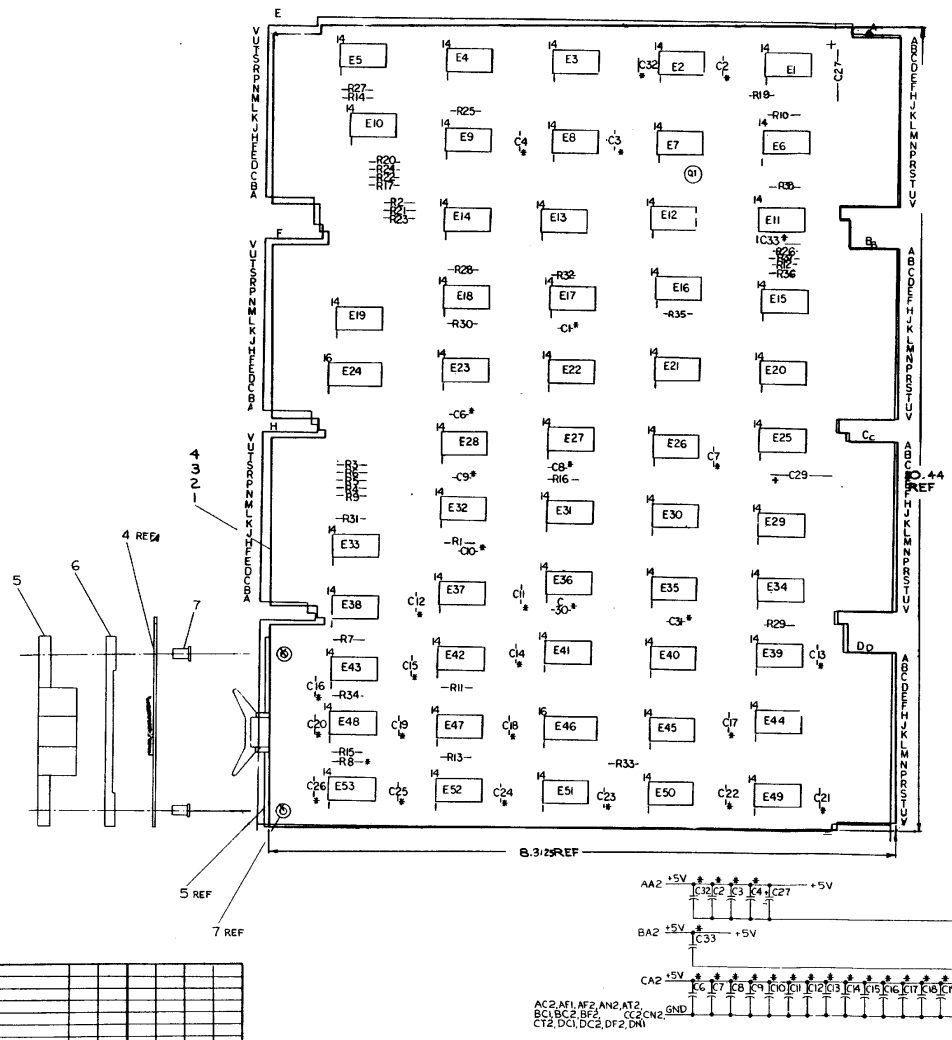
NOTES:
* THESE COMPONENTS MUST BE ON THE M8310 IF THERE IS A KL8-A(M8319) ON THE SYSTEM.



QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
* 1	R8	RES. 150, 1/4W, 5%	1300250	31
1	R37	RES. 3K, 1/4W, 5%	1300432	30
1	R38	RES. 100, 1/4W, 10%	1300231	29
1	Q1	TRANSISTOR DEC3009B	1503100	28
2	E40,E45	I.C. DEC 74H74	1909667	27
3	E18,E21,E35	I.C. DEC 74H00	1909056	26
2	E14,E36	I.C. DEC 74H04	1909931	25
1	R35	RES 100, 1/4W, 5%	1300[illegible]	[illegible]
1	E38	I.C. DEC 7486	1910011	23
3	E9,E11,E13	I.C. DEC 7412	1909955	22
1	E24	I.C. DEC 74151	1909936	21
4	E8,E10,E27,E28	I.C. DEC 7405	1909930	20
12	E1-E5,E23,E43, E44,E49,E52, E53,E15	I.C. DEC 8881	1909705	19
7	E6, E16,E20,E26, E34, E47,E48	I.C. DEC 7404	1909686	18
1	E46	I.C. DEC 8251	1909594	17
1	E29	I.C. DEC 384	1909486	16
6	E19,E22,E25,E37,E41,E51	I.C. DEC 7402	1909004	15
2	E7,E30	I.C. DEC 7420	1905577	14
2	E12,E31	I.C. DEC 7410	1905576	13
3	E32,E39,E42	I.C. DEC 7400	1905575	12
3	E17,E33,E50	I.C. DEC 7474	1905547	11
33	R1-R7,R9-R17,R19-R34,R36	RES. 470, 1/4W, 5%	1300316	10
* 2	C1-C4,C6-C26,C30-33	CAP. .22 MFD 50V CER	1010274	9
2	C27, C29	CAP. 6.8UF, 35V, 20% S.TANT	1000067	8
2		EYELETS G64-11 STIMPSON	9006750	7
1		SPACER (CABLE CLAMP)	1202704	6
1		HANDLE, FLIP CHIP-MAGENTA	9008337-06	5
1		ETCHED CIRCUIT BOARD	5009278	4
REF		MODULE ECO HISTORY	B-MH-M8310-0-6	3
REF		ASSY/DRILLING HOLE LAYOUT	D-AH-M8310-0-5	2
REF		X-Y COORDINATE HOLE LOC.	K-CO-M8310-0-4	1

PARTS LIST

DEC 3009B	2N3646	

REV COLUMN

PRINTED CIRCUIT BOARD REVISION

CIRCUIT SCH. REVISION

REV.	DATE	DESCRIPTION
	1/6/71	
	1/6/71	
	1/6/71	
	1/6/71	
	1/6/71	
	1/6/71	

DEC NO. | EIA NO.

SEMICONDUCTOR CONVERSION CHART

DEC NO. | EIA NO.

D-UA-KK8-E-0

SCALE 2/1

SHEET 1 OF 4

EQUIPMENT CORPORATION
WAYNE, MASSACHUSETTS

TITLE
MAJOR REG.
CONT. (M8310)

SIZE E | CS | M8310-0-1 | REV. H

DIST. 1/3/71 | 1/3/71 | 1/3/71

DEC 74151	8	16
DEC 8251	8	16
DEC 384	1	8
IC TYPE	GND	+5V

GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTFULLY EXCEPTIONS ARE STATED ABOVE

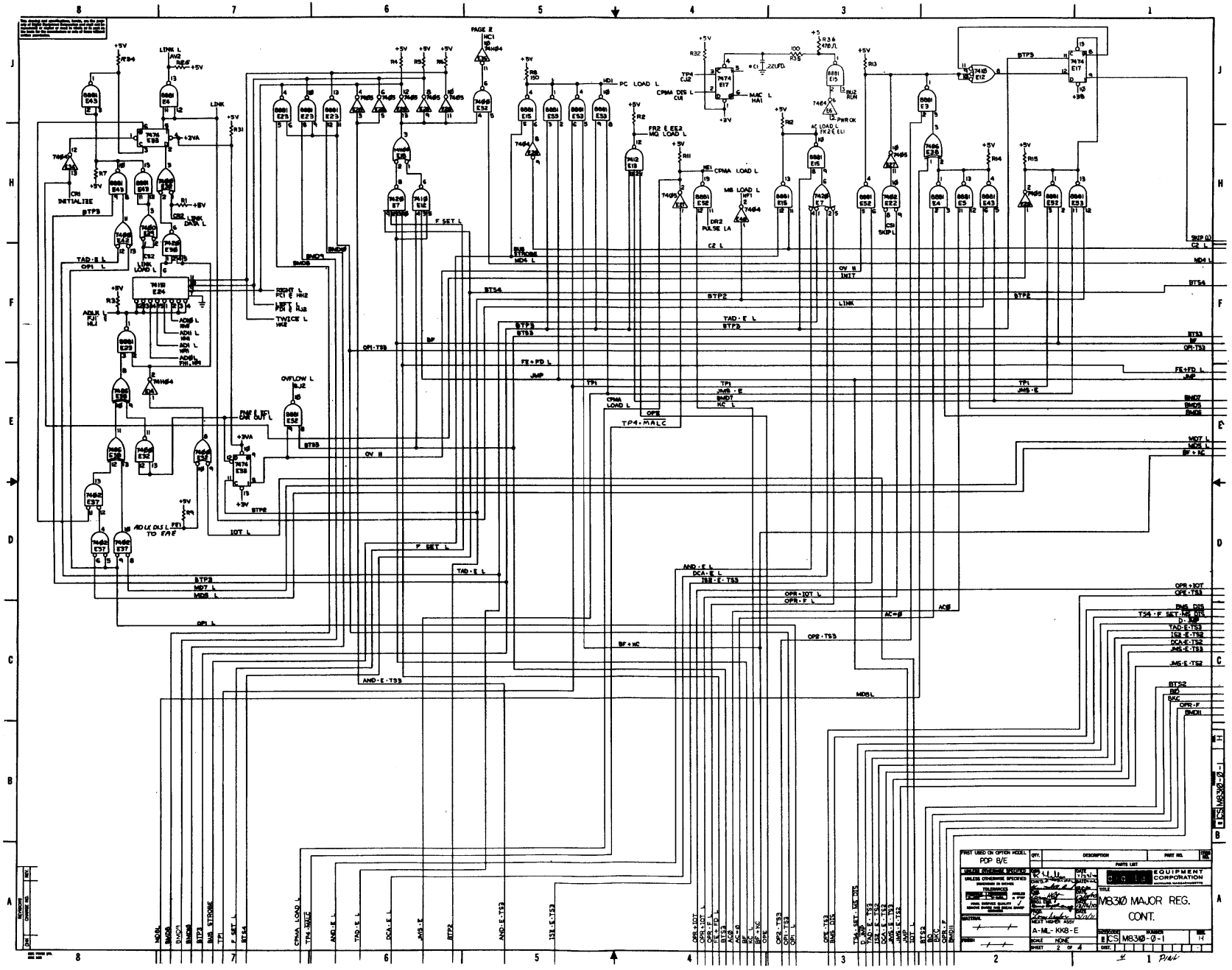
IC PIN LOCATIONS

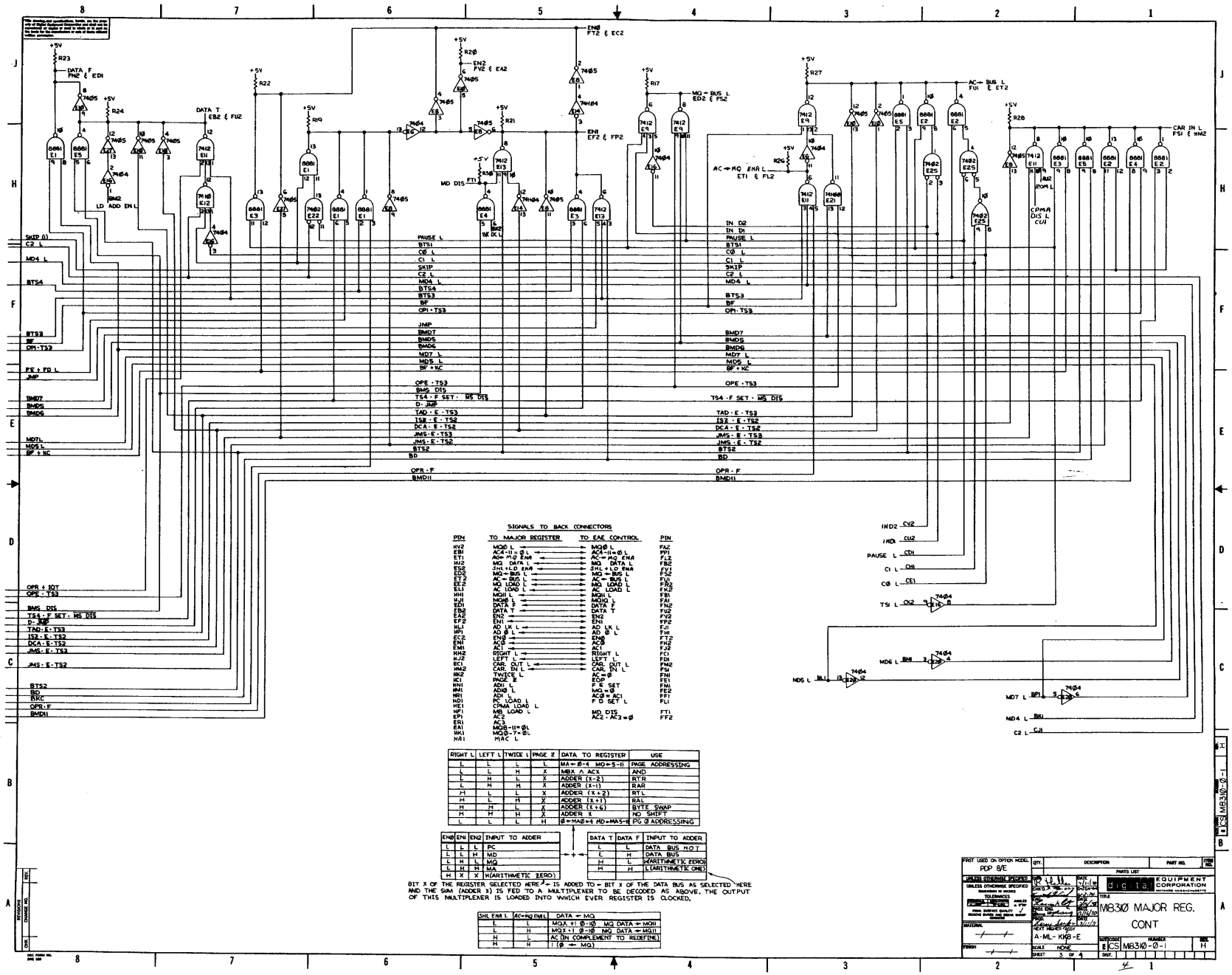
ITEM NO	AWG	FROM PT	TO PT

JUMPER LIST

REV.	CHG.	CHANGE NO.	REV.
		M8310-00001	A
		M8310-00002	B
		M8310-00003	C
		M8310-00004	D
		M8310-00005	E
		M8310-00006	F
		M8310-00007	G
		M8310-00008	H
		M8310-00009	I
		M8310-00010	J
		M8310-00011	K

CS M8310-0-1


POP B/E
EQUIPMENT CORPORATION
M8310 MAJOR REG. CONT.
A-ML-KKB-E
M8310-0-1



SIGNALS TO BACK CONNECTORS

PIN	TO MAJOR REGISTER	TO EAE CONTROL	PIN
HV2	MQØ L →	MQØ L	FA2
EB2	AC-11 = Ø L →	AC = -11 = Ø L	FP1
ET1	AC = MQ ENA →	AC = MQ ENA	FL2
HM2	MQ DATA L →	MQ ÷ DATA L	FB2
EB3	SHL + LD ENA →	SHL + LD ENA	FV1
EB1	MQ = BUS L →	MQ = BUS L	FS2
ET3	AC = BUS L →	AC = BUS L	FU1
ET2	MQ LOAD L →	MQ LOAD L	FR2
ELL	AC LOAD L →	AC LOAD L	FK2
HH1	MQU L →	MQU L	FB1
HJ1	MQ30 L →	MQ30 L	FA1
EB1	DATA F →	DATA F	FN2
EB2	DATA T →	DATA T	FU2
EA2	EN2 →	EN2	FV2
EF2	EN1 →	EN1	FP2
HL1	AD LK L →	AD LK L	FJ1
HP1	AD Ø L →	AD Ø L	FH1
EC2	EN Ø →	EN Ø	FT2
EN1	AC Ø →	AC Ø	FN2
EM1	AC1 →	AC1	FJ2
HH2	RIGHT L →	RIGHT L	FC1
HJ2	LEFT L →	LEFT L	FD1
EC1	CAR OUT L →	CAR OUT L	FM2
HM2	CAR IN L →	CAR IN L	FS2
HK2	TWICE L →	AC = Ø	FN1
HC1	PAGE 3 →	EOP	FE1
HN1	ADI L →	F E SET	FM1
HM1	ADM L →	MQ = Ø	FE2
HR1	ADI L →	AC Ø = AC1	FF1
HD1	AC LOAD L →	F D SET L	FL1
HE1	CPMA LOAD L →		
HF1	MB LOAD L →	MQ DIS	FT1
EP1	AC2 →	AC2 · AC3 = Ø	FF2
EB1	AC3 →		
EA1	MQ8-11 = ØL →		
HH1	MQ3-7 = ØL →		
HA1	MAC L →		

RIGHT L	LEFT L	TWICE L	PAGE 2	DATA TO REGISTER	USE
L	L	L	L	MA + Ø-4 MQ ÷ 5-11	PAGE ADDRESSING
L	L	H	X	MBX ∧ ACX	AND
L	H	L	X	ADDER (X-2)	RTR
L	H	H	X	ADDER (X-1)	RAR
H	L	L	X	ADDER (X+2)	RTL
H	L	H	X	ADDER (X+1)	RAL
H	H	L	X	ADDER (X+6)	BYTE SWAP
H	H	H	X	ADDER X	NO SHIFT
L	L	L	H	Ø ÷ MA Ø-4 MD ÷ MA 5-11	PG Ø ADDRESSING

END	EN	EN2	INPUT TO ADDER
L	L	L	PC
L	L	H	MD
L	H	L	MQ
L	H	H	MA
H	X	X	M(ARITHMETIC ZERO)

DATA T	DATA F	INPUT TO ADDER
L	L	DATA BUS NOT
L	H	DATA BUS
H	L	M(ARITHMETIC ZERO)
H	H	L(ARITHMETIC ONE)

BIT X OF THE REGISTER SELECTED HERE ← IS ADDED TO ← BIT X OF THE DATA BUS AS SELECTED HERE AND THE SUM (ADDER X) IS FED TO A MULTIPLEXER TO BE DECODED AS ABOVE. THE OUTPUT OF THIS MULTIPLEXER IS LOADED INTO WHICH EVER REGISTER IS CLOCKED.

SHL ENA L	AC÷MQ ENA L	DATA ÷ MQ
L	L	MQX + 1 Ø-10 MQ DATA ÷ MQ11
L	H	MQX + 1 Ø-10 MQ DATA ÷ MQ11
H	L	AC (IN COMPLEMENT TO REDEFINE)
H	H	1 (Ø ÷ MQ)

FIRST USED ON OPTION MODEL
PDP 8/E

UNLESS OTHERWISE SPECIFIED
DIMENSIONS IN INCHES
TOLERANCES
FRACTIONAL ± ANGULAR ±
TWO PLACE DECIMAL ±
THREE PLACE DECIMAL ±
FINISH SURFACE QUALITY
SHARP EDGES AND BREAK SHOW CORNERS
MATERIAL
FINISH

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		

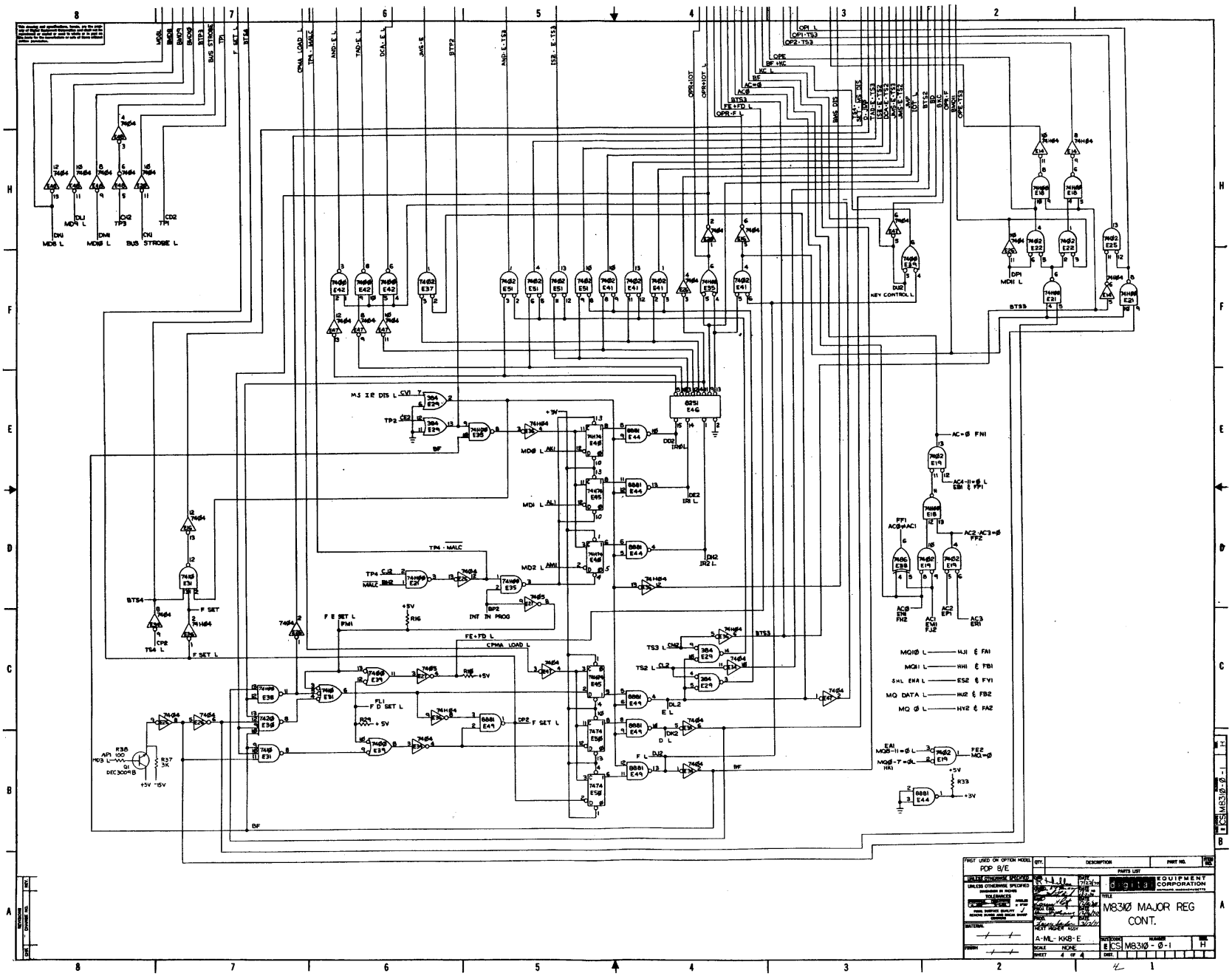
DRAWN 10 Feb 71
CHK'D
ENGR
MFG
QUAL
APPD
NEXT HIGHER ASSY
A-ML-KK8-E

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
M8310 MAJOR REG. CONT

SCALE NONE
SHEET 3 OF 4

CUSTOMER ACCT. NO.
CS M8310-Ø-1
NUMBER
M8310-Ø-1
REV.
H
DIST.



FIRST USED ON OPTION MODEL
POP B/E
PARTS LIST
QTY.
DESCRIPTION
PART NO.
UNLESS OTHERWISE SPECIFIED
TOLERANCES
MATERIAL
FINISH
digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
TITLE
M8310 MAJOR REG CONT.
A-ML-KK8-E
SCALE NONE
SHEET 4 OF 4
SIZE E
CODE CS
NUMBER M8310-0-1
REV. H