S E R V I C E N O T E

SUPERSEDES: None

4396A Network/Spectrum Analyzer

Serial Numbers: 3241J00198 / 9999J99999

Duplicate Service Notes: None

Firmware Update Procedures

Parts Required:

Part No.	Qty.	Description
See Note 1	1	Firmware Installation Kit of the desired revision
See Note 1	1	Revision Lable of the desired revision
1818-5028	6	Flash Memory (See Note 2)

Note 1: See service note 4396A-01 for the part number.

Note 2: The six flash memory parts are required only when updating the firmware in the A1 CPU (pn 04396-66511). When the six Flash memories are not available due to the supply problem, the ROM set of the desired revision is required. See service note 4396A-01 for the part number of the ROM set.

Situation:
There are two A1 CPUs, pn 04396-66501 and pn 04396-66511. The 04396-66501 is equipped with flash memory firmware and the 04396-66511 is equipped with a ROM set in place of the flash memories.

Continued

DATE: 14 June 1993

ADMINISTRATIVE INFORMATION

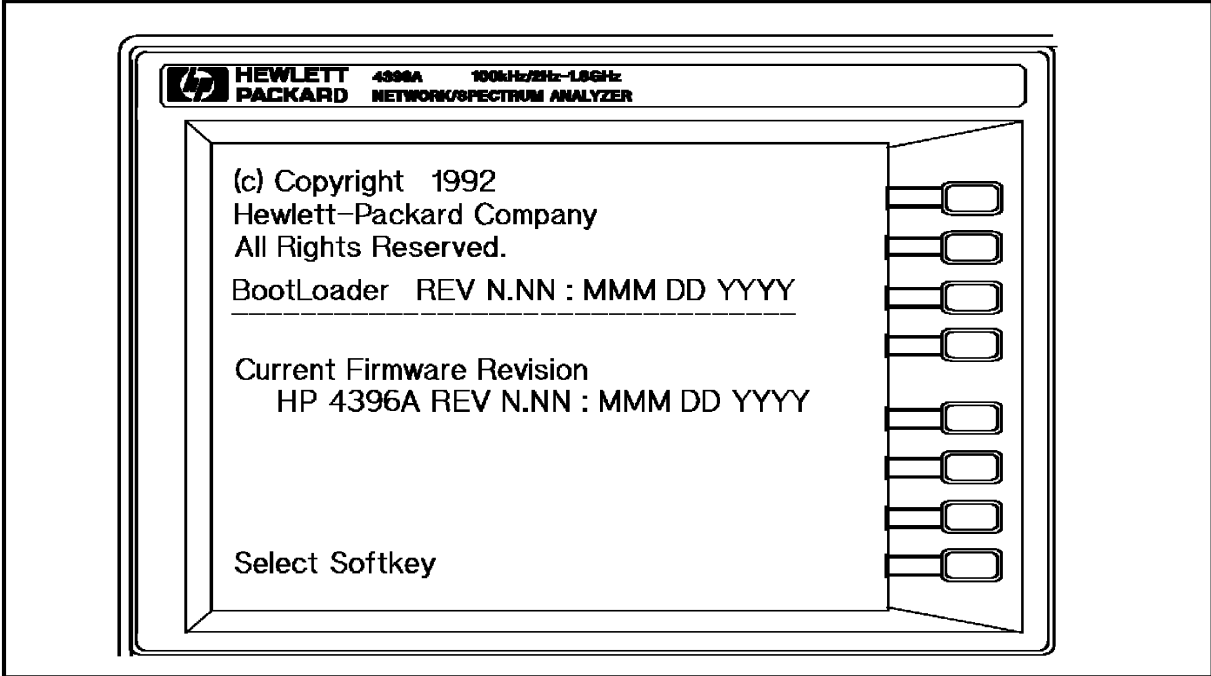| SERVICE NOTE CLASSIFICATION:		
INFORMATION ONLY		
AUTHOR: TS	ENTITY: 3355	ADDITIONAL INFORMATION:

Agilent Technologies

To update the firmware in the A1 CPU flash memory version, use the appropriate firmware installation kit.

To update the firmware in the A1 CPU ROM version, modify the A1 CPU to flash memory version. Then use the firmware installation kit.

Solution/Action:
When updating the firmware of a 4396A, identify A1 CPU version, flash memory version or ROM version.

1. Turn the unit power off.
2. With pressing both the [Start] and [Preset] keys, turn the power unit on.
3. Check if the Bootloader screen shown in Figure 1 appears on the CRT.

4396A-4 Figure 1

Figure 1.   Bootloader Screen

When the Bootloader screen appears:
The A1 CPU is flash memory version. Update the firmware revision by using the
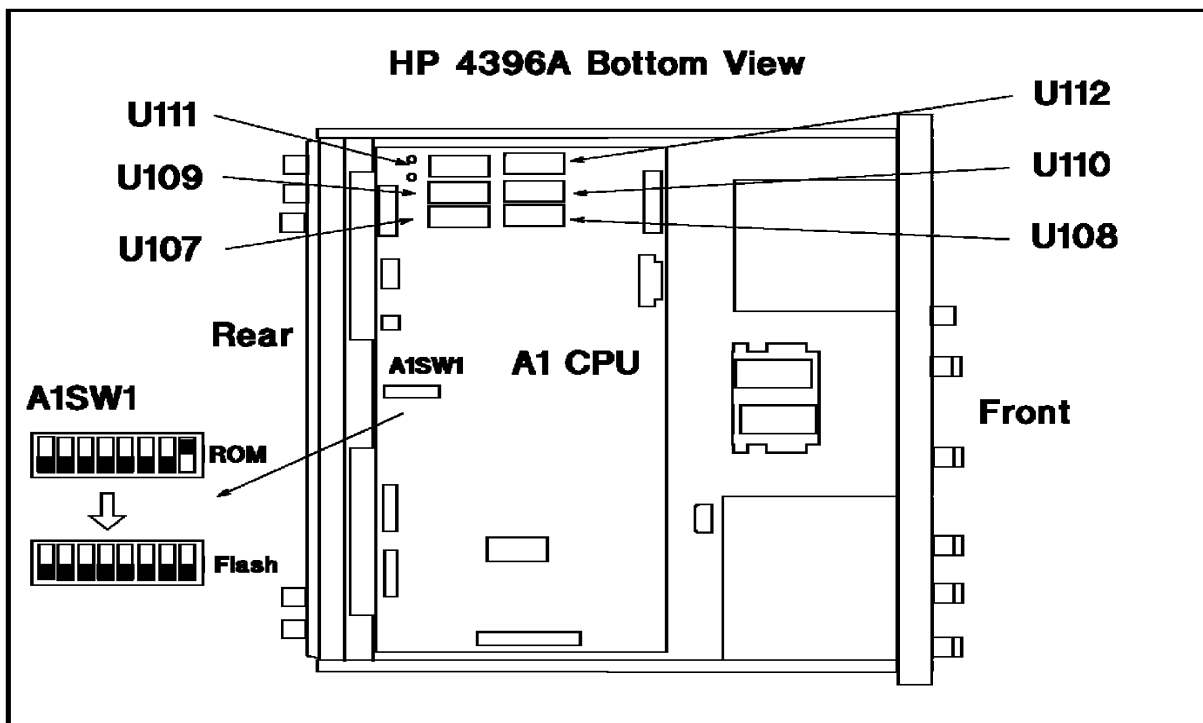firmware installation kit. The installation is customer installable.

When the normal measurement screen appears.
The A1 CPU is ROM version. Modify the A1 CPU to flash memory version using six
flash memory parts (pn 1818-5028). Then update the firmware revision by using the
firmware installation kit. The modification procedure is described below. This proce-
dure is NOT customer installable.

If six flash memories are not available due to the supply problem, update the firmware
revision by using the ROM set of the desired revision. The procedure is described at the
end of this service note.

A1 CPU Modification Procedure to flash memory version
  1. Remove the bottom cover from the unit.
  2. Change the bit switch A1SW1 settings as shown in Figure 2.

Figure 2.   A1SW1 and A1U107 through A1U112 Locations

3. Remove the six programmed ROMs (A1U107 through A1U112) from IC sockets on the A1 CPU. The location of the sockets are shown in Figure 2.
4. Install the six flash memories in to the IC sockets A1U107 through A1U112.
5. Assemble the bottom cover.
6. Turn the unit powe on. Then the Bootlloader appears as shown in Figure 1.
7. Install the desired firmware by using the firmware installation kit.

Firmware Update Using ROM set
1. Order a ROM set of the desired revision. See a service note 4396A-01 for the part number of the desired ROM set.
2. Remove the bottom cover from the unit.
3. Remove the six programmed ROMs (A1U107 through A1U112) from IC sockets on the A1 CPU. The location of the sockets are shown in Figure 2.
4. Install six ROMs into the IC sockets. For the relation between the part numbers and designators, see a service note 4396A-01.
5. Assemble the bottom cover.
6. Turn the unit power on.
7 Confirm that no "POWER ON TEST FAILED" message appears and that the installed firmware revision is displayed.
8. Attach the revision lable of the installed firmware on the unit's rear panel.