

HP 250 Computer System

The easy-to-use,
high-performance
business computer



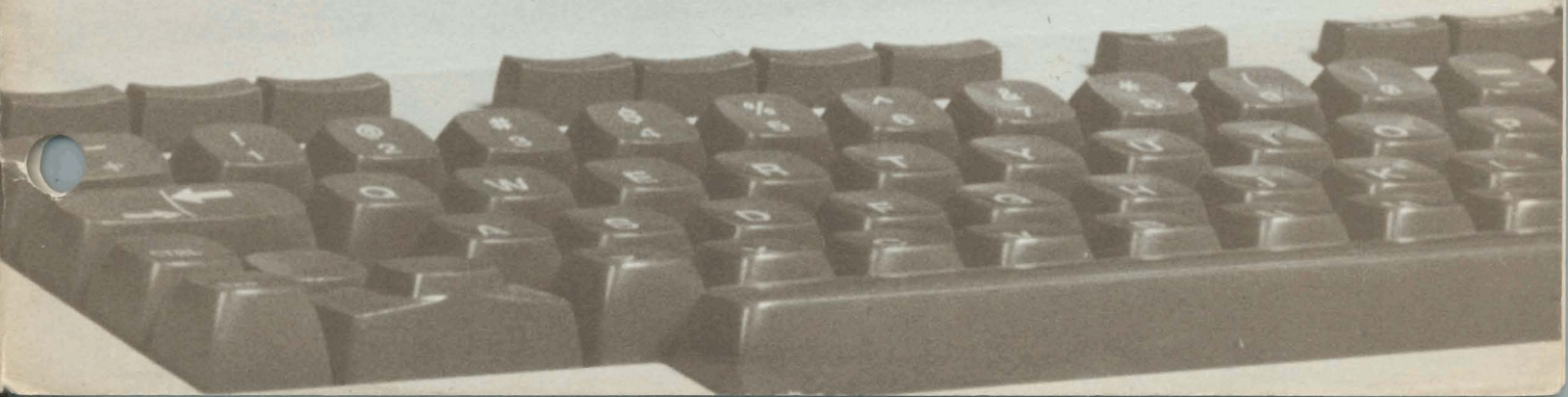
Configuration Guide
Effective September 1980

Select an option:

ALTER
BLOCK

RES

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Foreword

The objective of this guide is to present only information essential to determine an allowable system configuration and to order the required products. Additional information on all topics here is contained in the HP 250 General Information Manual, Part Number 5953-3408. Product features summarized here are basic performance/capacity measurements to help select between similar devices, such as discs.

How To Use This Guide

To best use this guide, you should have estimates of basic requirements such as:

- On-line disc storage in M (million) bytes.
- Print speed requirements in cps (characters per second).
- Number of concurrent users/tasks, and the memory segment for each, 32K or 64K bytes (K=1024).
- User's local language and electrical standards, such as line voltage of 120 or 240 volts.

Follow the System Configurator section to build an initial system.

Check the Upgrade section when adding to an existing system.

The last section is a complete Product Ordering Guide. A price list is available from your HP Sales Representative.



Section 1: HP 250 System Configurator

Follow the next 11 steps to assemble the components to meet your requirements. See the HP 250 General Information Manual for details on specific units. Consult the Product Ordering Guide, page 12, for specific ordering details.

Basic System

1. Select base system with desired language support:

- 45251A English
- 45252A French
- 45253A German
- 45254A United Kingdom
- 45255A Swedish
- 45255A-500 Danish
- 45256A Spanish
- 45257A Italian
- 45258A Katakana (Japanese)

Base system components not affected by options:

- Processor
- Display
- Keyboard
- Peripheral Interface Channel
- Printer Interface and cable
- System Software and manuals

2. Select power and color option to standard system: Power—to replace standard shown in the Product Ordering Guide, choose from the following:

- Option 050 50 Hz AC operation
- Option 060 60 Hz AC operation

- Option 100 100 V operation
- Option 120 120 V operation
- Option 220 220 V operation
- Option 240 240 V operation

- Option 900 U.K. power cord
- Option 901 Australia/New Zealand power cord
- Option 902 Continental Europe power cord
- Option 903 U.S./Canada power cord (120 V)
- Option 904 U.S./Canada power cord (240 V)
- Option 906 Switzerland power cord
- Option 912 Denmark power cord

Accent Panel—to replace standard brown panel, choose:

- Option 080 Marine blue
- Option 081 Leaf green
- Option 082 Sweet potato
- Option 083 Leaf gold

Memory

Note on Multi-Task & Multi-User The standard system has one user console and one memory partition, and is able to process one task at a time. Additional tasks can be processed concurrently by adding memory partitions. Additional users can be accommodated by adding memory partitions and also adding one or more remote consoles (see Step 6).

The HP 250 can process up to six tasks concurrently using up to six memory partitions. Each memory partition is fixed at either 32K or 64K bytes. Assuming sufficient memory partitions are available, one user/console can activate up to six tasks; conversely, up to six users/consoles can activate one task each. Any combination which totals to six tasks is possible with six memory partitions. There is a fixed overhead for multi-tasking of a 32K byte common block of memory. Thus a minimum multi-task memory requirement is:

System	128
Common block	32
Main task/user (main console)	32
Additional task/user	<u>32</u>
Total Minimum Requirement	224K bytes

Memory Requirements Worksheet

Use this worksheet to calculate total K bytes of memory required:

System:		
Minimum requirement		128
Multi-task common block (32K minimum)	=	
User*:		
Number of 32K partitions x 32	=	
Number of 64K partitions x 64	=	
Total memory required	=	<u> </u>

*Minimum is one 32K partition.

Note: The base system provides 128K system and 32K user memory. A fully configured operating system including trig and matrix functions, data communication and non-English language support will require a 32K byte memory block in addition to the system minimum.

Ordering Memory

3. Order memory products indicated in the following table according to the total memory required. Where several combinations are possible giving the same total memory, the lowest cost combination is shown. Note that some combinations may provide additional memory for a lower cost than a combination which exactly meets the requirement.

Total Memory Required K bytes	*	Order			
		Opt 002 (+32K)	Opt 004 (+96K)	45003A (+64K)	45004A (+128K)
160	A				
192		X			
224	B		X		
256			X		
288					1
320			X	1	
352	B		X		1
384			X		1
416					2
448			X	1	1
480	B		X		2
512			X		2
544	C				3
576	C		X	1	2

*Note A: Standard system shipped with 160K
 Note B: 32K bytes additional provided at lower cost
 Note C: May not be allowable due to power supply limitations. Consult your HP Sales Representative.

Mass Storage

In addition to the standard 1.2 megabyte flexible disc drive, one of the following must be ordered:

Disc	Capacity M bytes	Average Access Time m sec	Average Transfer Rate K bytes/sec
Opt 012	12.1	90	525
HP 7906H	19.6	33	938

4. Select mass storage devices from the table below, according to your total storage requirement:

Total Storage Required M bytes	Order-----		
	Option 012	7906H	
13.3	X		Minimum
20.8		1	
32.9	X	1	
40.4		2	
52.5	X	2	Maximum

Printers

5. Select printers and accessories; see table below for interface summary:

— 9871A-001*	30 cps, full character
98021A	Form feed attachment
— 2631A/B*	180 cps, dot matrix
-009	European character set
-046	Remote/250 interface
-041	Modem interface & cable
-250	HP 250 System interface
26097A	Pedestal stand & castors
-002	add Paper catcher
26090A	Sound abatement cover
— 2608A-251*	400 Imp, dot matrix
-002	European character set
-090	Optional VFC
-110	Sound abatement cover

Printer Interfaces		
Peripheral Interface Channel (Standard)	Asynchronous Serial Interface (45120A)	Remote/250 Console (2649D-044)
<i>Number allowed:</i> Max 2 per HP 250	Max 5 per ASI	Max 1 each
9871A-001	N/A	9871A-001
2631B-250	2631B-041	2631A-046
2608A-251	N/A	N/A

Remote Consoles

In order to support one or more Remote/250 consoles the following are required:

- Additional memory, see Memory above
- 45120A Asynchronous Serial Interface
- HP 2649D Remote/250 console

6. Select Remote/250 consoles and options:

2649D*	Remote/250 console
-044	Local printer interface and cable
-050	Current loop interface and cable

*See Product Ordering Guide for voltage and frequency options

Data Communications

7. Select data communication interface. HP 250 can support two communications interfaces. It is recommended that at least one 32K byte block of memory be added to system.

- ___ 45120A Asynchronous Serial Interface.
Required for Remote/250.
- ___ 45122A Intelligent Network Processor/250.
Includes RJE/250 software.

8. Select cables. See pages 7 and 8 of this guide for details.

- ___ 45110A Used only for second system printer
- ___ 45111A ASI-modem or direct connect to an HP 3000
- ___ 45112A ASI-Remote/250 current loop connection
- ___ 45113A ASI-HP 3000 direct connect, or optional extension
- ___ 45115A INP/250-modem or auto call unit connection
- ___ 45116A INP/250-HP 3000 direct connection

Maintenance/Support

9. Select Hardware Maintenance Plan. Your HP Sales Representative can develop a plan to suit your specific needs. Refer to Support Products, page 9.

10. Select Support Services and Training Courses. See Support Products, page 9.

Consumables

11. Select consumable supplies. See the Product Ordering guide, page 16. A very important consideration prior to a system installation is to have sufficient back-up disc media available. A minimum requirement is to have one extra copy of each flexible disc and each disc cartridge. If a 12 MB fixed disc system is installed, sufficient flexible disc media should be available to back it up. A fully loaded 12 MB would require 10 flexible discs.

Section 2: Ordering Examples and Maximum Configuration Diagram

Example 1: Minimum System

Qty	Product
1	45251A HP 250 System
1	-012 Add 12 MB Fixed disc
1	2631B-250 Serial printer
1	26097A Stand with castors
1	-002 Add Paper catcher

by the minimum standard flexible disc plus the optional fixed disc.

Checking Step 5 of the System Configurator for printer requirements, the system printer should be a 2631B-250, and the local printer for a remote console should be a 2631A-046.

System Configurator Steps 6, 7, and 8 finish up the following hardware list.

Example 2: Large System

Requirements:

- 3 Users/consoles with 64K memory, 1 with local printer, 2 Additional task partitions with 32K memory
- 10 to 13M bytes of disc storage
- 1 System printer. Printers should be faster than 150 cps.
- Remote job entry capability via dial-up telephone link

Memory requirement calculation:

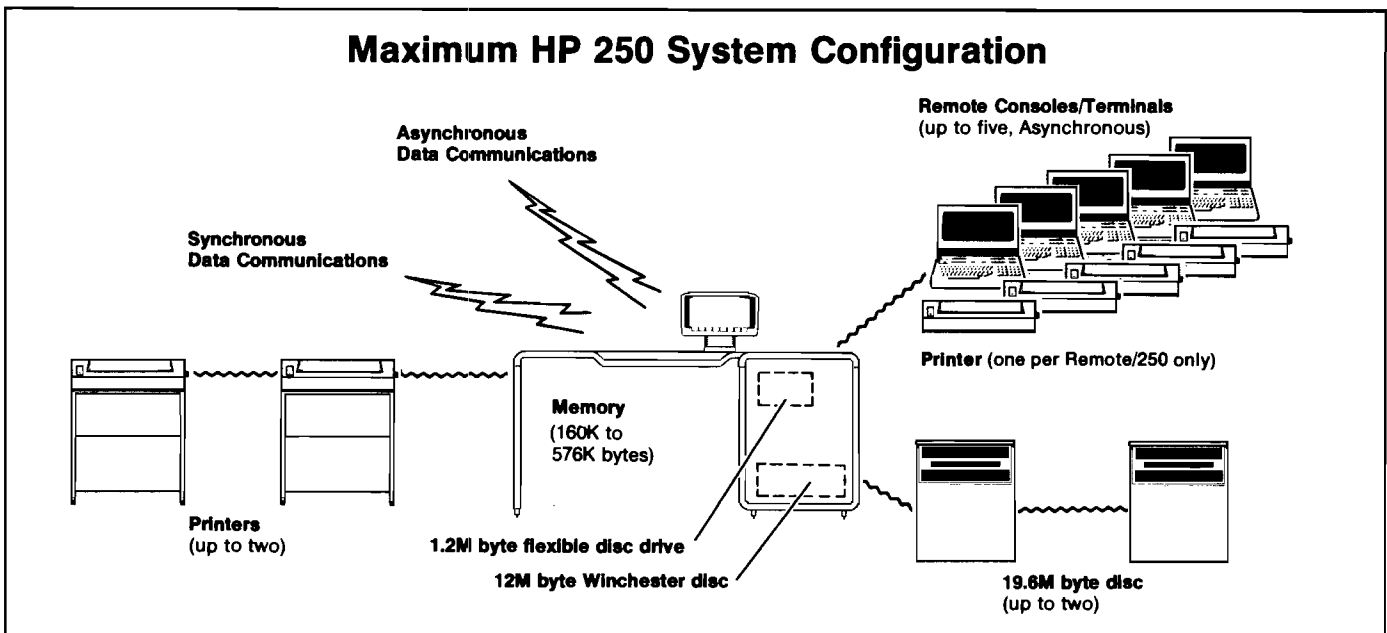
System minimum	128
Multi-task common block	32
3 partitions of 64K each	192
2 partitions of 32K each	64
Total memory required	416K

Checking the memory ordering table, Step 3 of the System Configurator, a 416K byte requirement is best met by adding two 128K boards to the base system.

Checking the mass storage ordering table in Step 4 of the System Configurator, a 10 to 13M byte requirement is met

Qty	Product
1	45251A HP 250 System
1	-012 Add 7910 fixed disc
2	45004A Add 128K byte memory
1	45120A Asynchronous interface (ASI)
1	45122A INP/250
1	45115A INP/250 modem cable
1	37210T Modem*
2	2649D Remote/250 console
1	-044 Local printer support
1	2631B-250 System printer
1	2631A-046 Remote/250 printer
2	26097A Stand with castors
2	-002 Paper catcher

*May not be available in all areas outside of U.S.A. Consult your local HP Sales Representative for availability.



Section 3: Upgrades to Existing System

Use this section when adding to an existing HP 250 System.

Memory

Available in 32, 64, and 128K increments. Use the following table to select the combination which most economically fulfills your requirement:

Required Increment K bytes	Order		
	45001A (32K)	45003A (64K)	45004A (128K)
32	1		
64		1	
96			1*
128			1
160	1		1
192		1	1
224			2*
256			2
288	1		2
320		1	2
352			3*
384			3

*32K bytes additional provided at lower cost

Mass Storage

Select the product(s) from the following table which provide(s) the required incremental capacity:

Capacity M bytes	Product	Max Number Per HP 250	
12.1	45012U	1	Field installed option 012
19.6	7906H	2	

Printers

See Step 5 in the System Configurator in this guide. There is no change to this information for upgrades. If a second system printer is being added to the peripheral interface channel, it is necessary to also order a 45110A cable.

Remote Consoles

2649D upgrade products are summarized below:

___ Upgrade to Option 044, local printer interface

13296A HP-IB interface
1818-0768 HP-IB ROM

___ Upgrade to Option 050, current loop interface

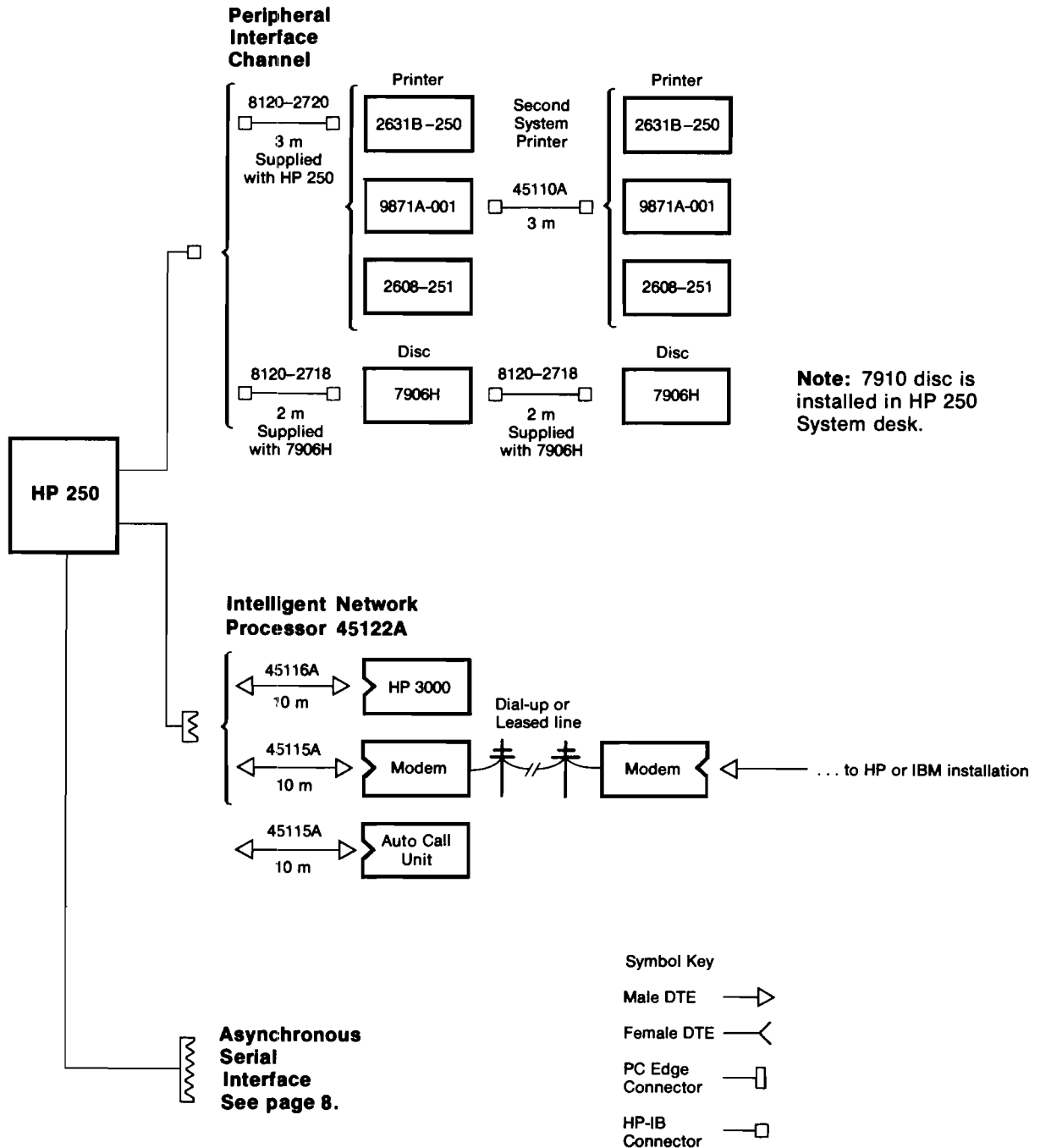
13250B Extended asynchronous interface

Data Communications

See Step 7 of the System Configurator in this guide. There is no change to this information for upgrades.

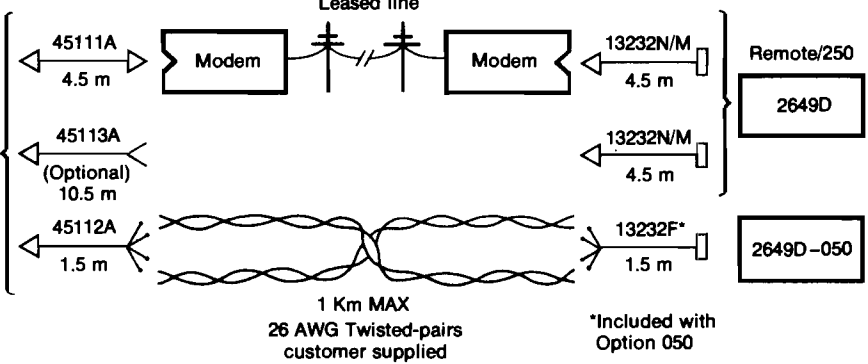
Section 4: Cabling Diagrams

HP 250 (4525xA) Input/Output Connections

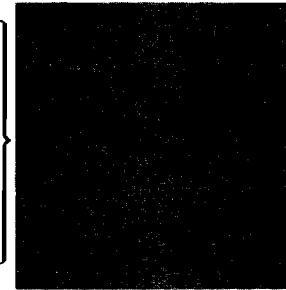


HP 250 (45251x) Asynchronous Serial Interface Connections

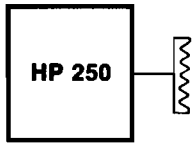
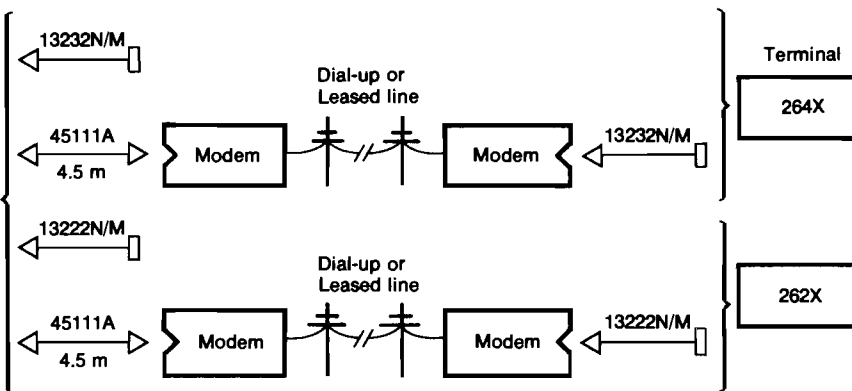
Remote/250 Consoles



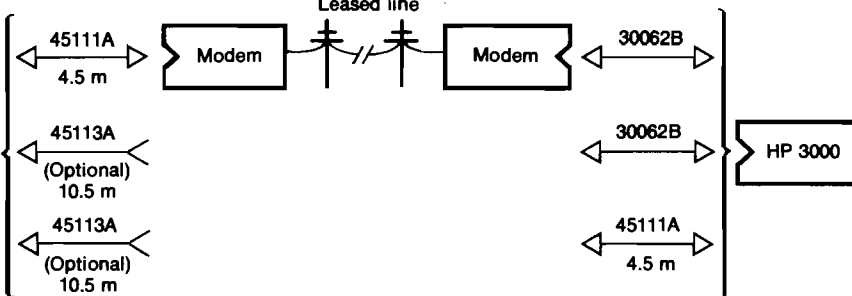
with Option 2649D-044



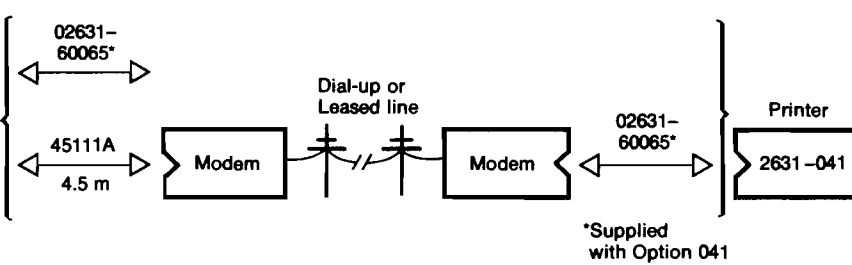
Application Terminals



HP 3000 Link



Printers



Symbol Key - Male DTE \rightarrow Female DTE \leftarrow PC Edge Connector \square HP-IB Connector \square

Section 5: Support Products



Documentation

The following table lists the manuals provided with HP 250 products. For individual copies, order using part number shown.

Shipped With	Manual	Part Number
HP 250 Order	Site Preparation Guide	45251-90040
HP 250 System* 4525xA	System Operator's Guide	45251-90000
	QUERY/250 Operator's Guide	45251-90005
	BASIC/250 Programming Manual	45251-90015
	IMAGE/250 Programming Manual	45251-90020
	QUERY/250 Programming Manual	45251-90021
	REPORT WRITER/250 Programming Manual	45251-90022
	FORMS/250 Programming Manual	45251-90023
	SORT/250 Programming Manual	45251-90024
	MEDIA/250 Programming Manual	45251-90025
	Manual Index	45251-90045
	Syntax Reference Guide	45251-90050
Quick Reference Guide	45251-62500	
ASI 45120A	TIO (Terminal Input/Output) Programming Manual	45120-90001
Remote/250 2649D	Remote/250 Operating Guide	45120-90010
	Remote/250 Programming Manual	45120-90020
INP/250 45122A	RJE/250 User's Manual	45122-90000

*A kit containing all except Quick Reference Guide can be ordered as Part Number 45251-87901.

Training

A five-day Comprehensive Programmer's Introduction to the HP 250 is available either on a per student basis at an HP Technical Center (45103A), or as a customer site class for up to ten students (45104A). Additional students can be added to the on-site class for an additional tuition per student.

System Software Consulting

System Software Consulting (45102A) provides on-site assistance on how to apply HP 250 system software to a specific customer application, and is available in eight-hour increments.

Software Support

The following is a brief description of software support available. Complete terms are described in the publication *Computer Systems Software Support Services*, which can be provided by your Sales Representative.

Product Number	Service Description
<i>System Software:</i>	
45130N	Software Notification Service (SNS)—provides information on: software utilization; problem resolution; updates (12 month min.).
45130S	Software Subscription Service (SSS)—includes all services by 45130N SNS above, plus software and manual updates (3 month min.).
45130W	Add additional system to 45130S SSS above.
45130T	Customer Support Service (CSS)—includes all services provided by 45130S SSS above, plus phone-in consulting service (PICS) and on-site Systems Engineer assistance (3 month min.) (prerequisite is 45103A or 45104A).
45130P	Add additional authorized caller to PICS coverage (3 month minimum).
45130V	Add additional HP 250 system to CSS coverage.
45130Q	Manual Update Service (MUS)—provides updates (only) for system software manuals (12 month min.).

Product Number	Service Description
<i>Data Communication Software:</i>	
45120A	All software for ASI support is covered under 45130T, system software CSS.
45122T	CSS for INP/250 software (includes system drivers and RJE/250). Prerequisite is 45130T. Additional system and PICS caller coverage is included in 45130V and 45130P respectively (3 month min.).

Hardware Support

To keep your HP 250 installation running effectively and to guarantee maximum availability to you, HP offers maintenance programs to suit your individual requirements.

Two levels of coverage are available: Standard System Maintenance for which a Standard Monthly Maintenance Charge (SMMC) is made; and Basic System Maintenance for which a Basic Monthly Maintenance Charge (BMMC) is made. Standard System Maintenance provides 4 hour response time within 100 miles of a maintenance office for service requests made during the normal business day (8 A.M. to 5 P.M.). Basic System Maintenance provides next-day response to service requests made within 100 miles of a maintenance office.

The monthly cost of a maintenance contract is based on the type of plan, the service distance, coverage hours, and the SMMC/ BMMC of the equipment under contract. SMMC and BMMC charges for each product are shown on the HP 250 Computer System Price Sheet.

Customers who prefer to employ HP service on a time-and-materials basis may take advantage of HP's Per-Call service.

Your HP Sales Representative can assist you in tailoring a maintenance plan to meet your needs.

Section 6: Site Preparation and Installation

Site Preparation

The HP 250 has been designed for the office environment. To assist you in preparing for the installation of your HP 250 System, you will receive the HP 250 Site Preparation Guide, Part Number 45251-90040, prior to installation. The Site Preparation Guide contains details on how to prepare for a successful HP 250 installation. A follow-up site check visit is included with the purchase of an HP 250.

The following are covered in the Site Preparation Guide:

- Customer and HP Responsibilities
- Recommended Consumable Supplies
- Site Completion Checklist
- Component Weights and Dimensions
- Floor Planning Guide and Scale Templates
- Power Requirements and Environmental Limits
- Receipt and Installation Procedure
- Modem and Auto Call Unit Ordering Information

Modems

The modems and auto call units covered in the Site Preparation Guide are summarized below:*

Model	Line Speed Bits per Second	Line Type: HD=Half Duplex FD=Full Duplex L=Leased S=Switched
<i>ASI Modems:</i>		
Bell 103	300	S, FD
Bell 202T	1200	L, FD
<i>INP/250 Modems:</i>		
HP 37210T	2400/4800	L or S
HP 37220T	9600	L
HP37230A	2400/4800/ 9600/19200	Twisted pair
Bell 201A3	2000	S, FD or HD
Bell 201B3	2400	L, FD or HD
Bell 201C	2400	L or S, FD or HD
Bell 208A	4800	L
Bell 208B	4800	S
Bell 209A	9600	L
<i>INP/250 Auto Call Units:</i>		
Bell 801A6		S
Bell 801C-L1/2		S, Touch Tone

*May not be available in all areas outside of U.S.A. Consult your local HP Sales Representative for availability.

Approvals

The HP 250 has the following regulatory approvals:

- UL listed
 - UL 114, Office Machines
 - UL 478, Data Processing Equipment
- CSA Certified
 - CSA C22.2 No. 154, Data Processing Equipment

Data Communication approvals:

- Germany, United Kingdom, Australia, France
- FTZ RFI License

System Installation

HP ships systems components to the installation site; you can arrange for a Customer Engineer to install the HP 250. On-site installation covers travel of up to 100 miles from the nearest HP service facility (U.S. only). An individual charge may apply for travel outside the 100-mile service radius. These conditions vary country to country outside the U.S., so see your local Sales Representative for details.

For add-on purchases, installation is included provided both the system and the add-on are covered by an HP annual maintenance contract (applies to both U.S. and Canada; for other locations contact your HP Sales Representative).

Complete terms are described in Computer Products Warranty and Installation (5953-3010), which can be provided by your Sales Representative.

Note: If receiving location has no loading dock, specify "Inside Delivery" on order.

Warranty

Hardware Products

Hewlett-Packard (HP) warrants its hardware against defects in materials and workmanship. During the warranty period, normally 90 days following installation, HP will, at its option, repair or replace hardware which proves to be defective.

Software and Firmware Products

Hewlett-Packard warrants that its software and firmware designated by HP for use with a CPU will execute its programming instructions when properly installed on that CPU. HP does not warrant that the operation of the CPU, or software, or firmware, will be uninterrupted or error free.

Limitation of Warranty

The foregoing warranty shall not apply to defects resulting from:

1. improper or inadequate maintenance by buyer;
2. buyer-supplied software or interfacing;
3. unauthorized modification or misuse;
4. operation outside of the environmental specifications of the product; or
5. improper site preparation and maintenance.

Complete warranty terms are described in *Computer Products Warranty and Installation* (5953-3010).

Section 7: Product Ordering Guide

Product Number	Option	Description	Price	Standard Monthly Maint. Charge	Basic Monthly Maint. Charge
HP 250 System		All HP 250 Systems include the following: Processor, Display Screen, Keyboard, 160K byte Memory, Flexible Disc Drive, Peripheral Interface Channel, Printer Interface and Cable, Power Cable, System Software, Operating and Programming Manuals and Palm Brown Accent Panel.			
45251A		U.S. Keyboard and Character Set 120V, 60Hz operation U.S./Canada power cord (NEMA 5-15)			
45252A		French Keyboard and Character Set 220V, 50Hz operation European power cord (CEE7-VII)			
45253A		German Keyboard and Character Set 220V, 50Hz operation European power cord (CEE7-V11)			
45254A		United Kingdom Keyboard and Character Set 240V, 50Hz operation U.K. power cord (BS 1363)			
45255A		Swedish Keyboard and Character Set 220V, 50Hz operation European power cord (CEE7-V11)			
	500	Danish Keyboard and Character Set 220V, 50Hz operation Denmark power cord (DRCR 107)			
45256A		Spanish Keyboard and Character Set 220V, 50Hz operation European power cord (CEE7-V11)			
45257A		Italian Keyboard and Character Set 220V, 50Hz operation European power cord (CEE7-V11)			
45258A		Katakana (Japanese) Keyboard and Character Set 100V, 60Hz operation U.S./Canada power cord (NEMA 5-15)			

System options (for all HP 250 Systems)

	002	Delete 32K byte Memory Board, add 64K byte Board			
	004	Delete 32K byte Memory Board, add 128K byte Board			
	012	Add 7910 12.1M byte Fixed Disc			
	050	50Hz operation			
	060	60Hz operation			

Product Number	Option	Description	Price	Standard Monthly Maint. Charge	Basic Monthly Maint. Charge
	080	Delete Brown Accent Panel, add Marine Blue Panel			
	081	Delete Brown Accent Panel, add Leaf Green Panel			
	082	Delete Brown Accent Panel, add Sweet Potato Panel			
	083	Delete Brown Accent Panel, add Leaf Gold Panel			
	100	100V operation			
	120	120V operation			
	220	220V operation			
	240	240V operation			
	900	U.K. power cord (BS 1363) 250V			
	901	Australia power cord (ASC112/NZSS198) 250V			
	902	European power cord (CEE7-V11) 250V			
	903	U.S./Canada power cord (NEMA 5-15) 125V			
	904	U.S./Canada power cord (NEMA 6-15) 250V			
	906	Switzerland power cord (SEV 1011) 250V			
	912	Denmark power cord (DBCR 107) 220V			

Memory Expansion

45001A		32K byte Memory Board			
45003A		64K byte Memory Board			
45004A		128K byte Memory Board			

Mass Storage

45012U		12.1M byte Fixed Disc Drive. Field Installed.			
7906H	015	20 MB Master Disc Drive (first drive), includes disc controller, cartridge, and 2 meter HP-IB cable. 230V, 50Hz operation			

Data Communication Products

45120A		Asynchronous Serial Interface. Provides five RS232 for Remote/250 consoles, HP 250 to HP 3000 data link, or application terminals/printers. Device cables must be ordered separately.			
45122A		Intelligent Network Processor/250. Includes RJE/250 program for IBM 2780/3780 emulation. Provides one RS232 synchronous port and one RS366 Auto Call Unit port.			

Remote/250 Console

2649D		Remote Console, U.S. Keyboard and Character Set. Includes 13260 Async Board and 13232N Cable			
	015	220V, 50Hz operation			
	016	110V, 50Hz operation			
	044	Local Printer Interface. Includes HP-IB interface ROM and cable.			
	050	Extended Asynchronous Interface. Supports current loop connection. Includes 13250B interface card and 13232F cable.			

Product Number	Option	Description	Price	Standard Monthly Maint. Charge	Basic Monthly Maint. Charge
2649D (cont.)	252 253 254 255 256 257 258 500	French Keyboard and Character Set, 220V, 50Hz. German Keyboard and Character Set, 220V, 50Hz. U.K. Keyboard and Character Set, 220V, 50Hz. Swedish Keyboard and Character Set, 220V, 50Hz. Spanish Keyboard and Character Set, 220V, 50Hz. Italian Keyboard and Character Set, 220V, 50Hz. Katakana Keyboard and Character Set, 100V, 60Hz. Danish Keyboard and Character Set, 220V, 50Hz.			

Cables

45110A		Peripheral Interface Channel Cable. Length 3.0 metre. For use with second printer.			
45111A		RS232C Modem Cable. Length 4.5 metre. For use with 45120A Asynchronous Serial Interface.			
45112A		20 Milliamp Current Loop Cable. Length 1.5 metre. For use with 45120A ASI.			
45113A		RS232C Extension Cable. Length 10.5 metre. For use with 45120A ASI.			
45115A		Modem or Auto Call Unit Cable. Length 10.0 metre. For use with 45122A Intelligent Network Processor.			
45116A		Direct Connect Cable. Length 10.0 metre. For use with INP/250 and HP 3000 Series II, III, 30 and 33			

Consulting and Training

45102A		HP 250 System Software Consulting Service. Eight hours at customer site.			
45103A		HP 250 Comprehensive Introduction. One student for five days at HP Training Center.			
45104A		HP 250 Comprehensive Introduction. Ten students for five days at customer site. Additional tuition per student per day—			

Support Services

45122T		INP/250 Customer Support Service. Monthly fee. Prerequisite 45130T.			
45130N		HP 250 System Software Notification Service. Monthly fee.			
45130P		HP 250 System Software Customer Support Service. Add one additional Phone-In Consulting Service Caller. Monthly fee.			
45130Q		HP 250 System Software Manual Update Service. Monthly fee.			
45130S		HP 250 System Software Subscription Service. Monthly fee. Includes 45130N.			

Product Number	Option	Description	Price	Standard Monthly Maint. Charge	Basic Monthly Maint. Charge
45130T		HP 250 System Software Customer Support Service. Monthly fee. Includes 45130S. Includes support for 45120A, ASI, software. Prerequisite 45103A or 45104A.			
45130V		HP 250 System Software Customer Support Service. Add one additional system. Monthly fee.			
45130W		HP 250 System Software Subscription Service. Add one additional system. Prerequisite 45130S. Monthly fee.			

Printers

2608A	251	400 line per minute Line Printer. Includes enclosed stand with casters, paper basket. Standard: 120V, 48-66 Hz operation.			
	002	French, German, Swedish/Finnish, Norwegian/Danish, Spanish, British, Roman Extension			
	015	220V, 48-66 Hz operation			
	016	100V, 48-66 Hz operation			
	017	240V, 48-66 Hz operation			
	090	Replaces 11" VFC ROM with 12" VFC ROM			
	106	Ribbon 6 Pack Starter Kit			
	110	Add sound cover and static eliminator			
		*Note: Monthly Maintenance Charge depends on printer usage			
2631A/B	250	180 character per second Serial Printer Standard: 120V, 48-66 Hz operation			
	009	Add Extended Roman Character Set			
	015	220V, 48-66 Hz operation			
	016	100V, 48-66 Hz operation			
	017	240V, 48-66 Hz operation			
	041	Modem interface and cable			
046	Remote/250 interface				
26090A 26093A 26097A	002	Sound abatement cover Paper basket; cannot be used with 26097A Pedestal for 2631A/B Printer Add paper catcher			

Terminals

2621A		Interactive Terminal. 120V, 60 Hz operation. Installation and data cable not included.			
	013	240V, 50 Hz operation			
	014	100V, 60 Hz operation			
	015	220V, 50 Hz operation			
	016	100V, 50 Hz operation			
2621P		Interactive Terminal with Printer, 115V, 60 Hz operation. Installation and data cable not included.			
	015	230V, 50 Hz operation			
	016	115V, 50 Hz operation			

Product Number	Option	Description	Price	Standard Monthly Maint. Charge	Basic Monthly Maint. Charge
2640B	015 016	Interactive Display Terminal. 5 KBytes of storage, expandable to 8 KBytes; 1 option slot. 115V, 60 Hz operation. Installation and data cable not included. 220-240V, 50 Hz operation 115V, 50 Hz operation			
2645A	007 013 015 016	Display Station. 4 KBytes of memory, expandable to 12 KBytes; 7 option slots. 115V, 60 Hz operation. Installation and data cable not included. Add integrated dual-cartridge tape transports (Requires 2 option slots) Add 5 Mini Cartridges 230V, 50 Hz operation 115V, 50 Hz operation			

Consumables

92155A		Ribbon Cartridge (black) for 2631A Printer, box of 3 cartridges			
92158A		Ribbon Cartridge (black) for 2608A Printer, box of 3 cartridges			
92195A		Flexible discs, box of 10 (unformatted, double-sided)			
12940A		7906 Disc Cartridge			

Terminal Cables

13222M		European RS232 cable for use with 262X terminals. Male 5 metre .			
13222N		U.S. RS232 cable for use with 262X terminals. Male 5 metre .			
13232M		European RS232 cable for use with 264X terminals. Male 4-5 metre .			
13232N		U.S. RS232 cable for use with 264X terminals. Male 4-5 metre .			



**HEWLETT
PACKARD**

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