

* SEE ALLOWABLE SUBSTITUTION LIST
PARTS REFERENCE & NOTE 8.

| ITEM NO | DRAWING REFERENCE | DESCRIPTION | PART NUMBER | QUANTITY |
|---------|-------------------|-----------------------------|-------------|----------|
| 1 | E10 | I.C. SOCKET #216-4610 ALNAT | 1209339 | 1 |
| 2 | | HOLDER AUGAT #000-PGI | 5007775 | 1 |
| 3 | | PRINTING JUMPER | 5403730 | 1 |
| 4 | 01 | TRANSISTOR 2N2825 | 1504779 | 1 |
| 5 | C1 | 100 MHZ CRYSTAL | 1102222 | 1 |
| 6 | 2, D3 | RES 222 | 1102114 | 2 |
| 7 | C0, C61 | CAP 100PF 100V 5% MVA | 1292442 | 2 |
| 8 | | CAP 100PF 100V 5% MVA | 1292442 | 2 |
| 9 | | CAP 100PF 100V 5% MVA | 1292442 | 2 |
| 10 | | CAP 100PF 100V 5% MVA | 1292442 | 2 |
| 11 | | CAP 100PF 100V 5% MVA | 1292442 | 2 |
| 12 | | CAP 100PF 100V 5% MVA | 1292442 | 2 |
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| 32 | | CAP 100PF 100V 5% MVA | 1292442 | 2 |
| 33 | | CAP 100PF 100V 5% MVA | 1292442 | 2 |
| 34 | | CAP 100PF 100V 5% MVA | 1292442 | 2 |
| 35 | | CAP 100PF 100V 5% MVA | 1292442 | 2 |
| 36 | | CAP 100PF 100V 5% MVA | 1292442 | 2 |
| 37 | | CAP 100PF 100V 5% MVA | 1292442 | 2 |

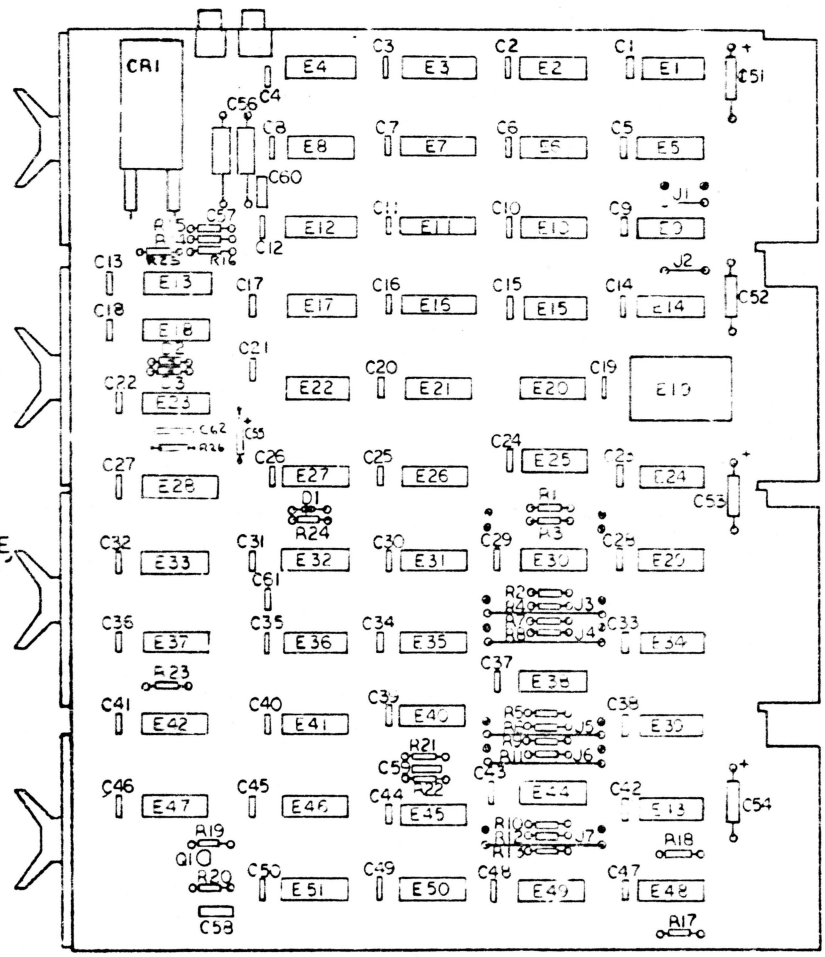
NOTES:

- PIN NOTATION THROUGHOUT IS ORDERED UPON MODULE PLACEMENT IN THE DDII. 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 SEPERATE PINS ARE USED; MULTIPLE INPUTS ARE CONNECTED. MODULE OUTPUT SIGNALS ARE BROUGHT TO THE EXTREME RIGHT OF EACH SHEET.
- PROCESSOR SIGNAL SOURCE NOTATION (KW-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" SITUATION, 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 74153 | PIN 5 | PIN 16 |
| DEC 74193 | PIN 5 | PIN 16 |
| DEC 7490 | PIN 0 | PIN 5 |
| DEC 8271 | PIN 8 | PIN 16 |
| DEC 380 | PIN 1 | PIN 8 |
| DEC | PIN | PIN |

6. UNLESS OTHERWISE SPECIFIED: RESISTANCE IS IN OHMS, CAPACITANCE IS IN PICOFARADS. CAPACITORS WITHOUT ANY NOTED VALUES ARE .01 UF

COMPONENT PLACEMENT

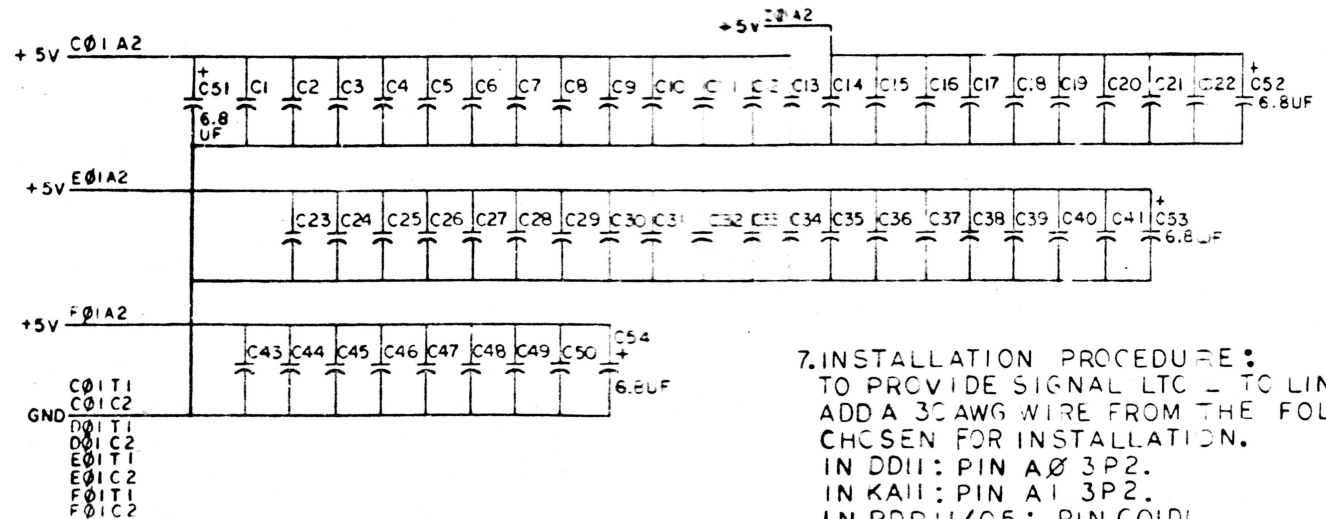


PIN NOMENCLATURE

| MODULE | PROCESSOR |
|--------|-----------|
| A | C |
| B | D |
| C | E |
| D | F |

ALLOWABLE SUBSTITUTION LIST

| ORIG. PART NO | SUBSTITUTE DESCRIPTION | PART NO. | ITEM NO. |
|---------------|------------------------|----------|----------|
| 1909485 | T.C.11380 | 1911113 | 25 |



7. INSTALLATION PROCEDURE:
TO PROVIDE SIGNAL LTC L TO LINE FREQUENCY INPUT OF KWII-P, ADD A 30AWG WIRE FROM THE FOLLOWING PINS TO CEI OF THE SLOT CHOSEN FOR INSTALLATION.
IN DDII: PIN A Ø 3P2.
IN KII: PIN A1 3P2.
IN PDP 11/05: PIN C01D1.
IN PDP 11/45: PIN C01R1.

8. ON ITEM NO.25, ALL 9 CHIPS MUST BE EITHER DEC 380'S OR ITS' SUBSTITUTE 11380IC'S. A DEC 380 AND 11380 MIXTURE OF THESE 9 CHIPS IS NOT ALLOWED. ON ITEM 37, E13 MUST BE A DEC 380.

REVISIONS

| REV | DATE | BY | DESCRIPTION |
|-----|---------|----------|-----------------------|
| 1 | 7-11-73 | B. WIEKS | INITIAL DESIGN |
| 2 | 7-11-73 | B. WIEKS | REVISED FOR M7228-0-1 |
| 3 | 7-11-73 | B. WIEKS | REVISED FOR M7228-0-1 |
| 4 | 7-11-73 | B. WIEKS | REVISED FOR M7228-0-1 |
| 5 | 7-11-73 | B. WIEKS | REVISED FOR M7228-0-1 |
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| 49 | 7-11-73 | B. WIEKS | REVISED FOR M7228-0-1 |
| 50 | 7-11-73 | B. WIEKS | REVISED FOR M7228-0-1 |

ETCH REV E

| FIRST USED ON | QTY | DESCRIPTION | PART NO | ITEM NO |
|---------------|-----|-------------|---------|---------|
| PDP 11/20 | | | | |

UNLESS OTHERWISE SPECIFIED:
DIMENSION IN INCHES
TOLERANCES
DECIMALS FRACTIONS ANGLES
± .005 ± .004 ± 0°30'
FINAL SURFACE QUALITY
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL: ALUMINUM
FINISH: ANODIZED

TITLE: KWII-P REAL TIME CLOCK (KW-1)

DATE: 7-11-73

DESIGNER: B. WIEKS

CHECKED: B. WIEKS

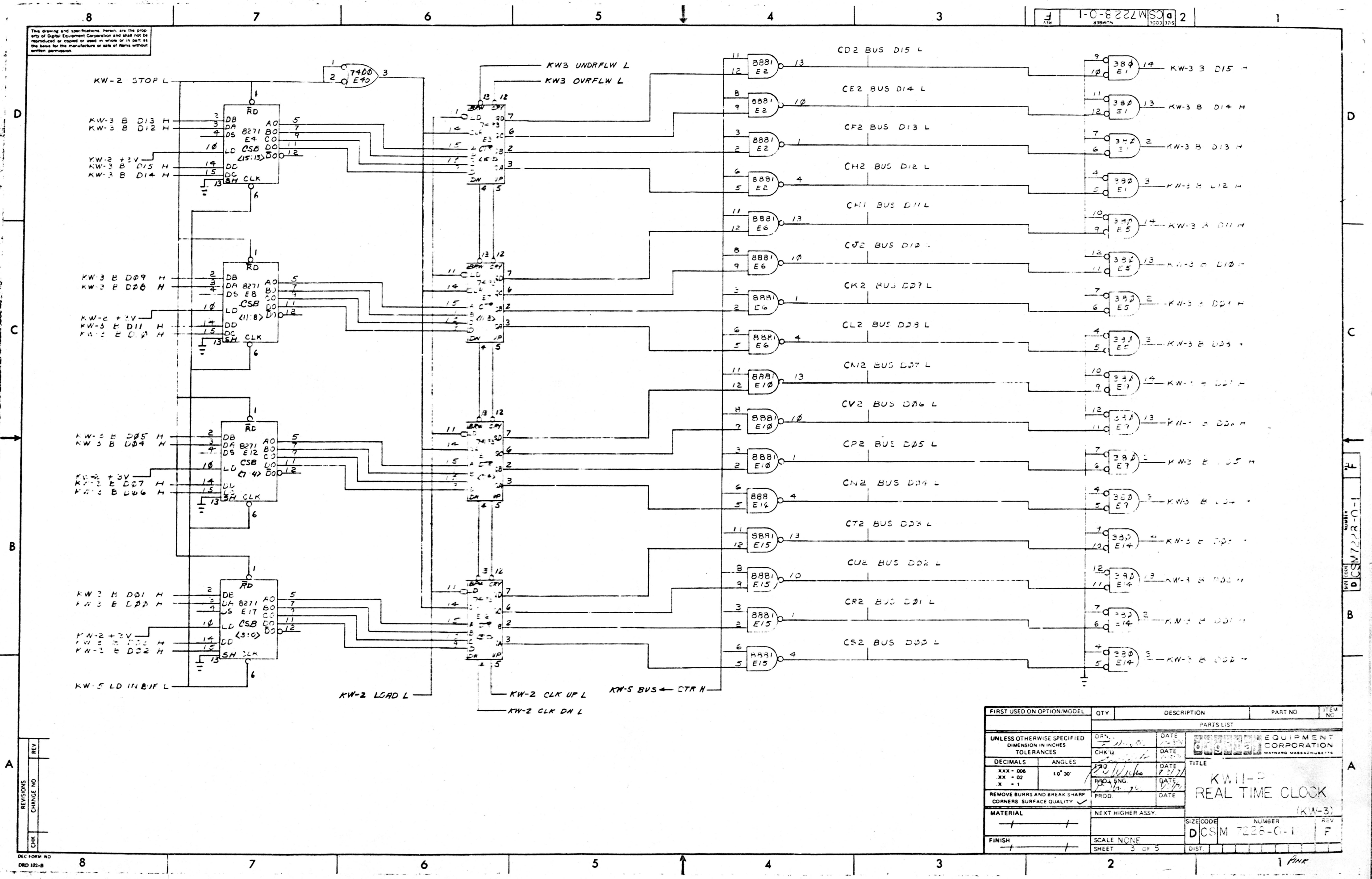
APPROVED: B. WIEKS

SCALE: 1 OF 5

DWG. NO: DCS M7228-0-1

REV: F

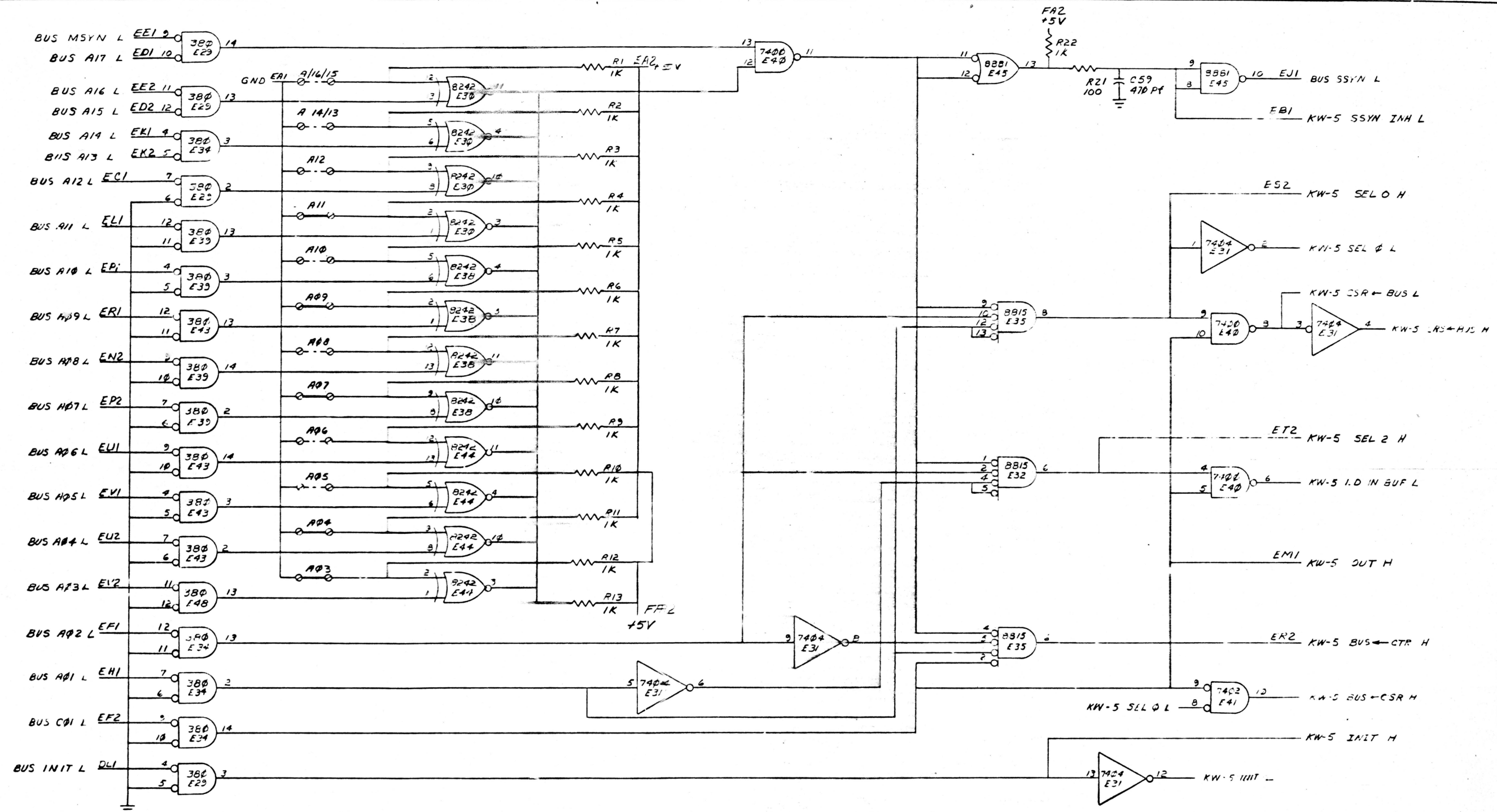
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|---|------------|--------------|---|---------|
| FIRST USED ON OPTION/MODEL | QTY | DESCRIPTION | PART NO | ITEM NO |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | DRN. DATE | DATE | DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS | |
| DECIMALS ANGLES | CHK'D | DATE | TITLE | |
| XXX - 006 XX - 02 X - 1 | 10° 30' | DATE | KW11-P REAL TIME CLOCK (KW-3) | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | PROD. DATE | DATE | MATERIAL | |
| | | | NEXT HIGHER ASSY. | |
| FINISH | SCALE NONE | SHEET 3 OF 5 | SIZE CODE | NUMBER |
| | | | DCSM 7226-0-1 | F |

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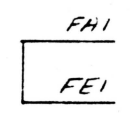
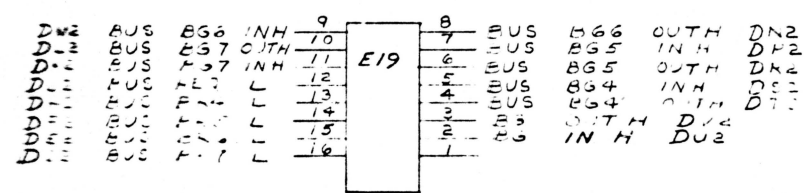
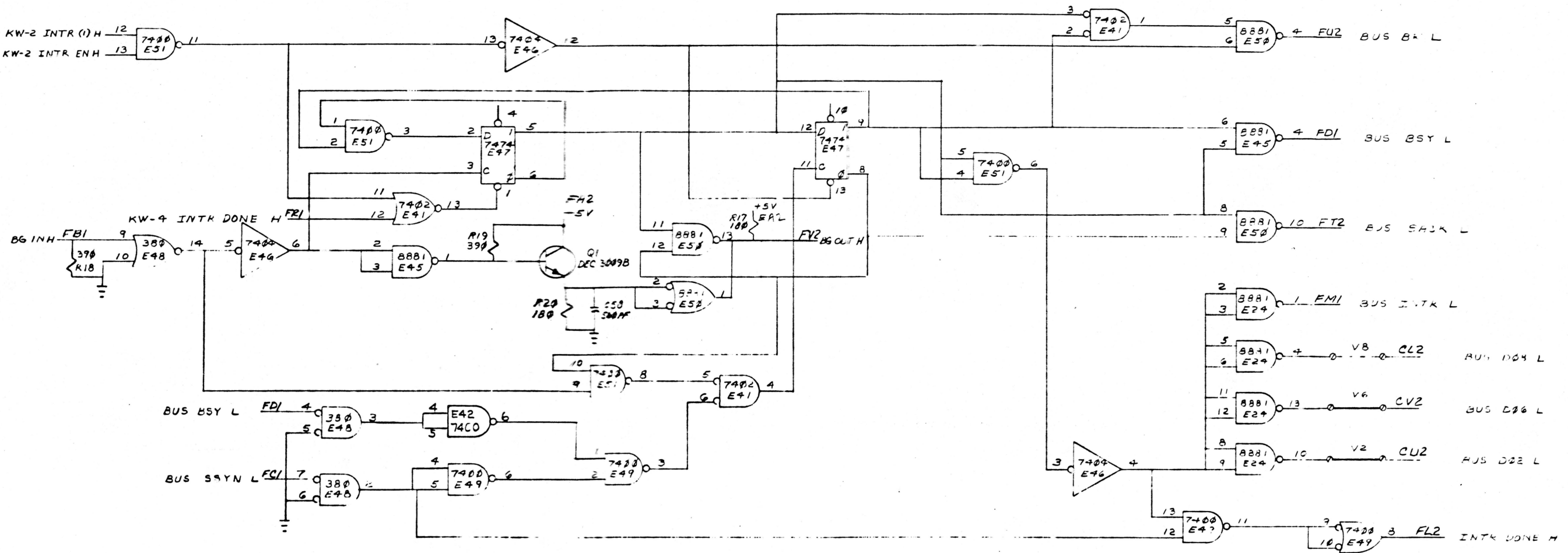


| REV | CHANGE NO |
|-----|-----------|
| | |

DEC FORM NO DED 102-B

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO | ITEM NO |
|---|-------------------|--|---------|---------|
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | | | |
| DRN | DATE | PARTS LIST | | |
| CHK'D | DATE | EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS | | |
| DECIMALS | ANGLES | TITLE | | |
| XXX - 006 | ±0° 30' | KW11-P | | |
| XX - 02 | | REAL TIME CLOCK | | |
| X - 1 | | (KW-5) | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | | |
| MATERIAL | NEXT HIGHER ASSY. | SIZE CODE NUMBER | | |
| FINISH | A.M.L. | DCS M7228-0-1 | | |
| SCALE NONE | | REV. F | | |
| SHEET 5 OF 5 | | DIST. | | |

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| | | |
|-----------|------------|------|
| REVISIONS | NO. | REV. |
| CHK | CHANGE NO. | |

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|---------|-------------|---|--------------|
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | DRN | DATE | EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS | |
| DECIMALS | CHK'D | DATE | | |
| ANGLES | ENG. | DATE | TITLE KW-4-P REAL TIME CLOCK (KW-4) | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | PROLENG | DATE | | |
| MATERIAL | PROD | DATE | SIZE CODE | NUMBER |
| FINISH | | | DCSM7228-0-1 | REV F |
| | | | SCALE NONE | SHEET 4 OF 5 |