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User Manual



NetStrada™ 3200

GETTING STARTED

ENGLISH

PER INIZIARE

ITALIANO

MISE EN ROUTE

FRANÇAIS

ERSTE SCHRITTE

DEUTSCH

PARA EMPEZAR

ESPAÑOL

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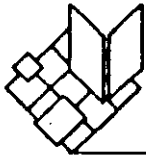
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STARTING OUT...

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What does this Guide Tell You?

This guide describes the installation procedures you need to follow to set-up your Server machine.

This manual constitutes the **Printed** part of the overall documentation and guides you through the following phases:

- System installation
- Identification of the Starter Kit components
- Start-up of the *Orchestra* software

Appendix A gives information on safety regulations and fundamental technical data. Should a problem arise following installation, read Appendix B, which contains a Troubleshooting guide that provides solutions to most common problems.

The **on-line** documentation is on the *Orchestra* CD-ROM which is provided with your system.

Who is this Guide Aimed At?

This guide is aimed for users who need to install the machine.

The guide is aimed at all levels of technical competence.

Editorial Conventions

The following editorial conventions are used in this guide:



Associated with a procedure that should be carried out step by step.



Means that the subject dealt with is described in more detail in the guide specified.



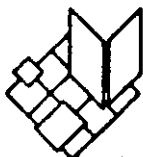
Means that the subject dealt with is described in more detail in the on-line *Hardware Advanced Guide*.



Associated with particularly important information, or information that is useful in some circumstances.



Associated with procedures or events to which you should pay particular attention, as incorrect execution could involve a risk to the product or to yourself.



1. INSTALLING THE SYSTEM

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This chapter contains instructions about installing your machine. You will find information on:

- Installing the machine
- Connecting basic system components



Because of the variety of equipment that can be connected to your system, the figures provided in the procedures in this chapter may not exactly match your equipment. Refer to the documentation provided with your equipment to verify that connections to a device are correct.

General

Unpacking the System

The following components are included in the packaging:



The system module



The mouse

The keyboard and monitor are packed separately.

These components and their connecting cables are packed in shaped foam shells within shipping cartons. As you unpack the system, verify that you have all of the components required.

You might find it useful to keep the packing material, in case you need to transport your system to another location.

The kit also comprises:

- The *Getting Started* manual
- The *Computer Test* diskette
- The *Orchestra* CD-ROM



If you ordered optional devices to be installed on your machine at the factory you will also find diskettes containing the device drivers plus the documentation for the options in the box.

Cleaning the Components

To clean the plastic parts of your system (base module, keyboard, printer, video,...) turn off and/or disconnect each component from the power outlet and use a damp cloth, avoiding the use of corrosive substances such as solvents, alcohol, petrol and abrasive agents.

Power and Grounding Requirements

The system uses nominal input voltages of 110 V AC or 220 V AC from single-phase power systems which have a grounded neutral conductor. To reduce the risk of electrical shock and damage to the system, do not plug the system into any other type of power system. Contact your facilities manager or call in a qualified electrician if you are not sure what type of power is supplied to your building. In planning where to place your system, remember that any peripheral equipment (such as a printer or external modem) will require additional power outlets.

Installing the Floor Standing Model

Read the following sections carefully and carry out any of the operations that may be necessary, before installing your system.



You should also refer to Appendix, A *Technical Data and Safety Regulations*.

Choosing a Site for Your Computer

Selecting a Suitable Site for your System

Before you unpack the components that make up your system, you should determine where the system will be installed. This process involves evaluating the site to determine whether it is appropriate in terms of space, power, environment, and cabling requirements. This is especially true if you intend to connect your system to an Ethernet local-area network. To connect the system to an Ethernet network, an Ethernet cable must be installed at or near the site of your system and you must have a transceiver cable to connect the system to the network. You should consult with your network manager or administrator about the availability of an Ethernet transceiver cable for your system.



For the computer to work properly and to avoid risks for the user, the work place in which it is installed must meet the following environmental and electrical requirements.

Electrical Requirements

The power outlet must be grounded. Make sure there is enough space between the power outlet and the system module, so that you can easily disconnect the power cable in case of emergencies. The power ON/OFF switch is used for operating purposes only and does not cut off the computer's power supply.

The electrical line must be free of interference. The most common sources of interference are:

- Fans and air conditioners
- Large photocopiers
- Radio or television transmitters and signal generators in general
- High-frequency safety devices

Small calculators and other office equipment may safely be connected to the same line.

Environmental Requirements

The place where the computer is to be installed must be **clean and dust-free**. Ensure that the **temperature and humidity levels are right**. Do not put your computer next to a radiator or a window.

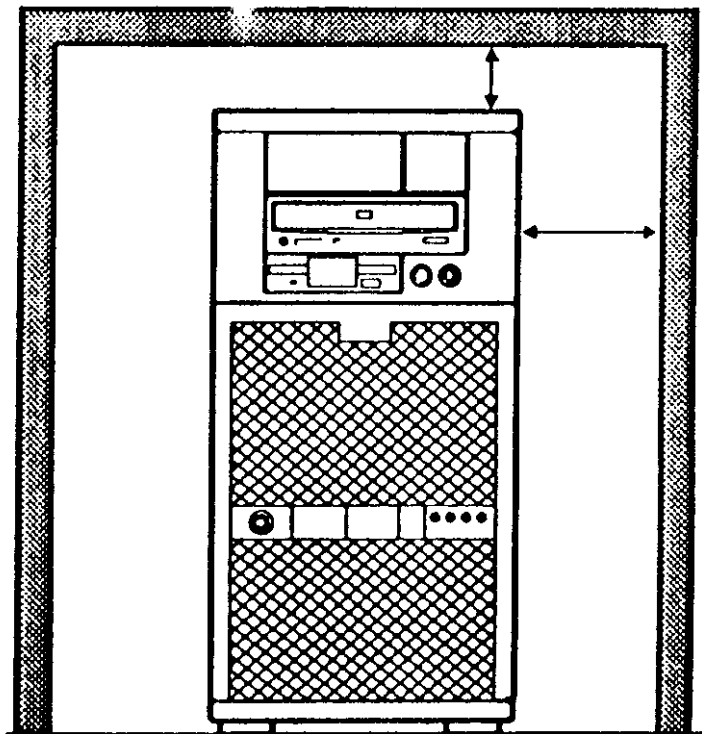
Choose a well-ventilated site for your computer. The computer has two air-cooled fans, one at the front and one at the back, which prevent the circuits and components from overheating. It is therefore important to check that the ventilation grids are not obstructed.



See Appendix A for details of the technical characteristics and environmental requirements of your computer.

Space and Access

It is advisable both during and after installation, to leave enough space in front and at the back of the system for ventilation and access to cables.



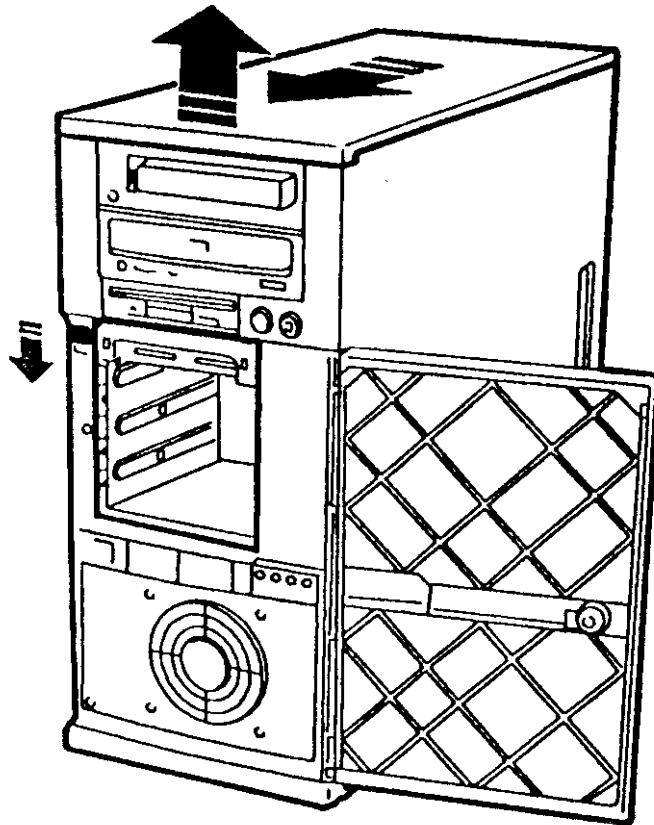
Installing the Rack-mountable Model

-  The "Rack-mountable" model of the system can be obtained from the "Floor Standing" model by installing a special kit, available on customer order.

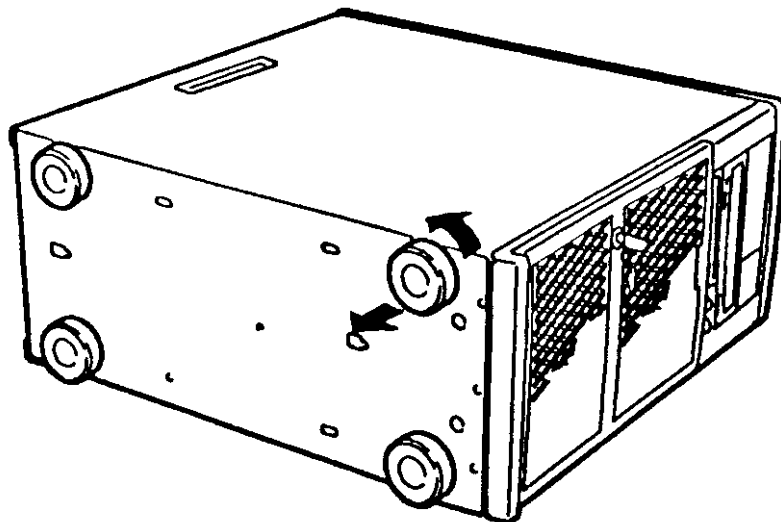
Installing the Runners on the System Module

-  To install the runners on the system module:

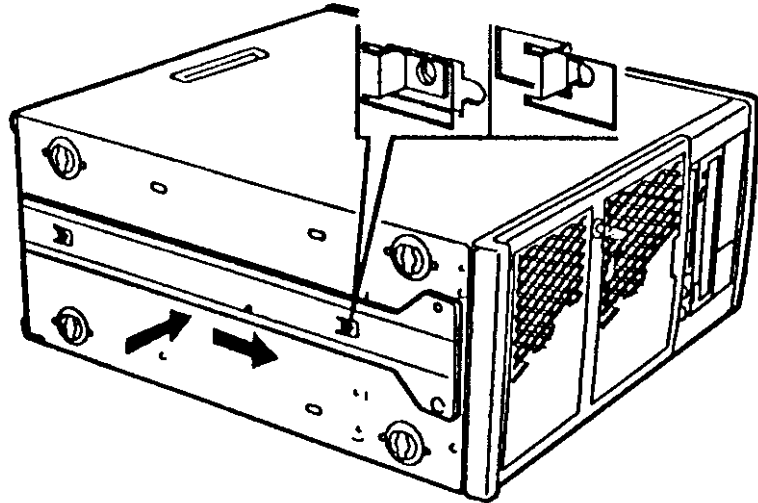
1. Open the front panel, release the top cover using the catch shown in the figure and then remove the top cover completely by pulling it forwards and then lifting it up.



2. Place the system module on its right side, turn the base supports and pull them out as shown in the figure.

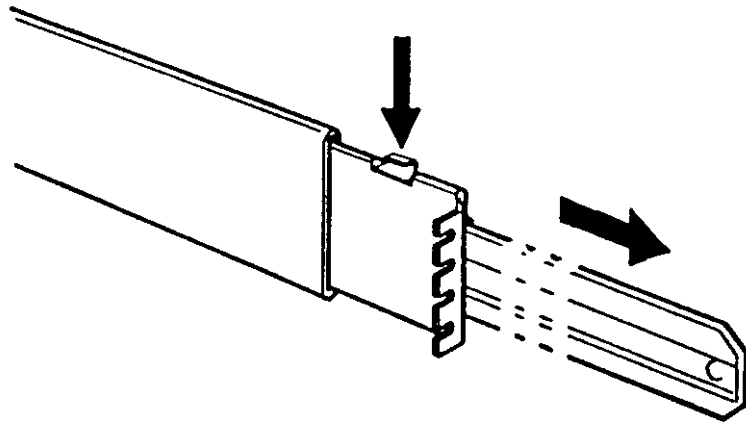


3. On the right and left sides, install the adapters for the runners provided in the kit, fitting them as shown in the figure.

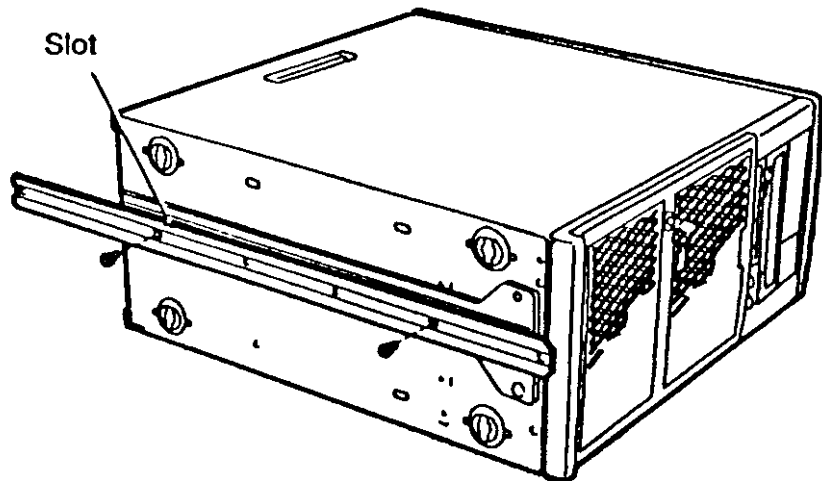


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4. The two runners provided in the kit each comprise three components that slide one inside the other. Pull out each runner to its maximum extended length and take out the part to be installed on the system (the shorter end part) using the release catch situated on the part of the runner into which it is inserted.



5. Install the runners on the system module as shown in the figure (slot facing upwards). Use the four long screws in the bag of eight (provided in the kit) and a setscrew wrench.



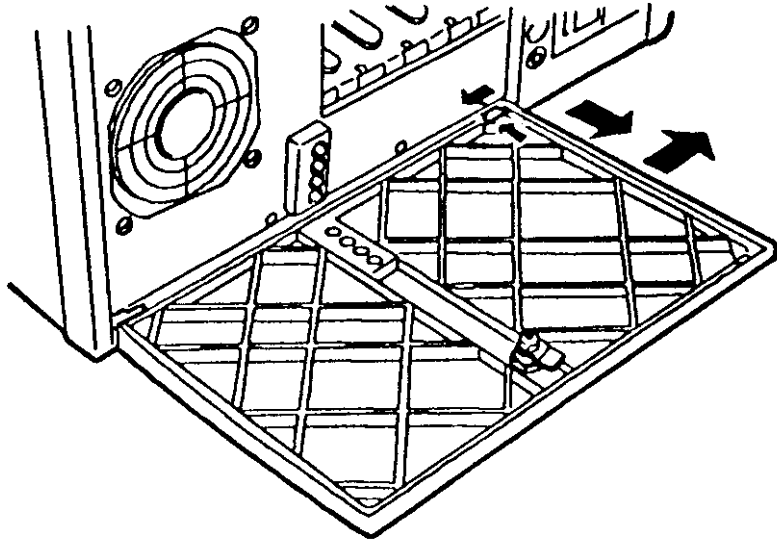
Installing the "Rack-mountable" Front Panel



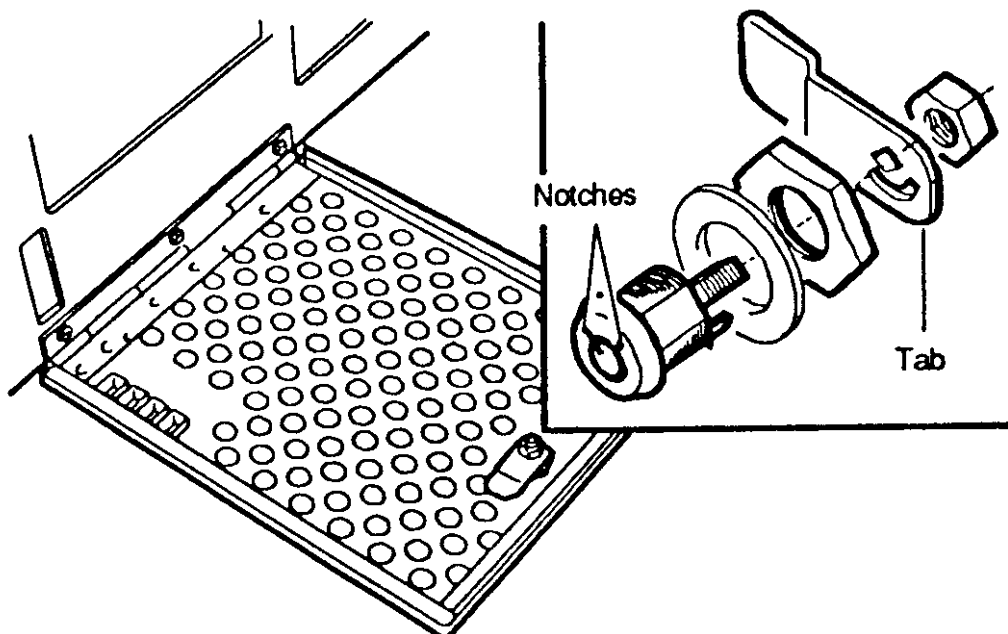
To install the "rack-mountable" front panel on the system module:

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1. Open the door, and at the same time, press on the hinge pin and move it to the left. Pull the door forwards to release it, then move the door to the right to remove it completely.

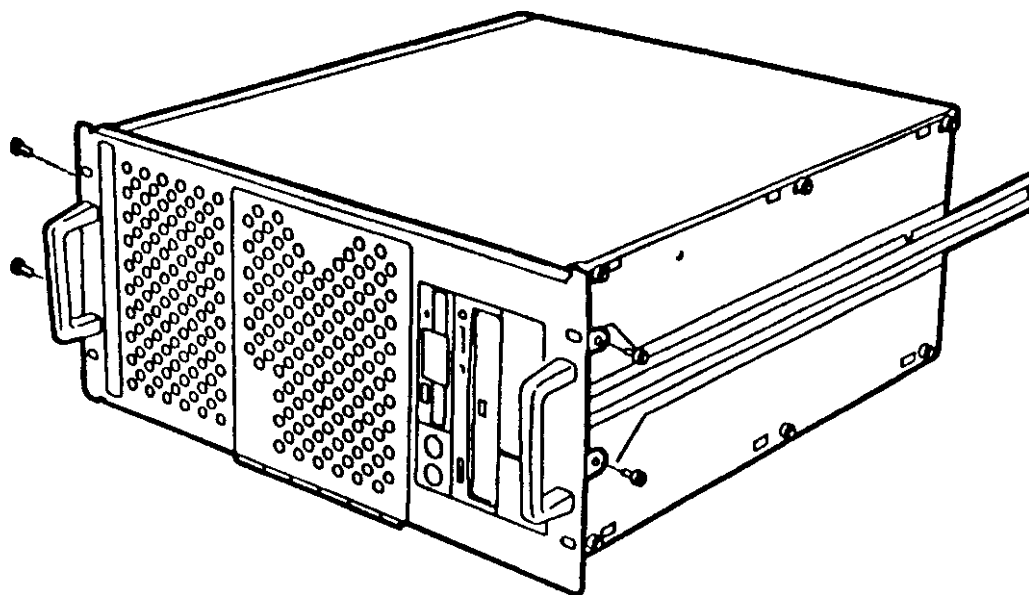


2. On the inside of the lock, unscrew the locknut and remove all other parts of the lock, i.e.: tab, nut, washer, and main locking mechanism.
3. Mount the door supplied with the kit on to the "rack-mountable" front panel, using the three screws provided.
4. Using the tab supplied with the kit instead of the one just removed in point 2, mount the parts on to the "rack-mountable" front panel in the following order: main locking mechanism, washer, nut, tab, and locknut. Fitting the tab turned to the left, the two notches of the locking nut must be turned upwards.



5. Install the special handles on the "rack-mountable" front panel using the four screws supplied with them (two on each handle). These must be screwed down from the inside.
6. Lock the window of the "rack-mountable" front panel and fit the front panel on to the system module, screwing it down on the sides using the four short screws in the bag of eight (supplied with the kit) and a setscrew wrench.

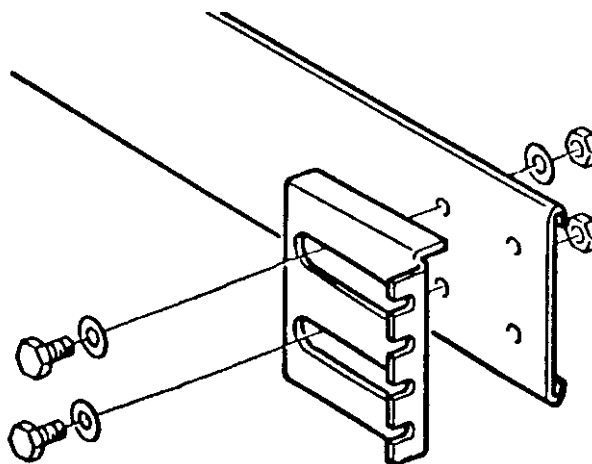
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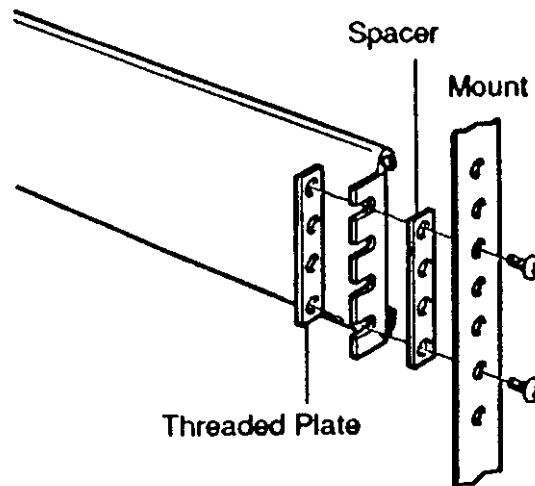
Installing the Runners on the "Rack"

 To install the runners on the "rack":

1. Identify the front and back of the runners. On the front part there is an L-shaped termination.
2. Take the back part of each runner and screw down the extender part on to it using the appropriate screws, washers, and bolts.

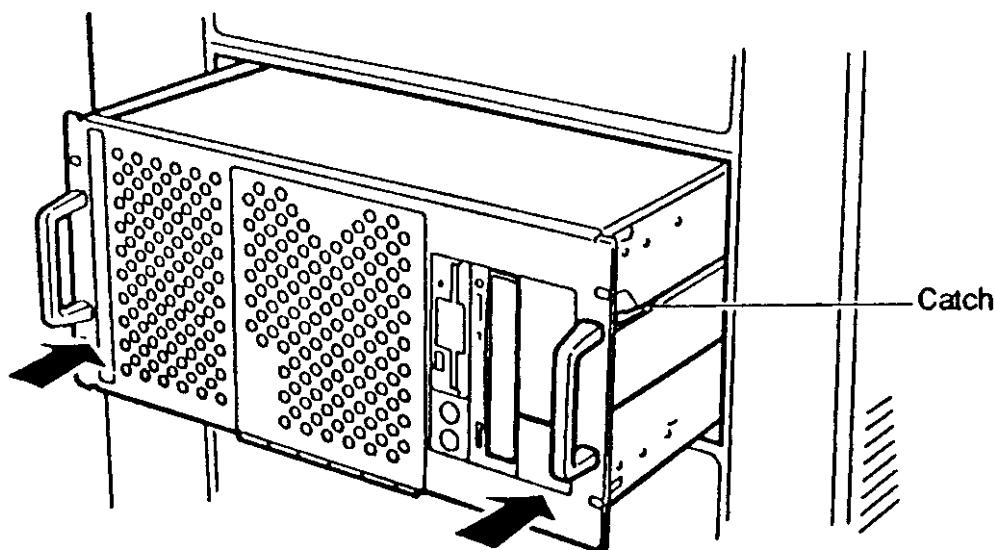


3. Screw the back and front of the runners to their relative mounts on the "rack". For each of the four mounts, use: a spacer, threaded plate, and two screws (see figure).



Installing the System In the "Rack"

Once the runners have been mounted on to the "rack", the system can be installed. Insert the system runners into the rack runners and push the system in until it locks into position between the appropriate catches (you can try and remove the system completely to check it is correctly locked into place).



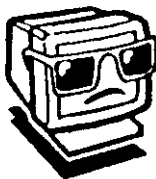
When inserting a CD-ROM into the drive, to ensure that it remains vertical, the CD must be locked into position by the clips on the disc tray, before closing the disc tray.

Ergonomic Positioning of the Computer

When you are preparing to set up your new computer, there are several important aspects to consider regarding the position, the light source, etc. It is important that strain and tiredness due to an incorrect posture be reduced to a minimum when you are sitting in front of the computer. The following guidelines should help you attain the most comfortable position.

Arranging the Various Components

Place the computer on a level, firm and vibration-free surface, away from direct sunlight or heat sources and in a place where the mains socket can be easily accessed.



The images displayed by the computer must be easy to read. Bad lighting can affect this and interfere with the screen. Therefore, there should not be a stronger light source (a lamp or window) behind the display as your eyes would adjust to it, and the image on the screen would be blurred. The same thing would happen if the light source were in front of the display: its light would be reflected onto the screen and you would see your reflection rather than the contents of the screen. The best position for the display is perpendicular to a window.

The display can be tilted up, down and to the side. The brightness and contrast controls on the front of the display can be adjusted to attain the best results. The display should not be the only light source: a concentration of light coming from only one source tires the eyes. Do not stay in front of the display for long periods: take a break of about fifteen minutes every two hours.



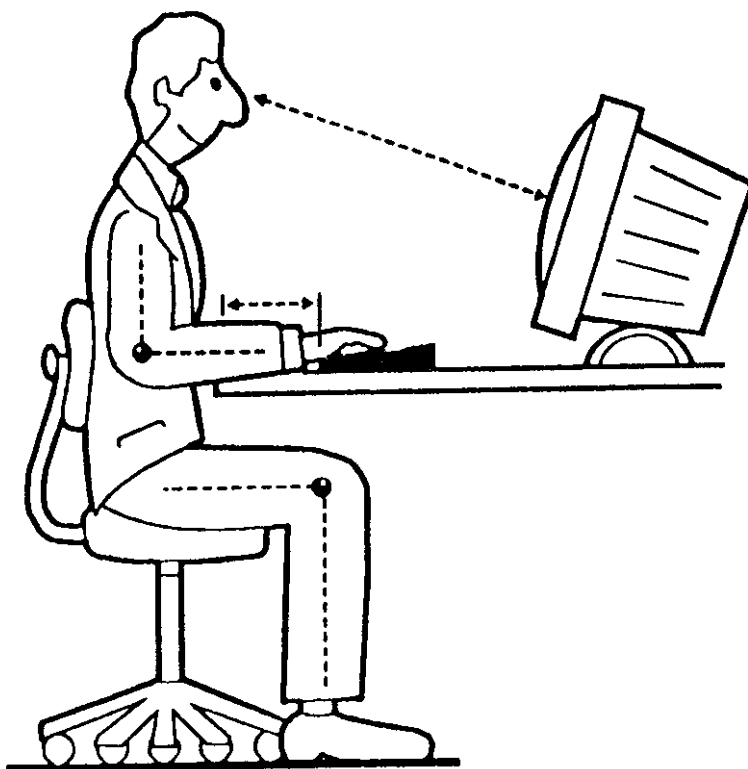
The display should not be placed either too high or too low: the ideal position is directly on the work surface, and the top line on the screen should be slightly lower than eye level. The display should be placed at least 50 cm away from you.



The keyboard should be at a suitable height to allow comfortable typing: the forearms should form a right angle with the upper arms, and your wrists should be resting on the work surface (for a person of medium stature this means there should be at least 15 cm between the keyboard and the edge of the work surface). The keyboard should be between you and the display, to avoid unnecessary twisting.



The mouse must be next to the keyboard, and there should be enough space to be able to move it around as required. The cable that connects the mouse to the computer must be able to freely follow its movements without hindrance.



When sitting in front of the computer, use a chair that provides adequate support for the lumbar region of your back. Adjust the height of the chair so that your feet rest comfortably on the floor without bending your knees excessively (the angle formed by your thighs and legs, with your feet resting on the floor, should be 90°). Use a footstool, if necessary. Make sure there is enough room for your legs under the work surface.

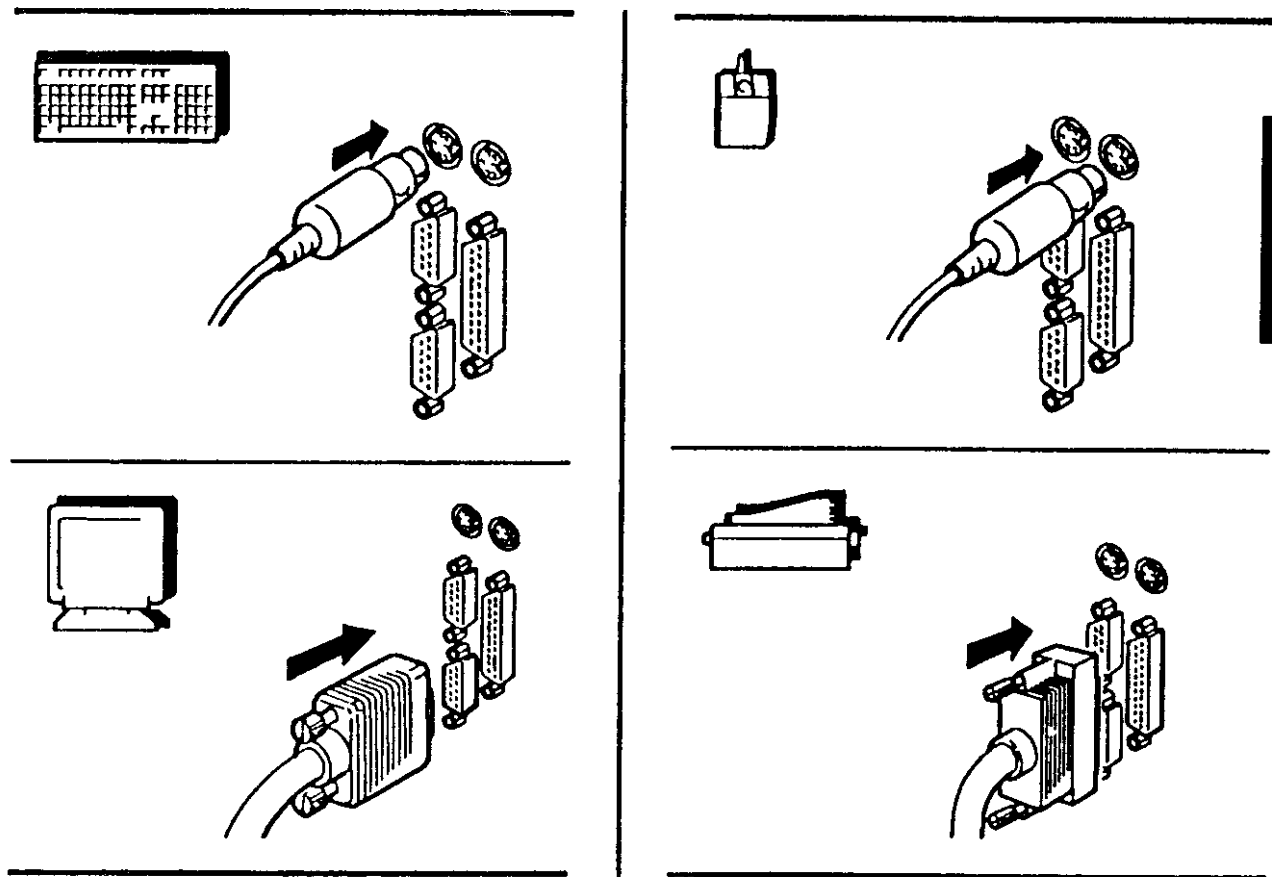
Connecting the System Components

The following pages outline the procedures for connecting external system components and devices, such as a monitor or a mouse, to the system module. In the case of optional devices, such as an external SCSI device or a printer, you should read the documentation that came with the optional equipment to make sure that the device is properly set up before connecting it to the system.



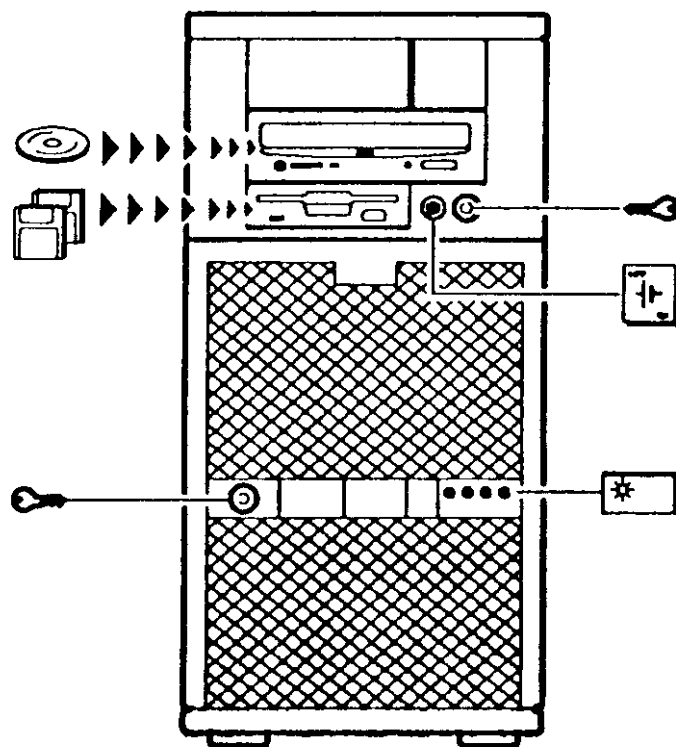
Verify that:

- All system components are compatible with the voltage and frequency of the local AC power outlet before making any connections.
- The monitor and computer power switches are turned off before connecting the monitor.
-  The mini-DIN connectors are "keyed" so that they go into the socket only when correctly aligned. Forcing the connection can damage the connecting pins.
-  Check that the voltage switch is correctly positioned for your power supply.
-  Do NOT connect the computer and monitor AC power cables to an external AC power outlet until instructed to do so.

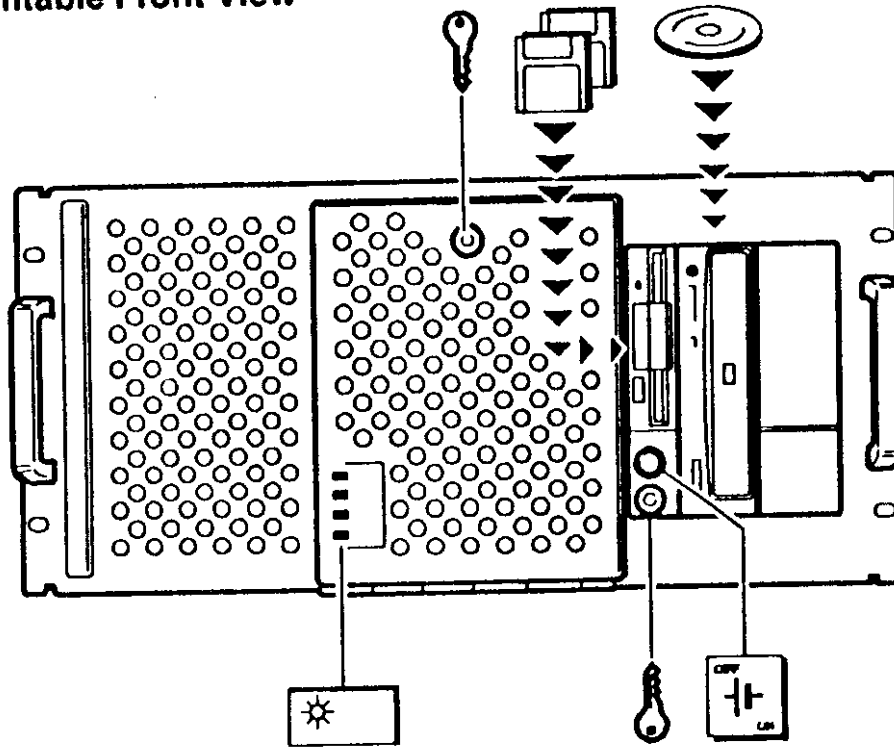


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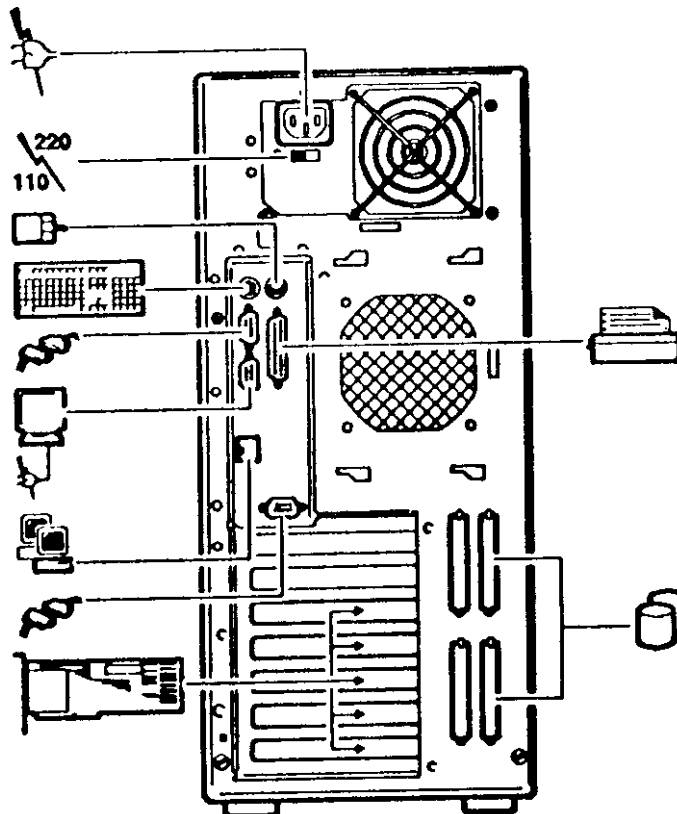
Floor Standing Front View



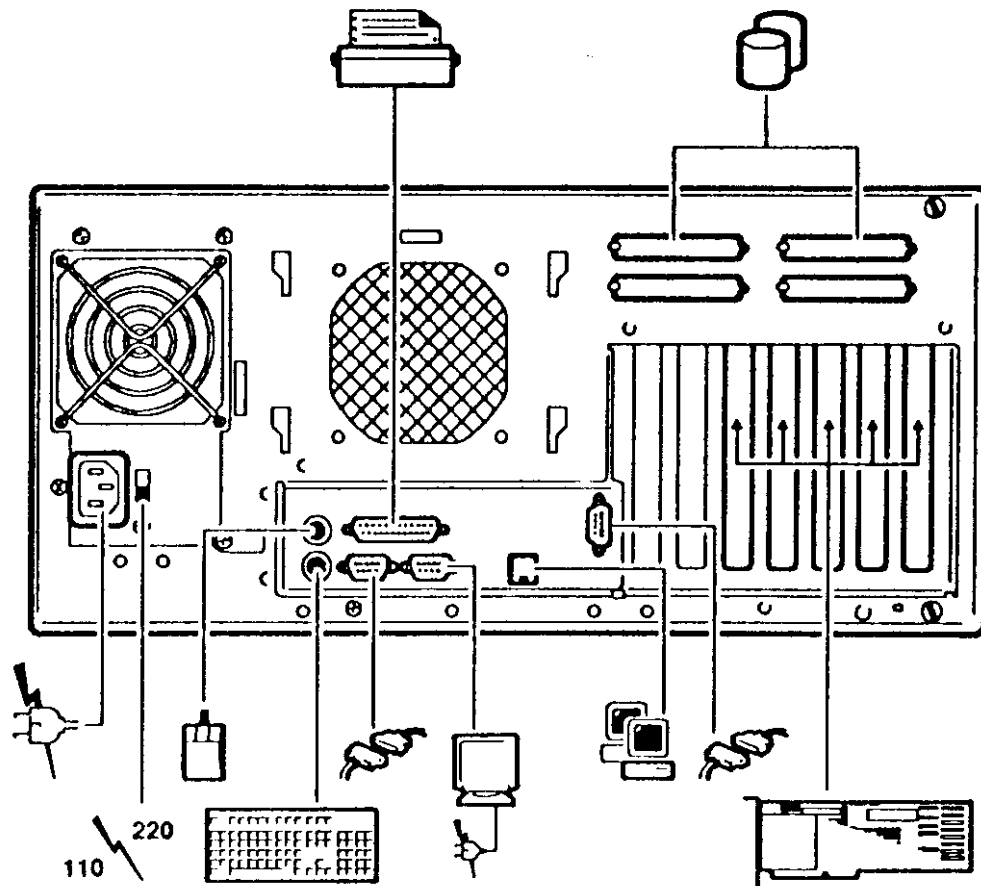
Rak-mountable Front View



Floor Standing Rear View



Rack-mountable Rear View



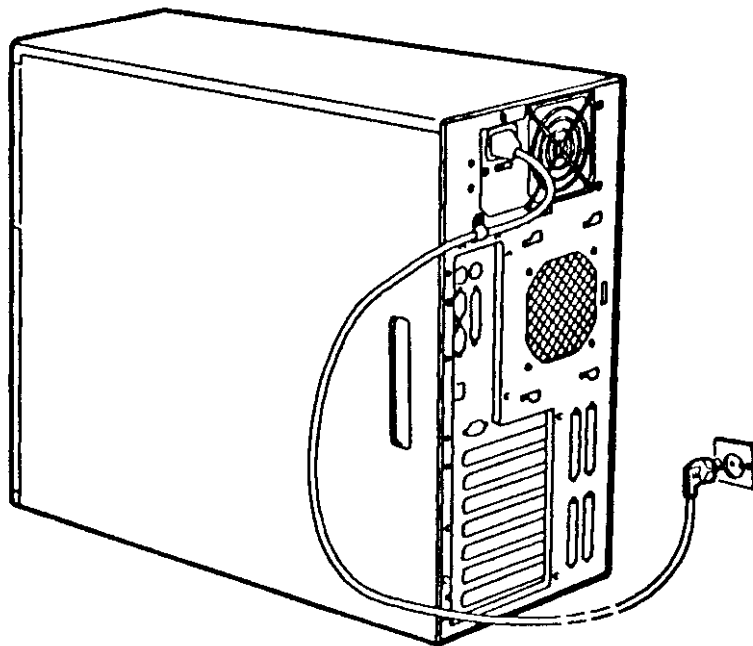
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Connecting the AC Input Cable

-  Before plugging the system module power cable in, check that the voltage switch (red) is in the correct position (110V or 220V).
-  The last cable to be connected to the system module is the AC input power cable.

 To connect the AC input cable:

1. Insert the female connector on the AC power cable into the AC power input socket on the back panel.
2. Verify that the cable connector is firmly seated and secure.



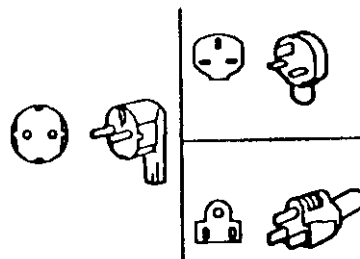
Connecting to External AC Power

Use the following procedure to connect AC power cables from the system module and any externally-powered peripherals, such as the monitor or printer, to external AC power outlets.

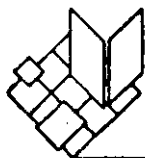
 To connect to external AC power:

1. Before connecting the system module to the external AC power outlet, verify that the monitor's ON/OFF power switch is OFF. Do the same for any other externally-powered peripherals such as a printer.
2. Connect the system module's AC power cable to an external AC power outlet.
3. Connect the AC power cables of the monitor and any externally-powered peripherals to external power outlets.

 The computer and monitor must be connected to a grounded electrical socket. The tripolar plug guarantees correct functioning of the devices and your own personal safety. Connect it only to a compatible socket.



 **DO NOT** switch the system or any peripherals ON until instructed to do so. See Chapter 3.



2. STARTER KIT OVERVIEW

The Starter Kit which comes with your system is used for configuring the system both at the initial installation phase and afterwards.

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The *Getting Started* Manual

This manual describes how to set up your system after you have unpacked it. All information for configuring the hardware is provided in the on-line documentation on the *Orchestra* CD-ROM. Chapter 3 includes the access and consultation procedures for the complete on-line documentation library.

The Orchestra CD-ROM

Orchestra presents a graphic interface based on the HTML environment. It allows access to the complete on-line documentation library. You can run software utilities and create diskettes containing drivers and programs for installing the operating system.



Chapter 3 tells you how to use the *Orchestra* user interface.

The Computer Test Diskette

The **Computer Test Diskette** contains the *Customer Test* utility used to test your system. This utility detects the components and modules that are installed in your system, performs the tests you select, and then identifies the modules and components that are not working correctly.



The on-line *Hardware Advanced Guide* explains how to use this diskette.



It is advisable to make a back up copy of the diskette as soon as possible.



3. USING ORCHESTRA

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Orchestra can be used in two different phases:

■ During the Pre-Installation Phase

This is the phase that precedes the installation of the operating system. In this phase, *Orchestra* allows you to create both the configuration floppies and the diskettes required for the installation of the selected operating system. Obviously, access to the on-line documentation library is always available.

You can run the system configuration utility and the MegaRAID board configurator directly from *Orchestra*. The MegaRAID board configurator (MegaRAID Manager) runs in the DOS environment.

■ During the Post-Installation Phase

This is the phase that follows the installation of the operating system. In this phase, *Orchestra* allows you to load and install add-on software packages, from CD-ROM. Access to the on-line documentation library is always available.

Running Orchestra



Before using the *Orchestra* CD-ROM, check in the computer's Setup program that boot from CD has priority (to enter setup, press F2 during the power-on diagnostics test). *Orchestra* must be used in an IDE CD-ROM drive, and not in a SCSI drive.



Carry out the following steps to run *Orchestra*:

1. Switch on the system.
2. Insert the *Orchestra* CD-ROM in the CD-ROM unit.



Do not remove the CD-ROM from the drive while using *Orchestra*.

3. When the *Orchestra* application boots on your server, it automatically recognizes your machine. The page containing the main topics of your machine will then appear on the screen:
 - **Orchestra Home:** Provides a general description the contents of the *Orchestra* CD and an overview of the installation procedure for your Server;
 - **Manuals:** Consist of a manual and technical documentation describing all the hardware and the software features of your Server;
 - **Release notes:** Provide last minute information;

- **Select your Hardware:** Allows you to select a hardware configuration different from the current one. Once you have specified a new hardware configuration Orchestra will guide you through the installation procedure for the specified configuration;
- **O.S. Installation:** Allows you to specify the operating system you plan to install, provides a detailed introduction to installation and, if necessary, can be used for preparing one or more driver diskettes;
- **HW Set Up:** Allows you to configure your hardware. Before continuing with the 'Hardware Set Up' please select the operating system you plan to install and read the installation instructions and warnings carefully.



If your machine is not recognized automatically, a page containing the list of possible Server appears on the screen. Please select your Server and confirm your configuration.

5. Click on the required topic:

- **Orchestra Home**
- **Manuals**
- **Release Notes**
- **Select your Hardware**
- **O.S. Installation**
- **HW Set Up**

How to Get "Help" (HTML format) or Consult an On-Line Manual

The on-line documentation of Orchestra is consulted using an HTML browser which supports frames (Netscape™ 3.0 and Internet Explorer™ 3.0). The HTML format can be displayed whatever operating system is used. For those who have never worked with an HTML browser, certain basic concepts must be known:

- On-line documentation is displayed inside a HTML browser window. The subjects covered in the documentation are divided into topics. A topic constitutes the basic unit of information.
- Every HTML browser has certain standard features:
 - The title bar (at the top) contains the title of the current page.
 - The menu bar (under the title bar) displays certain options that can be clicked on to "open" a menu. If an item in the menu is clicked on, the corresponding function will be enabled. For example, if the File menu is opened and Print is clicked on, the current page will be printed.

- The **scroll bars**: both the horizontal one (at the bottom of the window) and the vertical one (on the right of the window) only appear if the size of the window is not sufficient to display the topic. If the arrows are clicked on, the text scrolls upwards or downwards.
- The **button bar**, which allows navigation within the web page, refresh, print, character size, back and forward function.
- The on-line help of your browser explains in detail how to navigate within the browser and how to execute certain operations such as: return to the previous page, add bookmarks to your favourite pages, copy a topic etc.
-  There may be applications for reading documents in another format within an HTML browser, for example, a PDF format reader.

How to Print

There are two ways of printing the on-line documentation, the first is to print single pages of the manual and the second is to print the whole manual.

-  If you want to print some pages or the whole manual you must print from a workstation with the operating system and the specific driver of your printer device already installed.

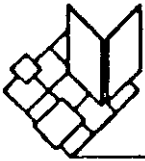
Printing page by page

This is a standard procedure of your browser, and is performed by activating the window you want to print and then selecting *Print* from the button bar of the browser.

Printing the whole manual

-  If you intend to print the whole manual proceed as follows:

1. Go to the Manuals page of the *Orchestra* CD.
2. Point to and click on the print icon button near the title of the manual that you want to print.



4. OPTIONAL SOFTWARE PACKAGES

The *Orchestra* CD-ROM contains the following optional proprietary packages:

- *Server View*
- SMS Support
- Resilience Support



The information contained in this chapter is generic. For information associated with the hardware characteristics of a particular system, consult the system specific documentation. For further details of specific information for servers and desktop computers see the on-line manual.

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Introducing *Server View*

Server View is a tool for monitoring small to medium-sized groups of servers and desktop computers. It is based on SNMP (Simple Network Management Protocol), now considered the de facto standard in network management.

This solution offers a set of instruments which analyse the integrity of the systems checked, supplying information on their performance and errors. This information aids the network administrators or support personnel to understand and perhaps avoid any errors on the systems.

Major benefits of this solution are: its independence from OS/NOS; it is a specialized solution for LAN configurations that is also suitable for remote access; it has considerable scope for scalability; the user interface is simple and elegant.

Server View comprises:

1. The Workstation, which is a Windows application with its own Graphics Interface (GUI), represents the network administration console.
2. The SNMP Agents which are installed on the systems to be checked. They gather useful system information and send this to the console along with notification of any problems or special occurrences.

The systems that can be checked with *Server View* include servers and desktop computers manufactured by our company, and desktop computers manufactured by other companies. A wealth of information and data on events is given for the servers and desktop computers manufactured by our company. General information on the system is supplied for desktop computers manufactured by other companies along with TCP/IP protocol information, as defined by the MIB-II standard.

The SNMP Agents for the server are available for the following operating systems:

- Microsoft® Windows® NT 4.x
- IntranetWare
- SCO Open Server v. 5.04

The SNMP Agents for the desktop computers (irrespective of the manufacturer) are available for the following operating systems:

- Microsoft® Windows® NT 4.x
- Microsoft® Windows® 95 OSR2

The *Orchestra* CD-ROM contains the *Server View* Workstation, all Agents for our servers and the Agents for generic desktop computers.

The Agents for desktop computers manufactured by our company are supplied with the *Manageability Pack* distributed with the desktop computer.

Overview of *Server View*

Using *Server View*, a Network Administrator can see the configuration of a remote server or desktop computer and monitor their key functions, such as the temperature of its vital components, the status of the SCSI Subsystem disks and the status of the resilient components such as the fans and power supply units.

Apart from receiving status and configuration data, a Network Administrator can use *Server View* to carry out a vast range of management tasks by accessing a range of purpose-built applications such as:

- IP or IPX Auto Discovery capability
- Fault Management
- Real Time Statistics application
- On-line documentation

Comprehensive SNMP protocol support is provided in the form of full MIB I/II device support plus proprietary MIB's and an advanced MIB browsing utility for use with private SNMP extensions.

IP or IPX Auto Discovery

IP or IPX Auto Discovery is a powerful application that scans networks for SNMP subsystems. The configuration of the detected subsystems is automatically stored, as are configuration updates when requested. This application also detects new subsystems with respect to the stored configuration. From the information gathered, an operator can create a graphical representation of the network with minimum effort, and with reduced possibility of error.

Fault Management

Server View's fault management capabilities include five fault/event notification levels, recording of faults/events and standardised colours that indicate the subsystem status. The operator can define thresholds for attributes and an error will result if these are exceeded.

The operator can define the amount of time for polling/time-out/retries for each subsystem and define a regular polling time for a subsystem timer.

The operator can also pre-configure a list of users who will automatically receive a fax or mail to notify them when a fault occurs.

Real Time Statistics

The *Real Time Statistics* application provides a convenient way for users to monitor subsystem trends.

On-line Documentation

Server View is provided with easily accessible on-line documentation. It contains all the information required to understand how to use *Server View*. This information is grouped into the following areas:

- Overview
- User Guide
- Resources Monitoring
- Traps Management

The **Server View On-Line Documentation** icon provides access to the *Main Menu* which allows you to select the subject area you want to consult. Each subject area contains an index of every topic dealt with.

It is possible to return to the *Main Menu* from any point within the on-line documentation by selecting the **Library** button. You can return to the local index by selecting the **Contents** button.

Management Areas

The *Server View* application presents users with a pictorial representation of the network map which includes the servers and desktop computers (found with Auto Discovery) or created manually.

Selecting a single desktop computer or server, a graphic representation of the hardware components is displayed. These could be:

- **Disks**
Information about SCSI and disk storage subsystem, split into logical and physical devices.
- **Processor**
Information about CPU configuration and use.
- **Memory**
Information on the RAM configuration.
- **Expansion Bus**
Motherboard information, plus information about all other board types plugged into the PCI and EISA/ISA buses.
- **Network**
Details of the MIB-II network protocols and interface information.

- **I/O Ports**
Information about the serial and parallel ports.
- **I/O Peripherals**
Information about the integrated video, mouse and keyboard.
- **Generic Storage Devices**
Information about the storage devices such as floppies, CD-ROMs and tape drives.
- **Generic SCSI Devices**
Information about the generic SCSI devices such as SCSI printers or scanners.
- **UPS (Uninterruptable Power Supply)**
Information about the status and configuration of an Uninterrupted Power Supply Unit (UPS).

There are also two buttons on the screen which, when selected, provide information about:

- **Miscellaneous**
General system information, such as its name, security settings, file system utilisation and active processes.
- **Resilience Features**
Status information about the critical server components such as the thermal status of the main box and the peripheral expansion box, the status of the redundant components such as the cooling fans and the Power Supply Units and Power On Self Test (POST) error reporting, correctable Memory Log data and the state of the system with respect to the SAR mechanism.

Fault Handling (Trap Management) Information

All SNMP Traps supported by *Server View* are raised as Faults. The level at which these faults are raised is pre-defined, taking into account the type of device, quality parameters and knowledge of real system usage levels.

When a Trap is received by the management application, the *Server View* display shows the colour associated with the level of Trap received. Manageable components within the interactive picture will be coloured according to their current status.

The colour definition can be changed by the user. The default colour settings are:

Fault Level	Colour	Level
Critical	Red	5
Urgent	Orange	4
Non Critical	Light Orange	3
Informative	Chrome Yellow	2
OK (Notice)	Lemon Yellow	1

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The 5-2 Trap levels are classified depending on the criticality and urgency of the fault. The notice traps are used to report that a particular fault has been cleared.



For a complete list and explanation of all Trap messages refer to the *Server View Traps Management* section from the *Server View Library*.

Management Objects

MIBs supported by the Server

The *Server View* package supports the following MIBs associated with the Server:

mib_II.mib	RFC1213 MIB-II information
ollcond.mib	Resilience Features Information
ollhost.mib	Host Utilisation and Operating System information
ollsrc.mib	SCSI information
ollsrv.mib	Server Configuration Information
powernet.mib	APC UPS Information (American Power Conversion defined MIB).

mib_II.mib

Is the standard MIB-II defined in RFC1213, which describes general information on the system and specific information on the TCP/IP protocols.

ollsrv.mib

Includes information about the System Identification (name, model, etc.), System Buses, Processor(s), Memory, ISA CMOS, EISA/ISA configuration information, PCI configuration information, ROM (including ROM BIOS) information, Keyboard, Video, Serial and Parallel Port(s), Floppy Disk(s), AT/ESDI compatible Interface Fixed Disks and Security.

ollhost.mib

Includes information about the operating system which is running, CPU utilisation, File System(s) utilisation, the Interface (associated with MIB II information), card information and information on the Software modules running on the system.

ollsrc.mlb

Includes all the information related to proprietary SCSI controllers, such as Controller features and statistics, SCSI Channel information, Logical Drive information (RAID information, size, spare part availability, etc.), Physical Drive information (features and statistics, error counts and manufacturer-defined thresholds), generic SCSI Target Device information (for CD-ROMs, tapes, etc.).

ollcond.mlb

Includes information about the resilience features supported by our servers, such as ECC corrections, high temperature conditions, redundant configurations covering fans and Power Supply Units on the main box and PEM(s) and Post (Power-on Self Test) messages.

powernet.mlb

Includes information about the connected UPS, such as battery status, battery capacity, line input and output voltage, UPS temperature and overall status and configuration information.

MIB supported on Desktop Computers

The *Server View* packages supports the following MIB's associated with the desktop computers:

audio.mlb	information about audio device
video.mlb	information about video device
Im78.mlb	information about Resilience Features
PC sys.mlb	information about PC status.

audio.mlb

This contains information about the manufacturer, resources used, the name and the version number of the driver associated with the audio device on the computer.

video.mlb

The "Video Direct Interface CI", contains all the information to describe the video device present on the PC in terms of manufacturer, driver name and version number, current resolutions, etc.

Im78.mlb

This contains all the information required to describe the status of a PC in terms of resilience components, (temperature sensors, fan monitoring, power supplies, etc.).

PC. sys.mlb

"Intel PC System Description", contains all the information necessary to describe the state of a PC in terms of manufacturer, resources used (IRQ, DMA, etc.) on the processor, operating system, BIOS, serial and parallel ports, etc.

Installing the *Server View*

The *Server View* Installation phase comprises two parts:

1. Installing the *Server View Management Station* application on a Windows workstation.
2. Installing the *Server View Management Agents* on the managed servers, *Manageability Pack* on desktop computers manufactured by our company and *Desktop SNMP Agents* on generic desktop computers.

Workstation Installation

The minimum required configuration is:

- 386 with 25MHz processor.
- 16 Mbytes RAM.
- 40 Mbytes disk space.
- VGA colour adapter and monitor (minimum resolution 800 x 600).
- Microsoft Windows® 95 or Microsoft Windows NT 3.5.1./4.x.
- NDIS compliant LAN Card with NDIS driver.
- TCP/IP Stack.
- Two or three button mouse (Windows compatible).
- One 3.5" floppy disk drive or CD drive.

If you plan to use the NetWare IPX/SPX protocol stack, the following packages are required:

- NetWare NetWork Client MS DOS/Windows.
- The appropriate ODI driver for your LAN board.

 The TCP/IP protocol stack is also required if IPX/SPX is used. Both IP and IPX protocol stacks are supported. The recommended configuration is:

- IP control stack for heterogeneous LAN
- IP or IPX for homogeneous NetWare LAN.

Installation from CD-ROM

 The procedures below describe software installation and usage. Use the appropriate menu or tool for installing and using the *Server View* software. If you have difficulties consult the operating system documentation for further information.



To install the software from the CD on a workstation, carry out the following procedure:

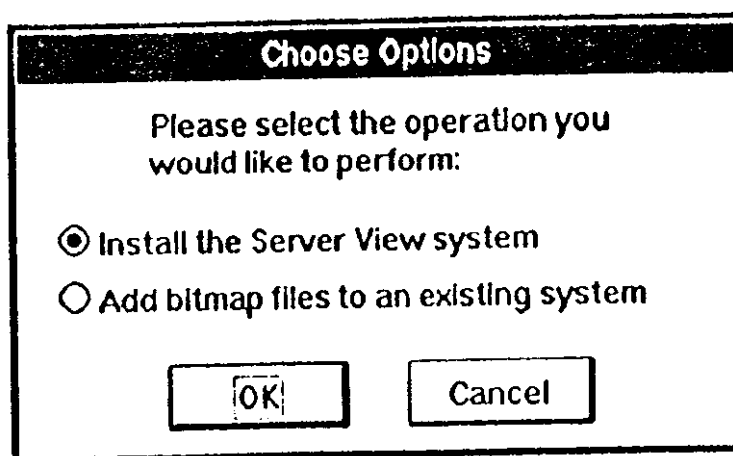
1. Insert the CD in the CD unit.
2. Execute the Setup.exe file command from drive e (the CD drive):
`\\svviewws\\ws\\setup.exe`.
3. Press ENTER.

If you are not using drive e: replace e with the name of the drive you are using.



If you do not have a CD drive on your *Server View* workstation it is possible to create floppy disks of the Management Application using the **Server View Floppy** button on the Hardware Set Up page of the *Orchestra* CD.

During the installation and set-up of *Server View* it is possible to carry out the following operations:



The first option is used to install *Server View* for the first time, or to upgrade a previously installed version.

The second option is used to add a series of geographical bitmaps to a previous installation. These bitmaps can be used as background pictures.

The step-by-step installation procedure is guided by self-explanatory dialog boxes. After the installation a new folder, called *Server View*, appears in the Windows *Programs* folder. It contains the following icons:

- **Server View** icon, which is the management application itself.
- **Mall/Fax Fault Set-up** icon which is an application that allows users to configure the recipients of mails or faxes in the event of faults.
- **Server View On-line Doc** icon, the electronic *Server View* user documentation.
- **Readme File**, which contains the release notes on the *Server View* Release 2.x reporting all the configuration information and current limitations of the current release. We recommend that you read these notes before using the *Server View* application.

Starting and Quitting *Server View*



When you wish to run *Server View*:

1. Click on ***Server View*** in the *Programs Folder*.
2. Enter your *Server View* login name.



The login name of the *Server View* administrator is named in the file
C:\sview\bin\onyx.ini.

3. Click on **OK**.
4. Select the **File** menu from the window that is displayed.
5. Select **Open**.

The top-level view window is displayed.



When you want to exit *Server View*:

1. Select the **File** menu from the menu bar in the top-level view window.
2. Select **Exit**.
3. A confirmation message box is displayed in which you should click on the **OK** push-button.
4. If you have made any modifications you will be asked whether you want to save them, click on **Yes** to do so.

The *Server View* manager shuts down.

Installation of Agents

- For the installation of Agents on the server, refer to the *Orchestra* On-line help.
- For installation of the desktop Agents, refer to the documentation in the *Manageability Pack* supplied with the desktop computer.
- For installation of the SNMP Agents for a generic desktop computer, go to the *Orchestra* CD in the desktop directory and follow the steps shown in the *Readme* file.

SMS Support

SMS support entails a (DMISCAN) utility that allows an extension to the collection of data on the Server, which is visible by the SMS (Systems Management Server), the associated Microsoft environment for Windows and Windows System Administration.

DMISCAN is available for Windows 95 and Windows NT platforms.

DMISCAN compiles and exports the MIF files to SMS, or rather the files in the DMI (Desktop Management Interface) format, the standard for handling desktop computers which is also emerging for the handling of servers.

The additional information compiled by DMISCAN and visible from the SMS console, pertains mostly to general system information (manufacturer, name, serial no.), chassis data, processor and serial and parallel ports.

For more details on this information, refer to the *readme.txt* file installed with the utility.

For information on the installation, refer to the *Orchestra* on-line help.

Resilience Support

The Resilience Support package includes two software components:

- OLIHIT package
- OLISAR package

OLIHIT package

The Olihit add-on software manages any dangerous situation related to the temperature or the resilient components of the main box and the peripheral expansion boxes (PEM modules) of your system.

The following events are monitored:

- High temperature on main box and on PEM Storage boxes.
- Power Supply or fan failures in redundant main box and redundant PEM Storage boxes.

When one of the abnormal events indicated above is detected, the Olihit software can perform the following actions:

- send messages to the users,
- log the error conditions in the error logging file,
- automatically shut down the operating system, in case of a major failure such as a high temperature condition or a complete blockage of the fan,
- automatically switch off the system in case of a major failure via the UPS, if present, or directly.



All the locally-managed OLIHIT events can be monitored remotely, if the *Server View* package is installed.

OLISAR package

System Automatic Restart (SAR) is a hardware/firmware/software (HW/FW/SW) mechanism that allows the automatic restart of a server when this hangs or crashes due to HW/SW problems. The main goal of SAR is to reduce the downtime of a server, especially unattended servers, where the time between the crash and the human intervention may be extremely long.

SAR behaviour is as follows:

- once SAR is enabled and activated, a HW counter starts running,
- when it reaches a preconfigured value, the system is reset.

In normal conditions the software periodically rewrites the HW counter value to avoid resetting the system.

This means that the system is supposed to be in a crash/hang condition when it is no longer able to schedule the software entity responsible for rewriting the counter value. It is possible to configure the number of times a SAR reset is attempted before the system is turned off. The time between the occurrence of the crash and the reset (SAR counter value) is also configurable.

SAR is disabled, by default. It can only be enabled by software. Once enabled, SAR activation/deactivation is controlled by the hardware and the firmware at boot time, and by the software at run time. More specifically, once enabled, SAR is active at boot time when the system is reactivated after a SAR event or HW reset; it is not active when the system is reactivated after it has been switched off or after a software reboot. At run time, once enabled, SAR is always active except after an off condition occurred after the maximum number of SAR retries has been attempted.

- All the events managed locally by OLISAR can be monitored from a remote location if the *Server View* package is installed.



APPENDIX A

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Technical Data and Safety Regulations

Characteristics

Power supply

Factory voltage settings autoranging AC:
Input: 90-132V (60 Hz), 180-264V (50Hz)
180 watts maximum continuous power rating
Output: +/-5V, +/-12V, +5V aux

Dimensions of the Floor Standing System Module

Width	210 mm
Depth	460 mm
Height	390 mm

Operating Environment

Temperature	10°C (50°F) to 35°C (95°F)
Relative humidity	20% to 80%, non condensing
Altitude	sea level to 3000 m (about 10,000 ft)

Non-Operating Environment

Temperature (packaged unit)	-40°C (-40°F) to +60°C (140°F)
Relative humidity (packaged unit)	5% to 95%, non condensing
Altitude	sea level to 9000 m (about 30,000 ft)

Acoustic Disturbance

Emitted from system module (standard configuration)	≤ 40 dBA, Operating
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Standards and Recommendations

User Safety

- Do not access parts of the computer apart from the areas reserved for the installation of the options, or as expressly indicated in the documentation.
- Ensure that the computer remains dry.
- Before cleaning the computer, unplug it.
- To disconnect the computer from the electrical supply, do not simply use the ON/OFF button; disconnect the power cable plug from the mains socket.
- If you connect an external optional device to the computer (for example a printer), also disconnect the plug from this option before carrying out any operations inside the computer.

Computer Safety and Maintenance

- Do not place the computer above or near heat sources (for example, radiators).
- Do not touch the connectors or pins of the computer or optional devices with your fingers, as this could change the electrical resistance of the contacts.
- Do not carry out maintenance on particular components of the computer if it is not expressly mentioned in the documentation.
- Avoid exposing the disks and boards to excessively strong heat sources or magnetic fields.
- Keep the computer and its accessories (disks, boards, etc.) free of dust, dirt or liquids.
- To protect the computer from viruses, never boot from a floppy disk if this does not come from a certified source. Do not use programs of uncertain origin.
- Place the boards in their protective cases when not in use. Never force boards into the slot. Do not bend them.
- Before cleaning the computer, switch it off and disconnect it from the electrical supply. Use a damp cloth, do not use corrosive substances such as solvents, alcohol, petrol or abrasive materials.
- If the lithium battery, assembled on the motherboard and used for powering the permanent memory containing the chronographic and configuration data (CMOS RAM or NV RAM), ever needs replacing, this must be done by an authorised service centre, as incorrect handling could cause the battery to explode.

Safety and Radio Interference Approvals



This product satisfies the basic requirements of Electromagnetic Compatibility and Safety required by the Directives:

- 89/336/CEE of 3 May 1989 with subsequent modifications (Directive 92/31/CEE of 28 April 1992 and Directive 93/68/CEE of 22 July 1993);
- 73/23/CEE of 19 February 1973 with subsequent modifications (Directive 93/68/CEE of 22 July 1993);

as having been designed in conformity with the requirements of the following Reference Norms:

- EN 55022 (*Limits and methods of measurements of radio interference characteristics of Information Technology Equipment*);
- EN 50082-1 (*Electromagnetic Compatibility - Generic Immunity Standard - Part 1: Residential, commercial and light industry*);
- EN 60950 (*Safety of Information Technology equipment, including electrical business equipment*).

Conformity with the above basic requirements is certified by means of the CE Marking on the product.

Manufacturer's Disclaimer



All responsibility is declined:

- If the product is stored, transported, installed, modified, or used in a way that is different from that described in the documentation.
- If the product is used in conditions different from those described in the documentation.
- If any repair is carried out by unauthorised personnel.
- For any damage caused by normal wear and tear, uncontrollable events and/or connection to devices that are not original.



The manufacturer reserves the right to carry out modifications to the product described in this documentation at any time and without notice.

U.S.A.**U.S. FEDERAL COMMUNICATIONS COMMISSION
RADIO FREQUENCY INTERFERENCE STATEMENT
INFORMATION TO THE USER**

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet of a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for assistance.

Changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Connecting of peripherals requires the use of grounded shielded signal cables.

CANADA**EMI REQUIREMENTS FOR CANADIAN MARKET**

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus", ICES-003 of the Industry of Canada.

SPECIFICATIONS EMI POUR LE MARCHÉ CANADIEN

Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe B prescrites dans la norme sur le matériel brouilleur : "Appareils Numériques", NMB-003 édictée par le Ministre des Communications.



Troubleshooting

The following table provides guidelines for solving many common problems. It should be used with the *diagnostics* program, to help eliminate a malfunction in a particular module or component.

Troubleshooting Table

The system does not work. No Indicators light-up.

- ▶ Defective power cable connection.

 Check the connection of the monitor power cable to the monitor. Check that the system power cable is correctly connected to a mains power outlet and that the power switch is in the on position. Check that there is power from the mains power outlet by connecting another electrical device to it.

Nothing appears on the monitor screen. System module appears to function.

- ▶ Contrast or brightness control needs adjustment.

 Adjust the contrast and brightness controls until the image appears on the screen.

- ▶ Monitor on/off switch is turned off.

 Set the monitor on/off switch to its ON position.

- ▶ Monitor cable connections defective.

 Check the monitor cable connections.

- ▶ Timer is set off following a period of keyboard and mouse inactivity.

 Type the correct password or disable the password (see on-line documentation).

A FAIL message appears during Power On Diagnostics.

- ▶ Transient electrical disturbance in the external power supply.

 Turn the system off and then on again. If a FAIL message still appears, call your technical support organization.

An "Invalid-System Disk error message appears.

- ▶ The diskette in drive A is not bootable.

 Remove the diskette from the drive. Either insert a bootable diskette in the drive or boot from hard disk.

The system does not respond.

- ▶ System has lost program control.

 Turn the power off and then on again. If the problem persists, call your technical support organization.

- ▶ System is locked by password.

 Type the correct password or disable the password (see on-line documentation).

Garbled characters mixed with text on screen.

- ▶ Video screen driver incorrect or missing in software start-up files.

 Install or add correct screen driver for your monitor.

The diskette in the drive cannot be read or written to.

- ▶ Diskette not inserted correctly.

 Insert the diskette correctly.

- ▶ Diskette write-protected.

 Open write-protect tab.

- ▶ Diskette not formatted.

 Format diskette (see operating system manual).

- ▶ Diskette damaged.

 Try a new diskette.

- ▶ Diskette and drive incompatible.

 Use diskette which is formatted to the correct capacity for the drive.

- ▶ Timer is set off following a period of keyboard and mouse inactivity.

 Type the correct password or disable the password (see on-line documentation).

Irregular program execution. Hard disk not reliable.

- ▶ External AC mains power outlet not properly grounded (earthed).

 Connect the system to a properly grounded (earthed) mains power outlet. If the problem persists, call your technical support organization.

The printer does not work.

- ▶ Printer out of paper or set to LOCAL mode.

 Refill paper tray; set printer to ON-LINE mode.

- ▶ Printer cable not properly connected.

 Check connection of cable and check that it is connected to correct interface.

- ▶ Incorrect printer configuration.

 Ensure that the correct printer configuration has been made by referring to the printer, software application and/or operating system manuals.

Keyboard does not function, but system appears to work.

- ▶ Defect in keyboard cable connection.

 Check connection of the keyboard cable. Remove and reinsert cable connector in socket at rear of keyboard.

- ▶ Keyboard password set.

 Type in the correct password or disable the password (see on-line documentation).

Memory error during Power-On Diagnostics or normal operation.

- ▶ Memory modules may not be installed or configured correctly.

 Check that the memory modules have been installed correctly and the values are set correctly in the Configuration Utility.

- ▶ Not enough memory to run your software application.

 Check memory requirements for your software and install more memory, if necessary.

Power-On Diagnostics (POD) Messages

The Power-On Diagnostics (POD) ensure that the hardware modules within the system are operational when the system is turned on or reset. The program to perform the POD is stored in the system's BIOS ROM.

The Power-On Diagnostics are performed automatically at power-on or after a software reset (CTRL+ALT+DEL). The POD tests are arranged so that the most essential components of the system are tested first. Further tests then use the components that have already been successfully tested.

The primary functions of the POD tests are to:

- Identify the system hardware.
- Set up the equipment flags in the ROM data area.
- Check the hardware present against the configuration stored in the CMOS RAM.

The POD warns of any discrepancies between the hardware and the configuration stored in the CMOS/non-volatile RAM (NVRAM) by displaying diagnostic messages on the screen. The screen displays each module being tested and indicates whether the module passes or fails the test.

Errors are defined as fatal or non-fatal. A fatal error is one that makes it impossible to continue the tests and boot the operating system. A non-fatal error does not prevent booting. If an error is considered fatal, a diagnostic message appears on the video. The error message remains on the screen and the process is frozen at this point. If a non-fatal error occurs, an error message is displayed and the power-on diagnostic continues to the next test or step in the booting sequence.



A complete list of error messages is provided in the on-line *Hardware Advanced Guide*. We recommend you print the list as soon as possible.

Server Line
NetStrada™ 3200

Getting Started - *Per iniziare*
 Mise en route - *Erste Schritte* - Para empezar

1. REPORT MADE BY THE AGENT NAME ALAN B. BROWN DATE 12-1-68

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