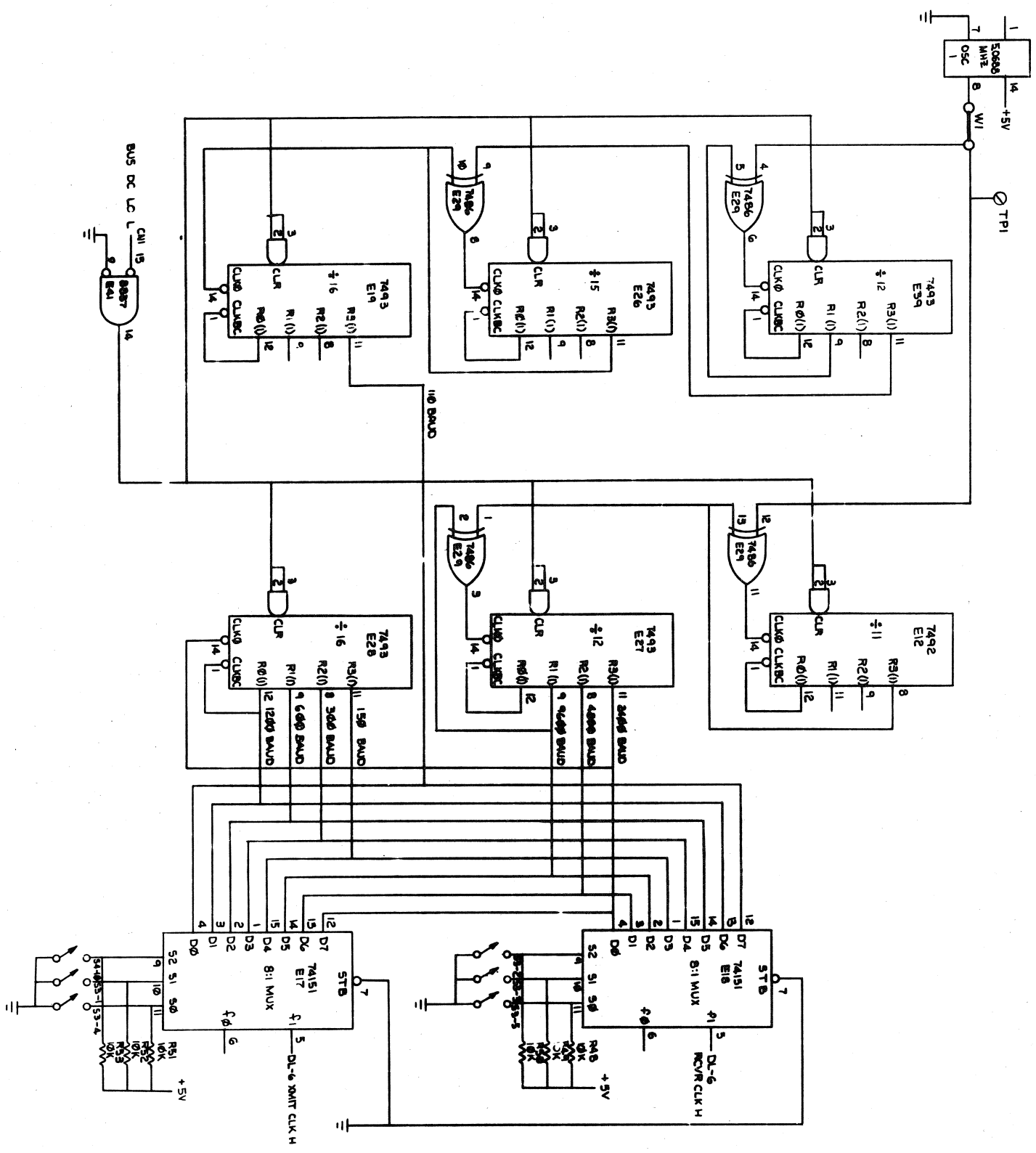


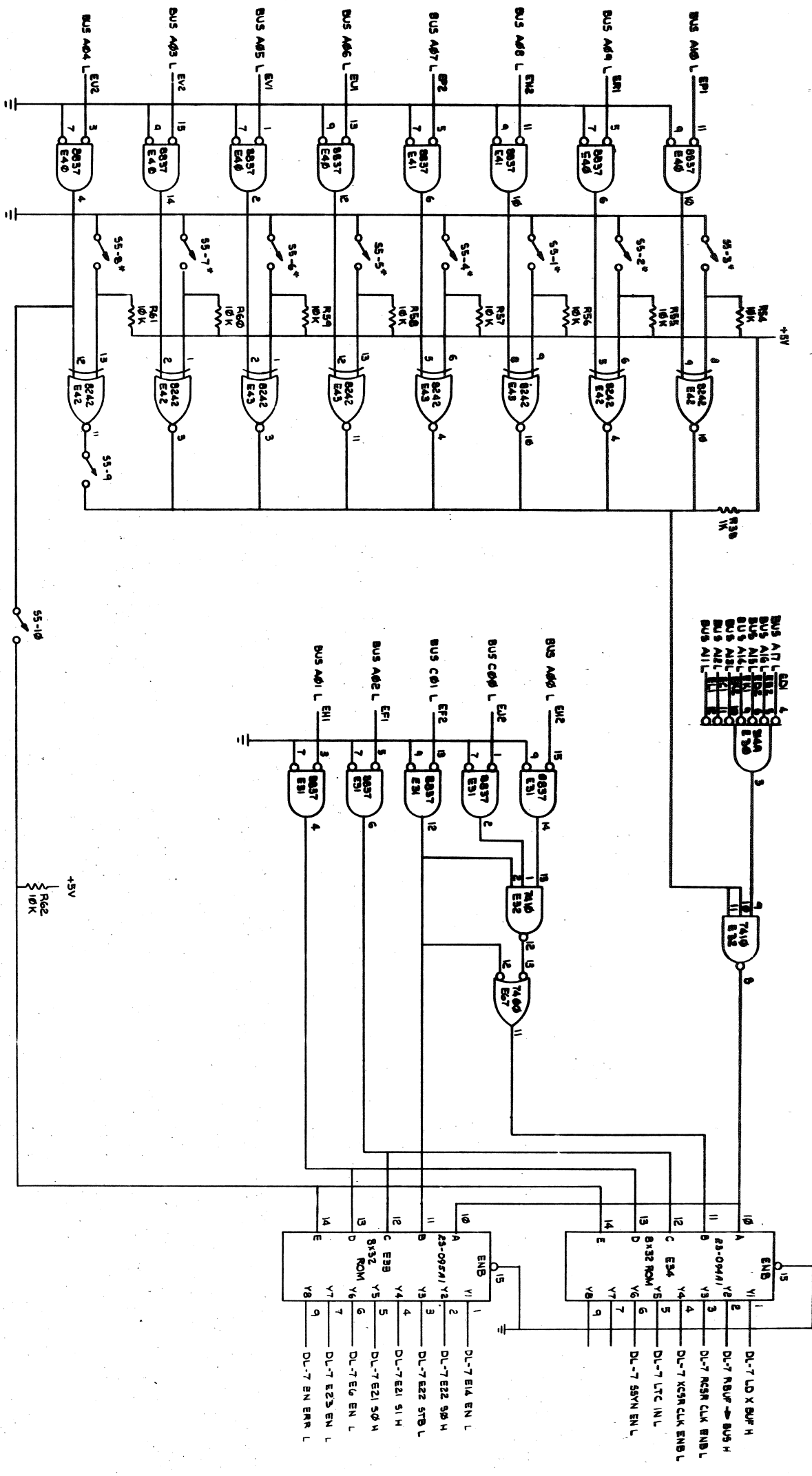
THIS DRAWING AND SPECIFICATIONS, LOGS, AND THE  
PROPERTY OF THE U.S. GOVERNMENT. IT IS TO BE  
REPRODUCED AND TRANSMITTED IN ANY FORM OR  
BY ANY MEANS, ELECTRONIC OR MECHANICAL,  
INCLUDING PHOTOCOPYING, RECORDING, OR BY  
ANY INFORMATION STORAGE AND RETRIEVAL  
SYSTEM, WITHOUT PERMISSION IN WRITING FROM  
THE U.S. GOVERNMENT PRINTING OFFICE.



| BAUD RATE | RCVR |      |      |       |      | XMIT |  |  |  |
|-----------|------|------|------|-------|------|------|--|--|--|
|           | S3-2 | S3-3 | S3-5 | S4-10 | S3-1 | S3-4 |  |  |  |
| 115200    | OFF  | OFF  | OFF  | ON    | ON   | ON   |  |  |  |
| 57600     | ON   | OFF  | OFF  | ON    | ON   | ON   |  |  |  |
| 28800     | OFF  | ON   | OFF  | ON    | ON   | ON   |  |  |  |
| 14400     | OFF  | OFF  | ON   | ON    | ON   | ON   |  |  |  |
| 7200      | ON   | ON   | ON   | ON    | ON   | ON   |  |  |  |
| 3600      | ON   | ON   | ON   | ON    | ON   | ON   |  |  |  |
| 1800      | ON   | ON   | ON   | ON    | ON   | ON   |  |  |  |
| 900       | ON   | ON   | ON   | ON    | ON   | ON   |  |  |  |

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

| TITLE                 | SIZE/RTG | OPTION | DL-6 | SIZE/RTG | OPTION | DL-6 | NUMBER | REV. |
|-----------------------|----------|--------|------|----------|--------|------|--------|------|
| SLU/RTG OPTION (DL-6) |          |        |      |          |        |      |        |      |



\* ADDRESS SELECTION SWITCHES - OFF=1 ON=0

| REVISIONS |             | TITLE |             | SCALE |             | SHEET |             | OF   |             | PART |             | DATE |             | BY   |             |
|-----------|-------------|-------|-------------|-------|-------------|-------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|
| REV.      | CHANGED NO. | REV.  | CHANGED NO. | REV.  | CHANGED NO. | REV.  | CHANGED NO. | REV. | CHANGED NO. | REV. | CHANGED NO. | REV. | CHANGED NO. | REV. | CHANGED NO. |
| 1         |             | 1     |             | 1     |             | 1     |             | 1    |             | 1    |             | 1    |             | 1    |             |

SLU/RTC OPTION (DL-7)

DCS M7856-0-1

F

THIS DRAWING AND SPECIFICATIONS, HEREIN, ARE THE PROPERTY OF DIGITAL EQUIPMENT CORPORATION AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION. REVISED 11/75, DIGITAL EQUIPMENT CORPORATION

REV.

6-0-9582W

532K

2

1

(FOR 23094A1-A07 & 23095A1-A07)

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

DEC 16 (325)-1080-1B-R275  
CRB 100A

|                                         |   |
|-----------------------------------------|---|
| THIRD ANGLE PROJECTION                  |   |
|                                         |   |
| REMOVE BURNS AND<br>BREAK SHARP CORNERS |   |
| DO NOT SCALE DWG                        |   |
| MATERIAL                                | + |
| FINISH                                  | + |

|                            |         |               |        |         |
|----------------------------|---------|---------------|--------|---------|
| DRN. <i>g. g. g.</i>       | 7-10-78 | FIRST USED ON | DL11-W | digital |
| CHK'D <i>g. g. g.</i>      | 9-28-78 |               |        |         |
| ENG. <i>g. g. g.</i>       | 9-28-78 |               |        |         |
| PROJ. ENG. <i>g. g. g.</i> | 9-28-78 |               |        |         |
| PROD. <i>g. g. g.</i>      | 9-28-78 |               |        |         |
| NEXT HIGHER ASSY.          |         |               |        |         |

|                |      |      |              |       |
|----------------|------|------|--------------|-------|
| D-CS-M7856-0-1 | SIZE | CODE | NUMBER       | REV.  |
| SCALE          | +    | K    | CS M7856-0-9 |       |
| SHEET          | 1    | OF   | 3            | DIST. |

ROM LISTING

1  
DEC PART NUMB: 23094A1-A07  
ORIGINATOR: BOB PRATT  
DATE OF ORIGIN: 2/28/75

ROM PATTERN SPEC

PAGE 2 OF 3

| DECIMAL<br>LOC | OCTAL<br>LOC | BINARY<br>DATA | OCTAL<br>DATA |
|----------------|--------------|----------------|---------------|
| 0              | 00           | 00111100       | 074           |
| 1              | 01           | 00111100       | 074           |
| 2              | 02           | 00111100       | 074           |
| 3              | 03           | 00111100       | 074           |
| 4              | 04           | 00111100       | 074           |
| 5              | 05           | 00111100       | 074           |
| 6              | 06           | 00111100       | 074           |
| 7              | 07           | 00111100       | 074           |
| 8              | 10           | 00111100       | 074           |
| 9              | 11           | 00111100       | 074           |
| 10             | 12           | 00111100       | 074           |
| 11             | 13           | 00111100       | 074           |
| 12             | 14           | 00001100       | 014           |
| 13             | 15           | 00111100       | 074           |
| 14             | 16           | 00011100       | 034           |
| 15             | 17           | 00111100       | 074           |
| 16             | 20           | 00011000       | 030           |
| 17             | 21           | 00111100       | 074           |
| 18             | 22           | 00011100       | 034           |
| 19             | 23           | 00111100       | 074           |
| 20             | 24           | 00010100       | 024           |
| 21             | 25           | 00111100       | 074           |
| 22             | 26           | 00011100       | 034           |
| 23             | 27           | 00111100       | 074           |
| 24             | 30           | 00011100       | 034           |
| 25             | 31           | 00111100       | 074           |
| 26             | 32           | 00011110       | 036           |
| 27             | 33           | 00111100       | 074           |
| 28             | 34           | 00011101       | 035           |
| 29             | 35           | 00111100       | 074           |
| 30             | 36           | 00011100       | 034           |
| 31             | 37           | 00111100       | 074           |



1  
DEC PART NUMB: 23-095A1-A07  
ORIGINATOR: BOB PRATT  
DATE OF ORIGIN: 2/28/75

RDM PATTERN SPEC

PAGE 3 OF 3

| DECIMAL<br>LOC | OCTAL<br>LOC | BINARY<br>DATA | OCTAL<br>DATA |
|----------------|--------------|----------------|---------------|
| 0              | 00           | 11111111       | 377           |
| 1              | 01           | 11111111       | 377           |
| 2              | 02           | 11111111       | 377           |
| 3              | 03           | 11111111       | 377           |
| 4              | 04           | 11111111       | 377           |
| 5              | 05           | 11111111       | 377           |
| 6              | 06           | 11111111       | 377           |
| 7              | 07           | 11111111       | 377           |
| 8              | 10           | 11111111       | 377           |
| 9              | 11           | 11111111       | 377           |
| 10             | 12           | 11111111       | 377           |
| 11             | 13           | 11111111       | 377           |
| 12             | 14           | 11011111       | 337           |
| 13             | 15           | 11111111       | 377           |
| 14             | 16           | 11111111       | 377           |
| 15             | 17           | 11111111       | 377           |
| 16             | 20           | 10001111       | 217           |
| 17             | 21           | 11111111       | 377           |
| 18             | 22           | 11111111       | 377           |
| 19             | 23           | 11111111       | 377           |
| 20             | 24           | 11010001       | 321           |
| 21             | 25           | 11111111       | 377           |
| 22             | 26           | 11111111       | 377           |
| 23             | 27           | 11111111       | 377           |
| 24             | 30           | 01000010       | 102           |
| 25             | 31           | 11111111       | 377           |
| 26             | 32           | 11111111       | 377           |
| 27             | 33           | 11111111       | 377           |
| 28             | 34           | 11111111       | 377           |
| 29             | 35           | 11111111       | 377           |
| 30             | 36           | 11111111       | 377           |
| 31             | 37           | 11111111       | 377           |

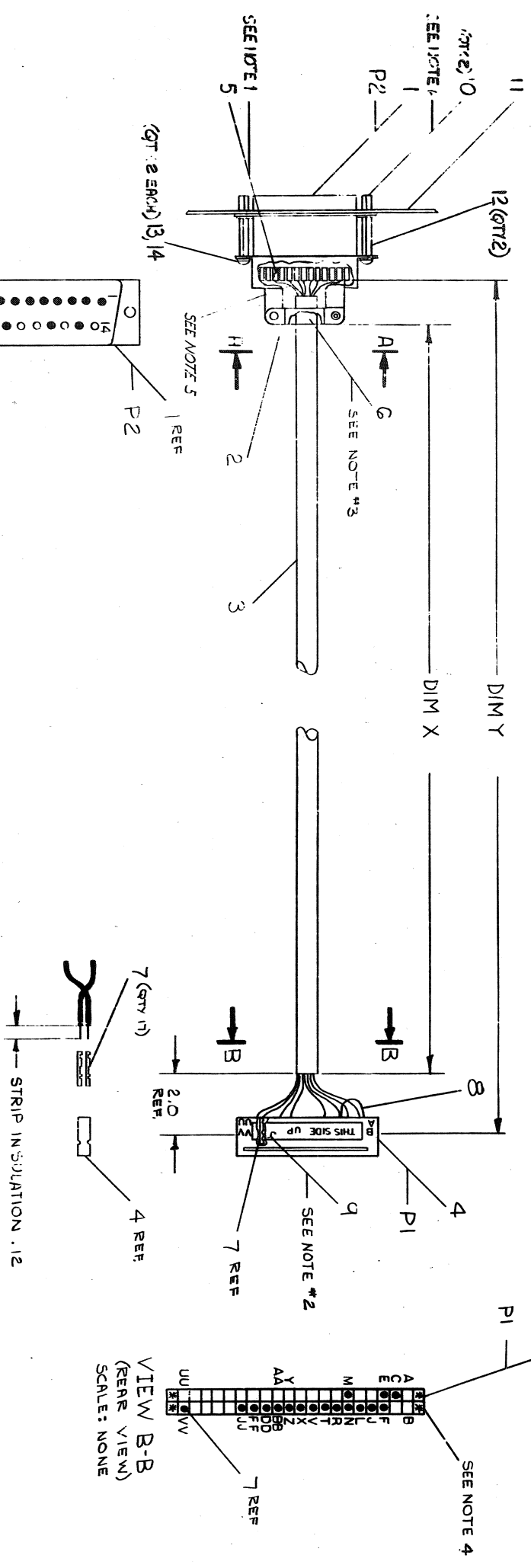




| WIRE TABLE |             |            |      |            |
|------------|-------------|------------|------|------------|
| ITEM NO    | DESCRIPTION | FROM       | TO   | WITH       |
| 1          | AVG. COLOR  | CONNECTION | WITH | CONNECTION |
| 2          | BLK         | P1-VV      | 7    | P2-7       |
| 3          | GRN/WHI     | P1-C       | 1    | P2-25      |
| 4          | GRN/BLK     | P1-JJ      | 1    | P2-12      |
| 5          | OR/BLK      | P1-FF      | 1    | P2-11      |
| 6          | RED         | P1-DD      | 1    | P2-20      |
| 7          | GRN         | P1-BB      | 1    | P2-8       |
| 8          | BLU/WHI     | P1-E       | 1    | P2-6       |
| 9          | ORN         | P1-X       | 1    | P2-22      |
| 10         | BLU         | P1-V       | 1    | P2-4       |
| 11         | WHI         | P1-T       | 1    | P2-5       |
| 12         | BLU/BLK     | P1-R       | 1    | P2-17      |
| 13         | BLK/WHI     | P1-N       | 1    | P2-15      |
| 14         | RED/WHI     | P1-L       | 1    | P2-24      |
| 15         | WHI/BLK     | P1-J       | 1    | P2-3       |
| 16         | RED/BLK     | P1-F       | 1    | P2-2       |
| 17         | BLK         | P1-E       | 7    | P1-M       |
| 18         | 22          | BLK        | F2-1 | SOLDER     |
| 19         | 22          | BLK        | F2-1 | SOLDER     |

| LEGEND   |               |           |                |
|----------|---------------|-----------|----------------|
| NUMBER   | VARIATION     | DIM "X"   | DIM "Y" PRECUT |
| BC03L-10 | 10FT ± 2IN    | 10FT, 5IN |                |
| BC03L-5  | 5FT ± 2IN     | 5FT, 5IN  |                |
| BC03L-1K | 1FT 9IN ± 1IN | 2FT       |                |

- NOTES:
- EACH SOLDERED CONN ON P2 SHALL BE INSULATED WITH A .25 PIECE OF SHRINK TUBING (ITEM 5)
  - PLACE ITEM 4 (THIS SIDE UP STICKER) ON LETTERED SIDE OF ITEM 4 (CONN HOUSING) AS SHOWN.
  - FOR STRAIN RELIEF, WRAP 2 TURNS OF TAPE (ITEM 6) AROUND "ABEL" (ITEM 3) AS SHOWN.
  - PINS MARKED \* IN VIEW B-B ARE NOT USEABLE
  - WIRES COMING FROM CENTER OF PLUG CONN. SHOULD BE SECURED. ALL OTHERS SHOULD BE SECURED INTO HOOD OF CONN. SC THAT THEY ARE NOT BOUNCED.
  - PLACE LOCKWASHER (SUPPLIED WITH ITEM 10) BETWEEN SPACER AND CONN. FOR FLANGE. DISCARD NUT (ITEM 2) SUPPLIED WITH ITEM 10.



| VIEW B-B (REAR VIEW) |  |
|----------------------|--|
| SCALE: NONE          |  |

| REVISIONS      |            |      |
|----------------|------------|------|
| CHK            | CHANGE NO. | REV. |
| BC03L-00002    | A          |      |
| B. SAMPSON     |            |      |
| BC03L-00003    | B          |      |
| M. LEWANDOWSKI |            |      |
| BC03L-00004    | C          |      |
| R. SAMPSON     |            |      |
| BC03L-00005    | D          |      |
| T. ORR         |            |      |
| BC03L-00006    | E          |      |
| T. ORR         |            |      |

| THIRD ANGLE PROJECTION |  |
|------------------------|--|
| DO NOT SCALE DIMS      |  |
| MATERIAL               |  |
| FINISH                 |  |
| SCALE                  |  |
| SHEET                  |  |

| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES |               |
|-----------------------------------------------------|---------------|
| DESCRIPTION                                         | DWG. PART NO. |
| 1. CONNECTOR, PLUG, FILTERED                        | 1214031-00    |
| 2. WASHER, LOCK                                     | 9006688       |
| 3. SCR. PL. PH. HD #4-40 X .25                      | 9008301-1     |
| 4. SPACER, THREADED, HEX                            | 9008833       |
| 5. PLATE, CONN. NTC                                 | 9008833       |
| 6. SCREW LOCK ASSY                                  | 9008833       |
| 7. LABEL (THIS SIDE UP)                             | 3611567       |
| 8. WIRE, STRAIDED #22AWG IPVC (BLK)                 | 9107350-00    |
| 9. SOCKET, CRIMP                                    | 1210000-00    |
| 10. TAPE, DOUBLE SIDED .50 W.D.                     | 9007000-00    |
| 11. TUBING, HEAT SHRINK .12                         | 9107255-00    |
| 12. CONN. 44 POS. HSG.                              | 1210918-15    |
| 13. CABLE, 15 COND. 22AWG.                          | 9107672-00    |
| 14. HOOD, CONN.                                     | 1212500-00    |

[illegible]

| ENGINEERING SPECIFICATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |    |    |    |    |    |    |          |   |   | CONTINUATION SHEET |   |   |   |   |                    |   |   |  |  |          |    |    |    |    |    |    |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |  |  |  |  |  |  |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|----|----|----------|---|---|--------------------|---|---|---|---|--------------------|---|---|--|--|----------|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|--|--|--|--|--|--|--|--|--|
| TITLE     DL11-W    Installation Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |    |    |    |    |    |    |          |   |   |                    |   |   |   |   |                    |   |   |  |  |          |    |    |    |    |    |    |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |  |  |  |  |  |  |  |  |  |
| <p><u>DL11-W Installation Procedure</u></p> <p>Installation of the M7856 module consists of the following preparations:</p> <ol style="list-style-type: none"> <li>1) Switch selection of the address mode and register addresses.</li> <li>2) Switch selection of vector address.</li> <li>3) Switch selection of data format.</li> <li>4) Switch selection of receiver and transmitter baud rates.</li> <li>5) Switch selection of operation mode for the current loops.</li> <li>6) Additional switch selections for compatability.</li> <li>7) Installation of G9000 in systems where +15V is not available.</li> </ol> <p>NOTE: The notation used to indicate a particular switch is as follows: SX-Y where X denotes the particular switch pack and Y denotes the individual switch in the pack. The switch pack is labeled on the P. C. board with an SX (ie S2) and the individual switches are labeled on the switch pack as are the on-off positions.</p> <p>A. <u>Register Address Assignments:</u></p> <p>The DL11-W can respond to addresses with the following format:</p> <table border="1" style="margin: 10px auto; border-collapse: collapse; text-align: center;"> <tr> <td>17</td><td>16</td><td>15</td><td>14</td><td>13</td><td>12</td><td>11</td><td>10</td><td>9</td><td>8</td><td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td>0</td> </tr> <tr> <td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td colspan="6">SWITCHES</td><td colspan="4"></td> </tr> </table> <div style="margin-left: 400px; margin-top: 10px;"> <p style="margin-left: 100px;">Selects 1 of 4<br/>Registers</p> <p style="margin-left: 350px;">Byte Control</p> </div> <p>The DL11-W can be operated in one of three different address selection modes. Normally, a DL11-W used as console terminal control would operate in the first mode, whereas additional DL11-W's would be operated in the second mode. The third mode is not normally used, but is included here for completeness.</p> |    |    |    |    |    |    |          |   |   |                    |   |   |   |   |                    |   |   |  |  | 17       | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | SWITCHES |  |  |  |  |  |  |  |  |  |
| 17                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 16 | 15 | 14 | 13 | 12 | 11 | 10       | 9 | 8 | 7                  | 6 | 5 | 4 | 3 | 2                  | 1 | 0 |  |  |          |    |    |    |    |    |    |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |  |  |  |  |  |  |  |  |  |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1  | 1  | 1  | 1  | 1  | 1  | SWITCHES |   |   |                    |   |   |   |   |                    |   |   |  |  |          |    |    |    |    |    |    |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |  |  |  |  |  |  |  |  |  |
| SIZE<br><b>A</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |    |    |    |    |    |    |          |   |   | CODE<br>SP         |   |   |   |   | NUMBER<br>DL11-W-2 |   |   |  |  | REV<br>A |    |    |    |    |    |    |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |          |  |  |  |  |  |  |  |  |  |

| ENGINEERING SPECIFICATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |      |      |      |      | CONTINUATION SHEET |      |      |      |      |       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|------|--------------------|------|------|------|------|-------|
| TITLE      DL11-W   Installation Procedure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |      |      |      |      |                    |      |      |      |      |       |
| <p>Mode 1: Both the serial line unit and the real-time clock sections can be addressed. Due to common address selection logic, operation in this mode requires that the serial line unit addresses be restricted to 77756X. The line clock address is 777546.</p> <p>Mode 2: Only the serial line unit section can be addressed. Address selection ranges from 74090 to 77777. Line clock is disabled and does not respond to address 777546.</p> <p>Mode 3: Only the line clock section can be addressed at 777546. The serial line unit section does not respond to any address.</p> |      |      |      |      |                    |      |      |      |      |       |
| <u>ADDRESS AND MODE SELECTION</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |      |      |      |                    |      |      |      |      |       |
| Address Bit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | A10  | A09  | A08  | A07  | A06                | A05  | A04  | A03  | N/A  | N/A   |
| Switch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | S5-3 | S5-2 | S5-1 | S5-4 | S5-5               | S5-6 | S5-8 | S5-7 | S5-9 | S5-10 |
| Mode 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Off  | Off  | Off  | On   | Off                | Off  | Off  | On   | Off  | On    |
| Mode 2*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Off  | Off  | Off  | On   | Off                | Off  | Off  | On   | On   | Off   |
| Mode 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Off  | Off  | Off  | On   | Off                | Off  | On   | On   | On   | On    |
| <p>*Address 77756X selected for serial line interface. Other addresses may be selected using SWITCH-OFF = 1 and SWITCH-ON = 0.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |      |      |      |                    |      |      |      |      |       |
| <p>Note: Remove R63 from DL11-W's operated in Mode 2 to allow proper operation of a line frequency clock or DL11-W operated in Mode 1 or Mode 3.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                   |      |      |      |      |                    |      |      |      |      |       |
| <p>Address assignments for serial lines are normally made in the ranges from 77650X to 77667X and from 77561X to 77617X.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                           |      |      |      |      |                    |      |      |      |      |       |
| <p>B. <u>Vector Address Assignments:</u></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |      |      |      |      |                    |      |      |      |      |       |
| <p>The line clock, if enabled, has a fixed vector address of 100 and cannot be changed. The serial line assignments are to floating vectors produced in the form XX0 (Receiver) and XX4 (Transmitter) where XX ranges from 00 to 77.</p>                                                                                                                                                                                                                                                                                                                                               |      |      |      |      |                    |      |      |      |      |       |
| <p>For a DL11-W used as the console device, the vector is 060/064. Additional DL11-W's vector addresses are floating.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                              |      |      |      |      |                    |      |      |      |      |       |

|           |            |                    |          |
|-----------|------------|--------------------|----------|
| SIZE<br>A | CODE<br>SP | NUMBER<br>DL11-W-2 | REV<br>A |
|-----------|------------|--------------------|----------|

# ENGINEERING SPECIFICATION

CONTINUATION SHEET

TITLE DL11-W Installation Procedure

V8 V7 V6 V5 V4 V3 V2 V1 V0

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

Switch Selectable for Serial Line

Vector Bit V8 V7 V6 V5 V4 V3

Switch S2-8 S2-7 S2-5 S2-3 S2-6 S2-4

060/064 Off Off Off On On Off

On = 1, Off = 0

## C. Selection of Data Format:

### 1. Data Bits

Switches S4-3 and S4-4 control the number of data bits in the serial character as follows:

| <u>S4-4</u> | <u>S4-3</u> | <u># of Data Bits</u> |
|-------------|-------------|-----------------------|
| On          | On          | 5                     |
| On          | Off         | 6                     |
| Off         | On          | 7                     |
| Off         | Off         | 8                     |

### 2. Parity

Parity is controlled by switches S4-2 and S4-6 as follows:

| <u>S4-2</u> | <u>S4-6</u> | <u>Parity</u> |
|-------------|-------------|---------------|
| Off         | Off         | Odd           |
| On          | Off         | Odd           |
| Off         | On          | Even          |
| On          | On          | Odd           |

### 3. Stop Bits

Switch S4-5 controls the number of stop bits selected in the serial character as follows:

| SIZE<br>A | CODE<br>SP | NUMBER<br>DL11-W-2 | REV<br>A |
|-----------|------------|--------------------|----------|
|-----------|------------|--------------------|----------|

110  
0300  
9600

ENGINEERING SPECIFICATION

CONTINUATION SHEET

TITLE

DL11-W Installation Procedure

S4-5

# of Stop Bits

On

1

Off

2 (or 1.5 if 5 data bits are selected)

D. Baud Rate Selection:

Receiver and Transmitter baud rates are independent, so any combination may be selected.

Baud Rate Switch Selections

| Baud Rate | Receiver<br>S3-2 | S3-3 | S3-5 | Transmitter<br>S4-10 | S3-1 | S3-4 |
|-----------|------------------|------|------|----------------------|------|------|
| 110       | Off              | Off  | Off  | On                   | On   | On   |
| 150       | On               | Off  | Off  | Off                  | On   | On   |
| 300       | Off              | On   | On   | On                   | Off  | Off  |
| 600       | Off              | On   | Off  | On                   | Off  | On   |
| 1200      | Off              | Off  | On   | On                   | On   | Off  |
| 2400      | On               | On   | On   | Off                  | Off  | Off  |
| 4800      | On               | On   | Off  | Off                  | Off  | On   |
| 9600      | On               | Off  | On   | Off                  | On   | Off  |

E. Current Loop Operation Mode:

Normally, current loops should be in active mode, unless interfaced to another active loop, such as to another DL11.

Active - Passive Mode Selection

|               | S1-1 | S1-2 | S1-3 | S1-6 | S1-7 |
|---------------|------|------|------|------|------|
| Transmitter   |      |      |      |      |      |
| Active        | On   | On   | Off  | Off  | On   |
| Passive       | Off  | Off  | On   | On   | Off  |
| Receiver      |      |      |      |      |      |
| Active        | On   | Off  | On   | Off  | On   |
| Passive       | Off  | On   | Off  | On   | Off  |
| Reader Enable |      |      |      |      |      |
| Active        | On   | Off  | On   | Off  | On   |
| Passive       | Off  | On   | Off  | On   | Off  |

SIZE

CODE

NUMBER

REV

A

SP

DL11-W-2

A

DEC FORM NO

DEC 16-(381)-1022-N370

ORA 108

SHEET

5

OF

8

ENGINEERING SPECIFICATION

CONTINUATION SHEET

TITLE

DL11-W Installation Procedure

F. Compatability Selection:

Switches S4-1 and S4-7 allow the DL11-W to be configured to replace DL11-A, B, C, and D options in most applications.

DL11-W Compatability Switches

| Selectable | Switch | Description                                                                                                                                                 |
|------------|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Break Bit  | S4-1   | Enabled in the ON position. Should be disabled (switch OFF) if replacing a DL11-A, or DL11-B should be enabled (switch ON) if replacing a DL11-C or DL11-D. |
| Error Bits | S4-7   | Error bit reporting is enabled in the ON position. Should be disabled if replacing DL11-A or DL11-B, and should be enabled if replacing DL11-C or DL11-D.   |

Note: Both EIA level and current loop signals are available at the berg connector on the module. No selection is necessary. The proper cable will pick up the correct signals.

G. G8000 Installation:

For DL11-W EIA operation, a positive voltage is required between 9 and 15 volts to operate the EIA drivers. For PDP-11/20 and PDP-11/15 systems with the H720 power supply, a G8000 module must be installed to provide this voltage. Using a filter network, this module converts the full-wave rectified "+8V" signal to a positive DC voltage.

1. Install G8000 into slot A02 or DD11-A.

2. Wire A03V2 to A02V2.

3. Wire A02N2 to CXXU1 where XX is the slot location of the M7856.

SIZE

CODE

NUMBER

REV

A

SP

DL11-W-2

A

DEC FORM NO

DEC 16-(381)-1022-N370

ORA 108

SHEET

6

OF

8

ENGINEERING SPECIFICATION

CONTINUATION SHEET

TITLE

DL11-W Installation Procedure

H. DL11-W Systems with +15V Available Using DD11-A

There is a special situation of using a DD11-A to mount a DL11-W in systems with +15V available. These systems have +15V available, and it appears at pin A03V2 of the DD11-A when using power harness such as 7009177, 7008855, or 7008909. In this situation, no G8000 is necessary, and +15V can be wired directly from A03V2 to CXXU1, where XX is the slot number of the DL11.

I. When using the DL11-W in an 11/05 processor pin CXXU1 has +15V available on it so no G8000 or no jumpers are required.

J. INSTALLATION

The DL11-W module plugs into an SPC slot. A wire must be installed to pick up the LTC L signal from the power supply and apply it to the line frequency input of the DL11-W.

When installed, the LTC L input to the DL11-W is located on pin CD1. Connect a length of 30 AWG wire from pin CD1 on the backplane to the pin on the backplane, as designated in Table 1-1, for each application.

Table 1-1 LTC L Connection

| PDP Computer                     | Processor           | Pin Number                                                    |
|----------------------------------|---------------------|---------------------------------------------------------------|
| 11/04                            | RD11-D (4 slot)     | C02D1, C03D1, C04D1                                           |
| 11/04                            | RD11-D (9 slot)     | C02D1, C03D1, C04D1, C05D1, C06D1, C07D1, C08D1, or C09D1     |
| 11/05                            | KAll-A w/8K memory  | C01D1, C02D1, C03D1, C04D1, or F0W72                          |
| 11/05                            | RD11-A w/16K memory | C01D1 or F0W72                                                |
| 11/20                            | KAll                | A13P2 or B12R1                                                |
| 11/34                            | RD11-E              | C03D1, C04D1, C05D1, C06D1, C07D1, C08D1, or C09D1            |
| 11/35                            | RD11-A              | F03U1 or C09D1                                                |
| 11/40                            | RD11-A              | F03M1 or C09D1                                                |
| 11/45                            | KB11-A              | C26D1, C27D1, or C28D1                                        |
| 11/55                            | KB11-D              | C26D1, C27D1, or C28D1                                        |
| 11/70                            | KB11-B              | C40D1, C41D1, C42D1, C43D1, or C44D1                          |
| 11/70                            | KB11-C              | C40D1, C41D1, C42D1, C43D1, or C44D1                          |
| DD11-B Peripheral Mounting Panel |                     | C01D1, C02D1, C03D1, or C04D1                                 |
| DD11-D Peripheral Mounting Panel |                     | C01D1, C02D1, C03D1, C04D1, C05D1, C06D1, C07D1, C08D1, C09D1 |
| DD11-A Peripheral Mounting Panel |                     | A03P2                                                         |

NOTE: A wire connection is not necessary for backplane pin numbers ending in D1. LTC L is already connected to the line frequency input of the DL11-W.

SIZE

CODE

NUMBER

REV

A

SP

DL11-W-2

A

DEC FORM NO

EN-01022-16-N370-(381)

ORA 108

SHEET

7

OF

8

ENGINEERING SPECIFICATION

CONTINUATION SHEET

TITLE

DL11-W Installation Procedure

K. Installation

The DL11-W module plugs into an SPC slot. A wire must be installed to pick up the DCLOL signal from the power supply and apply it to the DCLOL input of the DL11-W.

When installed, the DCLOL input to the DL11-W is located on pin CMI. Connect a length of 30 AWG wire from pin CMI on the backplane to the pin on the backplane, as designated in Table 1-2 for each application.

Table 1-2 DCLOL Connection

| PDP Computer                     | Processor           | Pin Number                                      |
|----------------------------------|---------------------|-------------------------------------------------|
| 11/04*                           | RD11-D (4 slot)     | C03M1, C04M1                                    |
| 11/04*                           | RD11-E (9 slot)     | C03M1 thru C09M1                                |
| 11/05*                           | KAll-A w/8K Memory  | C01M1, C02M1, C03M1, C04M1                      |
| 11/05*                           | RD11-A w/16K Memory | C01M1                                           |
| 11/20                            | KAll                | B11P2, B14P2, A13S2, A08S2, A03S2, B04D2, F06B2 |
| 11/34*                           | RD11-E              | C03M1 thru C09M1                                |
| 11/35                            | RD11-A              | @09P2                                           |
| 11/40                            | RD11-A              | @09P2                                           |
| 11/45*                           | KB11-A              | C26M1, C26M1, C28M1                             |
| 11/55*                           | KB11-D              | C26M1, C26M1, C28M1                             |
| 11/70*                           | KB11-B              | C40M1, C41M1, C42M1, C43M1, C44M1               |
| 11/70*                           | KB11-C              | C40M1, C41M1, C42M1, C43M1, C44M1               |
| DD11-B Peripheral Mounting Panel |                     | C01M1 thru C04M1                                |
| DD11-D Peripheral Mounting Panel |                     | C01M1 thru C09M1                                |
| DD11-A Peripheral Mounting Panel |                     | B01P2, B04P2, A03S2                             |

\*NOTE: A wire connection is not necessary for backplane pin numbers ending in M1 DCLOL. Is already connected to the input of the DL11-W.

SIZE

CODE

NUMBER

REV

A

SP

DL11-W-2

A

DEC FORM NO

EN-01022-16-N370-(381)

ORA 108

SHEET

8

OF

8





