

**ETCH CUTS SIDE 1 AS SHOWN**

1. E59-(6) TO E64-(5)
2. E13-(5) TO E18-(5)
3. E22(6) TO E38(9)

**WIRE ADDS SIDE 1 AS SHOWN**

1. BC1 TO GND
2. AH1 TO GND
3. DRILL HOLE BELOW C32 FOR AF2
4. AF2 TO E67-(13) SIDE 1
5. AF2 TO DRILLED HOLE BELOW C32 SIDE 2
6. E64-(4) TO E59-(6)
7. E64-(5) TO E64-(11)
8. E59-(3) TO E62-(7)
9. E62-(7) TO E54-(10)
10. E13-(5) TO E18-(6)
11. E54-(8) TO E61-(14)
12. E2-(9) TO E62-(2)
13. DRILL .0625 DIA BELOW J1-F FOR FOLLOWING WIRES
14. J1-F TO E45-(7) SIDE 1
15. J1-F TO DRILLED HOLE BELOW J1-F SIDE 2
16. J1-J TO R15 LOWER HOLE SIDE 1
17. J1-J TO DRILLED HOLE BELOW J1-F SIDE 2
18. J1-L TO PTH TO RIGHT OF R18 SIDE 1
19. J1-L TO DRILLED HOLE BELOW J1-F SIDE 2
20. J1-N TO PTH ABOVE R18 SIDE 1
21. J1-N TO DRILLED HOLE BELOW J1-F SIDE 2
22. J1-R TO E63-(8) SIDE 1
23. J1-R TO DRILLED HOLE BELOW J1-F SIDE 2
24. J1-T TO E63-(8) SIDE 1
25. J1-T TO DRILLED HOLE BELOW J1-F SIDE 2
26. E22(6) TO RIGHT SIDE OF R43 (DIA#3)
27. E38(9) TO LEFT SIDE OF R43 (DIA#2)

**NOTE:**  
W3 INSERTED AFTER OR TEST

**ETCH CUTS SIDE 2 AS SHOWN**

1. E64-(4) TO PTH TO RIGHT OF PIN E66
2. E59-(3) TO E66-(14)
3. E66-(14) TO E62-(7)

**COMPONENT ADDS SIDE 1:**

1. DRILL THREE .055 DIA AND INSTALL THREE EYELETS (9006731) ABOVE FINGERS OF SECTION D.
2. ADD CAPACITOR C40 (680 pF) FROM PTH BELOW E56 TO DIA #1.
3. ADD RESISTOR R43 (56 OHM) FROM DIA #2 TO DIA #3.
4. SOLDER ONE LEAD FROM C40 (DIA #1) TO ONE LEAD FROM R43 (DIA #2) ON MODULE SIDE 2.

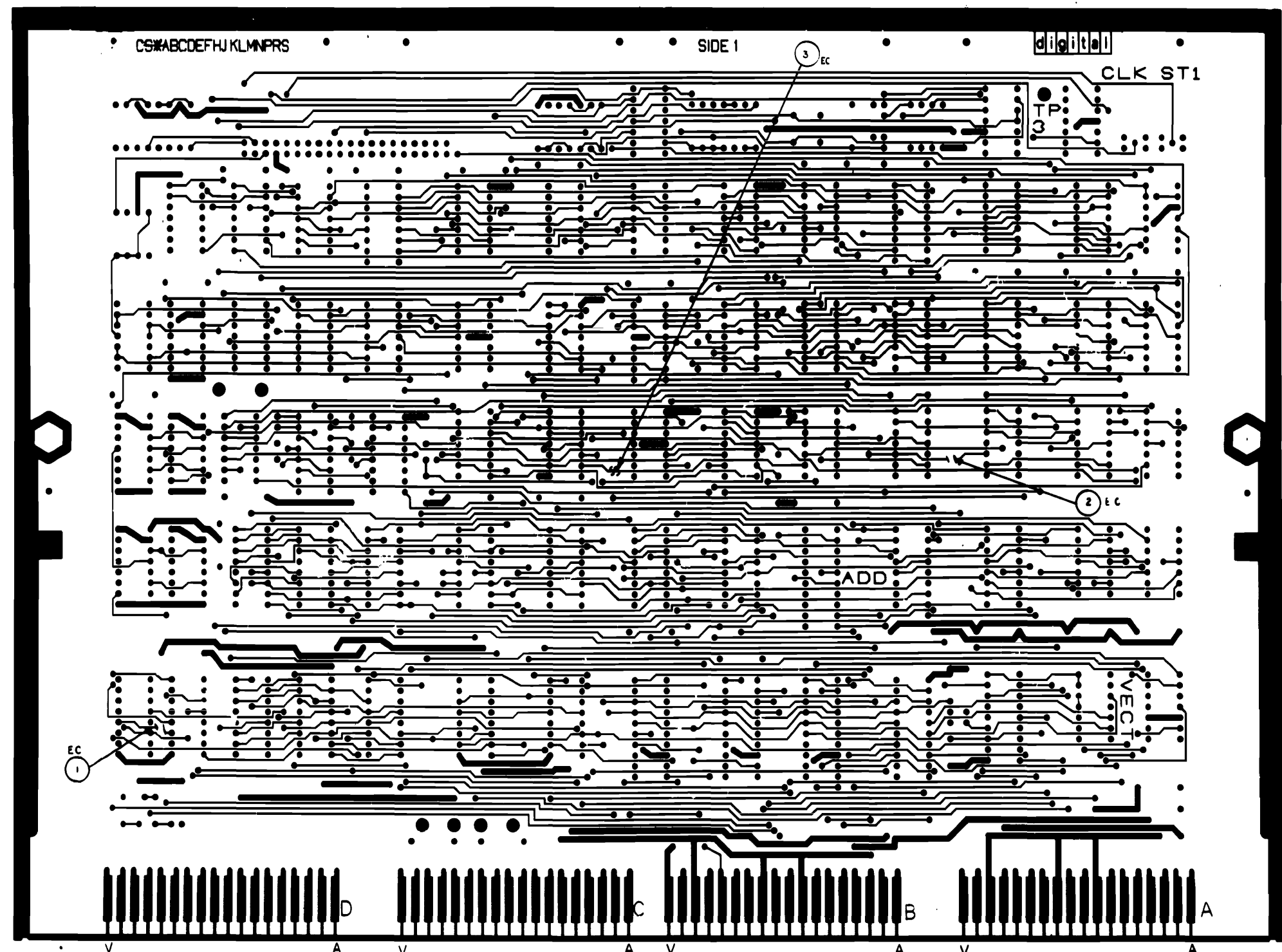
**NOTES: SPARE COMPONENTS**  
R3, R4, R6, R7, R9, R12, R13

| SIGNATURES                     |  | DATE    | digital |
|--------------------------------|--|---------|---------|
| ORN. <i>[Signature]</i>        |  | 5/11/76 |         |
| CHK'D. <i>[Signature]</i>      |  | 5/11/76 |         |
| ENG. <i>[Signature]</i>        |  | 5/11/76 |         |
| PROJ. ENG. <i>[Signature]</i>  |  | 5/11/76 |         |
| PROD. <i>[Signature]</i>       |  | 5/11/76 |         |
| SCALE 2/1                      |  |         |         |
| SHT. 1 OF 3                    |  |         |         |
| NEXT HIGHER ASSY. E-D1-M7952-0 |  |         |         |

| ETCH REV. | PCB DESIGN DATA BASE REV. |
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|           |                           |

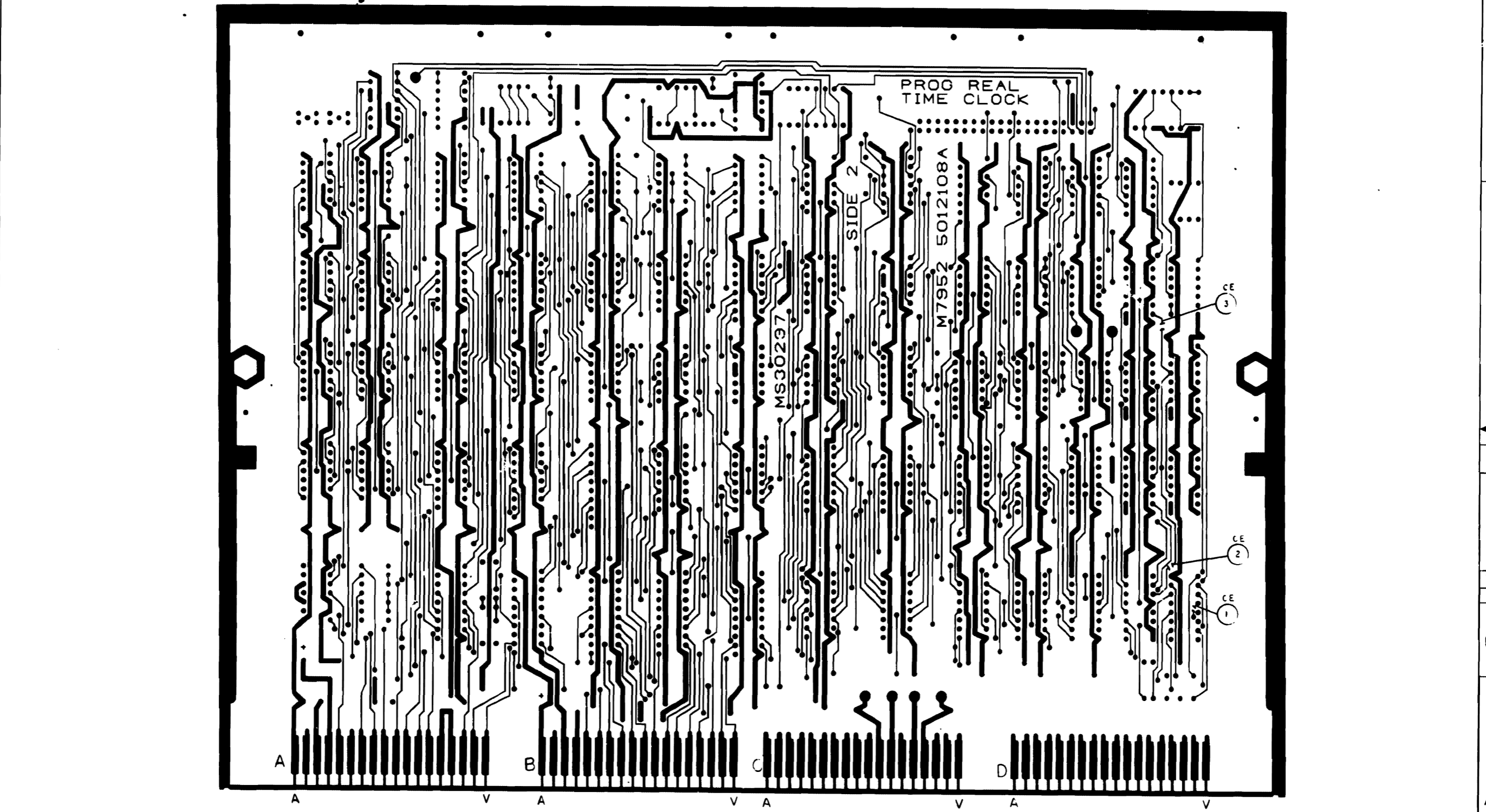
| TITLE | PROG REAL | TIME CLOCK | NUMBER        | REV |
|-------|-----------|------------|---------------|-----|
|       |           |            | DUA M7952-0-0 | A   |

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DIGITAL EQUIPMENT CORPORATION

PARTS LIST

QUANTITY / VARIATION

NOTES: 1. SPARE COMPONENTS ARE:  
R2, R3, R6, R7, R9, R12, R13

MADE BY *E. J. [unclear]* CHECKED *[unclear]* SECTION  
 DATE *31 MAR 76* DATE *11 MAR 76*  
 ENG *A. [unclear]* PROD *[unclear]* ISSUED SECTION  
 DATE *14 MAY 76* DATE *14 MAY 76*

| ITEM NO. | DRAWING NO.      | PART NO.   | DESCRIPTION             | QTY | REF. DESIGNATION             |
|----------|------------------|------------|-------------------------|-----|------------------------------|
| 1        | D-MD-5012108-0-0 | 5012108    | ETCHED CIRCUIT BOARD    | 1   |                              |
| 2        |                  | 1012784    | CAP. .047uf             | 29  | C1 THRU C28, C29             |
| 3        |                  | 1000021    | CAP. 220pf, 100V 5%     | 6   | C30, C34, C36, C37, C38, C39 |
| 4        |                  | 1005306    | CAP. 6.8uf              | 1   | C31                          |
| 5        |                  | 1004812    | CAP. 15mfd              | 2   | C32, C35                     |
| 6        |                  | 1000023    | CAP. 330pf, 100V 5%     | 1   | C35                          |
| 7        |                  | 1100114    | DIODE D664              | 8   | D1 THRU D4, D10 THRU D13     |
| 8        |                  | 1105796    | DIODE IN4004            | 6   | D5 THRU D8, D14, D15         |
| 9        |                  | 1110232    | DIODE MCL1304           | 1   | D9                           |
| 10       |                  | 1211164-06 | SW. PACK 10 SWITCHES    | 1   | S1                           |
| 11       |                  | 1211164-03 | SW. PACK 7 SWITCHES     | 2   | S2, S3                       |
| 12       |                  | 1209941-02 | CONNECTOR 40 PIN        | 1   | J1                           |
| 13       |                  | 1300005-01 | RES. 1K 5% 1/4W RES PAK | 1   | R1                           |
| 14       |                  | 1310881-02 | RES. 47 1% 1/4W FUSIBLE | 3   | R4, R5, R25                  |
| 15       |                  | 1302388    | RES. 2K 5% 1/4W         | 2   | R8, R28                      |
| 16       |                  | 1301874    | RES. 5.6K 5% 1/4W       | 5   | R11, R33, R34, R40, R41      |
| 17       |                  | 1300365    | RES. 1K 5% 1/4W         | 4   | R35 THRU R37, R42            |
| 18       |                  | 1302391    | RES. 20K 5% 1/4W        | 4   | R14 THRU R17                 |
| 19       |                  | 1309150-06 | RES. 50K 10% 1/4W POT   | 2   | R18, R19                     |
| 20       |                  | 1302466    | RES. 100K 5% 1/4W       | 2   | R20, R21                     |
| 21       |                  | 1309595    | RES. 1M 5% 1/4W         | 2   | R22, R23                     |

ECO. NO. 10001

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TITLE: PROG REAL TIME CLOCK

ASSY NO. D-UA-M7952-0-0

SIZE: B CODE: PL NUMBER: M7952-0-0 REV. A

SHEET 1 OF 4

DIGITAL EQUIPMENT CORPORATION

PARTS LIST

QUANTITY / VARIATION

NOTES:

|                          |                          |                |
|--------------------------|--------------------------|----------------|
| MADE BY <i>J. J. ...</i> | CHECKED <i>J. J. ...</i> | SECTION        |
| DATE <i>31 MAY 76</i>    | DATE <i>11 MAY 76</i>    |                |
| ENG <i>J. J. ...</i>     | PROD <i>J. J. ...</i>    | ISSUED SECTION |
| DATE <i>14 MAY 76</i>    | DATE <i>14 MAY 76</i>    |                |

| ITEM NO. | DRAWING NO. | PART NO. | DESCRIPTION       | QTY | VAR | REF. DESIGNATION                 |
|----------|-------------|----------|-------------------|-----|-----|----------------------------------|
| 22       |             | 1300316  | RES. 470 5% 1/2W  | 3   |     | R24, R26, R27                    |
| 23       |             | 1300295  | RES. 330 5% 1/2W  | 2   |     | R29, R30                         |
| 24       |             | 1300426  | RES. 2.7K 5% 1/2W | 2   |     | R38, R39                         |
| 25       |             | 1301424  | RES. 680 5% 1/2W  | 2   |     | R31, R32                         |
| 26       |             | 1300510  | RES. 33K 10% 1/2W | 1   |     | R10                              |
| 27       |             | 1911469  | I.C. DEC 8640     | 1   |     | E1                               |
| 28       |             | 1905575  | I.C. DEC 7400     | 3   |     | E2, E13, E24                     |
| 29       |             | 1910155  | I.C. DEC 7408     | 4   |     | E3, E4, E22, E29                 |
| 30       |             | 1905547  | I.C. DEC 7474     | 7   |     | E5, E10, E14, E19, E32, E34, E55 |
| 31       |             | 1909686  | I.C. DEC 7404     | 2   |     | E6, E8                           |
| 32       |             | 1905576  | I.C. DEC 7410     | 2   |     | E7, E23                          |
| 33       |             | 1909713  | I.C. DEC 8815     | 1   |     | E9                               |
| 34       |             | 1912730  | I.C. DEC DC003    | 1   |     | E11                              |
| 35       |             | 1910656  | I.C. DEC 74155    | 1   |     | E12                              |
| 36       |             | 1911521  | I.C. DEC 7432     | 3   |     | E15, E28, E49                    |
| 37       |             | 1913040  | I.C. DEC DC005    | 4   |     | E16, E21, E25, E30               |
| 38       |             | 1912647  | I.C. DEC 74LS257  | 4   |     | E17, E37, E46, E47               |
| 39       |             | 1910544  | I.C. DEC 74S74    | 3   |     | E18, E40, E44                    |
| 40       |             | 1910651  | I.C. DEC 74175    | 2   |     | E20, E48                         |
| 41       |             | 1911271  | I.C. DEC 74298    | 4   |     | E26, E41, E51, E52               |
| 42       |             | 1909004  | I.C. DEC 7402     | 1   |     | E27                              |

E.C.O. NO.

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TITLE  
PROG REAL TIME CLOCK

ASSY NO.  
D-UA-M7952-β-β

SIZE CODE NUMBER  
B PL M7952-β-β

REV.  
A

DIGITAL EQUIPMENT CORPORATION

PARTS LIST

QUANTITY / VARIATION

NOTES:

|         |         |                |
|---------|---------|----------------|
| MADE BY | CHECKED | SECTION        |
| DATE    | DATE    |                |
| ENG     | PROD    | ISSUED SECTION |
| DATE    | DATE    |                |

| ITEM NO. | DRAWING NO. | PART NO.   | DESCRIPTION                 | QTY | UNIT | REF. DESIGNATION        |
|----------|-------------|------------|-----------------------------|-----|------|-------------------------|
| 43       |             | 1910018    | I.C. DEC 74193              | 4   |      | E31, E42, E56, E57      |
| 44       |             | 1910951    | I.C. DEC 9602               | 3   |      | E33, E53, E64           |
| 45       |             | 1912108    | I.C. DEC LM339N             | 1   |      | E35                     |
| 46       |             | 1910550    | I.C. DEC 74S174             | 1   |      | E36                     |
| 47       |             | 1911324    | I.C. DEC 7414               | 1   |      | E38                     |
| 48       |             | 1910532    | I.C. DEC 74S00              | 2   |      | E39, E58                |
| 49       |             | 1909930    | I.C. DEC 7405               | 1   |      | E43                     |
| 50       |             | 1910542    | I.C. DEC 74S64              | 1   |      | E45                     |
| 51       |             | 1912696    | I.C. DEC 74LS194A           | 1   |      | E50                     |
| 52       |             | 1910091    | I.C. DEC 7437               | 1   |      | E54                     |
| 53       |             | 1909936    | I.C. DEC 74151              | 1   |      | E59                     |
| 54       |             | 1910095    | I.C. DEC 74190              | 5   |      | E60, E61, E62, E65, E66 |
| 55       |             | 1910011    | I.C. DEC 7486               | 1   |      | E63                     |
| 56       |             | 1909705    | I.C. DEC 8881               | 1   |      | E67                     |
| 57       |             | 1811660-01 | 10 MHZ XTAL OSC             | 1   |      | CR1                     |
| 58       |             | 9007112    | FASTON TAB                  | 2   |      | TP1, TP2                |
| 59       |             | 9006735    | SPLIT LUG                   | 7   |      | TP3 THRU TP9            |
| 60       |             | 9009185    | JUMPER, INSULATED           | 3   |      | W1, W2, W3              |
| 61       |             | 7413826-0  | HANDLE, MODULE (LEFT SIDE)  | 1   |      |                         |
| 62       |             | 7413826-1  | HANDLE, MODULE (RIGHT SIDE) | 1   |      |                         |
| 63       |             | 9006732    | EYELET                      | 8   |      |                         |

|          |  |
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|  | PROG REAL TIME CLOCK | D-UA-M7952-0-0 | B    | PL   | M7952-0-0 | A    |

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PARTS LIST

QUANTITY / VARIATION

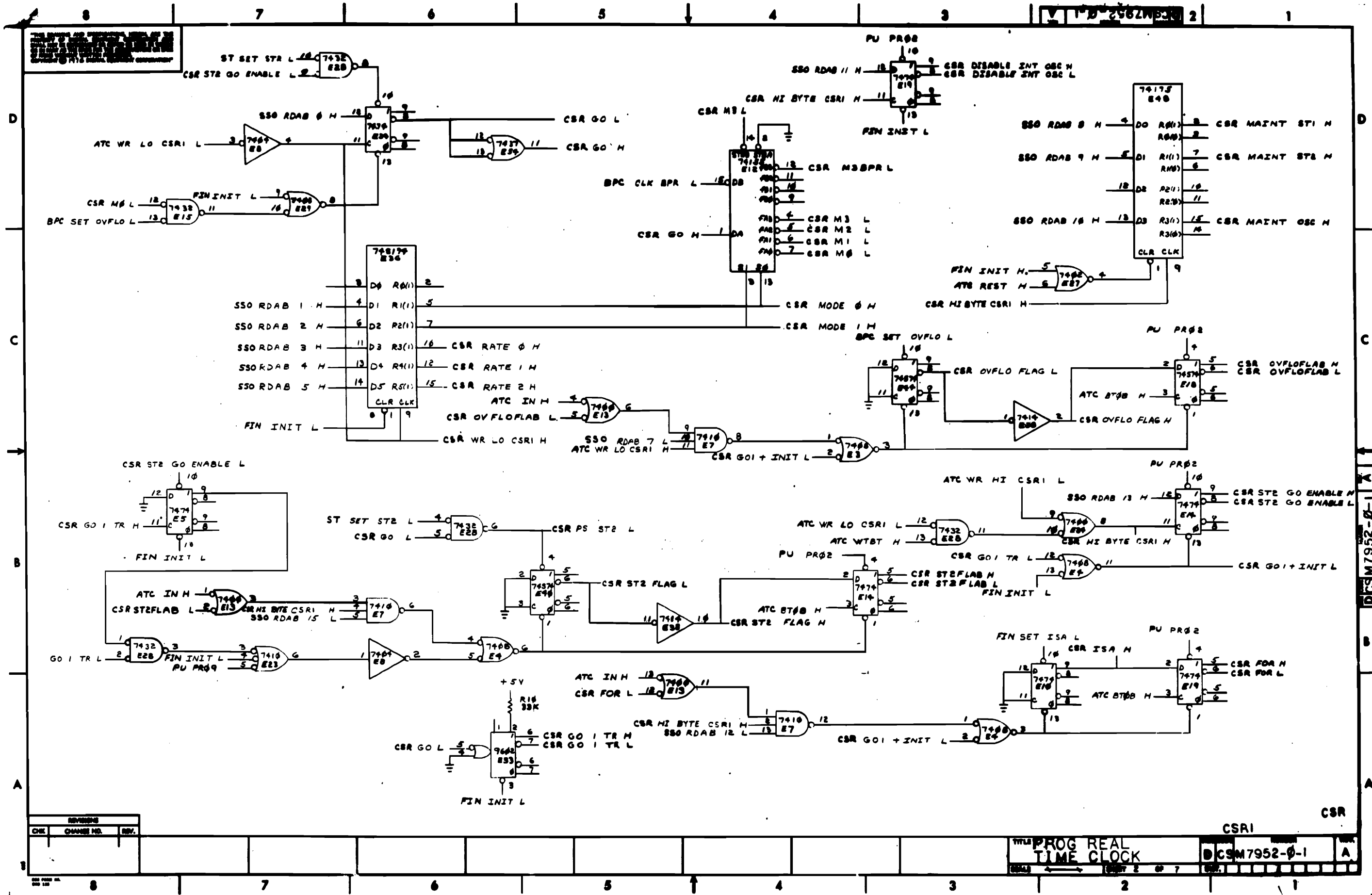
NOTES:

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| MADE BY <i>W. Wilson</i> | CHECKED <i>[Signature]</i> | SECTION        |
| DATE <i>31 MAY 76</i>    | DATE <i>11 MAY 76</i>      |                |
| ENG <i>A. Arrigh</i>     | PROD <i>[Signature]</i>    | ISSUED SECTION |
| DATE <i>14 MAY 76</i>    | DATE <i>14 MAY 76</i>      |                |

| ITEM NO. | DRAWING NO. | PART NO.   | DESCRIPTION             | QUANTITY | VARIATION | REF. DESIGNATION |
|----------|-------------|------------|-------------------------|----------|-----------|------------------|
| 64       |             | 9009000    | EYELET                  | 2        |           |                  |
| 65       |             | 1209941-03 | CONNECTOR RETAINER CLIP | 1        |           |                  |
| 66       |             | 1209941-04 | CONNECTOR RETAINER CLIP | 1        |           |                  |
| 67       |             | 1000026    | CAP. 680pf, 100V, 5%    | 1        |           | C40              |
| 68       |             | 1302602    | RES. 56, 5%, 1/4W       | 1        |           | R43              |
| 69       |             | 9006731    | EYELET                  | 3        |           |                  |
| 70       |             | 9105740-55 | WIRE 30AWG GREEN        | A/R      |           |                  |

|            |   |  |                               |                            |           |            |                     |           |
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|            | EN-01140-16-N1075-(325) DRB 124   |  | SHEET 4 OF 4                  |                            | DIST.     |            |                     |           |



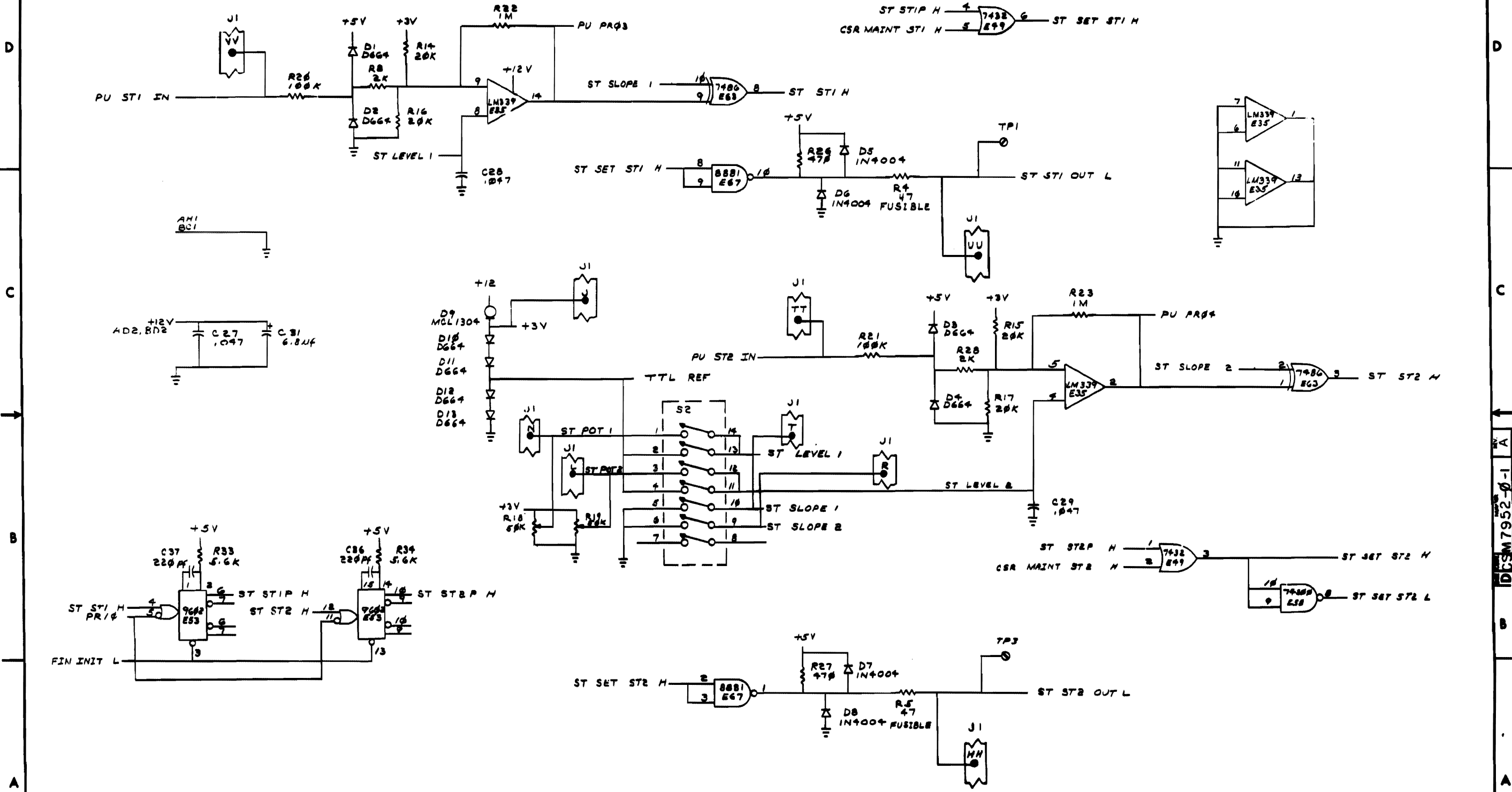


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TITLE: **PROG REAL TIME CLOCK**  
 DRAWING NO: **DCSM7952-0-1**  
 SHEET: **7** OF **7**  
 PROJECT: **CSR**

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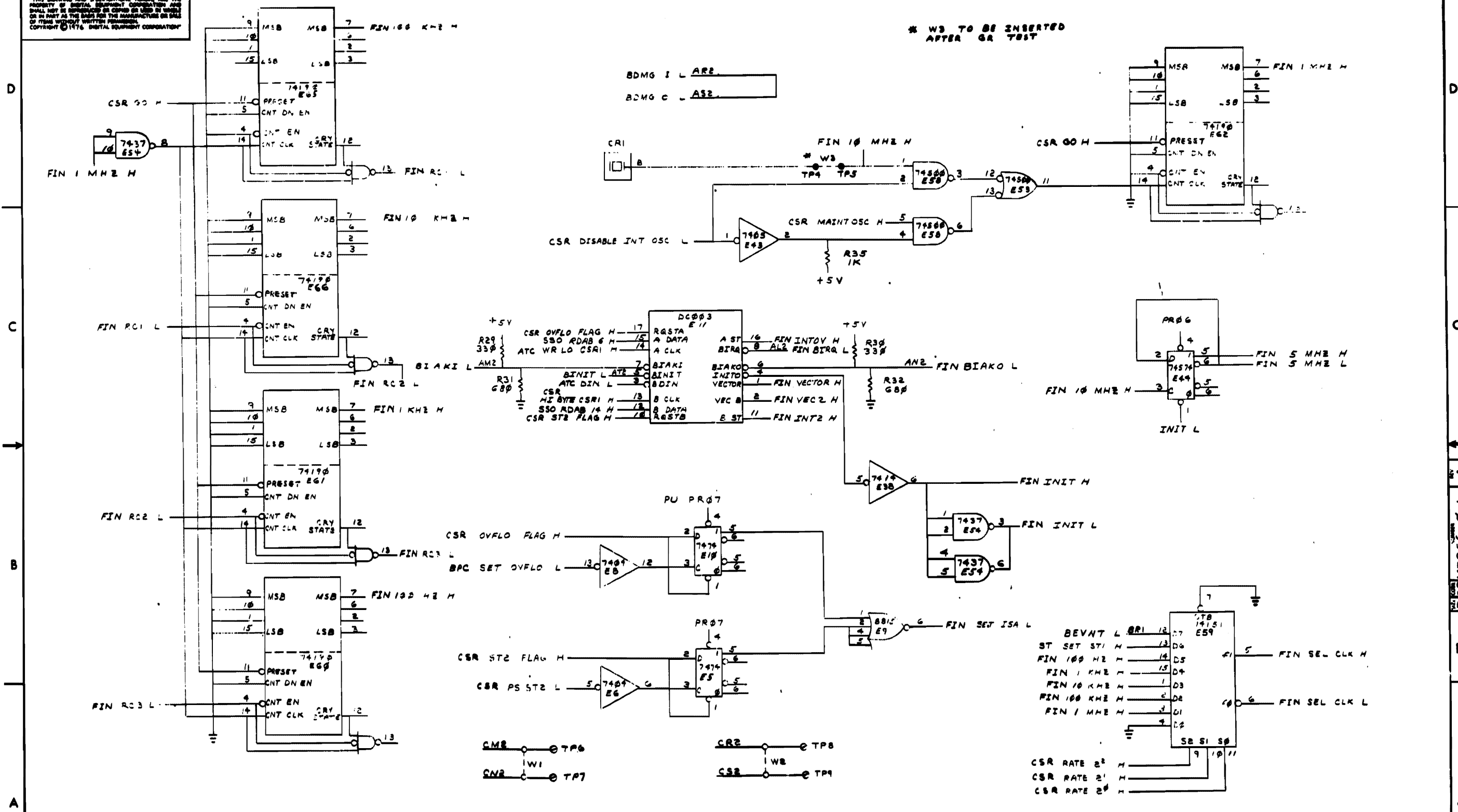
SCHMITT TRIGGERS

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|-------|---------------------|--------|-------------------------|------|---|
| TITLE | PRG REAL TIME CLOCK | NUMBER | D C S M 7 9 5 2 - 0 - 1 | REV. | A |
| SCALE |                     | SHEET  | 3 OF 7                  | DATE |   |



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\* WS TO BE INSERTED AFTER QA TEST



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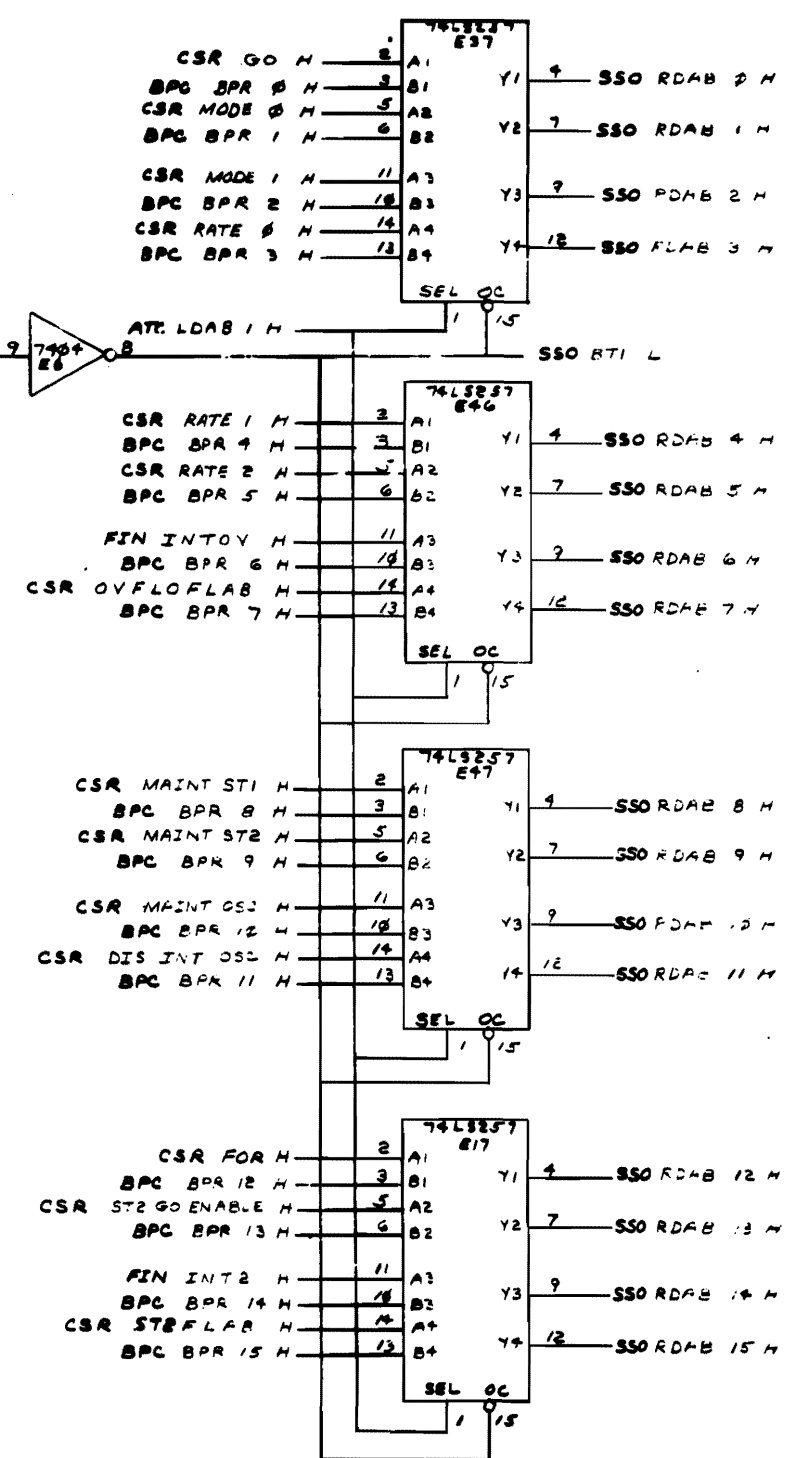
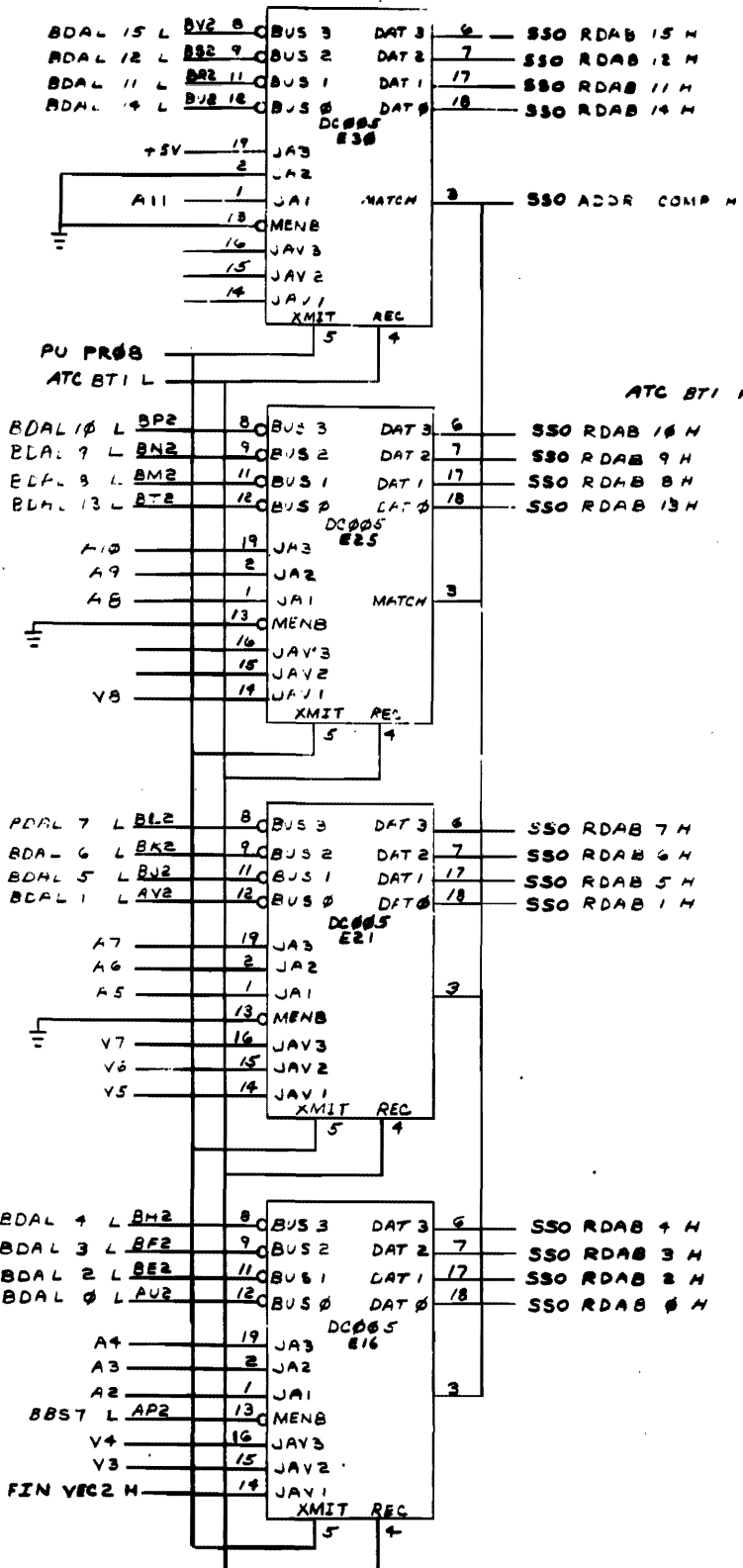
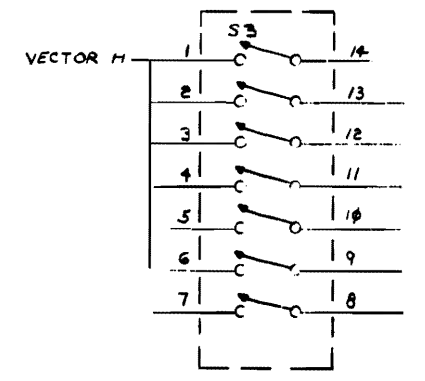
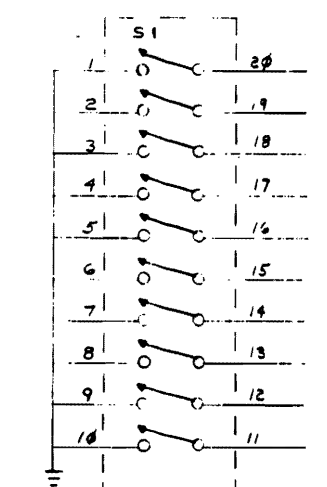
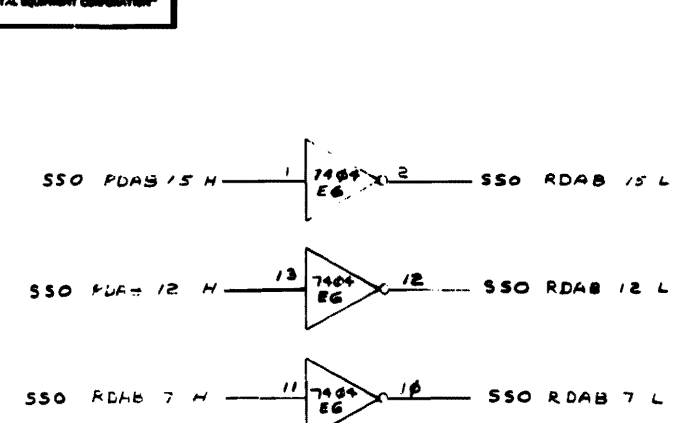
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| TITLE                                 | PROG REAL TIME CLOCK | SIZE/COOD    | NUMBER | REV.  |
| SCALE                                 | ←→                   | SHEET        | 5 OF 7 | DIST. |
| FIN FREQ. DIVIDER & INTERRUPT CONTROL |                      | DCSM7952-0-1 | A      | A     |

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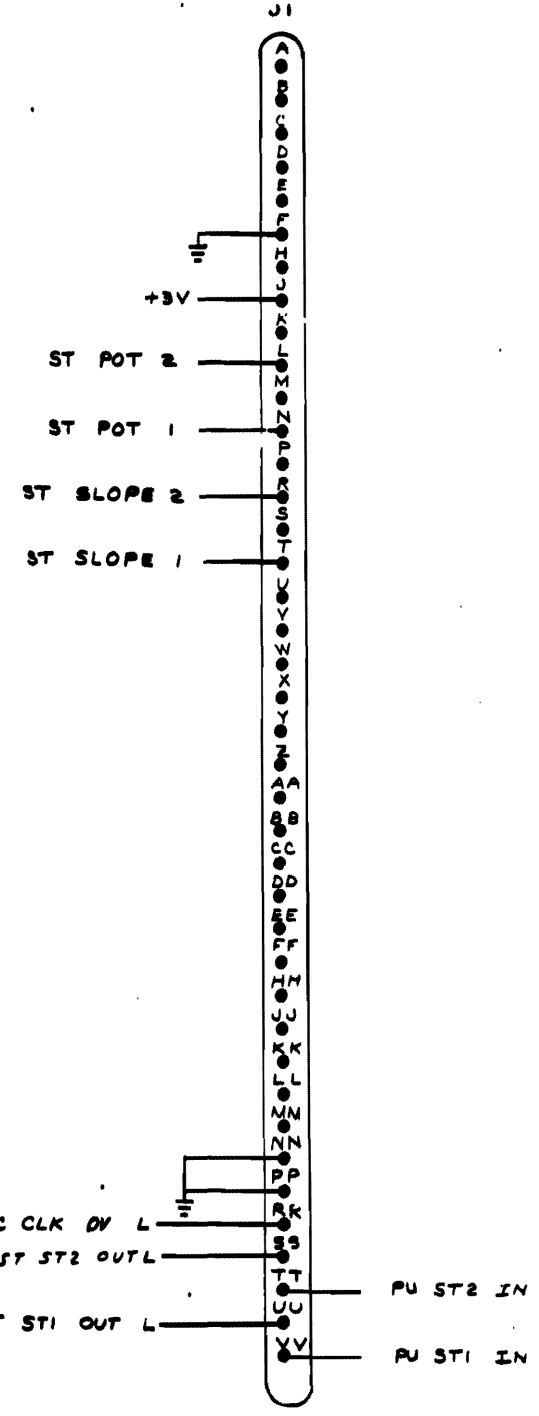
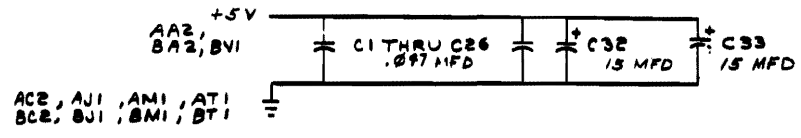
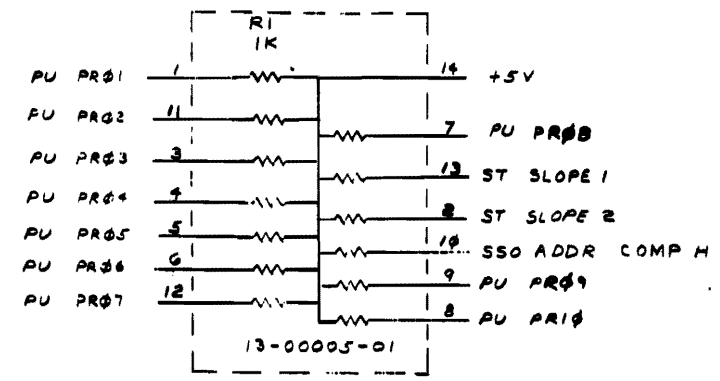
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DCSM7952-0-1



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PULL UPS  
 TITLE: PROG REAL TIME CLOCK  
 NUMBER: DCSM7952-0-1  
 REV: A