

Installation Instructions

8200 UPG/2S3S

For OPTIMOD-FM 8200 DIGITAL

Purpose: Upgrade from Two-Band to Multi-Band

Important: The UPG/2S3S kit will automatically provide you with the latest version of 8200 software. Refer to page 5.

Important: DO NOT remove the new 3S software module or the DSP Card from their anti-static packaging at this time!

These instructions will guide you through the installation of the 3S software module and DSP Card into OPTIMOD-FM 8200. Installation consists of opening the unit, replacing the software module on the control board, inserting the DSP Card and closing the unit. No soldering or test equipment is required.

If you do not have experience working with broadcast equipment containing CMOS semiconductors, please refer installation to qualified personnel. Read these instructions completely before proceeding.

UNPACKING AND PREPARATION

The 8200 UPG/2S3S package includes the following:

3S Software Module

DSP Card

Special Modification Sticker (labeled "CONVERTED TO 3S VERSION")

8200 UPG/2S3S Installation Instructions

Warranty Certificate/Registration Card

8200PC Software 3 1/2" Diskette

8200PC Operating Manual

You will need the following:

#1 Phillips screwdriver

3/16-inch flat screwdriver

Note: Some units will require a 1/16-inch hex wrench to open the front panel.

Note: Refer to the 8200PC Operating Manual for hardware and system requirements to run 8200PC.

Allow about 20 minutes to perform installation of the new module and DSP Card. Allow at least another hour if you do not intend to keep your present setup and preset data. Although there is no need to remove the OPTIMOD-FM unit from its mounting rack, the power must be turned off.

P/N 95337-120-03
25 - IHP - 2/95

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INSTALLATION

Important: Perform the installation under static control conditions. Simply walking across a rug can generate a static charge of 20,000 volts. This is the spark or shock you may have felt when touching a doorknob or some other conductive item. A much smaller static discharge is likely to completely destroy one or more of the CMOS semiconductors employed in OPTIMOD-FM or the software module. Static damage will not be covered under warranty.

There are many common sources of static. Most involve some type of friction between two dissimilar materials. Some examples are combing your hair, sliding across a seat cover or rolling a cart across the floor. Since the threshold of human perception for a static discharge is 3000 volts, many damaging discharges will not even be noticed.

Basic damage prevention consists of minimizing generation, discharging any accumulated static charge on your body or work station and preventing that discharge from being sent to or through an electronic component. A static wriststrap (grounded through a protective resistor) and a static safe workbench with a conductive surface should be used. This will prevent any buildup of damaging static.

To install the 3S Software Module and a third DSP Card into your OPTIMOD-FM 8200, carefully complete the following steps:

Copy down the 8200's A-O 100% LVL dB setting and all Digital I/O settings (if a D/32 or D/SRC card is installed).

[Skip this step if your 8200 is running Software Version V1.2 or higher.]

The resolution and scaling of these parameters have been improved. When you upgrade to V1.2, or higher, old settings are not retained because these parameters now have more settings than they previously did.

Access the 8200's front panel I/O CALIB screen.

Copy down the A-O 100% LVL dB setting and all Digital I/O settings (if a D/32 or D/SRC card is installed).

When you have completed installation, re-enter the settings you copied down. Then fine-tune the parameters, using the upgrade's increased resolution.

Open the front panel.

Remove the six screws at the top and bottom of the front panel. Save the screws.

Grasp the edges of the front panel, pull slightly forward, and, while holding the panel vertical, guide it forward and downward on its supports. Then rotate the top of the panel toward you and down until it rests on its supports.

Switch the power switch to OFF

Check that the internal AC POWER switch is set to OFF (not

depressed). The power switch is the chrome push-button switch located inside the unit on the right-hand side.

Temporarily remove the cardboard transit protection block (if present).

Lift up on the edge nearest the front panel to clear the chassis lip and slide the block away from the cards.

Remove the Control Board from OPTIMOD-FM.

Locate the card. The Control Board, slot #A9, is the card furthest to the right when facing the unit.

Grasp the handle on the Control Board and pull it towards you to unplug it. Pull it slightly forward to gain access to the cable connecting the Control Board to the Display Board and carefully remove the plug without pulling on the cable.

Wearing the static wriststrap, slide the Control Board out of OPTIMOD-FM and place it on the work area. If you are not using a wriststrap, be sure that you touch a grounded surface with your free hand before proceeding.

Remove the software module.

Locate the software module. The software module is attached to the Control Board by a screw and plugged into a connector on the Control Board.

Using the flat screwdriver, remove and reserve the screw attaching the software module to the Control Board.

Slide the existing software module out of the connector on the Control Board and set it aside.

Install the new software module.

Remove the new software module from its protective packaging.

Align the new module with the connector on the Control Board and plug it in.

Replace the attaching screw.

Re-install the Control Board.

Slide the Control Board into its guide rails and plug in the cable from the Display Board. Push the Control Board completely in to engage its connectors.

Install the new DSP Card into slot #A7.

Slide the new DSP Card into the guide rails of slot #A7 (also labeled "DSP 3"). Push the DSP Card completely in to engage its connectors.

Re-insert the cardboard transit protection block.

Note that it is not necessary to permanently remove the transit block. The unit may be operated with the block in place.

Switch the power switch to ON

Check that the internal AC POWER switch is set to ON (depressed). The power switch is the chrome push-button switch located inside the unit on the right-hand side.

Reset Software. (Skip this step if the OPTIMOD-FM does not display the following screen.)

To retain the existing presets and setup data,
press SOFTWARE MODULE.

This is the option you most likely want to use.

This will update or enhance your software without erasing the currently saved data. This will allow you to continue using or to modify existing presets and system setup.

The display will then return to the IDLE screen.
Setup or processing changes may now be performed.

To erase existing presets and setup data, press
CONTROL BOARD.

WARNING: This will erase the currently saved data. You will have to repeat the setup and processing steps in Section 2 and Section 3 of your manual.

The display will then return to the IDLE screen.
Setup or processing changes may now be performed.

Attach the SPECIAL MODIFICATIONS sticker.

Place the special modifications sticker (labeled "CONVERTED TO 3S VERSION") on the upper left corner of the 8200 rear panel.

Close The Unit.

Rotate the panel until it is vertical. Raise the panel while guiding it on its supports.

Use the six screws to secure the front panel in place.

Install 8200PC Software for Windows™ in your computer (optional).

Refer to 8200PC Operating Manual.

Installation Completed!

V1.2 UPGRADE INFORMATION

Your new software module incorporates the following V1.2 software changes:

PC Remote Support:

8200PC Remote Control permits you to adjust any 8200 preset by remote control, or to do most anything else that you can do from the 8200's front panel controls. (Refer to the 8200PC Operating Manual.)

TIME TO SCREEN SAVER Changes:

The new default setting is 1:00 HRS. If the front panel controls are inactive for one hour, the screen will turn blank. To reactivate the screen display, press the ESC button. To change the default 1:00 HRS setting, use the TIME+ DATE screen. Note that the OFF setting has been eliminated.

Two-Band Normal Processing Change:

The AGC IDLE GR is now a value proportional to the AGC DRIVE, instead of a fixed value of -10dB.

LF noise is no longer detectable at low drive levels.

Two-Band Purist Processing Change:

The AGC IDLE GR is now a value proportional to the AGC DRIVE, instead of a fixed value of -10dB.

Five-Band Processing Changes:

The AGC IDLE GR is now a value proportional to the AGC DRIVE, instead of a fixed value of -10dB.

Bass boost at low signal levels has been eliminated.

A-O 100% LVL dB Change :

Resolution has been increased for more accurate level adjustment.

Cleaner Audio When Switching Between Analog and Digital Source Material:

V1.2 eliminates audible clicks previously present when changing between analog and digital.

AGC DRIVE Control in FULL CONTROL SCREEN:

The adjustable range of the AGC DRIVE control is now from -10 to 25, instead of 0 to 25, so that AGC drive level can be reduced below the point where no AGC gain reduction occurs.

DISABLE EBS/ENABLE EBS Buttons in MODIFY EBS Screen (as implemented in Software V1.1):

Pressing DISABLE EBS eliminates the EBS TEST button from the RECALL PRESET screen.

Software to Control the 8200D/SRC Digital Sampling Rate Converter (as implemented in Software V1.1):

To support 8200 usage with 32kHz, 44.1kHz and 48kHz digital sampling rates, six front panel adjustable control lines have been added to the I/O CALIB screen. These include D-O SAMPLING RATE, D-O IF NO SYNC IN, D-O 50/75U S PRE-E, D-O J.17 PRE-EMPH, D-O 100% LVL dB and D-O WORD LENGTH. Refer to the 8200D/SRC Installation Instructions for setup and operation information.

D-O 100% LVL dB Changes (made to Software V1.1 D/SRC controls):

The maximum level has increased from <F128M>- 2.75dBFS to 0dBFS (dBFS = dB with reference to digital full-scale). The scale reads <F128M>+ 2.75dB to <F128M>- 20dB, where 0dB matches the 0dB level of the previous version of the 8200D/SRC and the level of the 8200D/32 board.

Resolution has been increased for more accurate level adjustment.