GRASS VALLEY GROUP

SERIAL DIGITAL I/O UPGRADE

Installation Manual

PROFILE FAMILY
VIDEO FILE SERVERS

Revision Status

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General Safety Summary

Review the following safety precautions to avoid injury and prevent damage to this product or any products connected to it.

Only qualified personnel should perform service procedures.

While using this product, you may need to access other parts of the system. Read the general safety summary in other system manuals for warnings and cautions related to operating the system.

Injury Precautions

Do Not Operate Without Product Covers in Place

To avoid electric shock or fire hazard, do not operate this product with covers or panels removed.

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To avoid electric shock, do not operate this product in wet or damp conditions.

Do Not Operate in an Explosive Atmosphere

To avoid injury or fire hazard, do not operate this product in an explosive atmosphere.

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To avoid injury, remove jewelry such as rings, watches, and other metallic objects. Do not touch exposed connections and components when power is present.

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Use the Proper Voltage Setting	Ensure that the line selector is in the proper position for the power source before applying power.
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Safety Terms and Symbols

Terms in This Manual   These terms may appear in this manual:

⚠   *WARNING:* Warning statements identify conditions or practices that can result in personal injury or loss of life.

⚠   *CAUTION:* Caution statements identify conditions or practices that can result in damage to the equipment or other property.

Terms on the Product   These terms may appear on the product:

DANGER indicates a personal injury hazard immediately accessible as one reads the marking.

WARNING indicates a personal injury hazard not immediately accessible as you read the marking.

CAUTION indicates a hazard to property, including the product.

Symbols on the Product

The following symbols may appear on the product:

⚡ DANGER high voltage

⏚ Protective ground (earth) terminal

⚠ ATTENTION – refer to manual

Service Safety Summary

⚠ *WARNING: These instructions are for use by qualified service personnel only. To avoid personal injury, do not perform any servicing unless you are qualified to do so. Refer to all safety summaries before performing service.*

Do Not Service Alone

Do not perform internal service or adjustment of this product unless another person capable of rendering first aid and resuscitation is present.

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To avoid electric shock, disconnect the main power by means of the power cord or, if provided, the power switch.

Use Care When Servicing With Power On

Dangerous voltages or currents may exist in this product. Disconnect power and remove battery (if applicable) before removing protective panels, soldering, or replacing components.

To avoid electric shock, do not touch exposed connections.

Certifications and Compliances

FCC Emission Control

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Changes or modifications not expressly approved by Grass Valley Group can affect emission compliance and could void the user's authority to operate this equipment.

Canadian EMC Notice of Compliance

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A préscrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

EN55022 Class A Warning

For products that comply with Class A. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

Certification

Category	Standard
Safety	*Designed/tested for compliance with:*
	UL1950 – Safety of Information Technology Equipment, including Electrical Business Equipment (Third Edition, 1995)
	IEC 950 – Safety of Information Technology Equipment, including Electrical Business Equipment (Second edition, 1991)
	CAN/CSA C22.2, No. 950-95 – Safety of Information Technology Equipment, including Electrical Business Equipment
	EN60950 – Safety of Information Technology Equipment, including Electrical Business Equipment (includes Appendix ZB)

Serial Digital I/O Upgrade Installation

Introduction

These instructions explain how to install the new serial digital I/O board in a PDR 100 Video Disk Recorder or a PDR 200 Video File Server. The latest boards have Sharcnet connectors so that embedded audio can be routed to and from the Audio Signal Processing Board (ASPB). These instructions also assume that you have already installed a slave disk recorder board field upgrade. The slave board converts a two-channel Profile system into a four-channel system.

NOTE: Embedded audio does not work with the Analog Audio I/O boards that came standard with the PDR 100. You must install an ASPB in a PDR 100 to use embedded audio.

The instructions include procedures for:

- Opening the Profile chassis.
- Moving existing boards, if necessary, to make room for the new board.
- Installing the new board.
- Closing the Profile chassis.
- Verifying that the installed board is functioning correctly.

System Requirements

The Profile system software installed in the Profile system must be version 2.1 or higher. To check the software version installed in your Profile system, open the VrdPanel application and choose **Help | About VdrPanel**. The software version is listed in the Product Version field in the displayed window.

Kit Contents

This upgrade kit includes the following:

- A serial digital component I/O board.
- Two Sharcnet cables.
- Two 50 Ω audio clock cables.
- A set of stick-on identification labels.
- This installation manual.

Tools Required

Tools required, but not supplied, to install this kit are:

• A Torx tool with T10 and T15 tips.

• Electrostatic discharge (ESD) grounding straps.

Electrostatic Precautions

⚠️ *CAUTION: This product contains components that are highly sensitive to electrostatic discharge. To protect these components from damage and to maintain product reliability, take the following precautions when handling the circuit boards:*

• *Handle all circuit boards in a static-protected area capable of controlling static charge on conductive materials, people, and nonconductive materials. Static-protected areas include nonstatic table tops and nonstatic floor mats.*

• *Leave the board in its ESD static-shielded bag until you are ready to install the board.*

• *Wear ESD grounding straps when handling boards outside of their ESD static-shielded bags.*

• *Handle the circuit boards only by the edges. Avoid touching the printed wires on the back of the circuit board as much as possible.*

Installation Procedures

The procedures that follow take you step-by-step through the installation of the serial digital I/O board. You can install the board with the Profile chassis fully extended on the rack slides if the equipment rack is adequately anchored to prevent tipping, and if there is sufficient slack in the cables connected to the rear panel to allow the chassis to fully extend on the slides.

If it is necessary for you to remove the Profile unit from the equipment rack to perform this installation, refer to the Profile system's installation manual for instructions.

⚠ *WARNING: Unless the equipment rack is adequately anchored, the rack could tip when the chassis is extended on the rack slides. To avoid possible injury, make sure the rack is firmly secured before extending the chassis on the rack slides.*

Removing the Chassis Covers

To remove the chassis covers:

1. Turn Profile system power off and remove the power cord.

2. Loosen the front panel retaining screw and pull the chassis out from the rack until the slide sections latch. If the rack is not anchored firmly, remove the chassis from the rack.

3. Use the Torx tool with the T10 tip to remove the top screws from the front chassis cover (❶ in Figure 1) and use the T15 tip to remove the side screws.The front chassis cover must be removed first because it overlaps the rear chassis cover (❷ in Figure 1).

NOTE: Take care not to lose these chassis screws. They are required to meet the EMI specifications for the Profile unit. Also, not all the screws on a PDR200, as shown in Figure 1, are present on a PDR100.

4. Use the Torx tool with the T10 tip to remove the rear chassis cover (❷ in Figure 1) which covers the circuit boards.

9675-9
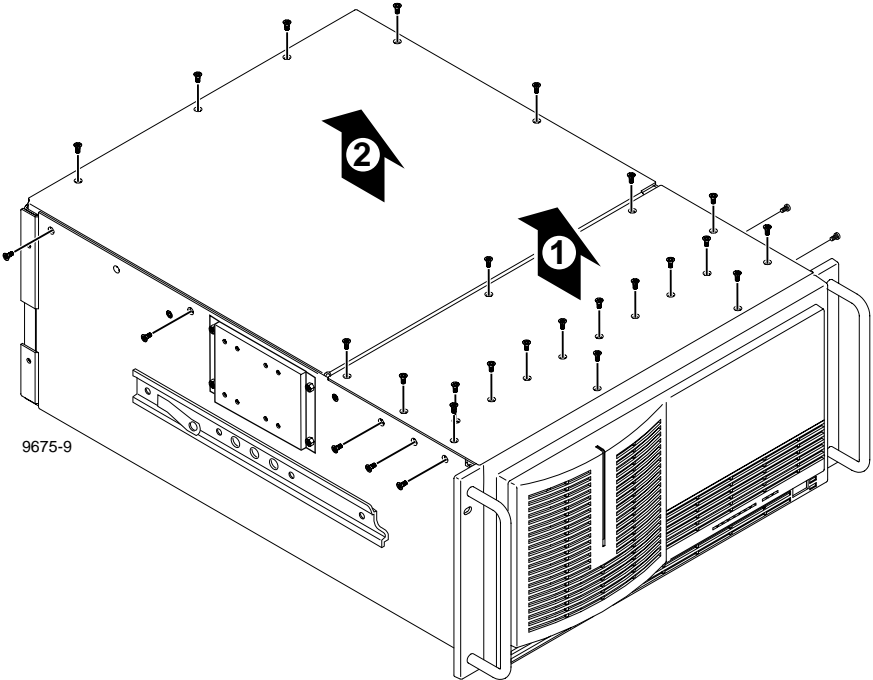
Figure 1. Removing the front and rear chassis covers

Removing the Circuit Board Hold-down Brackets

There are two hold-down brackets located in the circuit board area that must be removed in order to remove and replace circuit boards. Figure 2 shows these brackets.

To remove the hold-down brackets:

1. Use the Torx tool with the T10 tip to remove the screw (❶ in Figure 2) which secures the rear board hold-down bracket.

2. Lift the hold-down bracket (❷ in Figure 2) up and out of the chassis and set aside.

3. Use the Torx tool with the T10 tip to remove the screw (❸ in Figure 2) which secures the front board hold-down bracket.

4. Lift the hold-down bracket (❹ in Figure 2) up and out of the chassis and set aside.

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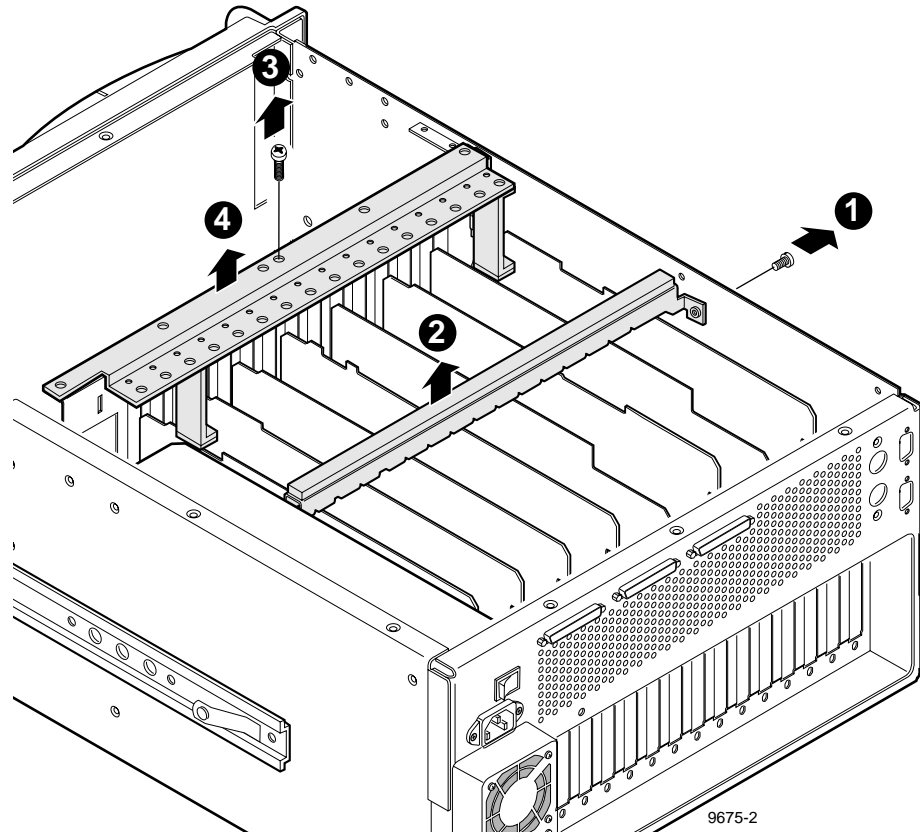
Figure 2. Removing the circuit board hold-down brackets

Removing Circuit Boards

Installing the serial digital I/O board may require that you remove or reposition one or more currently installed boards to make room for the new board or to meet internal cabling constraints.

When unplugging boards, you may also find it necessary to remove the screw mounting an adjacent circuit board, and in the case of shorter circuit boards, it may be necessary to remove an adjacent tall circuit board to ease removal of the shorter board.

Use the following procedure to unplug circuit boards from the motherboard:

1. Remove all interior and rear panel cables from the circuit boards that are to be removed.

2. Use the Torx tool with the T15 tip to remove the screw from the bracket inside the chassis (❶ in Figure 3) and the screw through the rear panel outside the chassis (❷ in Figure 3).

CAUTION: To avoid damage to the circuit board when removing or installing it:

- *Do not rock the circuit board in the EISA bus connector — pull straight up to remove.*

- *Do not grasp or push on the rear-panel connectors when removing or installing circuit boards in the card slots.*

3. Extract the circuit board. If the circuit board is tall, use the extraction lever on the front of the board and the extraction ring at the back of the board to lift the circuit board free of the connectors on the motherboard. For shorter circuit boards, carefully grasp the board and lift upward to free the circuit board from the motherboard connectors. You might need to remove an adjacent tall board to get enough room for a safe hold on the shorter board.
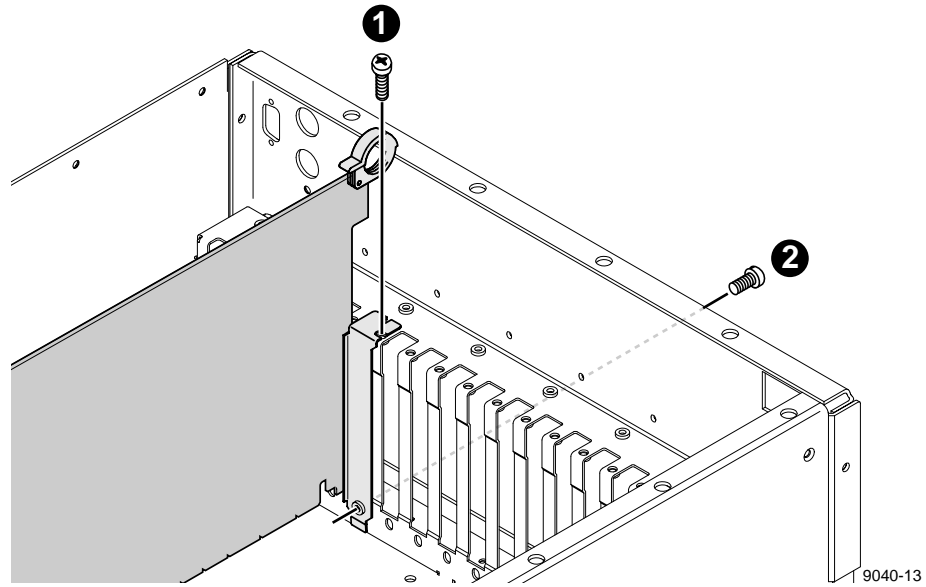
Figure 3. Screw locations for board mounting bracket

Board Location Guide

This board location guide is provided to help you install a serial digital I/O board in a PDR 200 or PDR 100. The guide identifies the video router inputs and outputs of each Profile board currently available, as well as the input and output connections on the video router connectors on the motherboard. Use this information when:

- Adding a board to the Profile system and selecting a slot into which you can install it.

- Moving boards to meet requirements for new boards.

As you move boards, remember that some circuit boards must occupy specific slots, while others can be installed in almost any slot as long as their I/O requirements are met (see Table 1).

From the factory, a single, two-channel serial digital I/O board comes installed in slot J14 in a PDR202D. The recommended slot for the additional serial digital I/O is slot J15, although it could be installed in any available slot from J5 to J15. In order to use embedded audio, however, the serial digital I/O boards must be close enough to the Audio Signal Processing Board (ASPB) for the audio clock and Sharcnet cables to reach. Also, the board must not be in a slot with shared inputs when all the inputs are taken by the adjacent board, such as the four-channel analog output board or the analog composite monitor board.

This section provides a general, simple approach to board location. It explains the relationship between the motherboard and video router connectors and provides tables, charts and examples to assist you in installing this and other boards.

Video Router to Motherboard Relationship

The video router provides and controls video data to twelve connectors on the motherboard. These video data connectors are aligned with the main motherboard connectors for slots J5 through J16. Since the Reference Genlock (Ref Gen) board must occupy J16 to provide the necessary system clocks, this discussion excludes J16.

When choosing a slot for a board, the major constraint for a slot is how the board connects to the video router. Not all boards require the same number of video I/O connections, and not all video data connectors provide the same number of video I/O connections. Therefore, you must know how many input and output connections the board needs, if any, and the slots available that meets those needs.

Board I/O Requirements and Restrictions

Table 1 lists each of the boards which may be installed in the Profile system and the recommended slots, possible alternatives, and restrictions for each board. If more than one slot is recommended or possible for a board, those slots are listed in the order of preference.

Video Router I/O Connections

Now let's look at the video router connections available at slots J5–J15. Table 2 is a board location chart with the video router input and output connections. In this table:

- The **Slot** column lists each slot on the motherboard connected to the video router.

- The **Board** column is where you write the boards currently installed and the name of the board you want to install.

- The **Inputs** column identifies data input connections available to the slots (boards) from the video router. The numbers in the blocks correspond to the order input connections are assigned at the video router connector.

- The **Outputs** column identifies data output connections available from the slots (boards) to the video router. The numbers in the blocks correspond to the order output connections are assigned at the video router connector.

- The shaded blocks in the diagram indicate video router connections shared between slots. A shared connection is available to either slot, but not both at the same time. For instance:
  - The shaded blocks between slots J5 and J6, slots J7 and J8, slots J10 and J11, and slots J12 and J13 indicate shared input connections.
  - The shaded blocks between slots J8 and J9, slots J10 and J11, and slots J12 and J13 indicate shared output connections.

Table 1. Board I/O requirements and restrictions

Board	Video Router Connection Requirements		Recommended Slot		Other Possible Slots	Restrictions
	Inputs	Outputs	PDR 100	PDR 200		
CPU	n/a	n/a	J1	J1	None	
VGA	n/a	n/a	J2	J2	None	
LAN	n/a	n/a	J3	J3	None	
SCSI	n/a	n/a	J4	J4	None	
RefGen	n/a	n/a	J16	J16	None	
RS422	n/a	n/a	J17	J17	None	
Fibre Channel	n/a	n/a	J15	J8	J5–J15	Must be adjacent to Master EDR
Master EDR	2	2	J14	J9	J5–J15	Must be adjacent to Slave EDR and (if installed) Fibre Channel
Slave EDR	2	2	J13	J10	J5–J15	Must be adjacent to Master EDR
Master DR	2	2	J14	n/a	J5–J15	Must be in adjacent to Slave DR
Slave DR	2	2	J15	n/a	J5–J15	Must be adjacent to Master DR
Serial Digital I/O	2	2	J11	J14, J15	J5–J15	Cables must be able to reach other serial digital I/O or ASPB
Decoder	None	None	J8	J5	J7, J11	Must be adjacent to Analog Composite In
Analog Composite In	None	1	J9	J6	J8, J12	Must be adjacent to Decoder
Analog Composite I/O	2	2	J11	J14, J15	J5–J15	Can't go in J5 if Mix Effects is in J6 or in J8 if Mix Effects is in J7
Mix Effects	6	2	J7	J7	J6	Only J6 and J7 have 5 inputs; board must be able to get a shared input (the 6th) from an adjacent slot (J5 or J8)
Four Channel Analog Out	4	None	J6	J6	J12, J7, J11	Only J6, J7, J11, and J12 have 3 (or more) inputs. If in J11 or J12, board must be able get a shared input (the 4th) from an adjacent slot (J10 or J13)
Analog Composite Monitor	4	None	J12	J12	J6, J7, J11	Only J6, J7, J11, and J12 have 3 (or more) inputs. If in J11 or J12, board must be able get a shared input (the 4th) from an adjacent slot (J10 or J13)
Audio Signal Processing Board (ASPB)	None	None	J13	J13 (1st) J12 (2nd)	J5–J15	Cables must be able to reach video boards or additional ASPB
CAV In	None	1	J5	J5	J5–J15	
Audio I/O	None	None	J5-J15	n/a	J5–J15	

Table 2. Board location chart

Slot	Board	Inputs	Outputs
J5		1 / 2	1 / 2 / 3
J6		6 / 5 / 4 / 3 / 2 / 1	2 / 1
J7		1 / 2 / 3 / 4 / 5 / 6	1 / 2
J8		2 / 1	1 / 2 / 3 4
J9		1 / 2	4 3 / 2 / 1
J10		1 / 2	1 / 2 / 3 4
J11		4 / 3 / 2 / 1	4 3 / 2 / 1
J12		1 / 2 / 3 / 4	1 / 2 / 3 4
J13		2 / 1	4 3 / 2 / 1
J14		1 / 2	1 / 2 / 3
J15		1 / 2	1 / 2 / 3

Selecting a Location

Here's how to use the tables to select a location for a board:

1. Write the board name in Table 2 and, referring to Table 1, put a check mark (✓) in each input and output block used by each board currently installed in your Profile system. Start with the **1** block for each board.

2. Look in Table 1 to see the input and output requirements and both the recommended slot and alternative slots for the board you want to install.

3. Look in Table 2 for a slot with the required video router connections available. Starting with the **1** block, put an ✗ in each block that corresponds to an input and output requirement for the newly added board. If the recommended slot is occupied, or there are not enough input or output blocks available, look at the alternative slots.

4. If all input and output requirements for the board match the available ones for the slot, write the board name in the **Board** column for the slot and install the board.

NOTE: If you can't find an open slot with the I/O connections which meets the I/O requirements of the board you want to install, you will have to move existing boards. You can use Table 1 and Table 2 to experiment with various board locations before deciding on one.

The following examples demonstrate how to use these Table 1 and Table 2.

Example 1: Installing a Second Serial Digital I/O Board

This example shows how to use Table 1 and Table 2 to install an additional serial digital I/O board in a two-channel PDR 202D with a Fibre Channel board and a Mix Effects board.

NOTE: The example assumes that the Profile system has been upgraded with a slave enhanced disk recorder board field kit.

1. Fill in Table 2 with the information for all the boards currently installed in the system.

   a. For the Mix Effects in slot J7, which requires six inputs and two outputs:
      - Put check marks in the five J7 Input blocks, 1–5.
      - Put a check mark in the J8 shared Input Block.
      - Put check marks in the J7 Output blocks 1 and 2.

   b. For the Fibre Channel in slot J8, there are no video router I/O requirements.

   c. For the Master EDR in slot J9, which requires two inputs and two outputs:
      - Put check marks in the J9 Input blocks 1 and 2.
      - Put check marks in the J9 Output blocks 1 and 2.

   d. For the Slave EDR in slot J10, which requires two inputs and two outputs:
      - Put check marks in the J10 Input blocks 1 and 2.
      - Put check marks in the J10 Output blocks 1 and 2.

   e. For the ASPB in slot J13, there are no video router I/O requirements.

   f. For the Serial Digital I/O in slot J14, which requires two inputs and two outputs:
      - Put check marks in J14 Input blocks 1 and 2.
      - Put check marks in J14 Output blocks 1 and 2.

2. From Table 1, note that the second serial digital I/O board's recommended slot is J15, with J5 through J15 as other possible slots.

3. Write **Serial Digital I/O** in the Board column for slot J15 and install the board.
   - Put an ✗ in J15 Input blocks 1 and 2.
   - Put an ✗ in J15 Output blocks 1 and 2.

Your board location chart would then look similar to Table 3.

Table 3. Example 1, Installing a Second Serial Digital I/O Board

Slot	Board	Inputs	Outputs
J5		1 2	1 2 3
J6		6 5 4 3 2 1	2 1
J7	Mix Effects	1 ✓ 2 ✓ 3 ✓ 4 ✓ 5 ✓ 6 ✓	1 ✓ 2 ✓
J8	Fibre Channel	2 1	1 2 3 4
J9	Master Enhanced Disk Recorder	1 ✓ 2 ✓	4 3 ✓ 2 ✓ 1
J10	Slave Enhanced Disk Recorder	1 ✓ 2 ✓	1 ✓ 2 ✓ 3 4
J11		4 3 2 1	4 3 2 1
J12		1 2 3 4 2	1 2 3 4
J13	ASPB	1	4 3 2 1
J14	Serial Digital I/O	1 ✓ 2 ✓	1 ✓ 2 ✓ 3
J15	Serial Digital I/O	1 ✗ 2 ✗	1 ✗ 2 ✗ 3

Example 2: Adding Serial Digital I/O to an Analog System

This example shows how to use Table 1 and Table 2 to install a serial digital I/O board in a four-channel PDR 204A.

1. Fill in Table 2 with the information for all the boards currently installed in the system.

   a. For the Analog Composite I/O in slots J14 and J15, which require two inputs and two outputs:
      - Put check marks in both J14 and J15 Input blocks 1 and 2.
      - Put check marks in both J14 and J15 Output blocks 1 and 2.

   b. For the Master EDR in slot J9, which requires two inputs and two outputs:
      - Put check marks in the J9 Input blocks 1 and 2.
      - Put check marks in the J9 Output blocks 1 and 2.

   c. For the Slave EDR in slot J10, which requires two inputs and two outputs:
      - Put check marks in the J10 Input blocks 1 and 2.
      - Put check marks in the J10 Output blocks 1 and 2.

   d. For the ASPB in slot J13, there are no video router I/O requirements.

2. From Table 1, note that the serial digital I/O board's possible slots are J5 through J15.

3. Write **Serial Digital I/O** in the Board column for slot J12 and install the board.
   - Put an ✘ in J12 Input blocks 1 and 2.
   - Put an ✘ in J12 Output blocks 1 and 2.

Your board location chart would then look similar to Table 4.

Table 4. Example 2, Adding Serial Digital I/O to an Analog System

Slot	Board	Inputs	Outputs
J5		1 ; 2	1 ; 2 ; 3
J6		6 ; 5 ; 4 ; 3 ; 2 ; 1	2 ; 1
J7		1 ; 2 ; 3 ; 4 ; 5 ; 6	1 ; 2
J8		2 ; 1	1 ; 2 ; 3 ; 4
J9	Master Enhanced Disk Recorder	1 ✓ ; 2 ✓	4 ; 3 ; ✓ 2 ; ✓ 1
J10	Slave Enhanced Disk Recorder	1 ✓ ; 2 ✓	1 ✓ ; 2 ✓ ; 3 ; 4
J11		4 ; 3 ; 2 ; 1	4 ; 3 ; 2 ; 1
J12	Serial Digital I/O	1 ✗ ; 2 ✗ ; 3 ; 4 ; 2	1 ✗ ; 2 ✗ ; 3 ; 4
J13	ASPB	1	4 ; 3 ; 2 ; 1
J14	Analog Composite I/O	1 ✓ ; 2 ✓	1 ✓ ; 2 ✓ ; 3
J15	Analog Composite I/O	1 ✓ ; 2 ✓	1 ✓ ; 2 ✓ ; 3

Installing the Serial Digital I/O Board

Refer to the board I/O requirements and restrictions in Table 1 and install the board as follows:

1. If necessary, remove the slot cover where you want to install the board—J15, in this example.

2. Align the board with the connectors on the motherboard. Make sure the extractor on the front end of the board is in the up position, then press down on the board firmly until the board is seated. As you push the board into the connectors, you will feel the board engage first one, then a second set of contacts in the connector. The board is properly seated when the top of the rear mounting bracket is resting on the rear chassis wall shelf.

3. Use the Torx tool with the T15 tip to install the mounting screws in the top of the bracket inside the chassis (❶ in Figure 4) and through the rear panel at the bottom of the bracket (❷ in Figure 4).

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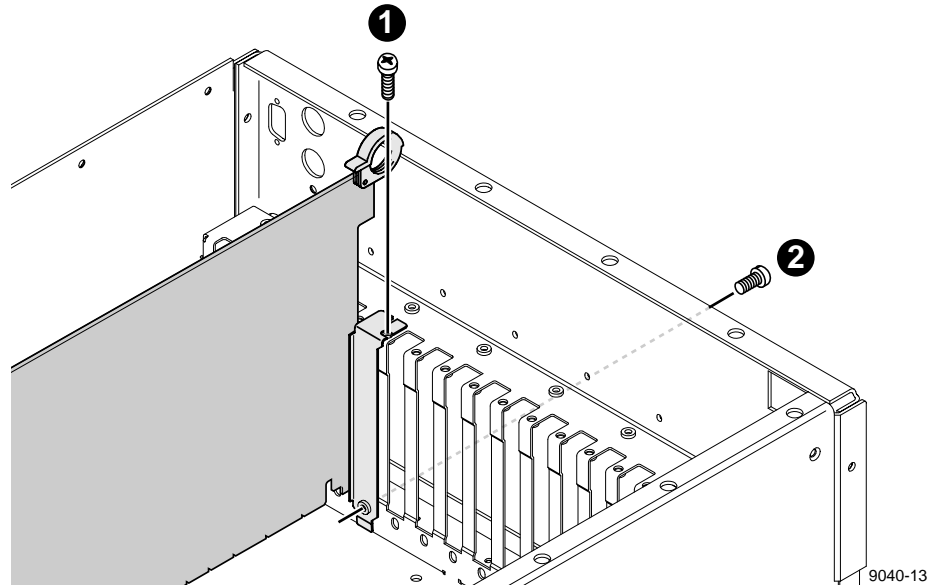
Figure 4. Screw locations for board mounting bracket

4. Install the blank circuit board brackets (if necessary) in the empty board slots on the rear panel.

5. Connect the audio clock and Sharcnet cables (see "Audio Clock and Sharcnet Cabling" on page 22).

6. Use the Torx tool with the T10 tip to reinstall the rear board hold-down bracket (see Figure 2).

7. If necessary, reconfigure the front board hold-down bracket, moving or removing a short board extension, and use the Torx tool with the T10 tip to reinstall the front board hold-down bracket (see Figure 2).

8. Use the Torx tool with the T10 tip to reinstall the rear top cover with the screws previously removed.

9. Use the Torx tool with the T10 and T15 tips to reinstall the front top cover with the screws previously removed.

10. Apply the stick-on label at the appropriate location in the Profile chassis rear panel to identify the location of the serial digital I/O board and any other board you repositioned.

11. Reinstall the Profile chassis in the rack and reconnect all cables previously removed.

12. Apply power to the Profile system and check the presence of the second serial digital I/O board in slot J15 with the procedure under "Installation Verification" on page 24.

Audio Clock and Sharcnet Cabling

This example shows the external audio clock and Sharcnet cabling necessary for two serial digital I/O boards (two channels each for a total of four channels) used with an ASPB. The cable connections are listed in Table 5 and shown in Figure 5.

Table 5. PDR 200 cabling for two serial digital I/O boards and an ASPB

Cable Type	Serial Digital I/O Slot	From Serial Digital I/O	To ASPB
Sharcnet	J15	Sharcnet A	Sharcnet 1
Sharcnet	J14	Sharcnet A	Sharcnet 2
Sharcnet	J15	Sharcnet B	Sharcnet 3
Sharcnet	J14	Sharcnet B	Sharcnet 4
Audio clock	J14	Channel A	Audio 1
Audio clock	J14	Channel B	Audio 2
Audio clock	J15	Channel A	Audio 3
Audio clock	J15	Channel B	Audio 4

Each ASPB provides input of four external audio clock signals, one to each Audio 1 through Audio 4 bank, where each bank consists of four audio channels. ASPB Audio 1 through Audio 4 connectors begin closest to the rear panel and go toward the front panel.

In general, the video board in the lowest numbered slot must provide the audio clock signal to the Audio 1 bank, then the video board in the next lowest numbered slot must provide the audio clock signal to the Audio 2 bank, and so forth. For example, if you have video boards in slots J5 and J11, the audio clock signal from the video board in J5 must be connected to Audio 1 on the ASPB and the audio clock signal from the video board in slot J11 must be connected to Audio 2 on the ASPB. If there are no available clock connectors on the ASPB, video inputs on the unclocked board must be synchronous with a clocked input.

J17 J16 J15 J14 J13 J12 J11 **J10 J9 J8** J7 J6 J5 J4 J3

Sharcnet In

Sharcnet Out 1

Sharcnet Out 2

Sharcnet Out

Sharcnet In 2

Sharcnet In 1

Sharcnet Expansion 1

Sharcnet Expansion 2

Channel B

Audio 4
Audio 3
Audio 2
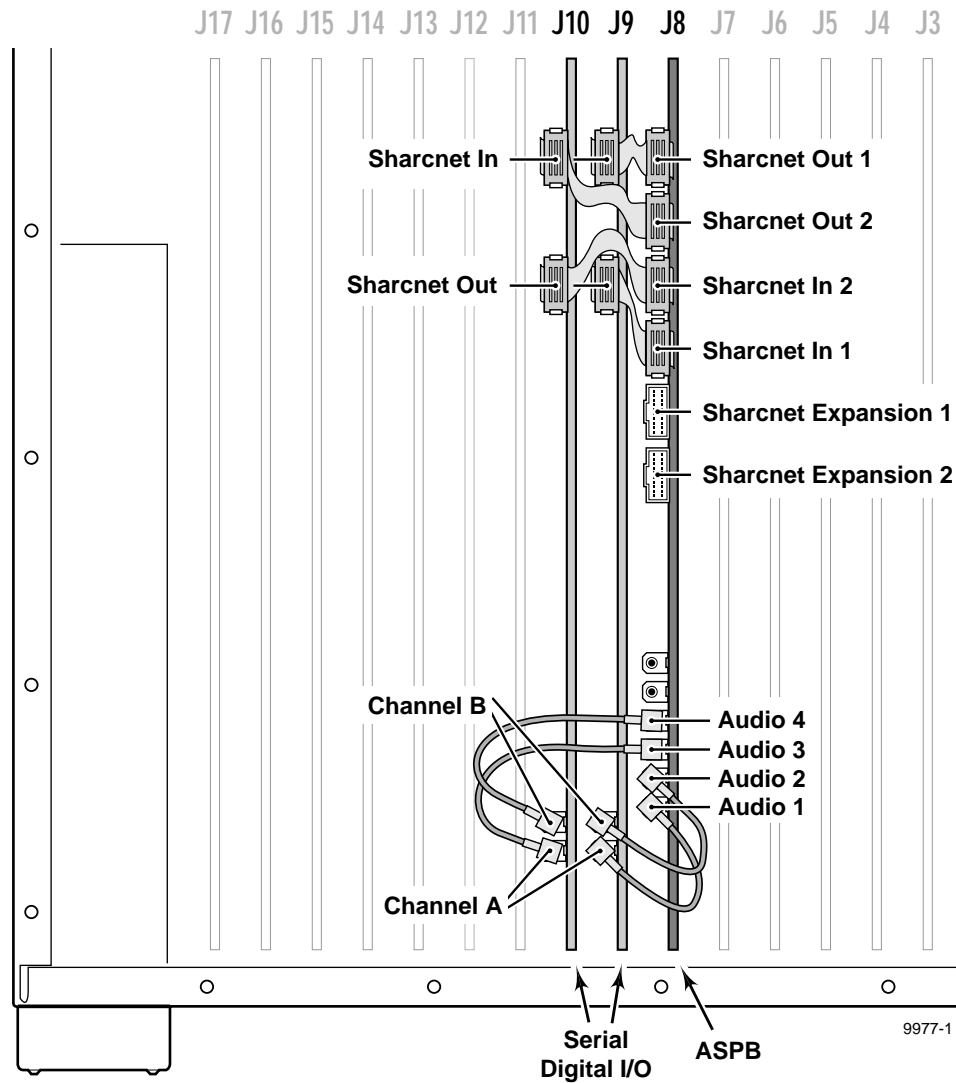Audio 1

Channel A

9977-1

Serial
Digital I/O

ASPB

Figure 5. PDR 200 cabling with two serial digital I/O boards and an ASPB

Installation Verification

Verification for installation of the serial digital I/O board consists of ensuring that the system recognizes the board. Use the Diagnostics window, which lists all installed and recognized boards, to see if the system recognizes the board. To check for recognition of the added serial digital I/O in a PDR 200, for example:

1. From the Windows NT 4.0 desktop, open the Diagnostics window by choosing **Start | Programs | PDR Debug Tools | PDR Diagnostics**.

2. On the left side of the window, ensure that the additional serial digital I/O appears at slot J15 or wherever the board was installed (see Figure 6 for an example).

Slot J1	**Pentium CPU**
Slot J2	**Non-EISA slot**
Slot J3	**SMCA010**
Slot J4	**BUS4202**
Slot J5	
Slot J6	
Slot J7	**Mix Effects (Rev 0)**
Slot J8	**Fibrechannel I/F (Rev 0)**
Slot J9	**Master EDR (Rev 0)**
Slot J10	**Slave EDR (Rev 0)**
Slot J11	
Slot J12	
Slot J13	**ASPB (Rev 1)**
Slot J14	**Serial UA (Rev 1)**
Slot J15	**Serial UA (Rev 1)**
Slot J16	**Ref Gen (4 LTC) (Rev 0)**
Slot J17	**RS422, if installed**
Mother Bd	**Mother Board (Rev 0)**
	Quit

Figure 6. Diagnostics window board recognition example for PDR 204D