UNISYS

U 5000/20, U 5000/30, U 5000/35, U 5000/40, U 5000/50 and U 5000/55 Systems

U 5000 Series Operating System

Planning Guide

UNİSYS

U 5000/20, U 5000/30, U 5000/35, U 5000/40, U 5000/50, and U 5000/55 Systems

U 5000 Series Operating System

Planning Guide

Priced Item

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Chapter 1. Introduction

This guide provides information to help you prepare for the installation of a Unisys 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 system. It describes physical and functional characteristics of the host processors and optional expansion cabinets and battery backups. It also includes information on how to plan interconnections to terminals, printers, and other system devices.

All recommendations in this guide should be followed before the system is installed. Planning is important because, once a unit is installed, it becomes far more difficult to correct problems that might have been averted through adequate preparation.

The Unisys 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 systems and most of the associated equipment are designed to be installed by the user. Customer setup (CSU) means that the customer receives, unpacks, installs, and tests the unit without on-site assistance from Unisys customer services personnel.

Peripherals for these systems include:

- Disk/Tape Expansion Cabinet (used with the 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55.)

- 5000/35 Disk Expansion Cabinet

- 5000/55 Disk Expansion Cabinet

- Standalone 1/2-Inch Tape Drive Cabinet

- Unisys Personal Computer HT

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- Unisys Personal Computer IT

- Unisys Personal Computer Micro IT

- Unisys Personal Workstation^2 Series

- Unisys Video Display Terminal-1210 (SVT-1210)

- Unisys Video Display Terminal-1220 (SVT-1220)

- Unisys Video Display Terminal-1224 (UVT-1224)

- Unisys Model 25C Printer

- Unisys Model 31 Printer

- Unisys Model 35 Printer

- Unisys Model 37 Printer

- Unisys Model 47 Printer

- Unisys Model 789 Printer

- Unisys Model AP1307 Printer

- Unisys Model AP1327 Printer

- Unisys Model AP1329 Printer

- Unisys Model AP9215-1 Printer

- Unisys Model B9246-7 Printer

Introduction

Customer Responsibilities

A summary of customer responsibilities follows. You should use the wiring, space, and environmental information contained in this guide to prepare for the installation of your Unisys 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 system.

- Provide and install all communications cables, wall jacks, special connectors, and associated hardware.

- Provide and install all necessary power distribution boxes, conduits, grounds, lightning arresters, and associated hardware.

- Make sure that the building alterations you make allow the installation to meet local electrical and building codes, as well as meeting the environmental requirements of the system.

- Provide floor coverings and environmental systems that prevent the buildup and discharge of static electricity.

- Provide enough space for field service access to the system.

- Correct any site wiring deficiencies that could cause system failure including voltage and frequency variation.

- When equipment arrives, unpack and inspect the equipment for damaged or missing items.

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- Notify your Unisys representative immediately of any missing or damaged equipment or of any equipment malfunction.

- Install your Unisys 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 system and peripherals, and make the necessary cable connections to communications equipment.

- Contact customer services personnel to install any non-CSU Unisys equipment.

- Provide other equipment (e.g., modems) as required and arrange for installation by the responsible vendor.

- Change factory-set operating parameters (as required) by means of keyboard entry.

- Verify correct operation in accordance with instructions in the installation guide provided with the equipment.

- If an equipment failure occurs, use the checkout procedures in the verification guide to isolate and correct all possible malfunctions.

- Notify your Unisys representative of any intent to relocate equipment, and follow the instructions provided for repacking and relocation.

Unisys Responsibilities

During site preparation, your Unisys representative is available to do the following:

Introduction

- Provide you or your contractor with this site planning guide prior to preparing the site.

- Answer your questions relating to site planning requirements.

NOTE:

Unisys employees are not responsible for certifying the electrical or mechanical systems installed by you or your contractor.

Site Planning Considerations

The 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 system is designed to operate in a wide range of environmental conditions. Normally, installing and operating this equipment requires little or no modification of existing facilities. Nevertheless, in planning the installation of this equipment, there are several important factors you need to consider, including:

- general environmental considerations, such as temperature and humidity (see Chapter 3),

- space for and placement of the equipment (see Chapter 4),

- cabling (see Chapter 5), and

- power requirements (see Chapter 6).

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A few additional factors to consider include:

- Cable Routing

  It may be necessary to route signal cables through walls, ceilings, or false floors, especially if you are installing a number of peripherals at various places throughout your facility. Installation of the system may be accomplished more readily if you install the signal cables first. These cables are ordered separately and can be shipped to you in advance of the equipment. You may also need cable raceways or similar materials to protect the loose cables that interconnect the equipment. It is recommended that you procure the cable raceways or other materials before the equipment arrives so that you can install raceways while you are installing the cables.

- Storage Facilities

  When planning your installation, consider the possible need for additional storage facilities that may be required for the reusable shipping containers, paper, ribbon, and printwheels. It is recommended that you have necessary supplies on hand and ready to use when your equipment arrives.

Before you begin planning for installation of your 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 system, it is recommended that you read the publications describing the system and any peripherals you intend to use. A list of the publications can be found in the 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, and 5000/55 Systems; 5000 Series Operating System; Unpacking Guide or in the 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, and 5000/55 Systems; 5000 Series Operating

System; Customer Setup Guide. To obtain copies of these publications, or if you have any questions concerning installation planning, contact your Unisys representative.

Chapter 2. General Description

General

Before you begin the actual planning for installation of your Unisys 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 system, it is suggested that you become familiar with the terminals, printers, and other equipment to be used in the system. Be sure to read all installation and operation manuals supplied with your equipment. Your understanding of this equipment and its capabilities contributes to successful and efficient site planning. This helps to ensure that you can install your equipment quickly and easily.

Temperature and Humidity

A basic Unisys 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 system consists of the system cabinet, an optional printer, and a CRT terminal. Figures 2-1, 2-2, and 2-3 show the basic systems. Table 2-1 is a summary of the various modules of which the system is composed. Table 2-2 is a summary of the systems and expansion cabinets.

Chapter 2
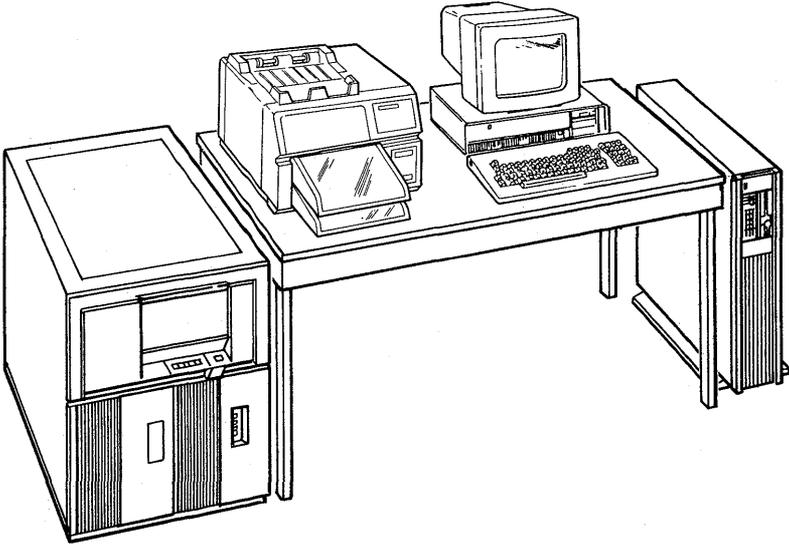
Figure 2-1. Typical Configuration for the Unisys 5000/20,
5000/30, 5000/40, or 5000/50 System

Figure 2-2. Typical Configuration for the Unisys 5000/35 System

Chapter 2
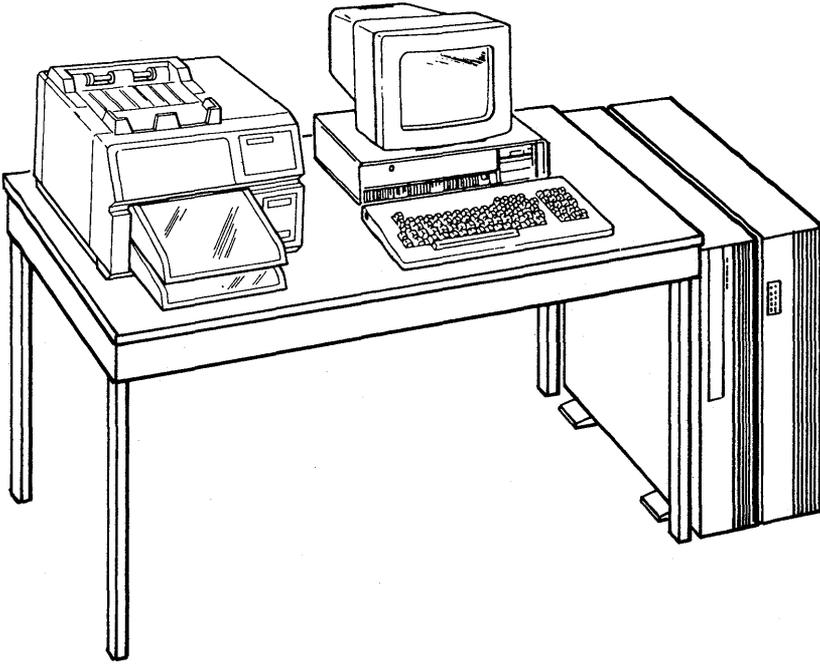
Figure 2-3. Typical Configuration for the Unisys 5000/55 System

General Description

Table 2-1. System Summary

MODULE NAME	COMMENTS
16-bit CPU 5000/20, or 5000/40	This CPU provides 16-bit processing for capabilities using an 8 Mhz 68010 microprocessor 64-Kb cache memory, full memory management and protection, and 128 Kb of EPROM.
32-bit CPU 5000/30, 5000/35, 5000/50, 5000/55	This CPU provides 32-bit processing for capabilities using a 16 Mhz for the 5000/30 or 5000/50 system and 25 Mhz or for 5000/35 or 5000/55 system 68020 microprocessor, 64Kb cache memory management and protection, and 128 Kb of EPROM.
Memory	Each of the memory boards must be used in matched pairs. Each of the boards contains either 1, 2, or 4 Mb of random access memory (RAM).
General Communications	8 and 16 Port Asynchronous Controller. These I/O controllers provide 8 and 16 asynchronous ports and an optional one or two parallel ports. From 1 to 3 boards can be installed depending upon the system. An additional asynchronous/synchronous controller (6-2-1) is available providing 6 ports asynchronous I/O; 2 parallel printer ports; and one synchronous port.
Mass Storage Controller	The Mass Storage Controller supports internal disk, tape, and diskette drives in the 5000/20, 5000/30, 5000/40, or 5000/50.
SCSI Mass Storage Controller	The SCSI Mass Storage Controller supports internal fixed disk, tape, and diskette drives for the 5000/35 or 5000/55.
SCSI Adapter	The SCSI Adapter supports all external disk and tape devices in the 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 system.

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Table 2-1. System Summary (Cont.)

MODULE NAME	COMMENTS
HPMSC	The High Performance Mass Storage Controller is an optional 1-board replacement for the SCSI Mass Storage Controller and SCSI Adapter in the 5000/35 and 5000/55.
46 Mb, 85 Mb, or 140 Mb Fixed Disk Drive for 5000/20, 5000/30, 5000/40 and 5000/50	These drives provide either 46 Mb, 85 Mb, or 140 Mb of unformatted disk storage capacity. Only one can be installed in the 5000/20 or 5000/30. Up to two can be installed in the 5000/40 or 5000/50.
170 Mb Fixed Disk Drive for 5000/35 or 5000/55	This drive provides 170 Mb of unformatted disk storage capacity. One can be installed in the 5000/35 and up to two can be installed in the 5000/55.
380 Mb Fixed Disk Drive for 5000/35 or 5000/55	This drive provides 380 Mb of unformatted disk storage capacity. One can be installed in the 5000/35 and up to two can be installed in the 5000/55.
Flexible Disk Drive	This flexible disk drive is a 5 1/4-inch form factor and provides diskette storage for up to 1 Mb of unformatted disk storage capacity. One of these drives is available for the 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55.
45 Mb 1/4-Inch Cartridge Tape Drive	This drive can be used as a software load device or for data storage (backup as well as archive) in the 5000/20, 5000/30, 5000/40, or 5000/50 system. This drive will also be available as a second tape on the 5000/55.
150 Mb 1/4-Inch Cartridge Tape Drive	This drive can be used as a software load device or for data storage (backup as well as archive) in the 5000/35 or 5000/55.

General Description

Table 2-2. Expansion Cabinet Summary

MODULE NAME	COMMENTS
5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 Disk/ Tape Expansion Cabinet	The disk/tape expansion cabinet includes a tape controller, AC distribution, and a 1/2-inch tape drive. It also provides space for a disk controller and up to two 340 Mb fixed disk drives. Each disk drive includes its own power supply that attaches to the AC distribution panel. A daisy chain cable is available to link this cabinet with other qualified disk and tape cabinets. Only one expansion cabinet can be used with the 5000/30; whereas two expansion cabinets can be connected to the 5000/40 and 5000/50. This cabinet can be included in combination with the 5000/35 and 5000/55. A maximum of four targets are available on the SCSI bus. Expansion cabinets can be selected from the following list: 35 Disk Expansion, 55 Disk Expansion, Standalone Tape Expansion, and Disk/Tape Expansion Cabinet. The Disk/Tape Cabinet with tape only is considered as one SCSI target. If the cabinet also includes disks, the disks are a second target.
5000/35 Disk Expansion Cabinet	This disk expansion cabinet includes disk controller and AC distribution. The cabinet holds one or two 337 Mb Disk Drives. Each disk drive includes its own power supply that attaches to the AC distribution panel. A daisy chain cable is available to link this cabinet with other qualified disk and tape cabinets. A maximum of four external SCSI targets can be added to the 5000/35 system. All disks or combinations of disk and tape cabinets can be connected to the 5000/55 system.

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Table 2-2. Expansion Cabinet Summary (Cont.)

MODULE NAME	COMMENTS
5000/55 Disk Expansion Cabinet	This disk expansion cabinet includes a disk controller and AC distribution. The cabinet holds up to three 337 Mb disk drives. Each disk drive includes its own power supply that attaches to the AC distribution panel. The cabinet can also be connected to the 5000/35 system. A daisy chain cable is available to link this cabinet with other qualified disk and tape cabinets. A maximum for four external SCSI targets can be added to the 5000/55 system. All disks or combinations of disk and tape cabinets can be connected to the 5000/35 system.
Standalone 1/2-Inch Tape Drive Cabinet	A daisy chain cable is available to link this cabinet with other qualified disk and tape cabinets. The 5000/30, 5000/40, or 5000/50 system can accommodate up to two 1/2-inch tape drive cabinets. The 5000/35 or 5000/55 systems can accommodate up to three 1/2-inch tape drive cabinets.

Table 2-3. Printer Summary

PRINTER	CHARACTERISTICS
Model 25C Matrix Printer	RS-232-C and Centronics-compatible interfaces; 132 columns at 10 CPI[1]; 160 CPS[2] (Draft); 40 CPS (NLQ[4]).
Model 31 Daisy Wheel Printer	RS-232-C compatible interface; 132 columns at 10 CPI; 55 CPS; 10, 12, 15 Pitch; 6-8 lines per inch; 96 character daisy wheel font (correspondence quality).
Model 35 Matrix Printer	RS-232-C and Centronics-compatible parallel interfaces; 132 columns at 10 CPI; 400 CPS (draft); 100 CPS (correspondence - NLQ).
Model 37 Laser Printer	RS-232-C and Centronics-compatible interfaces; 10 pages per minute.
Model 47 Laser Printer	RS-232-C compatible interface; 20 pages per minute.
Model 789 Band Printer	RS-232-C interface; 132 columns; 600 LPM[3] using a 48-character font.
Model AP1307 Daisy Wheel Printer	RS-232-C compatible serial interface; 132 columns; 55 CPS; 12 CPI (letter quality).

[1] Characters Per Inch (CPI)
[2] Characters Per Second (CPS)
[3] Lines Per Minute (LPM)
[4] Near Letter Quality (NLQ)

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Table 2-3. Printer Summary (Cont.)

PRINTER	CHARACTERISTICS
Model AP1327 MatrixPrinter	RS-232-C serial or Centronics-compatible parallel interfaces; 80 columns at 10 CPI; 270 CPS at 10 CPI (draft); 44 CPS at 10 CPI (NLQ^4).
Model AP1329 Matrix Printer	RS-232-C serial or Centronics-compatible parallel interfaces; 132 columns at 10 CPI^1; 270 CPS at 10 CPI (draft); 44 CPS at 10 CPI (NLQ).
Model AP9215-1 Laser Printer	RS-232-C serial or Centronics-compatible parallel interfaces; 15 (8x11) pages per minute; selectable EPSON, IBM, and Laser Jet emulations.
Model B9246-7 Band Printer	RS-232-C serial interface, 132 columns, 600 LPM using a 48 character band at correspondence quality.

[1] Characters Per Inch (CPI)
[2] Characters Per Second (CPS)
[3] Lines Per Minute (LPM)
[4] Near Letter Quality (NLQ)

CRT Terminals

The CRT terminals and modem described in Table 2-4 can be attached to the Unisys 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 system. Specific characteristics of each CRT terminal are listed in Table 2-4.

General Description

Table 2-4. Terminal Summary

CRT	CHARACTERISTICS
Personal Computer HT	8088 microprocessor-based personal computer; asynchronous RS-232-C, tty compatible interface.
Personal Computer IT	80286 microprocessor-based computer with processor speeds of 6 or 8 Mhz; two integrated RS-232-C asynchronous communication interfaces; one Centronics-compatible parallel printer interface.
Personal Computer Micro IT	80286 microprocessor-based personal computer; switchable asynchronous/synchronous RS-232-C communications ports. Processor speeds of 6 or 8 Mhz with five I/O expansion slots; one Centronics printer interface.
Personal Workstation^2 Series 300	80286 microprocessor-based personal computer; asynchronous RS-232-C communications ports. Processor speeds of 6 or 10 Mhz three I/O expansion slots; one Centronics printer interface.
Personal Workstation^2 Series 500	80286 microprocessor-based personal computer; switchable asynchronous/synchronous RS-232-C communications ports. Processor speeds of 6, 8, or 12 Mhz with five I/O expansion slots; one Centronics printer interface.
Personal Workstation^2 Series 800	80386 microprocessor-based personal computer; switchable asynchronous/synchronous RS-232-C communications ports. Processor speeds of 4.16, 6, 8, 10, 12, or 16 Mhz with eight I/O expansion slots; one Centronics printer interface.

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Table 2-4. Terminal Summary (Cont.)

CRT	CHARACTERISTICS
SVT-1210	Emulates DEC VT 100 terminal. Standard RS-232-C communications port.
SVT-1220	Emulates DEC VT 220 terminal. Standard RS-232-C communications port and periph- eral port.
UVT-1224	Emulates DEC VT 52, VT 100, or VT 220 terminals. Standard RS-232-C communica- tions port and peripheral port.

General Description

PERSONAL COMPUTER

SVT-1210/1220
UVT-1224
TERMINAL

DISK
EXPANSION CABINET

DISK
EXPANSION CABINET

DISK/TAPE
EXPANSION CABINET

0789 PRINTER

B-9246-7 PRINTER

MODEL 47 PRINTER

AP-1307 PRINTER

MODEL 35 PRINTER

MODEL 25C PRINTER

MODEL 31 PRINTER

MODEL 37 PRINTER

AP-9215-1 PRINTER

AP-1327/1329 PRINTER

STANDALONE ½-INCH
TAPE DRIVE
CABINET
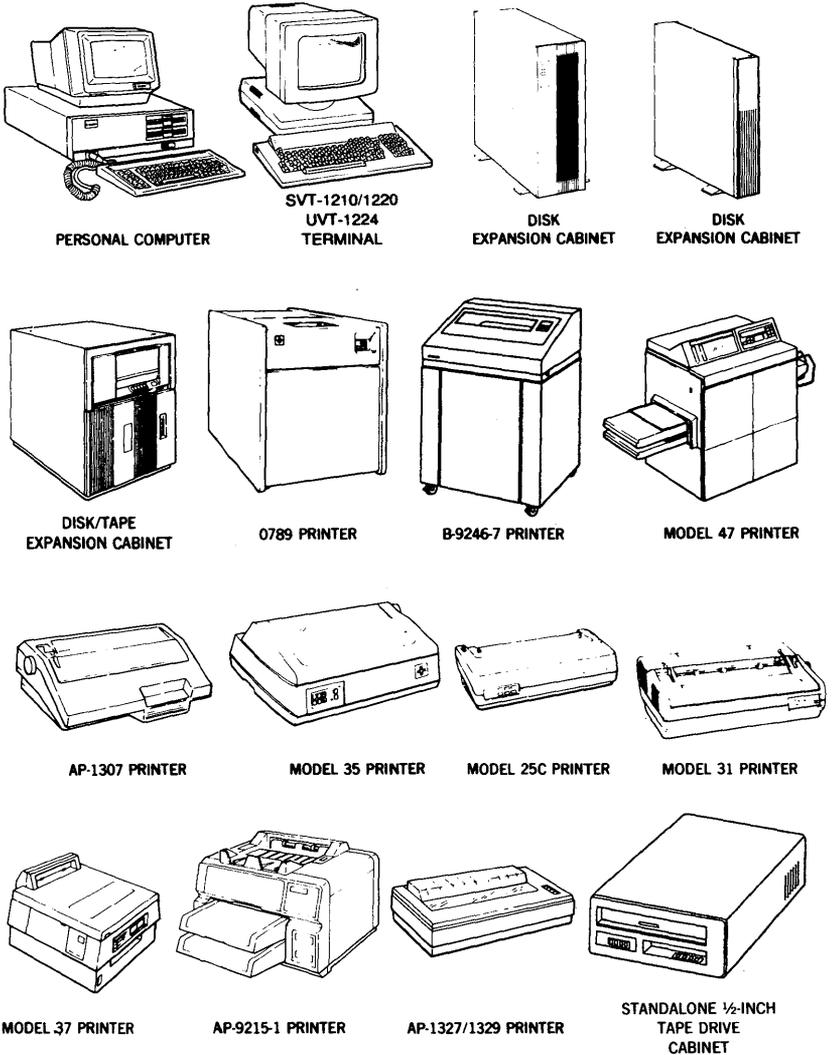
Figure 2-4. Peripheral Options

Chapter 3. Site Environmental Planning

General Information

The Unisys 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 system and peripherals are designed to operate efficiently under the wide range of environmental conditions now found in many commercial office buildings. You should avoid installing this equipment in areas where adverse environmental conditions may exist.

Do not install your system in:

*   kitchens, air-conditioner exhaust areas, or similar areas conducive to exceptional humidity;

*   workshops or similar areas producing high levels of dust and grit;

*   basements or similar areas susceptible to flooding; or

*   areas subject to vibration or high-gravitational forces (shock).

Temperature and Humidity

The Unisys 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 system operates in a wide environmental range. It is recommended, however that you do not operate it continuously at or near its temperature or humidity limits, or in a location where it is likely to exceed these limits.

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CAUTION:

It is particularly important that you avoid operating your system in environmental conditions that may cause condensation.

The nominal operating temperature range is 21° to 27°C (70° to 80°F) with a relative humidity range of 40 to 60 percent. If you operate the equipment within this range, your operating safety margin effectively permits an extended operating period in case the heating or air conditioning systems fail. Table 3-1 specifies the environmental operating limits of the Unisys 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 system and the optional peripheral equipment.

Table 3-1. Environmental Limits

UNIT	OPERATING TEMP RANGE	RELATIVE HUMIDITY
Unisys 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 CPU	10°C - 40°C (50°F - 104°F)	20% - 80% (noncondensing)
Expansion Cabinets	10°C - 40°C (50°F - 104°F)	20% - 80% (noncondensing)
Standalone 1/2-Inch Tape Drive Cabinet	10°C - 40°C (50°F - 104°F)	20% - 80% (noncondensing)

Site Environmental Planning

Table 3-1. Environmental Limits (Cont.)

UNIT	OPERATING TEMP RANGE	RELATIVE HUMIDITY
Model 25C Printer	10°C - 34°C (50°F - 93°F)	20% - 80% (noncondensing)
Model 31 Printer	10°C - 34°C (50°F - 93°F)	20% - 85% (noncondensing)
Model 35 Printer	10°C - 34°C (50°F - 93°F)	20% - 85% (noncondensing)
Model 37 Printer	10°C - 30°C (50°F - 86°F)	20% - 80% (noncondensing)
Model 47 Laser Printer	10°C - 35°C (50°F - 95°F)	15% - 85% (noncondensing)
Model 789 Printer	10°C - 34°C (50°F - 93°F)	20% - 85% (noncondensing)
Model AP1307	13°C - 35°C (55°F - 95°F)	10% - 80% (noncondensing)
Model AP1327	5°C - 38°C (40°F - 93°F)	20% - 80% (noncondensing)
Model AP1329	5°C - 38°C (40°F - 93°F)	20% - 80% (noncondensing)

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Table 3-1. Environmental Limits (Cont.)

UNIT	OPERATING TEMP RANGE	RELATIVE HUMIDITY
Model AP9215-1	10°C - 32°C (50°F - 90°F)	20% - 80% (noncondensing)
Model B9246-7 Printer	10°C - 30°C (50°F - 86°F)	20% - 80% (noncondensing)
Unisys Personal Computer HT	5°C - 40°C (40°F - 104°F)	20% - 90% (noncondensing)
Unisys Personal Computer IT	10°C - 34°C (50°F - 93°F)	20% - 85% (noncondensing)
Unisys Personal Computer Micro IT	0°C - 40°C (32°F - 104°F)	10% - 95% (noncondensing)
Unisys Personal Workstation^2 Series 300	0°C - 40°C (32°F - 104°F)	10% - 95% (noncondensing)
Unisys Personal Workstation^2 Series 500	0°C - 40°C (32°F - 104°F)	10% - 95% (noncondensing)
Unisys Personal Workstation^2 Series 800	10°C - 34°C (50°F - 93°F)	20% - 85% (noncondensing)
Unisys Video Terminal-1210	10°C - 40°C (50°F - 104°F)	10% - 90% (noncondensing)
Unisys Video Terminal-1220	10°C - 40°C (50°F - 104°F)	10% - 90% (noncondensing)
Unisys Video Terminal-1224	0 °C - 40°C (32°F - 104°F)	10% - 95% (noncondensing)

Site Environmental Planning

The nonoperating conditions (storage/shipping) of the Unisys 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, and 5000/55 systems are outlined in Table 3-2. For air cargo shipping, the maximum altitude is 40 thousand feet. For system peripheral environmental limits, consult the Installation, Operation, or User's Guides provided with the equipment.

Table 3-2. Non-Operating Environmental Limits

NON-OPERATING TEMP RANGE	TEMP CHANGE	REL. HUM.	HUMIDITY CHANGE
-10°C to 50°C (-14°F to 120° F)	10°C (18°F) per hour	5% to 95%	10% per hour (non condensing)

Media Storage

Store all media (backup tapes) under the same environmental conditions recommended for the main unit. If these storage conditions are not possible, place the tapes in the same room as the system for at least one hour before you use them. This allows the tapes enough time to adjust to the temperature and humidity of the room.

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CAUTION:

Do not store your media near sources of magnetic radiation such as magnets, electric motors, electric bells or buzzers, and audio speakers. Contact with magnetic fields corrupts or destroys the data on your magnetic tape.

Table 3-3. Media Storage Limitations

MEDIA TYPE	STORAGE TEMPERATURE	STORAGE HUMIDITY
1/4-Inch Cartridge Tape	5°C - 45°C (41°F - 113°F)	20% - 80% (noncondensing)
1/2-Inch Magnetic Tape	5°C - 32°C (40°F - 90°F)	20% - 80% (noncondensing)

Heat and Sound Output

Table 3-4 shows the heat and sound output from each unit in the system.

Site Environmental Planning

Table 3-4. Heat and Sound Output

UNIT	SOUND OUTPUT	HEAT OUTPUT
5000/20 System	56 dba	855 Btu/hr
5000/30 System	63 dba	1897 Btu/hr
5000/35, 5000/40, 5000/50, or 5000/55 System	55 dba	1872 Btu/hr
5000/30, 5000/40, or 5000/50 Expansion Cabinet	68 dba	3656 Btu/hr
5000/35 Expansion Cabinet	63 dba	2132 Btu/hr
5000/55 Expansion Cabinet	68 dba	3300 Btu/hr
Standalone 1/2-Inch Tape Drive Cabinet	68 dba	3656 Btu/hr
Model 25C Printer	meets NC 60*	341 Btu/hr
Model 31 Printer	meets NC 60*	341 Btu/hr
Model 35 Printer	meets NC 60*	565 Btu/hr
Model 37 Printer	55 dba	3275 Btu/hr
Model 47 Printer	meets NC 60*	3230 Btu/hr
Model 789 Printer	meets NC 60*	1195 Btu/hr
Model AP1307 Printer	60 dba	350 Btu/hr
Model AP1327 Printer	55 dba	256 Btu/hr
Model AP1329 Printer	55 dba	256 Btu/hr

* NC 60 is a Unisys Internal Standard.

Table 3-4. Heat and Sound Output (Cont.)

UNIT	SOUND OUTPUT	HEAT OUTPUT
Model AP9215-1 Printer	55 dba	1111 Btu/hr
Model B9246-7 Printer	55 dba	2600 Btu/hr
Unisys Personal Computer HT	**	1638 Btu/hr
Unisys Personal Computer IT	**	1638 Btu/hr
Unisys Personal Computer Micro IT	meets NC 45*	260 Btu/hr
Unisys Personal Workstation² Series 300	meets NC 45*	260 Btu/hr
Unisys Personal Workstation² Series 500	meets NC 45*	260 Btu/hr
Unisys Personal Workstation² Series 800	meets NC 45*	385 Btu/hr
Unisys Video Terminal-1210	**	239 Btu/hr
Unisys Video Terminal-1220	**	239 Btu/hr
Unisys Video Terminal-1224	**	233 Btu/hr

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* NC 60 and NC 45 are Unisys Internal Standards.
** Output is negligible.

Site Environmental Planning

Electromagnetic Interference

As is true with most electronic equipment, electromagnetic fields, such as those radiating from radio or television antennas and radar installations, may interfere with the 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 system or its associated equipment.

Operating problems may also result from electromagnetic fields from industrial equipment such as arc welders, insulation testers, and other similar equipment. Three-phase power distribution lines and related distribution panels, electric heating units, electric motors, and generators may also cause electromagnetic interference with the equipment.

To prevent such interference from causing problems, keep the equipment as far away from the sources of interference as possible. If this is not feasible, you may simply need to be aware of the potential problems.

Electrostatic Discharge

High electrostatic charges can build up as a result of people, equipment, or furniture in contact with carpeting or other types of floor covering. When these static charges are discharged into the metal of the equipment or the desk or table on which the equipment is located, interference with the proper operation of the equipment may result. Careful choice of furniture and use of coverings with antistatic characteristics minimizes static problems, as does the use of commercially available antistatic sprays on furniture and floor coverings.

Chapter 4. Site Physical Planning

In addition to the site environmental planning, you must also consider how the units will be installed in your facilities. For example, consider the following:

• weight of each unit;

• how much space each unit needs for:

  — operator access,

  — service access,

  — air circulation needed to ensure operation within environmental limits, and

  — entry and exit points for the interconnecting cables as well as maximum cable lengths.

NOTE:

The Unisys 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 system and expansion cabinets have cable entry and exit points on the back of each unit.

Prepare a drawing to scale showing the system and the peripheral locations to insure you don't overlook any of the physical limitations specified here. Tables 4-1, 4-2,

Chapter 4

and 4-3 provide the details you need for this physical placement planning.

Physical Characteristics

A summary of the physical characteristics of the Unisys 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 systems and their peripherals is shown in Table 4-1.

Table 4-1. Physical Characteristics

UNIT	HEIGHT	WIDTH	DEPTH	WEIGHT
Unisys 5000/20, 5000/30, or 5000/35 CPU*	61.0 cm (24.0 in)	27.7 cm (5.0 in)	64.8 cm (25.5 in)	38.6 kg (85 lbs)
Unisys 5000/40, 5000/50, or 5000/55 CPU*	73.7 cm (29.0 in)	17.8 cm (7.0 in)	68.6 cm (27.0 in)	52.6 kg (116 lbs)
Unisys 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 Disk/Tape Expansion Cabinet	73.7 cm (29.0 in)	55.9 cm (22.0 in)	88.9cm (35.0 in)	77 kg** (170 lbs)

* Typical system
** Empty expansion cabinet

Table 4-1. Physical Characteristics (Cont.)

UNIT	HEIGHT	WIDTH	DEPTH	WEIGHT
Unisys 5000/35 Disk Expansion Cabinet	60.9 cm (24 in)	25.4 cm (10 in)	63.8 cm (25.1 in)	62.2 kg** (137.2 lbs)
Unisys 5000/55 Disk Expansion Cabinet	73.6 cm (29 in)	25.4 cm (10.0 in)	68.3 cm (26.9 in)	73.3 kg** (161.5 lbs)
Standalone 1/2-Inch Tape Drive Cabinet	26.7 cm (10.5 in)	50.8 cm (20.0 in)	68.6 cm (27.0 in)	43.1 kg (95.0 lbs)
Model 25C Printer	13.7 cm (5.4 in)	5.13 cm (20.2 in)	24.9 cm (9.8 in)	11.3 kg (25.0 lb)
Model 31 Printer	16.8 cm (6.6 in)	60.0 cm (23.2 in)	37.7 cm (14.3 in)	16.7 kg (37.0 lb)
Model 35 Printer	24.0 cm (9.4 in)	65.6 cm (25.8 in)	46.1 cm (18.1 in)	32.0 kg (70.0 lb)
Model 37 Printer	34.8 cm (13.7 in)	43.8 cm (17.3 in)	42.5 cm (16.8 in)	26.0 kg (57.2 lb)
Model 47 Laser Printer	64.0 cm (25.2 in)	78.5 cm (30.9 in)	59.5 cm (23.4)	150.0 kg (33.1 lb)
Model 789 Printer	112 cm (44.0 in)	86.4 cm (34.4 in)	78.7 cm (31.0 in)	147.7 kg (325.0 lb)
Model AP1307 Printer	21.6 cm (8.5 in)	59.0 cm (23.2 in)	39.9 cm (15.7 in)	16.8 kg (37.0 lb)

** Empty Expansion Cabinet

Chapter 4

Table 4-1. Physical Characteristics (Cont.)

UNIT	HEIGHT	WIDTH	DEPTH	WEIGHT
Model AP1327 Printer	14.3 cm (5.7 in)	46 cm (18.1 in)	38.7 cm (15.3 in)	9.2 kg (20.2 lb)
Model AP1329 Printer	14.3 cm (5.7 in)	60.3 cm (23.8 in)	38.7 cm (15.3 in)	11.7 kg (25.7 lb)
Model AP9215-1 Printer	42.1 cm (16.6 in)	54.0 cm (21.3 in)	71.8 cm (28.2 in)	40.0 kg (88.0 lb)
Model B9246-7 Printer[1]	111.8 cm (44.0 in)	78.7 cm (31.0 in)	68.6 cm (27.0 in)	122.6 kg (270.0 lb)
Unisys Personal Computer HT[1]	42.5 cm (17.6 in)	48.0 cm (19.2 in)	61.5 cm (24.3 in)	20.7 kg (46.0 lb)
Unisys Personal Computer IT[2]	17.4 cm (6.85 in)	57.9 cm (22.8 in)	42.7 cm (16.8 in)	20.0 kg (44.0 lb)
Unisys- Personal Computer Micro IT[2]	12.7 cm (5.0 in)	38.1 cm (15.0 in)	38.1 cm (15.0 in)	10.8 kg (23.7 lb)

[1] Without power stacker.
[2] CPU unit only.

Table 4-1. Physical Characteristics (Cont.)

UNIT	HEIGHT	WIDTH	DEPTH	WEIGHT
Unisys Personal Workstation[2] Series 300	10.16 cm (4.0 in)	38.1 cm (15.0 in)	38.1 cm (15.0 in)	10.8 kg (23.7 lb)
Unisys Personal Workstation[2] Series 500	12.7 cm (5.0 in)	38.1 cm (15.0 in)	38.1 cm (15.0 in)	10.8 kg (23.7 lb)
Unisys Personal Workstation[2] Series 800	16.5 cm (6.5 in)	53.3 cm (21.0 in)	43.1 cm (17.0 in)	19.1 kg (42.0 lb)
Unisys Video Terminal-1210	35.5 cm (14.0 in)	45.0 cm (17.7 in)	49.0 cm (20.4 in)	14.4 kg (32.0 lb)
Unisys Video Terminal-1220	25.5 cm (10.0 in)	32.0 cm (12.6 in)	32.0 cm (12.6 in)	9.4 kg (15.0 lb)
Unisys Video Terminal-1224	38.4 cm (15.1 in)	34.0 cm (13.4 in)	35.5 cm (14.0 in)	12.0 kg (26.0 lb)

[2] CPU unit only

Space Requirements

Space requirements needed around all sides of a Unisys 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 system and peripheral are detailed in Tables 4-2 and 4-3.

Chapter 4

Table 4-2. Space Requirements

UNIT	CLEARANCE*	FRONT	BACK	ABOVE
Unisys 5000/20, 5000/30, or 5000/35 System	operator	open	open	**
	cooling	open	15.2 cm (6.0 in)	**
	service	30.5 cm (12.0 in)	55.9 cm (22.0 in)	45.7 cm (18.0 in)
Unisys 5000/40, 5000/50, or 5000/55 System	operator	open	**	**
	cooling	open	15.2 cm (6.0 in)	**
	service	30.5 cm (12.0 in)	50.8 cm (20.0 in)	38.1 cm (15.0 in)
Unisys 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 Disk/Tape Expansion Cabinet	operator	60.9 cm (24.0 in)	**	**
	cooling	open	open	open
	service	91.4 cm (36.0 in)	91.4 cm (36.0 in)	91.4 cm (36.0 in)
Unisys 5000/35 Disk Expansion Cabinet	operator	30.5 cm (12.0 in)	30.5 cm (12.0 in)	**
	cooling	30.5 cm (12.0 in)	30.5 cm (12.0 in)	**
	service	122 cm (48.0 in)	30.5 cm (12.0 in)	30.5 cm (12.0 in)

*   Unless noted, space requirements for operator, cooling,
      and service are the same.
**   No requirement.
*** As required by the operator.

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Table 4-2. Space Requirements (Cont.)

UNIT	CLEARANCE*	FRONT	BACK	ABOVE
Unisys 5000/55 Disk Expansion Cabinet	operator	30.5 cm (12.0 in)	30.5 cm (12.0 in)	**
	cooling	30.5 cm (12.0 in)	30.5 cm (12.0 in)	**
	service	122 cm (48.0 in)	30.5 cm (12.0 in)	30.5 cm (12.0 in)
Standalone 1/2-Inch Tape Drive Cabinet	operator	61.0 cm (24.0 in)	30.0 cm (12.0 in)	**
	cooling	61.0 cm (24.0 in)	30.0 cm (12.0 in)	**
	service	61.0 cm (24.0 in)	30.0 cm (12.0 in)	91.4 cm (36.0 in)
Model 25C Printer		15.2 cm (6.0 in)	38.1 cm (15.0 in)	25.4 cm (10.0 in)
Model 31 Printer		15.2 cm (6.0 in)	15.2 cm (15.0 in)	38.1 cm (15.0 in)
Model 35 Printer		15.2 cm (6.0 in)	38.1 cm (15.0 in)	25.4 cm (10.0 in)
Model 47 Laser Printer	operator	45.7 cm (18.0 in)	15.2 cm (6.0 in)	10.2 cm (4.0 in)
	service	45.7 cm (18.0 in)	61.0 cm (24.0 in)	25.4 cm (10.0 in)
Model 115 Printer		76.2 cm (30.0 in)	76.2 cm (30.0 in)	30.5 cm (12.0 in)
Model 789 Printer		76.2 cm (30.0 in)	76.2 cm (30.0 in)	91.5 cm (36.0 in)
Model AP1307 Printer		***	20.3 cm (8.0 in)	40.7 cm (18.0 in)

* Unless noted, space requirements for operator, cooling, and service are the same.
** No requirement.
*** As required by the operator.

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Table 4-2. Space Requirements (Cont.)

UNIT	CLEARANCE*	FRONT	BACK	ABOVE
Model AP1327 Printer		***	30.5 cm (12.0 in)	40.7 cm (18.0 in)
Model AP1329 Printer		***	30.5 cm (12.0 in)	40.0 cm (18.0 in)
Model AP9215-1 Printer		***	20.3 cm (8.0 in)	40.7 cm (18.0 in)
Model B9246-7 Printer		91.4 cm (36.0 in)	91.4 cm (36.0 in)	7.1 cm (3.0 in)
Unisys Personal Computer HT		***	11.4 cm (4.5 in)	**
Unisys Personal Computer IT		***	11.4 cm (4.5 in)	**
Unisys Personal Computer Micro IT		***	7.6 cm (3.0 in)	**
Unisys Personal Workstation² Series 300		***	7.6 cm (3.0 in)	**

*   Unless noted, space requirements for operator, cooling, and service are the same.
**   No requirement.
*** As required by the operator.

Table 4-2. Space Requirements (Cont.)

UNIT	CLEARANCE*	FRONT	BACK	ABOVE
Unisys Personal Workstation^2 Series 500		***	7.6 cm (3.0 in)	**
Unisys Personal Workstation^2 Series 800		***	15.2 cm (6.0 in)	**
Unisys Video Terminal-1210		***	11.4 cm (4.5 in)	5.1 cm (2.0 in)
Unisys Video Terminal-1220		***	11.4 cm (4.5 in)	5.1 cm (2.0 in)
Unisys Video Terminal-1224		***	15.2 cm (6.0 in)	5.1 cm (2.0 in)
Modem		**	**	**

*   Unless noted, space requirements for operator, cooling, and service are the same.
**   No requirement.
*** As required by the operator.

Chapter 4

Table 4-3. Space Requirements for Sides

UNIT	LEFT SIDE	RIGHT SIDE
Unisys 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 System or Expansion Cabinets	*	*
Standalone 1/2-Inch Tape Drive Cabinet	*	*
Model 25C Printer	10.2 cm (4.0 in)	10.2 cm (4.0 in)
Model 31 Printer	5.1 cm (2.0 in)	10.2 cm (4.0 in)
Model 35 Printer	10.2 cm. (4.0 in)	10.2 cm (4.0 in)
Model 37 Printer	40.6 cm (16.0 in)	40.6 cm (16.0 in)
Model 47 Laser Printer	45.7 cm (18.0 in)	61.0 cm (24.0 in)
Model 789 Printer	7.6 cm (3.0 in)	7.6 cm (3.0 in)
Model AP1307 Printer	15.2 cm (6.0 in)	7.6 cm (3.0 in)
Model AP1327 Printer	15.2 cm (6.0 in)	15.2 cm (6.0 in)
Model AP1329 Printer	15.2 cm (6.0 in)	15.2 cm (6.0 in)

* No requirement.

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Table 4-3. Space Requirements for Sides (Cont.)

UNIT	LEFT SIDE	RIGHT SIDE
Model B9215-1 Printer	21.6 cm (9.0 in)	7.6 cm (3.0 in)
Model B9246-7 Printer	7.6 cm (3.0 in)	7.6 cm (3.0 in)
Unisys Personal Computer HT	10.2 cm (4.0 in)	10.2 cm (4.0 in)
Unisys Personal Computer IT	10.2 cm (4.0 in)	10.2 cm (4.0 in)
Unisys Personal Computer Micro IT	*	*
Unisys Personal Workstation[2] Series 300	*	*
Unisys Personal Workstation[2] Series 500	*	*
Unisys Personal Workstation[2] Series 800	10.2 cm (4.0 in)	10.2 cm (4.0 in)
Unisys Video Terminal-1210	10.2 cm (4.0 in)	10.2 cm (4.0 in)
Unisys Video Terminal-1220	10.2 cm (4.0 in)	10.2 cm (4.0 in)
Unisys Video Terminal-1224	15.2 cm (6.0 in)	15.2 cm (6.0 in)

* No requirement.

Chapter 5. Cabling Considerations

Planning and preparation for use of your Unisys 5000/20, 5000/30, 5000/35 5000/40, 5000/50, or 5000/55 system must take into consideration all of the terminals, printers, and other devices in the system.

Considerations affecting the planning of a system cabling installation include cable length, cable routing, ambient noise environment, cable types, existing onsite cables, and installation lead times.

Cable Routing

Cable routing is normally considered to be within the premises of the user. When cable must be routed outside the premises, consult the local utility for applicable regulations.

Noise Environment

Ambient electrical noise (radiation) produced by equipment such as motor generators, electromechanical devices, radiation equipment, or existing wiring and cabling, can cause errors in data equipment. If such conditions exist, shielded cable must be considered for the installation.

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Cable Type

Unisys cabling includes both unshielded and shielded cables in common modular components. Shielded cables are available in two types: one for above ground use (aerial or duct) and the other for underground installation (burial).

Existing Onsite Cables

To use existing onsite cables with Unisys peripherals the existing cabling must be certified as acceptable for use with Unisys equipment. Verify shielding, internal conductors, and cable connectors for compatibility. Refer to Tables 5-1 and 5-2 for specific cable information.

NOTE:

Ownership of existing onsite cabling (i.e., whether the user owns or leases it) must be determined before peripheral certification can be made. Failure to make this determination may void cable certification and therefore void warranty.

Cable Length

Cable length is defined as the plug-to-plug distance between items of equipment. Routing requirements must be considered when planning a cable installation (conduit, corners, drops, stress relief, etc.) in addition to excess length to accommodate equipment positioning.

Cabling Considerations

Many different types of communications cables can be connected to the system. All of them are designated to meet RS-232-C, Centronics, SCSI, or COAX interface requirements. Each of them, however, has a somewhat different set of interface signal interconnect requirements. These types are modem cables, printer cables, terminal cables, and expansion cabinet cables. In general all cables are available in several lengths: 10, 25, and 50 foot cables are the usual options. The maximum length for most applications is 50 feet due to signal loss over the length of the cable. Refer to Table 5-1 for a summary of power cord length data and Table 5-2 for a summary of cable data.

Table 5-1. Power Cord Length

UNIT	POWER CORD LENGTH
Unisys 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 System	3.0 M (10.0 ft)
Unisys 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 Disk/Tape Expansion Cabinet	2.0 M (6.6 ft)
Unisys 5000/35 Disk Expansion Cabinet	2.0 M (6.6 ft)
Unisys 5000/55 Disk Expansion Cabinet	2.0 M (6.6 ft)
Standalone 1/2-Inch Tape Drive Cabinet	3.0 M (10.0 ft)
Model 25 C Printer	2.0 M (6.6 ft)
Model 31 Printer	2.0 M (6.6 ft)
Model 35 Printer	2.0 M (6.6 ft)

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Table 5-1. Power Cord Length (Cont.)

UNIT	POWER CORD LENGTH
Model 37 Printer	1.8 M (6.0 ft)
Model 47 Laser Printer	2.5 M (8.2 ft)
Model 789 Printer	2.0 M (6.6 ft)
Model AP 1307 Printer	2.5 M (8.3 ft)
Model AP 1327 Printer	2.3 M (7.5 ft)
Model AP 1329 Printer	3.0 M (9.9 ft)
Model AP 9215-1 Printer	2.5 M (8.2 ft)
Model B 9246-7 Printer	4.6 M (15.0 ft)
Unisys Personal Computer HT	2.0 M (6.6 ft)
Unisys Personal Computer IT	2.0 M (6.6 ft)
Unisys Personal Computer Micro IT	2.0 M (6.6 ft)
Unisys Personal Workstation^2 Series 300	2.0 M (6.6 ft)
Unisys Personal Workstation^2 Series 500	2.0 M (6.6 ft)
Unisys Personal Workstation^2 Series 800	1.8 M (6.0 ft)

Cabling Considerations

Table 5-1. Power Cord Length (Cont.)

UNIT	POWER CORD LENGTH
Unisys Video Terminal-1210	1.9 M (6.2 ft)
Unisys Video Terminal-1220	1.9 M (6.2 ft)
Unisys Video Terminal-1224	1.8 M (6.0 ft)

Table 5-2. Cable Data

FROM MAIN UNIT TO:	TYPE	LENGTH
Unisys 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 System	RS-232-C (UUCP)	15 M (50 ft)
Unisys 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 Disk/Tape Expansion Cabinets	SCSI	3 M (10 ft)
Unisys 5000/35 or 5000/55 Disk Expansion Cabinet	Host to First Disk Expansion Cabinet SCSI	3 M (10 ft) 4.6 M (15 ft)
Standalone 1/2-Inch Tape Drive Cabinet	Disk Expansion Cabinet to Standalone SCSI	3M (10 ft)
	Disk Expansion Cabinet to Disk/Tape Expansion Cabinet SCSI	3M (10 ft)

Chapter 5

Table 5-2. Cable Data (Cont.)

FROM MAIN UNIT TO:	TYPE	LENGTH
Unisys Printers*	RS-232-C	15.2 M (50 ft)
	Centronics	4.5 M (15 ft)
Unisys Personal Computer HT	RS-232-C	15.2 M (50 ft)
Unisys Personal Computer IT	RS-232-C	15.2 M (50 ft)
Unisys Personal Computer Micro IT	RS-232-C	2.0 M (6.6 ft)
Unisys Personal Workstation^2 Series 300	RS-232-C	2.0 M (6.6 ft)
Unisys Personal Workstation^2 Series 500	RS-232-C	2.0 M (6.6 ft)
Unisys Personal Workstation^2 Series 800	RS-232-C	15.2 M (50 ft)
Unisys Video Terminal - 1210	RS-232-C	15.2 M (50 ft)
Unisys Video Terminal - 1220	RS-232-C	15.2 M (50 ft)
Unisys Video Terminal - 1224	RS-232-C	15.2 M (50 ft)
Modem	asynchronous	6.0 M (20 ft)
	synchronous	6.0 M (20 ft)

* The Model 31 Printer and AP1307 Printer require an adapter block for RS-232-C.

For the RS-232-C connections to the 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 system, you will

Cabling Considerations

need a DB 15 connector on the system end of the cable and for most applications a DB 25-pin male connector on the device end. Unisys provides the necessary adapter. Centronic connections to the 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 system requires a DB 25-pin male connector on the system end of the cable and a Centronics ribbon connector for the peripheral end of the cable. The 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 system uses DB-25 pin male connectors for RS-232-C interfaces and Centronics ribbon male connector for Centronics interfaces. Refer to Table 5-3 for detailed peripheral connector information.

Expansion cabinet cabling varies according to configuration. Your Unisys representative can provide information about custom expansion cabinet proprietary cabling.

Table 5-3. Connector Data

FROM MAIN UNIT TO:	CONNECTORS	
	MAIN UNIT END	OTHER END
Unisys 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 System	15-pin male	15-pin male
Unisys 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 Expansion Cabinet	62-pin male	50-pin female
Unisys 5000/35 Host to First SCSI Expansion Cabinet	62-pin male	50-pin male
Unisys 5000/35 and 5000/55 Daisy Chain SCSI Expansion Cabinet and Standalone 1/2-inch Tape Drive Cabinet	50-pin male	50-pin male

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Table 5-3. Connector Data (Cont.)

FROM MAIN UNIT TO:	CONNECTORS	
	MAIN UNIT END	OTHER END
Unisys 5000/35, and 5000/55 to Daisy Chain Expansion Cabinet or Standalone 1/2-Inch Tape Drive Cabinet	50-pin male	50-pin female
Unisys Printers	RS-232-C 15-pin male Centronics 25-pin male	RS-232-C 25-pin male Centronics 36-pin male
Unisys Personal Computer HT	15-pin male	25-pin male
Unisys Personal Computer IT	15-pin male	25-pin male
Unisys Personal Computer Micro IT	15-pin male	25-pin male
Unisys Personal Work-station^2 Series 300	15-pin male	25-pin male
Unisys Personal Work-station^2 Series 500	15-pin male	25-pin male
Unisys Personal Work-station^2 Series 800	15-pin male	25-pin male
Unisys Video Terminal-1210	15-pin male	25-pin female

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Table 5-3. Connector Data (Cont.)

FROM MAIN UNIT TO:	CONNECTORS	
	MAIN UNIT END	OTHER END
Unisys Video Terminal-1220	15-pin male	25-pin female
Unisys Video Terminal-1224	15-pin male	25-pin female
Modem	asynchronous 15-pin (male) synchronous 25-pin (male)	asynchronous 25-pin (male) synchronous 25-pin (male)

Remote Diagnostic Requirements

1. Provide a modular phone jack on a direct line within 6 meters (20 feet) of the main unit for the remote diagnostic modem.

2. Provide a telephone that is within 6 meters (20 feet) of the main unit. (This phone can share the remote diagnostic modem line.)

3. Provide AC power for the diagnostic modem within 1.9 meters (6 feet) of the modem phone jack.

Chapter 5

Ethernet Cable Configuration

The following figure is an overview of Ethernet cable configuration.
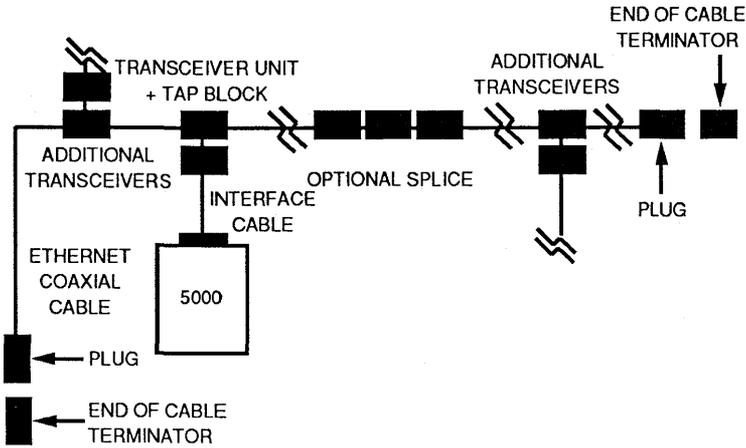

Figure 5-1. Ethernet Cable Configuration

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MUX-5000 Cable Configuration

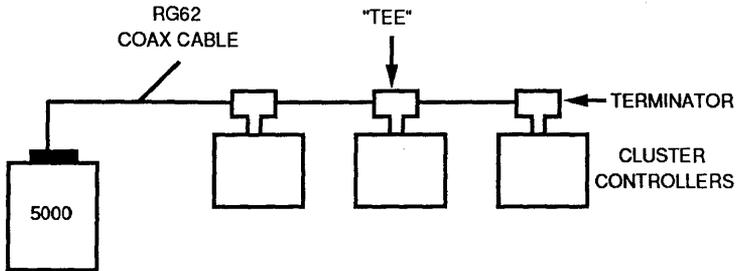The following figure is an overview of MUX-5000 cable configuration.

Figure 5-2. MUX-5000 Cable Configuration

Chapter 6. Power Consideration

Primary Power

Specifying the primary input power voltage (115, 220, 230, or 240 Vac) and frequency (50 or 60 Hz) is part of the ordering process for the Unisys 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55. Your equipment is then preset to your specifications prior to shipment. Unisys recommends that circuits be used to provide primary power for this equipment in accordance with the following:

• 60 Hz, 15A, single pole, 120 or 240 Vac (±10%), single phase, 2-wire and ground

• 50 Hz, 15A, single pole, 240 Vac (±10%), single phase, 2-wire and ground

Primary input power requirements for this equipment are shown in Table 6-1.

Table 6-1. Power Requirements

UNIT	PRIMARY INPUT POWER
Unisys 5000/20, 5000/30, or 5000/35 CPU	0.5 KVA
Unisys 5000/40 CPU	0.9 KVA
Unisys 5000/50 or 5000/55 CPU	0.7 KVA
Unisys 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 Disk/Tape Expansion Cabinet	1.44 KVA

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Table 6-1. Power Requirements (Cont.)

UNIT	PRIMARY INPUT POWER
Unisys 5000/35 Disk Expansion Cabinet	0.75 KVA
Unisys 5000/55 Disk Expansion Cabinet	1.12 KVA
Standalone 1/2-Inch Tape Drive Cabinet	1.44 KVA
Model 25C Printer	0.076 KVA
Model 31 Printer	0.22 KVA
Model 35 Printer	0.22 KVA
Model 37 Printer	.95 KVA
Model 47 Printer	1.5 KVA
Model 789 Printer	0.51 KVA
Model AP1307 Printer	.10 KVA
Model AP1327 Printer	.15 KVA
Model AP1329 Printer	.15 KVA
Model AP9215-1 Printer	1.0 KVA
Model B9246-7 Printer	.75 KVA
Unisys Personal Computer HT	0.48 KVA
Unisys Personal Computer IT	0.53 KVA

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Table 6-1. Power Requirements (Cont.)

UNIT	PRIMARY INPUT POWER
Unisys Personal Computer Micro IT	0.13 KVA
Unisys Personal Workstation^2 Series 300	0.12 KVA
Unisys Personal Workstation^2 Series 500	0.14 KVA
Unisys Personal Workstation^2 Series 800	0.56 KVA
Unisys Video Terminal-1210	0.07 KVA
Unisys Video Terminal-1220	0.07 KVA
Unisys Video Terminal-1224	.07 KVA

Voltage and Frequency Combinations

The Unisys 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 system and their peripherals can be ordered preset for a variety of different voltage and frequency combinations. Table 6-2 shows the availability of various voltage and frequency options for each component part of the system.

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Table 6-2. Voltage/Frequency Options

UNIT	VOLTAGE	FREQUENCY
Unisys 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 System	120 Vac (± 10%) 220 Vac (± 10%)	50/60 Hz 50/60 Hz
5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 Disk/Tape Expansion Cabinet	120 Vac (± 10%) 220 Vac (± 10%)	50/60 Hz 50/60 Hz
5000/35 Disk Expansion Cabinet	120 Vac (± 10%) 220 Vac (± 10%)	50/60 Hz 50/60 Hz
5000/55 Disk Expansion Cabinet	120 Vac (± 10%) 220 Vac (± 10%)	50/60 Hz 50/60 Hz
Standalone 1/2-Inch Tape Drive Cabinet	120 Vac (± 10%) 220 Vac (± 10%)	50/60 Hz 50/60 Hz
Model 25C Printer	110 Vac (± 10%) 240 Vac (± 10%)	60 Hz 50 Hz
Model 31 Printer	110 Vac (± 10%) 240 Vac (± 10%)	60 Hz 50 Hz
Model 35 Printer	110 Vac (± 10%) 240 Vac (± 10%)	60 Hz 50 Hz
Model 37 Printer	120 Vac (± 10%) 220 Vac (± 10%) 240 Vac (± 10%)	60 Hz 50 Hz 60 Hz
Model 47 Printer	110 Vac (± 10%) 240 Vac (± 10%)	60 Hz 50 Hz
Model 789 Printer	110 Vac (± 10%) 240 Vac (± 10%)	60 Hz 50 Hz

Power Consideration

Table 6-2. Voltage/Frequency Options (Cont.)

UNIT	VOLTAGE	FREQUENCY
Model AP1307 Printer	115 Vac (± 10%)	50/60 Hz
	220 Vac (± 10%)	50/60 Hz
	240 Vac (± 10%)	50/60 Hz
Model AP1327 Printer	115 Vac (± 10%)	50/60 Hz
	240 Vac (± 10%)	50/60 Hz
Model AP1329 Printer	115 Vac (± 10%)	50/60 Hz
	240 Vac (± 10%)	50/60 Hz
Model AP9215-1 Printer	110 Vac (± 18%)	50/60 Hz
	240 Vac (± 18%)	50/60 Hz
Model B9246-7 Printer	110 Vac (± 18%)	50/60 Hz
	240 Vac (± 15%)	50 Hz
	240 Vac (± 10%)	60 Hz
Unisys Personal Computer HT	110 Vac (± 10%)	60 Hz
	240 Vac (± 10%)	50/60 Hz
Unisys Personal Computer IT	110 Vac (± 10%)	60 Hz
	240 Vac (± 10%)	50/60 Hz
Unisys Personal Computer Micro IT	110 Vac (± 10%)	50/60 Hz
	240 Vac (± 10%)	50/60 Hz

Chapter 6

Table 6-2. Voltage/Frequency Options (Cont.)

UNIT	VOLTAGE	FREQUENCY
Unisys Personal Work-station^2 Series 300	110 Vac (± 10%)	50/60 Hz
	240 Vac (± 10%)	50/60 Hz
Unisys Personal Work-station^2 Series 500	110 Vac (± 10%)	50/60 Hz
	240 Vac (± 10%)	50/60 Hz
Unisys Personal Work-station^2 Series 800	110 Vac (± 10%)	60 Hz
	240 Vac (± 10%)	50/60 Hz
Unisys Video Terminal-1210	120 Vac (± 10%)	50/60 Hz
	240 Vac (± 10%)	50/60 Hz
Unisys Video Terminal-1220	120 Vac (± 10%)	50/60 Hz
	240 Vac (± 10%)	50/60 Hz
Unisys Video Terminal 1224	120 Vac (± 10%)	50/60 Hz
	240 Vac (± 10%)	50/60 Hz

Voltage and Frequency Variations

The Unisys 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 system, and expansion cabinets, are designed to operate effectively despite significant variations that may occur in input voltage and frequency. Permissible variations are defined in Table 6-3. Power variation range specifications for your peripheral equipment is found in the documentation shipped with the equipment. If you have any concerns about voltage or

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frequency variations, contact your power company and inquire about what variations are allowed in your local area. If you still have questions, contact your Unisys representative.

Voltage Variations

All of the component parts of the Unisys 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 system are designed to function within the same limits of voltage variation outlined in Table 6-3.

Frequency Variations

All of the component parts of the Unisys 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 are tolerant of frequency variations within the limits outlined in Table 6-3.

Table 6-3. Voltage and Frequency Range

Nominal Voltage	Voltage Limits
120 Vac	102 - 127 Vac
240 Vac	204 - 254 Vac
Nominal Frequency	**Frequency Limits**
60 Hz	58.8 - 61.2 Hz
50 Hz	49 - 51 Hz

Chapter 6

Branch Circuit Considerations

Random or transient electrical noise in the power circuit can cause errors in data transmission. Therefore, Unisys recommends that the specified power be provided from a branch circuit dedicated to the electronic equipment at your site. Small equipment, such as terminals, modems, or printers may be powered from the same branch circuit. Large, heavy current equipment, such as the computer CPU, expansion cabinet, and the laser printer, however, must be individually powered from its own branch circuit.

To avoid introducing electrical noise into the system, other equipment (coffee pots, fans, calculators, or other electromechanical devices) should not be connected to the branch circuit being used for any of your data communications equipment. It is also recommended that the branch circuit used be separately fused or equipped with an appropriate circuit breaker. This circuit should also be properly grounded.
If you suspect a power network problem, consider using a power line monitor. The monitor helps you select the best branch circuit and power protection equipment.

Power Receptacles

As part of your site planning, it is important to make sure that you have power receptacles to accommodate your equipment. Also make sure that these power receptacles are in close proximity to the equipment. Refer to Table 5-1 in Chapter 5 for exact power cord lengths.

The domestic power cable for the 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 system is a NEMA 5-15P. The 50 Hz units are shipped from the factory with

the customer-selected connector installed on the power cable. (Refer to Table 6-4.) If the power cable on your equipment does not have a factory-installed plug, make certain that the green or yellow wire in the power cable is connected to the ground in your power circuit during installation.

Refer to Figure 6-1 and Table 6-4 to ensure that the receptacles you install are compatible with the plugs to be used with your equipment. If you have any questions concerning selection of the correct receptacles, contact your Unisys representative.
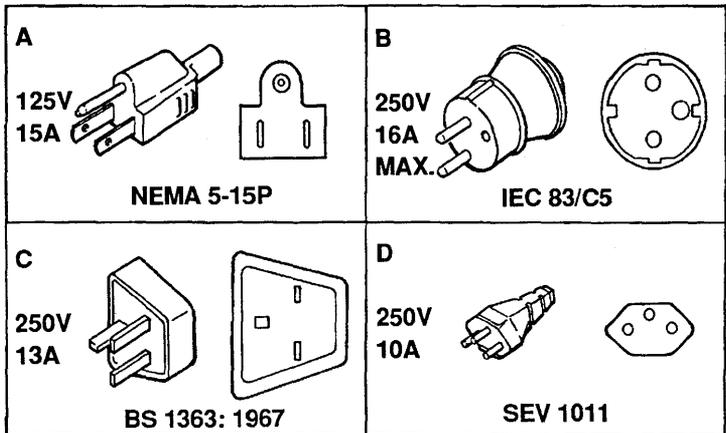

Figure 6-1. Power Plug Diagram

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Table 6-4. Power Plug Usage

COUNTRY	RATED VOLTAGE	PLUG (See Fig. 6-1)
Algeria	250 V	None*
Australia	250 V	No cable or plug
Austria	250 V	B
Belgium	250 V	B
Bulgaria	250 V	B
Canada	125 V	A
Denmark	250 V	None*
Finland	250 V	B
France	250 V	B
Germany	250 V	B
Hong Kong	250 V	C
Hungary	250 V	B
Iceland	250 V	B
Indonesia	250 V	B
Iran	250 V	B

*Cable purchased without power plug. Plug must be added by customer.

Table 6-4. Power Plug Usage (Cont.)

COUNTRY	RATED VOLTAGE	PLUG (See Fig. 6-1)
Ireland	250 V	None*
Italy	250 V	B
Japan	125 V	A
Korea	125 V	A
Malaysia	250 V	B
Netherlands	250 V	B
New Zealand	250 V	No cable or plug
Norway	250 V	B
Poland	250 V	B
Portugal	250 V	B
Rumania	250 V	B
South Africa	250 V	None*
Spain	250 V	None*
Sweden	250 V	B

*Cable purchased without power plug. Plug must be added by customer.

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Table 6-4. Power Plug Usage (Cont.)

COUNTRY	RATED VOLTAGE	PLUG (See Fig. 6-1)
Switzerland	250 V	D
United Kingdom	250 V	C
United States	125 V	A
Yugoslavia	250 V	B
Eastern Europe	250 V	None*
Parts of southern Ireland	250 V	C
Middle East	250 V	None*
Some Middle Eastern Countries	250 V	C

*Cable purchased without power plug. Plug must be added by customer.