

# Kurzweil PCR-1/PCR-2

***Orchestral/Classic Keys Expansion Boards for the PC2***

***Installation Instructions***

*November 1, 2003*



**K U R Z W E I L**  
*Music Systems*

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**Part Number: 910375 Rev. B**

Thank you for purchasing a PCR-1 or PCR-2 ROM Expansion Kit. Please read all of the introductory information in this document (through *Tools and Materials Required for Installation*) before proceeding with the installation. Then, depending on the model you have, turn to *Installing in Keyboard Models* on page 9, or *Installing in Rack-Mount Models* on page 17. Finally, go to *Updating Software* on page 26 to determine which components of your PC2's software you need to update.

## PCR-1

The PCR-1 adds 264 programs and 32 setups to the PC2 series, including an extensive collection of orchestral samples: strings, winds, brass, percussion, vocals, organs, and ensembles. A complete set of General MIDI 1 programs is included, too.

Once you've completed the hardware installation (one or more circuit boards), you can install the software portion of this option into ROM in one of two ways:

- As a collection of orchestral programs and setups with customized performance controls (the Orchestral set)
- As a General MIDI 1 set that conforms to the General MIDI 1 standard for program IDs and note assignments (the GM set)

Whichever set of programs you decide to install into ROM, you can always load the other set of programs into RAM if you want both sets to be available at the same time. And of course, you can reinstall into ROM as often as you like, so you can change your mind about which set of programs you keep in ROM.

## PCR-2

The PCR-2 provides an array of classic keyboard sounds, and adds 128 programs and 32 setups to your PC2.

## PCR-1/PCR-2 and the Polyphony Option

If you have installed the PCX-1 polyphony expansion option in your instrument, you'll need *two* PCR-1/PCR-2 expansion boards: one for the main sound engine board, and another for the PCX-1 sound engine board. There are installation instructions in this document both for instruments *with* the PCX-1 option and for those without it.

## Contents of the Kit

In addition to this installation guide, your PCR-1/PCR-2 kit should contain the following items:

- Expansion board (single inline memory module, or SIMM)
- CD containing updated software and PC2 object files
- One or two keyboard overlays that you can put over the **Sound Select** buttons to help you find the new programs
- User's Guide describing new software features, as well as information about programs and setups

## Safety Precautions

To prevent risk of electrocution, make sure that the PC2 or PC2R is disconnected from its power supply before you begin disassembling the instrument.

Static electricity, even in small amounts, can cause damage to electronic components (especially memory). Before disassembling the instrument, touch a conductive metal surface to discharge any static electricity that you may have built up.

## Saving Your Data

You'll be upgrading your PC2's software as part of this installation, which means that you'll need to do a hard reset before returning to normal operation. The hard reset initializes the PC2 so that it can use the new sounds and programs. It also deletes all user-defined data (programs, setups, and effects) from the PC2's memory. If you don't want to lose your user data when you install this option, do a SysEx dump of all objects before you begin the installation.

## System Requirements

You can install the PCR-1/PCR-2 option in any PC2-series instrument, keyboard or rack-mount. The only system requirement is that you have current versions of the PC2 software components listed below.

### PC2 Software Components

All PC2-series instruments contain three main software components.

- Operating system software
- Soundware
- Boot block software

The operating system software defines the performance and editing characteristics of the PC2. Your instrument must have Version 3.0 or later to work correctly with the PCR-1 option, and Version 4.0 or later for the PCR-2.

The soundware consists of two files: one file contains basic soundware objects; the other determines whether you install *Orchestral* programs and setups or *General MIDI 1* programs. The basic soundware objects file installed in your instrument must be Version 3.0 or later to work correctly with the PCR-1 option, and Version 4.0 or later for the PCR-2.

The boot block software contains diagnostic software and other functions (like the software updating application) not related to performance or editing. Your instrument must have Version 2.0 or later of the boot block to work correctly with Version 3.0 operating system software and soundware.

### Checking Software Versions

You need to check the versions of *all three* software components. As you check each software component, make a note of whether you need to update it. If you don't need to update any components, proceed to the installation procedure for your model (page 9 for keyboard models, or page 17 for rack-mount models).

If you *do* need to update one or more software components, we recommend that you install the option board(s) first, then update the software components.

### Checking the Boot Block Software Version

The boot block is a special utility that isn't accessible during normal PC2 operations, since the only time you'll need to use it is when you want to run diagnostics, install a ROM sound option, or update software.

To activate the boot block, turn the instrument on, and watch the display (if it's already on, turn it off then on again). When you see **Please wait...**, press and release the **Panic** button (for keyboard models) or the **Edit/Store** button (for rack-mount models). This starts the boot block. After a few seconds, you'll see another message indicating that you're running the boot block. The bottom line of the display shows the version of the boot block software. This message doesn't remain visible for long, so check it quickly. If the version number is lower than 2.0, you need to update your boot block (see page 28).

To return to normal operation, press the **Right** cursor button until you see **Run engine** in the bottom line of the display, then press **Yes**.

### Checking the Operating System Software Version

There are two ways to check the version of the operating system software. The first is to watch the display as the instrument powers up. During powerup, the display shows several messages. One of these messages is **Welcome to the PC2**; this message also indicates the version of the operating system software on the bottom line of the display.

The second way to check the version of the operating system software is to check the value of the OS Version parameter in the Global menu. Press the **Global** button, then press the **Right** cursor button until you see a parameter called OS Version. If you don't see this parameter, your operating system is Version 1-generation, and you need to update it.

Whichever method you use, if the operating system version is earlier than 3.0 (or 4.0 for PCR-2), you need to update your operating system software. See page 29.

### Checking the Soundware Version

Press the **Global** button; then press the **Right** cursor button repeatedly until you see the Int Sound Ver (Internal Sound Version) parameter.

If you don't see this parameter, your operating system version is earlier than 3.0, and you need to update both your operating system and your soundware.

## Tools and Materials Required for Installation

- #1 (small) cross-recess (Phillips head) screwdriver
- Two thick foam pads (keyboard models only)

You'll need a flat work area large enough to accommodate the disassembled instrument. Most tabletops will work for the PC2R, but keyboard models require more space—up to 60-by-30 inches, depending on the length of the keyboard. The foam pads listed in the required materials will protect the Alpha Wheel and sliders on keyboard units.

## Tools and Materials Required for Software Updates

If you need to update your operating system software, soundware, or boot block, you'll also need the following:

- Stand-alone sequencer or MIDI file player that has a CD-ROM drive and can send System Exclusive (SysEx) data—or a personal computer (either Windows-compatible or a Macintosh or other computer capable of reading DOS disks and files) equipped with MIDI interface, CD-ROM drive, and sequencing software capable of sending SysEx data.
- MIDI cable

If you don't have a device with a CD-ROM drive, you can download the files from our website. See page ii for our web address. If you're not sure which files you need to install, don't worry. There's a software installation checklist at the end of this document.

### **Sequencer Software for Windows-Compatible Computers**

#### **Shareware/Freeware**

Windows Media Player. You need to have version 5 or later of Media Player—older versions will not work correctly. You can download Windows Media Player from the following website

<http://www.microsoft.com/windows/windowsmedia/en/Download/default.asp>

Please note that Alesis Freeloader, which we recommend for the Mac, is buggy in the PC version and will *not* work correctly.

#### **Commercial software**

Logic (from EMAGIC)

### **Sequencer Software for Macintosh Computers**

#### **Shareware/Freeware**

MIDIgraphy 1.4.3 (older versions tend to crash w/ OS 8 and 9), is available at the following website:

<http://member.nifty.ne.jp/mmaeda/e/works.html>

Alesis Freeloader is available at the following website:

<http://www.alesis.com/downloads/software/freeloader>

Please note that Windows Media Player, which we recommend for the PC, is buggy in the Mac version and does NOT work.

#### **Commercial software**

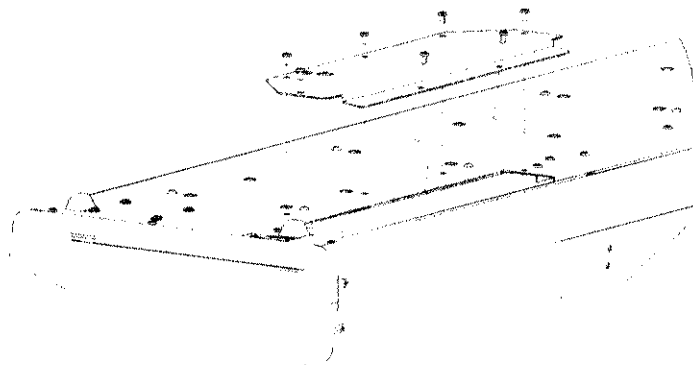
Performer (from Mark of the Unicorn)

Logic (from EMAGIC)

## Installing in Keyboard Models

### Removing the Access Panel

1. Make sure that the PC2 is disconnected from its power supply, and that you've discharged any residual static electricity by touching a conductive object (like the metal casing of the PC2 itself).
2. Position the foam pads on your work surface so that they'll support the ends of the keyboard.
3. Place the PC2 face-down on the foam pads, with the keyboard facing away from you. Make sure that the PC2 is not resting on the Alpha Wheel or sliders.
4. Using a #1 Phillips screwdriver, remove the seven screws that secure the access panel, as shown in Figure 1.



**Figure 1**      **Removing the retaining screws**

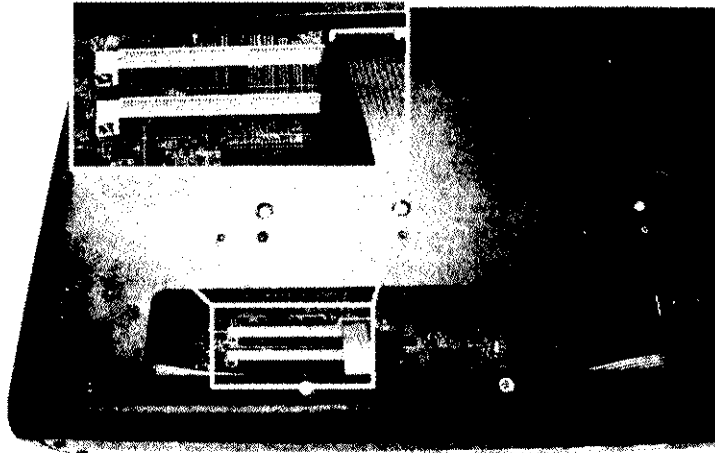
5. Remove the access panel by lifting its far edge and pulling it up and away from you.



### Installing PCR-1/PCR-2 Board on Engine Board

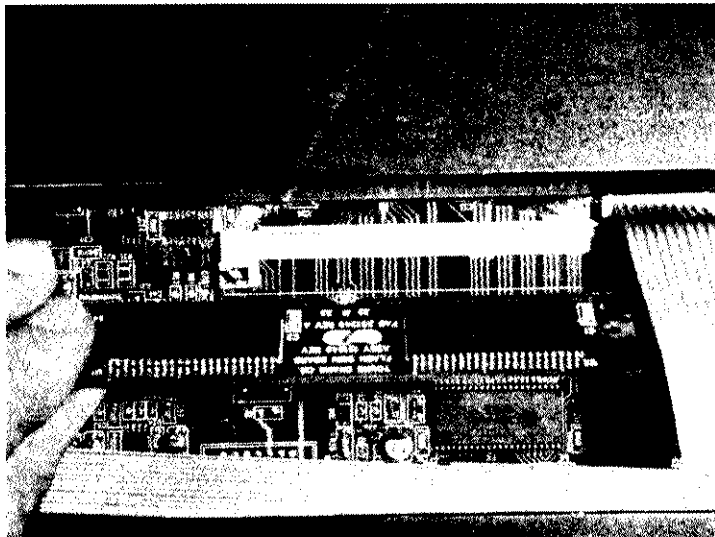
This section describes the basic installation. If you do not have the PCX-1 option in your instrument, follow the instructions in this section, then proceed with verification and reassembly. If you *have* installed the PCX-1 Polyphony Expansion option, you'll also follow the instructions in the section called *Installing the PCR-1/PCR-2 Board on the PCX-1 Board* (page 13).

1. Locate the Engine board, and identify the SIMM socket for the board you are installing: J409 for PCR-1, or J410 for PCR-2. Both sockets are shown in Figure 2.



**Figure 2**      PC2 Engine board, showing sockets for option boards

2. Grasp the board as shown in Figure 3, so that the chips face away from you when you insert the connecting edge of the board into the socket. Notice the semi-circular notch at the center of the connecting edge. This notch aligns with a key on the SIMM socket, and ensures that you position the board correctly in the socket. Note that part of the board will be under the ribbon cable shown at the far right in Figure 3.



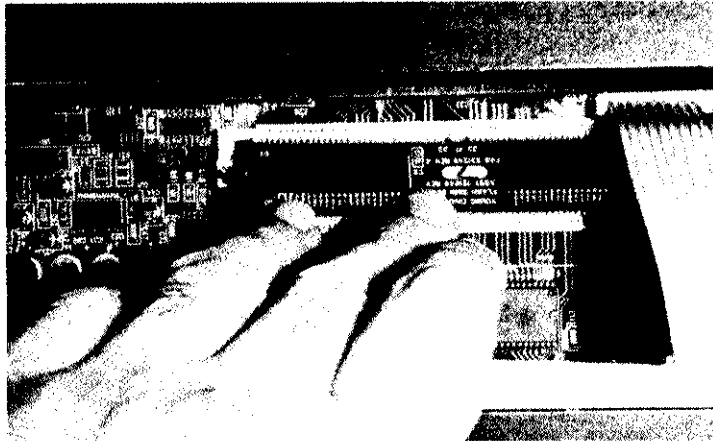
**Figure 3** Proper orientation of option board

3. Place the board in the connection slot of the appropriate SIMM socket, aligning the notch in the board with the key in the socket. The board will rotate toward you when you release it.

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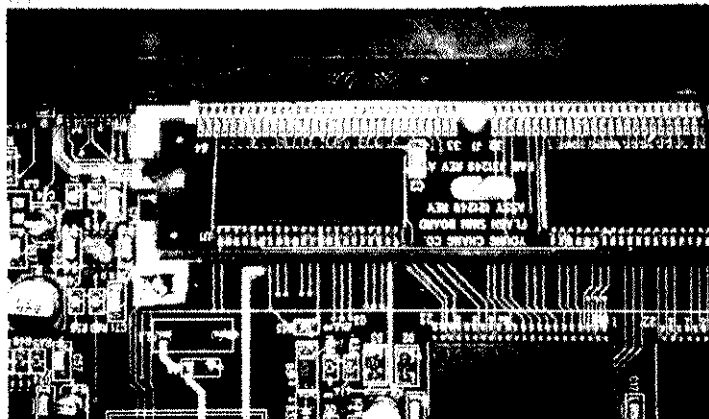
#### Tools and Materials Required for Installation

4. Press straight down on the top edge of the board, as shown in Figure 4, until the locking tabs at each side of the socket snap into place.



**Figure 4** Placing option board in SIMM socket

5. Figure 5 shows how the PCR-1 board looks when it's installed properly on the Engine Board.

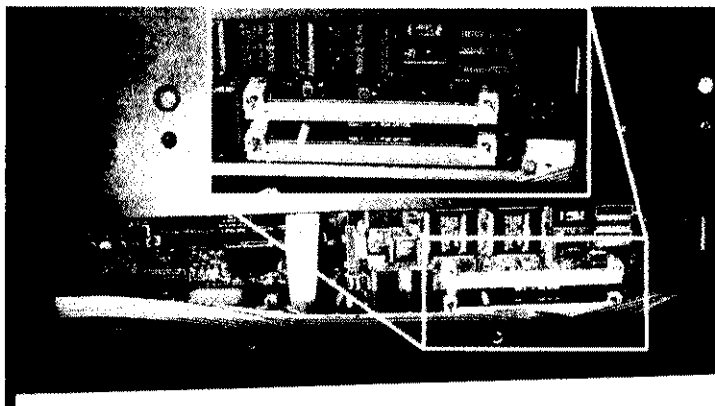


**Figure 5** Option board properly installed on Engine Board

### Installing the PCR-1/PCR-2 Board on the PCX-1 Board

This section is only for those who have the PCX-1 Polyphony Expansion option in their keyboards. If you *haven't* installed the PCX-1 option, please skip this section and proceed to *Reassembly and Hardware Verification* on page 16. If you *have* installed the PCX-1 option, follow the instructions in this section, then proceed to *Reassembly and Hardware Verification*.

1. Locate the PCX-1 board, which is mounted on the Engine board. Identify the SIMM socket for the option you are installing (J8 for the PCR-1 board; J9 for the PCR-2 board). See Figure 6.

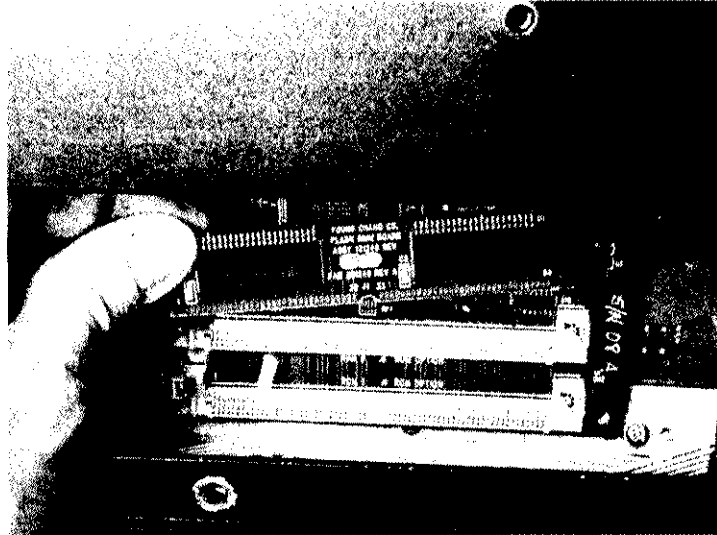


**Figure 6**      **PCX-1 board and SIMM sockets for option boards**

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Tools and Materials Required for Installation

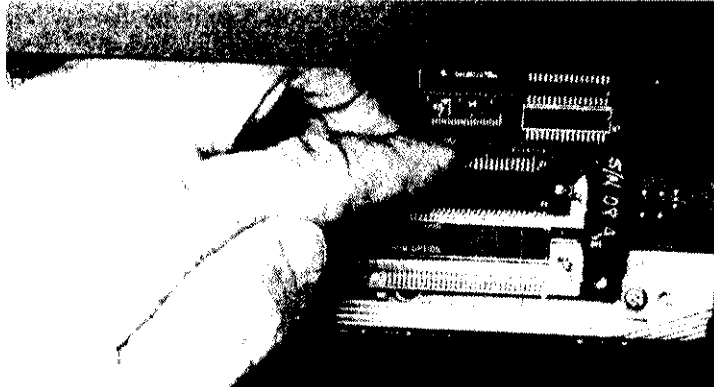
2. Grasp the board as shown in Figure 7, so that the chips face *toward* you when you insert the connecting edge of the board into the socket. Notice the semi-circular notch at the center of the connecting edge. This notch aligns with a key on the SIMM socket, and ensures that you position the board correctly in the socket.



**Figure 7** Proper orientation of option board

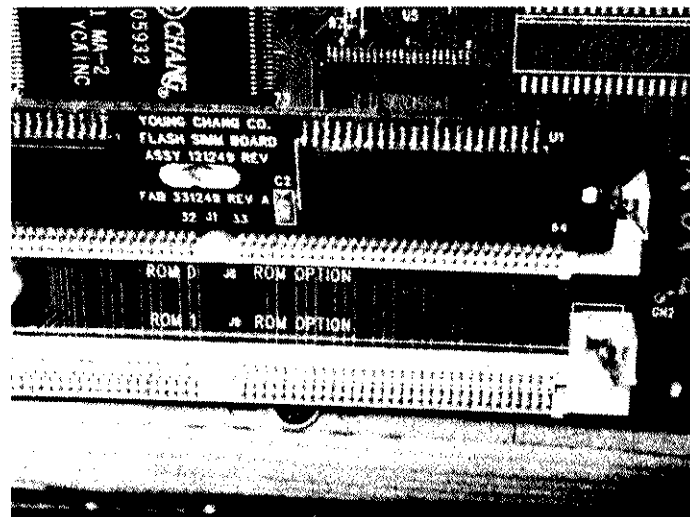
3. Place the option board in the connection slot in the SIMM socket, aligning the notch in the board with the key in the socket. The board will rotate away from you when you release it.

4. Press straight down on the top edge of the board, as shown in Figure 8, until the locking tabs at each side of the socket snap into place.



**Figure 8** Placing option board in SIMM socket

5. Figure 9 shows how the PCR-1 board looks when it's installed properly on the PCX-1 board.



**Figure 9** PCR-1 board properly installed on PCX-1 board

### Reassembly and Hardware Verification

1. Replace the access panel, and replace the retaining screws.
2. Turn the PC2 on, and watch the display. If you don't have the PCX-1 Polyphony Expansion option, the display should show **Welcome to the PC2** (for 76-key models) or **Welcome to the PC2x** (for 88-key models), then should go to a performance mode.

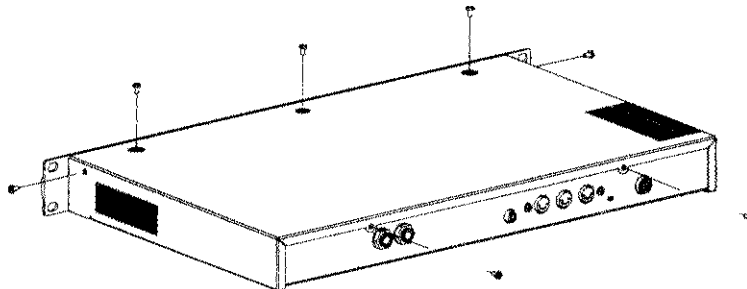
If your instrument has the PCX-1 option, the display should show **Welcome to the PC2P** (for 76-key models) or **Welcome to the PC2xP** (for 88-key models). The **P** indicates the presence of the polyphony expansion kit. If you don't see it, you may have dislodged the PCX-1 board during the PCR-1 installation.

3. Press the **Global** button, then press the **Right** cursor button repeatedly to scroll through the parameters until you find the parameter named **Exp1**, which should have a value of **Yes**. If the value of the **Exp1** parameter is **No**, the PCR-1 board isn't installed properly on the main engine board. You should repeat the installation procedure or consult a Kurzweil dealer or certified service center.
4. If you have the PCX-1 option, press the **Right** cursor button until you see the parameter named **PCXP1**. Its value should be **Yes**. If its value is **No**, the PCR-1 board isn't installed properly on the PCX-1 board. You should repeat the installation procedure or consult a Kurzweil dealer or certified service center.

## Installing in Rack-Mount Models

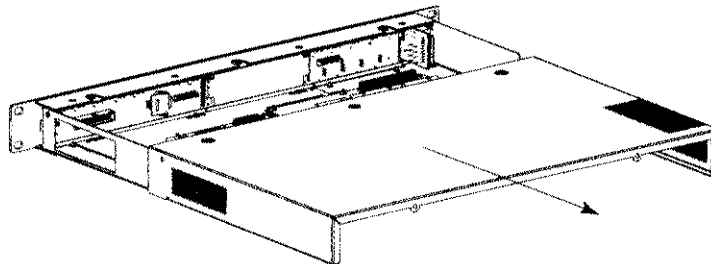
### Removing the Top Panel

1. Make sure that the PC2R is disconnected from its power supply, and that you've discharged any residual static electricity by touching a conductive object (like the metal casing of the PC2R itself).
2. Position the PC2R on your work surface—right side up, with the front panel facing away from you.
3. Using a #1Phillips screwdriver, remove the seven screws that secure the top panel (see Figure 10).



**Figure 10** Removing the retaining screws

4. Grasp the front of the PC2R and slide the top panel straight back until it's free from the body of the PC2R (see Figure 11).



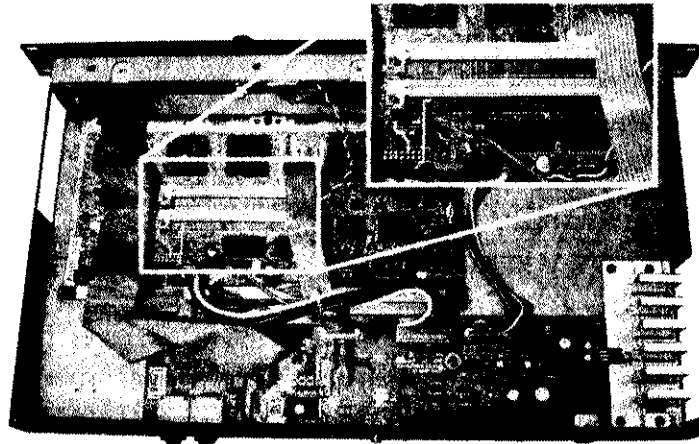
**Figure 11** Removing the top panel



### Installing the PCR-1 Board on the Engine Board

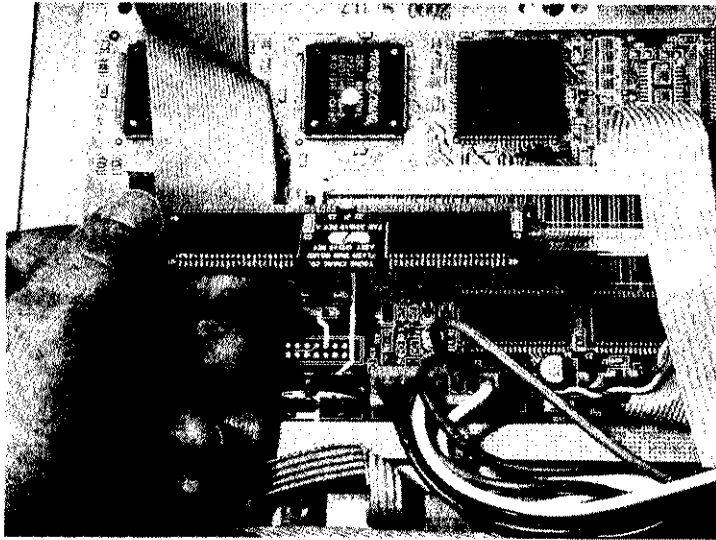
This section describes the basic PCR-1 installation. If you do not have the PCX-1 option in your instrument, follow the instructions in this section, then proceed with verification and reassembly. If you *have* the PCX-1 Polyphony Expansion option, follow the instructions in this section, then follow the instructions in the section called *Installing the PCR-1 /PCR-2 Board on PCX-1 Board* (page 21).

1. Locate the Engine board, and identify the SIMM socket for the board you are installing: J409 for PCR-1, or J410 for PCR-2. Both sockets are shown in Figure 12.



**Figure 12** PC2R Engine board and SIMM sockets for option boards

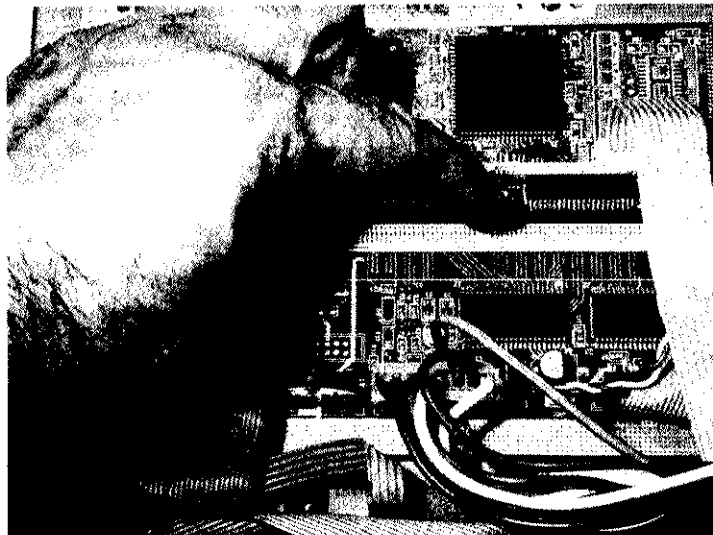
2. Grasp the board as shown in Figure 13, so that the chips face away from you when you insert the connecting edge of the board into the socket. Notice the semi-circular notch at the center of the connecting edge. This notch aligns with a key on the SIMM socket, and ensures that you position the board correctly in the socket.



**Figure 13** Proper orientation of option board

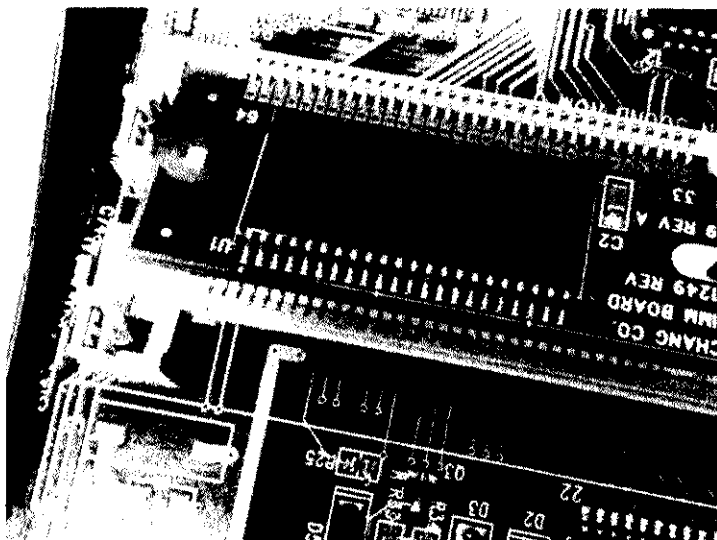
3. Place the option board in the connection slot in the SIMM socket, aligning the notch in the board with the key in the socket. The board will rotate toward you when you release it.

4. Press straight down on the top edge of the board, as shown in Figure 14, until the locking tabs at each side of the socket snap into place.



**Figure 14**     **Placing option board in SIMM socket**

5. Figure 15 shows how the option board looks when it's installed properly on the Engine Board.

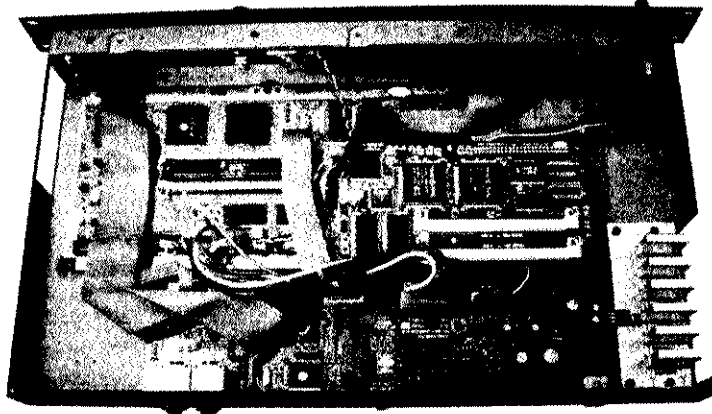


**Figure 15** Option board properly installed on Engine Board

### **Installing the PCR-1 /PCR-2 Board on PCX-1 Board**

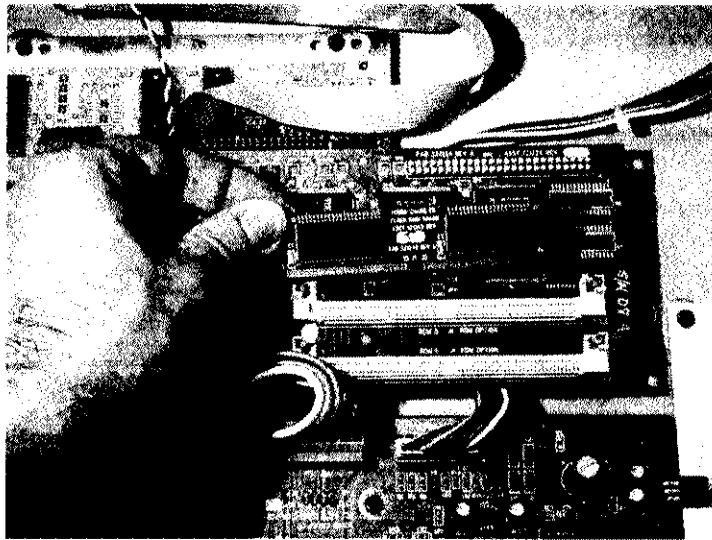
This section is only for those who have installed the PCX-1 Polyphony Expansion option in their instruments. If you *haven't* installed the PCX-1 option, please skip this section and proceed to *Reassembly and Hardware Verification* on page 25. If you *have* installed the PCX-1 option, follow the instructions in this section, then proceed to *Reassembly and Hardware Verification*.

1. Locate the PCX-1 board, which is mounted on the Engine board. Identify the SIMM socket for the option you are installing (J8 for the PCR-1 board; J9 for the PCR-2 board). See Figure 16.



**Figure 16** PCX-1 board, sockets for option boards

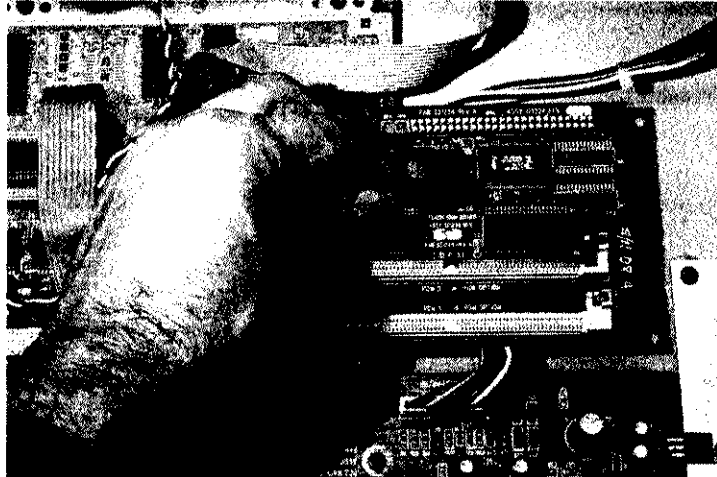
2. Grasp the board as shown in Figure 17, so that the chips face *toward* you when you insert the connecting edge of the board into the socket. Notice the semi-circular notch at the center of the connecting edge. This notch aligns with a key on the SIMM socket, and ensures that you position the board correctly in the socket.



**Figure 17** Proper orientation of option board

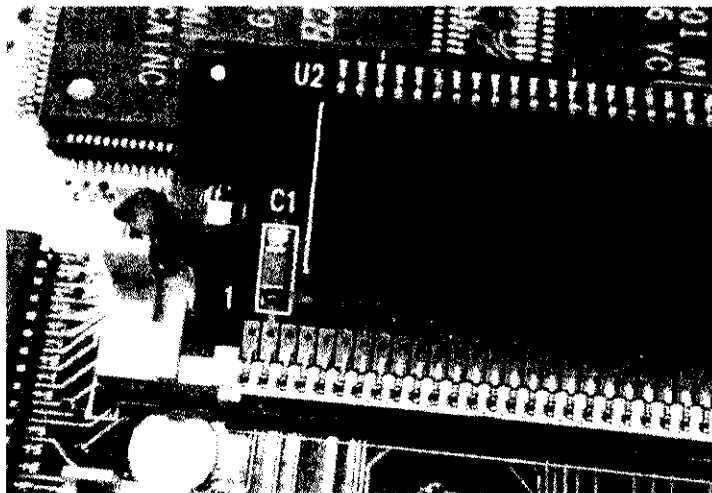
3. Place the option board in the connection slot in the SIMM socket, aligning the notch in the board with the key in the socket. The board will rotate away from you when you release it.

4. Press straight down on the top edge of the board, as shown in Figure 18, until the locking tabs at each side of the socket snap into place.



**Figure 18** Placing option board in SIMM socket

5. Figure 19 shows how the option board looks when it's installed properly on the PCX-1 board.



**Figure 19** Option board installed on PCX-1 board

### Reassembly and Hardware Verification

1. Slide the top panel back into place, and replace the seven retaining screws.
2. Turn the PC2R on, and watch the display. If you don't have the PCX-1 Polyphony Expansion option, the display should show **Welcome to the PC2r**, then should go to a performance mode.

If your instrument has the PCX-1 option, the display should show **Welcome to the PC2rP**. The **P** indicates the presence of the polyphony expansion kit. If you don't see it, you may have dislodged the PCX-1 board during the PCR-1 installation.

3. Press the **Global** button, then press the **Right** cursor button repeatedly to scroll through the parameters until you find the parameter named **Exp1**, which should have a value of **Yes**. If the value of the **Exp1** parameter is **No**, the PCR-1 board isn't installed properly on the main engine board. You should repeat the installation procedure or consult a Kurzweil dealer or certified service center.
4. If you have the PCX-1 option, press the **Right** cursor button until you see the parameter named **PCXP1**. Its value should be **Yes**. If its value is **No**, the PCR-1 board isn't installed properly on the PCX-1 board. You should repeat the installation procedure or consult a Kurzweil dealer or certified service center.



## Updating Software

If you haven't checked the versions of your boot block software, operating system software, and soundware, you should do so now. To function properly, both the PCR-1/PCR-2 option requires Version 2.0 or later of the boot block software. The PCR-1 option requires Version 3.0 or later of the basic soundware objects and Version 3.0 or later of the *Orchestral* or *General MIDI 1* program/setup file. The PCR-2 option requires Version 4.0 or later of the basic soundware objects and Version 4.0 of the *Operating System*.

See *Checking Software Versions* on page 5 to learn how to check software versions. If you need to update one or more software components, follow the instructions below.

You update the software by loading one or more MIDI files into the PC2's flash ROM using a sequencer application. The following subsection explains how to understand the filenames.

### How to Interpret the Filenames

The PC2's software files have names that look something like this: **pc2xorch310.mid**

The name of each file has four parts:

- **Prefix:** three characters that identify the type of the file. In our example above, **PC2** identifies the file as a file for the PC2, **X** is for the 88-note PC2, **R** is for the rack-mount model, and **P** is for any PC2 model with the PCX-1 Polyphony Expansion option.
- **Category:** **ORCH** indicates that *Orchestral* programs are used with PCR-1 (if installed). **GM** indicates that *GM* programs are used with PCR-1 (if installed).
- **Version:** three digits that indicate the version of the file. The version in the example is **3.10**.

- **Extension:** three characters following a dot, and identifying the file type to the sequencer and PC2. All files for this option installation have the extension **MID**.

Throughout this document, we use *placeholders* to represent the version numbers in filenames. Instead of using specific version numbers, we use *nnn* to represent any version of a file.

### **Saving Objects**

Updating software components requires you to do a hard reset before resuming normal operations. This deletes all user-defined information from the PC2's memory. You should dump all user-defined programs, setups, and effects to an external memory source (like a computer sequencer) before updating your software. Otherwise, they'll be lost.

See the programming chapter in your *PC2 Musician's Guide* for information about dumping programs and other objects.

### **Preparing Your Sequencer**

You'll need either a standalone sequencer, or a personal computer with a MIDI interface and sequencing software.

1. Connect a MIDI cable from your sequencer's or computer's MIDI Out port to the PC2's MIDI In port.
2. Launch the sequencer application.

### **Launching the PC2's Boot Block**

You'll need to run the boot block for any software updates you make (including updating the boot block itself).

1. If the PC2 is on, turn it off.
2. Turn the PC2 on, and watch the display.
3. When you see **Please wait...**, press and release the **Panic** button (for keyboard models) or the **Edit/Store** button (for rack-mount models). After a few seconds, you'll see **Main Menu** in the top line of the display, and **Install engine** in the bottom line. This is the boot block.

4. Follow the instructions in one or more of the following subsections, depending on which software components need updating.

#### Updating Boot Block Software

1. When the boot block has finished launching, press the **Right** cursor button until you see **Update boot block** in the bottom line of the display.
2. Press **Yes**. The display changes to **Update boot block via MIDI**.
3. Press **Yes** again. The display changes to **Waiting for MIDI**.
4. Insert the PC2 CD into the CD-ROM drive of your sequencer or computer.
5. Using the sequencer or computer, find and open the appropriate MIDI file for your PC2. (The "readme" document on the PC2 CD explains how the CD files are organized.) Look for files whose names start with **PC2B.....** The **B** stands for "boot block." The **B** is followed by either a **K** (keyboard), an **R** (rack-mount), or a **P** (PCX-1 polyphony expansion board, for both keyboard and rack-mount models). The three digits following the **BK**, **BR**, or **BP** indicate the version number. For example, a filename of **pc2bk200.mid** indicates Version 2.0 of the boot block software for keyboard models.
6. Play the MIDI file. The top line of the display shows **SYS3-0 file 1 of 1**, and the bottom line shows **segment 1 of 1**. When the file finishes loading, the PC2 will restart and return to a performance mode.
7. If your instrument does *not* contain the PCX-1 Polyphony Expansion option, proceed to Step 8. If it *does* contain the PCX-1 option, you need to update its boot block software as well. Repeat the procedure for launching the boot block (the instructions are in the previous subsection), then install the file **pc2bpnnn.mid**, following Steps 1 through 6 above. When you're finished, proceed to Step 8 below.

8. Turn off the PC2, then turn it back on. When you see **Please Wait...** in the display, press and release the **Panic** button (for keyboard models) or the **Edit/Store** button (for rack-mount models). This launches the new boot block. You should see the new version number as the boot block launches.
9. Follow the instructions in the following subsection, depending on which software components need updating. We recommend updating to the most recent versions of both the operating system software and the soundware data. However, if you *don't* need to update any more software components, proceed to *Doing a Hard Reset* (page 30).

#### Updating Operating System Software & Soundware Objects

The operating system software, together with the soundware data, are part of the PC2 sound engine. You'll use the **Install engine** (sound engine) option to install both the operating system software and the soundware.

1. If the boot block is not already running, launch it as described on page 27.
2. When the boot block has finished launching, press **Yes** (this selects the **Install engine** option, which is the first option in the boot block menu). The display changes to **Install engine via MIDI**.
3. Press **Yes** again. The display changes to **Waiting for MIDI**.
4. If necessary, insert the PC2 CD into the sequencer's or computer's CD-ROM drive.
5. Using the sequencer or computer, find and open the appropriate MIDI file for your PC2. Look for files whose names start with **pc2...** (for 76-note keyboards), **pc2x...** (for 88-note keyboards), **pc2r...** (for "rack-mount operating system"), or **pc2p...** (for any PC2 with the PCX-1 Polyphony Expansion option). The three digits after **orch** or **gm** indicate the version number.
6. Play the MIDI file. The top line of the display shows **SYS3-0 file 1 of 1**, and the bottom line

shows **segment 1 of x**. When the display shows **Done**, stop the sequencer if it doesn't stop automatically. As soon as you see **Done**, you can go on to the next step.

7. If your instrument does *not* contain the PCX-1 option, proceed to Step 8. If it *does* contain the PCX-1 option, you need to update its operating system software as well. Repeat Steps 4 through 6 above, but this time install the file **pc2pmmn.mid**. When you're finished, proceed to Step 8.
8. Follow the instructions in the next subsection if you need to update soundware data. If you don't need to update soundware, proceed to *Doing a Hard Reset* (page 30).

#### **Doing a Hard Reset**

This procedure assumes that you're in the boot block menu. If you aren't, relaunch the boot block (see page 27 if you need a reminder), then proceed.

1. Press the **Left** or **Right** cursor button until you see **Hard RESET** in the bottom line of the display.
2. Press **Yes**. The display prompts you with a question: **Erase RAM objects?**
3. Press the **Right** cursor button. This performs the hard reset and returns you to the boot block menu.
4. Follow the instructions in *Returning to Normal Operations From the Boot Block Menu* below.

#### **Returning to Normal Operations From the Boot Block Menu**

1. Press the **Left** or **Right** cursor button until you see **Run engine** in the bottom line of the display.
2. Press **Yes**. After a few seconds, you'll be back in a performance mode. You're now ready to verify the software installation.

### **Verifying the Software Installation**

This procedure assumes that you've properly installed the hardware portion of the PCR-1 option, verified the installation (as described on page 16 for keyboard models or page 25 for rack-mount models), executed a hard reset, and returned to a performance mode.

1. Press the **Global** button to enter the menu of global parameters.
2. Press the **Right** cursor button repeatedly until you see the parameter named OS Version. The version number in the display should match the version number in the name of the operating system file you installed (the version must be 3.0 or later for the PCR-1 option to work; 4.0 or later for the PCR-2 option).

See the troubleshooting section below if any of the steps in the verification procedure gave you the wrong result.

### **Troubleshooting for Software Updates**

You're not likely to have problems updating your software. In fact, there are very few things that can go wrong:

#### **Display is Stuck at Waiting for MIDI**

The MIDI signal isn't getting to the PC2. Make sure that the computer or sequencer's MIDI Out is connected to the PC2's MIDI In. Make sure the cable isn't defective. Try another cable if necessary.

#### **Display Never Shows Done**

It's possible that the PC2 isn't receiving all of the MIDI file data. Try playing the MIDI file at a slower tempo.

It's also possible that there's an issue with your MIDI interface. Installing the latest version of your interface's USB driver (available from the interface's manufacturer) may help. You might also try a different MIDI interface.

#### **Version in Display Doesn't Match Version of File**

This applies to operating system software, basic soundware objects, and program/setup files. If the version number you

see in the display doesn't match the version number on the file you installed, the file didn't get installed properly.

Try installing the file again. Watch the display carefully to make sure the instrument is receiving data from the sequencer. make sure that you see **Done** in the display before stopping the playback of the file.

If you downloaded or copied any of the files, one or more of them may be corrupted. Try downloading the files again. The address for the Kurzweil website is on page ii.

If you're still having problems, consult a Kurzweil dealer or service center.

## Loading PCR-1 Files Into RAM

The set of programs you're going to use most—Orchestral or GM—is the set you should install in ROM. That way the programs/setups will always be available, even if you do a hard reset.

Whichever set you decide to install in ROM, you can still have access to the other set of programs, by loading them into RAM. This set of programs stays in RAM until you load something else into RAM or do a hard reset.



**Caution:** Loading files into RAM replaces some or all of the objects already stored there. When you load the GM set into RAM, it replaces all the programs in the User bank. When you load the Orchestral set, it replaces all the programs in the User bank, as well as Setups **001–032** in the User bank. If you don't want to lose these programs and setups, you should dump (save) them before loading. See your instrument's User's Guide for instructions.

1. Connect a MIDI cable from the MIDI Out of your computer or sequencer to the MIDI In of the PC2.
2. Insert the PC2 CD into the CD-ROM drive of your computer or sequencer.
3. Launch your sequencer application if necessary.

4. Save (dump) any programs in the User bank that you want to keep, because they'll be erased when you load the MIDI file (this also applies to Setups **001–032** in the User bank if you load the **Orchestral** program set).
5. Open the MIDI file that you want to load in RAM. The **Orchestral** file's name is **ORCHRAM.mid**, and the **GM** file's name is **GMRAM.mid**. Please note that these are not the same files as the ROM versions.
6. Play the MIDI file. The file's contents automatically get loaded in RAM. The LED in the **MIDI Recv** button lights to indicate the data flow.
7. Turn your instrument off, then on again (or do a *soft* reset; *don't* do a hard reset). Always do this when you load one of these files into RAM. This enables the instrument to reinitialize with the proper sound and program information.



**Note:** If your instrument has the **PCX-1 Polyphony Expansion Option**, the initialization described in Step 7 takes several seconds. The **PC2** s display indicates the progress of the initialization.



## Finding the Right Files

This section will help you find the correct files to install in your instrument. There's a subsection for each of the software installations you may be doing: boot block, operating system, basic soundware objects, and program / setup files.

### Boot Block Files

Find your instrument's configuration in the first column, then look in the second column for the file(s) corresponding to that configuration. If you have the PCX-1 Polyphony Expansion option, you need to install *two* boot block files, one for the main sound engine, one for the expansion board.

On the PC2 CD, the boot block files are in the folder (directory) called **boot\_blk**, which is in the folder called **flashrom**.

Your Instrument Configuration	File(s) to Install	✓
PC2 or PC2X (keyboard model) without PCX-1	pc2bknnn.mid	
PC2R (rack-mount model) without PCX-1	pc2brnnn.mid	
PC2 or PC2X with PCX-1	pc2bknnn.mid and pc2bpnnn.mid	
PC2R with PCX-1	pc2brnnn.mid and pc2bpnnn.mid	

## System Files

Find your instrument's configuration in the first column, then look in the second column for the file(s) corresponding to that configuration. If you have the PCX-1 option, you need to install *two* system files.

These files are in the folder called **sysfiles**, which is in the folder called **flashrom** on the PC2 CD. There are two sets of program/setup files: **Orchestral** and **General MIDI**. Choose one of these to install in the main sound engine's ROM. If you have the PCX-1 option, install the same type of file (Orchestral or GM) into the expansion board's ROM. For example, if you install the Orchestral programs/setups in the main sound engine's ROM, you must install the Orchestral programs/setups in the expansion board's ROM. If you wanted to, you could then load the General MIDI 1 programs into the main sound engine's RAM and the expansion board's RAM.

Your Instrument Configuration	File to Load in RAM	✓
PC2X without PCX-1 Orchestral programs if you have PCR-1	pc2xorch400.mid	
PC2 without PCX-1 Orchestral programs if you have PCR-1	pc2orch400.mid	
PC2R without PCX-1 Orchestral programs if you have PCR-1	pc2rorch400.mid	
PC2X without PCX-1 GM programs if you have PCR-1	pc2xgm400.mid	
PC2 without PCX-1 GM programs if you have PCR-1	pc2gm400.mid	
PC2R without PCX-1 GM programs if you have PCR-1	pc2rgm400.mid	
PC2X with PCX-1 Orchestral programs if you have PCR-1	pc2xorch400.mid and pc2porch400.mid	
PC2 with PCX-1 Orchestral programs if you have PCR-1	pc2orch400.mid and pc2porch400.mid	
PC2R with PCX-1 Orchestral programs if you have PCR-1	pc2rorch400.mid and pc2porch400.mid	
PC2X with PCX-1 GM programs if you have PCR-1	pc2xgm400.mid and pc2pgm400.mid	
PC2 with PCX-1 GM programs if you have PCR-1	pc2gm400.mid and pc2pgm400.mid	
PC2R with PCX-1 GM programs if you have PCR-1	pc2rgm400.mid and pc2pgm400.mid	

### Program/Setup Files for Loading in RAM

Find your instrument's configuration in the first column, then look in the second column for the file(s) corresponding to that configuration. Even if you have the PCX-1 option, you need to load only *one* program/setup file; the PC2 automatically copies data from the main sound engine to the expansion board's RAM when you turn on your instrument.

On the PC2 CD, the RAM program/setup files are in the folder called **pcr1\_orc** or **pcr1\_gm**, which is in the folder called **ram**.

Your Instrument Configuration	File to Load in RAM	✓
Any PC2 with or without PCX-1, with Orchestral programs/setups in ROM	GMRAM.MID	
Any PC2 with or without PCX-1, GM programs in ROM	ORCHRAM.MID	