

SCHEMATIC			ISSUE																								
SD-82588-01	6	1	1	400	6																						
WIRING DIAGRAM	ISSUE																										
AUTOC CHG	SH NO.	24	25	26	27	28	29	30	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	31	32	33	
A1	A1																										
A2	A2																										
B1	B1								9	9	11	11	11	11	11	16	17	17	17	17	17	17	23	29	29	29	
B2	B2								9	9	11	11	11	11	16	16	16	16	16	16	16	23	29	29	29		
B3	B3								9	9	11	12	12	12	12	16	16	16	16	16	16	20	21	23	31	32	32
B4	B4								9	10	11	11	11	11	11	15	15	15	15	15	15	15	15	23	29	29	33
B5	B5								8	8	8	8	13	14	14	16	16	16	16	16	16	20	21	23	31	32	32
B6	B6								4	4	4	4	13	13	15	15	15	15	15	15	15	15	23	23	23	23	23
B7	B7								9	9	11	11	11	14	14	14	14	14	14	14	14	14	14	14	28	28	28
B8	B8								8	10	10	10	10	10	10	10	10	10	10	10	10	10	22	30	30	30	30
B9	B9								9	9	9	9	9	14	14	14	14	14	14	14	14	14	14	14	14	14	14
B10	B10								-	-	-	-	-	-	-	-	-	-	-	-	21	22	23	27	27	35	
B11	B11								-	-	-	-	-	-	-	-	-	-	-	-	-	23	-	-	-	26	

FUNCT DES	CODE	VALUE	OPTION
R1		3.83K OHM	W
		1.96K OHM	Z
R2		3.83K OHM	W
		1.96K OHM	Z
R3	KS-20810, L-1A RES	3.83K OHM	W
		1.96K OHM	Z
R4		3.83K OHM	W
		1.96K OHM	Z
R5		5K OHM	
R6		5K OHM	
R7		3.83K OHM	W
		1.96K OHM	Z
CR1	WP-90062		ZI
CR2	D100E		ZI

FS9	ZN (2)	ZN	SEE NOTE 67
40	ZL (2)	ZL	
	ZK	ZK	
	ZJ	ZJ	
	K, ZB	G	
	D	D	
35	ZI	ZI	
	ZH	ZH	
	ZG (2)	ZG	
	ZE	ZE	
30	ZD (2)	ZD	
	ZC	ZC	
	ZB	ZB	
	ZA (1)	ZA	
	(CAD 1)	P M14	
	(CAD 5)	ZC M13	
25	(CAD 5)	ZC M12	
	2 (CAD 1)	P M11	
	2 (CAD 5)	ZC M10	
	S,U	H9	
	S,U	H8	
	S,U	H7	
	S,U	H6	
	S,U	H5	
	J	J	
	H (1)	H	
	R	H4 R R	
	R	H3 R R	
	B	B	
	A (A)	A	
	F	F	
	E	E	
	D	D	
	C	C	
	(CAD 1)	W H2 Z	
	(CAD 1)	Z H W	
	F	B	
	F	A	
	(CAD 2)	G, V, T, R, U	2 G, T, R, U
	1, (CAD 1)	1	1

FIG	FIG 2	ZM OPT	ZL OPT	ZL	ZM
31	FIG 2	ZM OPT	ZL OPT	ZL	ZM
29	FIG F	ZK OPT	ZJ OPT	ZK	ZJ
	FIG 1	ZI OPT	NONE	ZB	ZA
	FIG 2	ZB OPT	ZA OPT	ZC	
		ZC OPT	NONE	P	
		P OPT	NONE	ZE	ZO
		ZE OPT	ZO OPT	ZH	HM, HN, ZG
	FIG A	ZH OPT	HM, HN, ZG OPT	D	A, B
19	FIG 2	U OPT	NONE	U	
18	FIG 2	R OPT	G OPT	R, G	
17	FIG 2	J OPT	H OPT	J, H	
15	FIG A	B APP	A APP	B	A
9	FIG F	FIG E	FIG E	F	E
9	FIG D	FIG C	FIG C	D	C
4	FIG B	FIG A	FIG A	A, B	
2	FIG 2	T APP	NONE	T	

LINE	SD-82588-01	T-82588-30	REMARKS
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
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38			
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40			

CA	CB	CC	CD	CE	CF

FIG	OPT	SHEET
1	ZI	33
1	H, Y, Z	32
1	ZA, ZB	31
1	H, J, Z, W	31

MANUFACTURING NOTES (CONTINUATION)
CONVENTIONS

9- ALL WIRING FROM SHUNTS TO THE 845653286 AND 845653294 CABLE ASSEMBLIES (ON THE BACKPLANE OF THE CONTROLLER) IS TO BE RUN BY THE INSTALLER. THIS INCLUDES CRIMP CONNECTIONS THAT MUST BE MADE AT THE BUTT SPLICE OF THE FUSE HOLDER ASSEMBLY AND AT THE QUICK-CONNECT ACCEPTABLE OF THE BACKPLANE CABLE ASSEMBLIES. 0 & R THREADED PAIR, KS-22247, L4 26GA ST, OR EQUIVALENT, SHALL BE USED.

10- THE AMP CONNECTOR P9C OR P9C- OF THE 845653674 FUSE HOLDER ASSEMBLY IS COMPATIBLE WITH TERMINALS 12 & 13 OF KS-22012 SHUNT-TYPE CIRCUIT BREAKERS. FOR THE MONITORING OF OTHER TYPES OF SHUNTS, THIS CONNECTION MAY BE CUT OFF AND REPLACED WITH A SUBSTITUTED SUBSTITUTE SUCH AS A 224 OR AIR-BFL STANON TERMINAL DURING INSTALLATION.

11- WHEN CONNECTING TO BACKPLANE IN FIG 1 OR FIG 2 INSTALLER MUST IDENTIFY THE BLUE POST IN MIDDLE OF I27C APPARATUS MOUNTING AS TERM 012 & 012 OR 044 & 144 AS SHOWN IN FIGURES 1 & 2.

12- DATA SWITCH PORT WIRING, WIRES (20 TO 22 AWG, STR) SHALL BE RUN, IN GENERAL, BY THE INSTALLER FROM EACH PIGTAIL OF AN H-285-224, L195 CABLE ASSEMBLY TO THE PIGTAIL OF CORRESPONDING COLOR ON THE L196 OR L197 CABLE ASSEMBLY (E.G. R TO R, W-R TO W-R, ETC). HOWEVER, THE FOLLOWING EXCEPTIONS APPLY:
(A) FOR MCS REMOTE MONITOR TO DATA SWITCH CONNECTION THE R AND W-R LEADS ON THE L195 CABLE ASSEMBLY ARE NOT USED.
(B) WHEN CONNECTING TO THE REMOTE INTERFACE IN THE SAME JBSOHA CONTROLLER AS THE DATA SWITCH, CUT OFF AND DISCARD THE THREE BUTT SPLICES AMP 2-320599-4, 2-34067-4 ON THE L196 CA ASSEMBLY STRIP & CRIMP THE BL & W-BL WIRES DIRECTLY TO THE PIGTAIL OF THE CORRESPONDING L195 CA ASSEMBLY. REFER TO NOTE 16 FOR WIRE TERMINATION.

13- INSTALLER SHALL CONNECT WIRE PER FIG H14 TO THE H285-226 L-1 CABLE ASSEMBLY USING 2-520183-2 FASTON CONNECTOR (AMP) FURNISHED WITH THE CABLE ASSEMBLY.

14- (A) CONNECTION BETWEEN THE "TELCO" JACK ON THE DATA SET AND TELEPHONE LINE SHALL BE MADE USING CUSTOMER PROVIDED CORD AND PLUG. (MASS CORD & PLUG OR EQUIV MAX 25 FT)
(B) CONNECTION BETWEEN THE "TEL SET" JACK ON THE DATA SET ASSEMBLY FURNISHED WITH THE DATA SET.

15- INSTALLER SHALL MOUNT THE (RT1) THERMISTOR ASSEMBLY TO (J89504A-1) SPARE HOLE IN BATTERY POST NEAREST GROUND POTENTIAL.
(A) REMOVE SCREW AND WASHER FROM THERMISTOR AND REUSE TO SECURE THERMISTOR ASSEMBLY TO BATTERY POST.
(B) CABLE ASSEMBLY SHALL BE TIE WRAPPED TO NEAREST BATTERY CABLE WITH 403746100 CABLE TIE.
(C) WIRING RUN PER FIG H13 SHALL BE CRIMPED TO BUTT SPLICE ON H285-226 L-2 CABLE ASSEMBLY AND 845997406 THERMISTOR ASSEMBLY.

16- FOR ALL REMOTE MONITOR TO DATA SWITCH CONNECTIONS, CRIMP H-285-224, L196 OR L197 CABLE ASSY TWO WIRES MAY BE INSERTED IN ONE END OF A BUTT SPLICE OF A L195 CABLE ASSY.

MANUFACTURING NOTES
CONVENTIONS

— CABLE
— SCREW TERMINAL
— SCREW CONNECTION
— DIVISION OF GENERAL WIRING VIEWS

1- ALL WIRES TO BE KS-22247, L4 26GA SOLID UNLESS OTHERWISE SPECIFIED.

2- 963 TYPE CONNECTORS SHALL BE CONNECTED TO THE BACKPLANE IN SUCH A MANNER AS TO CAUSE THE ARROW TO POINT UPWARD. (BLACK PORTION OF CONNECTOR ON THE LEFT).

3- THE INSTALLER SHALL STRAP THE BACKPLANE BOARD IN ACCORDANCE WITH SHUNT SIZES PROVIDED ON THE BATTERY STAND. STRAPPING SHALL BE ACCOMPLISHED USING THE 963E-2 CONNECTORS FURNISHED AND IN ACCORDANCE WITH THE TABLE BELOW:

SHUNT SIZE IN AMPS	CONNECT 963E-2 CONNECTORS TO TERMINALS
05	0, 3
100	3
150	0, 1, 2
200	1, 2
400	0, 1, 2, 3
600	1, 2, 3
800	0, 2, 3
1200	2, 3
1500	0, 2
2000	0, 1, 3
2500	1, 3
3000	2
4000	0, 1
5000	1
5000	0
8000	NO STRAPS REQUIRED

SEE SD-82588-01 NOTES 1108301

4- INFORMATION IN BRACKETS [] IS FOR RECORD ONLY AND REPRESENTS COLORS USED IN EARLY PRODUCTION.

5- NO WIRES ON THIS DRAWING ARE TO BE RUN BY THE INSTALLER EXCEPT WIRES DESIGNATED # IN FIG 1 AT (TB2) TERM STRIP, WIRES DESIG # IN FIG H4 AND ALL WIRES IN FIG H7, H9, H12, H13 & H14.

6- ALL WIRING TO BE KS-22247, L4 26 GAUGE WIRE COLOR GREEN-WHITE WIRE CONNECTION SHALL BE TO BASE OF TERM CLOSE TO BOARD AND RUN IN THE MOST CONVENIENT MANNER.

7- AT - WIRES NOT TO BE CONNECTED UNTIL AFTER SHOP TESTS ARE COMPLETED.

MANUFACTURING NOTES
CONVENTIONS

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100	3
150	0, 1, 2
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400	0, 1, 2, 3
600	1, 2, 3
800	0, 2, 3
1200	2, 3
1500	0, 2
2000	0, 1, 3
2500	1, 3
3000	2
4000	0, 1
5000	1
5000	0
8000	NO STRAPS REQUIRED

SEE SD-82588-01 NOTES 1108301

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6- ALL WIRING TO BE KS-22247, L4 26 GAUGE WIRE COLOR GREEN-WHITE WIRE CONNECTION SHALL BE TO BASE OF TERM CLOSE TO BOARD AND RUN IN THE MOST CONVENIENT MANNER.

7- AT - WIRES NOT TO BE CONNECTED UNTIL AFTER SHOP TESTS ARE COMPLETED.

FIG C WAS PART OF FIG 1, FIG D ADDED. FIG E WAS PART OF FIG 2, FIG F ADDED.	IN FIG B, (M2) AMMETER CHG'D AS FOLLOWS:
NDD85501KYS 9-5-85 CLASS "B"	AMMETER CODES REMOVED
	AMMETER CODES READ
	OPT KS-19516 LIST
	OPT KS-19516 LIST
	9
	HR 12
	HS 6
	HT 13
	HU 2
	HV 14
	HW 11
	HN 12
	HO 12
	HP 13
	HQ 2
	HR 11
	HS 12
	HT 13
	HU 14
	HW 11
	HN 12
	HO 12
	HP 13
	HQ 2
	HR 11
	HS 12
	HT 13
	HU 14
	HW 11
	HN 12
	HO 12
	HP 13
	HQ 2
	HR 11
	HS 12
	HT 13
	HU 14
	HW 11
	HN 12
	HO 12
	HP 13
	HQ 2
	HR 11
	HS 12
	HT 13
	HU 14
	HW 11
	HN 12
	HO 12
	HP 13
	HQ 2
	HR 11
	HS 12
	HT 13
	HU 14
	HW 11
	HN 12
	HO 12
	HP 13
	HQ 2
	HR 11
	HS 12
	HT 13
	HU 14
	HW 11
	HN 12
	HO 12
	HP 13
	HQ 2
	HR 11
	HS 12
	HT 13
	HU 14
	HW 11
	HN 12
	HO 12
	HP 13
	HQ 2
	HR 11
	HS 12
	HT 13
	HU 14
	HW

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

52-CONNECTING DRAWINGS
CHG & DISCH CKT T-82603-30,-31
OFF ALM CKT T-NOT AVAILABLE
ENG ALM CKT T-81100-32
AC SW GEAR T-81223-30,-31
T-81489-11
53-EQUIPMENT ARRANGEMENT
J85901A-1

54-THE TABLE BELOW LISTS LEADS DESIGNATED "FROM OFFICE ALARM CKT" IN FIG. 1 AND THE MEANING OF THE LEAD DESIGNATION.

LEAD DESIGNATION	MEANING	SIGNAL DESCRIPTION
A	ESS MINOR ALARM CONNECTION (SEE NOTE 56)	SENDS GRD ON ALM
ABS0	ALARM BATTERY SUPPLY	PROVIDES ABS
ABS1	ALARM BATTERY SUPPLY	
ABS2	ALARM BATTERY SUPPLY	
ABS3	ALARM BATTERY SUPPLY	
BD	BATTERY DISCHARGE	SENDS GRD ON ALM
D	ESS MAJOR ALARM CONNECTION	
FG	FRAME GROUND	
LON	LOAD MONITOR	ALM ON CONTACT CLOSURE
LONR	LOAD MONITOR RETURN	
PMJ	POWER MAJOR	
PMJR	POWER MAJOR RETURN	
PMJV	POWER MAJOR VISUAL	
PMJVR	POWER MAJOR VISUAL RETURN	
PMI	POWER MINOR	
PMIR	POWER MINOR RETURN	
PMIV	POWER MINOR VISUAL	
PMIVR	POWER MINOR VISUAL RETURN	
SI (A)	STATUS INDICATOR (BATTERY ON DISCHARGE)	
SIR (A)	STATUS INDICATOR (BATTERY ON DISCHARGE) RETURN	
SI (B)	STATUS INDICATOR (HIGH VOLTAGE)	
SIR (B)	STATUS INDICATOR (HIGH VOLTAGE) RETURN	
SI (C)	STATUS INDICATOR (HMF/RFA)	
SIR (C)	STATUS INDICATOR (HMF/RFA) RETURN	
SI (D)	STATUS INDICATOR (VERY LOW VOLTAGE)	
SIR (D)	STATUS INDICATOR (VERY LOW VOLTAGE) RETURN	
SI (E)	STATUS INDICATOR (MAJOR FUSE ALARM)	
SIR (E)	STATUS INDICATOR (MAJOR FUSE ALARM) RETURN	
SI (F)	RECTIFIER FAIL OR MINOR FUSE ALM	ALM ON CONTACT OPEN
SIR (F)		
SI (G)	HIGH VOLTAGE, VERY LOW VOLTAGE, LOW VOLTAGE OR OPERATED F17, F20, F21, DISCHARGE FUSE OR CB TRIP	
SIR (G)		
TR1	REMOTE SHUTDOWN FROM ENGINE CONTROL (J87339A CONT UNIT)	
TR2		
TR3		
TR4		
MPF	MICROPROCESSOR FAIL	ALM ON CONTACT CLOSURE
MPFR	MICROPROCESSOR FAIL RETURN	

55-LOOP LEAD LENGTH SHALL NOT EXCEED 2000 FT; SHUNT VOLTAGE SHALL NOT EXCEED +/- 100 VOLTS (SEE NOTE 9 & 97).

56-WHEN CONNECTION TO NO. 1, 2 & 2B ESS OFFICE ALARM IS REQUIRED SPECIFY FIG H1 FOR 48 VOLT PLANT AND FIG H2 FOR 24 VOLT PLANTS.

57-ENGINEER SHALL PROVIDE TWISTED PAIR O & R 20 GA KS-22247, L-4 STRANDED WIRE OR EQUIVALENT. (SEE NOTE 10)

58-ENGINEER SHALL PROVIDE A 70A, 1 1/3 AMP FUSE (100203822) AS REQUIRED ON A JOB BASIS AND INSTRUCT INSTALLER TO REMOVE & REPLACE DUMMY FUSE AT POS F1 TO F16 TO BE EQUIPPED.

59-MCS DATA SWITCH PORTS 1 THROUGH 4 MAY BE USED IN ANY COMBINATION FOR CONNECTIONS TO MCS REMOTE INTERFACE IN ANOTHER PLANT, OR TO LINEAGE REMOTE ACCESS SYSTEM. LINE ENGINEER SHALL SPECIFY FIG H6 & H7 REMOTE INTERFACE CONNECTION AND/OR FIG H8 & H9 REMOTE ACCESS CONNECTIONS AS REQUIRED. (SEE NOTE 60)

60-LINE ENGINEER SHALL PROVIDE KS-22247, L4 22GA STRANDED WIRE OR EQUIVALENT FOR CONNECTION BETWEEN M7 & W4 CABLE ASSEMBLIES (REMOTE ACCESS) AND FOR CONNECTION BETWEEN W6 & W4 CABLE ASSEMBLIES (REMOTE INTERFACE). WHEN THE DATA SWITCH AND REMOTE INTERFACE ARE IN THE SAME CONTROLLER ADDITIONAL WIRE IS NOT REQUIRED. (SEE NOTE 12)

61-THE CUSTOMER SHALL PROVIDE THE PLUG AND CORD NECESSARY TO MAKE THE CONNECTION BETWEEN THE (TEL CO) JACK ON THE DATA SET AND THE TELEPHONE CO. LINE RECP (W4AS CORD & PLUG OR EQUIVALENT 25 FT MAX) THE PHONE JACK SHALL BE MOUNTED NEAR THE CONTROLLER TO MEET THE 25 FOOT REQUIREMENT.

62-ALARM WIRING IS FURNISHED BY THE USER. ALARM (W/BK) AND ALARM RETURN (G) ARE TO BE CONNECTED TO THE L199 CABLE ASSEMBLY FROM ANY ISOLATED CONTACT PAIR. FOR REMOTE MONITOR, THE ALARM AND RETURN CONNECTIONS MAY BE MADE AT THE ALARM TERMINAL BLOCK TB1 (SEE SD-82588-01). FOR REMOTE ACCESS SYSTEM, IF A RAS ALARM IS USED, ALARM RETURN IS PROVIDED BY CONNECTION TO THE (G) WIRE OF THE L199 CABLE ASSEMBLY. THE CORRESPONDING ALARM CONNECTION MUST BE MADE ELSEWHERE WITHIN THE RAS (SEE SD-82645-01).

63-LINE ENGINEER SHALL PROVIDE KS22247L-4, 20 GAUGE STRANDED WIRE PAIR OR EQUIVALENT FOR CONNECTION BETWEEN RECTIFIER SEQUENCE CONTROLLER AND ENGINE ALTERNATOR APPLICATION OR ALARM CIRCUIT.

64-LINE ENGINEER SHALL PROVIDE KS13385, L-1, 18 GAUGE STRANDED WIRE PAIR OR EQUIVALENT FOR CONNECTION BETWEEN ROUND CELL PREDICTOR CONNECTOR AND (RT1) THERMISTOR MOUNTING ASSEMBLY.

65-SPARE FUSES FOR THE UNIVERSAL SHUNT MONITOR ARE GLR-1/2 AMP FUSE (BUSSMAN) AND MAYBE ORDERED PER CONCODE 405186339.

66-IN ORDER FOR THE "CALL OUT ON ALM" FEATURE ON DATA SWITCH TO FUNCTION, THE ENGINEER MUST CONNECT THE ALM & ALM RET LEAD OUT OF DATA SW PORT TO AN ISOLATED CONTACT PAIR ON THE MCS CONTROLLER ON RAS. THE CONTACT PAIR CAN BE EITHER NORMALLY CLOSED OR NORMALLY OPEN. INSTALLATION PROGRAMS THE DATA SWITCH WITH THE CORRECT ALM OPERATION. THE ENGINEER SHOULD DISCUSS WITH THE CUSTOMER AS TO WHETHER HE REQUIRES A CALL OUT ON A MAJOR OR MINOR ALM. THIS WILL PROVIDE THE CONNECTION POINT FOR THE ALM & ALM RET LEADS ON THE CONTROLLER OR RAS. (SEE NOTE 16)

76-MODIFICATION OF SD-82588-01 CONSISTS OF MAKING CHANGES PER LDI 9A & CONSIDERING KS-14523 TYPE CONNECTORS TO BE REPLACED BY KS-20667 TYPE JACKS.

(CONTINUATION)

W4-4 RESP. AT (J10B) TERM 5 & 2 REF TO ASSOC BACK PL TERMS 103 & 003 ADDED RESP. IN FIG H6 REF TO (SEE NOTE 12) ADDED. IN FIG H13 COLORS "BK, BR-4" READ "BK, W-BK".	2-17-89	CLASS "M"
EJC	JAC	MG
IN FIG F "Z" OPT WAS NOT SO DES "Z" OPT ADDED. DIST CODE READ "AMIO".	2-27-89	CLASS "M"
EJC	JAC	MG
SH B1, FIG. 1, AT TB2 INFO T-82603-31 FIG 15 LOW VOLTAGE DISCONNECT CKT. FROM OF DISCH GRD LEAD.	4-11-89	CLASS "M"
JPC	JAC	MG
IN FIG B AT (M2) AMMETER X & Y OPT INTERCHANGED.	8-2-89	CLASS "R"
JVM	JAC	MG
SH1 A1-ADD TBL. B CHG, TBL. C ADD L40; TBL. D ADD ZL, ZM OPT FOR FIG. 2; SH1 B4 ADD ZL, ZM OPT INFO TO Z1 NETWORK	9-26-86	CLASS AC
COO002J	JAC	MG
3-18-90		
G00	JAC	MG
31		
SH1 A1-ADD L41 TO TBL. C; ADD OPT ZH TO FIG. 2 ON TBL. D; SH1 A2-ADD ENG. NOTE 67; SH1 B4-ADD OPT ZH ON (CPM2) OF FIG. 2	3-15-90	CLASS: B
G00	JAC	MG
32		
CORRECT ISS. MISMATCH WITH SH1A1 ON SH B2, B3, B5 & B10.		
PDL 92.ESDJ97 S3		CL. "M"
357 [2-11-92]		32

(CONTINUATION)

NOTE 57 ADDED. IN FIG E HR OPT WAS NOT SO DESIG, HS OPT ADDED. IN FIG F, HT OPT WAS NOT SO DESIG, HS OPT ADDED. ON SH B5 IN FIG 2, (CP6) & (CP7) ADDED.	ND085501NJ11	3-7-86	CLASS B
EJC	JAC	MG	
IN FIG A.A. OPT WAS NOT SO DES OR RATED M.D. B OPT & ASSOC INFO ADDED.	CN3827NJ	9-26-86	CLASS AC
ND085501NJ16			
EJC	JAC	MG	
ON SH A1 NOTES 9 & 10 ADDED. SH A2 ADDED. SHEETS B4 & B5 REDRAWN FIGS. H3 & H4 AND IN FIG 2 POS 2 TO 7 OPT R MC800130-1, ADDED.	ND085501NJ19	9-26-86	CLASS B
EJC	JAC	MG	
ON SH B1 FIG 1 AT (TB1) H OPT WAS NOT SO DES OR RATED M.D. J OPT & ASSOC INFO ADDED.	ND085501NJ20	9-26-86	CLASS AC
EJC	JAC	MG	
ON SH A2 NOTE 98 ADDED ON SH B5 IN FIG 1 AT 22A FUSE BLK 728 DUMMY FUSES ETC. READ 70A FUSES.	ND085501NJ23	1-25-83	CLASS B
EJC	JAC	MG	
THRU OUT DMG & IN MFG NOTE 1 & 8 REF TO "KS-22247, L4" READ "KS-22247, L1 1-7-86"			
EJC	JAC	MG	
IN FIG H3 (SH B5) AT (J92A-7) & (J92B-7) COMB. PAIR COLORS INTERCH'D IN FIG H4 AT BRKT TO FIG H3 LEAD COLORS "O & R-O" INTERCHG'D.	9-22-87		CLASS M
EJC	JAC	MG	
ON SH A1 NOTES 12, 13 & 14 ADDED. ON SH A2 NOTES 59, 60, 61 & 62 ADDED. ON SH (B10) FIGS H5, H6, H7, H8 & H9 ADDED. SH B4 REDRAWN & "U" APP ADDED.	ND085501NJ21	4-13-87	CLASS M
EJC	JAC	MG	
(CONTINUED ON UPPER RIGHT)			
ON SH A1 MFG NOTE 5 REF TO COLOR GREEN "LINED OUT & "WHITE" ADDED. IN NOTE 12, PART B REF TO "INTERFACE" READ "MONITOR". ON SH A2 NOTE 59 "SEE NOTE 10" ON SH A2 NOTE 58 "SEE NOTE 10" RW'D. IN FIG 1 SH B1 AT (P1) BACKPLANE REF TO "SEE NOTE 2" ADDED. AT 22A F. BLK (SH B3) REF TO "A87M" TERM READ "A87" TERM. AT (F17), (F18) & (F19) BRKT DES "29A FUSE (F18) & (F19) BRKT DES "29A FUSE" ADDED. IN FIG 2 (SH 34) AT (CP10) CP BRKT DES (J10B) FOR TERM ORG TO 004 READ "(J10C)". IN FIG H4 SH B5 LEAD DES FOR O & R REF TO NOTE 55 ADDED ALSO LEAD DES CH-(NEG) CH "45" READ CH "29" IN FIG A SH B7 P3 & J3 CONN REF TO "MC80013A1C CP" READ "ED-83007-30 P4B". IN FIG H5 (SH B18) CA ASSY DES W4-4, W4-3, W4-2 & W4-1 READ W4-1, W4-2, W4-3 &			
EJC	JAC	MG	
ON SH A1 NOTE 16 B REF TO SAME IN NOTE 12, 66, FIG H7 & H9 ADDED. IN NOTE 10 REF TO "ON A18-BFL ADDED. IN NOTE 76 LDI "A" READ "B". IN FIG 2 AT (P2)-(P7) BACKPLANE DES "MC80031-A18" READ "MC-93031-A". IN FIGS H6, H7, H8 & H9 GRD LEAD ADDED. IN TABLE C 50 OPT FOR CAD 14 "S" OPT READ "Q".	CN3841	5-25-88	CLASS "A"
EJC	JAC	MG	
ON SH A2 LEADS DES "LDM & LDMR" AND MEANING LINED OUT. IN FIG 1 AT BRKT "FROM RECT SEQ" LEAD "SIR(G)" WAS NOT SO DES "S" OPT. IN FIG 6 AT P1 & P2 ON BACKPLANE, WRS REARRANGED IN FIG H3 AT (J92A-7) & (J92B-7) COMB'S COLORS BRACKETED NEW COLORS ADDED TO AGREE ASSY DWG & DALLAS POINT ISSUE 23.1	5-25-88		CLASS "M"
EJC	JAC	MG	

(CONTINUATION)

ON SHEET A1 NOTE 13 RW'D & READ, "FOR ALL REMOTE-MONITOR TO DATA SWITCH CONNECTIONS, CRIMP THE ALM-RETURN WIRE TOGETHER WITH THE G(GRD) WIRE OF THE L199 CABLE. TWO WIRES MAY BE INSERTED INTO ON END BUTT SPLICE." IN TABLE C, FIG H9 ADDED & FIG H5 TO H8 WERE SHOWN MADE FROM U OPT. ON SHEET A2 IN NOTE 57 "SEE NOTE 10" ADDED. ON SHEET B5 IN FIG H4 AT BRKT TO FIG H5 R-O WIRE READ O-R & O ADDED TO WIRES & AT FUSES (FA-) READ (FB-).			
ON SHEET B10 IN FIG H5 (PORT 1 TO 4) READ (PORT 4 TO 1) RESP. IN FIG H6 G WIRE PART OF H-285-224, L-196 CA ASSY RW'D FROM (J10D-) TERM 24 DESIG GRD AT BRKT & TERM NR 100 AT BACKPLANE. IN FIG H7, G WIRE, DESIG GRD BET BRKTS TO FIG H5 & FROM FIG H5 RW'D. SEE NOTE 13 RW'D FROM WIRES DESIG GRD. IN FIG H8 G WIRE PART OF H285-224, L-197 CA ASSY RW'D FROM TERM 5 OF (TB303) DESIG GRD TO FIG H9. SEE NOTE 13 RW'D FROM WIRES DESIG GRD. IN FIG H9 G WIRE DESIG GRD BET BRKTS TO FIG H5 & FROM FIG H8 RW'D. SEE NOTE 13 RW'D FROM WIRES DESIG GRD.	7-19-87		CLASS M
EJC	JAC	MG	
ON SH B1 IN FIG 1 (P2) CP WAS NOT SO DES. ZA, ZB OPT ADDED. ON SH B5 IN FIG 1 Z1 APP ADDED. ON SH B4 IN FIG 2, H1, ZG APP READ H1-ZD APP READ R, Y APP WAS NOT SO DESIG, P, ZC, ZE & ZH APP ADDED. ON SH B6 IN FIG A, D APP ADDED. ON SH B10, FIGS 10 TO 14 ADDED. ON SH A1 NOTE 4 READ, "NO WIRES ON THIS DMG ARE TO BE RUN BY THE INSTALLER EXCEPT WIRES DESIG "O" IN FIG 1 AT (TB2) TS; NOTE 13 READ UNASSIGNED, NOTE 15 ADDED. IN TABLE G (CR1) & (CR2) DIODE ADDED. ON SH A2 NOTE 63 & 64 ADDED. IN NOTE 54 MEANING FOR LEAD DESIG "S1(F), S1R(F), S1(G) & (S1R(G) READ UNASSIGNED IN NOTE 52 (SEE NOTE 10) ADDED. IN NOTE 76 "B8 READ 68, "SH B11 & NOTES 6, 65 & 66 ADDED. IN FIG H4 "O" WIRE READ "R-O".	ND085501NJ25	1-25-83	CLASS B
EJC	JAC	MG	
ON SH A1 NOTES 12, 13 & 14 ADDED. ON SH A2 NOTES 59, 60, 61 & 62 ADDED. ON SH (B10) FIGS H5, H6, H7, H8 & H9 ADDED. SH B4 REDRAWN & "U" APP ADDED.	ND085501NJ21	4-13-87	CLASS M
EJC	JAC	MG	
(CONTINUED ON UPPER LEFT)			

T-82588-30
SHEET A2

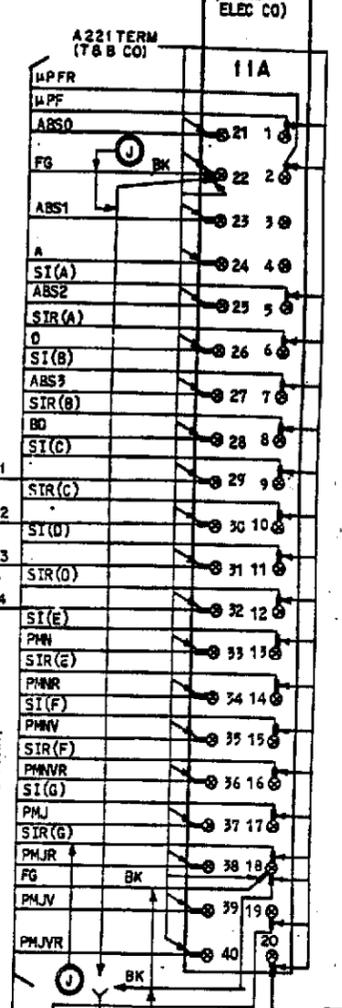
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CONTROLLER CKT

DWG SIZE 1550K
65 33

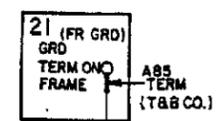
AT&T T-82588-30 SHEET A2

FIG 1
CONTROLLER CKT
(SEE NOTE 11)



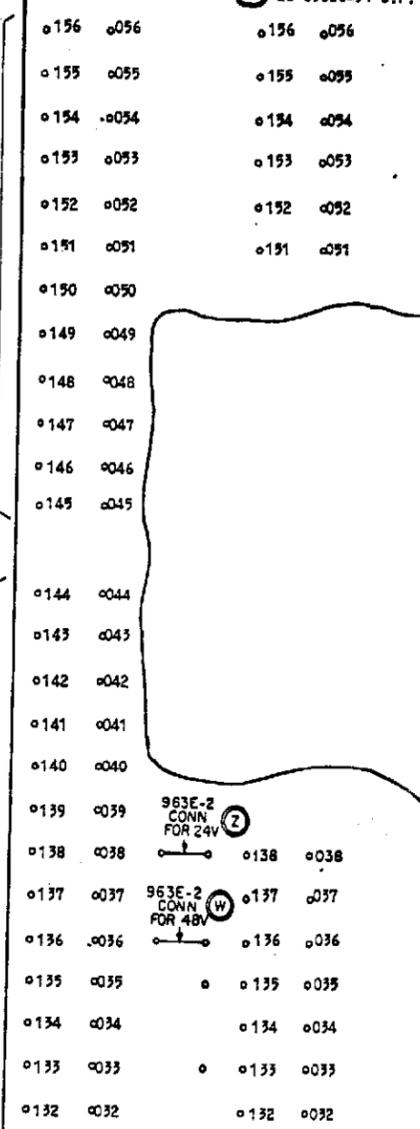
(TB1)	(TB1)
722140	722140
TERM BLK	TERM BLK
(MAGNUM	(MAGNUM
ELEC CO.)	ELEC CO.)
1	21
2	22
3	23
4	24
5	25
6	26
7	27
8	28
9	29
10	30
11	31
12	32
13	33
14	34
15	35
16	36
17	37
18	38
19	39
20	40

MATES WITH (J1) CONN IN FIG C (SH B2) OR FIG D (SH B3)
MATE WITH FIG C UNLESS OTHERWISE SPECIFIED

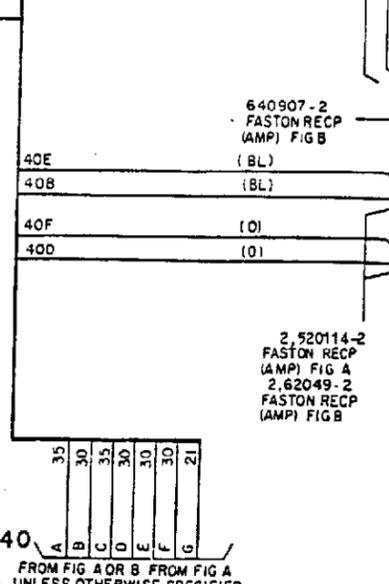
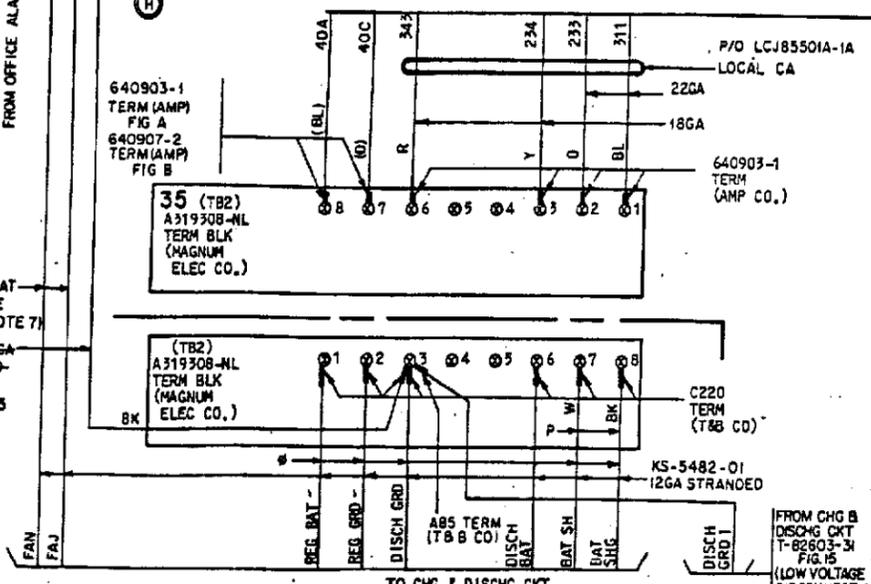


18GA STRANDED
OR
846323665
WIRE SET

25 P/O B4176R245
BACKPLANE
(P1)
(SEE NOTE 2)



MATES WITH (J1A) (J1B) CONN IN FIG C (SH B2) OR FIG D (SH B3)
MATE WITH FIG C UNLESS OTHERWISE SPECIFIED



FROM CHG B DISCHG CKT T-82503-3H FIG 15 (LOW VOLTAGE DISCONNECT CKT)

FROM FIG A OR B FROM FIG A UNLESS OTHERWISE SPECIFIED

CONTINUED ON SHEET B2

T-82588-30
SHEET B1

CONTROLLER CKT

AT & T

T-82588-30

DWG SIZE 65

ISSUE 29

SHEET B1

FIG 2 (CONT'D ON 5H 98)

P/O 841788248 BACKPLANE SHOWN IN FIG 1 (P8)

156	056
155	055
154	054
153	053
152	052
151	051
150	050
149	049
148	048
147	047
146	046
145	045
144	044
143	043
142	042
141	041
140	040
139	039
138	038
137	037
136	036
135	035
134	034
133	033
132	032
124	024

P/A

115	015
112	012
111	011

P/B

105	005
104	004
103	003
102	002
101	001
100	000

MATES WITH (J8A), (J8B), & (J8E) CONN IN FIG E (SH B9) OR FIG F (SH B7) MATE WITH FIG E UNLESS OTHERWISE SPECIFIED

P/O 841788476 BACKPLANE (P1)

156	056
155	055
154	054
153	053
152	052
151	051
150	050
149	049
148	048
147	047
146	046
145	045
144	044
143	043
142	042
141	041
140	040
139	039
138	038
137	037
136	036
135	035
134	034
133	033
132	032
124	024

P/A

115	015
112	012
111	011

P/B

105	005
104	004
103	003
102	002
101	001
100	000

MATES WITH (J1A), (J1B) & (J1C) CONN IN FIG E (SH B9) OR FIG F (SH B7) MATE WITH FIG E UNLESS OTHERWISE SPECIFIED

P/O (P2) (P3) (P4) (P5) (P6) OR (P7) ON BACKPLANE -841788476-845194356 E/W (CP8) MC80031-B1C CIRCUIT PACK

156	056
155	055
154	054
153	053
152	052
151	051
150	050
149	049
148	048
147	047
146	046
145	045
144	044
143	043
142	042
141	041
140	040
139	039
138	038
137	037
136	036
135	035
134	034
133	033
132	032
124	024

P/D

113	013
112	012
111	011

P/E

105	005
104	004
103	003
102	002
101	001
100	000

MATES WITH 963N-24 CONN P/O TH-285-224 LIT CA ASSY ON T-BE603-30 FIG 23 OR MATES WITH (J100-) CONN SHOWN IN FIG H6

P/O (P2) TO (P7) ON BACKPLANE 845194356 E/W (CP10) MC80031-A1B CIRCUIT PACK

156	056
155	055
154	054
153	053
152	052
151	051
150	050
149	049
148	048
147	047
146	046
145	045
144	044
143	043
142	042
141	041
140	040
139	039
138	038
137	037
136	036
135	035
134	034
133	033
132	032
124	024

P/A

123	023
122	022
121	021
120	020
119	019
118	018
117	017
116	016
115	015
114	014
113	013
112	012
111	011
110	010
109	009
108	008
107	007
106	006
105	005
104	004
103	003
102	002
101	001
100	000

MATES WITH (J10A-4) FIG H5
MATES WITH (J10A-3) FIG H5
MATES WITH (J10A-2) FIG H5
MATES WITH (J10A-1) FIG H5

P/O (P2) TO (P7) ON BACKPLANE 845194356 E/W (CP13) MC80013E1 CIRCUIT PACK

156	056
155	055
154	054
153	053
152	052
151	051
150	050
149	049
148	048
147	047
146	046
145	045
144	044
143	043
142	042
141	041
140	040
139	039
138	038
137	037
136	036
135	035
134	034
133	033
132	032
124	024

P/A

123	023
122	022
121	021
120	020
119	019
118	018
117	017
116	016
115	015
114	014
113	013
112	012
111	011
110	010
109	009
108	008
107	007
106	006
105	005
104	004
103	003
102	002
101	001
100	000

MATES WITH (J12) CONN, FIG H10

P/O (P2) TO (P7) ON BACKPLANE 845194356 E/W (CP12) ED-83228-30 G-1,A CIRCUIT PACK
ED-83228-31 G2 CIRCUIT PACK

156	056
155	055
154	054
153	053
152	052
151	051
150	050
149	049
148	048
147	047
146	046
145	045
144	044
143	043
142	042
141	041
140	040
139	039
138	038
137	037
136	036
135	035
134	034
133	033
132	032
124	024

P/A

123	023
122	022
121	021
120	020
119	019
118	018
117	017
116	016
115	015
114	014
113	013
112	012
111	011
110	010
109	009
108	008
107	007
106	006
105	005
104	004
103	003
102	002
101	001
100	000

MATES WITH (J11) CONN, FIG H11

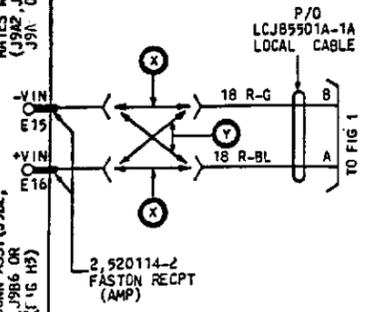
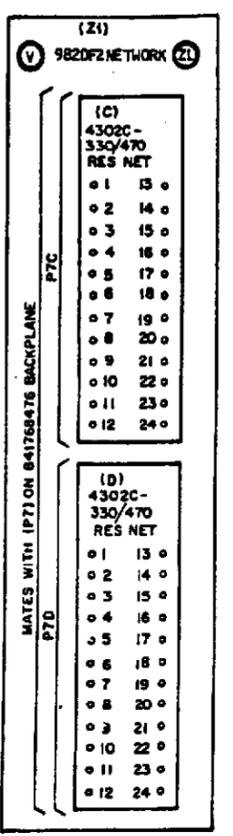
P/O (P2) TO (P7) ON BACKPLANE 841788476 845194356 E/W MC80013D-1 OR MC80013D-1B CIRCUIT PACK

156	056
155	055
154	054
153	053
152	052
151	051
150	050
149	049
148	048
147	047
146	046
145	045
144	044
143	043
142	042
141	041
140	040
139	039
138	038
137	037
136	036
135	035
134	034
133	033
132	032
124	024

P/A

123	023
122	022
121	021
120	020
119	019
118	018
117	017
116	016
115	015
114	014
113	013
112	012
111	011
110	010
109	009
108	008
107	007
106	006
105	005
104	004
103	003
102	002
101	001
100	000

MATES WITH MC CONN ASSY (J9A, J9B, J9C, J9D, J9E, J9F, J9G, J9H, J9I, J9J, J9K, J9L, J9M, J9N, J9O, J9P, J9Q, J9R, J9S, J9T, J9U, J9V, J9W, J9X, J9Y, J9Z) OR J9A-J9Z AS REQ'D (FIG H9)

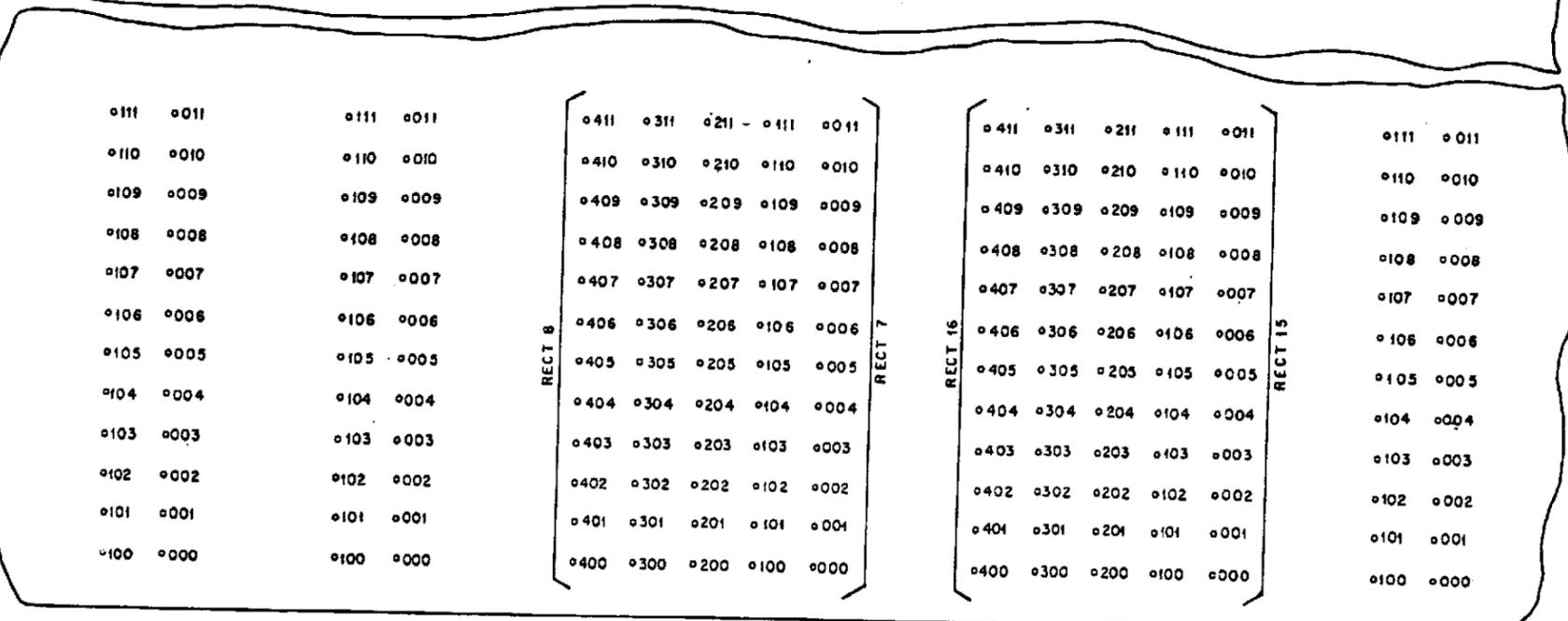
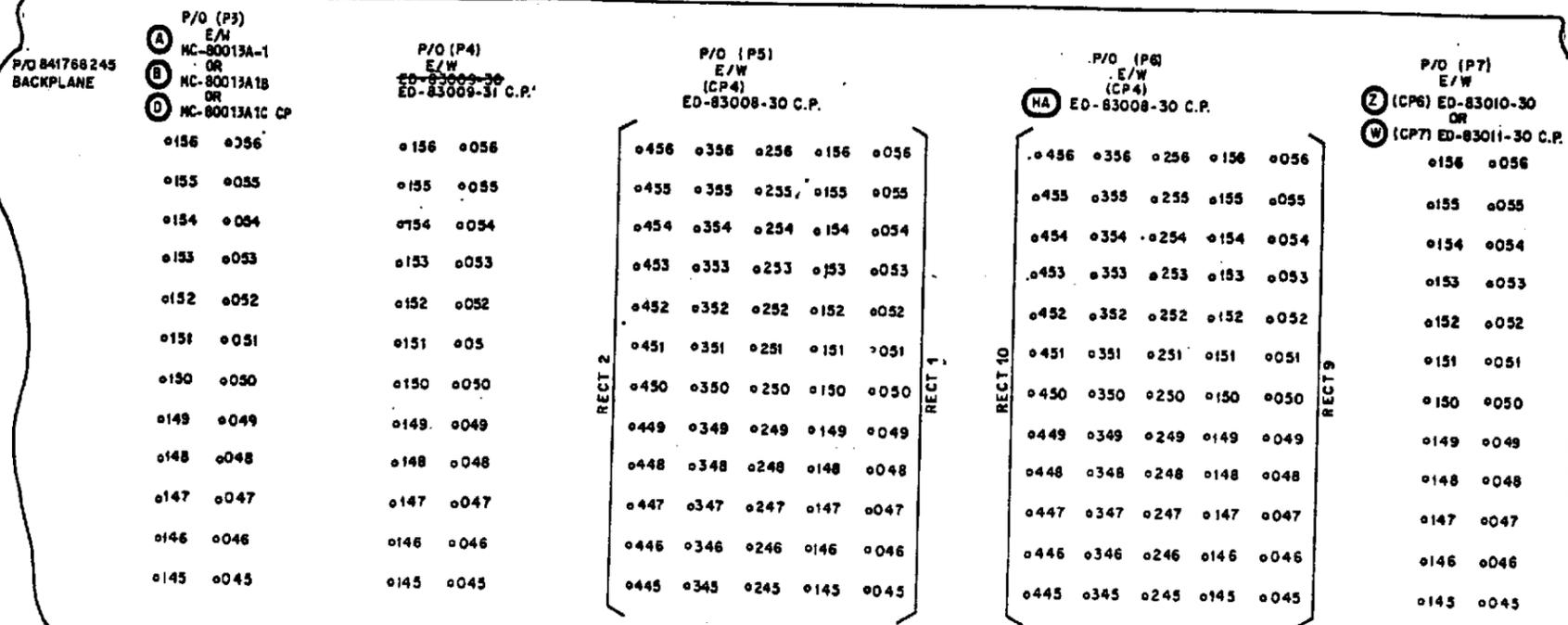


T-82588-30

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

CONTROLLER CKT	
DWG SIZE	ISSUE
65	32
AT&T TECHNOLOGIES, INC.	T-82588-30
SHEET B4	

FIG A

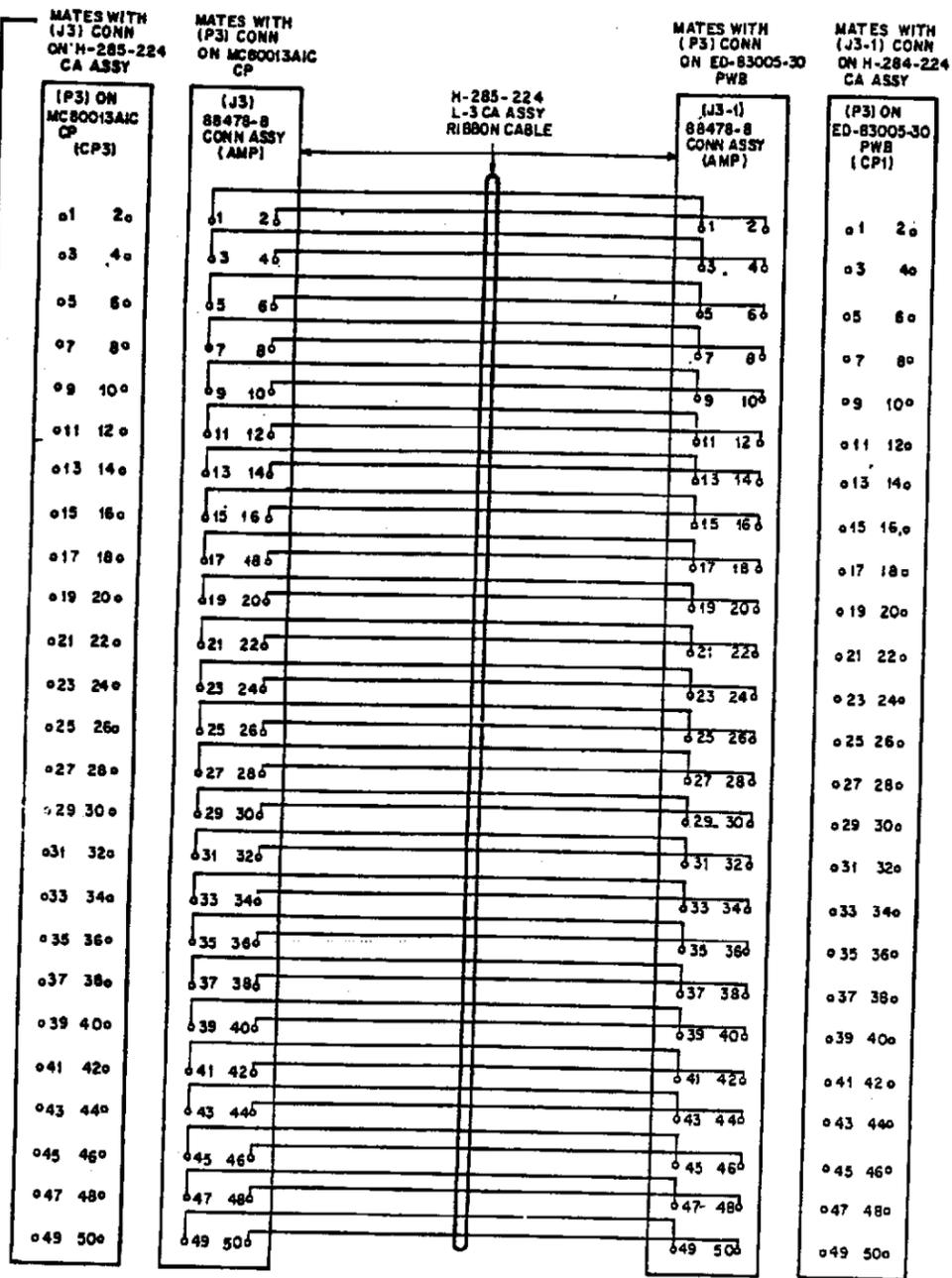


T-82588-30
 SHEET
 B6

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

CONTROLLER CIRCUIT		DWG SIZE	ISSUE
		85	23
AT&T	T-82588-30	SHEET B6	

FIG A (CONT'D)



MATES WITH (P4) CONN (J1) & (J2) PLUGS

(P4) CONN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P/O ED-83005-30 PWB	1	3	5	7	9	11	13	15	17	19									
	2	4	6	8	10	12	14	16	18	20									

MATES WITH (P4) CONN EVEN TERMS

(J1) PLUG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PART OF ML50241-502 SWITCH PANEL ASSEMBLY (DURALITH CORP)	COL 00	COL 10	COL 20	COL 30	COL 40	COL 50	COL 60	COL 70											

MATES WITH (P4) CONN ODD TERMS

(J2) PLUG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PART OF ML50241-502 SWITCH PANEL ASSEMBLY (DURALITH CORP)	10	9	8	7	6	5	4	3	2	1									

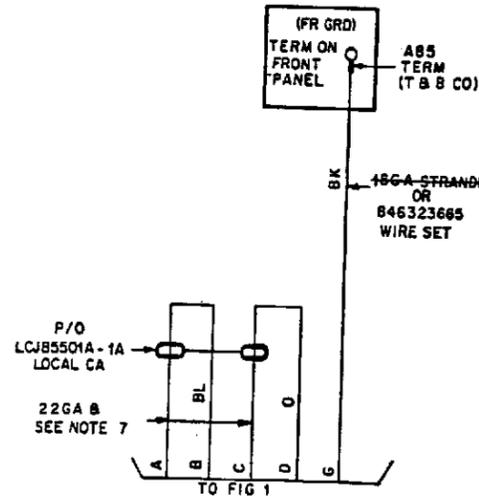
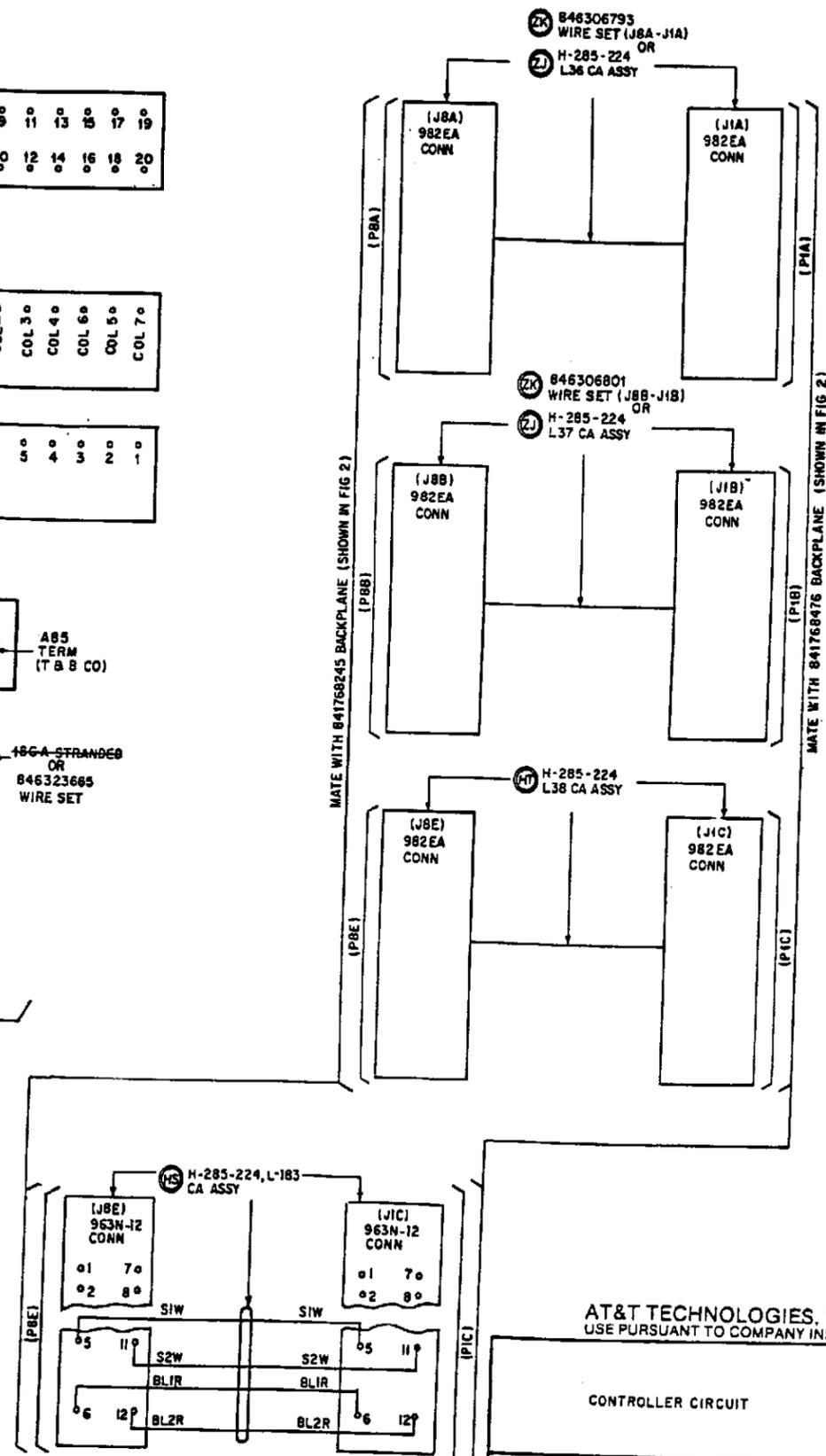


FIG F



T-82588-30
REV B7

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

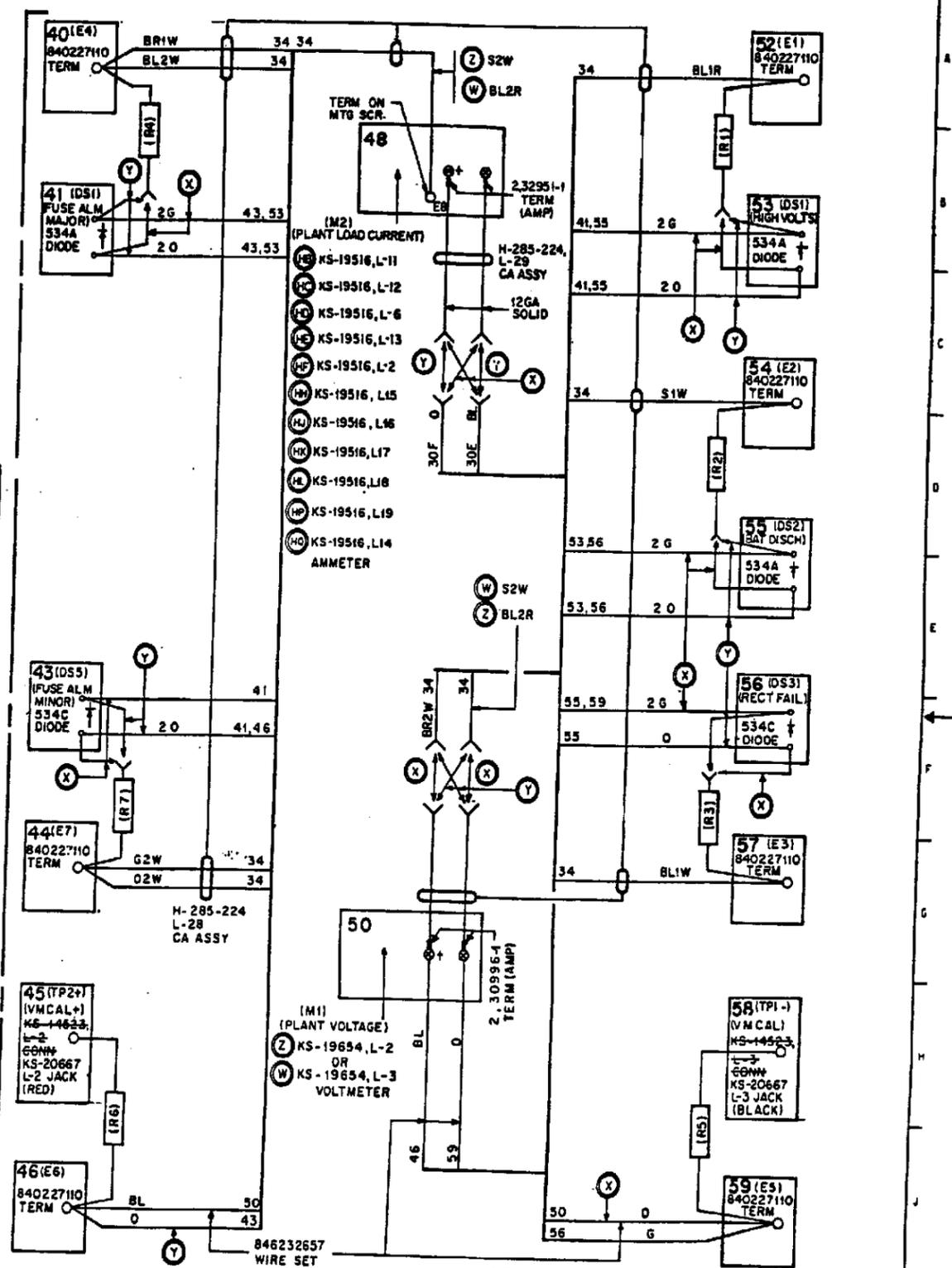
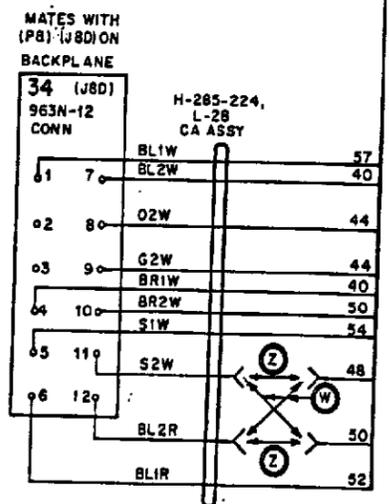
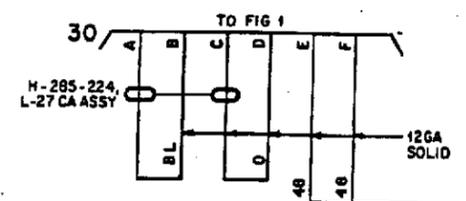
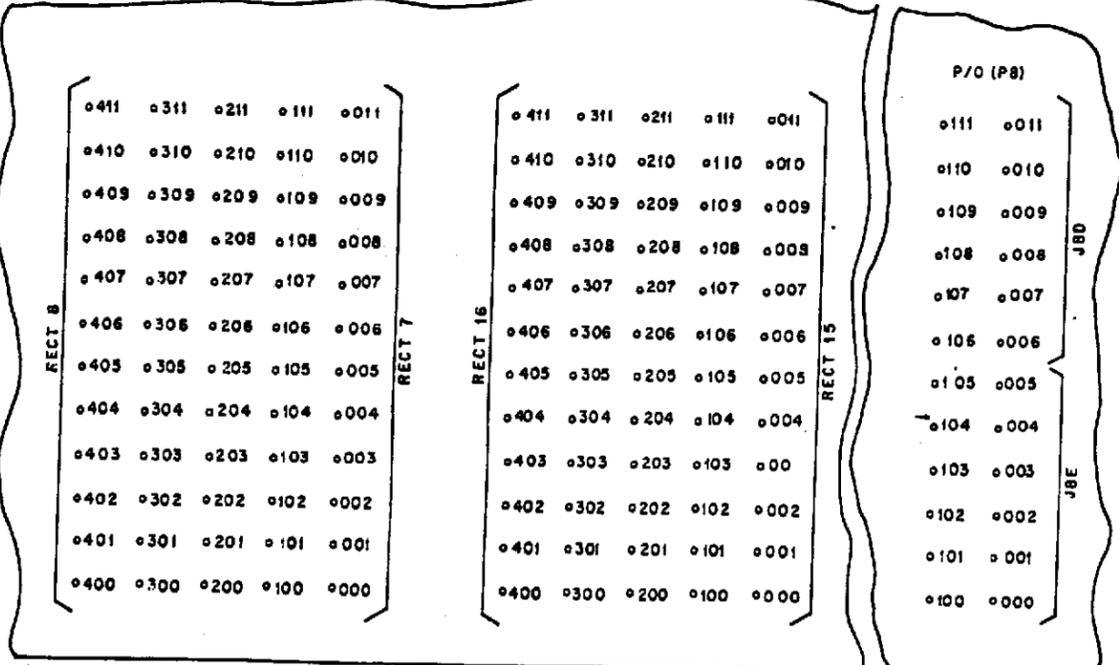
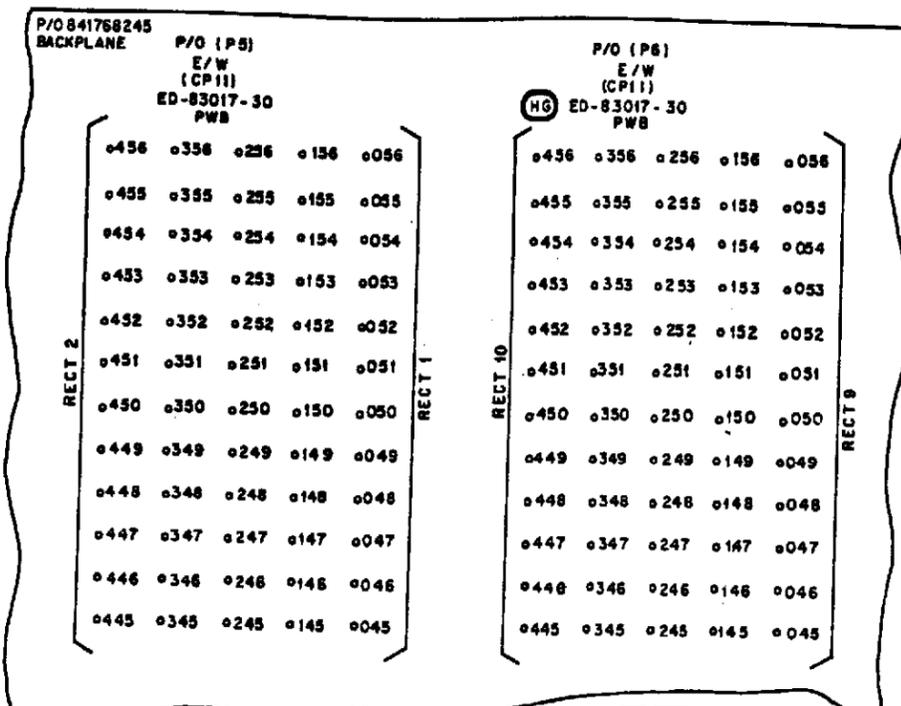
CONTROLLER CIRCUIT

DWG SIZE	ISSUE
65	28

AT & T T-82588-30

SHEET B7

FIG B

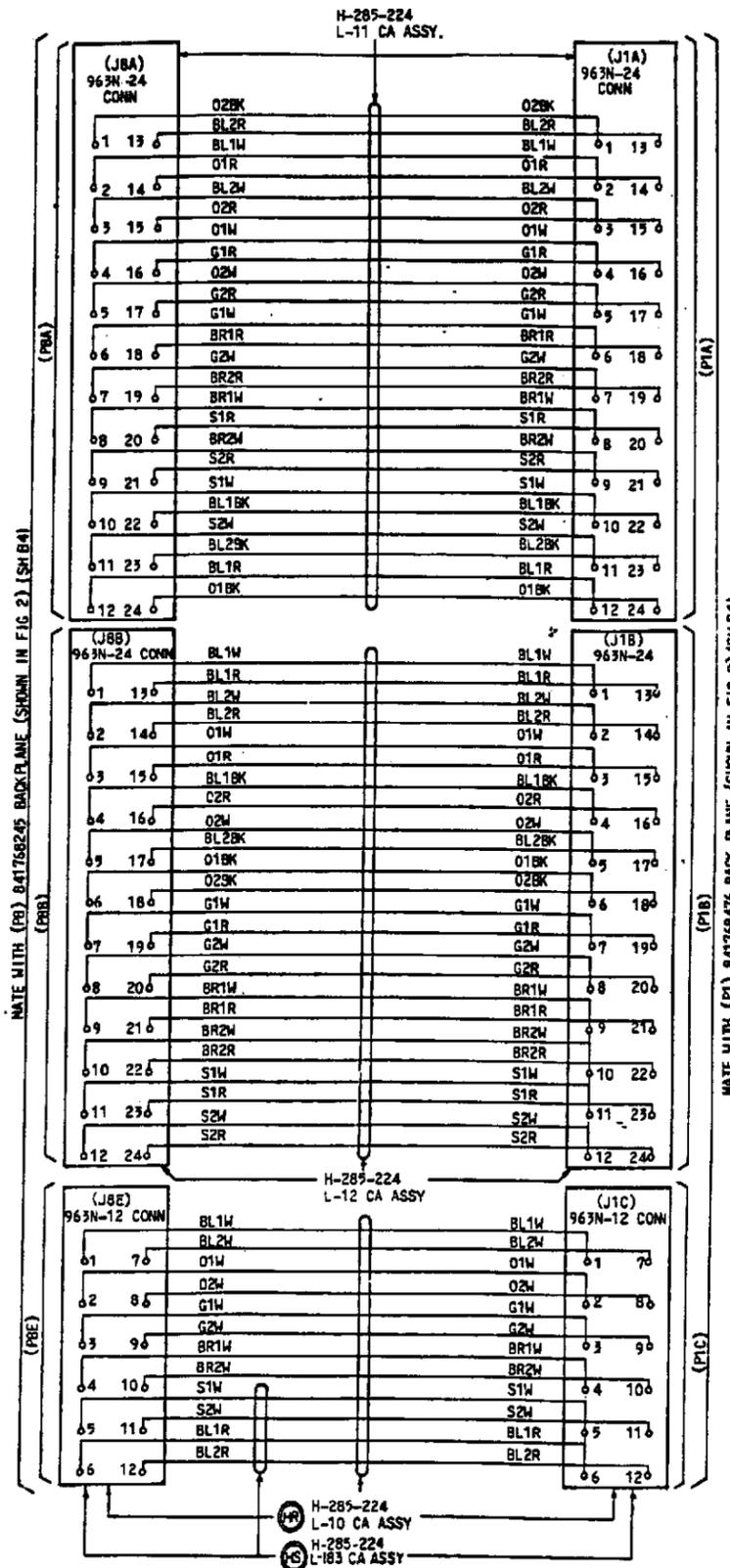
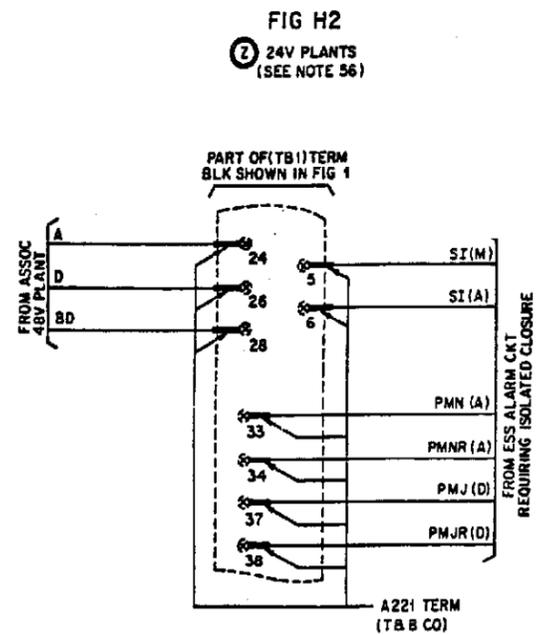
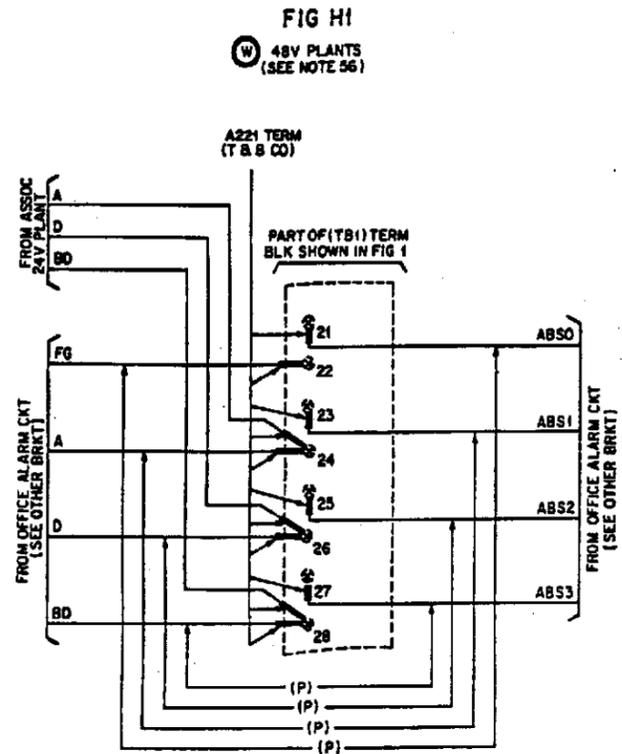


T-82588-30
SHEET 88

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

CONTROLLER CIRCUIT		DWG SIZE	ISSUE
		65	30
AT&T	T-82588-30	SHEET 88	

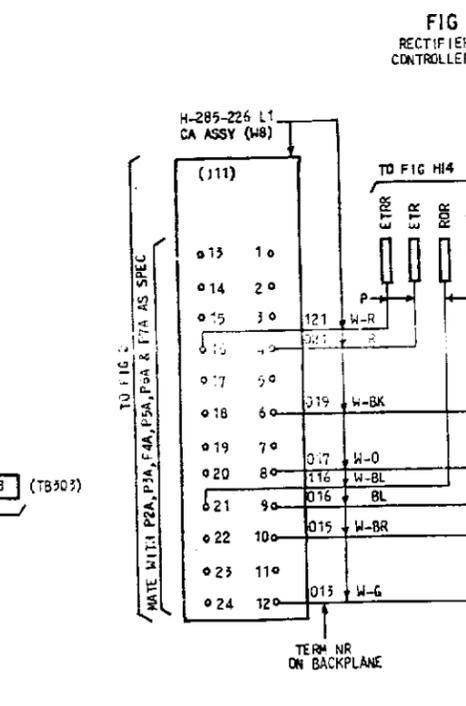
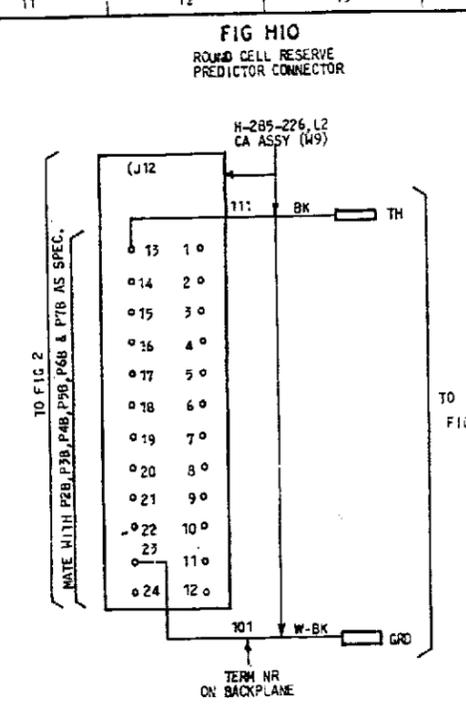
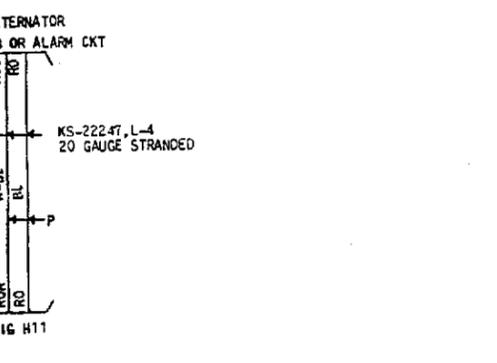
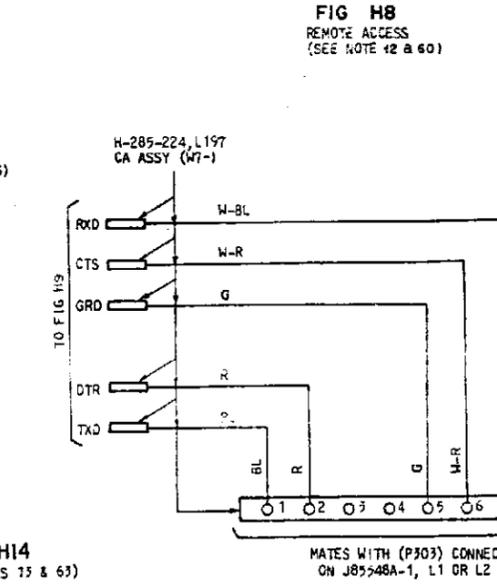
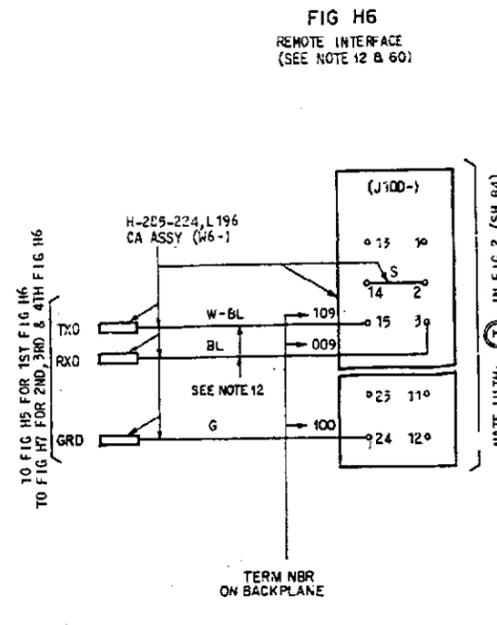
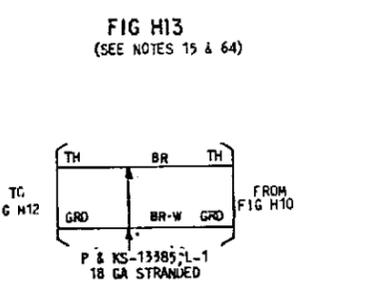
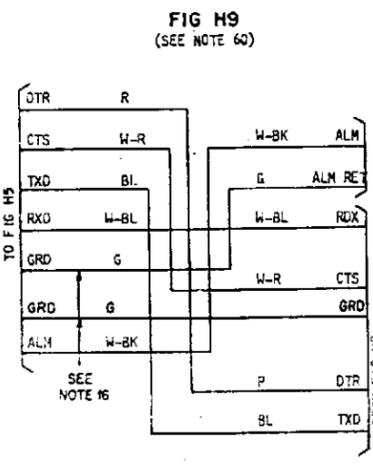
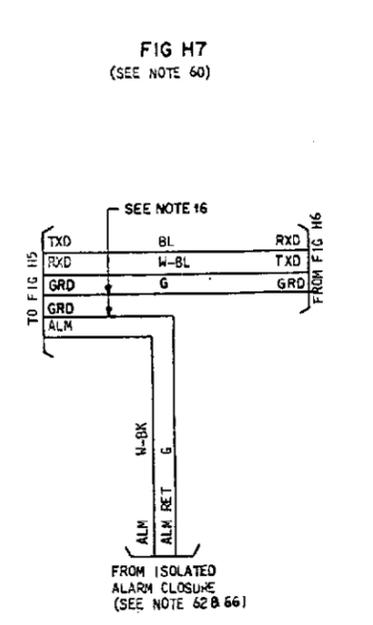
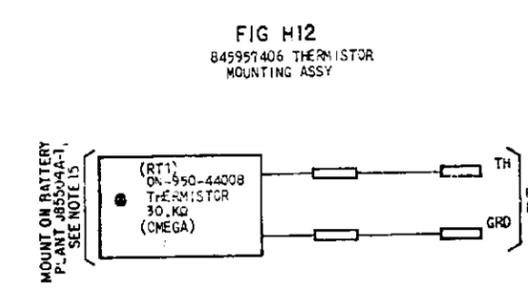
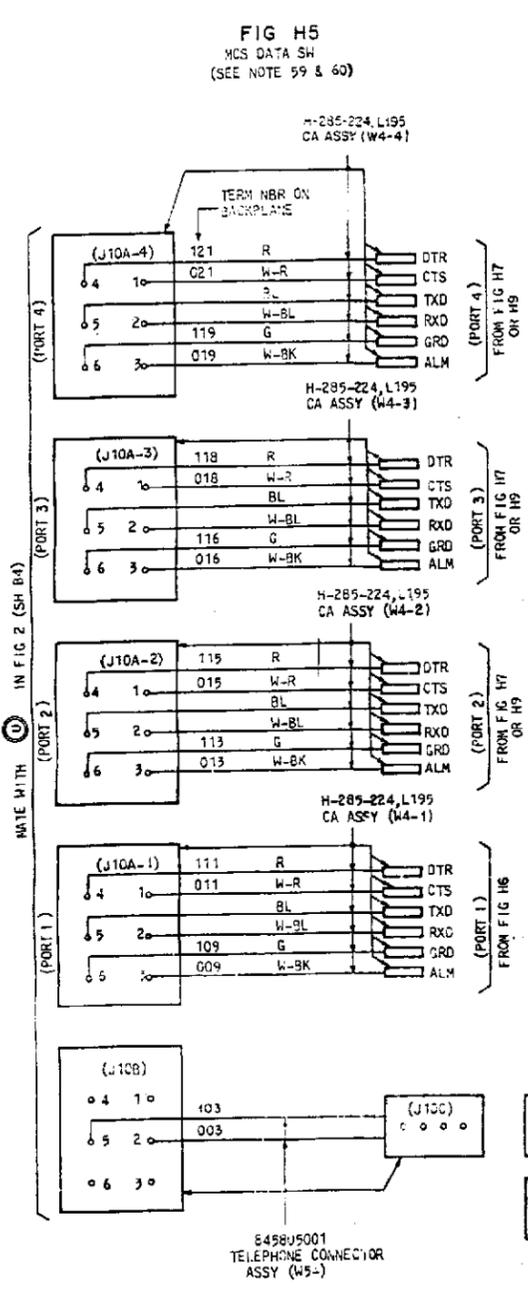
FIG E



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

CONTROLLER CKT		DWG SIZE	ISSUE
		65	14
AT&T TECHNOLOGIES, INC.	T-82588-30	SHEET B9	

T-82588-30
 SHEET B9



T-82588-30
SHEET B10

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

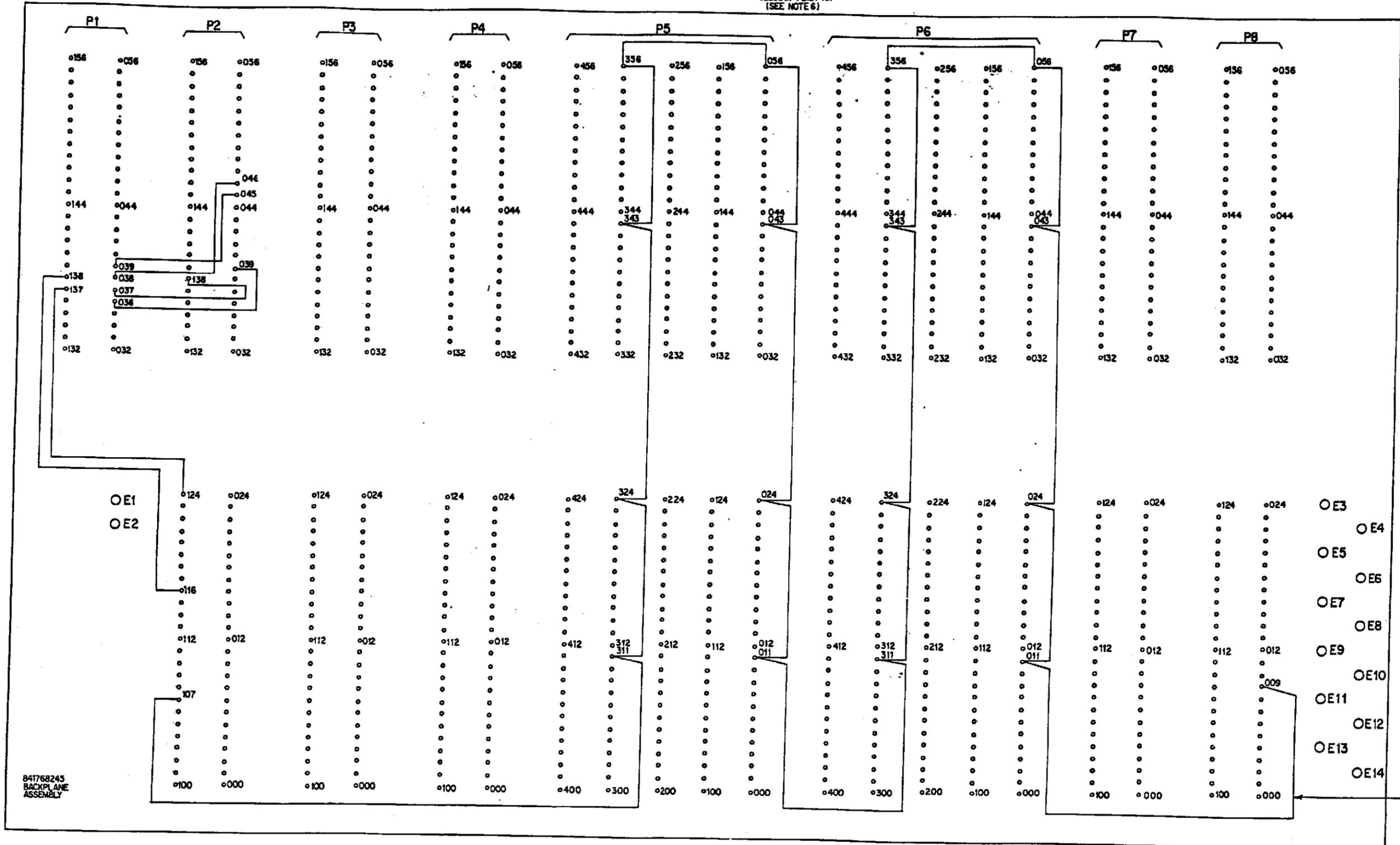
CONTROLLER CKT

DWG SIZE 65

ISSUE 33

AT&T TECHNOLOGIES, INC. T-82588-30 SHEET B10

FIG G
JB5501A-1 LIST AK
(SEE NOTE 6)



841768245
BACKPLANE
ASSEMBLY

FURN
LIST B
ONLY

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

CONTROLLER CKT		DWG SIZE 65	ISSUE 27
AT&T TECHNOLOGIES, INC.	T-82588-30	SHEET B11	

T-82588-30
SHEET
B11