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IBM INFOWINDOW II 3481/3482 DISPLAY STATION

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[Announcement Letter Number 192-237 dated September 21, 1992](#)

[US - Last Revised on September 21, 1992](#)

Brief Description of Announcement, Charges, and Availability.

The IBM InfoWindow (R) II 3481/3482 Display Station is an enhanced follow-on to the IBM InfoWindow 3471/3472 Display Station that provides access to mainframe host applications using a 3270 data stream. It offers new functions for increased ease of use and productivity, such as a built-in calculator, presentation space copy, and the ability to mark unprotected fields designated for user input. A printer port is now available on all models of the 3481/3482, which can be used for host addressable printing as well as local screen copy. A printer definition utility (PDU) enables the user to customize the printer characteristics locally, enabling selected ASCII printers to be supported.

A new power management feature is provided that reduces power consumption after a period of inactivity. This feature also reduces stress on critical components and may extend the life of the monitor. The 3481/3482 also has the capability for an expansion cartridge for possible future function enhancements or to meet a customer's unique needs.

To expand IBM's ongoing commitment to quality, the 3481/3482 has been designed for improved reliability and extended product life over predecessor display products. The 3481/3482 complies with emerging internationally recognized standards such as ISO (International Organization for Standardization) 9241 Part 3 and Swedish recommendation on electromagnetic fields MPR-II. National language support is expanded to meet the latest requirements, which

include the new keyboards for Eastern Europe.

Planned Availability Dates:

- o 3481 Model BAx/BGx: October 30, 1992
- o 3482 Model HCx: October 30, 1992
- o 3482 Model HAx/HGx: June 25, 1993

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Customer Letter Section

HIGHLIGHTS

- o New and enhanced functions for increased ease of use and productivity
- o Parallel printer port on all models
- o Compliance with emerging internationally recognized standards such as ISO 9241 Part 3 and Swedish MPR-II
- o Longer life and reduced power consumption using advanced power management feature
- o Support of all current InfoWindow functions for compatibility with current applications
- o Flexibility through an expansion cartridge

DESCRIPTION

PRODUCT	MACHINE	1-YEAR WARRANTY MODEL	3-YEAR WARRANTY MODEL
InfoWindow II 14-Inch Amber-Gold	3481*	BA1	BA3
InfoWindow II 14-Inch Green	3481*	BG1	BG3
InfoWindow II 15-Inch Amber-Gold	3482*	HA1	HA3
InfoWindow II 15-Inch Green	3482*	HG1	HG3
InfoWindow II 14-Inch Color	3482*	HC1	HC3

* The keyboard, stand, and 6-foot power cord for Chicago must be specified from the following specify feature codes:

SPECIFY

CODE	PRODUCT
9122	122-Key Typewriter Keyboard
9124 (New)	122-Key Data Entry Keyboard
9131	IBM Enhanced Keyboard
9154	122-Key Typewriter Keyboard/APL2 (TM)
9986	Power Cable, 6-foot for Chicago
9201	Tilt/Swivel Stand for 3481/3482
5801	Lift/Tilt/Swivel Stand for 3482-HCx
5802	Lift/Tilt/Swivel Stand for 3482-HAx/HGx
5803 (New)	Lift/Tilt/Swivel Stand for 3481

USER PRODUCTIVITY

The 3481/3482 supports a built-in calculator to perform local calculations and operates in the operator information area (OIA), keeping the screen display completely viewable. The user can import data from one application, perform a calculation, then export the result back to the same or a second application. The calculator allows storing and retrieving of numeric data, as well as frequently used mathematical expressions.

The 3481/3482 also supports presentation space copy locally. The user can copy the screen contents from one area to another area on the same screen.

A new reference screen mode of operation is now available on the 15-inch monochrome models. The mode displays two full 24 x 80 formats on the screen concurrently. The user is able to use one 24 x 80 format for online operation and copy all or a part of the session to the other 24 x 80 area for reference.

Record/play storage is now expanded to 6,000 bytes of memory, which enables the user to record commonly used phrases for subsequent recall, thereby eliminating keystrokes.

Mark unprotected field is supported to quickly identify input fields to the user for increased productivity.

With the 3174 Establishment Controller, the 3481/3482 provides advanced features such as:

- o Split screen, copy from session to session, 3174 calculator function, and 5250 emulation field exit (requires 3174 Licensed Internal Code (LIC) Configuration Support C (Release 2 or higher))
- o Multi-host support (requires 3174 LIC Configuration Support B (Release 1 or higher) or C)
- o Host addressable print, fast typematic (requires 3174 LIC Configuration Support A/S (Release 5 or higher), B, or C)
- o Extended vital product data (VPD), type-ahead, and enhanced null/blank processing (requires 3174 LIC Configuration Support B (Release 2 or higher) or C)
- o VPD, APL2 (TM), country extended code page (CECP) (requires 3174 LIC Configuration Support A/S (Release 4 or higher), B, or C).

The 3481/3482 has an etched screen, which minimizes glare and fingerprints. The 3481/3482 utilizes a cathode ray tube (CRT) with a high transmittance face plate. This CRT has the appearance of having a lighter background. This reduces the contrast between the foreground and background, which may be more pleasant to the user. Indicators are displayed in symbols on the bottom row of the screen outside the data area, and provide useful operator information. Updating the screen from the host is accomplished without refresh interruption (that is, no blinking). An underline type cursor and a rectangular reverse video cursor with blinking option are provided.

An audible alarm is provided to alert the operator. The volume of the alarm can be adjusted by the operator.

The cable-connected keyboard can be moved and the video element can be tilted and swiveled to change the screen angle for the operator. The keyboard slope can be adjusted by the user to 5 or 12 degrees.

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BUSINESS SOLUTIONS

A printer port is now supported on all models of the 3481/3482, which provides host addressable print as well as local screen copy. A printer definition utility (PDU) provides users the ability to customize printer tables to allow support of various ASCII printers.

The 3481/3482 front-of-screen (FOS) characteristics meet or

exceed the internationally recognized ISO 9241 Part 3. ISO 9241 Part 3 includes a new character font on most models and screen formats, and reduced flicker using a 75-Hz refresh rate. The 3482 15-inch monochrome screen has a larger viewing area compared with the 3472 (16% larger than 15-inch monochrome, 47% larger than 14-inch monochrome), which meets ISO 9241 Part 3 in all of the model 2, 3, 4, and 5 screen formats. The 3481/3482 meets or exceeds Swedish recommendation MPR-II for magnetic fields (VLMF/ELMF), electric fields (VLEF/ELEF), as well as electrostatics (ESF) to meet emerging workplace requirements.

The 3481/3482 provides features to aid physically impaired persons, which include character attribute color selection, adjustable typematic rate, and the IBM KeyGuard accessory.

INVESTMENT PROTECTION

The 3481/3482 supports a new advanced power management feature that turns off components during periods of inactivity. The power management feature reduces power consumption up to 65% and reduces component stress, which may result in extending the life of the monitor.

The 3481/3482 provides a monitor adjustment capability through keyboard operation. Users can adjust the front-of-screen characteristics such as dot width, centering, viewing area, pincushioning, and brightness, to compensate for monitor aging. (With a monochrome monitor, the user can adjust dot width only.)

SYSTEMS MANAGEMENT

The 3481/3482 is plug-compatible with 3471/3472 InfoWindow displays to provide access to existing host applications through the 3270 architecture.

The 3481/3482 provides extended vital product data. This information (machine type, model, and display address) may be collected by the host system and made available to users and application programs.

GROWTH ENABLEMENT

The 3481/3482 supports the expansion cartridge for possible future function enhancements or to meet unique customer requirements.

OPEN ENTERPRISE

The 3481/3482 complies with the following standards:

- o MPR-II
- o ISO 9241 Part 3.

PUBLICATIONS

The IBM INFOWINDOW II 3481 USER'S GUIDE (GA18-7094) or IBM INFOWINDOW II 3482 USER'S GUIDE (GA18-7095) is shipped with the product. Each Guide includes the setup instructions and a problem solving guide.

Additional copies are available from IBM. To order, contact your IBM representative.

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

- o IBM InfoWindow II 3481 and 3482 Introduction and Installation Planning Guide (GA18-7093)
- o IBM InfoWindow II 3481 and 3486 Maintenance Information (SY18-2335)
- o IBM InfoWindow II 3482 and 3487 Maintenance Information (SY18-2336)

The System Library Subscription Service (SLSS) is available by order number only. Customers currently subscribing to SLSS will receive publication updates automatically.

TECHNICAL INFORMATION

SPECIFIED OPERATING ENVIRONMENT

PHYSICAL SPECIFICATIONS:

3481 DISPLAY -- 14-INCH MONOCHROME WITH STAND

Width: 334 mm (13.1 inches).

Depth: 328 mm (12.9 inches).

Height: 344 mm (13.5 inches).

Weight: 9.1 kg (20.0 pounds).

3482 DISPLAY -- 15-INCH MONOCHROME WITH STAND

Width: 359 mm (14.1 inches).

Depth: 327 mm (12.9 inches).

Height: 364 mm (14.3 inches).

Weight: 11.1 kg (24.4 pounds).

3482 DISPLAY -- 14-INCH COLOR WITH STAND

Width: 360 mm (14.2 inches).

Depth: 388 mm (15.3 inches).

Height: 366 mm (14.4 inches).

Weight: 13.4 kg (29.5 pounds).

3481 DISPLAY -- 14-INCH MONOCHROME WITH LIFT STAND

Width: 334 mm (13.1 inches).

Depth: 328 mm (12.9 inches).

Height: 378-505 mm (14.9-19.9 inches).

Weight: 12.0 kg (26.4 pounds).

3482 DISPLAY -- 15-INCH MONOCHROME WITH LIFT STAND

Width: 359 mm (14.1 inches).

Depth: 345 mm (13.6 inches).

Height: 398-525 mm (15.7-20.7 inches).

Weight: 13.6 kg (30.0 pounds).

3482 DISPLAY -- 14-INCH COLOR WITH LIFT STAND

Width: 360 mm (14.2 inches).

Depth: 388 mm (15.3 inches).

Height: 400-527 mm (15.7-20.7 inches).

Weight: 15.9 kg (35.0 pounds).

TILT/SWIVEL STAND

Tilt: Plus 15 degrees to minus 5 degrees.

Swivel: Plus/minus 90 degrees.

LIFT/TILT/SWIVEL STAND

Lift: 7.6-20.3 mm (3.0-8.0 inches) from the bottom.

Tilt: Plus 15 degrees to minus 5 degrees.

Swivel: Plus/minus 150 degrees.

3482 LOGIC ELEMENT

Width: 232 mm (9.1 inches).

Depth: 157 mm (6.2 inches).

Height: 35 mm (1.4 inches).

Weight: 0.7 kg (1.5 pounds).

122-KEY KEYBOARD

Width: 533 mm (21.0 inches).

Depth: 215 mm (8.5 inches).

Height: 64 mm (2.5 inches)*.

Weight: 2.5 kg (5.5 pounds).

IBM ENHANCED KEYBOARD

Width: 488 mm (19.2 inches).

Depth: 210 mm (8.3 inches).

Height: 40 mm (1.6 inches)*.

Weight: 2.3 kg (5.1 pounds).

* Home Row: 30 mm (1.2 inches).

SIZE OF SHIPPING PACKAGE (MULTI-PACK) FOR 3481

Width: 508 mm (20.0 inches).

Depth: 508 mm (20.0 inches).

Height: 610 mm (24.0 inches).

SIZE OF SHIPPING PACKAGE (MULTI-PACK) FOR 3482-HAX/HGX

Width: 508 mm (20.0 inches).

Depth: 508 mm (20.0 inches).

Height: 610 mm (24.0 inches).

SIZE OF SHIPPING PACKAGE (MULTI-PACK) FOR 3482-HCX

Width: 508 mm (20.0 inches).

Depth: 508 mm (20.0 inches).

Height: 610 mm (24.0 inches).

SIZE OF SHIPPING PACKAGE FOR THE LIFT/TILT/SWIVEL STAND (FOR FEATURE 5801, 5802 OR 5803)

Width: 394 mm (15.5 inches).

Depth: 330 mm (13.0 inches).

Height: 254 mm (10.0 inches).

OPERATING ENVIRONMENT:

Temperature: 10 (degs) to 40 (degs) C (50 (degs) to 104 (degs) F).

Relative Humidity: 8% to 80%.

Wet Bulb: 27.0 (degs) C (80.6 (degs) F).

MACHINE REQUIREMENTS:

POWER: The 3481/3482 requires single-phase, 50- or 60-Hz electrical power.

VOLTAGE RANGE:

o 3481

- Universal voltage machine: 100-250 V ac

o 3482

- Low voltage machine (US and Canada only): 100-127 V ac

- Universal voltage machine: 100-250 V ac

POWER REQUIREMENT:

- o 3481
 - Universal voltage machine: 0.06 kVA, 0.3-0.6 A
- o 3482
 - Low voltage machine: 0.22 kVA, 1.8 A
 - Universal voltage machine: 0.22 kVA, 1.0-1.8 A

HEAT OUTPUT:

- o 3481: 30 watts (102 Btu/hr)
- o 3482 14-inch color: 70 watts (239 Btu/hr)
- o 3482 15-inch monochrome: 64 watts (219 Btu/hr)

POWER CORD AND POWER PLUG: The 3481/3482 is shipped with a power cord as follows:

- o 2.8 m (9 ft)
- o 1.8 m (6 ft) (Chicago only).

The power cord is shipped with an attached power plug for the power outlet most commonly used in that country. The power cord and plug have been approved for use with the 3481/3482 and meet the appropriate testing laboratory, country, or test house standard.

SYSTEM ATTACHMENT: Through the controller, the 3481/3482 may be attached to the following systems.

Via

System	Attachment	
43XX	3174, 3274	Type A Adapter
937X	3174, 3274	Type A Adapter
308X	3174, 3274	Type A Adapter
3090 (TM)	3174, 3274	Type A Adapter
ES/9000 (TM)	3174, 3274	Type A Adapter
8100 System	3174, 3274	Type A Adapter
System/36	3174	
AS/400 (R)	3174	
470X		Cluster Adapter
937X		Workstation Subsystem Controller
922X		Workstation Subsystem Controller
43X1		Workstation Adapter or Display Printer Adapter (where applicable)

ESTABLISHMENT CONTROLLER REQUIREMENTS: Attachment of the 3481/3482

is made via 3270 wiring. Coaxial cable (as is typically used to attach the 3471, 3472, 3191, 3192, 3178, 3179-1, 3180-1, 3278, or 3279 displays) and twisted pair cable with an approved balun may be used. See the Cable Orders section.

The 3481/3482 can be attached to the IBM 3174 Establishment Controller, similar to the 3471/3472. The 3174 significantly expands 3481/3482 capabilities by providing functions such as split screen, copy from session to session, 3174 calculator, 5250 emulation field exit, extended vital product data, type-ahead, enhanced null/blank processing, and expansion of national language support. In addition, the 3174 offers a broad range of connectivity options such as multiple logical terminal (MLT) support, network management, multi-host support, local format storage (LF), central site control facility (CSCF), Token-Ring attachment, and TCP/IP TELNET support. Refer to the 3174 ESTABLISHMENT CONTROLLER USER GUIDE (GA27-3966) and FUNCTIONAL DESCRIPTION (GA23-0218) for additional information.

The IBM 3481/3482 may be attached to a 3274 Control Unit; however, the 3174 functions described above are not supported. The 3274 and all of its related features and RPQs were withdrawn from marketing in 1988, and are no longer available from IBM. Function support for the 3481/3482 is also limited when attaching to the 3274. Refer to the Limitations section for details.

PREREQUISITES:

- o In Emulation Mode, the IBM 3481/3482 with specify code 9122, 9124, or 9154 must be attached to one of the following:
 - IBM 3174 Model 1L, 1R, 2R, 3R, 11L, 11R, 12L, 12R, 13R, 21L, 21R, 22L, 23R, 51R, 52R, 53R, 61R, 62R, 63R, 81R, 82R, 90R, 91R, or 92R.
 - IBM 3274 Control Unit Model 1A, 1B, 1C, 1D, 21A, 21B, 21C, 21D, 31A, 31C, 31D, 41A, 41C, 41D, 51C, or 61C:
 - Configuration Support A: Microcode release level 15, or higher
 - Configuration Support B: Microcode release level 26, or higher
 - Configuration Support C: Microcode release level 47, or higher

- Configuration Support D: Microcode release level 61, or higher
- Configuration Support P: Any microcode release level
- Configuration Support T: Microcode release level 31, or higher.

NOTE: Refer to the Limitations section for details.

- 937X (Workstation Subsystem Controller).
- 922X (Workstation Subsystem Controller).
- 43X1 (Workstation Adapter or Display Printer Adapter, where applicable).

o In Native Mode, the IBM 3481/3482 with specify code 9122, 9124, or 9154 must be attached to an IBM 3274 Control Unit with Configuration Support D -- Microcode Release 63, or higher. This level of support is also required for changing the layout of the

122-Key Typewriter Keyboard.

o The IBM 3482 with specify code 9131 operates in Native Mode only with the IBM 3174 Establishment Controller.

o The IBM 3481/3482 operates in Native Mode with the 3174 Establishment Controller.

o 3174 Attachment: Licensed Internal Code (LIC) Configuration Support A/S (Release 5 or higher), B, or C is required on the 3174 for host addressable print. Extended vital product data support requires 3174 LIC Configuration Support B (Release 2 or higher) or C.

PROGRAMMING REQUIREMENTS: The IBM 3481/3482 is data-stream compatible with the IBM 3471/3472. All host programs that operate with the IBM 3471/3472 will operate with the IBM 3481/3482 in exactly the same way.

LIMITATIONS:

o The IBM 3274 Control Unit does not support the following functions:

- Split screen, copy from session to session, 3174 calculator function, and 5250 emulation field exit
- Multi-host support
- Host addressable print, fast typematic

- Extended vital product data (VPD), type-ahead, and enhanced null/blank processing
- VPD, APL2, country extended code page (CECP).

o The following NLS/functions are available on the 3274 only if appropriate RPQs are installed. The 3274 RPQs are no longer available for new installation.

- NLS support for Arabic, Hebrew, Icelandic, and Greek.
- Multiple logical session support is available only on 3274s that have Configuration Support D, Release 64.2 microcode (or higher), and RPQ #8X0002 previously installed.
- The IBM Enhanced Keyboard is available only on 3274s that have Configuration Support D, Release 65 microcode (or higher), and RPQ #7L0825 previously installed.

NOTE: Replacement 3274 microcode is still available from IBM. A service charge applies unless the 3274 is covered by an IBM maintenance agreement.

o The following are not available:

- Graphics capability. (The IBM 3472-MCX will continue to be IBM's product of choice for graphics capability.)
- Black on white models are available in IBM EMEA countries only.
- The IBM 3192-L will continue to be IBM's product of choice for the Light Pen.
- When the magnetic badge slot reader is attached to the IBM 3481/3482, no secure header support is available.

o The following should be taken into consideration:

- When selecting the 122-Key Keyboard:
 - Available in Native or Emulation Mode.
 - If the keyboard is to be modified, the 3174 (any level) or the 3274 Configuration Support D release level 63, or higher, is required.
- IBM Enhanced Keyboard
 - Available in Native Mode only.
 - If the keyboard is to be modified, IBM 3174 Configuration Support A/S (Release 2 or higher), B, or C is required.

PLANNING INFORMATION

CUSTOMER RESPONSIBILITIES: The customer should have on hand, or should order, the IBM INFOWINDOW II 3481 AND 3482 INTRODUCTION AND INSTALLATION PLANNING GUIDE (GA18-7093) for site planning and preparation work.

Model changes are not field-installable.

Other responsibilities include:

- o Adequate site, system, and other vendor preparation.
- o Receipt at the customer's receiving dock, unpacking, and placement of the unit.
- o Physical setup, connection of cables in the customer access area, switch settings, and checkout.
- o Contacting IBM service for attachment of the 3481/3482 communications cable to an on-site serviced IBM control unit where a customer access area is not provided. This service will be provided at current hourly rates.
- o Setting up the display and printer using setup modes.
- o Keyboard modifications. Customers must remove and save customer-owned keycaps prior to returning a keyboard for exchange. A standard-layout keyboard will be given to the customer.
- o Determination of the required number of spares.

The number of spare units is dependent upon the number of 3481/3482 units the customer has installed, application requirements, physical locations, and layout. Determination of the required number of spares is a customer responsibility.

The customer should test spares for correct operation before putting them on the shelf. Spares can be ordered as a complete machine or as individual elements.

- o Returning security-lock keys to IBM if any exchange of the workstation's logic element is required. (If the keys are not returned to IBM, the customer will be charged for the replacement of the security keys and locks on a time-and-material basis.)
- o Safeguarding the two security-lock keys provided with the display. It is recommended that the customer remove one of the keys when the display is installed for use as a master. If a display user loses the other, the customer can have a duplicate

made from the master. A set of 10 blanks is available as an accessory (P/N 6238059). If both keys are lost, call IBM at 1-800-IBM-SERV. Key and lock replacement service is available on an hourly-service basis.

CABLE ORDERS: Attachment to the 3X74 is via IBM shielded twisted pair, coaxial cable, or IBM-approved unshielded twisted pair cable. Refer to the IBM/ROLM 3270 COAX-TO-TWISTED-PAIR ADAPTER MANUAL (GA27-3722) and to the 3270 INFORMATION DISPLAY SYSTEM SITE PLANNING MANUAL (GA23-0213) for proper identification, installation, and application of cable and associated accessories. For pricing and ordering information, refer to the appropriate IBM Direct catalog.

Coaxial Cable -- For proper identification, installation, and application of cable and associated accessories, refer to the IBM 3270 INSTALLATION MANUAL -- PHYSICAL PLANNING (GA27-2787).

INSTALLABILITY: The IBM 3481/3482 is a customer setup (CSU) machine. Setup instructions are included with each machine in the IBM INFOWINDOW II 3481 USER'S GUIDE or IBM INFOWINDOW II 3482 USER'S GUIDE (GA18-7094 or GA18-7095).

PACKAGING: The 3481/3482 is shipped in a single shipping carton. If lift/tilt/swivel is selected, two cartons will be shipped.

Keys: The 3481/3482 is shipped with two security keys. If keys are lost, the logic element should be sent to IBM. Contact 1-800-IBM-SERV. Replacement service for keys is available on an hourly-service basis. Most locksmiths or hardware stores can provide additional or replacement keys.

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

IBM Corporation
IBM Telemarketing Operations
One Culver Road
Dayton, NJ 08810

SECURITY, AUDITABILITY AND CONTROL

Data security functions provided with the IBM 3481/3482 are:

- o Non-displayed fields (for example, for keying of passwords)

o Security keylock (provides a means of physically locking the display to prevent unauthorized use).

User management is responsible for implementation of these functions.

If sensitive data is sent over external communication facilities, user management may wish to pursue the application of cryptography. For more information on data security controls, refer to DATA SECURITY CONTROLS AND PROCEDURES (G320-5649).

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

TERMS AND CONDITIONS

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

The announced product is included in Category A, Discount Group 2, of the Workstations and Related I/O Exhibit (WKS2).

Customers with an existing volume discount commitment in Category A of the exhibit may order the announced product as additional quantities to, or as direct substitutes for, any other machines in the same category, subject to availability.

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

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

WARRANTY PERIOD:

MACHINE		WARRANTY
TYPE	MODEL	PERIOD
3481	BA1	1 Year
	BG1	1 Year
	BA3	3 Years
	BG3	3 Years

3482

HA1	1 Year
HC1	1 Year
HG1	1 Year
HA3	3 Years
HC3	3 Years
HG3	3 Years

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

MAINTENANCE SERVICE: IOR.

IBM HOURLY SERVICE RATE CLASSIFICATION: One. IBM warranty service, maintenance service, or hourly service may be obtained by calling 800-IBM-SERV. IBM hourly service is available at the applicable rate and terms, including element exchange price, if applicable.

VOLUME MAINTENANCE OPTION: The 3481/3482 is an eligible machine for the Volume Maintenance Option of the IBM Customer Agreement.

MID-RANGE SYSTEM OPTION: The 3481/3482 is an eligible machine for the Mid-Range System Option of the IBM Customer Agreement. A revised exhibit will be available at a later date.

ELIGIBLE TYPE	DISCOUNT	
	THREE-YEAR	FIVE-YEAR
3481	12%	17%
3482	12%	17%

CORPORATE SERVICE OPTION: The 3481/3482 is an eligible machine for the Corporate Service Option of the IBM Customer Agreement. A revised exhibit will be available at a later date.

OPTION	DISCOUNT	
	THREE-YEAR	FIVE-YEAR
Network	15%	20%
System	15%	20%

EXTENDED MAINTENANCE OPTION: The 3481/3482 is an eligible machine for the Extended Maintenance Option of the IBM Customer Agreement. A revised exhibit will be available at a later date.

PRODUCT AVAILABILITY STATUS: New product available.

CUSTOMER SETUP: Yes.

LICENSED INTERNAL CODE: No.

EDUCATIONAL ALLOWANCE: A 15% educational allowance is available to qualifying institutions in accordance with the Educational Allowance

Amendment. The educational allowance may not be added to any other discount or allowance.

CHARGES

PRODUCT CHARGES

Description	Machine Type	Model Number	1-Year Warranty Charge P(IOR)	Annual Minimum Maintenance
InfoWindow II	3481	BA1	\$ 995	\$78
InfoWindow II	3481	BG1	995	78
InfoWindow II	3482	HA1	1,295	78
InfoWindow II	3482	HG1	1,295	78
InfoWindow II	3482	HC1	1,495	96

Description	Machine Type	Model Number	3-Year Warranty Charge P(IOR)	Annual Minimum Maintenance
InfoWindow II	3481	BA3	\$1,095	\$78
InfoWindow II	3481	BG3	1,095	78
InfoWindow II	3482	HA3	1,395	78
InfoWindow II	3482	HG3	1,395	78
InfoWindow II	3482	HC3	1,635	96

Feature Description	Machine Type	Feature Number	Purchase Price	Charge (IOR)
3481/3482 Tilt/Swivel Stand	3481/3482	9201	NC	NC
3482-HCx Lift/Tilt/Swivel Stand	3482	5801	\$95	NC
3482-HAx/HGx Lift/Tilt/Swivel Stand	3482	5802	95	NC
3481 Lift/Tilt/Swivel Stand	3481	5803	95	NC

NC No charge.

NOTE: For products to be installed in Chicago only, specify no-charge

(with initial order) feature number 9986 for a six-foot power cord (P/N 6952298).

MACHINE ELEMENT CHARGES

Description	Part Number	Purchase Price
3481-BAx, Video, 14-Inch Amber-Gold	06G8240	\$748
3481-BGx, Video, 14-Inch Green	06G8230	748
3482-HAx, Video, 15-Inch Amber-Gold	06G5320	353
3482-HGx, Video, 15-Inch Green	06G5310	353
3482-HCx, Video, 14-Inch Color	07G8611	568
3482 Logic Unit	06G5300	695
122-Key Typewriter Keyboard	1394801	#
122-Key Data Entry Keyboard	35G4730	\$227
IBM Enhanced Keyboard	1394802	#
122-Key Typewriter Keyboard/APL2	1394806	#
Power Cord, 9 Feet	6952297	#
Power Cord - Chicago, 6 Feet	6952298	#
3481/3482, Tilt/Swivel Stand	23F1841	#
3482-HCx, Lift/Tilt/Swivel Stand	64F9703	#
3482-HAx/HGx, Lift/Tilt/Swivel Stand	64F9704	#
3481, Lift/Tilt Swivel Stand	06G9640	\$115
Printer Cable	1525612	#

Price previously announced.

ACCESSORIES

Description	Part Number	Purchase Price
Clear Lens Keycaps (60), Paper Inserts (60/60), & Tool	6341707	#
Spare Key Blanks	6238059	#
IBM KeyGuard*	32G2684	\$80
IBM KeyGuard**	32G2687	80
Demonstration Cartridge	35G1092	80

Price previously announced.

* 122-Key Keyboard.

** IBM Enhanced Keyboard.

