SHEET INDEX - SD DWG & T DWG SHEET ISSUES ARE IN AGREEMENT AS FOLLOWS

SCHEMATIC		ISSUE																					
SD- 82603-01		1																					
WIRING DIAGRAM	SH NO.	ISSUE																					
AUTO CHG	A1	24	27	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	21
	A2	21	27	–	–	5	6	7	8	8	8	11	12	13	14	–	–	–	–	–	20	21	22
AH1	A3	24	27	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	20	21	22
1KY1	B1	19	19	3	3	5	5	7	7	7	7	11	12	12	14	14	14	14	14	14	20	20	20
	B2	20	20	1	1	5	6	7	7	7	7	11	12	12	14	14	14	14	14	14	14	14	14
	B3	14	14	2	2	5	6	7	7	7	7	11	12	12	14	14	14	14	14	14	11	11	11
	B4	11	11	3	3	5	6	7	7	7	7	11	11	11	11	11	11	11	11	11	11	11	11
	B5	11	11	3	3	5	5	5	8	8	8	11	11	11	11	11	11	11	11	11	11	11	11
	B6	23	23	3	3	5	5	5	5	5	5	11	12	12	12	12	12	12	12	12	12	12	25
	B7	14	14	2	2	5	5	5	5	5	5	5	5	5	14	14	14	14	14	14	14	14	14
	B8	20	20	2	2	5	5	5	7	7	10	11	11	11	11	11	11	11	11	11	20	20	20
	B9	16	16	3	3	5	5	7	8	8	8	11	11	11	11	11	16	16	16	16	16	16	16
	B10	21	21	3	4	5	5	5	5	9	9	11	11	13	13	13	13	13	13	13	13	21	21
	B11	20	20	–	–	5	5	5	5	5	5	5	5	5	14	14	14	14	14	14	20	20	20
	B12	14	14	–	–	5	5	7	7	7	7	11	11	11	14	14	14	14	14	14	14	14	14
	B13	19	26	–	–	–	–	7	7	7	7	11	12	12	14	14	14	14	14	19	19	19	19
	B14	16	16	–	–	–	–	–	–	9	9	9	9	13	13	15	16	16	16	16	16	16	16
	B15	18	18	–	–	–	–	–	–	9	9	9	9	13	13	15	16	16	18	18	18	18	18
	B16	24	24	–	–	–	–	–	–	–	–	11	12	12	12	12	12	17	17	19	19	19	22
	B17	20	20	–	–	–	–	–	–	–	–	–	12	12	14	14	14	14	14	14	20	20	20
	B18	15	15	–	–	–	–	–	–	–	–	–	12	12	12	15	15	15	15	15	15	15	15
	B19	15	15	–	–	–	–	–	–	–	–	–	12	13	14	15	15	15	15	15	15	15	15
	D1	12	25	3	3	3	3	7	7	7	7	11	12	12	12	12	12	12	12	12	12	12	12
	D2	12	25	2	2	5	5	7	7	7	7	11	12	12	12	12	12	12	12	12	12	12	12
	D3	11	11	1	1	1	1	7	7	7	7	11	11	11	11	11	11	11	11	11	11	11	11
	D4	21	25	–	–	–	–	7	7	7	7	11	12	12	12	12	12	12	12	12	21	21	21
	D5	11	25	–	–	–	–	7	7	7	7	11	11	11	11	11	11	11	11	11	11	11	11
	D6	21	25	–	–	–	–	–	–	–	–	11	12	12	12	12	12	12	12	19	19	21	21
	D7	20	20	–	–	–	–	–	–	–	–	–	12	12	14	14	14	14	14	14	20	20	20
	D8	14	14	–	–	–	–	–	–	–	–	–	–	–	14	14	14	14	14	14	14	14	14

(CONTINUED ON SHEET A2)

(CONTINUATION)

IN FIG 28 COMPONENTS WERE NOT DES "G, HFB" IN SH E OPT "T, HFC" WAS DES "T" IN TABLE L OPT COL ADDED. FIG 59 ADDED. IN FIG 41 COMPONENTS WERE NOT SO DES "G, HE2" "21A F BLKS WERE DES 71A AT KS 19392, L24 F PAN POS 1 & 2 REF TO "(SEE TABLE M)" ADDED. IN SH F "T, HFA" OPT READ "T" IN TABLE M OPT COL ADDED. IN FIG 42 (ALM) 21A F BLK & ASSOC WRG RMV'D IN FIG 42 SH G "T" CHG'D TO READ "T, HEY." IN FIG 43 AT 2, ALM 21A F BLKS WRG ON TERM 3 RMV'D ON TERM A OF (ALM) FUSE. ALM LEADS TO BRKT DES "TO OTHER FIGS 43 & 59 ADDED; ALSO TOP (ALM) FUSE ON TERM A FAJ LEAD TO BRKT DES "FROM FIG 42" ADDED. REF TO "SEE TABLE N" ADDED. IN TABLE N, REF TO "KS-15856, L2" & ASSOC INFO ALSO OPT COLS ADDED.

6-6-86 CLASS "AD"

EJC		13

ON SH A2 NOTE 57 RMV'D & READ "TERMS PROVIDED WITH PLANT WHEN RECTIFIER IS LOCATED IN INITIAL BAY WHEN RECT IS LOC IN OTHER THAN THE INITIAL BAY TERMS, SHALL CADERED IN THE JOB SPEC. NOTE 58 CHG'D & READ FOR CALCULATION OF b, C & d LEADS, SEE NOTE" ON SD-82603-01. IN NOTE 67 REF TO FIG 48, 50 & H7 ADDED. ON SH B2 IN FIG 4 & 5 REF TO DES. "TERMS E/W BLU-104. CRIMP LUG REPLACED BY "SEE NOTE 58" ON SH B5 IN FIG 12 & 13. REF TO DES TERMS. E/W BLU-104. CRIMP LUG REPLACED BY "SEE NOTE 58" ON SH B7 FIG 22 SUBTITLE REF TO ED-83108-30 GRP 1 ADDED. ON SH B12 IN FIG 37 REF TO DES TERMS E/W. ON SH B19 FIG 60 ADDED.

(CONTINUED)

H18, H19, H20, H21, H22	D8
H9, H10, H11, H12, H13, H14, H15, H16, H17	D7
53, 54, 55, 56, 57, 58, 59, 60	B19
46, 47, 48, 49, 51, 52	B18
45, 50	B17
FIG OPT	SHEET

(CONTINUATION OF TABLE D)

(CONTINUATION OF ISSUE 14)

KS-21053, L33 TERM, REPLACED BY "SEE NOTE 58" ON SH B13 IN FIG 39 & 40 FUSE & GAUGE TABLE, ALSO ON PANEL, DES QR-40V, 200 AMP RECT J859308-1 ADDED, REF TO "205" ON CKT MOD PWB RMV'D. TWO TERMS ADDED AT BOT-V & +V TO BRKT DES. "TO FIG K2 ETC, REF TO DES. "TERM E/W KS-15977, L313 TERMS. REPLD BY SEE NOTE 58. REF TO KS-5482-01 RMV'D. ON SH B17, IN FIG 45&50 INFO & TERMS FOR FOR 125 AMP RECT ADDED ON PANEL REF TO J859308C ADDED ON SH D7 IN FIGS H9 TO H17 DES (TB1) WAS (TS1) & CA DES "RHV" WAS "TP1" SH D8 AND ASSOC INFO ADDED. NDD865500NJ-10

7-9-86 CLASS D

EJC	E.F.H.	14

(CONTINUED ON SHEET A2)

LINE	SD-82603-01	T-82603-30
	FIG	OPT	FIG	MFR	APP	REMARKS
---	---	---	---	---	---	---
35	(CAD1) 1	X,Z	30			
		Y,Z	29			
			28			ENGR SK
			27	S		
	-		26	S		ENGR SK
30	(1)	V,S	25	S		
	(1)	T,S	24	S		
	3	M	23			
	2	S,W,Z	22			
25			21C			
			21B			
			21A			
	(1)		20B			
20			20A			
			19B			
			19A			
	-		18			MFR DISC
	-		17			MFR DISC
	-		16B			
15	-		16A			
	(CAD1)	W,X	15			ENGR SK
		W,X	14			ENGR SK
	(CAD1) 1	W,X	13			
		W,X	12			ENGR SK
		X,Z	11			ENGR SK
10		Y,Z	10			ENGR SK
	(CAD1)	X,Z	9			ENGR SK
		X,Z	8			
		Y,Z	7			
		Y,Z	6			
5		X,Y,Z	5		X,Y	
	(CAD1) 1	X,Y,Z	4		X,Y	
	-		3			ENGR SK
	-		2			ENGR SK
1	-	D	1	D		ENGR SK

SCHEMATIC FIGURES AND OPTIONS AGREE WITH SIMILARLY DESIGNATED WIRING DIAGRAM FIGURES AND OPTIONS EXCEPT AS SHOWN ABOVE. WE ASSIGNED FIGURES AND OPTIONS ARE PREFIXED WITH LETTER H AND HAVE NO SCHEMATIC EQUIV UNLESS SHOWN ABOVE. ITEMS IN ( ) PARENTHESES ARE FOR INFORMATION ONLY AND ARE NOT TO BE RECORDED ON JOB WIRING LIST DRAWINGS.

TABLE C - SD T DWG CROSS REFERENCE TABLE

CA	CB	CC	CD	CE	CF

CHANGE ON ISSUE	SPECIFY IF OFFICE RECORDS	DO NOT SPECIFY IF OFFICE RECORDS	THIS OPTION WAS FURNISHED	SEE NOTE	RATING STD	A & R	WD
19		P OR R	HER OR HES		P OR R		FIG 17, 18
* 5		HDT	HDS		HDT		HDS
2		FIG B	FIG A		FIG B		FIG A

TABLE B - RECORD OF FIGURES COMPONENTS AND WIRING CHANGE

SHEET A1

T-82603-30

MANUFACTURING NOTES
CONTINUATION

SHOP INST

x 13-THE INSTALLER SHALL STRAP THE CONTROLLER UNIT, J859014-1 BACKPLANE WIRING BOARD PER T-82588-30, NOTE 3 IN ACCORDANCE WITH SHUNT PROVIDED.

x 14-NO WIRES ON THIS DRAWING SHALL BE RUN BY THE INSTALLER EXCEPT WIRES IN FIGS 3,7,9,10 11,13,15,H1 THRU H7 & LEADS DESIGNATED Ø IN FIGS 1,3,4,5,12,16B,17,18,19B,20B,21B, 21C & 26 THRU 38, 44.

x 15-~~WHEN THE LAST CIRCUIT BREAKER EQUIPPED ON A GRP 4 PANEL IS IN POSITION 3, AND AN ADDITIONAL BREAKER IS BEING ADDED, THE H-285-224 LIST 19 PATCH CORD WHICH CONNECTS TERMINAL 11 OF THE CIRCUIT BREAKER IN POSITION 3 TO TERMINAL 10 OF THE (TB2) TERMINAL STRIP SHALL BE DISCONNECTED AT THE TERMINAL STRIP. AN H-285-224 LIST 19 ADAPTER PATCH CORD SHALL BE USED TO CONNECT THE DISCONNECTED PATCH CORD TO THE SUCCEEDING CIRCUIT BREAKER, TERMINAL 10.~~

x 16-WHEN A CIRCUIT BREAKER IS BEING ADDED ON A GRP 8 PANEL THE H-285-224 LIST 18 PATCH CORD WHICH CONNECTS TERMINAL 11 OF THE CIRCUIT BREAKER IN POSITION 1 TO TERMINAL 10 OF THE (TB2) TERMINAL STRIP SHALL BE DISCONNECTED AT THE TERMINAL STRIP. AN H-285-224 LIST 19 ADAPTER PATCH CORD SHALL BE USED AND ORDERED IN THE JOB SPECIFICATION, TO CONNECT THE DISCONNECTED PATCH CORD TO THE SUCCEEDING CIRCUIT BREAKER, TERMINAL 10.

17- UNASSIGNED.

x 18-(DATA-TALK) SWITCH AND (ORIG-ANS) SWITCH MUST BE SET IN THE "DATA" AND "ANS" POSITION RESPECTIVELY.

x x 19-WHEN MORE THAN ONE LEAD IS TO BE TERMINATED AT A TERMINAL ON THE TERMINAL STRIP THE ADDITIONAL LEAD MAY BE CONNECTED TO THE UNUSED TAB OF THAT TERMINAL.

x 20-WHEN A CIRCUIT BREAKER IS BEING ADDED ON A GROUP 4 PANEL, THE H-285-224, LIST 18 PATCH CORD, WHICH CONNECTS TERMINAL 11 OF THE LAST EQUIPPED CIRCUIT BREAKER TO TERMINAL 10 OF (TB2) TERMINAL STRIP, AN H-285-224 LIST 19 ADAPTER PATCH CORD SHALL BE USED TO CONNECT THE DISCONNECTED PATCH CORD TO THE SUCCEEDING CIRCUIT BREAKER TERM 10.

x 21-WHEN THE OPTIONAL SHUNTS ARE USED, THE LEADS GOING FROM THE SHUNTS TO THE FEEDER DRAIN MONITOR BOARD MUST BE CONNECTED SO THAT THE LINE SIDE OF THE SHUNTS (BLACK LEAD) CONNECTS TO AN ODD NUMBERED TERMINAL ON THE FEEDER DRAIN MONITOR.

x 22-B1-TERMINAL NEAREST PANEL.

x x 23-TERMINALS 10 AND 11 ARE NOT FURNISHED WITH CKT BRKR. DISREGARD ASSOCIATED WIRING.

x 24-THE INSTALLER SHALL CUT THIS LEAD DEAD AT BOTH ENDS WHEN THE ED-83186-30 LOW VOLTAGE DISCONNECT/RECONNECT PANEL IS PROVIDED.

(CONTINUED)

H7	HJ TO HQ, P, R	D6
44	"HERCHES" N, P, R	B16
	HE, P, HEB	B5
	HEL, HEM, HEP	B4
42, 43	G, T, HEK, HEY, HFP TO HBC	B15
41	G, T, HE2, HFA, HPB TO HPH	B14
H6, H8	HET TO HEW	D5
H5		D4
39, 40		B13
H3, H4	X, Y	D3
H2	HJ TO HQ	D2
H1		D1
37, 38	HDQ, HDR	B12
29, 30, 31, 32, 33, 34, 35, 36		B11
28	G, T, HFB, HPC HDD TO HDP	B10
25, 26, 27	S, T, V	B9
23, 24		B8
22, A, B	X, Y, Z, W, HDS, HDT	B7
19A, 19B, 20A, 20B, 21A, 21B, 21C		B6
17, 18	S, HBB TO HDA	B5 (TABLE F,G)
14, 15, 16A 16B	9, HR TO HBA	B4 (TABLE E)
8, 9, 10, 11, 12, 13	HE, HF, HG, HH	B3
4, 5, 6, 7	X, Y, HA, HB, HC, HD	B2
1, 2, 3	D	B1
FIG	OPT	SHEET

TABLE B - SHEET LOC OF FIGURES & OPTIONS

(CONTINUATION)

ON SH A1 IN TITLE BOX "6400" AMPERES READ "3200" AMPERS. ON SH A2 NOTE 68 UNDER FEATURE COL, LINE DES "BAT STAND BUS BARS" REF TO "2600 AMPS" ADDED & IN QTY COL "AS REQ'D" READ "1 PER POWER PLANT" IN NOTE 67 REF TO (INFO FOR FIG 39, 40, H3, H4, H5, & H6 ADDED. IN NOTE 64 REF TO "FIG H5 & OR AUXILARY FRAMING" ADDED. IN FIG 1 AT BRKT "FROM FIG 16B, 17 ETC" REF TO 16B WAS NOT SO DES. IN FIG 4, 5, 12, 13 & 37 AT BRKT DES "TO FIG H2" REF TO "OR H5" ADDED. IN FIG 16B AT BRKTS DES PREC & SUCC REF TO "OR 26" LINED OUT. IN FIG 26 AT BRKT "TO PREC ETC" LEAD DES "CBA" WAS NOT SO DES. FIGS 39, 40, H5 & H6 AND ASSOC WRG ADDED. IN FIG H1 SUB. IN TITLE READ "BUSBARS & GRD BUS". IN FIG H2 SUB TITLE REF TO "1300 TO 2600 AMPS ETC" ADDED. AT BAT BUS 84780610 & 843780610 BRKT DES "FROM FIG H5 OR H4" READ "FROM FIG H5". THRU OUT FIG H2 REF TO "(J859504A-1) OR LIST 4 (J859504B-1)" ADDED. AT SHUNT BELOW CODES REF TO "(SEE NOTE 13) ADDED.

6-25-85 CLASS "B"

EJC	G.T.C.	M.G.	7

ON SH A2 NOTE 70 ADDED. "IN FIG 18 & 25 REF TO H-285-224 CA ASSY & ASSOC WRG INCLD'G V, HEC, HED, HEE & HEF OPTIONS ADDED.

6-25-85 CLASS "B"

EJC	G.T.C.	M.G.	8

ON SH A1 NOTE 21 & 22 ADDED. IN FIG 28 (SH B10) "T" WRG & APP WAS NOT SO DES & "G" WRG & APP ADDED. FIG 41 (SH B14), FIG 42 & 43 (SH B15) ADDED.

6-25-85 CLASS "B"

EJC			9

(CONTINUED)

(CONTINUATION)

ON SH B8 IN FIG 23 AT (P1) & (J1) CONN, H-285-227, L142 CA ASSY ADDED. NDD83012-30NJ-3

6-25-85 CLASS "B"

			10

THRU OUT DWG, APP HEL THRU HEQ, HET THRU HEW ADDED. MISC CHGS MADE. FIGS 44, H7 & H8 ADDED. NDD85500NJ-7 NDD83018-30NJ-5 NDD83486-30NJ-1

8-7-85 CLASS "B"

			11

ON SH A1 IN NOTE 17 REF TO "W4AS CORD ETC" ADDED; TABLE C UPDATED & EXPANDED TO SH A2. ON SH'S B17, B18, B19 & D7, FIGS 45 THRU 58 & H9 THRU H17 AND REF TO SAME THRUOUT DWG ADDED.

3-5-86 CLASS "B"

			12

(CONTINUED)

MANUFACTURING NOTES
CONVENTIONS

SHOP INSTL

⊛ SCREW CONNECTION

▬ TERMINAL LUG

---- CONNECTION FURNISHED AS PART OF COMPONENT

—·— DIVISION OF GENERAL WIRING VIEWS

x x 1-ALL WIRING TO BE 22GA, KS-22247, L1 SOLID UNLESS OTHERWISE SPECIFIED.

x x 2-01-WIRING TO BE 22GA, KS-22247, L1 COLORED GREEN UNLESS OTHERWISE SPECIFIED.

x x 3-03-WIRING TO BE 22GA, KS-22247, L1 COLORED GREEN UNLESS OTHERWISE SPECIFIED AND RUN IN GENERAL PATHS.

x x 4-LEADS SHOWN TERMINATED IN COMPONENT WITHOUT TERMINALS ARE FURNISHED WITH COMPONENTS.

x x 5-ALL TERMINAL LUGS ON BOTTOM ROW TO BE MOUNTED ON OPPOSITE SIDE OF BUS BAR. (FIG. H2)

x 6-WHEN SPACING BETWEEN CIRCUIT BREAKERS ON A PANEL PRECLUDES THE USE OF THE 2201C, L100 ALARM PATCH CORDS, THE SHOP SHALL SUBSTITUTE KS-22010, L103 PATCH CORD (10" LONG) OR KS-22010, L104 PATCH CORD (20" LONG) AS REQUIRED.

x x 7-WHEN CHARGE SWITCH IS PROVIDED, CONTINUITY OF THE "CBA" LEAD MUST BE MAINTAINED BETWEEN ALL CIRCUIT BREAKER PANELS ON THE SAME BAY. SHOP SHALL FURNISH KS-21225 PATCH CORD ASSEMBLIES REQUIRED PER TABLE.

PATCH CORD	LENGTH	COMCODE NO.
KS-21225, L3	12"	401677158
KS-21225, L4	36"	401677166
KS-21225, L5	6"	401995048
KS-21225, L6	18"	401995055
KS-21225, L7	60"	401995063

x x 8-WHEN "S" WIRING IS SPECIFIED AND THE DISTANCE BETWEEN THE CIRCUIT BREAKERS WITH "S" WIRING EXCEEDS 3 POSITIONS, DISREGARD THE KS-21225, L5 PATCH CORD & SUBSTITUTE PATCH CORDS PER NOTE 7 AS REQUIRED.

x x 9-WHEN 96M-24 CONNECTORS ARE PLUGGED INTO THE BACKPLANE OF THE CONTROL UNIT THE BLACK HALF OF THE CONNECTOR SHOULD BE ON THE LEFT AND ARROW STAMPED ON CONNECTOR SHOULD POINT UPWARD.

x x 10-THE "FAJ" LEADS RUN ONLY ONCE TO THE CONTROLLER PNL FOR THE LOW VOLTAGE DISC RECONN PNL, ALL FUSE PNLS AND CKT BRKRS WHICH ARE PART OF THE SAME PWR PLANT. WHEN A FUSE PNL IS PROVIDED, AS PART OF THE ORIGINAL PWR PLANT DISTRIBUTION EQUIPMENT THE "FAJ" LEAD SHALL BE RUN FROM THE FUSE PNL TO THE CONTROLLER.

x x 11-REMOVE THE FEMALE CONNECTOR END OF KS-21225, L7 LINE CORD AND DISCARD. SHORTEN LINE AS REQUIRED BEFORE CONNECTING TO THE CAPACITOR CHARGE PANEL (FIG 22)

12-[] INFORMATION IN BRACKETS IS FOR RECORD ONLY.

(CONTINUED)

5-31-83

ECR	RJA	MG	1

ON SH A1 MFG NOTES 15, 16, 17 & 18, ENG NOTES 63 & 64 ADDED. IN MFG NOTE 14 REF TO FIGS 3, 26 & 27 ADDED. IN ENG NOTE 60 FOR FIG H1 "(SEE NOTE 64)" & QTY "AS REQ'D" ADDED, TABLES C&D CHANGED ACCORD. SH'S B8 & B9 WITH FIG 23 TO 27 ADDED. THROUGHOUT DWG REF TO ASSOC FIGS, NOTES & CHANGES MADE. ON SH B3 IN FIG 8 AT (J-) CONN DESIG "CUT, TAPE & STORE" ADDED ON LEAD FROM TERM 18. IN FIG 13 AT (J-) CONN DESIG "MATES WITH (P-) CONN ETC" ADDED. ON SH A1 NOTES 53&56 CHANGED ON SH'S IN FIGS 17 & 18 REF TO FIG "H2" ADDED & DESIG "(SEE NOTE 7)" READ "(SEE NOTE 8)" ON SH B6 IN FIGS 19B, 20B, 21B & 21C REF TO FIG H2 ADDED. ON SH B7 FIG A WAS PART OF FIG 22 & FIG B ADDED. ON SH D1 IN FIG H1 "ED-83019-50" READ "ED-83019-30" ON SH D2 IN FIG H2 LEAD DESIG "BD-843780610 & SHUNT DESIG "FROM CONTROLLER CKT" READ "TO CONTROLLER CKT." AT BUS BARS 843780644 & 843780610 DESIG "FOR TERMINATIONS SEE FIGS 16B, 17, 18, ETC" ADDED.

8-2-85 CLASS "D"

CAR	RJA	MG	2

ON SH A1 NOTE 66 ADDED & NOTE 10 CHG'D. SH B10, FIG 28 & ASSOC CONNECTIONS THRUOUT DWG ADDED.

10-21-83 CLASS "B"

SF	JTC	MG	3

ON SH A1 IN NOTES 1, 2 & 3 REF TO "22GA" READ "24GA". ON SH B10, FIG 28 AT (CB1) & (CB2) CKT BRKR TERM 8 & 9 WERE SHOWN IN POLE B POS, AT TERM 2 & 6 POLE B POS RECP CODE READ "2-350600-2" AT (CB1) CKT BRKR POLE A POS TERM 1 "W, 16" & DES "34829 RING TERM (AMP) MTD ON BUS BAR" RMV'D. AT (J1) REF TO "87159-3 HOUSING E/M 87024-3 RECP'S AMP" RMV'D & REF TO "H-285-224, L25" ADDED, AT (J2) REF TO "87159-3 HOUSING E/M 87024-3 RECP'S (AMP)" RMV'D AND REF TO "H-285-224, L26" ADDED.

2-9-84 CLASS "AD"

SF	JTC	MG	4

SH'S A2, B11 & B12 INCL'G FIGS 28 THRU 38, NOTES 19, 20, 67 & 68 AND REF TO SAME THRUOUT DWG ADDED. FIG 17 & 18 RATED HFR. DISC. NOTE 15 LINED OUT. SH A1 REDRAWN DUE TO LACK OF SPACE.

5-14-84 CLASS "C"

SF	RJA	MG	5	M

ON SH A2 NOTE 69 ADDED. IN NOTE 66 "LINEAGE 2000" READ "BELLMASTER". ON SH B2 IN FIGS 6 & 7 ON SH B3 IN FIGS 8, 9, 10, 11 & 13, ON SH B4 IN FIGS 14 & 15 ON TERMS 20 & 21 "G2W" & "BRTW" LEADS RESP WERE SHOWN AS "SPARE" & ARE NOW TERMINATED & DESIG "CUT, TAPE & STORE (SEE NOTE 69)".

7-31-84 CLASS "AD"

SF	RJA	MG	6	M

(CONTINUED)

NOTICE — NOT FOR USE OR DISCLOSURE OUTSIDE AT&T TECHNOLOGIES, INC EXCEPT UNDER WRITTEN AGREEMENT

REPLACED BY T-82603-31

RMWD

POWER SYSTEMS
CHARGE AND DISCHARGE CIRCUIT
24 OR 48 VOLTS, 6400 AMPERES (MAX)
LINEAGE™ 2000 MCS POWER PLANT

30 SHEETS

(CHG & DISCH CKT)

AT&T TECHNOLOGIES, INC.	T-82603-30	DWG SIZE 6S	ISSUE 27
		SHEET A1	

GN-97-2130 (10-74)
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ENGINEERING NOTES

51-SEE SHEET INDEX FOR DRAWING FROM WHICH THIS DRAWING IS MADE.

52-CONNECTING DRAWINGS:

CONTROLLER CKT T-82588-10 ISS 1

53-EQUIPMENT ARRANGEMENT
J85503C-1, J85500A-1, J85504A, ED-83012-30, ED-83018-30, ED-83019-5C, J85504B-1, J85503C-1, ED-83186-30

54-WIRES FROM BATTERIES TO BATTERY BUS BARS SHALL BE ORDERED BY THE JOB SPECIFICATION (SEE J85504-( )

55-ON EXISTING BAYS WHEN ADDITIONAL CIRCUIT BREAKER PANELS ARE ADDED IT WILL BE NECESSARY TO PROVIDE FOR THE CONTINUITY OF THE "CBA" LEAD, WHEN A CHARGE SWITCH IS PROVIDED. SEE NOTE 7, ORDER REQUIRED PATCH CORDS AND INSTRUCT THE INSTALLER ACCORDINGLY.

56-TERMINALS SHALL BE ORDERED IN ACCORDANCE WITH TABLES ON J85500A-1, J85504A-1, ED-83018-30 OR ED-83019-30.

57-UNASSIGNED.

58-FOR CALCULATION OF "A" & "B" LEAD LENGTHS & VOLTAGE DROPS SEE; SD-85103-01 FOR LEADS & TERMINALS FOR SPECIFIC J CODES. SEE NOTE 89 ON J85500A-1, SHT.

59-PROVIDE GROUNDING AS COVERED IN AT&TP 802-001-193 OR AT&TP 802-001-195.

60-SPECIFY FIGURES AND OPTIONS AS FOLLOWS: ALSO SEE NOTE 67

FEATURES		FIG	OPT	QTY
24 VOLT 100 AMP RECTIFIER	NEGATIVE PLANT	4	X	1 PER RECTIFIER AS REQ'D
	POSITIVE PLANT		Y	
	208/240 VAC		HA	
	480 VAC		HB	
24 VOLT 200 AMP RECTIFIER	NEGATIVE PLANT	5	X	1 PER RECTIFIER AS REQ'D
	POSITIVE PLANT		Y	
	208/240 VAC		HC	
	480 VAC		HD	
-48 VOLT 100 AMP RECTIFIER	208/240 VAC	12	HE	1 PER RECTIFIER AS REQ'D
	480 VAC		HF	
-48 VOLT 200 AMP RECTIFIER (FOR USE WITH SMART CONTROLLER	208/240 VAC	13	HG	1 PER RECTIFIER AS REQ'D
	480 VAC		HH	
CABLE ASSEMBLY FOR USE WITH SMART CONTROLLER (SEE NOTE 67)	-24 VOLTS, 100 AMP RECTIFIER, SUPPL BAY	7	-	1 PER FIG. 4 AS REQ'D
	-24 VOLTS, 100 AMP RECTIFIER SUPPL BAY	9	-	1 PER FIG. 4 AS REQ'D
	+24 VOLTS 200 AMP RECTIFIER	10	-	1 PER FIG. 5 AS REQ'D
	-24 VOLTS, 200 AMP RECTIFIER	11	-	1 PER FIG. 5 AS REQ'D
	-48 VOLTS, 100 AMP RECTIFIER SUPPL BAY	15	-	1 PER FIG. 12 AS REQ'D
DISCHARGE GROUND BUS BAR (SEE NOTE 64)		H1	-	1 PER POWER PLANT AS REQUIRED
1ST SUPPL DISCHARGE GROUND BUS BAR		(H1)	H08	AS REQ'D
2ND SUPPL DISCHARGE GROUND BUS BAR		(H1)	H0C	AS REQ'D
BATTERY STAND BUS BARS 2600 AMPS		H2 OR H7		AS REQ'D
BATTERY STAND SUPPL BUS BARS		(H2 OR H7)	HJ	AS REQ'D
24 VOLT BATTERY	NEGATIVE PLANT	H3	X	AS REQ'D
	POSITIVE PLANT	H3	Y	AS REQ'D
NEGATIVE 48 VOLT BATTERY		H4	-	AS REQ'D

61-WIRES BETWEEN THE BATTERIES AND BUS BARS SHALL BE ORDERED IN THE JOB SPECIFICATION (SEE J85504A-1)

62-THE BUS BAR ASSOCIATED WITH THE KS-22012 CIRCUIT BREAKERS WILL ACCOMODATE FROM 1 TO 3 LEADS, DEPENDING ON AMPERAGE UP TO 750MCM I"I SIZE. THE NUMBER OF LEADS WHICH MAY BE TERMINATED PER BREAKER ARE AS FOLLOWS:

CKT BRKR AMP RATING	NO. OF LEADS
100 TO 225	1
300 TO 400	2
500 TO 700	3

63-THE "BD" LEADS IN FIG 3 MAY ALSO BE TERMINATED AT THE DISCHARGE BUS SHOWN IN FIG 1. BOTH THE INITIAL BAY AND THE SUPPLEMENTARY BAY CAN ACCEPT A MAXIMUM OF 6-750 MCM CABLES EACH.

64-THE DISCHARGE GROUND BUS BAR, PART OF FIG H2 OR H5 IS EQUIPPED TO HANDLE ONLY LARGE TYPE CONNECTORS. IN SMALL PLANT APPLICATIONS IT MAY BE MORE APPROPRIATE TO PROVIDE A SUPPLEMENTARY DISCHARGE GROUND BUS PER ED-83019-50 LOCATED ON THE CABLE RACK OR AUX FRAMING NEAR THE INITIAL BAY. THIS BUS BAR IS ARRANGED TO ACCOMODATE A VARIETY OF CONNECTOR SIZES.

65-THE CUSTOMER SHALL PROVIDE THE PLUG AND CORD NECESSARY TO MAKE THE CONNECTION BETWEEN THE (TELCO) JACK ON THE DATA SET AND THE TELEPHONE CO. LINE RECP (MAAS CORD &PLUG OR EQUIVALENT 25 FT. MAX), UNDER NO CIRCUMSTANCE SHOULD SPARE LEADS IN AN ALARM CABLE BE UTILIZED TO CONNECT TO THE DATA SET. TO DO SO COULD INDUCE SPIKES CAUSING FALSE ALARM SIGNALS TO BE TRANSMITTED TO OFFICE ALARM SYSTEMS.

66-THESE ALARM LEADS CAN BE CONNECTED ACCORDING TO OFFICE REQUIREMENTS TO THE S1 ALARMS ON TB1. FOR THIS APPLICATION THEY ARE CONNECTED TO THE S1(A) LEADS AND UNDER THESE CONDITIONS PROVIDE A MINOR ALARM ISSUED AS A BD ALARM. THE LINEAGE 2000 CONTROLLER PROVIDES NO DIAGNOSTICS FOR THIS PARALLEL ALARM.

67-

FEATURES			FIG	OPT	QTY
CABLE ASSEMBLY FOR USE WITH A CONVENTIONAL CONTROLLER	+24 VOLTS, 100 AMP RECTIFIER SUPPL BAY		30		1 PER FIG. 4 AS REQ'D
	-24VOLTS 100 AMP RECTIFIER SUPPL		32		1 PER FIG 4 AS REQ'D
	+24VOLTS, 200 AMP RECTIFIER		33		1 PER FIG 5 AS REQ'D
	-24VOLTS, 200 AMP RECTIFIER		34		1 PER FIG 5 AS REQ'D
	-48VOLTS, 100 AMP RECTIFIER		36		1 PER FIG 12 AS REQ'D
-48VOLT, 200AMP RECTIFIER FOR USE WITH A CONVENTIONAL CONTROLLER	208/240 VAC		37	HDQ	1 PER RECTIFIER
	480 VAC			HDR	AS REQ'D
-48V, 200 AMP OR 400 AMP RECTIFIER FOR USE WITH	SMART CONTROLLER	208/240AC	39	HDY	1 PER RECTIFIER AS REQ'D
		480 VAC		HDZ	
-48V, 200 AMP OR 400 AMP RECTIFIER FOR USE WITH	CONVENTIONAL CONTROLLER	208/240AC	40	HEA	1 PER RECTIFIER AS REQ'D
		480 VAC		HEB	
BATTERY STAND BUS BARS 5200 AMPERES		4000 AMP SHUNT	H5	HEC	1 PER PANEL PLANT AS REQ'D
		5000 AMP SHUNT		HED	
DISCHARGE GRD BUS BAR (SEE NOTE 64)			H6		1 PER POWER PLANT AS REQ'D
-48 VOLT, 25 AMP 50 AMP OR 125 AMP RECTIFIER	208/240 V AC		49		1 PER RECTIFIER AS REQ'D
-48V 100 AMP RECTIFIER	208/240/480 VAC		45		1 PER RECTIFIER AS REQ'D
24 VOLT 25 AMP 50 AMP OR 125 AMP RECTIFIER	208/240 VAC		50	X	1 PER RECTIFIER AS REQ'D
				Y	
24 VOLT 100 AMP RECTIFIER	208/240/480 VAC		50		1 PER RECTIFIER AS REQ'D
BATTERY STAND BUS BARS		600 AMP SHUNT	H7	HK	1 PER PANEL PLANT AS REQ'D
		600 AMP SHUNT		HL	
		800 AMP SHUNT		HM	
		1200 AMP SHUNT		HN	
		2000 AMP SHUNT		HP	
		2400 AMP SHUNT		HQ	

68-LOAD LEADS TO CIRCUIT BREAKERS SHOWN IN FIGS 18, 24, 27 & 30 MAY BE CABLE TAPPED TO LARGER GAUGE WIRE IN THE CABLE RACK AS REQUIRED.

69-PRIOR TO ISSUE 6 OF CABLE ASSEMBLY DRAWING H-295-224, THE "CBW" AND "BATW" LEADS WERE NOT TERMINATED AT THE (J-) CONNECTOR.

70-WHEN CIRCUIT BREAKERS ARE PROVIDED AND LOCATED IN A SUPPLEMENTARY BAY PER FIGS 18 OR 25 AND FEEDER DRAIN MONITORING IS REQUIRED THE JOB SPEC SHALL ORDER ONE H-295-224 LIST 50 CABLE ASSEMBLY AND SPECIFY LENGTH, OFFICE RECORD SHALL SHOW REF OPTION.

71-WHEN FIG H6 IS SPECIFIED, THIS INVERTER HAS DC AS WELL AS AC INPUT WITH AC OUTPUT. THE INPUT AND OUTPUT LEADS SHOULD UTILIZE KS-5482 OR EQUIVALENT WIRE. THE FOLLOWING TABLE DELINEATES THE MINIMUM RECOMMENDED BREAKER SIZE AND LEAD SIZE THAT SHOULD BE USED.

(CONTINUED)

			59				
			H17				
			H16				
			H15				
80			H14				
			H13				
			H12				ENGR SK
			H11				
			H10				
75			H9				
			H8				
			H7				
			H6				
			H5				
70			H4				
			H3				
			H2				
			H1				
	(2)	S,W,Z	B		W,Z		
65	(2)	X,Y,W,Z	1221A	X,Y	W,Z		MFR DISC
			58				
			57				
			56				
60			54				
			53				
			52				
			51				
55			50				
			49				
			48				
			47				ENGR SK
			46				
50			45				
		N,P,R	44	P,R	N,P,R		
			43				
			42				
			41				
45			40				
			39				
	(1)	S	38	S			
		X,W	37				
		X,W	36				
40	(CAD)1	X,W	35				
		X,Z	34				
		Y,Z	33				
		X,Z	32				
		X,Z	31				

LINE	SD FIG	OPT	FIG	WRG	APP

(CONTINUATION OF TABLE C ON SHEET A1)

90			60				
			H22				
			H21				ENGR SK
			H20				
			H19				
85			H18				

LINE	SD FIG	OPT	FIG	WRG	APP	REMARKS

(CONTINUATION -TABLE C)

NOTE 71 CONTINUATION

LEAD	(NET) 1 KVA INVERTER		(NEU) 3 KVA INVERTER		(NEV) 5 KVA INVERTER		(NEW) 10 KVA INVERTER	
	LEAD SIZE	BREAKER (AMP)	LEAD SIZE	BREAKER (AMP)	LEAD SIZE	BREAKER (AMP)	LEAD SIZE	BREAKER (AMP)
DC LOAD INPUT	8 AWG	40	2 AWG	100	2/0	175	500MCM	400
DC GROUND INPUT	8 AWG	-	2 AWG	-	2/0	-	500MCM	-
AC LOAD INPUT	14 AWG	*10	10 AWG	30	6 AWG	*50	2 AWG	*100
AC GROUND INPUT	14 AWG	-	10 AWG	-	6 AWG	-	2 AWG	-
AC LOAD OUTPUT	14 AWG	**10	10 AWG	30	6 AWG	**50	2 AWG	**100
AC GROUND OUTPUT	14 AWG	-	10 AWG	-	6 AWG	-	2 AWG	-

* TO BE PROVIDED BY THE CUSTOMER
** TO BE PROVIDED BY THE THREE PORT INVERTER VENDOR

72-PAINT OR TAPE BOTH ENDS OF WHITE LEADS IN ARMORED CABLE TO INDICATE RED LEAD.

CHG PER DALLAS POINT ISS 14 I & 2
IN FIG 41 (SH 814) POS 1 AT (ALM) FUSE TERM B LEAD "0,12" TO SHUNT BOT ADDED ON TERM B "R" LEAD RECONN TO MIDDLE TERM. ON TERM A "R" LEAD TO ROTOR BOT TERM RMV'D. IN POS 2 "2R" LEADS ON ROTOR TOP TERM TO (FAU) RES BOT AND TO (ALM) FUSE TERM A RMV'D. AT SHUNT BOT "0" LEAD TO (ALM) FUSE TERM B ADDED. AT (ALM) FUSE TERM A "R" LEAD TO (FAU) RES BOT ADDED. IN FIG 47 (SH 818) CA ASSY "L41 & L153" READ "L41 & L130" IN FIG 51 REF TO "+24V" READ "-24V," IN FIG 55 CA ASSY "L65" READ "L47"
9-9-86 CLASS "M"
EJC 15

IN FIG 25 (SH 89) AT SUB TITLE "ED-83018-30, "GRP 4, 8, 11 OR 12" READ "GRP 4 OR 8". IN FIG 41 (SH 814) POS 1, 0 LEAD TO TOP TERM OF SHUNT WAS SHOWN CONNECTED TO BOT TERM OF SHUNT. CHG'S AGREE WITH POINT ISSUE 15 1.
1-7-86 CLASS "M"
EJC 16

IN FIG 44 "(TB2)" TERM BLK & ASSOC WRG ADDED
ND083186-30NJ-4
5-15-87 CLASS "M"
EJC 17

IN FIG 42 & 43 CONFIGURATION OF (B) BUS BARS & LOAD TERMS REARRANGED.
5-15-87 CLASS "M"
EJC 18

ON SH A1, NOTE 24 ADDED. ON SH 81 IN FIG 1, D OPT WAS NOT SO DES. ON SH 815 IN FIG 40, SUBTITLE "CONVENTIONAL" READ "SMART". ON SH 816 HER & HES OPT LINED OUT & P&R ADDED AT (TB2) TERM. N OPT WAS NOT SO DES. & TERM 2 READ "CHG GRD BUS" & TERM 3 READ TO CHG BUS". ON SH D6 IN FIG H7, AT 843780610 BUS BAR (CHG GRD) 16GA + LV LEAD FROM FIG 44 & ASSOC INFO ADDED. P-LEAD DES 14GA & B72 TERM ETC ADDED. AT 843780610 BUS BAR (CHG BAT) 16GA - LV LEAD FROM FIG 44 & ASSOC INFO ADDED. B WAS DES N LEAD FROM FIG 44. AT 845371640 BUS BAR (BAT) BOT RIGHT TERM N LEAD DES 14GA & ASSOC INFO ADDED. AT TOP RIGHT TERM, DISCH BAT LEAD DES 12GA & ASSOC INFO ADDED. DES CONTR ON LV D/R PNL ADDED TO DOTTED AREA WAS SHOWN SOLID IN SUBTITLE. DES E/W L.V. D/R PANEL & R & P OPT ADDED.
07-15-87 CLASS A
19

(CONTINUED ON SH A3)

SEE PROPRIETARY NOTICE ON SHEET A1

CHARGE AND DISCHARGE CIRCUIT		DWG SIZE 6S	ISSUE 27
AT&T TECHNOLOGIES, INC.		T-82603-30	SHEET A2

T-82603-30 SHEET A2

K & E DG 1211100876843210

CN-97-2135 (5-7-84)
PRINTED IN U.S.A.

ENGINEERING NOTES (CONTINUATION)

73 - IF LOAD FUSES OF 5 AMPERES OR LESS ARE EQUIPPED IN ALARM POSITIONS, THE LOAD LEAD MUST BE CONNECTED TO THE WIRE-WRAP ALARM POSITION THAT IS EQUIPPED WITH THE FUSE AND NOT TO THE ASSOCIATED STUD POSITION (BATTERY).

74. GROUND POSITION D1 IS BLOCKED BY INSULATOR AND IS UNUSABLE WHEN BUS BAR IS MOUNTED ON A 20 INCH CABLE RACK.

75. CENTRAL OFFICE GROUND CONNECTION IS MADE TO FIGURE H2 OR H7 WHEN FIGURE H1 IS NOT PROVIDED.

76. CENTRAL OFFICE GROUND CONNECTION IS MADE TO FIGURE H5 WHEN FIGURE H6 IS NOT PROVIDED.

77. ENGINEER SHALL INSTRUCT THE INSTALLER TO LOCATE AND DRILL THE 84378610 BUS BAR SHOWN IN FIGURE H2 OR H7 TO MOUNT A KS-15977 L13 CONNECTOR WHEN FIGURE H1 IS NOT PROVIDED.

78. IF YOUR POWER PLANT APPLICATION CONTAINS BOTH FIGURE H1 AND H2, THE "CO GRD" AND "DISCHG GRD" CONNECTIONS FOR THE CONTROLLER SHALL BE MADE ON THE FIGURE H1 DISCHARGE GROUND BAR.

SHOP	INST
	X

MANUFACTURING NOTES
CONTINUATION

25-(A) CONNECTION BETWEEN THE "TELCO" JACK ON THE DATA SET AND TELEPHONE LINE SHALL BE MADE USING CUSTOMER PROVIDED CORD AND PLUG. (M4AS CORD & PLUG OR EQUIV MAX 25FT.).
(B) CONNECTION BETWEEN THE "TEL SET" JACK ON THE DATA SET ASSEMBLY FURNISHED WITH THE DATA SET.
(C) UNDER NO CIRCUMSTANCE SHOULD SPARE LEAD IN AN ALARM CABLE BE UTILIZED TO CONNECT TO THE DATA SET. TO DO SO COULD INDUCE SPIKES CAUSING FALSE ALARM SIGNALS TO BE TRANSMITTED TO OFFICE ALARM SYSTEMS.

ISSUE NOTES (CONTINUATION)

ON SH A1 NOTE 17 IS NOW NOTE 25 ITEM (C) ADDED, ON SH A2 NOTE 72 & IN NOTE 65 "UNDER NO ETC" ADDED. SH A3 ADDED ON SH B2 IN FIG 5 BRKT DES "OR FROM FIG 33 OR 34" FROM (N) ADDED ON SH B11 IN FIGS 33 & 34 DES SEE NOTE 60 & 73 ON J85500A-1 ADDED, ON SH B17 FIG 50, BRKT & LEADS DES FROM FIG 33 OR 34 ADDED, ON SH D7 IN FIGS H9 TO H14 "M" LEAD LINEDOUT, R LEAD & SEE NOTE 72 ADDED.

3-3-88 CLASS M

[illegible]	[illegible]		20

ON SH A1 IN TITLE BOX DES REPLACED BY T-82603-31 ADDED ON SH B10 FIG 28 REF TO H-285-224, L25 & L26 ETC. LINEDOUT & REF TO P/O 845563279 WIRE SETS ADDED THRU OUT FIG. ON SH D4 IN FIG H5 AT SHUNT. REF TO HP & HQ OPT ADDED. ON SH D6 IN FIG H7 REF TO HQ OPT CODE 1424-2600-50, LF SHUNT, WAS 1420-2500-50, LF NDD8550NJ-22

3-3-88 CLASS M

[illegible]	[illegible]		21

ON SH B16 IN FIG 44 LOC 28 DIODE, WAS SHOWN CONN TO + TOP TERM & - TOP TERM, & CURRENT REVERSE & LEAD DES 15A & 17 INTERCHANGED. DALLAS POINT ISSUE 19.1

3-3-88 CLASS M

[illegible]	[illegible]		22

ON SH A3 NOTE 73 & REF TO SAME IN FIG 20B ADDED.

6-27-88 CLASS "M"

EJC	JLS		23

IN FIG 44 (SH B16) REF TO ALL D3 WRG LEAD DES "8461541 WIRE SET" & ASSOC COLORS ADDED. CHG AGREES WITH DALLAS POINT ISSUE 22.1 & 22.2.

6-27-88 CLASS "M"

EJC	EJW		24

ADDED NOTES 74 THRU 78. IN FIGS H1, H2, H5, H6 AND H7 ADDED KS 15977 L13 AND L73 AND ASSOCIATED WIRING. IN FIG H8 ADDED "WP" SPECS

8-16-90 CL "M"

RK	RJP		25

ADD J85503 C-2 TO FIG. 39 & 40

9-10-90 CL "M"

DDW	RJP		26

DARKEN PRINT ON MYLAR SO THAT THEY ARE EASIER TO READ.

PDI 92ESDJ9750 C

12-11-92 CL "M"

ED	KS		27

T-82603-30 SHEET A3

SEE PROPRIETARY NOTICE ON SHEET A1

CHARGE AND DISCHARGE CIRCUIT	DWG SIZE 6S	ISSUE 27
ATT&T TECHNOLOGIES, INC.	T-82603-30	SHEET A3

SN-97-2135 (4-84)
PRINTED IN U.S.A.

FIG 1
MAIN BAT DISCH BUS BAR
INITIAL BAY

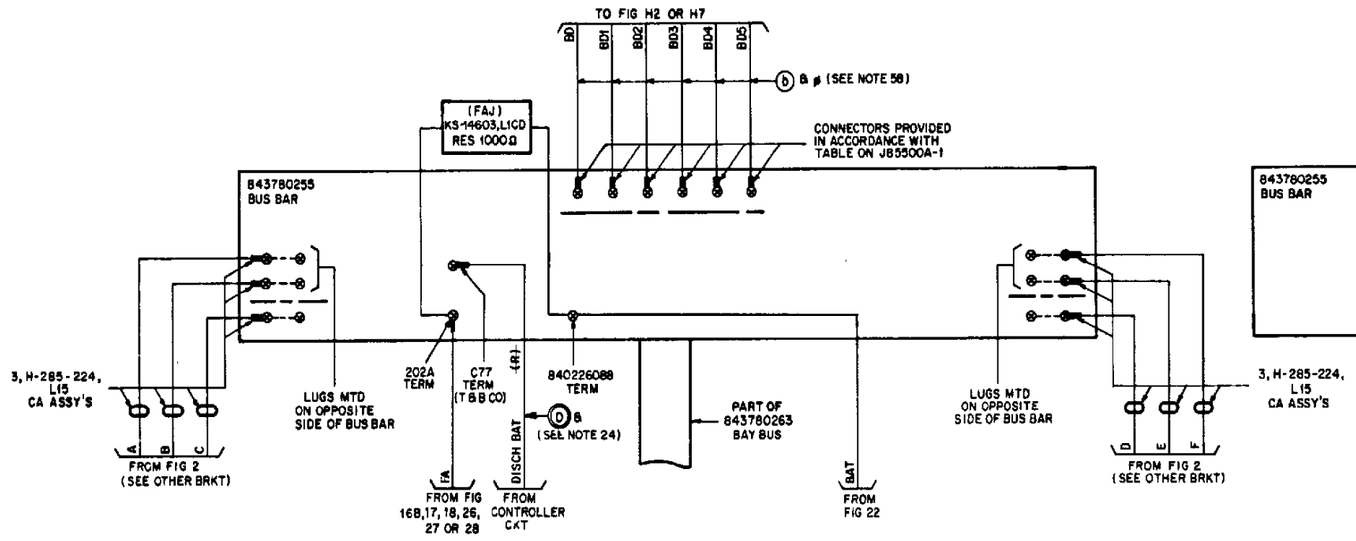


FIG 2
SUPPL BAT DISCH BUS BAR
INITIAL BAY

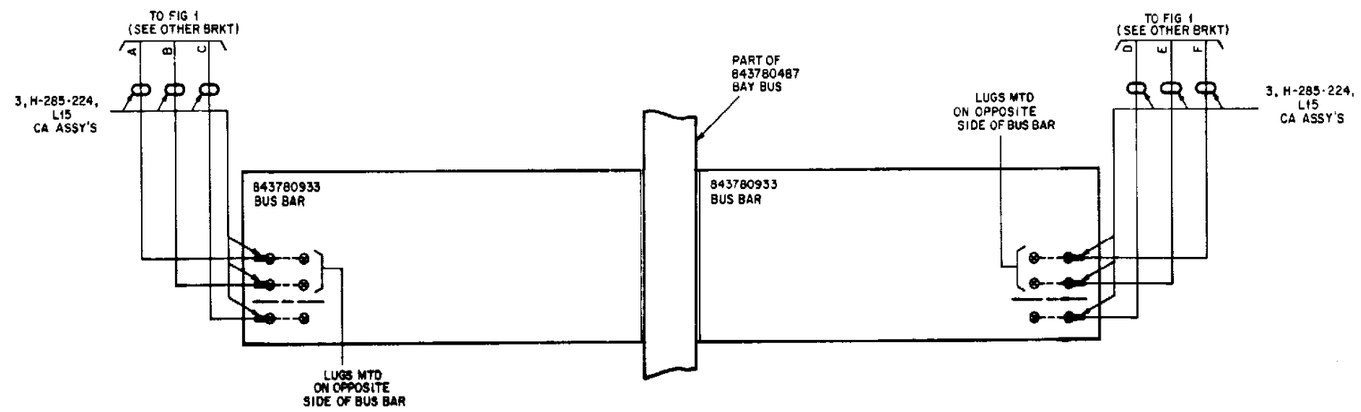
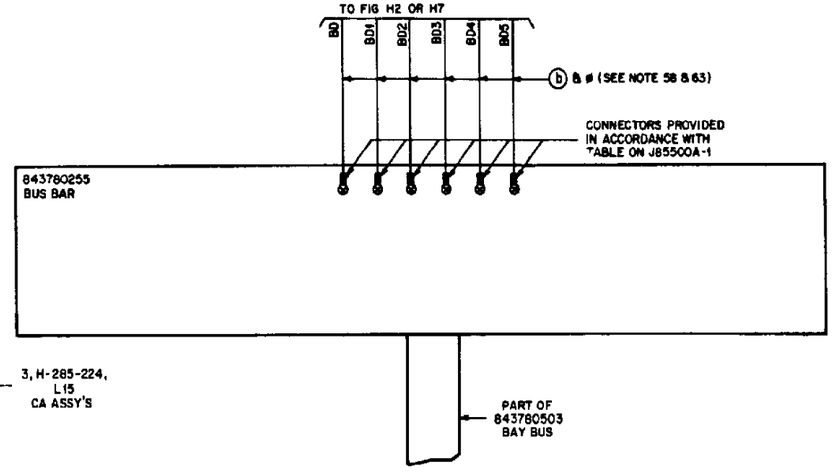


FIG 3
DISCH BUS BAR
SUPPL BAY



SEE PROPRIETARY NOTICE ON SHEET A1

CHARGE AND DISCHARGE CIRCUIT	DWG SIZE 69	ISSUE 19
AT&T TECHNOLOGIES, INC.	T-82603-30	SHEET B1

FIG 4

(+) OR (-) 24 VOLT, 100 AMP 3 PHASE RECTIFIER

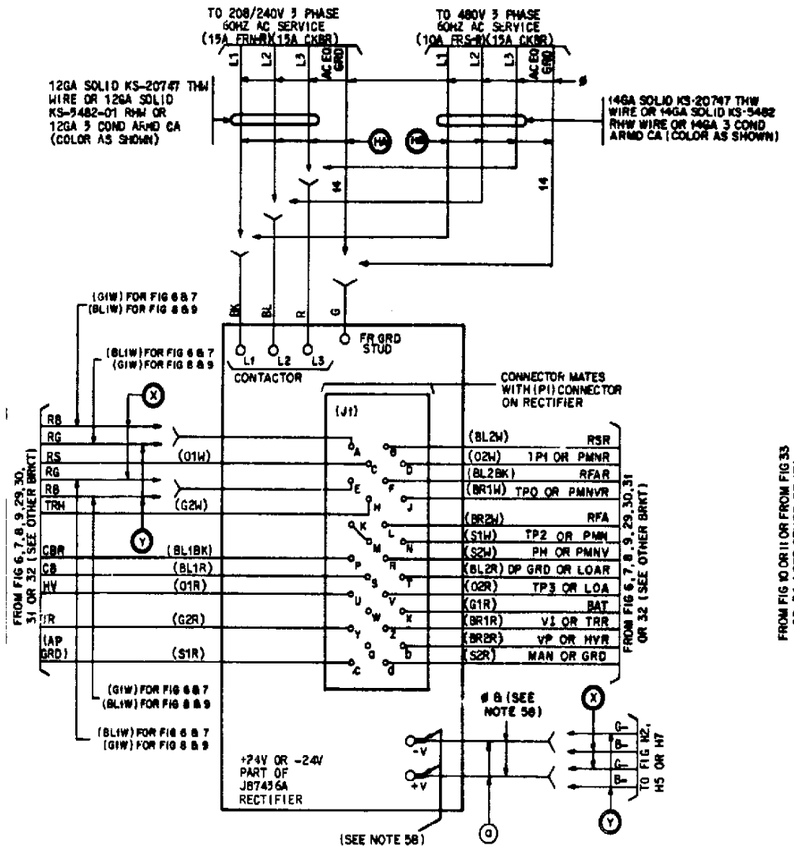


FIG 5

(+) OR (-) 24 VOLT, 200 AMP 3 PHASE RECTIFIER

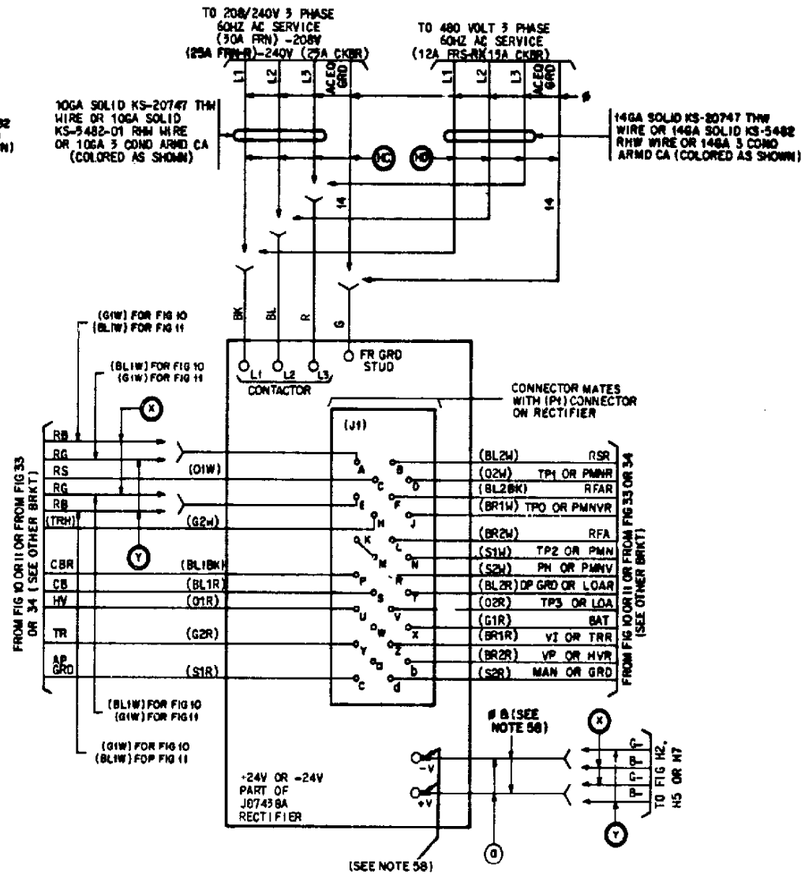


FIG 6

CONNECTOR INITIAL BAY
+24 VOLTS, 100 AMP RECTIFIER
FOR USE WITH SMART CONTROLLER
(SEE NOTE 9)

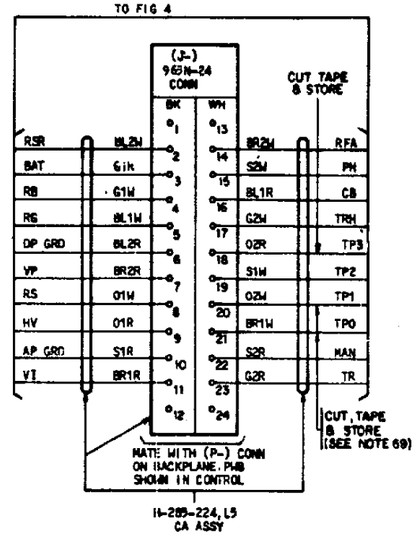
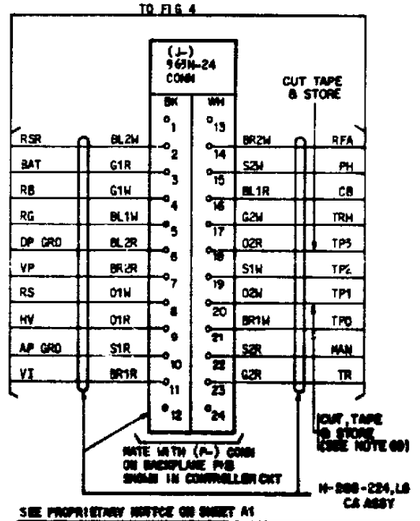


FIG 7

CONNECTOR SUPPL BAY
+24 VOLTS, 100 AMP RECTIFIER
FOR USE WITH SMART CONTROLLER
(SEE NOTE 9)



CHARGE AND DISCHARGE CIRCUIT		
	DWG SIZE 65	ISSUE 20
AT&T TECHNOLOGIES, INC.	T-82603-30	SHEET 82

FIG 8
CONNECTOR INITIAL BAY
-24 VOLTS,100 AMP RECTIFIER
FOR USE WITH SMART CONTROLLER
(SEE NOTE 9)

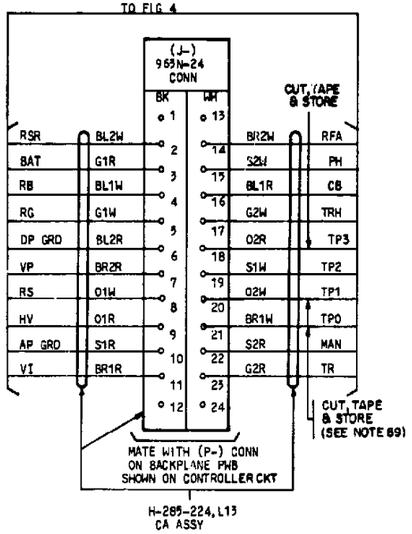


FIG 9
CONNECTOR SUPPL BAY
-24 VOLTS,100 AMP RECTIFIER
FOR USE WITH SMART CONTROLLER
(SEE NOTE 9)

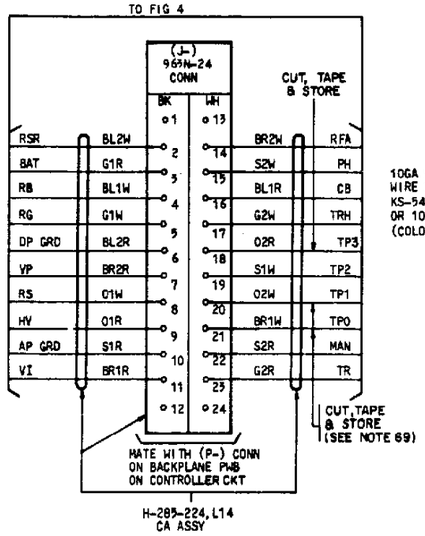


FIG 10
CONNECTOR
+24 VOLT, 200 AMP RECT
FOR USE WITH SMART CONTROLLER
(SEE NOTE 9)

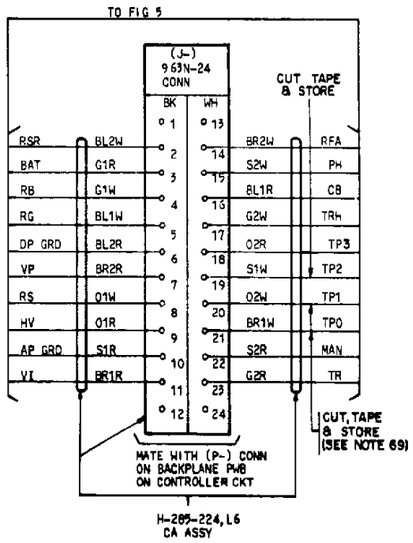


FIG 11
CONNECTOR
-24 VOLT, 200 AMP RECT
FOR USE WITH SMART CONTROLLER
(SEE NOTE 9)

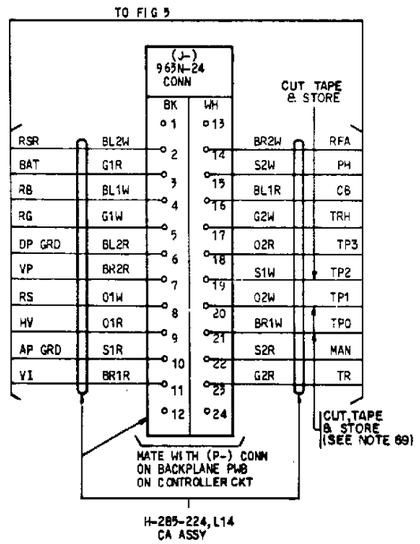


FIG 12
-48 VOLT, 100 AMP RECT

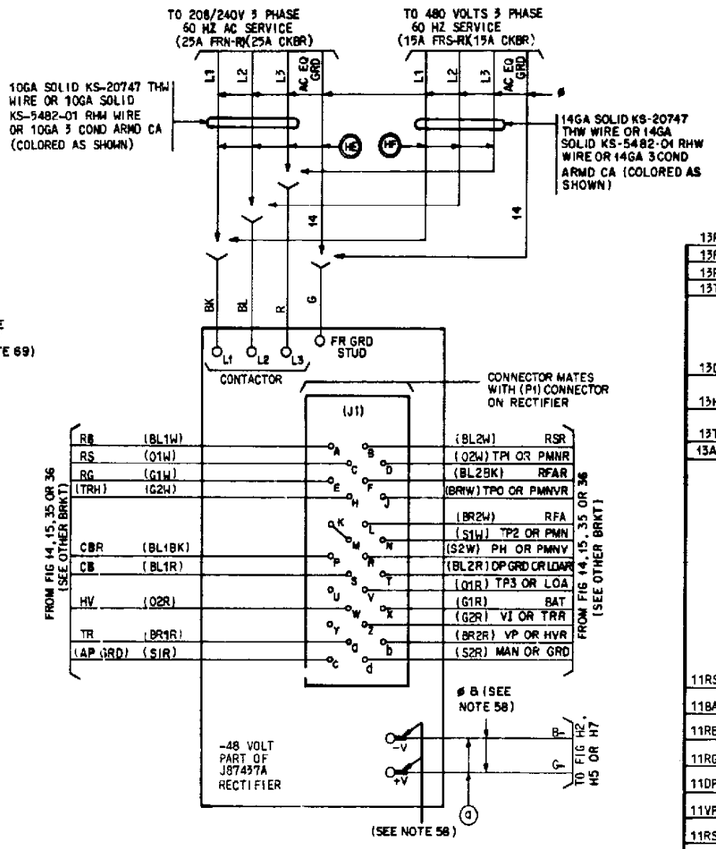
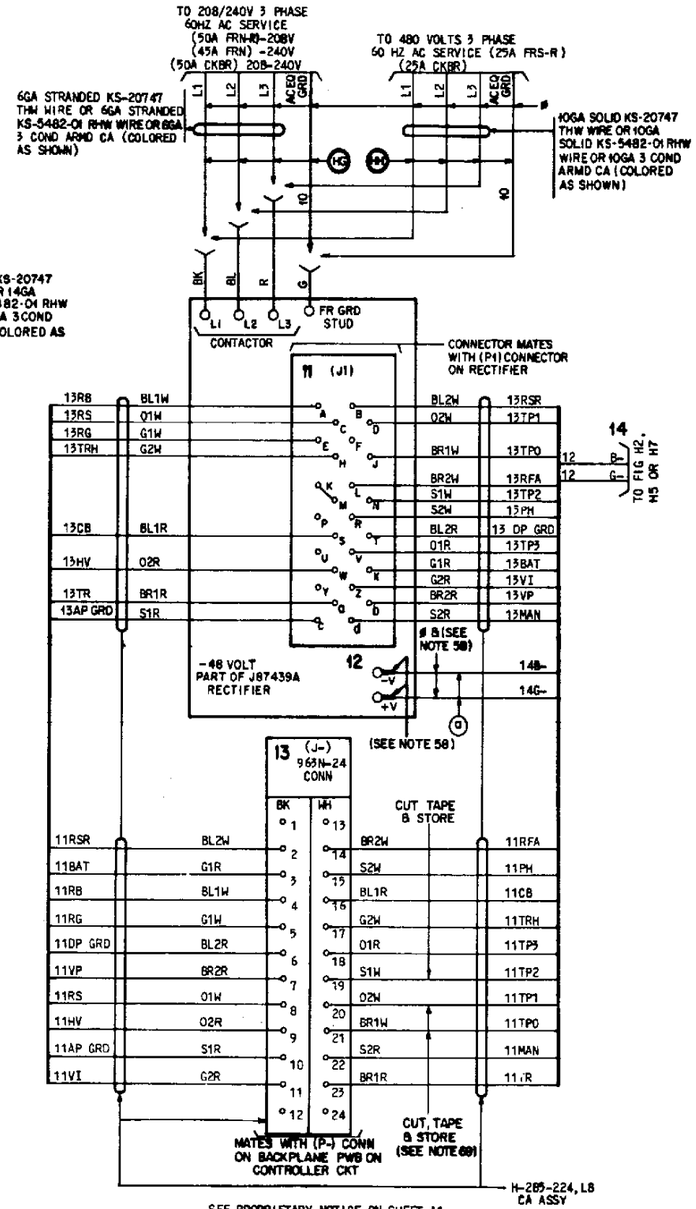


FIG 13
-48 VOLTS 200 AMP RECT
FOR USE WITH SMART CONTROLLER



SEE PROPRIETARY NOTICE ON SHEET A1

CHARGE AND DISCHARGE CIRCUIT	DWG SIZE 6S	ISSUE 14
AT&T TECHNOLOGIES, INC.	T-82603-30	SHEET 83

FIG 14

CONNECTOR INITIAL BAY
-48 VOLTS, 100 AMP RECTIFIER
FOR USE WITH SMART CONTROLLER
(SEE NOTE 9)

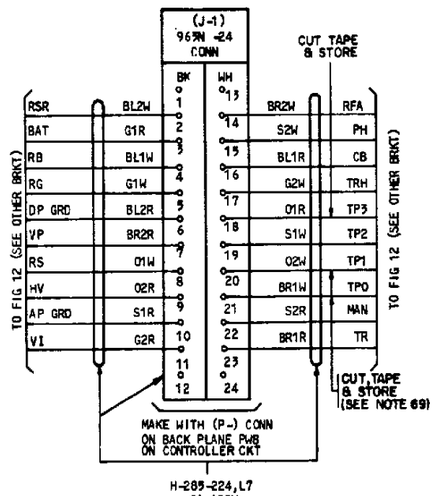


FIG 15

CONNECTOR SUPPL BAY
-48 VOLTS, 100 AMP RECTIFIER
FOR USE WITH SMART CONTROLLER
(SEE NOTE 9)

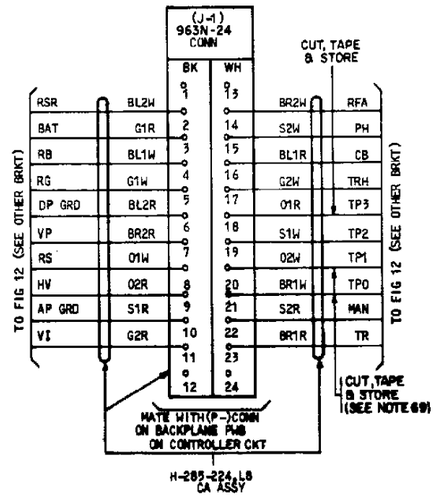


FIG 16A

CIRCUIT BREAKER PANEL
ED-83018-30, GRP 2 OR 10

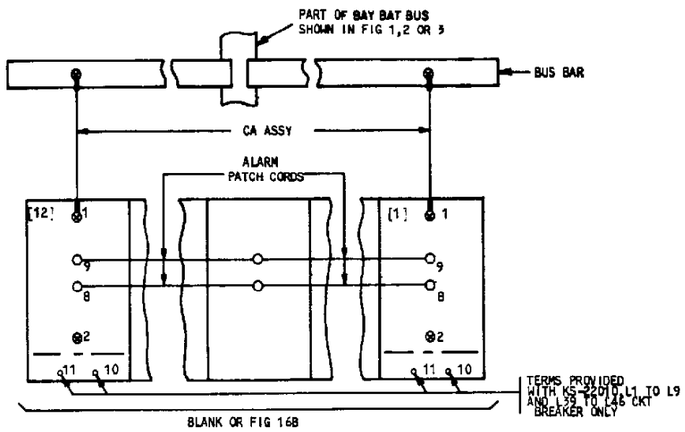


FIG 16B

CIRCUIT BREAKER 1 TO 110 AMP
ED-83018-30, GRP 2 OR 10
(SEE TABLE E)

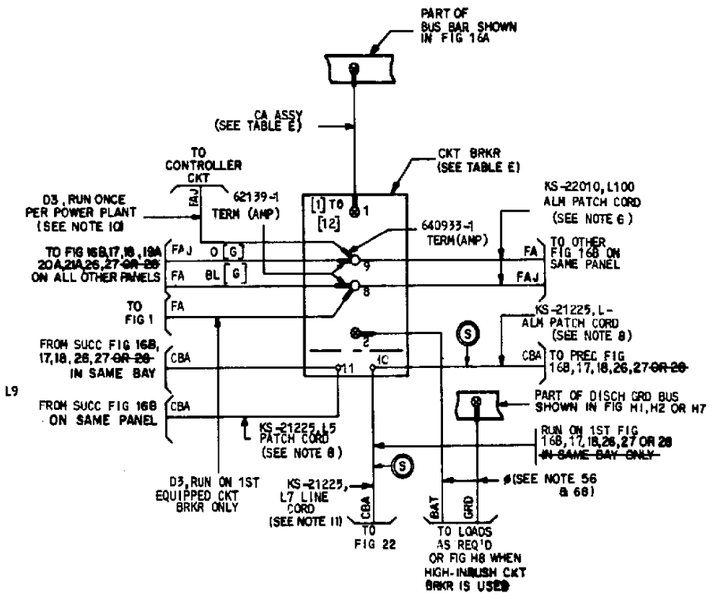


TABLE E (USED WITH FIG 16B & 36)

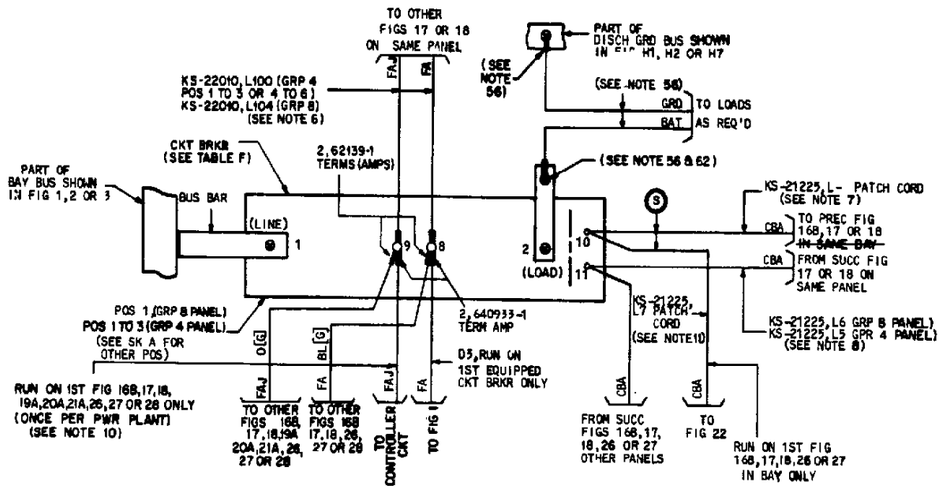
	OPT	CKT BRKR	LIST	AMP RATING	ED-83018-30 GRP	H-285-200 CA ASSEM LIST
WITH CHARGE SWITCH	HR	KS-22010	39	1	E	7
	HS		40	3	F	7
	HT		41	5	G	7
	HU		42	10	H	7
	HV		43	15	J	7
	HW		44	20	K	6
	HX		45	25	L	5
	HY		46	30	M	5
	HZ		1	40	N	4
	HAA		2	45	P	4
	HAB		3	50	Q	3
	HAC		4	60	R	3
	HAD		5	70	S	2
	HAE		6	80	T	2
	HAF		7	90	U	1
	HAG		8	100	V	1
	HAH		9	110	W	1
HIGH-INRUSH	HEL	CDI-Z287-1 (HEINEMANN) (SEE NOTE 23)		30	FV	5
	HEM	CDI-Z288-11 (HEINEMANN) (SEE NOTE 23)		40	FW	4
	HEN	CDI-Z288-18 (HEINEMANN) (SEE NOTE 23)		100	FX	1

	OPT	CKT BRKR	LIST	AMP RATING	ED-83018-30 GRP	H-285-200 CA ASSEM LIST
WITHOUT CHARGE SWITCH	HAJ	KS-22010	47	1	CP	7
	HAK		48	3	CQ	7
	HAL		49	5	CR	7
	HAM		50	10	CS	7
	HAN		51	15	CT	7
	HAP		52	20	CU	5
	HAQ		53	25	CV	5
	HAR		54	30	CW	5
	HAS		11	40	X	4
	HAT		12	45	Y	4
	HAU		13	50	Z	3
	HAV		14	60	AA	*
	HAW		15	70	AB	2
	HAX		16	80	AC	2
	HAY		17	90	AD	1
	HAZ		18	100	AE	1
	HBA		19	110	AF	1

CHARGE AND DISCHARGE CIRCUIT	DWG SIZE 6S	ISSUE 11
AT&T TECHNOLOGIES, INC.	T-82603-30	SHEET B4

FIG 17 (MFR DISC)

CIRCUIT BREAKER
100 AMP TO 225 AMP
(ED-83018-30, GRP 4 OR GRP 8)
(SEE TABLE F)



SK A

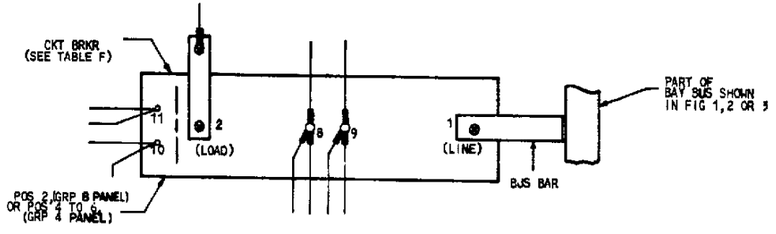
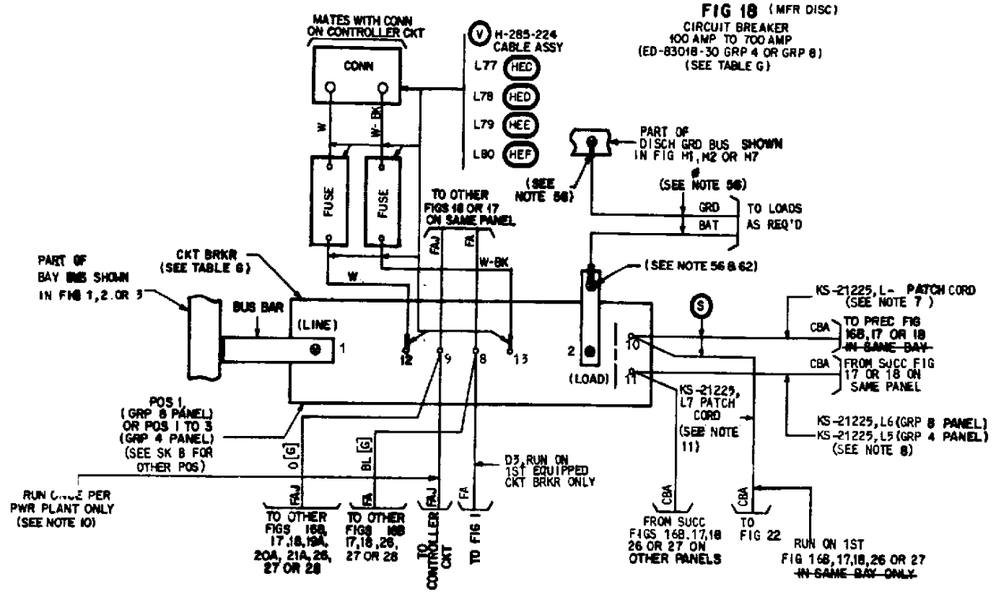


TABLE F (FOR USE WITH FIG 17 & 24)

	OPT	CKT BRKR	LIST	AMP RATING	ED-83018-30 GRP
WITH CHARGE SWITCH	HBB	KS-22012	21	100	AG
	HBC		22	110	AH
	HBD		23	125	AJ
	HBE		24	150	AK
	HBF		25	175	AL
	HBG		26	200	AM
	HBH		27	225	AN
WITHOUT CHARGE SWITCH	HBJ	KS-22012	31	100	AP
	HBK		32	110	AQ
	HBL		33	125	AR
	HBM		34	150	AS
	HBN		35	175	AT
	HBP		36	200	AU
	HBQ		37	225	AV
HIGH-INRUSH	HEP	GJ-Z35-35 (HEINEMANN) (SEE NOTE 23)		175	FY

FIG 18 (MFR DISC)

CIRCUIT BREAKER
100 AMP TO 700 AMP
(ED-83018-30 GRP 4 OR GRP 8)
(SEE TABLE G)



SK B

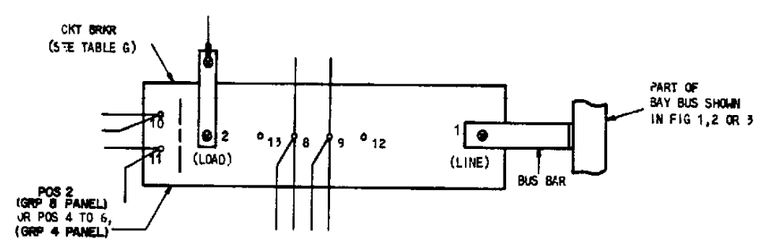


TABLE G (FOR USE WITH FIG 18 & 25)

	OPT	CKT BRKR	LIST	AMP RATING	ED-83018-30 GRP
WITH CHARGE SWITCH AND SHUNT	HBR	KS-22012, LIST 104 &	21	100	BS
	HBS		22	110	BT
	HBT		23	125	BU
	HBU		24	150	BY
	HBV		25	175	BW
	HBW		26	200	BX
	HBX		27	225	BY
	HBY		38	300	BG
	HBZ		39	400	BM
	HCA		40	500	BJ
	HCB		41	600	BK
	HCC		42	700	BL
HIGH-INRUSH	HEQ	GJHP-Z12-1 (HEINEMANN) (SEE NOTE 23)		400	FZ

	OPT	CKT BRKR	LIST	AMP RATING	ED-83018-30 GRP
WITHOUT CHARGE SWITCH WITH SHUNT	HCD	KS-22012, LIST 104 &	31	100	BZ
	HCE		32	110	CA
	HCF		33	125	CB
	HCG		34	150	CC
	HCH		35	175	CD
	HCJ		36	200	CE
	HCK		37	225	CF
	HCL		43	300	BM
	HCM		44	400	BN
	HCN		45	500	BP
	HCP		46	600	BQ
	HCQ		47	700	BR

	OPT	CKT BRKR	LIST	AMP RATING	ED-83018-30 GRP
WITH CHARGE SWITCH WITHOUT SHUNT	HCR	KS-22012	38	300	AW
	HCS		39	400	AX
	HCT		40	500	AY
	HCU		41	600	AZ
	HCV		42	700	BA
WITHOUT CHARGE SWITCH WITHOUT SHUNT	HCW	KS-22012	43	300	BB
	HCX		44	400	BC
	HCY		45	500	BD
	HCZ		46	600	BE
	HDA		47	700	BF

SEE PROPRIETARY NOTICE ON SHEET A1

CHARGE AND DISCHARGE CIRCUIT	DWG SIZE 6S	ISSUE 11
AT&T TECHNOLOGIES, INC.	T-82603-30	SHEET 85

FIG 19A

ED-83018-30
(USED WITH GRP 9)

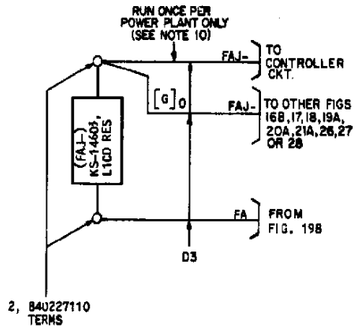


FIG 19B

FUSE PANEL
ED-83018-30
GRP 9

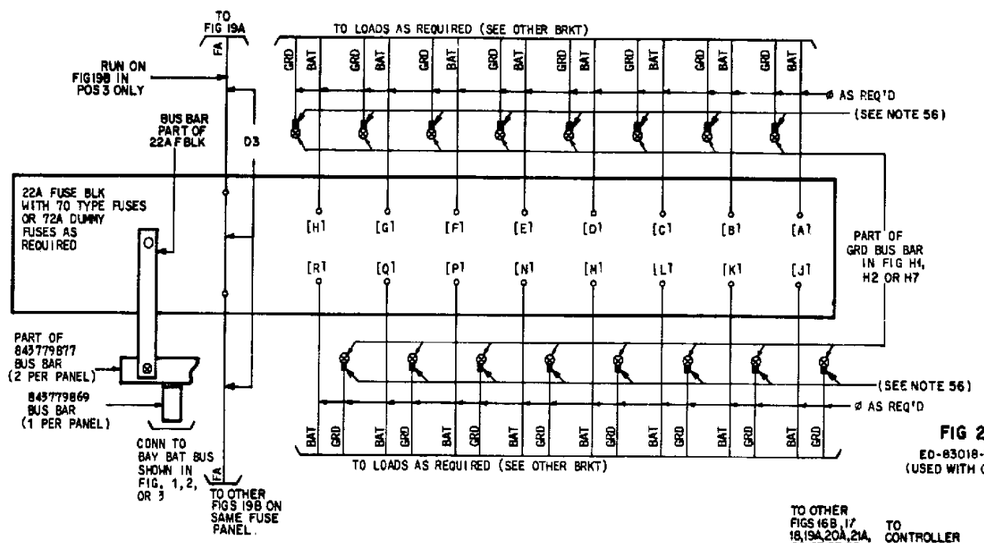


FIG 21A

ED-83018-30, GRP 7
(USED WITH GRP CL OR CM)

FIG 21B

FUSE PANEL
ED-83018-30
GRP CL

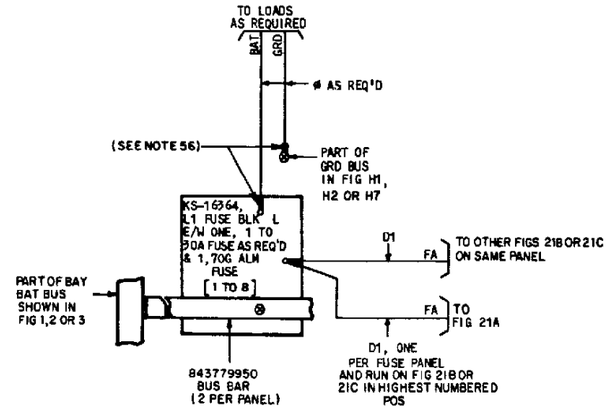


FIG 20A

ED-83018-30
(USED WITH GP GRP 6)

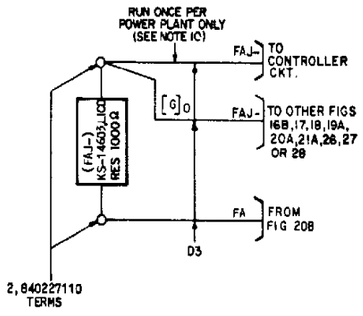
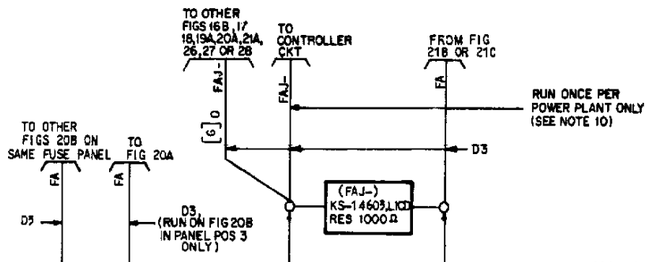


FIG 20B

FUSE PANEL
ED-83018-30
GRP 6



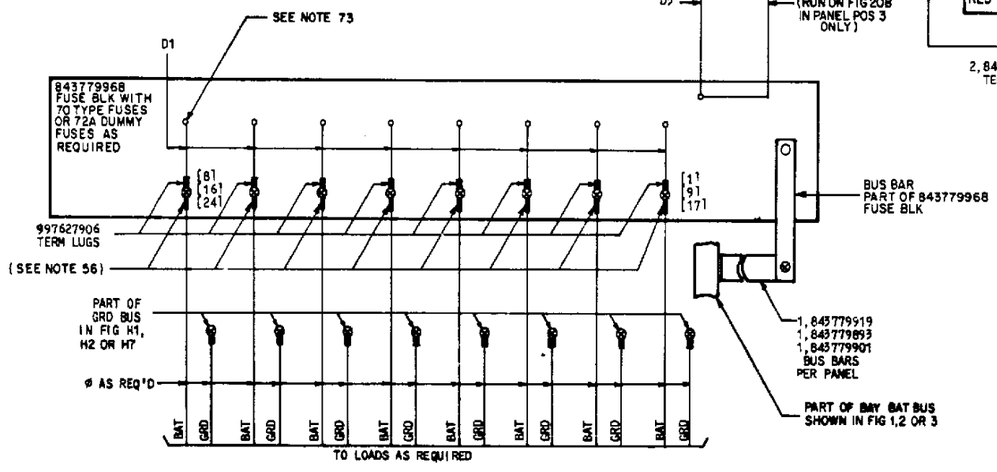
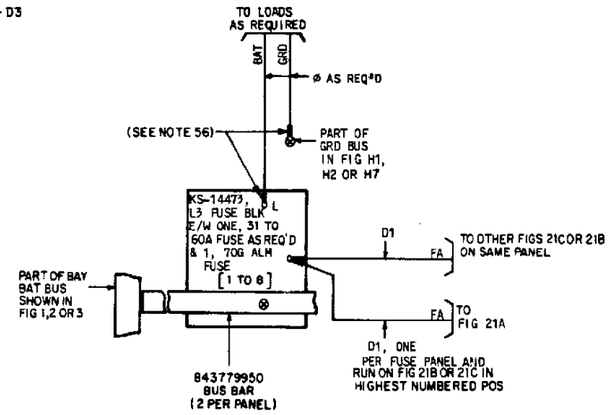


FIG 21C

FUSE PANEL
ED-83018-30
GRP CM



CHARGE AND DISCHARGE CIRCUIT	DWG SIZE 6S	ISSUE 23
AT&T TECHNOLOGIES, INC.	T-82603-30	SHEET B6

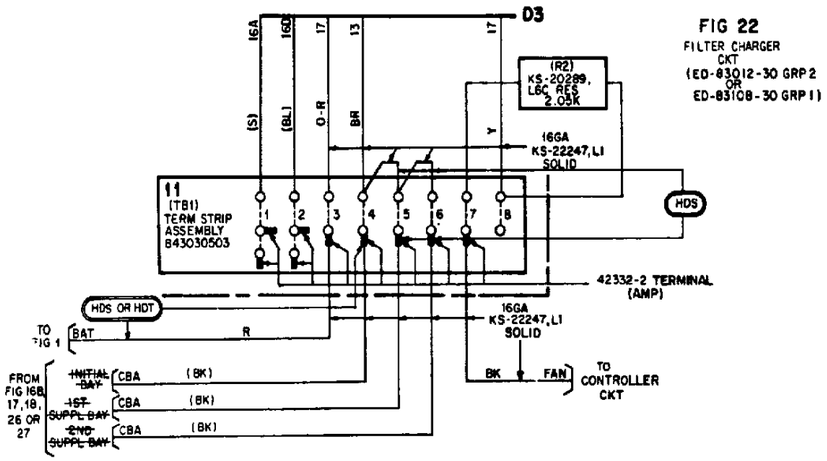


FIG 22
FILTER CHARGER
CKT
(ED-83012-30 GRP 2
OR
ED-83108-30 GRP 1)

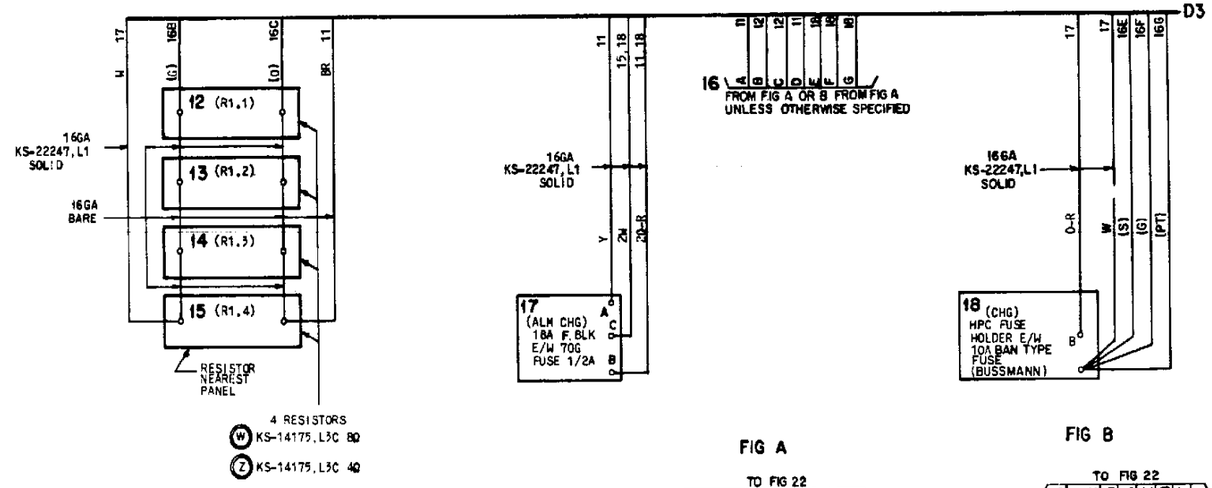


FIG A

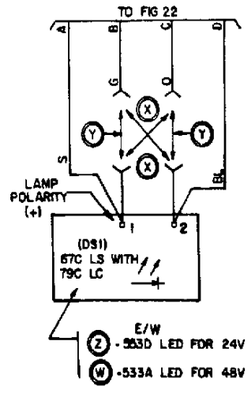
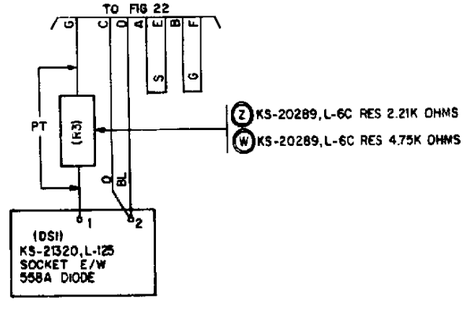


FIG B



SEE PROPRIETARY NOTICE ON SHEET A1

CHARGE AND DISCHARGE CIRCUIT	DWG SIZE 65	ISSUE 14
AT&T TECHNOLOGIES, INC	T-82603-30	SHEET 87

FIG 23

DATA SET
(SEE NOTE 18)

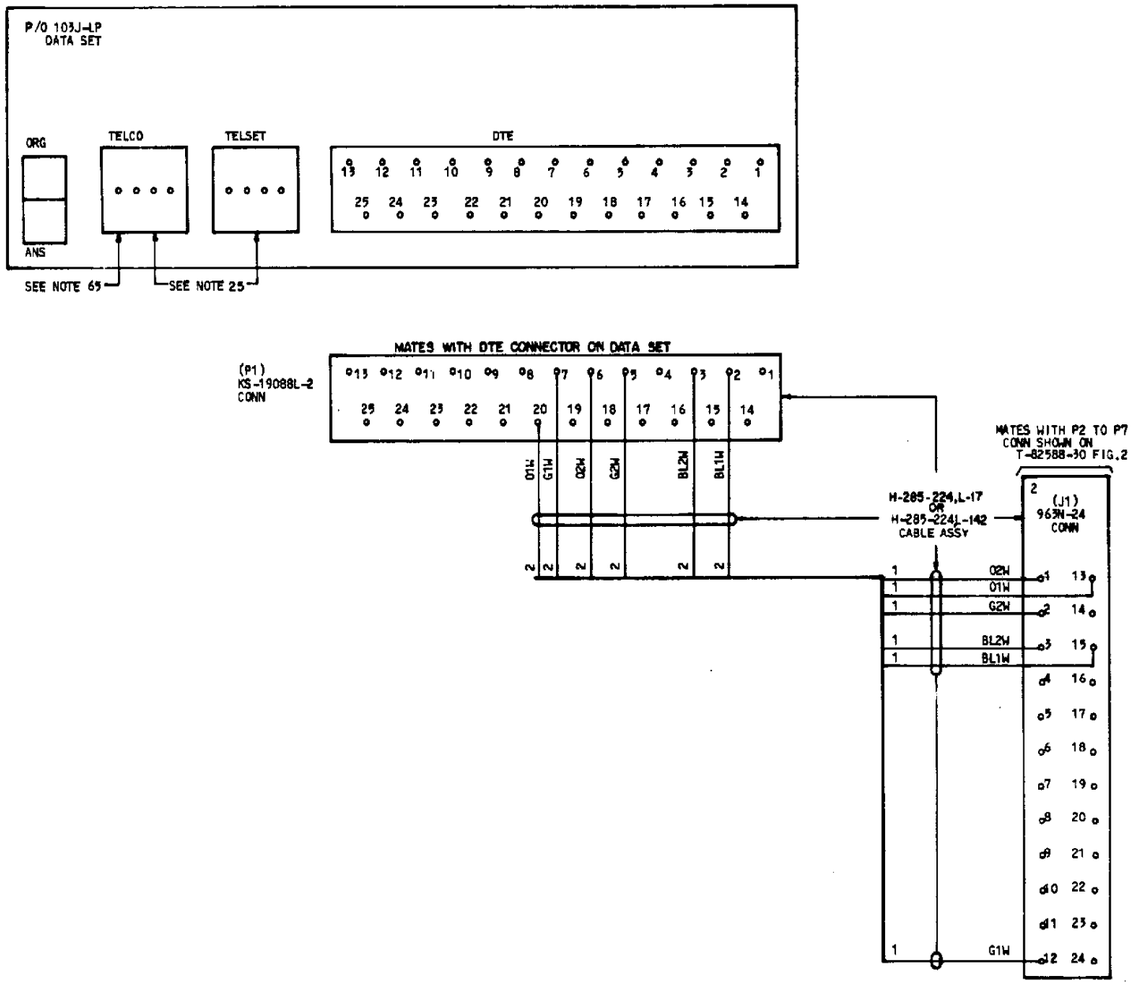
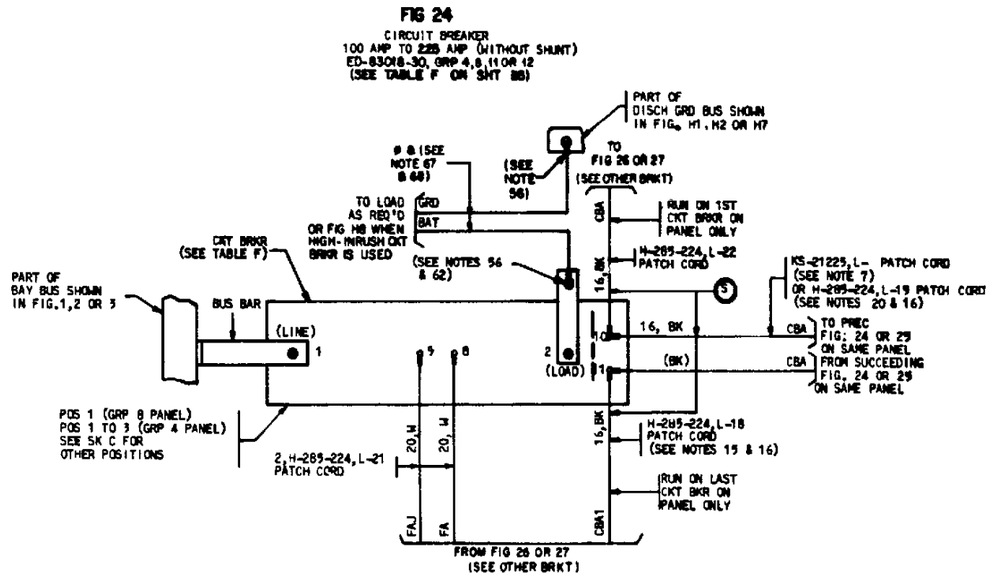
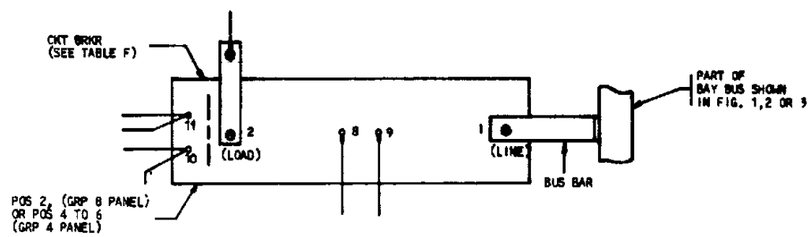


FIG 24

CIRCUIT BREAKER
100 AMP TO 225 AMP (WITHOUT SHUNT)
ED-83018-30, GRP 4,8,11 OR 12
(SEE TABLE F ON SHT 88)



SK C

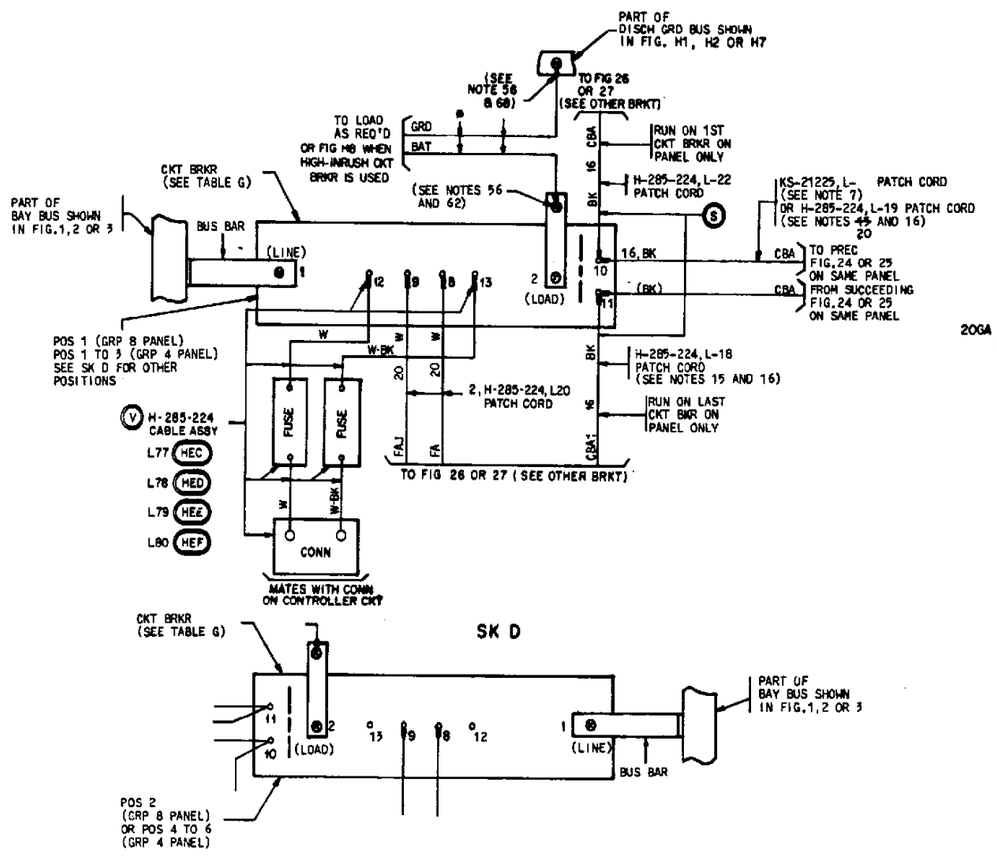


SEE PROPRIETARY NOTICE ON SHEET A1

CHARGE AND DISCHARGE CIRCUIT		
	DWG SIZE 65	ISSUE 20
AT&T TECHNOLOGIES, INC.	T-82603-30	SHEET 88

FIG 25

CIRCUIT BREAKER
100 AMP TO 700 AMP (SHUNT TYPE)
ED-85018-30 GRP 4,8,11 OR 12
(SEE TABLE G ON SHT 85)



SK D

FIG 26

TERM STRIP
(ED-85018-30, GRP 4 OR 11)

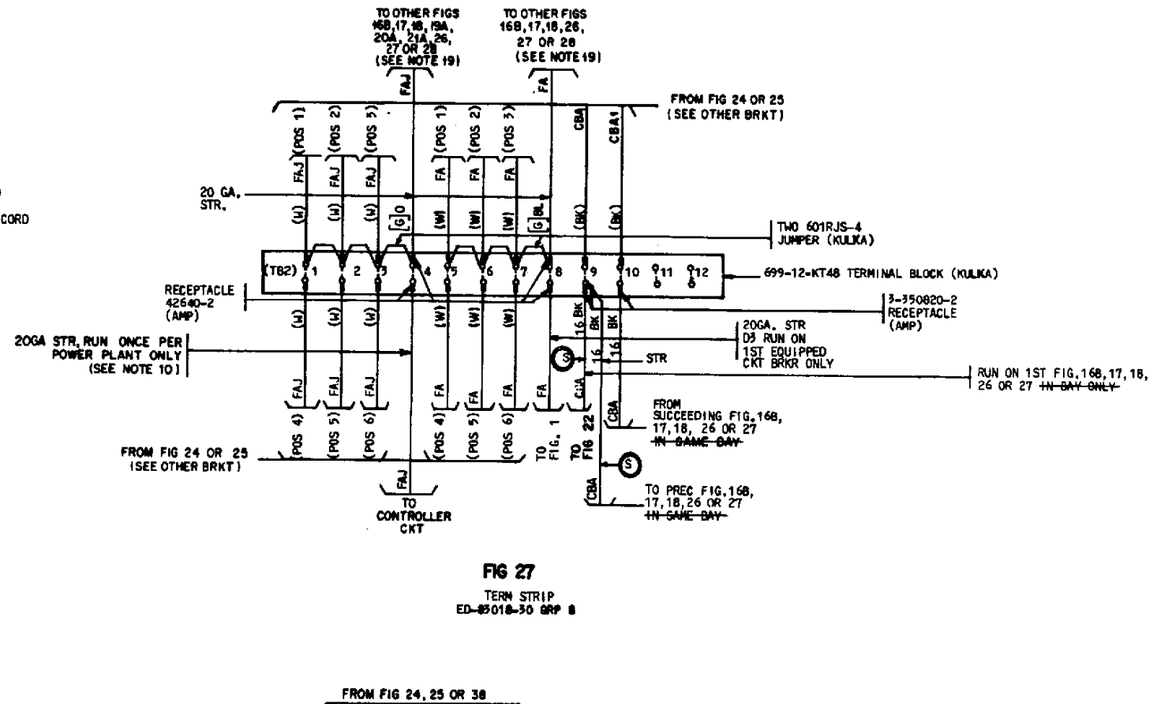
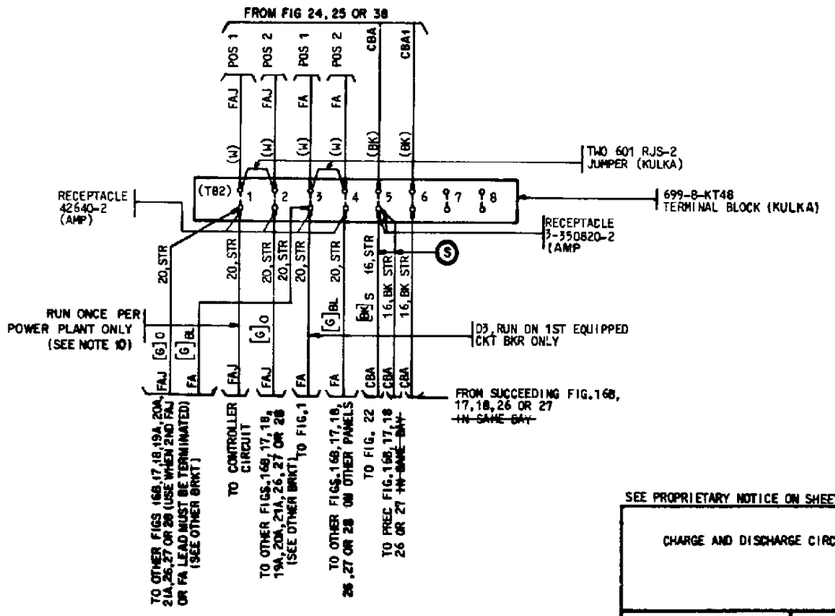


FIG 27

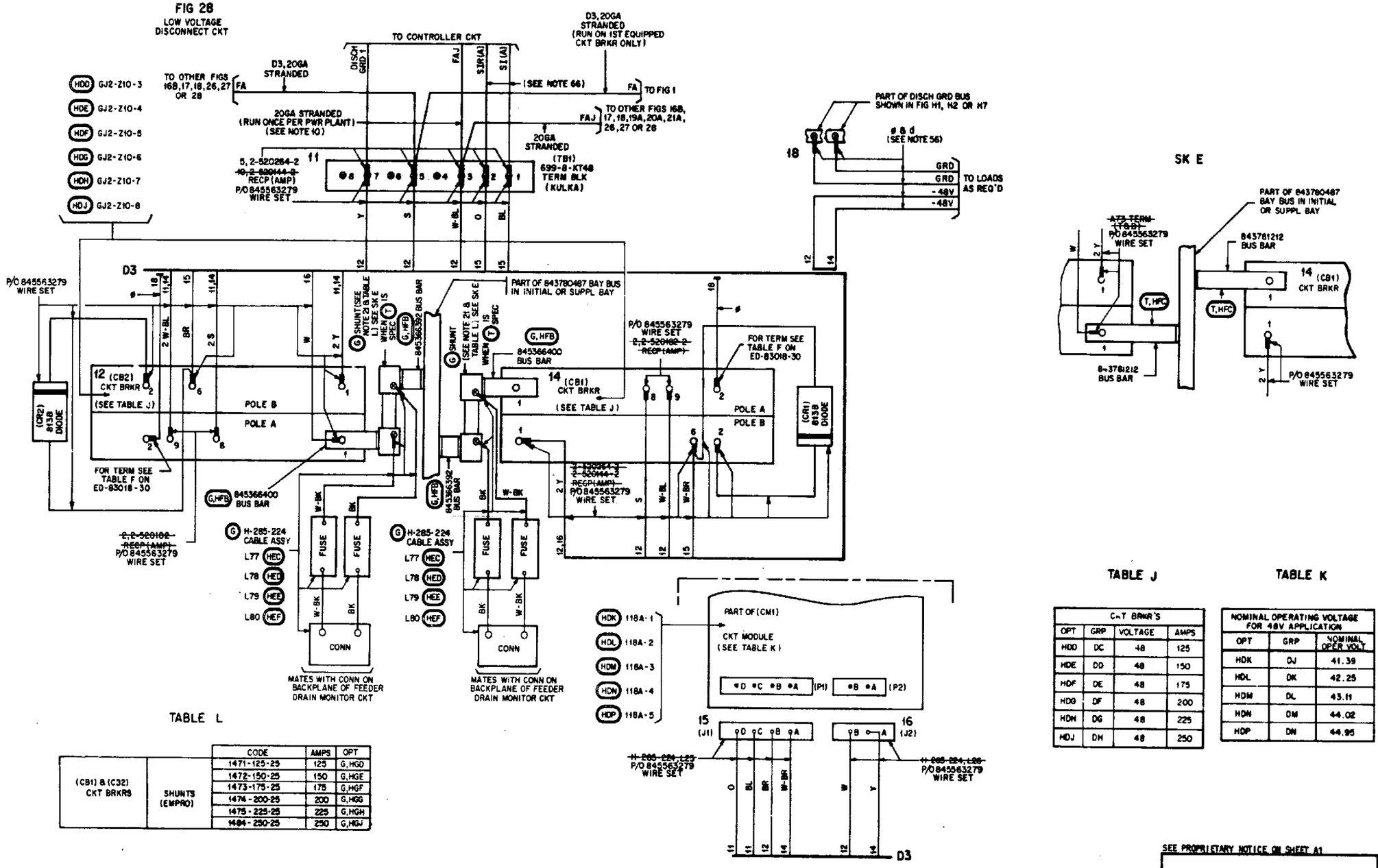
TERM STRIP
ED-85018-30 GRP 8



SEE PROPRIETARY NOTICE ON SHEET A1

CHARGE AND DISCHARGE CIRCUIT		
	DWG SIZE D5	ISSUE 16
AT&T TECHNOLOGIES, INC.	T-82603-30	SHEET B9

FIG 28
LOW VOLTAGE DISCONNECT CKT



SK E

TABLE J

CKT BRKR'S

OPT	GRP	VOLTAGE	AMPS
HDD	DC	48	125
HDE	DD	48	150
HDF	DE	48	175
HDG	DF	48	200
HDH	DG	48	225
HDJ	DH	48	250

TABLE K

NOMINAL OPERATING VOLTAGE FOR 48V APPLICATION

OPT	GRP	NOMINAL OPER VOLT
HDK	DJ	41.39
HDL	DK	42.25
HDM	DL	43.11
HDN	DM	44.02
HDP	DN	44.95

TABLE L

		CODE	AMPS	OPT
(CB1) & (C32) CKT BRKRS	SHUNTS (EMPRO)	1471-125-25	125	G,HGD
		1472-150-25	150	G,HGE
		1473-175-25	175	G,HGF
		1474-200-25	200	G,HGG
		1475-225-25	225	G,HGH
		1484-250-25	250	G,HGJ

CHARGE AND DISCHARGE CIRCUIT	DWG SIZE F5	ISSUE 21
AT&T TECHNOLOGIES, INC.	T-82603-30	SHEET 810

FIG 29

CONNECTOR INITIAL BAY
+24 VOLTS, 100 AMP RECTIFIER
FOR USE WITH CONVENTIONAL CONTROLLER
(SEE NOTE 9)

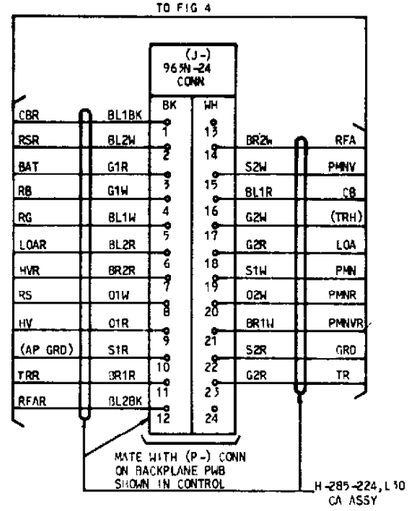


FIG 31

CONNECTOR INITIAL BAY
-24 VOLTS, 100 AMP RECTIFIER
FOR USE WITH CONVENTIONAL CONTROLLER
(SEE NOTE 9)

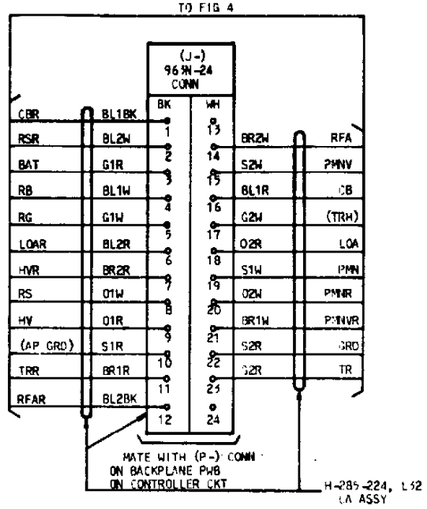


FIG 33

CONNECTOR
-24 VOLT, 200 AMP RECTIFIER
FOR USE WITH CONVENTIONAL
OR MCS CONTROLLER

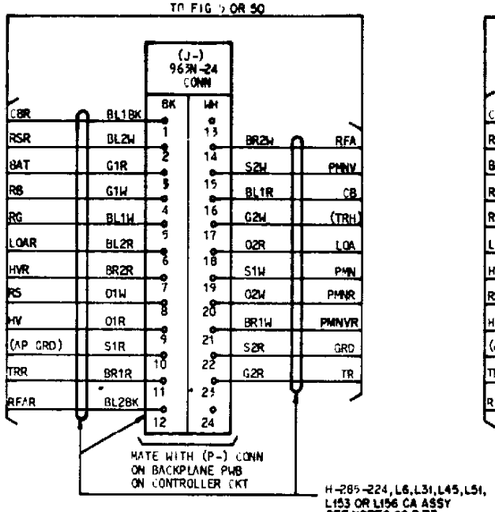


FIG 35

CONNECTOR INTIAL BAY
-48 VOLTS, 100 AMP RECTIFIER
FOR USE WITH CONVENTIONAL CONTROLLER
(SEE NOTE 9)

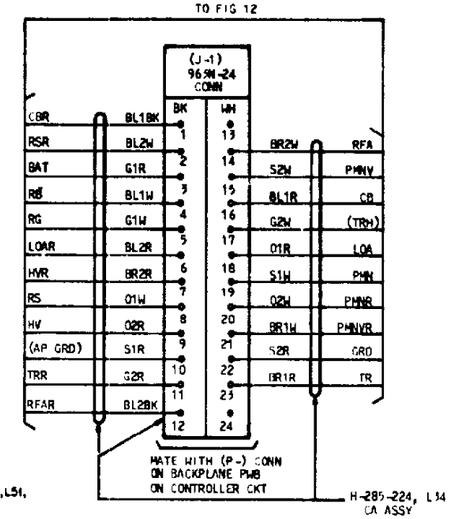


FIG 30

CONNECTOR SUPPL BAY
+24 VOLTS 100 AMP RECTIFIER
FOR USE WITH CONVENTIONAL CONTROLLER

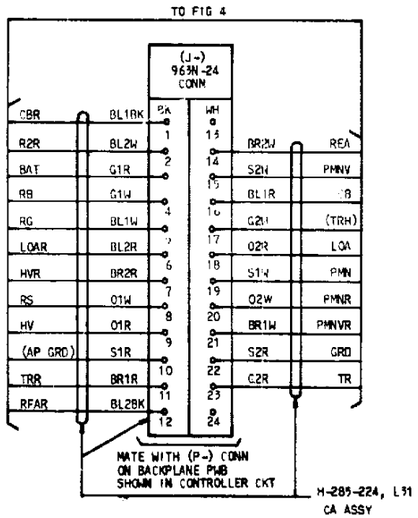


FIG 32

CONNECTOR SUPPL BAY
-24 VOLTS, 100 AMP RECTIFIER
FOR USE WITH CONVENTIONAL CONTROLLER
(SEE NOTE 9)

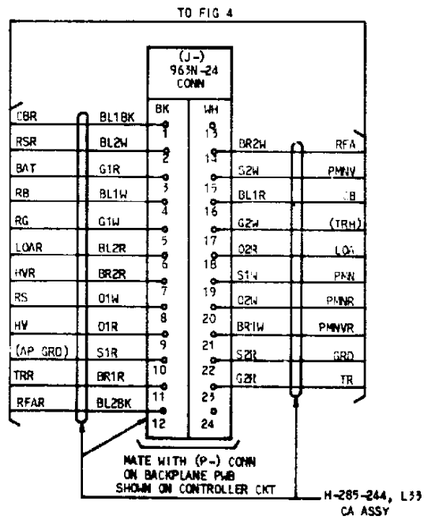


FIG 34

CONNECTOR
-24 VOLT, 200 AMP RECTIFIER
FOR USE WITH CONVENTIONAL OR MCS CONTROLLER

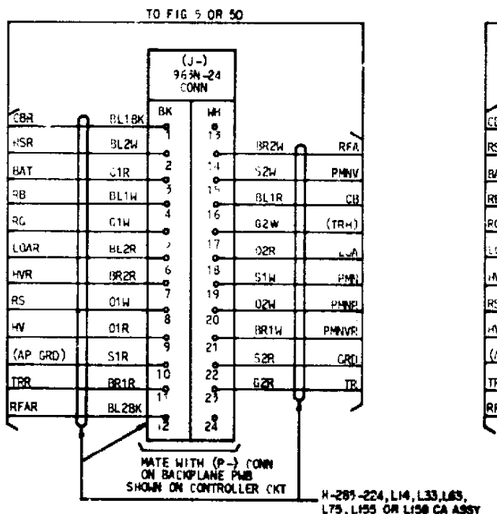
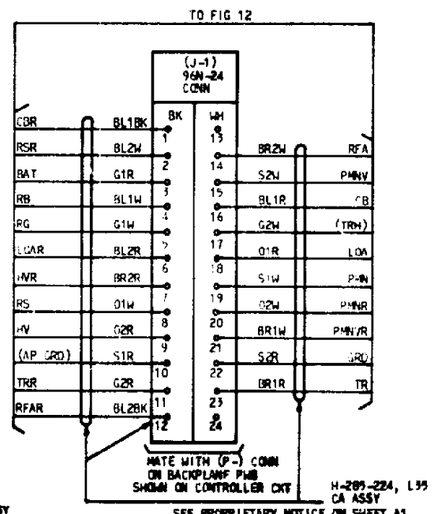


FIG 36

CONNECTOR SUPPL BAY
-48 VOLTS, 100 AMP RECTIFIER
FOR USE WITH CONVENTIONAL CONTROLLER
(SEE NOTE 9)



SEE PROPRIETARY NOTICE ON SHEET A1

CHARGE AND DISCHARGE CIRCUIT	DWG SIZE: S5	ISSUE: 20
AT&T TECHNOLOGIES, INC.	T-82603-30	SHEET: B16

FIG 37

-48 VOLTS 200 AMP RECTIFIER
FOR USE WITH CONVENTIONAL CONTROLLER

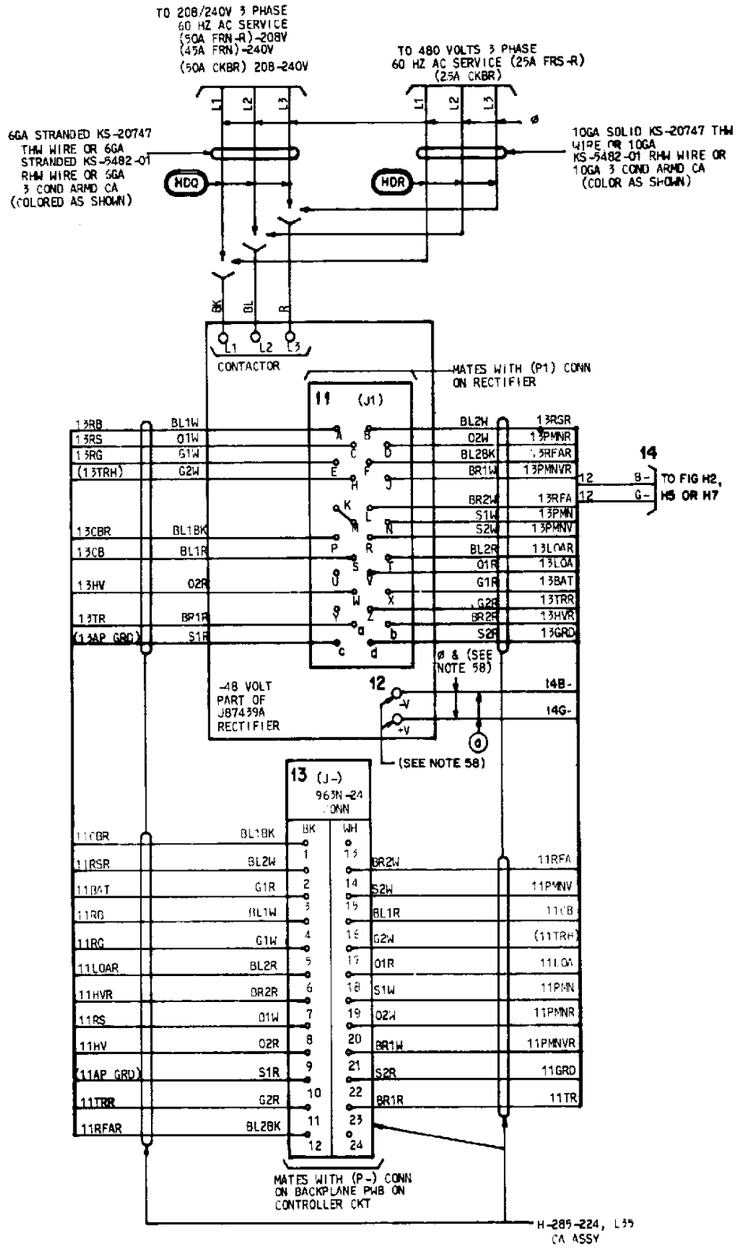
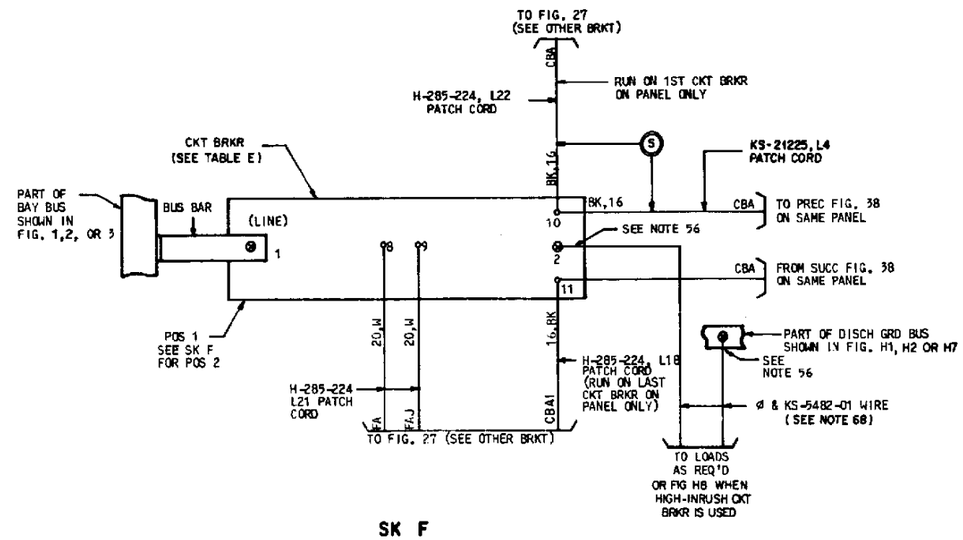
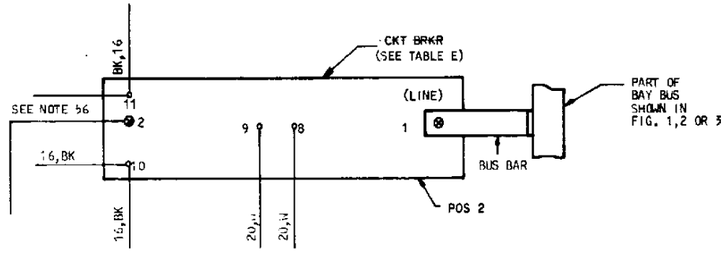


FIG 38

CIRCUIT BREAKER 1 TO 110 AMP
ED-83018-30, GRP 10



SK F



SEE PROPRIETARY NOTICE ON SHEET A1

CHARGE AND DISCHARGE CIRCUIT	DWG SIZE 6S	ISSUE 14
AT&T TECHNOLOGIES, INC. T-82603-30		SHEET B12

FIG 39

-48 VOLT, 400AMP RECTIFIER OR -48 VOLT, 200AMP RECTIFIER FOR USE WITH SMART CONTROLLER

TO 208/240V 3PHASE 60HZ SERVICE (100A FRN) 250V (100A CKBR) 208-240V

TO 480V 3 PHASE 60HZ AC SERVICE (50A FRS 600V) (50A CK3R)

INPUT VOLTS	INPUT AMPS	LINE FUSES (BUSS)	INPUT CONDUCTORS KS-5482-01	INPUT CONDUCTORS KS-20785
208/240	200	FN50	3-6GA	3-6GA
480	200	FN25	3-10GA	3-10GA
208/240	400	100A FRN	3-2GA	3-2GA
480	400	50A FRS	3-6GA	3-6GA

6 GA STRANDED KS-20747 THW WIRE OR 8GA STRANDED KS-5482 01 WIRE OR BARE WIRE PART OF KS-20785 ARMD CABLE

10GA SOLID KS-20747 THW WIRE OR 10GA SOLID KS-5482-01 OR BARE WIRE P/O KS-20785 ARMD CABLE

HDY HDZ

FR GRD TERM

CONTACTOR (K1) REL

MATE WITH (P2A) PLUG ON PWB

12 (J2A) 1-102393-8 CONN (AMP)

PART OF H-285-224, L45 CA ASSY

16

TO FIG H2, H5 OR H7

26 GA SOLID

14 (J-) 963N-24 CONN

BK | WH

820A CA

SPARE, TAPE & STORE

MATES WITH (P-1) CONN BACKPLANE PWB ON CONTROLLER CKT

-48 VOLT, 400AMP RECTIFIER J85503C-1, -2 OR -48 VOLT, 200AMP RECTIFIER J85503B-1

CKT MOD PWB

SPARE, TAPE STORE

13

(SEE NOTE 58)

ø B (SEE NOTE 58)

FIG 40

-48 VOLT, 400AMP RECTIFIER OR -48 VOLT, 200AMP RECTIFIER FOR USE WITH CONVENTIONAL CONTROLLER

TO 208/240V 3PHASE 60HZ AC SERVICE 100A FRN 250V (100A CKBR) 208-240V

TO 480V 3 PHASE 60HZ AC SERVICE (50A FRS 600V) (50A CKBR)

INPUT VOLTS	INPUT AMPS	LINE FUSES (BUSS)	INPUT CONDUCTORS KS-5482-01	INPUT CONDUCTORS KS-20785
208/240	200	FN50	3-6GA	3-6GA
480	200	FN25	3-10GA	3-10GA
208/240	400	100A FRN	3-2GA	3-2GA
480	400	50A FRS	3-6GA	3-6GA

6GA STRANDED KS-20747 THW WIRE OR 8GA STRANDED KS-5482-01 WIRE OR BARE WIRE PART OF KS-20785 ARMD CABLE

10GA SOLID KS-20747 THW WIRE OR 10GA SOLID KS-5482-01 WIRE OR BARE WIRE PART OF KS-20785 ARMD CABLE

HEA HEB

FR GRD TERM

CONTACTOR

MATES WITH (P2A) PLUG ON PWB

22 (J2A) 1-102393-8 CONN (AMP)

PART OF H-285-224, L51 CA ASSY

26

TO FIG H2, H5 OR H7

26 GA SOLID

24 (J-) 963N-24 CONN

BK | WH

820A CA

MATES WITH (P-1) CONN BACKPLANE PWB ON CONTROLLER CKT

-48 VOLT, 400AMP RECTIFIER J85503C-1, -2 OR -48 VOLT, 200AMP RECTIFIER J85503B-1

CKT MOD PWB

23

(SEE NOTE 58)

ø B (SEE NOTE 58)

SEE PROPRIETARY NOTICE ON SHEET A1

CHARGE & DISCHARGE CIRCUIT

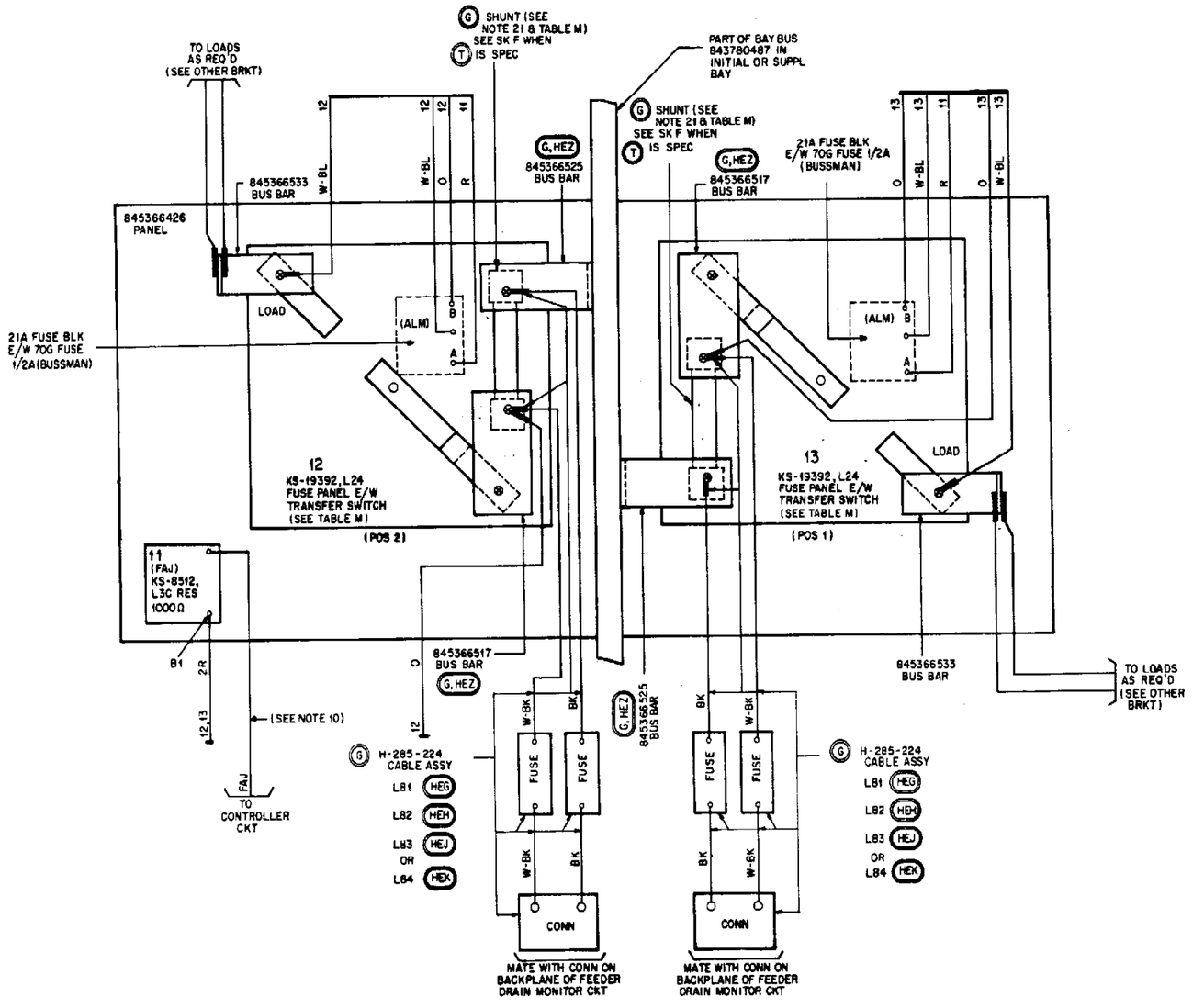
DWG SIZE B5 | ISSUE 26

AT&T TECHNOLOGIES, INC. | T-82603-30 | SHEET 813

T-82603-30 SHEET B13

SN-87-2135 (5-7-84)

FIG 41
FUSE PANEL
ED-83018-30, GRP 13



SK F

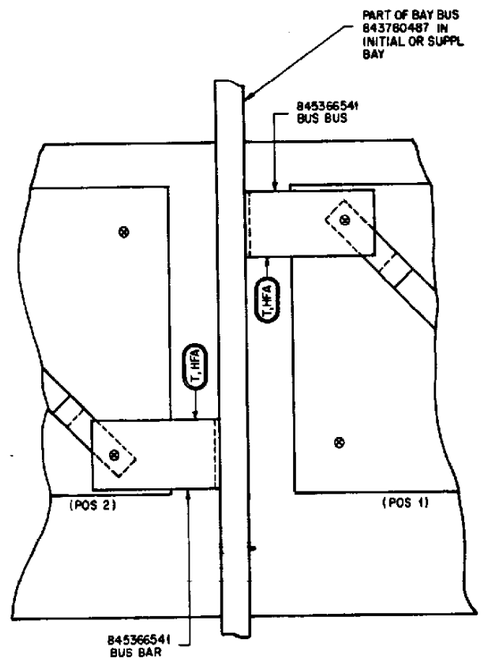


TABLE M

FUSE	LIST	OPT		CODE	AMPS	OPT
KS-19392 FUSE WITH TRANSFER SWITCH	12	HFD		1475-225-25	225	HFJ,G
	13	HFE		1476-300-25	300	HFK,G
	14	HFF		1477-400-25	400	HFL,G
	15	HFG		1478-500-25	500	HFM,G
	16	HFH		1479-600-25	600	HFN,G

CHARGE AND DISCHARGE CIRCUIT	DWG SIZE 6S	ISSUE 16
AT&T TECHNOLOGIES, INC.	T-82603-30	SHEET B14

FIG 42
FUSE PANEL
ED-83018-30, GRP 14

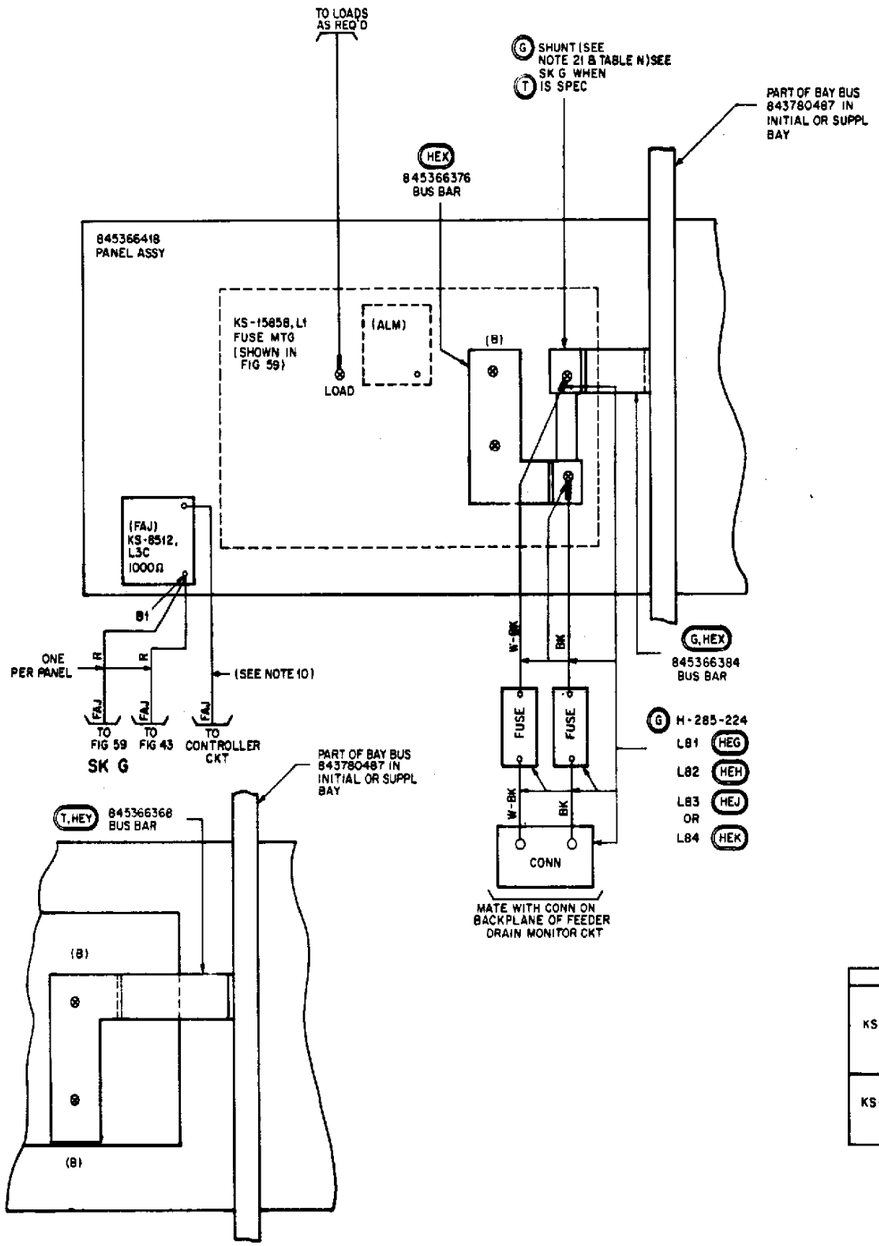


FIG 43
FUSE PANEL
ED-83018-30, GRP 14

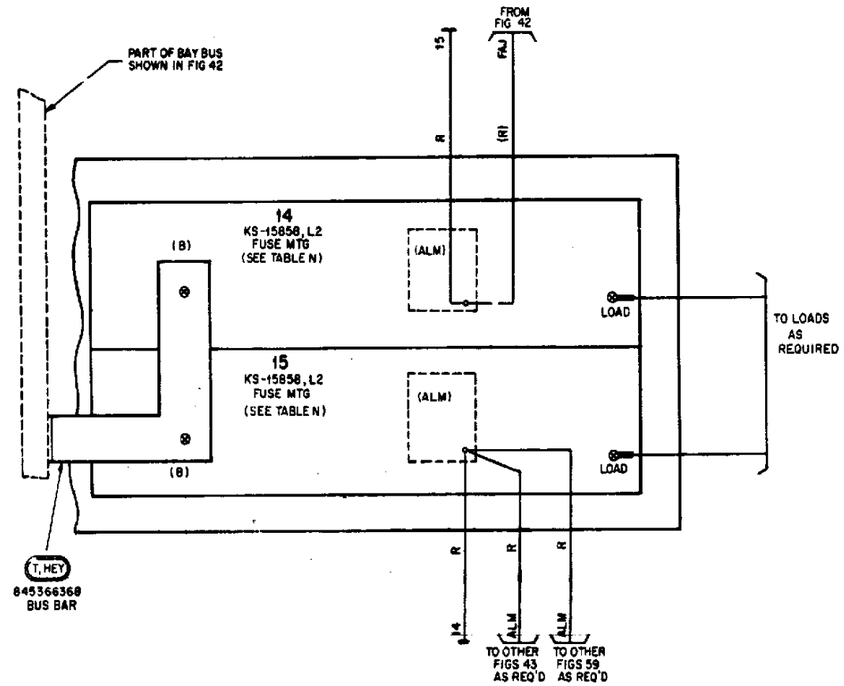
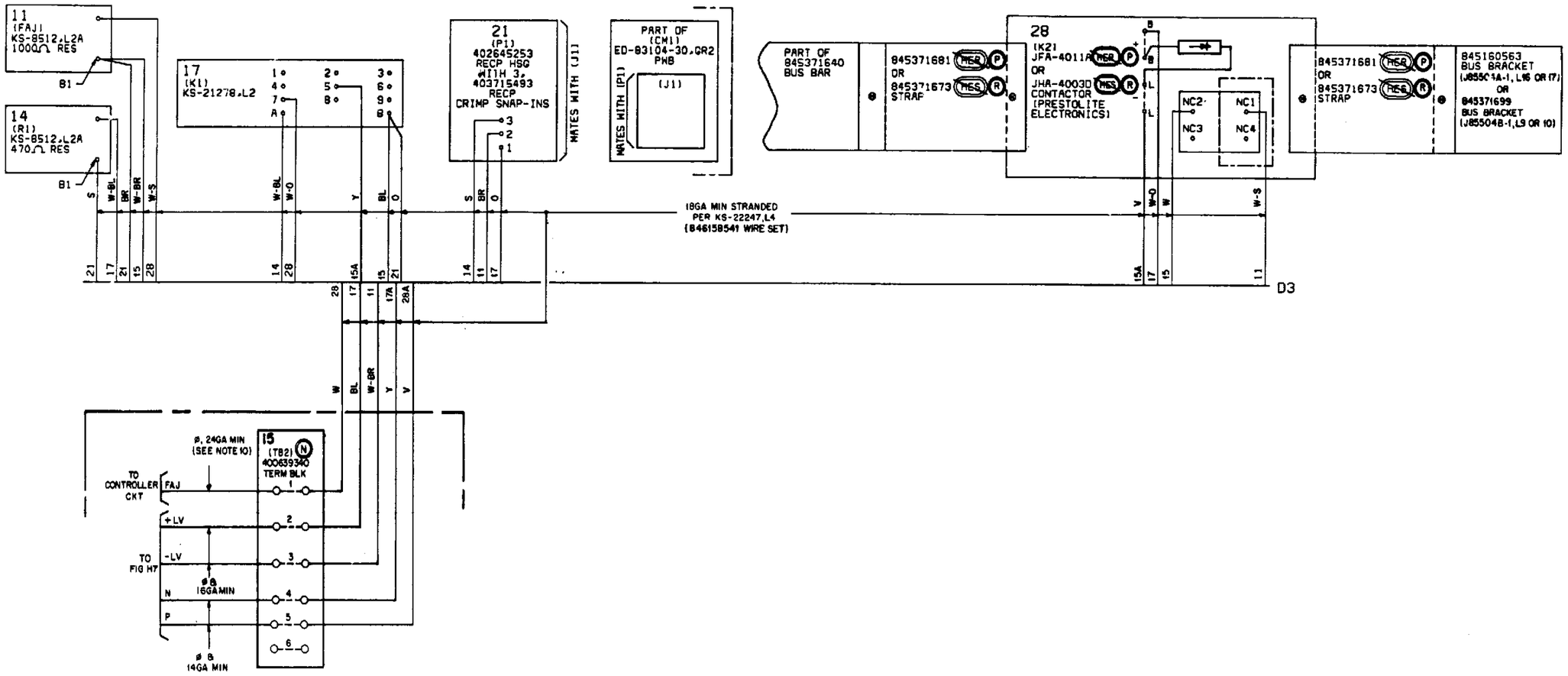


TABLE N

FUSE	AMPS	OPT	SHUNT (EMPRO)	CODE	AMPS	OPT
KS-15858, L1	110	HFP		1470-110-25	110	HFY,G
	125	HFQ		1471-125-25	125	HFZ,G
	150	HFR		1472-150-25	150	HGA,G
	175	HFS		1473-175-25	175	HGB,G
	200	HFT		1474-200-25	200	HGC,G
KS-15858, L2	70	HFU				
	80	HFV				
	90	HFW				
	100	HFX				

CHARGE AND DISCHARGE CIRCUIT		
	DWG SIZE 6S	ISSUE 18
AT&T TECHNOLOGIES, INC.	T-82603-30	SHEET B15

FIG 44
LOW VOLTAGE
DISCONNECT CKT



SEE PROPRIETARY NOTICE ON SH A1

CHARGE AND DISCHARGE CIRCUIT		DWG SIZE 6S	ISSUE 24
AT&T TECHNOLOGIES, INC.	T-82603-30	SHEET B16	

FIG 45

-48 VOLT, 25 AMP, 50 AMP, 100AMP, 125AMP OR 200AMP RECT

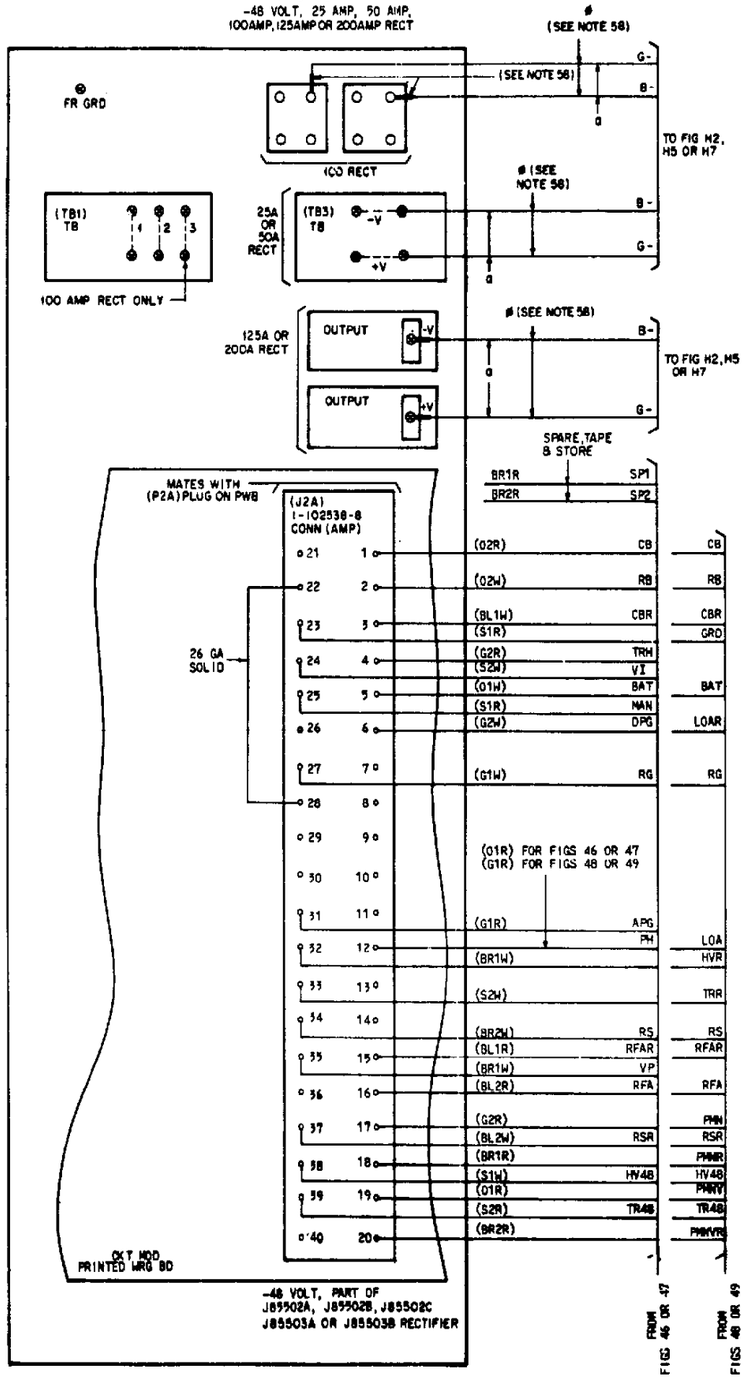
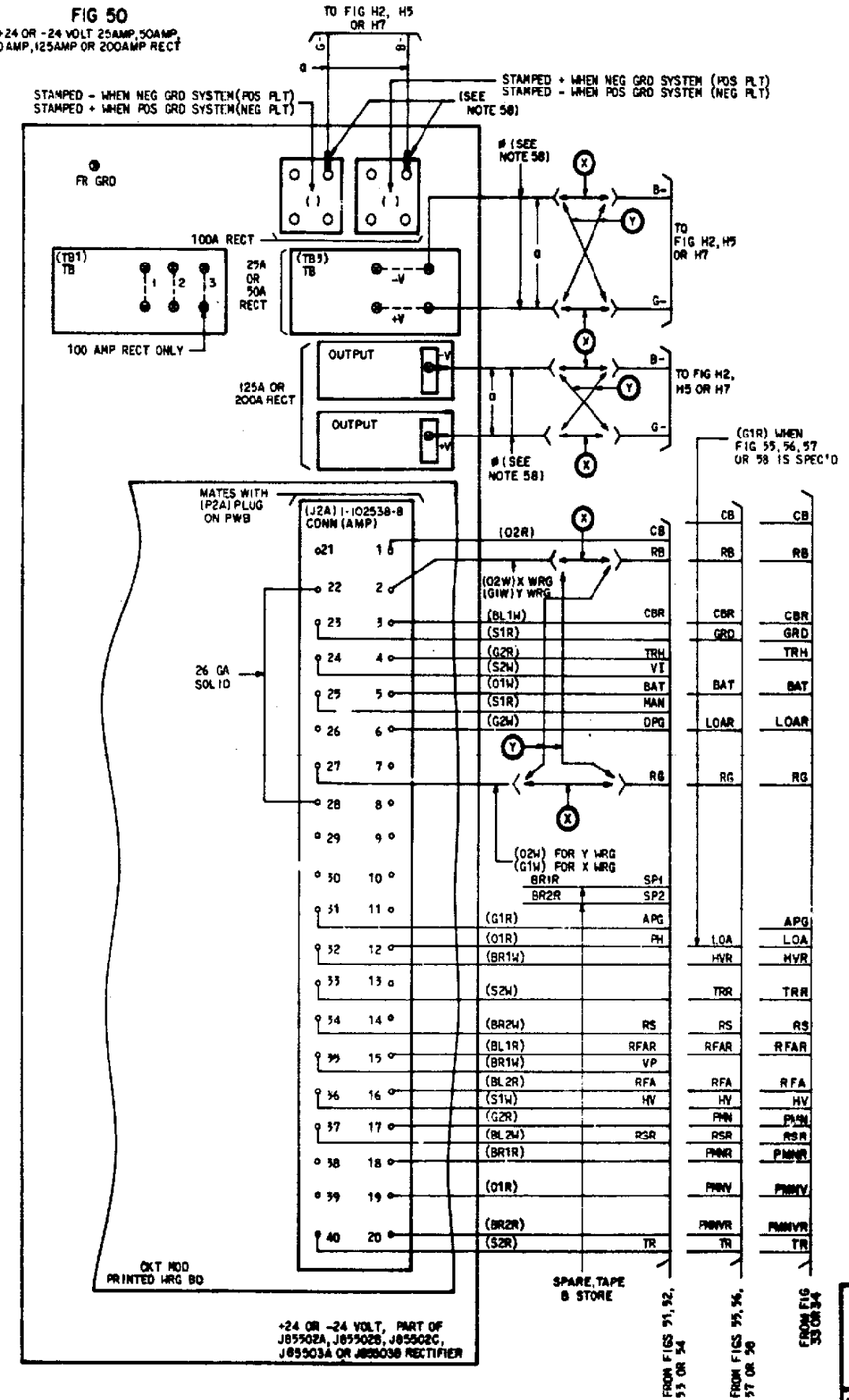


FIG 50

+24 OR -24 VOLT 25AMP, 50AMP, 100 AMP, 125AMP OR 200AMP RECT



CHARGE AND DISCHARGE CIRCUIT		
	DWG SIZE 6S	ISSUE 20
AT&T TECHNOLOGIES, INC.	T-82603-30	SHEET B17

FIG 46
CONN ASSY INITIAL BAY
-48 VOLT
(MCS CONTROLLER)

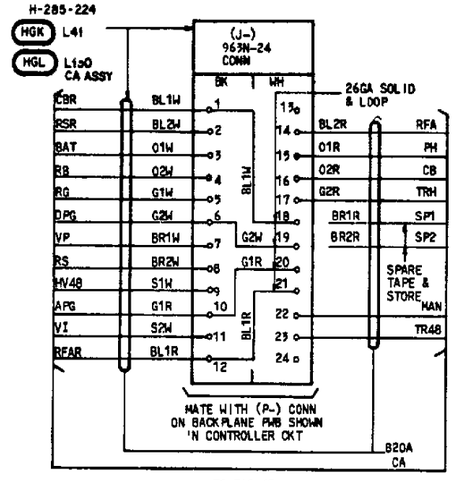


FIG 47
CONN ASSY, SUPPL BAY
-48 VOLT
(MCS CONTROLLER)

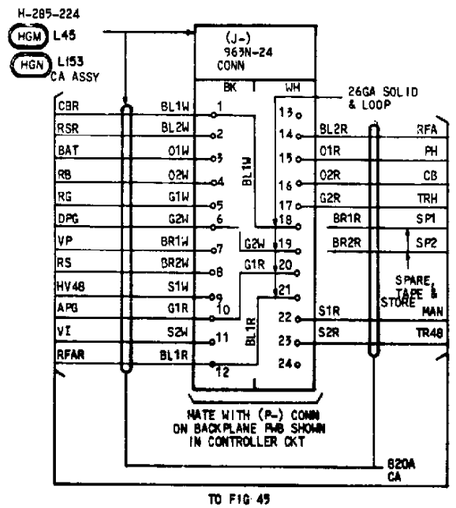


FIG 48
CONN ASSY INITIAL BAY
-48 VOLT
(CONVENTIONAL CONTROLLER)

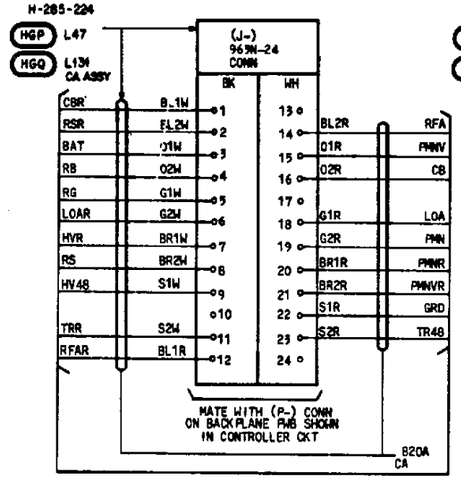


FIG 49
CONN ASSY, SUPPL BAY
-48 VOLT
(CONVENTIONAL CONTROLLER)

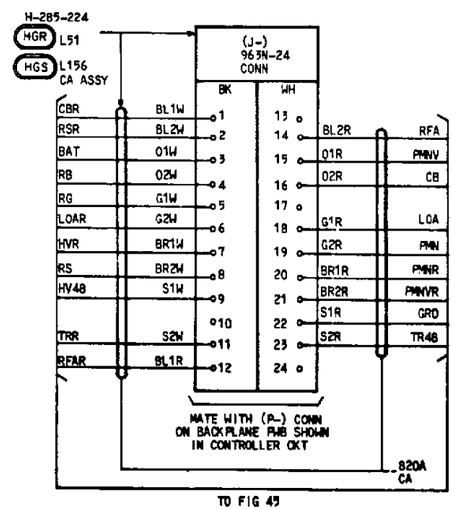


FIG 51
CONN ASSY INITIAL BAY
+24 VOLT
(MCS CONTROLLER)

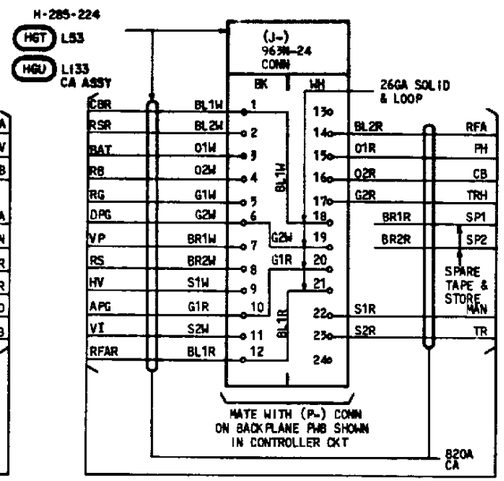
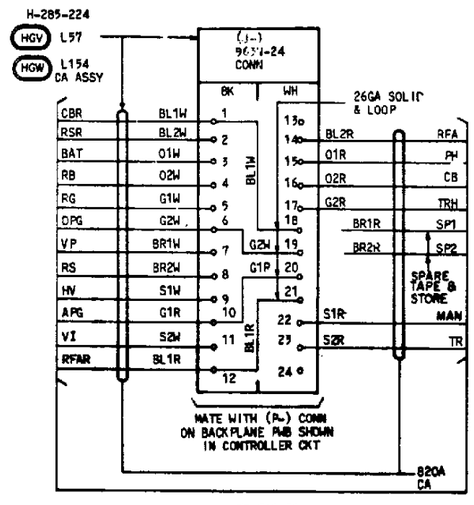


FIG 52
CONN ASSY, SUPPL BAY
+24 VOLT
(MCS CONTROLLER)



CHARGE AND DISCHARGE CIRCUIT		
	DWG SIZE 65	ISSUE 15
AT&T TECHNOLOGIES, INC.	T-82603-30	SHEET 818

FIG 53
CONN ASSY INITIAL BAY
-24 VOLT
(MCS CONTROLLER)

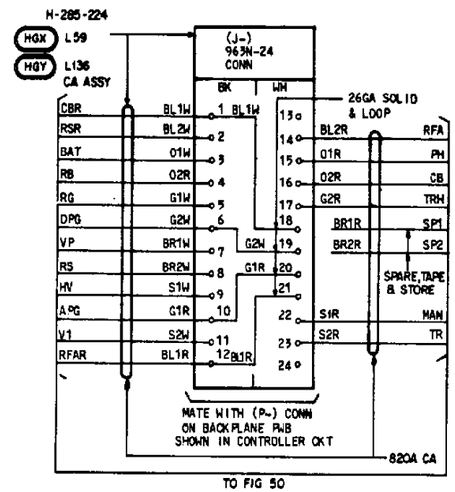


FIG 54
CONN ASSY SUPPL BAY
-24 VOLT
(MCS CONTROLLER)

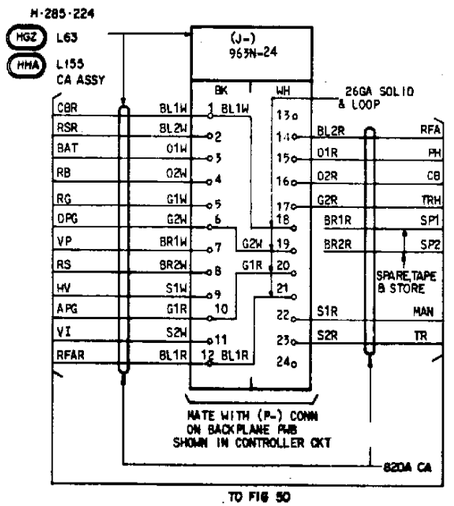


FIG 55
CONN ASSY INITIAL BAY
+24V VOLT
(CONVENTIONAL CONTROLLER)

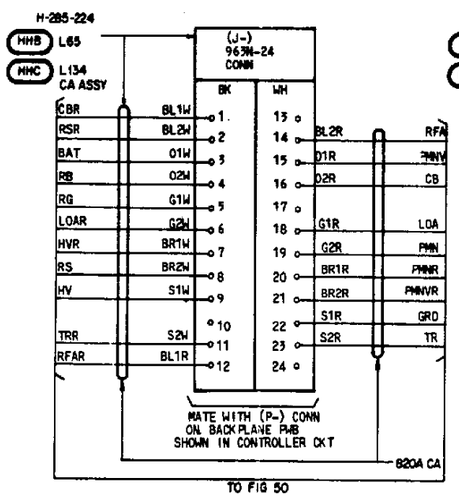


FIG 56
CONN ASSY SUPPL BAY
+24 VOLT
(CONVENTIONAL CONTROLLER)

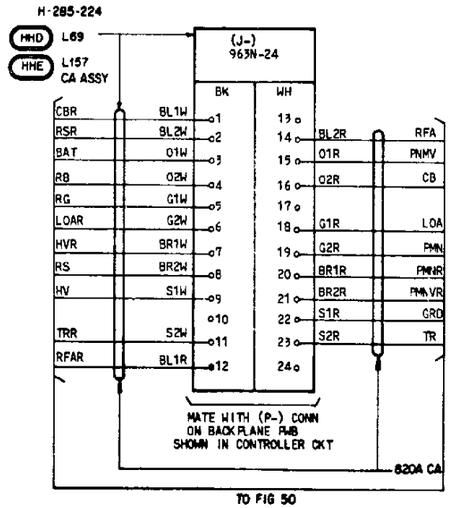


FIG 57
CONN ASSY INITIAL BAY
-24 VOLT
(CONVENTIONAL CONTROLLER)

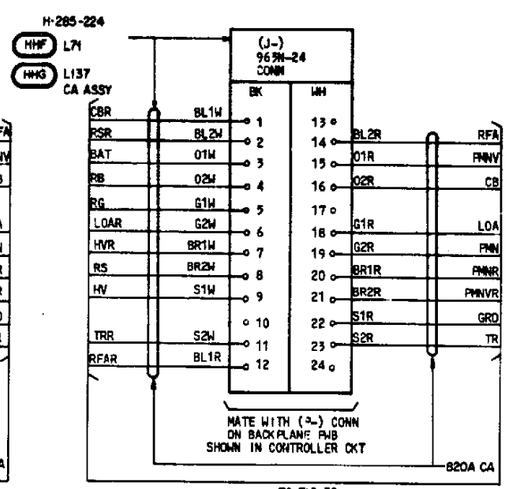


FIG 58
CONF' ASSY SUPPL BAY
-24 VOLT
(CONVENTIONAL CONTROLLER)

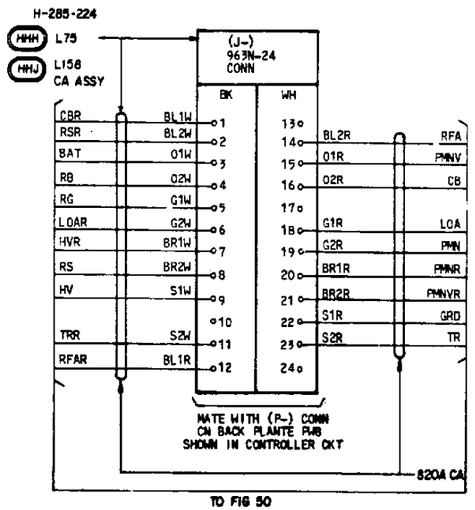


FIG 59
FUSE PANEL
ED-83018-30 GRP 14

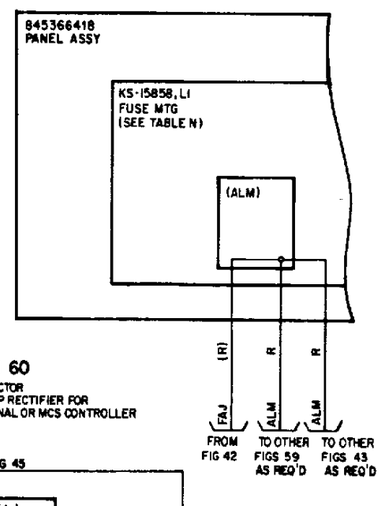
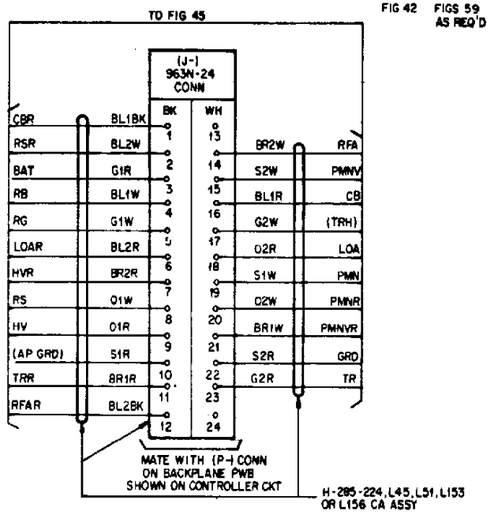


FIG 60
CONNECTOR
-48 VOLT, 200 AMP RECTIFIER FOR
USE WITH CONVENTIONAL OR MCS CONTROLLER

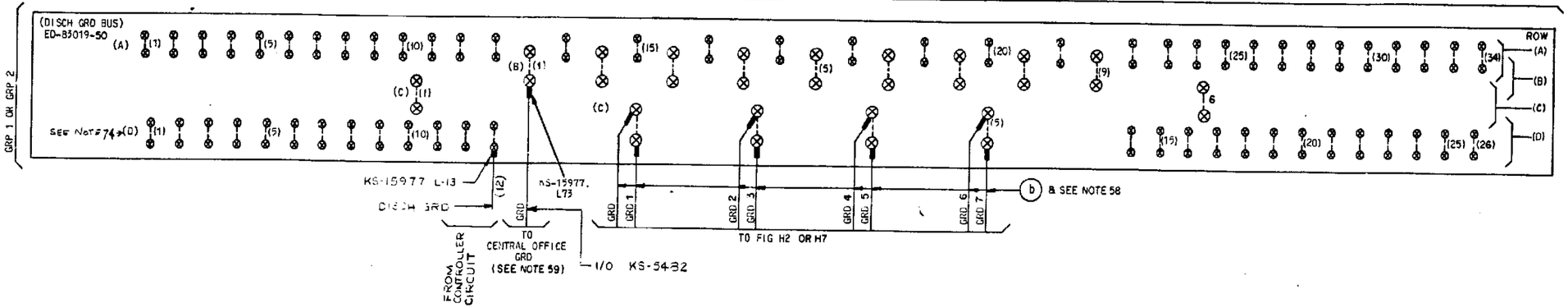


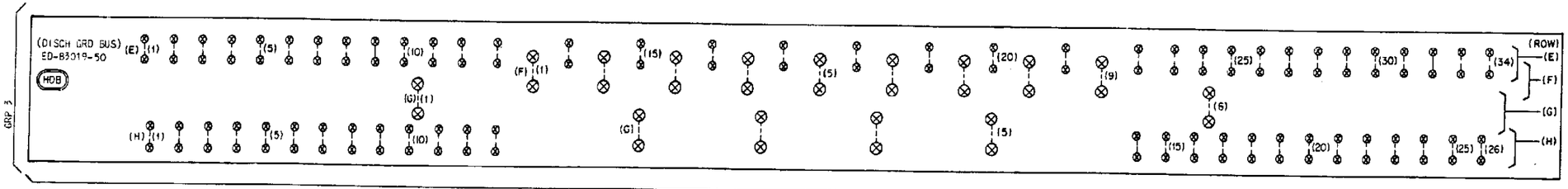
CHARGE AND DISCHARGE CIRCUIT		
	DWG SIZE 65	ISSUE 15
AT&T TECHNOLOGIES, INC.	T-82603-30	SHEET 819

FIG H1

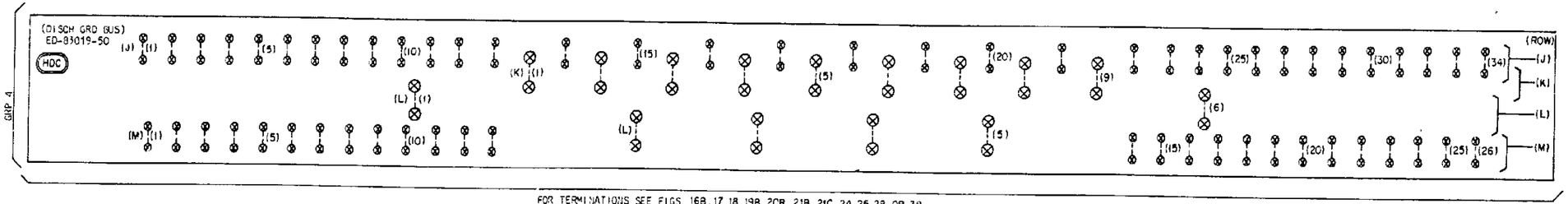
DISCHARGE GRD BUS
2600 AMPERES DISCHARGE CAPACITY (ED-83019-50)
(SEE NOTE 75)

FOR TERMINATIONS SEE FIGS 16B,17,18,19B,20B,21B,21C,24,25,28 OR 38 (SEE OTHER BRKTS) (SEE NOTE 56)





FOR TERMINATIONS SEE FIGS 16B,17,18,19B,20B,21B,21C,24,25,28 OR 38
(SEE OTHER BRKTS) (SEE NOTE 56)



FOR TERMINATIONS SEE FIGS 16B,17,18,19B,20B,21B,21C,24,25,28 OR 38
(SEE OTHER BRKTS) (SEE NOTE 56)

T-82603-30

SEE PROPRIETARY NOTICE ON SHEET A1

CHARGE AND DISCHARGE CIRCUIT		
	CAD SIZE 65	ISSUE 25
AT&T TECHNOLOGIES, INC. T-82603-30		SHEET D1

FIG H2

BATTERY STAND DISTRIBUTION,
1300 TO 2600 AMPERES
DISCHARGE CAPACITY
(J855504A-1)
OR
(J855504B-1)
(SEE NOTE 78)

FROM FIG 3 (SEE OTHER BRKT)
FROM FIG 4,5,12, 13,37,39,40,45 OR 50 (SEE OTHER BRKTS)
FROM FIG H3 OR H4
8TH 7TH 6TH 5TH
FROM FIG 3 (SEE OTHER BRKT)
FROM FIG 1 OR 3 (SEE OTHER BRKT)

BAT BUS 84780610
PART OF LIST G
SEE NOTE 56

CONNECTION PART OF BUS BAR
FROM FIG 4,5,12, 13,37,39,40,45 OR 50 (SEE OTHER BRKTS)
FROM FIG H3 OR H4
4TH 3RD 2ND
FROM FIG 1 OR 3 (SEE OTHER BRKT)
FROM CONTROLLER CKT
REG BAT
12GA KS-5482-01
C72 TERM (T&B) FURNISHED WITH BATTERY STAND

BAT BUS 843780610
PART OF LIST 5 (J855504A-1) OR LIST 4 (J855504B-1)
SEE NOTE 56
TERMINALS FURNISHED WITH BATTERY STAND

FROM 1ST FIG H3 OR H4 (SEE OTHER BRKT)

TO CENTRAL OFFICE GROUND NOTES 59 AND 95
KS-5482 L2
KS-15977 L73
(1/6)

GRD BUS 843780610
PART OF LIST 5 (J855504A-1) OR LIST 4 (J855504B-1)
(1) (5) (10) (12)
(FOR TERMINATIONS SEE FIGS 16B,17,18,19B,20B,21B,21C, 24,25,28 OR 38) (SEE NOTES 56 & 64)
SEE NOTE 56

FROM FIG H1
GRD 3 GRD 2 GRD 1 GRD

SHUNT
W-400-50 TYPE W,LA
W-600-50 TYPE W,LB
W-800-50 TYPE W,LC
C-1200-50 TYPE C,LD
C-2000-50 TYPE C,LE
1424-2600-50,LF (ENPRO MFG) (SEE NOTE 13)

C36 TERM (T&B) FURNISHED WITH BATTERY STAND
(W) BAT SH
(BK) BAT SHG
FROM CONTROLLER CKT
P & 12GA KS-5482-01

(SEE NOTE 77)
FROM CONTROLLER CIRCUIT
KS-15977 L13
DISCH GRD

CONNECTION PART OF BUS BAR
FROM FIG 4,5,12, 13,37,39,40,45 OR 50 (SEE OTHER BRKTS)
FROM FIG H3 OR H4 (SEE OTHER BRKT)
4TH 3RD 2ND
FROM CONTROLLER CKT
C72 TERM (T&B) FURNISHED WITH BATTERY STAND
12 REG GRD
KS-5482-01

GRD BUS 843780610
PART OF LIST 5 (J855504A-1) OR LIST 4 (J855504B-1)
SEE NOTE 56
TERMINALS FURNISHED WITH BATTERY STAND

FROM 1ST FIG H3 OR H4

CONNECTION PART OF BUS BARS

GRD BUS 843780628
PART OF LIST G
(1) (5) (10) (12)
(FOR TERMINATIONS SEE FIGS 16B,17,18,19B,20B,21B,21C, 24,25,28 OR 38) (SEE NOTES 56 & 64)
SEE NOTE 56

FROM FIG H1
GRD7 GRD6 GRD5 GRD4

PART OF BATTERY STAND

FROM FIG 4,5,12, 13,37,39,40,45 OR 50 (SEE OTHER BRKTS)
FROM FIG H3 OR H4 (SEE OTHER BRKT)
8TH 7TH 6TH

GRD BUS 843780628
PART OF LIST G
SEE NOTE 56
TERMINALS FURNISHED WITH BATTERY STAND

FROM 5TH FIG H3 OR H4

SEE PROPRIETARY NOTICE ON SHEET A1

CHARGE AND DISCHARGE CIRCUIT	DWG SIZE 65	ISSUE 25
AT & T TECHNOLOGIES, INC	T-82603-30	SHEET D2

T-82603-30
SHT D2

FIG H3
(+)OR(-) 24 VOLT BATTERIES

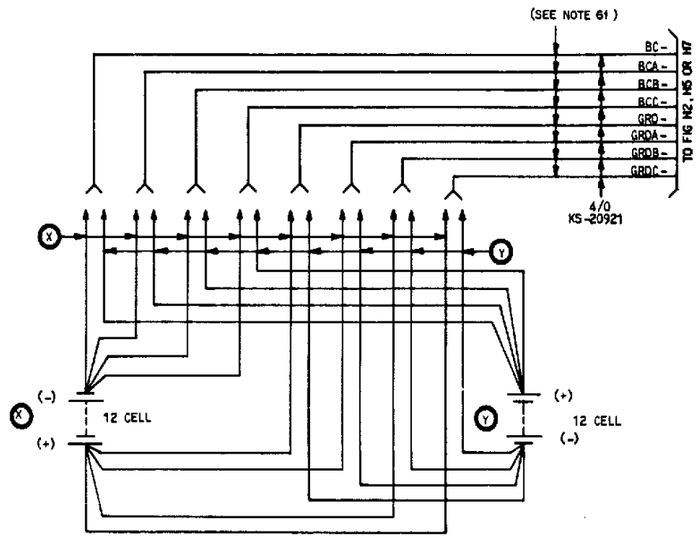
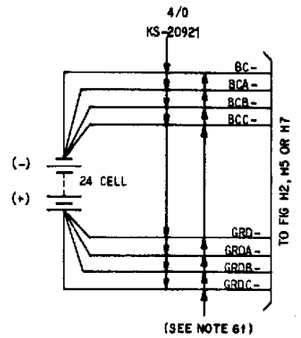


FIG H4
-48 VOLT BATTERIES



T-82603-30 SHEET D3

SEE PROPRIETARY NOTICE ON SHEET A1

CHARGE AND DISHARGE CIRCUIT	DWG SIZE 65	ISSUE 11
AT & T TECHNOLOGIES, INC.	T-82603 - 30	SHEET D3

GN-97-2135 (10-75) PRINTED IN U.S.A.

FIG H5

BATTERY STAND DISTRIBUTION
2600 TO 5200 AMPERES DISCHARGE
CAPACITY (J85504A-1) (J85504B-1)

TO CENTRAL OFFICE GROUND (SEE NOTES 59, 76)

FROM CONTROLLER CKT

BAT SH

BAT SHG

P 8 12GA KS-5482-01

KS-5482

KS-15977 L73

DISCHG GRD BUS 845198464 L-0

CHG GRD BUS 845198456 L-0

FROM FIG 4,5,12,13,37,39, 40,45 OR 50 (SEE OTHER BRKT)

G16 G15 G14 G13 G12 G11 G10 G9

SPARE

FROM FIG H3 OR H4 (SEE OTHER BRKT)

16TH GRD C16 GRD B16 GRD A16 GRD 16
15TH GRD C15 GRD B15 GRD A15 GRD 15
14TH GRD C14 GRD B14 GRD A14 GRD 14
13TH GRD C13 GRD B13 GRD A13 GRD 13
12TH GRD C12 GRD B12 GRD A12 GRD 12
11TH GRD C11 GRD B11 GRD A11 GRD 11
10TH GRD C10 GRD B10 GRD A10 GRD 10
9TH GRD C9 GRD B9 GRD A9 GRD 9

CONNECTION PART OF BUS BARS

C36 TERMS(T&B) FURNISHED WITH BATTERY STAND

SHUNT

FROM FIG 4,5,12,13,37,39, 40,45 OR 50 (SEE OTHER BRKT)

G8 G7 G6 G5 G4 G3 G2 G1

SPARE

FROM FIG H3 OR H4 (SEE OTHER BRKT)

8TH GRD C8 GRD B8 GRD A8 GRD 8
7TH GRD C7 GRD B7 GRD A7 GRD 7
6TH GRD C6 GRD B6 GRD A6 GRD 6
5TH GRD C5 GRD B5 GRD A5 GRD 5
4TH GRD C4 GRD B4 GRD A4 GRD 4
3RD GRD C3 GRD B3 GRD A3 GRD 3
2ND GRD C2 GRD B2 GRD A2 GRD 2
1ST GRD C1 GRD B1 GRD A1 GRD 1

CONNECTION PART OF BUS BARS

DISCHG GRD BUS 845198464 L-15

CHG GRD BUS 845198456 L-15

GRD 11 GRD 10 GRD 9 GRD 8 GRD 7 GRD 6 GRD 5 GRD 4 GRD 3 GRD 2 GRD 1 GRD

FROM FIG H6

HEC F-4000-50 TYPE F OR
MED F-6000-50 TYPE F (SEE NOTE 13) OR
HP C-2000-50 TYPE C OR
HQ 1424-2600-50

FROM DISTRIBUTION BAYS

FROM FIG 4,5,12,13,37,39, 40,45 OR 50 (SEE OTHER BRKT)

B6 B15 B14 B13 B12 B11 B10 B9

SPARE

FROM FIG H3 OR H4 (SEE OTHER BRKT)

8TH BCC8 BCB8 BCA8 BC8
7TH BCC7 BCB7 BCA7 BC7
6TH BCC6 BCB6 BCA6 BC6
5TH BCC5 BCB5 BCA5 BC5
4TH BCC4 BCB4 BCA4 BC4
3RD BCC3 BCB3 BCA3 BC3
2ND BCC2 BCB2 BCA2 BC2
1ST BCC1 BCB1 BCA1 BC1

CHG BAT BUS 845198472 L 15

CONNECTION PART OF BUS BARS

FROM FIG 4,5,12,13,37,39, 40,45 OR 50 (SEE OTHER BRKT)

B8 B7 B6 B5 B4 B3 B2 B1

SPARE

FROM FIG H3 OR H4 (SEE OTHER BRKT)

16TH BCC16 BCB16 BCA16 BC16
15TH BCC15 BCB15 BCA15 BC15
14TH BCC14 BCB14 BCA14 BC14
13TH BCC13 BCB13 BCA13 BC13
12TH BCC12 BCB12 BCA12 BC12
11TH BCC11 BCB11 BCA11 BC11
10TH BCC10 BCB10 BCA10 BC10
9TH BCC9 BCB9 BCA9 BC9

CHG BAT BUS 845198472 L-0

T-82603-30 SHT D4

SEE PROPRIETARY NOTICE ON SHEET A1

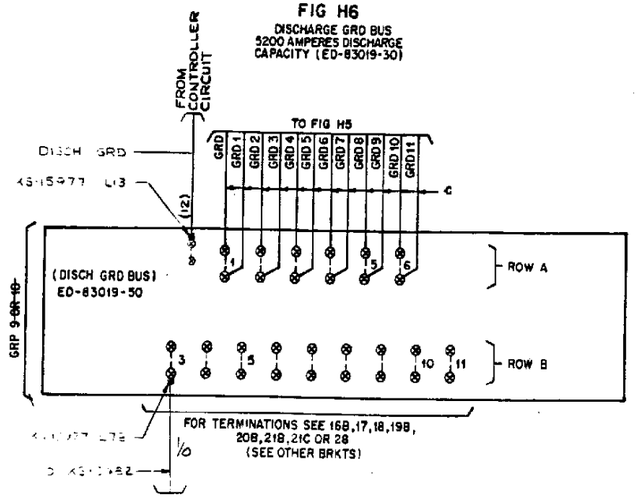
CHARGE AND DISCHARGE CIRCUIT		
	DWG SIZE 65	ISSUE 25
AT&T TECHNOLOGIES, INC.	T-82603-30	SHEET D4

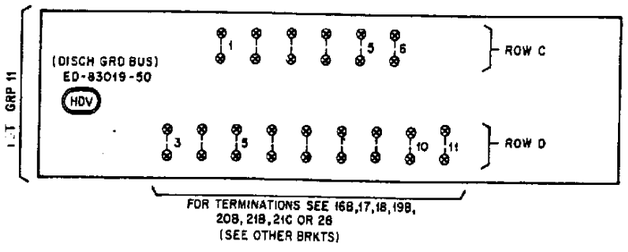
A 3 E DG 12111098765432 1 0

GN-97-2135 (5-7-84)

FIG H6

DISCHARGE GRD BUS
5200 AMPERES DISCHARGE
CAPACITY (ED-83019-30)





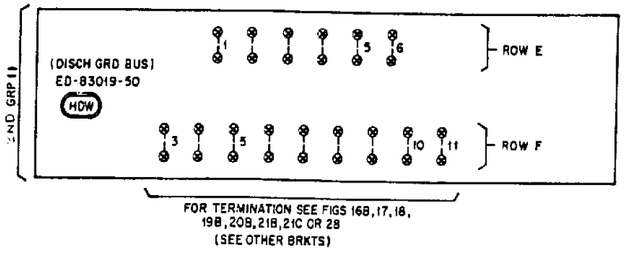
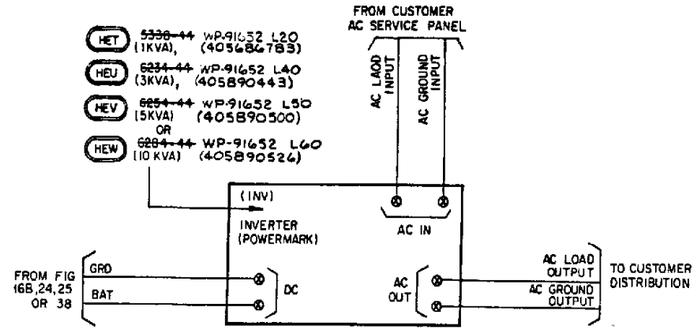


FIG H8

INVERTER
(SEE NOTE 71)



T-82603-30
SHEET D5

SEE PROPRIETARY NOTICE ON SHEET A1

CHARGE AND DISCHARGE CIRCUIT	DWG SIZE 6S	ISSUE 25
ATST TECHNOLOGIES, INC.	T-82603-30	SHEET D5

FIG H7

BATTERY STAND DISTRIBUTION
1300 TO 2600 AMPERES
DISCHARGE CAPACITY E/W L.V. D/R PANEL
(J85504A-1)
OR
(J85504B-1)

R,P

FROM FIG H3 OR H4 (SEE OTHER BRKT)
FROM FIG 4,5,12, 13,37,39,40,45 OR 50 (SEE OTHER BRKTS)
FROM FIG 3 (SEE OTHER BRKT)
FROM FIG 1 OR 3 (SEE OTHER BRKT)

843780610 BUS BAR (CHG BAT)

PART OF LIST G (HJ)

SEE NOTE 56

TO CENTRAL OFFICE GROUND (SEE NOTES 59,75)

I/O KS-5482 L28FR

KS-15977 L73 (SEE NOTE 77)

843780610 BUS BAR (DISCH GRD)

FROM FIG H1 (SEE OTHER BRKT)

(HK) W-400-50 TYPE W.LA OR (HL) W-600-50 TYPE W.LB OR (HM) W-800-50 TYPE W.LC OR (HN) C-1200-50 TYPE C.LD OR (HP) C-2000-50 TYPE C.LE OR (HQ) 1424-2600-50, LF SHUNT (EMPRO MFG) (SEE NOTE 13)

PART OF LIST 16 OR 17 (J85504A-1) OR LIST 9 OR 10 (J85504B-1)

FROM CONTROLLER CIRCUIT

KS-15977 L13

(FOR TERMINATIONS SEE FIGS 16B,17,18,19B,20B, 21B,21C,24,25,28 OR 38) (SEE NOTES 56 & 64)

SEE NOTE 56

C36 TERM(T&B) FURN WITH BAT. STAND

(W) BAT SH

(BK) BAT SIG

P & 12GA KS-5482-01

FROM CONT CKT (SEE OTHER BRKT)

FROM FIG H3 OR H4 (SEE OTHER BRKT)

6TH 5TH 4TH 3RD 2ND 1ST

FROM CONT CKT (SEE OTHER BRKT)

KS-5482-01

REG BAT

DISCH BAT

C72 TERM (T&B) FURN WITH BAT STAND

FROM FIG 44 (SEE OTHER BRKT)

FROM FIG 4,5,12, 13,37,39,40,45 OR 50 (SEE OTHER BRKTS)

FROM FIG 1 OR 3 (SEE OTHER BRKT)

843780610 BUS BAR (CHG BAT)

A72 TERM (T&B) FURN WITH BAT STAND

SEE NOTE 56

845371640 BUS BAR (BAT)

PART OF LOW VOLTAGE DISCONNECT PANEL ED-83186-30

872 TERM (T&B) FURN WITH BAT STAND

PART OF LIST 16 OR 17 (J85504A-1) OR LIST 9 OR 10 (J85504B-1)

CONTR ON LV D/R PNL

FROM FIG 44 (SEE OTHER BRKT)

FROM FIG 44 (SEE OTHER BRKT)

FROM FIG 4,5,12, 13,37,39,40,45 OR 50 (SEE OTHER BRKTS)

FROM FIG H3 OR H4 (SEE OTHER BRKT)

4TH 3RD 2ND

C72 TERM(T&B) FURN WITH BAT. STAND

KS-5482-01

843780610 BUS BAR (CHG GRD)

872 TERM (T&B) FURN WITH BAT STAND

PART OF LIST 16 OR 17 (J85504A-1) OR LIST 9 OR 10 (J85504B-1)

TERMS FURN WITH BAT. STAND

FROM 1ST FIG H3 OR H4

FROM 4,5,12, 13,37,39,40,45 OR 50 (SEE OTHER BRKTS)

FROM FIG H3 OR H4 (SEE OTHER BRKT)

8TH 7TH 6TH

843780628 BUS BAR (DISCH GRD)

(FOR TERMINATIONS SEE FIGS 16B,17,18,19B,20B, 21B,21C,24,25,28 OR 38) (SEE NOTES 56 & 64)

PART OF LIST G (HJ)

SEE NOTE 56

FROM FIG H1 (SEE OTHER BRKT)

843780628 BUS BAR (CHG GRD)

PART OF LIST G (HJ)

SEE NOTE 56

TERMS FURN WITH BAT. STAND

FROM 5TH FIG H3 OR H4

SEE PROPRIETARY NOTICE ON SH A1

CHARGE AND DISCHARGE CIRCUIT

DWG SIZE 6S

ISSUE 25

AT&T TECHNOLOGIES, INC.

T-82603-30

SHEET D6

T-82603-30 SHEET D6

SN-87-2105 110-751

FIG H9

INITIAL BAY +24, -24 OR -48 VOLT
25 AMP RECTIFIER AC WRG

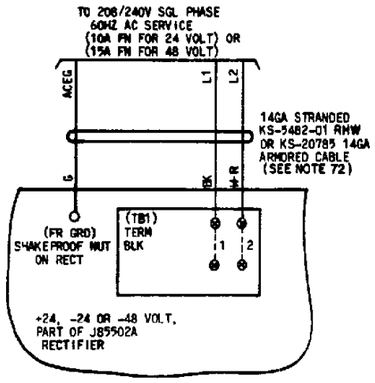


FIG H10

SUPPLEMENTARY BAY -48 VOLT
25 AMPRECTIFIER AC WRG

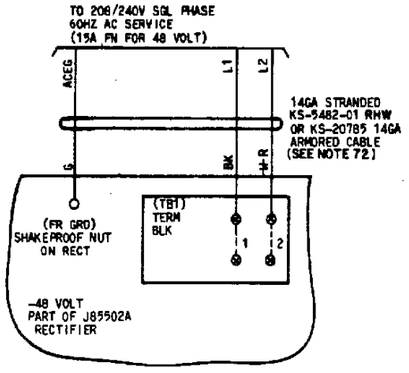


FIG H11

SUPPLEMENTARY BAY +24 OR -24 VOLT
25 AMP RECTIFIER AC WRG

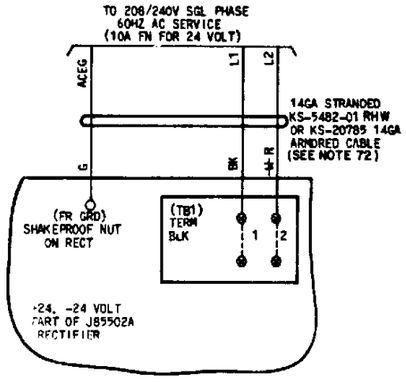


FIG H12

INITIAL BAY +24, -24 OR -48 VOLT
50 AMP RECTIFIER AC WRG

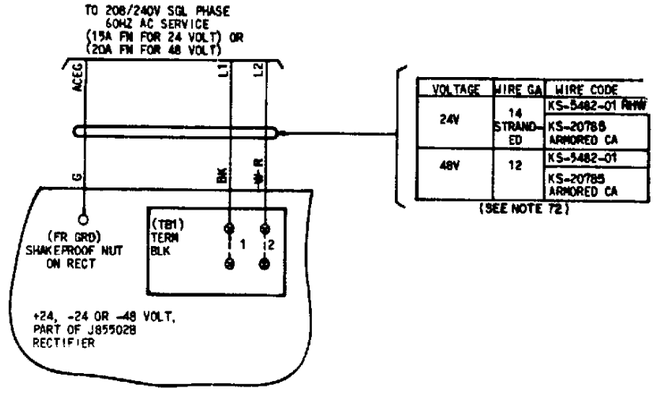


FIG H13

SUPPLEMENTARY BAY, -48 VOLT
50 AMP RECTIFIER AC WRG

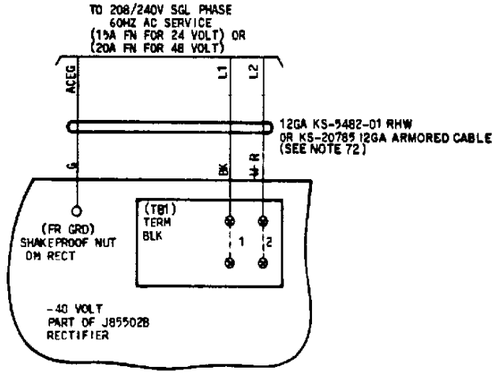


FIG H14

SUPPLEMENTARY BAY +24 OR -24 VOLT
AMP RECTIFIER AC WRG

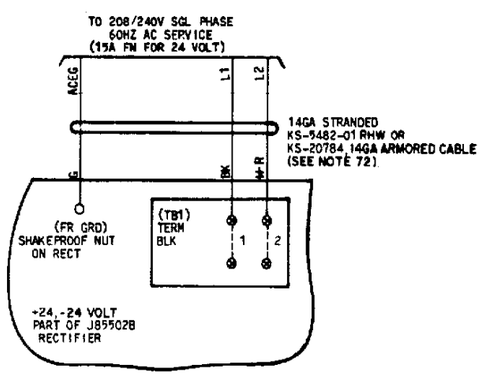
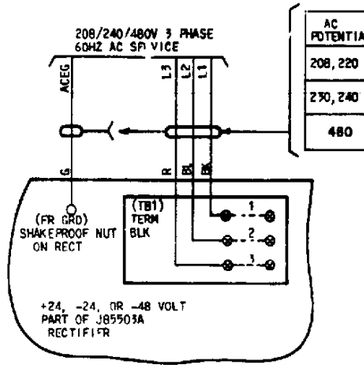


FIG H15

INITIAL BAY +24, -24 OR -48 VOLT
100 AMP RECTIFIER AC WRG



AC POTENTIAL	OUTPUT VOLTS	OUTPUT AMPS	LINE FUSES TYPE FN	INPUT CONDUCTORS KS-5482-01	INPUT CONDUCTORS KS-20789
208, 220	24	100	15	4-14	3-14
	48		25	4-10	3-10
230, 240	24	100	15	4-14	3-14
	48		25	4-10	3-10
480	24	100	10	4-14	3-14
	48		15	4-14	3-14

FIG H16

SUPPLEMENTARY BAY -48 VOLT
100 AMP RECTIFIER AC WRG

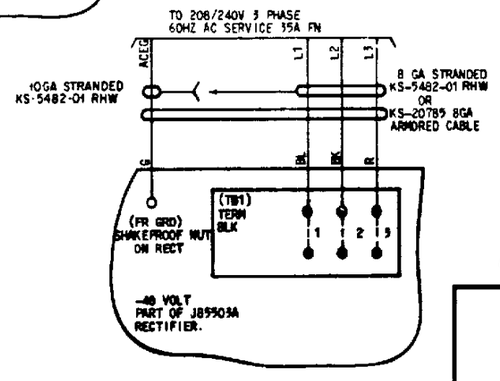
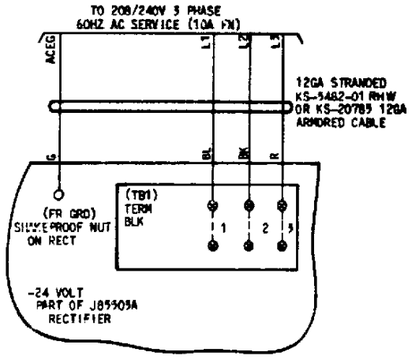


FIG H17

SUPPLEMENTARY BAY -24 VOLT
100 AMP RECTIFIER AC WRG



AT&T TECHNOLOGIES, INC-PROPRIETARY
USE PURSUANT TO COMPANY INSTRUCTIONS

CHARGE AND DISCHARGE CIRCUIT		
	DWG SIZE: 6S	ISSUE: 20
AT&T TECHNOLOGIES, INC.	T-82603-30	SHEET 07

FIG H18
INITIAL BAY +24 OR -24 VOLT
125 AMP RECTIFIER AC WRG

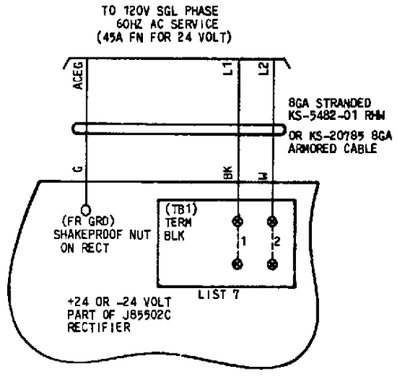
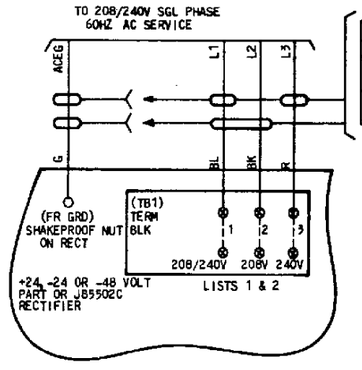


FIG H19
INITIAL BAY +24, -24 OR -48 VOLT
125 AMP RECTIFIER AC WRG



AC POTENTIAL	OUTPUT VOLTS	OUTPUT AMPS	LINE FUSES TYPE FN	INPUT CONDUCTORS KS-5482-01	INPUT CONDUCTORS KS-20785
208	24	125	25	3-10	2-10
	48		50	3-8	2-8
240	24	125	25	3-10	2-10
	48		45	3-8	2-8

FIG H20
SUPPLEMENTARY +24 OR -24 VOLT
125 AMP RECTIFIER AC WRG

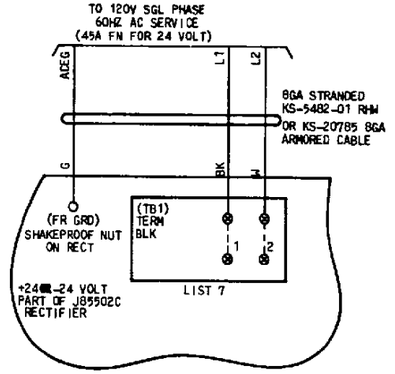


FIG H21
SUPPLEMENTARY +24 OR -24 VOLT
125 AMP RECTIFIER AC WRG

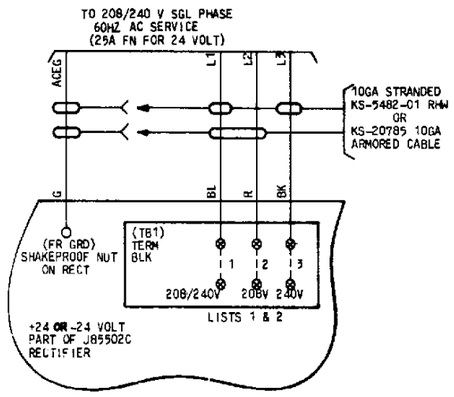
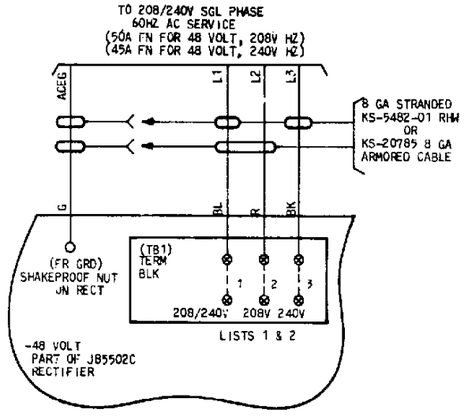


FIG H22
SUPPLEMENTARY BAY -48 VOLT
125 AMP RECTIFIER AC WRG



CHARGE AND DISCHARGE CIRCUIT		
	DWG SIZE 65	ISSUE 14
AT&T TECHNOLOGIES, INC.	T-82603-30	SHEET D8