

IBM PERSONAL SYSTEM/2 MODEL 40 SX (8540-040, 043, 045)**Contents**

[Announcement Letter Number 191-076 dated June 11, 1991](#)

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Brief Description of Announcement, Charges, and Availability

The Personal System/2 (R) (PS/2 (R)) Model 40 SX system unit utilizes the 80386SX microprocessor operating at 20MHz with zero to two wait states to system memory. The Model 40 SX ships with 2MB (million bytes) system board memory (expandable to 16MB on planar), new 3.5-inch DASD options, five slots and four bays, and 16-bit video graphics array (VGA). The 80386SX microprocessor PS/2 Model 40 SX has the following integrated functions: parallel port, serial port, pointing device port, VGA port, keyboard port, 1.44MB diskette drive support, Math Co-Processor socket, and three single in-line memory module (SIMM) sockets (two available for memory expansion). The PS/2 Model 40 SX is offered in a diskette only model (8540-040) and 40MB and 80MB fixed disk models (8540-043 and 8540-045).

The Model 40 SX supports the IBM Enhanced (101-key) Keyboard, Space Saving (84-key) Keyboard, or the IBM Host Connected (122-key) Keyboard. The keyboard selection can only be specified in new equipment orders and cannot be ordered separately for on-order or installed equipment.

Also announced are two new 8MB memory module options designed to expand system board memory. The IBM Personal System/2 8MB Memory Module Kit-80ns (#1401, 6450129) contains 8MB of 80 nanosecond memory on a single SIMM. The IBM Personal System/2 8MB Memory Module Kit-70ns (#5116, 6450130) contains 8MB of high speed, 70 nanosecond memory on a single SIMM. These memory module kits are supported on PS/2 Models 35 SX, 35 LS, 40 SX, 57 SX, 90 XP and 95 XP. The PS/2 Models 90 XP and 95 XP can now support up to 64MB of memory on the system board.

The Model 40 SX supports the following new options:

- o IBM Personal System/2 1.44MB Diskette Drive (#0030, 6451130)
- o IBM Personal System/2 2.88MB Diskette Drive (#1106, 6451106)
- o IBM Personal System/2 5.25-Inch External Diskette Drive Adapter Cable (#1124, 6451124)
- o IBM Personal System/2 40MB Fixed Disk Drive I (#1073, 6451073)
- o IBM Personal System/2 80MB Fixed Disk Drive I (#1074, 6451074)
- o IBM Personal System/2 8MB Memory Module Kit -- 70ns (#5116, 6450130)
- o IBM Personal System/2 8MB Memory Module Kit -- 80ns (#1401, 6450129).

The following operating systems support the PS/2 Model 40 SX:

- o Operating System/2 (R) (OS/2 (R)) Extended Edition Version 1.3 (Refresh Level 1.30.1)
- o OS/2 Standard Edition Version 1.3 (Refresh Level 1.30.1)
- o IBM Disk Operating System (DOS) Versions 3.3, 4.0 and 5.0.

Planned Availability Date: June 11, 1991.

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Customer Letter Section

HIGHLIGHTS

- o 80386SX microprocessor operating at 20MHz
- o 2MB memory standard on the system board (expandable to 16MB, in 1MB, 2MB, 4MB or 8MB increments, with two available SIMM sockets)
- o 40MB and 80MB fixed disk capacity (expandable to 80MB, 120MB or 160MB) with second fixed disk drive option
- o Five full size 8/16-bit expansion card slots and four DASD bays (two bays available in fixed disk models and three bays available in diskette only model)
- o 80387SX Math Co-Processor socket
- o 3270 front of screen affinity

DESCRIPTION

USER PRODUCTIVITY

The IBM PS/2 Model 40 SX introduces increased processor speed and

function into the PS/2 family of systems. The system memory is expandable to 16MB; the 80MB fixed disk model allows the user to run from the simplest of programs to more complex business application programs requiring the OS/2 operating system. The Model 40 SX can be used either as a stand-alone terminal or in a local area network (LAN).

GROWTH ENABLEMENT

The PS/2 Model 40 SX provides increased expansion capability through its new mechanical package design. The system has two customer accessible DASD bays (fixed disk models), and three customer accessible DASD bays (diskette only model). The PS/2 Model 40 SX supports up to two fixed disks and a variety of optional diskette devices, including the PS/2 5.25-inch internal 1.2MB diskette, 1.44MB 3.5-inch diskette drive, or the PS/2 Internal Tape Backup Unit. The system also provides five full size, customer accessible, 8/16-bit expansion card slots.

INVESTMENT PROTECTION

Based on the 80386SX microprocessor, the PS/2 Model 40 SX will be considered a long-term, reliable system solution. The Model 40 SX supports a wide range of IBM and non-IBM programs, applications, I/O devices, features and accessories.

With the expansion capability offered by the new mechanical design, the Model 40 SX provides five expansion card slots and three bays with diskette only model (8540-040), or two bays with fixed disk drive models (8540-043 or 8540-045). The system can easily be expanded as customer requirements become more complex.

BUSINESS SOLUTIONS

The PS/2 Model 40 SX supports the customer's business objectives by providing a cost effective workstation for stand-alone or networking environments. The PS/2 Model 40 SX with its wide range of optional features, compatible operating systems and applications, provides a powerful solution for small, medium and large enterprises. The Model 40 SX performance and expansion capability will be readily recognized as a sound business investment.

PUBLICATIONS

The Guide to Operations (S84F-7765, 84F7765) publication is shipped with the product. Additional copies are available

separately.

The following publications are available. To order, contact your IBM representative.

TITLE	ORDER NUMBER	PART NUMBER
Guide to Operations	S84F-7765	84F7765
Hardware Maintenance		
Library (HML)	S85F-1645	85F1645
HML includes:		
Hardware Maintenance		
Service Pamphlet		
Hardware Maintenance		
Reference Pamphlet		
Advanced Diagnostics		
Diskette		
Technical Reference		
Manual	S85F-1646	85F1646

SLSS is available.

IBM is now offering the IBM Personal System/2 Model 40 SX Guide to Operations in soft copy BookManager (TM) BOOK.

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EDUCATION SUPPORT

A description of self-study and classroom courses is contained in the CATALOG OF IBM EDUCATION (G320-1244).

Call IBM Direct -- Education at 1-800-IBM-TEACH (426-8322) for schedules, enrollments and orders for self-study courses.

SCHEDULE

The planned availability date is June 11, 1991.

TECHNICAL INFORMATION

SPECIFIED OPERATING ENVIRONMENT

PHYSICAL SPECIFICATIONS:

	8540-040	8540-043	8540-045
Processor	80386SX	80386SX	80386SX
Speed (MHz)	20	20	20
Memory (85ns)	2MB	2MB	2MB
Fixed Disk	None	40MB	80MB
Floppy Drive	1.44MB	1.44MB	1.44MB

The standard fixed disk drive capacities are 40MB and 80MB.
Both fixed disk drives have an integrated fixed disk controller.

DRIVE SPECIFICATIONS:

Formatted Capacity	40MB*	80MB*
Average Seek (ms)	17	17
Data Transfer Rate (MB/s)	1.35MB	1.35MB
Average Latency (ms)	8.3ms	8.3ms
Sector Interleave	1:1	1:1
Interface	AT (R)	AT
Buffer	32K	32K

* Actual user accessible capacity may vary slightly based on different operating environments.

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o Dimensions:

- Width -- 440mm (17.3 in.)
- Depth -- 394mm (15.5 in.)
- Height -- 169mm (6.7 in.)
- Weight -- 12.6kg (27.8 lb) (fixed disk models)
- Weight -- 11.9kg (26.3 lb) (diskette only model)

o Electrical:

- 197 watt power supply, dual voltage, controlled by switch on back
- 100-125 (nominal) V ac; 50-60Hz
- 200-240 (nominal) V ac; 50-60Hz

o Ambient Air Temperature:

- System on: 10.0 (degs) to 35.0 (degs)C (50 (degs) to 95 (degs)F)
- System off: 10. (degs) to 43.0 (degs)C (50 (degs) to 110 (degs)F)

o BTU Output:

- 90 BTU/Hr (26 watts -- configuration as shipped)
- 1030 BTU/Hr (300 watts -- maximum configuration)

o Noise Level: Class 3D

o Declared Acoustical Noise Emissions (idle mode): LWAd = 5.0 bels

NOTE: The noise emission level stated is the declared (upper limit) sound power level, in bels, for a random sample of

machines, typically configured and operating in idle mode; that is, powered on, but no DASD read/write or other I/O activity. All measurements made in accordance with ANSI S12.10, and reported in conformance with ISO 9296.

o Equipment Approvals:

- FCC -- Certified to comply with Subpart J, Part 15 FCC Rules, Class B limits
- UL -- UL 1950, 1st Edition
- CSA -- CSA22.2 No. 220-M1986

OPERATING ENVIRONMENT:

- o Temperature: 10 (degs) to 35 (degs)C (50 (degs) to 95 (degs)F)
- o Relative Humidity: 8% to 80%
- o Wet Bulb: 22.8C (degs) (73 (degs)F)

MACHINE REQUIREMENTS: The 8540 requires an analog display (8503, 8504, 8507, 8512, 8513, 8514, 8515, 8516 or equivalent).

PROGRAMMING REQUIREMENTS: The following operating systems support the PS/2 Model 40 SX:

- o IBM Operating System/2 Extended Edition Version 1.3 (Refresh level 1.30.1)
- o IBM Operating System/2 Standard Edition Version 1.3 (Refresh level 1.30.1)
- o IBM Disk Operating System Version 3.3, 4.0, and 5.0.

The PS/2 Model 40 SX contains fixed disk BIOS functions that provide performance enhancements not supported by the IBM Disk Cache program (IBMCACHE.SYS). The IBM Disk Cache program has been removed from the Starter diskette. Due to potential data integrity problems, no version of IBM Cache can be used on the PS/2 Model 40 SX.

SmartDrive Cache (SMARTDRV.SYS) is supported on the PS/2 Model 40 SX.

COMPATIBILITY: The Personal System/2 Model 40 SX is compatible with the IBM Personal Computer (5150), Personal Computer XT (TM) and Personal Computer AT (R) at the BIOS interface level (BIOS not identical) and at most hardware interfaces. The Model 40 SX has been designed to maintain compatibility with existing personal computer

software and non-timing dependent features. Due to the high level of integration, features such as Personal Computer XT and Personal

Computer AT memory upgrades and graphic adapters are not supported. Specific hardware products, features and software products supported in the Model 40 SX environment are listed in the attachment. The Model 40 SX has not been tested with all non-IBM features and options. Additional information on the interface and attachment requirements may be obtained by reviewing the IBM Personal System/2 Model 40 SX Technical Reference (S85F-1646) manual, which can be ordered through IBM or an IBM Authorized Dealer.

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USER GROUP REQUIREMENTS: This announcement satisfies, or partially satisfies, requirements from one or more of the World Wide User Group Communities, which include Australasian SHARE GUIDE (ASG), COMMON, COMMON EUROPE, GUIDE, European G.U.I.D.E., Japan GUIDE SHARE (JGS), Latin American GUIDE (LAG), SHARE EUROPE and SHARE.

PLANNING INFORMATION

CUSTOMER RESPONSIBILITIES: The Personal System/2 Model 40 SX is designated as customer setup (CSU). CSU allowance is one day.

CABLE ORDERS: There are no cabling requirements, other than for system power and keyboard connections. All cables are provided with the system unit, and the instructions are provided as part of initial setup.

INSTALLABILITY: By following the setup instructions, the user attaches the keyboard and peripherals and inserts the Starter Diskette. Power is then turned on and Setup is run after the computer has successfully completed its initial self-tests.

The PS/2 Model 40 SX has a universal power supply with an external switch and may, therefore, be used worldwide.

PROBLEM DETERMINATION: If a failure is found at initial installation, an instruction will appear on the screen. If the test is successfully completed, the system attempts to load an operating system from the A drive. If an operating system is not found, the system attempts to load one from the C fixed disk drive. If an operating system is not found, the user will be prompted to insert a diskette via an icon. A final default is provided through the use of a ROM-loaded BASIC interpreter as explained in the Guide to

Operations (S84F-7765).

The troubleshooting procedures consist of a power-on self test, diagnostic tests, and easy-to-follow troubleshooting charts designed to assist the user in isolating a defective machine element. The failing element can then be replaced or repaired under existing warranty provisions.

PACKAGING: IBM Personal System/2 Model 40 SX -- Shipment Group

SYSTEM UNIT CARTON:

- o 8540-XXX System Unit (040, 043, 045)
- o U.S. English Customer Information Assembly
 - Setup Sheet
 - Guide to Operations with U.S./Canadian Warranty Statement and FCC Statement
 - Starter Diskette
 - Learning About Your System Diskette
 - Floor-Standing Pedestal
 - Technical Directory
 - Customer Response Form
- o U.S. Line Cord
- o Keyboard Cable

KEYBOARD CARTON (CUSTOMER SELECTION DEPENDENT):

- o IBM Enhanced Keyboard (101-key) (default)
 - or
- o IBM Space Saving Keyboard (84-key)
 - or
- o IBM Host Connected Keyboard (122-key)

ACCESSORIES AND/OR SUPPLIES: Accessories and/or supplies can be purchased from IBM Authorized Supplies Dealers, IBM Authorized Distributors or from IBM Direct Response Operations (DRO). Call IBM DRO at 1-800-IBM-2468. Mail orders should be sent to:

IBM Corporation
IBM Direct Response Operations
One Culver Road
Dayton, NJ 08810

SECURITY, AUDITABILITY AND CONTROL

DATA SECURITY CHARACTERISTICS: The PS/2 Model 40 SX provides the following security features:

- o All covers lockable
- o Protected air vents
- o All internal I/O devices locked within the covers
- o Set and change the power-on password
- o Bolt down anchoring ports
- o A utility to allow the user to select the IPL device.

User management is responsible for evaluation, selection and implementation of security features, administrative procedures and appropriate controls in application systems and communications facilities.

TERMS AND CONDITIONS

VOLUME DISCOUNT: Volume purchasing is available under the Volume Discounts section of the IBM Customer Agreement (ICA).

The 8540 is included in Category A Discount Group 1 of the Volume Discount Exhibit -- Workstations and Related I/O (WKSX).

NOTE: The 8540 may not be offered for a discount greater than 27%.

For further information regarding volume orders, contact your IBM marketing representative.

EPC/EOC: The 8540 is available for ordering through the IBM Education Order Center.

IBM CREDIT CORPORATION FINANCING: Term leases and installment payment plans are available for commercial and state and local government customers.

CUSTOMER FULFILLMENT OPTION APPLIES: Yes.

WARRANTY PERIOD: One year (system and options and features).

WARRANTY SERVICE: Customer Carry-In Repair (CCR).

ALTERNATIVE SERVICE: IBM On-Site Repair (IOR).

IBM MAINTENANCE SERVICE: IOR.

IBM HOURLY SERVICE RATE CLASSIFICATION: One.

IBM Warranty Service, Maintenance Service or IBM Hourly Service may be obtained by calling 1-800-IBM-SERV (426-7378). IBM Hourly Service is available at the applicable rate and terms, including element exchange price if applicable.

VOLUME MAINTENANCE OPTION: The 8540 is an eligible machine and a qualifying machine for the Volume Maintenance Option of the ICA. A revised exhibit will be available at a later date.

MID-RANGE SYSTEM OPTION: The 8540 is an eligible machine for the

Mid-Range System Option to the ICA.

ELIGIBLE TYPE	DISCOUNT	
	THREE-YEAR	FIVE-YEAR
8540	17%	22%

CORPORATE SERVICE OPTION: The 8540 is an eligible machine for the Corporate Service Option of the ICA. A revised exhibit will be available at a later date.

ELIGIBLE TYPE	DISCOUNT	
	THREE-YEAR	FIVE-YEAR
Network	25%	30%
System	17%	22%

EXTENDED MAINTENANCE OPTION: The 8540 is an eligible machine for the Extended Maintenance Option to the ICA. A revised exhibit will be available at a later date.

CENTRAL FACILITY MAINTENANCE SERVICE: The 8540 is an eligible machine for the Central Facility Maintenance Service Option of the ICA. A revised exhibit will be available at a later date.

A minimum of six machines is required to be at the central facility before requesting maintenance service. The Additional Maintenance Charge Factor is currently 0.5 hours. The terms and conditions are stated in the Attachment for Central Facility Maintenance Service Option.

PRODUCT AVAILABILITY STATUS: New product available.

CUSTOMER SETUP: Yes.

LICENSED INTERNAL CODE: No.

IBM EDUCATION ORDER CENTER: The 8540 is available for ordering through the IBM Education Order Center. Availability through the Education Order Center may not coincide with the product availability dates in other sections of this announcement.

The IBM Education Order Center is the order processing location for selected personal computers and related hardware and software for eligible education end users. Eligible end users are defined as faculty and staff members of qualified kindergarten through twelfth grade educational institutions and students, faculty and staff members of higher educational institutions that have an Education Product Coordinator.

NATIONAL EDUCATION PRICE (NEP): A National Education Price is

available under the terms and conditions of the National Education Price Exhibit. The NEP price for the 8540, which represents a 36% discount from the single unit purchase price, is not subject to any further discount or allowance.

The 8540 included in the National Education Price Exhibit.

CHARGES

PRODUCT CHARGES

DESCRIPTION	MACHINE	MODEL/ FEATURE	PART	PURCHASE
	TYPE	NUMBER	NUMBER	PRICE
8540 SX	8540	040	8540040	\$ 2,395
8540 SX	8540	043	8540043	2,925
8540 SX	8540	045	8540045	3,195
40MB Fixed				
Disk Drive		1073	6451073	700
80MB Fixed				
Disk Drive		1074	6451074	1,060
8MB SIMM (70ns)		5116	6450130	2,195
8MB SIMM (80ns)		1401	6450129	1,995

PUBLICATION CHARGES

TITLE	ORDER	
	NUMBER	CHARGE
Guide to Operations	S84F-7765	\$ 45.50
Hardware Maintenance		
Library	S85F-1645	14.75
Technical Reference		
Manual	S85F-1646	176.00

ALTERNATIVE AND MAINTENANCE SERVICE CHARGES

ALTERNATIVE SERVICE CHARGES:

IBM
ON-SITE REPAIR
(IOR)
\$ 40

ANNUAL MINIMUM MAINTENANCE CHARGES:

IBM	CENTRAL FACILITY
ON-SITE	MAINTENANCE

REPAIR

SERVICE

(IOR)

(CFMS)

\$ 400

\$ 380

LIST OF SUPPORTED PRODUCTS

PERSONAL SYSTEM/2 MODEL 40 SX (8540-040, 043 AND 045)

The Personal System/2 (R) (PS/2 (R)) Model 40 SX is designed to maintain compatibility with the following products. (Refer to the Sales Manual for updates, or contact your IBM representative.)

HARDWARE SUPPORTED

The user should ensure that the total power required to support desired system configuration is within the power provided by the IBM Personal System/2 (R) (PS/2 (R)) Model 40 SX system.

DESCRIPTION	FEATURE NUMBER	PART NUMBER
SYSTEM BOARD MEMORY		
IBM Personal System/2 8MB Memory Module Kit-80ns	1401	6450129
IBM Personal System/2 4MB Memory Module Kit-80ns	3933	87F9977
IBM Personal System/2 1MB Memory Module Kit-85ns	5212	6450603
IBM Personal System/2 2MB Memory Module Kit-85ns	5213	6450604
IBM Personal System/2 2MB Memory Module Kit-80ns	5214	6450608
IBM Personal System/2 2MB Memory Module Kit-70ns	0129	6450902
IBM Personal System/2 4MB Memory Module Kit-70ns	0128	6450128
IBM Personal System/2 8MB Memory Module Kit-70ns	5116	6450130
COMMUNICATIONS/CONNECTIVITY		
Serial/Parallel Adapter	0215	6450215
IBM SDLC Communications Adapter	1205	1501205
IBM PC Network Adapter II	1220	1501220
IBM PC Network Baseband Adapter	1221	1501221
IBM Enhanced 5250 Display Station Emulation Adapter Kit, Version 2.2	2911	30F5383
IBM Enhanced 5250 Emulation Adapter and Cable Kit	5622	30F5622
System/370 (TM) Channel Emulator Card	3200	6193413
IBM 3278/3279 Emulation Adapter	5050	53F6425
IBM Realtime Interface Co-Processor (128KB)	6165	85X2710
IBM Realtime Interface Co-Processor (512KB)	6166	85X2706

IBM Realtime Interface Co-Processor Multiport (128KB)	6241	00F5527
IBM Realtime Interface Co-Processor Multiport, Model 2 (1MB)	6590	33F8791
IBM Realtime Interface Co-Processor RS-232C Interface Board	6051	60X8738
IBM Realtime Interface Co-Processor CCITT V.35 Interface Board	6053	67X1256
IBM Realtime Interface Co-Processor RS-422A Interface Board	6064	67X1255
IBM Realtime Interface Co-Processor 20 MA Current Loop Interface Board	6066	67X1257
IBM Realtime Interface Co-Processor 128KB Memory Expansion	6055	60X8199
IBM Realtime Interface Co-Processor 512KB Memory Expansion	6161	76X1019
IBM Realtime Interface Co-Processor Multiport 512K Memory Expansion	6242	00F5529
IBM Realtime Interface Co-Processor Multiport Four Port RS-422 Addition	6243	09F1989
IBM Realtime Interface Co-Processor Multiport Four Port RS-232 Addition	6245	00F5530
IBM Realtime Interface Co-Processor Surge Protection Adapter	6361	53F2625
IBM Realtime Interface Co-Processor 8-Port RS-232 Interface Board/A	6362	53F2610
IBM Realtime Interface Co-Processor 8-Port RS-422 Interface Board/A	6363	53F2613
IBM Realtime Interface Co-Processor Selectable Interface Board/A	6365	53F2616
IBM Realtime Interface Co-Processor 8-Port RS-232 Interface Board/A HML	6206	33F5338
	FEATURE	PART
DESCRIPTION	NUMBER	NUMBER
IBM Realtime Interface Co-Processor 8-Port RS-422 Interface Board/A HML	6207	33F5339
IBM Realtime Interface Co-Processor Selectable		

Interface Board/A HML	6208	33F5340
IBM Token Ring Network 16/4 Adapter	7367	25F7367
IBM Token Ring Network PC Adapter II	9858	25F9858
IBM PC 5178-001 Network Translator Unit		
IBM PC 5841-001 1200 Baud Modem (external)		
IBM PC 5853-001 2400 Baud Modem (external)		
IBM PC 8228-001 Token-Ring Network Multi-Station Access Unit		
CABLES		
IBM Serial Adapter Cable	0217	6450217
IBM PC Network Base Expander	0230	6450230
IBM PC Network Short Distance Kit	0231	6450231
IBM PC Network Medium Distance Kit	0232	6450232
IBM PC Network Long Distance Kit	0233	6450233
IBM PC Network 25-Foot Cabling Segment	0234	6450234
IBM PC Network 50-Foot Cabling Segment	0235	6450235
IBM PC Network 100-Foot Cabling Segment	0236	6450236
IBM PC Network 200-Foot Cabling Segment	0237	6450237
IBM Serial Adapter Connector	0242	6450242
IBM Communications Adapter Cable	2067	1502067
IBM Enhanced 5250 Display Station Emulation Integrated Cable Assembly	2877	6403635
IBM Printer Adapter Cable	5612	1525612
IBM Token-Ring PC Adapter Cable	3390	6339098
IBM Realtime Interface Co-Processor RS-232C Direct Attach Interface Cable	6056	67X1244
PS/2 5.25-Inch External Diskette Drive Adapter Cable	1124	6451124
IBM Realtime Interface Co-Processor RS-232C Modem Attach Interface Cable	6057	67X1246
IBM Realtime Interface Co-Processor CCITT V.35 Interface Cable	6061	67X1248
IBM Realtime Interface Co-Processor Multiport Interface Cable	6246	00F5531
IBM Realtime Interface Co-Processor Portmaster (TM) 8-Port Cable	6366	53F2619
IBM Realtime Interface Co-Processor Selectable		

Cable	6367	53F2622
IBM Realtime Interface Co-Processor X.21 Cable	6717	57F2746
IBM Realtime Interface Co-Processor V.35 Cable	6718	57F2748
DASD		
IBM Personal System/2 40MB Fixed Disk Drive I	1073	6451073
IBM Personal System/2 80MB Fixed Disk Drive I	1074	6451074
IBM Personal System/2 1.2MB 5.25-Inch Slim High Internal Diskette Drive	1066	6451066
IBM Personal System/2 1.44MB 3.5-Inch Slim High Diskette Drive	0030	6451130
IBM Personal System/2 2.88MB 3.5-Inch Slim High Diskette Drive	1106	6451106

IBM Personal System/2 4869-001 5.25-Inch 360KB
External Diskette Drive *

* Installation of the IBM PS/2 External 5.25-Inch External Diskette
Drive requires all of the following:

- External 5.25-inch Diskette Drive 4869-001
- 5.25-inch Diskette Drive Adapter Card (6450244, #8750)
- 5.25-inch External Diskette Drive Adapter Cable (#1124,
6451124).

DISPLAYS

IBM Personal System/2 8503 Monochrome Display
 IBM Personal System/2 8504 Monochrome Display
 IBM Personal System/2 8516 Touch Display
 IBM Personal System/2 8507 Monochrome Display
 IBM Personal System/2 8512 Color Display
 IBM Personal System/2 8513 Color Display
 IBM Personal System/2 8514 Color Display
 IBM Personal System/2 8515 Color Display

PRINTERS

IBM PagePrinter 3812-001
 IBM PagePrinter 3816-001
 IBM LaserPrinter 4019-001
 IBM LaserPrinter 4019-E01
 ExecJet (TM) 4072 Printer
 Proprinter (R) II 4201-002
 IBM Proprinter III 4201-003

IBM Proprinter XL 4202-001

IBM Proprinter II XL 4202-002

IBM Proprinter III XL 4202-003

IBM Proprinter X24E 4207-002

IBM Proprinter XL24E 4208-002

IBM Proprinter 24P 4212-001

IBM Personal PagePrinter 4216-031

Quietwriter (R) 5201-001

IBM Quietwriter 5201-002

IBM Quietwriter III 5202-001

Quickwriter (R) 5204-001

PS/1 (TM) Printer

PLOTTERS/SCANNERS

IBM 6180 Color Plotter

IBM 6182 Auto Sheet Feed Plotter

IBM 6184 Color Plotter

IBM 6185 Color Plotter

IBM 6186 Color Plotter

IBM 6187 Color Plotter

IBM 7372 Color Plotter

IBM 3118 Scanner

	FEATURE NUMBER	PART NUMBER
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DESCRIPTION

TAPE

IBM Personal System/2 120MB Internal Tape

Backup Unit

5279 30F5279

IBM Personal System/2 Internal Tape Backup

Installation Kit C (required to
install #5279 and Internal Tape
Convenience Kits in Model 40 SX)

2992 87F9826

OTHER DEVICES

IBM Personal System/2 Mouse

8770 6450350

ADCM

42201 97D1108

ROLMphone 244PC

46900C 21A1482

ROLMphone 120/DCM

61300 84C9201

ROLMphone 240/DCM

62300A 79X0405

ROLMphone 240E/DCM	62380	21A1312
ROLMphone 400/DCM	63400A	79X0408
M-Audio Capture and Playback Adapter	3908	87F9908
Game Control Adapter	1300	1501300
	FEATURE	PART
DESCRIPTION	NUMBER	NUMBER
IBM Personal System/2 5.25-Inch External Diskette Drive Adapter	8750	6450244
Data Migration Facility	5003	1501224
High Speed Adapter	4920	65X2016
SPECIAL NEEDS PRODUCTS (NO FEATURE NUMBERS -- TELEMARKETING ONLY)		
Screen Reader (TM)		6450616
IBM Screen Reader Braille Publication		6024937
SpeechViewer (TM) Hardware Option		6450611
IBM SpeechViewer Convenience Kit		6450610
IBM SpeechViewer Application Software		6280310
IBM PhoneCommunicator Hardware Option		6450619
IBM PhoneCommunicator Convenience Kit		6450618
IBM PhoneCommunicator Application Software		57F1954
IBM PhoneCommunicator Reference Card		57F2003
IBM SOFTWARE COMPATIBILITY FOR THE IBM PERSONAL SYSTEM/2 MODEL 40 SX (040, 043 AND 045)		
EDUCATION PRODUCTS	VERSION	3.5-INCH 5.25-INCH
Bouncy Bee		
Learns Letters (1)	1.01	6024511
Bouncy Bee		
Learns Words (1)	1.01	6024510
Missing Letters	1.01	6024507
Primary Editor (1), (2), (3)	1.01	6024767
Primary Editor Plus (1), (2), (4)	1.00	6024770
Private Tutor	2.01	6024508
Adventures in Math	1.00	6024112
Get Set for Writing to Read (1), (5)	1.01	6024468
IBM Classroom LAN Administration System	1.30	64F1441

IBM Classroom Network			
Assistant	1.00		6024867
Listen to Learn (1)	1.01	6024506	
PRIVATE TUTOR COURSES			
Capitalization Skills	1.00		6024085
Language Skills	1.00		6024084
Punctuation Skills	1.00		6024083
Reading			
Comprehension Skills	1.00		6024325
Spelling Skills	1.00		6024086
Vocabulary			
Building Skills	1.00		6024326
Word Knowledge Skills	1.00		6024327
Basic Number Concepts	1.00		6024297
Math Computation Skills	1.00		6024305
Preparing for Geometry and Algebra	1.00		6024307
Solving Math			
Word Problems	1.00		6024308
Learning to Program			
in Basic	1.00		6024081
Learning DOS	1.00		6024063
Computers and			
Communications	1.00		6024069
BASIC SKILLS SERIES			
IBM Math Exploration			
Toolkit	1.00	6024774	
Algebra One: Part One	1.00	6024775	
Algebra One: Part Two	1.00	6024776	
Algebra Two: Part One	1.00	6024777	
Algebra Two: Part Two	1.00	6024778	
Geometry One: Foundations	1.01	6024707	
Geometry Two: Proofs and Extensions	1.01	6024728	
Math Concepts: Level P	1.01	6024721	
Math Concepts: Level I	1.01	6024722	
Math Concepts: Level II	1.01	6024723	

Math Concepts: Level III	1.01	6024724	
Math Concepts: Level IV	1.01	6024716	
Math Practice: Level I	1.01	6024663	
Math Practice: Level II	1.01	6024664	
Math Practice: Level III	1.01	1024665	
Math Practice: Level IV	1.01	6024666	
Combining Sentences:			
Level II	1.01	6024689	
Combining Sentences:			
Level III	1.01	6024690	
EDUCATION PRODUCTS	VERSION	3.5-INCH	5.25-INCH
Combining Sentences:			
Level IV	1.01	6024691	
Parts of Speech:			
Level II	1.01	6024679	
Parts of Speech:			
Level III	1.01	6024680	
Punctuation: Level II	1.01	6024695	
Punctuation: Level III	1.01	6024696	
Punctuation: Level IV	1.01	6024697	
Reading for Information:			
Level II	1.01	6024683	
Reading for Information:			
Level III	1.01	6024684	
Reading for Information:			
Level IV	1.01	6024685	
Reading for Meaning:			
Level I	1.01	6024671	
Reading for Meaning:			
Level II	1.01	6024672	
Reading for Meaning:			
Level III	1.01	6024673	
Reading for Meaning:			
Level IV	1.01	6024674	
Reading for Meaning:			
Level II	2.00	57F1993	
Reading for Meaning:			

Level III	2.00	57F1996	
Reading for Meaning:			
Level IV	2.00	57F1999	
Spelling: Level I	1.10	6024972	
Spelling: Level I	1.01	6024720	
Spelling: Level II	1.01	6024708	
Spelling: Level II	1.10	6024974	
Spelling: Level III	1.01	6024709	
Spelling: Level III	1.10	6024977	
Touch Typing for			
Beginners	1.01	6024698	
Vocabulary: Level II	1.01	6024701	
Vocabulary: Level III	1.01	6024702	
Vocabulary: Level IV	1.01	6024703	
Teacher's Quiz Designer	1.01	6024509	
Writing to Read (R)			
Program Kit (1), (5)	3.00	6024513	
Scientific Reasoning			
Series	1.00	84F7763	
Logo (6)	1.00		6024731
Logo Learner (6)	1.01		6024515
LinkWay (TM), (1), (3), (5), (7)	2.0		84F7559
Exploring Measurement,			
Time and Money (1), (2), (5), (7)	1.00		6024870
People Sharing Information			
Network Workstation (8)	1.00	6024873	
People Sharing Information			
Network Server (8)	1.00	6024874	
BIOLOGY SERIES (5)			
Cell Functions: Growth and			
Mitosis	1.01	6024635	
Chemicals of Life I:			
The Structure			
of Matter	1.01	6024636	
Chemicals of Life II:			
Water, Carbohydrates,			

and Lipids	1.01	6024647
Chemical of Life III:		
Proteins and		
Nucleic Acids	1.01	6024614
Cytology & Histology:		
Cells and Tissues	1.01	6024612
EDUCATION PRODUCTS	VERSION	3.5-INCH
Human Life Processes I:		
Cellular Physiology	1.01	6024649
Human Life Processes II:		
Systems Level	1.01	6024616
Human Life Processes III:		
Development and		
Differentiation	1.01	6024657
Leaf: Structure and		
Physiology	1.01	6024637
Light, Plants and		
Photosynthesis:		
Energy in Conversion	1.01	6024638
Mendelian Genetics:		
The Science		
of Inheritance	1.01	6024613
Modern Genetics		
Chromosomes and Coding	1.01	6024648
Passive Transport:		
Diffusion and		
Osmosis	1.01	6024639
Pathology:		
Diseases and Defenses	1.01	6024646
Plants: Growth and		
Specialization	1.01	6024645
Pollination and		
Fertilization: Seeds,		
Fruits, and Embryos	1.01	6024633
Regulation and Homeostatis:		
Systems in Balance	1.01	6024615
Taxonomy: Classification		

and Organization	1.01	6024655		
The Environment I:				
Habitats and Ecosystems	1.01	6024658		
The Environment II:				
Cycles and Interactions	1.01	6024656		
EARTH SCIENCE SERIES (5)				
Earthquakes	1.01	6024517		
Glacial Landforms	1.00	6024514		
Ground Water	1.01	6024516		
Hydrologic Cycle	1.01	6024518		
Landslides	1.01	6024522		
Moisture in				
the Atmosphere	1.01	6024520		
Surface Water	1.01	6024519		
Volcanoes	1.00	6024521		
PHYSICS DISCOVERY SERIES (5)				
Investigating				
Acceleration	1.01	6024624		
Investigating				
Atomic Models	1.00	6024523		
Investigating				
Conservation				
of Energy	1.01	6024625		
Investigating				
Electric Fields	1.01	6024627		
Investigating				
Gravitational Force	1.01	6024622		
Investigating				
Models of Light	1.01	6024626		
Investigating				
Thermal Energy	1.01	6024623		
Investigating				
Wave Interference	1.01	6024628		
IBM REALTIME INTERFACE			PROGRAM ORDERING	FEATURE
CO-PROCESSOR SOFTWARE	VERSION	NUMBER	VEHICLE	NUMBER
OS/2 (R) Support	1.03	33F7229	5662-281	5036
(with CSD UL 91826)				

DOS Support	1.03	84F7448	5686-001	5000
C Language Support	1.02	33F7238	5601-060	5020
Extended Services	1.03	84F7410	5688-044	5492
	VERSION	TYPE	MODEL	
Plant Floor Series (TM)				
Distributed Automation				
Edition (TM)				
Communications System/2	1.1	5601	116	
Materials Logistics				
System/2	1.1	5601	117	
Host Link/2	1.1	5601	118	
Communications Protocol				
Programs/A	1.1	5601	151	
Entry Communications				
System/2	1.0	5621	022	
Device Data Management				
Support	1.01	5601	104	
Communications Subsystem				
w/PTF 5001	1.11	5669	179	
DATA COLLECTION EDITION (TM)				
Data Collector	1.1	5601	299	
Data Collection Controller/2	1.0	5756	144	
Data Collector for Distributed				
Automation Edition	1.0	5756	145	
7527 Extended Terminal				
Services	1.0	5756	146	
5250 & MAPICS Data				
Services	1.1	5601	398	
3270 & COPICS Data				
Services	1.1	5601	399	
			PART	
EMULATION SOFTWARE				
	VERSION		NUMBER	
Enhanced 5250 Emulation				
Program	2.2		49F5617	
Enhanced 5250 Emulation				
Convenience Kit	2.2		49F5618	
Remote 5250 Emulation				

Program	2.2	92X0718	
The following 3270 emulation software has been tested and is compatible with DOS 3.3 and 4.0:			
IBM PC 3270 Emulation Program,			
Entry Level	1.22		
IBM Personal			
Communications/3270	1.01		
IBM 3270 Personal			
Computer High-Level Language Application Program Interface	3.1		
IBM PC 3270 Emulation			
Program Entry Level	2.0		
IBM Personal			
Communications/3270	2.0		
IBM CAD SOFTWARE			
IBM CAD (DOS)	1.2	64F6914	
IBM CAD/Plus (DOS)	1.2	64F6921	
IBM CAD/Plus (OS/2)	1.2	70F9267	
IBM PLATINUM SERIES			
System Manager	2.0	70F9332	
Accounts Receivable	2.0	70F9342	
Financial Reporting			
Extender (ADV)	2.0	84F9819	
APPLICATIONS			
	VERSION	DOS	OS/2
Audio Visual Connection (R)	1.04	X	X
DisplayWrite Assistant (TM)	1.0	X	
DisplayWrite (R) 4/2	1.0		X
DisplayWrite 5	1.0	X	
DisplayWrite 5/2	1.0		X
Filing Assistant (R)	2.0	X	
Storyboard (TM) Plus	1.01	X	
Writing Assistant (TM)	2.0	X	
OPERATING SYSTEMS			
DOS Level	3.3		
DOS Level	4.0		

DOS Level	5.0			
OS/2 Standard Edition	1.3 (Refresh level 1.30.1)			
OS/2 Extended Edition	1.3 (Refresh level 1.30.1)			
		PROGRAM	ORDERING	FEATURE
OTHER SOFTWARE	VERSION	NUMBER	VEHICLE	NUMBER
IBM Current	1.2	85F1685		
Remote PrintManager	2.0	25F5944	5875-XXX	5944
Remote PrintManager	3.0	49F4812	5871-AAA	0499
SAA (TM)				
Networking Services/2	1.0	86F2503	5871-AAA	1611
IBM PC Support/400	2.1		5738-PC1	
IBM PS/2 Internal Tape Backup Program (DOS Comp.)	2.0	87F9828		1851
IBM PS/2 Internal Tape Backup Convenience Kit (DOS Compatible)	2.0	87F9830		1852
IBM PS/2 Internal Tape Backup Program (OS/2 compatible)	1.01	87F9827		1854
IBM PS/2 Internal Tape Backup Convenience Kit (OS/2 compatible)	1.01	87F9829		1855

VENDOR SOFTWARE COMPATIBILITY FOR THE
PERSONAL SYSTEM/2 MODEL 40 SX (8540-040, 043 AND 045)

INDEPENDENT LABORATORY TESTED SOFTWARE

The following software products have been tested by an Independent Test Laboratory on the IBM Personal System/2 Model 40 SX. This list does not include all of the products that may run on the PS/2 Model 40 SX. The products operate substantially as described in their program documentation. IBM has not evaluated these products and makes no comments or judgments about their functions, quality, and performance. Listed products may not be available in all countries.

VENDOR	PRODUCT	VERSION	DOS	OS/2
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Aldus Corporation	PageMaker (9)	3.01	X	X
Ashton-Tate	dBase III Plus (10)	1.1	X	
	dBase IV (10)	1.1	X	
	MultiMate (10)	4.0	X	
	(formerly MultiMate Advantage V1.0)			
Autodesk, Inc.	AutoCad (11)	10C	X	X
	AutoSketch (11)	2.0	X	
Borland				
International Inc.	PARADOX (12)	3.5	X	
	PARADOX OS/2	2.05		X
	Quattro Pro	2.0	X	
	SideKick	1.58	X	
	SideKick Plus	1.01	X	
	SideKick/PM	2.0		X
	Turbo C++ Prof	1.0	X	
Caseworks	CASE: PM	2.0		X
Cawthorn SW Group	ChipChat	1.1		X
Central Point Software	FastBack Plus	2.1.X		
Computer Associates	AccPac Plus SM/2	5.1		X
	SuperProject Expert/2 (13)	1.1		X
DAC Software, Inc.	Dac-Easy Accounting	4.1	X	
DataStorm Tech	PROCOMM PLUS	1.1B	X	
Digital Communications Associates	Crosstalk XVI (DCA)	3.71	X	
	Crosstalk Mark IV	1.01	X	
Fifth Generation System	Mace Utilities (HPFS=W (14))	3.5		X

Fox					
Software, Inc.	Fox Pro	1.02	X		
Guidance					
Tech	Choreographer	1.1			X
Hayes Microcomptr					
Products	Smartcom III	1.2	X		
VENDOR	PRODUCT	VERSION	DOS		OS/2
Intuit	Quicken	3.0	X		
Lennane Advanced					
Products	DeScribe Word Publisher	1.1			X
Lotus (15)					
Development Corporation	Agenda (15), (16) Freelance Plus (15), (17) 1-2-3 (15) 1-2-3 (15) 1-2-3G (15) Symphony (15)	1.01 3.01 2.2 3.0 1.0 2.2	 X X X X		X
Micro Focus	COBOL/2 (TM) Compiler (18) COBOL/2 Workbench (18), (19) COBOL/2 Toolset (18), (19)	1.1.9 2.2.9 1.0.9	 		X X X
Micrografx	Designer PM (20)	1.02			X
Microrim, Inc.	R:BASE for DOS (21) R:BASE for OS/2	3.1 2.1	X 		 X
Microsoft					
Corporation	BASIC Compiler C Compiler Excel Excel for OS/2 FORTRAN Compiler (22) Macro Assembler	7.1 6.0 2.1 2.21 5.0 5.1	X X X X X		X X X

	Pascal Compiler (22)	4.1	X	X
	Windows	3.0	X	
	Word	5.5	X	X
	Word for Windows	1.1	X	
	Works	2.0	X	
Peter Norton				
Computing	Norton Utilities			
	Advanced	5.0	X	
	Norton Guides			
	OS/2 API	1.0		X
Prodigy				
Services Co	Prodigy (23)	3.1	X	X (14)
QuarterDeck, Inc.	DesqView 386	2.26	X	
RightSoft Corp.	RightWriter (24)	3.1	X	
Software				
Publishing				
Corporation	FormTool	2.01 D	X	
	Harvard Graphics (25)	2.3	X	
	PFS: First Choice	3.02	X	
	PFS: First Publisher	3.0	X	
	PFS: Prof File	2.01	X	
	PFS: Prof Write	2.21	X	
Symantec	Q&A (26)	3.0	X	X
Sytron Corp	SY-TOS PLUS	1.1		X
VENDOR	PRODUCT	VERSION	DOS	OS/2
Timberline	Medallion Gold			
	Accounts Payable	1.5		X
	General Ledger	1.5		X
	Property Manager	1.3		X
	Starter Set	1.4		X
Word Perfect	WordPerfect (27)	5.1	X	
	WordPerfect for OS/2	5.0		X
WordStar				
International				
Corporation	WordStar 2000 Plus (28)	3.5	X	
	WordStar Professional	6.0	X	
Xerox Corp.	Ventura Publisher (29)	2.0	X	

VENDOR TESTED SOFTWARE

The following software products have been tested by the vendors in their latest versions and certified as compatible with the IBM Personal System/2 Model 40 SX:

SOFTWARE PUBLISHER	PRODUCT	VERSION
3COM (30) Corporation	3+Open (31) LANManager (30) Advanced System	2.0 (32), (33)
IGC	VM/386 (34)	1.22
	VM/386 MultiUser	2.0
Lotus Development Corporation	Symphony (15)	2.2
	1-2-3 (15)	2.2
	1-2-3	3.1
Novell (35) Inc.	NetWare (35)	2.2 (36), (37), (38)
	NetWare (35)	3.11 (36), (37), (38)
Qualitas (39) Inc.	386MAX (39)	5.11 (40)
	BlueMAX (41)	5.11 (40)

(TM) Registered trademark of International Business Machines Corporation.

(R) Registered trademark of International Business Machines Corporation.

(1) Uses or requires speech.

(2) Requires IBM Speech Adapter RAM-Resident Handler (C) 1990 IBM Corporation Version: February 19, 1991, to utilize PS/2 speech adapter (configuration 1).

(3) PS/2 Speech Adapter and M-ACPA adapter audio support only.

(4) Requires patch to PEP.EXE file to run on a 80386 and above system.

(5) Requires a color display.

(6) Requires patch to .com file to run on a VGA system.

(7) Uses or requires mouse.

(8) Requires modem.

(9) Registered trademark of Aldus Corporation.

(10) Trademark of Ashton-Tate.

- (11) Registered trademark of Autodesk, Inc.
- (12) Registered trademark of Borland International, Inc.
- (13) Registered trademark of Computer Associates International, Inc.
- (14) Must use File Application Table (FAT).
- (15) Registered trademark of Lotus Development Corporation.
- (16) Install manually using XCOPY command.
- (17) Testing completed with DOS 3.3 and 4.0.
- (18) Trademark of Micro Focus (COBOL/2 is a trademark of International Business Machines Corporation).
- (19) No print in Protect Mode when using PEDITOR unless the spooler is disabled.
- (20) Registered trademark of Micrografx, Inc.
- (21) Registered trademark of Microrim, Inc.
- (22) Unable to invoke a display of the extended 386 registers when using CodeView Debugger in the Protect Mode of OS/2.
- (23) Registered trademark of Prodigy Services Company, Inc.
- (24) Registered trademark of Rightsoft Corporation.
- (25) Trademark of Software Publishing Corporation.
- (26) Registered trademark of Symantec Corporation.
- (27) Registered trademark of WordPerfect Corporation.
- (28) Registered trademark of WordStar International Corporation.
- (29) Registered trademark of Xerox Corporation.
- (30) Registered trademark of 3COM Corporation.
- (31) Trademark of 3COM Corporation.
- (32) When used with 3COM 3c505 adapter card, the user must have revision Q of either the ELNKPL.DOS or ELNKPL.OS2 file. Contact 3COM for further information.
- (33) The fault tolerant features are not supported.
- (34) Trademark of IGC.
- (35) Trademark of Novell, Inc.
- (36) Requires a supplemental disk driver for use as a server. This driver will be available on NETWIRE, or contact your IBM remarketer for further information. Planned availability date is July 1, 1991.
- (37) The dedicated DOS IPX workstation driver for the 3COM 3c505 card is not supported. The DOS ODI driver for this card is supported.

- (38) The Remote Reset feature (Remote Program Load) of the Novell NE-1000, NE-2000, and RX Net network adapters is not supported.
 - (39) Registered trademark of Qualitas, Inc.
 - (40) To use the BIOS Compression feature (BCF) of BlueMAX, contact Qualitas, Inc. for the required files.
 - (41) Trademark of Qualitas, Inc.
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