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

Installation and Implementation Guide

May 1988

Printed in U S America
UP–12694 Rev. 1

Priced Item

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Chapter 1. Installing the System Software

Overview

This book contains the procedures to install the 5000 Series Operating System software. Although the procedures are simple, the operating system software should be installed by someone with experience using a UNIX®-based operating system, preferably the system administrator.

Before performing an initial system software installation, make sure the system hardware is installed following the procedures in the *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 Installation Guide*. The chapter called "Using the System Hardware" in that document contains instructions on installing a streaming tape and turning on the system.

If you are installing an upgrade to your system, consult the *U 5000/30, U 5000/35, U 5000/50, and U 5000/55 Operating System Release Description*, which contains the procedures necessary to protect your existing files.

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NOTE:

If your 5000 Series Operating System was preinstalled in the factory, the procedures described in this chapter are only necessary if you need to:

— install the operating system manually,
— restore selected files or entire file systems, or
— do file system maintenance.

The second, optional tape containing the System 5.2 extensions can be installed through Unisys menus after installing the operating system tape. Refer to the "Install" section of Chapter 3 of the *U 5000 and U 7000 Series Operating Systems Menu System Operating Guide UP-11763 R3.*

Sections of this guide apply to only the 5000/20, 5000/30, 5000/40, or the 5000/50 system Release 1.03.00 or earlier, while other sections apply to only the 5000/30, 5000/35, 5000/50, or 5000/55 Release 2.00. Table 3-1 in Chapter 3 has a list of all the disk and tape devices for each 5000 Series system. Refer to the *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; Operations Guide*, Chapter 5, "Streaming Tape Drive" section for tape compatibility.

5000/20, 5000/30, 5000/40, or 5000/50 System (Release 1.03.00 or earlier)

Installing the system software for your computer is a menu-driven procedure with successive self-explanatory lead-through

prompts. The system software installation process is performed in three phases:

Phase 1 determines the system root device and creates the install file system.

Phase 2 determines the system disk from Phase 1 and starts the creation of the file system.

Phase 3 copies the base system files and sets up system files.

5000/30, 5000/35, 5000/50, or 5000/55 System (Release 2.00)

Installing the system software for your computer is a menu-driven procedure with successive self-explanatory lead-through prompts. The system software installation process is performed in three phases:

The five main objectives of Phase 1 of the system software installation are:

1. Determining the system disk or root device.

2. Checking and retensioning the tape.

3. Checking the disk format information and performing a disk format if necessary.

4. Creating the install file system.

5. Terminating Phase 1.

The two main objectives of Phase 2 of the system software installation are:

1. Determining the system disk from Phase 1 and starting the creation of the file system.

2. Terminating Phase 2 and reloading the operating system.

The two main objectives of Phase 3 of the system software installation are:

1. Installing the base system files.

2. Relinking and reloading the operating system.

After the system files are set up, the system is relinked and reloaded and the **setterm** login prompt displays.

The system root device is either an internal 5.25-inch hard disk or an external SCSI hard disk in an expansion cabinet. Screen displays that come up on your console during the installation process show which device is the system root device. This document shows both disk drive names in the screen examples.

During the system software installation process, 13 users are automatically added to the system (see the section "Securing the System" in Chapter 2) but no passwords are assigned. To assure the security of your system, the system administrator should assign passwords immediately after installing the system software. (See the "Change" section in Chapter 3 of the *U 5000 and U 7000 Series Operating Systems Menu System Operating Guide UP-11763 Rev 3.*

When initializing the operating system, it is important to answer the user response messages correctly to assure that the system software is installed properly. After each entry for a user response message, press < **cr** >. After you press < **cr** >, either the cursor is automatically positioned at the next user

response message or the next step in the software installation process is performed.

If an entry error is made and you have not pressed < **cr** >, enter the pound sign (#) enough times to backspace to the error then make the correct entry. For example:

MS#DT is equivalent to **MDT**

If an error message appears during system software installation, refer to the chapter called "Error Messages."

Chapter 2. System Software Installation

5000/20, 5000/30, 5000/40, 5000/50 Release 1.03.00

This section of the chapter provides specific information for the installation of system software in the 5000/20, 5000/30, 5000/40, or the 5000/50 system (Release 1.03.00).

System software is on the INSTALL tape that is distributed with your system. Use only the tape cartridge distributed with your system.

If you reinstall your system, you must use the same tape you used for initial installation. Therefore, label the installation tape with some unique identifier, such as the serial number of your system. (The serial number is found on the chassis of your system under the left cover of the 5000/20 or 5000/30 system and under the top cover of the 5000/40 or 5000/50 system).

It is important that you insert and remove the streaming tape when requested. Insert the streaming tape in the top (or only) drive.

Make sure the tape cartridge is write-enabled.

NOTE:

Streaming tape cartridges must be permitted to reach the same temperature and humidity as that of the drive before they are used. If cartridges are not kept in the same area as the drive, move them near the drive at least one hour before they are used.

For more information on streaming tape cartridges, see the *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 Operations Guide.*

Installing the System from a Streaming Tape

After connecting the control console to the processor Channel b on your 5000 system, power up the system. The **Select Startup Function** menu appears on the console screen. Refer to the *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 Installation Guide* for information on how to turn on the system.

NOTE:

The following console settings should be used:

9600 Baud
7 bits/character
Parity on, even
1 stop bit
Xon/Xoff

The install system function on the **Startup** menu permits initial installation of the system software. Follow these procedures to begin installation.

1. From the **Select Startup Function** menu, select Item 2, **Install System**, by entering **2 < cr >**.

   The terminal displays:

   ENTER DEVICE NAME

2. Enter the device name **st01** and press **< cr >** to continue. The terminal displays:

   INSERT SYSTEM MEDIA
   PRESS SPACEBAR TO CONTINUE

3. Insert the tape cartridge labeled INSTALL. Press the space bar to begin the installation process.

   The hardware level of your particular system determines whether or not the following display appears. If it does not, go on to Step 5.

RETENSION TAPE? (Y/N):

To assure maximum reliability, the tape should be retensioned.

4. Enter **y < cr >** to retension tape.

5. Regardless of whether or not you retension the tape, the following messages appear:

AVAILABLE MEM SIZE = *hex number*

SYSTEM OKAY

STARTUP FUNCTIONS COMPLETE

On the 5000/30 and 5000/50 system the screen also displays:

System Release: *level number*
System Version: install
System Nodename: S5000
System Processor: MC68020

Caches Enabled: Processor ATC Program Data
maxmem = *xxxxx*
user program = *xxxxx*
max program size = *xxxxx*

Note that if you are installing a 5000/30 without caches, the Cache Enabled message does not appear.

6. Begin Phase 1 of the system software installation process after the following message appears:

SYSTEM INSTALLATION / RESTORE / MAINTENANCE - PHASE 1

Please make sure your installation tape is inserted properly.

PRESS the NEWLINE or RETURN key to continue

System Installation/Restore/Maintenance Phase 1

Description

The three main objectives of Phase 1 of the system installation are:

1. Determining which disk is the system root device.
2. Creating the install file system.
3. Terminating Phase 1.

Procedures

Perform the following steps to execute Phase 1 of the system installation.

1. Press the < **cr** > key to begin Phase 1.

   The terminal displays:

   STEP 1: DETERMINING SYSTEM DISK (ROOT DEVICE)
   The root device will automatically be h501 (or sd01). The root device is the disk which contains the required operating system files.

Do you wish to continue?
Answer y or n:

If your system is not connected to a disk/tape expansion cabinet, the root device is automatically h501, the first internal 5.25-inch disk. Go on to Step 2.

If you have a disk/tape expansion cabinet connected to your system, sd01 (SCSI disk) is automatically the root device.

Putting the root file system on the SCSI disk may increase the performance of your system. Because you cannot partition your root device, you may want to place the root file system on the smaller disk (h501) and partition the large disk (sd01) into one or more file systems (for example, **/usr/acct** and **/tmp**).

If sd01 is the root device you want, go on to Step 2. If you want to use h501, enter **n** after the prompt to select that device. Then proceed to Step 2.

2. Enter **y** < **cr** > to continue using the selected device as the root device.

   Enter **n** to terminate installation. If you decide to terminate installation, you can resume by pressing the RESET toggle switch. The terminal displays the **Select Startup Function** menu. Follow the procedures in this chapter that begin at the section called "Installing the System from a Streaming Tape."

   While determining the system disk, the root file system is created on the disk specified. Before creating the **root** file system, the system checks the disk for a valid format.

The system may detect an invalid disk format because of any of the following reasons:

- the disk device was cleared,
- a new unformatted disk was installed, or
- an electrical disturbance destroyed the integrity of the file system.

If the system does not detect an invalid disk format, it gives you a choice either to format or not to format the specified disk device. The terminal displays the following messages:

```
CHECKING Disk Format Information

Disk device is formatted.

Do you wish to reformat the disk?
Answer y or n:
```

3. Enter **y** to format the disk.

   Under normal conditions you do not need to reformat the disk. The disks that come with your initial system are already formatted. If an error occurs during the installation process and the file system cannot be made, the disk must be formatted again. Also, if you are installing a new release of the operating system on a disk that has been in use, you must format the disk (after taking the precaution of backing up the disk contents). Continue with the formatting procedures in the chapter called "Formatting the Disk Device." After completing these procedures, return to this section and continue with Step 6.

Enter **n** to continue installation. The terminal displays:

Do you have any bad blocks to enter?
Answer y or n :

4. Enter **y** and follow the instructions in the "Formatting the Disk Device" chapter for entering bad blocks. Then continue with Step 5.

   If this is an initial installation, you only need to enter the bad blocks recorded by the disk manufacturer on the Media Error Log. Although it is possible to avoid entering bad blocks by answering **n** in response to the prompt, this could result in future disk read errors.

   If you enter **y**, continue with the procedures in the "Formatting the Disk Device" chapter. After completing these procedures, return to this section, enter **n** in response to the prompt previously described and continue with Step 5.

5. The terminal displays the following:

   DISK FORMATTER
   Full format disabled
   Drive type:
   Non-SCSI Disk (or SCSI Disk)
   Unit 0
   Partition 0
   ISL to be written from: isl

   Determining Disk Type

   Device Type is *xxxx*

   Writing Bad Block Table

Writing ISL

Writing bootblock

Disk Format Complete

STEP 2: CREATING INSTALL FILE SYSTEM

BEGINNING tape operations:
RETENSIONING tape
VERIFYING tape
This process may take up to 10 minutes...please wait

COPYING data.....
VERIFYING data.....

NOTE:

No operator action is required for Step 2 of system software installation Phase 1. The process takes approximately seven minutes to complete. If you receive an error message, refer to the "Error Messages" chapter.

If you are installing software on the 5000/20 or 5000/40, the terminal then displays the following:

STEP 3: SUCCESSFUL TERMINATION OF PHASE 1

The system is automatically reloaded.

AUTO REBOOT NOW IN PROGRESS

LOADING "/unix.sti" FROM DEVICE h501 (or sd01)

LOAD COMPLETE

AVAILABLE MEM SIZE = *hex number*

SYSTEM OKAY

STARTUP FUNCTIONS COMPLETE

System Release: *level number*
System Version: sti
System Nodename: S5000
System Processor: 68010
Four K Pagemap Enabled [Configuration Dependent]

maxmem = *xxxxx*
user memory = *xxxxx*
max program size =-*xxxxx*

INIT: SINGLE USER MODE

If you are installing software on the 32-bit 5000/30, 5000/40, or 5000/50, the system displays:

STEP 3: SUCCESSFUL TERMINATION OF PHASE 1

The system will be automatically reloaded.

AUTO REBOOT NOW IN PROGRESS

LOADING "/unix.sti" FROM DEVICE (or sd01)

LOAD COMPLETE

AVAILABLE MEM SIZE = *hex number*

SYSTEM OKAY

STARTUP FUNCTIONS COMPLETE

System Release:	*level number*
System Version:	sti
System Nodename:	S5000
System Processor:	MC68020
Caches Enabled:	Processor ATC Program Data

maxmem = *xxxxx*
user memory = *xxxxx*
max program size = *xxxxx*
INIT: SINGLE USER MODE

6. When the prompt displays, continue the system software installation process with System Installation/Restore/ Maintenance Phase 2.

System Installation/Restore/Maintenance Phase 2

Description

The two main objectives of Phase 2 of the system software installation are:

1. Determining the system disk from Phase 1 and beginning the creation of the file system.

2. Succesfully terminating Phase 2 and reloading the operating system.

Procedures

Phase 2 begins with the following messages:

SYSTEM INSTALLATION / RESTORE / MAINTENANCE
PHASE 2

Select One Of The Following and PRESS NEWLINE or the RETURN key.

1 - Perform System Installation.
2 - Perform System Restore from Mag Tape.
3 - Perform System Restore from Streaming Tape.
4 - Perform File System Maintenance.

Enter Selection Number:

Perform the following steps to execute Phase 2 of the System Installation, Restore, and Maintenance.

1. Enter a selection number.

   Enter **1** if this is an initial installation. When you do this, the following messages appear informing you of the progress of the system installation:

   Error Logging Initiated

   System Installation (Phase 2) Beginning

   STEP 1: DETERMINING SYSTEM DISK (ROOT DEVICE)

   The root device determined in Phase 1 is the disk which will contain the operating system files.

   CREATING root file system

The initial file system construction may require up to 12 minutes.
The process requires no operator action.
A message will be displayed when the initial file system is installed.

STARTING file system creation.

Please Wait . . .

Initial File System Installed

INSTALLING configuration files
STEP: 2 SUCCESSFUL TERMINATION OF PHASE 2

The system will be automatically reloaded.

PRESS the NEWLINE or RETURN key when ready to continue

Perform a system restore by entering **2** or **3**, depending upon the type of media you are using. The following messages appear informing you of the progress of the system restore:

Error Logging Initiated

System Restore (Phase 2) Beginning

Step 1: RESTORING ROOT DEVICE

The root device determined in Phase 1 is the disk which contains the restored operating system files. PLEASE remove the install/restore tape at this time. It is no longer required during this system restore process.

Press the NEWLINE or RETURN key when ready

PLEASE locate the tape(s) labeled as:

File system: **root**
Device: /dev/rdsk/c0d0s1

Insert reel 1 of the root backup into the tape drive.

Press the NEWLINE or RETURN key when ready.

Verifying root file system backup tape.
Writing file system

PLEASE insert any additional reels from the backup of the root file system when prompted to do so.

Restoring the root file system.

Progress messages are displayed with the prompt:

Type "y" to override :

Enter **y** and the following appears:

Root File System Restored.
Remove the root file system backup tape from the tape drive.

Press the NEWLINE or RETURN key when ready.

STEP 2: Checking for mounted file system.

If you backed up only the root file system, you see the following output:

No mounted file system encountered. Restore complete.

STEP 3: SUCCESSFUL TERMINATION OF PHASE 2 - SYSTEM RESTORE

The system is automatically reloaded.

The following message appears if you backed up more than one file system.

Additional mounted file systems are indicated.
These file systems are recovered in Restore - Phase 3.
*** SYSTEM RESTORE - PHASE 3 ***

Error Logging Initiated

STEP 1: Check for 5.25-inch devices.

You can now restore the remaining file systems by entering **4**, which is the File System Maintenance selection.

At this point, a small file system resides in the swap area on the hard disk. If the remainder of the disk contains one or more file systems, they are still there. By entering **4**, one can mount any of the other file systems and perform maintenance such as repairing a damaged boot block or a corrupted password file. After making these repairs, do not continue the installation process (otherwise the file systems are recreated). Unmount all file systems. Enter **sync**, wait two or three minutes, remove the tape, and reboot the system.

2. Press < **cr** >. Phase 2 is successfully completed. On a 5000/30 or 5000/50 system, the terminal displays:

LOADING "/unix" FROM DEVICE h501 (or sd01)
LOAD COMPLETE
AVAILABLE MEM SIZE = *hex number*
SYSTEM OKAY

STARTUP FUNCTIONS COMPLETE
System Release: *level number*
System Version: *version number*
System Nodename: S5000
System Processor: 68010

Four K Pagemap Enabled [Configuration Dependent]

maxmem = *decimal number*
user memory = *decimal number*
max program size = *decimal number*

INIT: SINGLE USER MODE

Caches Enabled: Processor ATC Program Data

maxmem = *decimal number*
user memory = *decimal number*
max program size = *decimal number*

INIT: SINGLE USER MODE

When the prompt displays, continue the system software installation process with System Installation/Maintenance Phase 3.

System Installation/Maintenance Phase 3

Description

The four main objectives of Phase 3 of system software installation are:

1. Installing the base file system.

2. Setting the **terminfo** data base for the terminal designated to install the system software. (The data base originally called Termcap is designed as **terminfo**. Any reference to Termcap applies to **terminfo**.)

   The **terminfo** data base entry for the terminal designated to perform the installation is defined automatically if the terminal you are using is:

   - a Unisys Personal Computer,
   - a Unisys Video Terminal 1210,
   - a Unisys Video Terminal 1220, or
   - a Unisys Video Terminal 1224.

   NOTE:

   For the Unisys Personal Computers, a terminal emulation package must be used. Typically, an emulation package provides VT100 and VT52 functional capability.

   The **terminfo** data base entry is not defined if the terminal you are using to install the system software is not one previously listed.

3. Setting up the system files.

4. Terminating the installation of the system software.

Procedures

Phase 3 procedures begin with the following display:

SYSTEM INSTALLATION / MAINTENANCE PHASE 3

Select One Of The Following and PRESS NEWLINE or the RETURN key.

1 - Perform System Installation
2 - Perform File System Maintenance

Enter Selection Number:

Perform the following steps to execute Phase 3, System Installation and Maintenance.

1. Enter **1** if you are installing your system. The terminal displays the following messages:

   SYSTEM INSTALLATION - PHASE 3

   STEP 1: INSTALLING BASE SYSTEM FILES
   Please make sure your installation tape is inserted properly.
   PRESS the NEWLINE or RETURN key to continue.

2. Press **< cr >** to continue installing the base system files.

   Copying and verifying the base system files take approximately 16 minutes. During this time the system displays a series of progress messages:

   REWINDING tape. . .
   ADVANCING tape to base files . ..
   COPYING base files . . .
   VERIFYING base files . . .

INSTALLING BASE SYSTEM FILES complete.

The terminal now displays:

SYSTEM INSTALLATION - PHASE 3

STEP 2: REWINDING TAPE
The installation tape is no longer needed in the installation process. You may now remove the tape from the drive.

PRESS the NEWLINE or RETURN key to continue.

SYSTEM INSTALLATION - PHASE 3

STEP 3: DEFINING YOUR TERMINAL

TERMCAP DEFINITIONS

TERMCAP NAME	TERMINAL MODEL
svt1210	1210, standard setup
svt1220	1220, standard setup
vt52	1210/1220/PC, VT52 mode
vt100	1220/PC, VT100 mode
vt200	1220/PC, VT200 mode
xtalk	PC, with CROSSTALK 3.5 or below
unknown	dumb terminal

If your terminal model is not included in the display above, enter the name **unknown** and refer to your Unisys 5000 Series documentation.

3. Enter the termcap name for the terminal you are using. The termcap name refers to the name of the terminal as it is entered in the **terminfo** data base.

   Enter the exact name **(vt52, vt100, vt200...)** from the definitions displayed for the terminal model you are using to install the system software. After the terminal name is entered, the system automatically retrieves the parameters for that terminal from the **terminfo** data base.

   If a name for the terminal model you are using to install the system software is not listed in the definitions, enter the name **unknown**. The **terminfo** data base entry is not defined and must be defined after the system software installation process is complete. The **terminfo**(4) entry in the Programming Reference Manual tells you how to build the **terminfo** data base.

   Terminal emulators for the Unisys Personal Computers provide several modes, including VT100. If CROSSTALK of level 3.5 or below is in use, enter **xtalk** as the terminal name.

   The terminal now displays:

   STEP 4: SETTING UP SYSTEM FILES

   INSTALLING Administration Files

   CREATING lost and found directory for file system check

   STEP 5: SUCCESSFUL TERMINATION OF FILE SYSTEM INSTALLATION

   Your File System is now installed and operational. Use the Unisys Menu System to complete installation:

1. Set the Date and Time.
2. Set the Time Zone.
3. Install System Extensions.
4. Add Devices and Distribute File Systems.
5. Install Terminals and Printers.
6. Install Application Software.
7. Install Users.

This display summarizes what you do in response to the login that follows. Do not enter a login until the login screen appears. The display continues with more information:

The next will be a login screen.

REMEMBER:	FIRST:	Enter startup to go multi-user.
	THEN:	Enter sa to continue configuration with the UNISYS Menu System.
	LAST:	Enter shutdown before turning power off.

Press the < **cr** > key when you are ready to continue.

When the login prompt appears, continue with Step 4 or Step 7, if you want to go to multiuser. If you want to shut down, skip to Step 14.

If you are installing a 5000/50 level 1R1 system, follow Steps 4, 5, and 6. Otherwise, go to Step 7. If you install a software product without making this change and the system is rebooted during installation of that product, the Unisys Menu System may lose track of that product or some previously installed product.

4. Log in as **root**.

5. Enter:

```
cd /menus/scripts
ed addprod.sh
10,14s/^ /# /
w
q
sync
sync
sync
```

6. Enter < **Ctrl** > **d** to log out

7. In response to the login prompt, enter **startup** to go to multiuser mode. The screen displays:

```
Entering Multiuser Mode.

INIT: New run level: 1
Please select machine type:
        1) UNISYS 5000/20
        2) UNISYS 5000/30
        3) UNISYS 5000/40
        4) UNISYS 5000/50
        5) UNISYS 5000/60
        6) UNISYS 5000/80
        7) UNISYS 5000/90
        8) UNISYS 7000/40

Your selection: _____
```

8. Enter your selection and press < **cr** >. The screen displays:

```
Are you sure (Y/N?)
```

9. Enter **y** after you've checked your selection and press **< cr >** to confirm it. If the selection is incorrect, press **n** and repeat Steps 7 and 8.

10. The screen displays:

    checking root file system /dev/dsk/c0d0s1;

    and continues with information messages ending with the prompt:

    Is the date *xxxxxx* correct? (y or n)

11. If the date is correct, enter **y** and press **< cr >**. The terminal displays information messages ending with the login prompt.

    If the date is not correct, enter **n** and then the correct date when the screen displays:

    Enter the correct date (*mmddhhmmyy*):

12. When the terminal displays the following login prompt, enter **sa** to continue configuration with the Unisys Menu System or to install the System extensions. Skip to Step 14 to shutdown if you entered the exact **terminfo** name for your terminal model.

    S5000
    UNISYS 5000 Series - This Login banner resides in **/etc/issue**
    Login:

13. If you entered **unknown** to specify that the **terminfo** name is not defined for your terminal model, continue the system installation process by defining the **terminfo** conventions for the terminal used to install the system

software. Refer to the "Defining Terminals Through Root" section of this chapter.

14. Log in as **shutdown** and press < **cr** >. The terminal displays:

    How many seconds would you like to wait before shutting down?

15. Press **0** and < **cr** > for immediate shutdown. If other users are on the system, enter enough time to allow them to log out.

    Respond to the shutdown prompts until you see the message:

    Shutdown complete. You may halt the system.

16. Log out of the system.

17. After shutdown, move the MANUAL/AUTO LOAD toggle switch to the AUTO LOAD position and reset the system. Proceed to the section in this chapter called "Securing the System."

Using a Disk/Tape Expansion Cabinet

If you have (or plan to have) a Unisys Disk/Tape Expansion Cabinet connected to an upgraded 32-bit 5000/40 or to a 5000/50, and you are installing the level 1R1 Operating System, you must correct an addressing and naming problem in the hard disk data base file in your Unisys Menu System. The hard disk data base file uses the same name for both drive 0 (controller 1) and drive 1 (controller 1).

To make the correction log in as **root** and enter these command lines:

```
cd /menus/msdb
ed hdsklst45
4s/10/01/
w
q
```

If you do not make this change, two problems occur:

1. You are not able to use the Unisys Menu System to add another hard disk to the system if the **root** file system is on the external SCSI drive 0 (controller 1).

2. If the **root** file system is on an internal drive (controller 0) and the external SCSI drive 1 (controller 1) was added, using the Unisys Menu System, the diagnostics software has conflicting SCSI drive names, and therefore accesses the wrong drive. Any diagnostics software trying to access SCSI drive 0 (controller 1) is actually accessing SCSI drive 1 (controller 1); and any diagnostics software trying to access SCSI drive 1 (controller 1) is not able to find the device node name for that drive.

NOTE:

This concludes the specific instructions for installing the system software for the 5000/20, 5000/30, 5000/40, or 5000/50 system (Release 1.03.00). Please continue with the "Defining Terminals Through Root" section at the end of this chapter.

5000/30, 5000/35, 5000/50, or 5000/55 System (Release 2.00)

This section of the chapter provides specific information for the installation of system software in the 5000/30, 5000/35, 5000/50, or the 5000/55 system. System software is on the INSTALL tape that is distributed with your system.

It is important that you insert and remove the streaming tape when requested. Make sure the tape cartridge is write-protected. Insert the streaming tape in the top (or only) drive. Make sure that the MANUAL/AUTO LOAD toggle switch is in the MANUAL position.

NOTE:

Streaming tape cartridges must be permitted to reach the same temperature and humidity as that of the drive before they are used. If cartridges are not kept in the same area as the drive, move them near the drive at least one hour before they are used.

For more information on streaming tape cartridges, refer to the *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 Operations Guide.*

Installing the System from a Streaming Tape

After connecting the control console to the processor Channel b on your 5000 System, power up the system. The **Select**

Startup Function menu appears on the console screen. Refer to the *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 Installation Guide* for information on how to turn on the system.

NOTE:

The following console settings should be used:

9600 Baud
7 bits/character
Parity on, even
1 stop bit
Xon/Xoff

The install system function on the **Startup** menu permits initial installation of the system software. Follow these procedures to begin installation.

1. From the **Select Startup Function** menu, select Item 2, **Install System**, by entering the number **2**.

   The terminal displays:

   ENTER DEVICE NAME
   hpm0 at $00FF2040 command port is not ready...

2. Enter the device name **ssg1** (or **st01** for the 5000/30 or 5000/50) and press the < **cr** > key to continue. The terminal displays:

   INSERT TAPE MEDIA
   PRESS SPACEBAR TO CONTINUE

3. Insert the tape cartridge labeled INSTALL. Press the space bar to begin the installation process.

   The hardware level of your particular system determines whether or not the following screen appears. If it does not, go on to Step 5.

   RETENSION TAPE? (Y/N):

   To assure maximum reliability, the tape should be retensioned.

> **NOTE:**
>
> The tape is automatically retensioned during Phase 1.

4. Enter **y** to retension tape.

5. Regardless of whether you retension the tape, the screen displays:

AVAILABLE MEM SIZE = *hex number*

SYSTEM OKAY

STARTUP FUNCTIONS COMPLETE

System Release: *level number*
System Version: install
System Nodename: U 5000
System Processor: MC68020
Caches Enabled: Processor ATC Program Data (This message is not displayed on a 5000/30 without optional cache installed.)

maxmem = *xxxxx*
user program = *xxxxx*
max program size = *xxxxx*

6. Begin Phase 1 of the system software installation process after the following appears:

SYSTEM INSTALLATION/RESTORE/MAINTENANCE
- PHASE 1

System Installation/Restore/Maintenance PHASE 1

Description

The five main objectives of Phase 1 of the system installation are:

1. Determining the system disk (root device).
2. Checking and retensioning the tape.
3. Checking the disk format information and performing a disk format if necessary.
4. Creating the INSTALL file system.
5. Successfully terminating Phase 1.

Procedures

Perform the following steps to execute Phase 1 of the system installation, restore, and maintenance.

1. The terminal displays:

   STEP 1: DETERMINING SYSTEM DISK (ROOT DEVICE)

   This may take up to 10 minutes ...

   ---------- Available Root Devices ----------

   5.25 - Inch Disk Controller Devices:
   none available (On a 5000/30 or 5000/50 system **h501** may be displayed here.)

   Multibus SCSI Controller Devices:
   sda1

   Please enter a four character root device name from the list above:

   NOTE:

   The previous screen appears for either an internal or external SCSI disk.

   See Table 3-1 for a list of device names.

2. Enter one of the previously listed devices followed by a **< cr >**.

   If an invalid entry is entered, the following message appears:

   Invalid device name

PRESS the NEWLINE or RETURN key to re-enter.

3. After entering a correct device name the following message displays:

```
STEP 2:    CHECK AND RETENSION TAPE
           CHECKING tape format
           RETENSIONING TAPE
```

While the process of determining the system disk or root device is running, the root file system is created on the disk specified. Before creating the **root** file system, the system checks the disk for a valid format.

The system may detect an invalid disk format because of any of the following reasons:

- the disk device was cleared,
- a new unformatted disk was installed, or
- an electrical disturbance destroyed the integrity of the file system.

The system gives you a choice either to format or not to format the specified disk device. The terminal displays the following information:

```
STEP 3: CHECK DISK FORMAT INFORMATION

CHECKING Disk Format Information

Disk device is formatted.

Do you wish to reformat the disk?

Answer y or n:
```

4. Under normal conditions you do not need to reformat the disk. The disks that come with your initial system are already formatted. If during the installation process an error occurs and the file system cannot be made, the disk must be formatted again. Enter **y** to format the disk. Also, if you are installing a new release of the operating system on a disk that has been in use, you must format the disk (after taking the precaution of backing up the disk contents). Continue with the formatting procedures in the chapter called "Formatting the Disk Device." After completing these procedures, return to this section and continue with Step 5.

   Enter **n** to continue installation. The terminal displays:

   ```
   Do you have any bad blocks to enter?
   Answer y or n :
   ```

5. Enter **y** and follow the instructions in the "Formatting the Disk Device" chapter for entering bad blocks. Then continue with Step 6.

   If this is an initial installation, you only need to enter the bad blocks recorded by the disk manufacturer on the Media Error Log or the Media Defect List. Although it is possible to avoid entering bad blocks by answering **n** in response to the prompt, this could result in future disk read errors.

   If you enter **y**, continue with the procedures in the "Formatting the Disk Device" chapter. After completing these procedures, return to this section, enter **n** in response to the prompt previously described, and continue with Step 6.

6. The terminal displays the following:

DISK FORMATTER
Full format disabled
Drive type:
xxxxxxxx
Partition 0
ISL to be written from: isl

Determining Disk Type

Device Type is xxxx

Previous Bad Blocks:

Reassign Bad Blocks

Bad Block Report

xxxxx xxxxx
xxxxx xxxxx

Writing Bad Block Table

Writing ISL

Writing bootblock

Disk Format Complete

STEP 4: CREATING INSTALL FILE SYSTEM

COPYING data . . . . . .
. . . . . .

VERIFYING data . . . . . .
. . . . . .

NOTE:

No operator action is required for Step 4 of System Software Installation Phase 1. The process takes approximately seven minutes to complete. If you receive an error message, refer to the "Error Messages" chapter.

STEP 5: SUCCESSFUL TERMINATION OF PHASE 1

The system will be automatically reloaded.

AUTO REBOOT NOW IN PROGRESS

hpm0 at $00FF2040 command port is not ready..

LOADING "/unix.sti" FROM DEVICE *xxxx*
LOAD COMPLETE
AVAILABLE MEM SIZE = *hex number*
SYSTEM OKAY
STARTUP FUNCTIONS COMPLETE

System Release: *level number*
System Version: *version number*
System Nodename: STI
System Processor: MC68020
Caches Enabled: Processor ATC Program Data (on a 5000/30 if optional cache is present)

maxmem = *xxxxx*
user memory = *xxxxx*
max program size =-*xxxx*

INIT: SINGLE USER MODE

7. When the prompt appears, continue the system software installation process with the "System Installation/ Restore/Maintenance Phase 2" section.

System Installation/Restore/Maintenance Phase 2

Description

The two main objectives of Phase 2 of the system installation, restore, and maintenance are:

1. Determining the system disk from Phase 1 and beginning the creation of the file system.

2. Successfully terminating Phase 2 and reloading the operating system.

Procedures

Phase 2 begins with the following screen:

```
SYSTEM INSTALLATION / RESTORE / MAINTENANCE
PHASE 2

Select One Of The Following and PRESS the NEWLINE or
RETURN key..

        1 - Perform System Installation,
        2 - Perform System Restore from Mag Tape,
        3 - Perform System Restore from Streaming Tape.
        4 - Perform File System Maintenance.

Enter Selection Number:
```

Perform the following steps to execute Phase 2 of the System Installation, Restore, and Maintenance.

1. Enter a selection number.

Enter **1** if this is an initial installation. When you do this, the following messages appear informing you of the progress of the system installation:

Error Logging Initiated

System Installation (Phase 2) Beginning

STEP 1: DETERMINING SYSTEM DISK (ROOT DEVICE)

The root device determined in Phase 1 is the disk which contains the operating system files.

The following are the current partitions for the root device:

Partition	Num. of Blocks	Block Offset
0	xxxxxxxx	0
1	xxxxxxxx	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	xxxxxxxx	xxxxxxxx
14	xxxxxxxx	xxxxxxxx
15	xxxxxxxx	xxxxxxxx

You are prompted with the following message:

Press the NEWLINE or RETURN Key to continue

If the swap (Partition 15) area is less than 20000 the following appears:

The swap partition has *xxxxx* blocks assigned.
The recommended number of blocks is 20000.

Do you want to repartition the root device? (y/n)

If you enter **y** continue with the section in Chapter 3 called "Partitioning a Disk Device." Otherwise enter **n** and continue.

CREATING root file system

The initial file system construction may require up to 12 minutes.
The process requires no operator action.
A message is displayed when the initial file system is installed.

STARTING file system creation.

Please Wait . . .
Initial File System Installed

INSTALLING configuration files

STEP: 2 SUCCESSFUL TERMINATION OF PHASE 2

The system is automatically reloaded.

PRESS the NEWLINE or RETURN key when ready to continue

hpm0 at $00FF2040 command port is not ready..

LOADING "/unix" FROM DEVICE *xxxx*
LOAD COMPLETE
AVAILABLE MEM SIZE = *hex number*
SYSTEM OKAY
STARTUP FUNCTIONS COMPLETE

System Release: *level number*
System Version: *mfs*
System Nodename: U5000
System Processor: MC68020
Caches Enabled: Processor ATC Program Data

maxmem = *decimal number*
user memory = *decimal number*
max program size = *decimal number*

INIT: SINGLE USER MODE

When the prompt appears, continue the system software installation process with System Installation/Maintenance Phase 3. (See later in this chapter.)

NOTE:

The system restore procedure should be performed only by a system administrator.

Perform a system restore by entering **2** or **3**, depending upon the type of media you are using. The following

messages appear informing you of the progress of the system restore;

Error Logging Initiated

System Restore (PHASE 2) Beginning

STEP 1: RESTORING ROOT DEVICE
The root device determined in Phase 1 is the disk which contains the restored operating system files.

REWINDING Tape

PLEASE remove the install/restore tape at this time.
It will no longer be required during this system restore process.

Enter the NEWLINE or RETURN key when ready.

PLEASE locate the tape cartridge with the following information written on its adhesive label:

Contents: System Backup SEQUENCE
NUMBER: 1

File system Name: root device
Partition Name: /dev/rdsk/c0d0s1
Tape Cartridge Number: 1

Insert this tape cartridge into the tape drive.

Press the NEWLINE or RETURN key when ready.
Verifying root file system backup tape.
Writing file system

PLEASE insert any additional reels from the backup of the root file system when prompted to do so.

Restoring the root file system.

Progress messages are displayed with the prompt:

Type "y" to override :

Enter **y** and the following messages appear:

Root File System Restored.
Remove the root file system backup tape from the tape drive.

Press the NEWLINE or RETURN key when ready.

Step 2: Checking for mounted file system.

If you backed up only the **root** file system, you see the following output:

No mounted file system encountered. Restore complete.

STEP 3: SUCCESSFUL TERMINATION OF PHASE 2 - SYSTEM RESTORE

The system will be automatically reloaded.

The following output appears if you backed up more than one file system:

Additional mounted file systems are indicated.
These file systems are recovered in Restore - Phase 3.

*** SYSTEM RESTORE - PHASE 3 ***

Error Logging Initiated

Step 1: Check for 5.25-inch devices.

You can restore the remaining file systems by entering **4**, which is the File System Maintenance selection.

At this point, a small file system resides in the swap area on the hard disk. If the remainder of the disk contains one or more file systems, they are still there. By entering **4**, you can mount the **root** file system and perform maintenance, such as repairing a damaged boot block or a corrupted password file. There is a node, **/dev/dsk/rootfs**, that is provided to mount the root file system. To mount the root file system, enter:

/etc/mount /dev/dsk/rootfs /mnt

After making these repairs, do not continue the installation process (otherwise the file systems are recreated). Unmount all file systems by entering:

/etc/umount /dev/dsk/rootfs

Enter **sync**, wait two or three minutes, remove the tape, and reboot the system.

System Installation/Maintenance Phase 3

Description

The two main objectives of Phase 3 system software installation are:

1. Installing and verifying the base file system.

2. Relinking and reloading the operating system.

Relinking and reloading the operating system includes:

— setting up the system files,
— checking for system controllers,
— configuring the tty ports for the HPSIO boards present in the system during installation, and
— relinking the kernel.

NOTE:

If there is a change in the asynchronous/ synchronous controller configuration after the system is installed, use the **sa** menus to reconfigures the system.

First choose System Management from the initial menu. From the following menu, choose Change. Finally, select Back Plane and make the necessary alterations.

Procedures

Phase 3 procedures begin with the following display:

```
SYSTEM INSTALLATION / MAINTENANCE PHASE 3

Select One Of The Following and PRESS the NEWLINE or
RETURN key..

1 - Perform System Installation
2 - Perform File System Maintenance

Enter Selection Number:
```

Use the following steps to perform a system installation. A description of how to perform file system maintenance follows the system installation instructions.

1. Enter **1** to continue installation. The terminal displays:

   ```
   Error Logging Initiated
   SYSTEM INSTALLATION - PHASE 3

   STEP 1: INSTALLING BASE SYSTEM FILES
   ```

2. Copying and verification of the base system files take approximately 20 minutes. During this time, the system displays a series of progress messages:

REWINDING tape . . .
CHECKING tape format (5000/35 and 5000/55 only) . . .
ADVANCING tape to base files . . .
COPYING base files . . .
VERIFYING base files . . .

INSTALLING BASE SYSTEM FILES complete.

The installation tape is no longer needed in the installation process.
You may now remove the tape from the drive.

PRESS the NEWLINE or RETURN key to continue.

STEP 2: RELINKING/RELOADING THE OPERATING SYSTEM

SETTING up the system files
CHECKING for system controllers
CREATING lost and found directory for file system check

RELINKING THE OPERATING SYSTEM

The link process may require up to 10 minutes.
No interaction is required.

STARTING link process: **date**

Please Wait . . .

Successful link of the operating system

Press the NEWLINE or RETURN key to continue

INSTALLING Administration Files

RELOADING new operating system

After the system reloads and a login prompt appears, enter setterm as the login id.

Press the NEWLINE or RETURN key when ready to continue

hpm0 at $00FF2040 command port is not ready..

LOADING "/unix" FROM DEVICE *xxxx*
LOAD COMPLETE
AVAILABLE MEM SIZE = *hex number*
SYSTEM OKAY
STARTUP FUNCTIONS COMPLETE

System Release: *xxxxxx*
System Version: *xxxxxx*
System Nodename: U 5000
System Processor: MC68020
Caches Enabled: Processor ATC Program Data

maxmem = *hex number*
user memory = *hex number*
max program size = *hex number*

The following login prompt appears:

U5000
Login as setterm to continue.
RELEASE 2.00
login:
(login as setterm)

The following messages appear explaining how to define your terminal:

DEFINING YOUR TERMINAL:

From the following list, choose the TERMCAP NAME for the terminal you are using.

TERMCAP DEFINITIONS:

TERMCAP NAME	TERMINAL MODEL
• svt1210	1210, standard setup
• svt1220	1220, standard setup
• svt1224	1224, standard setup
• uvt1210	1210, standard setup
• uvt1220	1220, standard setup
• uvt1224	1224, standard setup
• xtalk	PC, with CROSSTALK 3.5 or below
• pcu	PC to Unix emulator (T 9516-00)
• unknown	dumb terminal

If your terminal model was not included in the display, enter the name "**unknown**" and refer to your System Documentation.

After you define your terminal, the following messages appear:

SUCCESSFUL TERMINATION OF DEFINING YOUR TERMINAL

Your File System is now installed and operational. The following steps are required to complete installation:

1. Set the Timezone.
2. Set the Date and Time.
3. Install Operating System Extensions.
4. Add Disk and Tape Devices.
5. Install Terminals and Printers.
6. Install Application Software.
7. Install Users.

These steps may be accomplished with the System Administrator Menus.

The next screen will be a login screen.

REMEMBER: Enter sa to the login request.

PRESS the NEWLINE or RETURN key when you are ready to continue.

3. In response to the login prompt, enter **sa** to continue the configuration with the Unisys Menu System. The terminal displays:

Please Select System Type:
(1) UNISYS 5000/30
(2) UNISYS 5000/35
(3) UNISYS 5000/50
(4) UNISYS 5000/55

Your selection: _____

NOTE:

If you are installing a 5000/40 32-bit upgrade, select (3) UNISYS 5000/50.

Refer to your *U 5000 and U 7000 Series Operating Systems Menu System Operating Guide* for further instructions on the use of the menu system.

4. Enter your selection and press **< cr >**. The screen displays:

   Are you certain (y/n)

5. Enter **y** after you've checked your selection and press **< cr >** to confirm it. If the selection is incorrect, press **n** and repeat Steps 3 and 4.

6. The screen displays:

   **It is strongly recommended that you back up your release tapes.
   Refer to the Software Release Description.

   (These messages vary according to devices that are present.)

7. If you entered **unknown** to specify that the **terminfo** name is not defined for your terminal model, continue the system installation process by defining the **terminfo** conventions for the terminal used to install the system

software. Refer to the "Defining Terminals Through Root" section of this chapter.

8. You are now required to perform various menu selections to complete your system installation.

   a. Set the Timezone

      Set the time zone by selecting System Management from the initial menu, then choose Change. Specify Timezone from the resulting menu and complete the required items to set your time zone.

   b. Set the Date and Time

      Set the date and time by selecting System Management from the initial menu, then choosing Change. Specify Date and Time from the resulting menu and complete the rquired items to set the date and time.

   c. Install Operating System Extensions

      Install the operating system extensions by selecting System Management from the initial menu, then choosing Install. Specify Device from the resulting menu and then select /dev/rmt/c0d0v device to install your operating system extensions.

   d. Add Disk and Tape Devices

      Add disk and tape devices by selecting System Management from the initial menu, then choosing Add. Specify Disk or Tape from the resulting menu and complete the rquired items to add your disk or tape devices.

e. Install Terminals and Printers

Install terminals and printers by selecting System Management from the initial menu and choosing Add. Specify Devices from the resulting menu and complete the required items to install your terminals and printers.

f. Install Application Software

Install application software by selecting System Management from the initial menu, then choosing Install. Specify Device from the resulting menu and select /dev/rmt/c0d0v device and complete the required items to install your application software.

g. Install Users

Install users on your system by selecting System Management from the initial menu, and choosing Add. Specify Users from the resulting menu and complete the required items to install the users.

You are now in single-user mode. Enter multiuser mode by selecting System Management from the initial menu, then choosing Change. Specify State, Multi, Single User from the resulting menu and complete the required items to change to multiuser mode.

If you want to shut down your 5000 System using the Unisys Menu System, select System Management from the initial menu and choose End. Specify System Activity (shutdown) from the resulting menu and complete the required items to shut down your system.

Log in as **shutdown** and press < **cr** >. The following message appears:

Please wait...
How many seconds would you like to wait before shutting down?

11. Press **0** followed by < **cr** > for immediate shutdown. If other users are on the system, enter adequate time to allow them to log out.

    Respond to the shutdown prompts until you see the message:

    Shutdown complete. You may halt the system.

12. After shutdown, move the MANUAL/AUTO LOAD toggle switch to the AUTO LOAD position and reset the system. Proceed to the section in this chapter, "Securing the System."

> **NOTE:**
>
> The remainder of this chapter applies to all releases on the 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 system.

Defining Terminals Through Root

The login name **root** is reserved for the superuser, your system support person. The superuser performs commands through the control of the operating system. It is expected that

the superuser has a thorough knowledge of the operating system, and is familiar with the User Reference Manual and the Administration Reference Manual.
If your system has any terminals other than one of the UVT series or a Unisys personal computer, ask your superuser to define these terminals using the following procedure:

1. Log in as **root** at the login prompt.

   Login: **root**

2. After you are logged in as **root**, update the **terminfo** database for any terminal in the system which is not one of the terminals listed in the previous description. The file **/usr/lib/terminfo/src/terminfo.src** has **terminfo** entries for unsupported terminal and you may find one that matches your terminal. Refer to **terminfo** (4) in the Programming Reference Manual.

3. If the terminal being used by the system administrator to install the system software is a terminal model you defined, add this terminal to the system by editing the **/etc/inittab** file. Refer to **inittab** (4) in the Programming Reference Manual.

   The next procedure is to secure the system.

Securing the System

Securing the system is necessary to discourage unauthorized access to the system. The system software installation process has added 13 users to your system; that is, 13 valid login names. All users must log in on the terminal used for installation and set their private passwords. After a password is set, access to the system is only permitted by entry of a correct login name and its associated password. A password

is any sequence of eight characters, except a **< Ctrl > d** character. All users must remember their passwords, which are neither displayed on the screen nor accessible to other system users.

The 13 users added to your system are:

root

The login name **root** is reserved for the superuser, your system support person. This person is expected to have a thorough knowledge of the UNIX-based system software.

sa

The login name **sa** is reserved for the system administrator. This login allows access to the menus which leads the system administrator through system administration jobs.

startup

The login name **startup** is reserved for the people in your organization who are allowed to change the run level to multiuser mode without using the system administrator menus. The system administrator can change the run level to multiuser using the menus. The system administrator may not always be present, however, when the system needs to go to multiuser mode. The **startup** login allows you to assign the run level change responsibility to one or more other users (each must know the password) without giving those other users access to your other system administrator capabilities. The password for the login **startup** must be set by **root**.

daemon

The login name **daemon** is reserved for the system administrator.

sys

The login name **sys** is reserved for the system administrator.

bin

The login name **bin** is reserved for the system administrator.

adm

The login name **adm** is reserved for the system administrator.

shutdown

The login name **shutdown** is reserved for the people in your organization who are allowed to shut down the system. The system administrator can shut down the system. The system administrator may not always be present, however, when the system should be shut down. The **shutdown** login allows assignment of shutdown responsibility to one or more other users (each must know the password) without giving those other users access to other system administrator capabilities.

maint

The login name **maint** is reserved for the Unisys-trained representative who services your system.

uucp

The login name **uucp** is reserved for the remote communications administrator.

lp

The login name **lp** is reserved for the printer administrator.

nuucp

The login name **nuucp** is reserved for controlled access by other systems.

sync

The login name **sync** is reserved for the people in your organization who are allowed to write all previously unwritten system buffers out to disk, assuring that all file modifications up to that point are saved. Use this login if you want to update the disk but do not intend to shut the system down. Of course, if you are logged in, simply use the **sync** command.

If you are using the Unisys 5000 Series Menu System, use the following procedures to establish passwords for each of the thirteen logins:

1. Log in as **sa**.

2. Select System Management from the first menu that appears.

3. From the next menu, choose Change,

4. When the menu resulting from the Change selection appears, choose Password.

5. Enter the required information for the new password.

6. Repeat these steps until you have provided passwords for all of your logins.

7. Exit menu system.

If you are not using the Unisys 5000 Menu System, proceed with the following steps to establish passwords for your logins:

1. Log in as **root**.

2. At the # prompt enter **passwd**.

3. Enter your new password when you see the new passwords prompt.

4. Re-enter your password at the Retype new password prompt. Your password is set if you have entered the same password at both password prompts. If you have entered the password differently from your first entry you receive instructions to try the process again.

Refer to **passwd**(1) in the User Reference Manual to set the password for each of your logins.

Completing Installation

Description

Completing installation requires that you have:

- added devices and distribute file systems,
- added printers and terminals,

- installed applications,
- added users,
- performed system backup, and
- gone to multiuser mode.

Although you need to do these jobs to complete installation, you may also need to perform these same tasks at any time during your administration of the system. You may later be required to add other terminals or printers to your system, install other applications, or add other users as needed. All of these jobs are performed using the Unisys 5000 Series Menu System provided with your system.

Chapter 3. Formatting the Disk Device

Description

In the section of Chapter 2 called "System Installation/ Restore/Maintenance Phase 1," you are given the option of reformatting the disk. Formatting the disk device is a menu-driven process which performs the following functions:

- determines disk type,
- formats and verifies the disks,
- marks factory media defective areas,
- marks unrecovered hard I/O errors for a logical block, and
- builds the bad block table.

Before the disk device is formatted, the information on the Media Error Log report and the System Error Log is needed.

The Media Error Log report or the Media Defect List registers the defective areas on a fixed disk. There is a separate report in the print package for the disk installed in your system. The following figures illustrate examples of a Media Error Log report and a Media Defect List.

hnnn or sdnn — Media Error Log

HEAD	CYLINDER	SECTOR	BYTE
0	127	0	2671
2	81	0	1637
6	87	0	3029
4	103	0	8113
3	119	0	3372
5	262	0	9399

Disk Tracer # = 12345

Unit Tracer # 67690

THIS LIST MUST BE SHIPPED WITH THE UNIT

Figure 3-1. Media Error Log

*** MEDIA DEFECT LIST ***

CUSTOMER — DATE: 88/05/10

MODEL: B03B-4760-B003A — DE SERIAL NO: 033892 — SERIAL NO: 033892

NO	CYLINDER	HEAD	POS/BYTES	LEN/BITS	SCT/	PAGE-001
001	0013(0019)	09(09)	181B(06171)	008(0008)		1
002	0015(0021)	09(09)	80B6(32950)	003(0003)		1
003	0016(0022)	09(09)	73D0(29648)	004(0004)		1
004	0017(0023)	09(09)	7A8D(31373)	002(0002)		2
005	001A(0026)	05(05)	7B36(31542)	003(0003)		1
006	0025(0037)	01(01)	16D2(05842)	003(0003)		1
007	002F(0047)	05(05)	1A47(06727)	008(0008)		1
008	0036(0054)	04(04)	9FD3(40915)	00D(0013)		1
009	0066(0102)	05(05)	0B7D(02941)	004(0004)		1
010	006E(0110)	01(01)	4B0D(19213)	004(0004)		1
011	0074(0116)	09(09)	38B3(14515)	003(0003)		1
012	0079(0121)	00(00)	6E03(28163)	003(0003)		1
013	0079(0121)	02(02)	5D04(23812)	002(0002)		1
014	0088(0136)	09(09)	6FF3(28659)	004(0004)		1
015	008A(0138)	04(04)	43CA(17354)	004(0004)		1
016	0096(0150)	03(03)	2094(08340)	005(0005)		1
017	00C5(0197)	00(00)	7BBA(31674)	002(0002)		1
018	00C9(0201)	06(06)	6E52(28242)	003(0003)		1
019	00D3(0211)	06(06)	68AC(26796)	005(0005)		1

Figure 3-2. Media Defect List

The System Error Log report is a collection of the errors logged by the operating system. This report is needed only if your system has been in operation and has logged unrecovered I/O errors for a logical block. The following is an example of the System Error Log report:

```
System Error Report - Selected Items  Prepared on Jan 23 16:23 Page 1

Date/Time of 5 1/4-Hard or Flex Disk Incident:  Mon Jan 23 13:41:12 1988

        Incident Sequence Number              0000
        Subsystem/Module                      XXXX
        Function                              04. Read Blocks Command
        Hardware Status                       0d. Data Address Mark Not Found Error
        Sense Status Byte                     0151
        Logical Block                         0000008613
        Cylinder = 95. Header = 3. Sector =   9
        Retry Count                           0
        Error Diagnostics                     Recovered
        Transfer Size in Bytes                512
        Simultaneous Bus Activity             None
        Statistics on Device to date
                No. of RAM Operations         369783
                No. of Other Operations       0
                No. of Unrecorded Errors      0
```

Figure 3-3. System Error Report

Procedures

1. Assemble the Media Error Log report or the Media Defect List, and the System Error Log report for each disk device (**xxxx**).

Table 3-1 provides you with information on disk and tape devices for the 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 systems.

Table 3-1. Disk and Tape Devices for the 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 Systems

5000 Series System	Mass Storage Device Board	Firmware Device Name	Device Type	Root Device	
				Rel. 2.00 & above	Rel. 1.03 & below
5000/20	MSC	h501	Internal Disk	N/A	Yes
		st01	Internal Tape	N/A	No
		fd01	Internal Flex	N/A	No
5000/30	MSC	h501	Internal Disk	Yes	Yes
		st01	Internal Tape	No	No
		fd01	Internal Flex	No	No
5000/35	SMSC & HPMSC	sda1	Internal Disk	Yes	N/A
		ssg1	Internal Tape	No	N/A
		sfd1	Internal Flex	No	N/A
	SHA & HPMSC	sd01-sd03*	External Disk	Yes	N/A
		sd11-sd13*	External Disk	Yes	N/A
		sd21-sd23*	External Disk	Yes	N/A
		sd31-sd33*	External Disk	Yes	N/A
		ss61-ss41	External Tape	No	N/A
5000/40	MSC	h501	Internal Disk	N/A	Yes
		h502	Internal Disk	N/A	No
		st01	Internal Tape	N/A	No
		fd01	Internal Flex	N/A	No
5000/50	MSC	h501	Internal Disk	Yes	Yes
		h502	Internal Disk	Yes	No
		st01	Internal Tape	No	No
		fd01	Internal Flex	No	No

*On the 5000/35, the third disk is available only if the 5000/55 expansion cabinet is used.

Table 3-1. Disk and Tape Devices for the 5000/20, 5000/30, 5000/35, 5000/40, 5000/50, or 5000/55 Systems (Cont.)

5000 System	Mass Storage Device Board	Firmware Device Name	Device Type	Root Device Rel. 2.00 & above	Root Device Rel. 1.03 & below
5000/50	SHA	sd01	External Disk	Yes	Yes
		sd02-sd03	External Disk	Yes	No
		sd11-sd13	External Disk	Yes	No
		ss21-ss23	External Disk	Yes	No
		sd31-sd33	External Disk	Yes	No
		ss61-ss41	External Tape	No	No
5000/55	SMSC & HPMSC	sda1-sdb1	Internal Disk	Yes	N/A
		ssg1-ssf1	Internal Tape	No	N/A
		sfd1	Internal Flex	No	N/A
	SHA & HPMSC	sd01-sd03	External Disk	Yes	N/A
		sd11-sd13	External Disk	Yes	N/A
		sd21-sd23	External Disk	Yes	N/A
		sd31-sd33	External Disk	Yes	N/A
		ss61-ss41	External Tape	No	N/A

2. Each user response message is displayed one at a time. Use the information on the Media Error Log report or the Media Defect List sent with your system to answer the user response messages. The disk device name on the Media Error Log report and on this display must be exactly the same. If a Media Defect List is used, it must

be the appropriate one for the disk device h*nnn* or (sd*nn*) being formatted.

The following output occurs if you opted to format the disk during Phase 1 of the System Installation. (See the section in Chapter 2 called "System Installation/Restore/ Maintenance Phase 1" for more information.)

Formatting Device h*nnn* (or sd*nn*)- Entering Factory Media Defect List

Please locate the paperwork that was distributed with your system with the heading:

h*nnn* (or sd*nn*) Media Error Log or Media Defect List

PRESS the NEWLINE or RETURN key to continue

3. Press **< cr >** to continue. The following messages display:

You may now enter each Head-Cylinder-Byte entry from this paperwork.
Please enter the data for Bad Block Number X.

Enter "end" if done.

Head Number (0 to N)?
Cylinder Number (0 to C)?
Byte Number (0 to B)?

Enter yes if the information below for Bad Block number X, is correct.

Head Number: *decimal number*
Cylinder Number: *decimal number*

Byte Number: *decimal number*

Correct: (Y/N)

4. Enter the word **end** if there are no bad blocks on the Media Error Log or on the Media Defect List. Otherwise, continue with Step 5.

5. Enter the value for the head number (0 to N).

6. Enter the decimal value for the cylinder number (0 to C).

7. Enter the decimal value of the byte number.

8. If the information shown for Bad Block Number X is correct, enter **y** < **cr** >. Return to Step 5. Continue with the next bad block or enter **end** < **cr** > if you are finished.

   If the information entered is incorrect, enter **n** < **cr** >. Return to Step 5 and reenter the bad block data.

9. The terminal displays the following messages. Each message requiring user response displays one at a time. Use the information on the System Error Log report to answer the user response messages.

   Entering of Factory Bad Block Numbers Complete

   If your system has been in operation using this disk *hnnn*, and if unrecovered I/O errors have been logged in your error log report for this disk, then the Block Numbers from the report should now be entered.

   Enter end when asked for the Block Number if you have no unrecovered Block Numbers left to enter.

Please enter the Block Number for Unrecovered Error Number 1.
Enter end if done
Block number (0 to X)?
Enter yes if information is correct
Correct (Y/N)?

If entries appear in your System Error Log, enter the block number of each unrecovered I/O error. Enter **end** < **cr** > after all of the bad block numbers are entered. If this is an initial system installation or if there are no entries in the System Error Log, enter **end** < **cr** >.

As a result of entering **end** < **cr** >, the following message appears on your screen.

DISK FORMATTER

Full format disabled
Drive type:
Partition 0
Isl to be written from: isl

Determining Disk Type

Device Type is *xxxx*

Previous Bad Blocks:

Previous and Supplied Bad Blocks:

Formatting
Certification Pass 1 . . . . . .
(varying messages will appear)

```
Reassign Bad Blocks
Bad Block Table:
     xxxxx     xxxxx
     xxxxx     xxxxx
Writing Bad Block Table
Writing ISL
Writing bootblock
Disk Format Complete
```

Depending on the type of disk, the formatting procedure takes approximately 40 to 180 minutes.

> **NOTE:**
>
> During formatting of your disk, unrecovered READ error messages may be displayed on your terminal. This is part of the format process.

After the disk format is successfully completed, the terminal displays progress messages indicating that the file system is being created. When the file system creation is complete, return to the "System Installation/Restore/maintenance Phase 1" section in Chapter 2 and continue with the outlined procedures.

Partitioning a Disk Device

The following information on partitioning a **root** disk device relates only to the 5000/30, 5000/35, 5000/50, or 5000/55 systems, Release 2.00.

A partition is a subset of the physical disk that is treated as a logical device. Each hard disk can be subdivided into 15 different partitions (1-f). Partition 0 is considered to be the whole disk.

Only the size (Number of Blocks) for each partition can be entered; the starting locations (Block Offset) are determined by the values entered for each partition size. All entries are automatically rounded to the appropriate cylinder boundary as defined by the disk.

NOTE:

The root disk can only be partitioned using the INSTALL tape. Note also that the size of the swap area on the root disk can only be changed using the INSTALL tape.

If you change the default swap partition on root, you must begin the install process again. You are prompted when to do this.

A message appears which asks you to enter the number of blocks. Enter the size of the partition by specifying either the number of 512-byte physical blocks or the number of megabytes with an M suffix for each partition. For example, enter **10240** or **5M**.

Notice that as you change the size of one partition, all the remaining unused partitions are adjusted.

The following message displays asking you to define your terminal before partitioning:

DEFINING YOUR TERMINAL:

From the following list, choose the TERMCAP NAME for the terminal you are using.

TERMCAP DEFINITIONS:

TERMCAP NAME	TERMINAL MODEL
• svt1210	1210, standard setup
• svt1220	1220, standard setup
• svt1224	1224, standard setup
• uvt1210	1210, standard setup
• uvt1220	1220, standard setup
• uvt1224	1224, standard setup
• xtalk	PC, with CROSSTALK 3.5 or below
• pcu	PC to Unix emulator (T 9516-00)
• unknown	dumb terminal

If your terminal model was not included in the display, enter the name "**unknown**" and refer to your System Documentation.

Enter the TERMCAP NAME for the terminal you are using:

If you enter an invalid entry, you are prompted to redisplay the full list and reenter your termcap name.

The correct termcap entry brings up a display with directions for using the function keys:

On your *xxxxxx* terminal press '1' - ' 7' on the key pad for function keys:

(display of function keys):

<1> Provides field help <5> Quit - not supported
<2> Unused <6> Returns to first input field
<3> Redraws the screen <7> Performs the current operation
<4> Exit current screen <**Ctrl -C**> Exit current screen

Press the NEWLINE or RETURN Key to continue

After you press < **cr** >, the following messages appear:

Partition a Disk Device

Disk drive: **[/dev/rdsk/root . . . . .]**

Partition	Start	Size	Partition	Start	Size
0:	[. . . . . .0]	[. . *xxxxxx*]	8:	[. . . . . .0]	[. . . . . .0]
1:	[. . . . . .0]	[. . *xxxxxx*]	9:	[. . . . . .0]	[. . . . . .0]
2:	[. . . . . .0]	[. . . . . .0]	10 (a):	[. . . . . .0]	[. . . . . .0]
3:	[. . . . . .0]	[. . . . . .0]	11 (b):	[. . . . . .0]	[. . . . . .0]
4:	[. . . . . .0]	[. . . . . .0]	12 (c):	[. . . . . .0]	[. . . . . .0]
5:	[. . . . . .0]	[. . . . . .0]	13 (d):	[. . . . . .0]	[. . . . . .0]
6:	[. . . . . .0]	[. . . . . .0]	14 (e):	[. . *xxxxxx*]	[. . *xxxxxx*]
7:	[. . . . . .0]	[. . . . . .0]	15 (e):	[. . *xxxxxx*]	[. . *xxxxxx*]

Enter the size for partition 1 (the number of 512-byte physical blocks, or the number of megabytes with an "M" Suffix . . . e.g., 10240 or 5M). Note that the size is aligned on the next higher track or cylinder boundary.

< 1 > Help < 2 > Unused < 3 > Redraw < 4 > Return
< 5 > Quit < 6 > Reenter < 7 > Go

Enter **7** when you have finished entering the information about your disk partitions or if you had not information to enter.

If you made no change in the disk partitions the installation continues with the default partitions and you see the following system messages:

The partition operation for the root device passed.

Continuing with the installation with default partitions.

Chapter 4. Restart the Installation Process

If either a fatal error condition occurs or the < **Del** > key is pressed at any step during the system software installation, the process currently being performed is not successfully completed and must be restarted. When a process is not successfully completed, the following messages appear:

User Requested Abort - Phase x Restore

*** System Restore Aborted: ***

An error in the system installation process has occurred.

This phase of the system restore process must be restarted.

***WARNING: Do not power down your system until this procedure completes.

Do you wish to restart at this time (y/n)?

Enter **y** to automatically continue the system software installation at the beginning of the phase that was interrupted. Refer to the "Automatic Restart Procedure" section of this chapter.

Enter **n** if you are continuing the system software installation at a later time. Refer to the "Manual Restart Procedure" section of this chapter.

Automatic Restart Procedure

Use the following steps to automatically restart installing the system software at the beginning of the interrupted Phase.

1. The terminal displays:

   RESTARTING System Restore - PHASE n

   Press NEWLINE or RETURN to continue.

2. Press < **cr** > to restart the system software installation at the beginning of Phase install*n*, where *n* is the phase number.

   If install*n* is install1, refer to the "Phase 1 Restart" section of this chapter to continue the system software installation process.

   If install*n* is install2, refer to the "Phase 2 Restart" section of this chapter to continue the system software installation process.

   If install*n* is install3, refer to the "Phase 3 Restart" section of this chapter to continue the system software installation process.

Manual Restart Procedure

Before the installation process stops, the system automatically performs an orderly shutdown. After the system is shut down, use the following steps to restart installation and ensure the integrity of your system:

1. When the streaming tape access light goes off, remove the streaming tape from the drive.

2. Turn off the POWER switch on the main unit.

3. Since only the last successfully completed phase was installed, you must restart the installation process at the phase that was interrupted. To do this, perform the following:

   To restart the 5000/20, 5000/30, 5000/40, or 5000/50 systems, release 1.03.00 or earlier of:

   - Phase 1, refer to the "Phase 1 Restart" section of this chapter,
   - Phase 2, refer to the "Phase 2 Restart" section of this chapter, and
   - Phase 3, refer to the "Phase 3 Restart" section of this chapter.

For the 5000/30, 5000/35, 5000/50, or 5000/55 systems, Release 2.00, you can restart Phase 3 if it is interrupted. Refer to the "Phase 3 Restart" Section of this chapter. If the 5000/30, 5000/35, 5000/50, or 5000/55 systems, Release 2.00 are interrupted in Phase 1 and Phase 2, you must reboot and being the manual restart procedure over again.

Phase 1 Restart

Use the following procedure to restart system software installation if the Phase 1 installation is not successfully completed:

1. Restart installation as if Phase 1 were never performed.

2. Start the installation with the procedures described in the "Turning On the System" section of Chapter 7 of the *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 Installation Guide.*

Phase 2 Restart

Use the following procedure to restart system software installation if the Phase 2 installation is not successfully completed:

1. Move the MANUAL/AUTO LOAD toggle switch to the MANUAL position.

2. Turn on the POWER switch on the main unit. The **Select Startup Function** menu displays on your terminal screen.

3. Insert the streaming tape cartridge into the drive.

4. From the **Select Startup Function** menu, select Item 3 LOAD.

5. The terminal displays:

   ENTER DEVICE NAME

   Enter the device name **h501** on the 5000/30 or the 5000/50, or **sd01** or other external disk name as available (refer to Table 3-1 in Chapter 3 for other devices) then press < **cr** >. You must enter the same disk device name that was entered in Phase 1.

6. The terminal displays:

   ENTER PATHNAME

   If the root device is the SCSI disk (**sd01**), enter the pathname **/unix.sd01.10 < cr >**. If the root device is the internal disk **h501,** enter the pathname, **/unix.at0** followed by a **< cr >**. (The **root** file system is created on the disk that was selected during Phase 1).

7. The terminal displays:

   LOADING "unix *xxxx*" FROM DEVICE *xxxx*
   LOAD COMPLETE
   PRESS SPACE BAR TO EXECUTE -
   ANY OTHER KEY TO RETURN TO STARTUP MENU

   Press the space bar to load the files. After the files are loaded, you are ready to continue installation.

8. Move the MANUAL/AUTO LOAD toggle switch to the AUTO LOAD position.

9. Start installation as if Phase 2 were never performed. Restart installation with the procedures described in the "System Installation/Restore/Maintenance Phase 2" section of Chapter 2.

Phase 3 Restart

Use the following steps to restart system software installation for Release 1.03.00 and Release 2.00, if the Phase 3 installation is not successfully completed.

1. Move the MANUAL/AUTO LOAD toggle switch to the MANUAL position.

2. Turn on the POWER switch on the main unit. (The **Select Start-Up Function** menu displays on your screen.)

3. Insert the streaming tape cartridge into the drive.

4. From the **Select Startup Function** menu, select Item 3 LOAD.

5. The terminal displays:

   ENTER DEVICE NAME

   Enter the device name, **h501** on the 5000/30 or the 5000/50 (**sda1** on the 5000/35 or 5000/55 Release 2.00) or **sd01**, or other external disk as available, and press < **cr** >. You must enter the same disk device name that was entered in Phase 1.

6. For the 5000/20, 5000/30, 5000/40, or 5000/50 System, Release 1.03.00, the terminal displays:

   ENTER PATHNAME

   If the root device is the SCSI disk (**sd01**), enter the pathname **/unix.sd0.10** and < **cr** >. If the root device is the internal disk, **h501**, enter the pathname, **/unix.at0** followed by a < **cr** >.
   For the 5000/30, 5000/35, 5000/50, or 5000/55 systems, Release 2.00, enter the root device that was selected during Phase 1 of the installation. Enter the pathname, **/unix**, followed by < **cr** >.

7. The terminal displays:

   LOADING "/unix.*xxxx*" FROM DEVICE *xxxx*
   LOAD COMPLETE
   PRESS SPACE BAR TO EXECUTE -
   ANY OTHER KEY TO RETURN TO STARTUP MENU

   Press the space bar to load the files. After the files are loaded, you are ready to continue installation.

8. Move the MANUAL/AUTO LOAD toggle switch to the AUTO LOAD position.

9. Start the installation as if Phase 3 were never performed. Restart installation with the procedures described in the "System Installation/Restore/Maintenance Phase 3" section of Chapter 2.

Chapter 5. Error Messages

This section describes the error messages that may occur during installation of the operating system and the action to perform to correct that error.

Error Messages

Streaming Tape Drive Access Error

Message

*** ERROR *** Cannot Access Streaming Tape Drive

Do you want to retry the operation? (Y/N)

Action

The streaming tape drive could not be accessed by the system. It is recommended that you enter **y** (for yes) to retry the operation. After you enter **y**, the terminal displays:

Remove streaming tape from drive

Enter RETURN when ready to continue

Remove the streaming tape and press < **cr** >. The terminal displays:

Reinsert streaming tape in drive
Enter RETURN when ready to continue

Insert the same streaming tape into the drive and press < **cr** >. If the operation is successful, the terminal displays:

Continuing . . .

If the same error message occurs after several attempts to access the streaming tape drive, call your Unisys representative to resolve the problem. Enter **n** (for no) to terminate the system software installation process. After the problem is resolved, start the installation process again. Refer to Chapter 4, "Restart the Installation Process."

Root File System Creation Error

Message

*** ERROR *** Cannot Create Root File System

Action

The installation process cannot be completed because the **root** file system cannot be created. When this error condition occurs, restart Phase 1 of the installation process. Enter **y** during the process of Phase 1 which determines the system disk in answer to the question:

Do you wish to reformat the disk?

If this error condition occurs again, call your Unisys representative to resolve the problem. After the problem is

resolved, start the installation process again. Refer to Chapter 4, "Restart the Installation Process."

Root Device Format Error

Message

*** ERROR *** Cannot Format the Root Device Check Hardware Installation

Do you wish to retry the formatting operation?

Enter 'Y' or 'N':

Action

The installation process cannot be completed because one of the disks cannot be formatted, or the Media Error Log information was not correctly entered. Enter **y** to try the root device formatting process again. Enter **n** to terminate the root device formatting process.

If this error message occurs after the Media Error Log information is entered, restarting the installation process is recommended. Refer to Chapter 4, "Restart the Installation Process." If the error is not corrected after the restart installation process, call your Unisys representative to resolve the problem. After the problem is resolved, start the installation process again.

Data File Integrity Error

Message

*** ERROR *** CORRUPTED/MISSING Files detected
Do you want to retry load of streaming tape? (Y/N)

Action

The installed data files failed a data integrity check. Entering **y** is recommended to retry the operation. After you enter **y**, progress messages display. If the operation is successful, the terminal displays:

Continuing...

If the same error message occurs after several attempts to reload the files on the disk, call your Unisys representative to resolve the problem. Enter **n** to terminate the system software installation process. After the problem is resolved, start the installation process again. Refer to Chapter 4, "Restart the Installation Process."

Streaming Tape File System Error

Message

*** ERROR *** File System Corrupted on Streaming Tape

Action

The file system on the streaming tape is corrupt. Call your Unisys representative to resolve the problem. After the problem is resolved, start the installation process again. Refer to Chapter 4, "Restart the Installation Process."

Streaming Tape Proprietary Error

Message

*** ERROR *** Streaming Tape Does Not Conform to the Proprietary Security Format

Action

Use only the streaming tape distributed with your 5000 system, i.e., the tape used to initially install that system. (This action applies to the 5000/20, 5000/30, 5000/40, or 5000/50 Release 1.03.00 and earlier only).

Media Defect Information Error

Message

*** ERROR *** Errors detected in media defect information.

Action

An error was detected in the factory media defect information or the user media defect information that was entered. Press < **cr** > and enter the information again.

Invalid Response Error

Message

ERROR You have entered an invalid response. Please answer Y or N and PRESS the RETURN key.

Action

Enter **y** or **n**, and press < **cr** >.

Date/Time Entry Error

Message

ERRORYou have entered the date or time incorrectly. Enter this information again and remember to enter exactly two numbers for each request. PRESS the NEWLINE or RETURN key when you are ready to continue.

Action

Press < **cr** > to continue. Remember to enter two numbers for each response. For example, enter **05** for the month of May. An entry of **5** is not correct.

Disk Format Error

Message

ERROR Cannot format the disk

Action

Refer to the Chapter 4, "Restart the Installation Process." If the error is not corrected after the restart installation process, call your Unisys representative to resolve the problem.

Tape Access Error

Message

ERROR Cannot open tape

Action

Check the hardware. Reinsert the tape making sure the lever is securely locked. Refer to Chapter 4, "Restart the Installation Process." If the error is not corrected after the restart installation process, call your Unisys representative to resolve the problem.

Tape Seek to EOT Error

Message

ERROR Tape seek to EOT failed

Action

Make sure the tape is inserted properly. Refer to Chapter 4, "Restart the Installation Process." If the error is not corrected after the restart installation process, call your Unisys representative to resolve the problem.

Tape Insertion Error

Message

ERROR Tape position failed

Action

Make sure the tape is inserted properly. Refer to Chapter 4, "Restart the Installation Process." If the error is not corrected after the restart installation process, call your Unisys representative to resolve the problem.

DS to Block 1 Error

Message

ERROR Disk seek to block 1 failed

Action

Check the hardware. Refer to Chapter 4, "Restart the Installation Process." If the error is not corrected after the restart installation process, call your Unisys representative to resolve the problem.

Block Device Error

Message

ERROR Block device error, device *xx*
Unrecovered READ error, Retry Count = 0

Action

The device requested was inaccessible or the media was incompatible. Refer to the *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 Operations Guide* for media compatibility and check the hardware. If the error is not corrected, call your Unisys representative to resolve the problem.

Read Tape Error

Message

ERROR Cannot read tape

Action

Fatal error. Refer to Chapter 4, "Restart the Installation Process." If the error is not corrected after the restart installation process, call your Unisys representative to resolve the problem. The tape head(s) may need cleaning.

Write to Disk Error

Message

ERROR Cannot Write to disk

Action

Check the hardware. Refer to Chapter 4, "Restart the Installation Process." If the error is not corrected after the restart installation process, call your Unisys representative to resolve the problem.

Write to Root Device Error

Message

ERROR Cannot write to root device

Action

Check the hardware. Refer to Chapter 4, "Restart the Installation Process." If the error is not corrected after the restart installation process, call your Unisys representative to resolve the problem.

Read Checksum Error

Message

ERROR Cannot read checksums

Action

Bad and/or missing data is on the tape. Refer to Chapter 4, "Restart the Installation Process." If the error is not corrected after the restart installation process, call your Unisys representative to resolve the problem. The tape head(s) may need cleaning.

Checksum Match Error

Message

ERROR Checksum did not match

Action

Bad and/or missing data is on the tape. System allows one retry. Refer to Chapter 4, "Restart the Installation Process." If the error is not corrected after the restart installation process, call your Unisys representative to resolve the problem. The tape head(s) may need cleaning.

Installation Termination Error

Message

ERROR Installation terminated

Action

User requested termination. Refer to Chapter 4, "Restart the Installation Process." If the error is not corrected after the restart installation process, call your Unisys representative to resolve the problem.

Check Hardware Error

Message

ERROR Check Hardware. Disk drive is not ready

Action

Check the hardware. Refer to Chapter 4, "Restart the Installation Process." If the error is not corrected after the restart installation process, call your Unisys representative to resolve the problem.

Formatting Disk During Installation Error

Message

ERROR can not open tape. System Installation terminated.

Action

This error may occur when you format the disk during installation of the operating system. When this error occurs, reset the system and start over. Because the disk formatting procedure completes successfully regardless of the system installation termination, it is not necessary to format the disk again. Answer **n** when the system prompt asks if you want to format the disk or enter bad blocks.

Mag Tape Device Error

Message

ERROR No magnetic tape devices available for system restore.

Action

Check the hardware. The system does not recognize a magnetic tape device.