INTRODUCTION

SECTION 1

This section provides an overview of the HP 150's system architecture, display, keyboard, data communications, and peripherals.

CONTENTS

HP 150 SYSTEM OVERVIEW

The HP 150 Personal Office Computer, the third member of the Series 100 family, offers a complete business solution and gives the customer more power and memory space in a small, efficient package. The entire sytem (display, processor, keyboard, flexible and Winchester disc drives, and integral printer) occupies only 2.1 square feet of space, about the same "footprint" as an open looseleaf notebook. Several features have been added to decrease the amount of time required to learn and use the system such as a touchscreen interface and an advanced "shell" called the Personal Applictions Manager (P.A.M.) which shields the user from the "computerese" associated with many computer systems.

The HP 150 system features are summarized below.

System Architecture

- Intel 8088 microprocessor (operating at 8 MHz)
- MS-DOS 2.0 operating system
- Built-in HPTouch
- 256K bytes of main memory standard; 640K bytes maximum
- Battery back-up for system configuration and real time clock

The HP 150 uses an Intel 8088 microprocessor running at 8 MHz. The standard system contains 256K bytes of RAM memory for the operating system, applications and user workspace, and can be expanded to 640K. Touchscreen and graphics are standard with the system.

In addition to the above capabilities, the HP 150 is also a customer expandable system. There are two expansion slots, accessible through the back of the unit, which allow the customer to add accessories (such as additional memory) to the system without requiring the assistance of an HP representative or dealer. Installation of accessories is a simple operation, requiring an average of 5 to 10 minutes.

The HP 150 Personal Computer uses MS-DOS 2.0 from Microsoft Corporation as the standard operating system. MS-DOS 2.0 is a single-user, single-task operating system for which many third-party software packages have been developed. The operating system resides on disc and upon initialization MS-DOS is loaded into the processor's main memory.

A unique enhancement by Hewlett-Packard to the MS-DOS operating system has been the addition of an easy-to-understand facility to help the user execute commands. PAM (Personal Applications Manager) provides simple intuitive menus for the most frequently used system commands. Unlike other systems which require the user to learn the system "computerese", PAM through menus and HPTouch, guides the user through commands. With PAM starting applications, creating directories, deleting files and listing existing files can be as easy as touching the screen. For more advanced users the standard MS-DOS command facility is also available.

Display

- Built-in high-resolution on-screen graphics display (512 x 390)
- High-resolution character display; 9 x 14 dot character cells; upper and lower case
- Display enhancements: inverse video, underline, blinking, half-bright, security and all combinations
- Up to two pages of 24 lines x 80 characters of display memory

The HP 150 can display both alphanumeric and graphics on the 9 inch diagonal screen. The alphanumeric display consists of a 27 line by 80 column format. The 25th and 26th lines are used for the screen labeling of function keys (and all are automatically "touchable" through touchscreen), and the 27th line is for system status and error messages. The screen memory stores 2 pages of text, which allows off-screen storage of the display. High resolution characters with true descenders are generated in a 9 x 14 dot cell with half-dot shift. The standard display is green character against a black background.

The graphics display has a resolution of 512 dots horizontally by 390 dots vertically. This gives a 1:1 aspect ratio guaranteeing symmetry (that is, circles look like circles). The numeric keypad also serves as the graphics keypad, allowing the customer to turn on and off the alpha display, turn on and off the graphics display or transfer the graphics display to one of the HP graphics printers. It also displays the graphics cursor and allows it to be moved around the screen.

Keyboard

- Detachable, typewriter-style
- Special editing keys
- Numeric/Graphics pad
- Eight screen-labeled function keys

The HP 150 keyboard is designed to provide a familiar interface to the system and minimize training time. The low-profile keyboard shape, the sculptured keycaps and the dished "home" keys help to make the keyboard comfortable to use. The 107-key keyboard contains the full local editing keys such as cursor control keys, display scrolling keys, "next" and "prev" keys for scrolling by pages and "insert" and "delete" keys for inserting or deleting characters or entire lines.

Series 100 function keys are screen labels used by the system and by application programs to increase the ease of use of the system. With the HP 150, this capability is enhanced by the use of HPTouch. Now, all function keys can be selected by pressing the key itself or by touching the key label on the screen.

Communications/Peripherals

- One RS-232/RS-422 communication port
- One RS-232 communication port
- One HP-IB port
- Full block mode graphics terminal support

Two RS-232-C ports (one of which is capable of RS-422 communication) may be used to connect the system to a remote computer or to serial devices (such as printers or plotters). Flexible protocols allow the use of either hardware or software handshaking and communication speeds can range from 110 to 19,200 baud.

The HP 150 contains the HP 2623 Graphics terminal feature set and can run any HP 3000 software which currently runs on that terminal. This includes block mode for V/3000 software and graphics applications such as HPEasychart and HPDraw as well as line-drawing and math character sets, "security" fields, transmit-only fields, edit checks and Tektronix 4010/4014 emulation.