

AS/400e



Safety Information

Version 4

AS/400e



Safety Information

Version 4

Note

Before using this information and the product it supports, be sure to read the general information in “Notices” on page v.

Third Edition (July 2000)

This edition replaces SA41-5139-01. This edition applies only to reduced instruction set computer (RISC) systems.

© Copyright International Business Machines Corporation 1997, 2000. All rights reserved.

US Government Users Restricted Rights – Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

Contents

Notices	v
Trademarks	vi
About Safety Information (SA41-5139)	vii
Who Should Read This Book	vii
Prerequisite and related information	vii
Information available on the World Wide Web	vii
How to send your comments	vii
Safety Notices	1
Data Integrity and Verification	1

Danger Notices	1
Caution Notices	4
Laser Safety Information	8
Laser Safety Information (for IBM Fiber Optic Link Products).	9
Product Recycling and Disposal	9
Battery Return Program	10
Environmental Design.	10
Readers' Comments — We'd Like to Hear from You	11

Notices

This information was developed for products and services offered in the U.S.A. IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
500 Columbus Avenue
Thornwood, NY 10594
U.S.A.

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

IBM World Trade Asia Corporation
Licensing
2-31 Roppongi 3-chome, Minato-ku
Tokyo 106, Japan

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law:

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

This information is for planning purposes only. The information herein is subject to change before the products described become available.

The drawings and specifications contained herein shall not be reproduced in whole or in part without the written permission of IBM.

IBM has prepared this publication for use by customer personnel for operating and planning for the specific machines indicated. IBM makes no representations that it is suitable for any other purpose.

Trademarks

The following terms are trademarks of the IBM Corporation in the United States or other countries or both:

Application System/400
AS/400
AS/400e
IBM
Operating System/400
OS/400
400

Other company, product, and service names may be trademarks or service marks of others.

About Safety Information (SA41-5139)

This book contains safety notices from the AS/400 publications. The safety notices included danger notices, caution notices, and laser safety information.

Danger Notice Definition

A special note in the text that calls attention to a potentially lethal or extremely hazardous situation.

Caution Notice Definition

A special note in the text that calls attention to a potentially hazardous situation.

Who Should Read This Book

Anyone who plans, installs, operates, or services the AS/400 system should be familiar with and understand the safety notices contained in this book.

Prerequisite and related information

For information about other AS/400 publications (except Advanced 36), see either of the following:

- The AS/400 online library is available on the World Wide Web at the following uniform resource locator (URL) address:
<http://as400bks.rochester.ibm.com/>

Information available on the World Wide Web

In addition to the AS/400 online library on the World Wide Web, you can access other information from the AS/400 Technical Studio at the following URL address:
<http://www.as400.ibm.com/techstudio>

How to send your comments

Your feedback is important in helping to provide the most accurate and high-quality information. If you have any comments about this book or any other AS/400 documentation, fill out the readers' comment form at the back of this book.

- If you prefer to send comments by mail, use the readers' comment form with the address that is printed on the back. If you are mailing a readers' comment form from a country other than the United States, you can give the form to the local IBM branch office or IBM representative for postage-paid mailing.
- If you prefer to send comments by FAX, use either of the following numbers:
 - United States and Canada: 1-800-937-3430
 - Other countries: 1-507-253-5192
- If you prefer to send comments electronically, use this network ID:
 - IBMMAIL, to IBMMAIL(USIB56RZ)
 - IDCLERK@RCHVMW2.VNET.IBM.COM

Be sure to include the following:

- The name of the book.

- The publication number of the book.
- The page number or topic to which your comment applies.

Safety Notices

Each safety notice contains a reference number (RSFTxxxx). You can use this reference number to check the safety notice in this language.

Data Integrity and Verification

IBM computer systems contain mechanisms designed to reduce the possibility of undetected data corruption or loss. This risk, however, cannot be eliminated. Users who experience unplanned outages, system failures, power fluctuations or outages, or component failures must verify the accuracy of operations performed and data saved or transmitted by the system at or near the time of the outage or failure. In addition, users must establish procedures to ensure that there is independent data verification before relying on such data in sensitive or critical operations. Users should periodically check the IBM support websites for updated information and fixes applicable to the system and related software.

Danger Notices

DANGER

To prevent a possible electrical shock during an electrical storm, do not connect or disconnect cables or station protectors for communications lines, display stations, printers, or telephones. (RSFTD003)

DANGER

To prevent a possible electrical shock from touching two surfaces with different electrical grounds, use one hand, when possible, to connect or disconnect signal cables. (RSFTD004)

DANGER

Dangerous voltage being measured. (RSFTD005)

DANGER

To prevent a possible electrical shock, do not use the port tester during electrical storms. (RSFTD006)

DANGER

Safety glasses must be worn when removing the straps from shipping containers. (RSFTD008)

DANGER

Up to 240 V ac is present at the power module connectors when the main power cord is connected to a power source. (RSFTD010)

DANGER

Do not run the EIA-422 or the EIA-232 direct attach cable outside, either above or below the ground. Doing this could cause a safety hazard. (RSFTD011)

DANGER

To prevent a possible electrical shock, disconnect the power cord from the electrical outlet before relocating the system. (RSFTD015)

DANGER

To prevent a possible electrical shock when connecting cables, connector shields must be placed on both ends of all cables attaching to workstation attachments. (RSFTD016)

DANGER

Do not disconnect either end of the green and yellow safety ground jumper wire at the bottom of the power control compartment (PCC). (RSFTD017)

DANGER

Ensure that you complete the following step. An electrical outlet that is not correctly wired could place hazardous voltage on the metal parts of the system or the products that attach to the system. (RSFTD018)

DANGER

If a disconnected or wrongly connected cable is found in the next step, do not attempt to connect it until you power off and unplug the console (and all other devices connected to it). (RSFTD020)

DANGER

An electrical outlet that is not correctly wired could place hazardous voltage on metal parts of the system or the products that attach to the system. It is the customer's responsibility to ensure that the outlet is correctly wired and grounded to prevent an electrical shock. (RSFTD201)

DANGER

To prevent a possible electrical shock when installing the system, ensure that the power cords for all devices are unplugged before installing signal cables. (RSFTD202)

DANGER

To prevent a possible electrical shock when adding or removing any devices to or from the system, ensure that the power cords for those devices are unplugged before the signal cables are connected or disconnected. If possible, disconnect all power cords from the existing system before you add or remove a device. (RSFTD203)

DANGER

To prevent a possible electrical shock when installing the device, ensure that the power cord for that device is unplugged before installing signal cables. (RSFTD204)

DANGER

To prevent a possible electrical shock when adding the device to a system, disconnect all power cords, if possible, from the existing system before connecting the signal cable to that device. (RSFTD205)

DANGER

To prevent power from switching on automatically during service procedures, set the keylock switch on the system unit control panel to the Manual or Secure position. (RSFTD206)

DANGER

Do not perform this procedure during an electrical storm. (RSFTD207)

DANGER

Do not power on the Power Control Compartment (PCC) unless it is installed in the rack frame.

The PCC does not contain any field serviceable parts. The PCC is sealed for your protection. Do not attempt to remove the cover from the PCC. (RSFTD208)

DANGER

Use only test probes to touch the housing of the outlet until instructed otherwise. (RSFTD209)

DANGER

Do not separate the connectors with unprotected hands. Either wrap the connectors with electrical tape or wear rubber gloves. (RSFTD210)

DANGER

To prevent power from switching on automatically during service procedures, select manual or secure mode on the system unit control panel or disconnect the cables that connect to J15 and J16 on the frame being serviced. (RSFTD211)

DANGER

To prevent power from switching on automatically during service procedures, select manual mode on the system unit control panel. (RSFTD212)

DANGER

Use caution when installing or modifying telephone lines. Disconnect the lines at the network interface before working with telephone wires that are not insulated. Never install telephone jacks that are not waterproof in wet locations. Do not install or modify telephone lines or use a telephone (other than a cordless type) during an electrical storm. Do not use a telephone to report a gas leak in the area of the leak. (RSFTD213)

DANGER

To prevent the system from powering on automatically during service procedures, select Manual or Secure mode on the system unit control panel. (RSFTD214)

DANGER

To prevent a possible electrical shock, disconnect the power cord from the electrical outlet before opening the unit. (RSFTD215)

DANGER

To reduce the risk of electrical shock use only AC power sources approved by IBM. (RSFTD216)

DANGER

Do not attempt to open the covers of the power supply. Power supplies are not serviceable and are to be replaced as a unit. (RSFTD217)

Caution Notices

CAUTION:

If you detect smoke, excessive heat, or unusual smells coming from your personal computer, immediately set the system unit switch to Off, disconnect the power cord, and see your system operator. (RSFTC055)

CAUTION:

Do not lift or carry the base power supply only by the handle. The handle will not give support to the weight of the base power supply. (RSFTC060)

CAUTION:

Do not charge the battery again, open the battery pack, or put the battery in a place hotter than 100 degrees Celsius (212 degrees Fahrenheit). (RSFTC062)

CAUTION:

These instructions describe how to install a rack stabilizer to the bottom front of each rack to prevent the rack from falling over when you slide or pull out the system units. Do not attempt to slide out or install any system units until the stabilizer is correctly installed. Use caution when moving the rack and its system units. (RSFTC063)

CAUTION:

If the system is on a raised floor, be careful around the holes in the floor. (RSFTC065)

CAUTION:

Do not plug the power cable into the power outlet at this time. (RSFTC075)

CAUTION:

Be careful when removing or installing this part or unit. This part or unit is heavy, but has a weight smaller than 18 kilograms (39.7 pounds). (RSFTC201)

CAUTION:

Your IBM equipment is heavy. Never attempt to lift or move any system equipment without help. (RSFTC202)

CAUTION:

Be careful when moving the boxes in the shipping group. Some boxes are heavy, but none have a weight more than 18 kilograms (39.7 pounds). (RSFTC203)

CAUTION:

The weight of this part or unit is between 18 and 32 kilograms (39.7 and 70.5 pounds). It takes two persons to safely lift this part or unit. (RSFTC204)

CAUTION:

The weight of this part or unit is between 32 and 55 kilograms (70.5 and 121.2 pounds). It takes three persons to safely lift this part or unit. (RSFTC205)

CAUTION:

The weight of this part or unit is more than 55 kilograms (121.2 pounds). It takes specially trained persons with a lifting device to safely lift this part or unit. (RSFTC206)

CAUTION:

If this unit or part is not held in place while being removed, it may fall out of the unit or toward you. (RSFTC208)

CAUTION:

Hold the card enclosure while installing or disconnecting the control panel cable to prevent the card enclosure from falling out of the unit or toward you. (RSFTC209)

CAUTION:

To reduce the risk of injury, install stabilizer feet on bottom of base frame before attaching this unit. (RSFTC212)

CAUTION:

Do not reconnect the mainline ac power cable until instructed to do so. (RSFTC213)

CAUTION:

Telecommunications Statement: This unit contains over-voltage circuits between the ac power outlet and the unit. These circuits meet the standard limits described in International Electrical Commission (IEC) 664, installation category II. It is the customer's responsibility to ensure that the power outlet meets the standards of IEC 664, installation category II. (RSFTC214)

CAUTION:

Do not use the handles on the top of the battery backup now. (RSFTC215)

CAUTION:

Ensure that the frame does not fall over during this step. (RSFTC216)

CAUTION:

When installing the card enclosure, slide it at least half-way into the rack before you let go of it, or it may fall out of the rack. (RSFTC217)

CAUTION:

This unit may fall toward you if you do not hold it with both hands. Hold the handle provided with one hand and place your other hand under the unit. (RSFTC218)

CAUTION:

When installing this unit, slide it completely into the rack before you let go of it. (RSFTC219)

CAUTION:

Do not power on the rack unless this wire is correctly installed. (RSFTC220)

CAUTION:

Do not power on the rack if the reading is more than 0.1 ohm. (RSFTC221)

CAUTION:

Ensure that all rack-mounted units are fastened in the rack frame. Do not extend or exchange any rack-mounted units when the stabilizer is not installed. (RSFTC222)

CAUTION:

Ensure that all electrical outlets to be used are correctly grounded to a 3-wire outlet. (RSFTC223)

CAUTION:

When the unit is extended, its weight can turn over a rack that is not steady. Before you pull the unit out of the rack, ensure that a rack stabilizer is attached to the bottom front of the rack.

Do not pull out more than one unit at a time. The rack can turn over if you pull out more than one unit at a time. (RSFTC224)

CAUTION:

The battery is a lead-acid battery. To avoid possible explosion, do not burn. Exchange only with the IBM-approved part. Recycle or discard the battery as instructed by local regulations.

In the United States, IBM has a process for the collection of this battery. For information, call 1-800-426-4333. Have the IBM part number for the battery unit available when you call. (RSFTC225)

CAUTION:

The battery is a nickel-cadmium battery. To avoid possible explosion, do not burn. Exchange only with the IBM-approved part. Recycle or discard the battery as instructed by local regulations.

In the United States, IBM has a process for the collection of this battery. For information, call 1-800-426-4333. Have the IBM part number for the battery unit available when you call. (RSFTC226)

CAUTION:

The battery is a lithium battery. To avoid possible explosion, do not burn or charge the battery. Exchange only with the IBM-approved part. Discard the battery as instructed by local regulations. (RSFTC227)

CAUTION:

The battery is an alkaline battery. To avoid possible explosion, do not burn or charge the battery. Discard the battery as instructed by local regulations. (RSFTC229)

CAUTION:

The battery is a carbon-zinc battery. To avoid possible explosion, do not burn or charge the battery. Exchange only with the IBM-approved part. Discard the battery as instructed by local regulations. (RSFTC231)

CAUTION:

This product contains a lithium battery. To avoid possible explosion, do not burn, exchange, or charge the battery. Discard the battery as instructed by local regulations for lithium batteries. (RSFTC232)

CAUTION:

This card assembly contains a lithium battery. To avoid possible explosion, do not burn, exchange, or charge the battery. Discard the card assembly as instructed by local regulations for lithium batteries. (RSFTC233)

CAUTION:

The circuit card contains lead solder. To avoid the release of lead (Pb) into the environment, do not burn. Discard the circuit card as instructed by local regulations. (RSFTC234)

CAUTION:

This assembly has a circuit card that contains lead solder. To avoid the release of lead (Pb) into the environment, do not burn. Discard the assembly as instructed by local regulations. (RSFTC235)

CAUTION:

The optical link card contains a laser. To avoid the release of toxic substances into the environment, do not burn. Discard the optical link as instructed by local regulations. (RSFTC236)

CAUTION:

The bar-code reader contains a Class II laser component. Only trained service personnel may repair the bar-code reader. (RSFTC237)

CAUTION:

Do not place a highly reflective surface between either the picker assembly and the tape cartridge magazines or between the picker assembly and the tape drives. This may cause damage to your eyes. (RSFTC238)

CAUTION:

If the automatic lock on the front door is not functioning and the door is open, do not look directly at the laser beam. Staring at the beam may cause damage to your eyes. (RSFTC239)

CAUTION:

The battery is a lithium battery. Only trained service personnel may replace this battery using the instructions in the Problem Analysis, Repair, and Parts service manual. To avoid possible explosion, do not burn or charge the battery. Exchange only with the IBM-approved part. Discard the battery as instructed by local regulations. (RSFTC241)

CAUTION:

Do not remove the covers of the unit. An invisible laser beam may be present. The repair of this unit should be performed by trained service personnel only. (RSFTC242)

CAUTION:

All IBM laser modules are designed so that there is never any human access to laser radiation above a class 1 level during normal operation, user maintenance, or prescribed service conditions. Data processing environments can contain equipment transmitting on system links with laser modules that operate at greater than class 1 power levels. For this reason, never look into the end of an optical fiber cable or open receptacle. Only trained service personnel should perform the inspection or repair of optical fiber cable assemblies and receptacles. (RSFTC243)

CAUTION:

The battery is a nickel metal hydride battery. To avoid possible explosion, do not burn. Exchange only with the IBM-approved part. Recycle or discard the battery as instructed by local regulations.

In the United States, IBM has a process for the collection of this battery. For information, call 1-800-426-4333. Have the IBM part number for the battery unit available when you call. (RSFTC244)

Laser Safety Information

CAUTION:

This product may contain a CD-ROM which is a class 1 laser product. (RSFTC240)

Laser Safety Information (for IBM Fiber Optic Link Products)

CAUTION:

This system may contain laser products called the IBM Optical Link Module (OLM), Serial Optical Converter (SOC), or Optical Link Card (OLC). In the United States, these fiber optic links are certified by IBM as Class I laser products that conform to the requirements contained in the Department of Health and Human Services (DHHS) regulation 21 CFR Subchapter J. Internationally, these fiber optic links are certified as Class 1 laser products that conform to the requirements contained in the International Electrotechnical Commission (IEC) standard 825-1 (1993), the CENELEC (European Committee for Electrotechnical Standardization) European Norm standard EN60825-1 (1994), and the Verband Deutscher Elektrotechniker (VDE) standard 0837 (1986). The German testing institute, VDE, has assigned certificate registration number 3642 to all IBM OLM, SOC, and OLC laser products.

The fiber optic links incorporate laser diodes that are either of the gallium aluminum arsenide (GaAlAs) type that emits in the wavelength range of 770 to 860 nanometers or of the indium gallium arsenide phosphide (InGaAsP) type that emits in the wavelength range of 1270 to 1355 nanometers. These fiber optic links incorporate discrete laser diodes that are Class 3B laser products with a rating of approximately 5.0 milliwatts peak power. Once the lasers are assembled into the OLM, SOC, or OLC, the automatic laser control safety system prevents laser emissions from exceeding Class 1 limits during both operation and service. There are no user maintenance operations or adjustments to be performed on IBM OLM, SOC, or OLC products. Class 1 laser products are not considered to be hazardous under any conditions.

The fiber optic links are designed and certified for use in applications with point-to-point optical links only. Use of these products with multiple input or multiple output links (for example, star coupler or fiber splitter) is not compatible with the OLM, SOC, or OLC design and function. In addition, the fiber optic link products must be connected only to other IBM OLM, SOC, or OLC (of the same model) or a compatible laser product. This is especially true for those models that contain both the open link detection safety system called Open Fiber Control (OFC) and the laser power control safety system. (All OLM, SOC, and OLC models contain the laser power control safety system. All OLC models contain OFC, all SOC model have No-OFC, but some OLM models are available with OFC and some have No-OFC.)

These requirements are necessary for the correct operation of the IBM OLM, SOC, and OLC products in any optical communication system. Failure to follow these restrictions could result in the system not operating correctly and the creation of points of access that emit laser radiation above the Class 1 limit specified by either the IEC 825-1 (1993) standard internationally or the DHHS regulation 21 CFR Sub J in the United States. (RSFTC211)

Product Recycling and Disposal

Components of the system, such as structural parts and circuit cards, can be recycled where recycling facilities exist. IBM does not currently collect and recycle used IBM products from customers in the United States other than those products that are involved in trade-in programs. Companies are available to disassemble, reutilize, recycle, or dispose of electronic products. Contact an IBM account representative for more information.

The system unit contains batteries and circuit boards with lead solder. Before you dispose of this unit, these batteries and circuit boards must be removed and discarded according to local regulations or recycled where facilities exist. This book contains specific information on each battery type where applicable.

Battery Return Program

In the United States, IBM has established a collection process for reuse, recycling, or proper disposal of used IBM batteries and battery packs. For information on proper disposal of the batteries in this unit, please contact IBM at 1-800-426-4333. Please have the IBM part number that is listed on the battery available when you make your call. For information on battery disposal outside the United States, contact your local waste disposal facility.

Environmental Design

The environmental efforts that have gone into the design of the system signify IBM's commitment to improve the quality of its products and processes. Some of these accomplishments include the elimination of the use of Class I ozone-depleting chemicals in the manufacturing process, reductions in manufacturing wastes, and increased product energy efficiency. For more information, contact an IBM account representative.

Readers' Comments — We'd Like to Hear from You

AS/400e
Safety Information

Publication No. SA41-5139-02

Overall, how satisfied are you with the information in this book?

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
Overall satisfaction	<input type="checkbox"/>				

How satisfied are you that the information in this book is:

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
Accurate	<input type="checkbox"/>				
Complete	<input type="checkbox"/>				
Easy to find	<input type="checkbox"/>				
Easy to understand	<input type="checkbox"/>				
Well organized	<input type="checkbox"/>				
Applicable to your tasks	<input type="checkbox"/>				

Please tell us how we can improve this book:

Thank you for your responses. May we contact you? Yes No

When you send comments to IBM, you grant IBM a nonexclusive right to use or distribute your comments in any way it believes appropriate without incurring any obligation to you.

Name

Address

Company or Organization

Phone No.



Fold and Tape

Please do not staple

Fold and Tape



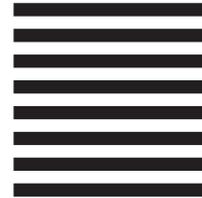
NO POSTAGE
NECESSARY
IF MAILED IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 40 ARMONK, NEW YORK

POSTAGE WILL BE PAID BY ADDRESSEE

IBM CORPORATION
ATTN DEPT 245
3605 HWY 52 N
ROCHESTER MN 55901-7829



Fold and Tape

Please do not staple

Fold and Tape



Printed in the United States of America
on recycled paper containing 10%
recovered post-consumer fiber.

SA41-5139-02

