IBM Technical Directory

Books, Reference Materials, and Software Products
for IBM Personal Computer Products and
IBM Personal System/2® Products

June 88

Hardware

The hardware publications contained in this issue of the Technical Directory include the *Guide To Operations* and *Quick Reference* manuals, the Hardware Maintenance Libraries, and the Hardware Technical Reference manuals.

Since the last issue of the Technical Directory, the Personal System/2® (PS/2®) Models 50, 60, and 80 Technical Reference manuals have been revised and combined into one manual (the *IBM Personal System/2 Hardware Interface Technical Reference*). This manual supports all PS/2 systems that incorporate the Micro Channel™ architecture. The *IBM Personal System/2 and Personal Computer BIOS Interface Technical Reference* manual has also been revised and now supports all PS/2 systems.

Additional publications for the recently announced Personal System/2 Models 50-031, 50-061, 70-A21, 70-E61, and 70-121 are available.

Software

The software publications and products contained in this issue of the Technical Directory include reference manuals, tool kits, and language products.

The reference manuals include the *BASIC Reference* Version 3.30, the *DOS Technical Reference* Version 3.30, and the *IBM Operating System/2*™ (OS/2™) *Technical Reference* Version 1.0.

The tool kits include the *Graphics Development Toolkit* Version 1.2, the *IBM Operating System/2 Graphics Development Toolkit*, and the Hardware Application Developer's Guide.

The language products include *BASIC Compiler/2*™, *C/2*™ Version 1.0, *COBOL/2*™, *FORTRAN/2*™, *Pascal Compiler/2*™, and *Macro Assembler/2*™.

The software programs listed in this catalog are offered under the terms and conditions of the IBM Program License Agreement included in each program package. This Agreement contains a limited warranty. The Agreement states that programs are provided "as is" without warranty of any kind, expressed or implied, except that program diskettes are warranted to be free from defects in material and workmanship for a period of 90 days from date of delivery. IBM may discontinue offering programs covered by this Agreement at any time.

Products acquired through this catalog are not eligible for aggregation or discounts under the Volume Procurement Agreement.

Personal System/2 and PS/2 are registered trademarks of the International Business Machines Corporation.

Micro Channel, Operating System/2, OS/2, BASIC Compiler/2, C/2, COBOL/2, FORTRAN/2, Pascal Compiler/2, and Macro Assembler/2 are trademarks of the International Business Machines Corporation.

Hardware Manuals

Guide To Operations - Quick Reference

These manuals contain basic information needed for system operation, testing, relocation, and option installation. A diagnostic diskette is included.

Description	Part Number	Form Number	Price
Personal System/2			
Model 25	75X1051	S75X-1051	$ 24.00
Model 30	68X2230	S68X-2230	$ 45.00
Model 50-021	68X2247	S68X-2247	$ 45.00
Models 50-031 and 50-061	68X2321	S68X-2321	$ 45.00
Model 60	68X2213	S68X-2213	$ 45.00
Model 70 386 (16/20MHz)	68X2308	S68X-2308	$ 45.00
Model 70 386 (25MHz)	68X2345	S68X-2345	$ 45.00
Model 80	68X2284	S68X-2284	$ 45.00
Personal Computer			
AT®	6280066		$ 49.50
AT Model 339	6280102		$ 80.00
PC	6322510		$ 50.00
PC Convertible	6280629		$ 65.00
PC*jr*™	1502292		$ 21.25
Portable PC	6936571		$ 66.75
XT	6322511		$ 50.00
XT Models 089, 268, 278	6280085		$ 80.00
XT Model 286	6280147		$ 65.00

Hardware Maintenance Manuals

These single volume manuals provide the information needed to isolate and repair problems caused by defective field replaceable units. The Color Printer and the Graphics and Compact Printer manuals are designed to be used with the system maintenance manuals.

Description	Part Number	Form Number	Price
Color Printer	68X2237	S68X-2237	$ 23.25
Graphics and Compact Printer	6280079	S229-9600	$ 23.25
PC*jr*	1502294	ZR28-0498	$ 88.00
PC Convertible	6280641	SA23-1046	$150.00
Supplement to 6280641:			
Speech Adapter	59X9964	SN20-9817	$ 23.00

AT is a registered trademark of the International Business Machines Corporation.

PC*jr* is a trademark of the International Business Machines Corporation.

Hardware Maintenance Libraries

The Personal Computer and the Personal System/2 Hardware Maintenance Libraries each include a service manual, a reference manual, and supplements. These libraries provide the information needed by trained service representatives to isolate and repair problems on IBM Personal Computer and Personal System/2 products.

The service manuals include maintenance analysis procedures, parts catalogs, switch settings (where applicable), and advanced diagnostic diskettes. The reference manuals are designed to supplement the service manuals and they include product descriptions, field replaceable unit location and removal procedures, and information about the diagnostic programs.

All supplements should be added to maintain a complete and accurate library.

Personal System/2 (except Model 25 and Model 30)

Description	Part Number	Form Number	Price
PS/2 Hardware Maintenance Service (Models 50 and 60)	68X2222	S68X-2222	$175.00
Supplements to 68X2222:			
Display Adapter 8514/A	68X2250	S68X-2250	$ 6.00
Model 80	68X2255	S68X-2255	$ 75.00
Models 80-111 and 80-311	68X2286	S68X-2286	$ 75.00
Models 70-E61 and 70-121	68X2311	S68X-2311	$ 75.00
Model 70-A21	68X2346	S68X-2346	$ 75.00
Models 50-031 and 50-061	68X2320	S68X-2320	$ 75.00
60MB`Fixed Disk Drive (50-021,-031)	68X2342	S68X-2342	$ 23.00
300/1200 Internal Modem/A	68X2274	S68X-2274	$ 12.00
5.25-Inch External Diskette Drive	68X2273	S68X-2273	$ 10.00
Expanded Memory Adapter/A (0-8MB)	01F0227	S01F-0227	$ 21.75
80386 Memory Expansion (2-8MB)	68X2338	S68X-2338	$ 25.00
PS/2 Hardware Maintenance Reference (Models 50 and 60)	68X2221	S68X-2221	$125.00
Supplements to 68X2221:			
Color Display 8514	68X2218	S68X-2218	$ 6.00
Display Adapter 8514/A	68X2249	S68X-2249	$ 6.00
Model 80	68X2254	S68X-2254	$ 50.00
Models 80-111 and 80-311	68X2287	S68X-2287	$ 50.00
Models 70-E61 and 70-121	68X2313	S68X-2313	$ 40.00
Model 70-A21	(Included in 68X2346 on this page)		
Models 50-031 and 50-061	(Included in 68X2320 on this page)		
60MB Fixed Disk Drive (50-021,-031)	(Included in 68X2342 on this page)		
300/1200 Internal Modem/A	(Included in 68X2274 on this page)		
5.25-Inch External Diskette Drive	(Included in 68X2273 on this page)		
Expanded Memory Adapter/A (0-8MB)	(Included in 01F0227 on this page)		
80386 Memory Expansion (2-8MB)	(Included in 68X2338 on this page)		

Hardware Maintenance Libraries

Personal Computer (including PS/2 Model 25 and Model 30)

Description	Part Number	Form Number	Price
Personal Computer Hardware Maintenance Service (PC, XT, AT, and *Portable*)	6280087	S229-9603	**$195.00**
Supplements to 6280087:			
Personal System/2 Model 25	75X1054	SA23-1201	**$ 33.00**
Personal System/2 Model 30	68X2202	S68X-2202	**$ 30.00**
AT Model 339	6280139	SS34-0001	**$ 9.95**
XT Model 286	68X2211	SS34-0021	**$ 9.95**
XT Models 089, 268, and 278	6280109	SN32-8202	**$ 9.95**
Display Adapter	68X2216	S68X-2216	**$ 30.00**
PC Music Feature	75X1049	SA23-1029	**$ 41.50**
2MB Expanded Memory Adapter	74X9923	SA23-1031	**$ 53.75**
3.5-Inch Internal Diskette Drive	6280159	SS34-0003	**$ 5.95**
3.5-Inch External Diskette Drive	6280111	SS34-0005	**$ 10.00**
5.25-Inch External Diskette Drive	68X2273	S68X-2273	**$ 10.00**
20MB Fixed Disk Drive Model 25	01F0246	S01F-0246	**$ 7.40**
Service Summary Card Models 25/30	01F0248	S01F-0248	**$ 2.05**
Empty supplement binder	1502561	S229-9605	**$ 7.25**
Personal Computer Hardware Maintenance Reference (PC, XT, AT, and *Portable*)	6280088	S229-9604	**$150.00**
Supplements to 6280088:			
Personal System/2 Model 25	75X1059	SA23-1200	**$ 9.00**
Personal System/2 Model 30	68X2203	S68X-2203	**$ 10.00**
AT Model 339	6280138	SS34-0002	**$ 5.95**
XT Model 286	68X2212	SS34-0022	**$ 9.95**
XT Models 089, 268, and 278	6280108	SN32-8203	**$ 5.95**
Display Adapter	68X2238	S68X-2238	**$ 6.00**
Color Display 8514	68X2218	S68X-2218	**$ 6.00**
3.5-Inch Internal Diskette Drive	6280160	SS34-0004	**$ 5.95**
3.5-Inch External Diskette Drive	(Included in 68X2203 on this page)		
5.25-Inch External Diskette Drive	(Included in 68X2273 on this page)		
20MB Fixed Disk Drive Model 25	01F0244	S01F-0244	**$ 3.50**
Empty supplement binder	01F0200	S01F-0200	**$ 17.00**

Hardware Technical Reference Manuals

These manuals include the System Technical References, the System Technical Reference supplements, the Hardware Interface Technical Reference, the BIOS Interface Technical Reference, and the Options and Adapters Technical References. Together, these manuals and supplements provide the information needed to design hardware and software products for IBM Personal Computer and Personal System/2 products.

System Technical References
These manuals contain interface and design information for the system unit. Information is included for the system board, math coprocessor, power supply, keyboard, instruction sets, and other system features.

Description	Part Number	Form Number	Price
Personal System/2 Model 25	75X1055	SA23-1202	$ 28.75
Supplement to 75X1055:			
20MB Fixed Disk Drive	01F0245	S01F-0245	$ 3.40
Personal System/2 Model 30	68X2201	S68X-2201	$ 75.00
Personal Computer	6322507	S229-9610	$ 30.00
Personal Computer AT®	6280070	S229-9611	$105.00
Supplement to 6280070:			
Personal Computer AT Model 339	6280099	S229-9608	$ 49.75
Personal Computer XT™ Model 286	68X2210	S229-9615	$ 50.00
Personal Computer XT and *Portable*	6280089	S229-9607	$ 49.75
PC Convertible	6280648	SA23-1047	$ 75.00
Supplements to 6280648:			
Speech Adapter	59X9965		$ 23.00
256KB Memory and Enhanced Modem	75X1035		$ 5.20
PC*jr*	1502293	S229-9609	$ 35.00

Hardware Technical Reference Manuals

Hardware Interface Technical Reference
The *IBM Personal System/2 Hardware Interface Technical Reference* manual contains information for the PS/2 systems that incorporate the Micro Channel architecture. Packaged with this manual are individual model-specific technical reference manuals for Models 50, 60, 70, and 80.

This manual replaces the PS/2 Model 50/60 Technical Reference manual (part number 68X2224), the PS/2 Model 80 Technical Reference manual (part number 68X2256), and the supplement for the Models 80-111 and 80-311 (part number 68X2285).

Description	Part Number	Form Number	Price
IBM Personal System/2 Hardware Interface Technical Reference	68X2330	S68X-2330	$125.00
Supplement to 68X2330:			
Model 70-A21	68X2344	S68X-2344	$ 50.00

BIOS Interface Technical Reference
The *IBM Personal System/2 and Personal Computer BIOS Interface Technical Reference* manual contains Basic Input/Output System (BIOS) interface information for IBM Personal Computer and Personal System/2 products.

This manual replaces the *IBM Personal System/2 and Personal Computer BIOS Interface Technical Reference* manual (part number 68X2260) and the Advanced BIOS Interface supplement (part number 68X2288).

Description	Part Number	Form Number	Price
IBM Personal System/2 and Personal Computer BIOS Interface Technical Reference (second edition)	68X2341	S68X-2341	$125.00
Supplement to 68X2341:			
Model 70-A21	(Included in 68X2344 on this page)		

Hardware Technical Reference Manuals

Options and Adapters

These publications contain interface and design information, hardware descriptions, programming considerations, and BIOS information (where applicable).

Description	Part Number	Form Number	Price
Options and Adapters Technical Reference - includes a binder and:	6322509	S229-9612	**$125.00**

- Asynchronous and Bisynchronous Communications Adapters
- Cluster Adapter
- Color Display
- Color/Graphics Monitor Adapter
- Color, Compact, and Graphics Printers
- Expansion Unit
- Fixed Disk Drive Adapter

- Game Control Adapter
- Monochrome Display
- Monochrome/Printer Adapter
- Printer Adapter
- SDLC Adapter
- Slimline Diskette Drive
- 10MB Fixed Disk Drive
- 5.25-Inch Diskette Drive and Adapter
- 64/256KB Memory Option

Description	Part Number	Form Number	Price
Engineering/Scientific - includes:	6280133	SS34-0009	$ 27.95

- Data Acquisition and Control Adapter (DAC)
- DAC Distribution Panel

- General Purpose Interface Bus Adapter
- Professional Graphics Controller
- Professional Graphics Display

Description	Part Number	Form Number	Price
Personal Computer AT - includes:	6280134	SS34-0010	$ 9.95

- Double-Sided Diskette Drive
- Fixed Disk and Diskette Drive Adapter
- High Capacity Diskette Drive

- Serial/Parallel Adapter
- 128KB Memory Expansion Option
- 20MB Fixed Disk Drive
- 512KB Memory Expansion Option

Communications

Description	Part Number	Form Number	Price
Dual Async Adapter/A -Second Edition	68X2315	S68X-2315	$ 6.00
Multiprotocol Adapter/A -Second Edition	68X2316	S68X-2316	$ 12.00
300/1200 Internal Modem/A	68X2275	S68X-2275	$ 6.00

Displays

Description	Part Number	Form Number	Price
PS/2 Color Display 8514	68X2214	S68X-2214	$ 6.00
PS/2 Display Adapter	68X2251	S68X-2251	$ 10.00
PS/2 Display Adapter 8514/A	68X2248	S68X-2248	$ 10.00
PS/2 Displays 8503, 8512, and 8513	68X2206	S68X-2206	$ 6.00
Enhanced Graphics Adapter (includes the Enhanced Color Display and the Graphics Memory Expansion Card)	6280131	SS34-0007	$ 9.95

Hardware Technical Reference Manuals

Description	Part Number	Form Number	Price
Diskette Drives and Adapters			
3.5-Inch External Drive	59X9945		$ 5.95
3.5-Inch External Drive Adapter	59X9946		$ 5.95
3.5-Inch 720KB/1.44MB Drive	68X2225	S68X-2225	$ 6.00
5.25-Inch External Drive	68X2272	S68X-2272	$ 10.00
Double-Sided Diskette Drive Half High (XT, AT)	6280093	SS34-0016	$ 5.95
Fixed Disk Drives and Adapters			
Fixed Disk Drive Adapter/A	68X2226	S68X-2226	$ 12.00
Fixed Disk Drive Adapter/A, ESDI	68X2234	S68X-2234	$ 12.00
Fixed Disk and Diskette Drive Adapter (for XT Model 286)	68X2215	SS34-0031	$ 6.00
20MB Drive (XT-089,-268,-278,-286)	68X2208	SS34-0019	$ 7.00
20MB Adapter (XT-089,-268,-278)	6280092	SS34-0015	$ 5.95
20MB Drive and Adapter (Model 25)	01F0247	S01F-0247	$ 2.85
3.5-Inch 20MB Drive (Model 30)	68X2205	S68X-2205	$ 6.00
3.5-Inch 20MB Drive (Model 50)	68X2219	S68X-2219	$ 10.00
30MB Drive (AT)	68X2310	S68X-2310	$ 5.95
30MB Drive (Model 50-031)	68X2324	S68X-2324	$ 10.00
44MB Drive (Second Edition)	68X2317	S68X-2317	$ 6.00
60MB Adapter (50-021 and 50-031)	68X2343	S68X-2343	$ 4.00
60/120MB Drives (Models 50 and 70)	68X2314	S68X-2314	$ 9.00
70/115/314MB Drives	68X2236	S68X-2236	$ 6.00
Memory			
128/640KB Memory Adapter	1502544	SS34-0017	$ 5.95
256KB Memory Expansion (includes Type 3 diskette drive)	6280132	SS34-0008	$ 9.95
512KB/2MB Memory Adapter	6183075	SS34-0018	$ 5.95
2MB Expanded Memory Adapter	75X1086	SA23-1033	$ 8.75
Expanded Memory Adapter/A (0-8MB)	01F0228	S01F-0228	$ 6.25
80286 Memory Expansion Option	68X2227	S68X-2227	$ 6.00
80386 Memory Expansion Option 2-6MB	68X2257	S68X-2257	$ 10.00
80386 Memory Expansion Option 2-8MB	68X2339	S68X-2339	$ 12.00
Other			
Personal System/2 Speech Adapter	68X2207	S68X-2207	$ 13.00
Voice Communications Adapter	55X8864	SS34-0011	$ 5.95
Mouse	68X2229	S68X-2229	$ 6.00
PC Music Feature	75X1048	SA23-1035	$ 17.75
Empty Options and Adapters binder	6280115	S229-9606	$ 7.25

Software Reference Manuals

BASIC Reference Version 3.30
This manual explains the operation and use of BASICA, the BASIC Interpreter contained in *IBM Disk Operating System* Version 3.30 and *IBM Operating System/2*. It contains the syntax and semantics of every command, statement, and function in the three versions of BASIC: cassette, disk, and advanced.

Description	Part Number	Price
BASIC Reference Version 3.30	6280189	$ 45.00

DOS Technical Reference Version 3.30
This manual contains information about the structure, facilities, and program interfaces of DOS. The package includes a Quick Reference card and diskettes (3.5-inch and 5.25-inch) containing the DOS utilities.

Description	Part Number	Price
DOS Technical Reference Version 3.30	6280059	$ 85.00

IBM Operating System/2 Technical Reference Version 1.0
This manual contains information about the interfaces, architecture, control structures, data structures, and I/O formats of OS/2.

Description	Part Number	Price
IBM OS/2 Technical Reference Version 1.0	6280201	$200.00

Software Toolkits

Graphics Development Toolkit Version 1.2

This product is designed for application developers who are writing graphics programs for the DOS (Version 2.1 or higher) environment. The Virtual Device Interface (VDI) provides hardware device independence. The package includes program diskettes (3.5-inch and 5.25-inch), VDI device drivers, and a Programmer's Guide.

Description	Part Number	Price
Graphics Development Toolkit Version 1.2	6280203	$ 530.00

OS/2 Graphics Development Toolkit

This product is designed for application developers who are writing graphics programs for the OS/2 environment. The Virtual Device Interface (VDI) provides hardware device independence. It supports the development of applications that use the multitasking, multiprogramming, and large memory (up to 16MB) capabilities of OS/2. The package includes program diskettes (3.5-inch and 5.25-inch), VDI device drivers, and a Programmer's Guide.

Description	Part Number	Price
OS/2 Graphics Development Toolkit	6280202	$1100.00

Hardware Application Developer's Guide

The *IBM Personal System/2 Display Adapter 8514/A Adapter Interface Application Developer's Guide* is designed for programmers of the Display Adapter 8514/A. The package includes a user's manual and a diskette containing utilities and sample programs.

Description	Part Number	Form Number	Price
Personal System/2 Display Adapter 8514/A Adapter Interface Application Developer's Guide	68X2279	S68X-2279	$ 25.00

Software Language Products

Programming Languages

These products run under and generate executable code for the OS/2 and the DOS Version 3.30 environments. Under OS/2, generated code can run concurrently with other applications in the multitasking environment.

Each product contains a set of tools including Linker, Library Manager, and Debugger. Each package includes program diskettes (3.5-inch and 5.25-inch) and three manuals (Fundamentals; Compile/Assemble, Link, and Run; and Language Reference).

C/2, COBOL/2, and FORTRAN/2 conform to the IBM Systems Application Architecture™ (SAA™). COBOL/2 and FORTRAN/2 are designed according to the American National Standards Institute (ANSI) as understood and interpreted by IBM as of January 1987. For COBOL/2, refer to ANSI X3.23-1985 (Intermediate). For FORTRAN/2, refer to ANSI X3.9-1978.

Description	Part Number	Price
BASIC Compiler/2	6280179	$635.00
C/2 Version 1.0	6280187	$560.00
COBOL/2	6280207	$965.00
FORTRAN/2	6280185	$635.00
Pascal Compiler/2	6280183	$635.00
Macro Assembler/2	6280181	$240.00

Systems Application Architecture and SAA are trademarks of the International Business Machines Corporation.

IBM Technical Directory

Ordered by:

Name _____

Company _____

Address _____

City _____

State _____ Zip _____

Ship to:

Name _____

Company _____

Address _____

City _____

State _____ Zip _____

Method of Payment:

☐ My check or money order made payable to IBM Corporation is enclosed.

Charge to: ☐ VISA   ☐ American Express
             ☐ MasterCard ☐ IBM Credit Card

X _____   ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐   ☐☐☐

Authorized Signature   Credit Card Account Number   Exp. Date

Item Description	Part Number	Qty.	Price	Item Total
Subtotal				$
Add your applicable state and local sales/use tax				$
Postage and Handling				$ 5.00
TOTAL				$

Ordering Information

Telephone Orders:

Please have the part numbers, quantities, and credit card information available when you call. Charge your order to your *VISA*, MasterCard, AMERICAN EXPRESS, or IBM credit card.

Publications can be ordered by calling toll free 1-800-IBM-PCTB (1-800-426-7282), weekdays between 8AM and 8PM Eastern Time. In Canada call toll free 1-800-465-1234, weekdays between 8:30AM and 4:30PM Eastern Time. In British Columbia call toll free 112-800-465-1234. In Alaska call 1-414-633-8108.

You may also call to request additional copies of the Technical Directory or to inquire about the availability of IBM Personal Computer or IBM Personal System/2 technical information on newly announced products that may not be listed in this directory.

Allow 1-2 weeks for delivery of telephone orders.

Mail Orders:

Please list the product names, part numbers, quantities, and total price. Add your applicable state and local sales/use tax, plus $5.00 for postage and handling. Enclose your check, money order, or credit card information with the order. Make your check or money order payable to IBM Corporation, or you can charge your order to your *VISA*, MasterCard, AMERICAN EXPRESS, or IBM credit card. We cannot accept cash, CODs, or purchase orders. Be sure to include shipping information.

In the United States, Puerto Rico, and the U.S. Virgin Islands mail to:

    IBM Technical Directory
    P.O. Box 2009
    Racine, WI 53404-3336

Allow 2-4 weeks for delivery of mail orders.

Publications and Products listed in the Technical Directory can be obtained by contacting an IBM Authorized Dealer, an IBM Marketing Representative, or an IBM Branch Office. Purchase orders will be accepted only when placing orders through an IBM Marketing Representative or an IBM Branch Office.

IBM reserves the right to substitute the most recent version of any manual listed in this directory. This could affect the price of the manual.

All prices are subject to change without notice. Orders received with incorrect payments or other errors will be returned. The products and prices quoted are for the United States, Puerto Rico, and the U.S. Virgin Islands only.

VISA is a trademark of VISA International Services Association. MasterCard is a trademark of MasterCard International, Incorporated. AMERICAN EXPRESS is a trademark of American Express, Incorporated.

IBM ®