRAPS "DI" AND "D2".

ENGINEERING NOTES:
 51- LOCAL CALL NUISANCE TRAP FEATURE. STRAP "NT" LEAD SHELF JACK 23 TO "C" LEAD SHELF JACK 9. (OFF HOOK CALLED PARTY WILL HOLD LOCAL CALLING CALL TRAIN.)
 52- REMOVE SPECIAL TRUNK GENERATOR FROM SHELF MULTIPLE 16. ADD RINGING STRAP OPTIONS FROM TABLE "A".
 53- REMOVE DIRECT GENERATOR FROM SHELF MULTIPLE 15. ADD RINGING STRAP OPTIONS FROM TABLE "A".
 54- "A" STRAP OPTION REQUIRED IN EACH SWITCH IN GROUP.
 55- INT. +12VBB WIRED ONLY IF THIS SWITCH IS TO PROVIDE A DIVERT FUNCTION. SEE "LISTED NUMBER" CIRCUIT H-75672-A; INTR. H-850747-A AND ANY "NIGHT TRANSFER" WHICH MAY BE INVOLVED.
 56- CAMP ON BUSY-BREAK IN FEATURE WILL ONLY FUNCTION ON LAST TERMINAL IN A GROUP HUNTING NUMBER BLOCK. SEE NOTE 4B FOR METHOD OF RESTRICTION THIS FEATURE.
 57- ON FIGURE 1A AND 2A ENGINEER TO INSTRUCT INSTALLER TO ADJUST LEFT NORMAL POST SPRINGS TO OPERATE ON "DIVERT AS ASSIGNED LEVELS" (2000 OHM TIP GROUND). ON FIGURE 3A INSTRUCT INSTALLER TO ADJUST LEFT NORMAL POST SPRINGS TO OPERATE ON LISTED NUMBER LEVEL (2000 OHM RING BATTERY). IF 2000 OHM TIP GROUND IS REQUIRED FOR FIGURE 3A, INSTALLER TO REMOVE "C" WIRING & ADD "D" WIRING. CIRCUIT WITHOUT "C", "D" OR "H" WIRING IS NORMALLY USED FOR DID CONNECTOR TERMINAL INTERCEPT (NO TIP OR RING MARK). TABLE D.
 58- ENGINEER TO PROVIDE DIODE CR5 AND INSTRUCT INSTALLER TO ADD "E" WIRING IF "SUPY 2" FUNCTION IS REQUIRED.
 59- ENGINEER TO INSTRUCT INSTALLER TO REMOVE "LPR" STRAP WHEN CALLING PARTY RELEASE IS REQUIRED.
 60- FIGURE 3A TO BE USED ON CONNECTOR SHELVES HAVING LISTED NUMBER LEVEL. ENGINEER TO INSTRUCT INSTALLER, WHEN USING FIGURE 3A, TO ADD WIRING TO LISTED NUMBER NIGHT GUARD AND TRANSFER CIRCUIT H-75672-A OR EQUIVALENT WHEN SELECTED STATION NIGHT SERVICE IS REQUIRED. IF NO NIGHT SERVICE IS REQUIRED, INSTALL STRAP "N" ON SHELF.
 61- FIGURES 1A, 2A & 3A NORMALLY SUPPLIED WITH "C" OR "D" WIRING. (SEE NOTE 57) IF A THIRD LISTED NUMBER IS REQUIRED, INSTRUCT INSTALLER TO DISCONNECT R2 RESISTOR FROM TIE POINT, REMOVE "C" OR "D" WIRING, AND ADD "T" WIRING TO ADD TIP & RING MARKING. (SEE TABLE D).



MANUFACTURING NOTES:
 1- SHELF JACKS 9 & 11 MAKE CONTACT WHEN SWITCH IS REMOVED.
 2- CONTACTS "X" OPERATE FIRST.
 3- CAPACITORS C1 & C2 ARE MATCHED WITHIN 5%.
 4- "EC" BANK MARKINGS ARE AS FOLLOWS:
 A- PBX GROUP HUNTING. STRAP C & EC OF EACH LINE IN GROUP, EXCEPT LAST.
 B- CAMP-OVERRIDE RESTRICTION. (NO CAMP OVERRIDE FEATURE) STRAP 1000 OHM 1 WATT MINIMUM GROUND TO TERMINAL TO BE RESTRICTED.
 5- PROVIDE SHELF STRAPS "X" FOR BATTERY CONNECTED GENERATOR; TO BE CHANGED IN FIELD BY INSTALLER TO "U" STRAPS WHEN GROUND CONNECTED GENERATOR IS PROVIDED. IF "U" STRAPS ARE USED, CONSULT AH-DRAWING FOR FIGURE 2A.
 6- ALL DIODES ARE PD-1029-DG UNLESS OTHERWISE SPECIFIED.
 7- CONNECTOR IS WIRED WITH CAMP ON BUSY-BREAK IN FEATURE, "B1" WIRING. TO REMOVE BREAK IN FEATURE, REMOVE "B1" WIRING AND ADD "DB" WIRING.
 8- LEFT NORMAL POST SPRINGS (SEE NOTE 57). RIGHT NORMAL POST SPRINGS OPERATE ON TRUNK CALL RESTRICT LEVELS.
 9- TRUNK CALL RESTRICT JACK 13 TO BE STRAPPED TO GROUND OR ATTENDANT CONTROLLED GROUND.
 10- ROTARY OFF NORMAL SPRINGS OPERATE ON FIRST ROTARY STEP.
 11- "D" AND "LPR" STRAPS ARE SHOP WIRING.
 12- "C" AND "DI" STRAPS ARE SHOP WIRING FOR FIGURE 3A.
 13- PRIOR TO ISSUE 2, RESISTOR R2 WAS 2000 OHM 1 WATT.

STOCKLIST DH-580370-B31 (FIG. 3A)
 STOCKLIST DH-580370-B30 (FIG. 1A & 2A)
 JUMPER LIST JL-580370-B

DRAWING NO.	ISS.	DESCRIPTION
AH-580370-B	1	ADJUSTMENT
E-580370-B	2	EXPLANATION

DESIGNED W.S. NUFER DR. L.Y.
 APP'D. J.F. HRIBIK CK. T.J.
 SCALE: DATE: 9-18-69
 DO NOT SCALE DRAWING

CURRENT DRAIN DATA AMPS.
 HOLDING CURRENT 0.33

DESIGNED W.S. NUFER DR. L.Y.
 APP'D. J.F. HRIBIK CK. T.J.
 SCALE: DATE: 9-18-69
 DO NOT SCALE DRAWING

3-H-580370-B (CL. B)
 FIG. 1A, 2A, 3A - ADDED DIODE CR5 (SEE TABLE C). A.F.
 I.J.B. J.H.F. J.H.E. J.H.E.
 12-29-70 5-30-72

ISSUE 2 7-14-70

ISSUE 3 12-29-70

4-H-580370-B (CL. B)
 ADDED NOTE 61 & TABLE D
 REVISED NOTE 57. M.T.
 5-30-72

ISSUE 4 (CL. B)
 5-H-580370-B (CL. B)
 ASSIGNMENT 1 & 2000 OHM TIP GROUND
 U.I.E. J.H.E. J.H.E.
 5-8-74

ISSUE 5 (CL. B)
 6-H-580370-B (CL. B)
 ASSIGNMENT 1 & 2000 OHM TIP GROUND
 U.I.E. J.H.E. J.H.E.
 5-8-74

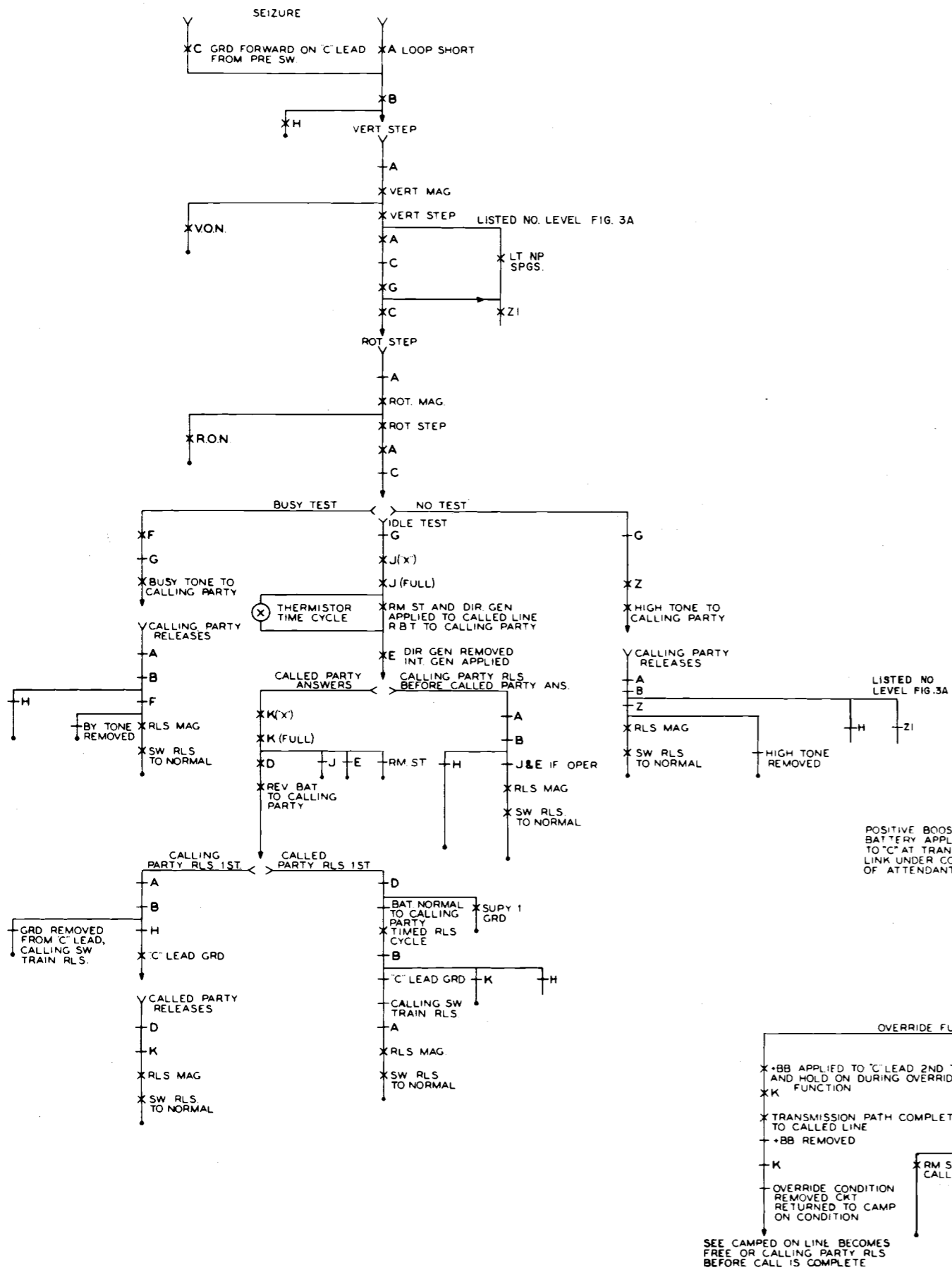
DESIGNED W.S. NUFER DR. L.Y.
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CONNECTOR CKT.-GRP. HUNTING CAMP ON BUSY-BREAK IN-SW THRU IMMEDIATE RING ON LOCAL CALL SPECIAL RING ON TRUNK CALL DIVERT-NO. TERM. TEST

H-580370-B
 SHEET 1 OF 3

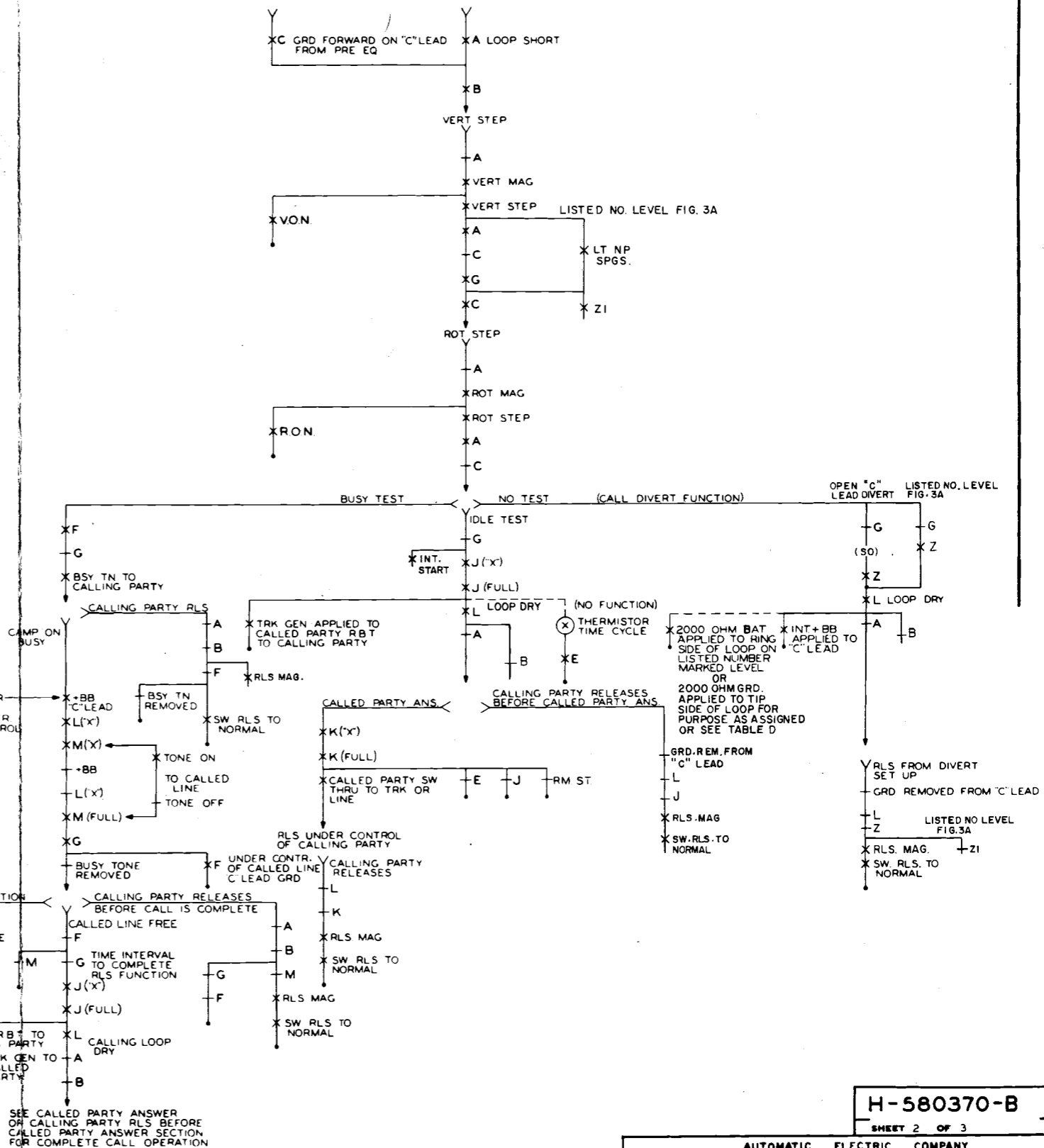
AUTOMATIC ELECTRIC COMPANY
 NORTHLAKE, ILL., U.S.A. GENOA, ILL., U.S.A. WAUKESHA, WISC., U.S.A.

FIG. SC1
LOCAL CALL



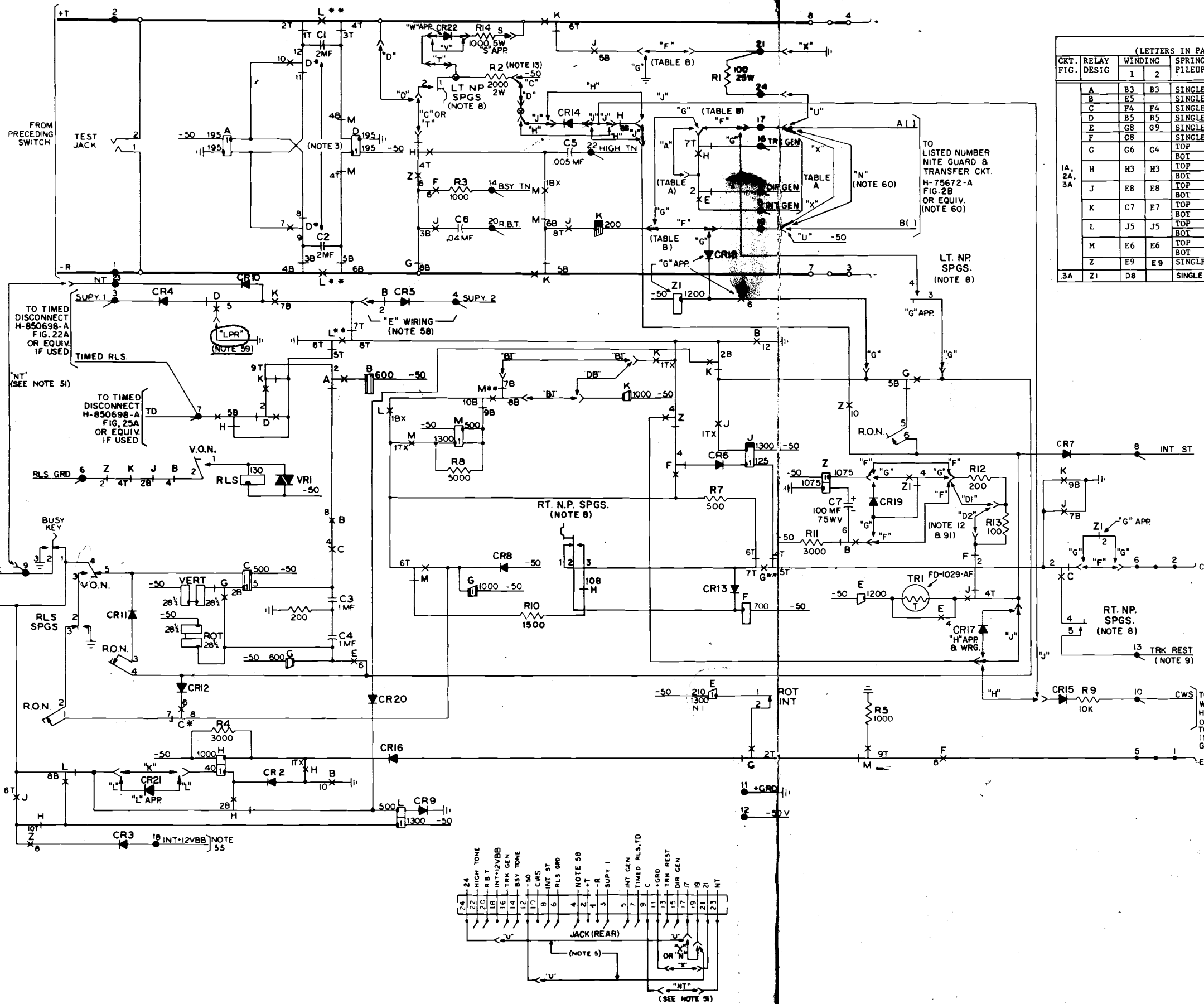
ISSUE 1
ISSUE 2 A
ISSUE 3
ISSUE 4
ISSUE 5

FIG. SC2
TRUNK OR LINK CALL



ISSUE 1
ISSUE 2
ISSUE 3
ISSUE 4
ISSUE 5

FIG. 1A
FIG. 2A
FIG. 3A (SEE TABLE B)



RELAYS (LETTERS IN PARENTHESES INDICATE TYPE OF SPARE COMBINATION)

CKT. FIG.	RELAY DESIG	WINDING		SPRING NUMBER & LOCATION												
		1	2	1	2	3	4	5	6	7	8	9	10	11	12	13
1A, 2A, 3A	A	B3	B3	SINGLE	E4		F3		F9		F4		H4		D8	
	B	F5	F4	SINGLE	D5		F4									
	C	F4	F4	SINGLE	F11											
	D	B5	B5	SINGLE	E4		D3		C4				B4			
	E	G8	G9	SINGLE	C8		G10		C5							
	F	G8	G9	SINGLE	F10		E8		C5				H10			
	G	G6	G4	TOP	H8				F8		E10			D5		
				BOT	G3											
	H	H3	H3	TOP	H4		B5				B8			J2		
				BOT	J3				E3					B7		F7
	J	E8	E8	TOP	E8		G10		J1					C7		
				BOT	F3		C5		B7		F11					SP
	K	C7	E7	TOP	D7		E2		A6					E4		
			BOT	D8				D6		D4					E11	
L	J5	J5	TOP	A4				D4					H2			
			BOT	E5				D4								
M	E6	E6	TOP	E5				C4		F5			H9			
			BOT	C6				B4		C6			E6			
Z	E9	E9	SINGLE	E2		E8		C5					J2		E9	
3A	Z1	D8	SINGLE	F11		E10		D8								

TABLE OF COMPONENTS

COMPONENT	LOC.	COMPONENT	LOC.
R1	B8	BSY KEY	F2
R2	B6		
R3	C6		
R4	H1	TEST JK	B2, C1
R5	H9		
R14	B6		
R7	F8		
R8	E6	RLS MAG	F4
R9	H11	RLS-SPGS	G2
R10	C6		
R11	F9	ROT MAG	G3
C1	A4	ROT INT SPG	H9
C2	C4		
C3	G4	RON SPG	H2, G2, E10
C4	G4		
C5	B7		
C6	C6		
C7	F9		
CR1	G1		
CR2	H4	VERT MAG	G3
CR3	J2		
CR4	D3		
CR5	D5	VON SPGS	E3, F2
CR6	E8		
CR7	E11		
CR8	F6		
CR9	J5	RT NP SPGS	F7, G11
CR10	D4		
CR11	G2	LT NP SPGS	B5, D10
CR12	C3		
CR13	F8	TR1	G10
CR14	B6		
CR15	H11	VR1	F4
CR16	H5		
CR17	G10		
CR18	G8	R12	E10
CR19	F5	R13	F11
CR20	G5	R14	A6
CR21	H3		
CR22	A5		