

Operating Manual

8200 PC

For Remote Control of OPTIMOD-FM 8200

Software V3.01

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1525 ALVARADO STREET, SAN LEANDRO, CA 94577 USA
Phone: (1) 510/351-3500; Fax: (1) 510/351-0500; E-Mail: custserv@orban.com; Site: www.orban.com

Important 8200 PC Manual Update

The 8200 PC Operating Manual for Software V3.01 supercedes the 8200PC section contained within the 8200 Operation Manual. If you intend to use 8200 PC Remote Control of OPTIMOD-FM 8200, we strongly suggest you update your manual as described below. In any case, it is imperative to follow V3.01 instructions when installing V3.01 or higher software and not any older documentation.

To update your 8200 Operation Manual:

1. Locate the 8200PC section at the back of the 8200 Operating Manual and remove all the pages of this section, including the '8200PC' purple tab page.
2. Insert the new 8200 PC Operating Manual, including the new '8200 PC' purple tab, into the back of your 8200 Operating Manual.

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8200 PC

Operating Manual

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Section 1

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How to Use This Manual

Quick Installation Versus Complete Installation

This manual provides Quick Installation (located on the facing page) and a complete detailed Installation (Section 2). If you are unsure which to use, we recommend you go to page 2-2 and follow the complete Installation steps. Otherwise, if you do use the Quick Installation and a problem occurs (e.g., an unsuccessful 8200 PC connection to OPTIMOD-FM 8200), refer to Section 2. If necessary, repeat all steps using complete Installation. For further help, refer to “Section 4: Troubleshooting.”

Manual Documentation and 8200 PC Remote On-Screen Help

Much of the operation information provided in Section 3 of this manual is also provided directly in 8200 PC, via its Help menu. This means that when you need information on 8200 PC's menus, commands and buttons, you don't have to consult the manual. For quick on-screen Help, simply select Help: Contents or click on the Help button — this button is identified by a yellow question mark — and choose topics from the “OPTIMOD Application Help” dialog box.

Quick Installation

If you are familiar with OPTIMOD-FM 8200 and Windows™, Quick Installation is all you should need to get 8200 PC Remote Software installed and running. Refer to Section 2 for complete Installation steps.

1. Check hardware requirements.

- Orban OPTIMOD-FM 8200 Digital Audio Processor (running OPTIMOD-FM 8200 firmware Version V3.0 or higher — check front panel SYSTEM SETUP screen).
Important: If your OPTIMOD-FM 8200 unit is not running Software Version 3.0 or higher, you must install a new software module to support 8200 PC. (Refer to the Installation Instructions provided with 8200 upgrade kit.)
- 8200 PC Remote Software 3 ½" diskettes (shipped with this manual).
- Pentium, 80486, or compatible computer; with at least 16MB or more of on-board memory (32MB recommended).
- Color VGA display, or better.
- Windows 95 or 98.
- For modem connections of 8200 to computer: two Hayes- or US Robotics-compatible modems; V.42 error correction.
- Correct cabling for computer-to-8200 direct connection or computer-to-modem/modem-to-8200 connection. (See step 2, below.)

2. Complete hardware connections: direct connection of computer to 8200 or modem connection of computer to 8200.

Note: Refer to Appendix 1 for cable wiring diagrams.

For direct connection of computer to 8200: Use a null modem cable (sometimes called a “reverse” cable), DB9 male at 8200 end, as required at computer end. A regular computer-to-modem cable will not work. Make cable connections at the computer’s COM Port and the 8200’s rear panel RS-232 interface.

For modem connection of computer to 8200: Use two Hayes- or US Robotics-compatible modems (with V.42 error correction), one at computer, one at 8200. Use computer-to-modem serial cables, DB9 male at 8200 end, as required at modem interfaces and computer end. Make one connection from the computer’s COM Port to a modem’s RS-232 interface, and one cable connection from another modem to the 8200’s rear panel RS-232 interface.

3. Install 8200 PC Remote Software on your computer.

[The following steps can be replaced with the Windows Control Panel method; use Add/Remove Program and follow the instructions throughout.]

- a) Insert the OPTIMOD 8200 PC Remote Software disk 1 in your floppy drive.
- b) With Windows 95 or 98 running, choose Run from the Start menu.
- c) Enter the path to launch 8200 PC Remote installation (usually A:\Setup.exe).
- d) Click on OK to begin installation, and follow the installation instructions.

8200 PC Remote Software is loaded into the Orban\8200PC directory and an OPTIMOD 8200 PC Remote icon is created on the desktop.

4. Configure 8200 PC Remote Software for a particular OPTIMOD.

Open 8200 PC from Windows by double-clicking on the OPTIMOD 8200 PC Remote icon, then choose Manage: Settings, and select the connection you want to edit in the “Edit Settings” dialog box.

Make sure passcodes entered in the 8200 PC “Edit Settings” dialog box match passcodes previously set on the 8200 front panel (using SET PASCODE). The passcode field can be left blank; in this case, the user will be prompted for a valid passcode when connecting to 8200 PC.

Note: 8200 PC does not work with 8200s that do not have passcodes entered. If necessary, enter passcodes into the 8200 from its front panel.

Help is always available from the 8200 PC Remote main window. Simply click on the Help button — this button is identified by a yellow question mark — and choose topics from the “OPTIMOD Application Help” dialog box.

5. Connect 8200 PC to an OPTIMOD.

- a) Select Manage: Connect command or click on the Connect button — this button is identifiable by a small blue-screened OPTIMOD ready to connect to a white box (representing the remote computer).

This opens the “Select OPTIMOD” dialog box.

- b) Choose an OPTIMOD from the “Select OPTIMOD” dialog box, and click OK.

6. Experiment with 8200 PC.

To recall a preset, click on Recall button and choose a preset.

To view controls, click on View Knobs button.

To toggle between control views, click on Less-More or Full Control button.

To modify a control, click on a control name, then click on its left/right arrows to adjust the control.

To save a setting, click on Save button, then choose a user preset to save the preset and its settings to.

Introduction

8200 PC Software provides broadcasters with the ultimate OPTIMOD-FM tool — full control of a station's processing from any location. Make adjustments to any 8200 preset remotely. Or do most anything else that can be done from the 8200's front panel software controls.

8200 PC displays all of the 8200's meters and preset processing controls on the computer screen to aid remote adjustment.

8200 PC can run on Pentium, 486, or compatible computer systems using VGA color or better displays and running Windows 95 or 98; the computer system must control a Hayes- or US Robotics-compatible modem, or establish a direct connection between the computer and the 8200 through their RS-232 serial ports.

Applications

Changing the Listening Environment

Many OPTIMODs are located at the transmitter to maximize loudness and sound quality. However, transmitter sites usually are an inadequate environment for making critical listening decisions because they are notoriously noisy. This is one reason why OPTIMODs are often located at the studio. With 8200 PC, and its immediate access to the 8200's controls, stations can listen and make changes to broadcast material from their studio, their home, or anywhere else conducive to making critical listening decisions, while leaving OPTIMOD 8200 at the transmitter.

Group Stations — Stations with Multiple OPTIMODs

8200 PC provides program directors and program managers (or anyone else with authority and security clearance to 8200) with a tool to make comprehensive changes across the entire group. Using 8200 PC's Backup feature, a program director who creates the perfect processing and automation programming for one station format, can now copy it, and then load it to as many other stations in the group as desired.

Making 8200s Located at the Transmitter More Accessible

Transmitter sites are often far away from the studio, or even inaccessible. With OPTIMOD-FM 8200 located at the transmitter site, a station may be restricted when it wants to make changes to the OPTIMOD. Is anyone at the transmitter site? How long does it take to get to the site? 8200 PC relocates the 8200's controls, placing them wherever a computer has access to a phone line. Processing heard over the air can be modified or replaced quickly and easily, without returning to where the 8200 is located.

New Installations — 8200 PC, an Impetus to Install OPTIMOD at the Transmitter

New stations must weigh different factors when deciding what type of STL setup to install. For example, they may decide to use a composite baseband microwave STL (studio-to-transmitter link) because it places OPTIMOD at the studio, keeping its controls accessible while providing an environment conducive to making critical listening decisions. Or, they may prefer an STL that carries left and right audio directly, because it places OPTIMOD at the transmitter. From this location, OPTIMOD can better maximize loudness, sound quality and separation.

The trade-offs presented by different types of STLs can be re-evaluated when 8200 PC is included in a station's installation plans. For example, 8200 PC allows stations to maintain some of the benefits associated with composite baseband technology, such as accessibility to OPTIMOD controls, while placing OPTIMOD at the transmitter. Using STLs that carry left and right audio directly no longer has to be a trade-off. With 8200 PC installed at the studio and OPTIMOD installed at the transmitter, 8200 control can be maintained and sound can be improved.

Features

- **Intuitive and Logical Controls:** The software operates similar to an 8200, but is designed to be easy-to-use for anyone with a basic knowledge of Microsoft Windows™. Changes can now be accomplished using a mouse, or via the computer's keyboard.
- **Archiving:** Backup saves the entire contents of an 8200's settings — an entire catalog of presets including their processing settings, Automation, I/O Calibration settings, and Remote Interface settings — for future restoring. Settings can be copied to other 8200 units. Presets can be copied as a complete set or individually.
- **Real-time adjustment of processing and test presets, automation, and setup controls (I/O Calibration, Remote Interface)** are made on the computer and update the 8200 immediately.
- **User-configurable OPTIMOD Directory:** 8200 PC software keeps a list of OPTIMODs that can be accessed and controlled at any time. There is no limit to the number of OPTIMODs, and the list can include OPTIMODs located at different sites, as well as the same OPTIMOD repeated for different users (with different passcodes and security levels). Each OPTIMOD entered in the list can be configured with its own OPTIMOD name, user/station name, modem settings and passcode.
- **Security Maintenance:** 8200 PC software observes the passcode security of the 8200, offering the user only those features that their passcode is authorized for. Those features unavailable to that passcode are “grayed out” in the menus and buttons. Passcode settings entered into the 8200 (with the 8200's front panel SET PASCODE command) are used to determine access via the PC software.
- **Sophisticated Control Graphics:** 8200 PC software provides a larger view of all the OPTIMOD's meters and controls — limited only by the size of the monitor and type of graphics card in use. All the meters for the current preset are visible at the same time on 8200 PC's main window. Additionally, all the controls for a given preset can be accessed to appear on the computer screen concurrently.
- **Color-Highlighted Status Information:** 8200 PC software uses color to highlight the status of a preset. For example, when a processing preset is gated, “GATED” is shown in red; when a processing control is changed, “MODIFIED” is shown to the right of the control in red.

Help

From the 8200 PC window, select Help: Contents or click on the Help button — this button is identified by a yellow question mark — and choose topics from the “OPTIMOD Application Help” dialog box.

Maintaining System Security

Maintaining Security from a PC Computer

8200 PC can be configured to not store OPTIMOD passcode information on the computer. Simply leave the Passcode field blank (in 8200 PC's Manage: Settings "Edit Settings" dialog box) when configuring 8200 PC for each OPTIMOD. This ensures that all users will be prompted for a valid passcode when trying to connect, and that they will have access to the functions for which their passcode was assigned (using 8200's front panel SET PASCODE). Note that even if you do insert a passcode in the Passcode field, they are never visible in the "Edit Settings" dialog box.

Important: *The security of your station's processing may be threatened if it is not standard policy for each 8200 PC user to disconnect from the OPTIMOD when finished with 8200 PC operation.*

The last successful 8200 PC connection defines the current security level. Until 8200 PC is disconnected, subsequent PC users with a lower security level than the last connected user will have access to more functions than they should.

Therefore, we recommend that each PC user disconnect from the OPTIMOD when finished with normal operation. Disconnecting from 8200 PC ensures that each subsequent user is allowed access to the functions for which their passcode was assigned.

To disconnect from 8200 PC:

- a) Click on the Disconnect button, or select the Manage: Disconnect command from the 8200 PC window. Respond to the prompt — "Are you sure you want to disconnect?" — by clicking on OK.

The Disconnect button is identifiable by a small blue-screened OPTIMOD connected to a white box (representing the remote computer).

OPTIMOD-FM 8200's Front Panel Lockout Feature

Important: Although 8200 PC enables and maintains 8200 front panel lockout, the security of your station's program processing may be threatened if it is not standard policy for each user to manually re-enable lockout when finished with local 8200 front panel operation.

The 8200 PC Connect command automatically enables OPTIMOD-FM 8200's front panel lockout feature. Lockout is maintained when 8200 PC is disconnected via 8200 PC's Disconnect command.

However, if 8200 PC control has been disabled from the front panel — by entering a valid passcode — the last successful passcode entry at the front panel defines the current security level. Until lockout is re-enabled, subsequent local

users with a lower security level than the last user will have access to more front panel functions than they should.

Therefore, we recommend that each user re-enable lockout mode when finished with normal front panel operation. Re-enabling lockout ensures that each user must enter a passcode to access the functions for which their passcode was assigned.

To re-enable lockout from the 8200 front panel, complete the following steps:

- a) If the IDLE G/R screen does not appear, press ESC repeatedly until you see it.
- b) Hold down the *ESC* button, then press the *HELP* button.

Note: Using 8200 PC to connect to or disconnect from OPTIMOD-FM 8200 will also re-enable lockout.

More Security Tips

In general, the following will help you maintain system security:

- Assign passcodes using OPTIMOD's front panel SET PASCODE, before you enter passcodes in 8200 PC's Manage: Settings "Edit Settings" dialog box.
- Use multiple passcodes, so that different users have different levels of access, as necessary.
- Use passcodes that are not obvious. For example, don't use birth dates, social security numbers, license plate numbers, etc.
- Set AUTO LOCK to 00:10.

When setting passcodes in the SET PASCODE screen (from the front panel of the 8200), set TIMEOUT TO AUTO LOCK, HRS:MINS to 00.10.

Timeout automatically locks the system when it is left unattended for the period of time set by this control. We strongly recommend that you set timeout to a reasonable time, so that if it is left unattended, it will enter Lockout mode.

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Section 2

Installation

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Complete Installation

These instructions will guide you through the hardware and software installation steps to implement 8200 PC.

Before You Begin . . .

You should have a general understanding of OPTIMOD-FM 8200 and know how to use Microsoft Windows.

We recommend that you read the installation instructions in full before proceeding. Once you begin the installation, make sure all steps are completed and done in order.

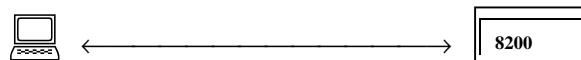
1. Check Hardware Requirements.

You will need the following:

- Orban OPTIMOD-FM 8200 Digital Audio Processor (running Software Version V3.0 or higher)

To check the version number of the software running on your 8200:

- a) If the IDLE G/R screen does not appear, press ESC repeatedly until you see it.
 - b) Press SYSTEM SETUP button, and check the second line of text: "SOFTWARE VERSION V3.00."
 - c) If the software is not V3.0 or higher, you must install a V3.0 or higher software module, before continuing. (Refer to the Installation Instructions provided with 8200 upgrade kit; V3.0 firmware documentation is also available online at Orban's website, www.orban.com.)
- 8200 PC Software 3 1/2" diskettes (shipped with this manual)
 - Pentium, 80486, or compatible computer
 - Null modem cable (if connecting computer directly to 8200)



(Refer to Appendix 1 for null modem cable schematic.)

- 2 Hayes- or US Robotics-compatible modems and 2 computer-to-modem serial cables (if connecting computer to 8200 via modem)



(Phone Line)

2. Check System Requirements.

Your computer, system software, and modem (if used) must meet the following minimum requirements to run 8200 PC Remote Software. This software will work best with the recommended requirements.

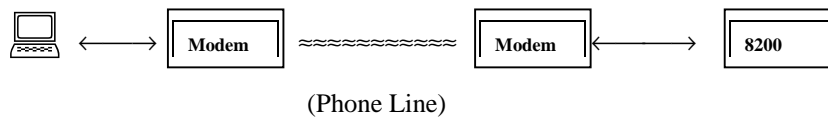
<i>Component</i>	<i>Recommended</i>	<i>Minimum</i>
Computer	Pentium	486 or compatible
Disk Space	2MB for 8200 PC Software, plus enough space for .FMB backup files.	2MB
RAM (Random-Access-Memory)	32MB	16MB
Display	VGA Color, or better	VGA Color
Microsoft Windows™	Windows 95	Windows 95
Modems¹ (optional)	Hayes- or US Robotics-compatible	Hayes- or US Robotics-compatible
Error Correction:	V.42	V.42

3. Complete Hardware Connections.

There are two serial ports on the 8200 (RS-232 and RS-242). For 8200 PC operation, use the one that complies with the RS-232 standard. You can connect this port to most modems designed to interface with an IBM PC or compatible using a computer-to-modem serial cable. You can also establish connection between the 8200 and an IBM PC or compatible by connecting the computer's COM port to the 8200's RS-232 port through a null modem ("reverse") cable. (The other serial port on the 8200 complies with the RS-422 standard.)

A) Complete modem connection of computer to 8200.

[Skip this step if you are connecting your 8200 directly to a computer.]



¹ Refer to Appendix 2 for a list of modems tested by Orban.

- a) Verify your computer is connected to a Hayes- or US Robotics-compatible internal or external modem.

If a modem is not installed, refer to your modem and computer manuals for correct installation instructions. Follow all instructions, accordingly. You will need to connect one end of a computer-to-modem serial cable to an open COM Port on your computer and the other end of the cable to the modem's RS-232 interface. For this connection, do not use a null modem ("reverse") cable.

Refer to Appendix 2 for a listing of Hayes- and US Robotics-compatible modems that have been tested for use with 8200 PC and OPTIMOD 8200.

- b) Connect OPTIMOD-FM 8200 to a Hayes- or US Robotics-compatible modem.

[Skip this step if you are connecting your 8200 directly to an IBM PC or compatible computer.]

Connect one end of a computer-to-modem serial cable to the modem's RS-232 interface and the other end of the cable to the RS-232 interface on the rear panel of the 8200. (The 8200 RS-232 interface is a DB9 male connector labeled "RS-232.") For this connection, do not use a null modem ("reverse") cable.

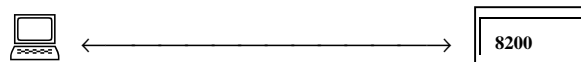
Additional 8200s can be connected to other modems, using the same steps. This includes modems connected directly to other computers accessible over the network.

Continue to step 4.

- B) Connect the 8200 directly to an IBM PC or compatible computer.

[Skip this step if you are connecting your 8200 to a modem.]

- a) Using a null modem cable (also called a reverse cable or crossover cable), connect the RS-232 connector on the rear panel of the 8200 to a COM port on your computer. (The 8200 RS-232 interface is a DB9 male connector.)



(Refer to Appendix 1 for null modem cable wiring diagram.)

4. Install 8200 PC Remote Software on Your Computer.²

Note: 8200 PC remote can be operated while other Windows are open. However, we recommend you have no other Windows applications running while performing software installation.

- A) Make a backup copy of the original 8200 PC diskettes.

Use Windows Explorer (using Edit Copy and Paste commands).

- B) Insert the 8200 PC backup disk 1 in the appropriate floppy disk drive.

- C) With Windows 95 or 98 running, select the Run command from the Start menu.

² Refer to Microsoft Windows User's guide for specific Windows information.

D) Enter the following in the “Open” field:

[drive]:\SETUP.EXE

where [drive] is replaced with the letter of the floppy disk drive containing the 8200 PC disk.

E) Click on OK to begin installation program.

F) Follow the instructions in each “Install” dialog box.

a) Verify Directory for 8200 PC files. Click on Continue.

Unless you specify otherwise, the install program creates the directory C:\Orban\8200PC on your hard drive.

b) Relax for a moment, while Install quickly copies 8200 PC program files to your hard drive.

The following files will be copied to your hard drive:

8200 PC.EXE 8200PC.HLP UNINST.ISU

Once the files have been copied, the next dialog box will pop up and ask you to press Finish.

c) Click on OK when the “Installation Complete” message appears.

5. Configure 8200 PC Software for a Particular OPTIMOD.

A) Double-click on the OPTIMOD 8200 PC Remote icon from the Windows desktop.

The 8200 PC window opens.

B) From 8200 PC, select Manage: Settings.

This accesses the “Edit Settings” dialog box.

C) From “Edit Settings” dialog box, configure the 8200 PC software for an OPTIMOD 8200.

Edit settings in order, as presented below.

Press the keyboard's *Tab* key to toggle to each field and list, or use the mouse. Use the computer's keyboard to type text in entry fields; use the keyboard's arrow keys or the mouse to make selections in button lists.

Facility Name: Type in the facility's name.

This is your name for the computer. It could be “Master Control,” “Jeffrey's Portable,” etc. This name will appear on the 8200 PC main window title bar when the software is running and on the 8200 front panel (PC ONLINE: [Facility Name]) when 8200 PC is connected to the 8200.

Note that changing the Facility Name for one OPTIMOD, changes the Facility Name for all OPTIMODs.

OPTIMOD Name: Type in a name to identify a specific OPTIMOD unit. Example: “WXYZ OPTIMOD 1.”

The OPTIMOD Name entry updates the OPTIMOD List in both the “Select OPTIMOD” and “Edit Settings” dialog boxes:

The OPTIMOD list occupies the left side of the “Edit Settings” dialog box. Selecting a “named OPTIMOD” in the OPTIMOD list allows you to configure the OPTIMOD's settings (i.e., its Name, Phone Number, Passcode, Port, Connection, etc.). To create new OPTIMOD entries, click on **New** and change the default name — “My OPTIMOD” — as desired.

The “Select OPTIMOD” box appears whenever a user attempts to connect 8200 PC to an OPTIMOD-FM 8200; this box provides a directory of all previously-configured OPTIMODs. (Refer to step 6.)

When an OPTIMOD is successfully connected to 8200 PC, its OPTIMOD Name will also appear on the 8200 PC's main window status bar.

8200 PC allows for managing an unlimited number of OPTIMODs. If configuring multiple OPTIMODs, make sure each time a new OPTIMOD is entered, other parameters (e.g., passcode, phone number, etc.) are reset as well.

Comm Port [1, 2, 3 or 4]: Enter the number of the communication port that you will use to communicate with the 8200.

For direct connections, this is the computer port the OPTIMOD 8200 is connected to. For modem connections, this is the computer port that an external or internal modem is connected to.

Passcode: Type in a 1 to 8 digit passcode (all numbers between 0 and 9 are valid) or you can leave this field blank (see note directly below).

Note: If the Passcode entry field is left blank, users will be prompted for a valid passcode when trying to connect 8200 PC to an OPTIMOD-FM 8200.

If an invalid passcode is entered in this field, 8200 PC access will be denied when attempting to connect. (Valid passcodes are passcodes previously set on 8200's front panel SET PASCODE screen);

For successful connections:

The OPTIMOD 8200 must have passcodes. 8200 PC cannot connect to 8200s that cannot be locked out (i.e., 8200s that do not have passcodes). If necessary, set 8200 at this time with passcodes using its front panel SET PASCODE controls;

and

Passcodes entered in the 8200 PC “Edit Settings” dialog box must match passcodes set on the 8200 front panel (using SET PASCODE).

See “More Security Tips,” for suggestions concerning passcode selection.

Connection [Direct, Modem]: Choose Direct if the computer is connected directly to the 8200. Choose Modem if the computer will communicate with the 8200 via modem.

Phone Number: [This field is only available for Modem connections.] Enter the phone number associated with this 8200.

Valid dial modifiers are listed below: These tell the modem what, when and how to dial.

<u>Valid Dial Modifiers:</u>	<u>Description:</u>
0-9 * #	Numbers and symbols the modem uses when dialing.
,	Pauses before continuing the dialing string.
\$	Waits for “bong” tone (for calling card number entry).
@	Waits for quiet answer.
!	Issues hookflash.
;	Returns to command state after dialing and maintains the connection.

Important: Do not use slashes, periods, brackets or letters of the alphabet.

D) Open “Advanced Modem Settings” dialog box and configure the modem settings.

[Skip this step if you are connecting your 8200 directly to a computer or if you intend to use 8200 PC's default modem settings.]

- a) Verify Modem button is selected in “Edit Settings” dialog box.
- b) From “Edit Settings” dialog box, click on Advanced.

This opens the “Advanced Modem Settings” dialog box.

Advanced: [This command is only available for Modem connections.] Pressing this command opens the “Advanced Modem Settings” dialog box. For most PCs, 8200 PC will operate properly if the “Advanced Modem Settings” are left at their default values. However, if connection problems persist, change these settings, as required.

Press the keyboard's *Tab* key to toggle to each field and list, or use the mouse. Use the computer's keyboard to type text in entry fields; use the mouse to click on selections in button lists.

Line Options: These options are always available from the “Advanced Modem Settings” dialog box.

Ignore Dial Tone: sets modem to ignore dial tone and begin dialing immediately, e.g. to override a dial tone signal that your modem cannot recognize.

Ignore Busy Signal: sets modem to ignore busy signal.

Wait For Carrier [50, 120, 180, 240 seconds]: sets how long the PC takes to timeout if it does not detect a modem carrier at the other end.

Dialing [Tone or Pulse]: sets modem for different types of telephone systems. Select **Tone** for touch-tone telephone systems. Select **Pulse** for rotary dial systems.

Modem Options: The “Modem Type” and “Init String Type” options are always available from the “Advanced Modem Settings” dialog box; when “Init String Type” is set to “Custom,” you can enter in a custom modem string in the “Modem Init String” field.

Modem Type [US Robotics, Hayes, or Other]: Set this field according to your modem type.

Init String Type [Default, Custom]: Choose **Default** to set modem to use default modem init string. Choose **Custom** to set modem to use customized modem init string (see below).

Modem Init String: [This field is only available if **Custom** is selected in the “Advanced Modem Settings” dialog box.] If your 8200 PC modem does not work with the factory default init string (i.e., it is not dialing out correctly), a new custom init string should be entered.

Before you enter in the new string for the modem connected to your PC, consider the following information.

Select LAPM error correction with no compression to ensure data integrity. Make sure V.42 is enabled.

Your modem must not be allowed to fall back to a communication protocol that doesn't support error correction. This must be avoided; set control on modem to hang up if it is unable to communicate at V.42 protocol. This is how the default string is set, so that it will work with a wide range of Hayes AT-set and S-register compatible modems.

If you are still having problems connecting, you may also want to consider using an init string that works with another modem.

c) Click on OK when you have completed the “Advanced Modem Settings” dialog box.

E) Configure additional OPTIMODs (optional).

[Skip this step if you are not configuring 8200 PC for more than one OPTIMOD at this time.]

To create new OPTIMOD entries, click on the **New** button, change the default name — “My OPTIMOD” — as desired, then configure 8200 PC for the OPTIMOD using the “Edit Settings” dialog box (refer to step 5-C and D).

F) Click on OK when you have completed the “Edit Settings” dialog box.

6. Connect 8200 PC to an OPTIMOD.

A) Open the “Select OPTIMOD” dialog box.

This can be accomplished in two different ways:

a) Select Manage: Connect command from the 8200 PC window,

or

b) Click on the Connect button. This button is identifiable by a small blue-screened OPTIMOD ready to connect to a white box (representing the remote computer).

B) From the “Select OPTIMOD” dialog box, select the OPTIMOD that you named and configured in step 5.

C) Click on OK.

Note: You may be prompted for a valid passcode (if Passcode field in “Edit Settings” dialog box was left blank. Simply enter a valid passcode at this time.

If the connection does not negotiate successfully, refer to the next step.

D) Troubleshoot unsuccessful connections.

[Skip this step if connection was successful.]

[Note: For unsuccessful 8200-to-computer modem connections: Verify 8200 and computer communication by reconnecting the 8200 directly to the computer (be sure to use a null modem or “reverse” cable) and then connecting to an OPTIMOD (be sure you change 8200 PC's “Edit Settings” Connection parameter to Direct).]

a) Check that all hardware and software steps were completed correctly (e.g., cables are fully connected, passcodes were valid, comm port is correct, etc.).

For direct 8200 to computer connections, make sure you are using a null modem (“reverse”) cable.

b) If your 8200 PC is not communicating correctly with the OPTIMOD, you may need to change the default modem init string. (Refer to step 5-D.)

c) If your OPTIMOD-FM 8200 does not answer, verify on the 8200 that the I/O CALIB MODEM INIT is set for the default string:

Use the 8200 front panel to access the I/O CALIB MODEM INIT screen, and press USE DEFAULT.

With the modem connected to the 8200 (modem plugged into the 8200's RS-232 connector), its AA light comes on within 10 seconds and stays on. If the AA light doesn't come on and/or the received data light (often labeled RD or RX) flashes at regular intervals, something is wrong with the init string.

In this case, open the I/O CALIB MODEM INIT screen, and reset the MODEM INIT string for the following parameters: recall factory preset, echo off, and auto-answer (Refer to the modem's manual).

- d) If the modem init string is set correctly, and 8200 PC and the OPTIMOD-FM 8200 still do not negotiate successfully, make sure the modem is set for V.42 operation only.

7. Experiment with 8200 PC.

After the software has established a connection and the presets have been loaded, the 8200 PC main window will display the meters for the current preset.

To recall a preset, select Recall button and choose a preset from the dialog box.

To view controls, select View Knobs button, or select Modify: View Knobs from the 8200 PC window. The single Less-More control or all the Full Control knobs appear in the center of the OPTIMOD-FM 8200 PC main window.

To toggle between control views, click on the Less-More or Full Control button.

To modify a control, click on a control name, then click on its left/right arrows to adjust the control (e.g., to decrease/increase a level, or toggle a switch off/on).

To save a setting, click on Save button, then choose a user preset destination (from “Save Preset” dialog box).

Most 8200 PC controls have more than one way of accessing features and adjusting parameters. For more information, refer to “Section 3: Operation.”

For quick on-screen Help, simply select Help: Contents or click on the Help button — this button is identified by a yellow question mark — and choose topics from the “OPTIMOD Application Help” dialog box.

Installation is Completed.

Re-Installing or Upgrading 8200 PC

Follow the “Quick Installation” or “Complete Installation” steps to re-install or upgrade 8200 PC software, except as noted directly below.

Retaining Manage: Settings Configuration

The SNGL8200.INI file, located in your 8200 PC directory, contains your 8200 PC’s Manage: Settings configuration, including your facility name, OPTIMOD list, etc. This file is created the first time you run 8200 PC software. If installing 8200 PC software to the same directory that was used with the old installation, your settings will be retained. However, if you install 8200 PC to a new directory, you will need to copy the SNGL8200.INI file (from the old 8200 PC directory) to the new 8200 PC directory to retain your old configuration. You can copy this file before or after installation.

Un-Installing 8200 PC

- A) From Windows, click on Start.
- B) Click on Settings.
- C) Click on Control Panel.
- D) Double-click on the “Add/Remove Programs” icon.
- E) Select “OPTIMOD 8200 PC REMOTE” from the list.
- F) Click on Add/Remove.
- G) Answer “Yes” to the “Confirm File Deletion” message.

Note: Any 8200 PC file you previously created will not be deleted. This includes the SNGL8200.INI configuration file and any .FMB files. You can delete these files manually, or retain them, as desired.

Section 3

Operation

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Operation

Before you start, you should have a general understanding of OPTIMOD-FM 8200 and know how to use Microsoft Windows. Consult the manuals for both 8200 and Windows, as necessary.

We recommend you read this section before you attempt to operate the 8200 via 8200 PC software controls.

This section will familiarize you with the operation of the components of the 8200 PC main window, as well as how the PC software interacts with the OPTIMOD-FM 8200 unit.

8200 PC Main Window

The 8200 PC main window is where you connect to an OPTIMOD 8200 and control it remotely. Everything you need for OPTIMOD remote control is either on the screen or a few mouse clicks away.

The 8200 PC main window consists of six sections: Title Bar, Menu Bar, Button Bar, Meters Window, Controls Section, and the Status Bar.

Title Bar

The Title Bar displays “OPTIMOD 8200 PC Remote,” followed by the facility name and OPTIMOD name (when connected), as entered in “Edit Settings” dialog box.

Menu Bar

The Menu Bar provides instant access to 6 drop down menus and their related submenu commands. The six menus are: File, Manage, Preset, Modify, Setup and Help. Each menu can have one or more submenu commands. For example, Manage menu has five submenus: Connect, Disconnect, Settings, Backup 8200, and Restore 8200.

Detailed descriptions of each menu and its submenu commands are provided below.

Submenus are listed in gray and black. Gray submenus are not currently available for selection; black submenus are available.

Some submenus execute as soon as you select them. Modify: View Knobs and Hide Knobs are examples of this type of submenu. Other command-type submenus prompt you to click on a button (e.g., to ok an action). Manage: Connect and Disconnect are examples of this type. Many submenus, however, require you to specify additional information before executing. Whenever you select a submenu of this type (indicated by three periods after the submenu name), a dialog box displays on the screen. Under the Manage menu, Settings... and Restore 8200... are examples of this type of submenu.

Button Bar

The Button Bar, located directly below the menu bar, features one row of buttons, each representing a submenu. These buttons provide quick access (with just one click of the mouse) to a few of the most used 8200 functions: Recall Preset, View/Hide Knobs, Less-More and Full Control switching, Compare presets, Save preset, Connect/Disconnect switch (shown as a graphical representation of the connection status) and Help (represented by a question mark).

To choose a button, just click the mouse on the desired button. Buttons that are not available during current operation will be “grayed out.” Note that some buttons are commands, while others open a dialog box, much like the button's equivalent submenu command.

Meters Window

The meters replicate the 8200's front panel meters. Meters appear in blue.

If the preset's processing is gated, the word “GATED” appears in red to the right of the AGC meter.

Modify Controls Window

The Modify Controls Window provides clearly labeled control knobs for quick and easy assessment and adjustment. The current active view (Less-More or Full Control) dictates the display. If Less-More is the current active view, only one knob will be shown. For Full Control view, the available parameters are the same as those available from the OPTIMOD's front panel controls. The Modify Controls Window will be empty if knobs are currently hidden, via Hide Knobs command.

Note that when 8200 PC is initially connected to an OPTIMOD, the Modify Controls Window is empty.

Using submenus or buttons, a user can toggle between a preset's Less-More control or its entire Full Control palette, or between hiding and viewing knobs. Control knobs can be modified with a mouse, or via the computer keyboard.

To modify a Full Control knob, its control name must first be highlighted. When Full Control view is initially selected, the control knob at the upper left corner of the Modify Controls Window is highlighted.

Selecting a Full Control knob: There are three ways to select a control knob:

- a) Use the keyboard's *Tab* key to toggle through the entire palette of Full Control knobs;

or

- b) Use the mouse to click on a control knob;

or

c) Use the keyboard's arrow keys

Use the left/right arrow keys to move through a row of control knobs (left-to-right or right-to-left).

Use the up/down arrow keys to move through a column of control knobs (upwards or downwards).

Note: If *Num Lock* is active on your keyboard, the “Num Locked” keypad will function differently: Up/down arrow keys will function as +/- keys (changing the value or on/off status of a control), and left/right arrow keys will be inoperative.

Modifying a Control: Modifications to the Less-More and Full Control processing controls can be made three different ways:

a) Use the mouse and the control's on-screen left/right arrow button.

Ranges: Click on left arrow to decrease values; click on right button to increase values.

ON/OFF switches (e.g., AGC ON/OFF): Click on left arrow to turn control off; click on right button to turn control on;

or

b) Use the mouse and the on-screen control knob.

Place the mouse pointer on a control, hold the mouse button down (for a Full Control knob, the control's name will highlight), move the mouse pointer up-screen to make the control increase a range value, or turn a control on, or move the mouse pointer downscreen to decrease a range value or turn a control off. Release the mouse button to end modification;

or

c) Use the keyboard's +/- keys or “Num Locked” up/down arrow keys.

Use minus (-) key to decrease a value in a range or toggle a switch off; use plus (+) key to increase a value in a range or toggle a switch on.

With the keyboard's *Num Lock* control active, up/down arrow keys will function as +/- keys. Use the down arrow key to decrease a value in a range or toggle a switch off; use up arrow key to increase a value in a range or toggle a switch on.

Whenever a control is modified, the word “modified” appears next to the control, in red. Whenever a value is returned to its original setting, “modified” disappears.

Status Bar

The Status Bar provides much of the information that appears in the top three lines of the 8200 front panel display: current date and time, current processing preset, a modified notification if the preset has been changed, and the OPTIMOD name (as assigned in the “Edit Settings” dialog box).

Using 8200 PC Software

Using Help

8200 PC offers extensive on-screen help that is always available and just a mouse click away. To access Help:

- A) Click on the Help button — this button is identified by a yellow question mark;
or

Press *F1* key on the keyboard;

or

Select the Help menu command from the 8200 PC window, then select the Help: Contents submenu command.

This opens the “OPTIMOD Application Help” dialog box.

- B) From the “OPTIMOD Application Help” dialog box, click on Search.

This opens the “Search” dialog box.

- C) Select a topic from the scrollbar list by clicking on it, or type in a topic in the entry field.

- D) Click on the Display button to access Help information on the selected topic.

Note: Help on a particular topic is also available from the “OPTIMOD Application Help” dialog box for any green-colored text. Simply click on the text for direct access to related Help information.

Working with Microsoft Windows 95 or 98

8200 PC software can be operated while other Windows are open. In fact, if you are working in another Windows program (e.g., a text program), and 8200 PC is in the background, 8200 PC software will continue to control the connected 8200.

8200 PC software will discontinue controlling an OPTIMOD-FM 8200 if:

- 8200 PC is disconnected (using Manage: Disconnect command or Disconnect button);
- the 8200 (or if applicable, the modem) are physically disconnected from the computer running 8200 PC software (e.g., the cable is disconnected);
- the computer running 8200 PC software is turned off.
- a pascode is entered on 8200 front panel.

Opening and Exiting 8200 PC

To open 8200 PC: from the Windows desktop, double-click on the OPTIMOD 8200 PC Remote icon.

To close 8200 PC: from the 8200 PC main window, select File: Exit.

If 8200 PC is currently connected, you will be prompted to disconnect. Click on OK to disconnect, or click on Cancel to keep 8200 PC open.

Connect 8200 PC to an OPTIMOD-FM 8200

A) Click on the Connect button;

or

Select the Manage: Connect command from the 8200 PC window.

The Connect button is identifiable by a small blue-screened OPTIMOD ready to connect to a white box (representing the remote computer). Clicking on this button opens the “Select OPTIMOD” dialog box.

Note: You can only connect to an OPTIMOD that has previously been initialized in “Edit Settings” dialog box. Also, if you are currently connected to an OPTIMOD, Connect will not be available; you must first disconnect (see below).

B) From the “Select OPTIMOD” dialog box, choose an OPTIMOD from the displayed list.

After the software has established a connection and the presets have been loaded, the 8200 PC main window will display the meters for the current preset.

If the passcode field is blank for the selected OPTIMOD, you will be prompted to enter a valid passcode at this time.

Disconnect 8200 PC from an OPTIMOD-FM 8200

A) Click on the Disconnect button;

or

Select the Manage: Disconnect command from the 8200 PC window.

The Disconnect button is identifiable by a small blue-screened OPTIMOD ready to disconnect from a white box (representing the remote computer).

B) Click on OK in response to the prompt: “Are you sure you want to disconnect?”

Backing Up OPTIMOD System Information (Presets, I/O CALIB, Automation Settings)

Backup stores all user settings for the online 8200 to a disk file for archival purposes. Using 8200 PC's Backup and Restore commands you can copy any or all settings from one 8200 and restore the settings to other 8200s.

- A) From the 8200 PC main window, select **Manage: Backup 8200**.

This opens the “Backup All Data To” dialog box.

- B) From the “Backup All Data To” dialog box, back up current system settings to a disk file.

Press the keyboard's *Tab* key to toggle to each field and list, or use the mouse. Use the computer's keyboard to type text in entry fields; use the keyboard's arrow keys or the mouse to make button selections.

Save In: lists the available folders and files. To see how the current folder fits in the hierarchy on your computer, click the down arrow. To see what's inside a folder, click on it.

Up One Level Icon: opens the folder one level above the active folder.

Create New Folder Icon: creates a new folder.

List Icon: shows the names of the files in large icon format.

Details: displays additional information about the files (Name/Size/Type/Modified Date).

File Name: saves a backup file with a name. To save a backup file with a new name, type a new file name. To save a backup file with an existing name, select the name in the list or type in the current name.

Save As Type: specifies the type of file you are saving as OPTIMOD-FM Backup Files (*.fmb).

- C) Click on **OK** to save backup file (or click on **Cancel** if you decide not to create a backup file).

If the file already exists, 8200 PC asks if you want to overwrite the existing backup file. Choose **Yes** to overwrite, or **No** to return to “Backup All Data To” window.

The backup file can be retrieved at a future date, via the **Restore 8200** command (see below).

Restoring OPTIMOD System Information (Presets, I/O CALIB, Automation Settings)

- A) From the 8200 PC main window, select **Manage: Restore 8200**.

This opens the “Restore OPTIMOD Data From Backup File” dialog box.

- B) From the “Restore OPTIMOD Data From Backup File” dialog box, click on **Select Backup File**.

This opens the “Select Backup File” dialog box.

- C) Select a file name from the file name list and click on **OK**.

- D) Restore multiple items or individual User Presets.

To restore multiple items, use the “Multiple Item Restore” dialog box. Select which data to restore, and click on **Restore** to send the data to the 8200. You

will be asked to confirm your selection. Click on **OK** to continue, or click on **Cancel** if you decide to not restore data. The following data choices can be restored: ALL 32 User Presets, Automation Settings, I/O Calibration Settings, Remote Interface Settings.

If you want to restore individual User Presets, use the “Individual Preset Restore” dialog box. Highlight the User Preset to be sent to the 8200 in the “Backup” box. Highlight the 8200 User Preset to be overwritten in the “OPTIMOD” box and press the arrow button between the two boxes. You will be asked to confirm your selection. Click on **OK** to restore, or **Cancel** to not restore the preset.

- E) Click on Done when finished.

Recalling a Preset

- A) Click on the Recall button;

or

Select the Preset Recall command from the 8200 PC window.

This opens the “Recall Preset” dialog box.

- B) From the “Recall Preset” dialog box, select a preset from the scrollbar list.
C) From the “Recall Preset” dialog box, click on Recall to put the selected (highlighted) preset on the air.

Note: If the selected preset is the same as the preset already on the air, the sound of the station will not change. When you click on Recall, the previous preset is remembered. To return to it, click on Recall Backup.

Note: The “Recall Preset” dialog box automatically closes when you recall Bypass, User Tone, or a User Tone saved to a User Preset. To terminate Bypass or any User Tone, click on the Exit Test or Recall button. You can also use any of the following commands: Exit Test, Recall, or Recall Backup.

- D) Click on Done to close “Recall” dialog box.

Recalling Backup Preset

- A) Select the Preset: Recall Backup command.

This puts the previously selected preset on the air. When you recall a preset, the preset that was on the air previously is remembered. Or when you modify a preset, the setting of the controls before you changed them are remembered. The number and name of the backup is shown in the “Backup Is:” box.

A backup preset can also be recalled from within the “Preset Recall” dialog box (after selecting the Recall button).

Exiting Test Presets (Bypass or User Tone)

- A) Click on the Exit Test button.

Note: If Bypass or User Tone was initiated from “Preset Recall” dialog box, the test can be terminated by recalling the backup preset or another preset. E.g., click on the Recall button. You can also use any of the following commands: Exit Test, Recall, or Recall Backup.

Viewing Less-More Control or Full Control Palette

A) Click on the View Knobs button;

or

Select the Modify: View Knobs command from the 8200 PC window.

Either the single Less-More control, or all the Full Control knobs, appear in the center of the OPTIMOD-FM 8200 PC main window, whichever view was last active.

To toggle between control views, click on the current control button (on the button bar) or select the ungrayed view command — Less-More or Full Control.

Modifying a Preset

A) If modifying a preset, via one of its Full Control knobs, select (highlight) a control.

[Skip this step if modifying a preset via its Less-More control.]

a) Use the keyboard's *Tab* key to toggle through the entire palette of Full Control knobs;

or

b) Use the mouse to click on a control knob;

or

c) Use the keyboard's arrow keys.

Use the left/right arrow keys to move through a row of control knobs (left-to-right or right-to-left).

Use the up/down arrow keys to move through a column of control knobs (upwards or downwards).

Note: If *Num Lock* is active on your keyboard, the “Num Locked” keypad will function differently: Up/down arrow keys will function as +/- keys (changing the value or on/off status of a control), and left/right arrow keys will be inoperative.

B) Modify the preset.

a) Use the mouse and the control's on-screen left/right arrow button.

Ranges: Click on left arrow to decrease value; click on right button to increase values.

ON/OFF switches (e.g., AGC ON/OFF): Click on left arrow to turn control off; click on right button to turn control on;

or

- b) Use the mouse and the on-screen control knob.

Place the mouse pointer on a control, hold the mouse button down (for a Full Control knob, the control's name will highlight), move the mouse pointer up-screen to make the control increase a range value or turn a control on, or move the mouse pointer downscreen to decrease a range value or turn a control off. Release the mouse button to end modification;

or

- c) Use the keyboard's +/- keys or “Num Locked” up/down arrow keys.

Use minus (-) key to decrease a value in a range or toggle a switch off; use plus (+) key to increase a value in a range or toggle a switch on.

With the keyboard's *Num Lock* control active, up/down arrow keys will function as +/- keys. Use the down arrow key to decrease a value in a range or toggle a switch off; use up arrow key to increase a value in a range or toggle a switch on.

Note: Whenever a control is modified, the word “modified” appears next to the control, in red. Whenever a value is returned to its original setting, “modified” disappears.

Saving a Modified Preset

- A) Click on the Save button;

or

Select the Modify: Save command from the 8200 PC window.

This opens the “Save Preset” dialog box.

- B) From the “Save Preset” dialog box, rename the current preset in the “Edit Name” field (optional).

Note: If you do not assign a new name, the name in the “Edit Name” box will be used.

- C) From the “Save Preset” dialog box, select a user preset number to name and save in the “Select Preset to Save Into” list.

- D) Click on Save.

This opens the “Overwrite User Preset?” dialog box.

- E) Click on OK to store the new settings in the selected user preset, or Cancel to return to the “Save Preset” dialog box.

Changing I/O Calibration Settings

Refer to Section 3 of the 8200 Manual for detailed information on I/O Calibration parameters.

- A) Select the Setup: I/O Calibrate command from the 8200 PC window.

This opens the “I/O Calibrate” dialog box.

- B) From “I/O Calibrate” dialog box, reconfigure I/O parameters as necessary.

There are four sections of adjustable parameters: Analog, Miscellaneous, AES/EBU and Composite.

Note: Although modifications are not saved until you press **Done** (step C), adjustments are implemented to air as you modify them.

- C) When finished adjusting I/O Calibrate, click on **Done** to save the settings.

Or choose **Cancel** to open the “Cancel I/O Calibrate” dialog box. From this box you can choose **No** to return to the “I/O Calibrate” dialog box or **Yes** to close the “I/O Calibrate” dialog box and return all previous I/O settings to air. Note that choosing **Yes** could cause an abrupt change to the on-air audio.

Configuring Remote Interface

- A) Select the **Setup: Remote Interface** command from the 8200 PC window.

This opens the “Remote Interface” dialog box.

- B) From the “Remote Interface” dialog box, click on one of the eight remote interfaces (e.g., #1), and scroll to a desired preset or function.

- C) Repeat step B, for additional remote interfaces, as required.

- D) When finished setting remote interface presets, click on **Update OPTIMOD** from the “Remote Interface” dialog box to implement the new settings (or click on **Cancel** to ignore the settings).

Viewing System Info

The System Information screen provides details on the hardware and software configuration of the online 8200.

- A) Select the **Setup: System Information** from the 8200 PC window.

- B) Click on **OK** to return to the 8200 PC main window.

Programming Automation

- A) Select **Setup: Program Automation** command from the 8200 PC window.

This opens the “Program Automation” dialog box.

- B) From the “Program Automation” dialog box, add events and edit them accordingly, or delete events.

Status [Disabled] or [Enabled]: activates or deactivates automated program changes.

Select **Disable** to deactivate automated program changes.

Select **Enable** to activate automated program changes.

Note that Automation can also be enabled/disabled via the **Setup: Enable Automation/Disable Automation** menu commands.

Add Event: inserts a new line above the selected line. Use “Edit Event” to adjust when the event will happen and what event (i.e., preset) will occur.

Delete Event: deletes highlighted event from automation list.

Edit Event: opens “Edit Event” dialog box that allows you to set Date Event or Daily Event. When finished, click on **Enter Change** to save events. Or select **Cancel** to lose any changes made in the “Edit Event” dialog box.

Edit Event Dialog Box

When you choose the **Edit Event** command (from the “Program Automation” dialog box), a dialog box opens with the following options:

Date Event: selects event to occur on a specific date. Click on Date, Month and Year up/down buttons to set the date; click on Hr., Min., and Sec. up/down buttons to set the time.

Daily Event: selects event to occur on one or more days a week. Click on MTWTFSS up/down buttons to select one or more days; click on Hr., Min., and Sec. up/down buttons to set the time.

Preset box: selects the preset. Use the scroll bar to search through the list, then select the desired preset by clicking on it.

C) Click on Update OPTIMOD to save Program Automation settings.

Enabling/Disabling Automation

To Enable Automation, select Setup: Enable Automation from the 8200 PC window.

To Disable Automation, select Setup: Disable Automation from the 8200 PC window.

Note: Automation can also be enabled or disabled from within the “Program Automation” dialog box, accessible by selecting the Program Automation submenu.

Updating Pilot Meter

A) Select Setup: Update Pilot from the 8200 PC window.

Metering of Pilot Injection is updated only upon initial connection with the 8200. To update metering to indicate the current value, select Update Pilot.

Checking 8200 PC Software Version

A) Select the Help: About PC Remote command from the 8200 PC window.

B) Click on OK to return to the 8200 PC main window.

Quick-Access Function Buttons

Recall Button

The Recall button opens a dialog box to select a factory or user preset and put it on the air.

This button is only available if 8200 PC is connected to a remote 8200 and the 8200 allows Recall Preset or Recall Test Presets access.

Press Recall button to see a list of all stored presets. You can select a preset from the list and recall that preset on the air.

Recalling a processing preset puts the preset on the air, while 8200 PC displays the preset name in the status bar and its specific meters in the meters window. If the single Less-More control or all the Full Control knobs were shown with the previous preset, the screen updates to the new preset's knob settings.

Recalling User Tone puts the tone immediately on the air, and recalling Bypass activates OPTIMOD's Bypass preset immediately. To terminate Bypass or any User Tone, click on the Exit Test or Recall button. You can also use any of the following submenu commands: Exit Test, Recall, or Recall Backup.

You can also recall a preset by doing the following:

- Click on the Recall command in the Preset menu.

Recall Preset Dialog Box

When you choose the Recall command, a dialog box opens with the following options:

Recall Preset scrollbar: selects which preset will be put on the air when you click on Recall.

Recall: puts the selected (highlighted) preset on the air. If the selected preset is the same as the preset already on the air, the sound of the station will not change. When you click on Recall, the previous preset is remembered. To return to it, click on Recall Backup.

Recall Backup: puts the previously selected preset on the air. When you recall a preset, the preset that was on the air previously is remembered. Or when you modify a preset, the setting of the controls before you changed them are remembered. The number and name of the backup is shown in the "Backup Is:" box. (A backup preset can also be recalled using the Preset: Recall Backup submenu command).

Done: closes "Recall" dialog box.

View Knobs/Hide Knobs Button

The View Knobs/Hide Knobs button switches whether the display shows or hides the knob controls that adjust the processing on-air.

The View Knobs button is only available if 8200 PC is connected to a remote 8200, the 8200 allows Modify Processing access and knobs are currently not displayed on the screen.

The Hide Knobs button is only available if 8200 PC is connected to a remote 8200, the 8200 allows Modify Processing access and either the Less-More control or Full Control knobs are currently displayed on the screen.

Click on View Knobs button to see the preset's controls and their current settings, and if desired, make modifications.

Clicking on View Knobs will display the current preset's Less-More control or its Full Control palette, depending on the situation.

If 8200 PC has just connected to an OPTIMOD, all knobs are initially hidden and clicking on View Knobs will display the single Less-More control, or the Full Control knobs, depending on the last modification state of the selected preset.

If View Knobs is selected multiple times in a session (i.e., controls are viewed, hidden, then viewed again), clicking on View Knobs will display the level of viewing that was active most recently.

Modifications to presets can only be made when controls are shown on the 8200 PC screen. To adjust a control, refer to "Full Control and Less-More Buttons" directly below.

You can also view knobs by doing the following:

- Click on the View Knobs command in the Modify menu.

Click on the Hide Knobs button to clear the window of any controls.

You can also hide knobs by doing the following:

- Click on the Hide Knobs command in the Modify menu.

Full Control and Less-More Buttons

The Full Control and Less-More buttons allow you to toggle between Full Control/Less-More views, and provide a means to modify control settings.

The Less-More button is only available if 8200 PC is connected to a remote 8200, the 8200 allows Modify Processing access, and the presets full set of control knobs are displayed on the screen.

The Full Control button is only available if 8200 PC is connected to a remote 8200, the 8200 allows Modify Processing access, and the preset's Less-More control knob is displayed on the screen.

To modify a Full Control knob, its control name must first be highlighted. When Full Control view is initially selected, the control knob at the upper left corner of the Modify Controls Window is highlighted.

Selecting a Full Control knob: There are three ways to select a control knob:

- a) Use the keyboard's *Tab* key to toggle through the entire palette of Full Control knobs;

or

- b) Use the mouse to click on a control knob;

or

- c) Use the keyboard's arrow keys.

Use the left/right arrow keys to move through a row of control knobs (left-to-right or right-to-left).

Use the up/down arrow keys to move through a column of control knobs (upwards or downwards).

Note: If *Num Lock* is active on your keyboard, the “Num Locked” keypad will function differently: Up/down arrow keys will function as +/- keys (changing the value or on/off status of a control), and left/right arrow keys will be inoperative.

Modifying a Control: Modifications to the Less-More and Full Control processing controls can be made three different ways:

- a) Use the mouse and the control's on-screen left/right arrow button.

Ranges: Click on left arrow to decrease values; click on right button to increase values.

ON/OFF switches (e.g., AGC ON/OFF): Click on left arrow to turn control off; click on right button to turn control on;

or

- b) Use the mouse and the on-screen control knob.

Place the mouse pointer on a control, hold the mouse button down (for a Full Control knob, the control's name will highlight), move the mouse pointer up-screen to make the control increase a range value or turn a control on, or move the mouse pointer downscreen to decrease a range value or turn a control off. Release the mouse button to end modification;

or

- c) Use the keyboard's +/- keys or “Num Locked” up/down arrow keys.

Use minus (−) key to decrease a value in a range or toggle a switch off; use plus (+) key to increase a value in a range or toggle a switch on.

With the keyboard's *Num Lock* control active, up/down arrow keys will function as +/- keys. Use the down arrow key to decrease a value in a range or toggle a switch off; use up arrow key to increase a value in a range or toggle a switch on.

Whenever a control is modified, the word “modified” appears next to the control, in red. Whenever a value is returned to its original setting, “modified” disappears.

You can also view the Less-More control knob by doing one of the following:

- Click on View Knobs command from Modify menu.
- Click on Less-More or Full Control command in the Modify menu

Less-More Undo Changes Dialog Box

When you click on Less-More button, after modifying a parameter from the Full Control view, you will always be presented with the opportunity to undo those changes made in Full Control.

Click on Undo to lose modifications, or click on Cancel to retain changes and return to Full Control view. To save changes to a user preset, use the Save command.

Compare Button

The Compare button opens a dialog box to compare the preset on-air with another preset.

This button is only available if 8200 PC is connected to a remote 8200 and the 8200 allows Modify Processing access.

Clicking on Compare immediately puts on-air the unmodified version of a previously changed (but not saved) preset.

The “Compare” dialog box lets you compare the preset currently on the air with any other preset. From the “Compare” dialog box, click on a preset name to place it on the box's “Next Is:” line, then press the Compare option to hear preset. Press the Compare option again to hear the previous on-air preset. When finished, press Done to exit the dialog box, and put the original preset on the air.

You can also compare presets by doing the following:

- Click on the Compare command in the Modify menu.

Compare Dialog Box

When you click on the Compare button, a dialog box opens with the following options:

Compare list box: selects a preset to put on-air (with this dialog box's Compare command), so that it can be compared to “On Air:” preset. Selected preset will appear on the “Next Is:” line.

Compare button: puts the “Next Is:” preset on the air, so that it can be compared with the previous preset. When you click on Compare, the “Next Is:” preset will appear on the “On Air:” line. The previous “On Air:” preset will become the “Next Is:” preset, so that you can continue switching between the presets.

Save Button

The Save button opens a dialog box to name and save the current preset and modifications made to it (if any) to one of 32 user preset locations.

This button is only available if 8200 PC is connected to a remote 8200 and the 8200 allows Modify Processing access.

From the “Save Preset” dialog box, select a user preset from the “Select Preset To Save Into” box, then rename it in the “Edit Name” box. Click on Save and then OK to save it (or press Cancel at any time if you decide not to save it).

You can also open the “Save Preset” dialog box by doing the following:

- Click on the Save command in the Modify menu.

Save Preset Dialog Box

When you click on **Save** button, a dialog box opens with the following options:

Edit Name: allows you to rename current preset, before it is saved to a user preset number. If you do not assign a new name, the name in the “Edit Name” box will be used.

Select Preset to Save Into: selects user preset number to name and save.

Save: stores the new settings in the selected user preset. Pressing **Save** initially brings up the “Overwrite User Preset?” box, which allows you to OK the save, or **Cancel**.

Cancel: closes “Save Preset” dialog box, without renaming current preset.

Connect/Disconnect Button

The Connect button has a graphical representation of a blue OPTIMOD ready to connect to a white box (representing the remote computer).

Use the Connect button to begin the connection process and control with the remote 8200.

Use Disconnect button to end communications and control with the remote 8200.

The Connect button is only available if 8200 PC is not connected to a remote 8200. The Disconnect button is only available if 8200 PC is connected to a remote 8200.

Using Connect:

Before attempting a connection, 8200 prompts you to choose an OPTIMOD from the “Select OPTIMOD” dialog box. Select an OPTIMOD and then click OK (or click on Cancel if you decide not to connect).

If the OPTIMOD entry was not configured with a passcode in the “Edit Settings” dialog box, you will be prompted to enter a valid passcode at this time. (Valid passcodes are passcodes that have previously been assigned to

OPTIMOD using OPTIMOD's front panel SET PASCODE (Refer to the 8200 Owner's Manual.)

To configure 8200 PC for an OPTIMOD (so that the OPTIMOD appears in the "Select OPTIMOD" dialog box), see the Manage menu Settings command.

When connection is attempted, the "Connection Status" box acts as a gauge of the information flow between 8200 PC and an OPTIMOD. Connection is successful when the gauge is 100% full. At this time, the box closes, and the current preset and meters appear on the screen.

Connection will only be successful if the following conditions are met:

- OPTIMOD has passcodes, as previously set with its front panel SET PASCODE.
- Hardware installation is completed (e.g., all cable connections are secure).
- Software installation is completed (i.e., 8200 PC is installed in your computer).
- Software configuration is completed (i.e., information entered in the "Edit Settings" dialog box is accurate).

You can also connect by doing the following:

- Click on the Connect command in the Manage menu.

Using Disconnect:

Before disconnecting, 8200 PC prompts you to click OK (or click on Cancel if you decide not to disconnect).

You can also disconnect by doing one of the following:

- Click on the Disconnect command in the Manage menu
- Enter a valid passcode on OPTIMOD's front panel. In this case, 8200 PC will not prompt you to disconnect, but will inform you that "8200 Has Ended Connection." Click on OK to return to the 8200 PC main window.

You can also disconnect by doing the following:

- Click on the Disconnect command in the Manage menu,

Help

The Help button provides a means to getting Help on 8200 PC applications, menus, commands and buttons.

The Help button is always available from the 8200 PC main window.

To fully use the Help button:

- a) Click on the Help button to access the "OPTIMOD Application Help" dialog box.

b) From “OPTIMOD Application Help” dialog box, click on Search menu.

This opens the “Search” dialog box.

c) Select a topic from the list by clicking on it, or type in a topic in the entry field.

d) Click on Display to access Help information the topic.

Note: Help on a particular topic is also available from the “OPTIMOD Application Help” dialog box for any green-colored text. Simply click on the text for direct access to related Help information.

Help can also be accessed in the following manner:

- Select Help: Contents.
- Press F1.

Menus and Commands

(**Note:** Use standard Windows keyboard and mouse conventions to choose menus or command buttons, select items in list boxes, option buttons and check boxes, and to make entries in text boxes.)

File Menu

The File menu offers the following command.

Exit: ends an 8200 PC session.

This command is always available.

If 8200 PC is currently connected, it prompts you to disconnect before it closes. Click OK to disconnect and close 8200 PC software (or click on Cancel if you decide not to end your session).

You can also exit 8200 PC by doing one of the following:

- Double-click the application Control menu box, located in the screen's upper left-hand corner.
- Open the application Control menu by pressing *Alt+Spacebar* and then choose Close.
- Press *Alt+F4* on the keyboard.

Manage Menu

The Manage menu offers the following commands to configure 8200 PC to remotely control an OPTIMOD, connect or disconnect 8200 PC and an OPTIMOD 8200 and archive an OPTIMOD's settings for future retrieval.

Connect: initiates connection with the remote 8200.

This command is only available if 8200 PC is not connected to a remote 8200.

Before attempting a connection, 8200 prompts you to choose an OPTIMOD from the “Select OPTIMOD” dialog box. Select an OPTIMOD and then click OK (or click on Cancel if you decide not to connect).

If the OPTIMOD entry was not configured with a passcode in the “Edit Settings” dialog box, you will be prompted to enter a valid passcode at this time. (Valid passcodes are passcodes that have previously been assigned to OPTIMOD using OPTIMOD's front panel SET PASCODE — refer to the 8200 Owner's Manual.)

To configure 8200 PC for an OPTIMOD (so that the OPTIMOD appears in the “Select OPTIMOD” dialog box), see the Manage menu Settings command, below.

When connection is attempted, the “Connection Status” box acts as a gauge of the information flow between 8200 PC and an OPTIMOD. Connection is successful when the gauge is 100% full. At this time, the box closes, and the current preset and meters appear on the screen.

Connection will only be successful if the following conditions are met:

- OPTIMOD has passcodes, as previously set with its front panel SET PASCODE.
- Hardware installation is completed (e.g., all cable connections are secure).
- Software installation is completed (i.e., 8200 PC is installed in your computer).
- Software configuration is completed (i.e., information entered in the “Edit Settings” dialog box is accurate).

You can also connect by doing the following:

- Click on the Connect button. This button has a graphical representation of a blue OPTIMOD ready to connect to a white box (representing the remote computer).

Disconnect: stops communicating with and controlling the remote 8200.

This command is only available if 8200 PC is connected to a remote 8200.

Before disconnecting, 8200 PC prompts you to click OK (or click on Cancel if you decide not to disconnect).

You can also disconnect by doing one of the following:

- Click on the Disconnect button. This button has a graphical representation of a blue OPTIMOD connected to a white box (representing the remote computer).
- Enter a valid passcode on OPTIMOD's front panel. In this case, 8200 PC will not prompt you to disconnect, but will inform you that “8200 Has Ended

Connection.” Click on OK to return to the 8200 PC main window.

Settings: opens a dialog box to configure 8200 PC for remote control of any number of OPTIMODs, by entering a passcode, Comm port number, modem settings (if any), and whether the PC talks to an 8200 via modem or directly, with a null modem (“reverse”) cable.

This command is only available if 8200 PC is not connected to a remote 8200.

Settings Dialog Box

When you choose the **Settings** command, a dialog box opens with the following options:

Facility Name: [Type in the facility's name].

Sets the name that appears on the 8200 PC's main window title bar when the software is running and on the 8200 front panel (PC ONLINE: [Facility Name]) when 8200 PC is connected to the 8200.

Type in the organization name entered during installation, or a different name.

Note: The Facility Name is common to all entries in the “OPTIMOD” list box.

OPTIMOD Name: [Type in a name to identify a specific OPTIMOD].

Updates the OPTIMOD list in both the “Select OPTIMOD” and “Edit Settings” dialog boxes.

OPTIMOD list occupies the left side of the “Edit Settings” dialog box. Clicking on a “named OPTIMOD,” followed by clicking on OK, in the OPTIMOD list allows you to configure an OPTIMOD's settings (i.e., its Name, Phone Number, Passcode, Port, Connection, etc.) in the “Edit Settings” dialog box.

The “Select OPTIMOD” box appears whenever a user attempts a connection, providing a directory of all previously-configured OPTIMODs. (Clicking on a “named OPTIMOD” in the “Select OPTIMOD” box, will start the connection.)

When an OPTIMOD is successfully connected to 8200 PC, its OPTIMOD Name will also appear on the 8200 PC's main window status bar.

Phone Number: [Type in the phone number of the modem that is connected to OPTIMOD 8200].

Sets the phone number used when 8200 PC communicates with OPTIMOD, via modem.

This entry should be left empty if the 8200 connects directly to a computer via a null modem (“reverse”) cable.

Valid dial modifiers are listed below: These tell the modem what, when and how to dial.

<u>Valid Dial Modifiers:</u>	<u>Description:</u>
0-9 * #	Numbers and symbols the modem uses when dialing.
,	Pauses before continuing the dialing string.
\$	Waits for “bong” tone (for calling card number entry).
@	Waits for quiet answer.
!	Issues hookflash.
;	Returns to command state after dialing and maintains the connection.

Important: Do not use slashes, periods, brackets or letters of the alphabet.

Passcode: [1] to [99999999]

Sets 8200 PC with passcodes to maintain OPTIMOD's security. Assign passcodes so that users have same passcodes as they did from OPTIMOD's front panel. This ensures that users have same security access.

If the OPTIMOD Name was previously given a passcode, asterisks will be shown here. Otherwise the parameter will be blank.

If Passcode entry field is left blank, user will be prompted for a valid passcode when trying to connect.

Note: For successful connections, the following conditions must be met:

(1) Passcodes entered in 8200 PC “Edit Settings” dialog box must match passcodes set on the 8200 front panel (using SET PASCODE).

and

(2) The 8200 must have passcodes. For security, 8200 PC will not communicate with 8200s that cannot be locked out (i.e., 8200s that do not have passcodes). If necessary, set 8200 with passcodes using front panel SET PASCODE.

Comm Port: [1, 2, 3 or 4].

Sets the computer communication port that is sending and receiving messages to and from the 8200.

For direct connections, this is the computer port the OPTIMOD 8200 is connected to. For modem connections, this is the computer port that an external or internal modem is connected to.

Connection: [Direct, Modem].

Sets 8200 PC for direct or modem connections.

Choose Direct if the computer is connected directly to the 8200. Choose Modem if the computer will communicate with the 8200 via modem.

Advanced: provides an additional level of modem controls.

This button is only available if Modem is selected in the Connection field.

Pressing the Advanced button opens a dialog box which allows you to set additional modem parameters.

For 100% US Robotics-compatible modems, 8200 PC will operate properly if “Advanced Modem Settings” are left at their default values. However, if connection problems persist, consider changing these settings, as necessary.

Modem Advanced Settings Dialog Box

When you choose Advanced from the “Edit Settings” dialog box, another dialog box opens with the following options:

Line Options: These options are always available from “Advanced Modem Settings” dialog box; they can be set when either Default or Custom (Modem Init String) is selected.

Ignore Dial Tone: sets modem to ignore dial tone and begin dialing immediately (e.g. to override a dial tone signal that your modem cannot recognize).

Ignore Busy Signal: sets modem to ignore busy signal.

Wait For Carrier: [50, 120, 180, 240 seconds]: sets how long the PC takes to time-out if it does not detect a modem carrier at the other end.

Tone or Pulse: sets modem for different types of telephone systems. Select **Tone** for touch-tone telephone systems. Select **Pulse** for rotary dial systems.

Modem Options: The “Modem Type” and “Init String Type” options are always available from the “Advanced Modem Settings” dialog box; when “Init String Type” is set to “Custom,” you can enter in a custom modem string in the “Modem Init String” field.

Modem Type [US Robotics, Hayes, or Other]: Set this field according to your modem type.

Init String Type [Default, Custom]: Choose Default to set modem to use default modem init string. Choose Custom to set modem to use customized modem init string (see directly below).

Modem Init String: If your 8200 PC modem does not work with the factory default init string (i.e., it is not dialing out correctly), a new custom init string should be entered.

(Refer to the manual for the modem connected to your PC for init string codes. Also, refer to the appendix of the 8200 PC manual for a listing of modems and init strings that have been tested for use with 8200 PC and OPTIMOD 8200.)

Before you enter the new string for the modem connected to your PC, consider the following information:

Select LAPM error correction with no compression to ensure data integrity. Make sure V.42 is enabled.

Your modem must not be allowed to fall back to a communication protocol that doesn't support error correction. Set control on modem to hang up if it is unable to communicate at V.42 protocol. This is how the default string is set, so that it will work with a wide range of Hayes AT-set and S-register compatible modems.

If you are still having trouble connecting, you may also want to consider using an init string that works with another.

Backup 8200: opens a dialog box to save all the data from a connected 8200 as a backup file for future retrieval, via Restore 8200 command.

This command is only available if 8200 PC is connected to a remote 8200 and if the 8200 allows System Setup access.

The "Backup 8200" dialog box allows you to specify a backup file name and what drive and directory to save it to. When these fields are completed, click on Save to create backup file (or click on Cancel if you decide not to create a backup file).

The backup file can be retrieved at a future date, via the Restore 8200 command.

Backup 8200 Dialog Box

When you choose the Backup 8200 command, a dialog box opens with the following options:

Save In: lists the available folders and files. To see how the current folder fits in the hierarchy on your computer, click the down arrow. To see what's inside a folder, click on it.

Up One Level Icon: opens the folder one level above the active folder.

Create New Folder Icon: creates a new folder.

List Icon: shows the names of the files in large icon format.

Details: displays additional information about the files (Name/Size/Type/Modified Date).

File Name: saves a backup file with a name. To save a backup file with a new name, type a new file name. To save a backup file with an existing name, select the name in the list or type in the current name.

Save As Type: specifies the type of file you are saving as OPTIMOD-FM Backup Files (*.fmb).

Restore 8200: opens a dialog box to load an online 8200 with individual presets or multiple items from a backup file, as previously saved with Backup 8200 command.

This command is only available if 8200 PC is connected and if the 8200 al-

lows System Setup access.

Choose an available 8200 backup file. To restore multiple items, use the “Multiple Item Restore” dialog box. Select which data to restore, and click on Restore to send the data to the 8200. You will be asked to confirm your selection. Click on OK to continue, or click on Cancel if you decide to not restore data.

If you want to restore individual User Presets, use the “Individual Preset Restore” dialog box. Highlight the User Preset to be sent to the 8200 in the “Backup” list box. Highlight the 8200 User Preset to be overwritten in the “OPTIMOD” list box and press the arrow button between the two list boxes. You will be asked to confirm your selection. Click on OK to restore, or Cancel to not restore the preset.

Restore 8200 Dialog Box

When you choose the Restore 8200 command, a dialog box opens with the following options:

Select Backup File: Select a file name from the file name list box and click on OK

Select Backup File Dialog Box

Look In: lists the available folders and files. To see how the current folder fits in the hierarchy on your computer, click the down arrow. To see what’s inside a folder, click on it.

Up One Level Icon: opens the folder one level above the active folder.

Create New Folder Icon: creates a new folder.

List Icon: shows the names of the files in large icon format.

Details: displays additional information about the files (Name/Size/Type/Modified Date).

File Name: restores a backup file with a name. Select the name in the list or type in the name.

Files Of Type: specifies the type of file you are restoring as OPTIMOD-FM Backup Files (*.fmb).

Multiple Item Restore: selects which groups to restore. Items are only available after a backup file has been selected (via **Select Backup File** command). Click on any combination of multiple items, as desired, then click on the **Restore** button to restore the preset. There are four choices: All 32 User Presets, Automation Settings, I/O Calibrate Settings and Remote Interface Settings.

Individual Preset Restore: selects a specific preset to be restored.

This control is only available after a backup file has been selected (via the **Select: Backup File** command).

To choose a preset to restore, click on a preset from the “Backup” list box. To select which preset to replace, click on a preset in the far right-hand box

(identified by the current OPTIMOD name). To restore the preset, click on the Restore -----> button, located between the two boxes.

Done: closes the “Restore 8200” dialog box.

Preset Menu

The Preset menu offers the following commands to recall any 8200 preset and exit test presets.

Recall: opens a dialog box to select a factory or user preset and put it on the air.

This command is only available if 8200 PC is connected to a remote 8200 and the 8200 allows Recall Preset or Recall Test Presets access.

Press Recall to see a list of all stored presets. You can select a preset from the list and recall that preset on the air.

Recalling a preset puts it on the air. All on-screen displays are updated to indicate the change.

Recalling User Tone puts the tone immediately on the air, and recalling Bypass activates OPTIMOD's Bypass preset immediately. To terminate Bypass or any User Tone, click on the Exit Test or Recall button. You can also use any of the following submenu commands: Exit Test, Recall, or Recall Backup.

You can also recall a preset by doing the following:

- Click on the Recall button to access “Recall” dialog box.

Recall Preset Dialog Box

When you choose the Recall command, a dialog box opens with the following options:

Recall Preset list box: selects which preset will be put on the air when you click on Recall.

Recall button: puts the selected (highlighted) preset on the air. If the selected preset is the same as the preset already on the air, the sound of the station will not change. When you click on Recall, the previous preset is remembered. To return to it, click on Recall Backup.

Recall Backup: puts the previously selected preset on the air. Recall Backup lets you toggle between the current and previous preset.

Done: closes “Recall” dialog box.

Backup Is: indicates the backup preset.

This menu item is always grayed and does not perform a command.

The Backup “Preset Name” can be put on the air with the Recall Backup command.

Recall Backup: puts the previously selected preset on the air. Recall Backup lets you toggle between the current and previous preset.

This command is only available if 8200 PC is connected to a remote 8200 and the 8200 allows Recall Preset or Recall Test Presets access.

You can also recall a backup preset by doing the following:

- Use “Preset Recall” dialog box: Click on Recall button to open dialog box, then click on Recall Backup button.

Exit Test: ends the current test preset (Bypass, User Tone, or a User Preset Test Tone), taking it off the air and putting the previous preset on the air.

This command is only available if 8200 PC is connected to a remote 8200 and a test preset is on the air.

Exit Test is displayed on the screen only when the preset on the air is a test preset.

You can also end a test by doing one of the following:

- Click on Exit Test button.
- Press OPTIMOD's front panel Exit Test softkey.
- Click on Recall Backup from “Preset Recall” dialog box (if test tone was activated from “Preset Recall” dialog box).
- Issue a command via 8200 PC's Remote Control Interface.

Modify Menu

The Modify menu offers the following commands to select between Less-More control and Full Control, compare the current modified preset with other presets, and save presets.

These commands are only available if 8200 PC is connected to a remote 8200 and the 8200 allows Modify Processing.

View Knobs/Hide Knobs: switches whether the display shows or hides the knob controls that adjust the processing on-air.

The View Knobs command is only available if 8200 PC is connected to a remote 8200, the 8200 allows Modify Processing access and knobs are currently not displayed on the screen.

The Hide Knobs command is only available if 8200 PC is connected to a remote 8200, the 8200 allows Modify Processing access and either the Less-More control or Full Control knobs are currently displayed on the screen.

Select View Knobs to see the preset's controls and their current settings, and if desired, make modifications.

Clicking on View Knobs will display the current preset's Less-More control or its Full Control palette, depending on the situation.

If 8200 PC has just connected to an OPTIMOD, all knobs are initially hidden and clicking on View Knobs will display the single Less-More control, or Full

Control knobs, depending on the last modification state of the selected preset.

Modifications to presets can only be made when controls are shown on the 8200 PC screen. To adjust a control, refer to **Less-More** command or **Full Control** command.

You can also view knobs by doing the following:

- Click on the View Knobs button.

Select **Hide Knobs** to clear the window of any controls.

You can also hide knobs by doing the following:

- Click on the Hide Knobs button.

Less-More: displays the Less-More control, providing the means to modify the selected preset.

This command is only available if 8200 PC is connected to a remote 8200, the 8200 allows Modify Processing access, View Knobs has been selected, and the selected preset was last modified by Full Control.

You can adjust the Less-More control knob by doing one of the following:

- Use the mouse and the control's on-screen left/right arrow button. Click on left arrow to decrease value, click on right button to increase value.
- Use the mouse and the on-screen control knob. Place the mouse pointer on the control, hold the mouse button down and move the mouse pointer up-screen to increase the Less-More setting, or move the mouse pointer down-screen to decrease the Less-More setting. Release the mouse button to end modification.
- Use the keyboard's +/- keys: Use (-) key to decrease Less-More setting; use (+) key to increase Less-More setting.
- If *Num Lock* is active on your keyboard, the keypad's up/down arrow keys will function as +/- keys.

Whenever the Less-More control is modified, the word “Modified” appears next to the control, in red. Whenever Less-More is returned to its original setting, “Modified” disappears.

You can also view the Less-More control knob by doing one of the following:

- Click on **View Knobs** — as long as the last level of knob display was not **Full Control**.
- Click on the **Less-More** button. If **Full Control** mode is presently displayed, changing from **Full Control** to **Less-More** will undo any **Full Control** changes. You will be prompted to confirm the undo first.

Less-More Undo Changes Dialog Box

When you choose the **Less-More** command, after modifying a parameter from the Full Control view, you will always be presented with the opportunity to undo the changes made in Full Control.

Click on **Undo** command to lose modifications, or click on **Cancel** to retain changes. To save changes to a user preset, use the **Save** command.

Full Control: displays individual parameter controls, providing the means to modify the selected preset.

This command is only available if 8200 PC is connected to a remote 8200, the 8200 allows Modify Processing access, View Knobs has been selected, and the current preset was last modified by Less-More, or was unmodified (factory).

You can select a specific control knob by doing one of the following:

- Click the mouse on the desired control.
- Use the keyboard's left/right arrow keys to move through a row of control knobs (left-to-right or right-to-left) and use the keyboard's up/down arrow keys to move through a column of control knobs (upwards or downwards). Then click on the desired control.

Note: If *Num Lock* is active on your keyboard, the keypad will function differently: Up/down arrow keys will function as +/- keys, and left/right arrow keys will be inoperative.

You can adjust a Full Control knob by doing one of the following:

- Use the mouse and the control's on-screen left/right arrow button.

Ranges: Click on left arrow to decrease value, click on right button to increase value

ON/OFF switches (e.g., AGC ON/OFF): Click on left arrow to turn control off, click on right button to turn control on.

- Use the mouse and the on-screen control knob.

Place the mouse pointer on a control, hold the mouse button down (the control's name will highlight), move the mouse pointer upscreen to make the control increase a range value, or turn a control on, or move the mouse pointer downscreen to decrease a range value or turn a control off. Release the mouse button to end modification.

- Use the keyboard's arrow keys and +/- keys: Use – key to decrease a value in a range or toggle a switch off; use + key to increase a value in a range or toggle a switch on.
- If *Num Lock* is active on your keyboard, the keypad will function differently: Up/down arrow keys will function as +/- keys, and left/right arrow keys will be inoperative.

Whenever a control is modified, the word “Modified” appears next to the

control, in red. Whenever a value is returned to its original setting, “Modified” disappears.

Compare: opens a dialog box to compare the preset on-air with another preset.

This command is only available if 8200 PC is connected to a remote 8200 and the 8200 allows Modify Processing access.

Clicking on Compare immediately puts on-air the unmodified version of a previously changed (but not saved) preset.

8200 PC also provides a “Compare” dialog box which allows you to choose any other factory or user preset to compare the on-air preset against. From the “Compare” dialog box, click on a preset name to place it on the box's “Next Is:” line, then press the Compare option to hear preset. Press the Compare option again to hear the previous on-air preset. When finished, press Done to exit the dialog box, and put the original preset on the air.

You can also open the “Compare” dialog box by doing the following:

- Click on the Compare button.

Compare Dialog Box

When you choose the Compare command, a dialog box opens with the following options:

Compare list box: selects a preset to put on-air (with this dialog box's Compare command), so that it can be compared to “On Air:” preset. Selected preset will appear on the “Next Is:” line.

Compare button: puts the Next Is: preset on the air, so that it can be compared with the previous preset. When you click on Compare, the “Next Is:” preset will appear on the “On Air:” line. The previous “On Air:” preset will become the “Next Is:” preset, so that you can continue switching between the presets.

Save: opens a dialog box to name and save the current preset and modifications made to it (if any) to one of 32 user preset locations.

This command is only available if 8200 PC is connected to a remote 8200 and the 8200 allows Modify Processing access.

From the “Save Preset” dialog box, edit the name of the preset to be saved, if desired. Then select the destination location. Click on OK to save it (or press Cancel if you decide not to save it). Saving a preset overwrites the previous settings for that preset location.

You can also save a preset by doing the following:

- Click on the Save button.
- Click on Save Changes option and then click on OK — this prompt occurs when recalling a preset after modifying the current preset.

Save Preset Dialog Box

When you choose the **Save** command, a dialog box opens with the following options:

Edit Name: allows you to rename current preset, before it is saved to a user preset number. If you do not assign a new name, the name in the “Edit Name” box will be used.

Select Preset to Save Into: selects the destination preset to be used for the save operation. The contents of this position will be overwritten upon saving the new preset to this location.

Save: stores the new settings in the selected user preset.

Cancel: closes “Save Preset” dialog box, without saving.

Setup Menu

The Setup menu offers the following commands to edit functions in the 8200 system.

These commands are only available if 8200 PC is connected to a remote 8200 and the 8200 allows Program System Setup.

I/O Calibrate: opens a dialog box to 8200 system operating parameters.

Clicking on **I/O Calibrate** opens a dialog box divided into four sections of adjustable parameters: Analog, Miscellaneous, AES/EBU and Composite.

When finished adjusting **I/O Calibrate**, click on **Done** in the dialog box to implement the new settings (or click on **Cancel** to ignore adjusted settings).

Refer to Section 3 of the 8200 Manual for detailed information on each Analog parameter.

I/O Calibrate Dialog Box

The **I/O Calibrate** controls are divided into four sections: Analog, Miscellaneous, AES/EBU and Composite.

Analog Section

The following Analog parameters can be changed:

Input Clip Level: [+5 dBu to +27 dBu] or [-17 dBu to +5 dBu], jumper-selectable; in 0.5dB steps.

Calibrates the level at which the OPTIMOD's A/D (Analog-to-Digital) converter clips to the absolute maximum peak level that your installation supplies to the OPTIMOD's analog input.

(**Note:** This parameter is equivalent to A-I CLIP LVL on OPTIMOD's I/O CALIB screen and is also included on OPTIMOD's QUICK SETUP.)

Input Reference Level: [-18dBu to +20.5dBu] or [-40dBu to -1.5dBu], jumper-selectable, in 0.5dB steps.

Sets the center of OPTIMOD's gain reduction range to the level to which your studio operators peak their program material on the studio meters.

This assures that OPTIMOD's processing presets will operate in their preferred range.

(**Note:** This parameter is equivalent to A-I REF LVL on OPTIMOD's I/O CALIB screen and is also included on OPTIMOD's QUICK SETUP.)

Input Right Chan Bal: [-3dB to +3dB] on right channel only, 0.1dB steps.

Sets gain of right channel only.

(**Note:** This parameter is equivalent to A-I BAL CH R on OPTIMOD's I/O CALIB screen; it is not included on OPTIMOD's QUICK SETUP.)

Output 100% Level: [-6dBu to +24dBu].

Adjusts the analog left/right output level. The level indication on the screen is the maximum peak output level that the processing will produce to modulate the transmitter to 100% peak modulation.

(**Note:** This parameter is equivalent to A-O 100% LVL dBu on OPTIMOD's I/O CALIB screen and is not included on OPTIMOD's QUICK SETUP.)

Output: [Flat, Pre-emphasized].

Controls whether the analog left/right outputs produce a FLAT signal, or a Pre-emphasized signal, following the pre-emphasis set with Pre-Emphasis control.

(**Note:** This parameter is equivalent to A-O on OPTIMOD's I/O CALIB screen and is not included on OPTIMOD's QUICK SETUP.)

Pre-Emphasis: [50 ms, 75 ms].

Controls the pre-emphasis of the internal processing's high-frequency limiters, and the pre-emphasis of the stereo encoder's output. It does not control whether analog left/right outputs are flat or pre-emphasized; they are controlled by Output control.

(**Note:** This parameter is equivalent to PRE-EMPHASIS μ -SEC on OPTIMOD's I/O CALIB screen and is also included on OPTIMOD's QUICK SETUP.)

Miscellaneous Section

The following Miscellaneous parameters can be changed:

Input: [Analog, Digital].

Sets the analog inputs or the AES/EBU digital input as the audio source.

(**Note:** This parameter is equivalent to INPUT-A or -D on OPTIMOD's I/O CALIB screen; it is not included on OPTIMOD's QUICK SETUP.)

Studio Chassis: [No, Yes].

Tells the OPTIMOD if you have a studio chassis (e.g., an Orban 8200ST OPTIMOD-Studio, or similar AGC) installed at your studio feeding the studio-to-transmitter link.

(**Note:** This parameter is also on OPTIMOD's front panel QUICK SETUP menu.)

Studio Meters Are: [VU, PPM].

Sets OPTIMOD's meters to display readings according to VU metering or PPM metering standards.

(**Note:** This parameter is also included on OPTIMOD's QUICK SETUP menu.)

Meters Indicate: [Ref, Clip].

Controls whether the left/right input level meters indicate Clip level or Reference level.

(**Note:** This parameter is not included on OPTIMOD's front panel QUICK SETUP menu.)

Clock Sync To: [Line, Crystal].

Synchronizes OPTIMOD's real-time clock to AC line frequency or the internal crystal oscillator.

(**Note:** This parameter is not included on OPTIMOD's QUICK SETUP.)

AES/EBU Section

The following AES/EBU parameters can be changed:

Input Ref-Pk Level: [-20 dBu to 0 dBu], in 0.5dB steps].

References the incoming audio from -20dBu to 0dBu of the maximum allowable digital word.

(**Note:** This parameter is equivalent to D-I REF-PK LVL dB on OPTIMOD's I/O CALIB screen; it is only available if an Orban 8200D/SRC or 8200D/32 Digital I/O card is installed.)

Output 100% Level: [-22.8 to 0dB], in 0.1dB steps.

Attenuates the digital output from the standard 100% reference level (which is 3dB below maximum digital word).

(**Note:** This parameter is equivalent to D-O 100% LVL dB on OPTIMOD's I/O CALIB screen; it is only available if an Orban 8200D/SRC Digital I/O card is installed.)

Samp Rate Out: [Sync, 32kHz, 44.1kHz, 48kHz, 32 Sync].

Sets the data rate of OPTIMOD's digital output to Sync, 32kHz, 44.1kHz, 48kHz, or 32 Sync.

(**Note:** This parameter is equivalent to D-O SAMPLING RATE on OPTIMOD's I/O CALIB screen; it is only available if an Orban Digital I/O card is installed. Note that the 8200D/32 supports only

32kHz sampling rate, whereas 8200D/SRC supports Sync To Input, 32kHz, 44.1kHz, 48kHz, 32kHz Sync.)

If No Sync: [32, 44.1, 48].

Determines the digital output sample rate when no digital signal is present at the input.

(**Note:** This parameter is equivalent to D-O IF NO SYNC on OPTIMOD's I/O CALIB screen; it is only available if an 8200D/SRC Digital I/O card is installed.)

Word Length: [14, 18].

Sets digital output as a 14-bit or 18-bit word.

(**Note:** This parameter is equivalent to D-O WORD LENGTH on OPTIMOD's I/O CALIB screen; it is only available if an Orban 8200D/SRC Digital I/O card is installed.)

50/75 Pre-E: [Flat, Pre-emphasized].

Sets whether the digital output remains pre-emphasized, or is de-emphasized to produce a flat response.

(**Note:** This parameter is equivalent to D-O 50/75 PRE-E on OPTIMOD's I/O CALIB screen; it is only available if an Orban 8200D/SRC Digital I/O card is installed.)

J17 Pre-E: [Flat, Pre-emphasized].

Applies J.17 pre-emphasis to the digital output, independently of the Pre-Emphasis control setting.

(**Note:** This parameter is equivalent to D-O j.17 PRE-EMPH on OPTIMOD's I/O CALIB screen; it is only available if a DSRC card is installed.)

Composite Section

The following Composite parameters can be changed:

Mod Type: [Mono L, Mono R, Stereo].

Sets the OPTIMOD for mono or stereo operation.

(**Note:** This parameter is equivalent to MODULATION TYPE on OPTIMOD's I/O CALIB screen; it is not included on OPTIMOD's QUICK SETUP.)

Pilot switch: [Off/On].

Turns OPTIMOD's 19kHz stereo pilot tone on or off. Use **Setup: Update Pilot** to see changes reflected on 8200 Pilot Meter.

Adjust pilot level on the stereo encoder with the screwdriver-adjustable control on OPTIMOD's front panel. This level cannot be adjusted with 8200 PC.

(**Note:** This parameter is equivalent to PILOT ON/OFF on OPTIMOD's I/O CALIB screen; it is not included on OPTIMOD's QUICK SETUP.)

TX1 Over Comp: [-20% to 0%], 0.5% steps.

Reduces program modulation on both the analog and (optional) digital output by the percentage programmed when the Remote Interface is activated.

(**Note:** This parameter is equivalent to OSHOOT TX1 COMP % on OPTIMOD's I/O CALIB screen; it is not included on OPTIMOD's QUICK SETUP.)

TX2 Over Comp: [-20% to 0%], 0.5% steps.

Reduces program modulation on both the analog and (optional) digital output by the indicated percentage, without reducing the on-air modulation of the OPTIMOD's 100% calibration tone.

(**Note:** This parameter is equivalent to OSHOOT TX2 COMP % on OPTIMOD's I/O CALIB screen; it is not included on OPTIMOD's QUICK SETUP.)

SCA1 Mod Comp: [-20% to 0%], 0.5% steps.

Reduces program modulation on both the analog and (optional) digital output by the percentage programmed when the Remote Interface is activated.

(**Note:** This parameter is equivalent to SC1 MOD COMP % on OPTIMOD's I/O CALIB screen; it is not included on OPTIMOD's QUICK SETUP.)

SCA2 Mod Comp: [-20% to 0%], 0.5% steps.

Reduces program modulation on both the analog and (optional) digital output by the percentage programmed when the Remote Interface is activated.

(**Note:** This parameter is equivalent to SC2 MOD COMP % on OPTIMOD's I/O CALIB screen; it is not included on OPTIMOD's QUICK SETUP.)

Remote Interface: opens a dialog box for programming the 8200's remote control interface and its eight (8) opto-isolated inputs.

This command is only available if 8200 PC is connected to a remote 8200 and the 8200 allows Program System Setup access.

When finished setting remote interface presets, click on Update OPTIMOD from the "Remote Interface" dialog box to implement the new settings (or click on Cancel to ignore the settings).

Remote Interface Dialog Box

When you choose the Remote Interface command, a dialog box opens which features eight boxes to set 8200 PC's eight opto-isolated inputs. These allow you to direct the 8200 to perform certain functions when a voltage (6-24V) is presented to the input.

Choose from the following functions:

PRESET NUMBER AND NAME: switches that preset on the air. Any test preset, factory or user programming preset may be recalled by the control interface. A momentary pulse of voltage will switch this function.

BY BYPASS: switches the 8200's Bypass preset on. A momentary pulse of voltage will switch this function.

TO USER TONE: switches the 8200's User Tone on. A momentary pulse of voltage will switch this function.

ST STEREO: switches the 8200's stereo encoder on. A momentary pulse of voltage will switch this function.

ML MONO FROM LEFT: switches the 8200's stereo encoder off, using the left input as the program source. A momentary pulse of voltage will switch this function.

MR MONO FROM RIGHT: switches the 8200's stereo encoder off, using the right input as the program source. A momentary pulse of voltage will switch this function.

ET EXIT TEST: If a test preset is switched on the air, EXIT TEST reverts to the previous processing preset.

01 OSHOOT TX1 COMP: reduces the program modulation by the percentage programmed in I/O CALIB. When voltage is removed, this function will be deactivated.

02 OSHOOT TX2 COMP: reduces the program modulation by the percentage programmed in I/O CALIB. When voltage is removed, this function will be deactivated.

S1 SC1 MOD COMP: reduces the program modulation by the percentage programmed in I/O CALIB. When voltage is removed, this function will be deactivated.

S2 SC2 MOD COMP: reduces the program modulation by the percentage programmed in I/O CALIB. When voltage is removed, this function will be deactivated.

IA INPUT ANALOG: selects the analog inputs as the audio source. A momentary pulse of voltage will switch this function.

ID INPUT DIGITAL: Selects the AES/EBU digital input as the audio source. A momentary pulse of voltage will switch this function.

RH RESET CLOCK TO HOUR: Resets the internal clock to the nearest hour. For example, 3:03:10 would be reset to 3:00:00, while 3:53:10 would be reset to 4:00:00. (**Note:** Times of 20 minutes after the hour through 20 minutes to the hour are not affected by this function.) A momentary pulse of voltage will switch this function on the leading edge of the pulse.

RM RESET CLOCK TO 00:00:00: Resets the internal clock to midnight. In 12 hour time, this is shown as 12:00:00A; in 24 hour time, this is shown as 00:00:00. A momentary pulse of voltage will switch this function on the leading edge of the pulse.

System Information: Use this command to open a dialog box — labeled “Processor Information” — that contains configuration information about the

8200 currently connected.

This command is only available if 8200 PC is connected to a remote 8200.

Click on OK when finished viewing “Processor Information” dialog box.

System Information Dialog Box

When you choose the System Information command, a dialog box opens with the following information:

Software Version: The “Software Version” line notes the version of software operating on the remote 8200. Modules which support 8200 PC Remote Software are Software V3.0, or higher.

Processing Structures: These lines note which processing structures are available. Protect Structure, Two-Band Purist Structure, Two-Band Normal Structure, Multi-Band (Five-Band) Structure.

I/O (Input/Output) Configuration: These lines note the type of inputs and outputs your OPTIMOD supports.

The OPTIMOD-FM 8200 DIGITAL is designed to simultaneously accommodate: (1) analog left/right inputs and outputs; (2) Digital AES/EBU left/right inputs and outputs; and (3) a stereo analog baseband composite output. Refer to 82000 Owner's Manual.

Each of these is accomplished with a plug-in card. The standard configuration includes analog in/out and stereo composite out. AES/EBU in/out is accommodated by a separate optional, user-installed card, available from your dealer.

DSP Cards: These lines show how many DSP Cards are installed in the OPTIMOD.

If your system has two DSP Cards (numbered 1 and 2), it supports the following processing structures: Protect Structure, Two-Band Purist Structure, Two-Band Normal Structure.

If your system has three DSP Cards (numbered, 1, 2 and 3), it supports the following processing structures: Protect Structure, Two-Band Purist Structure, Two-Band Normal Structure, Multi-Band (Five-Band) Structure.

Stereo Encoder: This line verifies that the Stereo Encoder (Generator) Card is installed in the OPTIMOD.

Overshoot TX1 and TX2 Compensation: These lines show the status of the OPTIMOD's OverSHOOT TranXmitter 1 and 2 COMPensation controls.

The controls will be listed as ACTIVE or INACTIVE. If they are ACTIVE, they will reduce program modulation on both Composite Output 1 and 2 by the percentage programmed (in the “I/O Calibrate Composite” dialog box) when the Remote Interface is activated.

SCA 1 and 2 Modulation Compensation: These lines show the status of the OPTIMOD's SubCarrier 1 and 2 MODulation COMPensation controls.

The controls will be listed as ACTIVE or INACTIVE. If they are ACTIVE, they will reduce program modulation by the percentage programmed (in the “I/O Calibrate Composite” dialog box) when the Remote Interface is activated.

Program Automation: opens a dialog box to program automated changes of presets at scheduled times.

Add events and edit them accordingly, or delete events, using the “Program Automation” dialog box.

When finished adjusting automation, click on OK in the dialog box to implement the new settings (or click on Cancel to ignore adjusted settings).

Program Automation Dialog Box

When you choose the Program Automation command, a dialog box opens with the following options:

Status: [Disabled] or [Enabled]. Deactivates or Activates automated program changes.

Select **Disable** to deactivate automated program changes set with Program Automation.

Select **Enable** to activate automated program changes set with Program Automation.

Add Event: Inserts a new line above the selected line. Use **Edit Event** to adjust when the event will happen and what event (i.e., preset) will occur.

Delete Event: Deletes highlighted event from automation list.

Edit Event: Opens “Edit Event” dialog box which allows you to set Date Event or Daily Event.

Edit Event Dialog Box

When you click the **Edit Event** button (from the “Program Automation” dialog box), a dialog box opens with the following options:

Date Event: selects event to occur on a specific date. Click on Date, Month and Year up/down buttons to set the date; click on Hr., Min., and Sec. up/down buttons to set the time.

Daily Event: selects event to occur on one or more days a week. Click on SMTWTFS check boxes to select one or more days; click on Hr., Min., and Sec. up/down buttons to set the time.

Event Box: selects the event. Use the scroll bar to search through the event list, then select the desired event by clicking on it.

Click on **Enter Change** to retain settings, or click on **Cancel** to exit “Edit Event” dialog box without saving changes.

Enable/Disable Automation: Activates or deactivates automated program changes.

The Enable Automation command is only available if 8200 PC is connected to

a remote 8200, the 8200 allows Program Automation access, and Automation is currently disabled

The Disable Automation command is only available if 8200 PC is connected to a remote 8200, the 8200 allows Program Automation access, and Automation is currently enabled.

Select Enable Automation to activate automated program changes set with Program Automation.

You can also enable automation by doing the following:

- Clicking on Enable Automation button in the “Program Automation” dialog box.

Select Disable Automation to deactivate automated program changes set with Program Automation.

You can also disable automation by doing the following:

- Clicking on Disable Automation button in the “Program Automation” dialog box.

This command is only available if 8200 PC is connected to a remote 8200 and the 8200 allows Program System Setup access.

Help Menu

The Help menu offers the following commands that provide assistance with 8200 PC.

These commands are always available from the 8200 PC main window (as long as a dialog box isn't open).

Contents: offers a list of 8200 PC topics on which help can be obtained.

About PC Remote: displays the version number of 8200 PC software that is currently running.

Section 4

Troubleshooting

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Troubleshooting

Unsuccessful Connection

1. Check that all hardware and software steps were completed correctly.
 - A) Verify your OPTIMOD 8200 is password protected with a passcode.
 - B) Verify passcodes are valid.
 - C) Make sure cables are fully connected.
 - D) For direct connections of computer to 8200, make sure you use a null modem (“reverse”) cable. A regular cable will not work.
2. Note any 8200 PC error messages that appear when attempting to connect, then check if they are listed in “Screen Messages” (on the following page); If listed, consider the information and solutions, then proceed as necessary.
3. If your 8200 PC is not communicating correctly with the OPTIMOD, you may need to change the default modem init string. (Refer to step “5. Configure 8200 PC for a Particular OPTIMOD,” in Section 2.)
4. If your OPTIMOD-FM 8200 does not answer, verify on the 8200 that the **I/O CALIB MODEM INIT** is set for the appropriate string for your modem:

For 100% Hayes-compatible modems, use the 8200 front panel to access the I/O CALIB MODEM INIT screen, and press USE DEFAULT. For other modems, do not use the default; reset the MODEM INIT string (Refer to the modem's manual).

With the modem connected to the 8200 (modem plugged into the 8200's RS-232 connector), its AA (Auto Answer) light comes on within 10 seconds and stays on. If the AA light doesn't come on and/or the received data light (often labeled RD or RX), flashes at regular intervals, something is wrong with the init string.

In this case, access the I/O CALIB MODEM INIT screen, and reset the MODEM INIT string for the following parameters: recall factory preset, echo off, and auto-answer (Refer to the modem's manual).
5. If the modem init string is set correctly, and 8200 PC and the OPTIMOD-FM 8200 still do not negotiate successfully, make sure the modem is set for V.42 operation only.
6. Some older systems may have serial ports that do not support buffering features. Because Windows does not detect whether your serial port supports buffering features, you may need to disable the FIFO buffer for

the com port you will be using.

- a) Click on Start.
- b) Click on Settings.
- c) Click on Control Panel.
- d) Double-click on the “System” icon.
- e) Click on the Device Manager tab.
- f) Double-click on Ports.
- g) Double-click on the Comm port you wish to use.
- h) Click on the Port Settings tab.
- i) Click on Advanced.
- j) Disable the FIFO buffer by clicking the check box to remove the check mark next to “Use FIFO buffers (requires 16550 compatible UART).”
- k) Click OK three times, which will close the open windows.
- l) Close the Control Panel Window.

Invalid Security Access

If an invalid passcode is entered in the “Passcode” field of the “Edit Settings” dialog box, 8200 PC access will be denied. In this case, you will see a series of message boxes on the screen. The first box is a Communications Error message that asks you if it is OK to disconnect. Press OK to disconnect. Then press OK again to close the second message box, Negotiation Failed.

Valid passcodes are passcodes previously set on 8200's front panel SET PASCODE.

Note that if Passcode entry field is left blank, users will be prompted for a valid passcode when trying to connect.

For successful connections:

The OPTIMOD 8200 must have passcodes. 8200 PC does not connect to 8200s that cannot be locked out (i.e., 8200s that do not have passcodes). If necessary, program 8200 with passcodes using its front panel SET PASCODE controls;

and

Passcodes entered in 8200 PC “Edit Settings” dialog box must match passcodes set on the 8200 front panel (using SET PASCODE).

Screen Messages

Access Denied: Unauthorized Passcode.

This occurs if you do not enter an authorized passcode when attempting to connect to an OPTIMOD-FM 8200.

This message appears in one of the following manners:

- When an invalid passcode was previously entered in the “Passcode” field of the Manage: Settings “Edit Settings” dialog box, and you attempt to connect to the associated “OPTIMOD Name.”

In this case, return to the Manage: Settings “Edit Settings” dialog box, and enter in a valid passcode for the particular “OPTIMOD Name.”

- When entering an invalid passcode into the “Enter Passcode” dialog box (which appears when attempting to connect to an “OPTIMOD Name” that was not assigned a passcode in the Manage: Settings “Edit Settings” dialog box).

In this case, retry connecting and enter in a valid passcode when prompted.

Are you sure you want to disconnect?

This appears whenever you prompt a disconnection, in one of the following manners:

- Click on File: Exit, when connected
- Click on Manage: Disconnect
- Click on Disconnect button.

You will be presented with two choices:

[OK]: Click on OK if you are ready to disconnect.

[Cancel]: Click on Cancel if you are not ready to disconnect.

Canceling IO Calibrate settings may cause an abrupt change to the audio on-air.

This appears when you choose Cancel from the “I/O Calibrate” dialog box (whether you have made changes or not).

You will be presented with two choices:

[OK]: Click on OK if you want to cancel any changes made within the “I/O Calibrate” dialog box. On-air sound will revert to previous on-air sound.

[Cancel]: Click on Cancel if you to keep any changes made in “I/O Calibrate” dialog box (i.e., you want to “cancel” losing changes).

Can't find muscroll.dll

This file, part of the 8200 PC installation, was not found in the directory where 8200 PC is installed. We recommend you copy it directly from the installation disk to the directory where 8200 PC.EXE is installed.

Communications Error, "Problem Description," OK To Disconnect.

This error will happen if a problem occurs with the connection between the computer and the 8200. The "Problem Description" in the message may be useful by Orban's customer service department for diagnosing a recurring problem.

COM Port Initialization Failed

The software was unable to establish communication with the COM port hardware on the computer. Check to make sure no other software is using the Communication port or the Communication port is correctly configured in the "Edit Settings" dialog box.

8200 Has Ended Connection

This means that a person has entered a passcode on the 8200 while it was connected to 8200 PC software. This is unavoidable if a person does this at the 8200.

Otherwise, OPTIMOD 8200 software has corruption.

Negotiation Failed

This may occasionally happen when the 8200 attempts to make a direct connection. Try connecting again.

You must enter a Facility Name in the Manage Settings dialog before connecting.

Press OK, then return to the Manage: Settings "Edit Settings" dialog box and enter a Facility Name in the "Facility Name" field.

Technical Support

If you require technical support, contact Orban customer service. Be prepared to accurately describe the problem. Know the software version of your 8200 PC software (refer to the Help menu's About PC Remote submenu command), as well as the software version of your OPTIMOD-FM 8200 software module (refer to System Information command in the Setup menu).

Contact Information:

Telephone (1) 510/351-3500

or Write: Customer Service
Orban

or Fax: (1) 510/351-1001

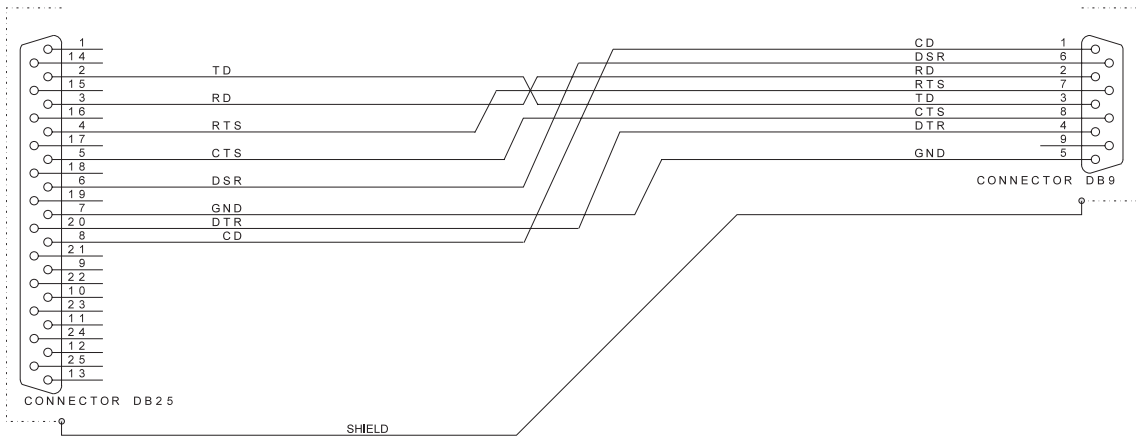
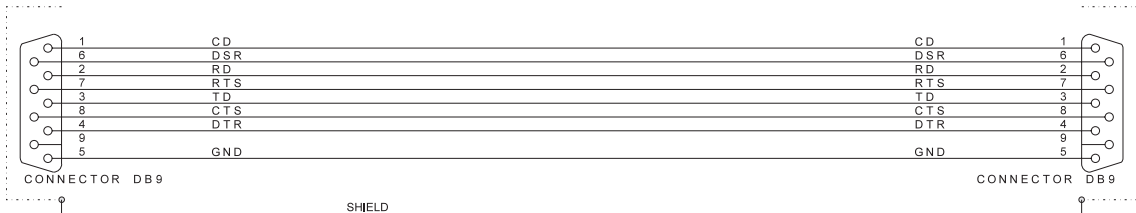
1525 Alvarado
San Leandro CA 94577
USA

Appendix 1 Cables (Diagram)

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Cables

Normal Serial Cable Wiring



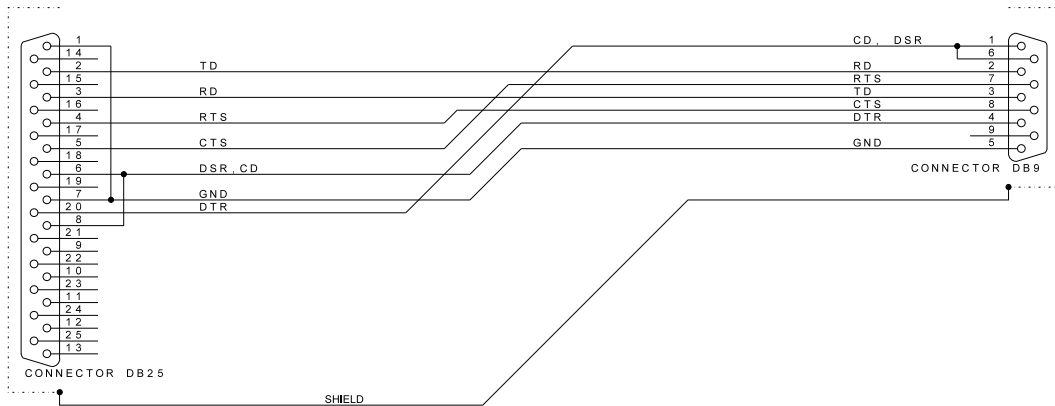
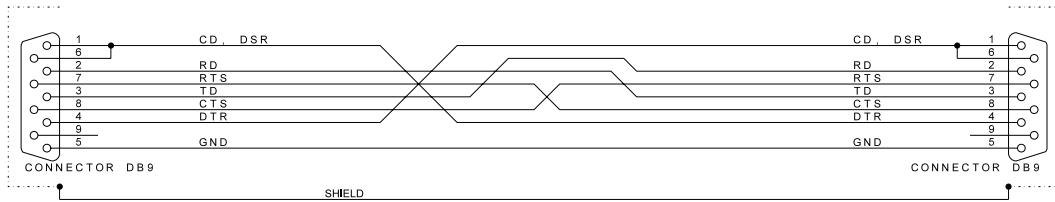
Normal Serial Cable Wiring

Signal

Name

CD	(Data) Carrier Detect
DSR	Data Set Ready
RD	Receive Data
RTS	Request to Send
TD	Transmit Data
CTS	Clear to Send
DTR	Data Terminal Ready
GND	(Signal) Ground

Null Modem Cable Wiring



Normal Serial Cable Wiring

Signal

Name

CD	(Data) Carrier Detect
DSR	Data Set Ready
RD	Receive Data
RTS	Request to Send
TD	Transmit Data
CTS	Clear to Send
DTR	Data Terminal Ready
GND	(Signal) Ground

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Appendix 2

Modems

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Modems

Choosing Modems

The following modems have been tested for use with 8200 PC and OPTIMOD-FM 8200. The second column refers to the 8200 PC Settings “Advanced Modem Settings” dialog box and the recommended Modem Type field settings.

<i>Modem Name</i>	<i>8200 PC Settings Modem Type Field</i>
Boca	Hayes
Hayes Accura 144	Hayes
US Robotics Sportster 28800	US Robotics
US Robotics Courier HST Dual Standard	US Robotics
Zyxel	Hayes

As we are continually testing other modems, please feel free to call us at (1) 510/351-3500 if you have any questions in regards to running 8200 PC and OPTIMOD-FM 8200 with any modem.

If you are having problems negotiating software connections with any of these modems, or a different modem, refer to the following text (and to related sections in the manual).

Customizing Your PC Modem String

When configuring 8200 PC Software for a particular OPTIMOD (Installation step 5) you are provided with the option of using 8200 PC's default modem settings or customizing the modem settings via 8200 PC's “Advanced Modem Settings” dialog box. 8200 PC will operate properly with most modems if its “Advanced Modem Settings” are left at their default values. If your 8200 PC modem is not communicating correctly with the OPTIMOD, a new custom init string should be entered.

Note: The following steps deal specifically with changing your PC's Modem String. For information on other “Advanced Modem Settings,” refer to Section 2 and 3.

1. Open 8200 PC's "Advanced Modem Settings" dialog box and Custom Modem String field from your computer.

- a) Open 8200 PC's Manage: Settings "Edit Settings" dialog box.
- b) Verify all settings in the "Edit Settings" dialog box are correct. (Refer to Installation step 5, page 2-5.)
- c) Click on Advanced to open "Advanced Modem Settings" dialog box (this dialog box is only available if Modem is selected in "Edit Settings" dialog box).
- d) Click on Custom button.

2. Enter in a new Custom Modem String.

Before you enter in the new string for the modem connected to your PC, consider the following information.

(Refer to the modem's manual for its AT commands. Refer to the list above — and the full listing in Appendix 2 — of modems and init strings that have been tested for use with 8200 PC and OPTIMOD 8200.)

Select LAPM error correction with no compression to ensure data integrity. Make sure V.42 is selected.

Your modem must not be allowed to fall back to a communication protocol that doesn't support error correction. Set control on modem to hang up if it is unable to communicate at V.42 protocol. This is how the default string is set, so that it will work with a wide range of Hayes AT-set and S-register compatible modems.

You may also want to consider using an init string that works with another modem (refer to the list of modems we have tested and their init strings).

3. Click on OK when you have completed the "Advanced Modem Settings" dialog box.

4. Click on OK in the "Edit Settings" dialog box.

5. Connect 8200 PC to an OPTIMOD from your computer.

[Refer to Installation step 6, page 2-9.]

If your 8200 PC modem is not dialing out correctly, make sure you correctly executed step 2 (at the top of this page).

If your OPTIMOD-FM 8200 does not answer, open the OPTIMOD's front panel I/O CALIB MODEM INIT screen, press Default, then press ESC repeatedly until you return to the IDLE screen. If it still does not answer, refer to the manual for the modem connected to the 8200 to determine how to set this modem for the following: recall factory preset, echo off, and auto-answer.

If you require technical support or assistance, contact Orban Customer Service: Telephone: (1) 510/351-3500 or Fax: (1) 510/351-1001.