

# HP 12977B Fast FORTRAN Processor Kit Installation Manual



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# LIST OF EFFECTIVE PAGES

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## 1-1. INTRODUCTION

This section provides instructions for installing the HP 12977B Fast FORTRAN Processor in an HP 21MX Computer. Additional information is provided in the following manuals:

- a. HP 21MX M-Series Computer Operating and Reference Manual.
- b. HP 21MX M-Series Computer Installation and Service Manual.

## 1-2. GENERAL DESCRIPTION

The HP 12977B Fast FORTRAN Processor Kit (21MX FFP) replaces 18 standard library subroutines with firmware subroutines which greatly enhance the throughput efficiency of application programs written in HP FORTRAN, other high level languages, or HP Assembly Language. The 21MX FFP includes an FFP subroutine library and an associated set of microprogrammed firmware subroutines. The firmware subroutines are fused into read-only memory (ROM) chips mounted on control store assemblies addressable as control store modules 3, 4, and 5.

The HP 12977B FFP Kit consists of the following hardware and software:

- a. One ROM Control Store Assemblies, part no. 5061-1373.
- b. Three screws with captive lockwashers, part no. 2360-0115.
- c. Two 21MX FFP Diagnostic Tapes, part nos. 12977-16004 and 12977-16005.
- d. *Fast FORTRAN Processor Diagnostic Manual*, part no. 12977-90002.

## 1-3. INSTALLATION

Install the one ROM control store assembly (figure 2-1) as follows:

### **WARNING**

**Hazardous voltages are present inside the processor mainframe!! Before installing the control store assemblies, set the POWER and BATTERY switches to OFF and DISCONNECT THE POWER CORD!! Failure to observe this precaution can result in serious injury.**

### **CAUTION**

All contents of memory will be lost when the mains (line) and battery voltages are both off. Therefore, before proceeding with the installation, ensure that any contents of memory to be saved are stored in another medium for later retrieval.

- a. Set computer POWER and BATTERY switches to OFF and disconnect power cord.
- b. Disconnect I/O extender cable assembly (if present) from CPU PCA edge connector.
- c. Loosen screw located in rear fold of bottom cover; slide cover toward rear and remove.
- d. Connect P1 of FFP assembly 5061-1373 to J2 of control store board A7. (See figure 2-2.) Secure FFP assembly to CPU standoffs for ROM PCA A8 with three screws and lockwashers.
- e. Replace computer bottom cover.
- f. Connect I/O extender cable assembly (if present) to CPU PCA edge connector.
- g. Plug computer power cord into power mains receptacle and set POWER and BATTERY switches to ON.

## 1-4. CHECKOUT

Verify the installation by running the diagnostic as described in the *Fast FORTRAN Processor Diagnostic Manual*, part no. 12977-90002. If the diagnostic tests are

completed without an error halt, the ROM control store assemblies are operating correctly. If the diagnostic tests indicate an error halt, notify your nearest HP Sales and Service Office listed in the computer *Operating and Reference Manual*.

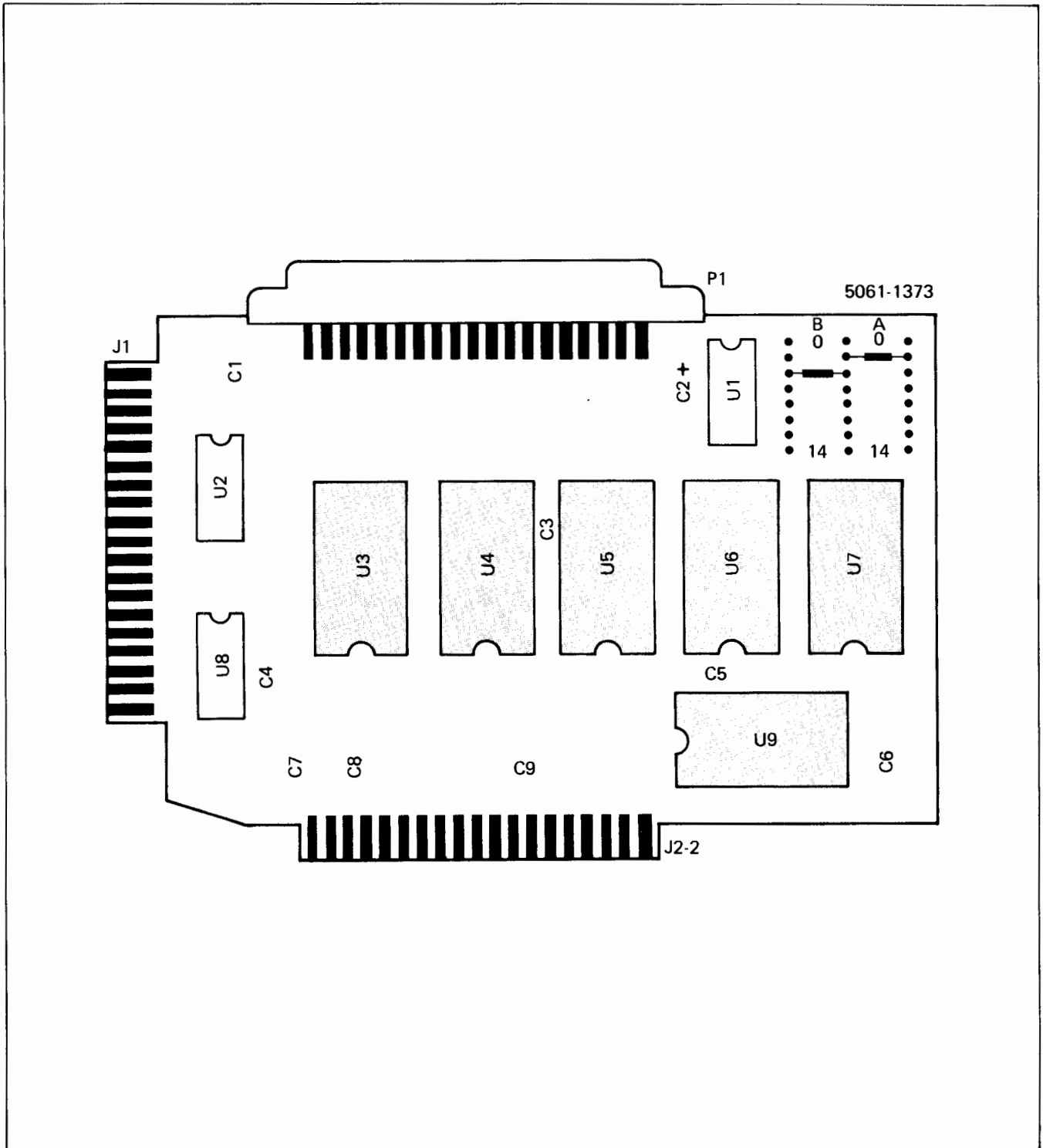
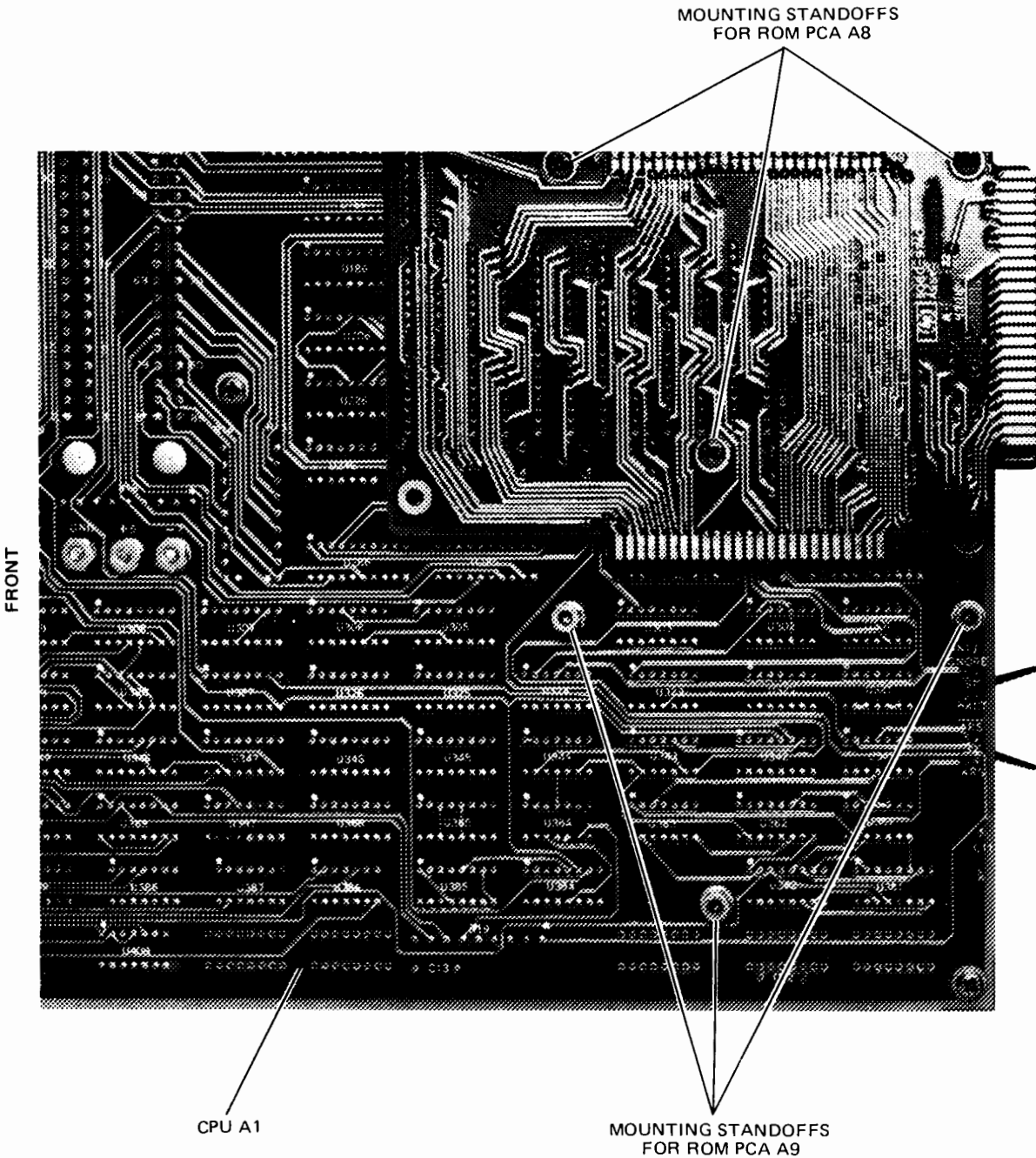


Figure 2-1. FFP ROM Control Store Assembly





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