



AIR TRAINING COMMAND

C699-416L-CD

COMPUTER SYSTEMS DEPARTMENT

CIRCUITS & DIAGRAMS

AN/FSQ-7 POWER SUPPLY AND MARGINAL CHECKING

ABR30533-1

KEESLER AFB, MISS

FOR ATC INSTRUCTIONAL PURPOSES ONLY

92-1879

SCHEMATICS

FOR

POWER

SYSTEM

AN/FSQ-7
COMBAT DIRECTION CENTRAL

TRAINING MANUAL

1, September 1961

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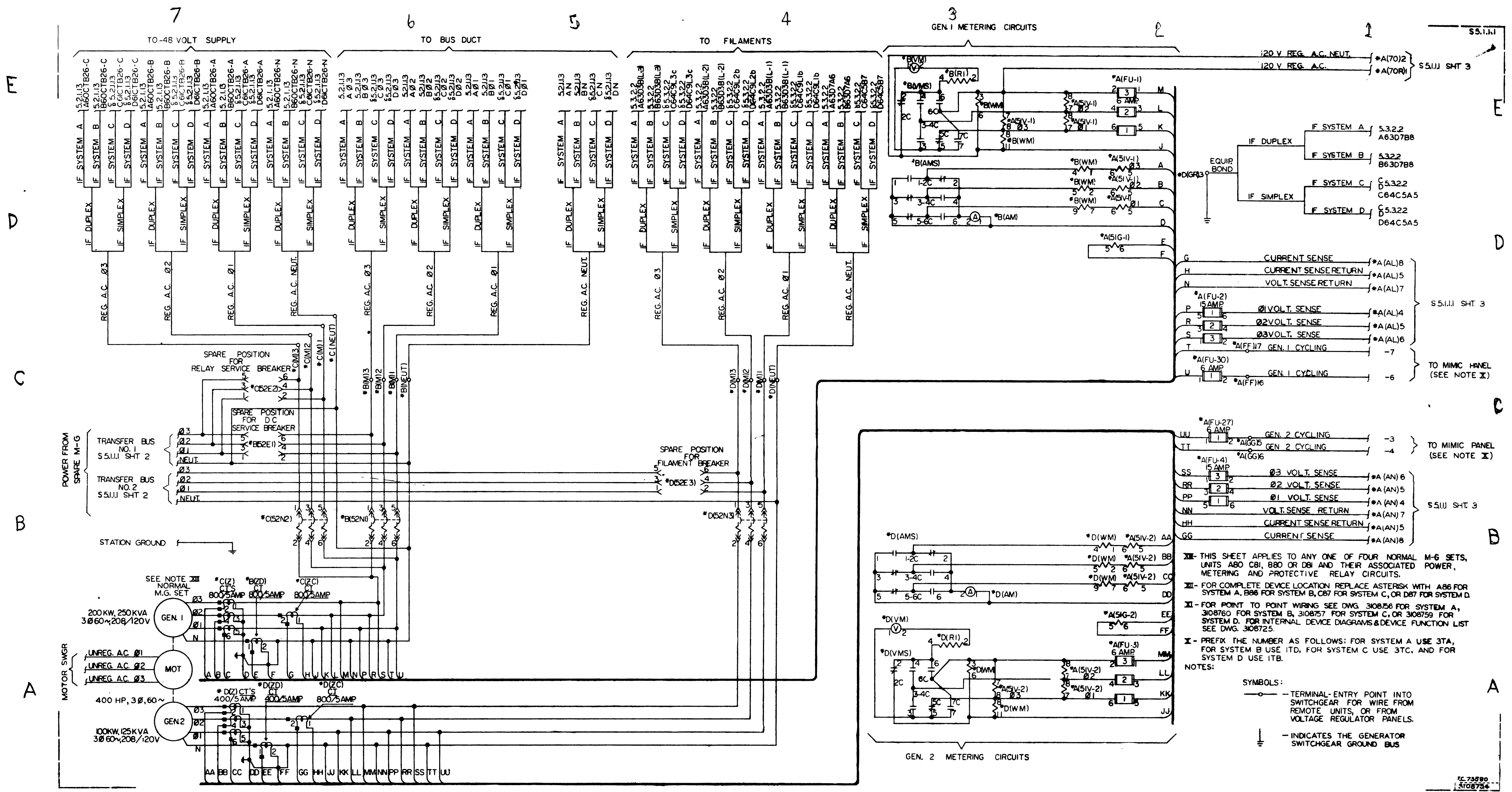
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INTERNATIONAL BUSINESS MACHINES CORPORATION
KINGSTON, NEW YORK

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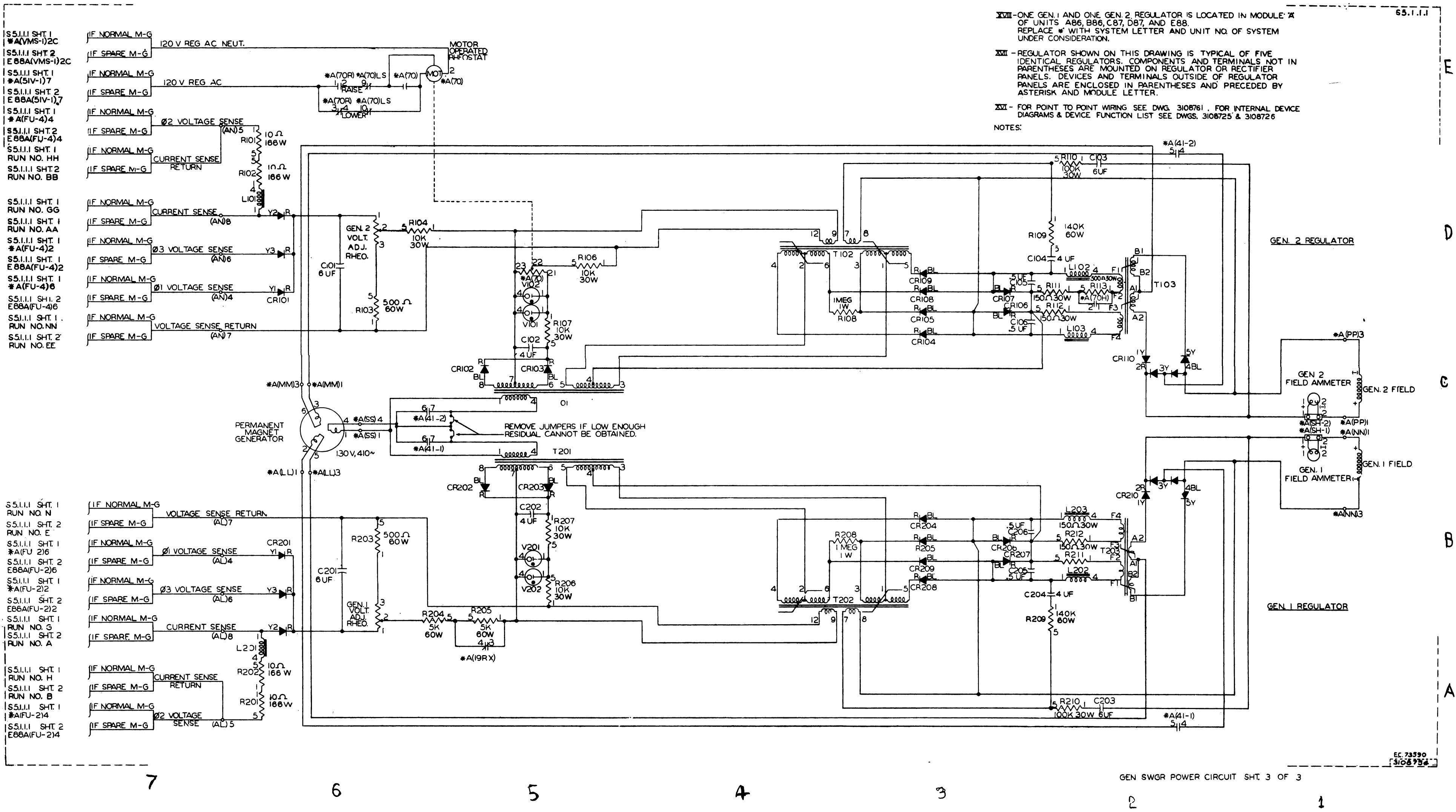
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GEN SWGR POWER CIRCUIT SHT. 1 OF 3

11-73880
5108734



- S5.1.1.1 SHT. 1 #A(VMS-1)2C
- S5.1.1.1 SHT. 2 E88A(VMS-1)2C
- S5.1.1.1 SHT. 1 #A(5IV-1)7
- S5.1.1.1 SHT. 2 E88A(5IV-1)7
- S5.1.1.1 SHT. 1 #A(FU-4)4
- S5.1.1.1 SHT. 2 E88A(FU-4)4
- S5.1.1.1 SHT. 1 RUN NO. HH
- S5.1.1.1 SHT. 2 RUN NO. BB
- S5.1.1.1 SHT. 1 RUN NO. GG
- S5.1.1.1 SHT. 1 RUN NO. AA
- S5.1.1.1 SHT. 1 #A(FU-4)2
- S5.1.1.1 SHT. 1 E88A(FU-4)2
- S5.1.1.1 SHT. 1 #A(FU-4)6
- S5.1.1.1 SHT. 2 E88A(FU-4)6
- S5.1.1.1 SHT. 1 RUN NO. NN
- S5.1.1.1 SHT. 2 RUN NO. EE
- S5.1.1.1 SHT. 1 RUN NO. N
- S5.1.1.1 SHT. 2 RUN NO. E
- S5.1.1.1 SHT. 1 #A(FU-2)6
- S5.1.1.1 SHT. 2 E88A(FU-2)6
- S5.1.1.1 SHT. 1 #A(FU-2)2
- S5.1.1.1 SHT. 2 E88A(FU-2)2
- S5.1.1.1 SHT. 1 RUN NO. G
- S5.1.1.1 SHT. 2 RUN NO. A
- S5.1.1.1 SHT. 1 RUN NO. H
- S5.1.1.1 SHT. 2 RUN NO. B
- S5.1.1.1 SHT. 1 #A(FU-2)4
- S5.1.1.1 SHT. 2 E88A(FU-2)4

55.1.1.1

XVII - ONE GEN. 1 AND ONE GEN. 2 REGULATOR IS LOCATED IN MODULE 'A' OF UNITS A86, B86, C87, D87, AND E88. REPLACE 'A' WITH SYSTEM LETTER AND UNIT NO. OF SYSTEM UNDER CONSIDERATION.

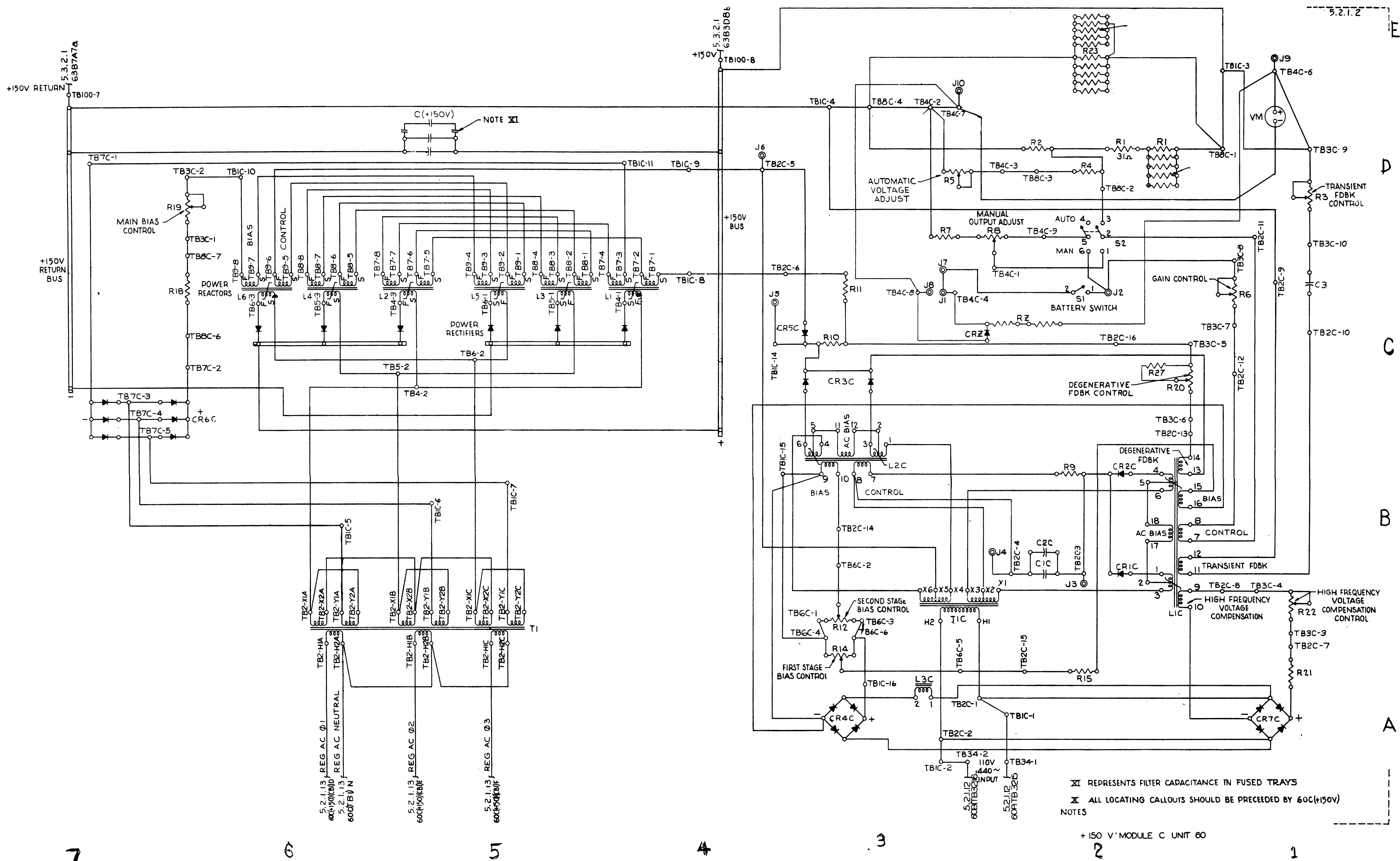
XVIII - REGULATOR SHOWN ON THIS DRAWING IS TYPICAL OF FIVE IDENTICAL REGULATORS. COMPONENTS AND TERMINALS NOT IN PARENTHESES ARE MOUNTED ON REGULATOR OR RECTIFIER PANELS. DEVICES AND TERMINALS OUTSIDE OF REGULATOR PANELS ARE ENCLOSED IN PARENTHESES AND PRECEDED BY ASTERISK AND MODULE LETTER.

XIX - FOR POINT TO POINT WIRING SEE DWG. 3108761. FOR INTERNAL DEVICE DIAGRAMS & DEVICE FUNCTION LIST SEE DWGS. 3108725 & 3108726

NOTES:

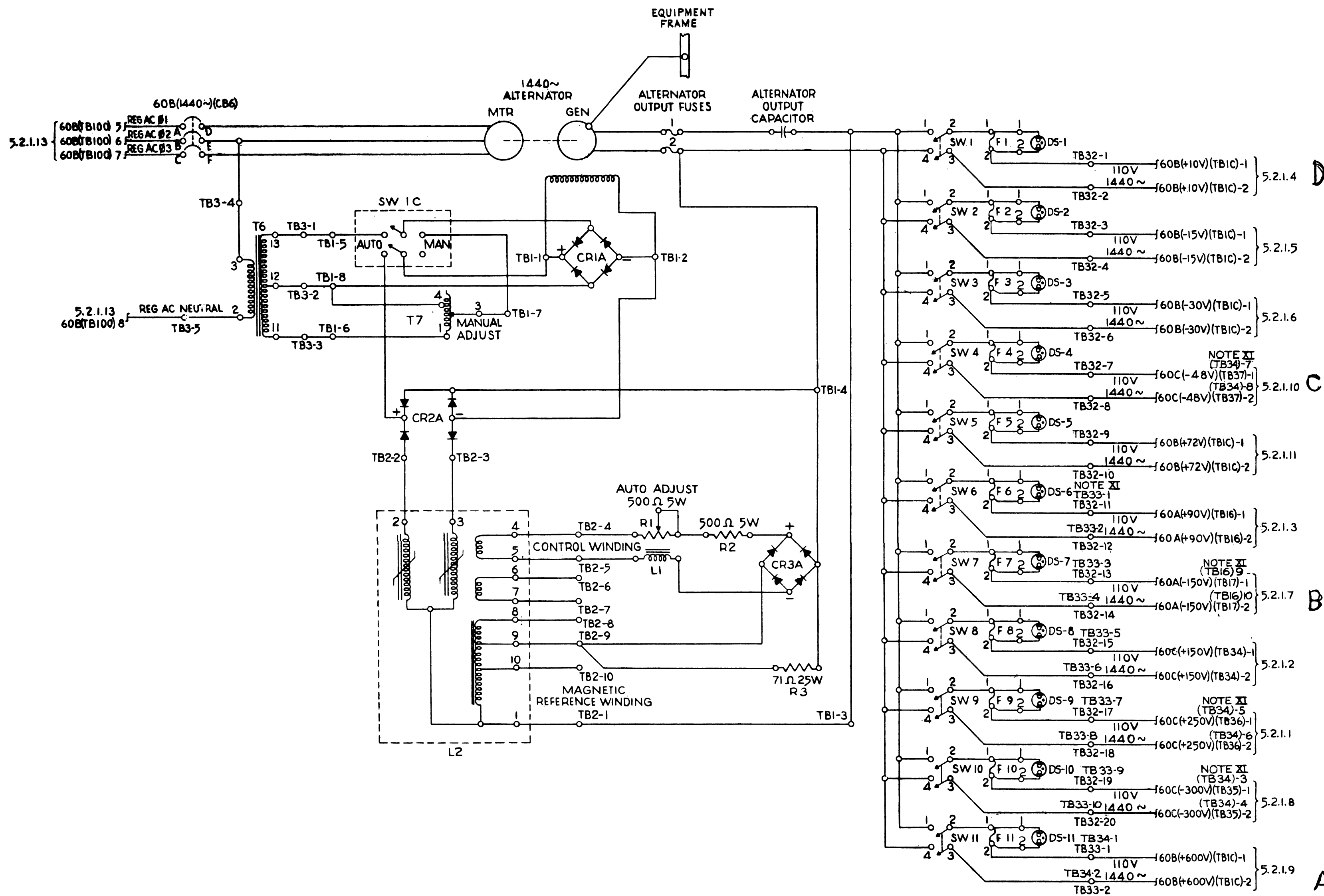
GEN SWGR POWER CIRCUIT SHT 3 OF 3

EC 73590
3108754



XI REPRESENTS FILTER CAPACITANCE IN FUSED TRAYS
 X ALL LOCATING CALLOUTS SHOULD BE PRECEDED BY 60C(+150V)
 NOTES

+150 V MODULE C UNIT 60



XI UPPER DESIGNATIONS APPLY TO SYSTEMS 17 AND HIGHER
 XII ALL LOCATING CALLOUTS SHOULD BE PRECEDED BY 60B(1440~)

NOTES

DUPLEX HIGH FREQUENCY ALTERNATOR - UNIT 60

F

D

C

B

A

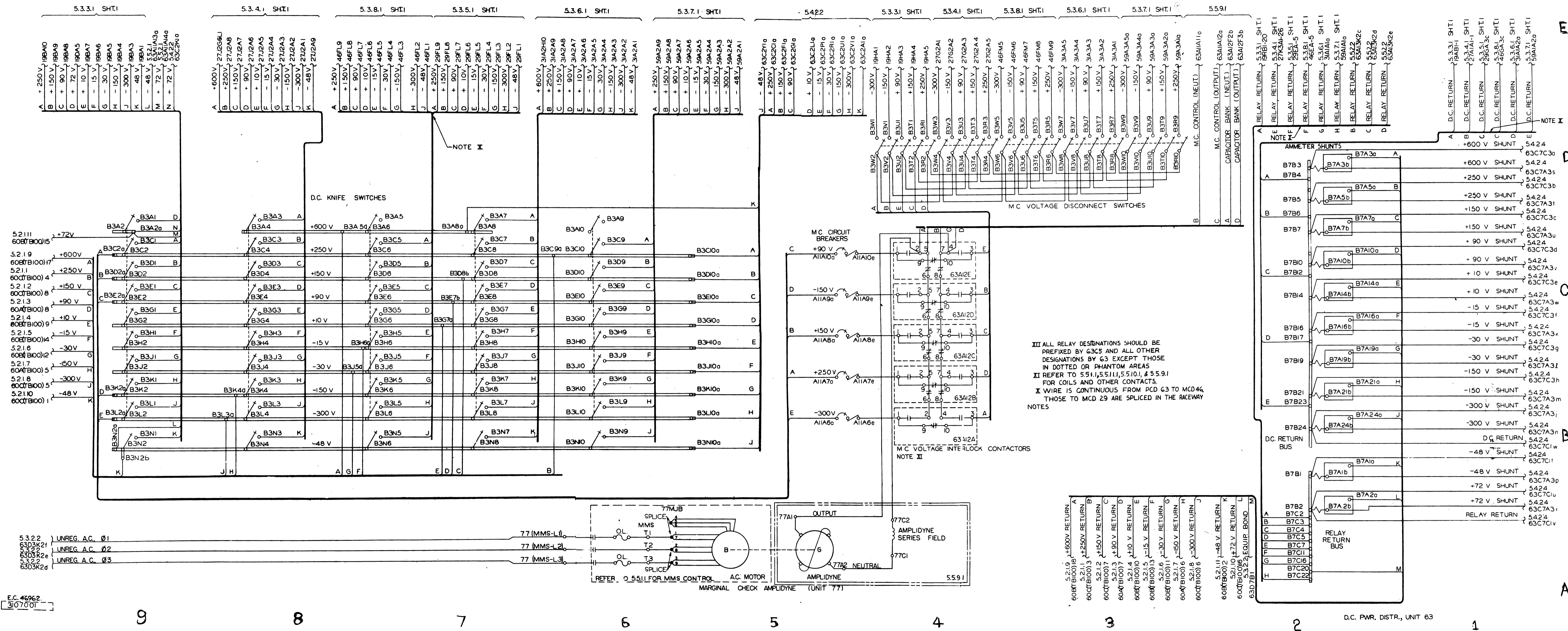
F

D

C

B

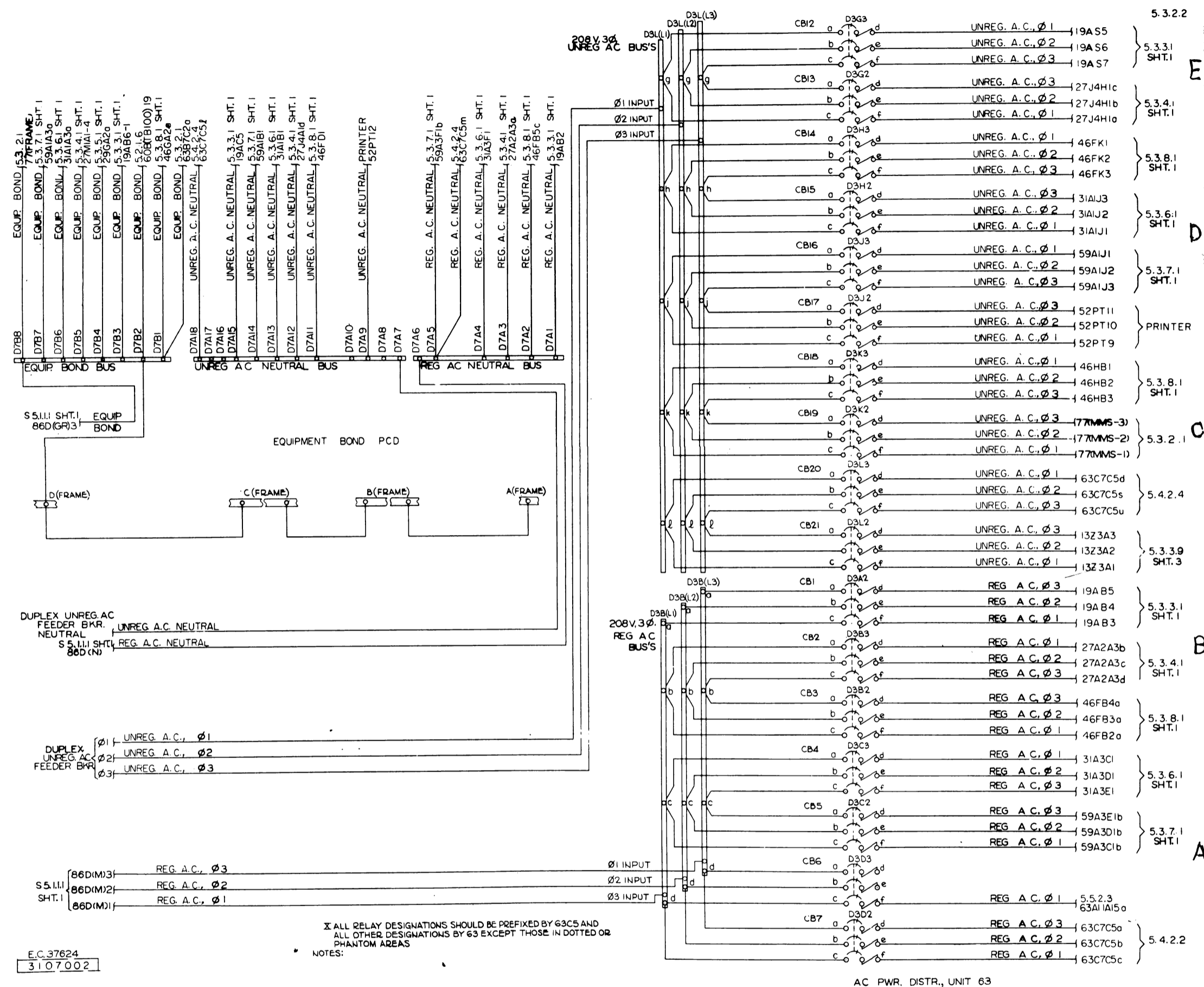
A



NOTE I
 ALL RELAY DESIGNATIONS SHOULD BE PREFIXED BY G3C5 AND ALL OTHER DESIGNATIONS BY G3 EXCEPT THOSE IN DOTTED OR PHANTOM AREAS
 NOTE II REFER TO 5.5.1.1, 5.5.1.1.1, 5.5.1.1.1.1, & 5.5.9.1 FOR COILS AND OTHER CONTACTS
 NOTE III WIRE 15 CONTINUOUS FROM PCD G3 TO MCD46 THOSE TO MCD 29 ARE SPLICED IN THE RACEWAY

E.C. 46962
 3107001

D.C. PWR. DISTR., UNIT 63

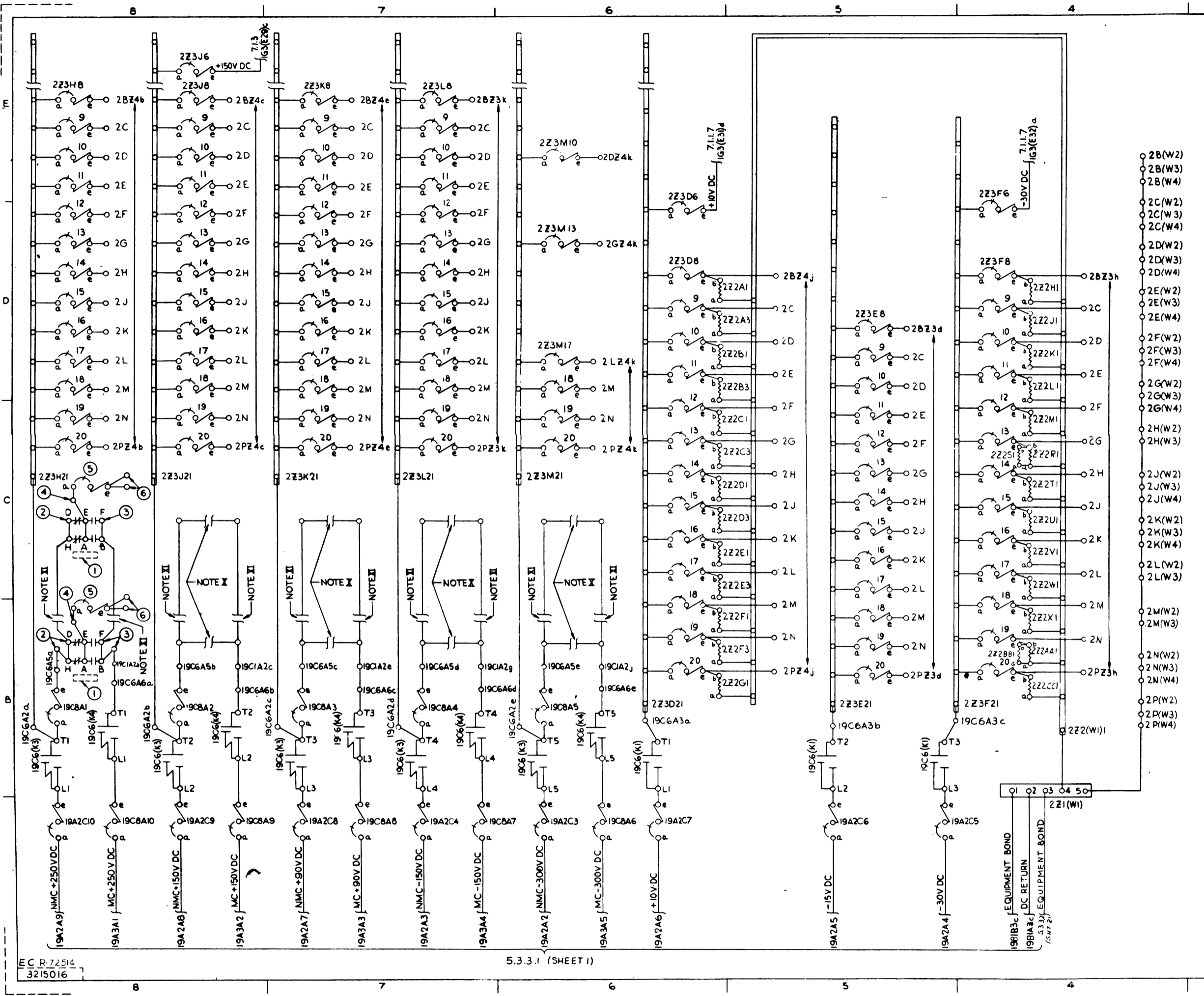


ALL RELAY DESIGNATIONS SHOULD BE PREFIXED BY 63CS AND ALL OTHER DESIGNATIONS BY 63 EXCEPT THOSE IN DOTTED OR PHANTOM AREAS

NOTES:

AC PWR. DISTR., UNIT 63

EC-37624
3107002



EC R-72514
3215016

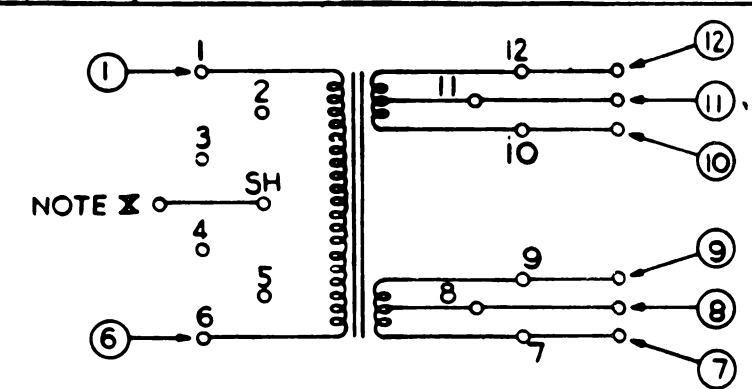
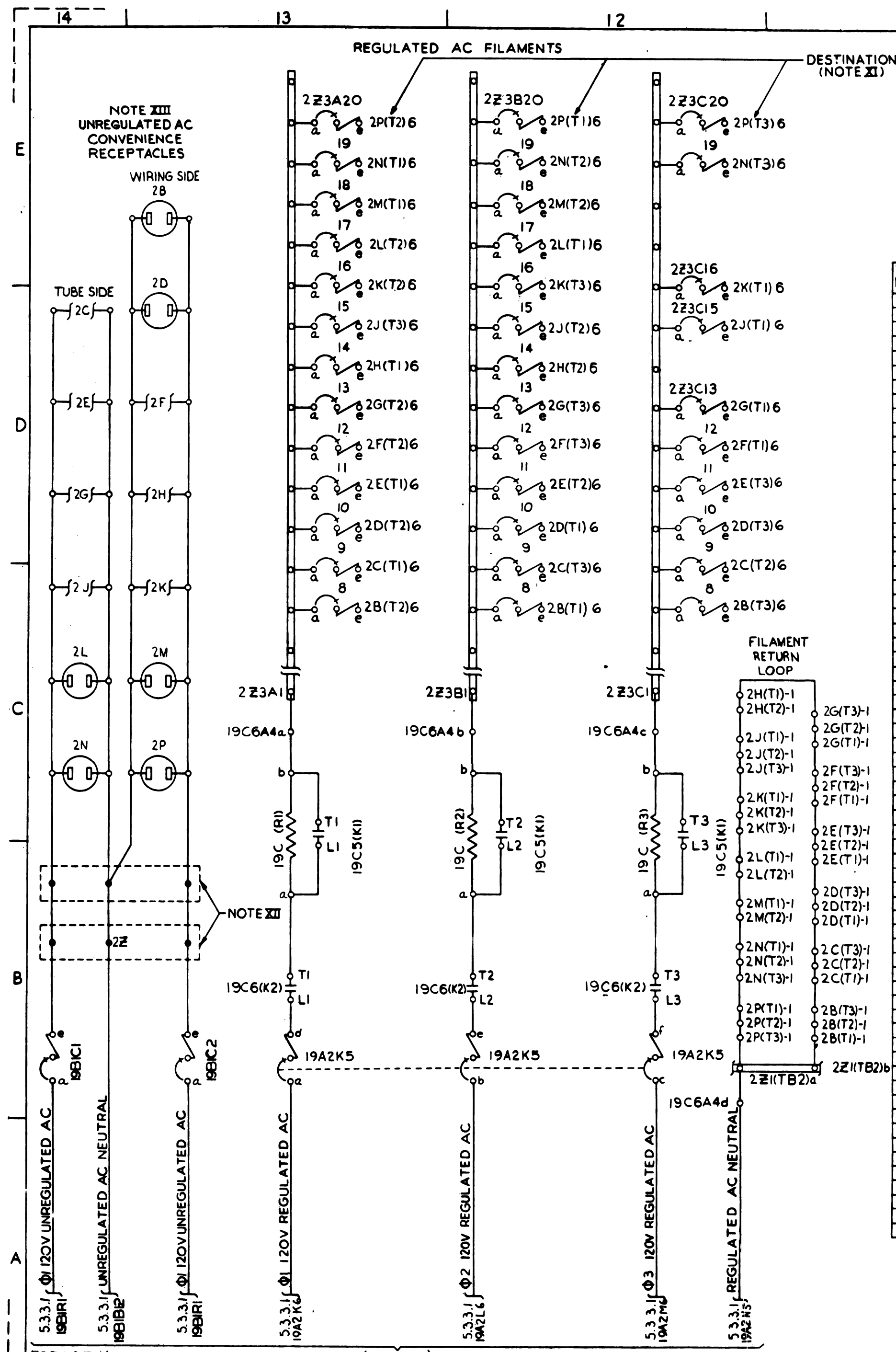
5.3.3.1 (SHEET 1)

VOLTS	RELAY	NON MC TERMINAL	MC TERMINAL	OUTPUT		POWER MODULE CB	DESTINATION	NOTE XIII
				TERMINAL	TERMINAL			
+250	19C2B4	19C1A1a	19C1A2a	19C2A8	19C2A8	2Z3N1	P4	I
				19C2A7	19C2A7			
				19C2A6	19C2A6			
+150	19C2A3	19C1A1c	19C1A2c	19C2A8d	19C2A8d	2Z3N4	P4	I
				19C2A7	19C2A7			
				19C2A6	19C2A6			
				19C2A5	19C2A5			
				19C2A4	19C2A4			
				19C2A3	19C2A3			
-150	19C2G3	19C1D1e	19C1D2e	19C2G6b	19C2G6b	2Z3N7	P5	I
				19C2G5	19C2G5			
				19C2G4	19C2G4			
				19C2G3	19C2G3			
				19C2G2	19C2G2			
				19C2G1	19C2G1			

XIII SEE LOGIC O.C.1 THRU O.C.7 FOR DESTINATIONS
 XIV SEE 5.5.7 FOR MC RELAY COIL CONNECTIONS
 XV CHART ON RIGHT SHOWS NUMBER OF CONNECTIONS MADE ON EACH VOLTAGE
 XVI MC RELAY AND ASSOCIATED CIRCUIT IS SHOWN ON LEFT OF THIS SHEET (+250 VOLTS)

NOTES

ADVANCE



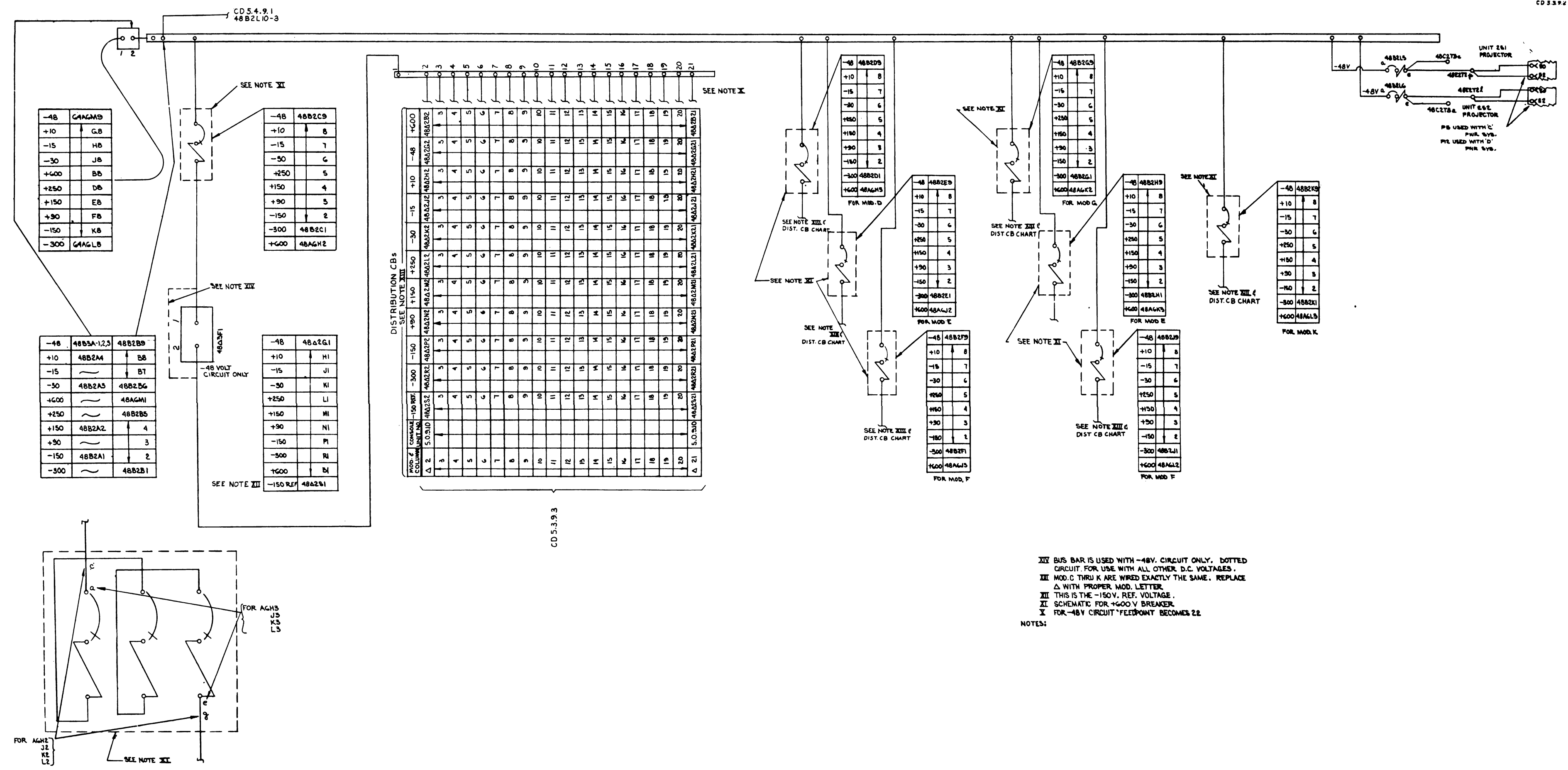
TRANS NUMBER	TERMINAL #1	TERM#6	TERM#7	TERMINAL #8	TERM#9	TERM#10	TERMINAL #11	TERM#12
2B(T1)	2Z(TB2)b	2B(T2)	2Z3B8e	2B(X2)	2B(A2)a	2B(T1)-11	2B(Y2)	2B(X2)
2B(T2)	2B(T1)	2B(T3)	A8e	2B(X3)	2B(T2)-11	2B(A2)b	2B(Y3)	2B(X3)
2B(T3)	2B(T2)	2C(T1)	C8e	2B(X4)	2B(T3)-11	2B(A2)c	2B(Y4)	2B(X4)
2C(T1)	2B(T3)	2C(T2)	A9e	2C(X2)	2C(A2)a	2C(T1)-11	2C(Y2)	2C(X2)
2C(T2)	2C(T1)	2C(T3)	C9e	2C(X3)	2C(T2)-11	2C(A2)b	2C(Y3)	2C(X3)
2C(T3)	2C(T2)	2D(T1)	B9e	2C(X4)	2C(T3)-11	2C(A2)c	2C(Y4)	2C(X4)
2D(T1)	2C(T3)	2D(T2)	B10e	2D(X2)	2D(A2)a	2D(T1)-11	2D(Y2)	2D(X2)
2D(T2)	2D(T1)	2D(T3)	A10e	2D(X3)	2D(A2)b	2D(T2)-11	2D(Y3)	2D(X3)
2D(T3)	2D(T2)	2E(T1)	C10e	2D(X4)	2D(A2)c	2D(T3)-11	2D(Y4)	2D(X4)
2E(T1)	2D(T3)	2E(T2)	A11e	2E(X2)	2E(A2)a	2E(T1)-11	2E(Y2)	2E(X2)
2E(T2)	2E(T1)	2E(T3)	B11e	2E(X3)	2E(A2)b	2E(T2)-11	2E(Y3)	2E(X3)
2E(T3)	2E(T2)	2F(T1)	C11e	2E(X4)	2E(A2)c	2E(T3)-11	2E(Y4)	2E(X4)
2F(T1)	2E(T3)	2F(T2)	C12e	2F(X2)	2F(A2)a	2F(T1)-11	2F(Y2)	2F(X2)
2F(T2)	2F(T1)	2F(T3)	A12e	2F(X3)	2F(A2)b	2F(T2)-11	2F(Y3)	2F(X3)
2F(T3)	2F(T2)	2G(T1)	B12e	2F(X4)	2F(A2)c	2F(T3)-11	2F(Y4)	2F(X4)
2G(T1)	2F(T3)	2G(T2)	C13e	2G(X2)	2G(A2)a	2G(T1)-11	2G(Y2)	2G(X2)
2G(T2)	2G(T1)	2G(T3)	A13e	2G(X3)	2G(A2)b	2G(T2)-11	2G(Y3)	2G(X3)
2G(T3)	2G(T2)	2H(T1)	B13e	2G(X4)	2G(A2)c	2G(T3)-11	2G(Y4)	2G(X4)
2H(T1)	2G(T3)	2H(T2)	A14e	2H(X2)	2H(A2)a	2H(T1)-11	2H(Y2)	2H(X2)
2H(T2)	2H(T1)	2J(T1)	B14e	2H(X3)	2H(A2)b	2H(T2)-11	2H(Y3)	2H(X3)
2J(T1)	2H(T2)	2J(T2)	C15e	2J(X2)	2J(A2)a	2J(T1)-11	2J(Y2)	2J(X2)
2J(T2)	2J(T1)	2J(T3)	B15e	2J(X3)	2J(A2)b	2J(T2)-11	2J(Y3)	2J(X3)
2J(T3)	2J(T2)	2K(T1)	A15e	2J(X4)	2J(A2)c	2J(T3)-11	2J(Y4)	2J(X4)
2K(T1)	2J(T3)	2K(T2)	C16e	2K(X2)	2K(A2)a	2K(T1)-11	2K(Y2)	2K(X2)
2K(T2)	2K(T1)	2K(T3)	A16e	2K(X3)	2K(A2)b	2K(T2)-11	2K(Y3)	2K(X3)
2K(T3)	2K(T2)	2L(T1)	B16e	2K(X4)	2K(A2)c	2K(T3)-11	2K(Y4)	2K(X4)
2L(T1)	2K(T3)	2L(T2)	B17e	2L(X2)	2L(A2)a	2L(T1)-11	2L(Y2)	2L(X2)
2L(T2)	2L(T1)	2M(T1)	A17e	2L(X3)	2L(A2)b	2L(T2)-11	2L(Y3)	2L(X3)
2M(T1)	2L(T2)	2M(T2)	A18e	2M(X2)	2M(A2)a	2M(T1)-11	2M(Y2)	2M(X2)
2M(T2)	2M(T1)	2N(T1)	B18e	2M(X3)	2M(A2)b	2M(T2)-11	2M(Y3)	2M(X3)
2N(T1)	2M(T2)	2N(T2)	A19e	2N(X2)	2N(A2)a	2N(T1)-11	2N(Y2)	2N(X2)
2N(T2)	2N(T1)	2N(T3)	B19e	2N(X3)	2N(A2)b	2N(T2)-11	2N(Y3)	2N(X3)
2N(T3)	2N(T2)	2P(T1)	C19e	2N(X4)	2N(A2)c	2N(T3)-11	2N(Y4)	2N(X4)
2P(T1)	2N(T3)	2P(T2)	B20e	2P(X2)	2P(A2)a	2P(T1)-11	2P(Y2)	2P(X2)
2P(T2)	2P(T1)	2P(T3)	A20e	2P(X3)	2P(A2)b	2P(T2)-11	2P(Y3)	2P(X3)
2P(T3)	2P(T2)	2Z(TB2)a	2Z3C20e	2P(X4)	2P(A2)c	2P(T3)-11	2P(Y4)	2P(X4)

NOTES

XIII DUPLEX THREE WIRE GROUND RECEPTACLES
 XII JUNCTION BOX AT TOP AND BOTTOM OF POWER MODULE
 XI MAY BE CONNECTED TO ANY TERMINAL IN ORDER TO ADJUST FILAMENT VOLTAGES
 X SHIELD CONNECTED TO ADJACENT MOUNTING BOLT

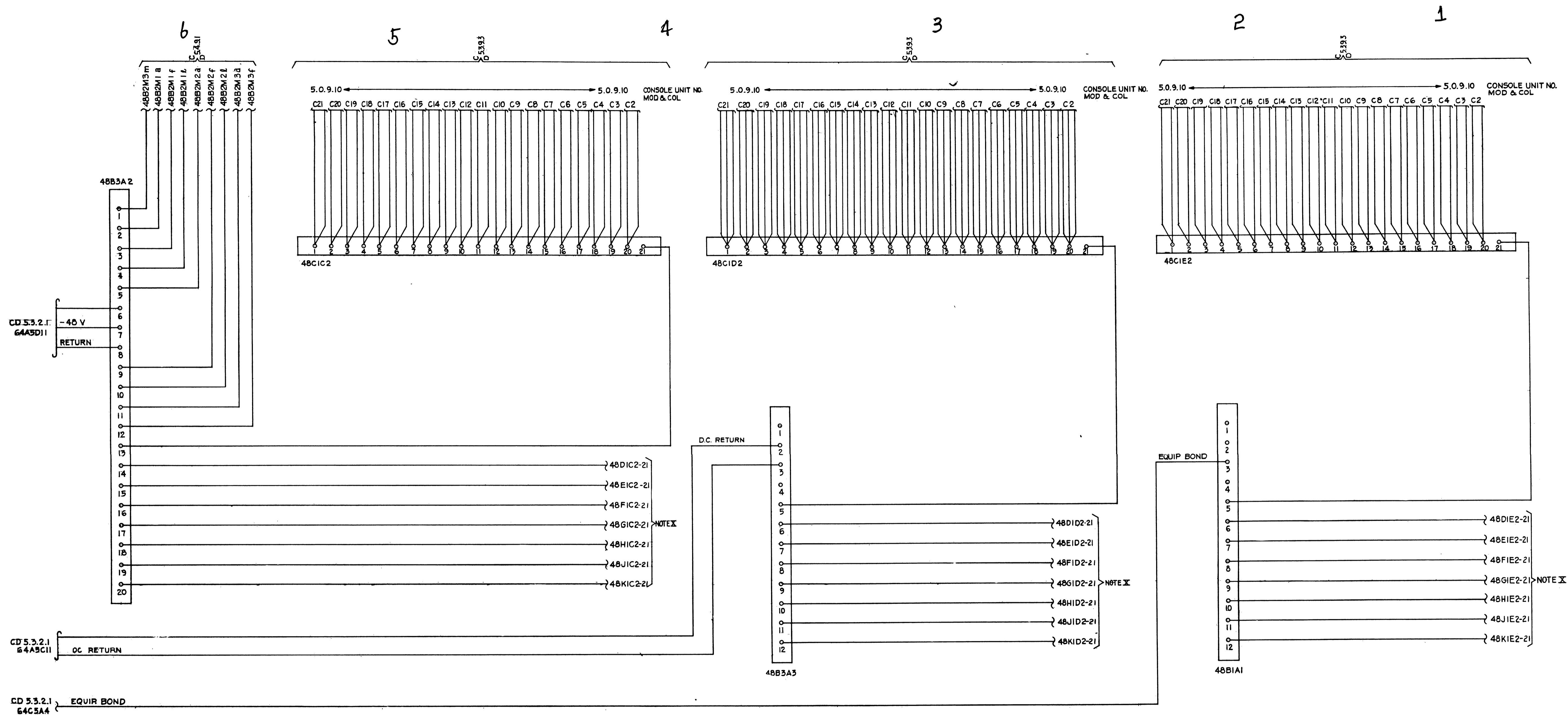
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3215016

(SHEET 1)



XIV BUS BAR IS USED WITH -48V. CIRCUIT ONLY. DOTTED
 CIRCUIT FOR USE WITH ALL OTHER D.C. VOLTAGES.
 XIII MOD. C THRU K ARE WIRED EXACTLY THE SAME. REPLACE
 Δ WITH PROPER MOD. LETTER.
 XII THIS IS THE -150V. REF. VOLTAGE.
 XI SCHEMATIC FOR +600V BREAKER.
 X FOR -48V CIRCUIT FEEDPOINT BECOMES 22.

NOTES:



X ALL POINTS FOR MODULES D-K ARE SIMILAR TO THOSE SHOWN FOR 48CIC2 FOR -48V RETURNS, 48CID2 FOR DC RETURNS, 48CIE2 FOR EQUIP BOND.

NOTES:

E

D

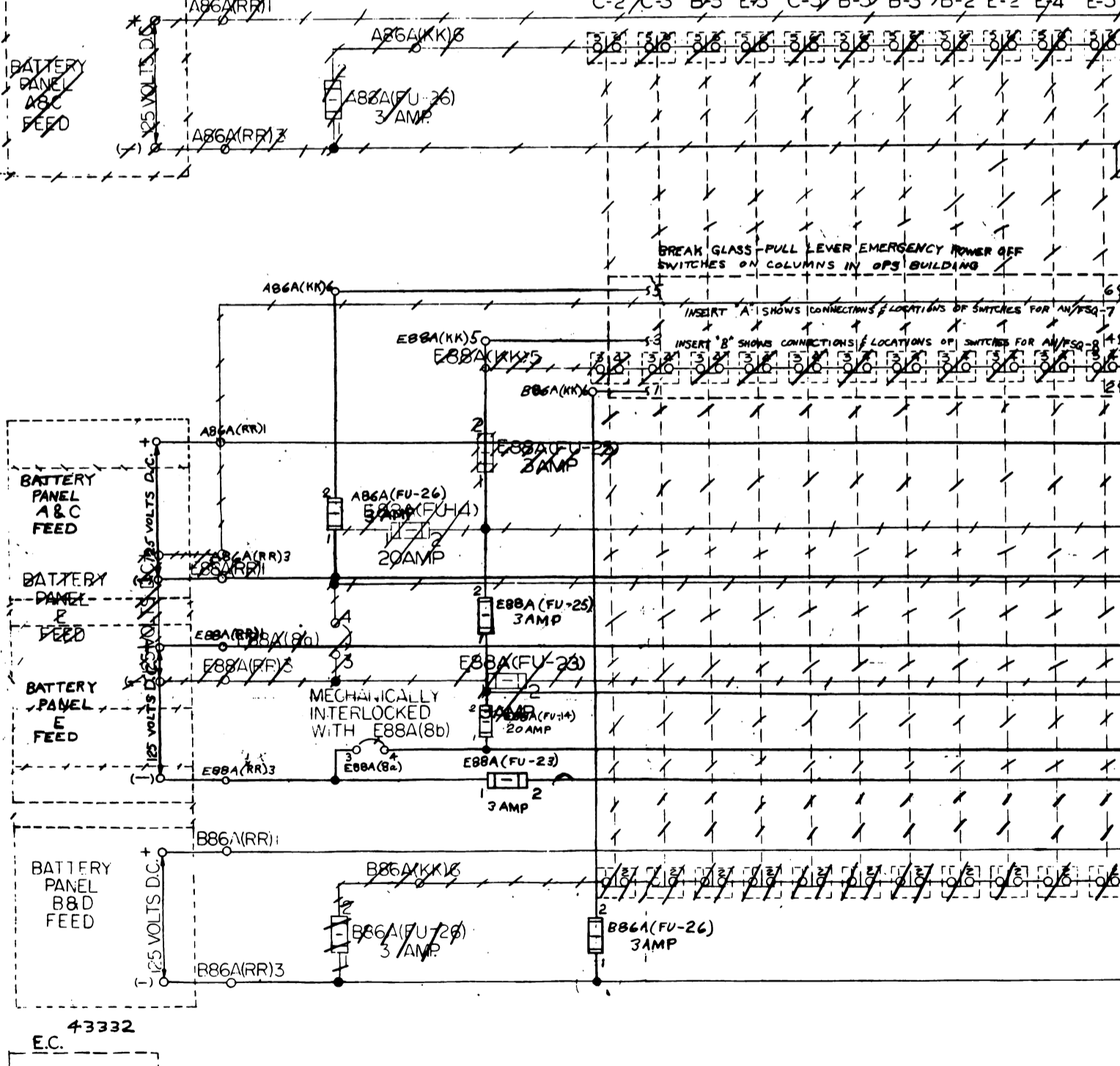
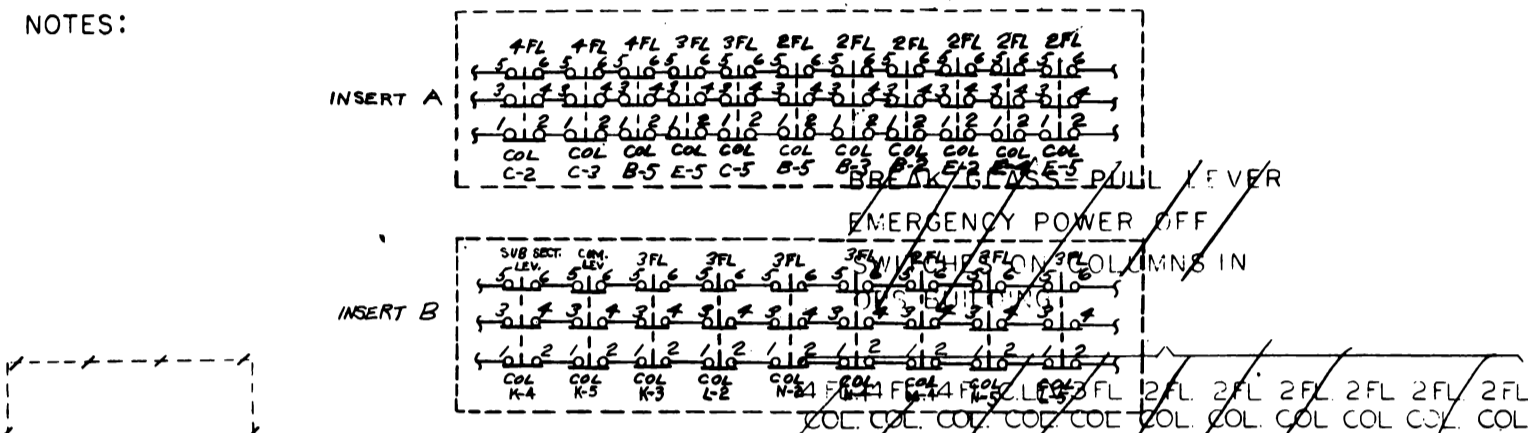
C

B

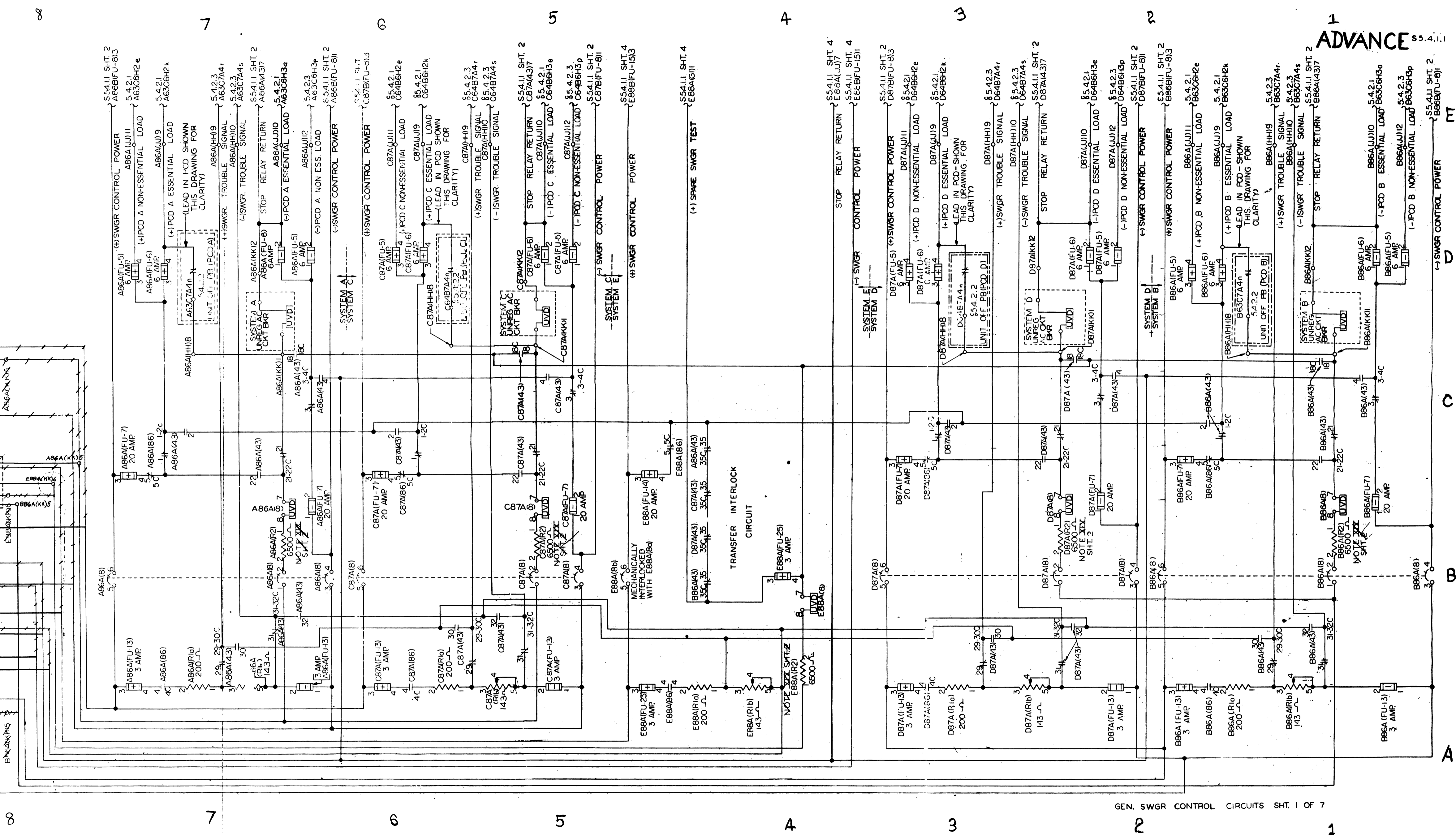
A

11851E
 54774
 11851E

- NOTES:**
- XIV - CONTROL POWER FEED & EMERGENCY OFF CIRCUITS. CONTROL SYSTEMS (A, B, C, D) BREAKER TRIP CIRCUITS. CONTROL SYSTEM (E) - BREAKER TRIP CIRCUITS. CONTROL SYSTEM (F) - INDICATION & BREAKER TRIP CIRCUITS.
 - XIII - DEVICES SHOWN IN DOTTED BLOCKS ARE TERMINALS SHOWN OUTSIDE OF DOTTED LEADS FROM REMOTE UNITS ENTER REMOTE FROM SWITCHGEAR BLOCKS ARE POINTS WHERE SWITCHGEAR.
 - XII - FIRST LETTER OF DEVICE DESIGNATION AND IS FOLLOWED BY UNIT NO. (66, 87 IN THAT ORDER, NUMBERS OR LETTER DESIGNATIONS, LETTER COMBINATIONS IN ALL CASES NUMBER FOLLOWING INDICATES SYSTEM (A, B, C, D OR E) OR (88) AND MODULE LETTER (A, B, C OR D) NUMBER COMBINATIONS IN PARENTHESIS ARE SWGR DEVICE DESIGNATIONS. PARENTHESIS INDICATE TERMINAL BOARDS AND PARENTHESIS IS THE TERMINAL NUMBER.
 - XI - RELAYS ARE SHOWN DE-ENERGIZED WITH THE SWITCH IN NORMAL POSITION. AND DEVICE 43 CONTACTS ARE SHOWN
 - X - POINT-TO-POINT WIRING SEE DWG. 310875 FOR SYSTEM C, 310876 FOR SYSTEM D, 310877 FOR SYSTEM E. FOR INTERNAL DEVICE DIAGRAMS AND DEVICE FUNCTION LIST SEE DWG. 3108725.

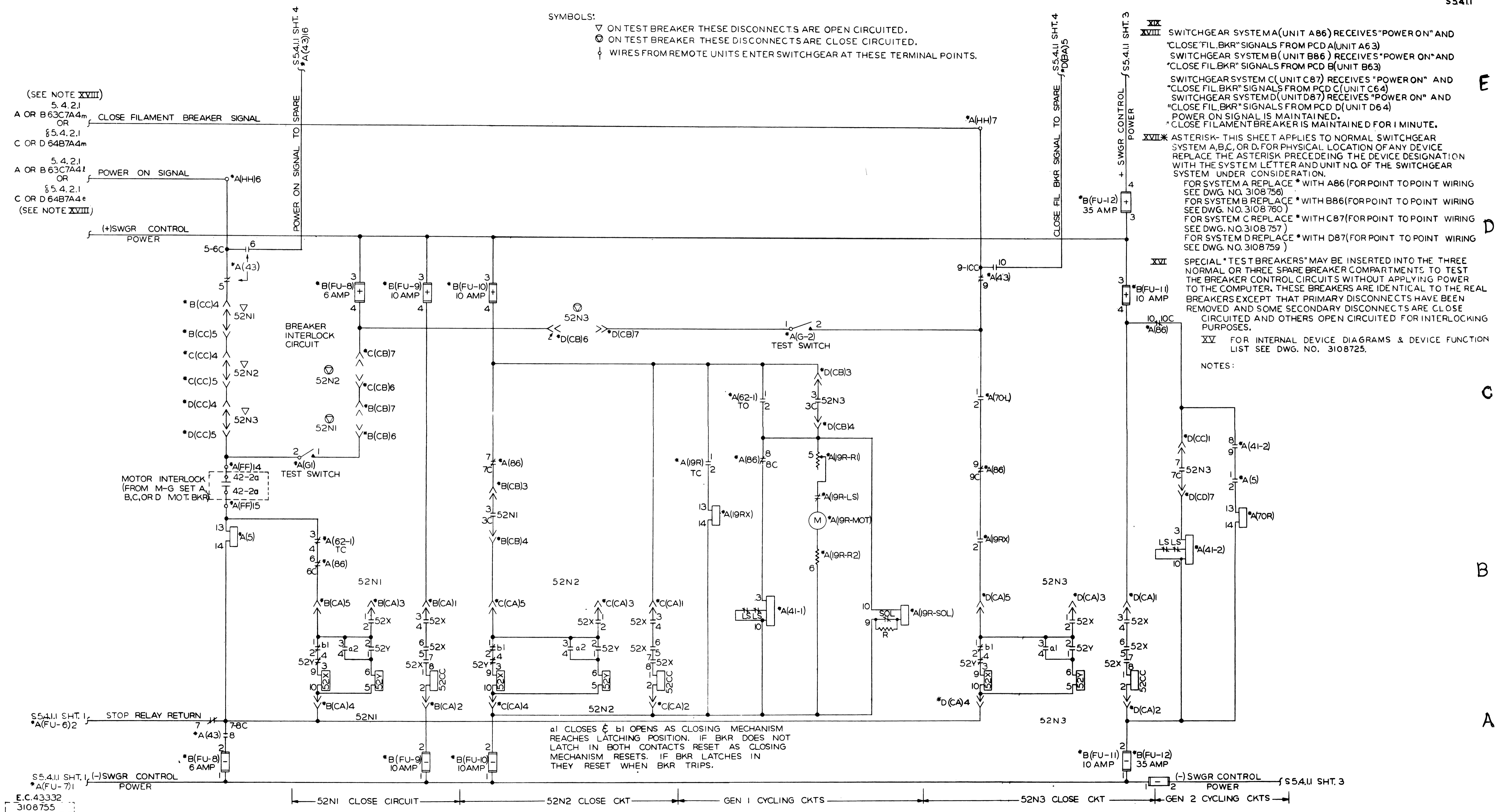


43332
3108755



GEN. SWGR CONTROL CIRCUITS SHT. 1 OF 7

SYMBOLS:
 ▽ ON TEST BREAKER THESE DISCONNECTS ARE OPEN CIRCUITED.
 ⊙ ON TEST BREAKER THESE DISCONNECTS ARE CLOSE CIRCUITED.
 † WIRES FROM REMOTE UNITS ENTER SWITCHGEAR AT THESE TERMINAL POINTS.



(SEE NOTE XVIII)
 5.4.2.1
 A OR B 63C7A4m
 OR
 §5.4.2.1
 C OR D 64B7A4m
 5.4.2.1
 A OR B 63C7A4m
 OR
 §5.4.2.1
 C OR D 64B7A4e
 (SEE NOTE XVIII)

XIX SWITCHGEAR SYSTEM A (UNIT A86) RECEIVES "POWER ON" AND "CLOSE FIL. BKR" SIGNALS FROM PCD A (UNIT A63)
 XXVIII SWITCHGEAR SYSTEM B (UNIT B86) RECEIVES "POWER ON" AND "CLOSE FIL. BKR" SIGNALS FROM PCD B (UNIT B63)
 SWITCHGEAR SYSTEM C (UNIT C87) RECEIVES "POWER ON" AND "CLOSE FIL. BKR" SIGNALS FROM PCD C (UNIT C64)
 SWITCHGEAR SYSTEM D (UNIT D87) RECEIVES "POWER ON" AND "CLOSE FIL. BKR" SIGNALS FROM PCD D (UNIT D64)
 POWER ON SIGNAL IS MAINTAINED.
 * CLOSE FILAMENT BREAKER IS MAINTAINED FOR 1 MINUTE.

XVII* ASTERISK- THIS SHEET APPLIES TO NORMAL SWITCHGEAR SYSTEM A, B, C, OR D. FOR PHYSICAL LOCATION OF ANY DEVICE REPLACE THE ASTERISK PRECEDING THE DEVICE DESIGNATION WITH THE SYSTEM LETTER AND UNIT NO. OF THE SWITCHGEAR SYSTEM UNDER CONSIDERATION.
 FOR SYSTEM A REPLACE * WITH A86 (FOR POINT TO POINT WIRING SEE DWG. NO. 3108756)
 FOR SYSTEM B REPLACE * WITH B86 (FOR POINT TO POINT WIRING SEE DWG. NO. 3108760)
 FOR SYSTEM C REPLACE * WITH C87 (FOR POINT TO POINT WIRING SEE DWG. NO. 3108757)
 FOR SYSTEM D REPLACE * WITH D87 (FOR POINT TO POINT WIRING SEE DWG. NO. 3108759)

XVI SPECIAL "TEST BREAKERS" MAY BE INSERTED INTO THE THREE NORMAL OR THREE SPARE BREAKER COMPARTMENTS TO TEST THE BREAKER CONTROL CIRCUITS WITHOUT APPLYING POWER TO THE COMPUTER. THESE BREAKERS ARE IDENTICAL TO THE REAL BREAKERS EXCEPT THAT PRIMARY DISCONNECTS HAVE BEEN REMOVED AND SOME SECONDARY DISCONNECTS ARE CLOSE CIRCUITED AND OTHERS OPEN CIRCUITED FOR INTERLOCKING PURPOSES.

XV FOR INTERNAL DEVICE DIAGRAMS & DEVICE FUNCTION LIST SEE DWG. NO. 3108725.

NOTES:

a1 CLOSES & b1 OPENS AS CLOSING MECHANISM REACHES LATCHING POSITION. IF BKR DOES NOT LATCH IN BOTH CONTACTS RESET AS CLOSING MECHANISM RESETS. IF BKR LATCHES IN THEY RESET WHEN BKR TRIPS.

E.C.43332
 3108755

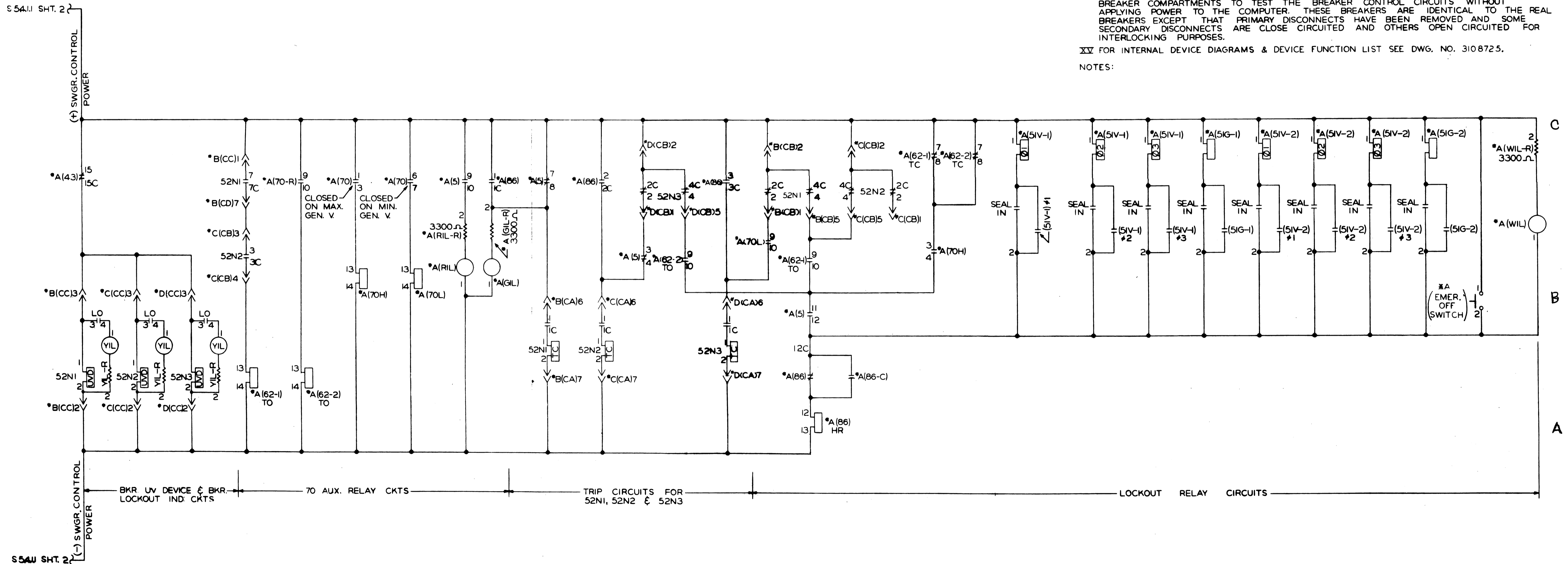
XVII *ASTERISK- THIS SHEET APPLIES TO NORMAL SWITCHGEAR SYSTEM A, B, C, OR D. FOR PHYSICAL LOCATION OF ANY DEVICE REPLACE THE ASTERISK PRECEDING THE DEVICE DESIGNATION WITH THE SYSTEM LETTER AND UNIT NO. OF THE SWITCHGEAR SYSTEM BEING ANALYZED.

FOR SYSTEM A REPLACE * WITH A86 (FOR POINT-TO-POINT WIRING SEE DWG. NO. 3108756)
 FOR SYSTEM B REPLACE * WITH B86 (FOR POINT-TO-POINT WIRING SEE DWG. NO. 3108760)
 FOR SYSTEM C REPLACE * WITH C87 (FOR POINT-TO-POINT WIRING SEE DWG. NO. 3108757)
 FOR SYSTEM D REPLACE * WITH D87 (FOR POINT-TO-POINT WIRING SEE DWG. NO. 3108759)

XVI SPECIAL *TEST BREAKERS* MAY BE INSERTED INTO THE THREE NORMAL OR THREE SPARE BREAKER COMPARTMENTS TO TEST THE BREAKER CONTROL CIRCUITS WITHOUT APPLYING POWER TO THE COMPUTER. THESE BREAKERS ARE IDENTICAL TO THE REAL BREAKERS EXCEPT THAT PRIMARY DISCONNECTS HAVE BEEN REMOVED AND SOME SECONDARY DISCONNECTS ARE CLOSE CIRCUITED AND OTHERS OPEN CIRCUITED FOR INTERLOCKING PURPOSES.

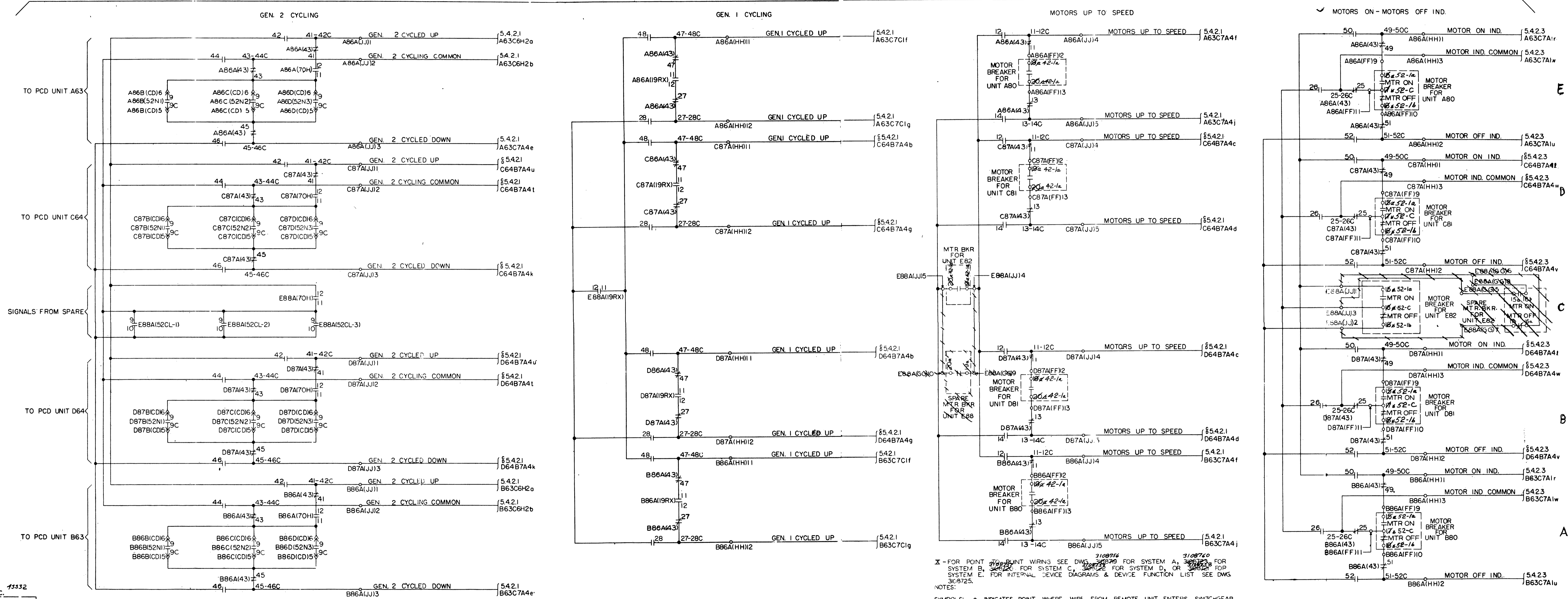
XV FOR INTERNAL DEVICE DIAGRAMS & DEVICE FUNCTION LIST SEE DWG. NO. 3108725.

NOTES:



S54U SHT. 2
 E.C. 43332
 3108755

SIGNALS TO PCD UNITS



X - FOR POINT TO POINT WIRING SEE DWG. 3108756 FOR SYSTEM A, 3108757 FOR SYSTEM B, 3108758 FOR SYSTEM C, 3108759 FOR SYSTEM D, OR 3108760 FOR SYSTEM E. FOR INTERNAL DEVICE DIAGRAMS & DEVICE FUNCTION LIST SEE DWG. 3108725.

NOTES:

SYMBOLS: —○— INDICATES POINT WHERE WIRE FROM REMOTE UNIT ENTERS SWITCHGEAR.

13332
E.C.
3/08755

8

7

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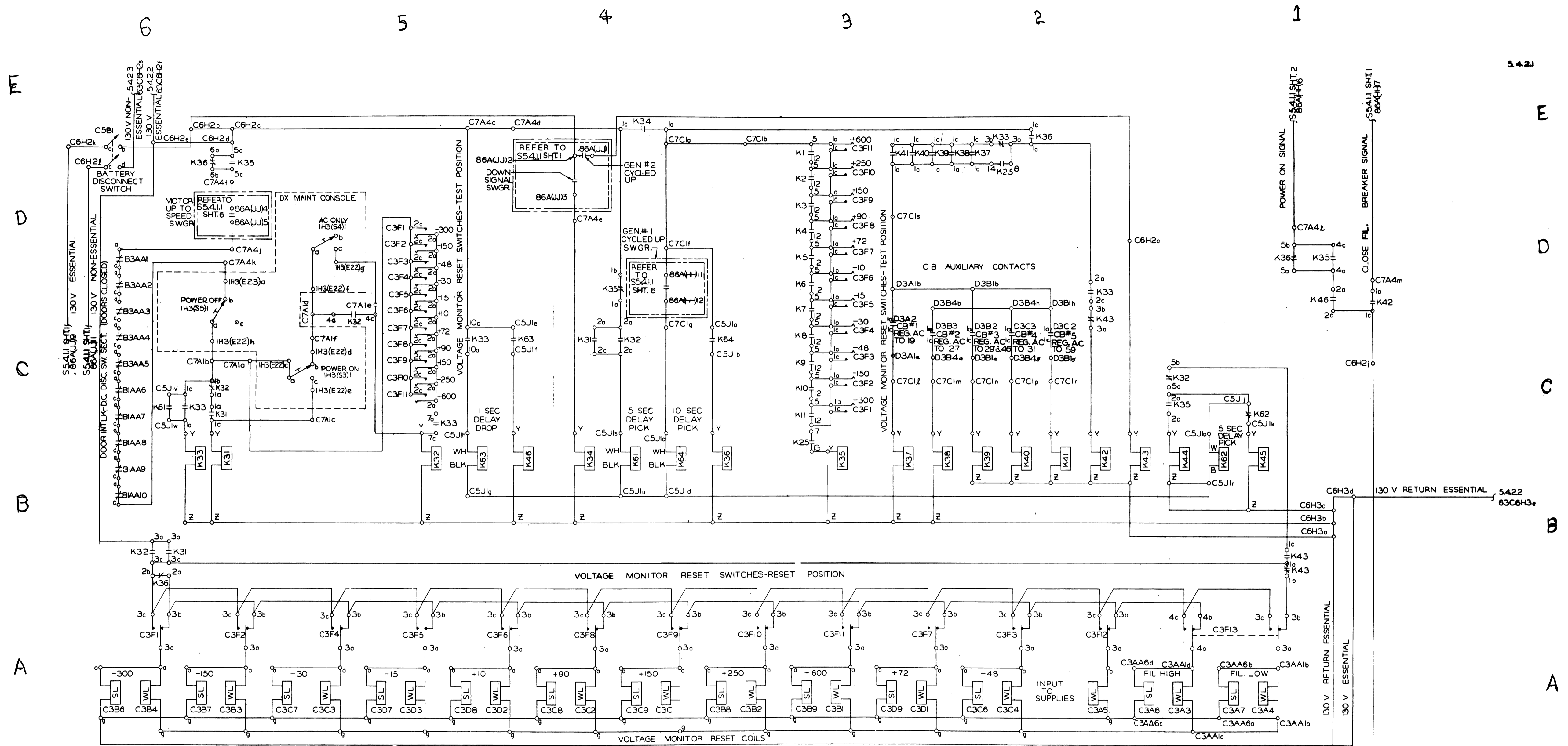
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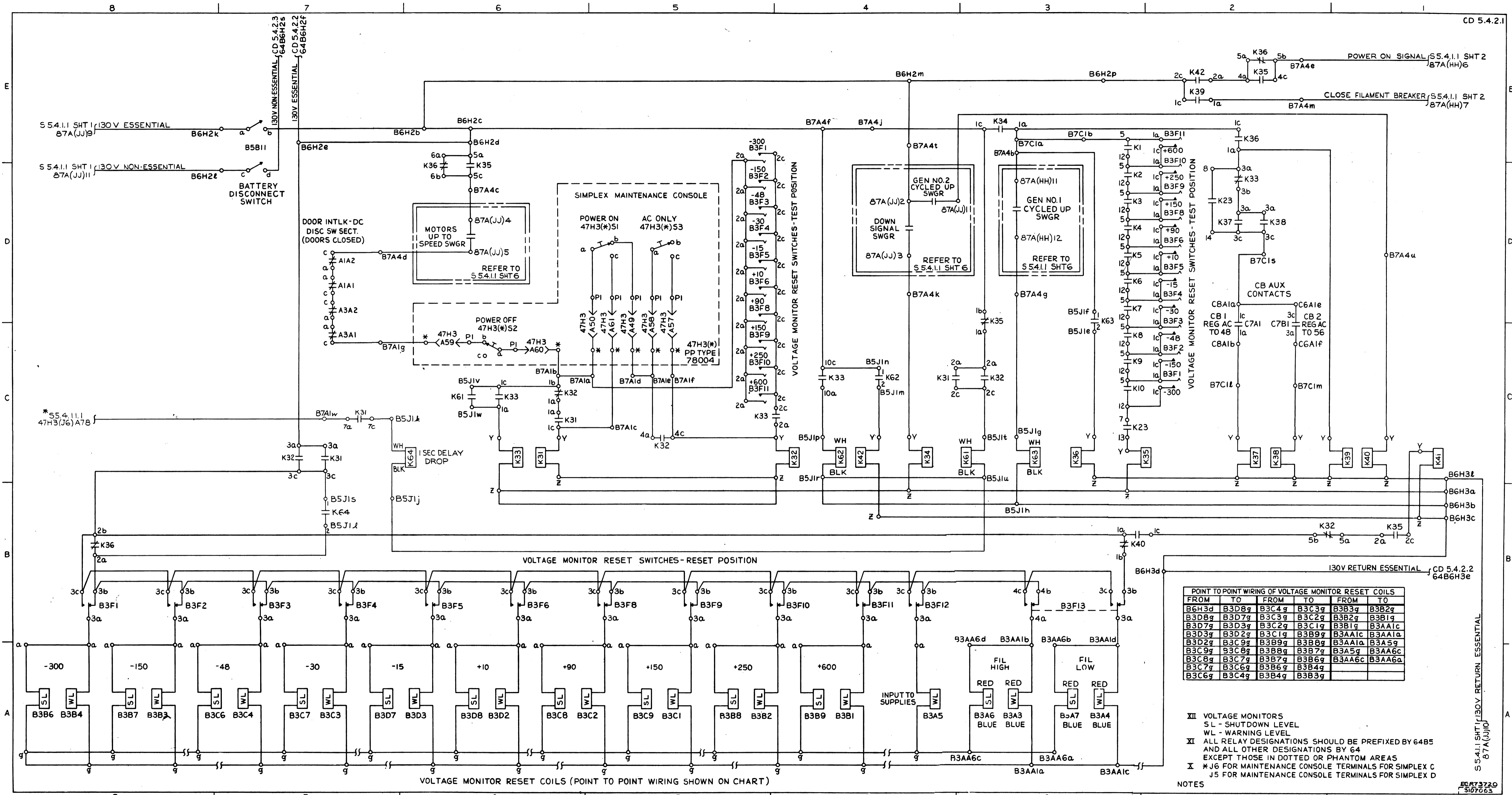
GEN. SWGR CONTROL CIRCUIT. SHT. 6 OF 7



E.C. 37624
3107004

II VOLTAGE MONITORS
S.L.-SHUTDOWN LEVEL
W.L.-WARNING LEVEL
X ALL RELAY DESIGNATIONS SHOULD BE
PREFIXED BY 63C AND ALL OTHER
DESIGNATIONS BY 63 EXCEPT THOSE
IN DOTTED OR PHANTOM AREAS
NOTES:

NORMAL ON AND OFF, UNIT 63

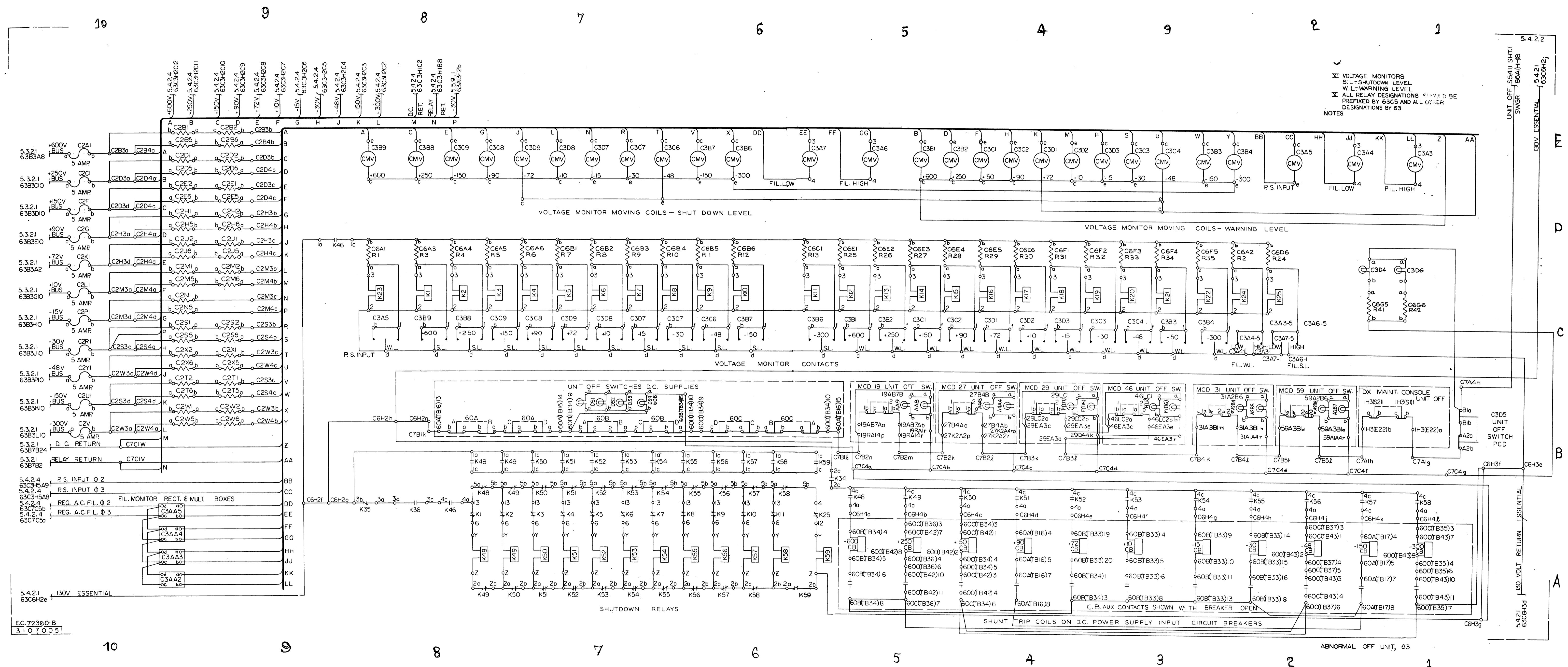


POINT TO POINT WIRING OF VOLTAGE MONITOR RESET COILS

FROM	TO	FROM	TO	FROM	TO
B6H3d	B3D8g	B3C4g	B3C3g	B3B3g	B3B2g
B3D8g	B3D7g	B3C3g	B3C2g	B3B2g	B3B1g
B3D7g	B3D3g	B3C2g	B3C1g	B3B1g	B3AA1c
B3D3g	B3D2g	B3C1g	B3B9g	B3AA1c	B3AA1a
B3D2g	B3C9g	B3B9g	B3B8g	B3AA1a	B3A5g
B3C9g	B3C8g	B3B8g	B3B7g	B3A5g	B3AA6c
B3C8g	B3C7g	B3B7g	B3B6g	B3AA6c	B3AA6a
B3C7g	B3C6g	B3B6g	B3B4g		
B3C6g	B3C4g	B3B4g	B3B3g		

- NOTES
- III VOLTAGE MONITORS
SL - SHUTDOWN LEVEL
WL - WARNING LEVEL
 - II ALL RELAY DESIGNATIONS SHOULD BE PREFIXED BY 64B5 AND ALL OTHER DESIGNATIONS BY 64 EXCEPT THOSE IN DOTTED OR PHANTOM AREAS
 - I *J6 FOR MAINTENANCE CONSOLE TERMINALS FOR SIMPLEX C
J5 FOR MAINTENANCE CONSOLE TERMINALS FOR SIMPLEX D

REF 3320
3167663

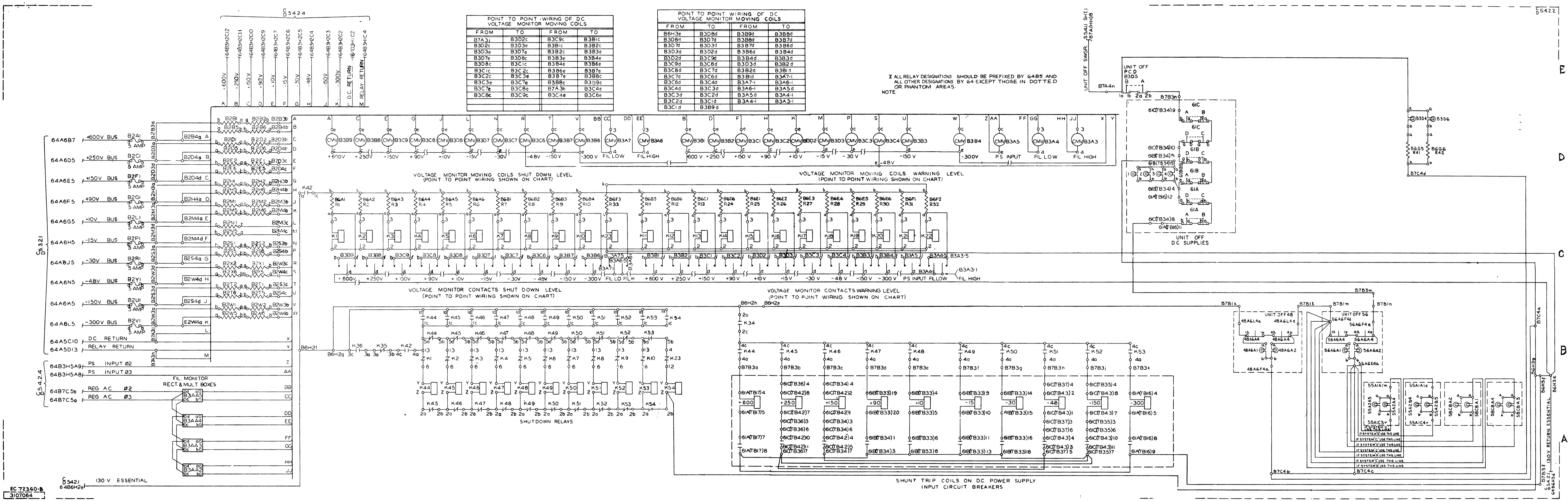


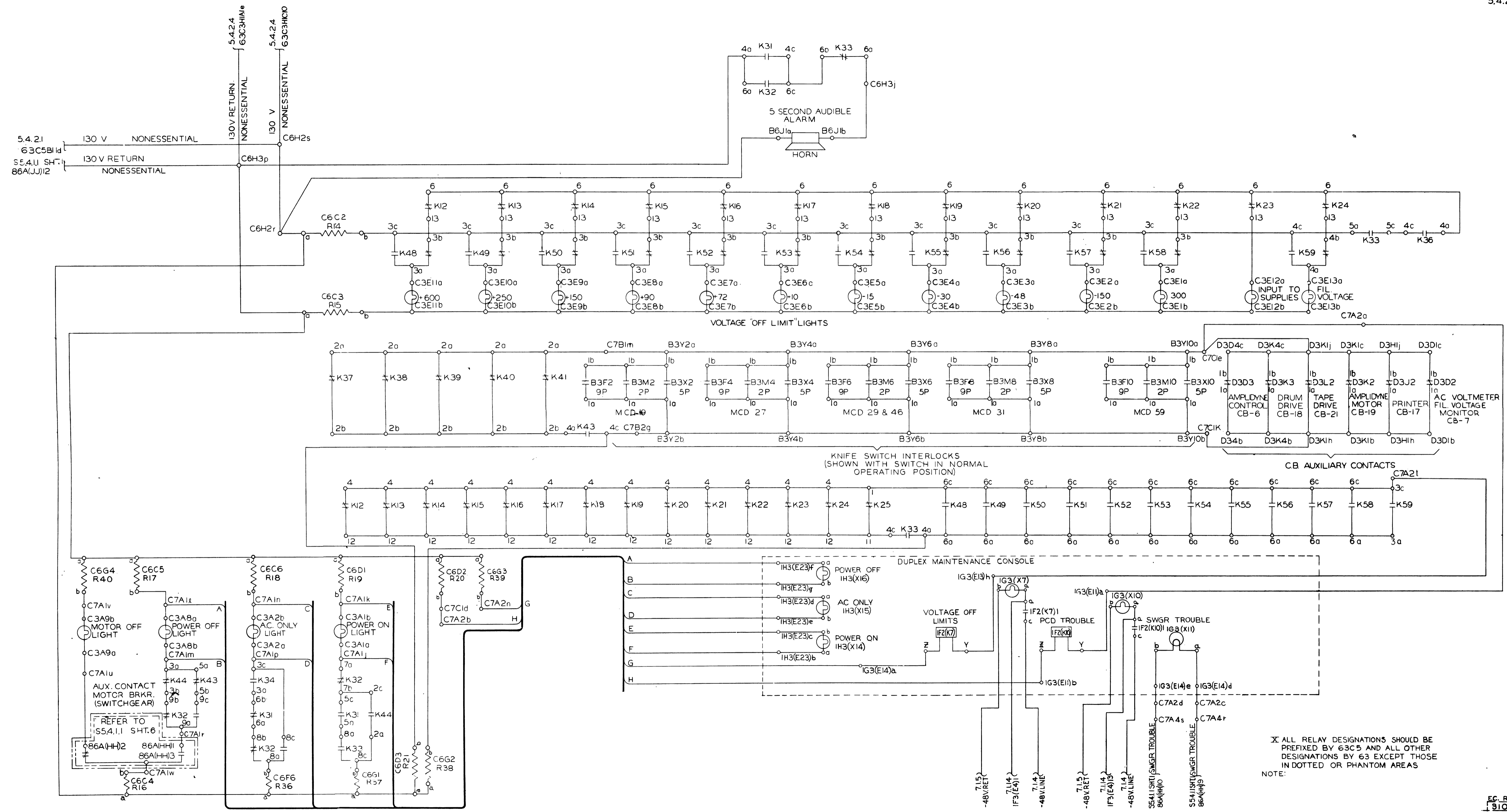
XI VOLTAGE MONITORS
 S.L.-SHUTDOWN LEVEL
 W.L.-WARNING LEVEL
 X ALL RELAY DESIGNATIONS SHOULD BE
 PREFIXED BY 63C5 AND ALL OTHER
 DESIGNATIONS BY 63
 NOTES

EC.72360-B
 31070051

5.4.2.2
 UNIT OFF (5541) SHT.1
 SWGR (66A) (H)B
 130V ESSENTIAL
 5.4.2.1
 63C6H34
 130V RETURN ESSENTIAL
 63C6H33

ABNORMAL OFF UNIT, 63





NOTE: ALL RELAY DESIGNATIONS SHOULD BE PREFIXED BY 63C5 AND ALL OTHER DESIGNATIONS BY 63 EXCEPT THOSE IN DOTTED OR PHANTOM AREAS

EC-R-73470
1107006

INDICATION, UNIT 63

E

D

C

B

A

7

6

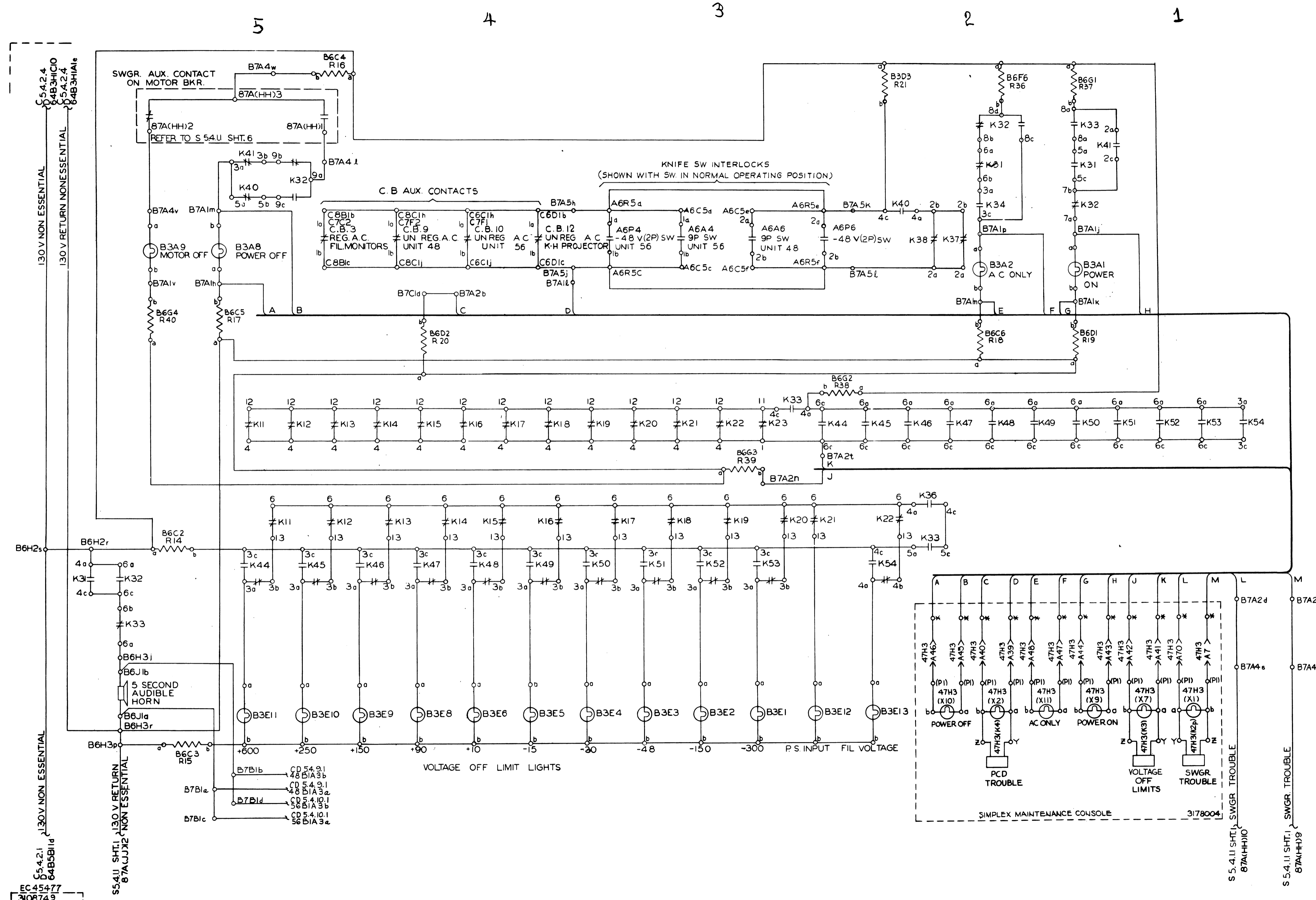
5

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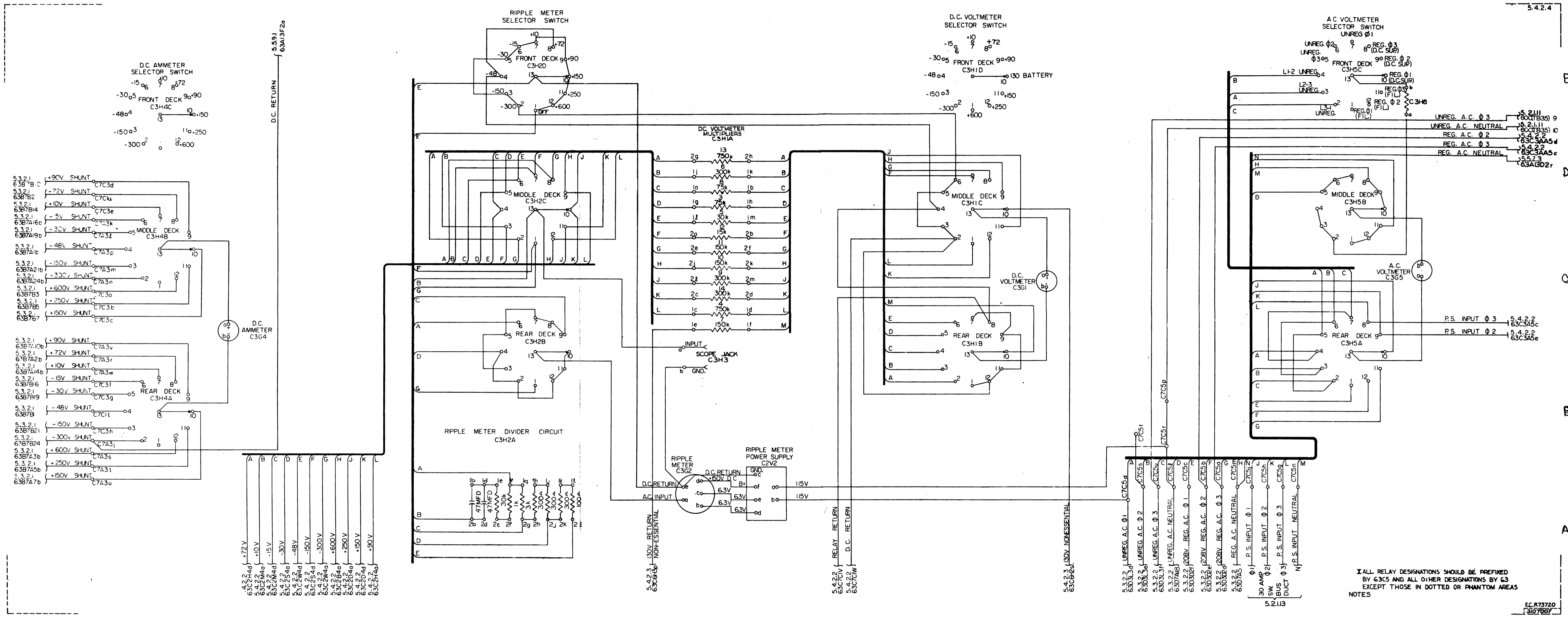


5.4.2.3

EC 45477
3108749

NOTES:
 II ALL RELAY DESIGNATIONS SHOULD BE PREFIXED BY 64B5 AND ALL OTHER DESIGNATIONS BY 64 EXCEPT THOSE IN DOTTED OR PHANTOM AREAS
 I * J6 FOR MAINTENANCE CONSOLE TERMINALS FOR SIMPLEX C
 JS FOR MAINTENANCE CONSOLE TERMINALS FOR SIMPLEX D

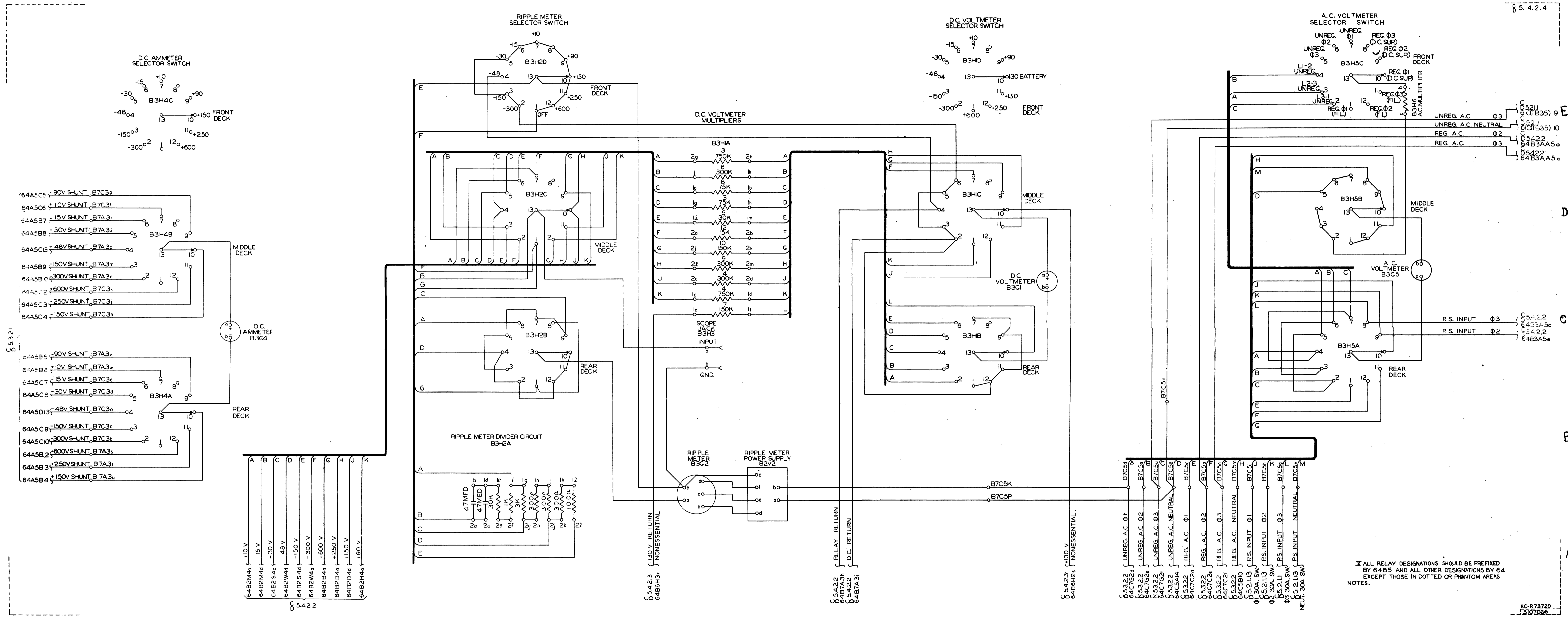
INDICATION, UNIT 64



ALL RELAY DESIGNATIONS SHOULD BE PREFIXED BY G3C5 AND ALL OTHER DESIGNATIONS BY G3 EXCEPT THOSE IN DOTTED OR PHANTOM AREAS

METERING UNIT 63

EC-R73720
3107687



5.4.2.4

ALL RELAY DESIGNATIONS SHOULD BE PREFIXED BY 64B5 AND ALL OTHER DESIGNATIONS BY 64 EXCEPT THOSE IN DOTTED OR PHANTOM AREAS NOTES.

EC-R73720
3107066

METERING, UNIT 64

8

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6

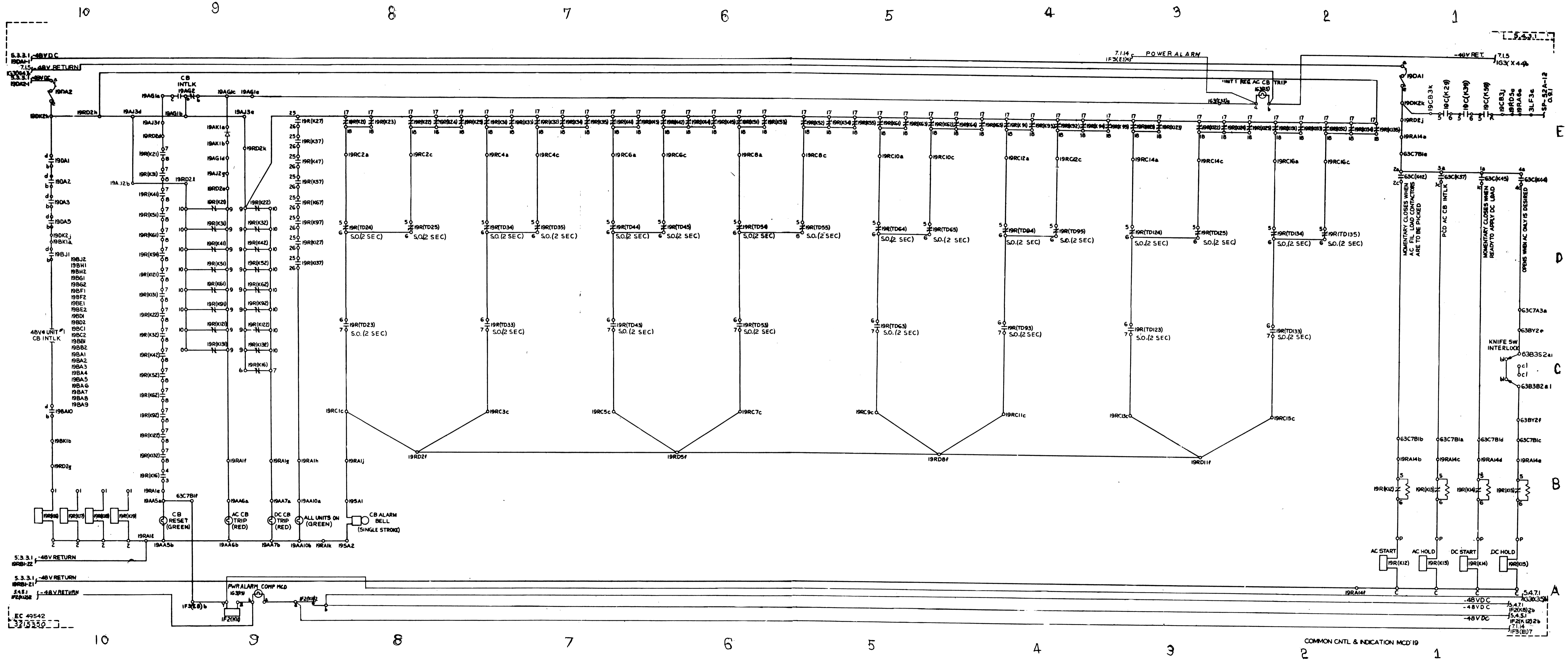
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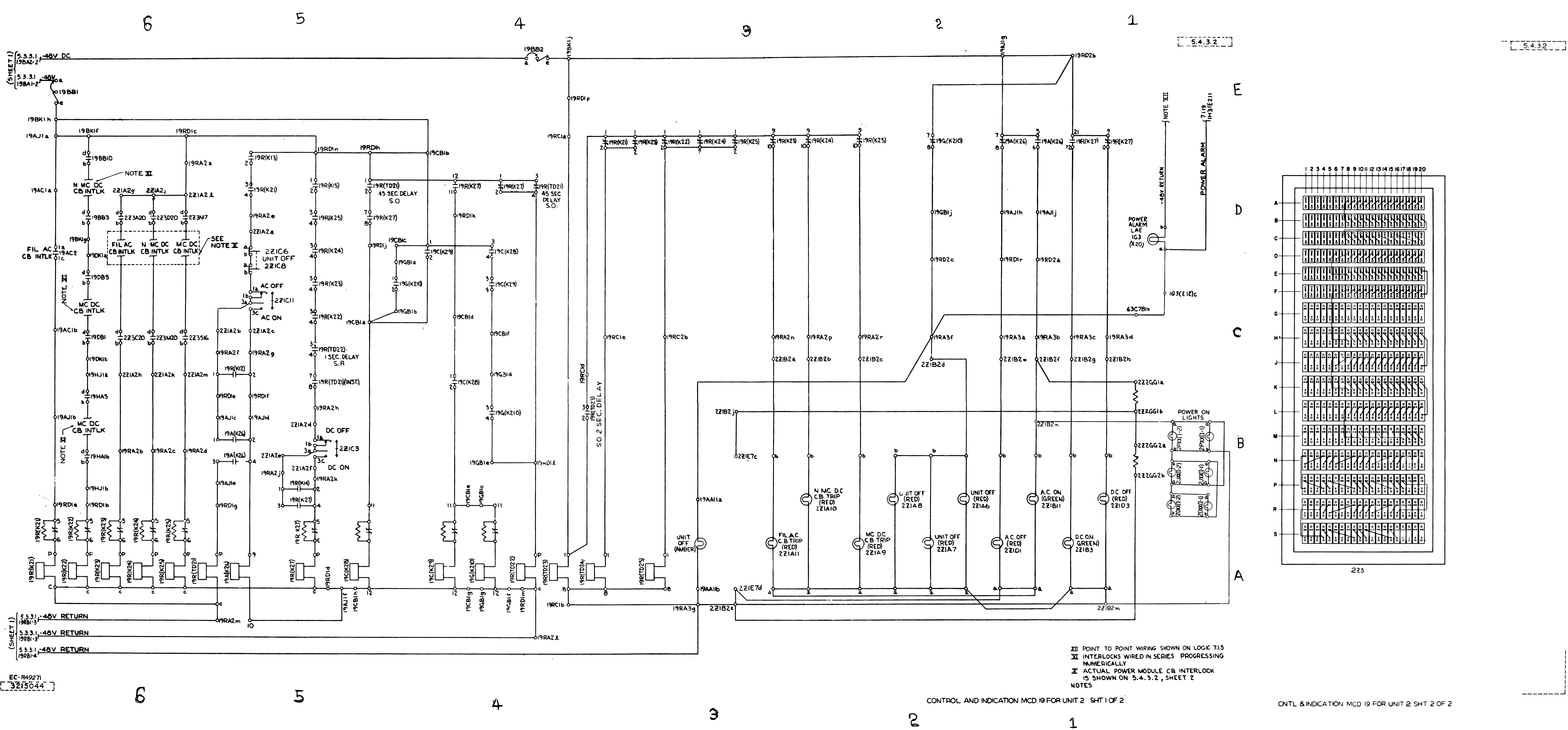
4

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2

1





5.4.3.2

5.4.3.2

(SHEET 1)
5.3.3.1 -48V DC
19BA2-2

(SHEET 1)
5.3.3.1 -48V
19BA1-2

(SHEET 1)
5.3.3.1 -48V RETURN
19RB1-3

(SHEET 1)
5.3.3.1 -48V RETURN
19RB1-3

(SHEET 1)
5.3.3.1 -48V RETURN
19RB1-4

XII POINT TO POINT WIRING SHOWN ON LOGIC T1.5
 XI INTERLOCKS WIRED IN SERIES PROGRESSING NUMERICALLY
 X ACTUAL POWER MODULE CB INTERLOCK IS SHOWN ON 5.4.3.2, SHEET 2
 NOTES

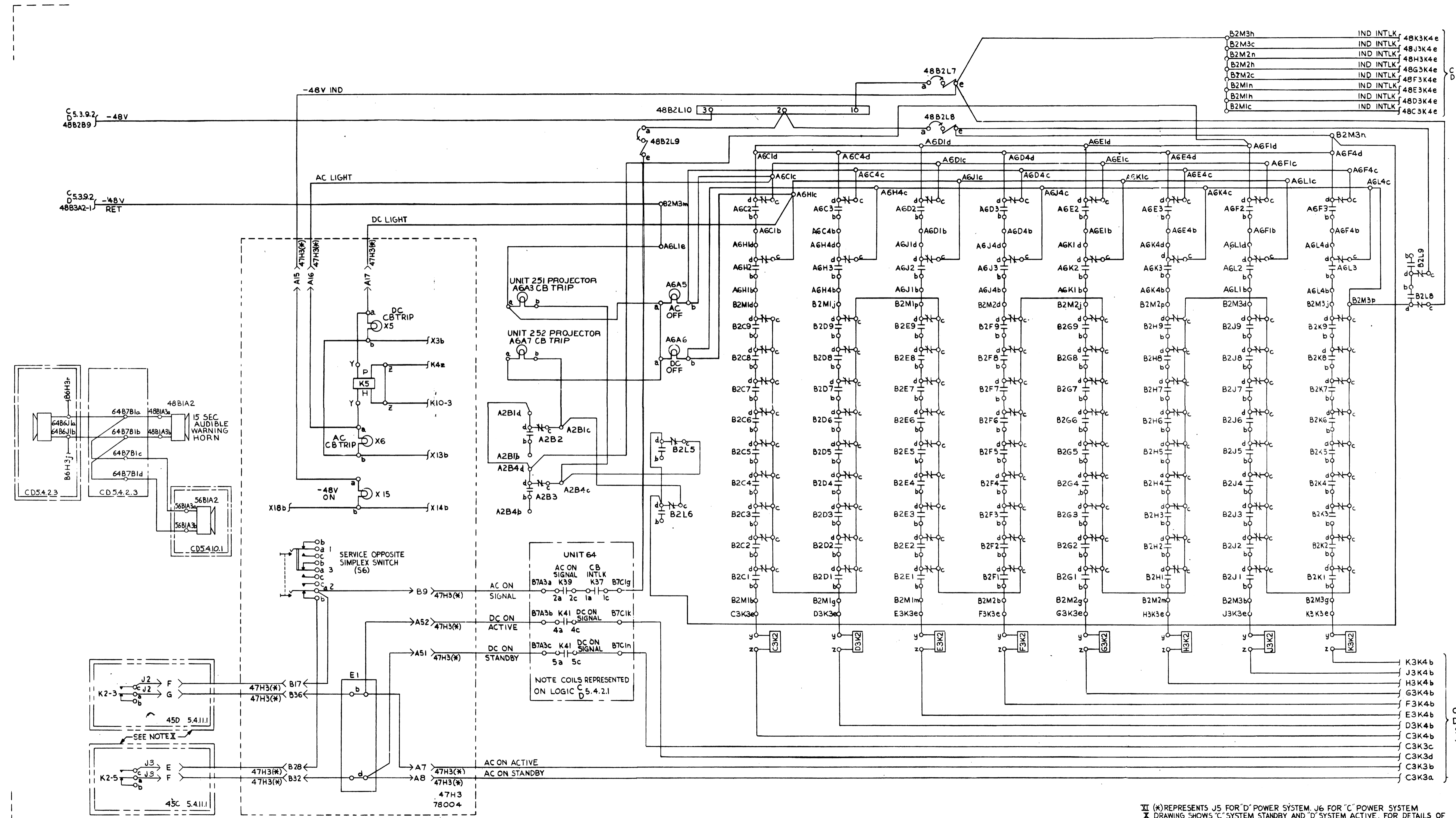
CONTROL AND INDICATION MCD 19 FOR UNIT 2 SHT 1 OF 2

CNTRL & INDICATION MCD 19 FOR UNIT 2 SHT 2 OF 2

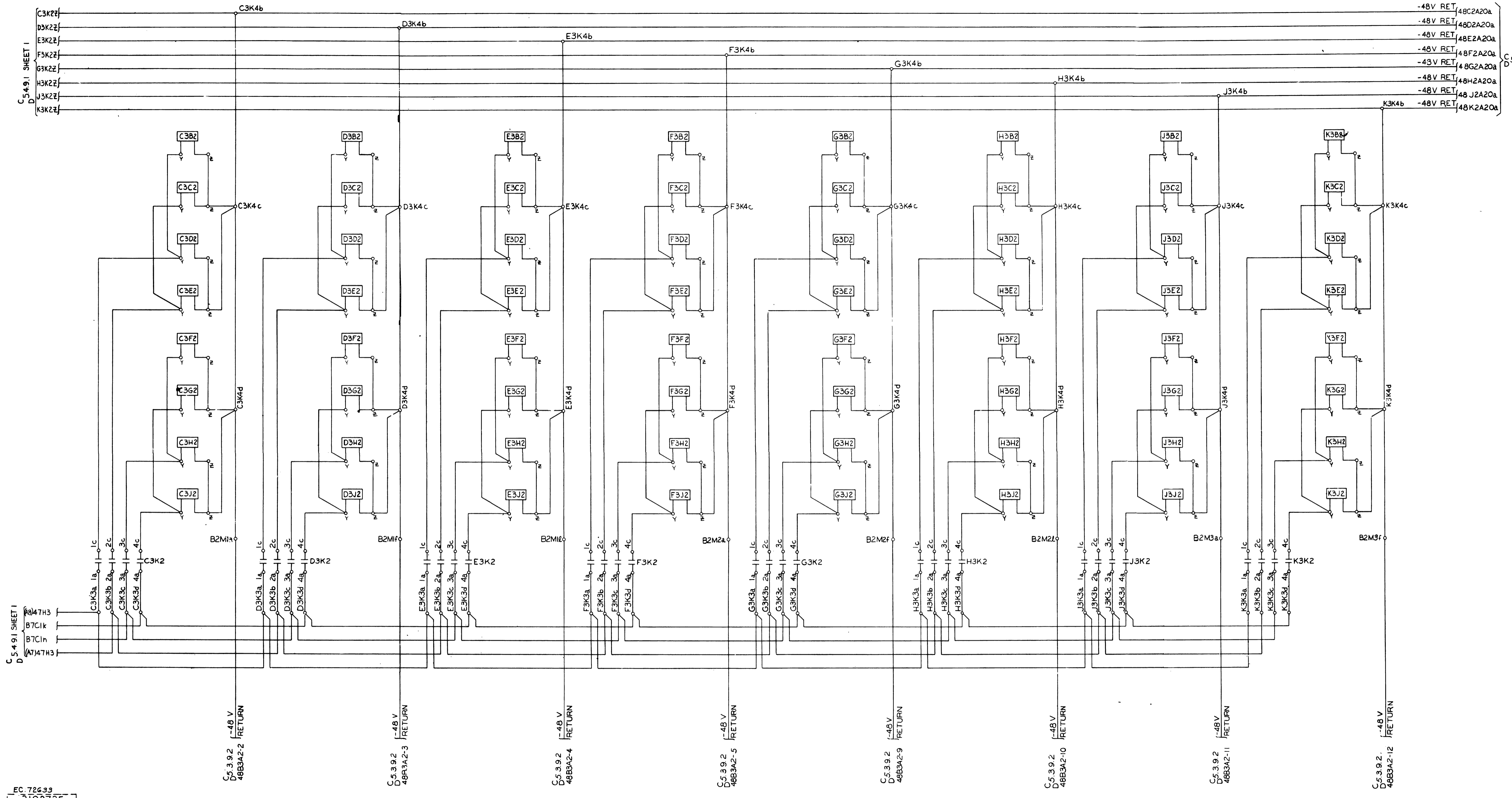
C 5.4.9.2

C 5.4.9.1
D SHEET 2

II (X) REPRESENTS J5 FOR 'D' POWER SYSTEM, J6 FOR 'C' POWER SYSTEM
X DRAWING SHOWS 'C' SYSTEM STANDBY AND 'D' SYSTEM ACTIVE. FOR DETAILS OF COMPLETE 'C' AND 'D' POWER CONTROL, REFERENCE LOGIC NO. 5.4.11.1
NOTES



EC 72633
3108735



C5.4.9.1 SHEET 1
D

EC 72633
3108735

6

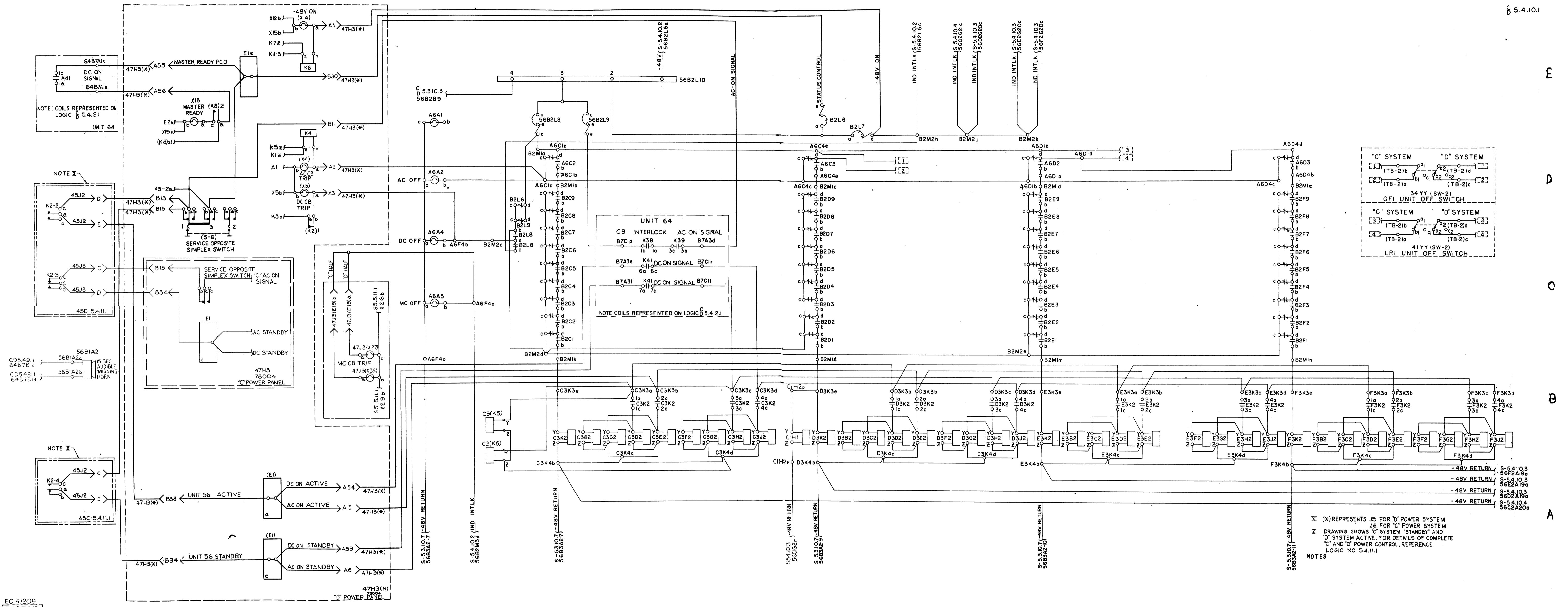
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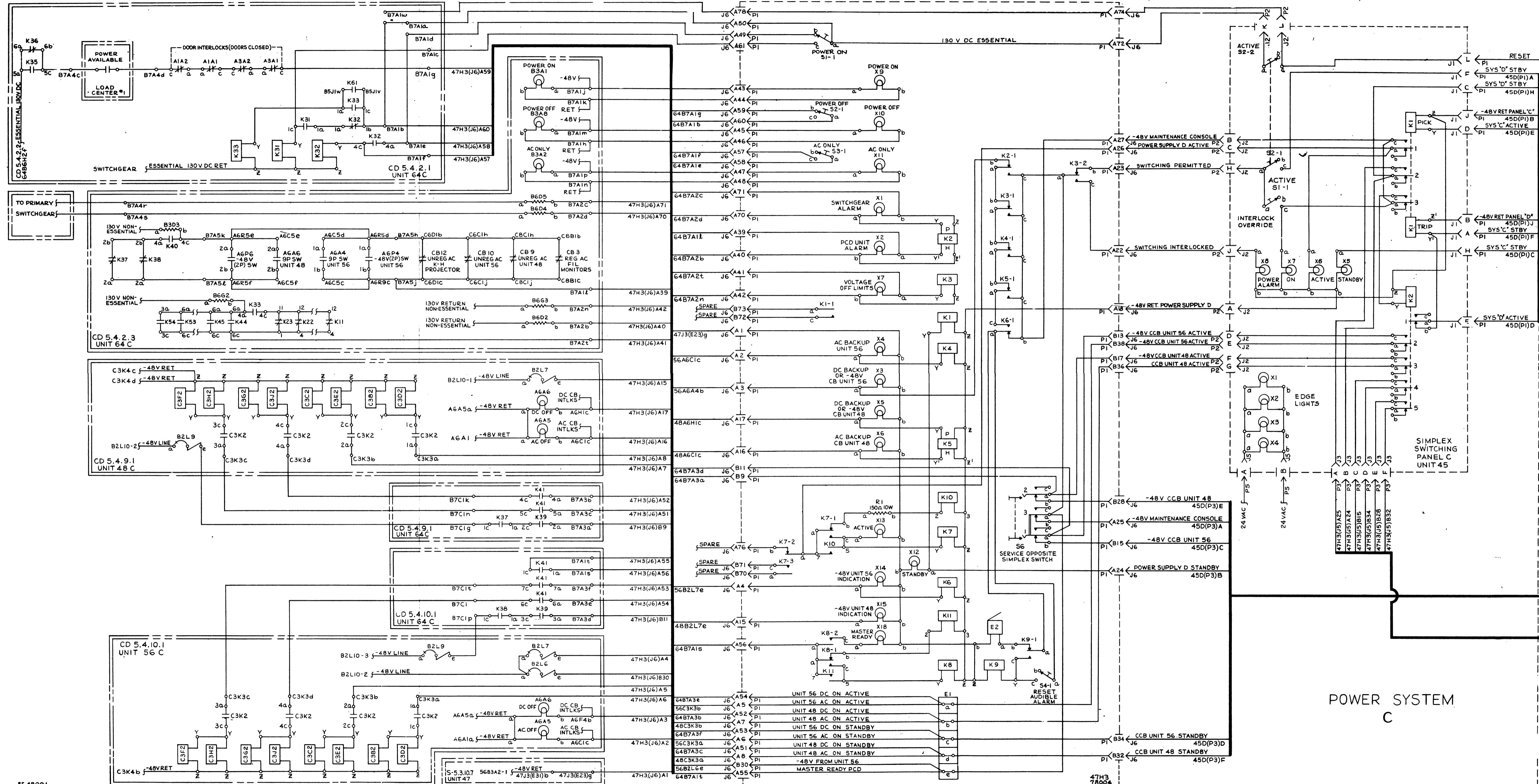
1



II (*) REPRESENTS J5 FOR "D" POWER SYSTEM
 J6 FOR "C" POWER SYSTEM
 I DRAWING SHOWS "C" SYSTEM "STANDBY" AND
 "D" SYSTEM ACTIVE. FOR DETAILS OF COMPLETE
 "C" AND "D" POWER CONTROL, REFERENCE
 LOGIC NO 5.4.11.1
 NOTES

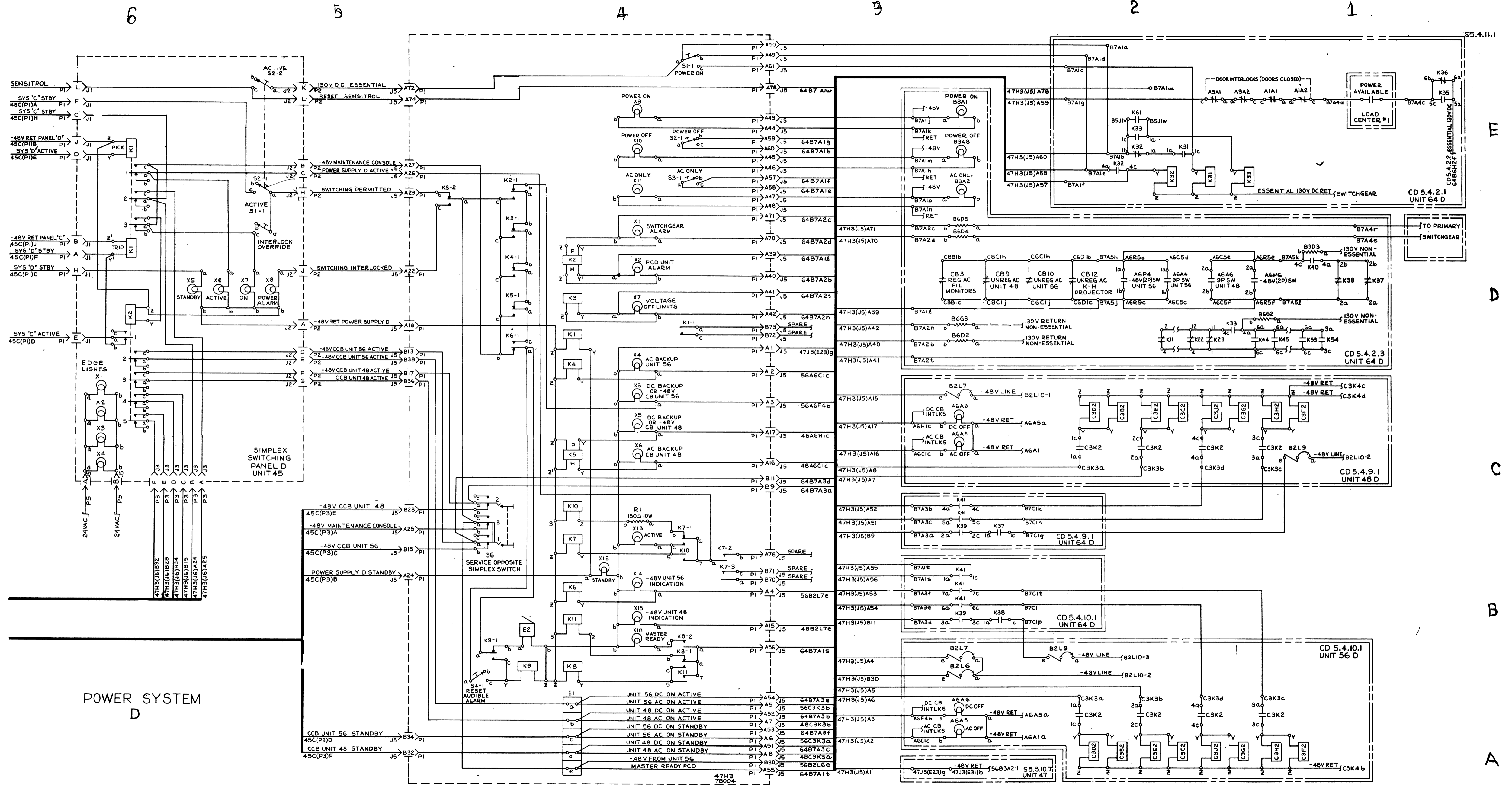
SIMPLEX INPUT SYSTEM, UNIT 56 CONTROL

EC 47209
3115766



POWER SYSTEM C

EC 48091 3215805



POWER SYSTEM
D

CONSOLES DUPLEX SWITCHING MAINTENANCE PANELS C & D