LetNo	ZP97-0144
Date	970204
Revised	970318
Class	IBM Europe Programming Announcement

Title

Personal Communications V4.11 Now Fully Supports Windows NT

Program Number

- 5622-972
  IBM Personal Communications AS/400 and 3270 V4.11 for DOS/Windows, Windows 95, Windows NT and OS/2

- 5622-971 IBM Personal Communications AS/400 V4.11 for Windows, Windows 95, Windows NT and OS/2

For Partnumber details see section "Ordering Information" in external part of this letter.

Overview

The industry-leading IBM Personal Communications family of emulators is enhanced to include full support for Windows NT for the client workstation.

For convenience and ease of use, Personal Communications is available in two packages: Personal Communications AS/400 Version 4.11 for Windows, Windows 95, Windows NT and OS/2 which provides 5250 emulation and connections to AS/400 and S/3X systems; and Personal Communications AS/400 and 3270 Version 4.11 for DOS, Windows, Windows 95, Windows NT and OS/2 which provides 3270 and 5250 emulation and connections to S/390, AS/400 and S/3X systems. These packages are available on separately orderable CD-ROMs.

This family of Personal Communications products provide state-of-the-art multi-protocol communications client support for PCs running DOS (3270), OS/2, Windows 3.x, Windows NT or Windows 95.

These products for Windows NT are available only via CD-ROM. You can select and install a single product from the CD-ROM for your preferred operating environment without dealing with multiple diskettes.

With Personal Communications AS/400 Version 4.11 for Windows, Windows 95, Windows NT and OS/2 you can connect PCs with AS/400 or S/3X mid-range host computers. Once the systems are connected, you can interact with IBM mid-range host computers using an impressive array of features, including an up-to-date GUI, 5250 terminal emulation, and data transfer support.

Personal Communications AS/400 and 3270 Version 4.11 for DOS, Windows, Windows 95, Windows NT and OS/2 gives you GUI-based 5250 and 3270 terminal emulation capability in addition to a range of SNA-based client application program interfaces (APIs), offering flexibility in application implementation. This product also lets you simultaneously access and process information on AS/400 and S/390 hosts while providing a common look and feel across both environments.

The versatile connectivity of these products gives new and established AS/400 and S/390 customers greater flexibility in expanding LAN/WAN network capabilities including support for the mobile workforce using asynchronous communications.

Planned Availability

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Language                Avail.Date
---------------         ------------
English                 02/28/97
French                  02/28/97
German                  02/28/97
Italian                 02/28/97
Spanish                 02/28/97
Swedish                 02/28/97
Bi-Directional          02/28/97
```

Marketing Information

Marketing Channels

IBM Marketing Representative

ISMS Direct Services

IBM Business Partners (*) acting as Agents

IBM Business Partners (*) acting as Remarketers of IBM PC COMPUTERS.

IBM Business Partners (*) acting as Remarketers of IBM NETWORKING PRODUCTS (Base).

IBM Application Marketing Associates

IBM Software Remarketers

Industrial Integrators

(*) Business Partners are called Business Associates in U.K. and Ireland.

Marketing Strategy

The IBM Personal Communications family of emulator products is IBM's response to the terminal-emulation needs of the PC marketplace. These products provide 3270 and 5250 emulation support for customers with PCs running DOS/Windows, Windows 95, Windows NT and OS/2. The emulators provide many powerful, simple-to-use features, such as macro support, keystroke record and playback, iconic toolbar, dynamic data exchange (DDE) and integration of Web browser with a host session. The products have the same look and feel across operating system environments and across 3270 and 5250 emulation environments. The emulators also support unattended installation to make management over a LAN easy. The Personal Communications family offers comprehensive support for a variety of LANs/WANs and key APIs.

Marketing Action Required

Agents currently authorized to market System Units and connected controllers, workstations and peripherals on which this product can operate are to be informed of this announcement.

Program Services

Central Service through mail or fax will be provided by IBM until March 31, 1999.

Additional fee support will be provided through the IBM Support Line and Country specific service offerings. Please contact IBM for further information on what is available in your Country.

This program will be subject to the terms of the IBM International Program License Agreement (IPLA) contained in the program package, and not to the Agreement for IBM Licensed Programs.

This Statement is complementary to the IBM IPLA contained in this package:

```
Program Name:      PCOMM AS/400 + 3270 V4.11 CD
Program Number:    5622-972
Service End Date:  March 31, 1999
Part Number:       64H0754..64H0759

Program Name:      PCOMM AS/400 V4.11 CD
Program Number:    5622-971
Service End Date:  March 31, 1999
Part Number:       64H0772..64H0777
```

For program defect related problems, the following procedure for assistance in problem identification is applicable:

- Contact your remarketer or distributor or, alternatively
- Mail or fax the written problem description to IBM.

IBM will reply in writing with information about correction, bypass or restriction with the intent to make the program perform according to its specifications, or, if there are none, to its principles of operation.

Customer information needed when submitting a problem:

- Address and contact name
- Current maintenance/Corrective Service Diskette (CSD) level
- Problem Description (typed, not hand written)

Additional information on customer reported problems can be obtained from your remarketer/distributor or IBM.

Software Advantage for Workstations Agreement

The product(s) is/are eligible to the terms of the Software Advantage for Workstations Agreement (Standard Offering including Upgrade Protection).

Marketing Support

Promotional Material

The following promotional material will be available via PUBSORDERING on HONE:

```
                                         Availability
           Title                 Order Number    Date
------------------------------   ------------  ------------

Any-to-Any Assessment Guide        G325-3675    February 4, 1997

Intranet/Internet Assessment Guide G325-3677    February 4, 1997

IBM Personal Communications Family G325-3475-02 February 4, 1997
Brochure

IBM Enterprise Communcations Family GV40-0548   February 4, 1997
Training CD

Personal Communications Evaluation CD  84H8372   February 28,1997

Personal Communications Product    SV40-0114    March 22, 1996
   Overview Diskette for OS/2

Personal Communications Product    SV40-0115    March 22, 1996
   Overview Diskette for Microsoft
   Windows

Personal Communications Product    SV40-0116    May 24,1996
   Overview Diskette for Microsoft
   Windows 95
```

Education Support

Refer to "Promotional Material".

HONE Information

Configurator Information

EMEA's software configurator, CFSW, will be updated to support this announcement.

This support will be provided on

ELINK and EHONE

and will be available to customers eligible to use IBMLINK.

Installation Information

Early Support Program

No.

Administrative Information

Upgrade Information

Upgrade Entitlements are described in the external part of this announcement letter under "Ordering Information".

Special Bid Requests

Requests for Special Bid Offerings should be directed through the Country SBO Organization. Contact the Country SBO Manager for further information.

Ordering Information

Refer to SWORDERINFO and CFSW on HONE.

In the countries which have agreed to and have set up to use Direct Services, Copenhagen, refer to the Ordering Guide 93-208 on Hone EPLI.

Note:

Customers who are currently licensed users of Personal Communications V4.1 CDROM can obtain a Corrective Service Delivery CDROM (CSD), which provides Windows NT support for Personal Communications V4.1, via the IBM Service.

Note:
@ PComm IPLA licensing is based on 'usage'. A PComm workstation is in 'usage' as soon as one session has been
@ established with a partner, host, midrange or anything else.

Order Control Codes

- Program Name: IBM Personal Communications AS/400 and 3270 Version 4.11 for DOS, Windows, Windows 95, Windows NT and OS/2
- Program Type: 5622
- Program Model: 972
- Function Class Code: 7213
- Product Identity Code: 5
- Division: SWS
- Industry Definition Categories: 14
- Integrated Product - No
- ALP/IPLA: IPLA

- Program Name: IBM Personal Communications AS/400 Version 4.11 for Windows, Windows 95, Windows NT and OS/2
- Program Type: 5622
- Program Model: 971
- Function Class Code: 7213
- Product Identity Code: 5
- Division: SWS
- Industry Definition Categories: 14

- Integrated Product - No
- ALP/IPLA: IPLA

EMEA Brand Marketing Code: G
EMEA Brand Manager: Daniel Gaborit (GABORIT at LGEPROFS)

Programming RPQs

Requests will not be accepted.

EMEA Pricing Statement

Consult your pricing organisation for pricing information regarding this announcement.

International Volume Offering

None of the product(s) in this announcement letter is/are eligible for the International Volume Offering (IVO) Exhibit.

Terms and Conditions for Remarketers

Available to IBM Business Partners acting as Remarketers for Personal Computers under the terms of the Business Partner Agreement.

Available to IBM Business Partners acting as Remarketers for Networking Products (Base) under the terms of the Business Partner Agreement.

Warranty

IBM standard warranty of media. Warranty period 3 months (or the period required by local legislation, if greater).

Update to the Summary of product related Terms and Conditions applicable to IBM Remarketers for IBM Personal Computers and IBM Networking Products (Base)

This program is added to the list of Category 2 - IBM Program Packages specified under entry number 3 (Programs and Categories).

Program Services

Program Services if available, and any refresh or update shipments, will be available to IBM Remarketers.

Additional fee support through IBM Support Line is provided for Remarketers.

Terms and Conditions for Industrial Integrators

Available to Industrial Integrators under the terms of the agreement for supply of IBM products to Industrial Integrators.

Summary of product related Terms and Conditions applicable to IBM Personal Computers and IBM Networking Products under the Industrial Integrator Offering

This program is added to the list of Category 2A-IBM Program Packages specified under entry number 3 (Programs and Categories).

Announcement Countries

All European, Middle Eastern and African Countries.

IBM Announcement Letter No. ZP97-0144 dated February 04, 1997.

See final section for details of availability and limitations, if applicable.

Title

Personal Communications V4.11 Now Fully Supports Windows NT

Overview

The industry-leading IBM Personal Communications family of emulators is enhanced to include full support for Windows NT for the client workstation.

For convenience and ease of use, Personal Communications is available in two packages: Personal Communications AS/400 Version 4.11 for Windows, Windows 95, Windows NT and OS/2 which provides 5250 emulation and connections to AS/400 and S/3X systems; and Personal Communications AS/400 and 3270 Version 4.11 for DOS, Windows, Windows 95, Windows NT and OS/2 which provides 3270 and 5250 emulation and connections to S/390, AS/400 and S/3X systems. These packages are available on separately orderable CD-ROMs.

This family of Personal Communications products provide state-of-the-art multi-protocol communications client support for PCs running DOS (3270), OS/2, Windows 3.x, Windows NT or Windows 95.

These products for Windows NT are available only via CD-ROM. You can select and install a single product from the CD-ROM for your preferred operating environment without dealing with multiple diskettes.

With Personal Communications AS/400 Version 4.11 for Windows, Windows 95, Windows NT and OS/2 you can connect PCs with AS/400 or S/3X mid-range host computers. Once the systems are connected, you can interact with IBM mid-range host computers using an impressive array of features, including an up-to-date GUI, 5250 terminal emulation, and data transfer support.

Personal Communications AS/400 and 3270 Version 4.11 for DOS, Windows, Windows 95, Windows NT and OS/2 gives you GUI-based 5250 and 3270 terminal emulation capability in addition to a range of SNA-based client application program interfaces (APIs), offering flexibility in application implementation. This product also lets you simultaneously access and process information on AS/400 and S/390 hosts while providing a common look and feel across both environments.

The versatile connectivity of these products gives new and established AS/400 and S/390 customers greater flexibility in expanding LAN/WAN network capabilities including support for the mobile workforce using asynchronous communications.

Intended Customers

Customers installing Windows NT as a client workstation operating system can now install Personal Communications V4.1 for Windows NT and extend the emulator look and feel across multiple operating systems.

Customers who are currently licensed users of Personal Communications V4.1 CD-ROM can obtain via IBM Service a Corrective Service Delivery (CSD) CD-ROM which contains Personal Communications Version 4.1 for Windows NT.

Key Prerequisites

Personal Communications AS/400 and 3270 Version 4.1 and Personal Communications AS/400 Version 4.1 CD-ROMs provide a variety of features and connectivity options across multiple operating systems and some differences exist between these platform offerings. Additionally, there are differences between single byte character set (SBCS) and double byte character set (DBCS) versions. You should carefully review the product description, hardware requirements, software requirements and limitations sections for further details.

At a Glance

The IBM Personal Communications family of emulators is enhanced to include a version that provides full support for Microsoft Windows NT.

The Personal Communications emulation products are available on CD-ROM for use in the DOS (3270 only), Windows, Windows 95, Windows NT, and OS/2 environments:

- Personal Communications AS/400 Version 4.11 for Windows, Windows 95, Windows NT and OS/2 on one CD-ROM

  The set of programs provided on this CD-ROM lets you connect to and use applications resident on IBM mid-range computers, such as an AS/400 or S/3x.

- Personal Communications AS/400 and 3270 Version 4.11 for DOS, Windows, Windows 95, Windows NT and OS/2 on one CD-ROM

  The set of programs provided on this CD-ROM lets you connect to and use host applications resident on either IBM enterprise servers (mainframes) such as the S/390, or on IBM mid-range hosts, such as an AS/400 or S/3x.

The CD-ROM gives you:

- An easier, more convenient way to order, install, upgrade, and maintain Personal Communications products

- Simpler licensing options

- Product documentation in Postscript printable format

Planned Availability Date: February 28,1997

See the complete letter for National Language Availability.

Description

The CD-ROMs for Personal Communications AS/400 Version 4.11 for Windows, Windows 95, Windows NT and OS/2 and Personal Communications AS/400 and 3270 Version 4.11 for DOS, Windows, Windows 95, Windows NT and OS/2 provides all the features and functions included on the diskette versions of:

- IBM Personal Communications AS/400 Version 4.1 for Windows
- IBM Personal Communications AS/400 and 3270 Version 4.1 for Windows
- IBM Personal Communications AS/400 Version 4.1 for OS/2
- IBM Personal Communications AS/400 and 3270 Version 4.1 for OS/2
- IBM Personal Communications AS/400 Version 4.1 for Windows 95

- IBM Personal Communications AS/400 and 3270 Version 4.1 for Windows 95

Personal Communications Version 4.11 CD-ROM provides an easy and convenient way to order and install the Personal Communications family of emulators for multiple operating system platforms.

Additionally, Personal Communications Version 4.11 provides a wide breadth of programming interfaces that allow other workstation applications to make use of applications residing on the host. These programming interfaces include:

- Emulator High-Level Language Application Programming Interface (EHLLAPI)

- Dynamic Data Exchange (DDE)

- Server-Requester Programming Interface (SRPI)

- Personal Communications Application Programming Interface (PCSAPI)

- Common Programming Interface for Communications (CPI-C)

- Advanced Program to Program Communication (APPC)

The entire Personal Communications family of products is designed to provide customers with a state-of-the-art, comprehensive set of tools for accessing applications and data that reside on either mid-range or IBM enterprise servers (mainframes). These products allow you to be more creative and more productive by masking the complexity of connecting to and using host applications.

In addition to spanning the major personal computer operating systems in use today, the Personal Communications family of products also supports enterprise server and mid-range host connectivity and provides a common look and feel across operating systems, enabling you to easily switch between operating systems and hosts. With the unequaled range of connectivity options offered by the Personal Communications family of products, you can have the same host interface in the office, at home, or even on the road. The productivity benefits include minimized retraining costs, the capability to easily switch between mid-range-based and enterprise server-based applications, and shared keyboard definitions. Other functions, such as enhanced edit functions, pop-up keypads, and macro support also help increase productivity.

The Personal Communications family of products offers a variety of standard programming interfaces for client/server-based applications, including support for CPI-C and APPC applications. These application programming interfaces allow you to access and process information on peer workstations or mid-range or host computers. This access to applications on other systems allows developers to create a common design for applications which is relatively independent of the operating system platform. This helps them to develop applications quicker.

Product Positioning

IBM Personal Communications AS/400 and 3270 V4.11 adds support for the Windows NT platform to IBM industry leading software.

Also, available as a separate offering, is IBM Personal Communications AS/400 Version 4.11, which includes the right solution for your 5250 emulation and AS/400 connectivity needs.

The IBM Personal Communications Family of Emulator products are IBM's response to the terminal-emulation needs of the PC marketplace. With these emulators, customers are provided 3270 and 5250 emulation support for PC's running DOS/Windows, Windows 95, Windows NT and OS/2.

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These emulators provide many powerful, yet simple-to-use features, such as macro support, keystroke record and playback, iconic toolbar, dynamic data exchange (DDE) and enhanced clipboard editing. They have the same look-and-feel across operating system environments, as well as across 3270 and 5250 emulation environments. Personal Communications also supports configuration, installation and distribution (CID), to make management over a LAN easy. The Personal Communications family offers comprehensive support for a variety of local area and wide area networks, multiprotocol support, and key APIs.

With Client Access/400

Client Access/400 and Personal Communications AS/400 provide the natural migration path from PC Support/400 which has long been the standard software solution for most customers wishing to link the AS/400 with PC work-stations. The existing PC Support/400 product contains DOS, Windows and OS/2 solutions for 5250 emulation, Shared Folders, Data Transfer, Virtual Print, APPC API's, Submit Remote Command, Data Queues, and more. However, PC Support/400 no longer meets the needs of many users due to conventional memory constraints, new connectivity requirements, and a need for better integration into the Microsoft Windows for Workgroups desktop environment.

IBM understands that customer networking needs, multi-platform operating needs, and budgetary constraints do not always allow one solution to satisfy all users requirements. To address the needs of a diverse marketplace, IBM has developed two solutions as represented by Client Access/400 and Personal Communications AS/400.

Client Access/400 is the recommended solution for users of OS/400 Version 3 Release 1 who require AS/400 connectivity for PCs running Windows and OS/2. Client Access/400 brings together an impressive set of functions and clients into a single product. Client Access/400 offers a true Windows client (eliminating the conventional memory constraints under V2Rx with PC Support/400), an OS/2 client which offers exploitation of the 32-bit oper-ating system environment and a vast array of features. These features include e-mail enablement (Vendor Inde-pendent Mail (VIM), Mail Application Programming Interfaces (MAPI)), Open Data Base Connectivity (ODBC), and Graphical Operations. Also included in Client Access/400 are IBM's Personal Communications 5250 emula-tors. IBM's Personal Communications 5250 is a state-of-the-art 5250 emulator that has a common look and feel in the Windows and OS/2 environments.

Personal Communications AS/400 is the recommended choice for customers who:

- Currently have OS/400 Version 2 Release 2 or Version 2 Release 3 installed and do not plan an immediate upgrade to Version 3 Release 1
- Do not require all the function provided by Client Access/400
- Require a quick/easy way to connect remote (dial) workstations to the AS/400

Personal Communications AS/400 (PC400) offers a state-of-the-art 5250 emulator based on the same technology as the emulator (Personal Communications 5250) found in Client Access/400. Personal Communications AS/400 is a PC program product (shipped via diskettes and CD-ROM). Personal Communications AS/400 provides native sol-utions for workstations running Windows, Windows 95, Windows NT, and OS/2 operating systems. PC400 pro-vides 5250 display and printer emulation, as well as SNA APIs (APPC and CPI-C), Data Transfer support, AnyNet (for Windows and OS/2), Shared Folders support (for Windows and OS/2), Virtual Print (for Windows) and ODBC (for Windows). PC400 provides a wide range of connection options including LAN (802.2 and TN5250), Async, Autosync (not available for Win95) Twinaxial, SDLC (and even PCMCIA support for Twinax, Async and LAN environments).

As users requirements grow beyond what is provided by existing OS/400 V2Rx, the solution provided by PC400 for Windows, OS/2, Windows 95, or Windows NT allows you to migrate seamlessly to Version 3 Release 1 of OS/400. You can continue to use PC400 with V3R1 until you migrate your users to Client Access/400.

For the users who require both 3270 and 5250 emulation support for Windows, OS/2, Windows 95, or Windows NT, IBM offers a combined product called Personal Communications AS/400 and 3270 which provides the latest in PC to enterprise server (mainframe) or PC to AS/400 connectivity. The combined product provides all the support found in PC400, but adds the award winning features of it's sister product Personal Communications/3270.

With IBM Host On-Demand

The Internet or World Wide Web (WWW) reaches more and more users every day. In addition to the internet, intranets are emerging as valuable internal assets for companies. IBM Host on-Demand is an Internet-to-SNA interconnectivity solution that provides 3270 application discovery and access through the WWW. Web users needing host applications, such as software applications, public catalogs, databases, and other resources can use Host-on-Demand from inside their Java-enabled Web browers to access central computer data.

Host On-Demand delivers network computing to the WWW by enabling Web-browser users to seamlessly access non-Internet Based 3270 applications, content and services. Host On-Demand is currently in a beta test program.

Host On-Demand is recommended for intranet/internet users requiring entry level emulation function. For full function emulation, programming APIs, and a wider range of protocols or connectivities, Personal Communications is recommended.

More information can be found on the IBM Host On-Demand home page on the WWW at www.raleigh.ibm.com/hex/hexprod_en.html .

With Other Emulators from IBM

The PCOMM family of clients also provides a natural migration path for users who require a full function emulator and are currently using Personal Communications AS/400 Twinaxial Entry Level, Personal Communications/3270 LUA Entry Level (part of Communications Server Version 4.0 for OS/2 Warp), IBM 5250 Emulation for Windows Version 1.1 or one of the Telnet-3270 or Telnet-5250 products that ship with IBM's TCP/IP for OS/2, and TCP/IP for DOS and Windows.

The IBM Personal Communications family of emulation products offers price and functional advantages when compared to competitive emulation products. The enhanced functions and cross-family usability make these products very competitive in the host emulation and application programming environments.

National Language Support:

Menus, and messages have been translated for the following languages:

- French
- German
- Italian
- Spanish
- Swedish
- Brazilian Portuguese*
- Japanese
- Hangeul
- Traditional Chinese
- Simplified Chinese

Note: * Brazilian Portuguese is supported for Windows, Windows NT and OS/2 versions of Personal Communications packages only.

Code page and keyboard support are provided for the following countries/ languages.

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- Albania
- Arabic
- Austria
- Belgium-Dutch
- Belgium-French
- Bosnia/Herzegovia (Latin)
- Brazil
- Bulgaria
- Canada-bilingual (Canadian French)
- Croatia
- Czech
- Denmark
- Finland
- France
- FYR Macedonia
- Germany
- Greece
- Hungary
- Iceland
- Israel
- Italy
- Latin America (LA-Spanish)
- Moldavia
- Netherlands
- Norway
- Poland
- Portugal
- Romania
- Russia
- Serbia/Montenegro (Cyrillic)
- Slovakia
- Slovenia
- Spain
- Sweden
- Swiss-French
- Swiss-German
- Thailand
- United Kingdom
- United States
- Turkey

Reference Information

Program Number

- 5622-972

  IBM Personal Communications AS/400 and 3270 V4.11 for DOS/Windows, Windows 95, Windows NT and OS/2

- 5622-971 IBM Personal Communications AS/400 V4.11 for Windows, Windows 95, Windows NT and OS/2

For Partnumber details see section "Ordering Information".

Availability of National Languages

```
    Description              Availability
-------------------------    ------------
English                      02/28/97
French                       02/28/97
German                       02/28/97
Italian                      02/28/97
Spanish                      02/28/97
Swedish                      02/28/97
Bi-Directional               02/28/97
```

Supplemental Information

The IBM Personal Communications family of products included on the two CD-ROMs gives you everything available in the emulator market today, and more:

3270 FEATURES

FEATURE/FUNCTION	OS/2	DOS/Windows	Windows 95	Windows NT
ATTACHMENTS				
IEEE 802.2	X	X	X	X
3174 Peer Communication	X	X		
IPX/SPX (NetWare for SAA)	X	X	X	X
NWSAA client				
APPC				X
LUA				X
TCP/IP (Telnet 3270)	X	X	X	X
SNA Distributed Function Terminal	X	X	X	X
Non-SNA DFT	X	X	X	X
Control Unit Terminal (CUT)	X	X		
SDLC (autodial capable)	X	X	X	X
WAC (Wide Area Connector)	X			X
SNA over ASYNC	X	X	X	X
ASYNCH for IGN (IBM Global Network)	X	X	X	X
Home3270	X	X	X	X
Hayes Autosync	X	X		X
MS-SNA Server				
FMI		Windows only	X	X
WinAPPC			X	X
WinLUA			X	X
APPC3270 (LU2 over APPC)	X	Windows only	X	X
AnyNet - SNA over TCP/IP	X	X		X
3270 pass-through via AS400	X	Windows only	X	X
ISDN, X.25	X	DOS (X.25) only		

FEATURE/FUNCTION	OS/2	DOS/Windows	Windows 95	Windows NT
INSTALLATION/CUSTOMIZATION				
Remote unattended install (CID)	X			
Silent Install			X (via CSD)	X
Installation and use from LAN Server	X	X	X	X
Uninstall	X	X	X	X
Automatic DFT connection	X	X	X	X
Dynamic addition/deletion of sessions	X	X	X	X
Simultaneous sessions with different code pages and keyboard languages	X	X	X	X
Rule Line	X	X	X	X
26 display/printer emulation sessions	X	X	X	X
Model 2,3,4,5 display sessions	X	X	X	X
Menu bar customization	X	Windows only	X	X
NETWORK MANAGEMENT				
SNA data compression (Emulator session data)	X	X	X	X
Session Level Encryption	X			
VPD/EVPD,RTM,Alert	X	X	X	X
GRAPHICAL USER INTERFACE				
Graphical, customizable tool bar	X	Windows only	X	X
Pop-up keypad and hot keys	X	Windows only	X	X
3D Hotspots	X	Windows only	X	X
Macro function	X	Windows only	X	X
Graphical keyboard remapping	X	X	X	X
-NLS key-caps support	X	X	X	X
-122 key keyboard support	X	X		
Keystroke record by example	X	X	X	X
Customizable mouse	X	Windows only	X	X
Drag-and-drop color remapping	X	Windows only	X	X
Clear,crisp fonts, automatic sizing, fixed font size	X	Windows only * No auto-sizing for DOS	X	X
Display,view,window setup	X	Windows only	X	X
Web browser launch from host session	X			X

FEATURE/FUNCTION	OS/2	DOS/Windows	Windows 95	Windows NT
VERSATILE EDIT FUNCTIONS				
Undo,cut,copy,copy append,paste paste next,clear,copy link, unmark,select all	X	Windows only	X	X
Clipboard viewer access	X	Windows only	X	X
Intelligent spreadsheet support	X	Windows only	X	X
FILE TRANSFER				
Multiple file and session transfers	X	Windows only	X	X
Background file transfer,lists, templates	X	X	X	X
Import/Export	X	X	X	X
PROGRAMMING INTERFACES				
EHLLAPI,DDE,PCSAPI,CPI-C,APPC	X	X	X	X
SRPI	X	X	X	X
HOST GRAPHICS				
GDDM and GOCA	X	X	X	X
Programmed symbol set	X	X		
Vector	X	X	X	X
Copy graphics images	X	Windows only	X	X
ADDITIONAL FEATURES				
APL support	X	X	X	X
3174 port 0 utility	X	X		
Automation and scripting utility (CMMOUSE)	X	X	X	X
ZIPPRINT	X	X	X	X
EasyREXX for HLLAPI	X			
LAN device drivers	X	X	X	X
Administration tools	X	X	X	X
Accessibility for handicapped users	X	X	X	X
HOST PRINT				
ASCII transparent	X	X	X	X
Printer definition table (PDT)	X	X	X	X
ADVANCED NETWORKING SUPPORT				
APPN End node	X		X	X
APPN LEN node			X	
HPR	X		X	X
DLUR	X		X	X
Gateway IEEE 802.2,SNA DFT,SDLC, and X.25		DOS only		

5250 FEATURES

	OS/2	DOS/Windows	Windows 95	Windows NT
FEATURE/FUNCTION				
ATTACHMENTS				
IEEE 802.2	X	X	X	X
IPX/SPX (NetWare for SAA)		X		
NWSAA client				
APPC				X
TCP/IP (Telnet 5250)	X	X	X	X
Twinaxial	X	X	X	X
Console (asynch and twinaxial)	X	X		
SDLC (autodial capability)	X	X	X	X
SNA over ASYNC	X	X	X	X
Hayes Autosync	X	X		X
MS-SNA Server				
APPC			X	X
AnyNet - SNA over TCP/IP	X	X		X
S/3X	X	Windows only		
INSTALLATION/CUSTOMIZATION				
Remote unattended install (CID)	X			
Silent Install			X (via CSD)	X
Installation and configuration from LAN Server	X	X	X	X
Uninstall	X	X	X	X
Dynamic addition/deletion of sessions	X	X	X	X
Simultaneous sessions with different code pages and keyboard languages	X	X	X	X
Automatic logon	X	X	X	X
Rule Line	X	X	X	X
26 display/printer emulation sessions	X	X	X	X
80 and 132 column support	X	X	X	X
Menu bar customization	X	X	X	X

FEATURE/FUNCTION	OS/2	DOS/Windows	Windows 95	Windows NT
GRAPHICAL USER INTERFACE				
Graphical, customizable tool bar	X	X	X	X
Pop-up keypad and hot keys	X	X	X	X
3D Hotspots	X	X	X	X
Macro function	X	X	X	X
Graphical keyboard remapping	X	X	X	X
-NLS key-caps support	X	X	X	X
-122 key keyboard support	X	X		
Keystroke record by example	X	X	X	X
Customizable mouse	X	Windows only	X	X
Drag-and-drop color remapping	X	Windows only	X	X
Clear,crisp fonts, automatic	X	Windows only	X	X
sizing, fixed font size		* No auto-sizing for DOS		
Display,view,window setup	X	Windows only	X	X
Web browser launch from host session	X			X
VERSATILE EDIT FUNCTIONS				
Undo,cut,copy,copy append,paste	X	Windows only	X	X
paste next,clear,copy link, unmark,select all				
Clipboard viewer access	X	Windows only	X	X
Intelligent spreadsheet support	X	Windows only	X	X
FILE TRANSFER				
Multiple file and session transfers	X	Windows only	X	X
PROGRAMMING INTERFACES				
EHLLAPI,DDE,PCSAPI,CPI-C,APPC	X	X	X	X

```
ADDITIONAL FEATURES
Automation and scripting utility   X        X        X            X
(CMMOUSE)
LAN device drivers                 X        X        X            X
Administration tools               X        X        X            X
Accessibility for handicapped users X       X        X            X
                                   X        X        X            X
CLIENT APPLICATION SUPPORT
File Transfer for AS/400           X        X        X            X
Virtual Print                               X
PC Organizer and Text Assist       X        X        X            X
Enhanced non-Programmable Terminal X        X        X            X
User Interface (ENPTUI)
Shared Folders                     X        X
Data Transfer (SQL file transfer)  X        X        X            X
Open database connectivity (ODBC)           X
and database access


HOST PRINT
3812 printer emulation             X        X        X            X
Host print transform               X        X        X            X
ASCII transparent                  X        X        X            X
Printer definition table (PDT)     X        X        X            X

ADVANCED NETWORKING SUPPORT
APPN End node                      X                 X            X
APPN LEN node                               X
HPR                                X                 X            X
DLUR                               X                 X            X
```

Publications

All publications for these products are provided on the CD-ROM for the appropriate country version. However, they can be ordered in hardcopy via PUBSORDERING on HONE. To order, contact your IBM representative.

```
OS/2 Personal Communications Publications
-----------------------------------------


            Title                    Order Number  Part Number
---------------------------------    ------------  -----------
Personal Communications AS/400 and 3270
  Version 4.1 for OS/2 Up and Running  SC31-8258    39H3413
Personal Communications AS/400 and 3270
  Version 4.1 for OS/2  Tell Me About OS/2
  Access Feature                       SC31-8257    39H3315
Personal Communications AS/400 and 3270
  Version 4.1 for OS/2 Reference       SC31-8259    39H3412
Personal Communications AS/400 and 3270
  Version 4.1 for OS/2 Programming     SC31-8260    39H3320
```

```
DOS and Windows Personal Communications Publications
---------------------------------------------------

               Title                   Order Number  Part Number
-----------------------------------    ------------  -----------
Personal Communications AS/400 and 3270
 V4.1 for Windows Up and Running         SC31-8261     39H0507
Personal Communications AS/400 and 3270
 V4.1 Full Function for DOS Up and Running  SC31-8262  39H0473
Personal Communications AS/400 and 3270
 V4.1 Entry Emulator for DOS Up and Running  SC31-8263  39H0472
Personal Communications AS/400 and 3270
 V4.1 for Windows Reference              SC31-8264     39H0506
Personal Communications AS/400 and 3270
 V4.1 for DOS Reference                  SC31-8265     39H0470
Personal Communications AS/400 and 3270
 V4.1 for DOS/Windows Programming        SC31-8266     39H0428
Personal Communications AS/400 and 3270
 V4.1 Entry Emulator for DOS Programming  SC31-8267    39H0468
APPC Networking Services for Windows
 Getting Started                         SC31-8124
IBM AnyNet Guide to SNA over TCP/IP for
 Windows                                 GV40-0113
```

```
Windows 95  Personal Communications Publications
---------------------------------------------------

               Title                   Order Number  Part Number
-----------------------------------    ------------  -----------
Personal Communications AS/400 and 3270  SC31-8205    64H0669
 V4.1 for Windows 95 Up and Running
Personal Communications AS/400 and 3270  SC31-8206    64H0692
 for Windows 95 Reference
Personal Communications AS/400 and 3270  SC31-8207    64H0493
 for Windows 95 Emulator Programming
Personal Communications AS/400 and 3270  SC31-8208    64H0694
 for Windows 95 Client/Server Communications
Programming
Personal Communications AS/400 and 3270  SC31-8199    64H0695
 for Windows 95 System Management Programming
```

```
Windows NT  Personal Communications Publications
------------------------------------------------

           Title                        Order Number  Part Number
--------------------------------------- ------------  -----------
Personal Communications AS/400 and 3270   GC31-8314     84H0569
 V4.1 for Windows NT Up and Running
Personal Communications AS/400 and 3270   SC31-8315     84H0570
 for Windows NT Reference
Personal Communications AS/400 and 3270   SC31-8316     84H0571
 for Windows NT Emulator Programming
Personal Communications AS/400 and 3270   SC31-8317     84H0572
 for Windows NT Client/Server Communications
 Programming
Personal Communications AS/400 and 3270   SC31-8318     84H0573
 for Windows NT System Management Programming
```

Displayable Softcopy Publications: The following product manuals are offered in displayable softcopy form.

```
Personal Communications AS/400 and 3270 Version 4.1
  for OS/2 Up and Running
Personal Communications AS/400 and 3270 Version 4.1
  for OS/2 Reference
Personal Communications AS/400 and 3270 Version 4.1
  for OS/2 Programming
Personal Communications AS/400 and 3270 Version 4.1
  for Windows 95 Up and Running
Personal Communications AS/400 and 3270 Version 4.1
  for Windows 95 Reference
Personal Communications AS/400 and 3270 Version 4.1
  for Windows 95 Emulator Programming
Personal Communications AS/400 and 3270 Version 4.1
  for Windows 95 System Management Programming
Personal Communications AS/400 and 3270 Version 4.1
  for Windows 95 Client/Server Communications
Programming
Personal Communications AS/400 and 3270 Version 4.1
  for Windows NT Up and Running
Personal Communications AS/400 and 3270 Version 4.1
  for Windows NT Reference
Personal Communications AS/400 and 3270 Version 4.1
  for Windows NT Emulator Programming
Personal Communications AS/400 and 3270 Version 4.1
  for Windows NT System Management Programming
Personal Communications AS/400 and 3270 Version 4.1
  for Windows NT Client/Server Communications
Programming
```

All unlicensed manuals are included. The displayable manuals are part of the basic machine-readable material. The files are shipped on the same media type as the basic machine-readable material.

The displayable manuals associated with the Windows 95 versions of IBM Personal Communications can be used with the BookManager READ licensed programs. The displayable manuals associated with the OS/2 versions of IBM Personal Communications can be used with the included Information Notebook viewer. Terms and conditions for use of the machine-readable files are shipped with the files.

The following publications may be ordered from Copenhagen upon availability.

```
OS/2 Personal Communications Publications
-----------------------------------------

              Title                      Order Number  Language
-----------------------------------------  ------------  --------

Personal Communications AS/400 and 3270
  Version 4.1 for OS/2 Up and Running
                                         SC31-8258     English
                                         SF11-0671     French
                                         SH12-2421     German
                                         SC13-2673     Italian
                                         S85G-8005     Spanish
                                         SC31-8258     Braz.Portug.
Personal Communications AS/400 and 3270
  Version 4.1 for OS/2  Tell Me About OS/2
  Access Feature
                                         SC31-8257     English
                                         SC11-1127     French
                                         SC12-2394     German




DOS/Windows Personal Communications Publications
-------------------------------------------------

              Title                      Order Number  Language
-----------------------------------------  ------------  -----------
Personal Communications AS/400 and 3270
  V4.1 for Windows Up and Running
                                         S20H-1641     English
                                         SH11-0959     French
                                         S20H-1792     German
                                         S22H-6224     Spanish
                                         SC31-8261     Braz.Portug.

Personal Communications AS/400 and 3270
  V4.1 Full Function for DOS Up and Running
                                         SC31-8262     English
                                         S20H-1772     Braz.Portug.
```

```
Personal Communications AS/400 and 3270
 V4.1 Entry Emulator for DOS Up and Running
                                          SC31-8263      English
                                          S22H-6211      Spanish
                                          S20H-1771      Braz.Portug.

Personal Communications AS/400 and 3270
 V4.1 for Windows Reference               SC31-8264      English

Personal Communications AS/400 and 3270
 V4.1 for DOS Reference                   SC31-8265      English

Personal Communications AS/400 and 3270
 V4.1 for DOS/Windows Programming         SC31-8266      English

Personal Communications AS/400 and 3270
 V4.1 Entry Emulator for DOS Programming  SC31-8267      English



 Windows 95  Personal Communications Publications
 -------------------------------------------------

          Title                           Order Number  Language
 ---------------------------------------   ------------  -----------
 Personal Communications AS/400 and 3270
  V4.1 for Windows 95 Up and Running
                                          SC31-8205      English
                                          SC11-1111      French
                                          SC12-2363      German
                                          SC13-2592      Italian
                                          SC10-9656      Spanish



Personal Communications AS/400 and 3270
for Windows 95 Reference                  SC31-8206  English

Personal Communications AS/400 and 3270   SC31-8207  English
for Windows 95 Emulator Programming

Personal Communications AS/400 and 3270   SC31-8208  English
for Windows 95 Client/Server
Communications Programming

Personal Communications AS/400 and 3270   SC31-8199  English
for Windows 95 System Management
Programming
```

```
Windows NT  Personal Communications Publications
------------------------------------------------

                Title                    Order Number  Language
--------------------------------------   ------------  -----------
Personal Communications AS/400 and 3270
 V4.1 for Windows NT Up and Running
                                         GC31-8314     English
                                         GC12-1212     French
                                         SC12-2460     German
                                         GC13-2592-01  Italian
                                         GC10-3070     Spanish
                                         GC17-1223     Brazilian
                                                       Portuguese
```

Technical Information

Specified Operating Environment

Hardware Requirements:

For installation, a PC capable of reading a CD-ROM is required. Other prerequisites are product dependent. For a list of prerequisites, refer to the applicable product announcement:

- Software Announcement ZP96-0236, dated March 12, 1996 (Personal Communications AS/400 Version 4.1 for Windows and Personal Communications AS/400 and 3270 Version 4.1 for Windows)
- Software Announcement ZP96-0212, dated March 12, 1996 (Personal Communications AS/400 Version 4.1 for Windows 95 and Personal Communications AS/400 and 3270 Version 4.1 for Windows 95)
- Software Announcement ZP96-0214, dated March 12, 1996 (Personal Communications AS/400 Version 4.1 for OS/2 and Personal Communications AS/400 and 3270 Version 4.1 for OS/2)

Requirements for Personal Communications for Windows NT

SYSTEM UNIT

Personal Communications AS/400 and 3270 Version 4.1 for Windows NT and Personal Communications AS/400 Version 4.1 for Windows NT require workstations that support the Microsoft Windows NT operating system. These systems include IBM and IBM-compatible workstations. These workstations must have an adequate processor, memory and fixed disk storage capacity to support Windows NT. If Personal Communications AS/400 and 3270 Version 4.1 for Windows NT or Personal Communications AS/400 Version 4.1 for Windows NT is to be locally installed, the workstation must also be capable of reading a CD-ROM. A system unit with a 486 processor or faster is recommended.

KEYBOARD

- Enhanced keyboard (101-key, 102-key, 104-key)
- Space Saving keyboard
- Microsoft Natural Keyboard

DISPLAY

Personal Communications AS/400 and 3270 Version 4.1 for Windows NT and Personal Communications AS/400 Version 4.1 for Windows NT will use displays that are supported by Window NT. Please see Windows NT publications.

VIDEO ADAPTER

Personal Communications AS/400 and 3270 Version 4.1 for Windows NT and Personal Communications AS/400 Version 4.1 for Windows NT support video adapters that are supported by Windows NT. Please see Windows NT publications.

RAM and Fixed Disk

16 MB RAM is the recommended minimum

17 - 30 MB minimum of fixed disk space above what Windows NT requires

COMMUNICATION ADAPTERS

Personal Communications AS/400 and 3270 Version 4.1 for Windows NT and Personal Communications AS/400 Version 4.1 for Windows NT support LAN and WAN communication adapters that have device drivers written to the network driver interface specification (NDIS 3.1). The MAC drivers for supported adapters will generally be available from the adapter vendor or they will be shipped with the adapters. Support for a number of communications adapters has been included with Windows NT.

The following are ADDITIONAL adapters supported by Personal Communications AS/400 and 3270 Version 4.1 for Windows NT

FOR NON-MICRO CHANNEL MACHINES

- IBM SDLC Communications Adapter
- IBM Multiprotocol Adapter
- IBM PC 3278/79 Emulation Adapter (3270 only)
- Advanced IBM PC 3278/79 Emulation Adapter (3270 only)
- IBM Wide Area Connector (WAC)
- IBM Twinax and some non-IBM Twinax adapters are supported

FOR MICRO CHANNEL MACHINES

- IBM Multiprotocol Adapter/A
- IBM 3270 Connection (3270 only)
- IBM Asynchronous/SDLC V.32 Modem/A (MPA Card with modem)
- IBM Wide Area Connector (WAC)
- IBM Twinax and some non-IBM Twinax adapters are supported

FOR PCMCIA Release 2.0 Type II

- IBM 3270 Emulation Credit Card Adapter (3270 only)
- IBM Twinax and some non-IBM Twinax adapters are supported

PRINTERS

- GDI print mode:

  Personal Communications AS/400 and 3270 Version 4.1 for Windows NT and Personal Communications AS/400 Version 4.1 for Windows NT support the printers which are supported by Windows NT via the GDI.

- PDT (raw data) print mode:

  Personal Communications AS/400 and 3270 Version 4.1 for Windows NT and Personal Communications AS/400 Version 4.1 for Windows NT also support printing via the following Printer Definition Tables (PDT) for the following printers:

The following PDFs are supported for both 3270/5250 sessions. (A Printer Definition File (PDF) is compiled to create a PDT)

```
File Name         Printer Name/Model
---------         ------------------
IBM3812.PDF       IBM 3812 Page Printer, Model 2
IBM3816.PDF       IBM 3816 Pageprinter II
PRN3812.PDF       IBM 3812 Pageprinter Model 2
                  IBM 3816 Pageprinter II
IBM38521.PDF      IBM 3852 Color Printer
PRN38521.PDF      IBM 3852 Color Printer
IBM38522.PDF      IBM 3852 Color Jetprinter, Model 2
PRN38522.PDF      IBM 3852 Color Jetprinter, Model 2
IBM4019.PDF       IBM 4019 LaserPrinter
                  IBM 4019 LaserPrinter E
                  IBM 4029 Laser Printer
PRN4019.PDF       IBM 4019 LaserPrinter
                  IBM 4019 LaserPrinter E
                  IBM 4029 Laser Printer
IBM4072.PDF       IBM 4072 ExecJet Printer
PRN4072.PDF       IBM 4072 ExecJet Printer
IBM4201.PDF       IBM 4201 Proprinter
                  IBM 4201 Proprinter II
                  IBM 4201 Proprinter III, Model 3
                  IBM 2380 Personal Printer Series 2
IBM4202.PDF       IBM 4202 Proprinter XL, Model 1
                  IBM 4202 Proprinter XL, Model 2
                  IBM 4202 Proprinter III XL, Model 2
                  IBM 4202 Proprinter III XL, Model 3
                  IBM 4216 Personal Pageprinter
                  IBM 2381 Personal Printer Series 2
PRN4202.PDF       IBM 4201 Proprinter
                  IBM 4201 Proprinter II
                  IBM 4201 Proprinter III, Model 3
                  IBM 4202 Proprinter XL, Model 1
                  IBM 4202 Proprinter XL, Model 2
                  IBM 4202 Proprinter III XL, Model 2
                  IBM 4202 Proprinter III XL, Model 3
                  IBM 4207 Proprinter X24
                  IBM 4207 Proprinter X24E
                  IBM 4208 Proprinter XL24
                  IBM 4208 Proprinter XL24E
                  IBM 4216 Personal Pageprinter
                  IBM 2380, 2381, 2390, 2391 printers
IBM4207.PDF       IBM 4207 Proprinter X24
```

```
                          IBM 4207 Proprinter X24E
                          IBM 2390 Personal Printer Series 2
         IBM4208.PDF      IBM 4208 Proprinter XL24
                          IBM 4208 Proprinter XL24E
                          IBM 2391 Personal Printer Series 2
         IBM5152.PDF      IBM 5152 Graphics Printer, Model 2
         PRN5152.PDF      IBM 5152 Graphics Printer, Model 2
         IBM5182.PDF      IBM 5182 Color Printer
         PRN5182.PDF      IBM 5182 Color Printer
         IBM5201.PDF      IBM 5201 Quietwriter Printer, Model 1
                          IBM 5201 Quietwriter Printer, Model 2
         IBM5202.PDF      IBM 5202 Quietwriter III
                          IBM 5204 Quietwriter Printer
         PRN5202.PDF      IBM 5201 Quietwriter Printer, Model 1
                          IBM 5201 Quietwriter Printer, Model 2
                          IBM 5202 Quietwriter III
                          IBM 5204 Quietwriter Printer
         IBM5216.PDF      IBM 5216 Wheelprinter
         PRN5216.PDF      IBM 5216 Wheelprinter
         IBM5223.PDF      IBM 5223 Wheelprinter E
         ACTLZR2.PDF      Epson Action Laser2 LQ2500 mode
         BJ300.PDF        Canon BJ300 CAPSL mode
         LBP4.PDF         Canon LBP4 ISO mode
         LQ870.PDF        Epson LQ870/1170
         HPLJII.PDF       HP LaserJet II Series
```

The following PDFs are provided only for 5250 sessions.

```
         File Name        Printer Name/Model
         ---------        ------------------
         CPQPM20.PDF      Compaq PageMarq 15 HP Mode
                          Compaq PageMarq 20 HP Mode
         EAP2250.PDF      Epson AP2250
         EAP3250.PDF      Epson AP3250
         EAP5500.PDF      Epson AP5000
                          Epson AP5500
         EFX1170.PDF      Epson FX1170
         EFX5000.PDF      Epson DFX5000
                          Epson DFX8000
         EFX850.PDF       Epson FX850
         ELQ1070.PDF      Epson LQ570
                          Epson LQ1070
         ELQ2550.PDF      Epson LQ2550
         ELQ510.PDF       Epson LQ510
         ELQ860.PDF       Epson LQ860
         ELX810.PDF       Epson LX810
         EPLPCL4.PDF      Epson EPL7000 HP Mode
         EPLPCL5.PDF      Epson EPL8000 HP Mode
         ESQ1170.PDF      Epson SQ1170
         HPDSKJT.PDF      HP DeskJet 500
         HPDJ550C.PDF     HP DeskJet 550C
         HPLJIII.PDF      HP LaserJet III
                          HP LaserJet IIIP
                          HP LaserJet IIISi
         HPLJIIID.PDF     HP LaserJet IIID
                          IBM 4039 LaserPrinter HP Mode
```

```
HPLJ4.PDF       HP LaserJet 4
IBM4070.PDF     IBM 4070 IJ
IBM4070E.PDF    IBM 4070 IJ Epson Mode
IBM4212.PDF     IBM 4212 Proprinter 24P
IBM4226.PDF     IBM 4226-302 Printer
NEC6300.PDF     NEC P6200 Pinwriter
                NEC P6300 Pinwriter
PANLBP4.PDF     Panasonic KX-P4410 HP Mode
                Panasonic KX-P4420 HP Mode
                Panasonic KX-P4450i HP Mode
PANLBP5.PDF     Panasonic KX-P4430 HP Mode
                Panasonic KX-P4451 HP Mode
PAN1123.PDF     Panasonic KX-P1123 Epson Mode
PAN1124.PDF     Panasonic KX-P1124 Epson Mode
                Panasonic KX-P1624 Epson Mode
PAN1180.PDF     Panasonic KX-P1180 Epson Mode
                Panasonic KX-P1180i Epson Mode
                Panasonic KX-P1191 Epson Mode
PAN1695.PDF     Panasonic KX-P1695 Epson Mode
PAN2123.PDF     Panasonic KX-P2123 Epson Mode
PAN2124.PDF     Panasonic KX-P2124 Epson Mode
PAN2180.PDF     Panasonic KX-P2180 Epson Mode
PAN2624.PDF     Panasonic KX-P1124i Epson Mode
                Panasonic KX-P1654 Epson Mode
                Panasonic KX-P2624 Epson Mode
```

Modems

Personal Communications for Windows NT supports modems as follows:

For Windows NT 3.51, Personal Communications has its own list of modems.

For Windows NT 4.0, Personal Communications uses modems configured through the Windows NT TAPI, except for Hayes AutoSync, for which it uses its own list of modems.

Personal Communications for Windows NT also supports SDLC modems (synchronous V.25bis modems) attached to SDLC, multiprotocol, or WAC adapters.

Software Requirements: Software Requirements for Personal Communications AS/400 and 3270 Version 4.1 for Windows NT and Personal Communications AS/400 Version 4.1 for Windows NT

- Windows NT 3.51 or Windows NT 4.0

Software options for Personal Communications AS/400 and 3270 Version 4.1 for Windows NT and Personal Communications AS/400 Version 4.1 for Windows NT

- Novell Netware for SAA client
- Microsoft SNA Server client

Personal Communications will communicate with the following types of server or gateway:

- Communication Server for OS/2 Warp
- Novell NetWare for SAA Version 1.2, or higher (3270 only) (IPX/SPX)

- Novell NetWare for SAA Version 2.0, or higher (3270 and 5250) (SNA)
- Microsoft SNA Server

To communicate with an AS/400, Personal Communications requires AS/400 LPPs listed below (depending upon desired system configuration):

- IBM OS/400 Version 2 Release 2.0, or later (5738-SS1, 5763-SS1 or 5716-SS1)
- IBM OS/400 Version 2 Release 3.0, or later is required for ENPTUI or Host Print Transform (5738-SS1, 5763-SS1 or 5716-SS1)
- IBM OS/400 Version 3 Release 6.0, or later is required for 132 column support
- For Text Assist features, cumulative PTF C3285220 with PTF SF14687 for Version 2 Release 2, PTF SF14495 for Version 2 Release 3.

Optional (for 3270)

The licensed programs required to be installed on the IBM System/390 host computers for file transfer are:

- For MVS/TSO - IBM 3270 PC File Transfer Program, Release 1.1.1 (5665-311)
- For VM - IBM 3270 PC File Transfer Program, Release 1.1.1 (5664-281)
- For CICS - IBM CICS to 3270PC File Transfer Program, Release 1 (5798-DQH)
- For VSE - VSE/SP Version 3 (5750-AAV), VSE/SP Version 4 (5750-ABF) or VSE/ESA (5750-ACD) (VSE/SP and VSE/ESA have no prerequisite programming requirements for file transfer)

    IBM System/390 host computers communicating SNA with Personal Communications AS/400 and 3270 Version 4.1 for Windows NT require the following:
    – For the MVS environment:

    — ACF/VTAM Version 3 or a higher level release or ACF/VTAM Version 3 Release 4.2 for Dynamic Definition of Dependent LUs and Data Compression.

        - ACF/VTAM V3 for MVS/XA (5665-289)

        - ACF/VTAM V3 for MVS/370 (5665-313)

        - ACF/VTAM V3 for MVS/ESA (5685-085)

        - ACF/VTAM V4R2 for MVS/ESA (5695-117) for APPC3270 & DLUR

        - ACF/VTAM V4R3 for MVS/ESA (5695-117) for HPR

    — ACF/NCP Version 4 Release 3.1 (5668-854) for Token-Ring connection
    — ACF/NCP Version 6 Release 2 (5688-231) for Data Compression of XRF sessions

    – For the VM environment:

    — ACF/VTAM Version 3 or higher level release or ACF/VTAM Version 3 Release 4.0 for Dynamic Definition of Dependent LUs.

        - ACF/VTAM V3 for VM/9370 (5684-052)

        - ACF/VTAM V3 for VM/ESA (5684-095)

        - ACF/VTAM V4R2 for VM/ESA (5654-010) for APPC3270 & DLUR

    — ACF/VTAM Version 3 Release 4.1 for VM/SP and VM/ESA (5684-095) for Data Compression
    — ACF/NCP Version 4 Release 2 (5668-854) or higher level release for Token-Ring connection

    – For the VSE environment:
    — ACF/NCP Version 4 Release 1.0 (5668-854) or higher level release for Token-Ring connection
    — ACF/VTAM Version 3 Release 4 for VSE/ESA (5666-363) for Dynamic Definition of Dependent LUs

— ACF/VTAM V4R2 for VSE/ESA (5686-065) for APPC3270 & DLUR

Refer to the individual host operating system information for the correct level of release that supports the above listed ACF/VTAM and ACF/NCP versions.

Personal Communications AS/400 and 3270 Version 4.1 for Windows NT is datastream compatible with 3270 base datastream alphanumeric application environments that support the IBM 3278 Model 2, 3, 4 or 5 or the IBM 3279 Model 2 or 3, with certain restrictions. (See limitations section).

Compatibility

Compatibility information is product dependent. For detailed information, refer to the applicable product announcement:

- Software Announcement ZP96-0236, dated March 12, 1996 (Personal Communications AS/400 Version 4.1 for Windows and Personal Communications AS/400 and 3270 Version 4.1 for Windows)
- Software Announcement ZP96-0212, dated March 12, 1996 (Personal Communications AS/400 Version 4.1 for Windows 95 and Personal Communications AS/400 and 3270 Version 4.1 for Windows 95)
- Software Announcement ZP96-0214, dated March 12, 1996 (Personal Communications AS/400 Version 4.1 for OS/2 and Personal Communications AS/400 and 3270 Version 4.1 for OS/2)

  Personal Communications AS/400 and 3270 Version 4.1 for Windows NT and Personal Communications AS/400 Version 4.1 for Windows NT have been tested for compatibility with the following programs; however, compatibility should not be assumed for all environments (host connections and emulation functions provided by Personal Communications AS/400 and 3270 Version 4.1 for Windows NT and Personal Communications AS/400 Version 4.1 for Windows NT). Users of Personal Communications AS/400 and 3270 Version 4.1 for Windows NT and Personal Communications AS/400 Version 4.1 for Windows NT must verify the availability of sufficient application memory space based upon the host connection, emulation functions configured and other Windows NT requirements and system extensions selected.
  - Operating Systems:
    - Windows NT 3.51 or 4.0
  - Microsoft SNA Server Windows NT Client
  - Netware for SAA client
  - Netware Version 3.12J (Japanese)

Limitations

Certain limitations may apply. For detailed information, refer to the applicable product announcement:

- Software Announcement ZP96-0236, dated March 12, 1996 (Personal Communications AS/400 Version 4.1 for Windows and Personal Communications AS/400 and 3270 Version 4.1 for Windows)
- Software Announcement ZP96-0212, dated March 12, 1996 (Personal Communications AS/400 Version 4.1 for Windows 95 and Personal Communications AS/400 and 3270 Version 4.1 for Windows 95)
- Software Announcement ZP96-0214, dated March 12, 1996 (Personal Communications AS/400 Version 4.1 for OS/2 and Personal Communications AS/400 and 3270 Version 4.1 for OS/2)

  The following are the limitations for Personal Communications for NT in all language versions:

  - S/3x attachment is not supported

  - Console Support to an AS/400 is not supported

  - Control Unit Terminal (CUT) is not supported

  - 3174 Peer Communication is not supported

– Shared Folders is not supported

– Printer Definition Tables (PDT) are supported by Personal Communications AS/400 and 3270 Version 4.1 for Windows NT and Personal Communications AS/400 Version 4.1 for Windows NT.

Unless PDTs are used, the SCS control codes may not always be handled correctly, depending on the printer drivers and fonts being used.

Personal Communications AS/400 and 3270 Version 4.1 for Windows NT and Personal Communications AS/400 Version 4.1 for Windows NT depend on the Windows NT Printer Device Drivers to print data when the print driver is used. Some printer device drivers do not support all characters that are used. Such printer device drivers print an unsupported character as the most similar character or as the default character of the printer driver (for example "-").

– Data Transfer does not support multiple invocations at a time

– Commonly used 3274 Control Unit features and capabilities are supported. However, the following are not supported (3270 only)

  — APL characters are not copied to the clipboard by CUT, COPY, or COPY LINK functions as APL characters. They are copied to the clipboard as ANSI characters that have the same code points.
  — Configuration C features:
    • Structured field and attribute processing (SFAP) (EBCDIC only)
    • Decompression of PS load data
    • Attachment of local or remote R-Loop
    • Explicit partitions
    • X.21 communication protocol
  — Only a subset of Entry Assist functions are supported
  — All IBM 3278 keyboard types except the IBM 3278 Typewriter keyboard
  — Certain IBM 3278 keys
    • Extended attribute selection keys: Color, highlighting, programmed symbols
    • Ident

– Magnetic stripe reader

– Certain IBM 3287 Printer capabilities:

  — Mono/dual case switch/light
  — Test switch/light
  — Reset switch
  — Setup switch
  — Index switch
  — Control unit signal light

– Security keylock

– Selector light pen

– Host direct printing with an APPC3270 connection

– Coexistence of IBM 3270 PCMCIA adapter and IBM 3270 AT-bus communication adapter, or IBM 3270 connection adapter.

– Change of Printer Control parameters when using a PDT file

- In addition to the above restrictions, when using DFT communications attachment, the following features and capabilities of the IBM 3274 or IBM 3174 Control Units are not supported:

  - Programmed symbols (PS) on attached workstations
  - Attachment to port 0 of the 3274
  - Data base operations
  - 3270 Diagnostic Reset Dump
  - Patch facility

- Home3270 and IBM Global Network attachments do not support the following:

  - Graphics
  - Passthru Print
  - SRPI

- Async IIN support is limited to the following:

  - 8-bit no parity
  - no compression

- The following attachments do not support multiple physical adapters, or two RS232-C ports.

  - Home3270
  - IBM Global Network

- Line speed:

  - SDLC, Async IIN and SNA-over-Async line speed is up to 115.2 Kbps depending on the PC and configuration.
  - Home3270 line speed is up to 115.2 Kbps depending on the PC and configuration.
  - IBM Global Network line speed is up to 115.2 Kbps depending on the PC and configuration.

- TCP/IP connectivity has the following restrictions:

  - The following functions are not available:
    - SDDLU (self-defining dependent LUs)
    - SNA session-level compression and decompression
  - The maximum packet size must be less than 8,000 bytes for the file transfer.

- IPX/SPX connectivity has the following restrictions:

  - The following functions are not available:
    - SDDLU (self-defining dependent LUs)
    - SNA session-level compression and decompression

- APPC and CPI-C APIs are not supported for the following attachments:

  - TCP/IP
  - IPX/SPX
  - Coaxial

- EHLLAPI

  - Storage manage function is not supported.

— CONPHYS is not supported.

– The following capability of the IBM 3278 and IBM 3279 Display Stations and the IBM 3287 Printer is not supported:

— Subsystem Local Copy

- The DDE API does not support code-page conversion. Applications must use the CSV API for code-page conversion.

Performance Considerations

Response time in a terminal environment depends upon a variety of system unit and data-communication load factors These include the types and speeds of system units processor, number and types of communication adapters installed, the line speed of the communication service, and the amount of processing done by the applications utilizing Personal Communications AS/400 and 3270 Version 4.1 for Windows NT or Personal Communications AS/400 Version 4.1 for Windows NT.

Planning Information

The Personal Communications AS/400 and 3270 Version 4.1 for Windows NT and Personal Communications AS/400 Version 4.1 for Windows NT can be setup to work in a server/client relationship. The approach used is to store the least amount of code necessary on the client workstation and to store the major portion of the run time code and configuration information on a LAN file server. This allows the customers to utilize their workstations for more applications.

Customer Responsibilities

The customer must provide the minimum hardware and software environments in which the specific IBM Personal Communications product will operate. It is recommended that an administrator be assigned to customize the program for the end users and/or to provide the end user with host information required to configure and install the selected product. For more detailed information on customer responsibilities, refer to the applicable product announcement:

- Software Announcement ZP96-0236, dated March 12, 1996 (Personal Communications AS/400 Version 4.1 for Windows and Personal Communications AS/400 and 3270 Version 4.1 for Windows)
- Software Announcement ZP96-0212, dated March 12, 1996 (Personal Communications AS/400 Version 4.1 for Windows 95 and Personal Communications AS/400 and 3270 Version 4.1 for Windows 95)
- Software Announcement ZP96-0214, dated March 12, 1996 (Personal Communications AS/400 Version 4.1 for OS/2 and Personal Communications AS/400 and 3270 Version 4.1 for OS/2)

Packaging

IBM Personal Communications AS/400 and 3270 Version 4.11 for DOS, Windows, Windows 95, Windows NT and OS/2 and Personal Communications AS/400 Version 4.11 for Windows, Windows 95, Windows NT and OS/2 program packages are each distributed with the following materials:

- Proof of Entitlement
- License Information
- International Program License Agreement
- IPLA Pointer Sheet - Generic
- Mail-In Address List
- Publications

– All publications on CD-ROM

  – Guide to Installation

  – Personal Communications Toolkit brochure

  – Host On Demand brochure

- 1 CD-ROM

Security, Auditability and Control

IBM Personal Communications products run under the control of the operating system for which they were designed and are subject to the controls that the operating system provides.

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

Ordering Information

Since this is a refresh, the same program numbers and partnumbers as in V4.1 apply:

o IBM Personal Communications AS/400 and 3270 V4.11 for DOS/Windows, Windows 95, Windows NT and OS/2, (CD ROM media)

```
   PROGRAM    PART NO.   LANGUAGE
   --------   --------   ---------
 - 5622-972   64H0754    German
 - 5622-972   64H0753    French
 - 5622-972   64H0755    Italian
 - 5622-972   64H0756    Spanish
 - 5622-972   64H0757    Swedish
 - 5622-972   64H0752    English (Non-US/Canada)
 - 5622-972   64H0759    Bi-Directional
```

o IBM Personal Communications AS/400 V4.11 for Windows, Windows 95, Windows NT and OS/2, (CD ROM media)

```
   PROGRAM    PART NO.   LANGUAGE
   --------   --------   ---------
 - 5622-971   64H0772    German
 - 5622-971   64H0771    French
 - 5622-971   64H0773    Italian
 - 5622-971   64H0774    Spanish
 - 5622-971   64H0775    Swedish
 - 5622-971   64H0770    English (Non-US/Canada)
 - 5622-971   64H0777    Bi-Directional
```

o Use Packs for Personal Communications AS/400 and 3270 V4.11 for DOS/Windows, Windows 95, Windows NT and OS/2

```
   PROGRAM   PART NO.  USE PACKS
   --------  --------  ---------
- 5622-972  64H2608       1      -- any language --
- 5622-972  64H2609       5      -- any language --
- 5622-972  64H2610      10      -- any language --
- 5622-972  64H2611      50      -- any language --
```

o Use Packs for Personal Communications AS/400 V4.11 for Windows, Windows 95, Windows NT and OS/2

```
   PROGRAM   PART NO.  USE PACKS
   --------  --------  ---------
- 5622-971  64H2614       1      -- any language --
- 5622-971  64H2615       5      -- any language --
- 5622-971  64H2616      10      -- any language --
- 5622-971  64H2617      50      -- any language --
```

o ISAW for IBM Personal Communications AS/400 and 3270 V4.11 for DOS/Windows, Windows 95, Windows NT and OS/2

```
- 5622-972  64H0722   -- any language --
```

o ISAW for IBM Personal Communications AS/400 V4.11 for Windows, Windows 95, Windows NT and OS/2

```
- 5622-971  64H0738   -- any language --
```

UPGRADES

o Upgrades to Personal Communications AS/400 and 3270 V 4.11 for DOS/Windows, Windows 95, Windows NT and OS/2 from any IBM or non-IBM 5250 or 3270 emulator product. (CD ROM media)

```
   PROGRAM   PART NO.  LANGUAGE
   --------  --------  ---------
- 5622-972  64H0763   German
- 5622-972  64H0762   French
- 5622-972  64H0764   Italian
- 5622-972  64H0765   Spanish
- 5622-972  64H0766   Swedish
- 5622-972  64H0761   English (Non-US/Canada)
- 5622-972  64H0768   Bi-Directional
```

o Upgrades to Personal Communications AS/400 V 4.11 for Windows, Windows 95, Windows NT and OS/2 from any IBM or non-IBM 5250 emulator product. (CD ROM media)

```
   PROGRAM   PART NO.  LANGUAGE
   --------  --------  ---------
- 5622-971  64H0781   German
- 5622-971  64H0780   French
- 5622-971  64H0782   Italian
- 5622-971  64H0783   Spanish
- 5622-971  64H0784   Swedish
- 5622-971  64H0737   English (Non-US/Canada)
- 5622-971  64H0786   Bi-Directional
```

o Use Packs for Upgrades to Personal Communications AS/400 and 3270 Version 4.11 for DOS/Windows, Windows 95, Windows NT and OS/2, from any IBM or non-IBM 5250 or 3270 emulator product.

```
  PROGRAM   PART NO.  USE PACKS
  --------  --------  ---------
- 5622-972  64H2612      1      -- any language --
- 5622-972  64H2630      5      -- any language --
- 5622-972  64H2631     10      -- any language --
- 5622-972  64H2632     50      -- any language --
```

o Use Packs for Upgrades to Personal Communications AS/400 Version 4.11 for Windows, Windows 95, Windows NT and OS/2 from any IBM or non-IBM 5250 emulator product.

```
  PROGRAM   PART NO.  USE PACKS
  --------  --------  ---------
- 5622-971  64H2618      1      -- any language --
- 5622-971  64H2633      5      -- any language --
- 5622-971  64H2634     10      -- any language --
- 5622-971  64H2635     50      -- any language --
```

o ISAW for Upgrades to Personal Communications AS/400 and 3270 V4.11 for DOS/Windows, Windows 95, Windows NT and OS/2 from any IBM or non-IBM 5250 or 3270 emulator product.

```
- 5622-972  64H0724   -- any language --
```

o ISAW for Upgrades to Personal Communications AS/400 V4.11 for Windows, Windows 95, Windows NT and OS/2 from any IBM or non-IBM 5250 emulator product.

```
- 5622-971  64H0740   -- any language --
```

o Upgrade Protection for Personal Communications AS/400 and 3270
V4.11 for DOS/Windows, Windows 95, Window NT and OS/2

```
- 5622-972  64H0894   -- any language --
```

o Upgrade Protection for Personal Communications AS/400 V4.11 for
  Windows, Windows 95, Windows NT and OS/2

```
- 5622-971  64H0896   -- any language --
```

o Note: All Bi-Directional part numbers are fulfilled with the
  English part numbers.

UPGRADES TO IBM Personal Communications AS/400 and 3270

Owners of the programs listed below are entitled to upgrade to IBM
Personal Communications AS/400 and 3270 Version 4.11 for DOS/Windows,
Windows 95, Windows NT and OS/2 at special upgrade prices:

```
                                    Base
Program                          Program   DUA
Title                   Version  Number   Number
----------------------- -------  -------- --------
Communications Manager/2     1.0    5621-254  5775-A26
Communications Manager/2     1.1    5622-078  5775-CF9
Communications Manager/2     1.11   5622-078  5775-CF9
OS/2 Extended Edition        1.x    5669-336  5775-AB9
Extended Services for OS/2   1.0    5621-213  5775-AX8
Extended Services for OS/2
with Database Server         1.0    5621-213  5775-AW5


3270 Workstation Program     1.0    5669-196  5775-RCA
3270 Workstation Program     1.1    5604-091  5775-RCP
Windows Connection           2.0    5604-304  5775-AB6


Personal Communications/3270  1.x   5601-303  5775-RCA
Personal Communications/3270  2.0   5604-330  5775-AM9
Personal Communications/3270  3.0   5621-426  5775-A75
Personal Communications/3270  3.1   5621-231  5775-CJ6
PCOMM/3270-DOS/WINDOWS        4.0    5622-589  5775-EX6
PCOMM/3270-OS/2              4.0    5622-754  5775-GK0
PCOMM AS/400 & 3270 - OS/2    4.0    5622-753  5775-GK6
PCOMM AS/400 & 3270 - Windows  4.0   5622-591  5775-EZ0
PCOMM AS/400-Win            4.0    5622-590  5775-EV9
PCOMM AS/400-OS2            4.0    5622-752  5775-GK3


3270 Emulation Pgm Entry Level   1.x    5604-011  5775-RCA
3270 Emulation Pgm Entry Level   1.2    5604-072  5775-RCA
3270 Emulation Pgm Entry Level   2.0    5604-331  5775-AN1
3270 Emulation Pgm              3.0    5604-012  5775-RCA
3270 Graphics Workstation Program         5604-088
APPC Networking Services for Win.  1.0    5622-575  5775-FI2
PC Support/400                  5728-PC1
Client Access/400               5763-XA1
Client Access for OS/2          5716-XA1
Communications Server for OS/2 Warp    5622-878


Any non-IBM 3270 or 5250 emulator         any       any
```

UPGRADES TO IBM Personal Communications AS/400

Owners of the programs listed below are entitled to upgrade to IBM
Personal Communications AS/400 Version 4.11 for Windows, Windows 95
Windows NT and OS/2 at special upgrade prices:

```
                                     Base
     Program                         Program   DUA
     Title                   Version Number    Number
     ------------------------------ ------- -------- --------
     Communications Manager/2          1.0    5621-254  5775-A26
     Communications Manager/2          1.1    5622-078  5775-CF9
     Communications Manager/2          1.11   5622-078  5775-CF9

     OS/2 Extended Edition             1.x    5669-336  5775-AB9
     Extended Services for OS/2        1.0    5621-213  5775-AX8
     Extended Services for OS/2
     with Database Server              1.0    5621-213  5775-AW5

     Windows Connection                2.0    5604-304  5775-AB6

     Personal Communications AS/400-Win 4.0    5622-590  5775-EV9
     Personal Communications AS/400-OS2 4.0    5622-752  5775-GK3

     PC AS/400 & 3270 - OS/2           4.0    5622-753  5775-GK6
     PC AS/400 & 3270 - Windows        4.0


     APPC Networking Services for Win. 1.0    5622-575  5775-FI2
     PC Support/400                           5728-PC1
     Client Access/400                        5763-XA1
     Client Access for OS/2                   5716-XA1
     Communications Server for OS/2 Warp      5622-878

     Any non-IBM 5250 emulator                any       any
```

Program Upgrades will be available until: NOTIFIED

Upgrades are provided under the Revised Software Transition Plan (Refer to Programming Announcement Letter ZA88-0144)

Proof of Entitlement to Program Upgrade is: the proof of entitlement card or the original cover page of the User's Guide manual. Proof of entitlement to Program Upgrade from non-IBM 5250 or 3270 Communication Programs is at country discretion.

Note:

Customers who are currently licensed users of Personal Communications V4.1 CDROM can obtain a Corrective Service Delivery CDROM (CSD, which provides Windows NT support for Personal Communications V4.1) via the IBM Service.

Note:

@ PComm IPLA licensing is based on 'usage'. A PComm workstation is in 'usage' as soon as one session has been
@ established with a partner, host, midrange or anything else.

Charges, Terms & Conditions for IPLA Program Package

Current Charges, Terms and Conditions, as announced for V4.1, remain unchanged.

Terms and Conditions

PROGRAM SERVICES

Such services will be in accordance with the Service Statement included in the program package, and will be available until the Service End Date, March 31, 1999

License Information

This section should be read in conjunction with the following two sections on Warranty and Program Services.

These are the additional terms referred to in the International Program License Agreement (IPLA).

This License is for

- IBM Personal Communications AS/400 and 3720 V4.11 for DOS/Windows, Windows 95, Windows NT and OS/2 (CD-ROM Media). Program Number 5622-972, PNs from 64H0752 to 64H0760 included.
- IBM Personal Communications AS/400 V4.11 for Windows, Windows 95 Windows NT and OS/2 (CD-ROM Media). Program Number 5622-971, PNs from 64H0770 to 64H0778 included.

Your Proof of Entitlement document from IBM will identify the feature purchased.

Warranty

IBM standard warranty of media. Warranty period 3 months (or the period required by local legislation, if greater).

Program Services

Central Service through mail or fax will be provided by IBM until March 31, 1999.

Additional fee support will be provided through the IBM Support Line and Country specific service offerings. Please contact IBM for further information on what is available in your Country.

This program will be subject to the terms of the IBM International Program License Agreement (IPLA) contained in the program package, and not to the Agreement for IBM Licensed Programs.

This Statement is complementary to the IBM IPLA contained in this package:

```
Program Name:      PCOMM AS/400 + 3270 V4.11 CD
Program Number:    5622-972
Service End Date:  March 31, 1999
Part Number:       64H0754..64H0759

Program Name:      PCOMM AS/400 V4.11 CD
Program Number:    5622-971
Service End Date:  March 31, 1999
Part Number:       64H0772..64H0777
```

For program defect related problems, the following procedure for assistance in problem identification is applicable:

- Contact your remarketer or distributor or, alternatively
- Mail or fax the written problem description to IBM.

IBM will reply in writing with information about correction, bypass or restriction with the intent to make the program perform according to its specifications, or, if there are none, to its principles of operation.

Customer information needed when submitting a problem:

- Address and contact name
- Current maintenance/Corrective Service Diskette (CSD) level
- Problem Description (typed, not hand written)

Additional information on customer reported problems can be obtained from your remarketer/distributor or IBM.

Software Advantage for Workstations Agreement

The product(s) is/are eligible to the terms of the Software Advantage for Workstations Agreement (Standard Offering including Upgrade Protection).

Announcement Countries

All European, Middle Eastern and African Countries.

The data in this letter is subject to the disclaimer in Letter ZS90-0112, which is available from IBM on request.

Please note this is an international announcement letter. If applicable you should also refer to your local country complementary document to check for country specific information.

************ End of Document ************