

Installation Note

Firmware Replacement Kit
08591-60103



**HEWLETT
PACKARD**

HP Part Number 08591-90174 Supersedes: 08591-90170
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PRODUCTS AFFECTED: HP 8591EM EMC analyzer
HP 8593EM EMC analyzer
HP 8594EM EMC analyzer
HP 8595EM EMC analyzer
HP 8596EM EMC analyzer

SERIAL NUMBERS: 3412A00000/9999A99999
3308A00000/9999A99999

TO BE PERFORMED BY: HP Service Center
 Personnel Qualified by HP
 HP Personnel On-site

ESTIMATED INSTALLATION TIME: 25 minutes

ESTIMATED VERIFICATION TIME: 5 minutes

Description

The firmware contained in this kit is revision D. The datecode for the revision D firmware is 96.07.09 which is in the format of YYMMDD. The datecode can be confirmed by using the following key sequence:

```
CONFIG
More 1 of 3
SHW INST CONFIG
```

Tools Required

Table 1. Required Tools

Description	HP Part Number
4-mm hex (Allen) wrench	8710-1755
Small (no. 1) pozidrive screwdriver	8710-0899
Large (no. 2) pozidrive screwdriver	8710-0900
TORX driver T-10	8710-1623
TORX driver T-15	8710-1622
Small flat-blade screwdriver	8710-0059

Installation Kit Parts List

Table 2 lists the parts shipped with the firmware replacement kit, HP part number 08591-60103.

Note The firmware in this kit consists of four 2-megabit ROMs, HP part numbers 08591-80061 to 08591-80064. It is to be used on processor boards with a part number of 08590-60362 or later.

Table 2. Firmware Replacement Kit Contents

Quantity	Description	HP Part Number
1	EPROM PRGMD U6	08591-80061
1	EPROM PRGMD U7	08591-80062
1	EPROM PRGMD U23	08591-80063
1	EPROM PRGMD U24	08591-80064
1	Installation note	08591-90174

Safety Considerations

WARNING Before you disassemble the instrument, turn the power switch OFF and unplug the instrument. Failure to unplug the instrument can result in personal injury.

CAUTION Electrostatic discharge (ESD) can damage or destroy electronic components. All work on electronic assemblies should be performed at a static-safe workstation. Refer to the documentation that pertains to your instrument for information about static-safe workstations and ordering static-safe accessories.

Installation Procedure

Removing the Instrument Cover

1. Disconnect the analyzer from ac power.

CAUTION To prevent damage to the front panel, use a soft cloth or towel between the work surface and the front panel.

2. Carefully place the analyzer on the work surface with the front panel facing down.
3. Remove the four screws and washers attaching the instrument cover to the rear frame. See Figure 1.
4. Unscrew, but do not remove, the four rear-feet screws, using a 4-mm hex wrench.

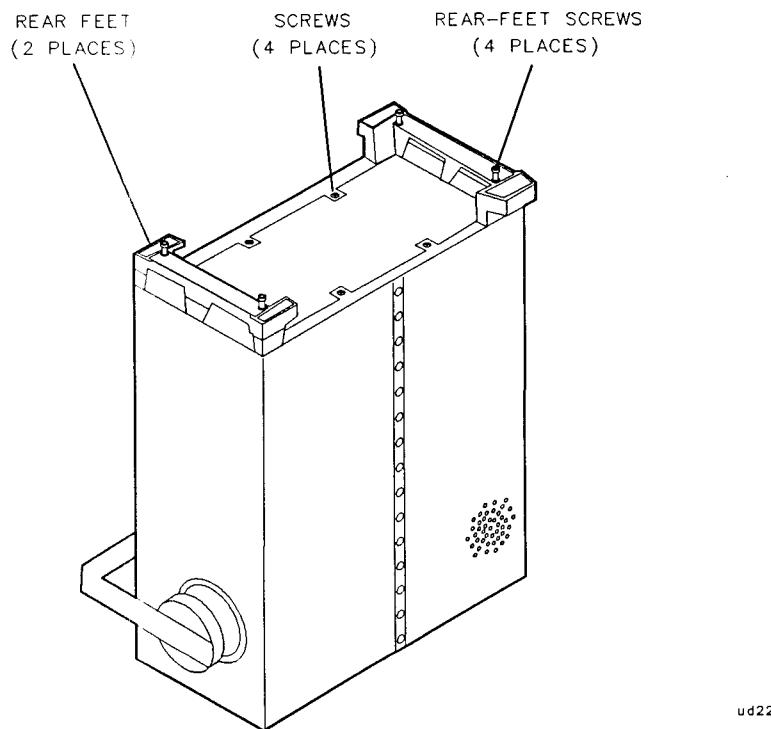
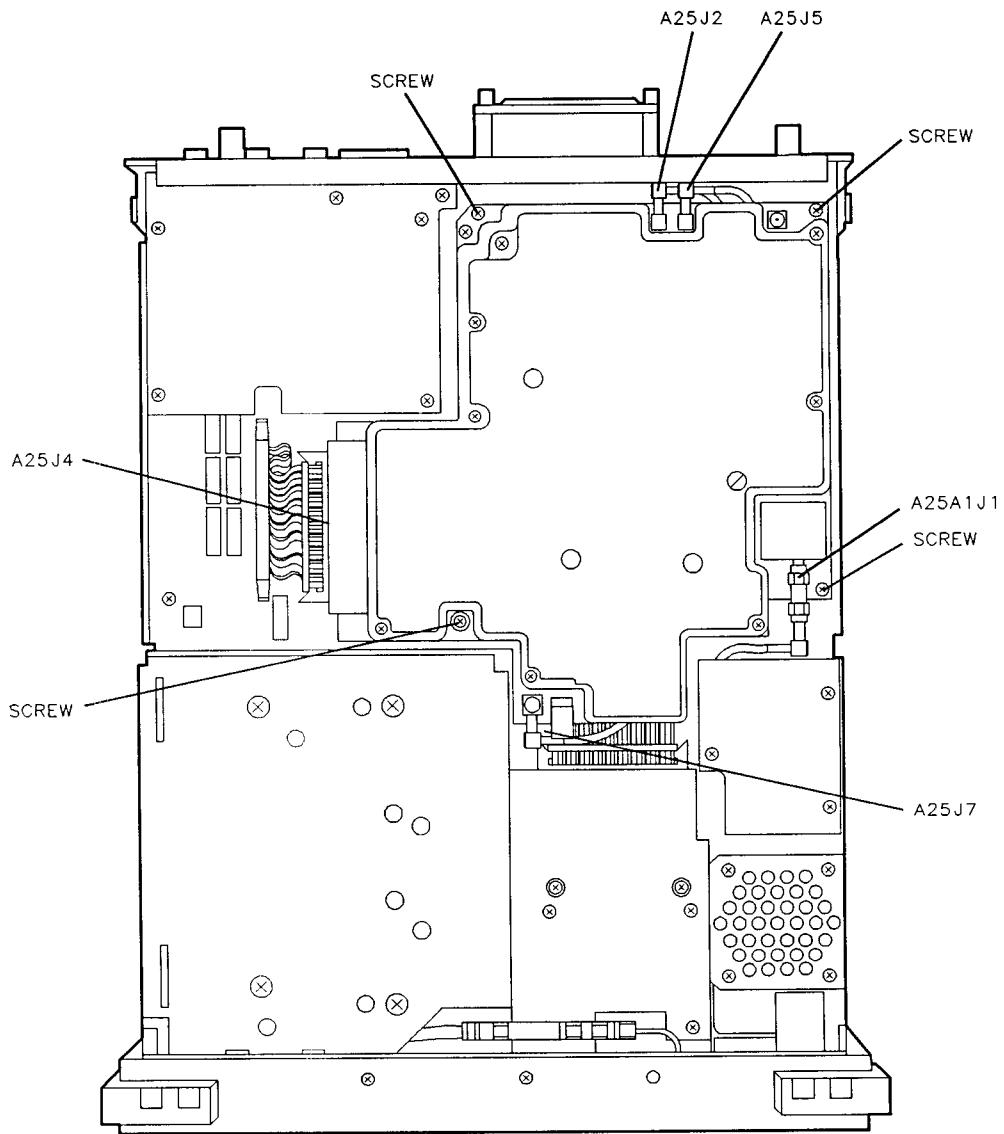


Figure 1. Removing the Instrument Cover

5. Pull the instrument cover off toward the rear of the instrument.

6. Disconnect W14 ribbon cable from A25J4. See Figure 2.
7. Remove the four screws securing the A25 counter-lock board assembly. Remove cables A25J2, A25J5, and A25J7 from the counter-lock board assembly. See Figure 2.
8. Move A25, the counter-lock board assembly, away from the analyzer chassis (cable A25A1J1 will still be attached to the counter-lock board assembly).



uq11cde1

Figure 2. Removing the Counter-Lock Board Assembly (A25)

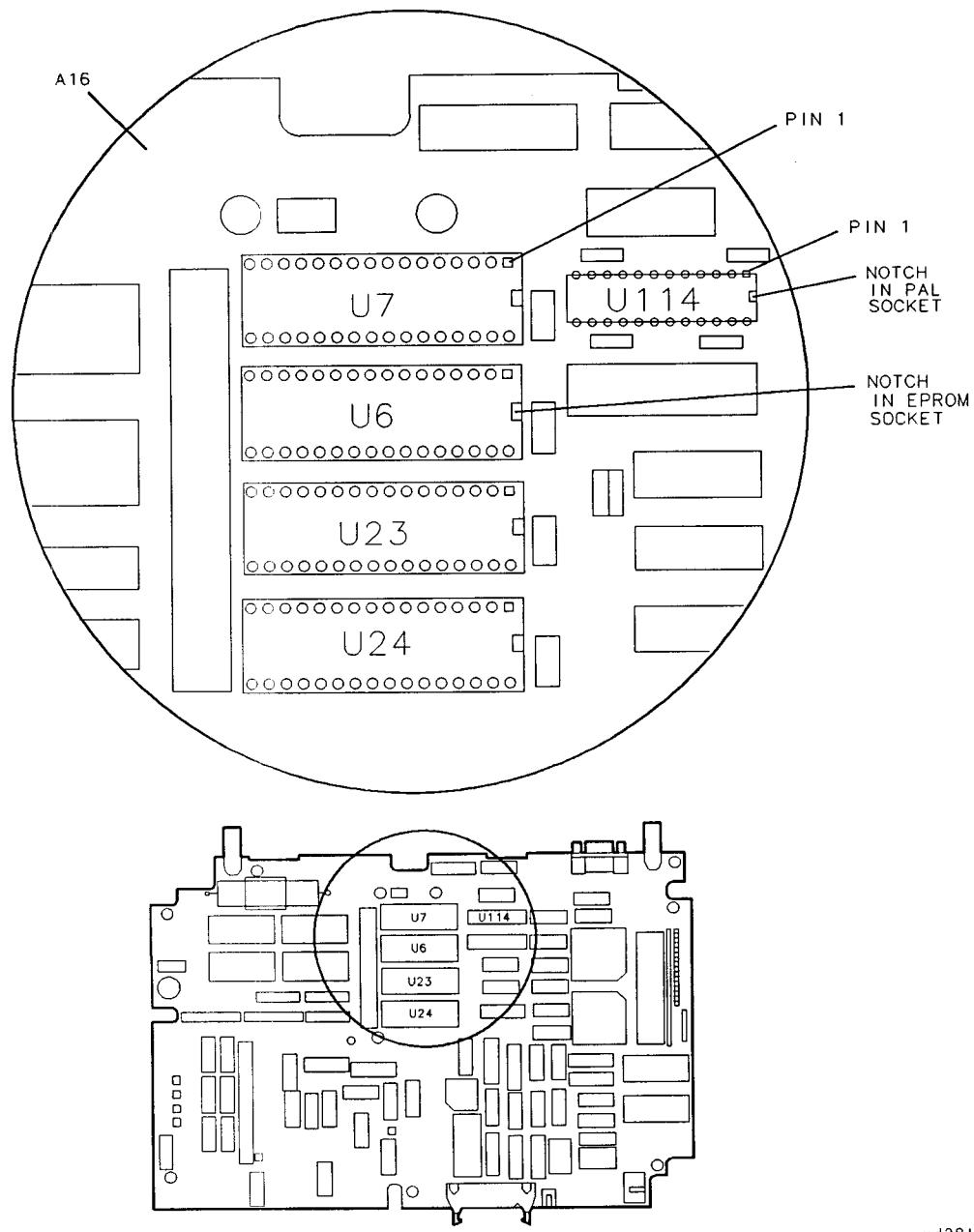


Figure 3. Location of the EPROM Integrated Circuits

9. Carefully pry the EPROM ICs upwards using a small-blade screwdriver. Pull the EPROMs from their sockets evenly so that the pins at the rear of each EPROM are not bent. See Figure 3.
10. Replace the EPROMs that were removed in the previous step with the EPROMs supplied in the installation kit. Make sure that the EPROMs are oriented correctly with the sockets on the processor board assembly (A16). Match the notch at the end of each EPROM with the notch at the end of its socket. Align each EPROM IC pin with the opening of its pin receptacle on the socket.

11. Reconnect the cables to the counter-lock board. Because the cables lie between the counter-lock board and the processor board, the length of the cables should be against the back of the counter-lock board. See Figure 2.
12. Place the counter-lock board on the chassis standoffs. Check that the cables are not pinched between the standoffs and the counter-lock board. Replace the four screws that connect the counter-lock board to the chassis. See Figure 2.
13. Attach the rear panel of the analyzer to the chassis, with three screws on each side of the rear panel. Ensure that the cables are not pinched between the chassis and the rear panel.

Replacing the Instrument Cover

Caution To prevent damage when replacing the instrument cover:

- Use a soft cloth or towel between the work surface and the front frame.
- Ensure that cables do not bind between the instrument cover and the analyzer's internal assemblies.

1. Carefully place the analyzer on the work surface with the front frame facing down.
2. Replace the instrument cover assembly. The seam of the cover should be on the bottom side of the analyzer.
3. Ensure that the cover is seated properly into the front frame of the analyzer. Tighten the four rear-feet screws with a 4-mm hex wrench.
4. Replace the four screws and washers attaching the instrument cover assembly to the rear frame.

Adjustments

1. Plug the power cable into the line module of the analyzer.
2. Plug the power cable into an ac power socket.
3. Press the **LINE** switch.
4. Press **PRESET**.
5. Let the analyzer warm up for 30 minutes.

Note A ϕ LOCK OFF message may appear on screen but will disappear after the successful completion of the self-calibration routines.

6. Connect a cable between CAL OUT and INPUT then press **CAL**, **CAL FREQ** & **AMPTD**.

Note If the error message CAL SIGNAL NOT FOUND is displayed, verify that CAL OUT is properly connected to the analyzer input. If the connection is correct, set the user pass code by pressing **FREQUENCY**, **CENTER FREQ**, **-37** **Hz**, then repeat step 6. (Enabling the pass code causes the self-calibration routine to skip the CAL OUT setup check.)

7. *HP 8593EM or HP 8596EM only:* Connect 100 MHz COMB OUT to the analyzer's input, using the appropriate cable and adapters.
8. *HP 8593EM, HP 8595EM, or HP 8596EM only:* Press **CAL YTF**. Wait for the completion of the CAL YTF self-calibration routine.
9. Press **CAL STORE**.
10. Press **More 1 of 4, CRT HORIZ POSITION**.
11. Using the analyzer knob, adjust the display's horizontal position, if necessary.
12. Press **CRT VERT POSITION**.
13. Using the analyzer knob, adjust the display's vertical position, if necessary.
14. Press **More 2 of 4, More 3 of 4, More 4 of 4, CAL STORE**.

Verification

No verification tests are necessary.



08591-90174