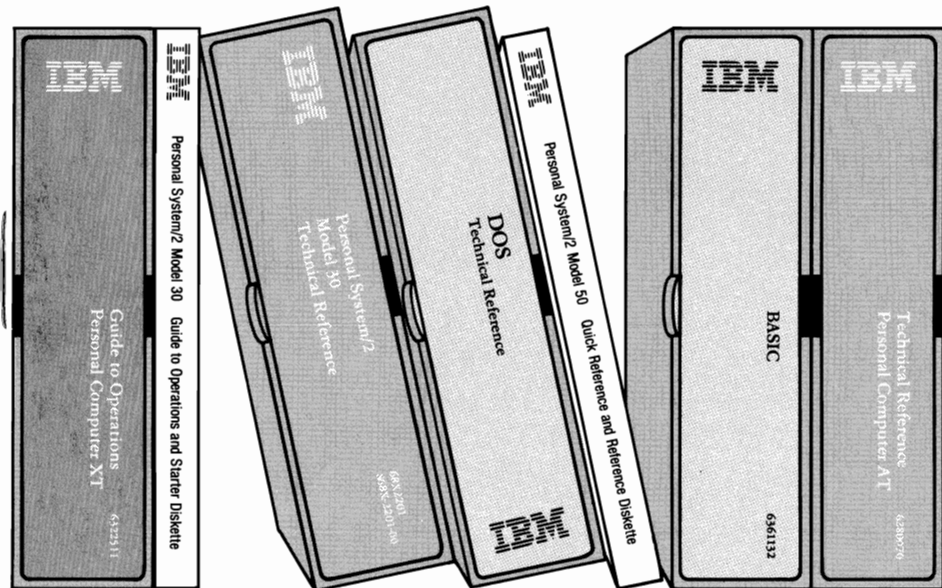




# Technical Directory

Books and Reference Materials  
for IBM Personal Computer Products  
and IBM Personal System/2™ Products.  
Direct from IBM

January 1988



## Software

### **BASIC REFERENCE** Version 3.30

This manual explains how to use the BASIC Interpreter for the IBM Personal Computer and contains the syntax and semantics of every command, statement, and function in the three versions of BASIC: cassette, disk, and advanced.

In addition to the reference material, there are chapters on BASIC programming concepts and the BASIC program editor. Other chapters describe data representation, file names, and input and output features. Updated with each version of DOS, this manual also contains a chapter that describes the most recent enhancements.

**6280189** ..... \$ 45.00

### **DOS TECHNICAL REFERENCE** Version 3.30

This manual is the reference for the IBM Personal Computer Disk Operating System (DOS) and is intended for experienced DOS users, system programmers, and application developers. Included is information about the structure, facilities, and program interfaces of DOS.

Chapter titles include Control Blocks, Memory Management, Disk Allocation, Interrupts and Function Calls, and File Structure and Loading. This package contains DOS utilities on a 3.5-inch and a 5.25-inch diskette and a Quick Reference card.

**6280059** ..... \$ 85.00

### **IBM OPERATING SYSTEM/2 TECHNICAL REFERENCE** Version 1.0

This manual is the reference for the IBM Operating System/2™ (OS/2™) and is intended for experienced users, system programmers, and application developers. It describes the OS/2 interfaces and the architecture, control structures, data structures, and I/O formats necessary to understand and use them.

**6280201** ..... \$200.00

## Hardware User Guides

### **GUIDE TO OPERATIONS and QUICK REFERENCE**

These publications contain instructions for system operation, testing, relocation, and option installation. A diagnostic diskette is included.

Description	Part Number	Form Number	Price
<b>Personal System/2</b>			
Model 25	75X1051	S75X-1051	\$ 24.00
Model 30	68X2230	S68X-2230	\$ 45.00
Model 50	68X2247	S68X-2247	\$ 45.00
Model 60	68X2213	S68X-2213	\$ 45.00
Model 80	68X2284	S68X-2284	\$ 45.00
<b>Personal Computer</b>			
AT®	6280066		\$ 49.50
AT Model 339	6280102		\$ 80.00
PC	6322510		\$ 50.00
PC Convertible	6280629		\$ 65.00
PCjr™	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

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PCjr and Personal Computer XT are trademarks of International Business Machines Corporation.

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Personal System/2, Operating System/2, and OS/2 are trademarks of International Business Machines Corporation.

## Hardware Maintenance Libraries

### PERSONAL SYSTEM/2 (except Model 25 and Model 30)

This Hardware Maintenance library consists of a two-part set of manuals. It is intended for trained service representatives.

The *Personal System/2 Hardware Maintenance Service* contains all of the information necessary to diagnose a failure. Maintenance Analysis Procedures (MAPs), the parts catalog, and the Reference Diskettes containing the advanced diagnostics tests are in this manual.

The *Personal System/2 Hardware Maintenance Reference* contains product descriptions, field replaceable unit (FRU) locations and removal procedures, and information about the diagnostic programs.

All available supplements should be added to maintain an accurate library. (The PS/2™ Model 25 and Model 30 supplements update the Personal Computer maintenance library.)

Description	Part Number	Form Number	Price
Personal System/2 Hardware Maintenance Service (Models 50 and 60)	68X2222	S68X-2222	\$175.00
<b>Supplements to 68X2222:</b>			
Display Adapter 8514/A Model 80	68X2250	S68X-2250	\$ 6.00
Model 80-111, -311	68X2255	S68X-2255	\$ 75.00
300/1200 Internal Modem/A	68X2286	S68X-2286	\$ 75.00
5.25-Inch External Diskette Drive	68X2274	S68X-2274	\$ 12.00
80286 Expanded Memory Adapter/A	68X2273	S68X-2273	\$ 10.00
	75X1107	SA23-1032	\$ 22.75
Personal System/2 Hardware Maintenance Reference (Models 50 and 60)	68X2221	S68X-2221	\$125.00
<b>Supplements to 68X2221:</b>			
Color Display 8514	68X2218	S68X-2218	\$ 6.00
Display Adapter 8514/A Model 80	68X2249	S68X-2249	\$ 6.00
Model 80-111, -311	68X2254	S68X-2254	\$ 50.00
300/1200 Internal Modem/A	68X2287	S68X-2287	\$ 50.00
5.25-Inch External Diskette Drive	(Included in 68X2274 on this page)		
80286 Expanded Memory Adapter/A	(Included in 68X2273 on this page)		
	(Included in 75X1107 on this page)		

### PERSONAL COMPUTER (Including PS/2 Model 25 and Model 30)

This Hardware Maintenance library consists of a two-part set of manuals. It is intended for trained service representatives.

The *Personal Computer Hardware Maintenance Service* contains all of the information necessary to diagnose a failing system. Maintenance Analysis Procedures (MAPs), jumper positions, switch settings, parts catalog, and diskettes containing the advanced diagnostics are in this manual.

The *Personal Computer Hardware Maintenance Reference* contains general information about the systems. It also describes the diagnostic procedures and field replaceable unit (FRU) location, adjustment, and removal.

All available supplements should be added to maintain an accurate library.

Description	Part Number	Form Number	Price
Personal Computer Hardware Maintenance Service (PC, XT, AT, and Portable)	6280087	S229-9603	\$195.00
<b>Supplements to 6280087:</b>			
AT Model 339	6280139	SS34-0001	\$ 9.95
Display Adapter	68X2216	S68X-2216	\$ 30.00
PC Music Feature	75X1049	SA23-1029	\$ 41.50
Personal System/2 Model 25	75X1054	SA23-1201	\$ 33.00
Personal System/2 Model 30	68X2202	S68X-2202	\$ 30.00
XT Model 286	68X2211	SS34-0021	\$ 9.95
XT Models 089, 268, 278	6280109	SN32-8202	\$ 9.95
2MB Expanded Memory Adapter	74X9923	SA23-1031	\$ 53.75
3.5-Inch External Diskette Drive	6280111	SS34-0005	\$ 10.00
3.5-Inch Internal Diskette Drive	6280159	SS34-0003	\$ 5.95
5.25-Inch External Diskette Drive	68X2273	S68X-2273	\$ 10.00
Personal Computer Hardware Maintenance Reference (PC, XT, AT, and Portable)	6280088	S229-9604	\$150.00
<b>Supplements to 6280088:</b>			
AT Model 339	6280138	SS34-0002	\$ 5.95
Color Display 8514	68X2218	S68X-2218	\$ 6.00
Display Adapter	68X2238	S68X-2238	\$ 6.00
Personal System/2 Model 25	75X1059	SA23-1200	\$ 9.00
Personal System/2 Model 30	68X2203	S68X-2203	\$ 10.00
XT Model 286	68X2212	SS34-0022	\$ 9.95
XT Models 089, 268, 278	6280108	SN32-8203	\$ 5.95
3.5-Inch External Diskette Drive	(Included in 68X2203 on this page)		
3.5-Inch Internal Diskette Drive	6280160	SS34-0004	\$ 5.95
5.25-Inch External Diskette Drive	(Included in 68X2273 on page 4)		

PS/2 is a trademark of International Business Machines Corporation.

## HARDWARE MAINTENANCE AND SERVICE

These single-volume manuals provide the information needed to isolate and replace any field replaceable unit (FRU). 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 Convertible	6280641	SA23-1046	\$150.00
<b>Supplements to 6280641:</b>			
Speech Adapter	59X9964	SN20-9817	\$ 23.00
PCjr	1502294	ZR28-0498	\$ 88.00

## BINDERS

Use these empty binders to store your Hardware Maintenance library supplements.

Description	Part Number	Form Number	Price
Hardware Maintenance Service binder (empty)	1502561	S229-9605	\$ 7.25
Hardware Maintenance Reference binder (empty)	01F0200	S01F-0200	\$ 17.00

## Hardware Technical Reference Library

These publications provide system-specific hardware and software interface information for the IBM Personal Computer and Personal System/2 products. They are intended for developers who provide hardware and software products to operate with these systems. The library is divided into System, Options and Adapters, and BIOS Interface publications.

### SYSTEM

These publications provide interface and design information for the system units. Information is included for the System Board, Math Coprocessor, Power Supply, Video Subsystem, Keyboard, Instruction Sets, and other features of the system.

Description	Part Number	Form Number	Price
PC Convertible	6280648	SA23-1047	\$ 75.00
<b>Supplements to 6280648:</b>			
Speech Adapter	59X9965		\$ 23.00
256KB Memory and Enhanced Modem	75X1035		\$ 5.20
PCjr	1502293	S229-9609	\$ 35.00
Personal Computer	6322507	S229-9610	\$ 30.00
Personal Computer AT	6280070	S229-9611	\$105.00
<b>Supplements to 6280070:</b>			
Personal Computer AT Model 339	6280099	S229-9608	\$ 49.75
Personal Computer XT and Portable Personal Computer	6280089	S229-9607	\$ 49.75
Personal Computer XT Model 286	68X2210	S229-9615	\$ 50.00
Personal System/2 Model 25	75X1055	SA23-1202	\$ 28.75
Personal System/2 Model 30	68X2201	S68X-2201	\$ 75.00
Personal System/2 Model 50 and 60*	68X2224	S68X-2224	\$125.00
Personal System/2 Model 80*	68X2256	S68X-2256	\$125.00
<b>Supplements to 68X2256:</b>			
Model 80-111, -311*	68X2285	S68X-2285	\$ 6.00

\* BIOS information is not included; see the BIOS Interface Technical Reference on page 11.

## OPTIONS AND ADAPTERS

These publications provide interface and design information for the options and adapters available for the various systems. This information includes a hardware description, programming considerations, interface specifications, and BIOS information (where applicable).

Description	Part Number	Form Number	Price
Options and Adapters Technical Reference - includes:	6322509	S229-9612	\$125.00
<ul style="list-style-type: none"> <li>Asynchronous Communications Adapter</li> <li>Bisynchronous Communications Adapter</li> <li>Cluster Adapter</li> <li>Color Display</li> <li>Color/Graphics Monitor Adapter</li> <li>Color Printer</li> <li>Compact Printer</li> <li>Expansion Unit</li> <li>Fixed Disk Drive Adapter</li> <li>Game Control Adapter</li> <li>Graphics Printer</li> <li>Monochrome Display</li> <li>Monochrome/Printer Adapter</li> <li>Printer Adapter</li> <li>SDLC Adapter</li> <li>Slimline Diskette Drive</li> <li>10MB Fixed Disk Drive</li> <li>5.25-Inch Diskette Drive</li> <li>5.25-Inch Diskette Drive Adapter</li> <li>64/256KB Memory Option</li> </ul>			
Engineering/Scientific - includes:	6280133	SS34-0009	\$ 27.95
<ul style="list-style-type: none"> <li>Data Acquisition and Control Adapter (DAC)</li> <li>DAC Distribution Panel</li> <li>General Purpose Interface Bus Adapter</li> <li>Professional Graphics Controller</li> <li>Professional Graphics Display</li> </ul>			
Personal Computer AT - includes:	6280134	SS34-0010	\$ 9.95
<ul style="list-style-type: none"> <li>Double-Sided Diskette Drive</li> <li>Fixed Disk and Diskette Drive Adapter</li> <li>High Capacity Diskette Drive</li> <li>Serial/Parallel Adapter</li> <li>128KB Memory Expansion Option</li> <li>20MB Fixed Disk Drive</li> <li>512KB Memory Expansion Option</li> </ul>			
<b>Communications</b>			
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

Description	Part Number	Form Number	Price
<b>Diskette and Fixed Disk</b>			
Double-Sided Diskette Drive (Half High Drive for XT and AT)	6280093	SS34-0016	\$ 5.95
Fixed Disk Drive Adapters/A	68X2226	S68X-2226	\$ 12.00
Fixed Disk Drive Adapter/A, ESDI	68X2234	S68X-2234	\$ 12.00
Fixed Disk and Diskette Drive Adapter (XT Model 286)	68X2215	SS34-0031	\$ 6.00
20MB Fixed Disk Drive (XT Models 089, 268, 278, 286)	68X2208	SS34-0019	\$ 7.00
20MB Fixed Disk Drive Adapter (XT Models 089, 268, 278)	6280092	SS34-0015	\$ 5.95
3.5-Inch External Diskette Drive	59X9945		\$ 5.95
3.5-Inch External Diskette Drive Adapter	59X9946		\$ 5.95
3.5-Inch 20MB Fixed Disk Drive (Model 30)	68X2205	S68X-2205	\$ 6.00
3.5-Inch 20MB Fixed Disk Drive (Model 50)	68X2219	S68X-2219	\$ 10.00
3.5-Inch 720KB/1.44MB Diskette Drives	68X2225	S68X-2225	\$ 6.00
30MB Fixed Disk Drive	68X2310	S68X-2310	\$ 5.95
44MB Fixed Disk Drive (Second Edition)	68X2317	S68X-2317	\$ 6.00
5.25-Inch External Diskette Drive	68X2272	S68X-2272	\$ 10.00
70/115/314MB Fixed Disk Drives	68X2236	S68X-2236	\$ 6.00
<b>Displays</b>			
Personal System/2 Color Display 8514	68X2214	S68X-2214	\$ 6.00
Personal System/2 Display Adapter	68X2251	S68X-2251	\$ 10.00
Personal System/2 Display Adapter 8514/A	68X2248	S68X-2248	\$ 10.00
Personal System/2 Displays - includes:	68X2206	S68X-2206	\$ 6.00
<ul style="list-style-type: none"> <li>Color 8512</li> <li>Color 8513</li> <li>Monochrome 8503</li> </ul>			
Enhanced Graphics Adapter - includes:	6280131	SS34-0007	\$ 9.95
<ul style="list-style-type: none"> <li>Enhanced Color Display</li> <li>Graphics Memory Expansion Card</li> </ul>			

Description	Part Number	Form Number	Price
<b>Memory</b>			
128/640KB Memory Adapter	1502544	SS34-0017	\$ 5.95
2MB Expanded Memory Adapter	75X1086	SA23-1033	\$ 8.75
256KB Memory Expansion - includes: • Type 3 Diskette Drive	6280132	SS34-0008	\$ 9.95
512KB/2MB Memory Adapter	6183075	SS34-0018	\$ 5.95
80286 Expanded Memory Adapter/A	75X1109	SA23-1043	\$ 5.75
80286 Memory Expansion Option	68X2227	S68X-2227	\$ 6.00
80386 Memory Expansion Option	68X2257	S68X-2257	\$ 10.00
<b>Other</b>			
Binder, Options and Adapters (empty)	6280115	S229-9606	\$ 7.25
Mouse	68X2229	S68X-2229	\$ 6.00
PC Music Feature	75X1048	SA23-1035	\$ 17.75
Personal System/2 Speech Adapter	68X2207	S68X-2207	\$ 13.00
Voice Communications Adapter	55X8864	SS34-0011	\$ 5.95

#### BIOS INTERFACE

This publication provides Basic Input/Output System (BIOS) interface information. It is intended for developers of hardware or software products that operate with the IBM Personal Computer and Personal System/2 products.

Description	Part Number	Form Number	Price
Personal System/2 and Personal Computer BIOS Interface	68X2260	S68X-2260	\$ 75.00
<b>Supplements to 68X2260:</b>			
Advanced BIOS Interface	68X2288	S68X-2288	\$ 50.00

#### Hardware Application Developer's Guide

##### PERSONAL SYSTEM/2 DISPLAY ADAPTER 8514/A ADAPTER INTERFACE APPLICATION DEVELOPER'S GUIDE

This guide is for programmers of the Display Adapter 8514/A. It consists of 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





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