IBM Power Personal Developer's ToolBox Program with Portable system and Supporting Options

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IBM Announcement Letter No. ZG94-0482 dated November 08, 1994.

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See final section for details of availability and limitations.

Title

IBM Power Personal Developer's ToolBox Program with Portable system and Supporting Options

Abstract

Power Personal Developer's ToolBox Program

The Power Personal Developer's ToolBox Program allows qualified developers of commercial products and qualified developers of internally-used products who plan to port or develop, PowerPC products to purchase portable system hardware, operating systems, and related software development tool licenses at special prices. The primary purpose of this program is to reduce the initial investment in PowerPC** development hardware and software for developers moving their products to the PowerPC environment.

Software licenses being offered through this program include:

- AIX Version 4 Offering** which includes:
    - AIX Version 4 For Clients**
    - IBM Ultimedia Services Version 2.1 for AIX**
    - Insignia SoftWindows Version 1.1**
- Windows NT Workstation**
- Plus related software development tools.

Portable system

This announcement describes the portable system and its options only. For details about the overall Power Personal Developer's ToolBox Program program please see Internal Announcement letter ZG94-0356.

Note: This Announcement will not generate any Customer letters or Sales Manual Pages.

**Product or company name is a trademark or registered trademark of its respective holder.

General Availability

```
+-----------------------------------------------------------+
| Machine  |  Model  | Feature |  Language  |  Availability  |
| Type     |         |         |            |                |
+-----------------------------------------------------------+
|          |         |         |            |                |
| 6020     |  A1L    |         |            |  2 January 1995 |
|          |         |         |            |  (NT - Beta)    |
|          |         |         |            |                |
| 6020     |  A3L    |         |            |  2 January 1995 |
|          |         |         |            |  (AIX)          |
|          |         |         |            |                |
|          |         |         |            |                |
+-----------------------------------------------------------+
```

Product Number

Standard Configuration Model Description:

The following pre-configured models may be ordered, no changes may
be made to the configurations:

NT Developer Configuration

```
Machine
Type      Description                                   Number
-------   -----------                                   -------

6020      Portable system (810MB)                       6020A1L
           24MB memory
           128KB L2 Cache
           CD-ROM
           1.44MB 3.5-inch Diskette Drive
           Keyboard
           Microphone
           Windows NT Workstation Operating System
           US English publications
```

Note: A beta version of Windows NT Workstation will be shipped with this model until the GA
version is available. Developers who purchase the beta version will be upgraded to the GA
version when it is available.

AIX Developer Configuration

```
Machine
Type      Description                                   Number
-------   -----------                                   -------

6020      Portable system  (810MB)                      6020A3L
           32MB memory
           128KB L2 Cache
           CD-ROM
           1.44MB 3.5-inch Diskette Drive
           Keyboard
           Microphone
           3-button mouse
           AIX Version 4 Offering
           US English publications
```

The following items (Mandatory Ordering Partnumbers) MUST be specified when ordering a
configured model:

Keyboard (language)   (zero priced)
Country Pack (power cord)   (zero priced)

UPOS Ordering Information:
```
--------------------------

Ordering PN    PNs to be linked
-----------    ----------------
6020A1L           6020850     Portable system (810MB)
                  DPRAM08     8MB DRAM memory (24MB total)
                  SPNTCDR     Windows NT Workstation
                  DWKBxxx     Quiet Touch Keyboard
                  CPK1xxx     Country Pack

Ordering PN    PNs to be linked
-----------    ----------------
```

```
6020A3L          6020850      Portable system (810MB)
                 DPRAM16      16MB DRAM memory (32MB total)
                 DMSEBL3      3 button Mouse
                 SPXAxxx      AIX Version 4 Offering
                 DWKBxxx      Quiet Touch Keyboard
                 CPK1xxx      Country Pack
```

Notes:

====== 1. STANDARD MODEL ORDERING PARTNUMBERS: Language Variation:
-------------------- The Ordering Partnumbers given above are to be used to order system with the 'normal' Local Language Software per country, e.g. German in Germany or English in UK. This is indicated by the final character 'L' of the Ordering Part-number. For other Languages, when required to be made available in a given country, the Ordering Partnumber should change the final character as shown in the table below. This should be used also as the solution for multilingual countries such as Switzerland or Belgium.

```
L = Local Language

E = UK English
F = French
G = German
I = Italian
S = Spanish
P = Portuguese
D = Danish
W = Swedish
X = Finnish
N = Dutch
V = Norwegian
A = Arabic
H = Hebrew
T = Turkish
K = Greek
C = Cyrillic
Y = US English
```

2. KEYBOARD WITH TRACKPOINT II ORDERING PART NUMBERS: The 'xxx' in the Keyboard Ordering Partnumbers must be replaced by the following three digits depending on Country/Language:

```
COUNTRY LANGUAGE             ORDERING PN
-----------------            -----------
        *
English (US)                 DWKBUSE
English (UK)                 DWKBUKE
German                       DWKBGER
French                       DWKBFRA
Italian                      DWKBITA
```

3. AIX OPERATING SYSTEM PRELOAD (SOFTWARE PACK) ORDERING PARTNUMBERS: The 'xxx' in the Software Pack Ordering Partnumbers must be replace by the following three digits depending on Language:

```
 AIX Version 4 offering  ORDERING

                         PART NO.
 ----------------------  ---------
 Language - Arabic       SPXAARA
           Belgian/
            Dutch        SPXABED
           Belgian/
            French       SPXABEF
```

```
          Bulgarian      SPXABUL
          Czech          SPXACZH
          Danish         SPXADEN
          Dutch          SPXADUT
          Finnish        SPXAFIN
          French         SPXAFRA
          German         SPXAGER
          Greek          SPXAGRK
          Hebrew         SPXAHBW
          Hungarian      SPXAHGN
          Italian        SPXAITA
          Norwegian      SPXANOR
          Polish         SPXAPOL
          Portuguese     SPXAPOR
          Romanian       SPXAROM
          Slovak         SPXASLK
          Spanish        SPXASPA
          Swedish        SPXASWE
          Swiss/
           French        SPXASFR
          Swiss/
           German        SPXASGE
          Turkish        SPXATUR
          UK-English     SPXAUKE
          US-English     SPXAUSE
```

4. COUNTRY PACK ORDERING PARTNUMBER: The 'xxx' in the Country Pack Ordering Partnumbers must be replaced by the following three digits depending on Language:

```
     Country                    Part Number
     --------                   -----------
     Arabic                     CPK1ARA
     Belgium/Dutch              CPK1BED
     Belgium/French             CPK1BEF
     Belgium/English            CPK1BEE
     Denmark                    CPK1DEN
     Egypt                      CPK1EGY
     Finland                    CPK1FIN
     France                     CPK1FRA
     Germany                    CPK1GER
     Israel                     CPK1ISR
     Italy                      CPK1ITA
     Netherlands                CPK1NET
     Norway                     CPK1NOR
     Portugal                   CPK1POR
     South Africa               CPK1SAF
     Spain                      CPK1SPA
     Sweden                     CPK1SWE
     Swiss/French               CPK1SFR
     Swiss/German               CPK1SGE
     Swiss/Italian              CPK1SIT
     Swiss/English              CPK1SUK
     United Kingdom             CPK1UKE
```

AFTER MARKET OPTIONS

The following options may be ordered to be shipped with the system (but NOT installed) or at a later time:

Software

```
  AIX Development Tools
  ---------------------
```

```
IBM C V3.1.1 for AIX (CDROM)                          DSWACV3
IBM C Set++ V3.1.1 for AIX (CDROM)                    DSWACPP

NT Development Tools
--------------------

NT Developer Kit (SDK/DDK)                            DSWNTDK
Motorola** PowerPC C/C++ Compiler for Windows NT      DSWNMOC

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trademark of its respective holder.
```

Hardware

```
Description                                   Part Number
-----------                                   ---------
IC DRAM Memory  4MB                           DWAMM04
IC DRAM Memory  8MB                           DWAMM08
IC DRAM Memory 16MB                           DWAMM16
IC Dram Memory 32MB                           DWAMM32

540MB SCSI-2 Hard Disk                        DWAF540
810MB SCSI-2 Hard Disk                        DWAF810

G10 Graphics with Motion Video Adapter*       DWGRG10

Video Camera (requires G10 with Motion video) DWVCAME


3 button mouse (black)                        DMSEBL3

PS/2 minature mouse                           DMINMOU

IBM PCMCIA - Ethernet 10Base2                 DWACME2
IBM PCMCIA - Ethernet 10BaseT                 DWACMET
IBM PCMCIA - Token Ring 16/4 Adapter          DWACMTR
IBM PCMCIA - 14.4/14.4 Data/FAX Modem         DWACMDF

NiMH Battery Pack EMEA                         DWABATE

AC Adapter UK                                 DWACUKE
AC Adapter EMEA                               DWACEME
AC Adapter Switzerland                        DWACSWI
AC Adapter Italy                              DWACITA
AC Adapter Denmark                            DWACDEN
AC Adapter Israel                             DWACISR

Quick Charger UK                              DWQCUKE
Quick Charger EMEA                            DWQCEME
Quick Charger Switzerland                     DWQCSWI
Quick Charger Italy                           DWQCITA
Quick Charger Denmark                         DWQCDEN
Quick Charger Israel                          DWQCISR
```

* G10 Graphics with Motion Video Adapter requires installation by
IBM trained service personnel (installation charges may apply).

The following monitors are supported:

```
                                          Maximum Viewable
                                          Screen Size,
                               Machine    Part      Measured
Description                    Type/Mod   Number    Diagonally
-----------                    --------   -------   ----------------

IBM 14X Color Monitor           9524      39G3393     13.0"
IBM 15X Color Monitor           9525      68G1367     13.7"
IBM 15XG Color Monitor          9525      9525A05     13.7"
IBM 17X Color Monitor           9527      9527012     15.8"
IBM 21X Color Monitor           9521      68G2627     19.1"
```

Highlights

Power Personal Developer's ToolBox Program Program:

- Provides early availability of Portable system for qualified developers.

- Allows qualified developers to purchase development systems and software tools at a special price.

- Allows developers to configure systems to their specific needs.

- Provides developers with a choice of 32-bit Operating Systems:

    - AIX Version 4 Offering

    - Windows NT Workstation

Portable system Provides:

The Portable system establishes a new level of performance that meets the needs of both workstation and personal computer mobile software developers. The Portable system plus the Power Personal Developer's ToolBox Program Program's software, and the supporting options make up a feature-packed, powerful, flexible, expandable mobile computer designed to support multiple 32-bit operating systems and the most demanding development requirements.

The Portable system is a premium function battery or AC-operated portable notebook computer. The Portable system is convenient to use and carry, and is a ideal general development system for the mobile, field, or desk oriented software development or consulting professional who needs high performance 32-bit operating systems to-go.

The Portable system's large 540MB or 810MB user removable SCSI-2 hard disks make it ideal for professionals that need to work with multiple operating systems. With a quick change of the HDD and reboot of the system you can be in any of the available development environments as they become available. A external SCSI-2 port makes attaching additional 1GB and 2GB external hard disk drives a snap.

With it's optional G10 Graphics with Motion Video adapter, the Portable system can output computer graphics on any National Television Standards Committee (NTSC) television monitor or projection system. Also, computer graphics can be superimposed on live video and sent to a video recorder. This feature, along with the integrated business audio, makes

Portable system an ideal system for multimedia business presentations.

The Portable system is the first notebook computer that has a built-in motion video camera, and full multimedia support with built-in CD-ROM, built-in audio, and motion video I/O capabilities. All this capability comes in a sleek eight pound system that also satisfies the requirements for U.S. Energy Star compliance.

The Portable system must be ordered with one or more of the following Power Personal Developer's ToolBox Program development environments; AIX Version 4 Offering or Windows NT Workstation.

Portable system Supporting Options:

- Portable Video Camera (CSU)

- Portable G10 Graphics with Motion Video Adapter (factory or dealer setup only)

- Portable SCSI-2 540MB Hard Disk Drive (CSU)

- Portable SCSI-2 810MB Hard Disk Drive (CSU)

- Portable AC Adapter (50 Watt) (CSU)

- Portable NiMH Battery Pack (CSU)

- Portable Quick Charger (CSU)

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Corporation.
(TM) Trademark of International Business Machines Corporation.
(1) Trademark of the Microsoft Corporation.
(2) Trademark of Sun Soft Corporation.

Description

Portable system:

The portable system establishes a new level of performance that meets the needs of both workstation and personal computer users. The portable system and the supporting options make up a feature-packed, powerful, flexible, expandable mobile computer designed to address the most demanding computing requirements.

The portable system is a premium function battery or AC-operated portable notebook computer. The portable system is convenient to use and carry, and is a general solution for the mobile, field, or desk oriented software development professional who needs a high performance 32-bit operating systems to-go.

The portable system's large 540MB or 810MB user removable SCSI-2 hard disks make it ideal for professionals that need to work with multiple operating systems. With a quick change of the HDD and reboot of the system you can be in any of the available development environments as they become available. A external SCSI-2 port makes attaching additional 1GB and 2GB external hard disk drives a snap.

With the optional G10 Graphics with Motion Video Adapter, portable system output computer

graphics on any National Television Standards Committee (NTSC) television monitor or projection system. Also, computer graphics can be superimposed on live video and sent to a video recorder. This feature, along with the integrated business audio, makes portable system an ideal system for multimedia business presentations.

The portable system is one of the first notebook computers that has a built-in motion video camera, and full multimedia support provided by; built-in CD-ROM, built-in audio, and motion video I/O capabilities. All this capability comes in a sleek eight pound system that also satisfies the requirements for U.S. Energy Star compliance.

The portable system satisfies requirements for U.S. Energy star compliance. In addition, hardware and operating systems have been designed to provide customers with the Rapid Resume feature from suspend mode. That is, the portable system can automatically conserve power and yet preserve the ability to resume operation from suspend mode based on: any key pressed on the keyboard, real time clock alarm, or a ring indicator on the serial port. This last type enables the portable system to receive FAXes without user intervention.

Note: Power management software is provided by the operating system, and may vary with different operating systems. Refer to supported operating system manuals for further detail.

Investment Protection

The portable system can grow as the customers needs grow. The system is designed for easy installation of IC DRAM cards, Fixed Disk Drives, and Network communications. By supporting multiple 32-bit operating systems the portable system helps protect the customer's investment of application software.

Warranty

As a result of IBM's continued commitment to enhance product reliability, the portable system (machine type 6020) is supported by a three-year warranty.

- (R) Registered trademark of International Business Machines Corporation.
- (TM) Trademark of International Business Machines Corporation.
- (1) Trademark of the Microsoft Corporation.
- (2) Trademark of Eastman Kodak Corporation.

Publications

Portable system Publications

The following publication and CD-ROM are shipped with the product:

```
Introducing your portable system                 S19H-1162
Portable system User's Guide                     S19H-1161
Portable system Multimedia Introduction CD-ROM   S19H-1173
Behind the Scenes...Discover the Power CD-ROM    S19H-1174
```

Additional copies of the User's Guides and CD-ROM Group will also be available at the planned availability date.

The following publications will also be available separately.

```
Publication                                  Order Number  Part Number
--------------------------------------------- ------------  -----------
Introducing Portable system                   S19H-1162     19H1162
Portable system User's Guide                  S19H-1161     19H1161
Portable system multimedia Introduction CD-ROM  S19H-1173     19H1173
```

Portable system

Service Publications (Manuals and Diskettes):

```
Publication                                  Order Number  Part Number
--------------------------------------------- ------------  -----------
Portable system  Hardware Maintenance         S19H-1160     19H1160
```

Hardware Maintenance Manual contains service and reference information for the portable system. The service section includes procedures for isolating problems to a FRU, related service procedures and an illustrated parts catalog. The reference section includes safety information, product description and general information about system functions.

Technical Information

Specified Operating Environment

Electrical Power Specifications Universal AC Adapter:

- Power Rating: 50 watts

- Input Voltage: 100 - 240VAC

- Input Current: 1.2 - 0.6A

- Input Frequency: 50Hz to 60Hz

- Output Voltage: 20 - 10VDC

- Output Current: 2.5 - 3.6A

- Mode selected by System Unit

Quick Charger Power Specifications:

- Input Voltage: 100 - 240VAC

- Input Current: 0.8 - 0.45A

- Input Frequency: 50 - 60Hz

- Output Characteristics:

    - Rated Voltage 12VDC

    - Maximum Charge Voltage: 18VDC

    - Quick Charge Current: 2.7A +/- 0.1A

    - Trickle Charge current: 80mA +/- 20mA

Intelligent Battery Pack:

- 16 NiMH cells, 1700mAH/cell

- Microprocessor for power management

- Nominal Voltage: 9.6VDC

- Nominal Capacity: 3300mAh

Battery operating hours and charging time estimates:

- Power off/Suspend Charging 1.5 hours

- Charge during operation 2.0 hours

- Quick Charger (1)

  - Discharging 7.0 hours

  - Charging 1.5 hours

- Battery Operation (2) 2 - 5 hours

(1) Discharge and charge cycle

(2) Operating system, application, and User dependent.

Hard Disk Drive Specifications:

```
Formatted Capacity:              540MB              810MB
Avg. data rate MB/s:            24 to 36           24 to 36
Avg. seek time: ms          Rd-14, Wr-15       Rd-14, Wr-15
Avg. latency: ms                 7.9                7.9
Interface:                      SCSI-2             SCSI-2
SCSI-2 speed MB/s: Sync/Async    5/10               5/10
Actual user-accessibility may vary based on operating system selected.
```

CD-ROM Specifications:

```
Double Speed CD-ROM Drive - 5.25 inch - Slim-line
 Supports standard and  XA formats
 Multi-session capability supports Photo-CD applications

 Tray loading:             Supports 12cm and 8cm disks
 Interface:                SCSI-2
 Data Capacity:  Mde.      1-550MB,   Mde. 2-660MB
 Speed: KB/s               x1 - 150,  x2 - 300
 Avg. Latency: ms          x1 - 150,  x2 - 75
 Avg. access time: ms       350
```

Video Camera Specification:

```
Image Sensor:1/3 inch color CCD
Picture Elements:        810(H) x 508(V)
        Effective:       768(H) x 495(V)
Signal System:           NTSC composite
Resolution:              400 TV Lines
Min. Sensitivity:        20 Lux
Signal to Noise Ratio:   43db
CCD Iris:                Auto Iris (1/60 to 1/10,000 second)
Lens:                    f=4.7mm  F2.8 diagonal 81 degree
Video Output:            CVBS 1V p-p, 75 ohm, Neg sync
Power Requirement:       8 - 12 Vdc,  200ma
```

Audio Specification:

```
Sampling Rate:            48KHz per channel maximum
Channel Bandwidth:        20Hz to 20KHz (+1/-3dB)
Dynamic Range:            16 bit resolution

S/(N+D) Line Input:       80 dB minimum (f=1KHz measured at line out)
S/(N+D) Microphone Input: 60 dB minimum (f=1KHz measured at line out)
S/(N+D) Built-in Mic.:    55 dB minimum (f=1KHz measured at line out)

Line In Impedance:        10K ohms
Line In Level:            2V rms nominal
Line In Connector:        Stereo 3.5mm 3-conductor mini-phone jack
                          - Tip: left, Ring: right, Sleeve: ground

Mic. In Impedance:        2.7K ohms
Mic. In Level:            10mV rms nominal to 70mV rms max.
Mic. Phantom Power:       Stereo 0.5mA nominal at 2VDC
Mic. In Connector:        Stereo 3.5mm 3-conductor mini-phone jack
                          - Tip: left, Ring: right, Sleeve: ground

CD-DA In Impedance:       20K ohm
CD-DA In Level:           1V rms nominal
CD-DA Conneteor:          Internal 60 pin fine-pitch for CD ROM

Line Out Impedance:       1K ohm
Line Out Level:           2V rms nominal
Line Out Connector:       Stereo 3.5mm 3-conductor mini-phone jack
                          - Tip: left, Ring: right, Sleeve: ground

Headphone Out Impedance:  75 ohms
Headphone Out Level:      2V rms nominal
Headphone Out Connector:  Stereo 3.5mm 3-conductor mini-phone jack
                          - Tip: left, Ring: right, Sleeve: ground
                          - Inserting a plug disables built-in speakers

Built-in Speaker;
Out Impedance:            8 ohms stereo
Out Power:                1 Watt (8 ohm load) stereo
Out Connector:            Two 2-pin Berg stereo

External Volume Control:  Affects Built-in speaker and Headphone output
```

Physical Specifications

Mechanical Specifications:

```
Width:  297mm (11.7 inches)
Depth:  260mm (10.24 inches)
Height:  61mm (2.4 inches)
Weight: 3.2kg (6.96 lbs)  With battery
Weight: 3.6kg (7.96 lbs)  With battery, and CD-ROM
Weight: 3.8kg (8.28 lbs)  With battery, CD-ROM, and Video Camera
```

System Unit Carton:

```
Single Pack Dimensions:     480mm (18.9")x 371mm (15")x 214mm (8.4")
Single Pack Weight:         7.9 Kg (17.4 pounds)
Quantity per Pallet:        24 System Units
Multipack Dimensions:       Multipack does not apply
Multipack Quantity:         Multipack does not apply
Multipacks per Pallet:      Multipack does not apply
Pallet Load Dimensions:     1.02m(40.1") x 1.2m(47.2") x 1.0m(39.3")
Pallet Load Weight:         220kg (485 pounds) *
```

```
Estimated Safe Stacking Height:  3 high
```

```
* 40 pounds added for pallet
```

Operating Environment

Heat Output:

Electrical Power Consumption: 43W

Air temperature:
```
0 - 8,000 (feet)

Operating :  5-35 Degrees C or 41-95 Degrees F (without diskette)
Operating : 10-35 Degrees C or 50-95 Degrees F (with diskette inside
unit)
System off          :   5-43 Degrees C or 41-110 Degrees F
Storage/Shipment    : -20-60 Degrees C or -4-140 Degrees F
Wet Bulb (Maximum) :   29.4 Degrees C or     85 Degrees F

8,000 - 10,000 (feet)

Operating :  5-31.3 Degrees C or 41-88 Degrees F (without diskette)
Operating : 10-31.3 Degrees C or 50-88 Degrees F (with diskette
inside unit)
System off          :   5-43 Degrees C or 41-110 Degrees F
Storage/Shipment    : -20-60 Degrees C or -4-140 Degrees F
Wet Bulb (Maximum) :   25.7 Degrees C or     78 Degrees F

Note: The maximum temperature when system on is linearly decreased
      from 8,000ft to 10,000ft.
```

Relative Humidity:

```
Operating : 8 - 95% RH (without diskette)
Operating : 8 - 80% RH (with diskette inside unit)
Storage/Shipment : 5 - 95% RH
```

Altitude:

```
10,000 Feet Maximum (3,048 Meters)
```

Acoustic Noise Emission Values:

```
Average sound-pressure levels:

At operator position:  43dB operating, 43dB idle
At bystander position: (1 meter) 40dB operating, 40dB idle

Declared (upper limit) sound power levels:

5.1dB operating, 4.9dB idle
```

Note: The noise emission level stated is declared (upper limit) a
weighted sound power level (in bels for a random sample of machines,
typically configured and operating in idle mode (that is, powered on but
no disk read/write or other I/O activity). These levels were measured in
controlled acoustical environments according to proceedures specified
by the American National Standards Institute (ANSI) S12.10 and ISO 779,

and are reported in conformance with ISO 9296.

Agency Approvals:

```
System Unit Approvals:

 FCC Class-B Certified to comply with FCC Rules, Part 15
  FCC ID is ANO6020
 VCCI CLASS 2 (0 db)
 CISPR22B
 UL-1950
 CSA C22.2 No. 950
 CB certificate to IEC950/EN60950
 UK-PTT
 JATE
 OeVE
 SASO

AC/DC Adapter Approvals:

 UL-1950
 CSA-C22.2 No. 223
 SA
 OeVE
 DENTORI
 NOM
```

ISO 9000:

```
ISO 9000 registered IBM Locations:
    Research Triangle Park, NC, USA
        Manufacturing          ISO 9001

    Greenock, Scotland
        Manufacturing          ISO 9001

    Austin, TX, USA
     RS/6000 Sys. Mfg.         ISO 9002
     RS/6000 Hdw/OEM/Tech Lab  ISO 9001
     AIX Software Lab.         ISO 9001
     PSP-LAN Sys.              ISO 9001
     PC Co. ECAT Mfg.          ISO 9001
     PC Co. PWB Facility       ISO 9002

    Fujisawa, Japan
        Manufacturing          ISO 9001
```

Software Requirements

Technical Information Software:

Please see Internal Announcement letter ZG94-0356 for details.

Compatibility

The Portable system system is designed to be compatible with the PowerPC Reference Platform Specification.

Portable system is designed to maintain compatibility with standard PCMCIA adapters. For an industry standard PCMCIA adapter to work in the Portable system, device driver support is

required. Please determine if the operating system chosen supports a particular device, or if the devices supplier provides the necessary drivers.

The Portable system system contains setup/diagnostics software in its Flash ROM called "Easy-Setup".

Easy-Setup allows the user to set passwords, start-up sequence for the drives, and the SCSI IDs for the SCSI-2 adapter and the internal hard disk. Easy-Setup also runs the diagnostics through a graphical user interface.

(R) Registered trademark of International Business Machines Corporation.
(TM) Trademark of International Business Machines Corporation.

Limitations

- The portable system has two memory slots per system. Using 4MB, 8MB, 16MB, or 32MB IC DRAM optional feature cards up to 80MB of system memory is possible.

  - IBM ThinkPad 4MB IC DRAM card PN-07G1420 not supported

  - IBM Japan 4MB IC DRAM card PN-06G9242 not supported

  - The customer must take care when selecting third party IC DRAM to insure compatibility with portable system

- Using DIMM (Dual In-line Memory Module) technology, the Portable system implements one 16MB Memory Modules as its base memory.

- Audio functions are supported in operating system environment only. Support may not be provided in all operating systems.

- G10 Graphics with Motion Video is supported in operating system environment only. Support may not be provided in all operating systems.

- Power management function is implemented in the operating system environment which will affect the expected battery life.

- The system has been designed so the customer can install or remove the PCMCIA card without turning off the system if the PCMCIA card and operating system selected supports this function. Refer to the instructions that come with the PCMCIA card.

- When the system is working under some operating systems, removal and installation of a PCMCIA card may not be supported during the power-on state.

- When installing two Type II PCMCIA communications cards in the PCMCIA slot, there may be some cable interference that allows only one card to be used.

- Divice drivers for Intel processors supplied with PCMCIA cards will not work. Customer must insure that PowerPC device drivers are available for the card.

- PC Card point enablers may write directly to the hardware, bypassing Socket and Card Services. Writing directly to the hardware may cause problems that cannot be anticipated. Point enablers may interfere with Client Device Drivers that do communicate with Socket and Card Services. Additional customer testing in their specific environments is recommended.

- Maximum data transfer rate of the Built-in double-speed CD-ROM drive is

approximately 300KBpS when used with the portable system.

- Customer installation of the G10 Graphics with Motion Video Adapter is not supported. The function can only be installed at the point of manufacture or at an authorized service facility.

- The IBM Keyboard/Mouse Y Connector accessory is required when attaching an external keyboard and mouse to the system via the external input device port.

Suspend Mode Operational Considerations:

The computer can enter Suspend mode when the PCMCIA card uses one of the following operating systems:

- AIX Version 4 For Clients

- Windows NT Workstation

Note: Removing or installing PCMCIA cards during Suspend mode is not recommended. Also the Suspend mode capabilities are operating system dependent.

Planning Information

Customer Responsibilities

The Portable system is designated as Customer setup. Customer setup, service, and programming publications are available. Customer setup allowance is one day. By following the setup instructions, the user attaches the peripherals, installs the battery, connects the AC adapter, and turns the system on, and installs the operating system as described in the OS documentation.

Bulletin Board Support IBM will provide a worldwide bulletin board for this program via Compuserve for support purposes. Upon acceptance into the developer's program information will be provided on how to access this bulletin board. IBM will receive questions daily with the objective of responding within five business days. **Software Technical Support** Software technical support for developers will be provided as follows:

- Support for the IBM AIX version 4 offering software development tools will be provided by your country AIX support organisation. Please contact them for details of their support contracts and charges.

- Technical support for Windows NT software development tools will be provided via bulleting board by IBM Kirkland Porting and Development center.

Technical assistance can be modified or discontinued by IBM at any time.

Cable Orders

Keyboard/Mouse Connector cable must be ordered when the customer requires both an external keyboard and a mouse.

SCSI-2 cable must be ordered if customer wants to attach a external SCSI-2 device.

Installability

The Portable system system requires about 20 minutes for installation. Installation includes unpacking, setting up and powering on the system. Additional time is required to install other memory, an operating system and other features.

Problem Determination

If a failure is found at initial installation, an instruction or error code will appear on the screen. The user should note this information and refer to the *User's Guide* shipped with the system unit.

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

World Trade Considerations

The personal system hardware supports an icon-based interface that eliminates the need for hardware and engineering software National Language support. The customer will select icons from an easily understandable menu to configure the hardware.

National Language Support is also dependent upon operating system support. Please refer to operating system manuals to determine support of a particular country.

Packaging

Ship Group Contents

System Unit Carton:

- System Unit with Country keyboard
- Universal AC adapter (50W)
- Power Cord
- Rechargeable Battery Pack
- External 1.44MB Diskette Drive
- Diskette Drive Bezel (to mount FDD into system)
- Emergency Eject Pin
- Shipping Group
    - Introducing Your portable system
    - Portable system User's Guide
    - Portable system Multimedia Introduction CD-ROM (English only)
- Portable system Product Map
- Keyboard Template

- PCMCIA Connector Lid

- TrackPoint Caps (4)

- Adhesive Tape Eject Memory Card Set

Note: All publications are Enlish only.

Security, Auditability and Control

Standard Security Features

Passwords

- A power-on password (POP) helps protect the system from unauthorized use. If a POP is set, the password prompt appears:
    - Each time the system is turned on
    - When the system is returned to normal operation from Suspend mode if implemented by the operating system.

- A Supervisor Password provides a higher level of security than the POP. The Supervisor Password helps protect the system functions from being used by unauthorized users and helps protect the hardware configuration from unauthorized modification. If a supervisor password has been set, the system will prompt the user to enter a password when trying to access Configuration or Start Up sequence sub-minues of Easy-Setup.

- The user can use the hook on the locking mechanism to a leash with a user selected padlock and chain or cable.

- Vital Product Data (VPD) enabled. VPD is a software system identification.

World Trade Security Considerations:

The Portable system system supports an icon-based interface for the above security features that eliminates the need for National Language translation. The Customer will select icons from easily understandable menu to configure the system and set passwords.

National Language Support is also dependent on the operating system used. Please refer to the OS manuals to determine support for a particular country. User management is responsible for evaluation, selection and implementation of security features, administrative procedures and appropriate controls in application systems and communications facilities.

Charges

Consult your IBM Marketing Representative.

Terms and Conditions

Offering

This product is available from IBM under the Terms & Conditions for Purchase.

Warranty

The warranty period is: 36 Months.

Warranty Format: Return to base

Service Provider: IBM CS

To obtain service - Users should follow self-help procedures, then;

- Call the appropriate telephone number in the Product Support Guide. This call will be referred to IBM CS call management.

- The customer is responsible for returning the HW to an IBM Service Point where warranty service will be carried out.

Support For general HW queries and to facilitate the distribution of fixes a restricted section of the IBM Compuserve forum is provided. This section is supported by the responsible lab - IBM Power Personal Systems, Austin, TX, USA.

Developers must provide their Compuserve ID to IBM by completing the appropriate section of the Developer Program Application.

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.

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