

**KT11-D memory
management option
engineering drawings**

DRAWING DIRECTORY

CUSTOMER PRINT SET INDEX

| | SEQUENCE | | SEQUENCE |
|----------------------|----------------|----------------|----------|
| DRAWING DIRECTORY | B-DD-KT11-D | (SHEET 1 ONLY) | |
| PARTS LIST | A-PL-KT11-D-Ø | | |
| MEMORY MANAGEMENT | D-CS-M7236-Ø-1 | | |
| STACK LIMIT REGISTER | D-CS-M7237-Ø-1 | | |
| SOFTWARE LIST | A-SL-KT11-D-SL | | |

THIS IS PRINT SET

| UNIT VARIATIONS | | PRINT SET TYPE | | | | |
|-----------------|-------------------|----------------|--|--|--|--|
| VARIACTION | TITLE | KT11-D | | | | |
| KT11-D | MEMORY MANAGEMENT | X | | | | |
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| REVISIONS | DATE | CHG. NO. | REV | USED ON OPTION/MODEL | | DRN. | DATE | TITLE | SIZE | CODE | NUMBER | REV |
|-----------|------|----------|---------|----------------------|--------|---------------------|---------------------|---------|-------------------|------|--------|--------|
| | | 2/73 | KT11D-1 | A | KD11-A | | <i>J. Stoughton</i> | 9/26/72 | MEMORY MANAGEMENT | B | DD | KT11-D |
| | | | | | | <i>J. Stoughton</i> | 9/27/72 | | | | | |
| | | | | | | <i>J. Stoughton</i> | 9/27/72 | | | | | |
| | | | | | | <i>J. Stoughton</i> | 9/27/72 | | | | | |
| | | | | | | <i>J. Stoughton</i> | 9/27/72 | | | | | |
| | | | | | | <i>J. Stoughton</i> | 9/27/72 | | | | | |
| | | | | | | <i>J. Stoughton</i> | 9/27/72 | | | | | |
| | | | | | | <i>J. Stoughton</i> | 9/27/72 | | | | | |
| | | | | | | <i>J. Stoughton</i> | 9/27/72 | | | | | |
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| | | | | | | <i>J. Stoughton</i> | 9/27/72 | | | | | |
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| | | | | | | <i>J. Stoughton</i> | 9/27/72 | | | | | |
| | | | | | | <i>J. Stoughton</i> | 9/27/72 | | | | | |

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

| | | |
|----------------------------|----------------------------|--------------|
| MADE BY <i>JJ O'Rourke</i> | CHECKED <i>JJ O'Rourke</i> | SECTION |
| DATE <i>9/26/72</i> | DATE <i>9/27/72</i> | |
| ENG <i>JJ O'Rourke</i> | PROD <i>JL Stanger</i> | ISSUED SECT. |
| DATE <i>9/27/72</i> | DATE <i>9-28-72</i> | |

QUANTITY / VARIATION

| ITEM NO. | DWG NO. / PART NO. | DESCRIPTION | KT11-D | | | | | | | | | | | | | | | | | |
|----------|--------------------|---------------------------|--------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| 1 | D-CS-M7236-0-1 | MEMORY MANAGEMENT | 1 | | | | | | | | | | | | | | | | | |
| 2 | D-CS-M7237-0-1 | STACK LIMIT REGISTER | 1 | | | | | | | | | | | | | | | | | |
| 3 | D-MU-KD11-A-MU | MODULE UTILIZATION | REF | | | | | | | | | | | | | | | | | |
| 4 | 10-00026 | C113 - 680 MMF 100 VDC 5% | 1 | | | | | | | | | | | | | | | | | |
| 5 | 10-00025 | C114 - 560 MMF 100 VDC 5% | 1 | | | | | | | | | | | | | | | | | |
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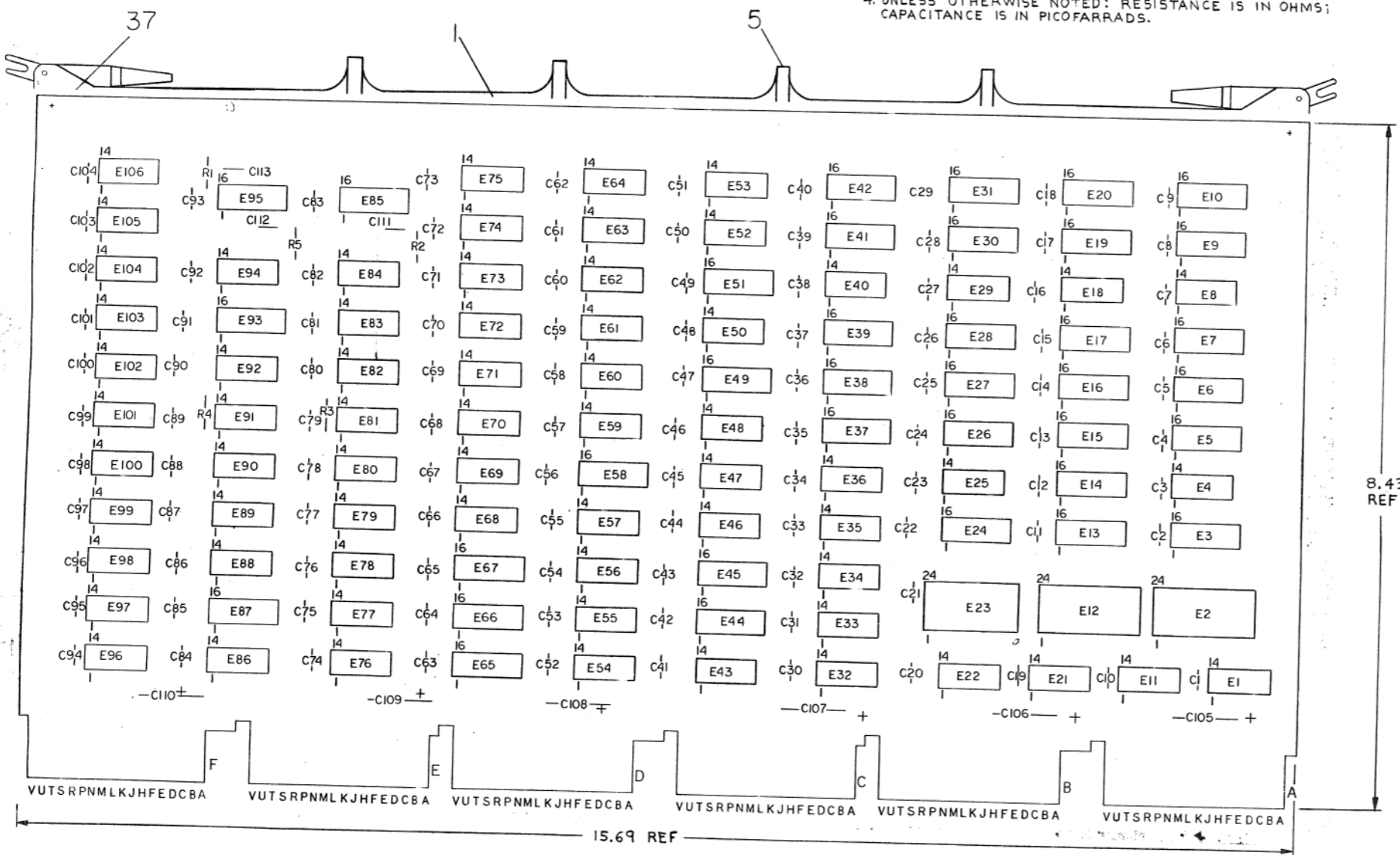
| | | | | | | |
|---------------------------------|-------------------|------------------|-------------------|--------------------|-----------|------------------------|
| TITLE MEMORY MANAGEMENT (PL) | ASSY NO. <i>X</i> | SIZE A | CODE PL | NUMBER KT11-D-0 | REV. A | ECO NO. KT11D-00001 |
| | SHEET 1 OF 1 | DIST. | | | | |

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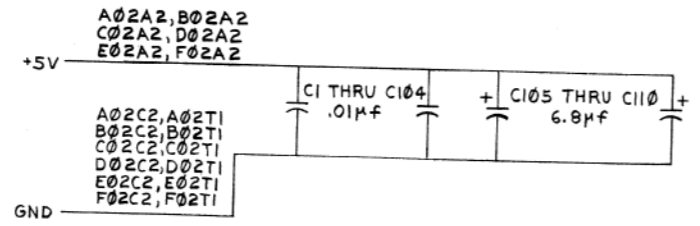
NOTES:

- PIN NOTATION THROUGHOUT IS ORDERED UPON MODULE PLACEMENT IN THE KDII-A PROCESSOR. MODULE REFERENCE ALONE IS OBTAINED BY DELETING THE NUMBER (SLOT LOCATION) AFTER THE FIRST LETTER.
- ALL SIGNALS THAT HAVE MODULE PINS ARE SO NOTED. OUTPUT SIGNALS WITH MODULE PINS ARE BROUGHT TO THE RIGHT SIDE OF THE PRINT.
- PROCESSOR SIGNAL PREFIX NOTATION (KT-B 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. SIGNALS WITH A 'BUS' PREFIX REPRESENT A "WIRED OR" SITUATION, AND MULTIPLE SOURCES FOR THE SIGNAL CAN EXIST.
- UNLESS OTHERWISE NOTED: RESISTANCE IS IN OHMS; CAPACITANCE IS IN PICOFARRADS.

9 1-7-3222W 157 d



| QTY | REF DESIGNATION | DESCRIPTION | PART NO. | ITEM NO. |
|-----|---|--------------------------|------------|----------|
| 12 | | EYELET | 9006732 | 37 |
| 1 | E65 | I.C. DEC 23B38A2 | 23B38A2 | 36 |
| 2 | E42, E44 | I.C. DEC 74157 | 1910655 | 35 |
| 7 | E3, E9, E10, E14, E20, E24, E31 | I.C. DEC 3101 | 1910653 | 34 |
| 5 | E7, E17, E28, E39, E49 | I.C. DEC 74174 | 1910652 | 33 |
| 4 | E45, E51, E67, E87 | I.C. DEC 74175 | 1910651 | 32 |
| 3 | E83, E90, E92 | I.C. DEC 8885 | 1910649 | 31 |
| 1 | E73 | I.C. DEC 8875 | 1910647 | 30 |
| 2 | E85, E95 | I.C. DEC 74123 | 1910436 | 29 |
| 2 | E19, E30 | I.C. DEC 7485 | 1910224 | 28 |
| 6 | E8, E18, E29, E34, E40, E89 | I.C. DEC 7408 | 1910155 | 27 |
| 1 | E53 | I.C. DEC 7437 | 1910091 | 26 |
| 3 | E2, E12, E23 | I.C. DEC 74181 | 1909982 | 25 |
| 10 | E5, E6, E15, E16, E26, E27, E37, E38, E58, E93 | I.C. DEC 74153 | 1909937 | 24 |
| 2 | E98, E100 | I.C. DEC 7405 | 1909930 | 23 |
| 4 | E48, E96, E97, E99 | I.C. DEC 74H01-1 | 1909849 | 22 |
| 6 | E61, E77, E80, E81, E82, E102 | I.C. DEC 8815 | 1909713 | 21 |
| 9 | E1, E11, E21, E22, E32, E35, E36, E47, E91 | I.C. DEC 8881 | 1909705 | 20 |
| 7 | E4, E25, E43, E54, E63, E78, E105 | I.C. DEC 7404 | 1909686 | 19 |
| 2 | E101, E106 | I.C. DEC 74H11 | 1909267 | 18 |
| 2 | E60, E86 | I.C. DEC 74H55 | 1909063 | 17 |
| 1 | E69 | I.C. DEC 74H52 | 1909061 | 16 |
| 1 | E104 | I.C. DEC 74H21 | 1909058 | 15 |
| 2 | E55, E74 | I.C. DEC 7450 | 1905580 | 14 |
| 1 | E33 | I.C. DEC 7430 | 1905578 | 13 |
| 1 | E68 | I.C. DEC 7420 | 1905577 | 12 |
| 4 | E62, E76, E79, E88 | I.C. DEC 7410 | 1905576 | 11 |
| 4 | E46, E50, E72, E75 | I.C. DEC 7400 | 1905575 | 10 |
| 10 | E52, E56, E57, E59, E64, E70, E71, E84, E94, E103 | I.C. DEC 7474 | 1905547 | 9 |
| 3 | E13, E41, E66 | I.C. RES NETWORK | 1311003-02 | 8 |
| 5 | R1, R2, R3, R4, R5 | RES 10K 1/4W ±5% | 1300479 | 7 |
| 1 | | HANDLE MODULE | 1210711-02 | 5 |
| 104 | C1 THRU C104 | CAP .01µf 100V ±20% DISC | 1001610 | 4 |
| 6 | C105 THRU C110 | CAP 6.8µf 35V ±20% STANT | 1000067 | 3 |
| 3 | C111, C112, C113 | CAP 33µf 100V ±5% DM | 1000009 | 2 |
| 1 | | ETCHED CIRCUIT BOARD | 5010026 | 1 |



| IC TYPE | GND | +5V |
|------------|-----|-----|
| 1311003-02 | 8 | 16 |
| DEC 7485 | 8 | 16 |
| DEC 74181 | 12 | 24 |
| DEC 74175 | 8 | 16 |
| DEC 74174 | 8 | 16 |
| DEC 74157 | 8 | 16 |
| DEC 74153 | 8 | 16 |
| DEC 74123 | 8 | 16 |
| DEC 3101 | 8 | 16 |

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

IC PIN LOCATIONS

FIRST USED ON OPTION MODEL PDP 11

ETCH BOARD REV C

REVISIONS

| REV | DATE | BY | DESCRIPTION |
|-----|----------|----------|-------------|
| 1 | 11/14/72 | E. ANTON | ... |
| 2 | 11/14/72 | E. ANTON | ... |
| 3 | 11/14/72 | E. ANTON | ... |

SEMICONDUCTOR CONVERSION CHART

| DEC. NO. | EIA NO. | DEC. NO. | EIA NO. |
|----------|---------|----------|---------|
| | | | |

digital EQUIPMENT CORPORATION
METHUEN, MASSACHUSETTS

MEMORY MANAGEMENT

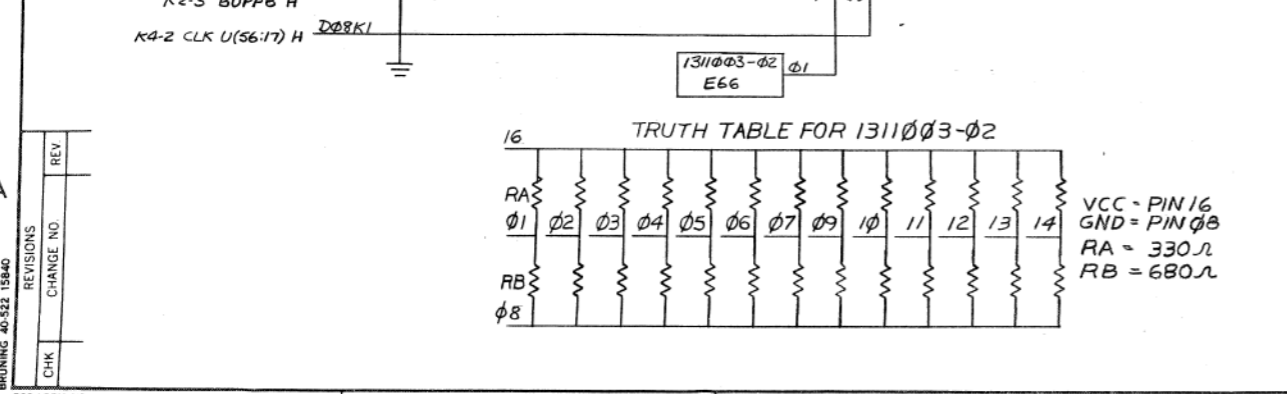
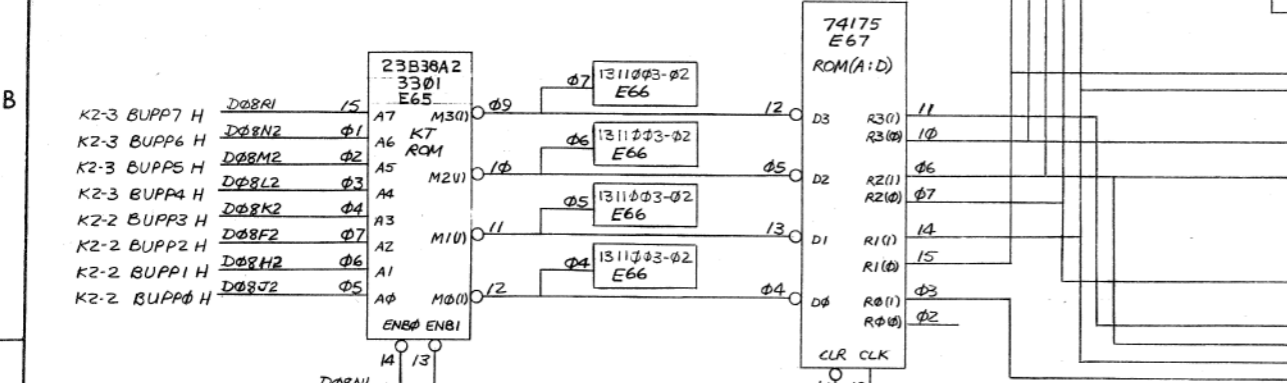
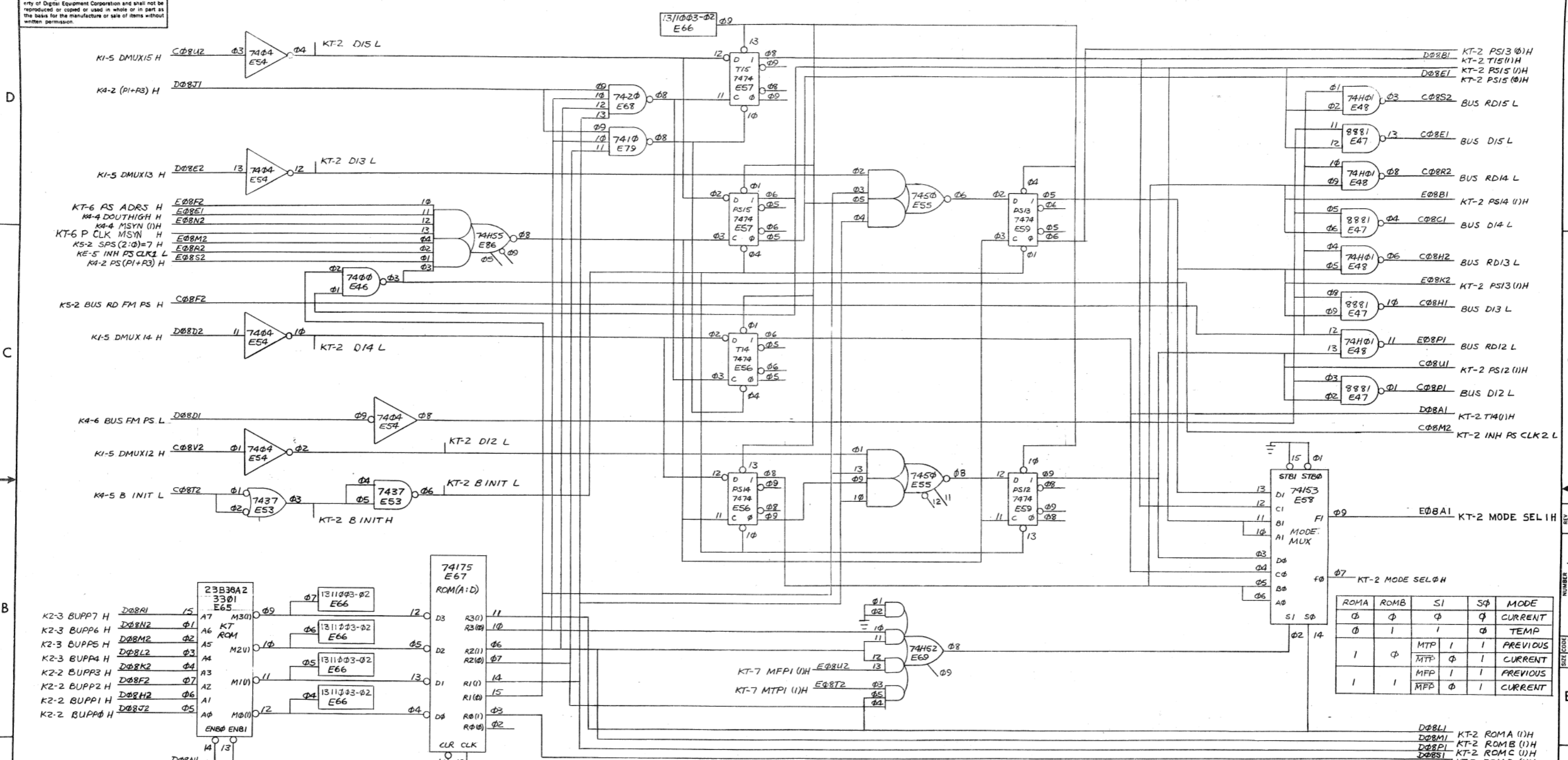
KT-1

SIZE CODE: DCS NUMBER: M7236-0-1 REV. B

SCALE: NONE SHEET 1 OF 13

BRUNING 40-32 16699
DEC FORM NO. DRD-135A

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DEVICE TRUTH TABLE:

| 74153 | | | |
|-------|----|----|-----|
| STBN | SI | Sφ | FN |
| H | - | - | L |
| L | L | L | FAN |
| L | L | H | FBN |
| L | H | L | FCN |
| L | H | H | FDN |

WHERE N = φ, 1

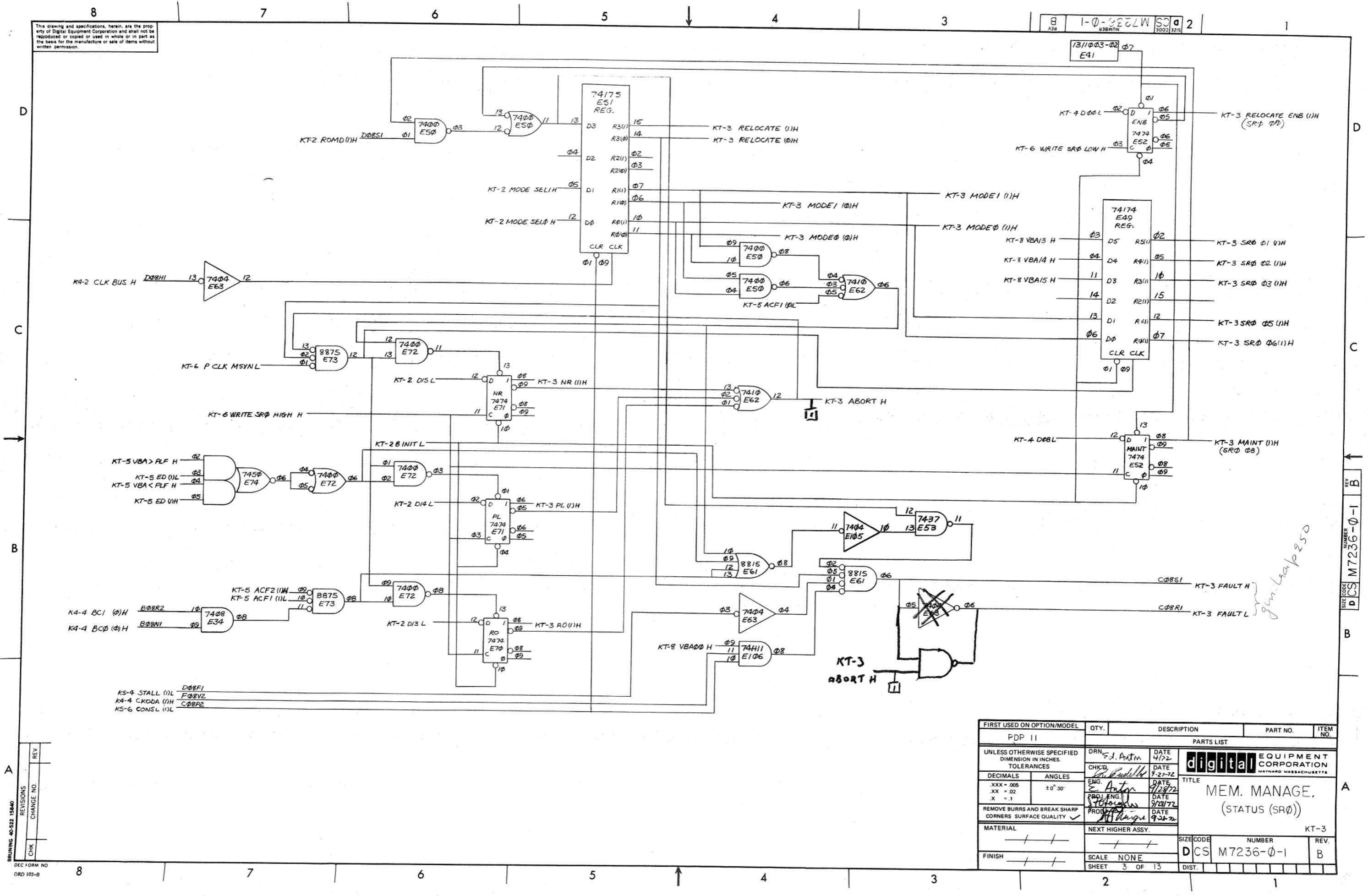
| ROMA | ROMB | SI | Sφ | MODE |
|------|------|-----|----|----------|
| φ | φ | φ | φ | CURRENT |
| φ | 1 | 1 | φ | TEMP |
| 1 | φ | MTP | 1 | PREVIOUS |
| 1 | 1 | MTP | φ | CURRENT |
| 1 | 1 | MFP | 1 | PREVIOUS |
| 1 | 1 | MFB | φ | CURRENT |

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|---|-----------------|-------------------------|--------------------------------|----------|
| PDP 11 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | DRN. E. ANTON DATE 5/72 | digital EQUIPMENT CORPORATION | |
| DECIMALS .XXX ± .005 | ANGLES ± 0° 30' | CHK'D DATE 9-27-72 | MAYNARD MASSACHUSETTS | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | ENG. DATE 7/24/72 | TITLE | |
| | | PROJ. ENG. DATE 7/27/72 | MEM. MANAGE. (KT PS EXTENSION) | |
| MATERIAL | | DATE 7-22-72 | KT-2 | |
| NEXT HIGHER ASSY. | | | SIZE CODE | NUMBER |
| | | | DCS | M7236-01 |
| FINISH | | SCALE NONE | REV. B | |
| | | SHEET 2 OF 13 | | |

BRUNING 40-522 15840
 DEC FORM NO DRD 102-B

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1-0-02272W 2



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

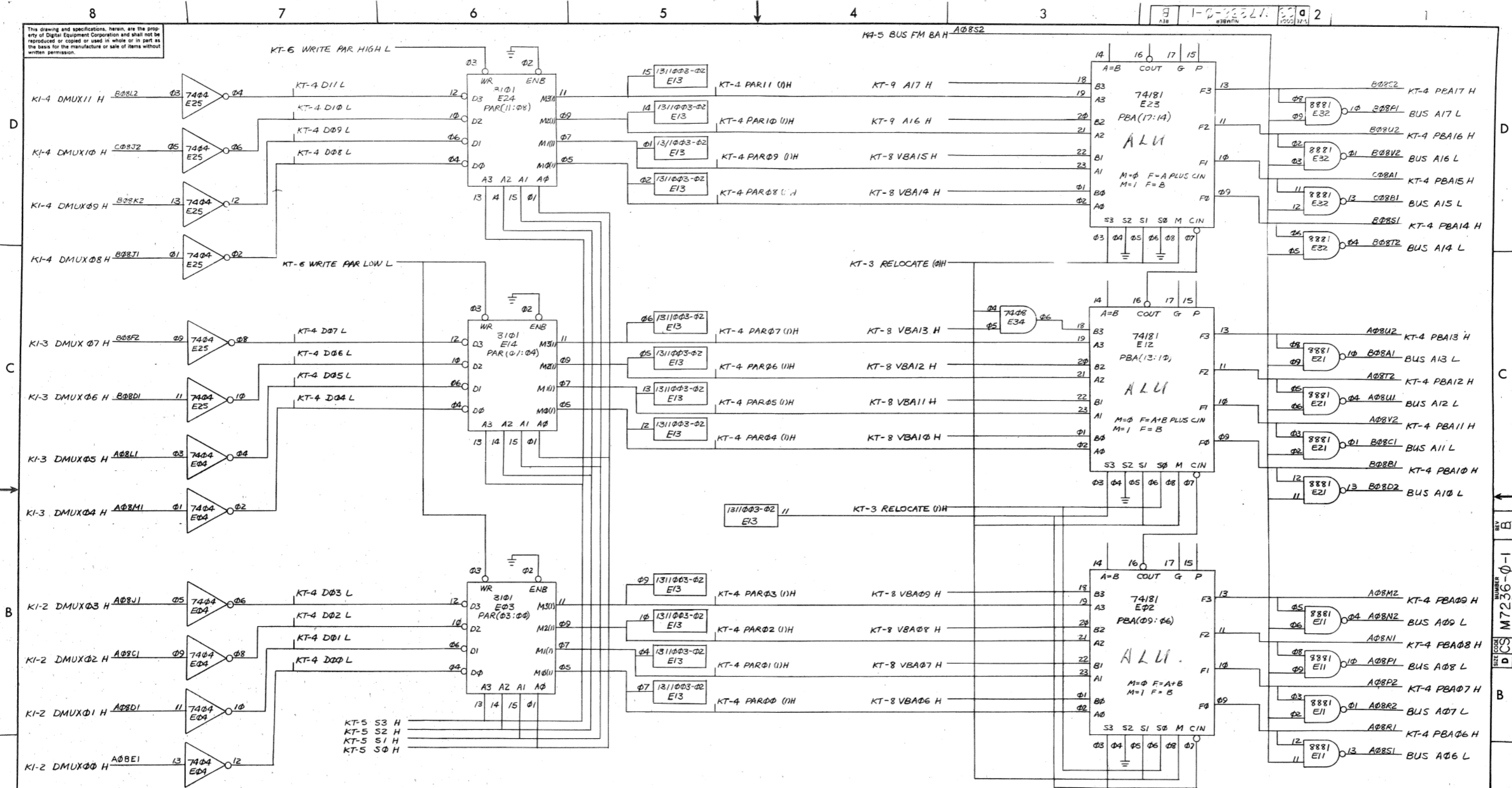
BRUNING 40-522 15840
DEC FORM NO
DRD 102-B

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|-------------------------------|--------------|---|----------|
| PDP 11 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. | DRN <i>J. Antin</i> | DATE 4/72 | digital CORPORATION MAYNARD MASSACHUSETTS | |
| TOLERANCES | CHK'D <i>W. Paulillo</i> | DATE 9-27-72 | | |
| DECIMALS | ENG. <i>J. Antin</i> | DATE 7/28/72 | TITLE MEM. MANAGE. (STATUS (SR0)) | |
| ANGLES | PROJ. ENG. <i>W. Paulillo</i> | DATE 9/28/72 | | |
| .XXX - .005 | PROB. <i>W. Paulillo</i> | DATE 9/28/72 | | |
| .XX - .02 | DATE 9/28/72 | | | |
| .X - .1 | DATE 9/28/72 | | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | PROB. <i>W. Paulillo</i> | DATE 9/28/72 | | |
| MATERIAL | NEXT HIGHER ASSY. | | | |
| FINISH | SCALE NONE | | | |
| | SHEET 3 OF 13 | | | |

REV. B
M7236-0-1

REV. B

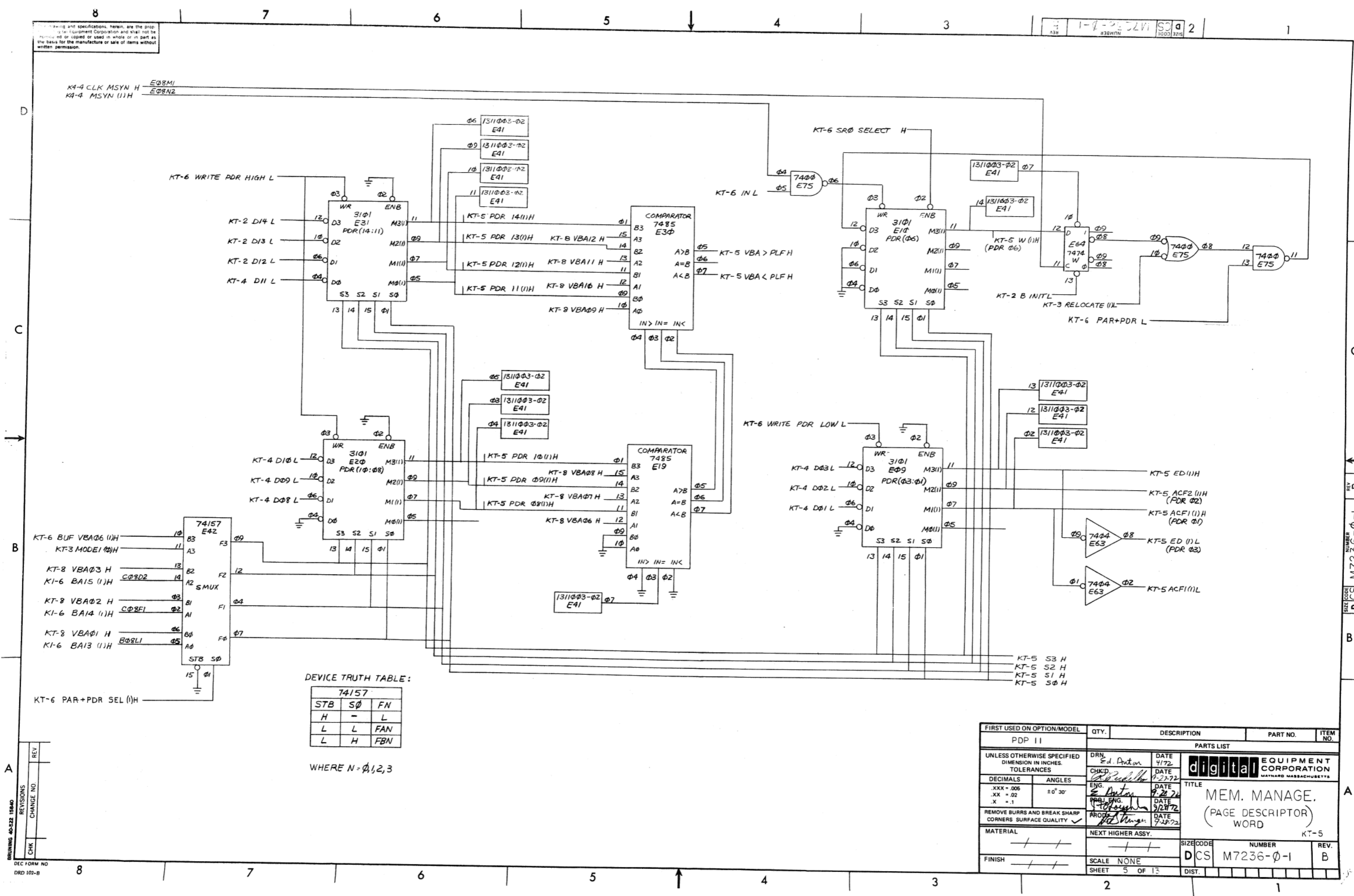
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| | |
|-----|-----|
| REV | NO. |
| CHK | NO. |
| CHG | NO. |
| REV | NO. |

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|------------------------|--------------|---|------------------|
| PDP 11 | | PARTS LIST | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | DRN Ed. Andon | DATE 4/72 | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS TITLE MEM. MANAGE. (PAGE ADDRESS REG) AND PHYSICAL BUS A | |
| DECIMALS ANGLES | CHKD. [Signature] | DATE 5-27-72 | | |
| .XXX = .005 .XX = .02 .X = .1 | ENG. [Signature] | DATE 7/18/72 | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | PBOL. ENG. [Signature] | DATE 7/27/72 | | |
| MATERIAL | NEXT HIGHER ASSY. | DATE 7-27-72 | KT-4 | |
| FINISH | SCALE NONE | | SIZE CODE DCS | NUMBER M7236-0-1 |
| | SHEET 4 OF 13 | | DIST. | REV. B |

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DEVICE TRUTH TABLE:

| 74157 | | |
|-------|----|-----|
| STB | Sφ | FN |
| H | - | L |
| L | L | FAN |
| L | H | FBN |

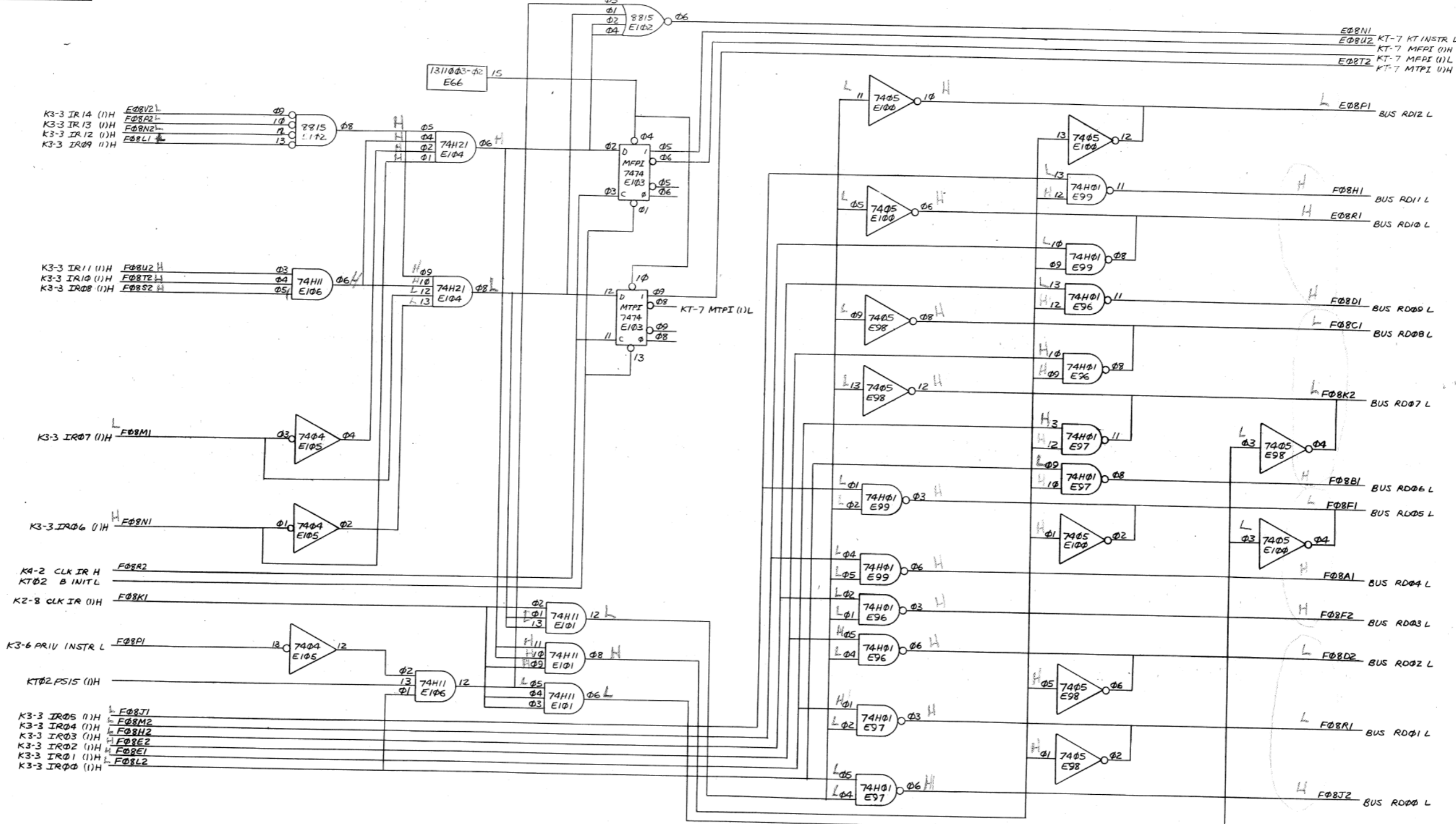
WHERE N = φ1, 2, 3

| | |
|------------|--|
| REV | |
| CHG | |
| REVISIONS | |
| CHANGE NO. | |

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|-------------------|-------------------|--------------|---|
| PDP 11 | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | | | |
| DECIMALS | ANGLES | PARTS LIST | | |
| .XXX = .006 | ±0° 30' | DRN. Ed. Anton | DATE 4/72 | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS TITLE MEM. MANAGE. (PAGE DESCRIPTOR) WORD KT-5 |
| .XX = .02 | | CHKD. [Signature] | DATE 7-27-72 | |
| .X = .1 | | ENG. Ed. Anton | DATE 7-28-72 | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | PROD. [Signature] | DATE 7-28-72 | |
| MATERIAL | NEXT HIGHER ASSY. | | | |
| FINISH | SCALE NONE | | | |
| | SHEET 5 OF 13 | | | |
| | | SIZE CODE | NUMBER | REV. |
| | | D CS | M7236-φ-1 | B |
| | | DIST. | | |

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1-4-92011 2
 838WPN 10003215



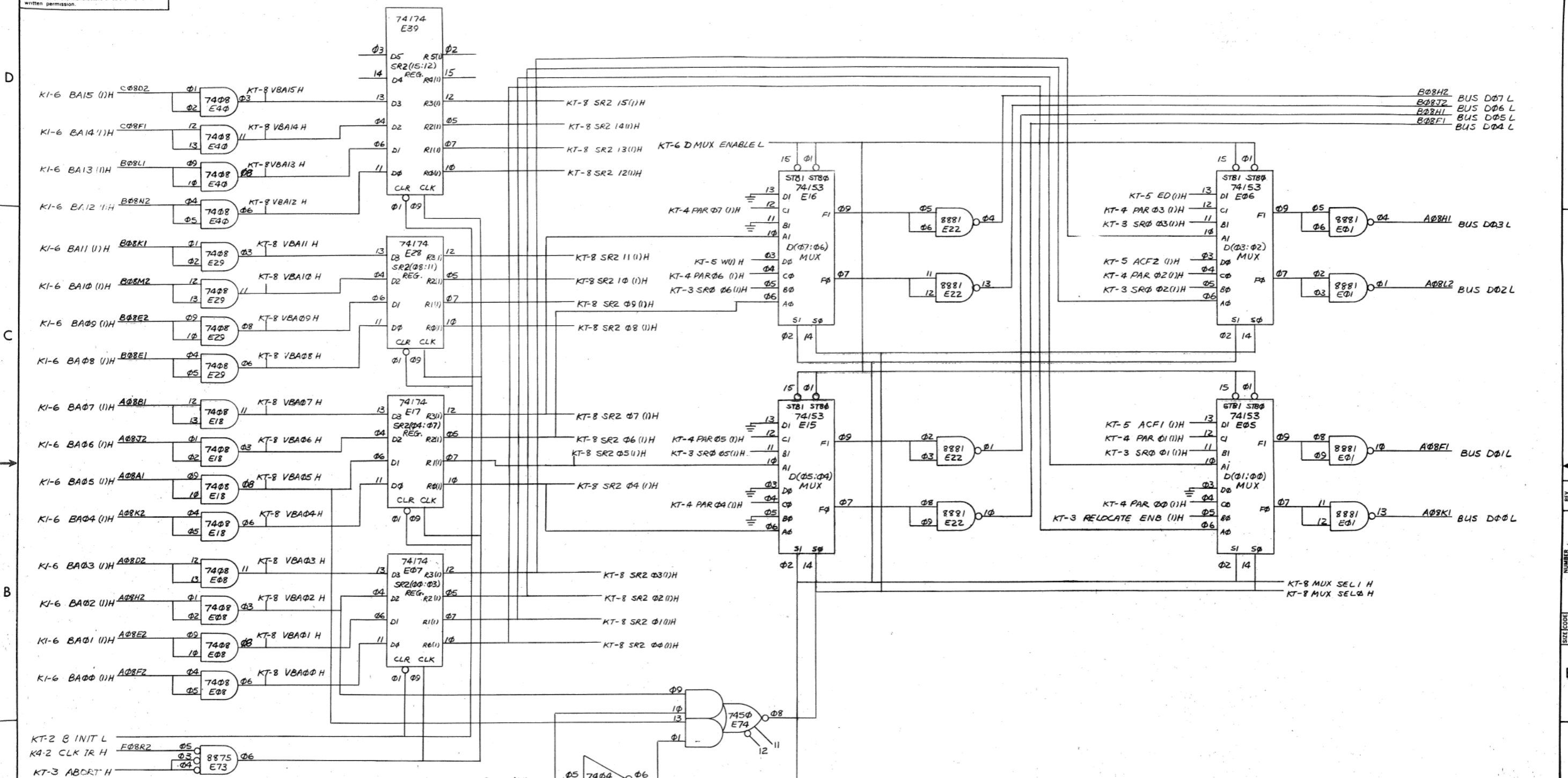
006506.

010646

| | | |
|----------------------|------------|--|
| BRUNING 40-222 15440 | REV | |
| REVISIONS | CHANGE NO. | |
| CHK | | |

| | | | | |
|---|-------------------|-----------------------|----------|---|
| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
| PDP 11 | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | | | | |
| DECIMALS | ANGLES | PARTS LIST | | |
| XXX - .005 | ±0° 30' | DRN | DATE | digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS TITLE MEM. MANAGE. (KT INSTRUCTION) DECODE KT-7 |
| XX - .02 | | CHK'D | DATE | |
| X - .1 | | ENG. | DATE | |
| | | PROD. ENG. | DATE | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | PROD. ENG. | DATE | |
| MATERIAL | NEXT HIGHER ASSY. | SIZE CODE NUMBER REV. | | |
| FINISH | SCALE NONE | DCS M7236-0-1 B | | |
| | SHEET 7 OF 13 | DIST. | | |

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DEVICE TRUTH TABLE:
74153

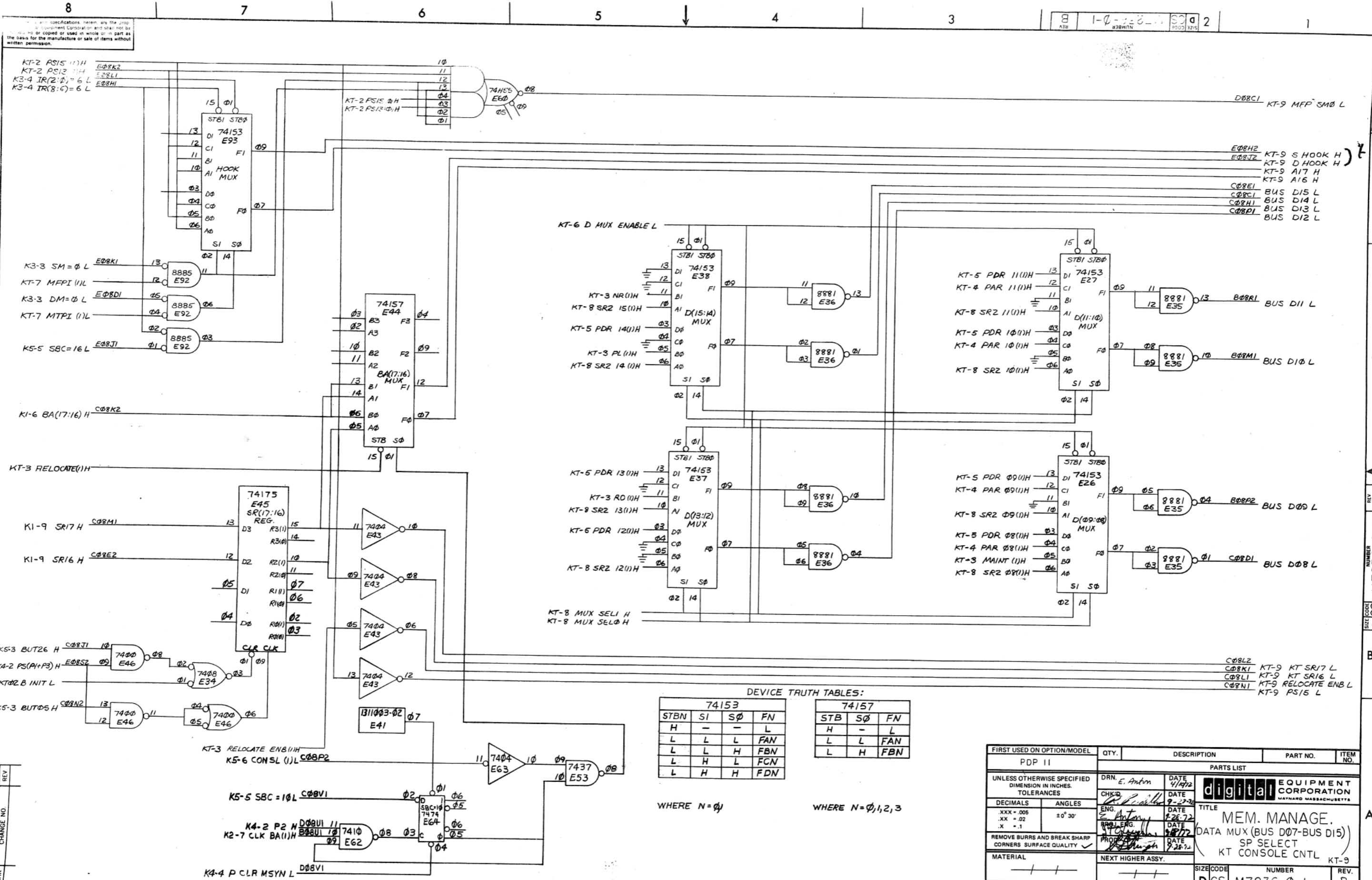
| STBN | SI | S0 | FN |
|------|----|----|-----|
| H | - | - | L |
| L | L | L | FAN |
| L | L | H | FBN |
| L | H | L | FCN |
| L | H | H | FDN |

WHERE N = 0, 1

REVISIONS

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

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|-------------------|---------------|--|-----------|
| PDP 11 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | DRN Ed. Anton | DATE 4/72 | digital EQUIPMENT CORPORATION <small>MAYNARD MASSACHUSETTS</small> | |
| DECIMALS ANGLES | CHKD. J. ... | DATE 9-27-72 | | |
| .XXX = .005 .XX = .02 .X = .1 | ENG. E. Anton | DATE 1/28/72 | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | PROJ. ... | DATE 1/28/72 | | |
| MATERIAL | NEXT HIGHER ASSY. | SCALE NONE | SIZE CODE | NUMBER |
| FINISH | | SHEET 2 OF 13 | DCS | M7236-0-1 |



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to KI-1
11/4
DRAW.

DEVICE TRUTH TABLES:

| 74153 | | | |
|-------|----|----|-----|
| STBN | SI | SØ | FN |
| H | - | - | L |
| L | L | L | FAN |
| L | L | H | FBN |
| L | H | L | FCN |
| L | H | H | FDN |

| 74157 | | |
|-------|----|-----|
| STB | SØ | FN |
| H | - | L |
| L | L | FAN |
| L | H | FBN |

WHERE N = Ø1

WHERE N = Ø1, 2, 3

| |
|-----------------------|
| BRUNING 40-322 15940 |
| DEC FORM NO DRD 102-B |
| REV |
| CHG |
| NO |
| CHANGE NO |
| REVISIONS |

REV B
M7236-Ø-1

| FIRST USED ON OPTION/MODEL | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|--|---------|-------------------|----------|----------|
| PDP 11 | | | | |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | | | | |
| DECIMALS | ANGLES | | | |
| .XXX - .005 | ±0° 30' | | | |
| .XX - .02 | | | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | | | | |
| MATERIAL | | NEXT HIGHER ASSY. | | |
| FINISH | | SCALE NONE | | |
| | | SHEET 9 OF 13 | | |
| | | DIST. | | |

MEM. MANAGE.
SP SELECT
KT CONSOLE CNTL

REV B
M7236-Ø-1

DEC. PART NUMB: 23-B38A2
 ORIGINATOR: ED ANTON
 DATE OF ORIGIN: 11-AUG-72

ROM PATTERN SPEC

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| DECIMAL LOC | OCTAL LOC | BINARY DATA | OCTAL DATA |
|-------------|-----------|-------------|------------|
| 144 | 220 | 1110 | 16 |
| 145 | 221 | 1110 | 16 |
| 146 | 222 | 1111 | 17 |
| 147 | 223 | 1111 | 17 |
| 148 | 224 | 1110 | 16 |
| 149 | 225 | 1110 | 16 |
| 150 | 226 | 1111 | 17 |
| 151 | 227 | 1111 | 17 |
| 152 | 230 | 1111 | 17 |
| 153 | 231 | 1111 | 17 |
| 154 | 232 | 1111 | 17 |
| 155 | 233 | 1111 | 17 |
| 156 | 234 | 1110 | 16 |
| 157 | 235 | 1111 | 17 |
| 158 | 236 | 1110 | 16 |
| 159 | 237 | 1111 | 17 |
| 160 | 240 | 1111 | 17 |
| 161 | 241 | 1111 | 17 |
| 162 | 242 | 0011 | 03 |
| 163 | 243 | 1111 | 17 |
| 164 | 244 | 1111 | 17 |
| 165 | 245 | 1111 | 17 |
| 166 | 246 | 0011 | 03 |
| 167 | 247 | 1111 | 17 |
| 168 | 250 | 1111 | 17 |
| 169 | 251 | 1111 | 17 |
| 170 | 252 | 1111 | 17 |
| 171 | 253 | 1111 | 17 |
| 172 | 254 | 1111 | 17 |
| 173 | 255 | 1111 | 17 |
| 174 | 256 | 1111 | 17 |
| 175 | 257 | 1111 | 17 |
| 176 | 260 | 1111 | 17 |
| 177 | 261 | 1111 | 17 |
| 178 | 262 | 1110 | 16 |
| 179 | 263 | 1111 | 17 |

DEC. PART NUMB: 23-B38A2
 ORIGINATOR: ED ANTON
 DATE OF ORIGIN: 11-AUG-72

ROM PATTERN SPEC

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

| DECIMAL LOC | OCTAL LOC | BINARY DATA | OCTAL DATA |
|-------------|-----------|-------------|------------|
| 180 | 264 | 1111 | 17 |
| 181 | 265 | 1110 | 16 |
| 182 | 266 | 1111 | 17 |
| 183 | 267 | 1111 | 17 |
| 184 | 270 | 1111 | 17 |
| 185 | 271 | 1111 | 17 |
| 186 | 272 | 1111 | 17 |
| 187 | 273 | 1111 | 17 |
| 188 | 274 | 1111 | 17 |
| 189 | 275 | 1110 | 16 |
| 190 | 276 | 1110 | 16 |
| 191 | 277 | 1111 | 17 |
| 192 | 300 | 1111 | 17 |
| 193 | 301 | 1111 | 17 |
| 194 | 302 | 1111 | 17 |
| 195 | 303 | 1111 | 17 |
| 196 | 304 | 1111 | 17 |
| 197 | 305 | 1111 | 17 |
| 198 | 306 | 1111 | 17 |
| 199 | 307 | 1111 | 17 |
| 200 | 310 | 1111 | 17 |
| 201 | 311 | 1111 | 17 |
| 202 | 312 | 1111 | 17 |
| 203 | 313 | 1111 | 17 |
| 204 | 314 | 1111 | 17 |
| 205 | 315 | 1111 | 17 |
| 206 | 316 | 1111 | 17 |
| 207 | 317 | 1111 | 17 |
| 208 | 320 | 1111 | 17 |
| 209 | 321 | 1111 | 17 |
| 210 | 322 | 1111 | 17 |
| 211 | 323 | 1111 | 17 |
| 212 | 324 | 1111 | 17 |
| 213 | 325 | 1111 | 17 |
| 214 | 326 | 1011 | 13 |
| 215 | 327 | 1011 | 13 |

| | |
|--|--------------------|
| digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS | |
| TITLE MEMORY MANAGEMENT | |
| DRW <i>E. Rudolph</i> | DATE 9-26-72 |
| CHK'D <i>Ed Anton</i> | DATE 9-28-72 |
| ENG. <i>Ed Anton</i> | DATE 9-28-72 |
| PROJ. ENG. <i>E. Rudolph</i> | DATE 9-28-72 |
| PRG. <i>E. Rudolph</i> | DATE 9-28-72 |
| SIZE CODE CS | NUMBER M7236-01 |
| SHEET 12 OF 13 | REV. B |

print

DEC PART NUMB: 23-B38A2
 ORIGINATOR: ED ANTON
 DATE OF ORIGIN: 11-AUG-72

ROM PATTERN SPEC

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| DECIMAL LOC | OCTAL LOC | BINARY DATA | OCTAL DATA |
|-------------|-----------|-------------|------------|
| 216 | 330 | 1011 | 13 |
| 217 | 331 | 1011 | 13 |
| 218 | 332 | 1011 | 13 |
| 219 | 333 | 1111 | 17 |
| 220 | 334 | 1111 | 17 |
| 221 | 335 | 1111 | 17 |
| 222 | 336 | 1111 | 17 |
| 223 | 337 | 1111 | 17 |
| 224 | 340 | 1111 | 17 |
| 225 | 341 | 1111 | 17 |
| 226 | 342 | 1111 | 17 |
| 227 | 343 | 1111 | 17 |
| 228 | 344 | 1111 | 17 |
| 229 | 345 | 1111 | 17 |
| 230 | 346 | 1111 | 17 |
| 231 | 347 | 1111 | 17 |
| 232 | 350 | 1111 | 17 |
| 233 | 351 | 1111 | 17 |
| 234 | 352 | 1111 | 17 |
| 235 | 353 | 1111 | 17 |
| 236 | 354 | 1111 | 17 |
| 237 | 355 | 1111 | 17 |
| 238 | 356 | 1111 | 17 |
| 239 | 357 | 1111 | 17 |
| 240 | 360 | 1111 | 17 |
| 241 | 361 | 1111 | 17 |
| 242 | 362 | 1111 | 17 |
| 243 | 363 | 1111 | 17 |
| 244 | 364 | 1111 | 17 |
| 245 | 365 | 1110 | 16 |
| 246 | 366 | 1110 | 16 |
| 247 | 367 | 1111 | 17 |
| 248 | 370 | 1111 | 17 |
| 249 | 371 | 1111 | 17 |
| 250 | 372 | 1111 | 17 |
| 251 | 373 | 1111 | 17 |

DEC PART NUMB: 23-B38A2
 ORIGINATOR: ED ANTON
 DATE OF ORIGIN: 11-AUG-72

ROM PATTERN SPEC

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

| DECIMAL LOC | OCTAL LOC | BINARY DATA | OCTAL DATA |
|-------------|-----------|-------------|------------|
| 252 | 374 | 1110 | 16 |
| 253 | 375 | 1111 | 17 |
| 254 | 376 | 1111 | 17 |
| 255 | 377 | 1111 | 17 |

| | | | |
|---------------------------------|-----------------|---|-----------|
| digital | | EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS | |
| TITLE | | | |
| MEMORY MANAGEMENT | | | |
| DRN. <i>E. Rudolph</i> | DATE 9-26-72 | SIZE CODE | NUMBER |
| CHK'D <i>E. Anton</i> | DATE 9-26-72 | C CS | M7236-0-1 |
| ENG. <i>E. Anton</i> | DATE 9-26-72 | | REV. |
| PROJ. ENG. <i>H. Stanger</i> | DATE 9-26-72 | | B |
| SHEET 13 OF 13 | | DIST. | |

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PARTS REFERENCE

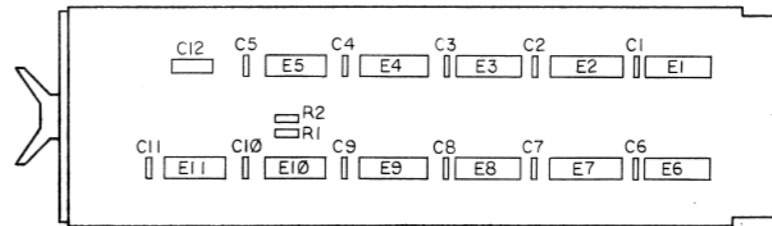
| ITEM NO | DRAWING REFERENCE | DESCRIPTION | PART NUMBER | QUANTITY |
|---------|-------------------|----------------------|----------------|----------|
| 1 | E1, E6 | DEC 5384 | IC 1910394 | 2 |
| 2 | E2, E7 | DEC 74175 | IC 1910651 | 2 |
| 3 | E3, E8 | DEC 8881 | IC 1909705 | 2 |
| 4 | E4, E9 | DEC 7485 | IC 1910224 | 2 |
| 5 | E5 | DEC 74H00 | IC 1909056 | 1 |
| 6 | E10 | DEC 74H20 | IC 1905635 | 1 |
| 7 | E11 | DEC 740B | IC 1910155 | 1 |
| 8 | C1 THRU C11 | .01 MFD 100V 20% CAP | 1001610 | 11 |
| 9 | C12 | 6.8 MFD 35V 20% CAP | 1000067 | 1 |
| 10 | R1, R2 | 1K 1/4W 5% RES | 1300365 | 2 |
| REF | | STACK LIMIT REGISTER | A-PL-M7237-0-0 | |

NOTES:

- PIN NOTATION THROUGHOUT IS ORDERED UPON MODULE PLACEMENT IN THE 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 SEPERATE PINS ARE USED; MULTIPLE INPUTS ARE CONNECTED. MODULE OUTPUT SIGNALS ARE BROUGHT TO THE EXTREME RIGHT OF EACH SHEET.
- KJ11 SIGNAL SOURCE NOTATION (K1-2, FOR EXAMPLE) IDENTIFIES THE SIGNAL SOURCE FROM THE PROCESSOR. FIRST NUMBER AFTER THE K INDICATES THE MODULE PRINT SET, WHILE THE SECOND INDICATES THE SHEET WITHIN THE SET. SIGNALS WITH A "BUS" PREFIX REPRESENT A "WIRED OR" SITUATION, AND MULTIPLE SOURCES FOR THESE SIGNALS CAN EXIST.
- UNLESS OTHERWISE SPECIFIED: RESISTANCE IS IN OHMS
- DETAILS ON COMPONENTS ARE NOTED IN THE PARTS REFERENCE, PLACEMENT IS NOTED IN THE COMPONENT PLACEMENT DIAGRAM. CAPACITORS WITHOUT NOTED VALUES ARE .01 MFD.
- GND AND +5V ARE USUALLY PIN 7 AND PIN 14, RESPECTIVELY. EXCEPTIONS ARE:

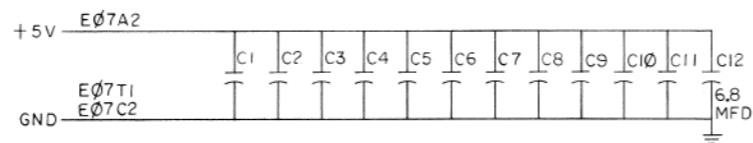
| IC TYPE | GND | +5V |
|-----------|-------|--------|
| DEC 5384 | PIN 1 | PIN 8 |
| DEC 74175 | PIN 8 | PIN 16 |

COMPONENT PLACEMENT



PIN NOMENCLATURE

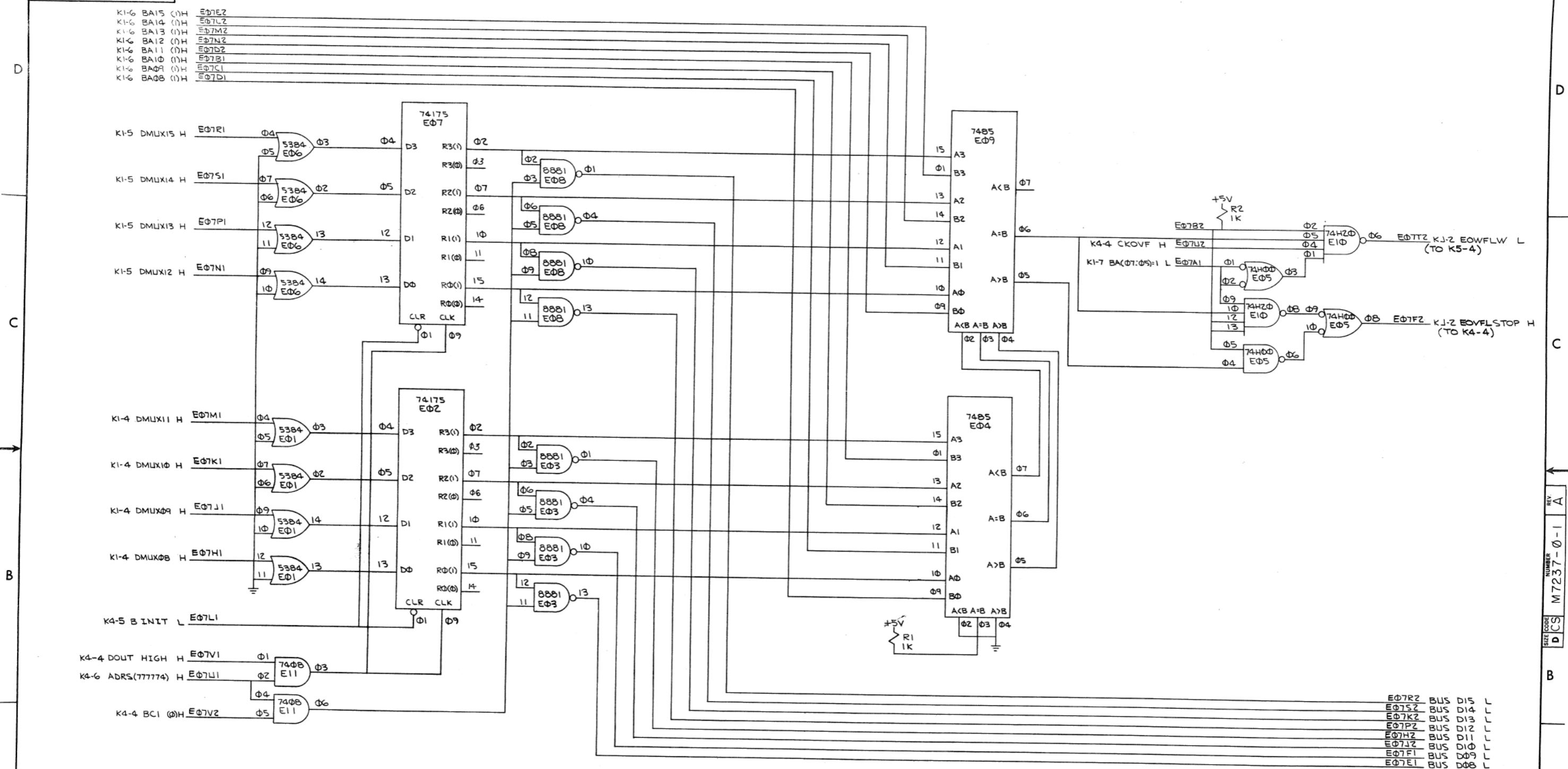
| MODULE | PROCESSOR |
|--------|-----------|
| A | E07 |



| | | | | |
|--|------------------------------|------------------|---|----------|
| FIRST USED ON OPTION / MODEL PDP 11/25 | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED | DRN. W. MAJOR | DATE 9/22/71 | digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS | |
| DIMENSION IN INCHES | CHKD. [Signature] | DATE 9/27/71 | TITLE | |
| TOLERANCES | ENG. [Signature] | DATE 5-23-72 | STACK LIMIT REGISTER | |
| DECIMALS FRACTIONS ANGLES | PRD. ENG. [Signature] | DATE 5-23-72 | M7237 | |
| ± .005 ± 1/64 ± 0°30' | PROD. [Signature] | DATE 5/23/72 | NUMBER KJ-1 | |
| FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS | NEXT HIGHER ASSY A-ML-KJ11-A | | | |
| MATERIAL | SCALE | | | |
| FINISH | SHEET 1 OF 2 | | | |
| SIZE CODE DCS | | NUMBER M7237-0-1 | | REV. A |
| DST. | | | | |

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

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- E07R2 BUS D15 L
- E07S2 BUS D14 L
- E07K2 BUS D13 L
- E07P2 BUS D12 L
- E07H2 BUS D11 L
- E07J2 BUS D10 L
- E07F1 BUS D09 L
- E07E1 BUS D08 L

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

DEC FORM NO DRD 102-B

| | | | | |
|--|-------------------|--------------|---|------------------|
| FIRST USED ON OPTION/MODEL PDP 11/25 | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
| PARTS LIST | | | | |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES | DRN. W. MAJOR | DATE 7/22/71 | digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS | |
| DECIMALS .XXX ±.006 | CHKD. [Signature] | DATE 2-7-72 | | |
| ANGLES ±0° 30' | ENGR. [Signature] | DATE 5-23-73 | | |
| .X ±.1 | PROD. [Signature] | DATE 5-23-73 | | |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY | PROJ. [Signature] | DATE 3/27/72 | TITLE STACK LIMIT REGISTER M7237 KJ-2 | |
| MATERIAL | NEXT HIGHER ASSY. | A-ML-KJ11-A | SIZE CODE DCS | NUMBER M7237-0-1 |
| FINISH | SCALE | SHEET 2 OF 2 | DIST. | REV. A |

REV. A
 NUMBER M7237-0-1
 SIZE CODE DCS

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

SOFTWARE LIST

LEGEND

- D DOCUMENT
- DN DOCUMENT CHANGE NOTICE
- PA PAPER TAPE ASCII
- PB PAPER TAPE BINARY
- PM PAPER TAPE READ-IN-MODE

QUANTITY/VARIATION

| | | |
|-----------------------------|-----------------------------|--------------|
| MADE BY <i>J. Dougherty</i> | CHECKED <i>J. Dougherty</i> | SECTION |
| DATE <i>9/26/72</i> | DATE <i>7/27/72</i> | |
| ENG <i>J. Dougherty</i> | PROD <i>H. Stinger</i> | ISSUED SECT. |
| DATE <i>7/27/72</i> | DATE <i>9-28-72</i> | |

| ITEM NO. | DWG NO. / PART NO. | DESCRIPTION | QUANTITY/VARIATION | | | | | | | | | | KIT CHECK | BY | DATE | INSTALLATION CHECK | BY | DATE |
|----------|-----------------------|------------------|--------------------|--|--|--|--|--|--|--|--|--|-----------|----|------|--------------------|----|------|
| | | | KT11-D | | | | | | | | | | | | | | | |
| 1 | MAINDEC-11-DBKTA-A-D | LOGIC TEST | 1 | | | | | | | | | | | | | | | |
| 2 | MAINDEC-11-DBKTA-A-PB | LOGIC TEST | 1 | | | | | | | | | | | | | | | |
| 3 | MAINDEC-11-DBKTB-A-D | KEYS TEST | 1 | | | | | | | | | | | | | | | |
| 4 | MAINDEC-11-DBKTB-A-PB | KEYS TEST | 1 | | | | | | | | | | | | | | | |
| 5 | MAINDEC-11-DBKTC-A-D | MOVES TEST | 1 | | | | | | | | | | | | | | | |
| 6 | MAINDEC-11-DBKTC-A-PB | MOVES TEST | 1 | | | | | | | | | | | | | | | |
| 7 | MAINDEC-11-DBKTD-A-D | STATES TEST | 1 | | | | | | | | | | | | | | | |
| 8 | MAINDEC-11-DBKTD-A-PB | STATES TEST | 1 | | | | | | | | | | | | | | | |
| 9 | MAINDEC-11-DBKTF-A-D | ABORT TEST | 1 | | | | | | | | | | | | | | | |
| 10 | MAINDEC-11-DBKTF-A-PB | ABORT TEST | 1 | | | | | | | | | | | | | | | |
| 11 | MAINDEC-11-DBKTG-A-D | KT EXERCISER | 1 | | | | | | | | | | | | | | | |
| 12 | MAINDEC-11-DBKTG-A-PB | KT EXERCISER | 1 | | | | | | | | | | | | | | | |
| 13 | MAINDEC-11-DCKBF-A-D | STACK LIMIT TEST | 1 | | | | | | | | | | | | | | | |
| 14 | MAINDEC-11-DCKBF-A-PB | STACK LIMIT TEST | 1 | | | | | | | | | | | | | | | |

| | | | | | |
|----------------------------|---------------------|--------------------------|---------------------|------|--------|
| TITLE MEMORY MANAGEMENT | ASSY. NO. <i>74</i> | SIZE CODE A SL | NUMBER KT11-D-SL | REV. | ECO NO |
| SHEET 1 OF 1 | | DIST. | | | |