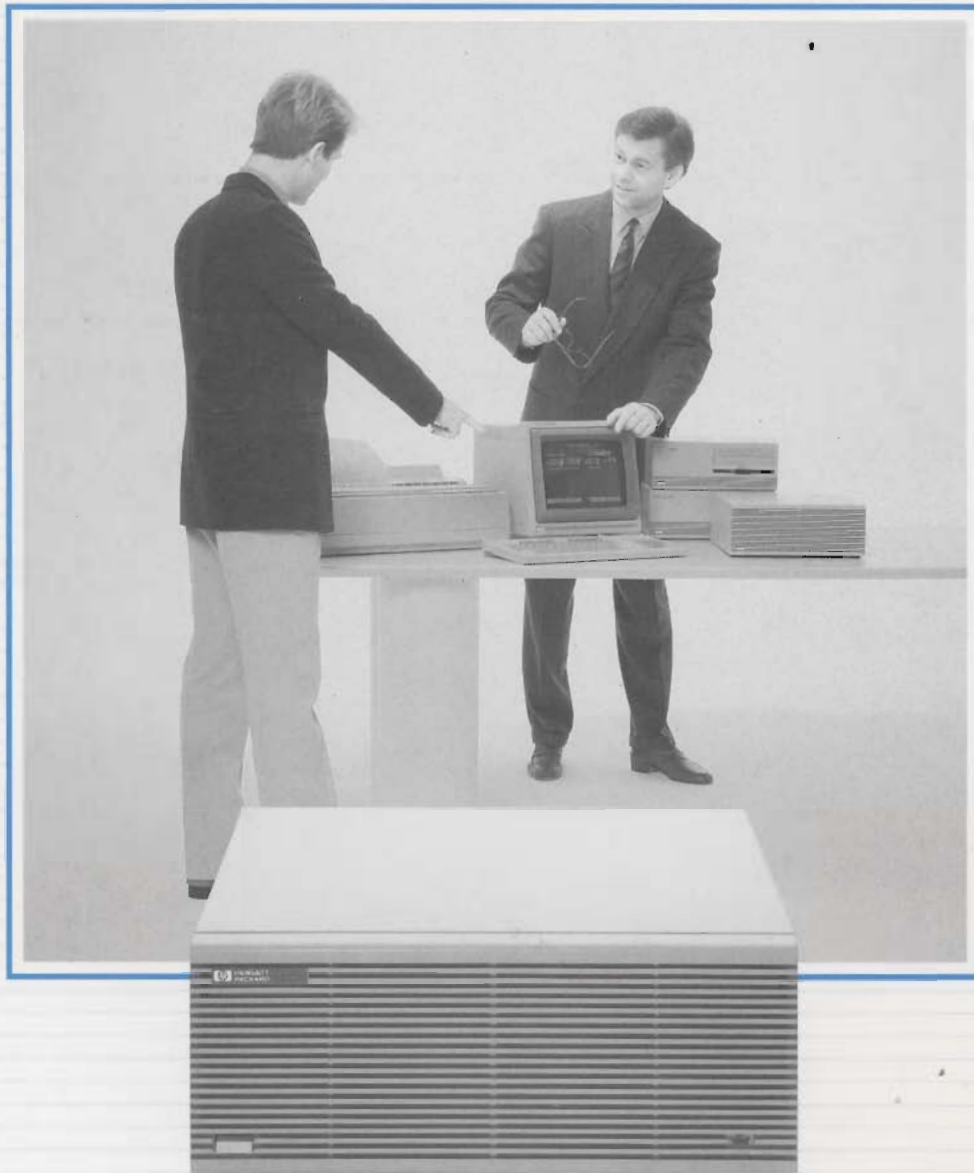


## HP 260 Business Computer Systems



## Sales Training Manual

**HP Computer Museum**  
**[www.hpmuseum.net](http://www.hpmuseum.net)**

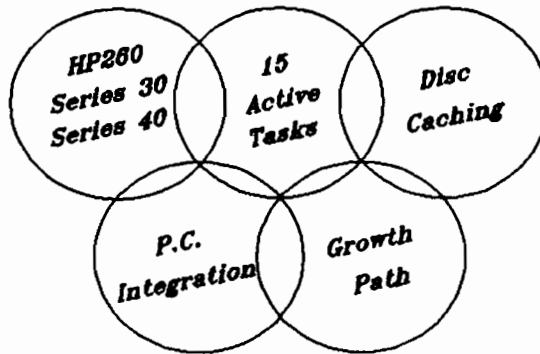
**For research and education purposes only.**

# What's New for the HP 260 System?

SECTION

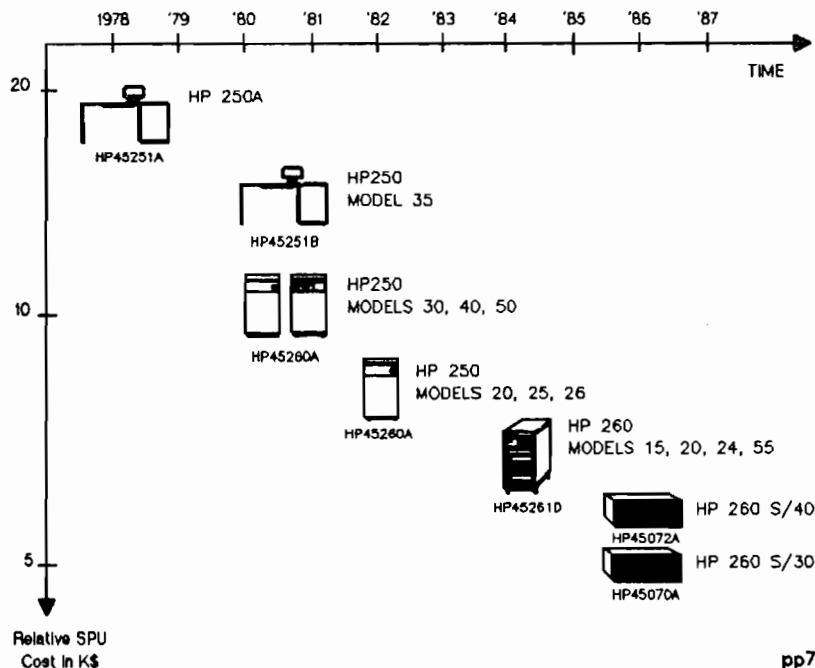
1

The HP 260 is HP's easiest to operate, "first-time" user, business computer system. The HP 260 family is designed to meet the needs of small companies requiring from one to five users up to larger companies requiring as many as 15 users. What *is* new for the HP 260?



## INTRODUCING THE HP 260 SERIES 30 AND 40!

Two new systems have been added to a long line of HP 250 and HP 260 systems: the HP 260 Series 30 and HP 260 Series 40. Managing the new HP 260 Series is Operating System Revision, B.08. As with all HP 250 and HP 260 operating systems, B.08 will run on earlier systems providing many of the new features available for the Series 30 and 40. An overview of the history of the HP 250 and HP 260 family is provided below.



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## WHAT'S NEW FOR THE HP 260 SYSTEM?



### HP 260 Series 30

The new HP 260 Series 30 system is ideal for the budget-conscious company that is ready to automate and needs a helping hand. Safe and secure access to shared data by multiple users is accomplished with ease.

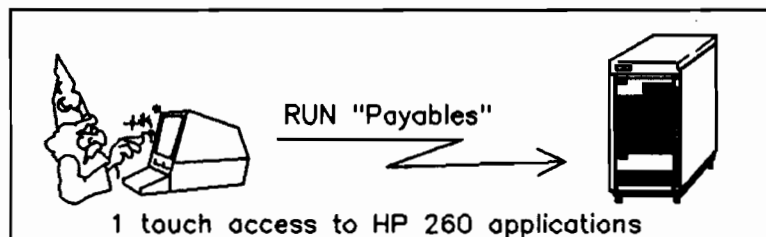
### HP 260 Series 40

Like the Series 30, the Series 40 is designed to handle multi-user, multi-tasking environments efficiently and safely.

For the company that insists on maximum performance and plenty of room to grow, the HP 260 Series 40 is the answer. The new Series 40 optimizes performance with tools such as disc caching.

### PC INTEGRATION!

Looking for a good alternative to PC Networks? Look at the HP 260. The Series 30 provides an economical growth path for one or more PC users. The PC with all of its functionality continues to be the user's workstation with easy (Touchscreen) access to HP 260 applications.

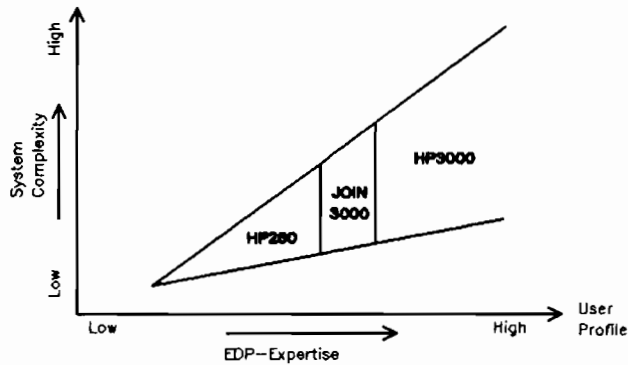


PP231

# JOIN/3000!

The new HP 260 Series together with the JOIN/3000 migration program creates new possibilities for incremental sales to first-time (pre-HP 3000) users.

## GPBC PRODUCT STRATEGY

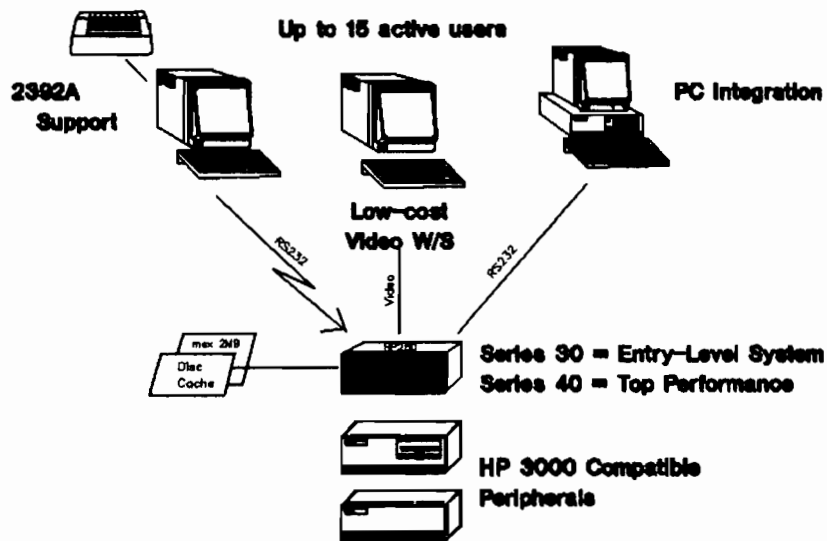


PP6

The new HP Business BASIC/V language on the HP 3000 System offers a highly compatible migration path for HP 260 applications. And to help ease the expense of rapid growth, many HP 260 system peripherals can be used on the HP 3000 system.

The HP 260 system offers the best of two worlds: simplicity coupled with low-cost, and performance teamed with a virtually unlimited growth path.

## NEW HP 260 FEATURES



PP4

## PERFORMANCE INCREASES AND PRICE DECREASES !

The HP 260 Series 30 and 40 have been designed to maximize performance and minimize cost of ownership. Many hardware enhancements distinguish the new HP 260 Series 30 and 40 from earlier HP 260 models.

**Hardware Enhancements**

<p><b><i>NEW SPU DESIGN:</i></b></p> <ul style="list-style-type: none"><li>* Smaller packaging</li><li>* Fewer components</li><li>* Higher reliability</li><li>* No internal switches/cables</li></ul> <hr/> <p><b><i>PERFORMANCE ENHANCEMENTS</i></b></p> <ul style="list-style-type: none"><li>* Faster microprocessor</li><li>* High-Speed 256 Kb RAMs</li><li>* 19.2K Baud ASI ports</li></ul>	<p><b><i>NEW CPU BOARD</i></b></p> <ul style="list-style-type: none"><li>* 2 ASI ports on board</li><li>* 512 Kb memory on board</li><li>* Optimized for increased processor speed</li></ul> <hr/> <p><b><i>GREATER CAPACITY</i></b></p> <ul style="list-style-type: none"><li>* Up to 20 I/O devices</li><li>* Up to 400 Mb mass storage</li><li>* Up to 2 Mb main memory</li></ul>
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PP2

The software enhancements offered by Operating System Revision B.08 benefit new HP 260 Series 30 and 40 users as well as owners of earlier HP 260 and HP 250 systems.

**Software Enhancements**

<p><b><i>15 ACTIVE TASKS</i></b></p> <ul style="list-style-type: none"><li>* 4 Additional partitions</li><li>* Main or background tasks</li></ul> <hr/> <p><b><i>PC INTEGRATION</i></b></p> <ul style="list-style-type: none"><li>* HP PCs: 150 II, Vectra, Portable PLUS</li><li>* IBM PCs: PC, PC AT, PC XT</li></ul>	<p><b><i>DISC CACHING</i></b></p> <ul style="list-style-type: none"><li>* On Series 40 systems</li><li>* With HP 260/HP 250 PLUS Performance upgrade</li><li>* With S/30 to S/40 upgrade</li></ul> <hr/> <p><b><i>NEW PERIPHERALS SUPPORTED</i></b></p> <ul style="list-style-type: none"><li>* HP 3000—standard 2392A</li><li>* 82 Mb and 131 Mb discs</li><li>* 9144A cartridge tape drive</li><li>* Plotter, MULTIMUX &amp; More</li></ul>
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PP3



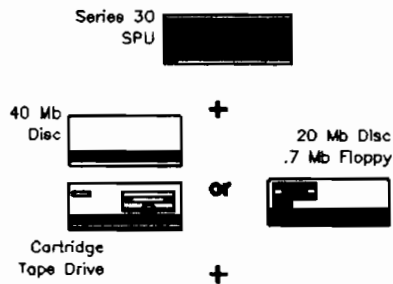




# The New HP 260 Series 30 and 40

HP 260 Series 30 system -- for the price-sensitive customer

## TYPICAL HP 260 SERIES 30 SYSTEM



PERIPHERALS

**TARGET MARKET:** Small businesses with little or no computer experience. One to five active users.

**GROWTH OPTIONS:**

- \* Upgrade to HP 260 Series 40
- \* Migration to HP 3000 systems

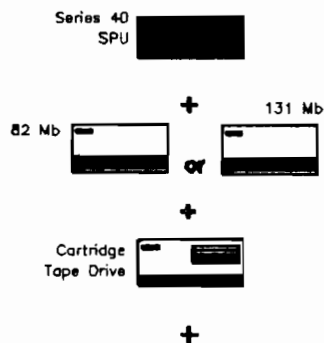
**COMPETITIVE ADVANTAGE:**

- \* Low-cost SPU includes .5 Mb memory and 2 ASI ports
- \* Growth path for PC users
- \* Low cost-of-ownership
- \* IMAGE Database Management System

PP6

HP 260 Series 40 system -- more memory and more performance

## TYPICAL HP 260 SERIES 40 SYSTEM



PERIPHERALS

**TARGET MARKET:** Growing small businesses requiring an easy to use, database-oriented system for 4 to 10 active users.

**GROWTH OPTIONS:**

- \* Up to 15 users/ 20 devices
- \* Up to 400 Mb mass storage
- \* Migration to HP 3000 systems

**COMPETITIVE ADVANTAGE:**

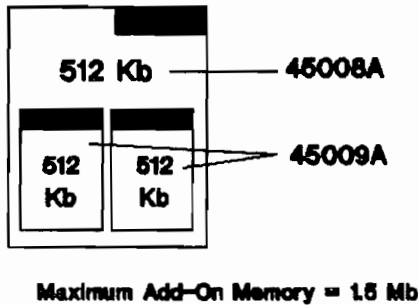
- \* PC integration
- \* High-performance disc caching
- \* No dedicated system manager needed
- \* Wide range of peripherals available

PP7



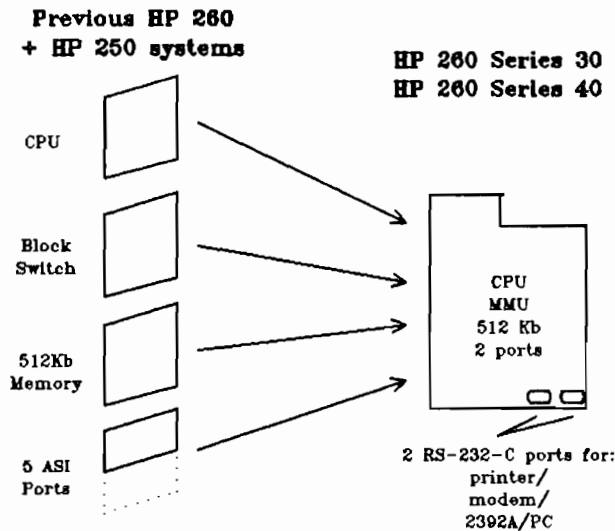
### Adding additional memory

On Series 40 systems, slot #2 contains the 45008A memory board, for a total of 1 Mb of memory as standard. Series 30 systems can optionally add the 45008A memory board in slot #2. On both systems, up to two 512 Kb "piggyback" memory modules, 45009A, can be added to the 45008A memory board for a total of 2 Mb of system memory.



### CPU integration

The new Series 30 and 40 CPU boards are highly integrated. A single board replaces 3.5 boards required on previous HP 260 and HP 250 systems.



pp64

### Using the integrated serial (ASI) ports

Two free RS-232-C ports are on the Series 30 and Series 40 CPU board. These ports are for HP 2392 and PC workstations, printers, or modems ONLY. (Plotters, video workstations, or RS-422 devices can not be connected).

A one or two-user Series 30 configuration could consist of the HP 45070A SPU without additional I/O. The two integrated ports could support one workstation and one printer or two workstations. If two workstations are configured, each could have a local printer. If only one local printer is preferred, all tasks requiring printing must be done on the workstation with the printer (unless an ABC switch is used; see Section 3).

THE NEW HP 260 SERIES 30 AND SERIES 40 SYSTEMS

For Series 30 and Series 40 systems not using video workstations, at least one 2392A or PC workstation must be connected to the integrated port labeled "-1" for system boot-up.

**System Configuration Maximums**

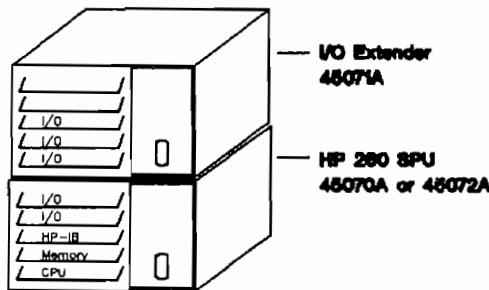
The HP 260 Series 30 and 40 can offer up to 20 I/O ports (plus an HP-IB channel capable of supporting 3 disc drives, 1 tape drive, and 2 HP-IB printers). For maximum I/O connectivity, the I/O Extender (HP 45071A) must be added.

**System Configuration Maximums**

board type	boards/ system	X	ports/ board	=	max # ports	Comments
CPU	1		2		2	2 RS 232 ports and 512 Kb memory, MMU.
Memory	(3)					slot #2 holds up to 3 @ 512 Kb cards.
HP-IB	1		1		1	4 disc and tape drives, 2 printers.
ASI	2		5		10	RS-232/422 (3 modem ports per board).
Video	2		4		8	8 ports for HP45263D workstations.
INP	1		1		1	DS/DSN and DS/RJE communications.
NOTE: Maximum # user terminals = 20 (12 serial + 8 video workstations) Maximum concurrent tasks = 15 (64 Kb memory block per task) Maximum RAM memory = 2 Mb OS memory requirements = 256 Kb						

PP11

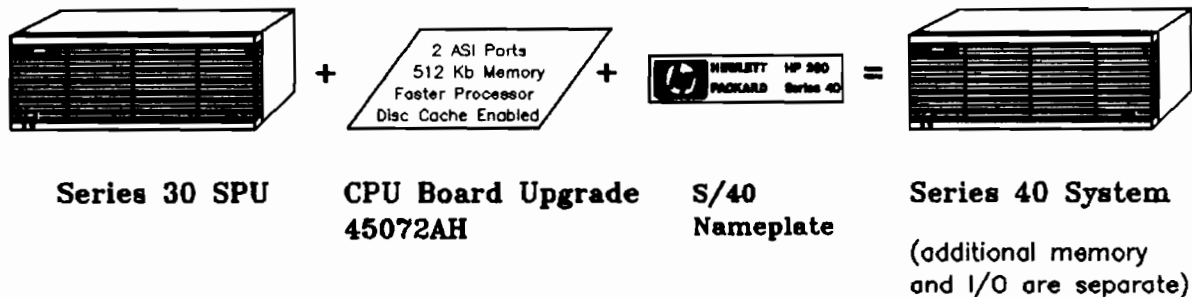
**Adding an I/O Extender**



One 5-slot I/O Extender can be added to the Series 40 or the Series 30. (HP installation is required).

## HP 260 Series 30 to 40 CPU Upgrade

A simple upgrade will be available for customers who wish to start with the economical Series 30 and later add the performance features of the Series 40. The Series 30 to 40 CPU Upgrade (45072AH) consists of replacing the Series 30 CPU board with the Series 40 CPU board. Additional memory and I/O expansion are purchased separately. An HP 260 Series 40 nameplate is provided.



PP10

## The Series 30 and 40 are New

Each board in the new HP 260 Series has been redesigned to meet the following objectives: better performance, lower cost, higher reliability, and easier installation. Important new hardware features include:

### *ASI Board*

ASI ports can run as fast as 19.2K Baud. Up to three ports per ASI board can be configured for modem support.

### *CPU Board*

The CPU boards optimize processor performance and benefit from a new Memory Management Unit (MMU -- replaces the Block Switch board of earlier systems) and 512 Kbytes of fast, on-board RAM memory (256 Kbit chips).

### *HP-IB Board*

The HP-IB interface now supports single-controller and dual-controller disc and backup devices. For small systems you can combine an economical 40 Mb disc (HP 9134L) with the convenient HP 9144A, 1/4" cartridge tape drive. Large systems can maximize HP 3000 compatibility by configuring the 9144A tape with 82 and/or 131 Mb disc drives.

## THE NEW HP 260 SERIES 30 AND SERIES 40 SYSTEMS

### *Self-configuring SPU boards*

SPU boards contain no manual switches. This improves user installability of additional memory and I/O boards and simplifies SPU configuration. All HP 260 Series 30 and Series 40 boards are customer installable.

### *Elimination of internal cables.*

Easy-to-use connectors rather than cables are used inside the SPU.

### *Monthly hardware support costs are 20% lower.*

Improvements in board design and integration result in high reliability and lower cost-of-ownership.

#### **NOTE**

The new HP 260 Series 30 & 40 boards are smaller than the boards used in earlier HP 260 and HP 250 systems. Therefore, the boards are not interchangeable. Installed systems can upgrade to the performance level of the Series 40 with the HP 250/HP 260 PLUS Upgrade (HP 45261AH). Please see Chapter 6 for more information.

## Hardware Features & Benefits Overview:

<u>FEATURES</u>	<u>BENEFITS</u>
* CPU modifications	* 15-20% perf. increase for S/30
	* 55-60% perf. increase for S/40
* ASI speeds up to 19.2 Kb baud	* Faster screens
* Integrated serial ports on CPU board	* Low-cost, entry-level system
* Up to 2 Mb of system memory	* 15 active users + disc caching
* Auto-configured SPU	* No board-level switches
* Battery backed up real-time clock	* No need to reset clock at boot up

PP12

## Operating System B.08

The HP 260 Series 30 and 40 include a new revision of the HP 260 operating system, B.08. OS B.08 is fully compatible with installed HP 250 and HP 260 systems. Many of the features of the new Series 30 and 40 are functions of the B.08 operating system. These features are available to current users of installed HP 250 and HP 260 systems.

- \* 15-user support
- \* HP 2392A workstation support
- \* PC integration (for HP 260s)
- \* Dual controller support
- \* New HP 45263D keyboards (for HP 260s)
  - Finnish
  - Flemish
  - Swiss-German
  - Swiss-Roman

### NOTE

B.08 requires 10 Kb more of system memory than B.07 if a cartridge tape drive is configured. B.07 users upgrading to B.08 will need 10 Kb in DROM overflow if backup is to a cartridge tape drive.

## What about disc caching?

Disc caching is also a feature of Operating System Revision B.08, but is available only with the Series 40 CPU board or with the new HP 250/HP 260 PLUS CPU board available with the HP 45261AH upgrade kit (details in Chapter 6).

## What IS disc caching?

Disc caching is an innovative technology designed for I/O-intensive and database-intensive environments. Disc caching works to eliminate many of the time-consuming disc accesses that limit I/O and system throughput.

## O/S B.08 AND NEWLY SUPPORTED PERIPHERALS

The technology uses main memory as a high speed buffer for the disc. Disc caching places the most frequently accessed portions of files and directories in available portions of main memory, where they can be accessed repeatedly by an executing program. Thus, instead of going immediately to the disc to get requested information, disc caching first checks to see if the file information is already in memory, that is, in the disc cache. When the information is located in the disc cache, I/O performance is improved in two principal ways. First, several time-consuming disc accesses are eliminated. Second, since information may be accessed in main memory 10 - 100 times faster than it may be accessed from disc, disc caching greatly reduces the time required for an I/O to complete. This two fold improvement means better response and higher throughput for I/O-intensive applications.

The performance improvement from disc caching is greatest with applications where multiple users share the same information. Programs which share IMAGE databases, can benefit greatly since disc caching reduces the contention for these data bases. Because I/O requests can be serviced more quickly with disc caching, the locking delays are reduced, and the throughput of applications like IMAGE is increased. B.08 controls the operation of disc caching, and handles file information in the cache dynamically. As a result, special areas of main memory need not be dedicated for the disc cache.

Preliminary test results indicate that typical HP 260 applications with four to six users/tasks need approximately 1 Mb of total system memory. Typical applications with seven - ten users require from 1.5 Mb to 2 Mb, and with 10 - 15 users a total of 2 Mb of system memory. Please see Section 7 regarding performance results for the HP 260 Series 40 with disc caching.

## New Peripherals for the HP 260 Series 30 and 40

Operating System Revision B.08 adds support for many new peripherals. (Some of these peripherals may not be supported on earlier HP 250 and HP 260 systems. Please refer to Appendix A for a complete listing.) Newly supported peripherals are:

### WORKSTATIONS



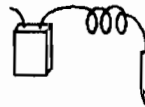
HP 2932A  
HP 150A/B/II<sup>1</sup> PC  
HP VECTRA PC  
HP Portable PLUS  
IBM PC/AT/XT<sup>2</sup>

### DISC/TAPE PRODUCTS



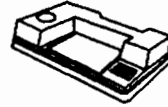
HP 7909A \*  
HP 7957A \*  
HP 7958A \*  
HP 9153/4B \*  
HP 9144A

### BAR-CODE READERS



HP 92915A for  
the 2392A  
  
HP 92916A for  
the 45263D, HP 150 II  
or Vectra PC

### PLOTTERS



HP 7440A  
"Colorpro"

- <sup>1</sup> HP 150 II is sold in the U.S. as the "Touchscreen II"
- <sup>2</sup> Non-HP equipment is not supported by HP.  
These IBM PCs have been tested with the HP 260 system.

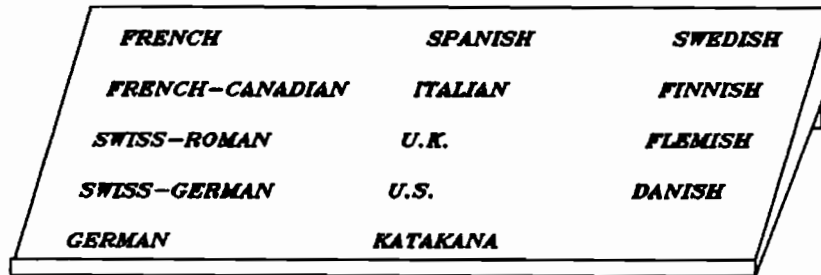
\* Availability to be announced

pp14



## A Wide Variety of Local Language Keyboards

Operating System Revision B.08 adds support for four additional HP45263D keyboards: Finnish, Flemish, Swiss-German, and Swiss-Roman (Swiss-French). O/S B.08 will recognize the following keyboards on 45263D video workstations. (All HP 2392A and PC keyboards which support the ROMAN8 character code can be used with the HP 260.)



PP15



## Supported workstation peripherals

Printers and bar-code readers are popular workstation peripherals. The following devices have been tested and are supported in an HP 260 system configuration.

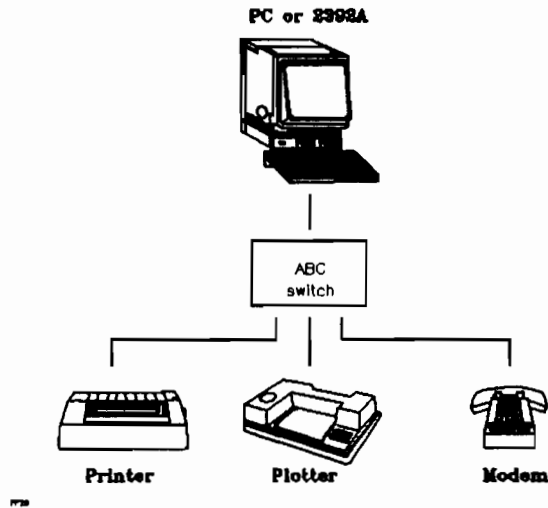
## Supported Workstation Peripherals

Peripheral		Workstation
Bar-code readers:	92195A	2392A, 150B
	92196A	45263D, 150 II, Vectra
Printers:	ThinkJet QuietJet LaserJet 2932/4A 2603A	2392A, 150 II, Vectra
Modems:	Bell and CCITT compatible	2392A, 150 II, Vectra

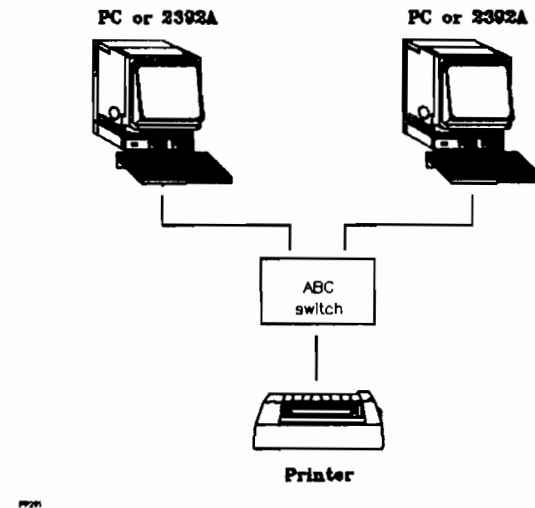
pp251

### Maximizing your workstation configuration

For a workstation configuration utilizing several peripherals (such as a printer, bar-code reader, and modem), a peripheral-sharing device can be useful. The 92178S, RS232C ABC Switch, (for example) can be connected between the PC and up to three peripherals.

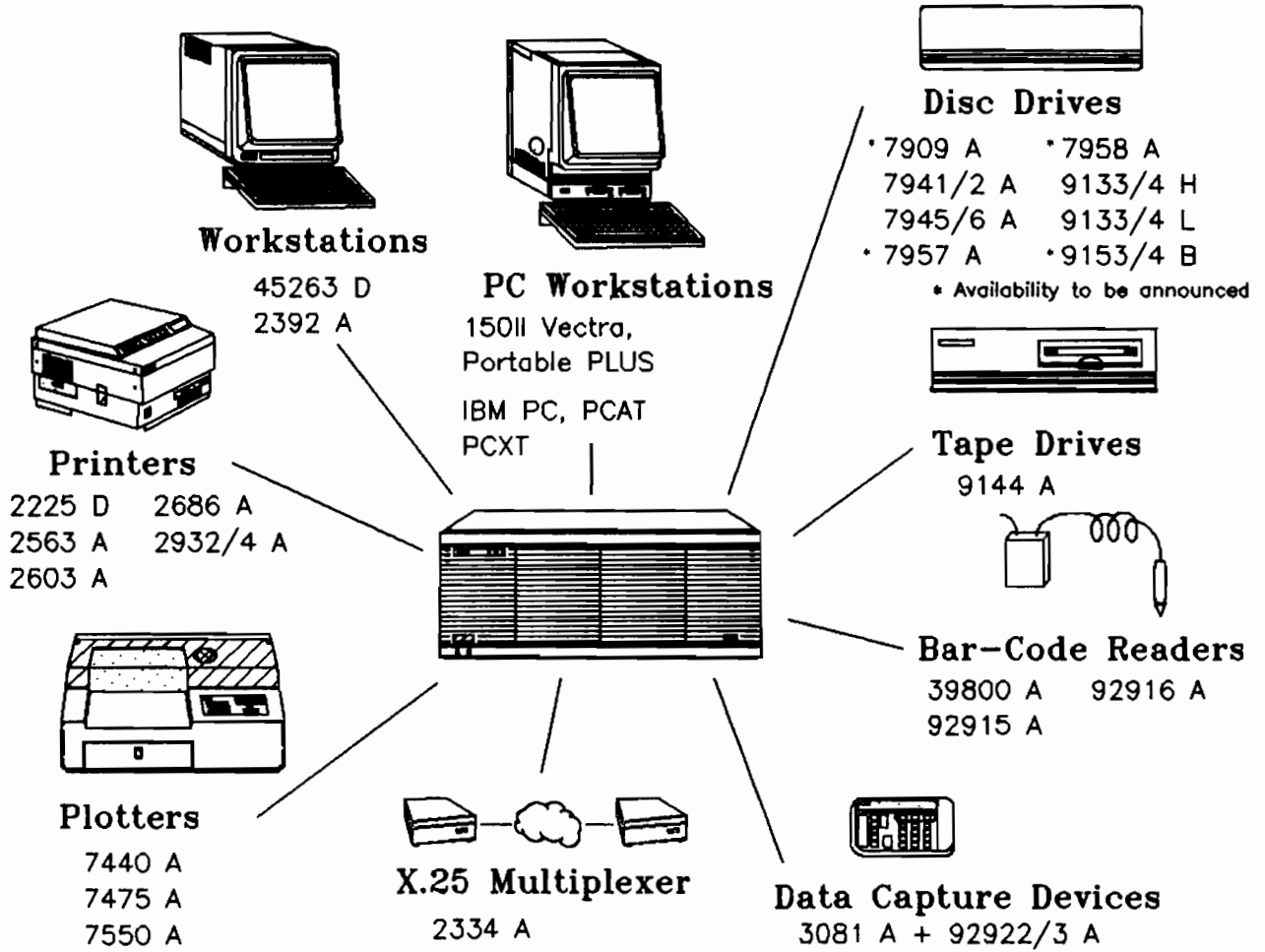


The ABC switch can also be used so that two to three users can share a printer. This is a convenient alternative to a single local printer for a two-user Series 30 system.



A broad selection of peripherals can be configured on the HP 260 Series 30 and Series 40.

## HP 260 Series 30 + 40 Peripherals



pp16-1

## B.08 Features & Benefits Overview:

<u>FEATURES</u>	<u>BENEFITS</u>
* Disc caching (S/40 & upgrades)	* 40-80% average additional performance increase
* 15 user support	* More user tasks can be added
* Dual controller support	* Separate disc/tape combinations and greater HP 3000 compatibility
* Personal Computers supported	* W/S emulation, data file transfer
* New peripherals supported	* Lower cost solutions
* All local languages on one OS	* Configure any supported language from standard B.08 tape

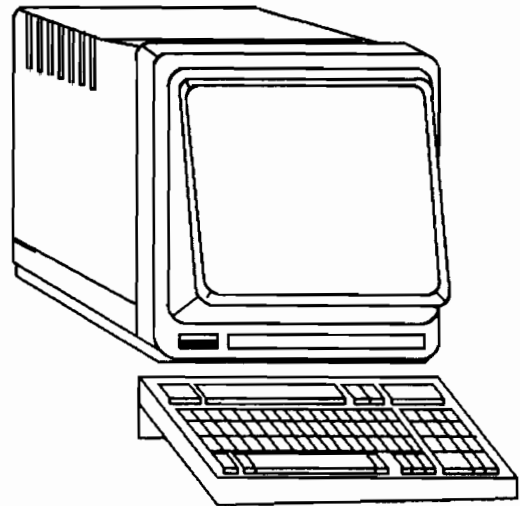
pp13

You can choose from three types of workstations for your HP 260-based solution: HP 45263D video workstation, 2392A terminal, and personal computers. Each type offers unique advantages.

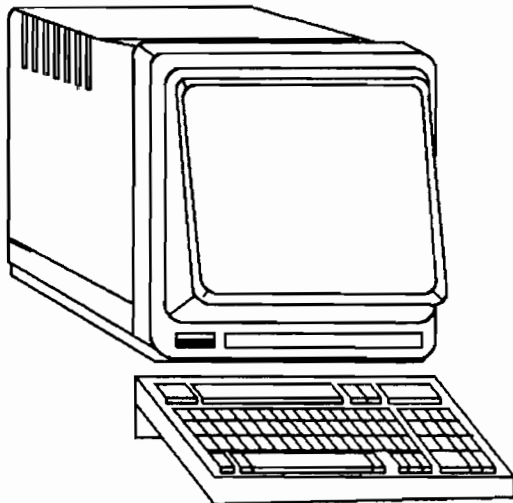
## 1) HP 45263D video monitor workstation:

The HP 45263D is the lowest cost workstation choice and offers the fastest display speed. The 45263D can be located as far as 100 meters from the HP 260 SPU. For customized lengths, Build-Your Own Cable kits are available from the Consumer Users Catalog.

On the HP 260 Series 30 and 40, the 45263D keyboard can now support the HP 92916A bar-code reader. The 45263D keyboard functionality is a superset of that offered by the HP 2622D or the HP 2392A.



PP17



## 2) HP 2392A terminal:

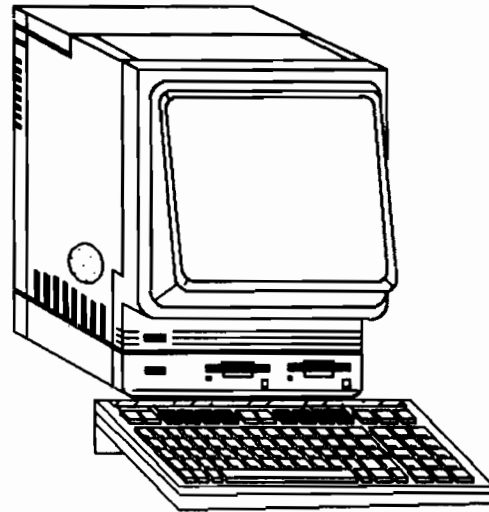
With OS Revision B.08, HP 2392A terminals can be used as fully functional workstations on HP 260 (and HP 250) systems. The 2392A terminal is supported on the HP 3000 system, and is a good choice for users who are considering migration to the HP 3000.

A modem, printer, or bar-code reader can be attached to the 2392A. Terminal handling of the ENTER key, TAB key, SELECT/ESC SELECT keys, and several others, differ slightly in functionality compared to the HP 2622D or 45263D workstation.

PP17

### 3) Personal computers:

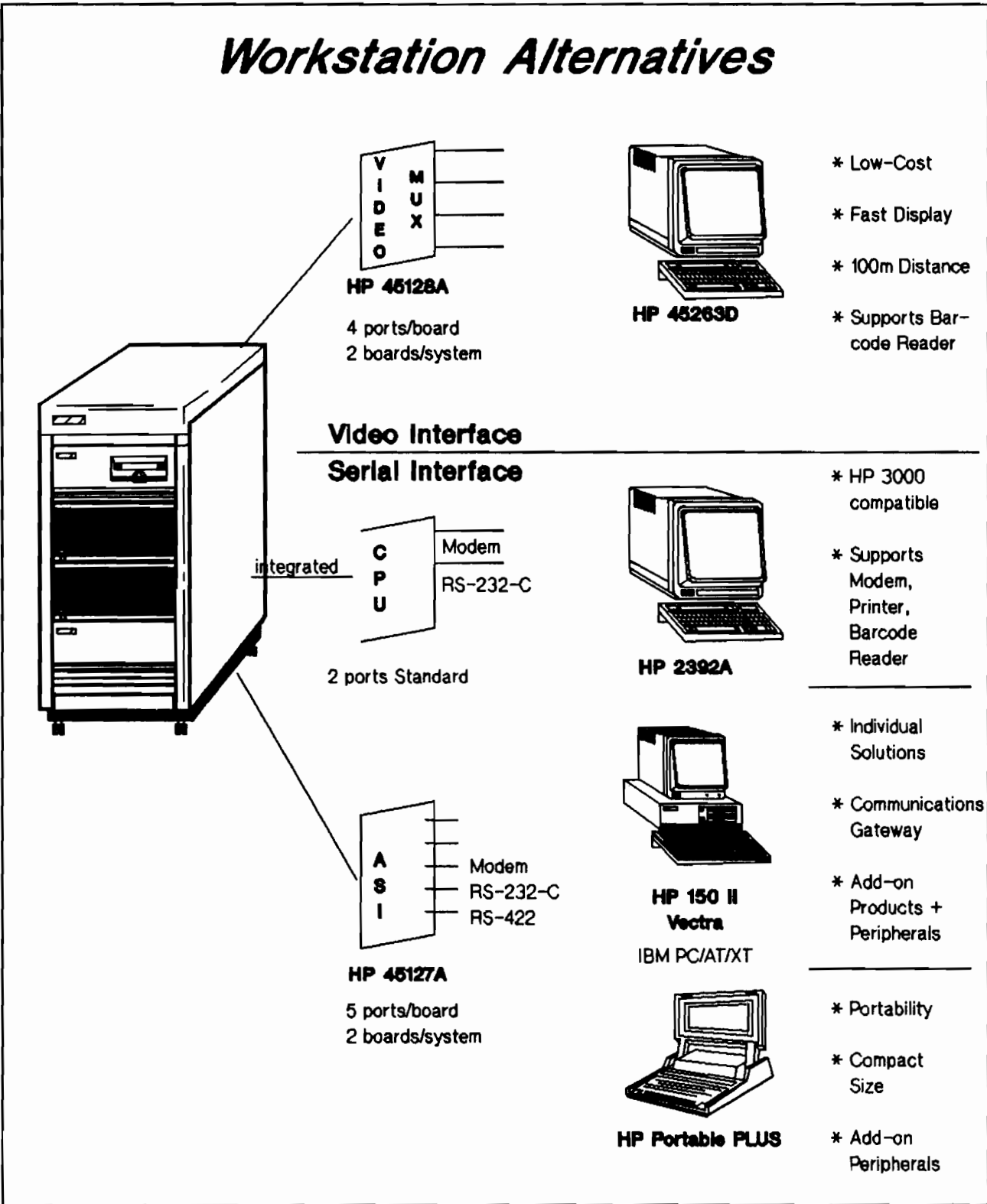
The HP 150 II (Touchscreen II), Vectra, and Portable PLUS PCs as well as IBM PC/XT/ATs can also be used as HP 260 workstations. HP 2392A terminal emulation, file transfer, and command file capabilities are provided by the AdvanceLink, AdvanceLink 2392, and REFLECTION 1 data communications products. All that is required on the HP 260 system is Operating System B.08!



PP18

WORKSTATION ALTERNATIVES

# Workstation Alternatives



PP25

## Personal Computer Support with OS B.08.

Operating System Revision B.08 includes support for three popular terminal emulators: AdvanceLink (revision A.03.02 and later), AdvanceLink 2392 (revision A.05.00 and later) and REFLECTION 1. In order for the PC to function as an HP 260 workstation or for file transfer between the PC and the HP 260, the PC must be running the correct terminal emulator software.

Personal Computer	PC Software Required	Product Number	U.S Price
HP 150 II	AdvanceLink*	HP45431A	\$295
HP Vectra	Advance-Link 2392	HP68333F	\$295
HP Portable PLUS	REFLECTION 1	HP82863K##	\$395
IBM PC/AT/XT	Advance-Link 2392	HP68333F	\$295

PP20

\* Terminal emulation is standard with the HP 150 II (Touchscreen II).

## Order option 400. Localization kits for German, French and Italian are available as products 82866KD/KF/KZ Option 400.



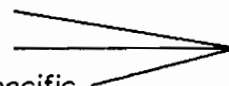
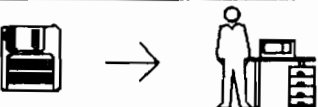
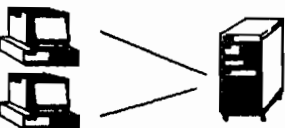


These sophisticated data communications solutions allow customers to use their PC as a multi-purpose workstation. They offer many powerful features for the HP 260 + PC user such as:

Ease of Use	P.A.M. integration Unattended operation possible
Superior file transfer capabilities	Error checking Binary data transfer 9600 baud typical transfer rate File manager escape
High performance	Bypasses PC OS to communicate directly to PC hardware Fast screen output Large display memories
Use of command files	Preprogrammed log-on sequences Remote process controls Bi-directional communications Auto-dial modem support
Integration with HP solutions	AdvanceNet compatible Access to a variety of hosts

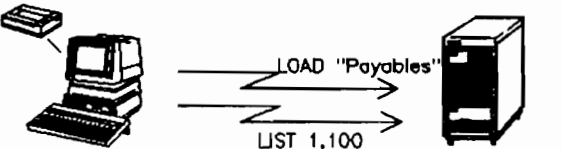
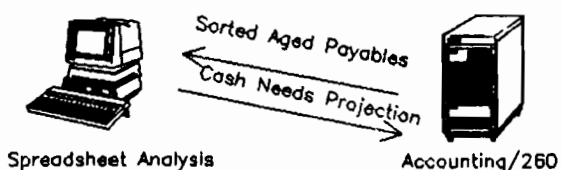
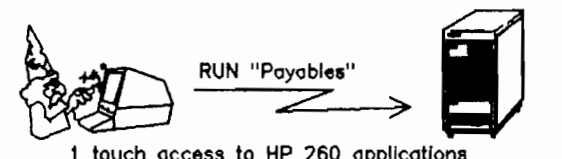

pp21

**Why use Personal Computers with multi-user systems?**

<b>GROWTH</b>	 <p>From single-user to multiple users</p>
<b>INVESTMENT</b>	 <p>Preserve investment in PC software and hardware</p>
<b>INTEGRATED SOLUTIONS</b>	<p>Secretarial Managerial Industry Specific</p>  <p>Single screen access to all information management solutions</p>
<b>PRIVACY</b>	 <p>Private data ownership</p>
<b>PERFORMANCE</b>	 <p>PC applications off-load the principal SPU</p>

PP22

**What functionality is offered?**

 <p>LOAD "Payables" LIST 1,100</p>	<b>Full workstation capabilities</b>
 <p>Sorted Aged Payables Cash Needs Projection</p> <p>Spreadsheet Analysis      Accounting/260</p>	<b>Bi-directional file transfer</b>
 <p>RUN "Payables"</p> <p>1 touch access to HP 260 applications</p>	<b>P.A.M. Integration</b>
 <p>HP 3000 IBM AdvanceNet Public Data Bases</p>	<b>Communications gateway</b>

PP23

**Integrated applications.**

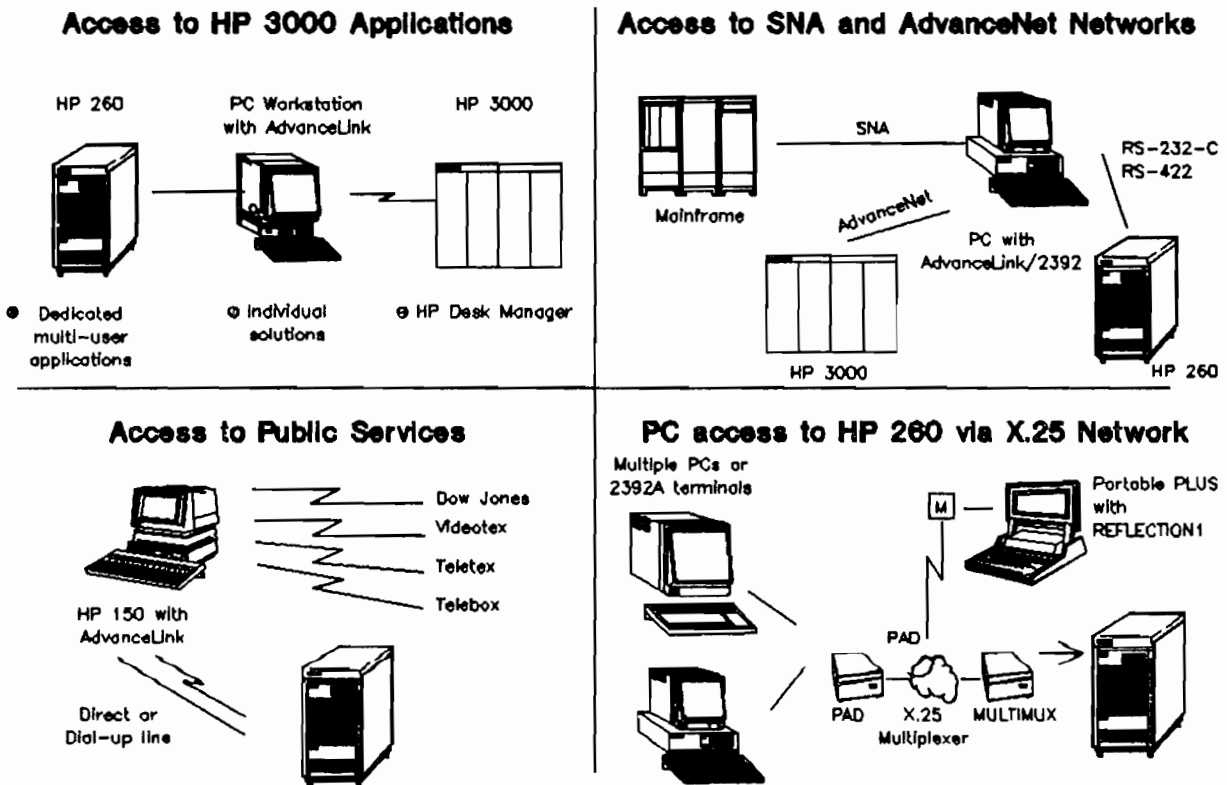
In a large company which uses the HP 260 for specialized applications, the PC-workstation fulfills many needs. It can access HPDESKMANAGER on the HP 3000, run individual application software and function as an HP 260 workstation. In addition, public data bases and information services are only a phone call away.

In smaller companies, the PC off-loads the HP 260 by utilizing PC applications for word processing, electronic spreadsheets, etc. The full strengths of the multi-user HP 260 with its powerful IMAGE Database Management Software can be focused on the main tasks of the company such as: manufacturing control, order processing, customer invoicing, inventory control, and financial accounting.

Multiple PCs or HP 2392A terminals can communicate with the HP 260 via an X.25 network. The HP 2334A MULTIMUX must be used between the X.25 network and the HP 260. Communications can be bidirectional and must be initiated by the workstation.

The HP 260 PC-workstation can act as a communications gateway to HP 3000 systems, IBM compatible systems, HP AdvanceNet, other HP 260 systems, and public data bases and information services. Additional hardware and software for the PC may be required to access some networks. The PC-workstation becomes a powerful communications channel.

**HP 260 + PC COMMUNICATIONS**



PP24



# Joining The HP 3000 Family

SECTION

5

Join/3000 is a set of products and programs designed to provide a highly compatible migration path from HP 260 and HP 250 systems to the HP 3000 family.

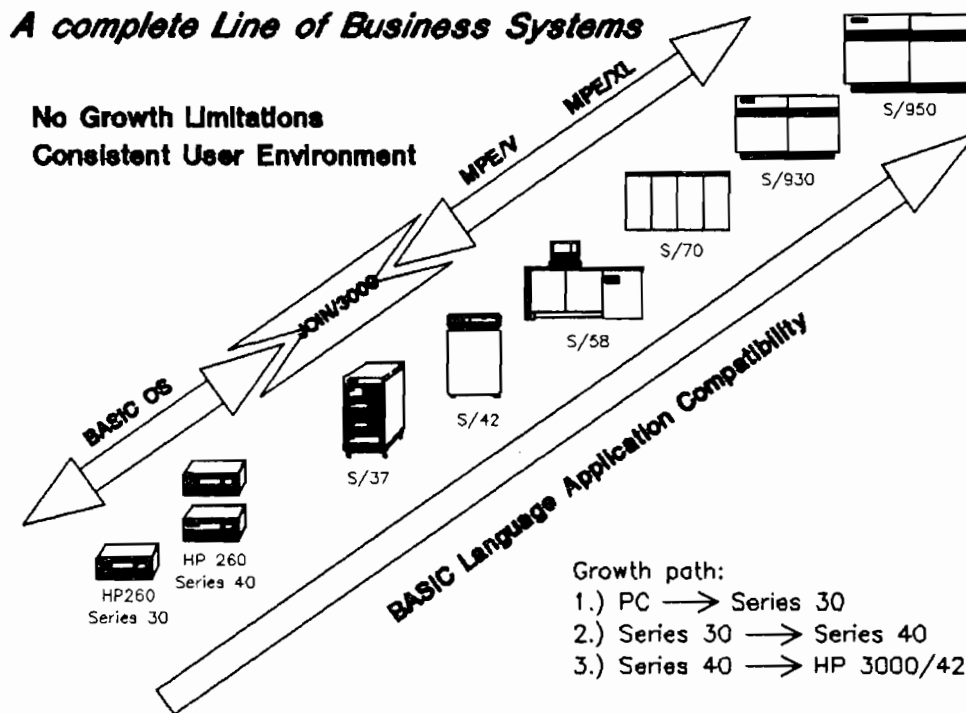
## Join/3000 consists of:

- 1) HP Business BASIC/V (HP32115A)
- 2) HP 3000 upgrade credits
- 3) AE-level training classes

## HP Business BASIC/V offers high compatibility with BASIC/260.

The full release of HP Business BASIC ("Phase II") is available for HP 3000 systems with the UB-Delta-1 MIT release. HP Business BASIC/V was modeled after BASIC/260 and can offer program compatibility of 90% or greater. Please refer to the section "Preparing for Portability" for more information on maximizing program compatibility.

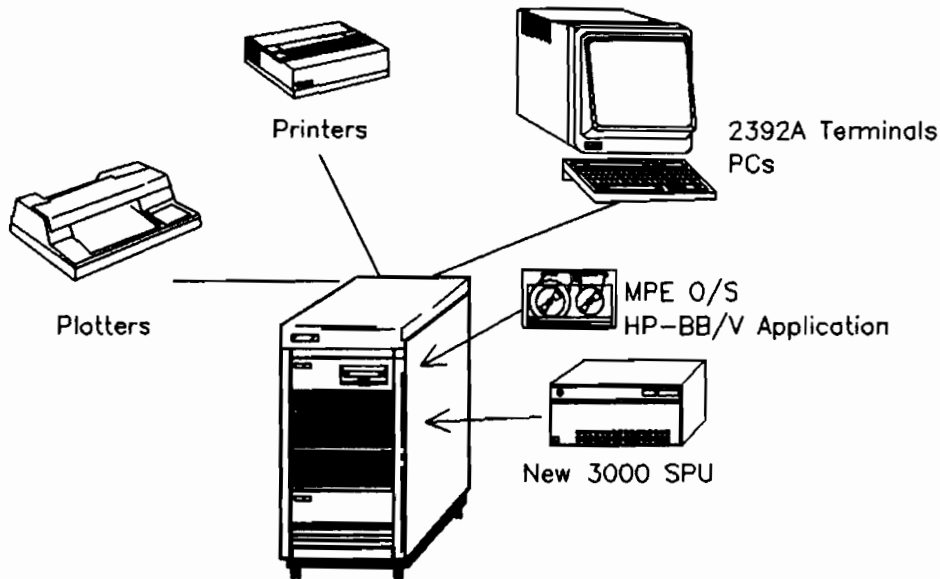
Join/3000 bridges the HP 260 and HP 3000 product lines and offers a secure growth path for new and current HP 260 (and HP 250) customers. The HP 260 can serve as a low-cost and simple to use "pre-HP 3000" system for small businesses. VARs can quickly develop BASIC language applications which span the HP 260 and HP 3000 product lines.



pp27

## Leveraging Your Hardware Investment

Many peripherals supported by the HP 260 Series 30 and 40 are also supported on low-end HP 3000 systems. Growing from an HP 260 Series 30- or 40- based hardware system to an HP 3000-hardware system allows the continued use of most workstations, printers, plotters, discs and cartridge tape drives. Installing the new HP 3000 hardware could be as simple as exchanging SPUs and loading the MPE/V operating system. Of course, be certain that the data stored on the disc drives has been converted via HP Business BASIC/V.



PP28

## Leveraging Your Software Investments

BASIC/260 application programs converted to HP Business BASIC/V can offer a consistent user environment. The user does not have to relearn any application procedures or experience changes in the use of familiar forms.

A character-mode FORM implementation on the HP 3000 offers the same functionality as FORM/260.

BASIC/260 form on an HP 260 system  
ORDER MANAGEMENT SYSTEM

Order date 04.07.86		Order number <u>1</u>				
Customer# <u>1</u>	Name <u>JOHNSON CHEMICALS</u>					
	Addr1 <u>SPRINGFIELD ROAD, LAFAYETTE</u>					
	Addr2 <u>47906 INDIANA</u>					
Part#	Unit	Quantity	Price	Disc't	Total	Comment
12345	100	15	1500	10	1350	URGENT



NEW ORDER						ACCEPT DATA	EXIT
-----------	--	--	--	--	--	-------------	------

HP Business BASIC/V form on an HP 3000 system  
ORDER MANAGEMENT SYSTEM

Order date 04.07.86		Order number <u>1</u>				
Customer# <u>1</u>	Name <u>JOHNSON CHEMICALS</u>					
	Addr1 <u>SPRINGFIELD ROAD, LAFAYETTE</u>					
	Addr2 <u>47906 INDIANA</u>					
Part#	Unit	Quantity	Price	Disc't	Total	Comment
12345	100	15	1500	10	1350	URGENT

NEW ORDER						ACCEPT DATA	EXIT
-----------	--	--	--	--	--	-------------	------

## Migrating to an HP 3000 System.

System performance testing indicates that an HP 3000 system with performance equal to or greater than the Series 42 should be the target upgrade system from a high-end HP 250/HP 260 system. This is necessary in order to provide a performance increase and allow for system expansion.

Upgrade credits to HP 3000 systems will be announced separately from this manual.

### HP Business BASIC/V ordering instructions.

32115A	HP Business BASIC/V
opt 301	BASIC/250 Return Credit
opt 3xx	For HP 3000 Series XX

## JOIN/3000 Features & Benefits Overview

<u>FEATURES</u>	<u>BENEFITS</u>
* Bridge to the HP 3000 family	* Ends "no growth path" sales argument
* Hardware upgrade credits	* Leverage HP 260 H/W investment
* Smooth upgrade to HP 3000	* Preserves user's S/W investment
* HPBB modeled after BASIC/260	* Powerful development environment retained
* Form conversion utility	* 99% automatic form conversion
* Form editor	* Migrated forms can be modified
	HP 260-style forms can be created
* Integrated run-time libraries	* User environment is maintained







# HP 250/HP 260 PLUS Performance Upgrade

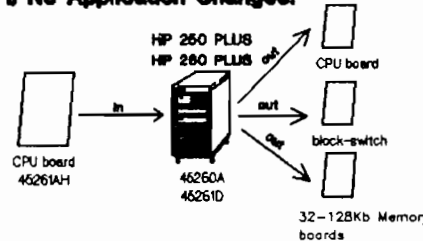
SECTION

6

In addition to the JOIN/3000 growth path, current HP 250 and HP 260 users have the alternative to upgrade to the performance levels of the HP 260 Series 40 with the HP 250/HP 260 PLUS upgrade.

## POWERFUL UPGRADES

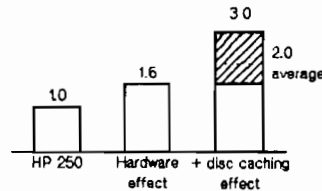
### 1) No Application Changes!



### 2) No Retraining!



### 3) Big Performance Boosts!



### 4) Major Enhancements!

- \* Faster processor
- \* Operating System B.08
- disc caching
- 15 tasks supported
- PC integration
- \* 1 Mb fast RAM memory
- \* Enhanced memory management

pp31

## HP 260/HP 250 PLUS UPGRADE

The performance of installed HP 260 systems and most HP 250 systems can easily be increased with the HP250/HP260 PLUS Performance Upgrade. HP 260 customers with SPU, 45261D, and HP 250 customers with SPU, 45260A, can typically double their current level of system performance with the PLUS upgrade.

The HP 250/HP 260 PLUS Performance Upgrade consists of OS B.08 and a new CPU board containing 1 Mb of high-speed RAM memory, a faster processor, and a new Memory Management Unit (MMU). With this upgrade, disc caching is available for SPU's 45261D and 45260A.

The CPU board contains 1 Mb of fast RAM memory (256 Kbit chips) in order to: improve performance, allow for additional 64Kb user partitions, and to provide plenty of memory for the disc cache. (Please see NOTE, next page).

## HP 250/HP 260 PLUS PERFORMANCE UPGRADE

Product No.	Opt.	Description
HP 45261AH		HP 250/HP 260 PLUS Upgrade. Includes high-speed CPU board with 1 Mb RAM memory and MMU, OS B.08 software on tape cartridge user documentation updates and HP installation.
		Media override options:
	041	Software on 8" media
	045	Software on 3.5" media
		Local language manual options:
	252	French user documentation
	253	German user documentation
	256	Spanish user documentation
	257	Italian user documentation

### NOTE

When the new CPU board is installed, the CE will remove any 16 Kb, 32 Kb, 64 Kb and 128 Kb memory boards. These boards can not be used with the new high-performance CPU board. The old CPU board and Block Switch board will also be removed. All boards remain the property of the customer.

## COMPARING UPGRADE ALTERNATIVES

### What is the best solution for increased system performance?

The answer depends upon the needs of your customer. The PLUS upgrade is certainly the easiest and least expensive alternative. It is the best choice for the HP 250 or HP 260 customer who needs to grow to 8 - 10 active users with several background tasks running. The customer experiences no changes in the user or system management environment and there are no disruptions to the work flow. For a very small investment, system performance typically can be doubled.

The JOIN/3000 migration to the HP 3000 family is the best choice for large HP 250/HP 260 installations which need to grow beyond 10 - 12 active users and have excess capacity for additional system expansion. The HP 3000 system offers more sophisticated system management tools and

comprehensive solutions for data communications and office products. Growth within the HP 3000 family is virtually limitless for the HP 260 customer.

Of course, it is very important that your HP 260 customer understands the difference in the system management environment of the HP 3000 when evaluating these upgrade alternatives. In some cases a third alternative may be preferable: buy one or more additional HP 260 systems.

## ***UPGRADE ALTERNATIVES***

***for Current HP 250/HP 260 Users***

<b>HP 260 Performance Upgrade PLUS</b>	<b>HP 3000 JOIN/3000 Migration</b>
<p><b>Up to 15 active tasks</b></p> <p><b>Low-cost performance increase</b></p>	<p><b>Growth beyond 10-12 users</b></p> <p><b>Greater system capabilities</b></p>
<p><b>Retain current hardware</b></p> <p><b>No software changes</b></p> <p><b>No system management changes</b></p>	<p><b>Requires new SPU + peripherals</b></p> <p><b>Requires software conversion</b></p> <p><b>Requires system manager</b></p>

PP30

The need to purchase new peripherals when growing to an HP 3000 will decrease substantially for HP 260 Series 30 & 40 users. Unlike the earlier HP 250 and HP 260 systems, the new HP 260 Series 30 and 40 support standard "HP 3000" workstations, discs and cartridge tape drives.

### **Is the PLUS upgrade available for the HP 250 Model 35?**

Unfortunately, it is not. This is because the HP 250 Model 35 SPUs, 45251A and 45251B, have been discontinued. New internal hardware products can not be supported in discontinued SPUs. After the five year support life for the 45251A/B expires in May 1988, the SPUs are obsolete and supported on a "best attempt" basis. Many of the peripherals sold with these SPUs have also been discontinued. The 45251A and 45251B SPUs have not been tested with the new CPU board. The HP 250/HP 260 PLUS upgrade board will not be supported on these old SPUs and should not be installed.

Users of these SPUs who wish to increase their system performance should consider the following alternatives:

## HP 250/HP 260 PLUS PERFORMANCE UPGRADE

- 1) Buy a Series 40 system (check Appendix A for lists of supported peripherals).
- 2) Arrange through their VAR to purchase a used HP 45260A or HP 45261D SPU and buy the 45261AH PLUS upgrade. (Again, check Appendix A to ensure that only supported peripherals are used).

### Reasons to buy a new Series 40 system:

- 1) Most (or all) of the cost of the old hardware has been fully depreciated.
- 2) New hardware will extend the life of the application software.
- 3) Upgrading to an HP 260 requires no changes in user environment, system management, or application software.
- 4) Monthly BMCC maintenance contracts are 50 - 75% lower on the S/40 system. For example:

<u>HP 250 Model 35</u>	<u>BMCC</u>	<u>HP 260 Series 40</u>	<u>BMCC</u>
45251B SPU	\$ 109	45072A SPU	\$ 30 *
128 Kb memory board	19	45008A 512 Kb mem.board	5 *
256 Kb memory board	14	45127A ASI board	5 *
ASI board	18		
7908P disc/tape drive	48	7945A disc drive	40
		9144A tape drive	11
2 x 2649D workstation	96	5 x 2392A workstation	50
3 x 2622D workstation	72		
2631B printer	52	2932A printer	21
Total monthly cost	\$ 428	Total monthly cost	\$ 162

Monthly cost difference = \$ 266  
 Annual cost difference = \$ 3,192  
 Series 40 is 62% less expensive to maintain

\* Estimate, final prices not available  
 at this printing

pp40

# MEASURING PERFORMANCE GAINS

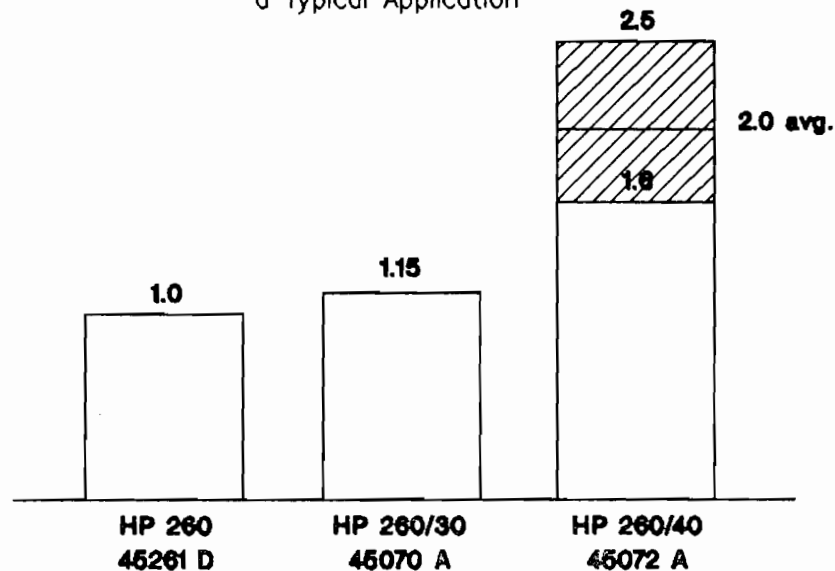
SECTION

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The results from the first round of performance testing have been very encouraging. For comparison purposes, we have measured the new Series 30 and Series 40 relative to last year's HP 260 SPU (HP 45261D). On the average, the HP 260 Series 30 is 1.15 times faster than the 45261D. The degree of performance improvement for the Series 40 will be relative to the effect that disc caching has on a particular application. On the average, the Series 40 will be twice the speed of the 45261D.

## PERFORMANCE COMPARISON

Relative Throughput for  
a Typical Application



All systems tested with the HP 7946 A disc

pp70

The amount of performance improvement you can expect will depend on the CPU vs. I/O intensive mix of your application. CPU intensive applications are primarily working within memory partitions with few calls to the disc. Disc I/O intensive applications are frequently accessing the disc to read or write data. A DBGET statement is very I/O intensive whereas a IN DATA SET ... DIM ALL statement is CPU intensive.

For CPU intensive applications the Series 30 is typically 20% faster than the 45261D SPU. The Series 40 offers a 60% performance improvement. The difference is due to the higher performance CPU board in the Series 40. For the I/O intensive tests, the 7946A disc and the higher performance 7912P disc were used. (The new 82 Mb and 131 Mb discs are targeted to be similar to the 7912 in performance.)

In I/O intensive applications, the performance of the Series 30 is equal to the 45261D. As might be expected, the performance of the Series 30 was 40% greater with the 7912P disc than with the 7946A. However, the effect of the disc's performance on the system is not so great when disc caching is used. The

SEPT 86

7-1

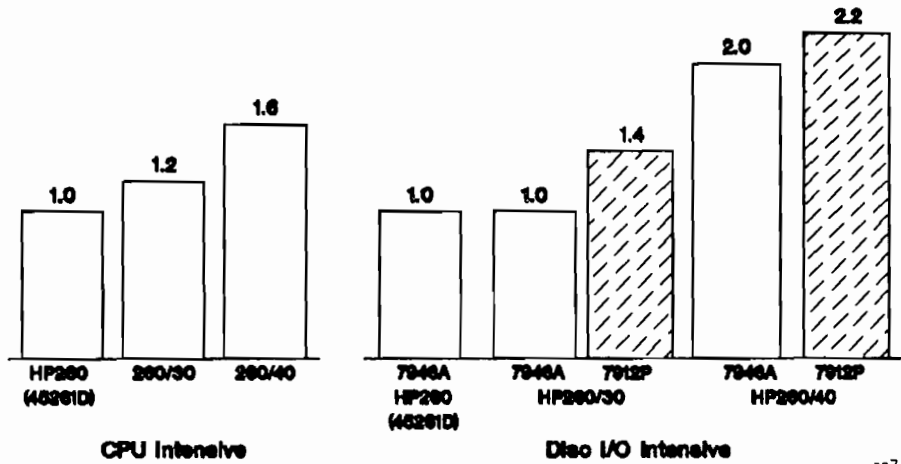
## Measuring Performance Gains

performance of the Series 40 system with the 7912 disc was 120% greater than a 45261D with a 7946A disc. The Series 40 system with the 7946A disc was 100% faster.

Disc caching greatly compensates for slower performing discs!

### PERFORMANCE MEASUREMENTS

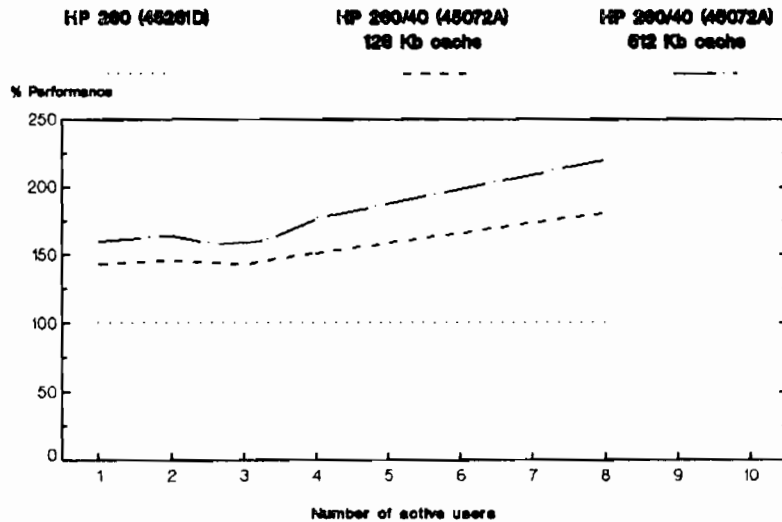
Relative Throughput



pp71

The amount of memory available for the disc cache can make a performance difference. Please refer to the following graph. In these tests all systems were using a 7946A disc. Notice that for 1 to 3 users the performance increase was approximately 45% with a 128Kb cache and 60% with a 512Kb cache. However, for 6 to 7 users the increase over the 45261D was 65% with 128Kb cache and nearly 100% with 512 Kb in cache memory.

### PERFORMANCE COMPARISON



PP72C



In summary, we find that the HP 260 Series 30 is approximately 15% to 20% faster than the previous HP 260 SPU, 45261D. The Series 40 can range from 60% to 150%+ depending on the CPU vs. I/O intensive nature of your application, the amount of memory in the disc cache, and the number of active users.

Additional performance testing is scheduled after the printing of this manual. These results will be made available in a follow-up document.

Comparing the an average Series 30 to the average Series 40 offers this data.

<i><b>HP 260</b></i>		
<i><b>Series 30</b></i>		<i><b>Series 40</b></i>
0.6	<i><b>HP 260 Processor Native MIPS</b></i>	0.9
0.5 - 1.5 Mb	<i><b>Main Memory</b></i>	1 - 2 Mb
1.15	<i><b>System Performance (relative to 45261D SPU)</b></i>	2
no	<i><b>Disc Cache</b></i>	yes



# PRODUCT POSITIONING

SECTION

8

## Positioning the HP 260 and HP 3000 Families

The HP 260 is positioned at the low-end of the small business marketplace where the needs for data communications and office automation are minimal and the needs for simplicity and low-cost are great. The HP 260 can sell into the very low-end of the marketplace, the three to four user solution.

The HP 260 can close deals for HP systems and open doors for future HP 3000 upgrades.

	HP 260	HP 3000 S/37
Entry-level SPU price	\$ 5,000	\$ 14,860
Single user system price	\$ 8,700 *	\$ 24,361 **
Entry-level disc size	20 Mbytes	55 Mbytes (plus)
FOS size	1.2 Mbytes	25 - 30 Mbytes
Typical number of users	2 - 8	4 - 12
System manager requirements	"key operator"	"trained manager"
Growth path - conversion required	HP 3000 5 - 10%	HP 3000 none
Languages supported	BASIC only	multiple
Data comm solutions	limited	extensive
Office automation solutions	limited	extensive
Vertical solutions available	diverse	limited
Vertical solutions price	low	medium/high

\* Entry-level configuration = S/30 SPU, 512 Kb memory, 2 serial ports, 20 Mb disc with .7 Mb micro-floppy, 1 workstation.

\*\*Entry-level configuration = SPU, 1 Mb memory, cabinet, ATP-M, 55 Mb disc with tape backup, 1 terminal. Price reflects \$4,299 LEVAR discount (Europe).

pp301

## Starting Small

An HP 260-based solution is ideally suited to the small company that has a modest EDP budget AND ambitious growth plans. A five-year comparative analysis shows that starting with an HP 260 system and later growing to an HP 3000 system offers substantial cost savings over starting with an HP 3000/37.

Please consider the scenario of a small manufacturing company automating for the first time.

### Small Manufacturing Company Scenario

1986 Decision and funding for automation of: accounts payable and accounts receivable.

*Requirements:* 3 users  
20-40 Mb of mass storage  
200 cps printer  
reliable hardware and software  
implementation assistance  
flexible growth path  
low-cost solution

*Solution:* HP 260 Series 30 with VAR application solution.

1987 HP 260 implementation successful and cost-effective. Decision and funding to automate: customer & purchase order control and inventory control.

*Requirements:* 3 additional users  
data capture terminals  
additional mass storage  
fully integrated solution

*Solution:* Additional peripherals and VAR applications are purchased.

1989 Manufacturing capacity is doubled. Materials requirements and capacity planning solutions are added.

*Requirements:* 4 additional users  
additional performance  
high-speed line printer  
additional mass storage  
additional integrated software solutions

*Solution:* Upgrade to HP 260 Series 40. Add new peripherals and application software.

1990 Three sales offices are opened. Computing needs now include electronic mail, remote order entry and payroll.

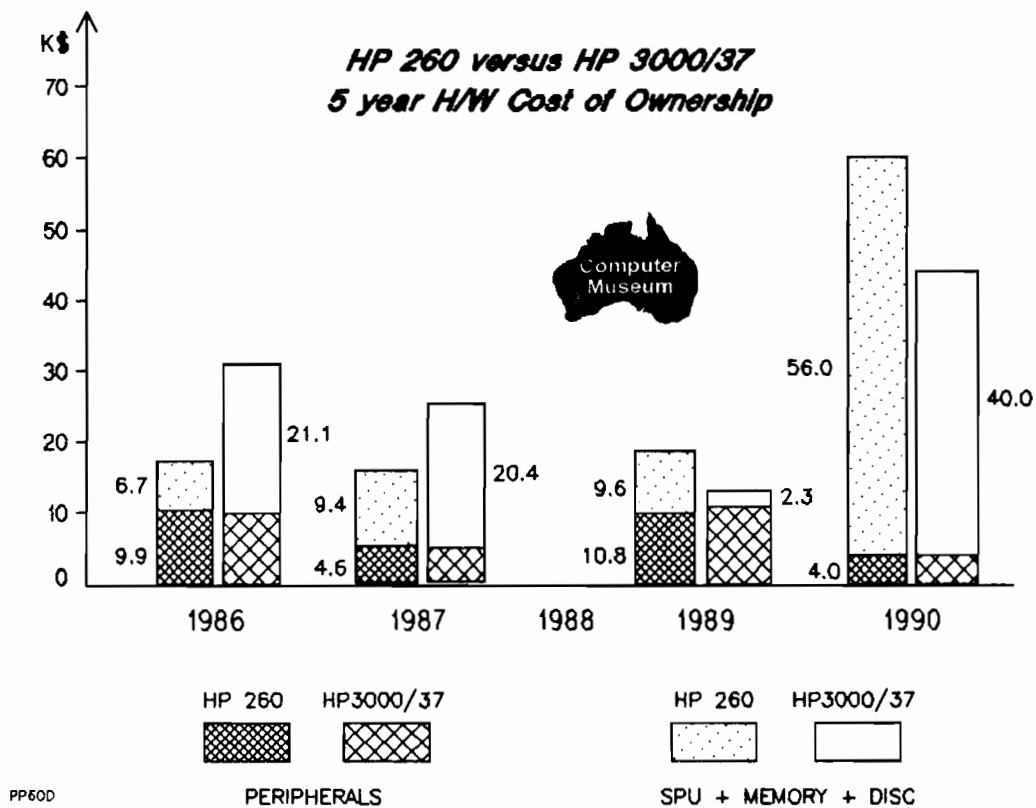
*Requirements:* 3 remote workstations  
additional applications

*Solution:* Upgrade to an HP 3000 Series (42).

**Evaluating the scenario**

Let's look at the financial impact of the Small Manufacturing Company's (SMC) decision to go with the HP 260 in 1986 instead of an HP 3000/37. We will not assign a relative cost value to the HP 260's user-friendly environment. Also, we will not compare hardware and software support costs. On the average the HP 3000 is 10 - 20% more expensive for support cost-of-ownership.

Had SMC initially purchased an HP 3000 Series 37, The cost would have been 81% greater than the cost for the HP 260 Series 30. The cost of the Series 37 may have prohibited the sale. Note that the system cost difference is related to SPU, memory, disc and backup costs. Costs for workstations and printers is essentially equal.



Notice that in 1990 SMC migrates to an HP 3000 system (Series 42 for this comparison). In 1990 SMC had to spend more than they would have, had they initially purchased an HP 3000/37. However, let's add up the total cost of hardware over the five year period for each system and apply a 10% hurdle rate (present value of money analysis).

## Product Positioning

We find that the present value of the total hardware investment to be:

HP 260 \$ 55,186

HP 3000 \$ 62,439

---

\$ 7,253 - Cost Savings with HP 260

CONCLUSION: HP 260s win deals at the low-end and sell future HP 3000 systems.

## Positioning the HP 260 and Multi-user PCs

### Unix as an Industry Standard

The primary PC-based competition to the HP 260 in the coming years is likely to be multi-user PCs running a Unix operating system. An estimated 90% of today's market for desktop Unix operating systems is owned by Microsoft Corporation's Unix implementation, Xenix. Xenix is offered by vendors such as Altos, Wang, ITT, NCR, and Olivetti and by Independent Software Vendors (ISV) in partnership with dealer hardware.

Multi-user PCs are emerging as a strong dealer channel product. "Industry standard" hardware and software are a good fit for the dealer channel. The more like a commodity a product becomes, the greater the need to sell in high volume with low value-added.

### Value-Added Reseller Channel vs. Dealer Channel

The HP 260 is a VAR channel product. The VAR channel differs from the dealer channel in the level of value-added. VARs add value in consulting, customized software solutions, training and on-going support. Typically these value-added services add as much as 100% to the cost of the hardware and system software solution.

There are market niches for low-value added dealer products and for high-value added VAR products. Ultimately, the best way to avoid competing with dealer prices and availability, is to focus on industry segments which require the HP 260 VAR's expertise and other value-added services.

### What is Best for the End User?

Unix-based solutions are growing in number, but they are not necessarily better for the end user. Let's focus on issues which are important to the end user.

#### *Growth Path*

Multi-user PCs can be suitable choice for a business requiring little or no system growth. Vertical markets with a high growth potential need the ability to add new multiuser applications and a wide variety of peripherals while maintaining an acceptable performance level.

#### *User Interface*

Unix-based operating systems often demand that the user be eager to learn system commands and intrinsics. The HP 260 operating system "spoon feeds" the user in all aspects of system use and system management.

*Performance*

Memory swapping can significantly decrease system performance on Unix-based systems. On the HP 260 each user has a dedicated 64 Kb memory partition. The HP 260 file system offers greater performance through the use of contiguous files.

*Resource Utilization*

The kernel and basic utilities for a Unix OS require 4-6 Mb of disc space, compared to 1.5 Mb for the HP 260. The HP 260 system requires only 512 Kb of system memory to support 4 users. At least 2.0 Mb of memory would be needed on a Unix-based system.

*System Integration*

Most multi-user PC offerings are not single vendor solutions. The database solution, forms package, and SPU hardware come from independent suppliers. Little system integration testing is performed and support can come from yet another vendor.

*Support*

If a multi-user PC is purchased from a dealer, who provides the support? What is the availability of hardware replacement parts and software assistance? Who does the trouble shooting with a multi-vendor solution? How much implementation assistance, on-site training, and hand holding will be available?

These are important considerations for companies evaluating a multi-user computer solution. There are market niches for multi-user PCs and a growing dealer channel to provide them. There are also a number of vertical markets which require a level of support and implementation assistance, uneconomical for a dealer to offer. The dealer's first objective is inventory turnover. The VARs first objective should be a lasting business partnership with the end user.





## Introducing a new data communications tool, APD/260

With the introduction of Operating System Revision B.08, a new software product for developing asynchronous data communications programs is available. Asynchronous Program Development Package (APD) consists of TIO II and XMODEM binaries. TIO II permits an HP 260 to interface to any RS-232-C/V.24 device or system independent of the protocol the device or system is using. TIO II is updated for B.08, but otherwise unchanged. The XMODEM binaries are new and allow for the development of data communications link to other systems which support the industry-standard XMODEM protocol.

APD/260 is available with unlimited right to copy. It is intended for use by experienced programmers with strong data communication backgrounds.

### Ordering information

HP 45209A	APD/260 Asynchronous Program Development Package. Includes unlimited right to copy. Software on tape cartridge.
HP 45209A+SOO +WOO	Software Materials Subscription (Data Comm B category) Extend SMS - add one site

APD/260 contains binaries that are supported only with OS B.08. Software Materials Subscription will provide a new version of APD/260 with each new Operating Revision. If a support contract is not purchased, APD/260 must be repurchased to run under a future HP 260 operating system.

## What's new for current HP 260 Software products?

DSG/250, SLIDE/250 and NETWORK/250 have new names! They are now appropriately named:

DSG/260	Decision Support Graphics	(HP 45150A)
SLIDE/260	Textual Plotting Package	(HP 45170A)
NETWORK/260	Asynchronous Communications	(HP 45125A)

DSG/260 (Revision B.05) and SLIDE/260 (Revision A.03) now support the low-cost, 8-pen Color Pro plotter.



Some points to consider to help make buying, installing and using an HP 260 system easier for your customers:

1. **SITE PREPARATION PRIOR TO INSTALLATION:**

Please make sure that all customers receive the manual "PREPARING FOR YOUR HP 260 SERIES 30 AND SERIES 40", part number 45070-90003, several weeks before the system is scheduled to arrive. All sites must meet the specifications stated in this manual to qualify for a maintenance contract. Proper site preparation is essential to the safety of the user and the reliability of the equipment. It is the user's responsibility to arrange for an electrician, value-added business partner, or HP to verify that the site meets HP standards prior to system installation.

The sales office and VAR should keep a supply of the manual in stock and see that each customer receives a copy after placing their order. The factory is only able to ship the manual with the system. And that is too late.

2. **USING THE HP-IB 2563A PRINTERS WITH THE HP 260.**

The HP 260 is not able to determine if an HP-IB 2563A printer is "ON LINE" or "OFF LINE". If the printer is addressed by the HP 260 (or HP 250) when it is "OFF LINE", the program/system will wait until the printer has been turned "ON LINE" before responding. No data will be lost, but a user may not be aware that the application program is waiting for the printer. This can be particularly frustrating if the HP-IB 2563A is used for logging system errors or messages.

3. **BUYING A SYSTEM CABINET FOR THE HP 260.**

Your customer has two choices for a system cabinet to mount HP 260 components such as the SPU, I/O Extender, disc and tape drives. The Computer Users Catalog offers a Design Plus cabinet, 92211R, and BGD offers the HP 45065A (110-120V) and HP 45066A (220-240V) cabinets.

The Design Plus cabinet must be ordered from DMO/DMK with the 92211S, rail kit, and 92211T, filler panel kits. Purchases are not subject to OEM discount schedules.

The 45065/6A cabinets from BGD have the same dimensions as the 92211R cabinet, but are designed to be easier to install, lighter in weight, and less expensive. Drawer kits are not available. Purchases are eligible for OEM discounts. Installation of this type of cabinet is described in the "Installing Your HP 260" manual.



The following sales tools are available for HP 260 systems.

<b>Literature Piece</b>	<b>Version</b>	<b>Part Number</b>
Management brochure	European (English)	5954-6210
	U.S. (English)	5954-6210D
	Italian	5954-6210IT
	Spanish	5954-6210SP
	Norwegian	5954-6210NO
	Danish	5954-6210DK
	German	5954-6210GE
	Dutch	5954-6210DU
	French	5954-6210FR
	Finnish	5954-6210FI
Direct mail flyer	European (English)	5954-6211
	U.S. (English)	5954-6211D
	Italian	5954-6211IT
	Spanish	5954-6211SP
	Swedish	5954-6211SW
	Norwegian	5954-6211NO
	German	5954-6211GE
	French	5954-6211FR
Finnish	5954-6211FI	

## Sales Tools

<b>Literature Piece</b>	<b>Version</b>	<b>Part Number</b>
System Overview	English	5954-6213
	Italian	5954-6213IT
	Danish	5954-6213DK
	Swedish	5954-6213SW
	German	5954-6213GE
	Finnish	5954-6213FI
NETWORK data sheet	English	5954-6227
QUERY data sheet	English	5954-6228
TEXT data sheet	English	5954-6229
DSG data sheet	English	5954-6230
REPORT WRITER data sheet	English	5954-6231
GPL data sheet	English	5954-6232
DSN data sheet	English	5954-6233
IMAGE data sheet	English	5954-6234
SLIDE data sheet	English	5954-6235
HP 45263D workstation data sheet	English	5954-6237
SPU data sheet	English	5954-6218
HP 260/250 PLUS data sheet	English	5954-6219
APD/260 data sheet	English	5954-6220
Poster 1	Universal	5954-6221
Poster 2	English	5954-6222
Sales Training Manual	English	5954-6224
Price Guide (US)	English	5954-6225D
Price Guide (FBP)	English	5954-6226

# QUESTIONS AND ANSWERS

SECTION

12

- Q - Are there any system bundles for the Series 30 and 40?
- A - We are not offering any bundled systems at this time. HP is in the process of improving and redefining the system bundles program.
- Q - Why can't we order extra memory and I/O boards as SPU options?
- A - Having dual numbers (SPU option and stand-alone product number) for the same product was creating some order processing and distribution problems. We've tried to make ordering the Series 30 or Series 40 as easy as possible.
- Q - How can I learn more about the PC Integration features of the HP 260?
- A - Read the AdvanceLink, AdvanceLink/2392, or REFLECTION 1 documentation. PC integration on the HP 260 is a result of B.08 support for these products.
- Q - Does the HP 260 support the 35401A autochanger tape drive?
- A - Not at this time. If there is a market demand, this can be considered for future enhancements. Let us know.
- Q - Can I use an old HP 2622D workstation on the Series 30 and 40?
- A - No, the new HP 260 series does not support the HP 2622D (in addition, it will not work on the integrated ports). The HP 2622D will be removed from the CPL on November 1, 1986. All HP 260/HP 250 systems running OS B.08 can use the 2392A if additional workstations are needed.
- Q - Why doesn't the HP 260 support the HP 9142A cartridge tape drive?
- A - The 9142A is not compatible with the 9144A, so tapes produced on one can not be read by the other. Also, the 9142A is a PC-type product intended for a single user duty cycle. The 9144A provides the better back-up solution for a multi-user system.

## Questions and Answers

**Q -** Why are there no return credits for an HP 250 Model 35 to HP 260 Series 40 upgrade?

**A -** As there is no HP remarketing program for old HP 250 systems, and since we do not use "refurbished" parts in our systems, there is no internal demand for the old SPUs. We have priced the Series 30 and 40 to be attractive to new and installed base customers. Please see Section 6 for more information

**Q -** Will PCDO distribute the new HP 260 series for the U.S. and Canada?

**A -** Yes, BGD and PCDO have worked closely to improve all phases of the "RAPID DELIVERY" program for the new HP 260 in the U.S. and Canada.

**Q -** How can we order the HP 260 "Programming Manuals Kit"?

**A -** The Programming Manuals Kit is available from DMK/DMO as part number 45261- 87901 (including binders). The HP 260 Configuration Guide lists the contents of this kit in the Documentation Appendix.

**Q -** Are any of the programming manuals localized?

**A -** Yes, the BASIC manual is available in German. However, you must order it separately with part number 45261-90351 from DMK/DMO.



## HP 260 SPU SERIES 30

Prod #	Description
45070A	HP 260 Series 30 SPU including 512Kb memory, 2 RS232C ports, HP-IB, system software on tape cartridge, 100 - 240V operation, power cord, and standard manual set in English.
020	Delete HP installation (Non-HP installation requires a skilled technician).
System software media override option:	
045	Operating system on 3.5" micro-floppy disc instead of tape cartridge
Replace English standard manual set with local language version:	
252	French standard manual set
253	German standard manual set
256	Spanish standard manual set
257	Italian standard manual set
Power cord options:	
900	U.K. power cord
901	Australian/New Zealand power cord
902	European power cord
904	U.S./Canadian power cord, 250V
906	Swiss power cord
912	Danish power cord
917	South African power cord

## PRODUCT STRUCTURE

### HP 260 SERIES 40

Prod #	Description
45072A	HP 260 Series 40 SPU including disc caching, 1 Mb of memory, 2 RS232C ports, HP-IB, system software on tape cartridge, 100 - 240V operation, power cord, and standard manual set in English.
020	Delete HP installation (Non-HP installation requires a skilled technician).

#### System software media override option:

045	Operating system of 3.5" micro-floppy disc instead of tape cartridge
-----	--

#### Replace English standard manual set with local language version:

252	French standard manual set
253	German standard manual set
256	Spanish standard manual set
257	Italian standard manual set

#### Power cord options:

900	U.K. power cord
901	Australian/New Zealand power cord
902	European power cord
904	U.S./Canadian power cord, 250V
906	Swiss power cord
912	Danish power cord
917	South African power cord

## NEW PL10 PRODUCT NUMBERS

### Hp 260 Series 30 and 40 SPUs

HP45070A HP 260 Series 30 SPU

HP45072A HP 260 Series 40 SPU

### HP 260 Series 30 and 40 Add-on Products

HP45008A 512 Kb Memory Board

HP45009A 512 Kb Memory Module  
(requires 45008A)

HP45127A ASI Interface

HP45128A Video MUX Interface

HP45129A INP Board

HP45071A I/O Extender  
Attaches to HP 260 SPU  
45070A or 45072A. 100-240V  
operation, includes U.S.  
power cord and HP installation.

opt 900 U.K. power cord  
opt 901 Australian/New Zealand power cord  
opt 902 European power cord  
opt 904 U.S./Canadian power cord, 250V  
opt 906 Swiss power cord  
opt 912 Danish power cord  
opt 917 South African power cord

### New HP 260/ HP 250 products

HP 45209A APD/260 Asynchronous Program  
Development Package.  
Software on tape cartridge.

HP 45065A System Cabinet, 100-120V power,  
U.S./Canadian power cord.

HP 45066A System Cabinet, 220-240V power,  
European power cord.

## PRODUCT STRUCTURE

opt 900 U.K. power cord  
opt 901 Australian/New Zealand power cord  
opt 904 U.S./Canadian power cord, 250V  
opt 906 Swiss power cord  
opt 912 Danish power cord  
opt 917 South African power cord

## Installed Base Upgrade Products

HP45072AH S/30 to S/40 CPU Upgrade  
(order additional memory  
and I/O separately)

HP45261AH HP 250/ HP 260 PLUS Performance  
Upgrade. Includes high-speed  
CPU board with 1 Mb of  
memory, B.08 operating system  
on tape cartridge, user  
documentation updates, and HP Installation

opt 041 Software on 8" media  
opt 045 Software on 3.5 media  
opt 252 French user documentation  
opt 253 German user documentation  
opt 256 Spanish user documentation  
opt 257 Italian user documentation

HP45265E B.08 Operating System Upgrade  
on tape cartridge. Includes  
user documentation updates.

opt 041 Software on 8" media  
opt 045 Software on 3.5 media  
opt 252 French user documentation  
opt 253 German user documentation  
opt 256 Spanish user documentation  
opt 257 Italian user documentation

HP 45276A CPU ROM Upgrade for HP 150, 45260A.  
Allows the B.08. operating  
software to be booted from any  
supported hard disc on an HP 250  
system. Requires HP installation.

# Peripheral Support Matrix

APPENDIX

A

Operating System Revision B.08 is the newest release in a long line of compatible operating systems for the HP 250 and HP 260 computer systems. Not all peripherals recognized by OS B.08 are supported by every HP 250 or HP 260 SPU. The following matrix lists those peripherals which can be added as "supported" peripherals to an installed HP 250 or HP 260 system. \*

	HP 260 Systems		HP 250 Systems	
	45070A/72A	45261D	45260A	45251A/B
<b>Workstations</b>				
2392A	X	X	X	X
2622D		X	X	X
2649D			X	X
45262D		X		
45263D	X	X		
150A/B PC	X	X		
150 II PC	X	X		
Vectra PC	X	X		
Portable PLUS PC	X	X		
<b>Printers</b>				
2225D	X	X	X	X
2563A/B	X	X	X	X
2601A		X	X	X
2602A		X	X	X
2603A	X	X	X	X
2608A			X	X
2631A/B			X	X
2686A/B	X	X	X	X
2687A		X	X	X
2932A	X	X	X	X
2933A		X	X	X
2934A	X	X	X	X
82905B		X	X	X
9871A				X
<b>Plotters</b>				
7220T/C			X	X
7221T/C			X	X
7225A			X	
7440A	X	X	X	X

**PERIPHERAL SUPPORT MATRIX**

7470A		X
7475A	X	X
7550A	X	X

**HP 260 Systems**

**HP 250 Systems**

45070A/72A      45261D      45260A      45251A/B

**Mass Storage**

7902A				X
7906H/M/S			X	X
7909A	X			
7908P		X	X	X
7910K				X
Int. 5/10/15 Mb			X	
7911A		X	X	X
7912P	X	X	X	X
7941/2/5/6A	X	X	X	X
7957A	X	X	X	X
7958A	X	X	X	X
9895K			X	X
9895A		X		
9133/4D		X	X	X
9133/4H	X	X	X	X
9133/4L	X	X	X	X
9153/4B	X			

**Tape Drives  
(standalone)**

9144A	X	X	X	X
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**Data Capture Terminals**

3075A		X	X	X
3076A		X	X	X
3077A		X	X	X
3081A	X	X	X	X
+92922A	X	X	X	X
+92923A	X	X	X	
39800A	X	X	X	X
92915A	X	X	X	X
92916A	X			

**Data Comm**

2334A	X			
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\* Peripherals which are added in an unsupported configuration may be unplugged during system testing in the event of a hardware maintenance call. If a peripheral is listed as "unsupported", it has not been tested with the referenced SPU. Non-HP peripherals are not supported by HP.

**NOTE**

The HP 250 SPUs, HP 45251A and HP 45251B, have been discontinued and are in their five year support life period.





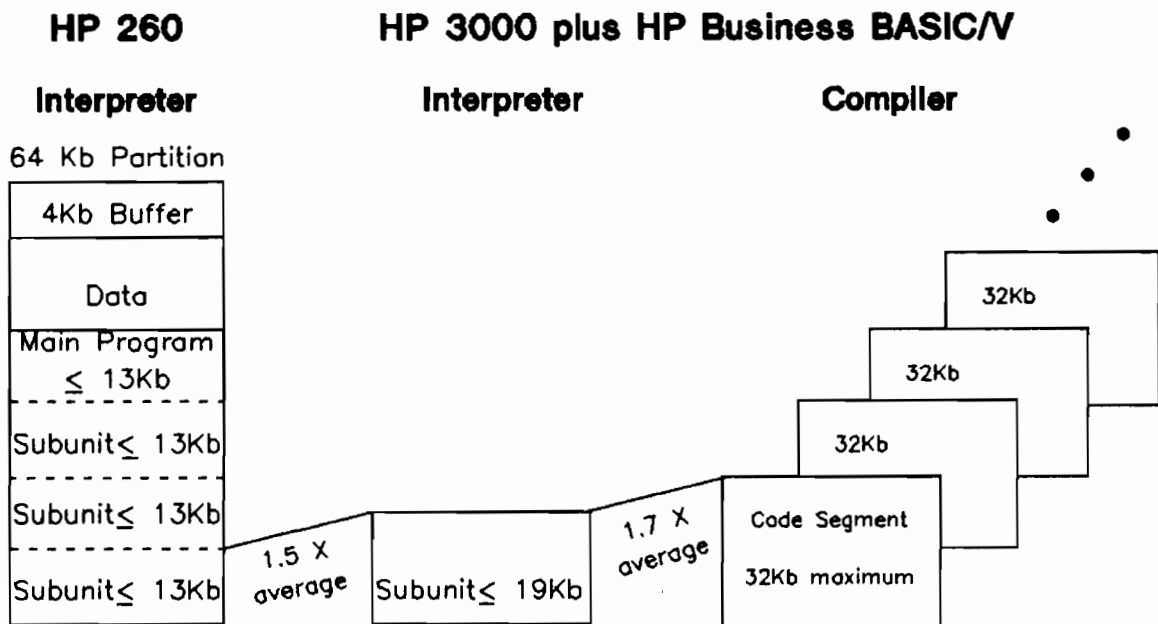
# Preparing For Portability

HP 260 programmers who are developing or modifying HP 260 programs for migration to the HP 3000 system, should be aware of the differences between the HP 260's Basic Operating System and the HP 3000's MPE/V Operating System. Hewlett-Packard offers many courses which provide training on MPE and its subsystems. In addition, to assist in the HP 260 to HP 3000 conversion effort, BGD will publish a technical paper and offer training courses dealing with programming for portability.

The purpose of this section is to alert you to the need to develop highly structured HP 260 programs, if you plan to migrate them to MPE/V.

For optimal performance, all migrated HP 260 programs should run in compiled mode on the HP 3000. MPE/V limits the size of a compiled code segment to a maximum of 32 Kbytes. To compile the program being converted, it must first run through the HP Business BASIC/V interpreter. Typically the HP 260 code will expand 1.5 times in this phase. Moving the code from interpretive to compiled format will cause a further 1.7 times code expansion. The 1.5 and 1.7 times expansion figures are based on preliminary test results. The actual expansion rate for your code will vary.

Working backwards from the 32 Kb compiled code segment limitation, we find that HP 260 code "subunits" should typically be no larger than 13 Kb. Developing structured programs using these guidelines will allow you to move your HP 260 programs to the HP 3000 via HP Business BASIC/V with speed and ease.



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