

## DRAWING DIRECTORY

# CUSTOMER PRINT SET INDEX

THIS IS PRINT SET

## SEQUENCE

## SEQUENCE

DRAWING DIRECTORY  
MIL-1-A ARMY  
MIL-1-B NAVAL DIAGRAM  
MIL-1-C NAVAL DIAGRAM  
MIL-1-D NAVAL  
MIL-1-E NAVAL

B-DD-KE11-E (SHEET 1 ONLY)  
D-UA-KE11-E-Ø  
D-BD-KE11-E-BD  
D-FD-KE11-E-FD  
D-CS-M723H-Ø-1  
A-SL-KE11-E-SL

## UNIT VARIATIONS

## PRINT SET TYPE

## VARIATION

TITLE

**KELL-E**

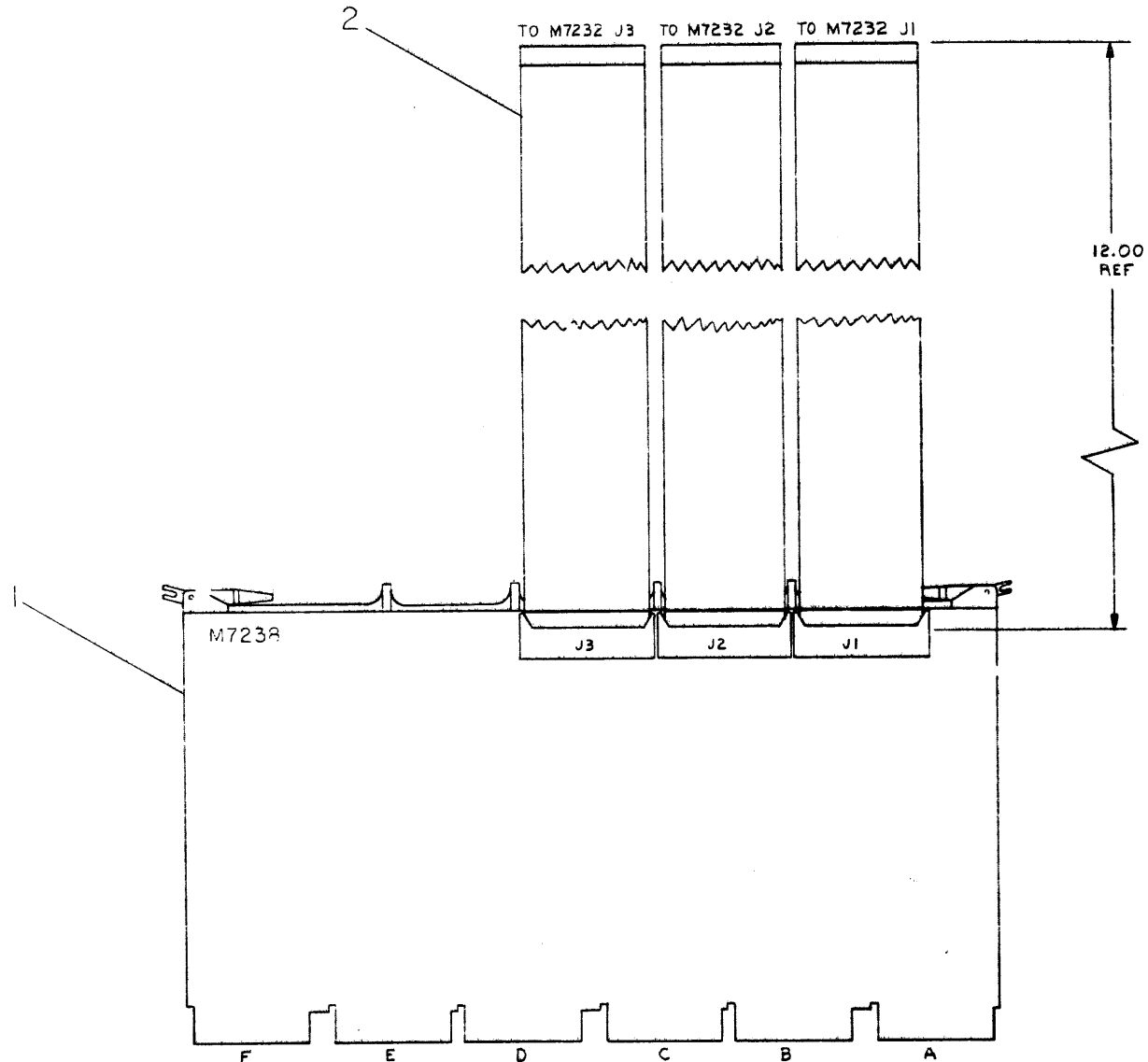
**KE11-E**

## EXPANDED INSTRUCTION SET

|  |   |
|--|---|
|  | X |
|--|---|

## NOTES:

1. PLUG M7238 INTO SLOT A-F2 OF KDII-A SEE D-MU-KDII-A-MU
2. INSTALL CABLES WITH SHIELD TOWARD M7238 MODULE.
3. CUT W1 ON M7233 MODULE (IR DECODE) INSTALLING KEII-E OPTION.
4. CUT W1, W2, W3 ON M7238 MODULE (EIS) WHEN INSTALLING KEII-F OPTION.
5. WHEN INSTALLING KEII-E OPTION IN THE 11/40 TUCK SLACK BC09R-01 CABLE LOOP DOWN IN FRONT OF SLOT 1 MODULE POSITION.
6. FOR DRAWING DIRECTORY INFORMATION REFER TO DRAWING \*B-DD-KEII-E

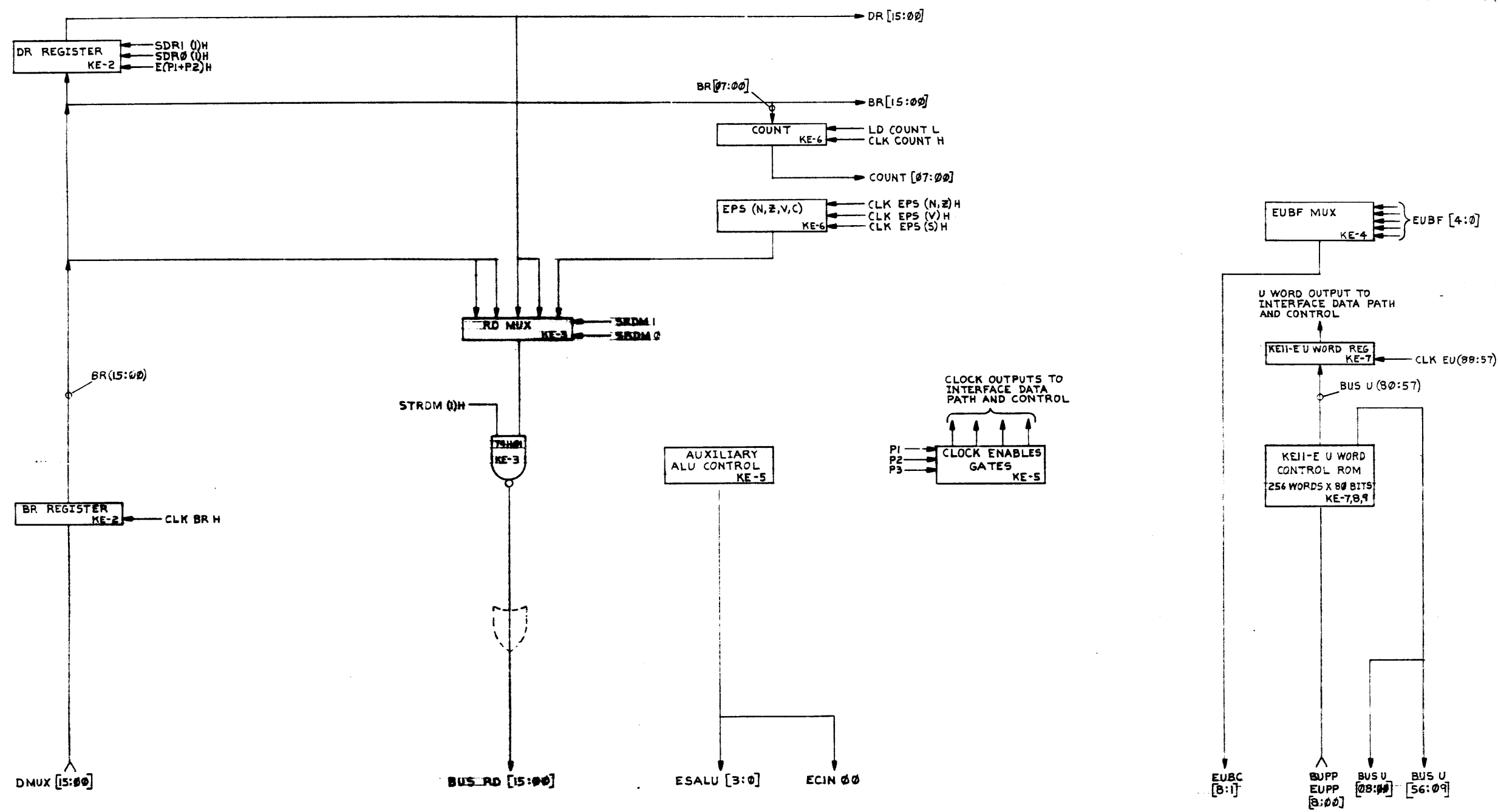


|                                                                 |          |                   |                                                        |
|-----------------------------------------------------------------|----------|-------------------|--------------------------------------------------------|
| 3 I/O CABLE (BC09R)                                             |          | C-UA-BC09R-01     | 2                                                      |
| 1 EIS BOARD                                                     |          | D-CS-M7238-0-1    | 1                                                      |
| PDP 11                                                          |          | PARTS LIST        |                                                        |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSION IN INCHES<br>TOLERANCES |          | DATE 8-23-72      | digital EQUIPMENT CORPORATION<br>MAYNARD MASSACHUSETTS |
| DECIMALS                                                        | ANGLES   | DATE 7-26-72      | TITLE                                                  |
| .XXX + .005                                                     | ± 0° 30' | DATE 8-21-72      | KEII-E ASSY                                            |
| .XX - .02                                                       |          | DATE 9-21-72      |                                                        |
| .X - .1                                                         |          | DATE 9-21-72      |                                                        |
| REMOVE BURRS AND BREAK SHARP<br>CORNERS SURFACE QUALITY         |          | DATE 9-21-72      |                                                        |
| MATERIAL                                                        |          | NEXT HIGHER ASSY. |                                                        |
| FINISH                                                          |          | B-DD-KEII-E       | SIZE CODE DUA                                          |
|                                                                 |          | SCALE NONE        | NUMBER KEII-E-0                                        |
|                                                                 |          | SHEET 1 OF 1      | REV.                                                   |

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

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NOTE: THIS DIAGRAM IS DRAWN SO THAT INTERFACE SIGNALS AT THE BOTTOM OF THIS SHEET LINE UP WITH THEIR RESPECTIVE SIGNALS AT THE TOP OF THE KD11-A BLOCK DIAGRAM (D-BD-KD11-A-BD)



| REV | CHG | NO | REV |
|-----|-----|----|-----|
| 1   | 1   | 1  | 1   |
| 2   | 2   | 2  | 2   |
| 3   | 3   | 3  | 3   |
| 4   | 4   | 4  | 4   |
| 5   | 5   | 5  | 5   |
| 6   | 6   | 6  | 6   |
| 7   | 7   | 7  | 7   |
| 8   | 8   | 8  | 8   |

| FIRST USED ON OPTION/MODEL                           | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|------------------------------------------------------|------|-------------|----------|----------|
| PDP 11                                               |      |             |          |          |
| UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES.     |      |             |          |          |
| TOLERANCES                                           |      |             |          |          |
| DECIMALS                                             |      |             |          |          |
| ANGLES                                               |      |             |          |          |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY |      |             |          |          |
| MATERIAL                                             |      |             |          |          |
| FINISH                                               |      |             |          |          |
| PARTS LIST                                           |      |             |          |          |
| digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS |      |             |          |          |
| TITLE KE11-E BLOCK DIAGRAM (U WORD & TABLES)         |      |             |          |          |
| NEXT HIGHER ASSY. B-DD-KE11-E                        |      |             |          |          |
| SCALE NONE                                           |      |             |          |          |
| SHEET 1 OF 2                                         |      |             |          |          |
| DIST.                                                |      |             |          |          |

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# EXPANSION U WORD

M7239 KEII-F U WORD [U(88:8)] — M7238 KEII-E U WORD [U(80:57)]

| FCI     |         | FUB     |         | MHR     |         | FRD     | ERD     | SRD     |         | SDR     |         | CVM     |         |         | NZM     |         | CCC     |         |         | GPC     |         |         | CEE     | CNT      |         | EUB     |         |         |         |         | CBR     |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|---------|---------|---------|
| CON1    | CON2    | FCI BUS | EUBF4   | MSR     | MSR1    | MSR0    | STFROM  | STROM   | SRDMI   | SRDM0   | SDR1    | SDR0    | SCVM2   | SCVM1   | SCVM0   | SN2M1   | SN2M0   | CLK N2  | CLK V   | CLK C   | GPC2    | GPC1    | GPC0    | CLK UPB0 | LCNT    | ECNT    | EUBF5   | EUBF2   | EUBF1   | EUBF0   | CLK BR  |
| U88(1)H | U89(1)H | U84(1)H | U85(1)H | U84(1)H | U83(1)H | U82(1)H | U81(1)H | U80(1)H | U79(1)H | U78(1)H | U77(1)H | U76(1)H | U75(1)H | U74(1)H | U73(1)H | U72(1)H | U71(1)H | U70(1)H | U69(1)H | U68(1)H | U67(1)H | U66(1)H | U65(1)H | U64(1)H  | U63(1)H | U62(1)H | U61(1)H | U60(1)H | U59(1)H | U58(1)H | U57(1)H |

| EUB (4:1) BUT CHART |       |       |       |       |  | BUT               |
|---------------------|-------|-------|-------|-------|--|-------------------|
| EUBF4               | EUBF3 | EUBF2 | EUBF1 | EUBF0 |  |                   |
| L                   | L     | L     | L     | L     |  | NOOP              |
| L                   | L     | L     | L     | H     |  | D15               |
| L                   | L     | L     | H     | L     |  | SDIVD             |
| L                   | L     | L     | H     | H     |  | BRIS              |
| L                   | L     | H     | L     | L     |  | D=0               |
| L                   | L     | H     | L     | H     |  | DRIS              |
| L                   | L     | H     | H     | L     |  | NOT USED          |
| L                   | L     | H     | H     | H     |  | DIV QUIT          |
| L                   | H     | L     | L     | L     |  | COUNT=0           |
| L                   | H     | L     | L     | H     |  | OVFL+UNFL+STORE * |
| L                   | H     | L     | H     | L     |  | DR00 * E15        |
| L                   | H     | L     | H     | H     |  | BR (05:00)        |
| L                   | H     | H     | L     | L     |  | ZB * EPS (2) *    |
| L                   | H     | H     | L     | H     |  | FINSTR I *        |
| L                   | H     | H     | H     | L     |  | FINSTR II         |
| L                   | H     | H     | H     | H     |  | FINSTR I          |

\* = KEII-F

| FUBC BUT CHART (KEII-F) |       |       |       |    |  | BUT          |
|-------------------------|-------|-------|-------|----|--|--------------|
| STB                     | S2    | S1    | S0    | FN |  | (FUBC)       |
| EUBF4                   | EUBF2 | EUBF1 | EUBF0 |    |  |              |
| H                       | —     | —     | —     | L  |  | —            |
| L                       | L     | L     | L     | D0 |  | ARGA         |
| L                       | L     | L     | H     | D1 |  | MSR01        |
| L                       | L     | H     | L     | D2 |  | ZB * EPS (2) |
| L                       | L     | H     | H     | D3 |  | COUNT > 30   |
| L                       | H     | L     | L     | D4 |  | NORMALIZED   |
| L                       | H     | L     | H     | D5 |  | MSR00        |
| L                       | H     | H     | L     | D6 |  | —            |
| L                       | H     | H     | H     | D7 |  | —            |

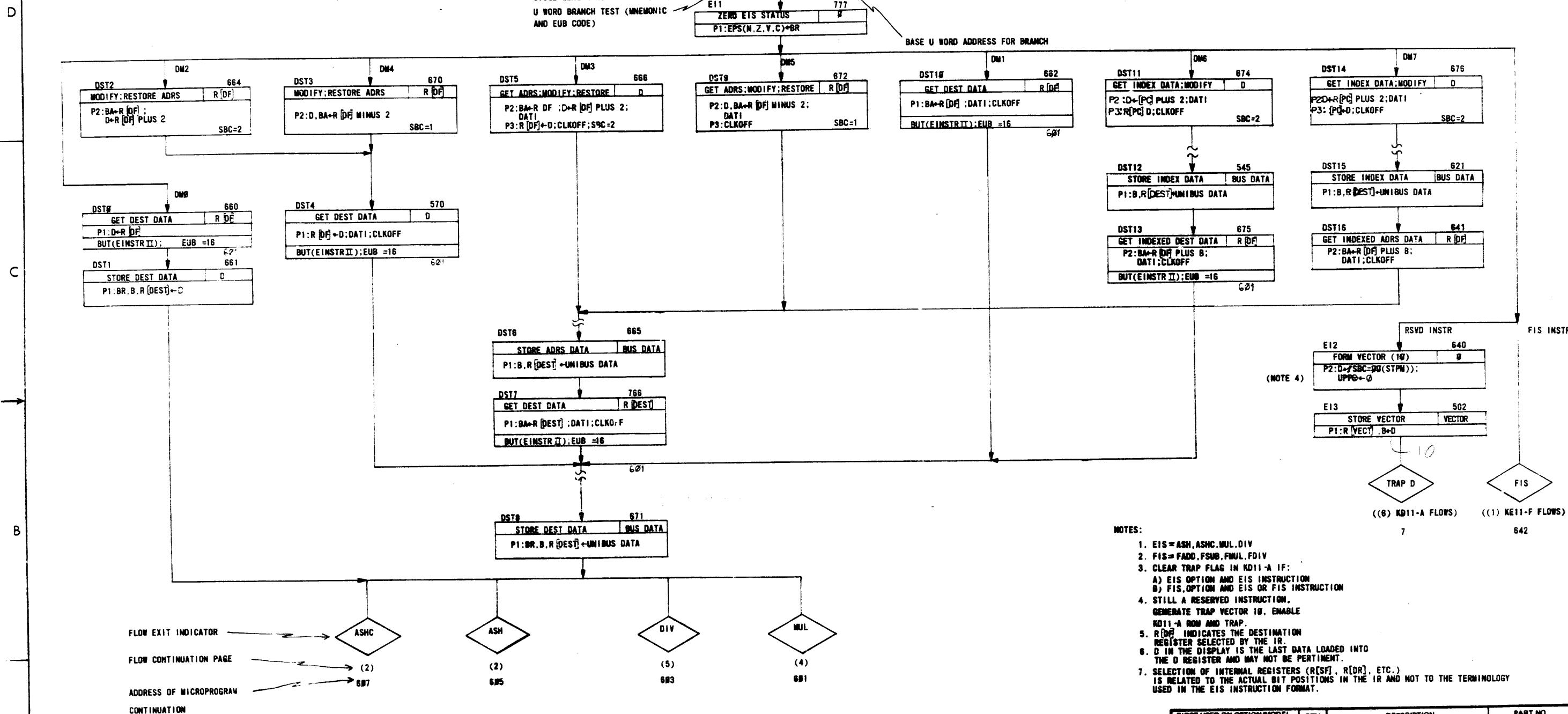
| CONSTANTS (KEII-F) |      |      |  | CONSTANT |
|--------------------|------|------|--|----------|
| GPC=6              | CON1 | CON2 |  | (OCTAL)  |
| H                  | L    | L    |  | 400      |
| H                  | L    | H    |  | 244      |
| H                  | H    | L    |  | 6        |
| H                  | H    | H    |  | 30       |
| L                  | L    | L    |  | 200      |

| GPC CHART |      |      |  | FUNCTION                                                                                       |
|-----------|------|------|--|------------------------------------------------------------------------------------------------|
| GPC2      | GPC1 | GPC0 |  |                                                                                                |
| 1         | 1    | 1    |  | NOOP                                                                                           |
| 1         | 1    | 0    |  | BUT (NORMALIZE) TESTS DR09 - KEII-F                                                            |
| 1         | 0    | 1    |  | ALLOWS ALU CONTROL AS A FUNCTION OF CERTAIN CONDITIONS RATHER THAN DIRECTLY BY THE CONTROL ROM |
| 1         | 0    | 0    |  | ENABLES DRIS TO PROVIDE THE CARRY-IN TO THE ALU                                                |
| 0         | 1    | 1    |  | ENABLES EPS(C) TO PROVIDE THE CARRY-IN TO THE ALU                                              |
| 0         | 1    | 0    |  | ENABLES MSRIS TO PROVIDE LSB SHIFT INPUT TO THE DR, KEII-F                                     |
| 0         | 0    | 1    |  | USED IN KEII-F. FORMS CONSTANT 2000                                                            |
| 0         | 0    | 0    |  | USED IN KEII-F EXECUTES A MICROPROGRAM TEST FOR BUS REQUESTS                                   |

| KEII-E KEII-F |       |       |       |       |  | ALU FUNCTIONS              |
|---------------|-------|-------|-------|-------|--|----------------------------|
| ALUM          | ALUS3 | ALUS2 | ALUS1 | ALUS0 |  | ALU F (FUNCTION)           |
| L             | L     | L     | L     | L     |  | F=A                        |
| L             | L     | L     | H     | H     |  | F=MINUS 1 (2'S COMPLEMENT) |
| L             | L     | H     | H     | L     |  | F=A MINUS B MINUS 1        |
| L             | H     | L     | L     | H     |  | F=A PLUS B                 |
| L             | H     | H     | L     | L     |  | F=A PLUS B                 |
| H             | L     | L     | L     | L     |  | F=X                        |
| H             | L     | L     | H     | H     |  | F=LOGICAL 0                |
| H             | H     | L     | H     | L     |  | F=B                        |
| H             | H     | H     | H     | L     |  | F=AB                       |

|                                                      |  |                   |             |                               |           |
|------------------------------------------------------|--|-------------------|-------------|-------------------------------|-----------|
| FIRST USED ON OPTION MODEL                           |  | QTY.              | DESCRIPTION | PART NO.                      | ITEM NO.  |
| PDP 11                                               |  |                   |             |                               |           |
| UNLESS OTHERWISE SPECIFIED TOLERANCES                |  | PARTS LIST        |             |                               |           |
| DECIMALS                                             |  | DATE              | DATE        | DIGITAL EQUIPMENT CORPORATION |           |
| ANGLES                                               |  | DATE              | DATE        | MAYNARD MASSACHUSETTS         |           |
| .XXX - .000                                          |  | DATE              | DATE        | TITLE                         |           |
| .XXX - .000                                          |  | DATE              | DATE        | KEII-E                        |           |
| .XXX - .000                                          |  | DATE              | DATE        | BLOCK DIAGRAM                 |           |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY |  | DATE              | DATE        | (U WORD & TABLES)             |           |
| MATERIAL                                             |  | NEXT HIGHER ASSY. |             | SIZE CODE                     | NUMBER    |
| FINISH                                               |  | SCALE NONE        |             | D BD                          | KEII-E-BD |
|                                                      |  | SHEET 2 OF 2      |             | REV.                          | A         |

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[illegible]

- NOTES:
- 7
1. EIS = ASH, ASHC, MUL, DIV
  2. FIS = FADD, FSUB, FMUL, FDIV
  3. CLEAR TRAP FLAG IN KD11-A IF:
    - A) EIS OPTION AND EIS INSTRUCTION
    - B) FIS, OPTION AND EIS OR FIS INSTRUCTION
  4. STILL A RESERVED INSTRUCTION.  
GENERATE TRAP VECTOR 10, ENABLE  
KD11-A ROM AND TRAP.
  5. R[DR] INDICATES THE DESTINATION  
REGISTER SELECTED BY THE IR.
  6. D IN THE DISPLAY IS THE LAST DATA LOADED INTO  
THE D REGISTER AND MAY NOT BE PERTINENT.
  7. SELECTION OF INTERNAL REGISTERS (R[SF], R[DR], ETC.)  
IS RELATED TO THE ACTUAL BIT POSITIONS IN THE IR AND NOT TO THE TERMINOLOGY  
USED IN THE EIS INSTRUCTION FORMAT.

|                                                                                       |  |                                                                                                       |                 |                                                                                                                                                      |          |
|---------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| FIRST USED ON OPTION/MODEL                                                            |  | QTY.                                                                                                  | DESCRIPTION     | PART NO.                                                                                                                                             | ITEM NO. |
| PDPII                                                                                 |  | PARTS LIST                                                                                            |                 |                                                                                                                                                      |          |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSION IN INCHES.<br>TOLERANCES                      |  | DRN<br><i>R. B. Smith</i>                                                                             | DATE<br>7-18-72 |  <b>DIGITAL</b> EQUIPMENT CORPORATION<br>MAYNARD, MASSACHUSETTS |          |
| DECIMALS                                                                              |  | CHK'D<br><i>Thompson</i>                                                                              | DATE<br>8-21-72 |                                                                                                                                                      |          |
| ANGLES                                                                                |  | <i>Thompson</i>                                                                                       | DATE<br>7-21-72 |                                                                                                                                                      |          |
| .XXX = .003<br>.XX = .02<br>.X = .1                                                   |  | <i>Thompson</i>                                                                                       | DATE<br>8-21-72 |                                                                                                                                                      |          |
| REMOVE BURRS AND BREAK SHARP<br>CORNERS. SURFACE QUALITY ✓                            |  | PROG.<br><i>R. B. Smith</i>                                                                           | DATE<br>7-21-72 | TITLE<br><h1>FLOW DIAGRAM</h1> (KEII-E DEST)                                                                                                         |          |
| MATERIAL                                                                              |  | NEXT HIGHER ASSY.                                                                                     |                 |                                                                                                                                                      |          |
|  |  | B-DD-KDII-A                                                                                           |                 | SIZE CODE NUMBER REV.<br>DFD KEII-E-FD A                                                                                                             |          |
| FINISH                                                                                |  | SCALE                                                                                                 |                 |                                                                                                                                                      |          |
|  |  | SHEET 1 OF 5<br> |                 | DWT                                                                                                                                                  |          |



|                                                                                                   |  |                                  |                 |                                                                                                                                                             |          |
|---------------------------------------------------------------------------------------------------|--|----------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| FIRST USED ON OPTION/MODEL                                                                        |  | QTY.                             | DESCRIPTION     | PART NO.                                                                                                                                                    | ITEM NO. |
| PDP11                                                                                             |  | PARTS LIST                       |                 |                                                                                                                                                             |          |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSION IN INCHES.<br>TOLERANCES                                  |  | DRAWN<br><i>[Signature]</i>      | DATE<br>9-18-72 |  <b>EQUIPMENT CORPORATION</b><br><small>WARRIOR, MASSACHUSETTS</small> |          |
| DECIMALS      ANGLES                                                                              |  | CHD.<br><i>[Signature]</i>       | DATE<br>9-22-72 | <b>FLOW DIAGRAM</b><br>(ASH, A3HC)                                                                                                                          |          |
| .XXX = .006                                                                                       |  | ENG.<br><i>[Signature]</i>       | DATE<br>9-26-72 |                                                                                                                                                             |          |
| .XX = .02                                                                                         |  | PROG. ENG.<br><i>[Signature]</i> | DATE<br>9-11-72 |                                                                                                                                                             |          |
| .X = .1                                                                                           |  | PROG.<br><i>[Signature]</i>      | DATE<br>9-24-72 |                                                                                                                                                             |          |
| REMOVE BURRS AND BREAK SHARP<br>CORNERS SURFACE QUALITY ✓                                         |  | (2)                              |                 |                                                                                                                                                             |          |
| MATERIAL<br> |  | NEXT HIGHER ASSY.                |                 | SIZE CODE      NUMBER<br><b>D</b> FD      KE11-E-FD                                                                                                         |          |
| FINISH<br>   |  | B-DD-KD11-A                      |                 | REV.<br>A                                                                                                                                                   |          |
| SCALE<br>SHEET 2 OF 5                                                                             |  | DIST.                            |                 |                                                                                                                                                             |          |

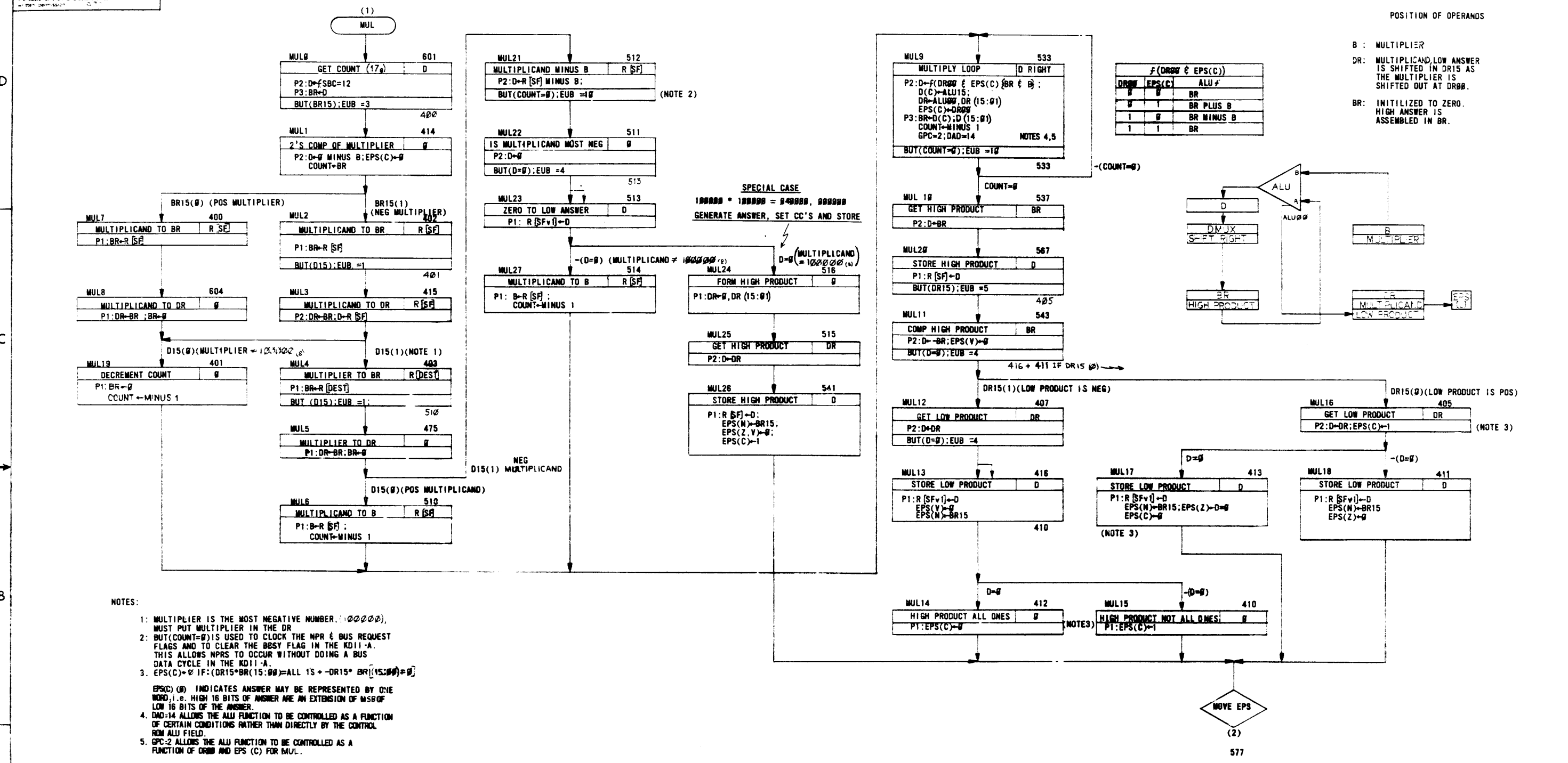
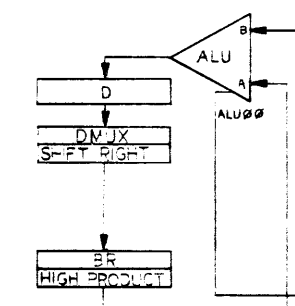
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SIZE CODE  
A  
REV  
A  
D  
FD  
KEII-E-FD  
2

POSITION OF OPERANDS

B : MULTIPLIER  
DR : MULTIPLICAND, LOW ANSWER IS SHIFTED IN DR15 AS THE MULTIPLIER IS SHIFTED OUT AT DR00.  
BR : INITIALIZED TO ZERO. HIGH ANSWER IS ASSEMBLED IN BR.

| f(DR00 & EPS(C)) |            |
|------------------|------------|
| DR00             | EPS(C)     |
| 0                | BR         |
| 1                | BR PLUS B  |
| 1                | BR MINUS B |
| 1                | BR         |

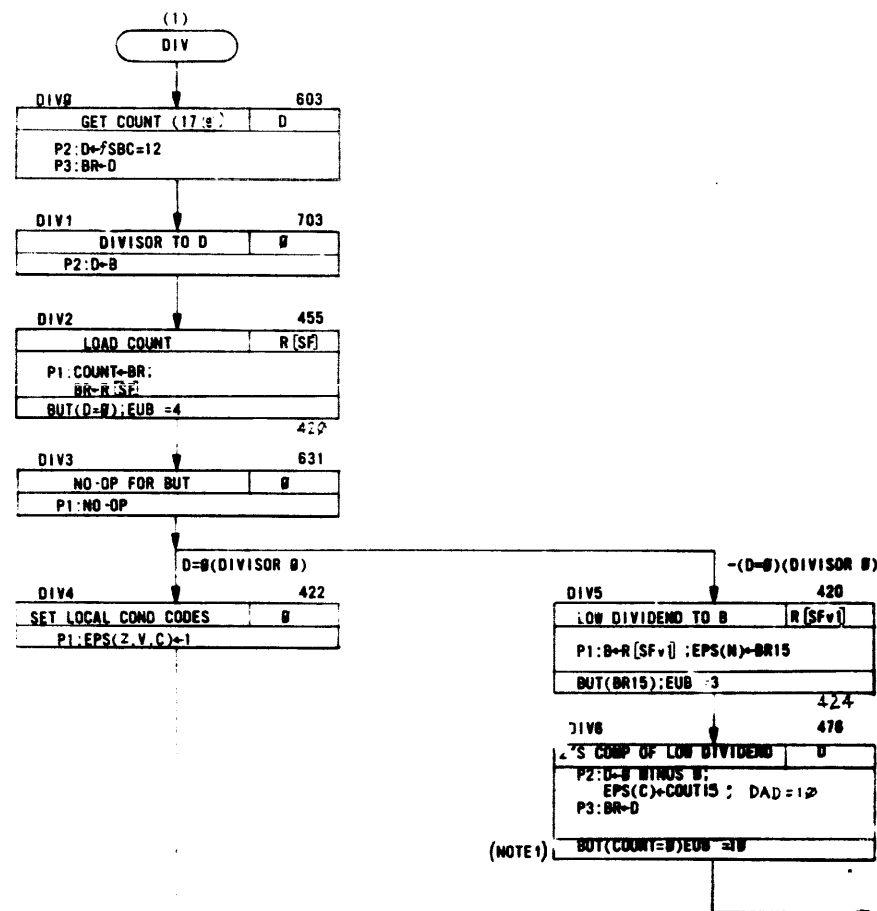


- NOTES:
- MULTIPLIER IS THE MOST NEGATIVE NUMBER. (10000000). MUST PUT MULTIPLIER IN THE DR.
  - BUT(COUNT=0) IS USED TO CLOCK THE NPR & BUS REQUEST FLAGS AND TO CLEAR THE RBSY FLAG IN THE KD11-A. THIS ALLOWS NPRS TO OCCUR WITHOUT DOING A BUS DATA CYCLE IN THE KD11-A.
  - EPS(C)=0 IF: (DR15\*BR(15:00))=ALL 1'S + -DR15\*BR(15:00)=0
- EPS(C) (0) INDICATES ANSWER MAY BE REPRESENTED BY ONE WORD, I.E. HIGH 16 BITS OF ANSWER ARE AN EXTENSION OF MSB OF LOW 16 BITS OF THE ANSWER.
- DAD=14 ALLOWS THE ALU FUNCTION TO BE CONTROLLED AS A FUNCTION OF CERTAIN CONDITIONS RATHER THAN DIRECTLY BY THE CONTROL ROM ALU FIELD.
  - GPC=2 ALLOWS THE ALU FUNCTION TO BE CONTROLLED AS A FUNCTION OF DR00 AND EPS (C) FOR MUL.

| FIRST USED ON OPTION/MODEL                                      | QTY.              | DESCRIPTION         | PART NO.        | ITEM NO.        |
|-----------------------------------------------------------------|-------------------|---------------------|-----------------|-----------------|
| PDPII                                                           |                   |                     |                 |                 |
| PARTS LIST                                                      |                   |                     |                 |                 |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSION IN INCHES<br>TOLERANCES | DATE<br>9-12-72   | DATE<br>9-21-72     | DATE<br>9-21-72 | DATE<br>9-21-72 |
| DECIMALS                                                        | ANGLES            | DATE<br>9-21-72     | DATE<br>9-21-72 | DATE<br>9-21-72 |
| XXX = .005<br>XX = .02<br>X = .1                                | ±0° 30'           | DATE<br>9-21-72     | DATE<br>9-21-72 | DATE<br>9-21-72 |
| REMOVE BURRS AND BREAK SHARP<br>CORNERS SURFACE QUALITY         |                   |                     |                 |                 |
| MATERIAL                                                        | NEXT HIGHER ASSY. |                     |                 |                 |
| FINISH                                                          | B-DD-KD11-A       |                     |                 |                 |
|                                                                 | SCALE             |                     |                 |                 |
|                                                                 | SHEET 3 OF 5      |                     |                 |                 |
| TITLE<br>FLOW DIAGRAM<br>(MUL)                                  |                   | REV. A              |                 |                 |
| SIZE CODE<br>D                                                  |                   | NUMBER<br>KEII-E-FD |                 |                 |
| DIST                                                            |                   |                     |                 |                 |

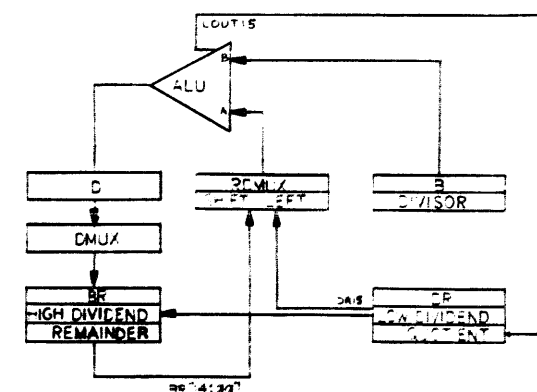
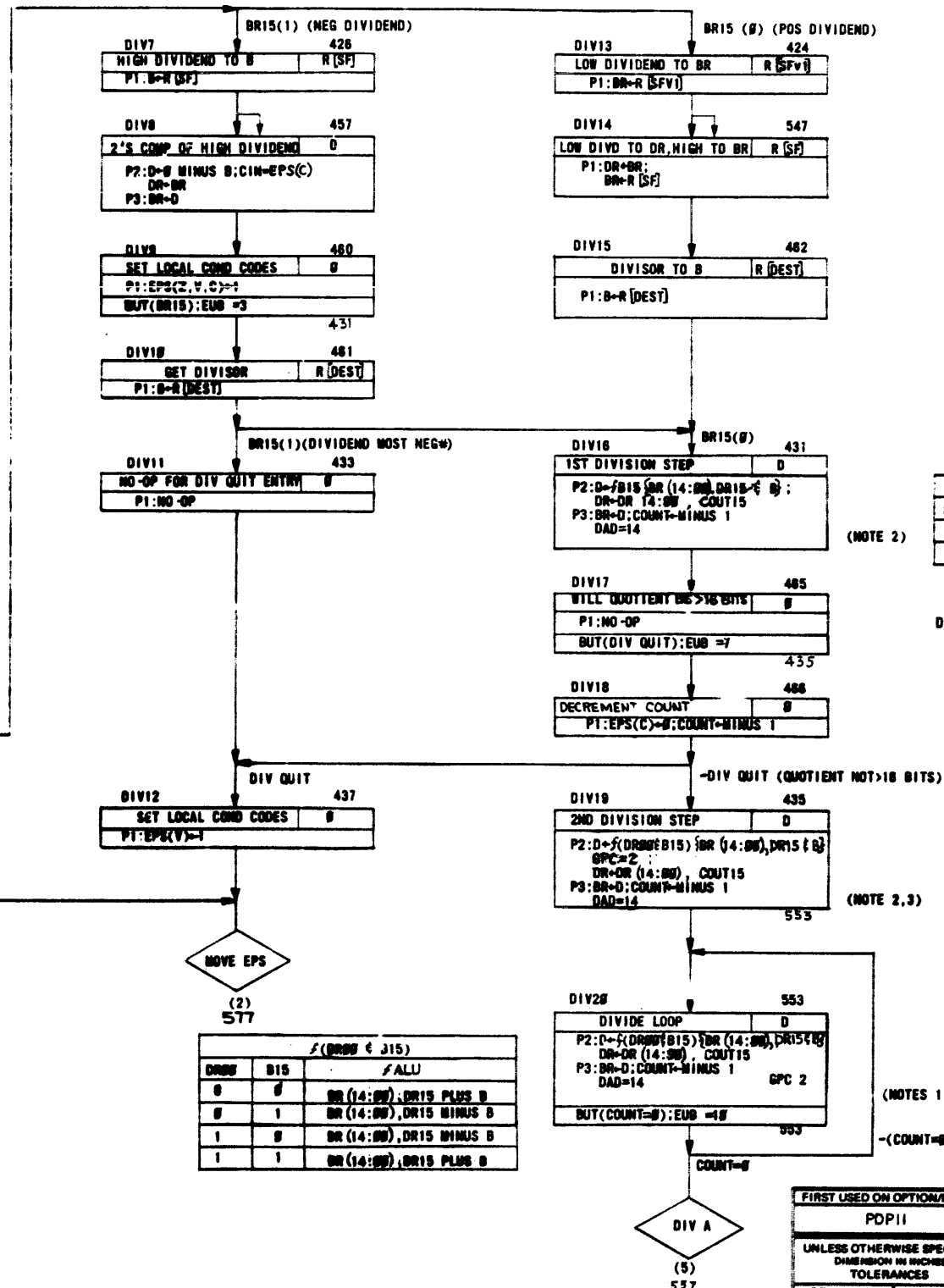
REVISIONS  
CHANGE NO.  
REV  
A

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**NOTES:**

1. BUT(COUNT=9) IS USED TO CLOCK THE MPR & BUS REQUEST FLAGS AND TO CLEAR THE BSZY FLAG IN THE K011-A. THIS ALLOWS MPRS TO OCCUR WITHOUT DOING A BUS DATA CYCLE IN THE K011-A.
2. DAD=14 ALLOWS THE ALU FUNCTION TO BE CONTROLLED AS A FUNCTION OF CERTAIN CONDITIONS RATHER THAN DIRECTLY BY THE CONTROL ROM ALU FIELD.
3. GPC=2 ALLOWS THE ALU FUNCTION TO BE CONTROLLED AS A FUNCTION OF DR00 AND R15 FOR DIV.



|     |            |
|-----|------------|
|     | $\div B15$ |
| B15 | ALL        |
| 1   | DR PLUS B  |
| 0   | DR MINUS B |

$$\text{DIV QUIT} = (-D - \text{D*DRAG} + 815 * \text{EPS}(N) * \text{DRAG} +$$

### POSITION OF OPERANDS

D: DIVISOR

DR: INITIALLY LOADED WITH  
LOW DIVIDEND.  
LOW ANSWER IS  
SHIFTED INTO DRUM.

OR: INITIALLY LOADED WITH  
HIGH DIVIDEND.  
REMAINDER IS ASSEMBLED  
IN OR.

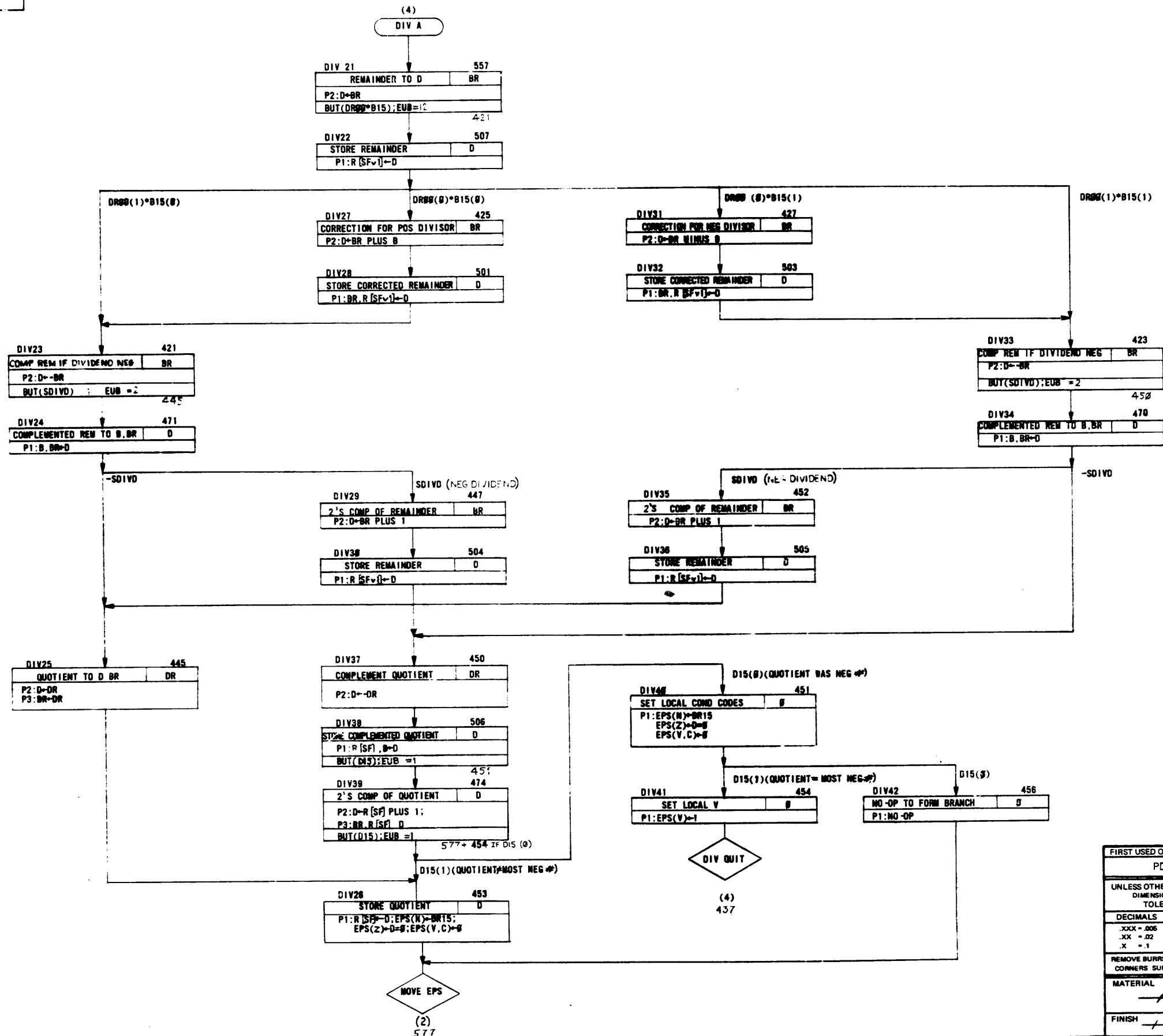
| F (DR15 & 315) |     |                          |
|----------------|-----|--------------------------|
| DR15           | 315 | FALL                     |
| 0              | 0   | DR (14:00), DR15 PLUS B  |
| 0              | 1   | DR (14:00), DR15 MINUS B |
| 1              | 0   | DR (14:00), DR15 MINUS B |
| 1              | 1   | DR (14:00), DR15 PLUS B  |

(NOTES

- (COUNT=5)

|                                                                                       |                                                                                             |                                                                                                                                                                                                                                     |             |          |          |
|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------|----------|
| FIRST USED ON OPTION/MODEL                                                            |                                                                                             | QTY.                                                                                                                                                                                                                                | DESCRIPTION | PART NO. | ITEM NO. |
| PDP11                                                                                 |                                                                                             |                                                                                                                                                                                                                                     |             |          |          |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSION IN INCHES.<br>TOLERANCES                      |                                                                                             | PARTS LIST                                                                                                                                                                                                                          |             |          |          |
| DECIMALS                                                                              | ANGLES                                                                                      | <div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 5px; margin-right: 10px;">digital</div> <div> <b>EQUIPMENT CORPORATION</b><br/> <small>RAYMOND, MASSACHUSETTS</small> </div> </div> |             |          |          |
| .XXX = .009<br>.XX = .02<br>.X = .1                                                   | 20° 30'                                                                                     | TITLE                                                                                                                                                                                                                               |             |          |          |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓                                |                                                                                             | FLOW DIAGRAM<br>(Div)                                                                                                                                                                                                               |             |          |          |
| MATERIAL                                                                              | NEXT HIGHER ASSY.                                                                           |                                                                                                                                                                                                                                     | (4)         |          |          |
|  | B-DD-KD11-A                                                                                 |                                                                                                                                                                                                                                     | SIZE CODE   |          |          |
| FINISH                                                                                | SCALE  |                                                                                                                                                                                                                                     | NUMBER      |          | REV.     |
|  | SHEET 4 OF 5                                                                                |                                                                                                                                                                                                                                     | D F D       |          | A        |
|                                                                                       |                                                                                             |                                                                                                                                                                                                                                     | K E 11-E-FD |          |          |
|                                                                                       |                                                                                             |                                                                                                                                                                                                                                     | D I S T     |          |          |

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| FIRST USED ON OPTION/MODEL                                      | QTY.                                                                                                      | DESCRIPTION                                             | PART NO.     | ITEM NO. |
|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|---------------------------------------------------------|--------------|----------|
| PDPII                                                           |                                                                                                           |                                                         |              |          |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSION IN INCHES<br>TOLERANCES | DATE 9-18-72<br>CHK'D. DATE 9-21-72<br>ENG. DATE 9-21-72<br>PROG. ENG. DATE 9-21-72<br>PROG. DATE 9-21-72 | digital EQUIPMENT CORPORATION<br>MAYNARD, MASSACHUSETTS |              |          |
| DECIMALS .XXX = .006<br>.XX = .02<br>.X = .1                    | ANGLES ±0° 30'                                                                                            | TITLE<br>FLOW DIAGRAM<br>(DIV (CONT))                   |              | (5)      |
| REMOVE BURRS AND BREAK SHARP<br>CORNERS SURFACE QUALITY         |                                                                                                           |                                                         |              |          |
| MATERIAL                                                        | NEXT HIGHER ASSY.                                                                                         | SIZE CODE                                               | NUMBER       | REV.     |
| FINISH                                                          | B-DD-KDII-A                                                                                               | D                                                       | FD KEII-E-FD | A        |
|                                                                 | SCALE                                                                                                     | SHEET 5 OF 5                                            | DIST.        |          |

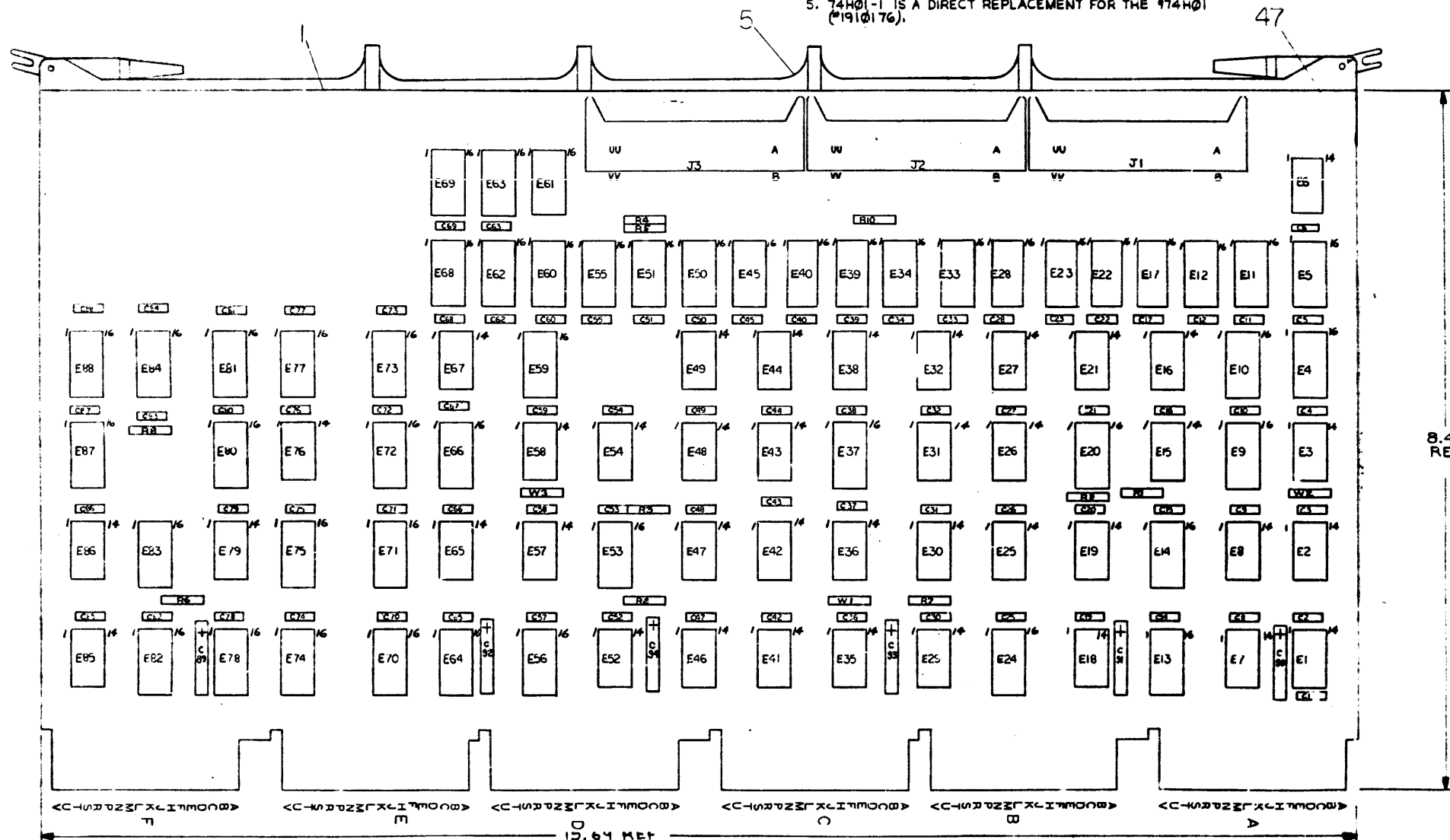
## NOTES:

- PIN NOTATION THROUGHOUT IS ORDERED UPON MODULE PLACEMENT IN THE K11-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 (KE-1 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 PICOFARADS.
- 74H01-1 IS A DIRECT REPLACEMENT FOR THE 74H01 (#1910176).

## INSTALLATION:

- CUT W1 ON M7233 MODULE WHEN INSTALLING KE-1-E
- CONNECT B02B-R-21 CABLE (SHIELD TOWARD M7233 BOARD) FROM M7233-J1, J2, J3 TO M7232-J1, J2, J3 RESPECTIVELY.
- CUT W1, W2, W3 ON THIS MODULE M7233 WHEN INSTALLING KE-1-E

8.43  
REF

15.64 REF

A02A2, B02A2  
C02A2, D02A2  
E02A2, F02A2

+5V

A02C2, A02T1  
B02C2, B02T1  
C02C2, C02T1  
D02C2, D02T1  
E02C2, E02T1  
F02C2, F02T1

GND

|                  |                   |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |                    |
|------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| C1<br>THRU<br>C6 | C8<br>THRU<br>C12 | C14<br>THRU<br>C17 | C19<br>THRU<br>C23 | C25<br>THRU<br>C28 | C30<br>THRU<br>C34 | C36<br>THRU<br>C40 | C42<br>THRU<br>C45 | C47<br>THRU<br>C55 | C57<br>THRU<br>C60 | C62<br>THRU<br>C63 | C64<br>THRU<br>C68 | C89<br>THRU<br>C94 |
| .01µf            | .01µf             | .01µf              | .01µf              | .01µf              | .01µf              | .01µf              | .01µf              | .01µf              | .01µf              | .01µf              | .01µf              | 6.8µf              |

| IC TYPE                                                                        | QTY | REF |
|--------------------------------------------------------------------------------|-----|-----|
| 1311003-02                                                                     | 8   | 16  |
| DEC 74194                                                                      | 8   | 16  |
| DEC 74191                                                                      | 8   | 16  |
| DEC 74174                                                                      | 8   | 16  |
| DEC 74153                                                                      | 8   | 16  |
| DEC 74151                                                                      | 8   | 16  |
| DEC 8251                                                                       | 8   | 16  |
| IC TYPE                                                                        | GND | +5V |
| GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY. EXCEPTIONS ARE STATED ABOVE. |     |     |
| IC PIN LOCATIONS                                                               |     |     |

BRUING 40-522 16699

DEC FORM NO.  
DRD-125A

| QTY | REF DESIGNATION                                                                                                                                                           | DESCRIPTION              | PART NO    | ITEM NO. |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------|----------|
| 3   | W1, W2, W3                                                                                                                                                                | INSULATED JUMPER         | 9007195    | 43       |
| 12  |                                                                                                                                                                           | EYELET                   | 9006732    | 47       |
| 1   | E60                                                                                                                                                                       | I.C. DEC 23B37A2         | 23B37A2    | 45       |
| 1   | E68                                                                                                                                                                       | I.C. DEC 23B30A2         | 23B30A2    | 45       |
| 1   | E62                                                                                                                                                                       | I.C. DEC 23B29A2         | 23B29A2    | 44       |
| 1   | E12                                                                                                                                                                       | I.C. DEC 23B28A2         | 23B28A2    | 43       |
| 1   | E17                                                                                                                                                                       | I.C. DEC 23B34A2         | 23B34A2    | 42       |
| 1   | E11                                                                                                                                                                       | I.C. DEC 23B26A2         | 23B26A2    | 41       |
| 1   | E55                                                                                                                                                                       | I.C. DEC 23B25A2         | 23B25A2    | 40       |
| 1   | E50                                                                                                                                                                       | I.C. DEC 23B24A2         | 23B24A2    | 39       |
| 1   | E51                                                                                                                                                                       | I.C. DEC 23B23A2         | 23B23A2    | 38       |
| 1   | E45                                                                                                                                                                       | I.C. DEC 23B22A2         | 23B22A2    | 37       |
| 1   | E40                                                                                                                                                                       | I.C. DEC 23B21A2         | 23B21A2    | 36       |
| 1   | E34                                                                                                                                                                       | I.C. DEC 23B20A2         | 23B20A2    | 35       |
| 1   | E39                                                                                                                                                                       | I.C. DEC 23B19A2         | 23B19A2    | 34       |
| 1   | E33                                                                                                                                                                       | I.C. DEC 23B36A2         | 23B36A2    | 33       |
| 1   | E28                                                                                                                                                                       | I.C. DEC 23B17A2         | 23B17A2    | 32       |
| 1   | E22                                                                                                                                                                       | I.C. DEC 23B16A2         | 23B16A2    | 31       |
| 1   | E23                                                                                                                                                                       | I.C. DEC 23B15A2         | 23B15A2    | 30       |
| 7   | E5, E10, E63, E69<br>E70, E78, E82                                                                                                                                        | I.C. DEC 74174           | 1910652    | 24       |
| 4   | E71, E74, E75, E83                                                                                                                                                        | I.C. DEC 74194           | 1910623    | 28       |
| 7   | E21, E49, E54, E76, E79<br>E85, E86                                                                                                                                       | I.C. DEC 74H01-1         | 1909349    | 27       |
| 2   | E56, E64                                                                                                                                                                  | I.C. DEC 74191           | 1910096    | 26       |
| 2   | E20, E53, E59, E66, E72<br>E73, E77, E80, E81, E84<br>E87, E88                                                                                                            | I.C. DEC 74153           | 1909137    | 25       |
| 3   | E14, E24, E37                                                                                                                                                             | I.C. DEC 74151           | 1909936    | 24       |
| 5   | E8, E30, E31, E52, E57                                                                                                                                                    | I.C. DEC 74H04           | 1909431    | 23       |
| 1   | E27                                                                                                                                                                       | I.C. DEC 7416            | 1909928    | 22       |
| 3   | E3, E7, E65                                                                                                                                                               | I.C. DEC 8815            | 1909713    | 21       |
| 1   | E44                                                                                                                                                                       | I.C. DEC 74H74           | 1909667    | 20       |
| 2   | E9, E13                                                                                                                                                                   | I.C. DEC 8251            | 1909594    | 19       |
| 3   | E25, E48, E67                                                                                                                                                             | I.C. DEC 74H11           | 1909267    | 18       |
| 2   | E1, E2                                                                                                                                                                    | I.C. DEC 74H53           | 1909062    | 17       |
| 1   | E36                                                                                                                                                                       | I.C. DEC 74H52           | 1909061    | 16       |
| 5   | E15, E29, E32, E42, E46                                                                                                                                                   | I.C. DEC 74H50           | 1909060    | 15       |
| 1   | E38                                                                                                                                                                       | I.C. DEC 74H10           | 1909057    | 14       |
| 2   | E16, E47                                                                                                                                                                  | I.C. DEC 74H00           | 1909056    | 13       |
| 2   | E19, E43                                                                                                                                                                  | I.C. DEC 7402            | 1909004    | 12       |
| 1   | E41                                                                                                                                                                       | I.C. DEC 74H40           | 1905586    | 11       |
| 1   | E18                                                                                                                                                                       | I.C. DEC 7420            | 1905577    | 10       |
| 2   | E26, E35                                                                                                                                                                  | I.C. DEC 7400            | 1905575    | 9        |
| 2   | E6, E58                                                                                                                                                                   | I.C. DEC 7474            | 1905547    | 8        |
| 2   | E4, E61                                                                                                                                                                   | I.C. RES NETWORK         | 1311003-02 | 7        |
| 10  | R1 THRU R10                                                                                                                                                               | RES 1K 1/4W ±5%          | 1309365    | 6        |
| 1   |                                                                                                                                                                           | HANDLE MODULE            | 1210711-02 | 5        |
| 3   | J1, J2, J3                                                                                                                                                                | CONN 40 PIN              | 1209941    | 4        |
| 6   | C89 THRU C94                                                                                                                                                              | CAP 6.8µf 35V ±10% STANT | 1005306    | 3        |
| 77  | C1 THRU C6, C8 THRU C12<br>C14 THRU C17, C19 THRU C23<br>C25 THRU C28, C30 THRU C34<br>C36 THRU C40, C42 THRU C45<br>C47 THRU C55, C57 THRU C60<br>C62, C63, C65 THRU C88 | CAP .01µf 100V ±20% DISC | 100101     | 2        |
| 1   |                                                                                                                                                                           | ETCHED CIRCUIT BOARD     | 531013     | 1        |
| QTY | REF DESIGNATION                                                                                                                                                           | DESCRIPTION              | PART NO    | ITEM NO. |
| 1   |                                                                                                                                                                           | HANDLE MODULE            | 1210711-02 | 5        |
| 3   | J1, J2, J3                                                                                                                                                                | CONN 40 PIN              | 1209941    | 4        |
| 6   | C89 THRU C94                                                                                                                                                              | CAP 6.8µf 35V ±10% STANT | 1005306    | 3        |
| 77  | C1 THRU C6, C8 THRU C12<br>C14 THRU C17, C19 THRU C23<br>C25 THRU C28, C30 THRU C34<br>C36 THRU C40, C42 THRU C45<br>C47 THRU C55, C57 THRU C60<br>C62, C63, C65 THRU C88 | CAP .01µf 100V ±20% DISC | 100101     | 2        |
| 1   |                                                                                                                                                                           | ETCHED CIRCUIT BOARD     | 531013     | 1        |
| QTY | REF DESIGNATION                                                                                                                                                           | DESCRIPTION              | PART NO    | ITEM NO. |
| 1   |                                                                                                                                                                           | HANDLE MODULE            | 1210711-02 | 5        |
| 3   | J1, J2, J3                                                                                                                                                                | CONN 40 PIN              | 1209941    | 4        |
| 6   | C89 THRU C94                                                                                                                                                              | CAP 6.8µf 35V ±10% STANT | 1005306    | 3        |
| 77  | C1 THRU C6, C8 THRU C12<br>C14 THRU C17, C19 THRU C23<br>C25 THRU C28, C30 THRU C34<br>C36 THRU C40, C42 THRU C45<br>C47 THRU C55, C57 THRU C60<br>C62, C63, C65 THRU C88 | CAP .01µf 100V ±20% DISC | 100101     | 2        |
| 1   |                                                                                                                                                                           | ETCHED CIRCUIT BOARD     | 531013     | 1        |

FIRST USED ON OPTION MODEL

PDP 11

PARTS LIST

ETCH BOARD REV

D

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

DATE

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DATE

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DATE

DATE

DATE

DATE

DATE

digital EQUIPMENT CORPORATION  
NATASHA, MASSACHUSETTS

EIS BOARD

KE-1

SIZE CODE DCS NUMBER M7238-0-1 REV. D

SEMICONDUCTOR CONVERSION CHART

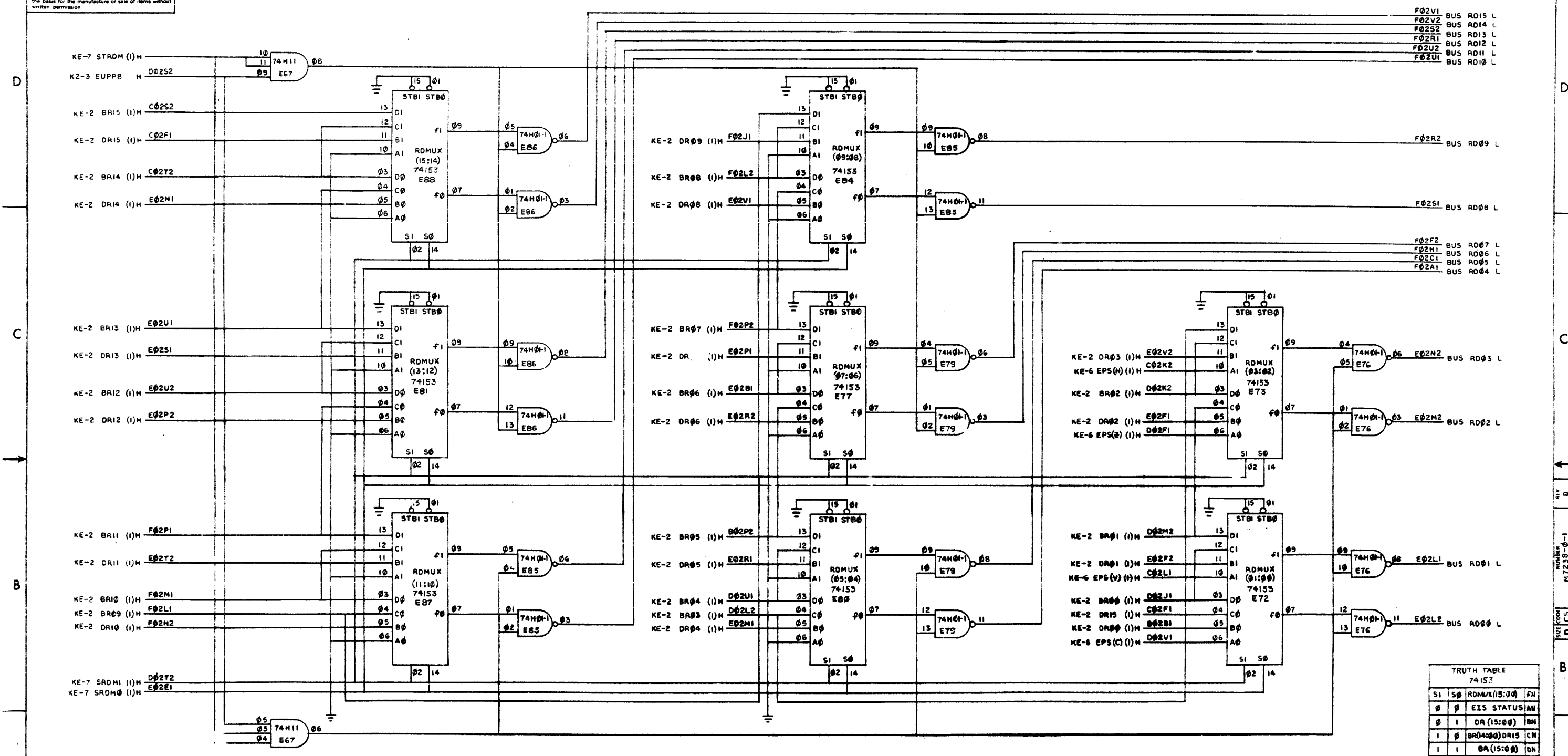
SCALE NONE

SHEET OF

DIST.



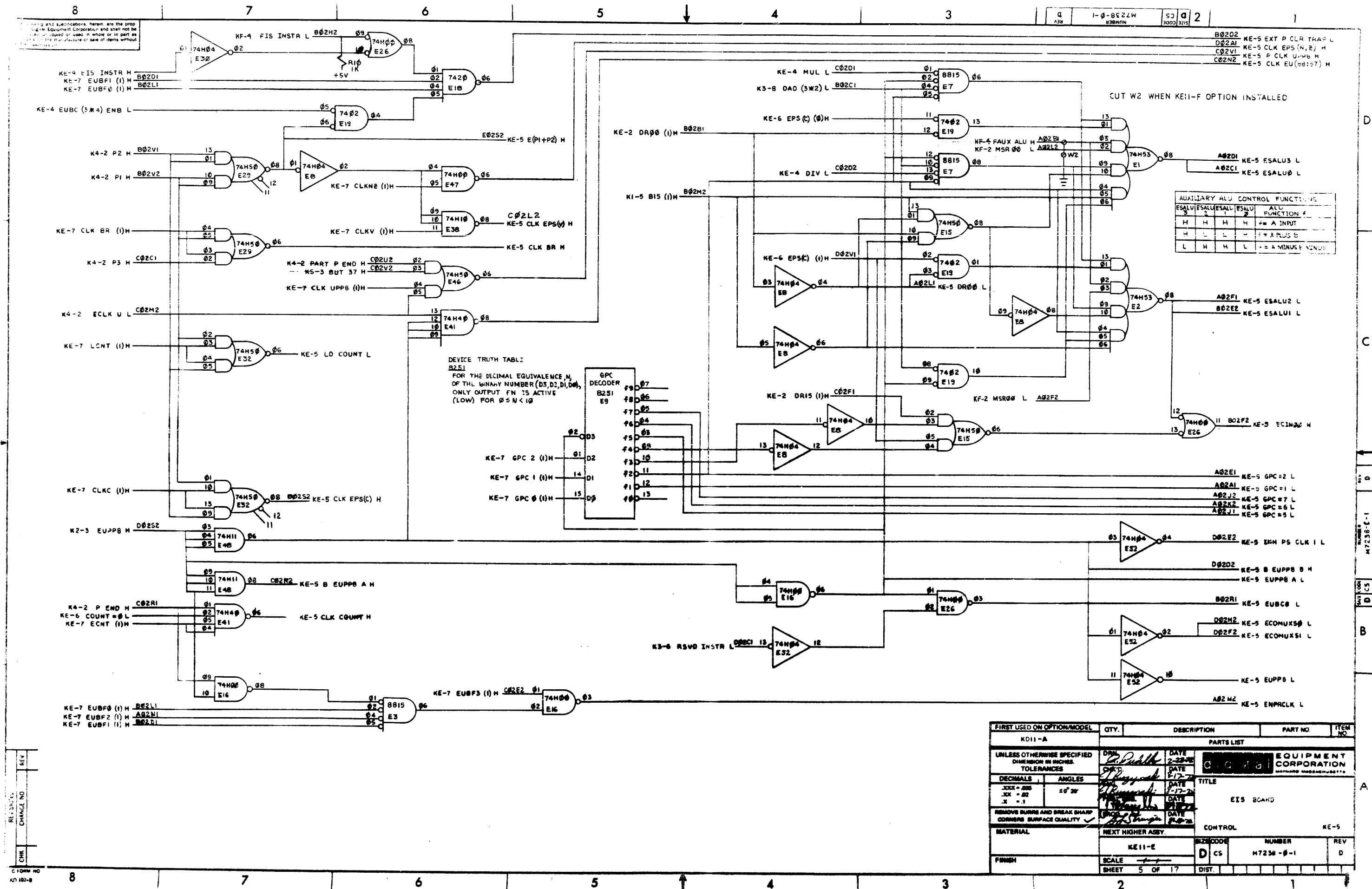
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REVISIONS  
CHANGE NO.  
CHK  
DEC FORM NO  
DRI 102-B

| FIRST USED ON OPTION/MODEL                                       | QTY.              | DESCRIPTION      | PART NO. | ITEM NO. |
|------------------------------------------------------------------|-------------------|------------------|----------|----------|
| NO11-A                                                           |                   |                  |          |          |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS IN INCHES<br>TOLERANCES |                   |                  |          |          |
| DECIMALS                                                         | ANGLES            | DATE 2-16-72     |          |          |
| .XXX - .000                                                      | ± 0° 30'          | DATE 2-17-72     |          |          |
| .XX - .00                                                        |                   | DATE 2-17-72     |          |          |
| .X - .1                                                          |                   | DATE 2-17-72     |          |          |
| REMOVE BURRS AND BREAK SHARP<br>CORNERS SURFACE QUALITY          |                   |                  |          |          |
| MATERIAL                                                         | NEXT HIGHER ASSY. | TITLE            |          |          |
| FINISH                                                           | SCALE             | ROMUX KE-3       |          |          |
|                                                                  | SHEET 3 OF 17     | SIZE CODE D C5   |          |          |
|                                                                  |                   | NUMBER M7238-0-1 |          |          |
|                                                                  |                   | REV. D           |          |          |





8

7

6

5

4

3

2

1-0-9621 M

2

1

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| C.V. MUX |      |      |      |      |
|----------|------|------|------|------|
| SCV      | SCV  | SCV  | SCV  | SCV  |
| DATA     | DATA | DATA | DATA | DATA |
| L        | L    | L    | L    | L    |
| L        | L    | H    | L    | L    |
| L        | H    | L    | L    | L    |
| L        | H    | H    | L    | L    |
| H        | L    | L    | L    | L    |
| H        | L    | H    | L    | L    |
| H        | H    | L    | L    | L    |
| H        | H    | H    | L    | L    |

| N.E. MUX |      |      |      |      |
|----------|------|------|------|------|
| DATA     | DATA | DATA | DATA | DATA |
| L        | L    | L    | L    | L    |
| L        | L    | H    | L    | L    |
| L        | H    | L    | L    | L    |
| H        | L    | L    | L    | L    |
| H        | L    | H    | L    | L    |
| H        | H    | L    | L    | L    |
| H        | H    | H    | L    | L    |

D

C

B

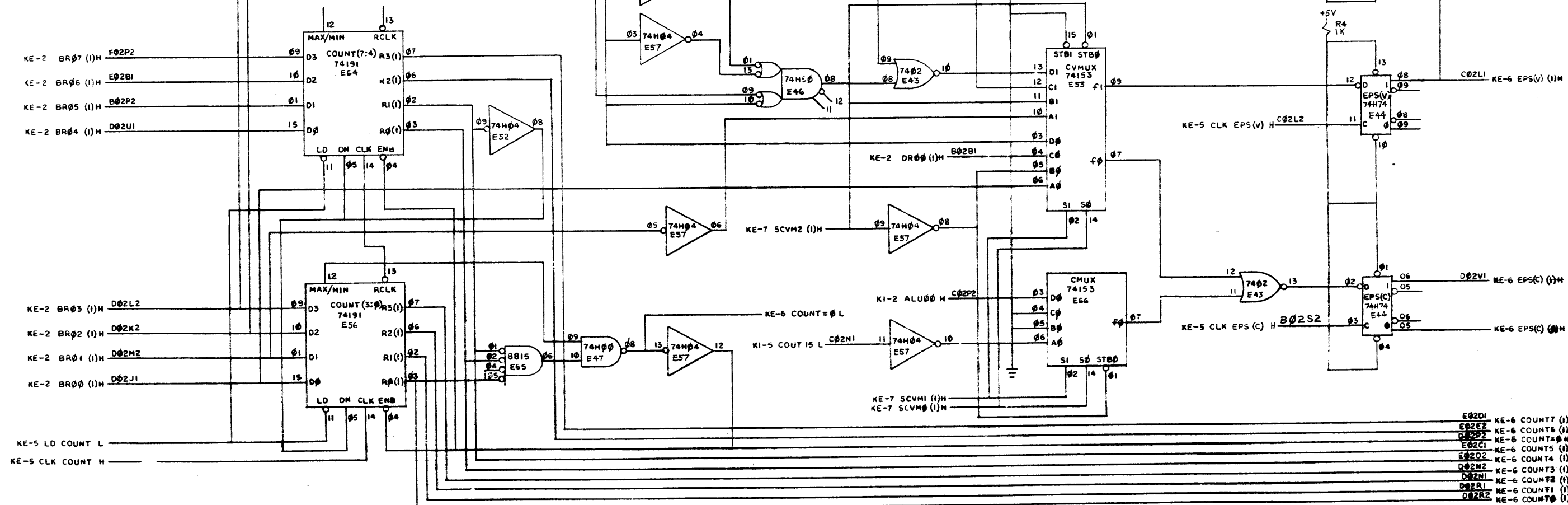
A

D

C

B

A



| TRUTH TABLE 74153 |    |    |    |  |
|-------------------|----|----|----|--|
| STB               | SI | SO | FM |  |
| H                 | -  | -  | L  |  |
| L                 | L  | L  | AN |  |
| L                 | L  | H  | BN |  |
| L                 | H  | L  | CN |  |
| L                 | H  | H  | DN |  |

| FIRST USED ON OPTION MODEL                                 |           | QTY. | DESCRIPTION | PART NO. | ITEM NO. |
|------------------------------------------------------------|-----------|------|-------------|----------|----------|
| KD11-A                                                     |           |      |             |          |          |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES |           |      |             |          |          |
| DECIMALS                                                   | ANGLES    |      |             |          |          |
| .XXX = .005                                                | .XX = .02 |      |             |          |          |
| .X = .1                                                    | .0 = .00  |      |             |          |          |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY       |           |      |             |          |          |
| MATERIAL                                                   |           |      |             |          |          |
| FINISH                                                     |           |      |             |          |          |
| NEXT HIGHER ASSY.                                          |           |      |             |          |          |
| SCALE                                                      |           |      |             |          |          |
| SHEET 6 OF 17                                              |           |      |             |          |          |

| REV | CHG | NO |
|-----|-----|----|
| 1   | 1   | 1  |

DEC 1 FORM NO  
DQD 102-8

8

7

6

5

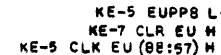
4

3

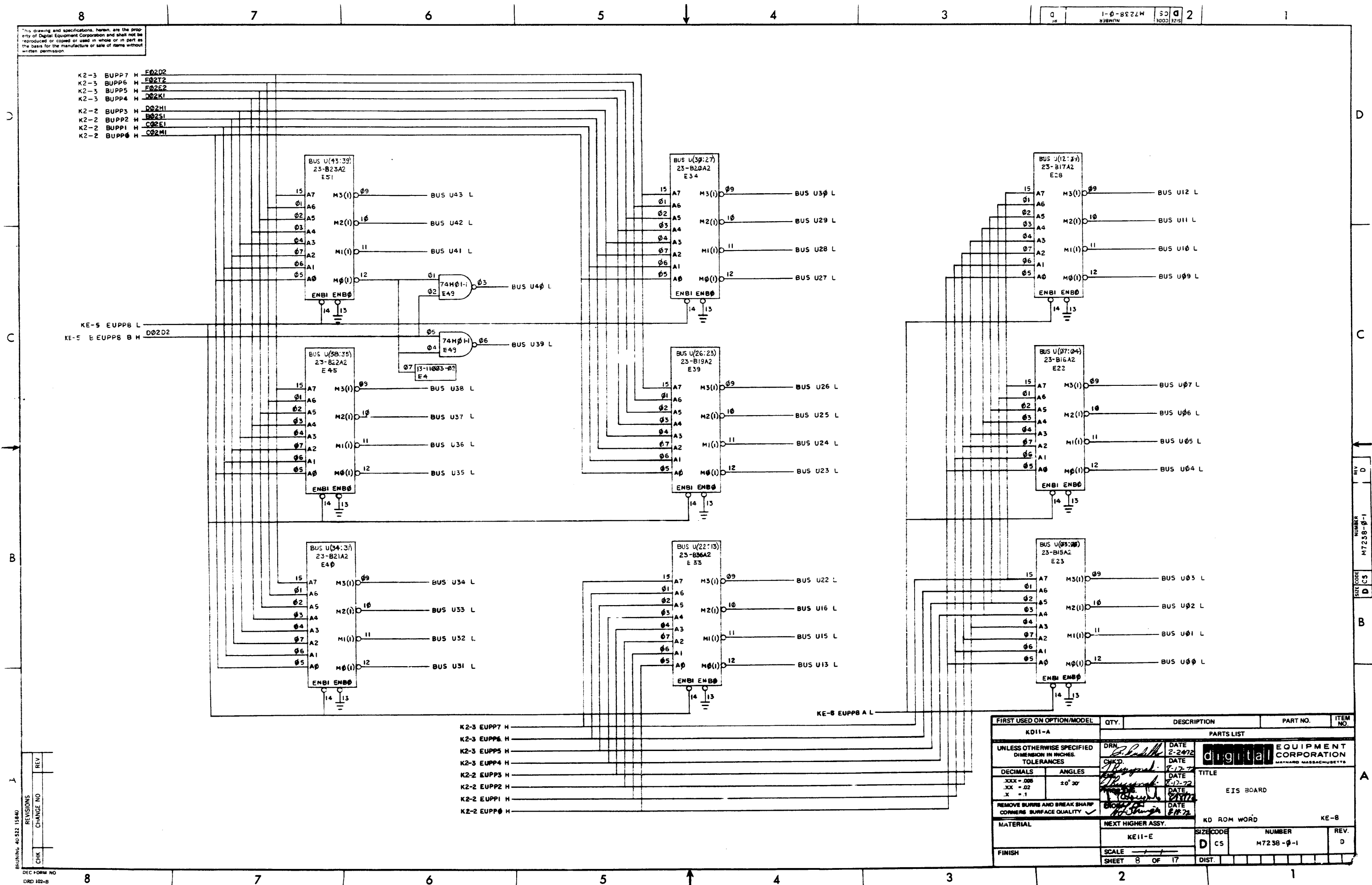
2

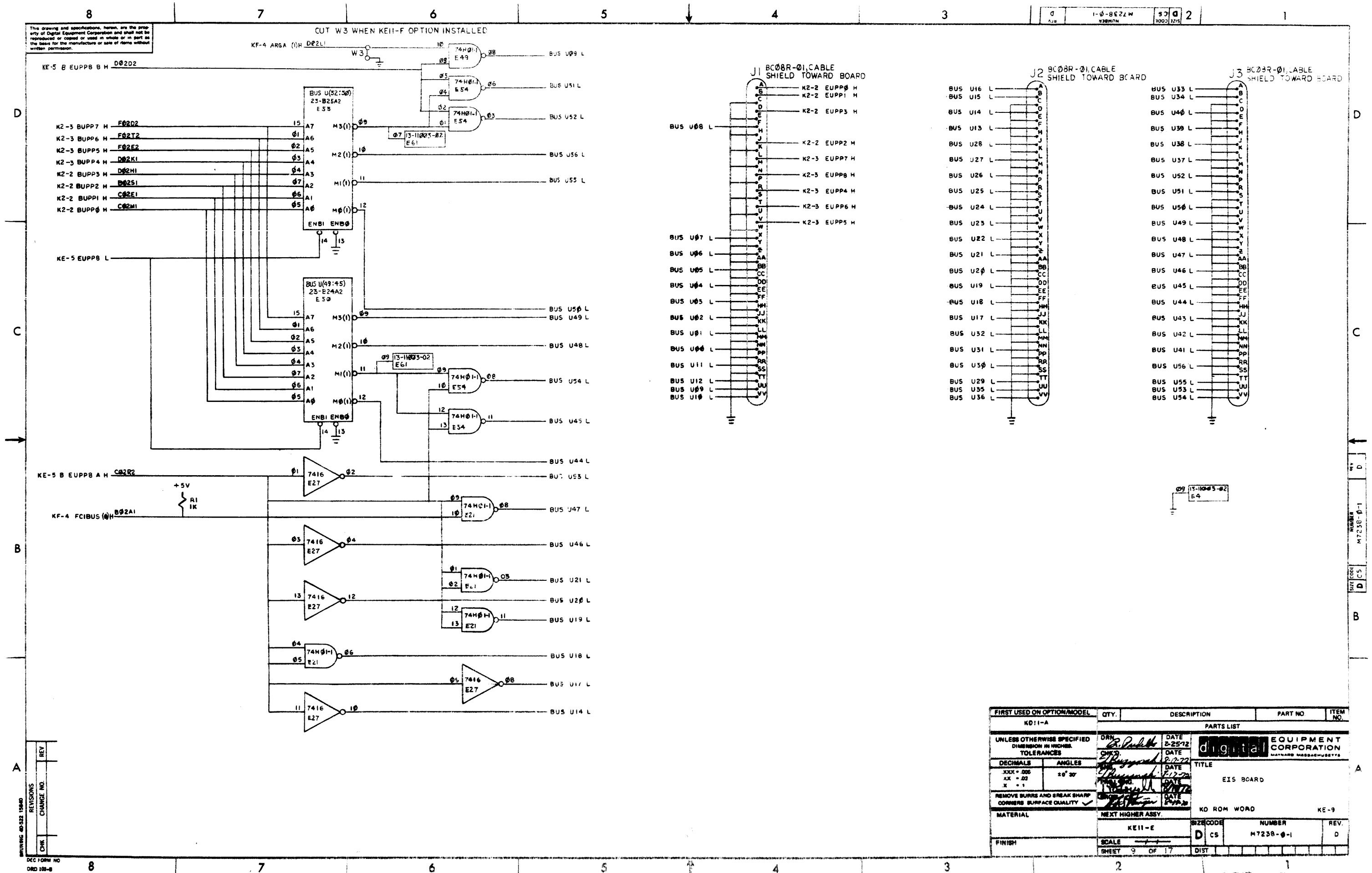
1

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|                                                                  |  |                   |             |                                                         |          |          |
|------------------------------------------------------------------|--|-------------------|-------------|---------------------------------------------------------|----------|----------|
| FIRST USED ON OPTION/MODEL                                       |  | QTY.              | DESCRIPTION |                                                         | PART NO. | ITEM NO. |
| KD11-A                                                           |  |                   | PARTS LIST  |                                                         |          |          |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSION IN INCHES.<br>TOLERANCES |  | DRN               | DATE        | DIGITAL EQUIPMENT CORPORATION<br>MAYNARD, MASSACHUSETTS |          |          |
| DECIMALS ANGLES                                                  |  | ONE               | DATE        | TITLE<br><br>EIS BOARD                                  |          |          |
| .XXK + .008                                                      |  | 2/12/72           | DATE        |                                                         |          |          |
| .XXI + .00                                                       |  | 2/12/72           | DATE        |                                                         |          |          |
| .X + .1                                                          |  | 2/12/72           | DATE        |                                                         |          |          |
| REMOVE BURRS AND BREAK SHARP<br>CORNERS. SURFACE QUALITY         |  | 2/12/72           | DATE        |                                                         |          |          |
| MATERIAL                                                         |  | NEXT HIGHER ASSY. |             | KE ROM WORD KE-7                                        |          |          |
| FINISH                                                           |  | NE11-E            |             | SIZE CODE                                               | NUMBER   | REV      |
| SCALE                                                            |  | D CS              |             | M7230-0-1                                               |          | D        |
| SHEET                                                            |  | 7 OF 17           |             | DIST.                                                   |          |          |





| PLANS | STATE | ADR | CLK | CIR | WR | CB | CD | CBA | BUS | DAD | SPS | ALU | SBC | SBM | SOR | SBA | UBF | SRX | RIF | UPF |
|-------|-------|-----|-----|-----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| E3    | MUL7  | 000 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 10  | 00  | 204 |
| E3    | MUL19 | 001 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 133 |
| E3    | MUL2  | 002 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 10  | 00  | 015 |
| E3    | MUL4  | 003 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 01  | 12  | 075 |
| F5    | FDV1  | 004 | 2   | 0   | 0  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 01  | 15  | 006 |
| E3    | MUL16 | 005 | 4   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 011 |
| F5    | FDV2  | 006 | 6   | 0   | 0  | 1  | 1  | 0   | 0   | 10  | 0   | 06  | 00  | 00  | 2   | 0   | 00  | 01  | 14  | 160 |
| E3    | MUL12 | 007 | 4   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 016 |
| E3    | MUL15 | 010 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 177 |
| E3    | MUL18 | 011 | 2   | 0   | 3  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 11  | 01  | 177 |
| E3    | MUL14 | 012 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 177 |
| E3    | MUL17 | 013 | 2   | 0   | 3  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 11  | 01  | 177 |
| E3    | MUL1  | 014 | 4   | 0   | 0  | 0  | 1  | 0   | 0   | 10  | 0   | 06  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 000 |
| E3    | MUL3  | 015 | 4   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 10  | 00  | 001 |
| E3    | MUL13 | 016 | 2   | 0   | 3  | 0  | 0  | 0   | 0   | 00  | 0   | 0   | 00  | 00  | 2   | 0   | 00  | 11  | 01  | 010 |
| F3    | ADD23 | 017 | 6   | 0   | 3  | 0  | 1  | 0   | 0   | 00  | 0   | 14  | 00  | 00  | 2   | 0   | 00  | 01  | 11  | 361 |
| E4    | DIV20 | 020 | 2   | 0   | 0  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 11  | 01  | 076 |
| E5    | DIV23 | 021 | 4   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 20  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 071 |
| E4    | DIV4  | 022 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 177 |
| E5    | DIV33 | 023 | 4   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 20  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 070 |
| E4    | DIV13 | 024 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 11  | 01  | 147 |
| E5    | DIV27 | 025 | 4   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 11  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 101 |
| E4    | DIV7  | 026 | 2   | 0   | 0  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 10  | 00  | 057 |
| E5    | DIV31 | 027 | 4   | 0   | 0  | 0  | 1  | 0   | 0   | 10  | 0   | 06  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 103 |
| E2    | ASH2  | 030 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 177 |
| E4    | DIV16 | 031 | 6   | 0   | 0  | 0  | 1  | 0   | 0   | 14  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 00  | 00  | 065 |
| F5    | FDV21 | 032 | 2   | 0   | 0  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 01  | 11  | 372 |
| E4    | DIV11 | 033 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 037 |
| E2    | ASH5  | 034 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 123 |
| E4    | DIV19 | 035 | 6   | 0   | 0  | 0  | 1  | 0   | 0   | 14  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 00  | 00  | 153 |
| E2    | ASH3  | 036 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 063 |
| E4    | DIV12 | 037 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 177 |

**NOTE:**

THE COMPLEMENT OF THE ACTUAL ROM OUTPUT FOR THE UPF, WR, SPS (HIGH 2 BITS), BUS (LOW BIT), AND CLK (LOW BIT) FIELD IS LISTED FOR CLARITY.

| PLANS | STATE | ADR | CON | FC1 | FUB | MHR | FRD | RD | BRD | SDR | CVM | NZM | CCC | GPC | CZE | CNT | EUB | CBR |
|-------|-------|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| E3    | MUL7  | 000 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 1   |
| E3    | MUL19 | 001 | 0   | 0   | 0   | 0   | 0   | 0  | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 00  | 1   |
| E3    | MUL2  | 002 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 01  | 1   |
| E3    | MUL4  | 003 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 01  | 1   |
| F5    | FDV1  | 004 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 2   | 4   | 0   | 0   | 0   | 14  | 0   |
| E3    | MUL16 | 005 | 0   | 0   | 0   | 0   | 0   | 1  | 1   | 0   | 1   | 0   | 1   | 0   | 0   | 0   | 00  | 0   |
| F5    | FDV2  | 006 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   | 0   | 6   | 0   | 0   | 00  | 0   |
| E3    | MUL12 | 007 | 0   | 0   | 0   | 0   | 0   | 1  | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 04  | 0   |
| E3    | MUL15 | 010 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 1   | 0   | 1   | 0   | 0   | 0   | 00  | 0   |
| E3    | MUL18 | 011 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 3   | 4   | 0   | 0   | 0   | 00  | 0   |
| E3    | MUL14 | 012 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 5   | 0   | 1   | 0   | 0   | 0   | 00  | 0   |
| E3    | MUL17 | 013 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 5   | 2   | 5   | 0   | 0   | 0   | 00  | 0   |
| E3    | MUL1  | 014 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 5   | 0   | 1   | 0   | 0   | 2   | 00  | 0   |
| E3    | MUL3  | 015 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| E3    | MUL13 | 016 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 2   | 3   | 6   | 0   | 0   | 0   | 00  | 0   |
| F3    | ADD23 | 017 | 0   | 0   | 0   | 0   | 0   | 0  | 2   | 0   | 0   | 0   | 0   | 4   | 0   | 0   | 00  | 0   |
| E4    | DIV20 | 020 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 3   | 4   | 0   | 0   | 0   | 03  | 0   |
| E5    | DIV23 | 021 | 0   | 0   | 0   | 0   | 0   | 1  | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 02  | 0   |
| E4    | DIV4  | 022 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 1   | 1   | 7   | 0   | 0   | 0   | 00  | 0   |
| E5    | DIV33 | 023 | 0   | 0   | 0   | 0   | 0   | 1  | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 02  | 0   |
| E4    | DIV13 | 024 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 1   |
| E5    | DIV27 | 025 | 0   | 0   | 0   | 0   | 0   | 1  | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| E4    | DIV7  | 026 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| E5    | DIV31 | 027 | 0   | 0   | 0   | 0   | 0   | 1  | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| E2    | ASH2  | 030 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 5   | 2   | 7   | 0   | 0   | 0   | 00  | 0   |
| E4    | DIV16 | 031 | 0   | 0   | 0   | 0   | 0   | 1  | 2   | 2   | 0   | 0   | 0   | 0   | 0   | 1   | 00  | 1   |
| F5    | FDV1  | 032 | 0   | 0   | 0   | 0   | 0   | 0  | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 00  | 0   |
| E4    | DIV11 | 033 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| E2    | ASH5  | 034 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 10  | 0   |
| E4    | DIV19 | 035 | 0   | 0   | 0   | 0   | 0   | 1  | 2   | 2   | 0   | 0   | 0   | 2   | 0   | 1   | 00  | 1   |
| E2    | ASH3  | 036 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 10  | 0   |
| E4    | DIV12 | 037 | 0   | 0   | 0   | 0   | 0   | 0  | 0   | 0   | 1   | 0   | 2   | 0   | 0   | 0   | 00  | 0</ |

|                       |                 |                                                                           |  |
|-----------------------|-----------------|---------------------------------------------------------------------------|--|
| <b>digital</b>        |                 | <b>EQUIPMENT<br/>CORPORATION</b><br><small>MAYNARD, MASSACHUSETTS</small> |  |
| <b>TITLE</b>          |                 |                                                                           |  |
| <b>EIS BOARD</b>      |                 |                                                                           |  |
| <b>(ADRS 000-037)</b> |                 |                                                                           |  |
| <b>UNCLASSIFIED</b>   | <b>NUMBER</b>   | <b>PAGE</b>                                                               |  |
| <b>C 00</b>           | <b>1982-0-1</b> | <b>D</b>                                                                  |  |
| <b>DIST.</b>          |                 |                                                                           |  |

| PL | JS    | STATE | ADR | CLA | CIR | WH | CB | CD | CBA | BUS | DAD | SPS | ALU | SBC | SBM | SDM | SBA | UBF | SRX | RIF | UPF |
|----|-------|-------|-----|-----|-----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| E2 | ASH9  | 040   | 4   | 0   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 11  | 01  | 030 |
| F4 | FML4  | 041   | 2   | 0   | 0   | 1  | 0  | 0  | 0   | 00  | 0   | 00  | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 150 |
| F5 | FDV23 | 042   | 2   | 0   | 0   | 1  | 0  | 0  | 0   | 00  | 0   | 00  | 00  | 00  | 00  | 0   | 0   | 00  | 01  | 13  | 211 |
| F4 | FML3  | 043   | 6   | 0   | 3   | 1  | 1  | 0  | 0   | 00  | 0   | 23  | 00  | 00  | 00  | 2   | 0   | 00  | 01  | 15  | 176 |
| E2 | ASH16 | 044   | 2   | 0   | 0   | 0  | 0  | 0  | 0   | 00  | 0   | 00  | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 243 |
| E5 | DIV25 | 045   | 6   | 0   | 0   | 0  | 1  | 0  | 0   | 00  | 0   | 00  | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 053 |
| E2 | ASH10 | 046   | 2   | 0   | 0   | 0  | 0  | 0  | 0   | 00  | 0   | 00  | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 223 |
| E5 | DIV29 | 047   | 4   | 0   | 0   | 0  | 1  | 0  | 0   | 00  | 0   | 11  | 01  | 17  | 0   | 0   | 00  | 00  | 00  | 00  | 104 |
| E5 | DIV37 | 050   | 4   | 0   | 0   | 0  | 1  | 0  | 0   | 00  | 0   | 20  | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 106 |
| E5 | DIV40 | 051   | 2   | 0   | 0   | 0  | 0  | 0  | 0   | 00  | 0   | 00  | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 054 |
| E5 | DIV35 | 052   | 4   | 0   | 0   | 0  | 1  | 0  | 0   | 00  | 0   | 11  | 01  | 17  | 0   | 0   | 00  | 00  | 00  | 00  | 105 |
| E5 | DIV26 | 053   | 2   | 0   | 3   | 0  | 0  | 0  | 0   | 00  | 0   | 00  | 00  | 00  | 00  | 2   | 0   | 00  | 10  | 00  | 177 |
| E5 | DIV41 | 054   | 2   | 0   | 0   | 0  | 0  | 0  | 0   | 00  | 0   | 00  | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 037 |
| E4 | DIV2  | 055   | 2   | 0   | 0   | 0  | 0  | 0  | 0   | 00  | 0   | 00  | 00  | 00  | 00  | 0   | 0   | 00  | 10  | 00  | 231 |
| E5 | DIV42 | 056   | 2   | 0   | 0   | 0  | 0  | 0  | 0   | 00  | 0   | 00  | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 177 |
| E4 | DIV8  | 057   | 6   | 0   | 0   | 0  | 1  | 0  | 0   | 00  | 0   | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 00  | 00  | 060 |
| E4 | DIV9  | 060   | 2   | 0   | 0   | 0  | 0  | 0  | 0   | 00  | 0   | 00  | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 061 |
| E4 | DIV10 | 061   | 2   | 0   | 0   | 1  | 0  | 0  | 0   | 00  | 0   | 00  | 00  | 00  | 00  | 0   | 0   | 00  | 01  | 12  | 031 |
| E4 | DIV15 | 062   | 2   | 0   | 0   | 1  | 0  | 0  | 0   | 00  | 0   | 00  | 00  | 00  | 00  | 0   | 0   | 00  | 01  | 12  | 031 |
| E2 | ASH4  | 063   | 6   | 0   | 3   | 1  | 1  | 0  | 0   | 00  | 0   | 00  | 00  | 00  | 00  | 3   | 0   | 00  | 10  | 00  | 063 |
| F2 | ADD3  | 064   | 6   | 0   | 0   | 0  | 1  | 0  | 0   | 10  | 0   | 06  | 00  | 00  | 00  | 2   | 0   | 00  | 00  | 00  | 320 |
| E4 | DIV17 | 065   | 2   | 0   | 0   | 0  | 0  | 0  | 0   | 00  | 0   | 00  | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 046 |
| E4 | DIV18 | 066   | 2   | 0   | 0   | 0  | 0  | 0  | 0   | 00  | 0   | 00  | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 035 |
| E2 | ASH14 | 067   | 4   | 0   | 0   | 0  | 1  | 0  | 0   | 00  | 0   | 32  | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 127 |
| E5 | DIV34 | 070   | 2   | 0   | 0   | 1  | 0  | 0  | 0   | 00  | 0   | 00  | 00  | 00  | 00  | 2   | 0   | 00  | 00  | 00  | 050 |
| E5 | DIV24 | 071   | 2   | 0   | 0   | 1  | 0  | 0  | 0   | 00  | 0   | 00  | 00  | 00  | 00  | 2   | 0   | 00  | 00  | 00  | 045 |
| F2 | ADD17 | 072   | 4   | 0   | 0   | 0  | 1  | 0  |     |     |     |     |     |     |     |     |     |     |     |     |     |

NOTE:  
THE COMPLEMENT OF THE  
ACTUAL ROM OUTPUT FOR THE  
UPF, WR, SPS (HIGH 2 BITS), BUS  
(LOW BIT), AND CLK (LOW BIT)  
FIELD IS LISTED FOR CLARITY.

| FLWS | STATE | ADR | CON | FC1 | FUB | MHR | FRD | FRD | SRD | SDR | CVM | NZM | CCC | GPC | CEE | CNT | EUB | CBR |
|------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| E2   | ASH9  | 040 | 0   | 0   | 0   | 0   | 0   | 1   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| F4   | FML4  | 041 | 0   | 0   | 0   | 0   | 1   | 0   | 3   | 0   | 0   | 0   | 0   | 6   | 0   | 0   | 10  | 0   |
| F5   | Fdv23 | 042 | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| F4   | FML3  | 043 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 1   |
| E2   | ASH16 | 044 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 10  | 0   |
| E5   | DIV25 | 045 | 0   | 0   | 0   | 0   | 0   | 1   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 1   |
| E2   | ASH10 | 046 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 10  | 0   |
| E5   | DIV29 | 047 | 0   | 0   | 0   | 0   | 0   | 1   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| E5   | DIV37 | 050 | 0   | 0   | 0   | 0   | 0   | 1   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| E5   | DIV40 | 051 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 5   | 2   | 7   | 0   | 0   | 0   | 00  | 0   |
| E5   | DIV35 | 052 | 0   | 0   | 0   | 0   | 0   | 1   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| E5   | DIV26 | 053 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 5   | 2   | 7   | 0   | 0   | 0   | 00  | 0   |
| E5   | DIV41 | 054 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 2   | 0   | 0   | 0   | 00  | 0   |
| E4   | DIV2  | 055 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 04  | 1   |
| E5   | DIV42 | 056 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| E4   | DIV8  | 057 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 0   | 0   | 0   | 4   | 0   | 0   | 00  | 1   |
| E4   | DIV9  | 060 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 1   | 7   | 0   | 0   | 0   | 03  | 0   |
| E4   | DIV10 | 061 | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| E4   | DIV15 | 062 | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| E2   | ASH4  | 063 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 7   | 0   | 1   | 0   | 0   | 1   | 10  | 1   |
| F2   | ADD3  | 064 | 0   | 0   | 0   | 3   | 0   | 0   | 0   | 0   | 4   | 0   | 1   | 0   | 0   | 0   | 10  | 1   |
| E4   | DIV17 | 065 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 07  | 0   |
| E4   | DIV18 | 066 | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 0   | 5   | 0   | 1   | 0   | 0   | 1   | 00  | 0   |
| E2   | ASH14 | 067 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| E5   | DIV34 | 070 | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 1   |
| E5   | DIV24 | 071 | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 1   |
| F2   | ADD17 | 072 | 0   | 0   | 0   | 3   | 0   | 1   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
|      |       | 073 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| E5   | DIV39 | 074 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 01  | 1   |
| E3   | MUL5  | 075 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 1   |
| E4   | DIV6  | 076 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   | 0   | 1   | 0   | 0   | 0   | 10  | 1   |
| E2   | ASH13 | 077 | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 1   |

**digit** **EQUIPMENT CORPORATION**  
MAYNARD, MASSACHUSETTS 01902

**TITLE**

**EIS BOARD**

**(ADRS 040-077)**

| <b>INDEX</b> | <b>CODE</b> | <b>NUMBER</b>    |
|--------------|-------------|------------------|
| <b>C</b>     | <b>CS</b>   | <b>19235-000</b> |

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| Flows | State | ADR | CLK | CIR | WR | CB | CD | CBA | BUS | DAD | SPS | ALU | SHC | SBM | SDM | SBA | UBF | SRX | RIF | UPF |
|-------|-------|-----|-----|-----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| E1    | E10   | 100 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 377 |
| E5    | DIV28 | 101 | 2   | 0   | 3  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 11  | 01  | 021 |
| E1    | E13   | 102 | 2   | 0   | 3  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 01  | 14  | 007 |
| E5    | DIV32 | 103 | 2   | 0   | 3  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 11  | 01  | 023 |
| E5    | DIV30 | 104 | 2   | 0   | 3  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 11  | 01  | 050 |
| E5    | DIV36 | 105 | 2   | 0   | 3  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 11  | 01  | 045 |
| E5    | DIV38 | 106 | 2   | 0   | 3  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 10  | 00  | 074 |
| E5    | DIV22 | 107 | 2   | 0   | 3  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 11  | 01  | 021 |
| E3    | MUL6  | 110 | 2   | 0   | 0  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 10  | 00  | 133 |
| E3    | MUL22 | 111 | 4   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 23  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 113 |
| E3    | MUL21 | 112 | 4   | 0   | 0  | 0  | 1  | 0   | 0   | 10  | 0   | 06  | 00  | 00  | 0   | 0   | 00  | 10  | 00  | 111 |
| E3    | MUL23 | 113 | 2   | 0   | 3  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 11  | 01  | 114 |
| E3    | MUL27 | 114 | 2   | 0   | 0  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 10  | 00  | 133 |
| E3    | MUL25 | 115 | 4   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 141 |
| E3    | MUL24 | 116 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 115 |
|       |       | 117 | 0   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 000 |
| F2    | ADD0  | 120 | 2   | 0   | 0  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 01  | 13  | 251 |
| F1    | FP1   | 121 | 2   | 0   | 3  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 1   | 0   | 00  | 01  | 11  | 125 |
| F2    | SUB0  | 122 | 6   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 20  | 00  | 00  | 2   | 0   | 00  | 00  | 00  | 120 |
| E2    | ASH6  | 123 | 6   | 0   | 3  | 1  | 1  | 0   | 0   | 00  | 0   | 11  | 00  | 00  | 2   | 0   | 00  | 10  | 00  | 123 |
| F4    | FML0  | 124 | 6   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 00  | 00  | 130 |
| F1    | FP2   | 125 | 7   | 0   | 3  | 0  | 1  | 1   | 1   | 00  | 0   | 11  | 02  | 17  | 2   | 0   | 00  | 04  | 00  | 131 |
| F5    | FDV0  | 126 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 00  | 00  | 004 |
| E2    | ASH20 | 127 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 177 |
| F4    | FML1  | 130 | 2   | 0   | 0  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 01  | 14  | 132 |
| F1    | FP3   | 131 | 2   | 0   | 3  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 1   | 0   | 00  | 01  | 13  | 151 |
| F4    | FML2  | 132 | 6   | 0   | 3  | 0  | 1  | 0   | 0   | 00  | 0   | 11  | 00  | 00  | 2   | 0   | 00  | 01  | 15  | 041 |
| E3    | MUL9  | 133 | 6   | 0   | 0  | 0  | 1  | 0   | 0   | 14  | 0   | 00  | 00  | 00  | 3   | 0   | 00  | 00  | 00  | 133 |
| F5    | FDV20 | 134 | 2   | 0   | 0  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 154 |
| F1    | FP5   | 135 | 2   | 0   | 0  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 01  | 11  | 155 |
| F6    | NOM6  | 136 | 2   | 0   | 3  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 01  | 15  | 305 |
| E3    | MUL10 | 137 | 4   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 160 |

NOTE:  
THE COMPLEMENT OF THE  
ACTUAL ROM OUTPUT FOR THE  
UPF, WR, SPS (HIGH 2 BITS), BUS  
(LOW BIT), AND CLK (LOW BIT)  
FIELD IS LISTED FOR CLARITY.

[illegible]

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

|        |                   |      |         |
|--------|-------------------|------|---------|
| DRN    | <i>G. Pindick</i> | DATE | 8-16-72 |
| CHCK'D | <i>G. Pindick</i> | DATE | 8-17-72 |
| FILED  | <i>G. Pindick</i> | DATE | 8-17-72 |
| FILED  | <i>G. Pindick</i> | DATE | 8-17-72 |
| SHEET  | 12                | OF   | 17      |

**digit** **EQUIPMENT**  
**CORPORATION**  
MAYNARD, MASSACHUSETTS

**TITLE**

**EIS BCARD**

**(ADRS 100-437)**

| DATE | TIME | REV. |
|------|------|------|
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| POS | STATE | ADW | CLA | CIR | WH | CH | CD | CBA | RUS | DAD | SPS | ALU | SBC | SBM | SOM | SBA | UBF | SRX | RIF | UPF |
|-----|-------|-----|-----|-----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| F6  | NOM14 | 140 | 6   | 0   | 3  | 1  | 1  | 0   | 0   | 00  | 0   | 11  | 01  | 17  | 2   | 0   | 00  | 01  | 15  | 142 |
| E3  | MUL26 | 141 | 2   | 0   | 3  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 10  | 00  | 177 |
| F6  | EXI0  | 142 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 332 |
| E3  | MUL11 | 143 | 4   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 20  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 005 |
| F1  | FP12  | 144 | 2   | 0   | 3  | 0  | 1  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 01  | 11  | 244 |
| E1  | DST12 | 145 | 2   | 0   | 3  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 1   | 0   | 00  | 01  | 12  | 275 |
| F1  | FP10  | 146 | 6   | 0   | 3  | 1  | 1  | 0   | 0   | 00  | 0   | 23  | 00  | 00  | 2   | 0   | 00  | 01  | 13  | 292 |
| E4  | DIV14 | 147 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 10  | 00  | 062 |
| F4  | FML5  | 150 | 6   | 0   | 3  | 0  | 1  | 0   | 0   | 00  | 0   | 06  | 00  | 00  | 2   | 0   | 00  | 01  | 15  | 365 |
| F1  | FP4   | 151 | 6   | 0   | 3  | 0  | 1  | 0   | 0   | 00  | 0   | 11  | 00  | 00  | 2   | 0   | 00  | 01  | 13  | 135 |
|     |       | 152 | 0   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 000 |
| E4  | DIV20 | 153 | 6   | 0   | 0  | 0  | 1  | 0   | 0   | 14  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 00  | 00  | 153 |
| F6  | NOM1  | 154 | 6   | 0   | 3  | 0  | 1  | 0   | 0   | 00  | 0   | 11  | 01  | 17  | 2   | 0   | 00  | 01  | 15  | 324 |
| F1  | FP6   | 155 | 6   | 0   | 3  | 1  | 1  | 0   | 0   | 00  | 0   | 11  | 00  | 00  | 2   | 0   | 00  | 01  | 11  | 175 |
| F6  | NOM8  | 156 | 6   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 11  | 01  | 17  | 2   | 0   | 00  | 00  | 00  | 174 |
| E5  | DIV21 | 157 | 4   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 107 |
| F5  | FDV6  | 160 | 4   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 1   | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 344 |
| F6  | EXI4  | 161 | 6   | 0   | 0  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 296 |
| F5  | FDV5  | 162 | 6   | 0   | 3  | 1  | 1  | 0   | 0   | 00  | 0   | 23  | 00  | 00  | 2   | 0   | 00  | 01  | 15  | 176 |
| F2  | ADD13 | 163 | 4   | 0   | 0  | 0  | 1  | 0   | 0   | 10  | 0   | 06  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 340 |
| F2  | ADD5  | 164 | 2   | 0   | 0  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 01  | 11  | 165 |
| F2  | ADD6  | 165 | 4   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 06  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 202 |
| F5  | FDV3  | 166 | 4   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 350 |
| E3  | MUL20 | 167 | 2   | 0   | 3  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 10  | 00  | 143 |
| E1  | DST4  | 170 | 3   | 0   | 3  | 0  | 0  | 0   | 1   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 04  | 00  | 271 |
| F5  | FDV11 | 171 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 01  | 10  | 042 |
| F4  | FML8  | 172 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 01  | 10  | 210 |
| F5  | FDV13 | 173 | 6   | 0   | 0  | 0  | 1  | 0   | 0   | 14  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 00  | 00  | 331 |
| F6  | NOM9  | 174 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 273 |
| F1  | FP7   | 175 | 4   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 32  | 00  | 16  | 0   | 0   | 00  | 00  | 00  | 367 |
| F6  | NOM3  | 176 | 2   | 0   | 0  | 0  | 0  | 1   | 0   | 06  | 0   | 00  | 00  | 00  | 1   | 0   | 00  | 04  | 00  | 220 |
| F2  | ASH15 | 177 | 6   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 7   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 321 |

NOTE:  
THE COMPLEMENT OF THE ACTUAL  
ROM OUTPUT FOR THE UPF, WR,  
SPS (HIGH 2 BITS), BUS (LOW BIT),  
AND CLK (LOW BIT) FIELD IS  
LISTED FOR CLARITY.

| FLOWS | STATE | ADR | CON | FC1 | FUB | MHR | FRD | ERD | SRD | SDR | CVM | NZM | CCC | GPC | CEE | CNT | EUB | CBR |
|-------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| F6    | NOM14 | 140 | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 1   |
| E3    | MUL26 | 141 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 3   | 5   | 0   | 0   | 0   | 00  | 0   |
| F6    | EXI0  | 142 | 0   | 0   | 0   | 0   | 1   | 0   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 1   |
| E3    | MUL11 | 143 | 0   | 0   | 0   | 0   | 0   | 1   | 3   | 0   | 2   | 0   | 2   | 0   | 0   | 0   | 04  | 0   |
| F1    | FP12  | 144 | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| E1    | DST12 | 145 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| F1    | FP10  | 146 | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 1   |
| E4    | DIV14 | 147 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 1   |
| F4    | FML5  | 150 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| F1    | FP4   | 151 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   | 0   | 1   | 0   | 0   | 0   | 00  | 0   |
| F6    | NOM1  | 152 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| E4    | DIV20 | 153 | 0   | 0   | 0   | 0   | 0   | 1   | 2   | 2   | 0   | 0   | 0   | 2   | 0   | 1   | 10  | 1   |
| F6    | NOM1  | 154 | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 04  | 0   |
| F1    | FP6   | 155 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   | 0   | 0   | 10  | 0   |
| F6    | NOM8  | 156 | 0   | 0   | 0   | 0   | 1   | 0   | 1   | 0   | 4   | 0   | 1   | 0   | 0   | 0   | 00  | 1   |
| E5    | DIV21 | 157 | 0   | 0   | 0   | 0   | 0   | 1   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 12  | 0   |
| F5    | FDV6  | 160 | 0   | 0   | 0   | 0   | 1   | 0   | 3   | 0   | 0   | 0   | 0   | 6   | 0   | 0   | 00  | 0   |
| F6    | EXI4  | 161 | 2   | 0   | 0   | 0   | 1   | 0   | 3   | 0   | 1   | 3   | 6   | 0   | 0   | 0   | 00  | 0   |
| F5    | FDV5  | 162 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 1   |
| F2    | ADD13 | 163 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 4   | 0   | 0   | 2   | 00  | 0   |
| F2    | ADD5  | 164 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| F2    | ADD6  | 165 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 4   | 0   | 0   | 00  | 0   |
| F5    | FDV3  | 166 | 1   | 0   | 0   | 0   | 1   | 0   | 3   | 0   | 1   | 0   | 1   | 0   | 0   | 0   | 00  | 0   |
| E3    | MUL20 | 167 | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 05  | 0   |
| E1    | DST4  | 170 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 16  | 0   |
| F5    | FDV11 | 171 | 0   | 0   | 0   | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 1   |
| F4    | FML8  | 172 | 0   | 0   | 0   | 7   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 1   |
| F5    | FDV13 | 173 | 0   | 0   | 1   | 0   | 0   | 1   | 1   | 3   | 4   | 0   | 1   | 2   | 0   | 0   | 05  | 1   |
| F6    | NOM9  | 174 | 0   | 0   | 0   | 3   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| F1    | FP7   | 175 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 10  | 0   |
| F6    | NOM3  | 176 | 0   | 1   | 0   | 3   | 0   | 0   | 1   | 3   | 0   | 2   | 4   | 0   | 0   | 0   | 00  | 0   |
| F2    | ASH15 | 177 | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 00  | 0</ |

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

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digit
EQUIPMENT CORPORATION

MAYNARD, MASS. 02148

TITLE

EIS BOARD

(ADDRESS 140-177)

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| Flows | State | ADR | CLK | CIR | #R | CB | CD | CBA | BUS | DAD | SPS | ALU | SBC | SBM | SDM | SBA | UBF | SRX | RIF | UPP |
|-------|-------|-----|-----|-----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| F2    | ADD39 | 200 | 2   | 0   | 3  | 0  | 0  | 0   | 0   | 0   | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 01  | 13  | 072 |
| E3    | MUL0  | 201 | 6   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 32  | 12  | 17  | 2   | 0   | 00  | 00  | 00  | 014 |
| F2    | ADD7  | 202 | 2   | 0   | 3  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 01  | 11  | 300 |
| E4    | DIV0  | 203 | 6   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 32  | 12  | 17  | 2   | 0   | 00  | 00  | 00  | 303 |
| E3    | MUL8  | 204 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 001 |
| E2    | ASH0  | 205 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 311 |
| E2    | ASH19 | 206 | 4   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 11  | 01  | 127 |
| E2    | ASH7  | 207 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 11  | 01  | 351 |
| F4    | FML9  | 210 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 212 |
| F5    | FDV24 | 211 | 6   | 0   | 0  | 0  | 1  | 0   | 0   | 10  | 0   | 06  | 00  | 00  | 2   | 0   | 00  | 00  | 00  | 032 |
| F4    | FML10 | 212 | 2   | 0   | 0  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 01  | 13  | 213 |
| F4    | FML11 | 213 | 4   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 232 |
| F6    | NOM11 | 214 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 216 |
| F2    | ADD16 | 215 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 01  | 13  | 200 |
| F6    | NOM12 | 216 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 234 |
| F4    | FML18 | 217 | 6   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 00  | 00  | 330 |
| F6    | EXI7  | 220 | 5   | 0   | 0  | 0  | 1  | 0   | 3   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 336 |
| E1    | DST15 | 221 | 2   | 0   | 3  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 1   | 0   | 00  | 01  | 12  | 241 |
| F6    | EXI3  | 222 | 6   | 0   | 0  | 0  | 1  | 0   | 2   | 00  | 0   | 03  | 00  | 00  | 2   | 0   | 00  | 00  | 00  | 224 |
| E2    | ASH11 | 223 | 6   | 0   | 3  | 1  | 1  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 3   | 0   | 00  | 10  | 00  | 223 |
| F6    | EXI12 | 224 | 2   | 0   | 0  | 0  | 0  | 0   | 2   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 00  | 00  | 161 |
| F2    | ADD10 | 225 | 6   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 06  | 00  | 00  | 2   | 0   | 00  | 00  | 00  | 245 |
| F2    | ADD15 | 226 | 4   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 215 |
| E2    | ASH12 | 227 | 4   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 077 |
| F4    | FML16 | 230 | 2   | 0   | 0  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 01  | 11  | 259 |
| E4    | DIV3  | 231 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 020 |
| F4    | FML12 | 232 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 3   | 0   | 00  | 00  | 00  | 304 |
| F3    | ADD35 | 233 | 6   | 0   | 0  | 1  | 1  | 0   | 0   | 00  | 0   | 36  | 00  | 00  | 0   |     |     |     |     |     |

NOTE:  
THE COMPLEMENT OF THE  
ACTUAL ROM OUTPUT FOR THE  
UPF, WR, SPS (HIGH 2 BITS), BUS  
(LOW BIT), AND CLK (LOW BIT)  
FIELD IS LISTED FOR CLARITY.

[illegible]

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

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|---|----|---|
| 0 | 00 | 0 |
| 0 | 11 | 0 |
| 1 | 10 | 0 |

digitizer

EQUIPMENT CORPORATION

MAYNARD, MASSACHUSETTS

TITLE

EIS BOARD

(ADRS 200-237)

|                   |         |
|-------------------|---------|
| DRN               | DATE    |
| <i>A. P. Bell</i> | 8-16-72 |
| CHK'D             | JATE    |
| <i>A. P. Bell</i> | 8-17-72 |
| ISS               | DATE    |
| <i>A. P. Bell</i> | 8-17-72 |
| FOR ENCL          | DATE    |
| <i>A. P. Bell</i> | 8-17-72 |
| FOR FILE          | DATE    |
| <i>A. P. Bell</i> | 8-17-72 |

|                |           |      |
|----------------|-----------|------|
| SIZE CODE      | NUMBER    | REV. |
| C 40           | MR 38-0-1 | 0    |
| SHEET 14 OF 17 | DIST.     |      |

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NOTE:  
THE COMPLEMENT OF THE ACTUAL  
ROM OUTPUT FOR THE UPF, WR,  
SPS (HIGH 2 BITS), BUS (LOW BIT),  
AND CLK (LOW BIT) FIELD IS  
LISTED FOR CLARITY.

|                                                                |                       |
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| TITLE                                                          |                       |
| EIS BOARD                                                      |                       |
| (ADRS 240-277)                                                 |                       |
| INZMODE<br>C    CC                                             | NUMBER<br>ATG 240-277 |
| DIST.                                                          | REV.<br>0             |

| REVISIONS |            |      |
|-----------|------------|------|
| K         | CHANGE NO. | REV. |
|           |            |      |

|        |                     |      |         |
|--------|---------------------|------|---------|
| DRN.   | <i>R. Bredell</i>   | DATE | 8-16-72 |
| E K.D. | <i>Physognathus</i> | DATE | 7-7-72  |
| FEM    | <i>Physognathus</i> | DATE | 8-12-72 |
| WING   | <i>Physognathus</i> | DATE | 8-12-72 |
| WING   | <i>Physognathus</i> | DATE | 8-12-72 |
| SHEET  | 15                  | OF   | 17      |

| FLOWS | STATE    | ADR | CLK | CIR | MM | CH | CD | CBA | BUS | DAD | SPS | ALU | SBC | SBM | SDM | SBA | UBF | BRX | RIF | UPF |
|-------|----------|-----|-----|-----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| F2    | ADD2     | 300 | 2   | 0   | 0  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 01  | 12  | 064 |
| F2    | ADD18    | 301 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 01  | 11  | 321 |
| F2    | ADD4     | 302 | 6   | 0   | 3  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 01  | 13  | 164 |
| E4    | DIV1     | 303 | 4   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 32  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 055 |
| F4    | FML13    | 304 | 2   | 0   | 0  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 01  | 13  | 213 |
|       | F6 NOM7  | 305 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 156 |
|       | F4 FML14 | 306 | 2   | 0   | 0  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 01  | 13  | 277 |
|       | F6 NOM5  | 307 | 4   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 06  | 00  | 00  | 0   | 0   | 00  | 01  | 15  | 136 |
| F2    | ADD21    | 310 | 2   | 0   | 3  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 01  | 15  | 340 |
| E2    | ASH1     | 311 | 6   | 0   | 0  | 1  | 1  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 10  | 00  | 030 |
| F5    | FDV19    | 312 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 134 |
| F3    | ADD27    | 313 | 6   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 313 |
| F3    | ADD33    | 314 | 2   | 0   | 0  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 334 |
| F3    | ADD32    | 315 | 6   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 11  | 00  | 00  | 2   | 0   | 00  | 00  | 00  | 314 |
| F5    | FDV16    | 316 | 6   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 333 |
| F3    | ADD30    | 317 | 6   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 11  | 00  | 00  | 2   | 0   | 00  | 00  | 00  | 347 |
| F2    | ADD8     | 320 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 01  | 10  | 245 |
| F2    | ADD19    | 321 | 2   | 0   | 3  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 01  | 11  | 325 |
| F2    | ADD9     | 322 | 2   | 0   | 0  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 01  | 10  | 225 |
| E2    | ASH21    | 323 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 017 |
| F6    | NOM4     | 324 | 2   | 0   | 0  | 0  | 0  | 1   | 0   | 06  | 0   | 00  | 00  | 00  | 1   | 0   | 00  | 04  | 00  | 305 |
| F2    | ADD20    | 325 | 4   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 01  | 14  | 310 |
| F6    | NOM2     | 326 | 6   | 0   | 3  | 1  | 1  | 0   | 0   | 00  | 0   | 23  | 00  | 00  | 2   | 0   | 00  | 01  | 15  | 170 |
| F6    | NOM0     | 327 | 2   | 0   | 0  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 154 |
| F4    | FML19    | 330 | 2   | 0   | 0  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 150 |
| F5    | FDV14    | 331 | 2   | 0   | 0  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 01  | 11  | 370 |
| F6    | EXT14    | 332 | 4   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 32  | 00  | 16  | 0   | 0   | 00  | 00  | 00  | 230 |
| F5    | FDV12    | 333 | 2   | 0   | 0  | 1  | 0  | 0   | 0   | 00  | 0   | 00  |     |     |     |     |     |     |     |     |

THE COMPLEMENT OF THE ACTUAL ROM OUTPUT FOR THE UPF, WR, SPS (HIGH 2 BITS), BUS (LOW BIT), AND CLK (LOW BIT) FIELD IS LISTED FOR CLARITY.

| Flows | State | ADR | CON | FC1 | FUB | MHR | FRD | ERD | SRD | SDR | CVM | NZM | CCC | GPC | CEE | CNT | EUB | CBR |
|-------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| F2    | ADD2  | 300 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 05  | 1   |
| F2    | ADD18 | 301 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 10  | 1   |
| F2    | ADD4  | 302 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| E4    | DIV1  | 303 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| F4    | FML13 | 304 | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| F6    | NOM7  | 305 | 0   | 0   | 0   | 1   | 0   | 0   | 1   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 10  | 0   |
| F4    | FML14 | 306 | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| F6    | NOM5  | 307 | 0   | 0   | 1   | 2   | 0   | 0   | 0   | 2   | 0   | 0   | 0   | 5   | 0   | 0   | 04  | 0   |
| F2    | ADD21 | 310 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| E2    | ASH1  | 311 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 0   | 1   | 0   | 0   | 1   | 00  | 1   |
| F3    | FDV19 | 312 | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 1   |
| F3    | ADD27 | 313 | 0   | 0   | 0   | 1   | 0   | 0   | 1   | 1   | 0   | 0   | 0   | 7   | 0   | 1   | 10  | 0   |
| F3    | ADD33 | 314 | 0   | 0   | 0   | 0   | 1   | 0   | 1   | 3   | 0   | 2   | 4   | 0   | 0   | 0   | 00  | 0   |
| F3    | ADD32 | 315 | 0   | 0   | 0   | 0   | 0   | 1   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 10  | 1   |
| F5    | FDV16 | 316 | 0   | 0   | 0   | 0   | 0   | 1   | 2   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 1   |
| F3    | ADD30 | 317 | 0   | 0   | 0   | 0   | 1   | 0   | 1   | 0   | 4   | 0   | 1   | 0   | 0   | 0   | 00  | 1   |
| F2    | ADD8  | 320 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 1   |
| F2    | ADD19 | 321 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| F2    | ADD9  | 322 | 0   | 0   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| E2    | ASH21 | 323 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| F6    | NOM4  | 324 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| F2    | ADD20 | 325 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| F6    | NOM2  | 326 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 1   |
| F6    | NOM0  | 327 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 04  | 1   |
| F4    | FML19 | 330 | 0   | 0   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 1   |
| F5    | FDV14 | 331 | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 10  | 0   |
| F6    | EXI14 | 332 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 5   | 2   | 5   | 0   | 0   | 0   | 00  | 0   |
| F5    | FDV12 | 333 | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 7   | 0   | 0   | 00  | 0   |
| F3    | ADD34 | 334 | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 4   | 0   | 1   | 0   | 0   | 0   | 03  | 1   |
| F3    | ADD37 | 335 | 0   | 0   | 0   | 0   | 1   | 0   | 1   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| F6    | EXI8  | 336 | 0   | 0   | 0   | 0   | 0   | 1   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| F5    | FDV17 | 337 | 0   | 0   | 0   | 0   | 1   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 1   |

|                 |                 |
|-----------------|-----------------|
| REV. _____      | REV. _____      |
| CHANGE IN _____ | CHANGE IN _____ |
| CHK _____       | CHK _____       |

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|---|---|---|
| 0 | 0 | 0 |
| 0 | 0 | 1 |

|                    |         |
|--------------------|---------|
| DRN.               | DATE    |
| <i>R. P. Della</i> | 8-16-72 |
| CHMD               | DATE    |
| <i>R. P. Della</i> | 8-17-72 |
| DEG                | DATE    |
| <i>R. P. Della</i> | 8-17-72 |
| POOLING            | DATE    |
| <i>R. P. Della</i> | 8-17-72 |
| PROD. NO.          | DATE    |
| <i>R. P. Della</i> | 8-16-72 |

**digital EQUIPMENT CORPORATION**  
MAYNARD, MASSACHUSETTS

TITLE

## EIS BOARD

(ADRS 300-337)

|      |      |
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| SIZE | CODE |
| C    | CS   |

NUMBER

M7238-0-1

REV.

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SHEET 16 OF 17

DIST.

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| FLWS | STATE | ADR | CLK | CIR | WR | CB | CD | CBA | BUS | DAD | SPS | ALU | SBC | SBM | SDM | SBA | UBF | SRX | RIF | UPF |
|------|-------|-----|-----|-----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| F3   | ADD22 | 340 | 6   | 0   | 0  | 1  | 1  | 0   | 0   | 00  | 0   | 14  | 00  | 00  | 2   | 0   | 00  | 01  | 13  | 017 |
| F3   | ADD26 | 341 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 313 |
| F2   | ADD14 | 342 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 00  | 00  | 226 |
| F3   | ADD28 | 343 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 317 |
| F5   | FDV7  | 344 | 2   | 0   | 3  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 01  | 15  | 346 |
|      |       | 345 | 0   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 000 |
| F5   | FDV8  | 346 | 6   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 11  | 02  | 17  | 2   | 0   | 00  | 00  | 00  | 364 |
| F3   | ADD31 | 347 | 2   | 0   | 0  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 01  | 11  | 315 |
| F5   | FDV4  | 350 | 2   | 0   | 3  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 01  | 14  | 222 |
| E2   | ASH8  | 351 | 6   | 0   | 0  | 1  | 1  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 10  | 00  | 000 |
| F5   | FDV18 | 352 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 312 |
| F3   | BRQ0  | 353 | 2   | 0   | 0  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 355 |
| F6   | EXI6  | 354 | 6   | 0   | 3  | 0  | 1  | 0   | 0   | 10  | 0   | 06  | 00  | 00  | 2   | 0   | 00  | 04  | 00  | 007 |
| F4   | BRQ4  | 355 | 6   | 0   | 3  | 0  | 1  | 0   | 0   | 10  | 0   | 06  | 00  | 00  | 2   | 0   | 00  | 04  | 00  | 375 |
| F6   | EXI9  | 356 | 6   | 0   | 3  | 0  | 1  | 1   | 0   | 06  | 0   | 06  | 01  | 17  | 2   | 0   | 00  | 04  | 00  | 374 |
| F3   | BRQ1  | 357 | 2   | 0   | 0  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 355 |
| F3   | ADD38 | 360 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 327 |
| F3   | ADD24 | 361 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 237 |
| F3   | ADD36 | 362 | 6   | 0   | 0  | 1  | 1  | 0   | 0   | 00  | 0   | 06  | 00  | 00  | 2   | 0   | 00  | 00  | 00  | 335 |
| F3   | ADD29 | 363 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 00  | 00  | 314 |
| F5   | FDV9  | 364 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 01  | 12  | 267 |
| F4   | FML6  | 365 | 6   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 263 |
| E1   | D8T7  | 366 | 3   | 0   | 0  | 0  | 0  | 1   | 1   | 00  | 0   | 00  | 00  | 00  | 0   | 1   | 00  | 01  | 12  | 271 |
| F1   | FP8   | 367 | 2   | 0   | 3  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 2   | 0   | 00  | 01  | 15  | 235 |
| F5   | FDV15 | 370 | 6   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 11  | 00  | 00  | 2   | 0   | 00  | 00  | 00  | 316 |
| F5   | BRQ6  | 371 | 6   | 0   | 0  | 1  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 355 |
| F5   | FDV22 | 372 | 6   | 0   | 0  | 0  | 1  | 0   | 0   | 00  | 0   | 06  | 00  | 00  | 2   | 0   | 00  | 00  | 00  | 316 |
| F2   | ADD12 | 373 | 6   | 0   | 0  | 1  | 1  | 0   | 0   | 10  | 0   | 06  | 00  | 00  | 2   | 0   | 00  | 01  | 15  | 163 |
| F6   | EXI10 | 374 | 5   | 0   | 0  | 0  | 1  | 0   | 1   | 00  | 0   | 32  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 376 |
| F6   | BRQ5  | 375 | 6   | 0   | 3  | 0  | 1  | 0   | 0   | 00  | 0   | 06  | 01  | 17  | 2   | 0   | 00  | 01  | 07  | 017 |
| F6   | EXI11 | 376 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 177 |
| E1   | EI1   | 377 | 2   | 0   | 0  | 0  | 0  | 0   | 0   | 00  | 0   | 00  | 00  | 00  | 0   | 0   | 00  | 00  | 00  | 240 |

NOTE:

THE COMPLEMENT OF THE ACTUAL ROM OUTPUT FOR THE UPF, WR, SPS (HIGH 2 BITS), BUS (LOW BIT), AND CLK (LOW BIT) FIELD IS LISTED FOR CLARITY.

| FLWS | STATE | ADR | CON | FC1 | FUB | MHR | FRD | ERD | SRD | SDR | CVM | NZM | CCC | GPC | CEE | CNT | EUB | CBR |
|------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| F3   | ADD22 | 340 | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 4   | 0   | 1   | 0   | 0   | 1   | 03  | 1   |
| F3   | ADD26 | 341 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 10  | 0   |
| F2   | ADD14 | 342 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 10  | 1   |
| F3   | ADD28 | 343 | 0   | 0   | 0   | 2   | 0   | 0   | 1   | 2   | 0   | 0   | 0   | 5   | 0   | 0   | 00  | 0   |
| F5   | FDV7  | 344 | 3   | 0   | 0   | 0   | 0   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 10  | 0   |
|      |       | 345 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| F5   | FDV8  | 346 | 3   | 0   | 0   | 0   | 1   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 1   |
| F3   | ADD31 | 347 | 0   | 0   | 0   | 3   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| F5   | FDV4  | 350 | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| E2   | ASH8  | 351 | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 3   | 0   | 0   | 0   | 0   | 0   | 1   | 00  | 1   |
| F5   | FDV18 | 352 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| F3   | BRQ0  | 353 | 2   | 0   | 0   | 0   | 1   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| F6   | EXI6  | 354 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| F4   | BRQ4  | 355 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 00  | 0   |
| F6   | EXI9  | 356 | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| F3   | HRQ1  | 357 | 2   | 0   | 0   | 0   | 1   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| F3   | ADD38 | 360 | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 03  | 0   |
| F3   | ADD24 | 361 | 0   | 0   | 1   | 0   | 0   | 1   | 2   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 02  | 1   |
| F3   | ADD36 | 362 | 0   | 0   | 0   | 3   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 4   | 0   | 0   | 00  | 1   |
| F3   | ADD29 | 363 | 0   | 0   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 10  | 1   |
| F5   | FDV9  | 364 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 2   | 00  | 1   |
| F4   | FML6  | 365 | 3   | 0   | 0   | 0   | 1   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 1   |
| E1   | D8T7  | 366 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 16  | 0   |
| F1   | FP8   | 367 | 0   | 0   | 0   | 0   | 0   | 0   | 3   | 0   | 0   | 2   | 4   | 0   | 0   | 0   | 04  | 0   |
| F5   | FDV15 | 370 | 0   | 0   | 0   | 0   | 0   | 1   | 1   | 3   | 4   | 0   | 1   | 4   | 0   | 0   | 10  | 1   |
| F5   | BRQ6  | 371 | 2   | 0   | 0   | 0   | 1   | 0   | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| F5   | FDV22 | 372 | 0   | 0   | 0   | 0   | 0   | 1   | 1   | 3   | 4   | 0   | 1   | 4   | 0   | 0   | 10  | 1   |
| F2   | ADD12 | 373 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 01  | 1   |
| F6   | EXI10 | 374 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| F6   | BRQ5  | 375 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 00  | 0   |
| F6   | EXI11 | 376 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 5   | 2   | 7   | 0   | 0   | 0   | 00  | 0   |
| E1   | EI1   | 377 | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 7   | 0   | 0   | 0   | 00  | 0   |

| REV. | CHANGE NO. |
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| DRN                | DATE     |
| <i>A. C. C. C.</i> | 8-16-72  |
| CHKD.              | DATE     |
| <i>R. C. C. C.</i> | 8-17-72  |
| DATE               | DATE     |
| <i>R. C. C. C.</i> | 8-17-72  |
| DATE               | DATE     |
| <i>R. C. C. C.</i> | 8-17-72  |
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