
Read-This-First!

Installation Instructions

For upgrading the operating system of HP 83480A and HP 54750A mainframes.



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Introduction

This manual documents the Option 001 and Option 002 upgrade software which gives HP 83480A and HP 54750A mainframes the ability to use new modules. (Option 001 upgrades HP 83480A mainframes. Option 002 upgrades HP 54750A mainframes.)

Contents

Step 1. Update the Operating System	4
Step 2. Initialize Electrical Plug-in Modules	5
Step 3. Calibrate the Plug-in Module	6
New Features	7

Step 1. Update the Operating System

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1. Insert the Option 001 or 002 diskette in the mainframe's disk drive.
2. Press the front-panel SYSTEM **Utility** key.
3. Press the **System config . . .** softkey.
4. Press the **Update system firmware** softkey.
5. Press the **Continue** softkey, and wait for the installation to complete.

NOTE

This step will take approximately 7 minutes.

6. Remove the diskette from the disk drive.

Step 2. Initialize Electrical Plug-in Modules

CAUTION

DO NOT DO THIS STEP if you are installing a plug-in module that has an optical input connector. If you initialize a plug-in module that has an optical connector, you *must* return your module to a Hewlett-Packard Sales and Service Office for service.

1. If you have an HP 83481A or HP 83485A/B optical plug-in module skip this procedure and continue with “Step 3. Calibrate the Plug-in Module” on page 6.
2. Press the front-panel SYSTEM **Utility** key.
3. Press the **Service . . .** softkey.
4. Locate the bottom portion of the display which is labeled “Plug-ins”.
5. In the “Plug-ins” area, if any modules has **~known** as its model number, initialize the module using the following steps:
 - a. In the “Plug-ins” area, note the slot number used by the module.
 - b. Press the **Plug-in . . .** softkey.
 - c. Press the **Plug-in** softkey to select the slot number used by the module to be initialized.
 - d. Press the **Initialize plug-in memory** softkey.

Step 3. Calibrate the Plug-in Module

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1. Press the front-panel SYSTEM **Utility** key.
2. Press the **Calibrate . . .** softkey
3. Press the **Calibrate plug-in . . .** softkey.
4. Press the **Plug-in** softkey to select the plug-in to be calibrated.
5. Press the **Start cal** softkey, and follow the directions that appear on the display's top line.

New Features

The new mainframe manuals (provided with this upgrade) together with the module's manual document all new capabilities. For example refer to the *Programmer's Guide* for remote commands to control the new module. For older mainframes, the following general functions are added to the system:

- Best Flatness (*added to HP 54750A mainframes*)
- Variable Bandwidth Limit (*added to HP 83480A and HP 54750A mainframes*)

Best Flatness

Best Flatness is a new function located in the **Acquisition** menu. The samplers used in the HP 54750A and HP 83480A systems have a certain amount of passive feed through. This feed through is corrected by a compensation circuit. A small amount of feed through does remain after compensation and this causes slight non-flatness in a step response. Since averaging implies single-valued waveforms, the Best Flatness control takes advantage of this to further improve flatness. This is done by taking a sample with the samplers turned on and then with the samplers turned off. The two results are then subtracted thereby removing the residual non-flatness.

Variable Bandwidth Limit

The variable bandwidth limit filter is a software fourth-order lowpass Bessel filter. To locate the function, press **Math**, **Define function . . .**, and then **Operator**.

New Features