

POS24947

VIA 5 11 82

**DR11-B**  
**engineering drawings**

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| FLIP CHIP | FOCAL        |
| DIGITAL   | COMPUTER LAB |
| UNIBUS    |              |

## ENGINEERING DRAWINGS

| Drawing Number   | Number of Sheets | Title                        |
|------------------|------------------|------------------------------|
| A-ML-DR11-B      | 2                | DR11-B Master Drawing List   |
| A-PL-DR11-B-0    | 1                | DR11-B ASSY                  |
| D-AD-7008329-0-0 | 1                | Wired ASSY (DR11-B)          |
| A-PL-7008329-0-0 | 1                | Wired ASSY (PL)              |
| D-MU-DR11-B-01   | 1                | Module Utilization           |
| A-PL-DR11-B-01   | 1                | Module Utilization (PL)      |
| D-CS-M9760-0-1   | 1                | Twisted Pair Cable Connector |
| D-CS-M7219-0-1   | 5                | RC11 Bus Interface           |
| D-BS-DR11-B-02   | 1                | NPR Control                  |
| D-BS-DR11-B-03   | 1                | Status & Command Register    |
| D-BS-DR11-B-04   | 1                | Data Register (DRDB)         |
| D-IC-DR11-B-05   | 1                | DR11-B Bus and Power CONN    |
| D-IC-DR11-B-06   | 1                | User Device Connections      |
| D-CS-M9680-0-1   | 2                | DR11-B Test Board            |
| K-WL-DR11-B-08   | (complete)       | Wire List                    |
| D-CS-M796-0-1    | -                | Unibus Master Control        |
| D-CS-M239-0-1    | -                | Three 4-BIT Counter Register |
| D-CS-M208-0-1    | -                | Buffer-Shift Register        |
| D-CS-M7821-0-1   | -                | Interrupt Control            |
| A-SP-DR11-B-09   | 3                | DR11-B Test Procedure        |
| A-SP-DR11-B-10   | 2                | DR11-B Acceptance Test       |
| A-AL-DR11-B-11   | 1                | Accessory List               |
| A-SL-DR11-B-12   | 1                | Software List                |



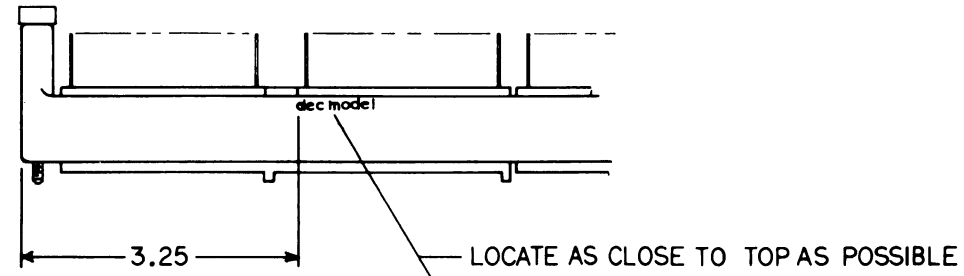
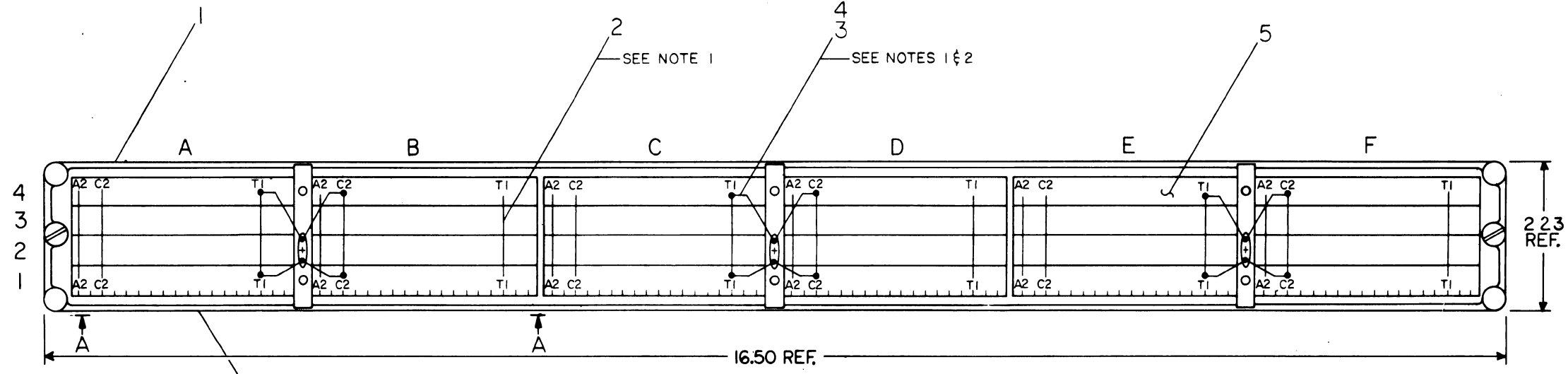


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| WIRE TABLE |             |          |        |       |     |         |
|------------|-------------|----------|--------|-------|-----|---------|
| ITEM NO    | SIGNAL NAME | FROM PIN | TO PIN | COLOR | AWG | REMARKS |
| 6          | GND         | A03D2    | A03E2  | BLK   | #24 |         |
|            |             | A03F2    | A03N1  |       |     |         |
|            |             | A03P1    | A03R1  |       |     |         |
|            |             | A03S1    | A03T1  |       |     |         |
|            |             | A03U1    | A03V1  |       |     |         |
|            |             | A03C2    | A03D2  |       |     |         |
|            |             | A03E2    | A03F2  |       |     |         |
|            |             | A03N1    | A03P1  |       |     |         |
|            |             | A03R1    | A03S1  |       |     |         |
| 6          | GND         | A03T1    | A03U1  | BLK   | #24 |         |

| WIRE TABLE |             |          |        |       |     |                                      |
|------------|-------------|----------|--------|-------|-----|--------------------------------------|
| ITEM NO    | SIGNAL NAME | FROM PIN | TO PIN | COLOR | AWG | REMARKS                              |
| 7          | +5V         | A03A2    | B01A2  | RED   | #24 |                                      |
|            |             | A03H2    | B04A2  |       |     |                                      |
|            |             | C01A2    | D01A2  |       |     | WIRES MUST RUN TO LEFT OF SLOT ONE   |
|            |             | E01A2    | F01A2  |       |     |                                      |
|            |             | A03J2    | C01A2  |       |     |                                      |
|            |             | A03K2    | E01A2  |       |     |                                      |
|            |             | C04A2    | D04A2  |       |     | WIRES MUST RUN TO RIGHT OF SLOT FOUR |
|            |             | E04A2    | F04A2  |       |     |                                      |
|            |             | A03L2    | C04A2  |       |     |                                      |
| 7          | +5V         | A03M2    | E04A2  | RED   | #24 |                                      |

- NOTES**
- CONNECTIONS ON ITEMS 2 & 3 TO BE SOLDERED AND LOCATED AT MINIMUM PRACTICAL HEIGHT ABOVE BLOCKS.
  - CONNECTOR BLOCKS TO BE GROUNDED TO GROUND LUGS AS SHOWN.
  - ALL VERTICAL HAND WIRING TO RUN OUTSIDE CONNECTOR BLOCKS.



| REV. | CHANGE NO. | REVISIONS  |
|------|------------|------------|
| A    | 0001       | DR11B-0001 |
| B    | 0005       | DR11B-0005 |
| C    | 0010       | DR11B-0010 |
| D    | 0011       | DR11B-0011 |
| E    | 0012       | DR11B-0012 |
| F    | 0013       | DR11B-0013 |
| G    | 0014       | DR11B-0014 |
| H    | 0017       | DR11B-0017 |

|  |                          |                     |                                      |                              |
|--|--------------------------|---------------------|--------------------------------------|------------------------------|
| FIRST USED ON OPTION/MODEL<br><b>DR11-B</b>                      | QTY.                     | DESCRIPTION         | PART NO.                             | ITEM NO.                     |
| PARTS LIST   |                          |                     |                                      |                              |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSION IN INCHES.<br>TOLERANCES | DRN. <b>W. MAPS</b>      | DATE <b>2-1-71</b>  |                                      |                              |
| DECIMALS .XXX - .005<br>.XX - .02<br>.X - .1                     | CHKD. <b>[Signature]</b> | DATE <b>2-1-71</b>  |                                      |                              |
| ANGLES ±0° 30'   | ENG. <b>[Signature]</b>  | DATE <b>3/10/71</b> | TITLE<br><b>WIRED ASS'Y (DR11-B)</b> |                              |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓           | PROD. <b>[Signature]</b> | DATE <b>3-17-71</b> |                                      |                              |
| MATERIAL<br>+ + +  | NEXT HIGHER ASSY.        | A-ML-DR11-B-0       | SIZE CODE<br><b>DAD</b>              | NUMBER<br><b>7008329-0-0</b> |
| FINISH<br>+ + +  | SCALE<br>+ + +           | SHEET 1             | OF 1                                 | REV.<br><b>H</b>             |

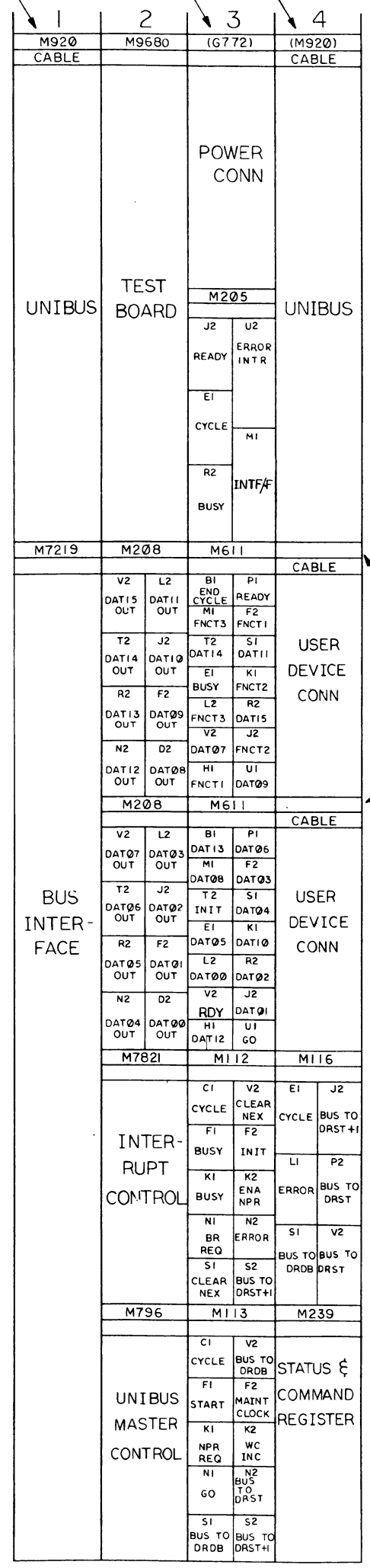


This drawing and specifications, however, are not to be construed as a warranty of performance or quality of the materials or workmanship or as a part of the contract for the purchase of the equipment.

| REVISIONS           |             |      |
|---------------------|-------------|------|
| CHK                 | CHANGE NO.  | REV. |
|                     | DR11B-00001 | A    |
|                     |             |      |
| JANSON              |             |      |
|                     | DR11B-00004 | B    |
|                     |             |      |
| RJANSON             |             |      |
|                     | DR11B-00006 | C    |
|                     |             |      |
| JANSON              |             |      |
|                     | DR11B-00007 | D    |
|                     |             |      |
| JANSON              |             |      |
|                     | DR11B-00018 | E    |
|                     |             |      |
| PAUL JANSON         |             |      |
|                     | DR11B-00015 | F    |
|                     |             |      |
| K. POON             |             |      |
|                     | DR11B ML019 | H    |
|                     |             |      |
| DICK BISSON         |             |      |
|                     |             |      |
| Dick Bisson 2-27-80 |             |      |

NOTES  
 1. MAY BE EITHER M920 OR BC11A  
 2. MAY BE M920, M930, OR BC11A  
 3. USUALLY M957 OR M9760 USER CABLE MODULES, BUT USES M9680 TEST BOARD FOR MAINTENANCE PURPOSES  
 4. NOT SUPPLIED WITH DR11-B  
 5. PART OF POWER HARNESS IN BAI1 MOUNTING BOX

SEE NOTE 1  
 SEE NOTE 5  
 SEE NOTES 2 AND 4



SEE NOTE 3

FIRST USED ON OPTION/MODEL  
 DR11-B

DO NOT SCALE DRAWING  
 UNLESS OTHERWISE SPECIFIED  
 DIMENSIONS IN INCHES  
 DECIMALS FRACTIONS ANGLES  
 SHALL BE TO THE NEAREST  
 REMOVE DIMS AND BREAK MARKS  
 COMMENTS

DATE 1/27/71  
 DATE 2/5-71  
 DATE 5/17/71  
 DATE 12-20-72  
 DATE 12-76-73  
 DATE 10-17-72  
 DATE 12-20-72  
 DATE 6-20-73  
 DATE 11-AUG-76  
 DATE 2-8-80  
 DATE 2-27-80

DESCRIPTION  
 MODULE UTILIZATION

REV. H  
 PART NO. DR11-B-01  
 NUMBER  
 SCALE 1/8"=1"

SIZE CODE DML NUMBER DR11-B-01 REV H

10-B-1100 DWG 2



**DIGITAL EQUIPMENT CORPORATION**  
MAYNARD, MASSACHUSETTS  
**PARTS LIST**

**QUANTITY / VARIATION**

|                                 |                           |                     |
|---------------------------------|---------------------------|---------------------|
| <b>MADE BY</b> W. MAJOR         | <b>CHECKED</b> KEN GULICK | <b>SECTION</b>      |
| <b>DATE</b> 2/26/71             | <b>DATE</b> 3/9/71        | 1                   |
| <b>ENG</b> <i>P. E. Johnson</i> | <b>PROD</b> <i>Call</i>   | <b>ISSUED SECT.</b> |
| <b>DATE</b> 3-19-71             | <b>DATE</b> 3/22/71       | 1                   |

| ITEM NO. | DWG NO. / PART NO. | DESCRIPTION                  | 9 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|----------|--------------------|------------------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|          | H850               | HANDLE EXTENDER              | 9 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          | M112               | NOR GATE                     | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          | M113               | TEN 2-INPUT NAND GATES       | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          | M116               | NOR GATE                     | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          | M205               | 5 "D" FLIP FLOPS             | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          | M208               | 8 BIT BUFFER/SHIFT REGISTER  | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          | M239               | 3-4-BIT COUNTER/REGISTER     | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          | M611               | HIGH SPEED POWER INVERTER    | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          | M7219              | RC11 BUS INTERFACE           | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          | M7821              | INTERRUPT CONTROL            | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          | M796               | UNIBUS MASTER CONTROL        | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          | M920               | UNIBUS CONNECTOR             | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          | M957               | CABLE CONNECTOR              | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          | M9680              | DR11-B TEST BOARD            | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          | M9760              | TWISTED PAIR CABLE CONNECTOR | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |                    |                              |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |                    |                              |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |                    |                              |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |                    |                              |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |                    |                              |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |                    |                              |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |                    |                              |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |                    |                              |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |                    |                              |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|          |                    |                              |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

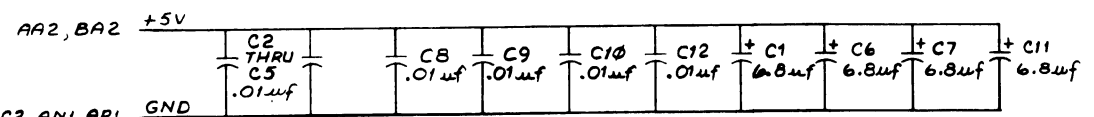
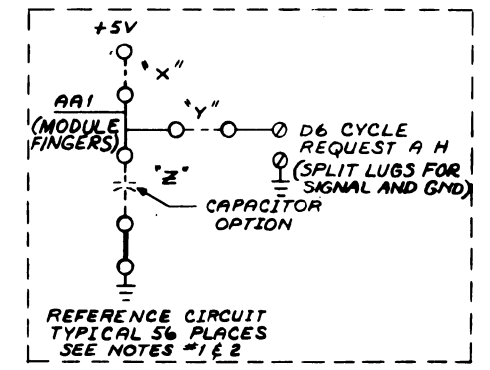
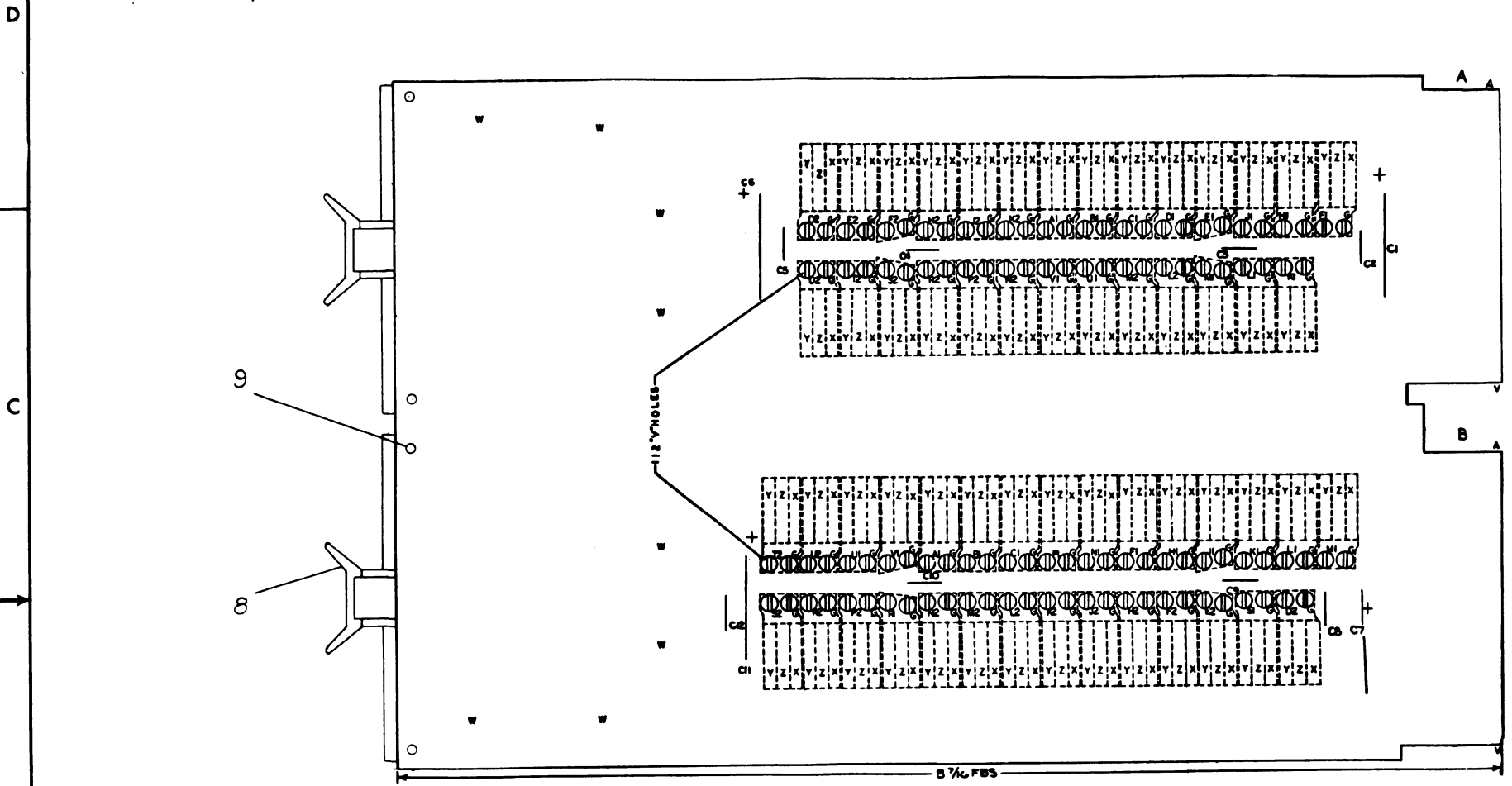
|                                 |                                   |               |                |                         |               |                            |
|---------------------------------|-----------------------------------|---------------|----------------|-------------------------|---------------|----------------------------|
| <b>TITLE</b> MODULE UTILIZATION | <b>ASSY NO.</b><br>D-MU-DR11-B-01 | <b>SIZE</b> A | <b>CODE</b> PL | <b>NUMBER</b> DR11-B-01 | <b>REV.</b> E | <b>ECO NO.</b> DR11B-00008 |
| <b>SHEET</b> 1 <b>OF</b> 1      |                                   | <b>DIST.</b>  |                |                         |               |                            |

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NOTES:

- 1. ALL RECEIVED SIGNALS HAVE 'Y' AS A JUMPER AND 'X' & 'Z' ARE UNUSED.
2. ALL DRIVEN LINES WILL HAVE A 75 OHM RESISTOR (R1 THRU R24) IN 'Y' AND 'X' & 'Z' ARE UNUSED.
3. MODULE PINS USED ARE UNIBUS COMPATIBLE.

Table with two columns: SLOT A and SLOT B. Each column has sub-columns for PIN, COMPONENT, and SIGNAL NAME. It lists various signals like D6 CYCLE REQUEST A H, D6 DAT00 IN H, etc., and their corresponding component values.



AB2, AC2, AN1, AP1
AR1, AS1, AT1, AV2
BB2, BC2, BD1
BE1, BT1, BV2

Table with columns for IC TYPE, GND, and +5V. It lists pin locations for various IC types.

Parts list table with columns: QTY, REF DESIGNATION, DESCRIPTION, PART NO., ITEM NO. It lists components like resistors, jumpers, capacitors, and the etched circuit board.

Form with fields for FIRST USED ON OPTION MODEL (DR11-B), ETCH BOARD REV (C), and PARTS LIST.

REVISIONS table with columns: REV, CHANGE NO., CHK, DATE. It tracks changes to the drawing.

SEMICONDUCTOR CONVERSION CHART table with columns: DEC NO., EIA NO., DEC NO., EIA NO. It provides conversion information for semiconductor components.

Digital Equipment Corporation logo and title block. Title: TWISTED PAIR CABLE CONNECTOR. Includes fields for SCALE (NONE), SHEET (1 OF 1), and DIST.

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PARTS REFERENCE

| ITEM NO | DRAWING REFERENCE                          | DESCRIPTION          | PART NUMBER   | QUANTITY |
|---------|--|----------------------|---------------|----------|
| 1       | E6, E11, E17, E22, E26, E28, E33, E37, E40 | DEC 8640             | I.C. 1911469  | 9        |
| 2       | E19, E34                                   | DEC 7400             | I.C. 1905575  | 2        |
| 3       | E38  | DEC 7402             | I.C. 1909004  | 1        |
| 4       | E3, E45                                    | DEC 7404             | I.C. 1909686  | 2        |
| 5       | E30  | DEC 7410             | I.C. 1905576  | 1        |
| 6       | E42  | DEC 7416             | I.C. 1909928  | 1        |
| 7       | E4, E8, E15, E46                           | DEC 8242             | I.C. 1909712  | 4        |
| 8       | E23  | DEC 8815             | I.C. 1909713  | 1        |
| 9       | E5, E7, E14, E16, E18, E27, E29, E39, E41  | DEC 8881             | I.C. 1909705  | 9        |
| 10      | E1, E9, E12, E20, E24, E31, E35, E43       | DEC 74153            | I.C. 1909937  | 8        |
| 11      | E2, E10, E13, E21, E25, E32, E36, E44      | DEC 74193            | I.C. 910018   | 8        |
| 12      | C1 THRU C45, C47                           | .01 MFD 100V 20% CAP | 1001610       | 45       |
| 13      | C46  | 470 P.F. 100V 5% CAP | 1000024       | 1        |
| 14      | R1 THRU R12, R14 THRU R20                  | 1K 1/4W 5% RES       | 1300365       | 19       |
| 15      | R13  | 100 1/4W 5% RES      | 1300229       | 1        |
| 16      |  | #30 GAUGE WIRE       |               | A/R      |
| REF     |  | BUS INTERFACE        | APL-M7219-0-0 |          |

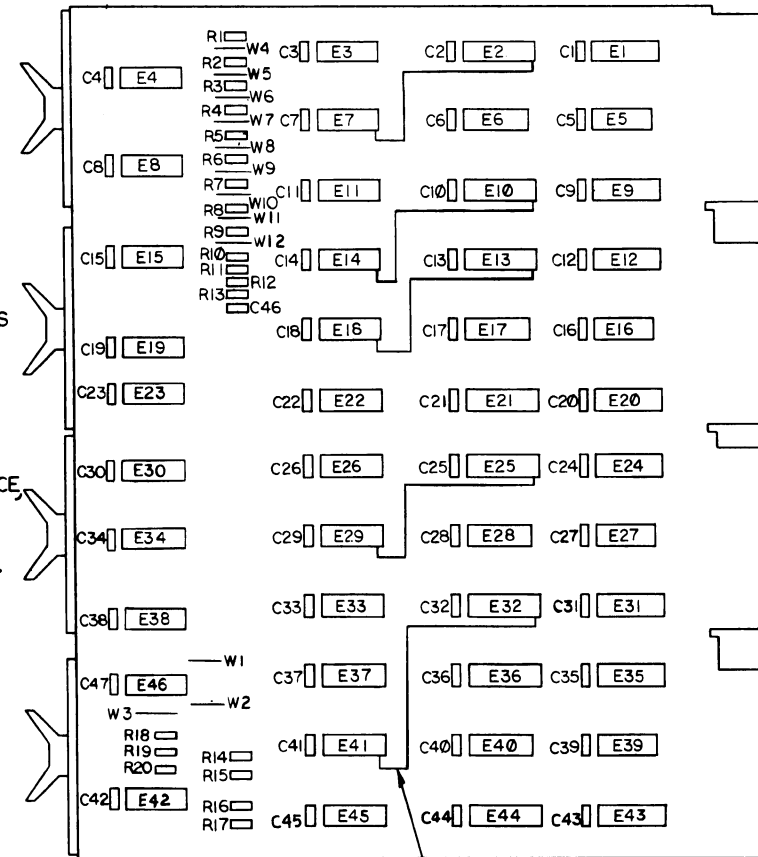
NOTES:

- PIN NOTATION THROUGHOUT IS ORDERED UPON MODULE PLACEMENT IN THE DR11-B. MODULE REFERENCE ALONE IS OBTAINED BY DELETING THE NUMBER (SLOT LOCATION) AFTER THE FIRST LETTER, AND CONVERTING THE FIRST LETTER ACCORDING TO THE PIN NOMENCLATURE CHART AT RIGHT.
- ALL SIGNALS THAT HAVE MODULE PINS ARE SO NOTED; MULTIPLE NOTATIONS OF THE SAME SIGNALS WITHIN A MODULE HAVE THE PIN NOTED ON EACH. AN INPUT SIGNAL IS NOTED ONLY ONCE PER SHEET UNLESS SEPERATE PINS ARE USED; MULTIPLE INPUTS ARE CONNECTED. MODULE OUTPUT SIGNALS ARE BROUGHT TO THE EXTREME RIGHT OF EACH SHEET WHENEVER POSSIBLE.
- DR11-B SIGNAL SOURCE NOTATION (D1-2, FOR EXAMPLE) IDENTIFIES THE SIGNAL SOURCE. THE FIRST NUMBER AFTER THE D INDICATES THE PRINT SET, WHILE THE SECOND INDICATES THE SHEET WITHIN THE SET. IF ON A PRINT, THE FIRST NUMBER OF THE D PREFIXES COINCIDE FOR A SIGNAL NAME AND THE PRINT (SEE TITLE BLOCK), THE SIGNAL IS GENERATED ON THE MODULE. A DIFFERENCE IN THE FIRST NUMBER OF THE D PREFIXES INDICATES A SIGNAL GENERATED OFF THE MODULE. SIGNALS WITH A "BUS" PREFIX REPRESENT A "WIRED OR" SITUATION, AND MULTIPLE SOURCES FOR THE SIGNAL CAN EXIST.
- DETAILS ON COMPONENTS ARE NOTED IN THE PARTS REFERENCE. PLACEMENT IS NOTED IN THE COMPONENT PLACEMENT DIAGRAM. CAPACITORS WITHOUT NOTED VALUES ARE .01 MFD.
- GND AND +5V ARE USUALLY PIN 7 AND PIN 14, RESPECTIVELY. EXCEPTIONS ARE:

| IC TYPE   | GND   | +5V    |
|-----------|-------|--------|
| DEC 74153 | PIN 8 | PIN 16 |
| DEC 74193 | PIN 8 | PIN 16 |
| DEC 8640  | PIN 1 | PIN 8  |

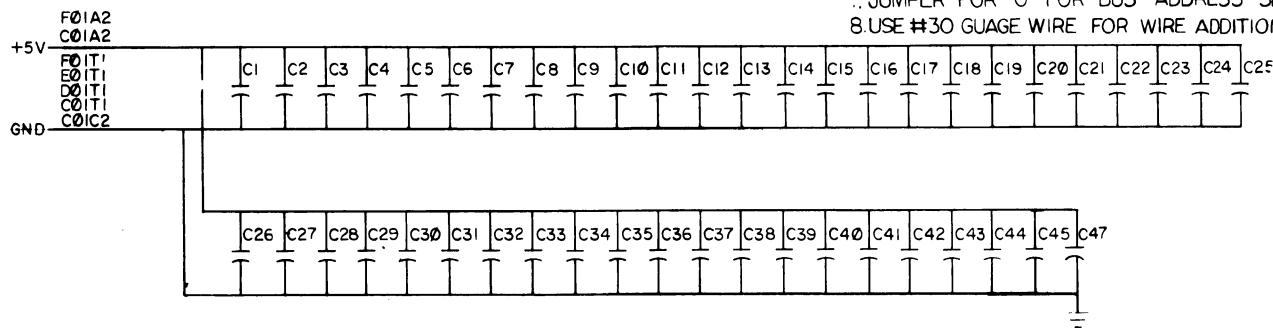
UNLESS OTHERWISE NOTED: RESISTANCE IS IN OHMS; CAPACITANCE IS IN PICO FARADS  
 .. JUMPER FOR 0 FOR BUS ADDRESS SELECTION  
 8. USE #30 GAUGE WIRE FOR WIRE ADDITIONS.

COMPONENT PLACEMENT



PIN NOMENCLATURE

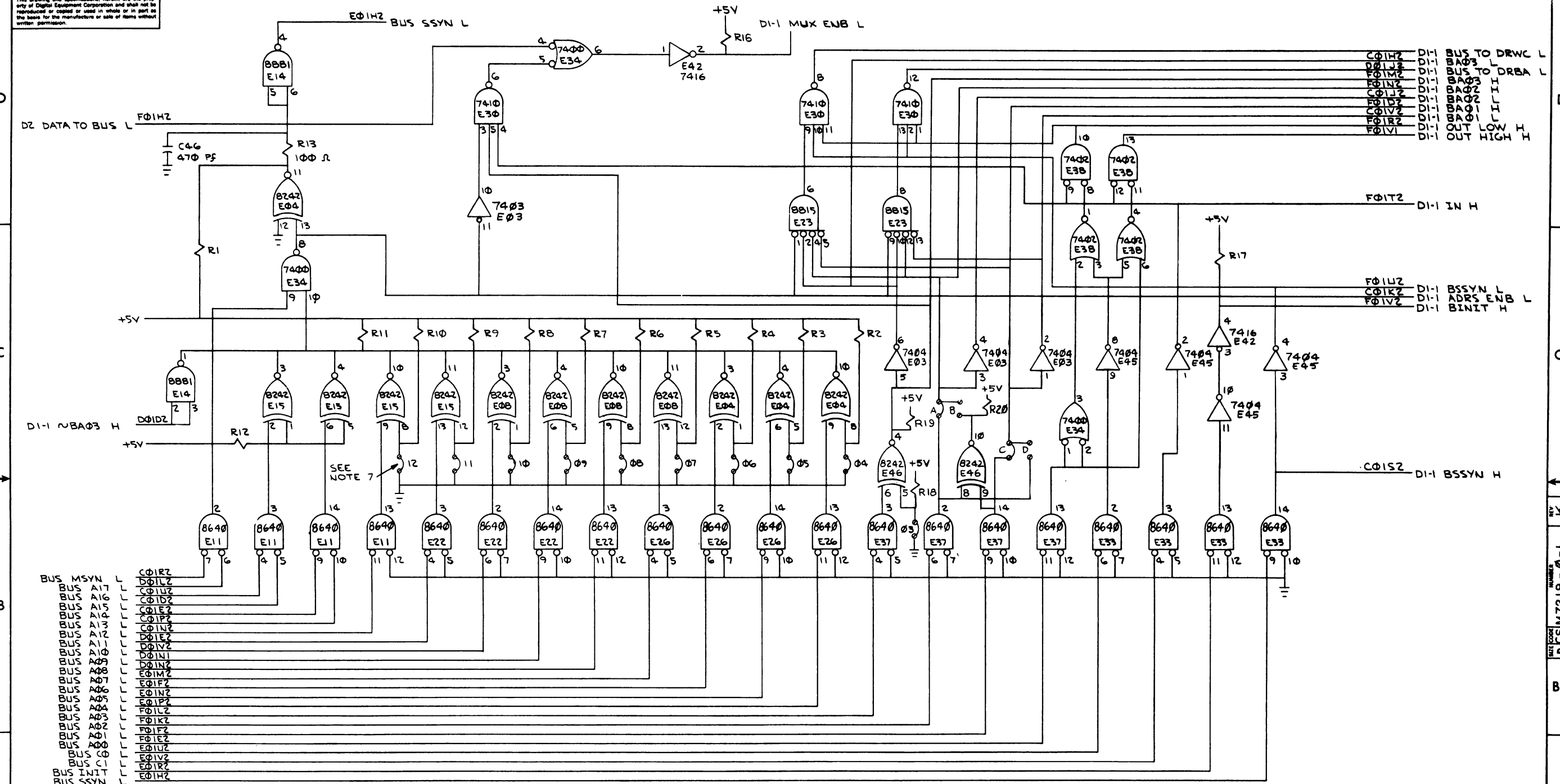
| MODULE | DR11-B |
|--------|--------|
| A      | C      |
| B      | D      |
| C      | E      |
| D      | F      |



| REV | CHANGE NO. | ORIGINATED BY | DATE   |
|-----|------------|---------------|--------|
| A   | 1          | P. J. JANSON  | 9-2-71 |
| B   | 2          | P. J. JANSON  | 9-2-71 |
| C   | 3          | P. J. JANSON  | 9-2-71 |
| D   | 4          | P. J. JANSON  | 9-2-71 |
| E   | 5          | P. J. JANSON  | 9-2-71 |
| F   | 6          | P. J. JANSON  | 9-2-71 |
| G   | 7          | P. J. JANSON  | 9-2-71 |
| H   | 8          | P. J. JANSON  | 9-2-71 |
| I   | 9          | P. J. JANSON  | 9-2-71 |
| J   | 10         | P. J. JANSON  | 9-2-71 |
| K   | 11         | P. J. JANSON  | 9-2-71 |
| L   | 12         | P. J. JANSON  | 9-2-71 |
| M   | 13         | P. J. JANSON  | 9-2-71 |
| N   | 14         | P. J. JANSON  | 9-2-71 |
| O   | 15         | P. J. JANSON  | 9-2-71 |
| P   | 16         | P. J. JANSON  | 9-2-71 |
| Q   | 17         | P. J. JANSON  | 9-2-71 |
| R   | 18         | P. J. JANSON  | 9-2-71 |
| S   | 19         | P. J. JANSON  | 9-2-71 |
| T   | 20         | P. J. JANSON  | 9-2-71 |
| U   | 21         | P. J. JANSON  | 9-2-71 |
| V   | 22         | P. J. JANSON  | 9-2-71 |
| W   | 23         | P. J. JANSON  | 9-2-71 |
| X   | 24         | P. J. JANSON  | 9-2-71 |
| Y   | 25         | P. J. JANSON  | 9-2-71 |
| Z   | 26         | P. J. JANSON  | 9-2-71 |
| AA  | 27         | P. J. JANSON  | 9-2-71 |
| AB  | 28         | P. J. JANSON  | 9-2-71 |
| AC  | 29         | P. J. JANSON  | 9-2-71 |
| AD  | 30         | P. J. JANSON  | 9-2-71 |
| AE  | 31         | P. J. JANSON  | 9-2-71 |
| AF  | 32         | P. J. JANSON  | 9-2-71 |
| AG  | 33         | P. J. JANSON  | 9-2-71 |
| AH  | 34         | P. J. JANSON  | 9-2-71 |
| AI  | 35         | P. J. JANSON  | 9-2-71 |
| AJ  | 36         | P. J. JANSON  | 9-2-71 |
| AK  | 37         | P. J. JANSON  | 9-2-71 |
| AL  | 38         | P. J. JANSON  | 9-2-71 |
| AM  | 39         | P. J. JANSON  | 9-2-71 |
| AN  | 40         | P. J. JANSON  | 9-2-71 |
| AO  | 41         | P. J. JANSON  | 9-2-71 |
| AP  | 42         | P. J. JANSON  | 9-2-71 |
| AQ  | 43         | P. J. JANSON  | 9-2-71 |
| AR  | 44         | P. J. JANSON  | 9-2-71 |
| AS  | 45         | P. J. JANSON  | 9-2-71 |
| AT  | 46         | P. J. JANSON  | 9-2-71 |
| AU  | 47         | P. J. JANSON  | 9-2-71 |

|                                      |                              |              |                               |           |          |
|--------------------------------------|------------------------------|--------------|-------------------------------|-----------|----------|
| ETCH REV <b>E</b>                    | FIRST USED ON OPTION / MODEL | QTY.         | DESCRIPTION                   | PART NO.  | ITEM NO. |
|                                      | DR11-B                       |              |                               |           |          |
| UNLESS OTHERWISE SPECIFIED           | DRN. W. MAJOR                | DATE 2/23/71 | PARTS LIST                    |           |          |
| UNLESS OTHERWISE SPECIFIED           | CHK'D. <i>[Signature]</i>    | DATE 2-2-71  | digital EQUIPMENT CORPORATION |           |          |
| DIMENSION IN INCHES                  | ENG. <i>[Signature]</i>      | DATE 2/2-71  | MAYNARD, MASSACHUSETTS        |           |          |
| TOLERANCES                           | PROD. <i>[Signature]</i>     | DATE 3-19-71 | TITLE                         |           |          |
| PERPENDICULARITY ANGLE               |                              | DATE 3/12/71 | BUS INTERFACE                 |           |          |
| FINAL SURFACE QUALITY                |                              | DATE 3/12/71 | M7219                         |           |          |
| REMOVE BURRS AND BREAK SHARP CORNERS |                              | DATE 3/12/71 | DI-0                          |           |          |
| MATERIAL                             | NEXT HIGHER ASSY             |              | D-MU-DR11-B-01                |           |          |
| FINISH                               | SCALE NONE                   |              | SIZE CODE                     | NUMBER    | REV.     |
|                                      | SHEET 1 OF 5                 |              | DCS                           | M7219-0-1 | K        |

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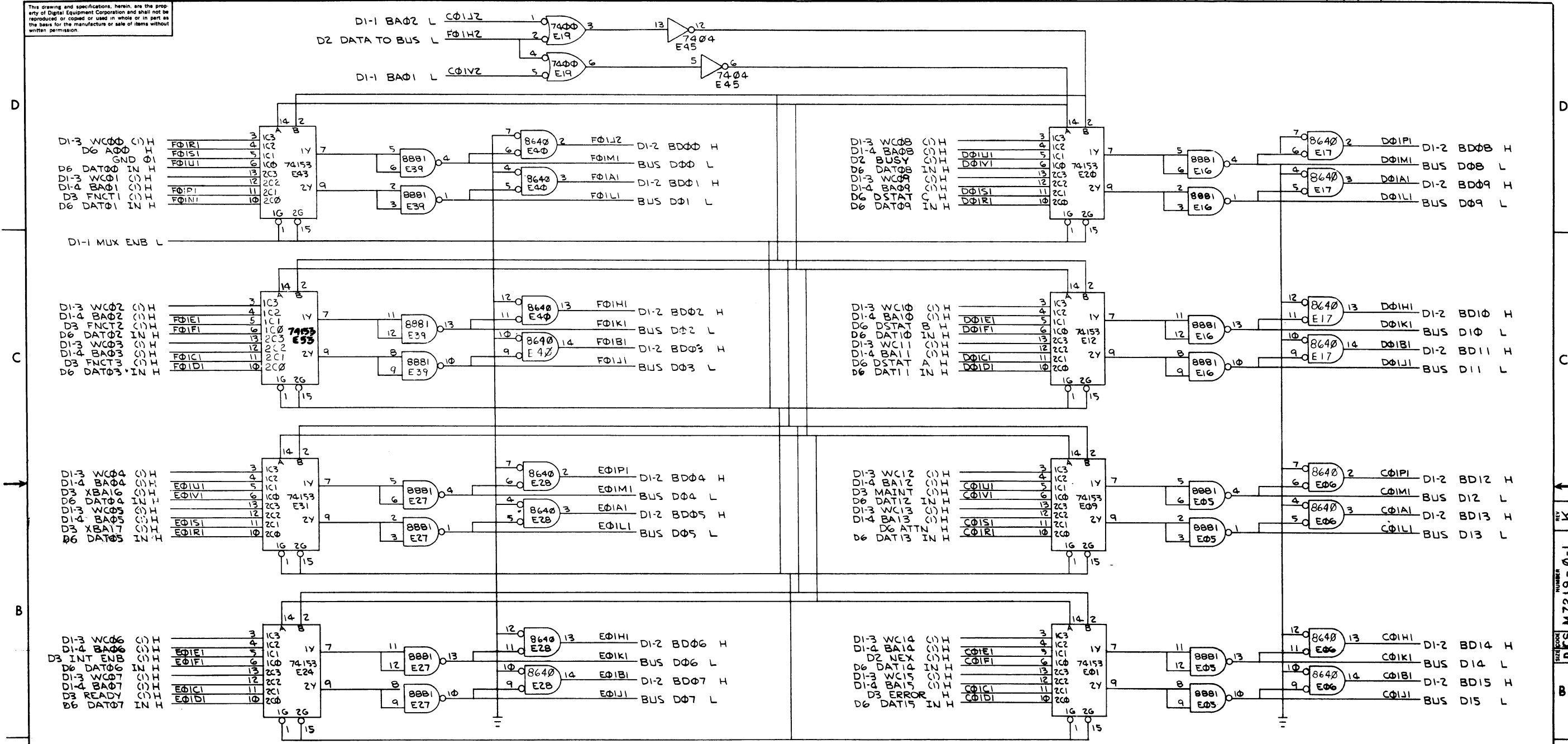


- BUS M SYN L C0I1R2
- BUS A17 L C0I1L2
- BUS A16 L C0I1L2
- BUS A15 L C0I1D2
- BUS A14 L C0I1E2
- BUS A13 L C0I1F2
- BUS A12 L C0I1N2
- BUS A11 L C0I1E2
- BUS A10 L C0I1V2
- BUS A9 L C0I1N1
- BUS A8 L C0I1N2
- BUS A7 L C0I1M2
- BUS A6 L C0I1F2
- BUS A5 L C0I1N2
- BUS A4 L C0I1L2
- BUS A3 L C0I1K2
- BUS A2 L C0I1T2
- BUS A1 L C0I1E2
- BUS A0 L C0I1L2
- BUS 0 L C0I1V2
- BUS C1 L C0I1R2
- BUS INIT L C0I1H2
- BUS S SYN L C0I1H2

|     |  |
|-----|--|
| REV |  |
| CHG |  |

|   |                              |                 |  |          |
|---|------------------------------|-----------------|--|----------|
| FIRST USED ON OPTION/MODEL<br>DRI1-B                            | QTY.                         | DESCRIPTION     | PART NO.   | ITEM NO. |
| PARTS LIST  |                              |                 |  |          |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSION IN INCHES<br>TOLERANCES | DRN.<br>W. MAJOR             | DATE<br>2/17/71 | DIGITAL EQUIPMENT CORPORATION<br>MAYNARD MASSACHUSETTS |          |
| DECIMALS  | CHK'D.                       | DATE            | TITLE  |          |
| ANGLES  | ENG. <i>Condon</i>           | 2-18-71         | BUS INTERFACE  |          |
| .XXX - .005   | PROL. ENG. <i>P.P. Hanon</i> | DATE            | M7219(ADRS SEL) DI-1                                   |          |
| .XX - .02   | PROD. <i>L. Call</i>         | DATE            | SIZE CODE NUMBER REV.                                  |          |
| .X - .1   |                              | 3-9-71          | DCS M7219-0-1 K  |          |
| REMOVE BURRS AND BREAK SHARP<br>CORNERS SURFACE QUALITY         |                              |                 | SCALE  |          |
| MATERIAL  | NEXT HIGHER ASSY.            |                 | SHEET 2 OF 5   |          |
| FINISH  |                              |                 | DIST.  |          |

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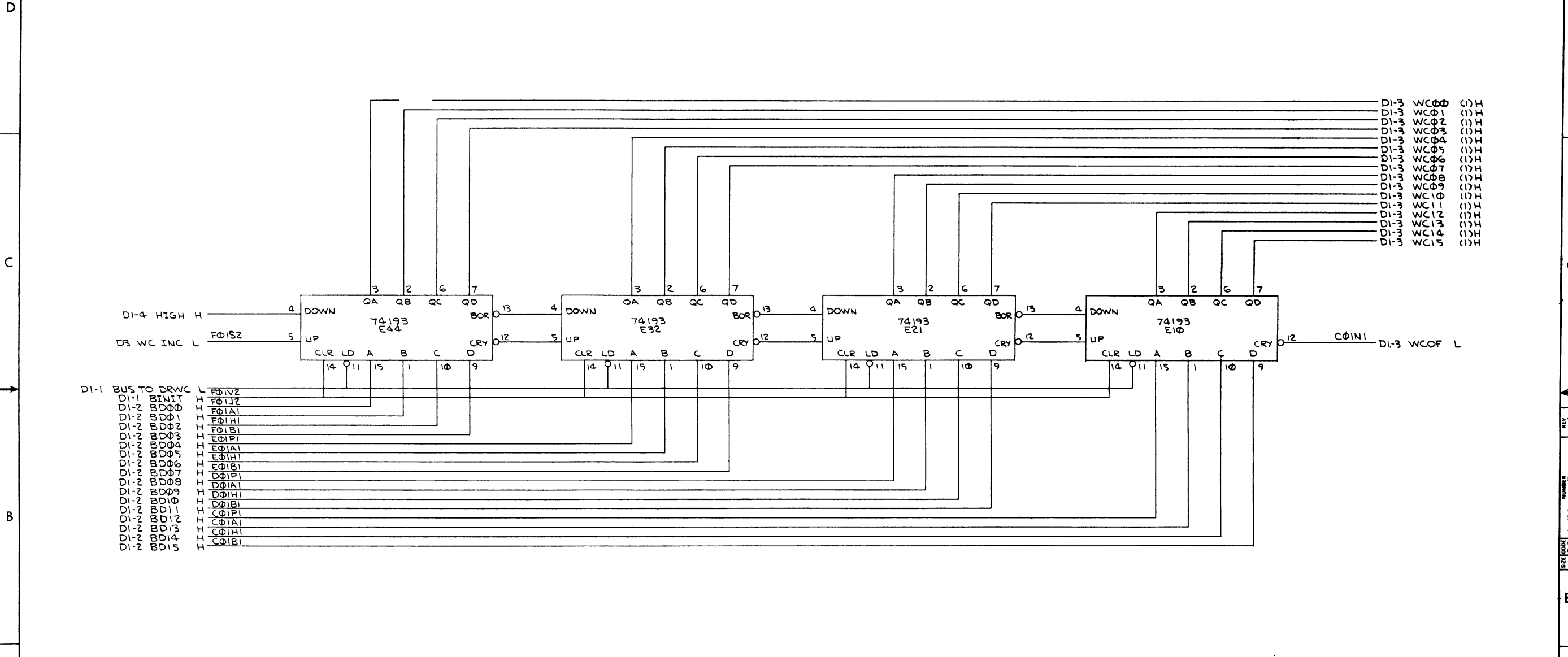


| REV | CHANGE NO. |
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|     |            |
|     |            |
|     |            |

| FIRST USED ON OPTION/MODEL                                      | QTY.              | DESCRIPTION                  | PART NO.    | ITEM NO.  |
|---|-------------------|------------------------------|-------------|---|
| DR11-B  |                   |                              |             |   |
| PARTS LIST  |                   |                              |             |   |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSION IN INCHES<br>TOLERANCES |                   | DRN. W. MAJOR                | DATE 2-21   | <b>digital</b> EQUIPMENT CORPORATION<br>MAYNARD MASSACHUSETTS<br><b>BUS INTERFACE</b><br>M7219 (MUX) D+2<br>DCS M7219-0-1 K |
| DECIMALS  | ANGLES            | CHK'D. <i>[Signature]</i>    | DATE 3-9-71 |   |
| .XXX - .006   | ±0° 30'           | ENG. <i>[Signature]</i>      | DATE 3-1-71 |   |
| .XX - .02   |                   | PRO. ENG. <i>[Signature]</i> | DATE 3-1-71 |   |
| .X - .1   |                   | PROD. <i>[Signature]</i>     | DATE 3-1-71 |   |
| MATERIAL  | NEXT HIGHER ASSY. |                              |             |   |
| FINISH  | SCALE             |                              |             |   |
|   | SHEET 3 OF 5      |                              |             |   |

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8 7 6 5 4 3 2 1



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

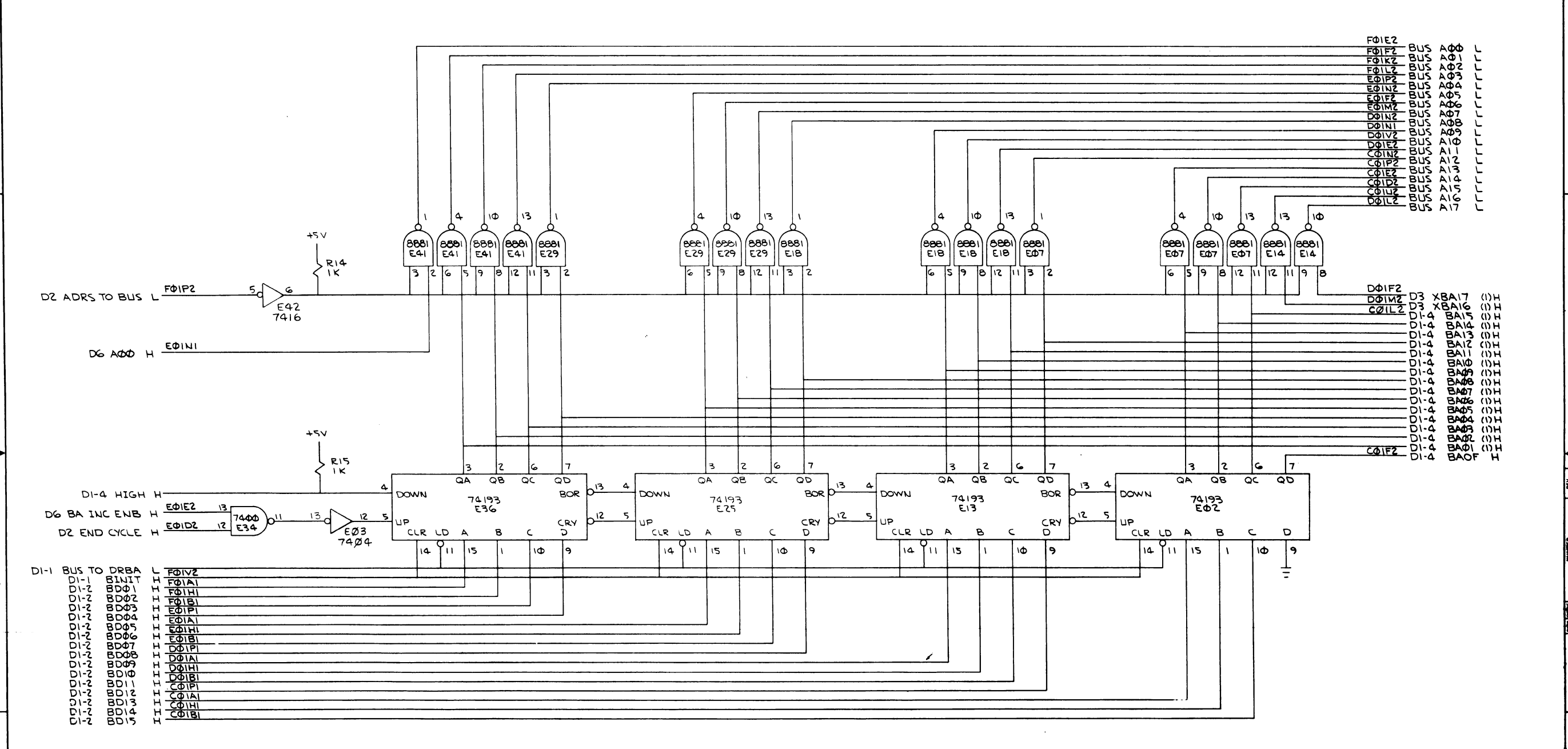
DEC FORM NO DRD 102-B

8 7 6 5 4 3 2 1

|  |                   |                           |              |   |
|--|-------------------|---------------------------|--------------|---|
| FIRST USED ON OPTION/MODEL                                 | QTY.              | DESCRIPTION               | PART NO.     | ITEM NO.  |
| DR11-B   |                   |                           |              |   |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES |                   |                           |              |   |
| DECIMALS   | ANGLES            | PARTS LIST                |              |   |
| .XXX - .005  | ± 0° 30'          | DRN. W. MAJOR             | DATE 2/10/71 | <br>DIGITAL EQUIPMENT CORPORATION<br>MAYNARD, MASSACHUSETTS |
| .XX - .02  |                   | CHK'D. <i>[Signature]</i> | DATE 3-10-71 |   |
| .X - .1  |                   | ENG. <i>[Signature]</i>   | DATE 3-19-71 |   |
|  |                   | PROD. <i>[Signature]</i>  | DATE 3-27-71 |   |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓     |                   |                           |              |   |
| MATERIAL   | NEXT HIGHER ASSY. | TITLE                     |              |   |
| FINISH   | SCALE             | M7219 (DRWC) DI-3         |              |   |
|  | SHEET 4 OF 5      | SIZE CODE                 | NUMBER       | REV.  |
|  |                   | DCS M7219-0-1             |              | K   |

REV K  
NUMBER  
DCS M7219-0-1

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|  |  |                   |             |                               |          |
|--|--|-------------------|-------------|-------------------------------|----------|
| FIRST USED ON OPTION/MODEL                           |  | QTY.              | DESCRIPTION | PART NO.                      | ITEM NO. |
| DR11-B   |  |                   |             |                               |          |
| PARTS LIST   |  |                   |             |                               |          |
| UNLESS OTHERWISE SPECIFIED                           |  | DRN               | DATE        | digital EQUIPMENT CORPORATION |          |
| DIMENSION IN INCHES                                  |  | W.M.A.D.R.        | 2/19/71     | MAYNARD, MASSACHUSETTS        |          |
| TOLERANCES   |  | CHK'D.            | DATE        | TITLE                         |          |
| DECIMALS   |  |                   | 3-9/71      | BUS INTERFACE                 |          |
| ANGLES   |  | ENG               |             | M7219 (DRBA) DI-4             |          |
| .XXX = .008  |  | PRD. ENG          | DATE        | SIZE CODE                     |          |
| .XX = .02  |  | P.E. Janon        | 5-11-71     | NUMBER                        |          |
| .X = .1  |  | PROD.             | DATE        | DCS M7219-0-1                 |          |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY |  | W. Call           | 3/2/71      | K                             |          |
| MATERIAL   |  | NEXT HIGHER ASSY. |             | SCALE                         |          |
| FINISH   |  | SHEET 5 OF 5      |             | DIST.                         |          |

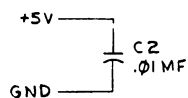
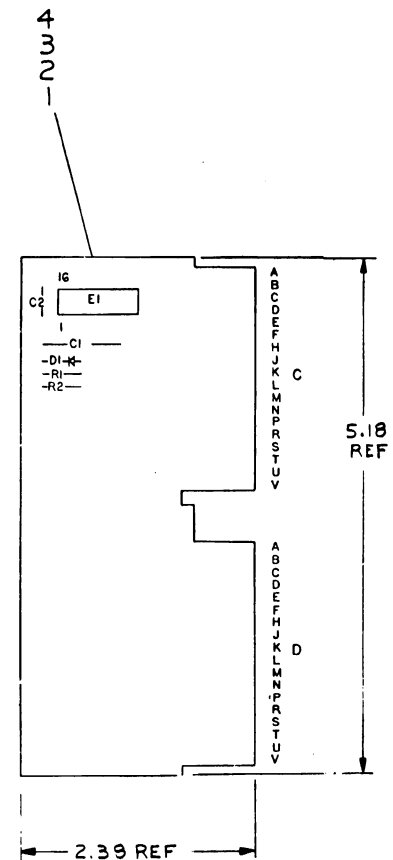
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|-----|-----|
| REV | NO. |
|     |     |
| CHK |     |

DEC FORM NO. DRD 102-B

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**NOTES:**

1. GROUNDS ARE ON THE PINS RATHER THAN THE BOARD AND ARE WIRED TO SLOTS C04 AND D04, NOT A02 AND B02.
2. NORMALLY IN A02 AND B02 - PLUGGED INTO C04 AND D04 FOR MAINTENANCE USE.
3. THIS IS THE ONLY SIGNAL USED WHEN THE BOARD IS IN A02 AND B02.



1-0-0896W 2

|     |                              |                |    |
|-----|------------------------------|----------------|----|
| REF | X-Y COORDINATE HOLE LOCATION | K-CO-M9680-0-4 | 1  |
| REF | ASSY/DRILLING HOLE LAYOUT    | D-AH-M9680-0-5 | 2  |
| REF | MODULE ECO HISTORY           | B-MH-M9680-0-6 | 3  |
| 1   | ETCHED CIRCUIT BOARD         | 5010391        | 4  |
| 1   | CAP .01MF, 50V, 20%          | 1001610        | 5  |
| 1   | CAP. 270PF, 100V, 5%         | 1000022        | 6  |
| 1   | DIODE D664                   | 1100114        | 7  |
| 1   | RES 1K, 1/4W, 5%             | 1300365        | 8  |
| 1   | RES 10K, 1/4W, 5%            | 1300479        | 9  |
| 1   | I.C. DEC 74123               | 1910436        | 10 |

| QTY | REF DESIGNATION | DESCRIPTION | PART NO. | ITEM NO. |
|-----|-----------------|-------------|----------|----------|
|-----|-----------------|-------------|----------|----------|

| FIRST USED ON OPTION MODEL     |         | PARTS LIST                    |             |
|--------------------------------|---------|-------------------------------|-------------|
| DR11-B                         |         | ETCH BOARD REV                | A           |
| DRN                            | DATE    | digital EQUIPMENT CORPORATION |             |
| CHRTD.                         | DATE    | MAYNARD MASSCH-USA#778        |             |
| ENG.                           | DATE    | TITLE                         |             |
| PRD.                           | DATE    | DR11 B TEST BOARD             |             |
| PRY.                           | DATE    | NEXT HIGHER ASSY              |             |
| D664                           |         | IN3606                        | B-DD-DR11-B |
| DEC NO.                        | EIA NO. | DEC NO.                       | EIA NO.     |
| SEMICONDUCTOR CONVERSION CHART |         | SCALE                         | NONE        |
|                                |         | SHEET                         | 1 OF 2      |
|                                |         | DIST.                         |             |

| IC TYPE  | GND | +5V |
|--|-----|-----|
| DEC 74123  | 8   | 16  |
| GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY. EXCEPTIONS ARE STATED ABOVE. |     |     |
| IC PIN LOCATIONS   |     |     |

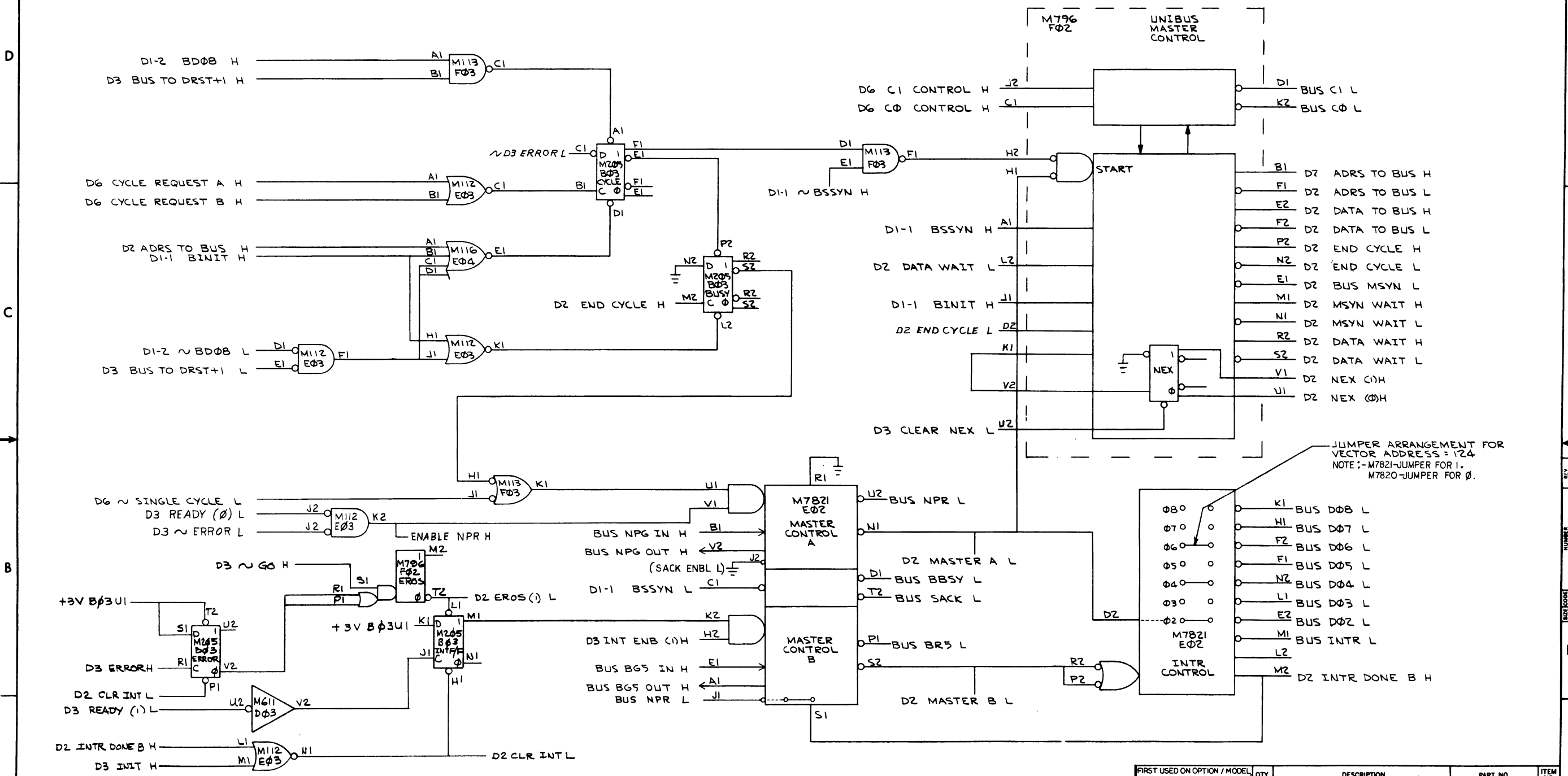
DEC FORM NO. DRD 135A

PART NUMBER  
DICS M9680-0-1





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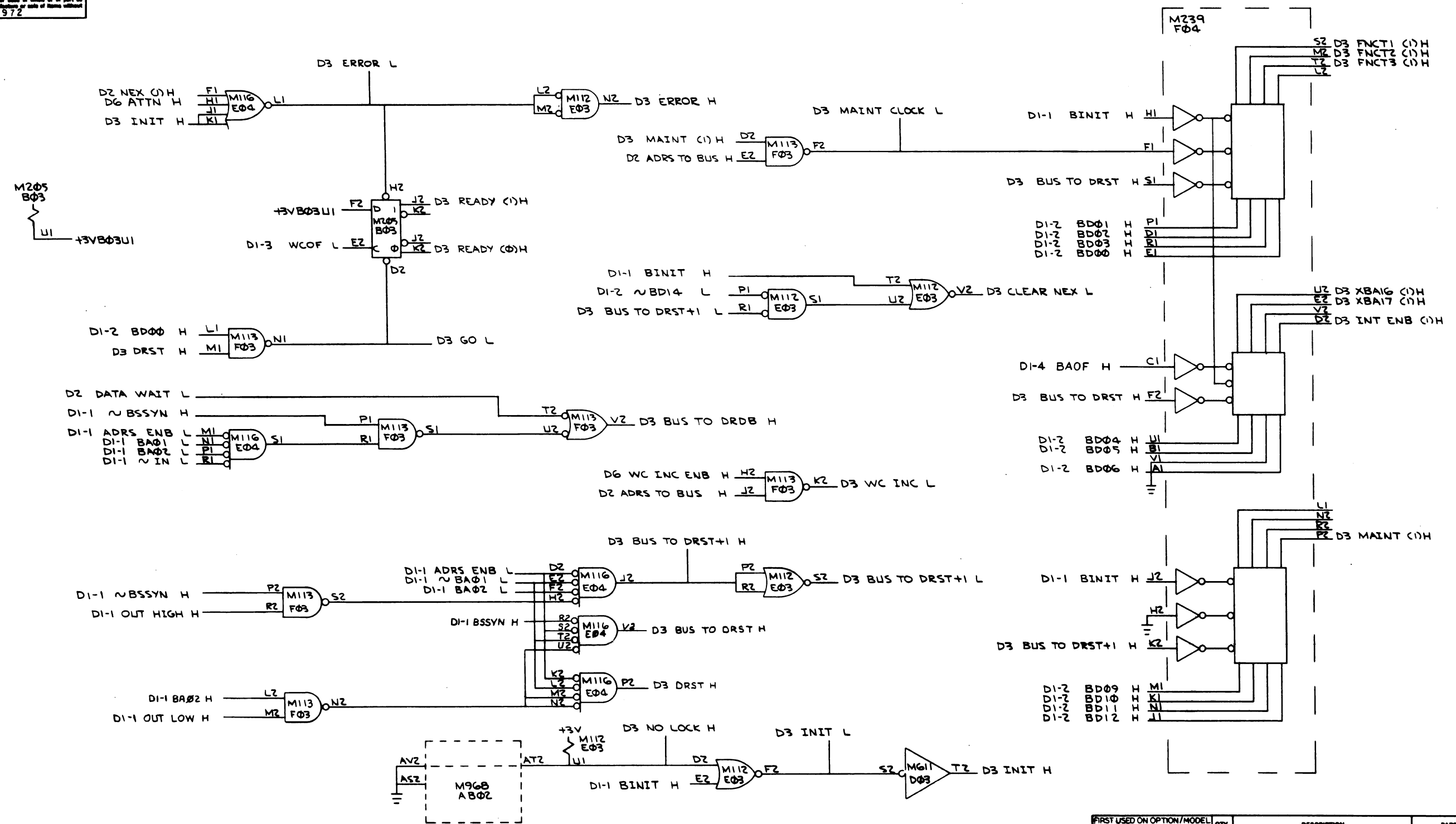
| REV | CHANGE NO. | DATE      | BY        | CHKD. |
|-----|------------|-----------|-----------|-------|
| A   | 0001       | 5-28-71   | P. JANSON |       |
| B   | 0004       | 12-2-71   | P. JANSON |       |
| C   | 0006       | 12-2-71   | P. JANSON |       |
| D   | 0015       | 10-17-72  | P. JANSON |       |
| E   |            | 11/AUG/76 | K. POON   |       |

| REV | CHANGE NO. | DATE      | BY        | CHKD. |
|-----|------------|-----------|-----------|-------|
| A   | 0001       | 5-28-71   | P. JANSON |       |
| B   | 0004       | 12-2-71   | P. JANSON |       |
| C   | 0006       | 12-2-71   | P. JANSON |       |
| D   | 0015       | 10-17-72  | P. JANSON |       |
| E   |            | 11/AUG/76 | K. POON   |       |

| REV | CHANGE NO. | DATE      | BY        | CHKD. |
|-----|------------|-----------|-----------|-------|
| A   | 0001       | 5-28-71   | P. JANSON |       |
| B   | 0004       | 12-2-71   | P. JANSON |       |
| C   | 0006       | 12-2-71   | P. JANSON |       |
| D   | 0015       | 10-17-72  | P. JANSON |       |
| E   |            | 11/AUG/76 | K. POON   |       |

| FIRST USED ON OPTION / MODEL  | QTY. | DESCRIPTION | PART NO.              | ITEM NO. |
|---|------|-------------|-----------------------|----------|
| DR11-B  |      |             |                       |          |
| PARTS LIST  |      |             |                       |          |
| UNLESS OTHERWISE SPECIFIED DRN. W. MAJOR DATE 2/9/71                          |      |             |                       |          |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES CHKD. DATE 3-5-71              |      |             |                       |          |
| TOLERANCES DECIMALS FRACTIONS ANGLES ± .005 ± 1/64 ± 90° DATE 3/19/71         |      |             |                       |          |
| FINAL SURFACE QUALITY REMOVE BURRS AND BREAK SHARP CORNERS PROD. DATE 3/15/71 |      |             |                       |          |
| MATERIAL  |      |             | TITLE                 |          |
| FINISH  |      |             | NPR CONTROL D2        |          |
| NEXT HIGHER ASSY  |      |             | A-ML-DR11-B           |          |
| SCALE   |      |             | SIZE CODE NUMBER REV. |          |
| SHEET 1 OF 1  |      |             | DBS DR11-B-02 E       |          |
| DIST.   |      |             |                       |          |

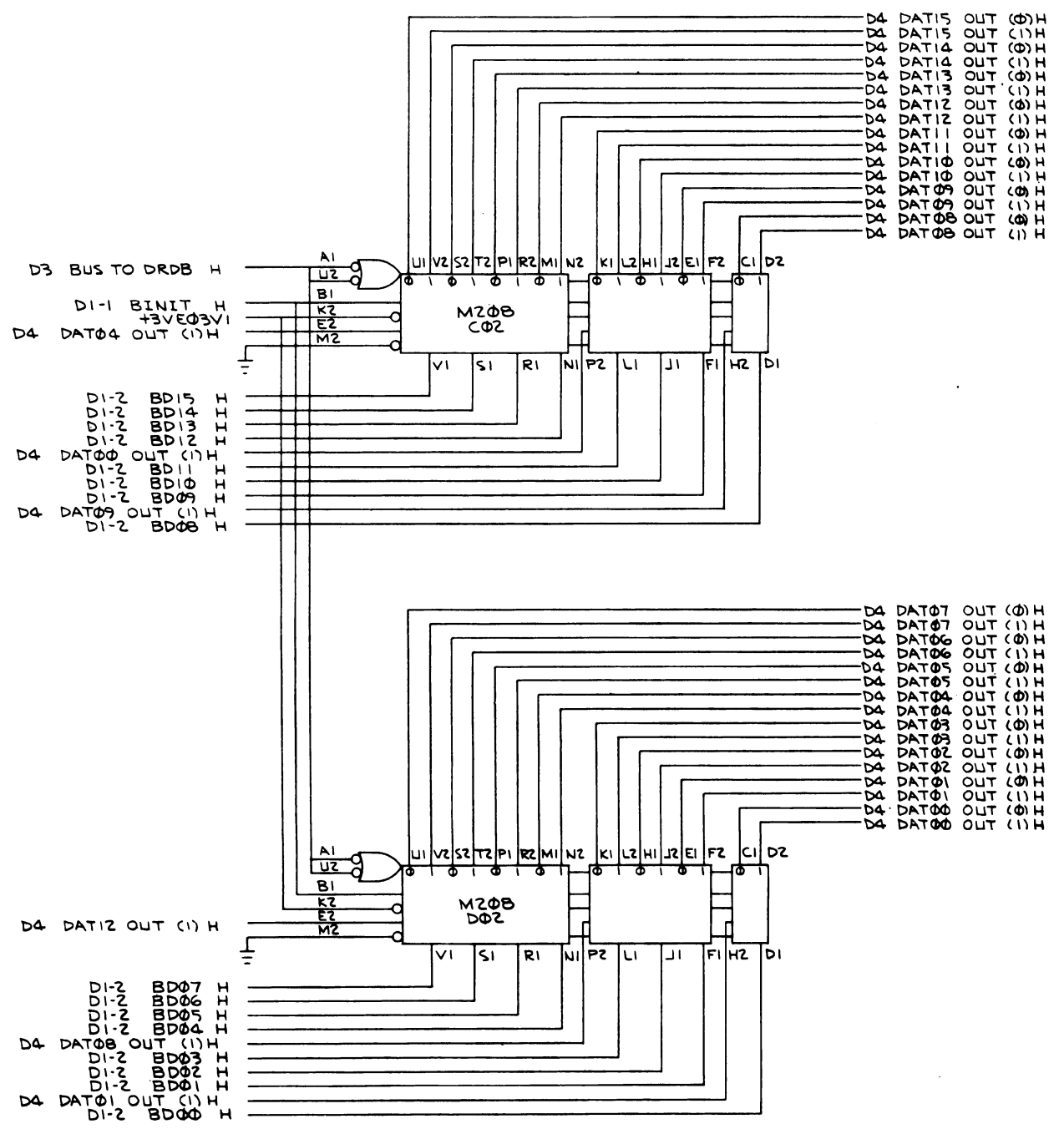
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| REV | CHG | DATE     | BY       | DESCRIPTION |
|-----|-----|----------|----------|-------------|
| A   | 1   | 12-17-78 | JANSON   | DR11B-00006 |
| B   | 2   | 12-20-78 | JANSON   | DR11B-00007 |
| C   | 3   | 12-25-78 | JANSON   | DR11B-00016 |
| 77  | 4   | 12-27-77 | K. POON  | DR11B-00016 |
| 77  | 5   | 12-27-77 | L. PETER | DR11B-00016 |

| FIRST USED ON OPTION/MODEL           | QTY.             | DESCRIPTION | PART NO. | ITEM NO. |
|--------------------------------------|------------------|-------------|----------|----------|
| DR11-B                               |                  |             |          |          |
| UNLESS OTHERWISE SPECIFIED           |                  |             |          |          |
| DIMENSIONS IN INCHES                 |                  |             |          |          |
| TOLERANCES                           |                  |             |          |          |
| DECIMALS                             | FRACTIONS        | ANGLES      |          |          |
| ± .005                               | ± 1/64           | ± .075      |          |          |
| FINAL SURFACE QUALITY                |                  |             |          |          |
| REMOVE BURRS AND BREAK SHARP CORNERS |                  |             |          |          |
| MATERIAL                             | NEXT HIGHER BSSV |             |          |          |
| FINISH                               | A-ML-DR11-B      |             |          |          |
| SCALE                                |                  | NUMBER      |          | REV      |
| SHEET 1 OF 2                         |                  | DR11-B-03   |          | C        |

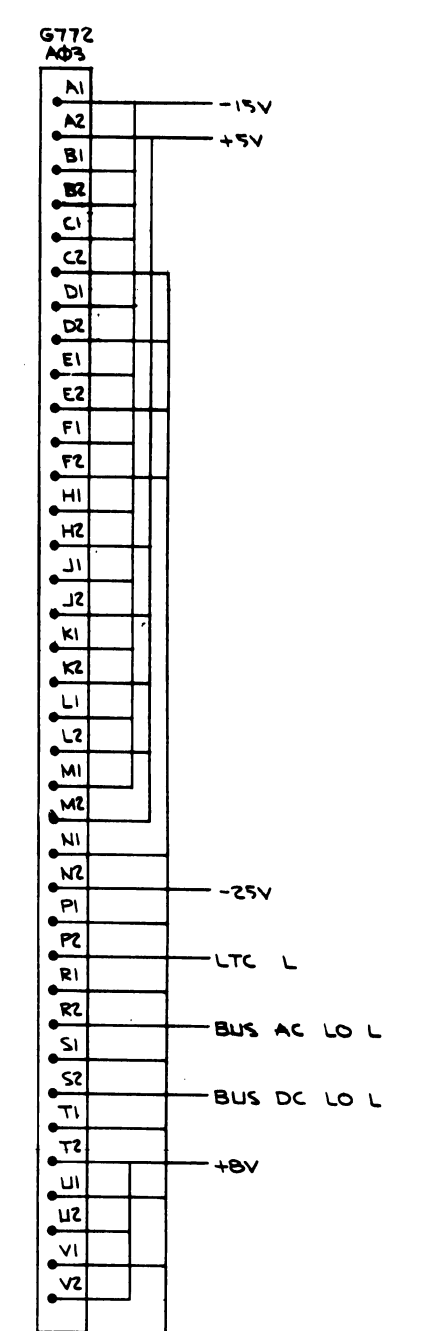
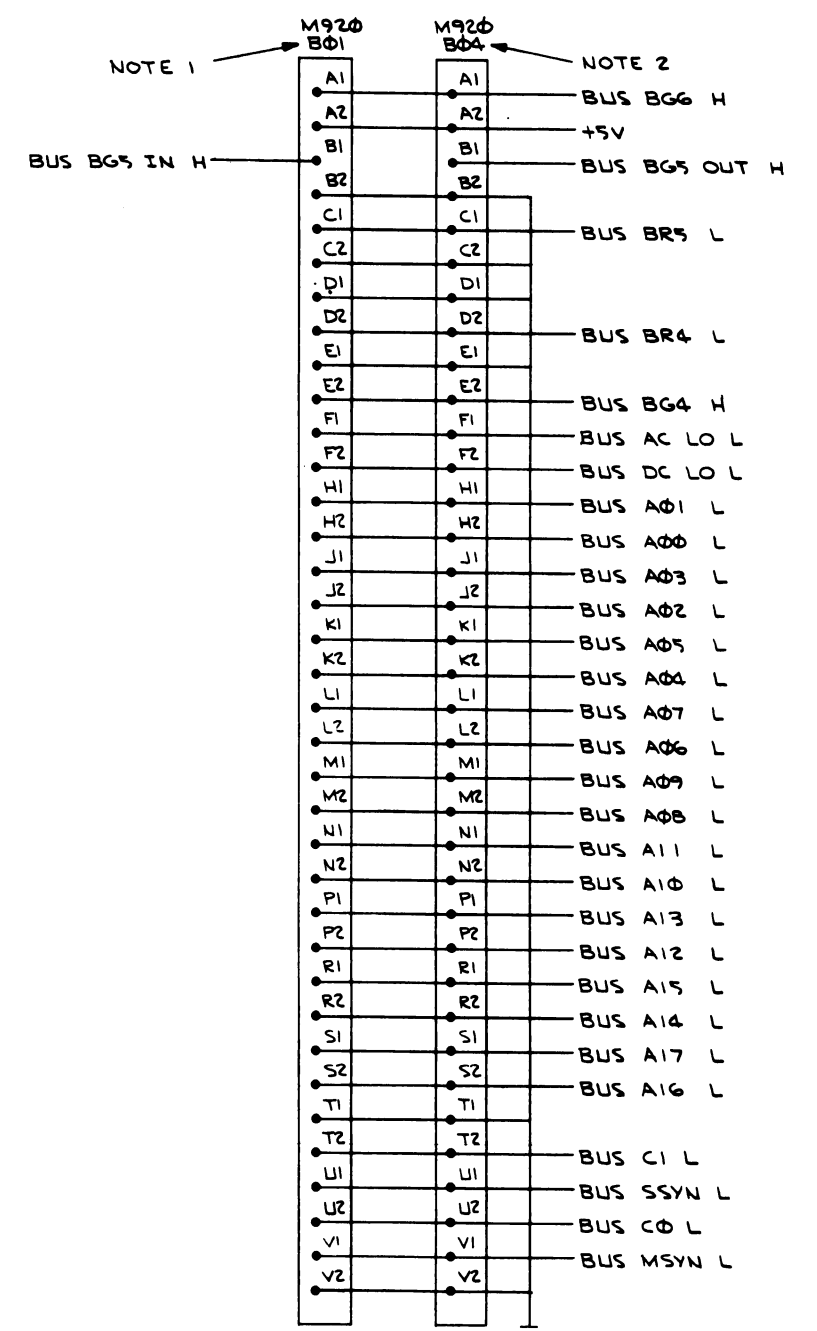
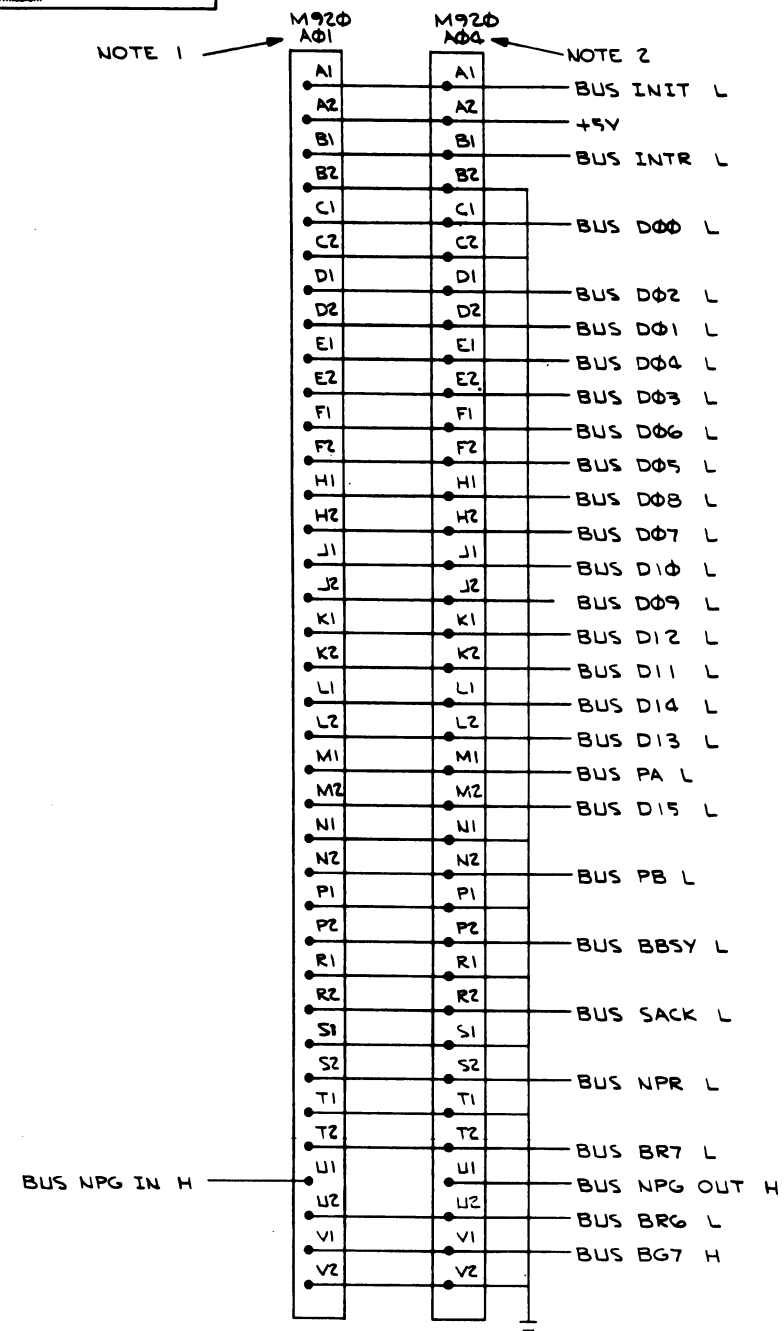
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| REVISIONS  | REV. |
| CHANGE NO. |      |
| CHK        |      |

|  |                                 |                                  |  |                     |
|--|---------------------------------|----------------------------------|--|---------------------|
| FIRST USED ON OPTION / MODEL<br>DR11-B   | QTY.                            | DESCRIPTION                      | PART NO.   | ITEM NO.            |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSION IN INCHES<br>TOLERANCES<br>DECIMALS FRACTIONS ANGLES<br>± .005 ± 1/64 ± 0°30'<br>FINAL SURFACE QUALITY<br>REMOVE BURRS AND BREAK SHARP CORNERS | DRN. W. MAJOR<br>DATE 2/17/71   | DATE 3-2-71                      | PARTS LIST<br><b>digital</b> CORPORATION<br>MAYNARD, MASSACHUSETTS |                     |
| MATERIAL<br>/ /  | PROD. DATE 3-2-71               | TITLE<br>DATA REGISTER (DRDB) D4 |  |                     |
| FINISH<br>/ /  | NEXT HIGHER ASSY<br>A-ML-DR11-B | SCALE<br>SHEET 1 OF 1            | SIZE CODE<br>DBS   | NUMBER<br>DR11-B-04 |

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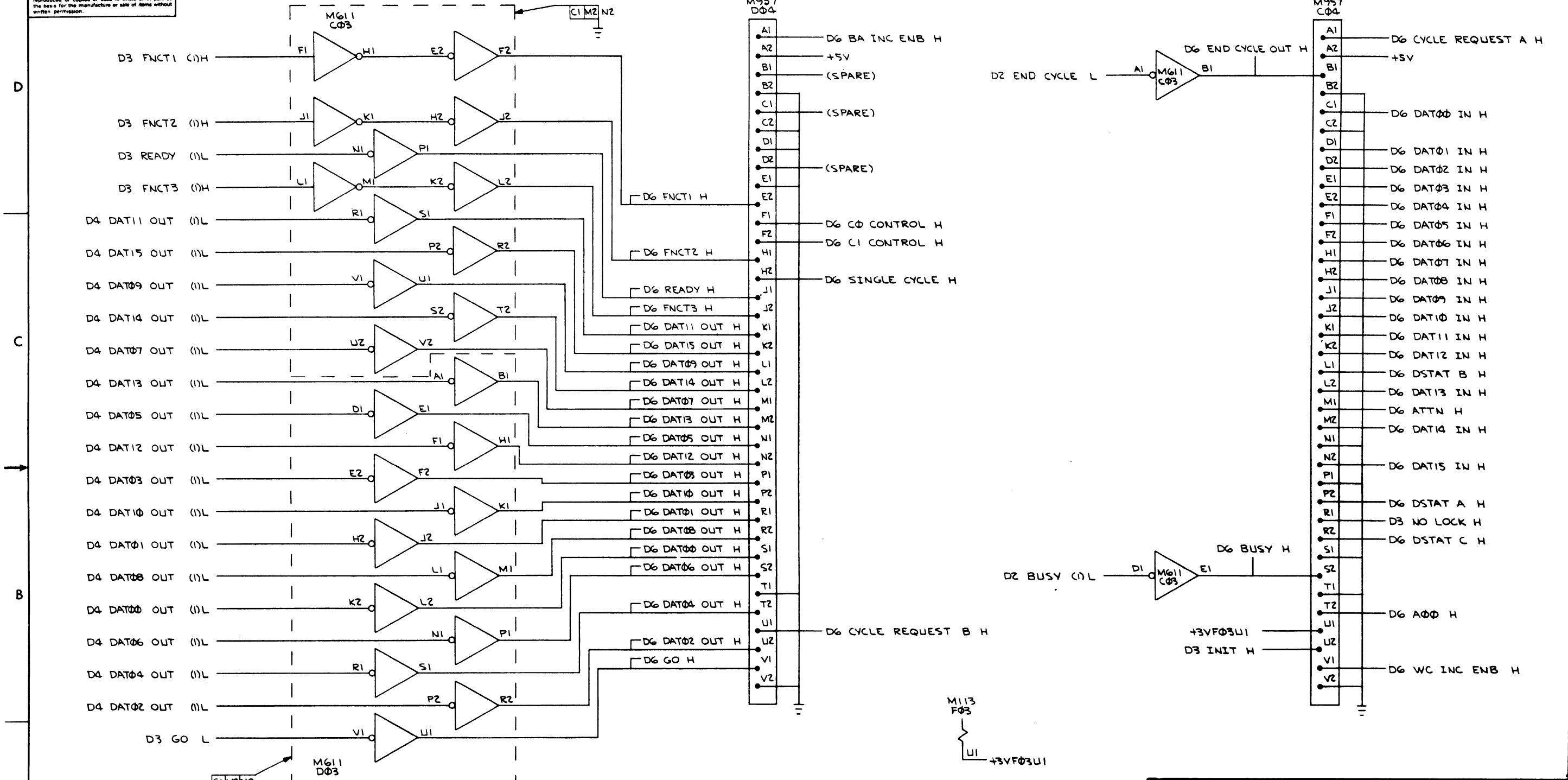
NOTE 1: MAY BE EITHER M920 OR BC11A  
 NOTE 2: MAY BE M920, M930, OR BC11A

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

DEC FORM NO. DRD 102-B

|  |                   |                          |              |  |
|--|-------------------|--------------------------|--------------|--|
| FIRST USED ON OPTION/MODEL<br>DR11-B                       | QTY.              | DESCRIPTION              | PART NO.     | ITEM NO.   |
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES |                   |                          |              |  |
| DECIMALS   | ANGLES            | PARTS LIST               |              |  |
| .XXX - .005  | ±0° 30'           | DRN. W. MAJOR            | DATE 2/22/71 | EQUIPMENT CORPORATION<br>NATHAN, MASSACHUSETTS<br>TITLE<br>DR11-B BUS & POWER CONN<br>D5 |
| .XX - .02  |                   | CHK'D.                   | DATE 3-1-71  |  |
| .X - .1  |                   | ENG. <i>[Signature]</i>  | DATE 3-1-71  |  |
|  |                   | PROD. <i>[Signature]</i> | DATE 3-1-71  |  |
| MATERIAL   | NEXT HIGHER ASSY. | SIZE CODE                |              |  |
| FINISH   | SCALE             | A-ML-DR11-B              | NUMBER       | REV.   |
|  | SHEET OF          | D I C                    | DR11-B-05    |  |

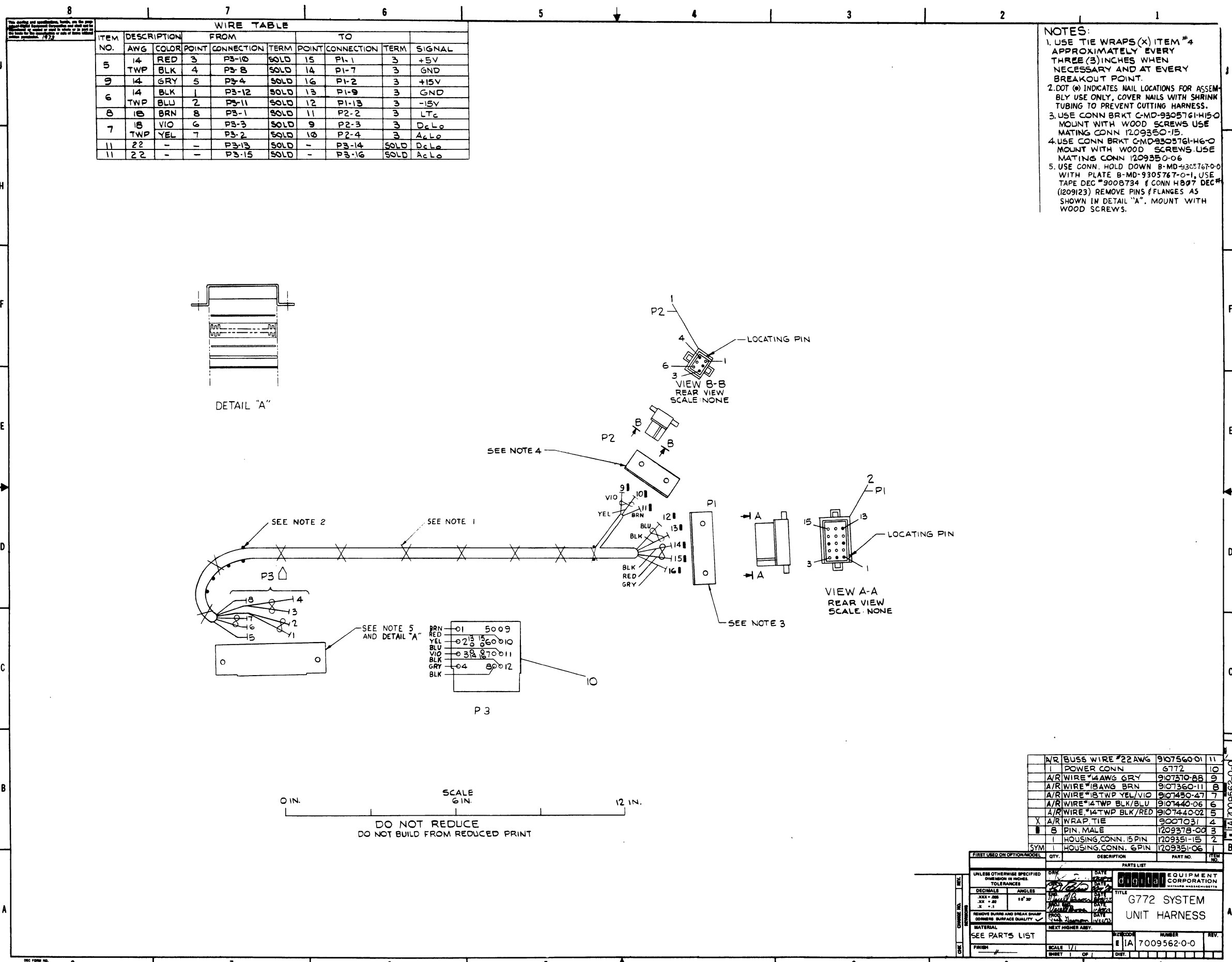
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| FIRST USED ON OPTION/MODEL                           | QTY.              | DESCRIPTION    | PART NO.     | ITEM NO.   |
|--|-------------------|----------------|--------------|--|
| DR11-B   |                   | PARTS LIST     |              |  |
| UNLESS OTHERWISE SPECIFIED, DIMENSIONS IN INCHES     |                   | DRN. W. MAJOR  | DATE 2/19/71 | <b>digital</b> EQUIPMENT CORPORATION<br>MAYNARD, MASSACHUSETTS |
| TOLERANCES   |                   | CHK'D          | DATE 1-9-71  |  |
| DECIMALS   | ANGLES            | ENG. P. Jordan | DATE 2/19/71 | TITLE<br><b>USER DEVICE CONNECTIONS</b><br>D6                  |
| .XXX - .008  | ±0° 30'           | PROG. P. Call  | DATE 3/24/71 |  |
| .XX - .02  |                   |                |              |  |
| REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY |                   | PROG. P. Call  | DATE 3/24/71 |  |
| MATERIAL   | NEXT HIGHER ASSY. |                |              |  |
| FINISH   | SCALE             |                |              |  |
|  | SHEET OF          |                |              |  |
|  |                   |                |              |  |

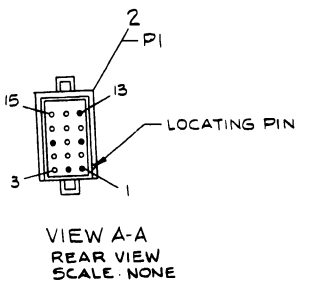
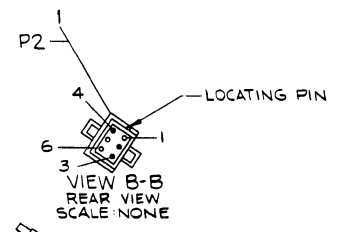
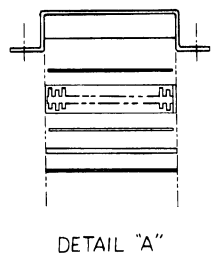
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|-----------|-----|------|
| REVISIONS | NO. | REV. |
| CHK       |     |      |

REV. NUMBER DR11-B-06



| ITEM NO. | WIRE TABLE |       |       |            |      |       |            |      | SIGNAL |
|----------|------------|-------|-------|------------|------|-------|------------|------|--------|
|          | AWG        | COLOR | POINT | CONNECTION | TERM | POINT | CONNECTION | TERM |        |
| 5        | 14         | RED   | 3     | P3-10      | SOLD | 15    | P1-1       | 3    | +5V    |
|          | TWP        | BLK   | 4     | P3-8       | SOLD | 14    | P1-7       | 3    | GND    |
| 9        | 14         | GRY   | 5     | P3-4       | SOLD | 16    | P1-2       | 3    | +15V   |
|          | 14         | BLK   | 1     | P3-12      | SOLD | 13    | P1-9       | 3    | GND    |
| 6        | TWP        | BLU   | 2     | P3-11      | SOLD | 12    | P1-13      | 3    | -15V   |
|          | 18         | BRN   | 8     | P3-1       | SOLD | 11    | P2-2       | 3    | LTc    |
| 7        | 18         | VIO   | 6     | P3-3       | SOLD | 9     | P2-3       | 3    | DcLo   |
|          | TWP        | YEL   | 7     | P3-2       | SOLD | 10    | P2-4       | 3    | AcLo   |
| 11       | 22         | -     | -     | P3-13      | SOLD | -     | P3-14      | SOLD | DcLo   |
|          | 22         | -     | -     | P3-15      | SOLD | -     | P3-16      | SOLD | AcLo   |

- NOTES:
- USE TIE WRAPS (X) ITEM #4 APPROXIMATELY EVERY THREE (3) INCHES WHEN NECESSARY AND AT EVERY BREAKOUT POINT.
  - DOT (•) INDICATES NAIL LOCATIONS FOR ASSEMBLY USE ONLY. COVER NAILS WITH SHRINK TUBING TO PREVENT CUTTING HARNESS.
  - USE CONN BRKT C-MD-9305761-H15-0 MOUNT WITH WOOD SCREWS USE MATING CONN 1209350-15.
  - USE CONN BRKT C-MD-9305761-H6-0 MOUNT WITH WOOD SCREWS USE MATING CONN 1209350-06.
  - USE CONN. HOLD DOWN B-MD-9305767-0-0 WITH PLATE B-MD-9305767-0-1, USE TAPE DEC #9008734 & CONN H007 DEC# (1209123) REMOVE PINS & FLANGES AS SHOWN IN DETAIL "A". MOUNT WITH WOOD SCREWS.




|     |    |      |
|-----|----|------|
| BRN | 01 | 5009 |
| RED | 02 | 5010 |
| YEL | 03 | 5011 |
| BLU | 04 | 5012 |
| VIO | 05 | 5013 |
| BLK | 06 | 5014 |
| GRY | 07 | 5015 |
| BLK | 08 | 5016 |

| QTY. | DESCRIPTION              | PART NO.   | ITEM NO. |
|------|--------------------------|------------|----------|
| 1    | A/R BUSS WIRE #22 AWG    | 910756001  | 11       |
| 1    | POWER CONN               | 6772       | 10       |
| 1    | A/R WIRE #14 AWG GRY     | 9107310-08 | 9        |
| 1    | A/R WIRE #18 AWG BRN     | 9107360-11 | 8        |
| 1    | A/R WIRE #18 TWP YEL/VIO | 9107430-47 | 7        |
| 1    | A/R WIRE #14 TWP BLK/BLU | 9107440-06 | 6        |
| 1    | A/R WIRE #14 TWP BLK/RED | 9107440-02 | 5        |
| X    | A/R WRAP TIE             | 9007031    | 4        |
| 1    | B PIN, MALE              | 1209378-00 | 3        |
| 1    | HOUSING, CONN. 15 PIN    | 1209351-15 | 2        |
| 1    | HOUSING, CONN. 6 PIN     | 1209351-06 | 1        |

|   |  |  |               |                 |               |                |               |                |
|---|--|--|---------------|-----------------|---------------|----------------|---------------|----------------|
| UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES | DECIMALS .010 .015 .020 .030 .040 .050 .060 .070 .080 .090 .100 .125 .150 .175 .200 .250 .300 .375 .450 .500 .625 .750 .875 1.000 1.250 1.500 2.000 2.500 3.000 4.000 5.000 6.000 8.000 10.000 | ANGLES 1/2° 1° 2° 3° 4° 5° 6° 8° 10° 12° 15° 18° 20° 25° 30° 36° 45° 60° 90° | DATE 12/22/72 | BY [Signature]  | DATE 12/22/72 | BY [Signature] | DATE 12/22/72 | BY [Signature] |
| MATERIAL  |  | NEXT HIGHER ASSY.  |               | REV. 1          |               | REV. 1         |               |                |
| SEE PARTS LIST  |  | SCALE 1/1  |               | EIA 7009562-0-0 |               | REV. 1         |               |                |
| FINISH  |  | SHEET 1 OF 1   |               | DWT. 1          |               | REV. 1         |               |                |

|                 |        |
|-----------------|--------|
| DRWG NO         | REVLTR |
| K-WL-DR11-B-DBW | R      |

| REVISIONS |             |         |      |
|-----------|-------------|---------|------|
| REV LTR   | ECO NO      | DATE    | ENG  |
| A         | DR11B-00001 | 5-21-71 | W.M. |
| B         | DR11B-00002 | 7-19-71 | W.M. |
| C         | DR11B-00004 | 12/71   | W.M. |
| D         | DR11B-00005 | 12/22   | W.M. |
| E         | DR11B-00006 | 9/72    | W.M. |
| F         | DR11B-00007 | 12/72   | W.M. |
| H         | DR11B-00010 | 4-74    | W.M. |
| J         | DR11B-00011 | 10-74   | W.M. |
| K         | DR11B-00012 | 10-75   | W.M. |
| L         | DR11B-00013 | 4-76    | W.M. |
| M         | DR11B-00014 | 6-76    | W.M. |
| N         | DR11B-00015 | 8-76    | W.M. |
| P         | DR11B-00016 | 12-77   | W.M. |
| R         | DR11B-00018 | 2-80    | W.M. |

|                                 |  |   |                                    |                               |                     |
|---------------------------------|--|---|------------------------------------|-------------------------------|---------------------|
| DRAWN<br>W. MAJOR<br>3/2/71     |  | <br><b>EQUIPMENT CORPORATION</b><br>MAYNARD, MASSACHUSETTS | TITLE<br><b>WIRE LIST (DR11-B)</b> |                               |                     |
| CHECKED<br>J. Wyckang<br>3/9/71 |  |   | FOR <b>TAPE*</b> <b>FILE*</b>      |                               |                     |
| DATE<br>3-19-71                 |  |   | SIZE<br><b>K WL</b>                | DWG. NO.<br><b>DR11-B-DBW</b> | REV LTR<br><b>R</b> |
| DATE<br>3/22/71                 |  |   | SCALE                              | SHEET <b>1</b> OF <b>1</b>    | DIST.               |

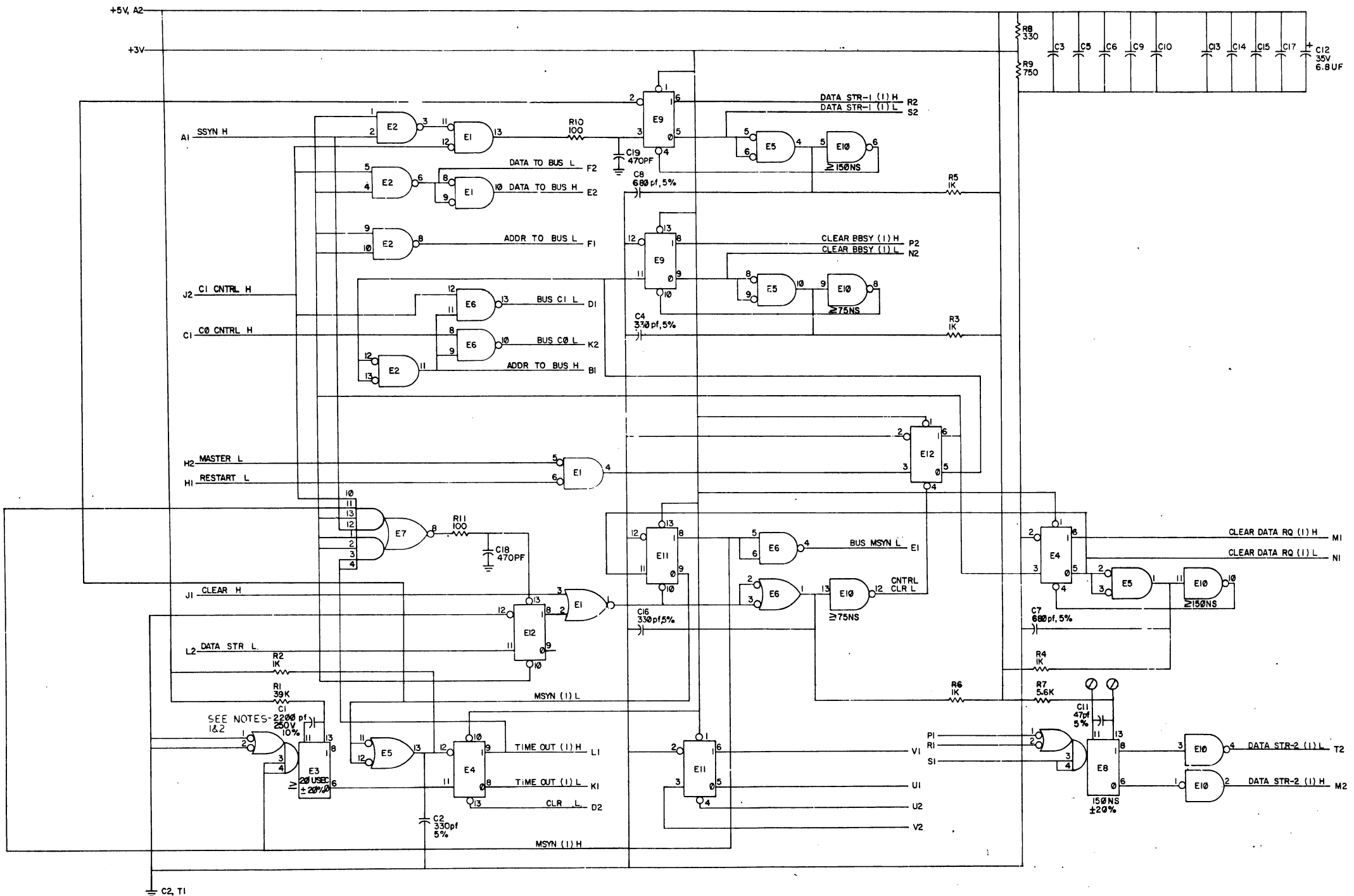
MP-ØDR11-BØ





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1-0-962W M796 CS D



NOTE: 1. C1 IS CHANGED TO 5000PF ± 20% (1001765) FOR A DELAY OF 37μS MINIMUM WHEN USED WITH A DL 10.  
 2. FOR M796-YA CHANGE C1 TO 6.8μf 35V (P/N-000067)

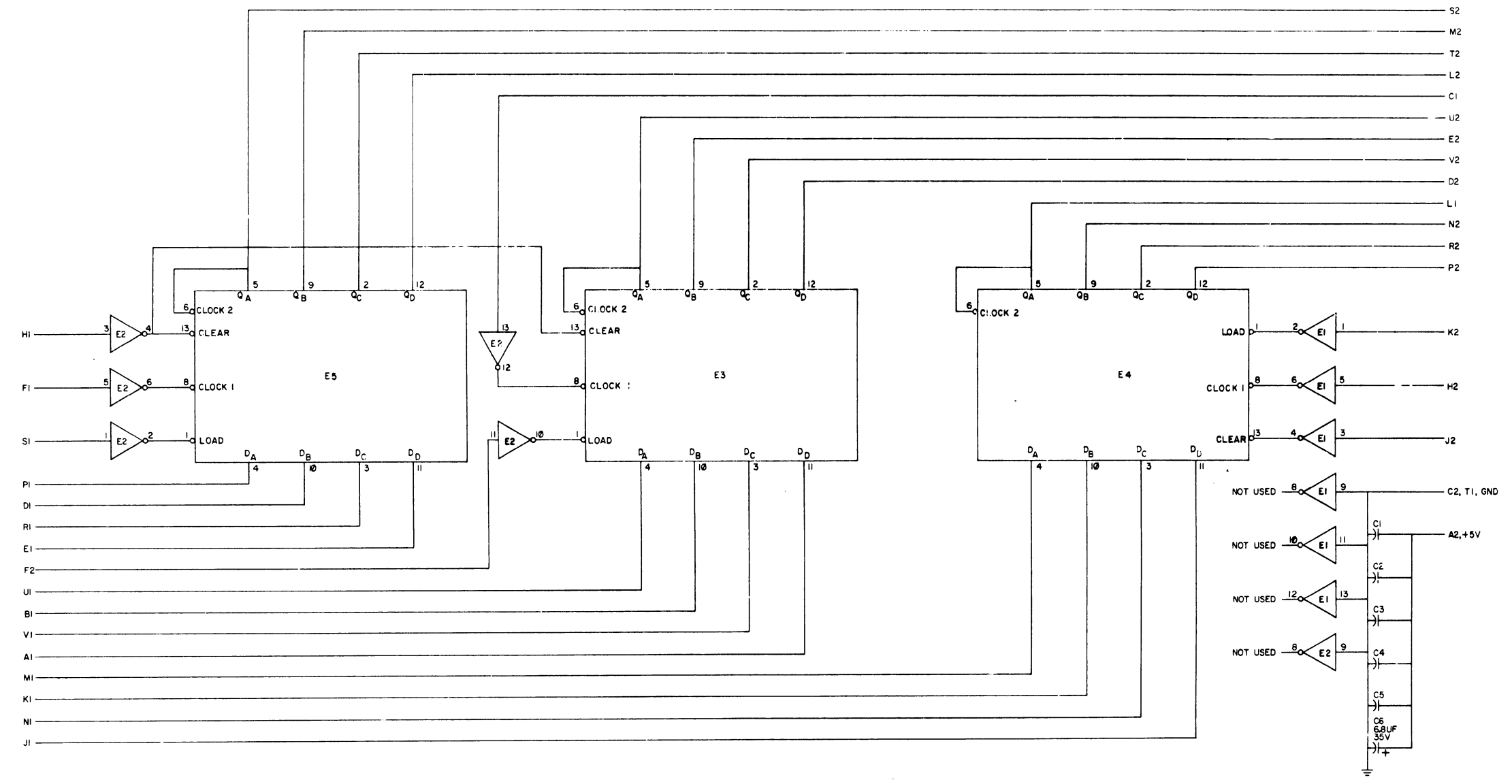
UNLESS OTHERWISE INDICATED:  
 RESISTORS ARE 1/4W, 5%  
 CAPACITORS ARE .01uf, 100V, 20%  
 E1 IS DEC7402  
 E2 IS DEC7400  
 E3, E8 ARE DEC9601  
 E4, E9, E11, E12 ARE DEC7474  
 E5 IS DEC7401  
 E6 IS DEC8881  
 E7 IS DEC74H55  
 E10 IS DE7404  
 ⊕ = SPLIT LUGS

| REV | NO | DATE    | BY        | CHKD | APP'D |
|-----|----|---------|-----------|------|-------|
| 1   | 1  | 12/1/70 | J. S. ... |      |       |
| 2   | 1  | 12/1/70 | J. S. ... |      |       |

| TRANSISTOR & DIODE CONVERSION CHART |     |     |     |
|-------------------------------------|-----|-----|-----|
| DIC                                 | EIA | DEC | EIA |
|                                     |     |     |     |
|                                     |     |     |     |
|                                     |     |     |     |

|                       |      |                       |     |
|-----------------------|------|-----------------------|-----|
| EQUIPMENT CORPORATION |      | MAYNARD MASSACHUSETTS |     |
| SIZE                  | CODE | NUMBER                | REV |
| D                     | CS   | M796-0-1              | E   |
| PRINTED CIRCUIT REV   |      |                       | C   |

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UNLESS OTHERWISE INDICATED:  
 CAPACITORS ARE .01UF, 100V, 20%  
 E3, E4, E5 ARE DEC74197  
 E1, E2 ARE DEC74H04  
 ON ALL IC'S PIN 14 = +5V, PIN 7 = GND

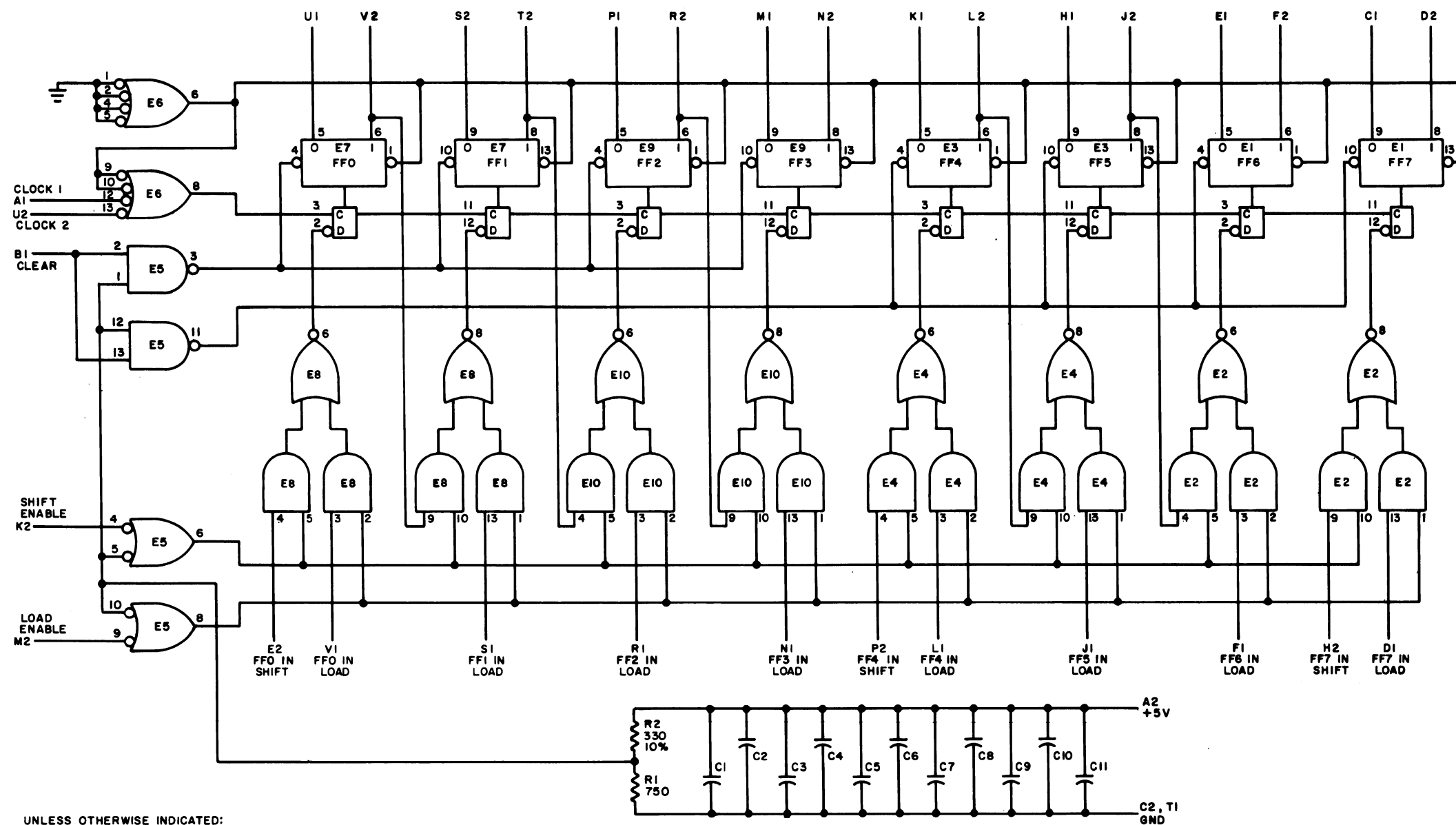
| REV | NO | DATE |
|-----|----|------|
| 1   | 1  |      |

| TRANSISTOR & DIODE CONVERSION CHART |      |              |      |
|-------------------------------------|------|--------------|------|
| MANUFACTURER                        | TYPE | MANUFACTURER | TYPE |
| DEC                                 | E1A  | DEC          | E1A  |
|                                     |      |              |      |
|                                     |      |              |      |
|                                     |      |              |      |
|                                     |      |              |      |

|                      |      |                                       |          |
|----------------------|------|---------------------------------------|----------|
| TITLE                |      | THREE 4-BIT COUNTER/<br>REGISTER M239 |          |
| EQUIPMENT            | SIZE | CODE                                  | NUMBER   |
| CORPORATION          | D    | CS                                    | M239-0-1 |
| PRINTED CIRCUIT REV. |      | REV. A                                |          |

REV. A  
 NUMBER D CS M239-0-1

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UNLESS OTHERWISE INDICATED:  
 CAPACITORS ARE .01 MFD  
 RESISTORS ARE 1/4 W, 5%  
 E6 IS DEC74H40N  
 E5 IS DEC7400N  
 E2, E4, E8, & E10 ARE DEC7450N  
 E1, E3, E7, & E9 ARE DEC7474N  
 PIN 7 ON EACH IC = GND  
 PIN 14 ON EACH IC = +5V

REV. B  
 NUMBER  
 M208-0-1  
 SIZE CODE  
 C CS

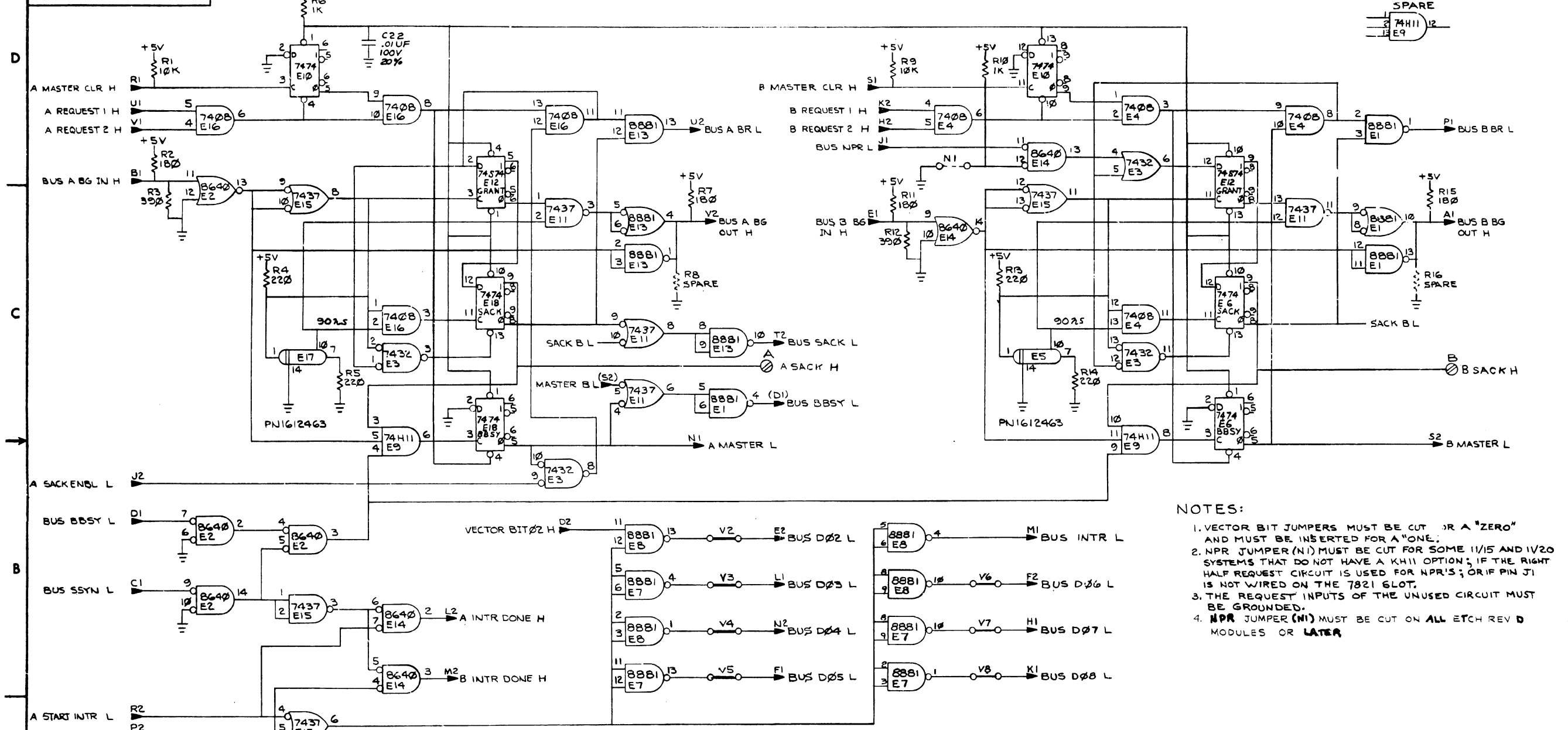
| REV. | CHG. NO. | REV. |
|------|----------|------|
| 1    | 6511     | A    |
| 2    | 00001    | B    |

|                  |         |
|------------------|---------|
| DRN.             | DATE    |
| <i>M. Walker</i> | 8-11-67 |
| CHK'D            | DATE    |
| <i>M. Long</i>   | 5-17-67 |
| ENG.             | DATE    |
| <i>J. White</i>  | 5-17-67 |
| PROD.            | DATE    |

| TRANSISTOR & DIODE CONVERSION CHART |     |     |     |
|-------------------------------------|-----|-----|-----|
| DEC                                 | EIA | DEC | EIA |
|                                     |     |     |     |
|                                     |     |     |     |
|                                     |     |     |     |
|                                     |     |     |     |

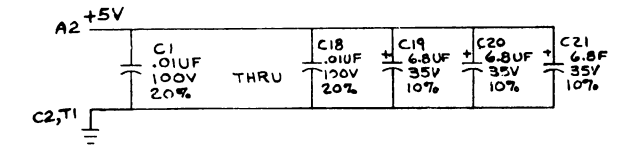
|   |                            |                      |      |
|---|----------------------------|----------------------|------|
| <b>digital</b><br>EQUIPMENT CORPORATION<br>MAYNARD, MASSACHUSETTS | TITLE                      | NUMBER               | REV. |
|   | BUFFER-SHIFT REGISTER M208 | M208-0-1             | B    |
| SIZE  | CODE                       | PRINTED CIRCUIT REV. |      |
| C   | CS                         | C                    |      |

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- NOTES:
1. VECTOR BIT JUMPERS MUST BE CUT OR A "ZERO" AND MUST BE INSERTED FOR A "ONE".
  2. NPR JUMPER (N1) MUST BE CUT FOR SOME 11/15 AND 11/20 SYSTEMS THAT DO NOT HAVE A KH11 OPTION; IF THE RIGHT HALF REQUEST CIRCUIT IS USED FOR NPR'S; OR IF PIN J1 IS NOT WIRED ON THE 7821 SLOT.
  3. THE REQUEST INPUTS OF THE UNUSED CIRCUIT MUST BE GROUND.
  4. NPR JUMPER (N1) MUST BE CUT ON ALL ETCH REV D MODULES OR LATER.

|  |     |     |
|--|-----|-----|
| DEC DELAY LINE   | 14  | -   |
| DEC 8640   | 1   | 8   |
| IC TYPE  | GND | +5V |
| GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTIVELY EXCEPTIONS ARE STATED ABOVE |     |     |
| IC PIN LOCATIONS   |     |     |



| QTY                            | REF. DESIGNATION | DESCRIPTION   | PART NO. | ITEM NO. |
|--------------------------------|------------------|---------------|----------|----------|
| FIRST USED ON OPTION MODEL     |                  |               |          |          |
| ETCH BOARD REV. D              |                  |               |          |          |
| PARTS LIST                     |                  |               |          |          |
| DRN. DATE 11/13/77             |                  | DATE 11/13/77 |          |          |
| CHK. DATE 11/13/77             |                  | DATE 11/13/77 |          |          |
| ENG. DATE 11/13/77             |                  | DATE 11/13/77 |          |          |
| PRG. DATE 11/13/77             |                  | DATE 11/13/77 |          |          |
| NEXT HIGHER ASSY               |                  |               |          |          |
| DEC NO.                        |                  | EIA NO.       | DEC NO.  | ETC NO.  |
| SEMICONDUCTOR CONVERSION CHART |                  |               |          |          |
| SCALE                          |                  | SHEET 1 OF 1  |          |          |
| TITLE                          |                  | NUMBER        |          |          |
| INTERRUPT CONTROL M7821        |                  | DCSM7821-0-1  |          |          |
| REV.                           |                  | REV.          |          |          |
| H                              |                  | H             |          |          |