

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

SEQUENCE

SEQUENCE

TIMING DIAGRAM	D-TD-KW11-L-02
LINE FREQUENCY CLOCK	D-BS-KW11-L-01
LINE CLOCK	D-CS-M787-0-1
LINE FREQUENCY CLOCK	A-PI-KW11-L-00
SOFTWARE LIST	A-SL-KW11-L-28

MFG PRINTS

TEST PROCEDURE A-SP-KW11-L-03

UNIT VARIATIONS

PRINT SET TYPE

VARIATION

TITL

KW77-L

LINE FREQUENCY CLOCK

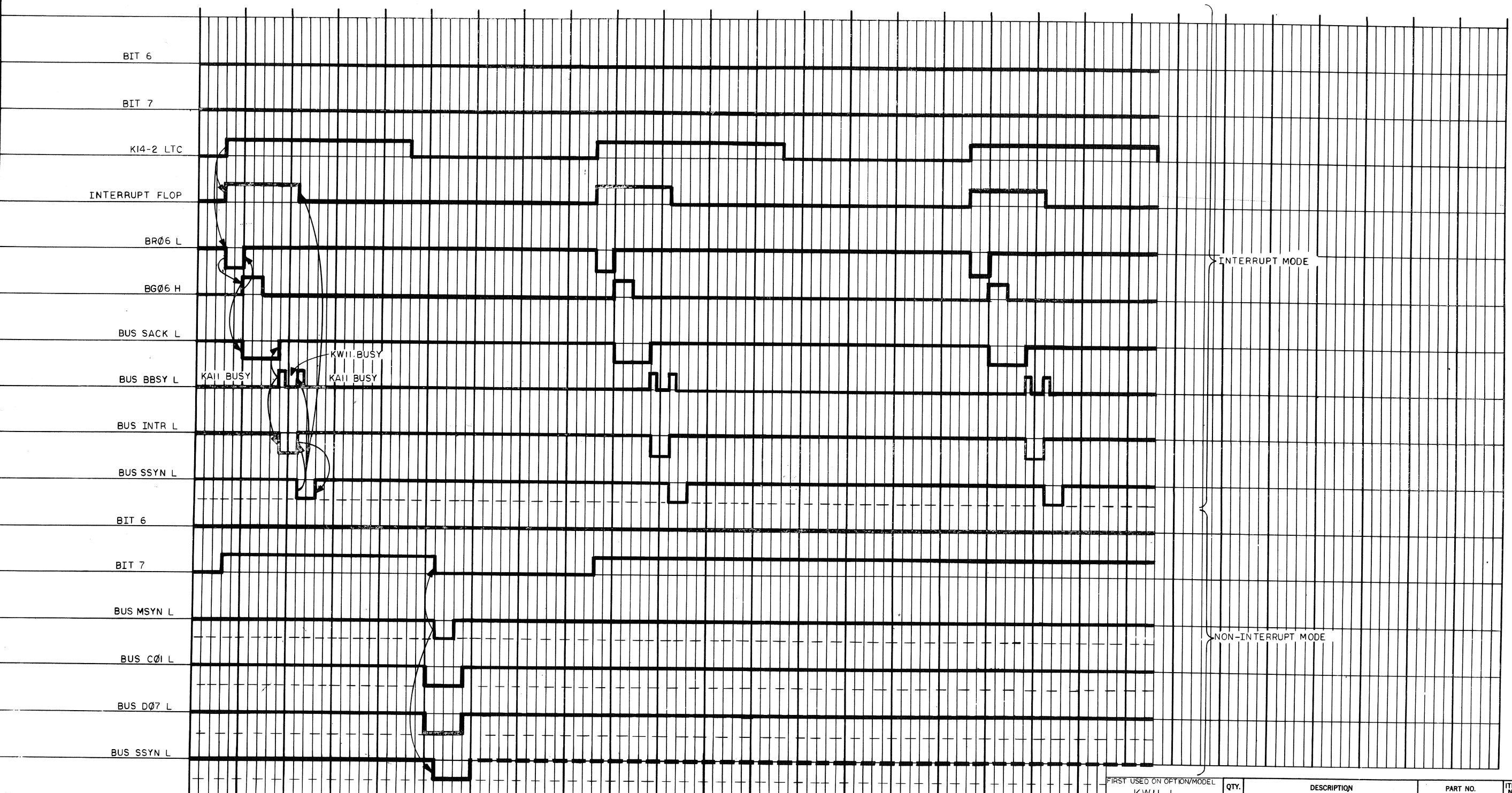
KW77-1

+

REVISONS		CHG. NO.		REV		USED ON OPTION/MODEL		DRN.	DATE	TITLE		SIZE		CODE	NUMBER		REV
DATE								S. POTTERMAN	2-14-72	LINE FREQUENCY CLOCK (KW11-L)		B		DD	KW11-L-0		*
								CHK'D.	DATE								
								M. B. B. B.	6-13-72								
								PRO. ENG.	DATE								
								M. B. B. B.	6-14-72								
								PRO. ENG.	DATE								
								M. B. B. B.	6-14-72								
								FIELD SERV.	DATE								
								U. B. B. B.	6-14-72								
								SHEET	1	OF	2						

DRB 108
DEC 16-(325)-1062-2-N871

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FIRST USED ON OPTION/MODEL KWII-L		QTY.	DESCRIPTION	PART NO.	ITEM NO.
DO NOT SCALE DRAWING UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES DECIMALS FRACTIONS ANGLES ± .005 ± 1/64 ± 0°30' FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS		DRN. CHK'D ENG. PROJ. ENG. PROD.	DATE 7/6/70 7/7/70 7/8/70 7/8/70	PARTS LIST digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS TITLE TIMING DIAGRAM (KWII-L)	
MATERIAL FINISH		NEXT HIGHER ASSY A-ML-KWII-L		SIZE CODE D TD	
SCALE SHEET 1 OF 1		DATE 7/8/70		NUMBER KWII-L-02	
REV.		DIST.		REV.	

REVISIONS
CHANGE NO.
CHK
DEC FORM NO. 101
ahp

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PARTS REFERENCE

ITEM NO.	DRAWING REFERENCE	DESCRIPTION	PART NUMBER	QUANTITY
1	R1, R3	390 1/4 W 5% CC	1300309	2
2	R2, R6 - R11	1K 1/4 W 5% CC	1300365	7
3	R4, R5	180 1/4 W 5% CC	1301322	2
4	R12	2.4K 1/4 W 5% CC	1303177	1
5	C1 - C15, C18, C19	.01 MFD 100V 20% DISC	1001610	17
6	C16, C17	560 MMF 100V 5% D.M.	1000025	2
7	Q1, Q2	TRANSISTOR DEC 3009 B.S.	1503100	2
8	E1, E5, E8, E9, E10	I.C. DEC 380	1909485	5
9	E2	I.C. DEC 7430	1905578	1
10	E3	I.C. DEC 8815	1908713	1
11	E4	I.C. DEC 7400	1905575	1
12	E6, E7, E13	I.C. DEC 7474	1905547	3
13	E11	I.C. DEC 7404	1908686	1
14	E12, E14, E15	I.C. DEC 8881	1909705	3

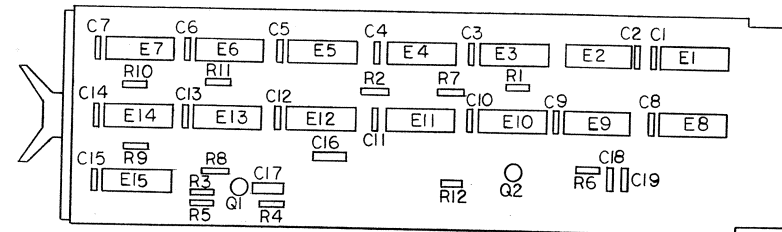
NOTES

- PIN NOTATION THROUGHOUT IS ORDERED UPON MODULE PLACEMENT IN THE K111 PROCESSOR. MODULE REFERENCE ALONE IS OBTAINED BY DELETING THE NUMBER (SLOT LOCATION) AFTER THE FIRST LETTER, AND CONVERTING THE FIRST LETTER ACCORDING TO THE PIN NOMENCLATURE CHART AT RIGHT.
- ALL SIGNALS THAT HAVE MODULE PINS ARE SO NOTED: MULTIPLE NOTATIONS OF THE SAME SIGNALS WITHIN A MODULE HAVE THE PIN NOTED ON EACH. AN INPUT SIGNAL IS NOTED ONLY ONCE PER SHEET UNLESS SEPARATE PINS ARE USED. MULTIPLE INPUTS ARE CONNECTED. MODULE OUTPUT SIGNALS ARE BROUGHT TO THE EXTREME RIGHT OF EACH SHEET.
- PROCESSOR SIGNAL SOURCE NOTATION (K10-2, FOR EXAMPLE) IDENTIFIES THE SIGNAL SOURCE (PRINT AND MODULE). THE FIRST NUMBER AFTER THE K INDICATES THE MODULE PRINT SET. WHILE THE SECOND INDICATES THE SHEET WITHIN THE SET. IF ON A PRINT, THE FIRST NUMBER OF THE K PREFIXES COINCIDE FOR A SIGNAL NAME AND THE PRINT (SEE TITLE BLOCK). THE SIGNAL IS GENERATED ON THE MODULE. A DIFFERENCE IN THE FIRST NUMBER OF THE K PREFIXES INDICATES A SIGNAL GENERATED OFF THE MODULE. SIGNALS WITH A "BUS" PREFIX REPRESENT A "WIRED OR" SITUATIONS AND MULTIPLE SOURCES FOR THE SIGNAL CAN EXIST.
- DETAILS ON COMPONENTS ARE NOTED IN THE PARTS REFERENCE. PLACEMENT IS NOTED IN THE COMPONENT PLACEMENT DIAGRAM.
- GND AND +5V ARE USUALLY PIN 7 AND PIN 14, RESPECTIVELY. EXCEPTIONS ARE:

IC TYPE	GND	+5V
DEC 7481	PIN 10	PIN 4
DEC 7482	PIN 11	PIN 4
DEC 8251	PIN 8	PIN 16
DEC 8271	PIN 8	PIN 16
DEC 380	PIN 1	PIN 8
DEC 384	PIN 1	PIN 8

- UNLESS OTHERWISE NOTED - RESISTANCE IS IN OHMS; CAPACITANCE IS IN MICRO MICRO FARADS, CAPACITORS WITHOUT ANY NOTED VALUES ARE .01 MFD.

COMPONENT PLACEMENT



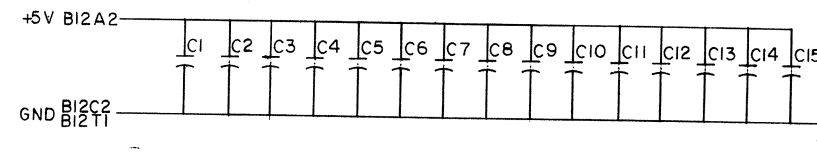
PIN NOMENCLATURE

MODULE PROCESSOR

A B

INSTALLATION PROCEDURE

- REMOVE JUMPER FROM B12V2 TO B12R2
- INSTALL M787 LINE FREQUENCY CLOCK MODULE IN K111 SLOT B12
- RUN MAINDEC DEC-11-D2DA LINE FREQUENCY CLOCK TEST



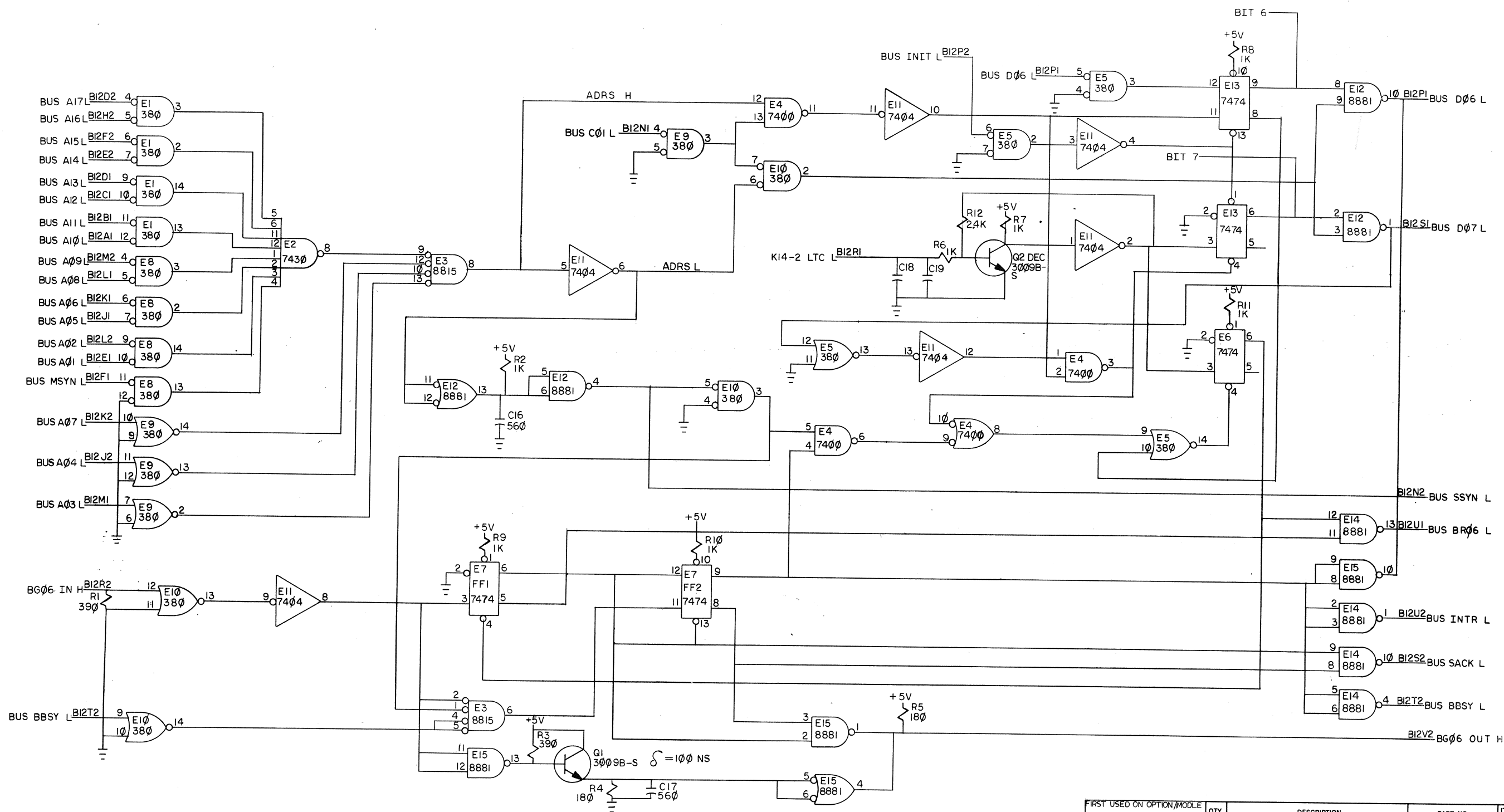
FIRST USED ON OPTION/MODEL
KW11-L

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS FRACTIONS ANGLES
± .005 ± 1/64 ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL
FINISH

QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST			
DRN.	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
CHK'D	DATE	TITLE LINE FREQUENCY INTERVAL CLOCK	
ENG.	DATE	SIZE CODE NUMBER REV.	
PROJ. ENG.	DATE	D BSKW11-L-01 A	
PROD.	DATE	SHEET 1 OF 2	
NEXT HIGHER ASSY		DIST.	
A-ML-KW11-L			

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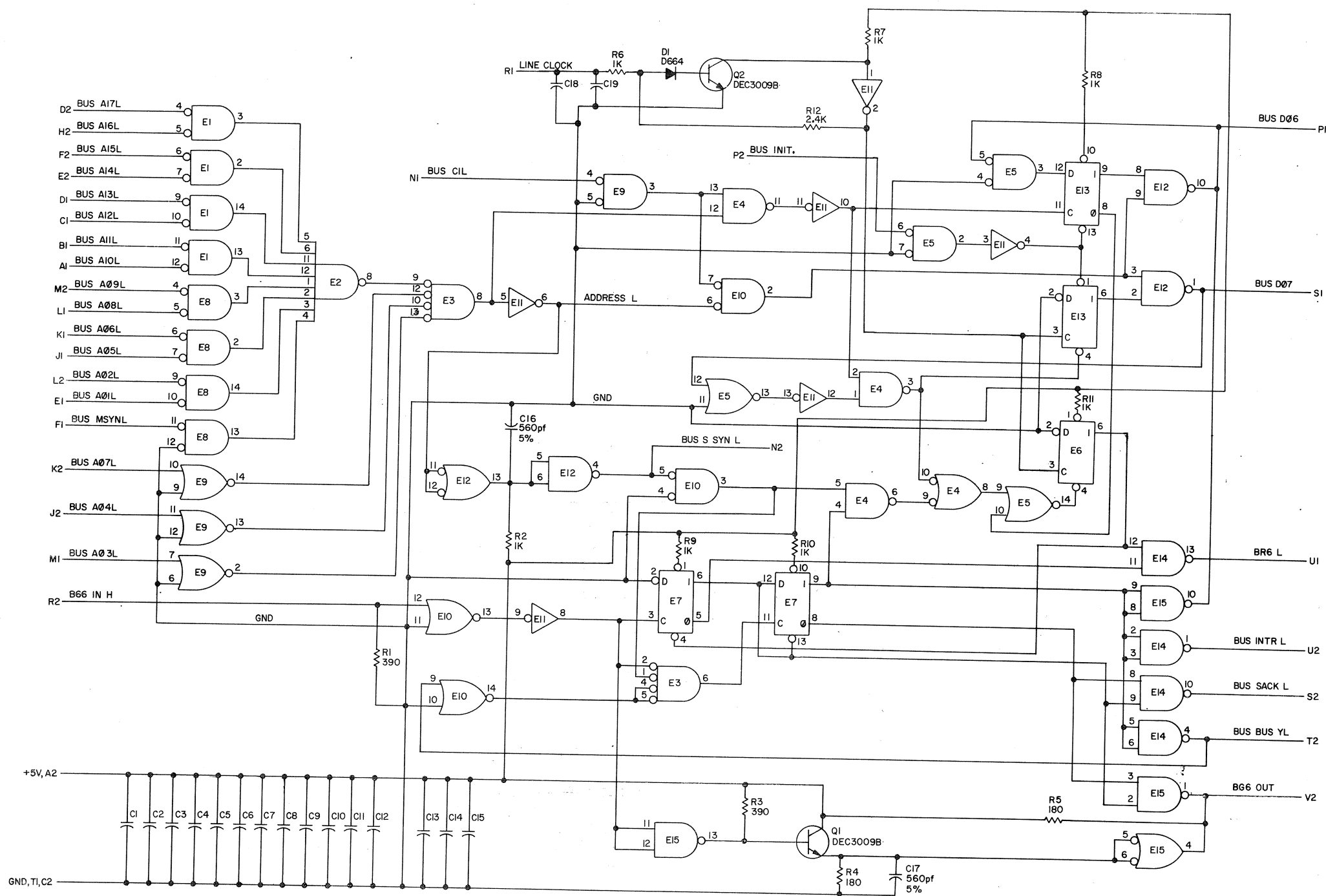
FIRST USED ON OPTION/MODULE		QTY.	DESCRIPTION	PART NO.	ITEM NO.
KW11-L					
UNLESS OTHERWISE SPECIFIED		PARTS LIST			
UNLESS OTHERWISE SPECIFIED		DIGITAL EQUIPMENT CORPORATION			
DIMENSION IN INCHES		MAYNARD, MASSACHUSETTS			
TOLERANCES		TITLE			
DECIMALS FRACTIONS ANGLES		LINE FREQUENCY			
± .005 ± 1/64 ± 0°30'		INTERVAL CLOCK			
FINAL SURFACE QUALITY		SCALE			
REMOVE BURRS AND BREAK SHARP CORNERS		SHEET 2 OF 2			
MATERIAL		NEXT HIGHER ASSY			
FINISH		A-ML-KW11-L			
		SIZE CODE NUMBER			
		D BSKW11-L-01			
		REV. A			

REVISIONS
CHANGE NO.
CHK

DEC FORM NO
DRD 102A

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REV. C
M787-O-1
CS D



UNLESS OTHERWISE INDICATED:
RESISTORS ARE 1/4W, 5%
CAPACITORS ARE .01uf, 100V, 20%
DEC380 = E1, E5, E8, E10, E9
DEC7430 = E2
DEC8815 = E3
DEC7400 = E4
DEC7404 = E11
DEC8881 = E15, E12, E14
DEC7474 = E6, E7, E13

PIN 1 = GND
PIN 8 = +5V ON E1, E8, E9, E10, E5
PIN 7 = GND ON E2, E3, E4, E11, E12, E14, E13, E7, E15, E6
PIN 14 = +5V

REV	DATE	BY	CHK
1	4-2-70	BUTLER	
2	4-22-70		
3	7-1-70		

DATE	BY	CHK
4-2-70	BUTLER	
4-22-70		
7-1-70		

TRANSISTOR & DIODE CONVERSION CHART			
DEC	EIA	DEC	EIA
DEC3009B	2N3009B	D864	1N3606

TITLE		LINE TIME CLOCK INTERRUPT M787	
SIZE	CODE	NUMBER	REV
D	CS	M787-O-1	C
EQUIPMENT CORPORATION		PRINTED CIRCUIT REV.	

[illegible]

DEC FORM NO.16-1031
DRA 110

