

# BA62 VME Enclosure

## Installation Manual

Order Number EK-VME01-IN B01

Prepared by  
Information Design and Consulting

**Digital Equipment Corporation • Merrimack, NH 03054**

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## PREFACE

The *BA62 VME Enclosure Installation Manual* provides information to Digital Customer Service engineers and other technically trained personnel for the installation of the BA62 VME Enclosure, installation of modules, and cabling the modules to the bulkhead panel assembly.

## ORGANIZATION

The *VME Enclosure Installation Manual* is organized in the following manner:

- **CHAPTER 1, INTRODUCTION** – provides an overview of the BA62 VME Enclosure, modules, various configurations, and specifications for the BA62 VME Enclosure
- **CHAPTER 2, INSTALLATION** – provides information on site preparation, unpacking and checking the equipment, installing enclosure and installing modules in the enclosure
- **CHAPTER 3, CABLING** – describes how to cable the 6U and 9U card cage backplane connectors to an appropriate I/O interface connector located on the bulkhead panel assembly
- **CHAPTER 4, OPERATION** – describes how to turn on the BA62 VME Enclosure power

## RELATED DOCUMENTATION

<i>2T-PMABV Module Installation/Owner's Card</i>	EK-2TPMV-IN
<i>2T-T6000 Module Installation/Owner's Card</i>	EK-2T600-IN
<i>2T-DWTVX Module Pocket Service Guide</i>	EK-2TTVX-IN
<i>PMABV-AA Module Installation/Owner's Card</i>	EK-PMABV-IN
<i>T6000 Module Installation/Owner's Card</i>	EK-T6000-IN
<i>DWTVX-Ax VME I/O 5000 Subsystem Pocket Service Guide</i>	EK-DWTVX-PS
<i>BA62 VME Enclosure Pocket Service Guide</i>	EK-VME01-PS
<i>DWMVA Technical User's Guide</i>	EK-DWMVA-TM
<i>DWMVA Module Installation/Owner's Guide</i>	EK-DWMVA-IN
<i>IEEE Standards for a Versatile Backplane Bus – VMEbus</i>	ANSI/IEEE STD 1014-1987

## CONVENTIONS

### Note

A note calls the reader's attention to any item of information that may be of special importance to the reader.

### CAUTION

A caution contains information essential to avoid damage to the system.

### WARNING

A warning contains information essential to the safety of personnel.

## FCC USER STATEMENT

### NOTICE:

This equipment generates, uses, and may emit radio frequency energy. The equipment has been type tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against such radio frequency interference. Operation of this equipment in a residential area may cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

### Note

FCC/VDE approval is based on Digital supplied contents only. Additional configurations need to be addressed by the OEM and end user.



# CHAPTER 1

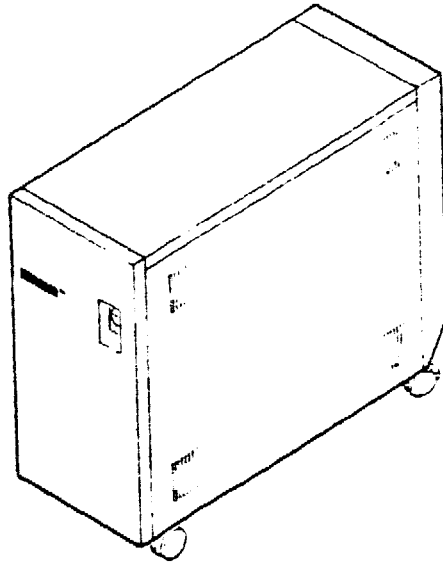
## INTRODUCTION

### 1.1 INTRODUCTION

The BA62 VME Enclosure (see Figure 1) is part of the VME I/O Subsystem that provides a VME-bus interface to a host system or workstation. The BA62 VME Enclosure houses the VME-bus backplane, two card cages (one for 6U modules and the other for the 9U modules), power supply, cooling fans for the equipment, and an interface logic module. Third-party VME modules are accessible from the host operating system through a two-board bus adapter connected together by a cable.

The BA62-Ax, Rev. A VME Enclosure allows the VME slot 01 system controller functions to be performed from card cage position 9, the right-most position. Thus, a 9U x 400 mm VME module may be used to perform the system controller functions.

The BA62-Ax, Rev. B and BA62-Bx VME Enclosure allows the VME slot 01 system controller functions to be performed from card cage position 1, the left-most position. Thus, a 6U x 160 mm VME module may be used to perform the system controller functions..



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**Figure 1 BA62 VME Enclosure**

## 1.2 SPECIFICATIONS

Specifications for the BA62 VME Enclosure are as follows:

### Enclosure Dimensions

Height	64.77 cm (25.5 in.)
Width	26.92 cm (10.6 in.)
Depth	74.93 cm (29.5 in.)
Weight	43.08 kg (95 lb)
Shipping weight	64.4 kg (142 lb)

### 6U Module Dimensions

Height	6U
Depth	160 mm ( 6.2 in.)
Mount rail holes	25.57 cm (10.7 in.)

### 9U Module Dimensions

Height	9U
Depth	400 mm ( 15.56 in.)
Mount rail holes	38.61 cm (15.2 in.)

## **Environmental**

### **Operating**

Temperature	10°C (50°F) to 40°C (104°F)
Humidity	10% to 90% with maximum wet bulb temperature 28°C (82°F) and minimum dew point 2° C (36° F), noncondensing
Altitude	Up to 2.4 km (8,000 ft)

### **Non-operating**

Temperature	-40°C (-40°F) to 66°C (151°F)
Humidity	Up to 95% maximum wet bulb 46°C (115°F) short duration (less than 60 days)
Altitude	Up to 4.9 km (16,000 ft)

## **Electrical Requirements**

AC input voltage	100 – 120 Vac/220 – 240 Vac, single-phase, 3-wire
AC current load	7 A/3.5 A
Input line frequency	50, 60 Hz
Power cord	1.9 m (75 in.) detachable, 3-conductor, grounded
Input power	700 W maximum (2388 Btu/hr)
DC output voltage for VME modules	+5 V, 80 A (7.2 A maximum per 6U, 25 A maximum per 9U slot) -5 V, 2 A +12 V, 7.5 A (continuous), 13.5 A peak, 30 sec maximum -12 V, 10 A

#### **DC Power Available for BA62 VME Modules**

470 W total

#### **System Cooling Capabilities**

35 W for each 6U x 160-mm-size module

125 W for each 9U x 400-mm-size module

160 LFM minimum for each 6U x 160-mm-size module

90 LFM minimum for each 9U x 400-mm-size module

#### **Note**

The system cooling capabilities assume uniform distribution of power across each board.

### **1.3 BACKPLANE AND BOARD CONNECTORS**

Tables 1, 2, and 3 provide the pin assignments for the P1, P2, and backplane P3 connectors. These connectors consists of three rows of pins labeled rows (a), (b), and (c).

**Table 1 P1 Pin Assignments**

Pin Number	(a) Signal Mnemonic	(b) Signal Mnemonic	(c) Signal Mnemonic
1	D00	BBSY*	D08
2	D01	BCLR*	D09
3	D02	ACFAIL*	D10
4	D03	BG0IN*	D11
5	D04	BG0OUT*	D12
6	D05	BG1IN*	D13
7	D06	BG1OUT*	D14
8	D07	BG2IN*	D15
9	GND	BG2OUT*	GND
10	SYSCLK	BG3IN*	SYSFAIL*
11	GND	BG3OUT*	BERR*
12	DS1*	BR0*	SYSRESET*
13	DS0*	BR1*	LWORD*
14	WRITE*	BR2*	AM5
15	GND	BR3*	A23
16	DTACK*	AM0	A22
17	GND	AM1	A21
18	AS*	AM2	A20
19	GND	AM3	A19
20	LACK*	GND	A18
21	LACKIN*	SERCLK	A17
22	LACKOUT	SERDAT*	A16
23	AM4	GND	A15

**Table 1 P1 Pin Assignments (continued)**

Pin Number	(a) Signal Mnemonic	(b) Signal Mnemonic	(c) Signal Mnemonic
24	A07	IRQ7*	A14
25	A06	IRQ6*	A13
26	A05	IRQ5*	A12
27	A04	IRQ4*	A11
28	A03	IRQ3*	A10
29	A02	IRQ2*	A09
30	A01	IRQ1*	A08
31	-12 V	+5 V STDBY	+12 V
32	+5 V	+5 V	+5 V

**Table 2 P2 Pin Assignments**

Pin Number	(a) Signal Mnemonic	(b) Signal Mnemonic	(c) Signal Mnemonic
1	User-Defined	+5 V	User-Defined
2	User-Defined	GND	User-Defined
3	User-Defined	RESERVED	User-Defined
4	User-Defined	A24	User-Defined
5	User-Defined	A25	User-Defined
	User-Defined	A26	User-Defined
	User-Defined	A27	User-Defined
8	User-Defined	A28	User-Defined
9	User-Defined	A29	User-Defined
10	User-Defined	A30	User-Defined

**Table 2 P2 Pin Assignments (continued)**

<b>Pin Number</b>	<b>(a) Signal Mnemonic</b>	<b>(b) Signal Mnemonic</b>	<b>(c) Signal Mnemonic</b>
11	User-Defined	A31	User-Defined
12	User-Defined	GND	User-Defined
13	User-Defined	+5 V	User-Defined
14	User-Defined	D16	User-Defined
15	User-Defined	D17	User-Defined
16	User-Defined	D18	User-Defined
17	User-Defined	D19	User-Defined
18	User-Defined	D20	User-Defined
19	User-Defined	D21	User-Defined
20	User-Defined	D22	User-Defined
21	User-Defined	D23	User-Defined
22	User-Defined	GND	User-Defined
23	User-Defined	D24	User-Defined
24	User-Defined	D25	User-Defined
25	User-Defined	D26	User-Defined
26	User-Defined	D27	User-Defined
27	User-Defined	D28	User-Defined
28	User-Defined	D29	User-Defined
29	User-Defined	D30	User-Defined
30	User-Defined	D31	User-Defined
31	User-Defined	GND	User-Defined
32	User-Defined	+5 V	User-Defined



**Table 3 P3 Backplane Connector Pin Assignments**

<b>Pin Number</b>	<b>(a) Signal Mnemonic</b>	<b>(b) Signal Mnemonic</b>	<b>(c) Signal Mnemonic</b>
01	+5 V	User-Defined	GND
02	+5 V	User-Defined	GND
03	+5 V	User-Defined	GND
04	+5 V	User-Defined	GND
05	+5 V	User-Defined	GND
06	+5 V	User-Defined	GND
07	+5 V	User-Defined	GND
08	+5 V	User-Defined	GND
09	+5 V	User-Defined	GND
10	+5 V	User-Defined	GND
11	+5 V	User-Defined	GND
12	+5 V	User-Defined	GND
13	+5 V	User-Defined	GND
14	+5 V	User-Defined	GND
15	+5 V	User-Defined	GND
16	+5 V	User-Defined	GND
17	+5 V	User-Defined	GND
18	+5 V	User-Defined	GND
19	+5 V	User-Defined	GND
20	+5 V	User-Defined	GND
21	+5 V	User-Defined	GND
22	+5 V	User-Defined	GND
23	+5 V	User-Defined	GND
24	+5 V	User-Defined	GND
25	+5 V	User-Defined	GND

**Table 3 P3 Backplane Connector Pin Assignments (continued)**

<b>Pin Number</b>	<b>(a) Signal Mnemonic</b>	<b>(b) Signal Mnemonic</b>	<b>(c) Signal Mnemonic</b>
26	+12 V	User-Defined	+12 V
27	+12 V	User-Defined	+12 V
28	-12 V	User-Defined	-12 V
29	-12 V	User-Defined	-12 V
30	-5.2 V	User-Defined	-5.2 V
31	-5.2 V	User-Defined	-5.2 V
32	-5.2 V	User-Defined	-5.2 V

## CHAPTER 2 INSTALLATION

### Note

Installation of the BA62 VME Enclosure should be performed only by a Digital Customer Service engineer or other technically trained personnel.

### 2.1 INTRODUCTION

This chapter discusses site preparation, procedures for unpacking and checking the enclosure, installing the enclosure, and installing modules into the enclosure.

### 2.2 SITE PREPARATION

Site preparation deals with the issues of environmental and electrical requirements.

#### 2.2.1 Environmental Requirements

- Keep the environment between 10°C and 40°C (50°F and 104°F). Keep the BA62 VME Enclosure away from heaters, photocopiers, and direct sunlight.
- Ensure a minimum of two inches of clearance around the enclosure for circulating air.
- Keep the air circulating to prevent heat from accumulating.
- Keep the environmental relative humidity between 0% and 80%.
- Decrease static electricity buildup by locating the BA62 VME Enclosure away from busy areas, such as office corridors, and keep the environment at recommended humidity levels. Static electricity can cause data to be lost and other problems to occur.
- Keep the BA62 VME Enclosure area clean. Do not place food or liquids on or near the enclosure.
- Keep the BA62 VME Enclosure area free of dust (dust particles can interfere with enclosure cooling and can damage hardware).

### **2.2.2 Electrical Requirements**

A dedicated 15-ampere, 3-wire branch circuit is recommended for the BA62 VME Enclosure. This circuit must meet national and local standards, provide a good ground, be stable, and be free from electrical noise. If power disturbances cannot be prevented, add power-conditioning equipment. Consult with Digital Customer Service engineer about electrical requirements for the BA62 VME Enclosure.

Do not connect other equipment (such as air conditioners or office copiers) to the circuit dedicated to the BA62 VME Enclosure.

## 2.3 UNPACKING AND CHECKING THE EQUIPMENT

### WARNING

The shipping weight of the BA62 VME Enclosure is 64.4 kg (142 lb). Be sure to use sufficient personnel when lifting or moving the BA62 VME Enclosure.

The hardware shipment may consist of two cartons:

- BA62 VME Enclosure carton
- Customer Kit carton containing the two board bus adapter and cables

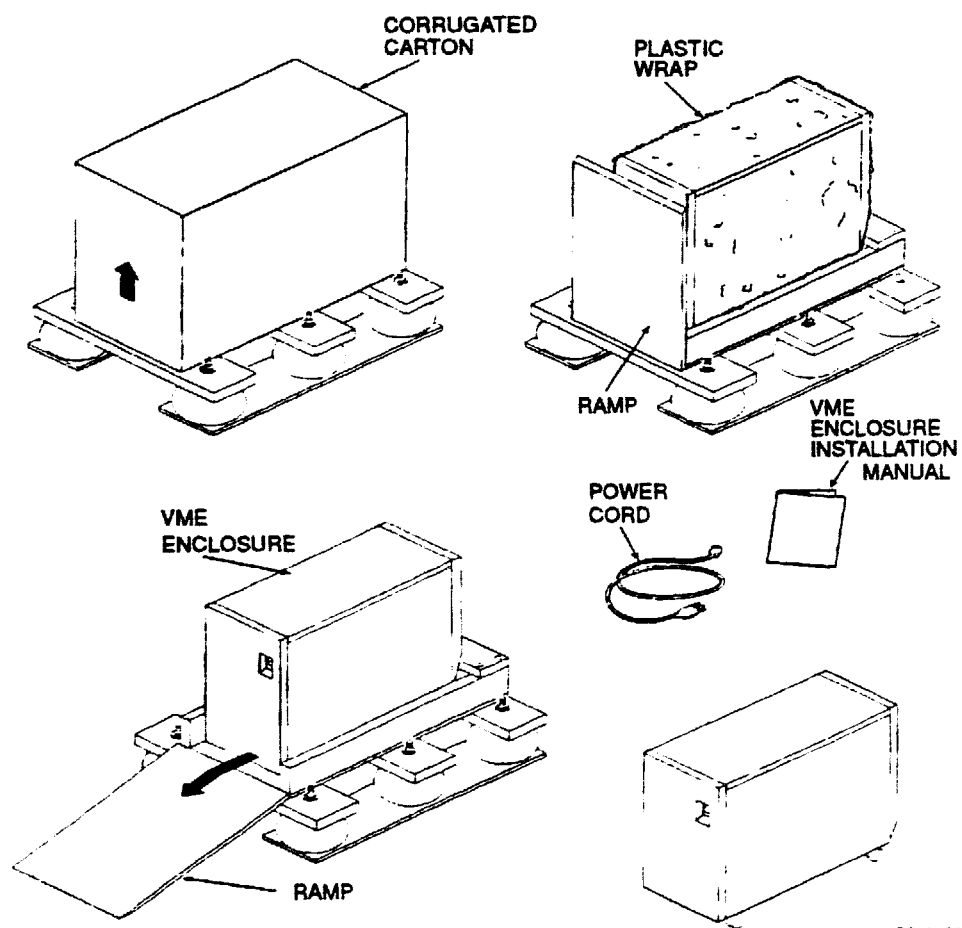
To unpack the BA62 VME Enclosure, perform the steps in the following procedure (see Figure 2):

1. Cut the two straps securing the corrugated carton to the shipping pallet.
2. Lift the corrugated carton straight up and off the enclosure and pallet.
3. Lower the ramp that is folded up along side the enclosure.
4. Remove the foam inserts from the enclosure.
5. Remove the plastic wrap from the enclosure.
6. Remove the *BA62 VME Enclosure Installation Manual* and the power cord.

### WARNING

The BA62 VME Enclosure weighs 43.08 kg (95 lb). Use sufficient personnel when lifting or moving the BA62 VME Enclosure.

7. Lift the BA62 VME Enclosure over the edge of the pallet and roll it down the ramp.
8. Compare the contents to those shown in Figure 2 and as listed on the enclosed packing slip. If any item is missing or damaged, notify the delivery agent, and contact the Digital Systems representative.
9. Save the shipping carton and the packing material in case the BA62 VME Enclosure needs to be returned for service.



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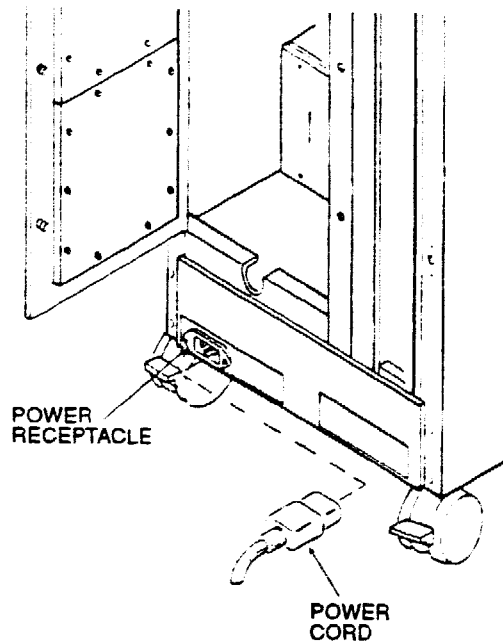
**Figure 2 Unpacking the BA62 VME Enclosure**

## 2.4 INSTALLING THE BA62 VME ENCLOSURE

1. Place the BA62 VME Enclosure within 1.82 m (6 ft) of the host system.
2. Remove the rear panel from the enclosure by grasping the panel at the bottom and pulling it straight back.
3. Install the power cord into the power receptacle located at the left, rear of the enclosure (see Figure 3).

### Note

**DO NOT** connect the other end of the power cord to the power source at this time.



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**Figure 3 Installing the Power Cord**

## **2.5 INSTALLING MODULES IN THE ENCLOSURE**

This section provides the procedures for installing 6U and 9U modules in the card cages in the enclosure.

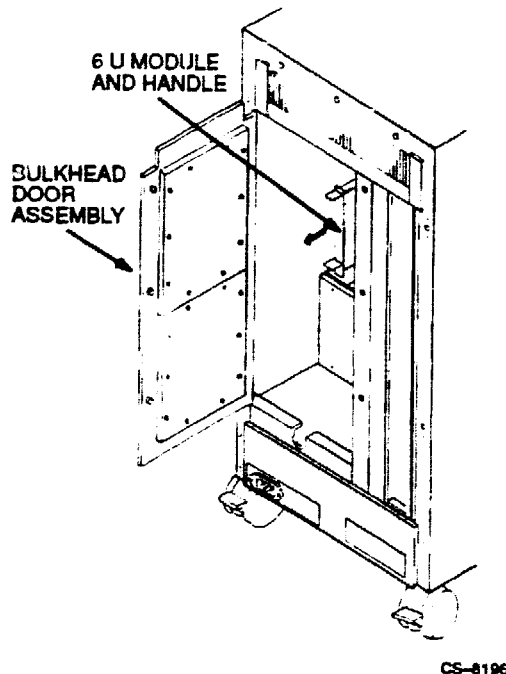
### **Note**

The BA62 VME Enclosure is shipped with BG0-3 and IACK jumpers installed in the rear backplane. These jumpers must be removed from each slot that will be occupied by a VME module and must be installed in each empty slot (refer to Section 2.5.4).

#### **2.5.1 Installing a Typical 6U Module**

1. Loosen the three captive fasteners, securing the bulkhead door assembly to the rear of the enclosure by turning counterclockwise (see Figure 4).
2. Swing the bulkhead door assembly to the left.
3. Determine in which card cage slot the 6U module will be installed. The slots are numbered 1 through 6 and correspond to backplane positions 2 through 7 (refer to Section 2.5.4).
4. Place a properly grounded antistatic wrist strap on your wrist (not provided by Digital).
5. Remove the 6U module from its package and check for damaged or loose components. Follow the instructions in module documentation for installation and configuration procedures.
6. Align the module with the card guides and insert the module into the slot.
7. When resistance is felt, continue to push the module into the slot until the connectors are fully seated.
8. Secure the module in the card cage by tightening the screws on the module's handle.
9. Connect the appropriate module cables per the instructions in Chapter 3, Cabling.
10. Remove or install backplane jumpers (refer to Section 2.5.5).



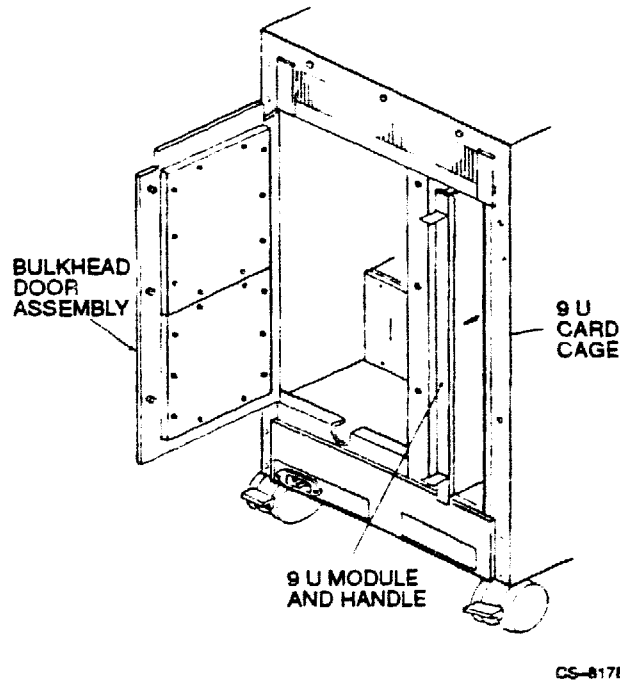


**Figure 4 6U Module Installation**

### **2.5.2 Installing a Typical 9U Module**

1. Determine in which card cage slot the 9U module will be installed. Card cage slots 7, 8, and 9 correspond to backplane positions 9, 10, and 1, respectively in the BA62-Ax Rev. A enclosures and to backplane positions 8, 9, and 10 in BA62-Ax Rev. B, and BA62-Bx enclosures (refer to Section 2.5.4).
2. Using a small screwdriver, loosen the two screws securing the blank cover over the appropriate card slot.
3. Remove the cover.
4. Place a properly grounded antistatic wrist strap on your wrist (not provided by Digital).
5. Remove the 9U module from its package and check for damaged or loose components. Follow the instructions in module documentation for installation and configuration procedures.
6. Align the module with the card guides and insert the module into the slot (see Figure 5).

7. When resistance is felt, continue to push the module into the slot until the connectors are fully seated.
8. Secure the module in the card cage by tightening the screws on the module's handle.
9. Connect the appropriate module cables per the instructions in Chapter 3, Cabling.
10. Remove or install jumpers (refer to Section 2.5.4).



**Figure 5 9U Module Installation**

### **2.5.3 Installing 2T-T6000-AA Module**

The 2T-T6000-AA module provides an interface to the DECstation 5000 host computer, as well as providing VME system control functions.

Follow configuration instructions packaged with the 2T-T6000-AA module and install the module in card cage slot 9, the right-most slot, (for system control in BA62-Ax Rev. A enclosures). Otherwise, install the module in slot 7 or 8 (BA62-Ax Rev. B and BA62-Bx enclosures).

### **2.5.4 installing C3200 Module**

Follow configuration instructions packaged with the C3200 Module and install the module in the card cage slot #1, the left-most slot in the BA62-Ax, Rev. B and BA62-Bx Enclosures. If the VME bus backplane is equipped with BG/LACK jumpers for slot #1, remove them all.

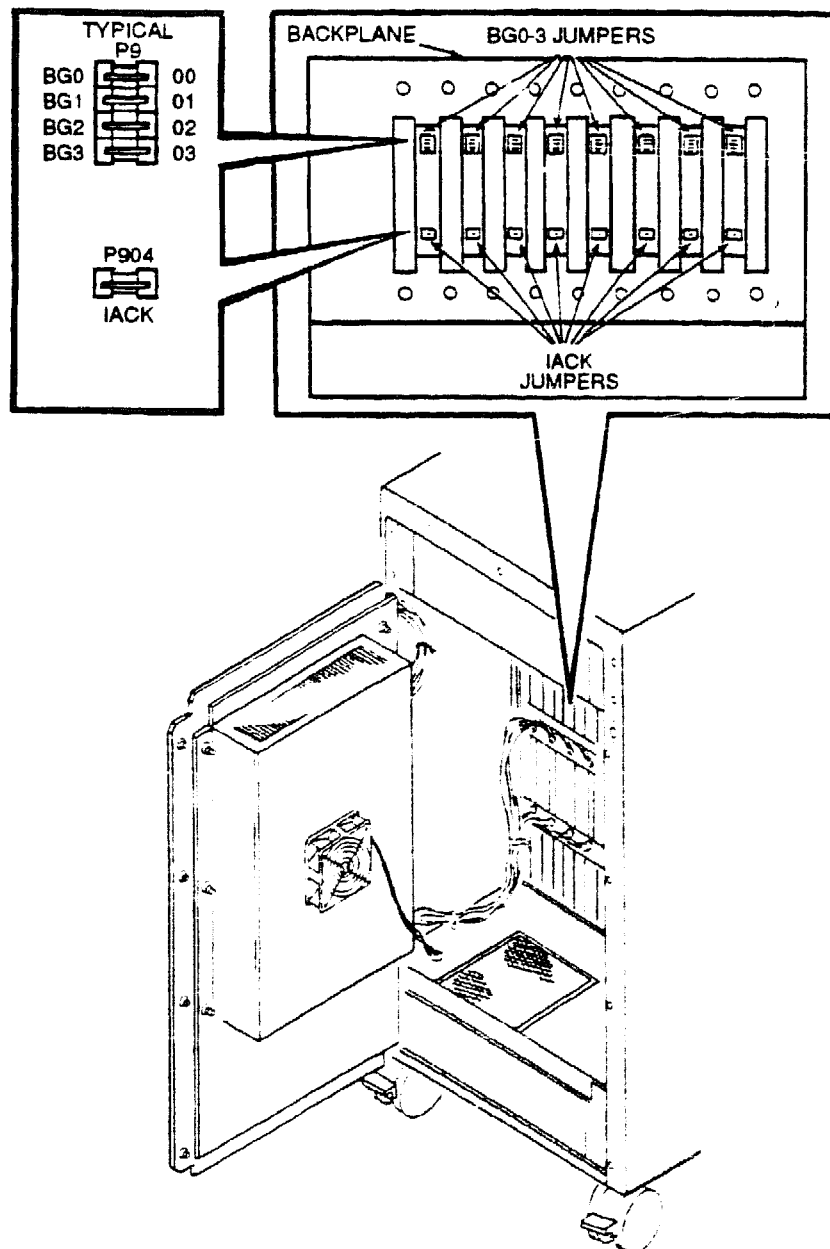
### **2.5.5 Configuration**

The BA62 VME Enclosure is shipped with both BG0-3 and LACK jumpers, P/N 12-18783-00, installed in the rear of the backplane.

To remove jumpers from slots where VME modules are to be installed, grasp each jumper between thumb and finger and lift it straight up from the mounting pins. Be sure that all BG0-3 and LACK jumpers are removed from the appropriate slots (see Figure 6).

To install jumpers in slots that no longer have VME modules, reverse the procedure described above.

If a backplane slot is not occupied by a module or is occupied by a slave module that does not connect the "IN" and "OUT" daisy chains and if other modules are installed in other slots, then the jumpers must be installed at that slot in order to pass through the bus grant and interrupt acknowledge daisy-chain signals.



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**Figure 6 BG0-3 and IACK Jumpers on the Backplane**

Use Table 4 as a worksheet for configuring the card cage of the BA62-Ax Rev. A enclosure with different modules. Use Table 5 as a worksheet for configuring the backplane jumpers of the BA62-Ax Rev. A enclosure.

Use Table 6 as a worksheet for configuring the card cage of the BA62-Ax Rev. B and BA62-Bx enclosures with different modules. Use Table 7 as a worksheet for configuring the backplane jumpers of the BA62-Ax Rev. B and BA62-Bx enclosures.

**Table 4 Card Cage Configuration Worksheet,  
BA62-Ax Rev. A Enclosure**

Card Cage Position	Module	Amps At				Total Watts
		+5 V	-5 V	+12 V	-12 V	
1						
2						
3						
4						
5						
6						
-						
7						
8						
9	2T-T6000-AA	10 A	-	-	-	50 Watts
Total						
Max. Allowed		80 A	2 A	7.5 A	10 A	470 Watts

**Table 5 Backplane Jumper Configuration Worksheet,  
BA62-Ax Rev. A Enclosure**

Card Cage Position	P1-P2 Backplane Position	BG Jumpers				IACK Jumpers		
		Location	Jumper	In	Out	Location	In	Out
1	02	P2	BG0			P204		
			BG1					
			BG2					
			BG3					
2	03	P3	BG0			P304		
			BG1					
			BG2					
			BG3					
3	04	P4	BG0			P404		
			BG1					
			BG2					
			BG3					
4	05	P5	BG0			P504		
			BG1					
			BG2					
			BG3					
5	06	P6	BG0			P604		
			BG1					
			BG2					
			BG3					

**Table 5 Backplane Jumper Configuration Worksheet,  
BA62-Ax Rev. A Enclosures (continued)**

Card Cage Position	P1-P2 Backplane Position	BG Jumpers				LACK Jumpers		
		Location	Jumper	In	Out	Location	In	Out
6	07	P7	BG0			P704		
			BG1					
			BG2					
			BG3					
-	08	P8*	BG0	X		P804*	X	
			BG1	X				
			BG2	X				
			BG3	X				
7	09	P9	BG0			P904		
			BG1					
			BG2					
			BG3					
8	10	-	-			-		
			-					
			-					
			-					
9	01	-	-			-		
			-					
			-					
			-					

\* BG0-3 and LACK jumpers always installed

Note: Record if the BG0-3 and LACK jumpers are installed or removed.

**Table 6 Card Cage Configuration Worksheet,  
BA62-Ax Rev. B and BA62-Bx Enclosures**

Card Cage Position	Module	Amps At				Total Watts
		+5 V	-5 V	+12 V	-12 V	
1	C3200	3A				15 Watts
2						
3						
4						
5						
6						
-						
7						
8						
9						
Total						
Max. Allowed		80 A	2 A	7.5 A	10 A	470 Watts



**Table 7 Backplane Jumper Configuration Worksheet,  
BA62-Ax Rev. B and BA62-Bx Enclosures**

Card Cage Position	P1-P2 Backplane Position	BG Jumpers				IACK Jumpers		
		Location	Jumper	In	Out	Location	In	Out
1	01	-	—			-		
			—					
			—					
			—					
2	02	P2	BG0			P204		
			BG1					
			BG2					
			BG3					
3	03	P3	BG0			P304		
			BG1					
			BG2					
			BG3					
4	04	P4	BG0			P404		
			BG1					
			BG2					
			BG3					
5	05	P5	BG0			P504		
			BG1					
			BG2					
			BG3					

**Table 7 Backplane Jumper Configuration Worksheet,  
BA62-Ax Rev. B and BA62-Bx Enclosures (continued)**

Card Cage	P1-P2	BG Jumpers				IACK Jumpers		
Position	Backplane Position	Location	Jumper	In	Out	Location	In	Out
6	06	P6	BG0			P604		
			BG1					
			BG2					
			BG3					
—	07	P7*	BG0	X		P704*	X	
			BG1	X				
			BG2	X				
			BG3	X				
7	08	P8	BG0			P804		
			BG1					
			BG2					
			BG3					
8	09	P9	BG0			P904		
			BG1					
			BG2					
			BG3					
9	10	—	—			—		
			—					
			—					
			—					

\*BG0-3 and IACK jumper always installed

Note: Record if the BG0-3 and IACK jumpers are installed or removed.

## **CHAPTER 3 CABLING**

### **Note**

Cabling of the BA62 VME Enclosure should be performed only by a Digital Field Service representative or other technically trained personnel.

### **3.1 INTRODUCTION**

This chapter discusses the procedures to follow in cabling the various modules within the enclosure.

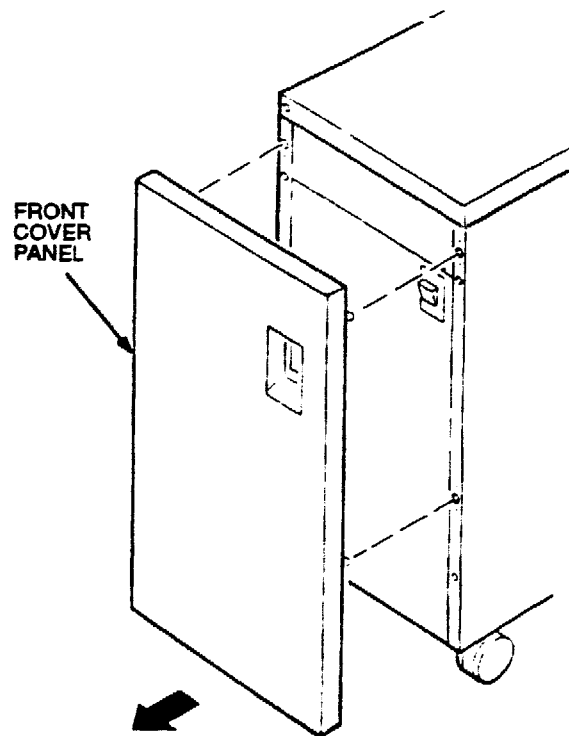
### **3.2 ACCESS TO THE INSIDE OF THE ENCLOSURE**

Initially, access must be gained to the front and rear of the BA62 VME Enclosure. To gain access to the inside of the enclosure, perform the steps in the following procedures.

#### **3.2.1 Access to the Backplane (See Figures 7 and 8)**

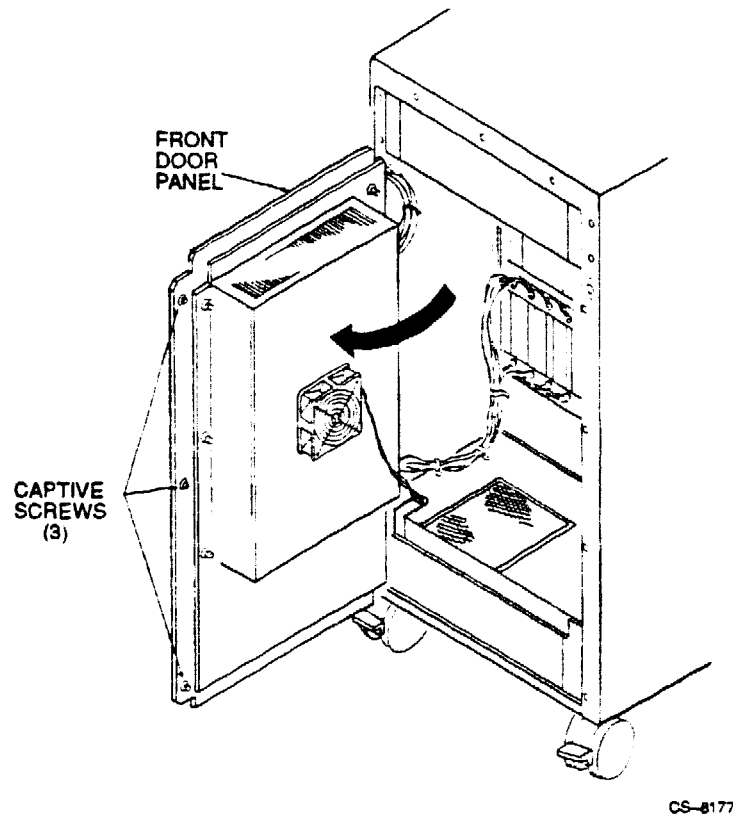
1. Grasp the front panel at the bottom and pull toward you.
2. Remove the front panel.
3. Loosen the captive screws at the side of the door panel.
4. Swing the door panel to the left.

The connectors on both the 6U and 9U backplanes and the cableway are now accessible.



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**Figure 7 Removing the Front Cover**

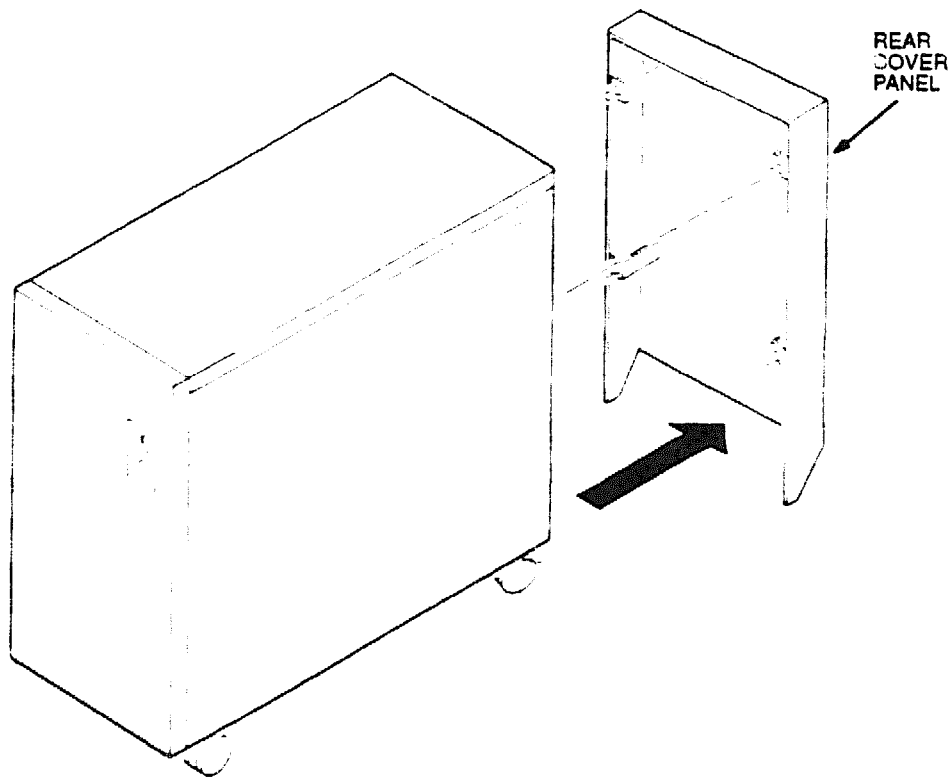


**Figure 8 Opening the Cover Panel**

### **3.2.2 Access to the Card Cages (See Figures 9 and 10)**

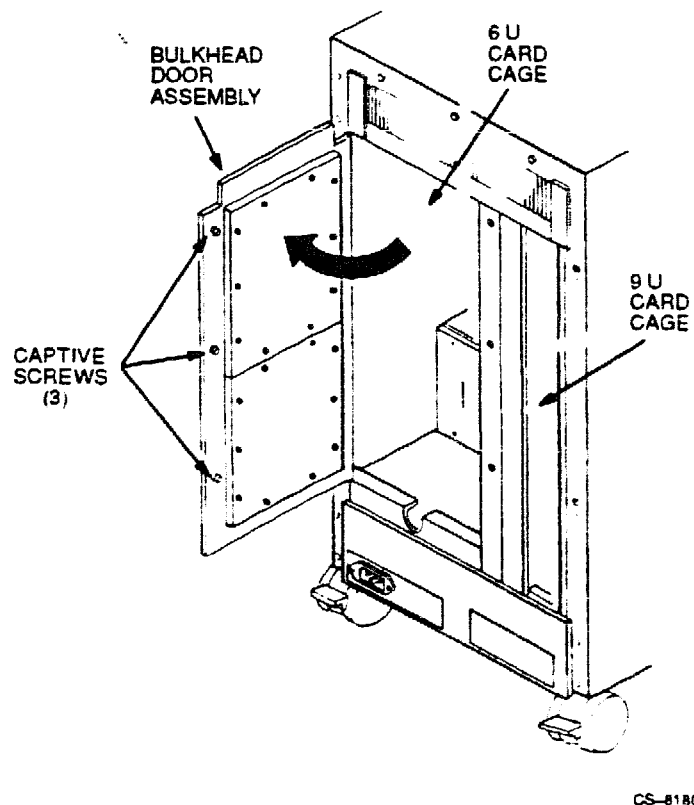
1. Remove the rear panel of the enclosure by grasping the panel at the bottom edge and pulling the panel straight back.
2. Loosen the three captive screws that secure the bulkhead door assembly to the enclosure.
3. Swing the bulkhead door assembly to the left.

The connectors on the module handles in both the 6U and 9U card cages and the cableway are now accessible.



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**Figure 9 Removing the Rear Panel**



**Figure 10 Access to the Card Cages**

### **3.3 CABLING**

Cabling the VBA62 ME Enclosure consists of connecting all third-party I/O modules—(both 6U, 233.35 mm x 160 mm (9.2 x 6.2 in.) and 9U, 366.7 mm x 400 mm (14.4 x 15.6 in.) sizes—to interface cables.

All enclosure panels must be in place when the system is operated in order to provide the proper electro-magnetic interference (EMI) shielding. To cable the BA62 VME Enclosure, the front and rear panels must be removed for access to the inside of the enclosure (refer to Section 3.2). These panels must be replaced before operating the equipment. During system integration, it may be necessary to install a special I/O interface connector to the bulkhead panel assembly. These connectors must be properly grounded to the swing-out door in order to provide radio frequency (RF) shielding.

#### **3.3.1 6U Module Handle I/O Cables**

The front handle connectors on a 6U module must be connected to the I/O connector panel on the bulkhead door assembly. Such cables would be supplied or fabricated by the system integrator during installation (refer to specific module documentation for additional information). These bulkhead cables are necessary to maintain the EMI protection of the design.

#### **Note**

**Do not lay cables through an open bulkhead opening. All bulkhead openings must be covered with either a cover panel or an I/O interface panel.**

#### **3.3.2 9U Module Handle I/O cables**

All I/O interface cables from the handles of the 9U modules will go directly to peripheral equipment. For information on the installation of the 9U module cables, please refer to the appropriate module installation manual. The 9U card handles should include a treatment to contain EMI inside the enclosure.

#### **3.3.3 Backplane to Bulkhead Cables**

It may be necessary to connect some third-party modules directly from the VME backplane to the I/O interface connector panel on the bulkhead panel assembly. These special connections are made by routing either discrete wires or cables through the cableway, between card cage slot 1 and the sidewall, to connect the module at the backplane to the I/O interface connector. These connections are typically made to the P2 section of the backplane, and would probably use a 96-pin IEC connector for cables, or other method of connection directly to the appropriate backplane connector pins. Refer to the appropriate module installation manual for additional information.



To connect signals from the backplane to the I/O connector on the bulkhead panel assembly, follow the steps in the following procedure:

1. Gain access to the front and rear of the BA62 VME Enclosure (refer to Section 3.2).
2. Feed the cable(s) through the openings to the right of the 6U card cage, between card cage slot 1 and the sidewall (when viewed from the backplane side of the enclosure).

### **Note**

**Cables may be routed only in the space provided to the right of the 6U card cage. Under no condition should cables be routed through the fan tray or over the upper air intake plenum.**

3. Push the cable(s) past the 160 mm (6.29 in.) handles.
4. Secure the cables in a wire bundle on the left side (when viewed from the card cage side).
5. Secure the bulkhead end of each cable to the bulkhead panels.
6. Connect the the cable to the appropriate P2 connector on the backplane.

### **3.3.4 DEC Specific Cables**

DEC specific cables are those cables that connect the BA62 VME Enclosure to Digital-supplied workstations and other host systems.

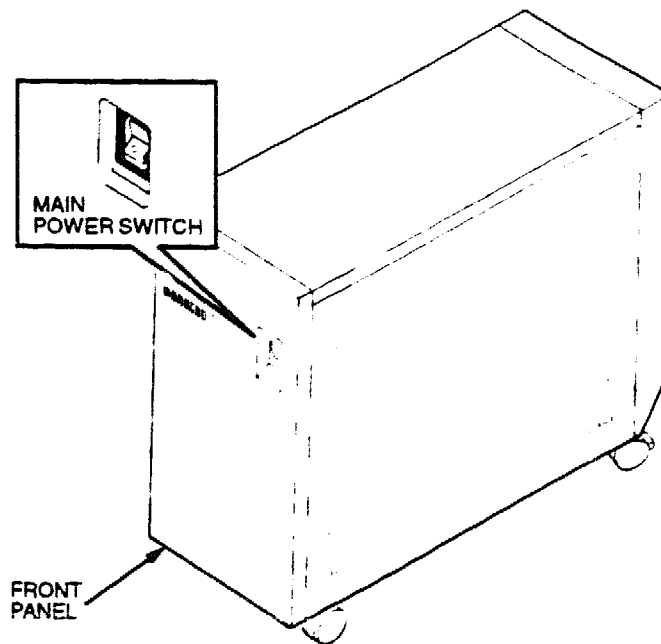
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## CHAPTER 4 OPERATION

### Note

The BA62 VME Enclosure should be turned on prior to powering-up, restarting or booting the host.

To turn on the BA62 VME Enclosure, press the main power switch located in the upper-right corner of the front panel (see Figure 11).



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Figure 11 Main Power Switch

**Refer to the *BA62 VME Enclosure Pocket Service Guide* for procedures on checking and adjusting the dc voltages during initial powerup of the BA62 VME Enclosure.**