

Errata

Title & Document Type: E1420A to E1420B Std. Upgrade Kit Installation Note

Manual Part Number: E1420-90021

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HP References in this Manual

This manual may contain references to HP or Hewlett-Packard. Please note that Hewlett-Packard's former test and measurement, semiconductor products and chemical analysis businesses are now part of Agilent Technologies. We have made no changes to this manual copy. The HP XXXX referred to in this document is now the Agilent XXXX. For example, model number HP8648A is now model number Agilent 8648A.

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Replaces: Kit Instructions for E1420-67001, 12/91 and 4/92

HP E1420A to E1420B Std. Upgrade Kit P/N E1420-67003

GENERAL

This installation note explains how to upgrade an HP E1420A Universal Counter with any option combinations to an HP E1420B with a standard input amplifier board. If the E1420A has Option 010 already installed, the option will remain installed into the E1420B. If the E1420A has Option 030 installed, using this upgrade kit will remove Option 030 from the counter.

MATERIAL INCLUDED

Kit P/N E1420-67003 should contain the following parts:

HP PART NO.	DESCRIPTION	QTY
53310-60008	A2 Std. Input board	1
E1420-00006	E1420B front panel	1
E1420-00007	E1420B top cover	1
E1420-80023	EPROM - A1 U12	1
E1420-80024	EPROM - A1 U13	1
E1420-80027	"E1420-60016" PC Board label	1
E1420-80028	"E1420-60017" PC Board label	1
5080-0098	Serial number label	1
6960-0002	Plug hole - front panel	1
0590-1251	Hex nut	2 (Extra)
0515-1107	Screw - front panel	2 (Extra)
0515-1127	Screw - top cover; 15/32-32	2 (Extra)
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TOOLS REQUIRED

Pozidriv screwdriver : 64-131
 9/16 inch wrench
 IC extractor or small flat blade screwdriver

TIME REQUIRED

The upgrade installation plus the performance verification tests should take around two hours.

INSTALLATION PROCEDURE

1. Disassemble the HP E1420A by loosening the front panel BNC nuts with a 9/16" wrench and removing all the screws holding the top cover with the Pozidriv screwdriver.
2. Lift off the top cover carefully and dislodge the two boards from the bottom cover.
3. Separate the E1420A input board from the main assembly by gently lifting up the back part of the board until the connector pins are free.
4. Remove the A1U12 and A1U13 EPROMs from the main assembly, using an IC extractor or a small flat-blade screwdriver. Install the E1420B EPROMs A1U12 (p/n E1420-80023) and A1U13 (p/n E1420-80024), being careful to align the notched edges of the EPROMs with the top of the sockets.
5. In the upper left corner of the main assembly (with the VXIbus connector pins on the right), locate the main board part number under the HP logo. If Option 010 is not installed, place the "E1420-60016" PC board label (p/n E1420-80027) over the old board part number. If Option 010 is installed, place the "E1420-60017" PC Board label (p/n E1420-80028) over the old board part number.
6. Install the new E1420B input board (p/n 53310-60008). Gently press down on the back part of the board until the connector pins are secured.
7. Using the Pozidriv screwdriver, turn over the bottom cover and remove the E1420A front panel. Transfer the black VXI handles to the E1420B front panel (HP logo on top) and install the plug hole provided (p/n 6960-0002) into the Input 3 position on the E1420B front panel. Attach the new front panel.
8. With the front panel facing you, place the two board assemblies into the bottom cover by locating the metal standoffs in the bottom cover and positioning them in the holes provided in the main assembly. Slide the boards forward until they are locked in place and the BNC connectors and LEDs are firmly lodged in the front panel.
9. Referring to the instrument serial number on the E1420A top cover, transfer that serial number to the label provided (p/n 5080-0098). Place the serial number label on the E1420B top cover to the right of the Options box.
10. Install the top cover, tighten the screws and then the hex nuts around the BNC connectors.
11. Verify proper operation of the counter by running only the Functional tests from the HP BASIC E1420A/B HP-IB Verification program, p/n E1420-13503 or E1420-13504, on an HP Series 200/300 controller, or its equivalent. Also, issue the following BASIC commands:

```
output 70906; "**TST?"  
enter 70906; TST$  
DISP TST$
```

The result should return a "0", No errors.