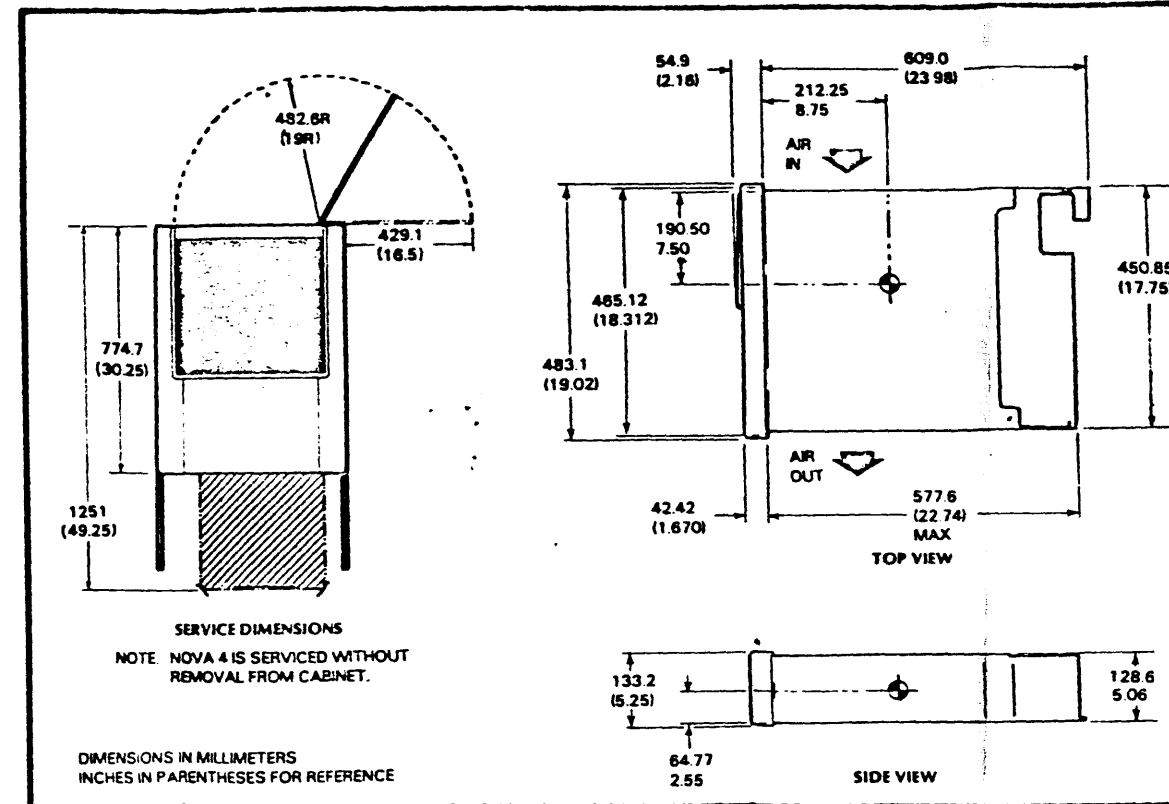
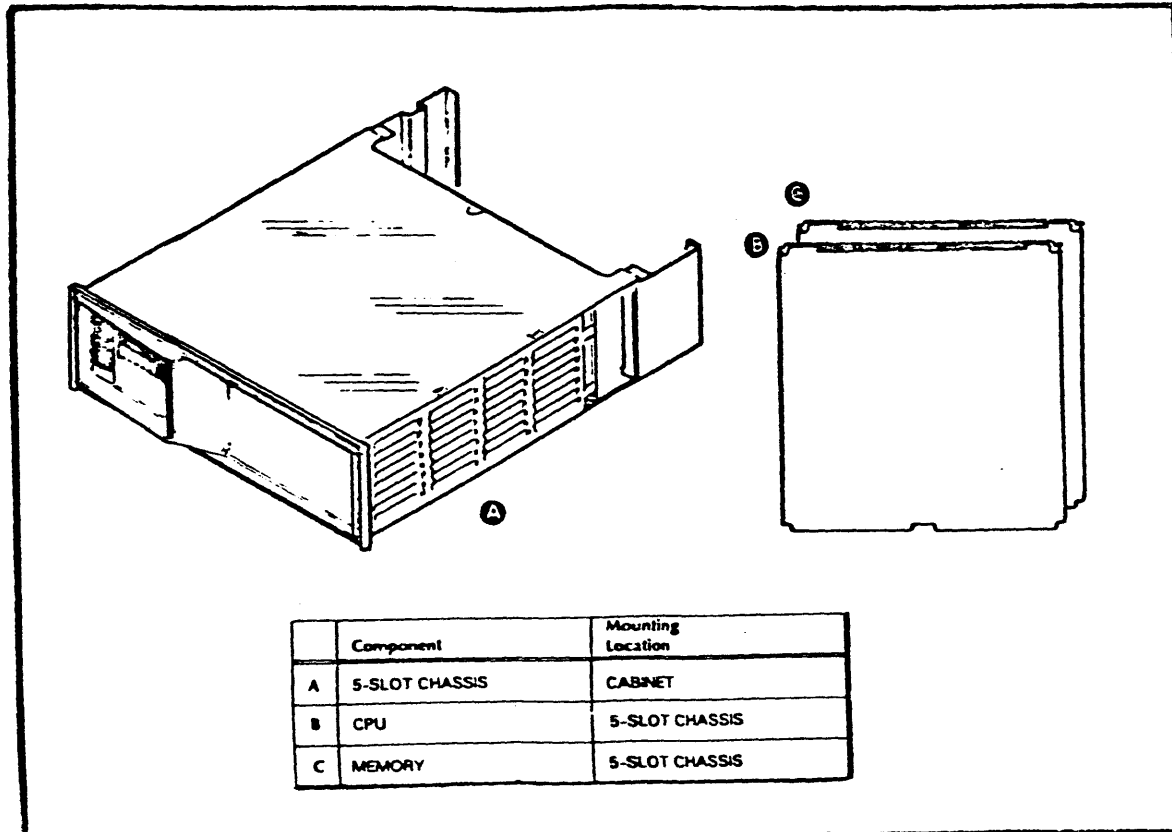


INSTALLATION SPECIFICATIONS



**SLOT ASSIGNMENTS**

| Slot | Allowed (Slot Chart) | Assigned | +5V Current Draw |
|------|----------------------|----------|------------------|
| 5    | I/O                  |          |                  |
| 4    | I/O                  |          |                  |
| 3    | I/O                  |          |                  |
| 2    | MEMORY or I/O        |          | NOTE 2           |
| 1    | CPU                  |          | NOTE 1           |
| 0    | POWER SUPPLY         |          |                  |

Total +5V Current draw: 17A  
 Max +5 Current Available: 35A  
 +5 Current Surplus: 18A

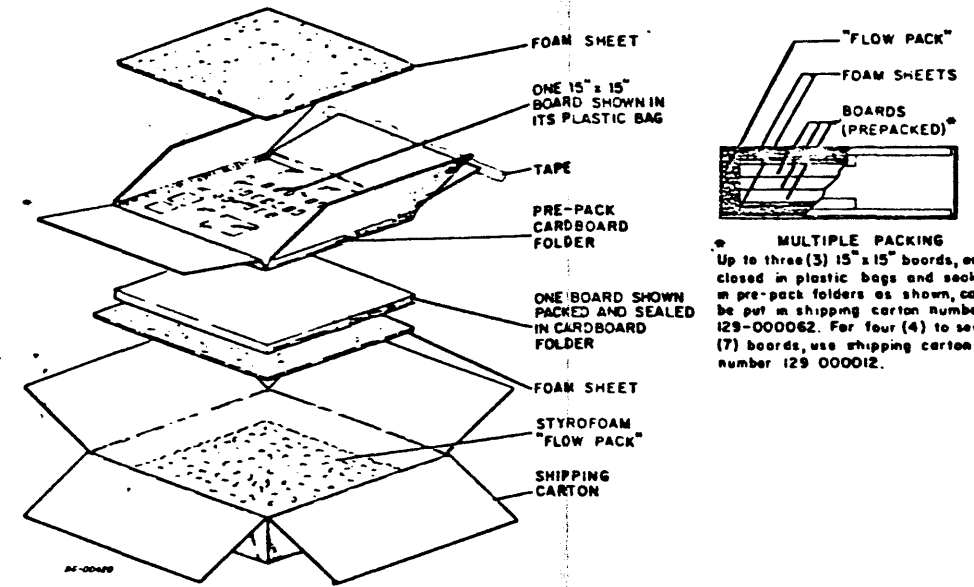
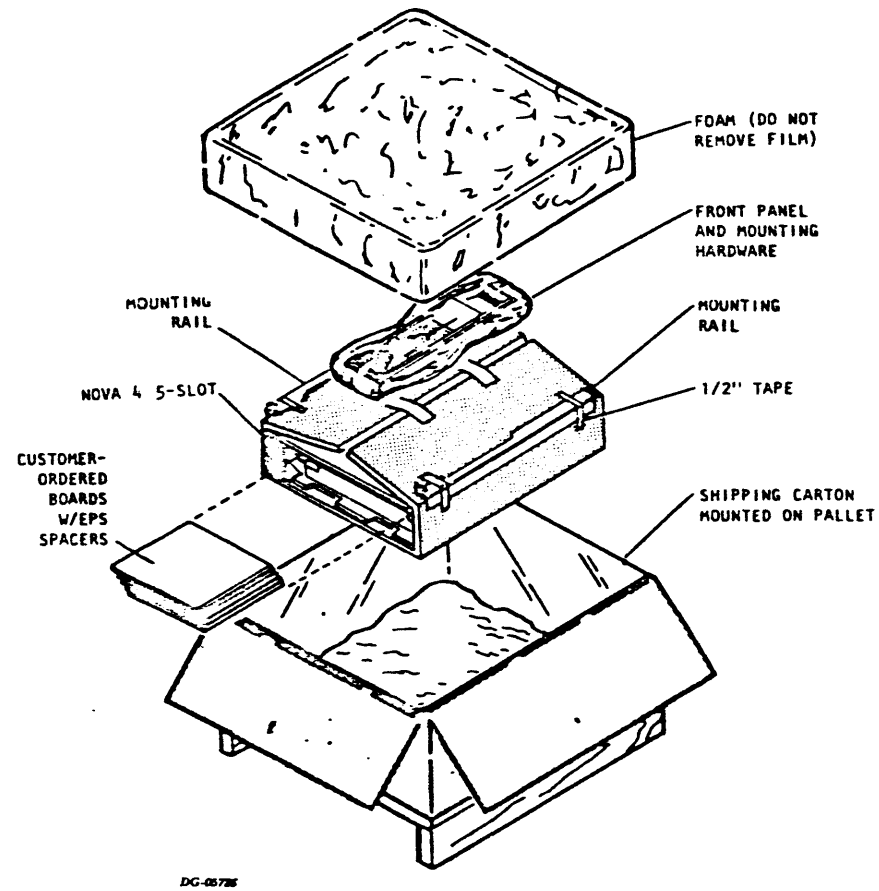
**NOTES:**

- NOVA 4/S and NOVA 4/X: 17A  
NOVA 4/C: 8A
- MEMORY (NOVA 4/S & 4/X only): 5.6A
- PUSH ON TERMINATORS ON MEMORY SLOT (NOVA 4/S & 4/X ONLY)
- MAX DRAW +15V, +12V, +12V MEM: 5.0A
- MAX DRAW -5V, -5V MEM: 1.5A

**SPECIFICATIONS**

| NOVA 4 5-slot                 |   |
|-------------------------------|---|
| <b>DIMENSIONS:</b>            | Width: 483.1 mm (19.02 in), Depth: 663.9 mm (26.14 in), Height: 133.2 mm (5.25 in)  |
| <b>SERVICE CLEARANCES:</b>    | Front: 508.0 mm (20.0 in)   |
| <b>WEIGHT:</b>                | Empty: 18.14 kg (40 lbs), Fully Loaded: 22.68 kg (50 lbs)   |
| <b>OPERATING ENVIRONMENT:</b> | Temperature (max): 55°C (131°F) 80Hz, 45°C (113°F) 50Hz<br>Relative Humidity (max): 90%<br>Altitude (max): 3084m (10,000')                                |
| <b>CABLES:</b>                | Primary Power: Length, Conn, Mating Conn<br>Domestic: 1.8m(6'), 5-15P, 5-15R<br>Export: 1.8m(6'), 6-15P, 6-15R<br>External I/O Bus Cable: 15.3m (50') max |
| <b>HEAT OUTPUT:</b>           | 500 watts (1705 BTU/hr)   |
| <b>POWER REQUIREMENTS:</b>    | (Domestic)<br>Voltage: 85-132 Hz<br>Max Amp per Phase: 8.0<br>Phase: 1<br>(Export)<br>Voltage: 187-264 Hz<br>Max Amp per Phase: 4.0<br>Phase: 1           |
| <b>LINE CORDS:</b>            | Supply, Part No.<br>100V: 109 000239<br>120V: 109 000238<br>220V: 109 000237<br>240V: 109 000240  |

SHIPPING

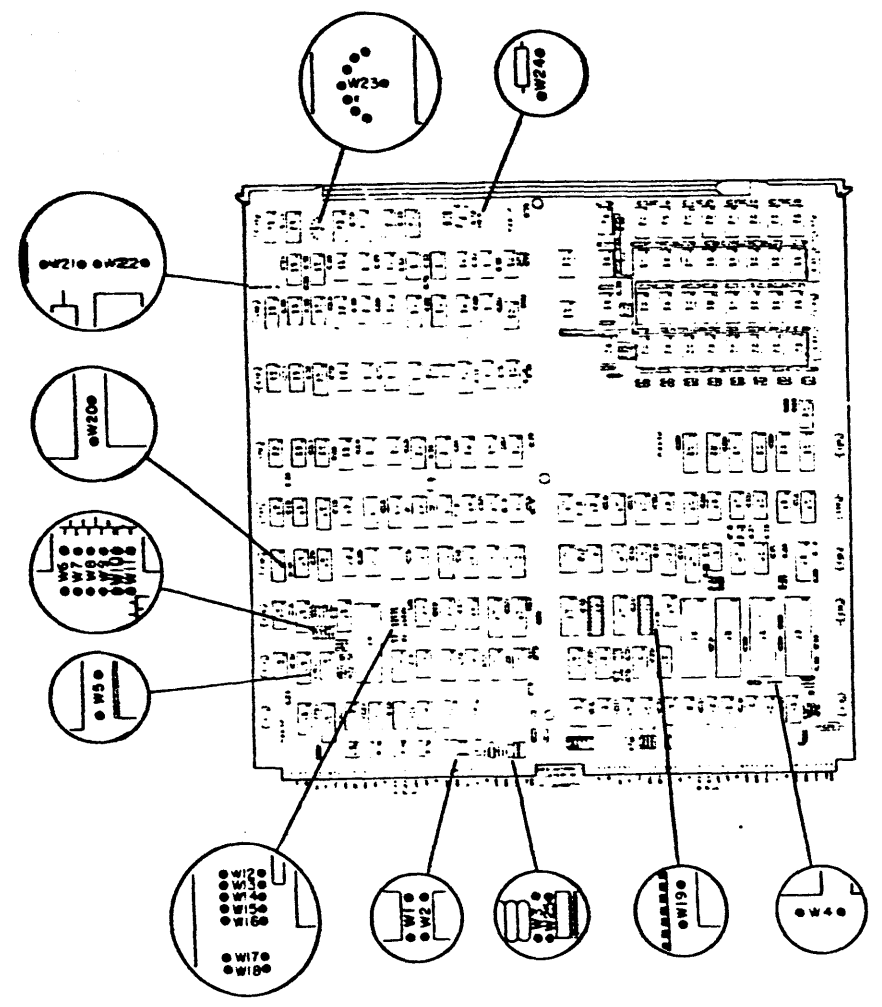


\* MULTIPLE PACKING  
Up to three (3) 15" x 15" boards, enclosed in plastic bags and sealed in pre-pack folders as shown, can be put in shipping carton number I29-000062. For four (4) to seven (7) boards, use shipping carton number I29-000012.

| SHIPPING AND PACKAGE DATA |                   |                      |                        |                   |                |
|---------------------------|-------------------|----------------------|------------------------|-------------------|----------------|
| Outside Dimensions        |                   |                      | Weight (Gross)         | Volume            | Density        |
| Length                    | Width             | Depth                |                        |                   |                |
| in.                       | in.               | in.                  | lbs.                   | cu ft             | lbs/cu ft      |
| cm                        | cm                | cm                   | kg                     | cu m              | kg/cu m        |
| 36                        | 28                | 24.5                 | 75                     | 14.29             |                |
| 91.4                      | 71.12             | 62.2                 | 34.0                   | .4287             |                |
| SHIPPING SPECIFICATIONS   |                   |                      | STORAGE SPECIFICATIONS |                   |                |
| Temperature Range         | Relative Humidity | Maximum Altitude     | Temperature Range      | Relative Humidity | Maximum Period |
| °F                        | (non-condensing)  |                      | °F                     | (non-condensing)  |                |
| °C                        |                   |                      | °C                     |                   |                |
| -40 to +160               | 0% / 90%          | 50,000ft.<br>15,200m | -40 to +160            | 0% / 90%          | 90 days        |
| -40 to +71                |                   |                      | -40 to +71             |                   |                |

DG-C322

### TAILORING CPU JUMPERING NOVA 4/C



DEVICE CODE JUMPERS FOR FRONT PANEL AUTOMATIC PROGRAM LOAD  
SELECT THE PROGRAM LOAD DEVICE CODE BY INSTALLING JUMPERS  
W11, W8, W6, W7, W9, W10, AS FOLLOWS:

JUMPER OUT = 1    JUMPER IN = 0

EXAMPLE JUMPERING FOR DEVICE CODE 27g:

|     |     |    |     |     |     |
|-----|-----|----|-----|-----|-----|
| W11 | W8  | W6 | W7  | W9  | W10 |
| IN  | OUT | IN | OUT | OUT | OUT |

W4 IS NOT INSERTED IF THE PROGRAM LOAD DEVICE IS A HIGH SPEED DEVICE, OTHERWISE IT IS INSERTED.

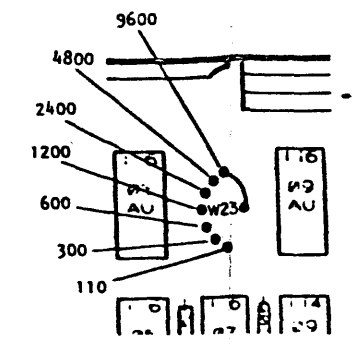
TYPE OF TRANSMISSION JUMPERS

| TYPE OF TRANSMISSION | JUMPERS INSERTED* |
|----------------------|-------------------|
| ZOMA CURRENT LOOP    | W1, W3            |
| EIA RS232-C          | W2                |

\* JUMPER 25 IS INSERTED IF THE SYSTEM TERMINAL IS A TELETYPE, OTHERWISE IT IS NOT INSERTED.

\* JUMPERS W17 AND W18 MUST ALSO BE INSERTED AS SHOWN BELOW.

W23 IS INSERTED TO DETERMINE THE BAUD RATE AS SHOWN BELOW: (9600 SHOWN)



W22 IS NEVER INSERTED.

THE FOLLOWING JUMPERS ARE ALWAYS INSERTED:

- W5
- W19
- W20
- W21
- W24

STOP BIT JUMPERS

| NUMBER OF STOP BITS | W15 JUMPER POSITION |
|---------------------|---------------------|
| 1                   | IN                  |
| 2                   | OUT                 |

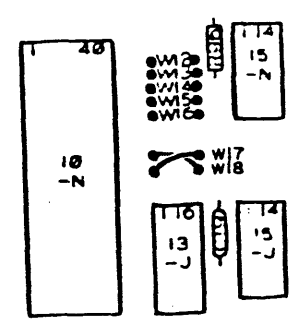
PARITY JUMPERS

| TYPE OF PARITY | JUMPER POSITION |     |
|----------------|-----------------|-----|
|                | W12             | W16 |
| EVEN           | OUT             | IN  |
| ODD            | IN              | IN  |
| NONE           | OUT             | OUT |

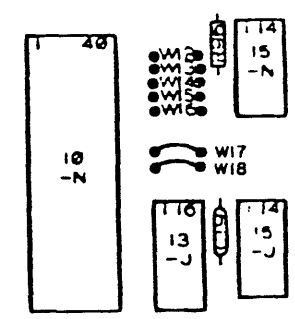
CHARACTER LENGTH JUMPERS

| CHARACTER LENGTH | JUMPER POSITION |     |
|------------------|-----------------|-----|
|                  | W13             | W14 |
| 5 BITS           | IN              | IN  |
| 6 BITS           | OUT             | IN  |
| 7 BITS           | IN              | OUT |
| 8 BITS           | OUT             | OUT |

ZOMA CURRENT LOOP



EIA RS232-C



JUMPERS W17 AND W18 MUST NOT TOUCH!

CPU/MEMORY LOADS

| VOLTAGE  | DESCRIPTION                   | CURRENT DRAW |
|----------|-------------------------------|--------------|
| +5V      | SYSTEM WITHOUT BATTERY BACKUP | 8.0A         |
| +5V      | SYSTEM WITH BATTERY BACKUP    | 7.5A         |
| +5V MEM  |                               | 0.5A         |
| +12V MEM |                               | 0.7A         |
| +15V     |                               | 0.04A        |

**TAILORING (CONT)**  
**CPU JUMPERING**  
**NOVA 4/S OR 4/X**

BAUD RATE JUMPERS

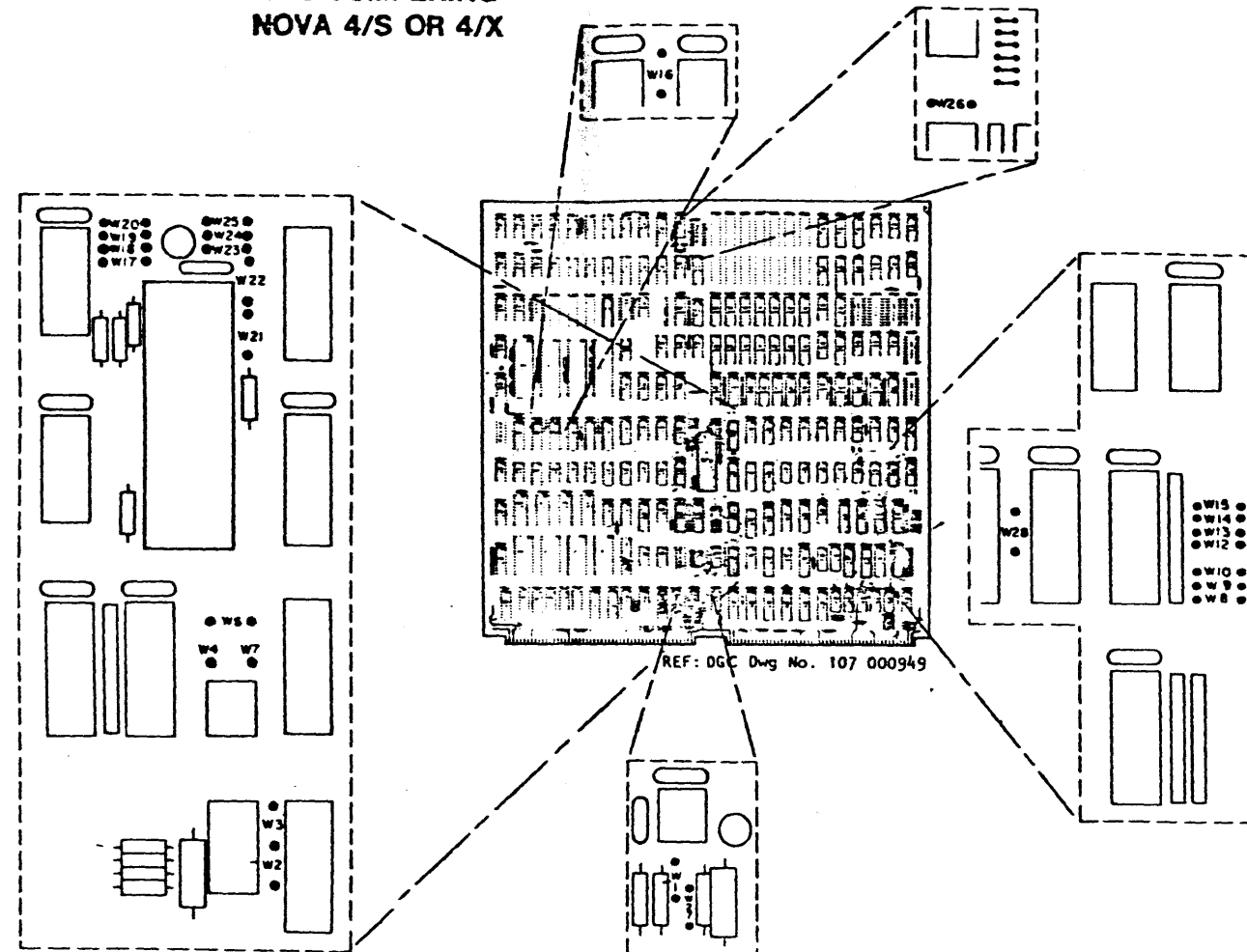
| BAUD RATE | JUMPER POSITION |     |     |     |     |
|-----------|-----------------|-----|-----|-----|-----|
|           | W17             | W18 | W19 | W20 | W27 |
| 50        | IN              | IN  | OUT | IN  | OUT |
| 75        | IN              | IN  | OUT | OUT | OUT |
| 110       | OUT             | OUT | OUT | OUT | IN  |
| 134.5     | IN              | OUT | IN  | IN  | OUT |
| 150       | OUT             | OUT | OUT | IN  | OUT |
| 200       | IN              | OUT | IN  | OUT | OUT |
| 300       | OUT             | OUT | IN  | OUT | OUT |
| 600       | IN              | OUT | OUT | IN  | OUT |
| 1200      | OUT             | IN  | OUT | OUT | OUT |
| 1600      | OUT             | IN  | OUT | IN  | OUT |
| 2400      | OUT             | OUT | IN  | IN  | OUT |
| 4800      | OUT             | IN  | IN  | OUT | OUT |
| 9600      | OUT             | IN  | IN  | IN  | OUT |
| 19200     | IN              | IN  | IN  | OUT | OUT |

PARITY JUMPERS

| TYPE OF PARITY | JUMPER POSITION |     |
|----------------|-----------------|-----|
|                | W22             | W21 |
| EVEN           | OUT             | IN  |
| ODD            | IN              | IN  |
| NONE           | OUT             | OUT |

CHARACTER LENGTH JUMPERS

| CHARACTER LENGTH | JUMPER POSITION |     |
|------------------|-----------------|-----|
|                  | W25             | W24 |
| 5 BITS           | IN              | IN  |
| 6 BITS           | OUT             | IN  |
| 7 BITS           | IN              | OUT |
| 8 BITS           | OUT             | OUT |



TYPE OF TRANSMISSION JUMPERS

| TYPE OF TRANSMISSION | JUMPERS INSERTED |
|----------------------|------------------|
| ZOMA CURRENT LOOP    | W4, W7, W2, W1   |
| EIA RS232-C          | W6, W3           |

STOP BIT JUMPERS

| NUMBER OF STOP BITS | W23 JUMPER POSITION |
|---------------------|---------------------|
| 1                   | IN                  |
| 2                   | OUT                 |

REAL TIME CLOCK JUMPER

| RTC STATUS   | W28 |
|--------------|-----|
| RTC ENABLED  | IN  |
| RTC DISABLED | OUT |

DEVICE CODE JUMPERS FOR FRONT PANEL AUTOMATIC PROGRAM LOAD

SELECT THE PROGRAM LOAD DEVICE CODE BY INSTALLING JUMPERS W13, W15, W14, W12, W10, W8 AS FOLLOWS:

JUMPER IN = 1 JUMPER OUT = 0

EXAMPLE JUMPERING FOR DEVICE CODE 27 :  
 8

| W13 | W15 | W14 | W12 | W10 | W8 |
|-----|-----|-----|-----|-----|----|
| OUT | IN  | OUT | IN  | IN  | IN |

W9 IS INSERTED IF THE PROGRAM LOAD DEVICE IS A HIGH SPEED DEVICE. OTHERWISE, IT IS REMOVED.

NOTE: JUMPERS W16 AND W26 ARE ALWAYS INSERTED. JUMPERS W5 AND W11 DO NOT EXIST.

+5V CURRENT DRAW = 17A

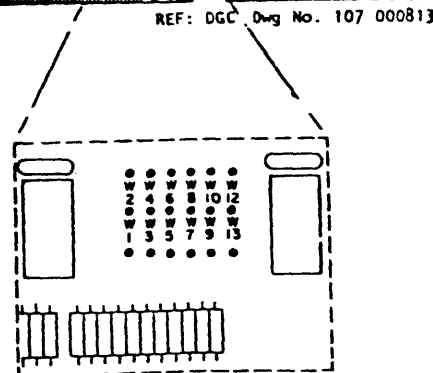
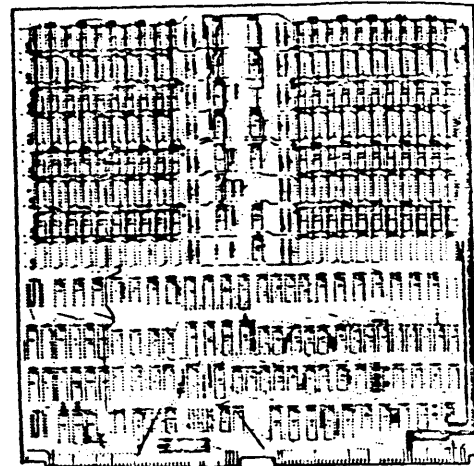
**TAILORING (CONT)**

**MEMORY JUMPERING  
NOVA 4/S AND 4/X**

NOVA 4/X MEMORY BOARD SELECT JUMPERS

| ADDRESS RANGE | JUMPERS INSERTED* |           |
|---------------|-------------------|-----------|
|               | BOARD SIZE        |           |
|               | 256KBYTES         | 128KBYTES |
| 0377777-      | NONE              |           |
| 0300000-      |                   |           |
| 0277777-      |                   |           |
| 0200000-      |                   |           |
| 0177777-      |                   |           |
| 0100000-      |                   | W7        |
| 0077777-      |                   |           |
| 0000000-      |                   |           |

\*NOTE: JUMPERS W1, W3, AND W5 ARE ALWAYS INSERTED.  
JUMPERS W2, W4, AND W6 ARE NEVER INSERTED.



NOVA 4/S MEMORY BOARD SELECT JUMPERS

| ADDRESS RANGE | JUMPERS INSERTED* |           |
|---------------|-------------------|-----------|
|               | BOARD SIZE        |           |
|               | 64 KBYTES         | 32KBYTES  |
| 0077777-      | W7 W9             |           |
| 0040000-      |                   |           |
| 0037777-      |                   | W7 W9 W11 |
| 0000000-      |                   |           |

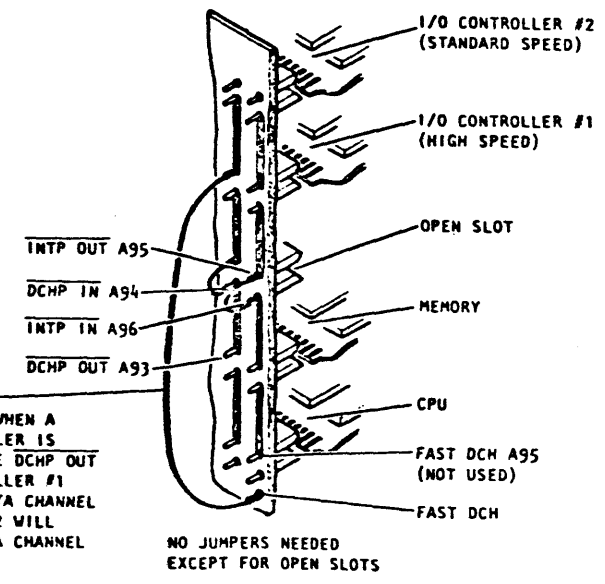
NOTE: JUMPERS W1, W3, AND W5 ARE ALWAYS INSERTED;  
JUMPERS W2, W4, AND W6 ARE NEVER INSERTED.

MEMORY LOADS

| VOLTAGE  | DESCRIPTION                   | CURRENT DRAW |
|----------|-------------------------------|--------------|
| +5V      | SYSTEM WITH BATTERY BACKUP    | 4.4A         |
| +5V      | SYSTEM WITHOUT BATTERY BACKUP | 5.6A         |
| +5V MEM  |                               | 1.2A         |
| +12V MEM | FIRST BOARD IN CHASSIS        | 2.3A         |

### TAILORING (CONT) BACKPANEL JUMPERING

TYPICAL CONFIGURATION

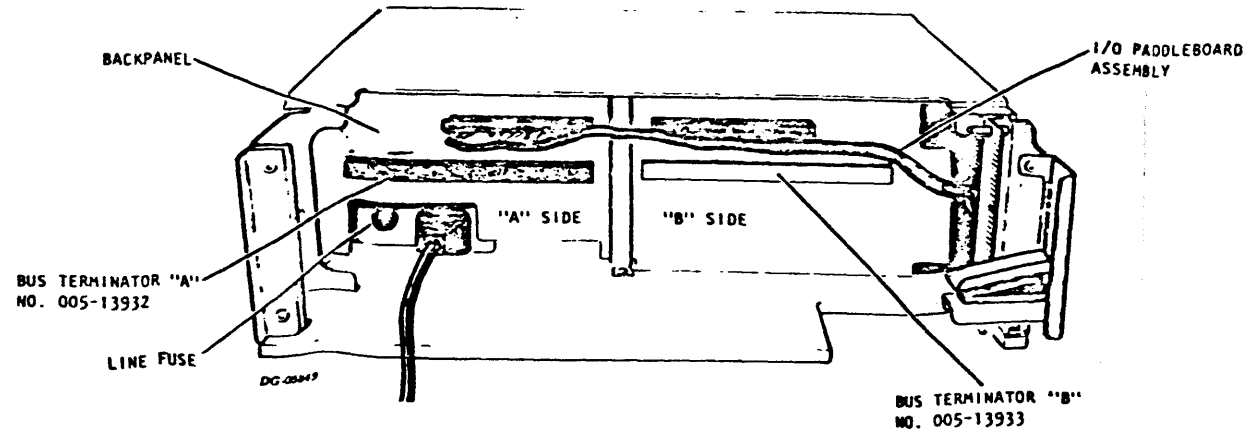
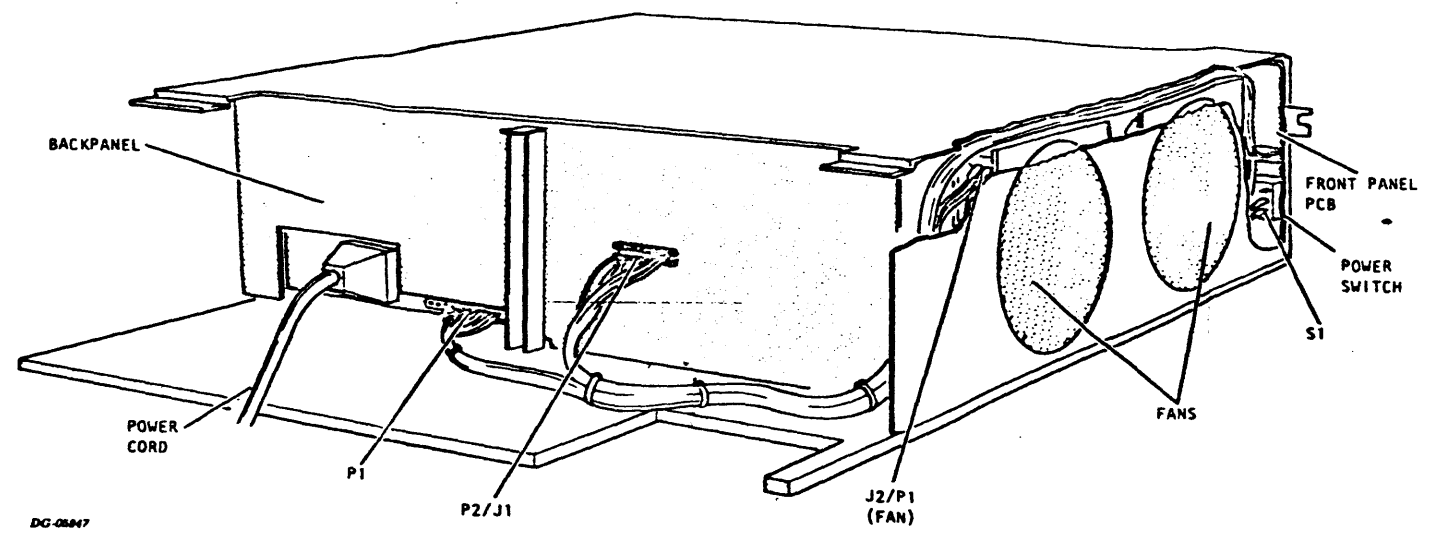


**FAST DCH JUMPER**  
 (THIS JUMPER IS ONLY USED WHEN A STANDARD SPEED I/O CONTROLLER IS CONFIGURED. IT RETURNS THE DCHP OUT SIGNAL TO THE CPU. CONTROLLER #1 WILL RECEIVE HIGH SPEED DATA CHANNEL SERVICE WHILE CONTROLLER #2 WILL RECEIVE STANDARD SPEED DATA CHANNEL SERVICE.)

**NOTE:** WHEN AN I/O CONTROLLER RESIDES OUTSIDE THE CHASSIS, IT MUST BE CONFIGURED AS A STANDARD DATA CHANNEL CONTROLLER.

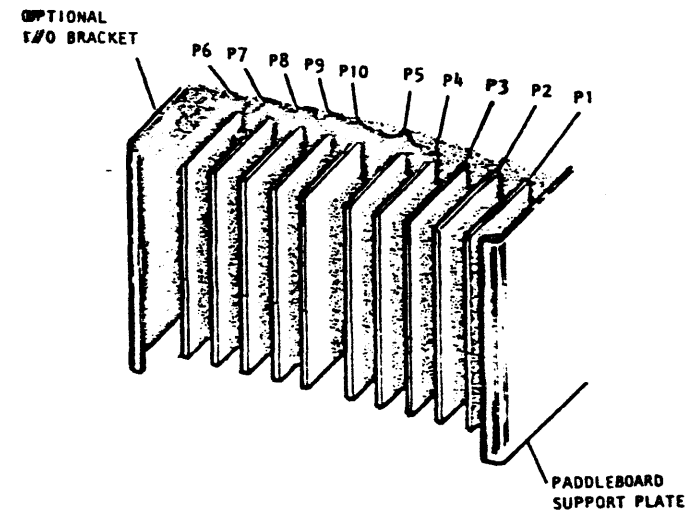
FOR MORE INFORMATION CONCERNING INTERRUPT AND DATA CHANNEL PRIORITY SCHEMES, REFER TO THE INTERFACE DESIGNER'S REFERENCE, NOVA AND ECLIPSE LINE COMPUTERS, DG NO. 015-000031.

### INTERNAL CABLING BACKPANEL CONNECTORS



INTERNAL CABLING (CONT)

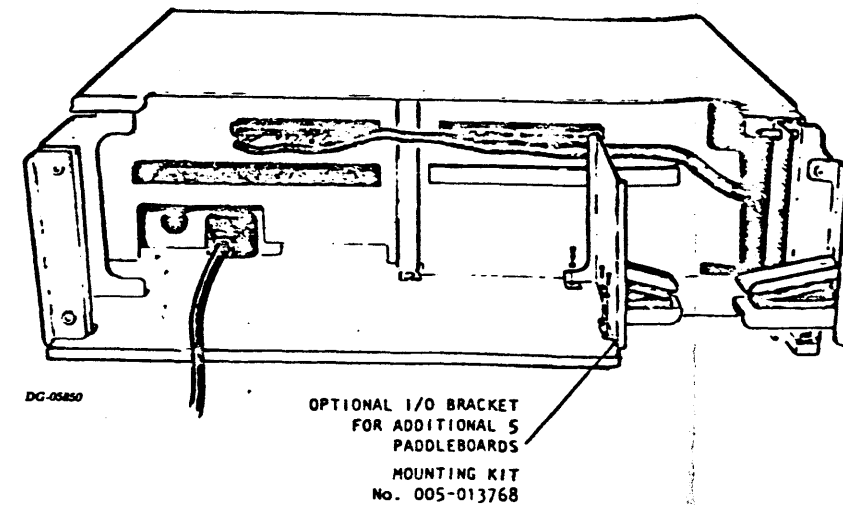
PADDLEBOARD MOUNTING



NOVA 4 I/O PADDLEBOARDS

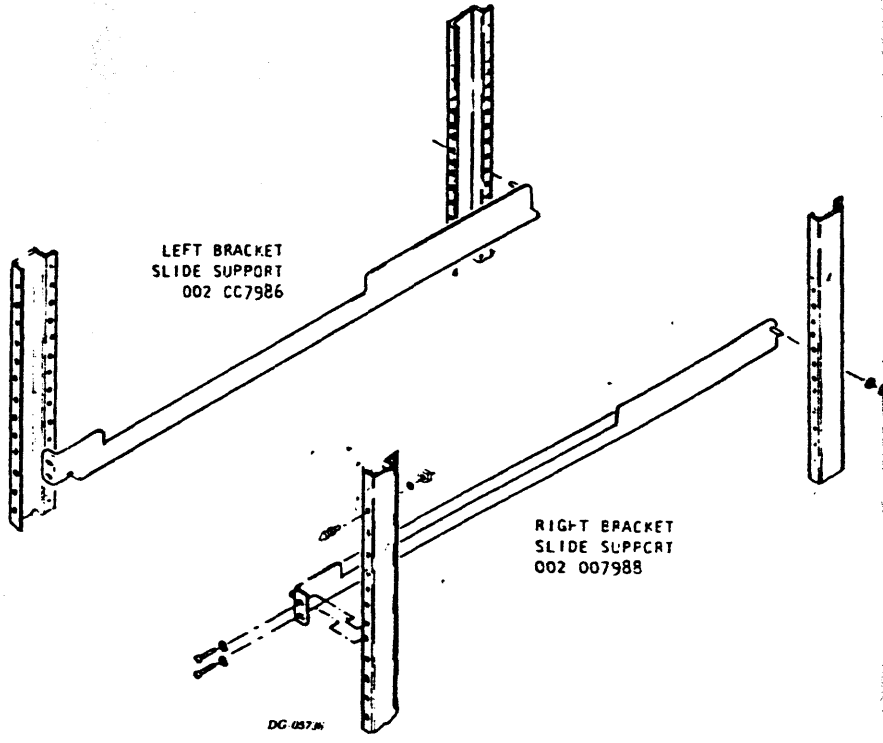
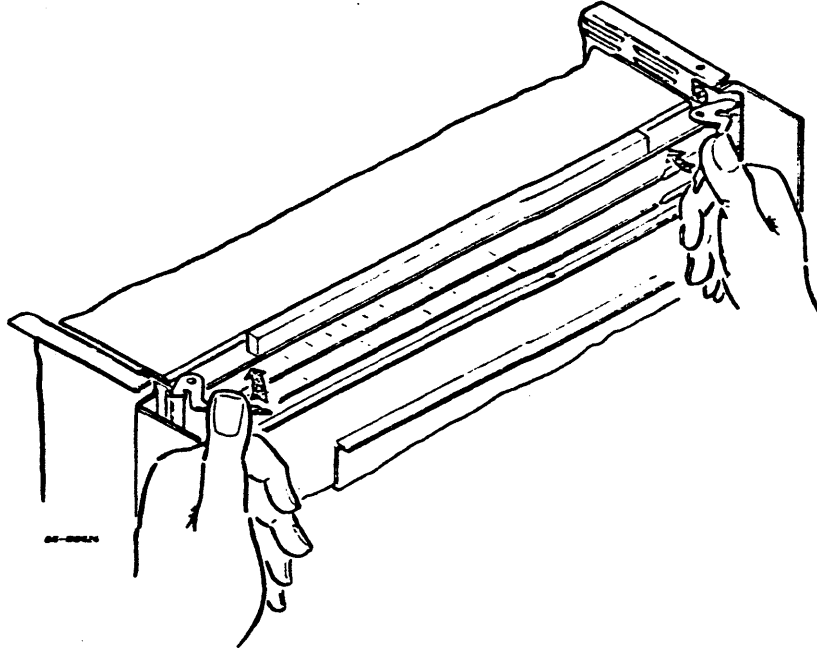
| ASSEMBLY No. | TYPE   |
|--------------|--|
| 005 012472   | GENERAL PURPOSE I/O  |
| 005 012751   | EXTERNAL I/O BUS   |
| 005 012765   | UNIVERSAL LINE MUX (SYNC)<br>MODEL 4241, 4241A, 4242,<br>4243          |
| 005 012476   | I/O BUS REPEATER<br>MODEL 8315   |
| 005 012590   | DCU-50<br>MODELS 4250, 4254  |
| 005 012473*  | ASYNCHRONOUS INTERFACE<br>MODELS 4007, 4010, 4023,<br>4075, 4077, 4078 |
| 005 012585   | MCA MODEL -206   |

\* THIS PADDLEBOARD MUST BE PLACED IN THE OUTSIDE POSITION: i.e. THE FURTHEST AWAY FROM THE PADDLEBOARD SUPPORT PLATE.



CABINET MOUNTING

INSERTING PC BOARD



INSERTING POWER SUPPLY PCB

