REV. 22.0 SOFTWARE INSTALLATION GUIDE

Second Edition

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This guide describes how to install Revision 22.0 software in the following situations:

- Performing an initial installation of Rev. 22.0 PRIMOS® on a new system (Chapter 2).
- Upgrading to Rev. 22.0 PRIMOS and reformatting the disk to Rev. 22.0 format (Chapter 3).
- Upgrading to Rev. 22.0 PRIMOS without reformatting the disk (Chapter 4).

Read Chapter 1, which describes new features and changes that you must consider in the installation, and the appropriate chapter from those listed above. It is recommended that you read this material through once before attempting the actual installation.

RELATED DOCUMENTATION

Be sure to read the READ_BEFORE_USING and INFO22.0 files as soon as possible, preferably before performing an installation or upgrade.

Other documents applicable to software installation are available through the Prime Technical Publications group:

- Software Release Document (DOC10001-5PA) describes new features at Rev. 22.0.

- Data Backup and Recovery Guide (DOC10129-2LA) describes how to save information on disk or tape, and how to restore the information later.

- Operator's Guide to File System Maintenance (DOC9300-4LA) explains how to format and repair disk partitions with MAKE and FIX_DISK, how to interpret disk error messages, and discusses reverse sectoring, robust partitions, dynamic badspot handling, and disk mirroring in detail.

- The System Administrator's Guide, Volume I: System Configuration (DOC10131-2LA) describes the CONFIG and PRIMOS.COMI files and all configuration directives.

- The System Administrator's Guide, Volume II: Communication Lines and Controllers (DOC10132-2LA) describes how to configure your asynchronous lines and allocate I/O buffers.

- The System Administrator's Guide, Volume III: System Access and Security (DOC10133-2LA) describes EDIT_PROFILE, and the ACL system.

- Operator's Guide to the Spooler Subsystem (DOC9303-3LA) describes how to configure, monitor, and control the spooler subsystem.

- Operator's Guide to the Batch Subsystem (DOC9302-3LA) describes how to configure, monitor, and control the batch subsystem.

You may also need the following documents if you are on a networked system:

- PRIMENET Planning and Configuration Guide (DOC7532-3LA and the Rev. 22.0 update package UPD7532-31A) describes how to plan for and configure PRIMENET.

- NTS Planning and Configuration Guide (DOC10159-1LA) and the Rev. 22.0 update package to this guide (UPD10159-11A) describes how to plan for and configure NTS.

To obtain a complete list of Prime technical documentation online, type the command HELP DOCUMENTS. A hardcopy list is available in the Guide to Prime User Documents (DOC6138-5PA). This guide is issued once a year. Lists of additional updated material are published quarterly in the Customer Service Newsletter.

PRIME DOCUMENTATION CONVENTIONS

The following conventions are used in command formats, statement formats, and in examples throughout this document. Examples illustrate the uses of these commands and statements in typical applications.

Convention	Explanation	Example
UPPERCASE	In command formats, words in uppercase indicate the names of commands, options, statements, and keywords. Enter them in either uppercase or lowercase.	SLIST
lowercase	In command formats, words in lowercase indicate variables for which you must substitute a suitable value.	LOGIN user-id
Braces { }	Braces enclose a list of items. Choose one and only one of these items.	CLOSE { filename ALL }
Ellipsis ...	An ellipsis indicates that the preceding item may be entered more than once on the command line.	SHUTDN pdev-1 [...pdev-n]
Hyphen -	Wherever a hyphen appears as the first character of an option, it is a required part of that option.	SPOOL -LIST
Underscore in examples	In examples, user input is underscored but system prompts and output are not.	OK, RESUME MY_PROG This is the output of MY_PROG.CPL OK,
Apostrophe '	An apostrophe preceding a number indicates that the number is in octal.	'200
Angle brackets in examples < >	In examples, the name of a key enclosed within angle brackets indicates that you press that key.	OK, ED <RETURN>

Angle brackets in messages < >	In messages, characters or words enclosed within angle brackets indicate a variable for which the program substitutes the appropriate value.	Disk <diskname>

CHAPTER 1

INTRODUCTION

THE MASTER DISK TAPE STRUCTURE

At Rev. 22.0 the Master Disk Tape structure has changed. As of Rev. 22.0, the logical tapes you may receive are: U1, U2, V1, C1, and D1. The new U1 tape contains software that is required to install PRIMOS and bring your system up. The new U2 tape contains the additional PRIMOS software and utilities that are not essential for running PRIMOS, but includes INFO22.0 and the updated HELP* directory. The separation between the U1 and U2 tapes was made to facilitate the installation of PRIMOS on systems with limited disk capacity. Additionally, at Rev. 22.0, languages are no longer supplied on the chargeable products tape (C1). They will be supplied on a separate tape, called T1.

The contents of the user tape (M220U1) are:

BOOTRUN	CMDNCO	DIAG	DOWN_LINE_LOAD*
DSM*	LIB	LIBRARIES*	NETWORK_MGT*
PRIRUN	SEARCH_RULES*	SEG	SEGRUN*
SERVERS*	SIT*	SPOOL*	SYSCOM
SYSOVL	SYSTEM	T&MRUN	TERM*
TOOLS	UP_LINE_DUMP*		

The new M220U2 tape will contain the following directories:

BATCHQ	DOS	FORMS*_TEMPLATE	HELP*
INFO22.0	LOAD_MAPS*	RJSPLQ*	SYSTEM_DEBUG*

BEFORE INSTALLING THE SOFTWARE

There are a few things you should be aware of before attempting to install Rev. 22.0 software.

Languages

At Rev. 22.0, language related products, including their associated libraries, are no longer supplied on the Master Disk tape. They are revised and released independently from PRIMOS. Note also that COBOL is no longer supported. It has been replaced by CBL.

Before installing Rev. 22.0, you must install Rev. T1.0 or a subsequent fix release of T1.0 such as T1.1. This release consists of language related products such as the C compiler and has a nonchargeable part and a chargeable part. You must install the nonchargeable part of T1.0 or a subsequent fix release before installing Rev. 22.0. If you have ordered any T family products, such as the C compiler, then you must install that part of the T1.0 release also, so the compilers will be consistent with the associated libraries, which are in the nonchargeable part of T1.0. If you do not install the nonchargeable part of the appropriate T family release, then some PRIMOS utilities and products such as NTS will fail in unpredictable ways.

> **Caution**
>
> If you will be using the COMM_CONTROLLER command to downline load any devices, either LHC300s for network operations or ICS units for either synchronous or asynchronous operations, then you must install a version of the nonchargeable T Family runfiles and libraries. The transient servers that are spawned by the COMM_CONTROLLER command will not be able to operate without those runfiles and libraries.

For information about installing the full contents of the T1 logical tape, see the Translator Family Software Release Document (DOC10217-1PA).

EDIT_PROFILE

The Rev. 21 defaults for command environment limits may not be adequate for your system at Rev. 22.0. The following are the minimum command environment limits recommended:

Command Attribute	Recommended Value
Command levels	10
Live invocations per level	10
Private dynamic segments	64
Private static segments	64

If your current defaults are less than those listed above, use the CHANGE_SYSTEM_DEFAULTS subcommand of EDIT_PROFILE to set segment limits accordingly before bringing up Rev. 22.0 PRIMOS.

DSM

If you are upgrading from Rev. 21.0, you may want to consider the following.

Whether performing an initial installation or upgrading from a previous revision, always run DSM.INSTALL.CPL to ensure that DSM will work.

Changes to DSM: At Rev. 22.0, DSMNETSR has been replaced by the ISC network server ISC_NETWORK_SERVER. To use DSM on remote systems, you need only ensure that PRIMENET is started on those systems. The DSM_LOGGER phantom is a customized version of the DSMASR phantom specifically made for logging users; it replaces the DSMASR phantom used at Rev. 21.0. The command file for the logging server is LOGGER_ASR.CPL, while the runfile is called LOGGER_ASR.RUN. They are both located in the directory DSM*.

DSM.SHARE.COMI: The file DSM.SHARE.COMI is no longer used. The DSM.SHARE.COMI file supplied on the Master Disk Tape is a dummy file available to prevent PRIMOS.COMI from stopping with an error. You should remove reference to DSM.SHARE.COMI from your PRIMOS.COMI file and delete the DSM.SHARE.COMI file from your SYSTEM directory.

Starting DSM: You should also remove the -MN (Multi-Node) option from the START_DSM command in PRIMOS.COMI, as it is no longer used. If present, it will generate a warning message.

NTS

If you are using NTS and your site has both Rev. 21.0 and Rev. 22.0, your Rev. 21.0 machines must be running at least Rev. 21.0.2 so that terminals can connect to all available hosts.

Obsolete Directives

The following directives are obsolete at Rev. 22.0: AMLBUF, REMBUF, NTSBUF, and NTSABF. They have been replaced by the CAB command, described under New Features at Rev. 22.0. Both the FILUNT and TPDUMP directives are obsolete and no longer needed. If you are upgrading your system from Rev. 20.2 or earlier, please note that the following directives were made obsolete at Rev. 21.0: LOGREC, NETREC, and NUSEG.

NEW FEATURES AT REV. 22.0

New features at Rev. 22.0 are described in the Software Release Document. Those mentioned below include only those for which you may wish to make changes during or immediately after installation of the software.

Disk Changes

As of Rev. 21.0, the MAKE command creates a Dynamic Badspot (DBS) file and a Remapped Area (RMA) file on the first partition of a disk device. Therefore, you must create the partition containing surface 0 before you create any other partition. If you will be creating any other additional partitions on that particular storage device, then it is recommended that you run the MAKE command on those partitions in sequential order.

Process Management

The maximum number of processes (NTUSR + NRUSR + NTSUSR + NSLUSR + NPUSR) is now 600 for all CPUs except the 4050™, the 4150™, the 6350™, and the 6550™ series; on those CPUs it is 960.

It is no longer necessary to include the following servers when calculating the number of phantom processes for NPUSR.

Login Server	LOGIN_SERVER
Copy Servers	COPY_SERVER
Timer Process	TIMER_PROCESS
DSM System Manager	SYSTEM_MANAGER
NTS Connection Manager	NTS_SERVER
User Backplane Interconnector	UBI_SERVER
Security Auditor	AUDITOR
Inter Service Communication Network Server	ISC_NETWORK_SERVER

You will still need to configure phantoms for NETMAN, Route-through, Batch, the DSM worker processes, your spooler phantoms, and phantoms for users.

ASRBUF: The supervisor terminal I/O buffer sizes can only be assigned through the use of the ASRBUF configuration directive. The output produced by some commands, notably DSM reports, may overflow the default sizes set for ASRBUF. It is recommended that the size of the input and output buffers be increased. For example:

```
ASRBUF 0 2000 2000
```

AMLC: It is recommended that if you have not already done so, you should upgrade any AMLC commands to SET_ASYNC commands within your PRIMOS.COMI file. While obsolete AMLC commands will still operate on systems with fewer than 256 asynchronous lines, use of the new SET_ASYNC command is preferred.

The CAB command

CAB allows a System Administrator or a DSM privileged user to change the size of asynchronous buffers associated with a line. You can use CAB commands in your PRIMOS.COMI file or interactively. It replaces the configuration directives AMLBUF, REMBUF, NTSBUF, and NTSABF. Prior to Rev. 22.0, when PRIMOS was cold started, memory was wired for each line on the system. CAB works dynamically, assigning buffer space only when a user is logged in. This can save you a considerable amount of wired memory.

Avoid confusion by not using both CAB commands and AMLBUF directives on the same system. PRIMOS will recognize both commands, and they can be used together as long as they are not used to configure the same communication lines; however, CAB is more efficient. Additionally, AMLBUF directives will fail on any lines configured beyond the old 255-line limit.

There are differences between the old AMLBUF directive and the CAB command. Most importantly, the CAB command takes its arguments in

decimal instead of octal. Additionally, the DMQ buffer size must be one less than a power of two: 63, 127, 255, 511, etc. To explain further: when a DMQ buffer is specified under the AMLBUF command, the system subtracts one from the argument that is given, for example, octal 200 specifies a buffer that actually has a length of octal 177 (decimal 127). Under the CAB command, the subtraction must be built into the argument; the AMLBUF DMQ argument of octal 200 converts to a CAB DMQ argument of decimal 127, not 128.

CONVERT_BUFFER_DIRECTIVES

The CONVERT_BUFFER_DIRECTIVES utility is available to aid in changing AMLBUF directives into the corresponding CAB commands. There have been a variety of differing methods taught over the years for using the AMLBUF directives in ways that are efficient or that are relatively easy to understand. Because some of these methods now appear to have been incorrect or misleading, we strongly recommend the following:

Make a copy of your current CONFIG file for later reference. Use the LAB command (list async buffers) to list the actual values being set by the current AMLBUF directives on all of your system lines. Use the CONVERT_BUFFER_DIRECTIVES conversion utility to create the CAB commands which correspond to your old AMLBUF directives. If any of the buffer sizes listed by the LAB command are not the values that you expected for the particular line, correct the CAB command for that line. The copy of the CONFIG file may help you in this determination; but please remember that the buffer sizes listed by LAB are the sizes you've been using, no matter what the AMLBUF directives seem to indicate. This procedure is simpler than trying to relearn the ins and outs of the AMLBUF directive. Refer to the next section for more related information.

Line Number vs. Associated User Number

Prior to Rev. 22.0, you could eliminate unused default buffers (for example, those for the assigned line used by a serial printer) by changing the user number associated with the line. This will no longer be necessary or possible at Rev. 22.0, because the buffers are now associated with the line, not with the user number.

Changing the associated user number also had the side effect of changing the sizes of the input and output buffers (but not the DMQ buffer) to the sizes associated with the new user number. The I/O buffer sizes were keyed to the user number, not to the line number. This will no longer occur at Rev. 22.0; the I/O buffer sizes now are keyed to the line number. Customers can still change the user number associated with an Async line (via the -USER option to SET_ASYNC or by providing an entry in the lword parameter to the AMLC command), but the buffer sizes will stay the same. A warning message will state that USER <n> is now associated with that specific line, but that the sizes of the buffers for the line have not been changed, and that one must use the CAB command to change the size of the buffers associated with a specific line. See the System Administrator's Guide, Volume II, Communication Lines and Controllers for details and restrictions.

EDIT_PROFILE

There are three new subcommands whose purpose is to enhance security. PRIMOS will generate passwords if you use the EDIT_PROFILE subcommand COMPUTER_GENERATED_PASSWORDS -ON.

On a system-wide basis, you can establish the length of time users are allowed to keep the same password with the DEFAULT_PASSWORD_LIFETIME subcommand.

Within EDIT_PROFILE, you can use the -PASSWORD_LIFETIME option with either ADD_USER or CHANGE_USER to set the length of time in days that an individual user is allowed to keep the same password. These options are described in full in the System Administrator's Guide, Volume III: System Access and Security.

HARDWARE AND SOFTWARE REQUIREMENTS

Before you install Rev. 22.0, your system must meet the following requirements:

- Prime recommends that your system have at least 2MB of physical memory. The first 512KB must be contiguous, starting at location 0.

- The system must have a partition onto which you will load the Rev. 22.0 software. You will need 13484 records available to accommodate the M220U1 tape and 3608 records for the M220U2 tape.

- You cannot boot from any of the following: Option B (4001) and Option B' (4002) disk controllers, diskette controllers, 7-track tape drives, 4020 9-track tape controllers, or paper tape.

The controllers and drives mentioned above can be used after PRIMOS is running.

Whether you are performing an initial installation or are upgrading from an earlier PRIMOS revision, the entire Rev. 22.0 tape should be installed at the same time. Some Rev. 22.0 software requires the presence of other Rev. 22.0 software in order to work properly.

Most PRIMOS Rev. 22.0 software that is not on the Master Tape requires the Rev. 22.0 revision stamp in order to run. Certain independent products, however, use their own revision stamp. To be certain that you have compatible software, use the HELP REV22 command after installing the Rev. 22.0 HELP* directory from the M220U2 Master Disk Tape.

CHAPTER 2

INSTALLING REV. 22.0 ON A NEW MACHINE

This chapter details the steps that you must follow to install PRIMOS Rev. 22.0 initially on a new machine. Figure 2-1 provides a quick reference flowchart, followed by detailed instructions.

All Prime software products shipped with new Prime computer systems are stored on several magnetic tapes through the MAGSAV utility. The tapes contain the operating system (PRIMOS), the utilities, the nonchargeable software products, and any separately priced software products you have ordered.

The sixteen steps in Figure 2-1 must be followed in order.

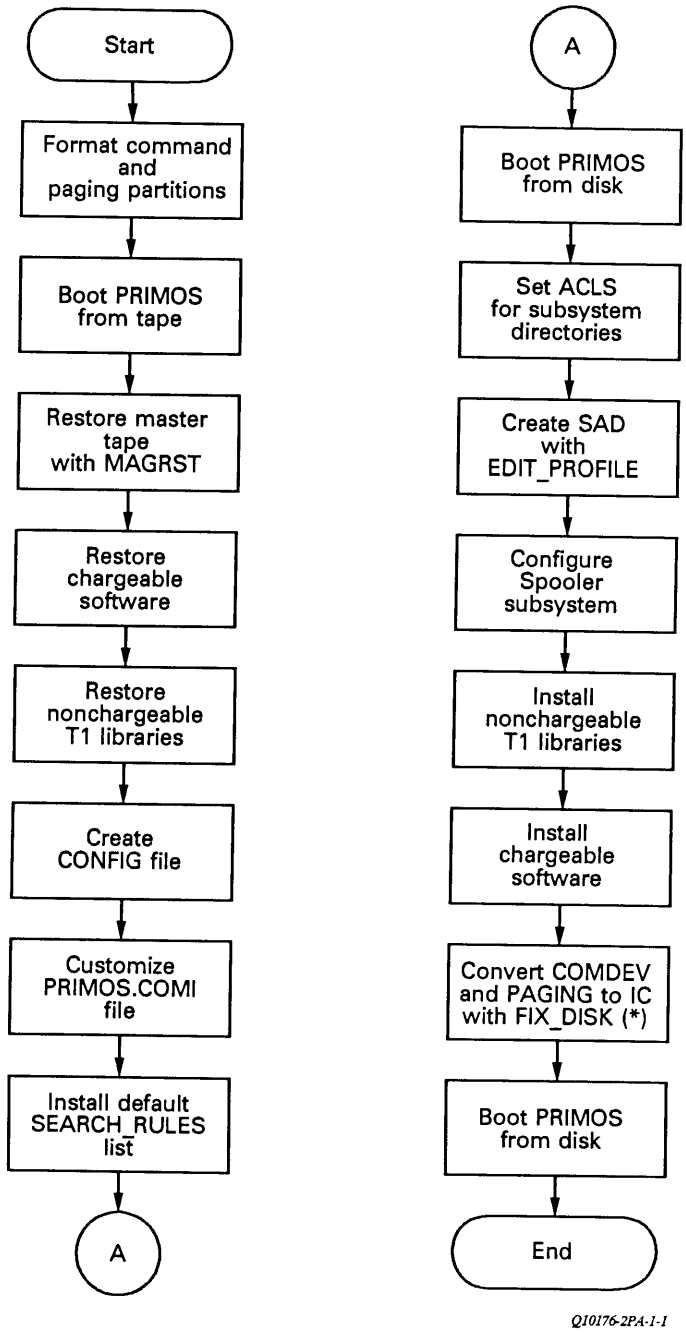

Figure 2-1
New Installation Procedures

CREATING THE COMMAND AND PAGING PARTITIONS

Use the following procedure and commands to create the command and paging partitions.

Note

As of Rev. 21.0, the MAKE command creates a Dynamic Badspot (DBS) file and a Remapped Area (RMA) file on the first partition of a disk device. Therefore, you must create the partition containing surface 0 before you create any other partition. The DBS and the RMA files are accessed when the partition is in Dynamic Badspot Handling (-IC) mode.

In the following example, CMDDSK is the command partition on a 496 MB disk drive. It is a six-head partition, starting from head 0 on Disk Drive 0 at Disk Controller address '26. The paging partition is on surfaces 22 and 23 on the same disk drive. Operator entries are underlined.

1. Construct physical device numbers (pdevs) for each partition by following these steps:

   a. Determine the number of surfaces you want in the partition.

   b. Determine the starting surface number. If you are creating the command device (COMDEV), then the starting surface number should be 0.

   c. Look up the basic physical device number in Table 2-1.

   d. Add the Disk Drive Unit value shown in Table 2-2.

   e. Add the Disk Controller Address value shown in Table 2-3.

   For example, to create a six-head partition starting at head 0 with a disk unit number of 0 and a controller address of '26, follow this procedure:

   1) Derive the basic pdev from Table 2-1 (001420).

   2) Add the disk drive unit number value from Table 2-2 (001420 + 0 = 001420).

   3) Add the disk controller address value from Table 2-3 (001420 +40 =1460).

Table 2-1

Basic Physical Device Numbers for Storage Modules and Fixed-media Devices

		Starting Surface Number							
		0	2	4	6	8	10	12	14
N									
u	1	------	010021	020021	030021	------	------	------	------
m	2	000420	010420	020420	030420	040420	050420	060420	070420
b	3	000421	010421	020421	------	------	------	------	070421
e	4	001020	011020	021020	031020	041020	051020	061020	071020
r	5	001021	011021	------	------	------	------	061021	071021
	6	001420	011420	021420	031420	041420	051420	061420	071420
o	7	001421	------	------	------	------	051421	061421	------
f	8	002020	012020	022020	032020	042020	052020	062020	072020
	9	------	------	------	------	042021	052021	------	072021
S	10	002420	012420	022420	032420	042420	052420	062420	072420
u	11	------	------	------	032421	042421	------	062421	------
r	12	003020	013020	023020	033020	043020	053020	063020	073020
f	13	------	------	032021	033021	------	053021	------	------
a	14	003420	013420	023420	033420	043420	053420	063420	073420
c	15	------	013421	023421	------	043421	------	------	------
e	16	004020	014020	024020	034020	044020	054020	064020	074020
s	17	004021	014021	------	034021	------	------	------	------
	18	004420	014420	024420	034420	044420	054420	064420	------
i	19	004421	------	024421	------	------	------	------	------
n	20	005020	015020	025020	035020	045020	055020	------	------
	21	------	015021	------	------	------	------	------	------
P	22	005420	015420	025420	035420	055420	------	------	------
a	23	005421	------	------	------	------	------	------	------
r	24	006020	016020	026020	036020	------	------	------	------
t	25	------	------	------	------	------	------	------	------
i	26	006420	016420	026420	------	------	------	------	076420
t	27	------	------	------	------	------	------	------	------
i	28	007020	017020	------	------	------	------	067020	------
o	29	------	------	------	------	------	------	------	------
n	30	007420	------	------	------	------	057420	------	------

Table 2-1 (continued)

Basic Physical Device Numbers for Storage Modules and Fixed-media Devices

Starting Surface Number									
16	18	20	22	24	26	28	30		N
100021	110021	------	130021	------	------	------	------	1	u
100420	110420	120420	130420	140420	150420	160420	------	2	m
100421	------	120421	------	------	------	------	------	3	b
101020	111020	121020	131020	141020	151020	------	------	4	e
------	111021	------	------	------	------	------	------	5	r
101420	111420	121420	131420	141420	------	------	------	6	
101421	------	------	------	------	------	------	------	7	o
102020	112020	122020	132020	------	------	------	------	8	f
------	------	------	------	------	------	------	------	9	
102420	112420	122420	------	------	------	------	172420	10	S
------	------	------	------	------	------	------	------	11	u
103020	113020	------	------	------	------	163020	------	12	r
------	------	------	------	------	------	------	------	13	f
103420	------	------	------	------	153420	------	------	14	a
------	------	------	------	------	------	------	------	15	c
------	------	------	------	144020	------	------	------	16	e
------	------	------	------	------	------	------	------	17	s
------	------	------	134420	------	------	------	------	18	
------	------	------	------	------	------	------	------	19	i
------	------	125020	------	------	------	------	------	20	n
------	------	------	------	------	------	------	------	21	
------	115420	------	------	------	------	------	------	22	P
------	------	------	------	------	------	------	------	23	a
106020	------	------	------	------	------	------	------	24	r
------	------	------	------	------	------	------	------	25	t
------	------	------	------	------	------	------	------	26	i
------	------	------	------	------	------	------	------	27	t
------	------	------	------	------	------	------	------	28	i
------	------	------	------	------	------	------	------	29	o
------	------	------	------	------	------	------	------	30	n

Notes for Table 2-1

All partitions must begin on an even starting surface number.

To avoid wasting disk space, define a disk partition with an odd number of surfaces only when it is the last partition on a disk pack having an odd number of surfaces.

Table 2-2
Disk Drive Unit Value

Number to Add for Disk Drive Unit Number	
Disk Drive Unit Number	Add
0	0
1	2
2	4
3	6

Table 2-3
Disk Controller Address Value

Number to Add for Disk Controller Address	
Disk Controller Address	Add
'24	0
'26	40
'25	100
'22	140
'45	200
'27	240
'46	300
'23	340

2. Power up the system and mount the Rev. 22.0 boot tape on Magnetic Tape Drive 0 (MT0.)

3. From Control Panel mode, execute the following set of commands to boot MAKE.SAVE from tape and create a command partition.

   You must specify the -AC option with Rev. 22.0 partitions when running MAKE.SAVE standalone. You can later convert the partition to -IC mode with FIX_DISK.

   A) Clear the system.

```
CP> SYSCLR
DPM006: Central Processor system initialization completed.
        24 Feb 88 09:40:00 Wednesday
```

B) Boot MAKE.SAVE.

```
CP> BOOT 10005
DPM007: System booting, please wait.
[CPBOOT Rev. 9.0 Copyright (c) Prime Computer, Inc. 1988]
[BOOT Rev. 22.0 Copyright (c) 1988, Prime Computer, Inc.]

RUN FILE TREENAME= MAKE.SAVE

BOOTING FROM MTO      MAKE.SAVE

****MAKE <Rev.22>**** Copyright (c)1988, Prime Computer, Inc.

Enter command line options:
```

C) Enter your command line options for creating the command partition.

```
-DISK 1460 -PART CMDDSK -DT MODEL_4735 -FORMAT -NEWDSK -AC

Which file sectoring scheme would you like?
Type "0" (Reverse Sector)
 or  "1" (Forward Sector)
>0

Making      6 head partition CMDDSK
Tracks:                  711
Sectors per track:        14
Partition is using Reverse Sectoring
Partition is in All_Controller Mode
Partition size in decimal records:      59724
Beginning format.
Format completed.
Checking for badspots.
Disk created.

DPM400: CPU halted at 025175: 103775
        24 Feb 88 10:35:00 Wednesday

CP>
```

4. Repeat the above three parts of step 3 for the paging partition, with the following command line option.

```
-DISK 130460 -PART PAGDSK -DT MODEL_4735 -FORMAT -NEWDSK -AC -SPLIT

Which file sectoring scheme would you like?
Type "0" (Reverse Sector)
 or  "1" (Forward Sector)
>0

Total decimal number of records available:      19908
Decimal records for paging? 19888
```

```
Making        2 head partition PAGDSK
Tracks:                    711
Sectors per track:          14
Partition is using Reverse Sectoring
Partition is in All_Controller Mode

File system records:       20
Paging records:         19888

Beginning format.
Format completed.
Checking for badspots.
Disk created.

DPM400: CPU halted at 025175: 103775
        24 Feb 88 11:50:00 Wednesday

CP>
```

5. At this point, you could repeat the above steps for any other partitions you may want in the file system. Running the MAKE.SAVE command from tape is slower and more cumbersome than running it from disk. You have the command and paging devices formatted, the two partitions that are required to boot the system. You could wait until you have booted from disk before attempting to create your additional partitions.

Note

If you are using Dynamic Badspot Handling, be sure to create any other additional partitions on that physical disk in sequential order.

BOOTING PRIMOS FROM TAPE

Execute the following series of commands to boot the system to PRIMOS. The sense-switch setting of 100005 instructs BOOT to bypass the configuration file and prompt for the physical device, SYSNAM, COMDEV, PAGDEV, and NTUSR.

1. Clear the system.

```
CP> SYSCLR
DPM006: Central Processor system initialization completed.
        24 Feb 88 12:05:00 Wednesday
```

2. Boot.

```
CP> BOOT 100005
DPM007: System booting, please wait.
```

```
[CPBOOT Rev. 9.0 Copyright (c) Prime Computer, Inc. 1988]

PHYSICAL DEVICE= MTO

RUN FILE TREENAME= PRIRUN>PRIMOS.SAVE

BOOTING FROM MTO      PRIRUN>PRIMOS.SAVE

Coldstarting PRIMOS, Please wait...
```

3. Enter values for COMDEV, PAGING device, NTUSR, and SYSNAM.

```
Enter COMmand DEVice: 1460
Enter PAGing Device: 130460
Enter Number Terminal USeRs: 3

[PRIMOS Rev. 22.0 Copyright (c) 1988, Prime Computer, Inc.]
[Serial # XXXXXXX]

8192K BYTES MEMORY IN USE

Starting up revision 22 partition "CMDDSK"
Enter system name:SYSB
Initializing profile data for the supervisor from the SAD.
Can't attach to the SAD: Not found.
Please contact System Administrator.
Profile data cannot be initiated from the SAD for the supervisor.
System defaults are being used.
Please enter date and time.
Not found, "SAD"
Error initializing Search_Rules. Please check template files in
SEARCH_RULES*.
OK,
```

Note

Ignore any error messages concerning the SAD and SEARCH_RULES at this time.

RESTORING PRIMOS FROM THE MASTER TAPE

Use the MTRESUME command to execute the MAGRST utility from your Rev. 22.0 boot tape, then restore the contents of the M220U1 logical tape to the command partition as follows.

1. Attach to the command partition.

```
OK, A <CMDDSK>MFD
OK,
```

2. Mount the Rev. 22.0 tape received from Prime on a magnetic tape drive (MT0 is used in this example) and assign that tape drive.

```
OK, ASSIGN MT0
Device MT0 assigned
OK,
```

3. Execute MAGRST from tape.

```
OK, MTRESUME MT0 MAGRST.SAVE
This is a revision 22 MAGSAV tape.
Date: 01-01-00
Revision: 0
Reel: 1
Name: M220BT
[MAGRST Rev. 22.0 Copyright (c) 1988, Prime Computer, Inc.]
Tape unit (9 Trk):
```

4. Now restore the M220U1 logical tape.

```
Tape Unit (9 Trk): 0
Enter logical tape number: 2
Positioning to logical tape      2 .....
(Rev. 19 tape without ACLs)
Name: M220U1
Date: 02-14-88
Rev: 22
Reel: 1
Ready to Restore: YES
***Starting Restore***
***End Logical Tape***
***Restore Complete***
OK,
```

RESTORING ADDITIONAL SYSTEM SOFTWARE

The M220U2 logical tape contains the HELP* and INFO22.0 directories. It is therefore strongly recommended that you restore these directories. It is also recommended that you restore the appropriate nonchargeable T Family runfiles and libraries.

Note

If you use the Remote Job Entry system, then you must restore the contents of the M220U2 logical tape. The RJESPLQ* directory must exist on the COMDEV for the RJE product to operate.

Follow this procedure to install additional system software from the M220U2 logical tape.

1. Mount the tape containing the Rev. 22.0 M220U2 software on MTO.

2. Execute MAGRST (now resident on disk).

```
OK, MAGRST
[MAGRST Rev. 22.0 Copyright (c) 1988, Prime Computer, Inc.]
Tape Unit (9 Trk): 0
Enter logical tape number: 2
Positioning to logical tape      2 .....
(Rev. 19 tape without ACLs)
Name: M220U2
Date: 02-14-88
Rev: 22
Reel: 1
Ready to Restore: YES
***Starting Restore***
***End Logical Tape***
***Restore Complete***
OK,
```

3. Mount the tape containing the nonchargeable T Family runfiles and libraries on MTO.

4. Execute MAGRST again.

```
OK, MAGRST
[MAGRST Rev. 22.0 Copyright (c) 1988, Prime Computer, Inc.]
Tape Unit (9 Trk): 0
Enter logical tape number: 1
(Rev. 19 tape without ACLs)
Name: MT10U1
Date: 02-14-88
Rev: 22
Reel: 1
Ready to Restore: YES
***Starting Restore***
***End Logical Tape***
***Restore Complete***
OK,
```

RESTORING ADDITIONAL CHARGEABLE SOFTWARE

Follow this procedure to restore additional chargeable software from the M220C1 and M220D1 tape(s) on a product-by-product basis. Use the listing provided with the tapes to determine the appropriate logical tape number.

1. Use the printout supplied with the tapes to ascertain which physical tape contains Rev. 22.0 M220C1, and mount that reel on MTO.

2. Execute MAGRST.

```
OK, MAGRST
[MAGRST Rev. 22.0 Copyright (c) 1988, Prime Computer, Inc.]
Tape Unit (9 Trk): 0
Enter logical tape number: 1
(Rev. 19 tape without ACLs)
Name: M220C1
Date: 02-14-88
Rev: 22
Reel: 1
Ready to Restore: YES
***Starting Restore***
***End Logical Tape***
***Restore Complete***
OK,
```

Note

You must wait until after the next cold start to run the INSTALL files for the various chargeable software that has just been restored. The shared editor (ED) has not yet been shared, and any INSTALL files that use it would fail if executed now.

CREATING A CONFIGURATION FILE

Use the nonshared editor (NSED) to create a configuration file named CONFIG in CMDNCO. At Rev. 22.0, the CONFIG file must contain at least the following directives.

- SYSNAM to define the name of the system. The name must be six characters or less. If the directive is omitted, the system operator is prompted for a system name at cold start. If the system is to be networked, use the PRIMENET node name.
- COMDEV to identify the physical device number of the command partition.
- PAGING to identify the physical device numbers of as many as eight paging partitions.
- NTUSR to define the number of terminal users on the system.
- NPUSR to define the number of phantom users on the system. At Rev. 22, the NPUSR directive should have a value of at least 12.
- GO to instruct PRIMOS to return to the PRIMOS.COMI file. This directive must be the last directive in the CONFIG file.

A sample CONFIG file is shown below.

```
ASRATE 3410           /* Set baud rate of supervisor terminal to 9600
TYPOUT YES            /* Display configuration at supervisor terminal
ASRBUF 0 2000 2000    /* Set I/O buffers on supervisor terminal
SYSNAM ACCTNG         /* Specify system name
ERASE 210             /* Set erase character to backspace
COMDEV 1460           /* Command partition, contains CMDNCO
PAGING 130460         /* Set up paging partition
NTUSR 20              /* Supervisor Terminal and Terminal users
NPUSR 30              /* 24 phantom processes
NSLUSR 5              /* 5 slave processes
GO
```

CUSTOMIZING THE PRIMOS.COMI FILE

Use the COPY command to copy the file PRIMOS.COMI.TEMPLATE from the PRIRUN directory into CMDNCO, renaming it to PRIMOS.COMI in the process. For example:

```
OK,COPY PRIRUN>PRIMOS.COMI.TEMPLATE CMDNCO>PRIMOS.COMI
OK,
```

The PRIMOS.COMI.TEMPLATE file is shown in Figure 2-2. Once it has been copied into CMDNCO, use NSED to modify PRIMOS.COMI to suit your system's requirements. Be sure to do the following:

- Configure asynchronous lines for printers and terminals with the SET_ASYNC command.
- Delete any references to products that were not restored. Comment out any SHARE commands or startup references to products that were restored but have not yet been installed. Products and utilities that are not yet installed and/or configured could cause PRIMOS.COMI to halt with an error when a reference to that product is encountered. For the first attempted boot from disk, it is better to run with a "bare bones" PRIMOS.COMI file. You will be removing the comments from the appropriate product share command lines and references later on in the installation process.
- Supply time information with the command SET_TIME_INFO.
- It is important that you do not start your communication controllers at this time. You must wait until the TRANSLATORS are installed. You can create the appropriate COMM_CONTROLLER commands, but be sure to comment them out at this time.

- Add your own comment lines at the top of the file detailing any changes that you may have made to the file.

```
/* PRIMOS.COMI.TEMPLATE, PRIRUN, MPY, 7/29/88
/* TEMPLATE FOR MAKING C_PRMO FILE FOR BRINGING UP PRIMOS
/* Copyright (C) 1988, Prime Computer, Inc., Natick, MA  01760
/*
/*
CONFIG -DATA                          /* specify CONFIG file after -DATA
ADDISK                                /* specify local disks to be added
SET_ASYNC -LINE XX -PROTOCOL TTY      /* configure ASYNC lines
OPR 1                                 /* now an optional command
SHARE SYSTEM>ED2000 2000              /* SHARE the editor  -  ED
SHARE SYSTEM>F2021A 2021 700          /* SHARE FORMS LIBRARY
SHARE SYSTEM>F2021B 2021 700
R SYSTEM>F4000 1/4
SHARE 2021
/* Set_Time_Info command: The following is an example for a time zone
/* of -5 hrs 0 min. (Natick,MA) with the default daylight savings
/* period (U.S. standard).
OPR 0
STI -TZ -0500 -DLST YES               /* SET_TIME_INFO
START_DSM                             /* START DSM
CLOSE 7
CO SYSTEM>BASICV.SHARE.COMI 7         /* SHARE BASICV COMPILER
CO SYSTEM>C2.INIT.COMI 7              /* SHARE C2
CO SYSTEM>CBL.SHARE.COMI 7            /* SHARE CBL
CO SYSTEM>CC.SHARE.COMI 7             /* SHARE CC
CO SYSTEM>DBG.SHARE.COMI 7            /* SHARE DBG
CO SYSTEM>DPTX.SHARE.COMI 7           /* SHARE DPTX
CO SYSTEM>EMACS.SHARE.COMI 7          /* SHARE EMACS
CO SYSTEM>FED.SHARE.COMI 7            /* SHARE FED
CO SYSTEM>FORMS.SHARE.COMI 7          /* SHARE FORMS LIBRARY
CO SYSTEM>FTS.SHARE.COMI 7            /* SHARE FTS
CO SYSTEM>MIDASPLUS.SHARE.COMI 7      /* SHARE MIDASPLUS LIBRARY
CO SYSTEM>MIDASPLUSEX.SHARE.COMI 7    /* SHARE MIDASPLUSEX
CO SYSTEM>PRISAM.SHARE.COMI 7         /* SHARE PRISAM
CO SYSTEM>PRISAMEX.SHARE.COMI 7       /* SHARE PRISAMEX
CO SYSTEM>SPOOL.SHARE.COMI 7          /* SHARE SPOOLER
CO SYSTEM>ROAM.SHARE.COMI 7           /* SHARE ROAM before DBMS
CO SYSTEM>DBMS.SHARE.COMI 7           /* SHARE DBMS
CO SYSTEM>DISCOVER_DBMS.SHARE.COMI 7  /* SHARE DISCOVER_DBMS
CO SYSTEM>DISCOVER_PRISAM.SHARE.COMI 7/* SHARE DISCOVER_PRISAM
CLOSE 7
/* SET DATE AND TIME ***
MAX -ALL                              /* TYPE MAX TO ALLOW USERS TO LOG IN
CO -END
```

Figure 2-2
PRIMOS.COMI.TEMPLATE File

INSTALLING DEFAULT SEARCH_RULES LIST

Install default system search rules by attaching to the SYSTEM directory and executing the CPL program ENTRY$.INSTALL.CPL. An example follows.

```
OK, A SYSTEM
OK, R ENTRY$.INSTALL.CPL
OK,
```

After running ENTRY$.INSTALL.CPL, you should execute the SET_SEARCH_RULES command to ensure that the system uses the search rules that were just installed.

```
OK, SSR SEARCH_RULES*>ENTRY$.SR
OK,
```

You should then execute the following search rule install files:

```
ATTACH$.INSTALL.CPL
BINARY$.INSTALL.CPL
COMMAND$.INSTALL.CPL
INCLUDE$.INSTALL.CPL
```

BOOTING PRIMOS FROM DISK

Execute the following series of commands to shut down and cold start the system. The installation files for some chargeable software products use the shared editor. Booting from disk allows ED to be shared, so that those install files will run properly.

1. Shut down PRIMOS and clear the system.

```
OK, SH ALL
REALLY? YES
WAIT,
PRIMOS NOT IN OPERATION

DPM400: CPU halted at 000006/637515 013404
        24 Feb 88 13:53:00 Wednesday

CP> SYSCLR
DPM006: Central Processor system initialization completed.
        24 Feb 88 13:53:27 Wednesday
```

2. Boot to multi-user PRIMOS.

```
CP> BOOT 14114
DPM007: System booting, please wait.
[CPBOOT Rev. 8.0 Copyright (c) Prime Computer, Inc., 1988]
[BOOT Rev. 22.0 Copyright 1988, (c) Prime Computer, Inc.]
```

```
BOOTING FROM 001460          PRIRUN>PRIMOS.SAVE

Coldstarting PRIMOS, Please wait...

CONFIG -DATA CONFIG          /* Specify CONFIG file after -DATA
PRIMOS 22 Copyright (c) Prime Computer, Inc. 1988

 2048K BYTES MEMORY IN USE

Starting up revision 22 partition "CMDDSK"
SET -TZ -0500 -DLST  /* Set internal clock
/*
      ...
      ...
      ...
OK,
```

SETTING ACLS FOR SUBSYSTEM DIRECTORIES

Set proper system ACLs for the subsystem directories by executing the CPL programs in the SYSTEM directory. An example using DSM follows.

```
OK,R DSM.INSTALL.CPL

==========================================================================

Install of DSM Logfiles and Config Files
24 Feb 88 14:03:15 Wednesday

copy DSM*>CONFIG_FILES>DSM_UMH_DEFAULT.CONFIG
    DSM*>CONFIG_FILES>DSM_UMH.CONFIG -nq -rpt
"DSM*>CONFIG_FILES>DSM_UMH_DEFAULT.CONFIG" copied to
   "DSM*>CONFIG_FILES>DSM_UMH.CONFIG".
copy DSM*>CONFIG_FILES>DSM_DEFAULT.CONFIG
    DSM*>CONFIG_FILES>DSM_RESTART.CONFIG -nq -rpt
"DSM*>CONFIG_FILES>DSM_DEFAULT.CONFIG" copied to
   "DSM*>CONFIG_FILES>DSM_RESTART.CONFIG".
copy DSM*>LOGS>EMPTY.LOG  DSM*>LOGS>UMH>DEFAULT.LOG -nq -rpt
"DSM*>LOGS>EMPTY.LOG" copied to "DSM*>LOGS>UMH>DEFAULT.LOG".
copy DSM*>LOGS>EMPTY.LOG  DSM*>LOGS>UMH>UNDELIVERED.LOG -nq -rpt
"DSM*>LOGS>EMPTY.LOG" copied to "DSM*>LOGS>UMH>UNDELIVERED.LOG".
copy DSM*>LOGS>EMPTY.LOG  DSM*>LOGS>PRIMOS>PRIMOS.LOG -nq -rpt
"DSM*>LOGS>EMPTY.LOG" copied to "DSM*>LOGS>PRIMOS>PRIMOS.LOG".
copy DSM*>LOGS>EMPTY.LOG  DSM*>LOGS>NETWORKS>NETWORK.LOG -nq -rpt
"DSM*>LOGS>EMPTY.LOG" copied to "DSM*>LOGS>NETWORKS>NETWORK.LOG".
```

```
Converting logs to latest format......
Errors here are not fatal.

      r DSM*>convert_log DSM*>LOGS>UMH>DEFAULT.LOG
[CONVERT_LOG Rev. 22.0 Copyright (c) 1988, Prime Computer, Inc.]
Error: "DSM*>LOGS>UMH>DEFAULT.LOG" is already a version
2 logfile.
(CONVERT_LOG)
      r DSM*>convert_log DSM*>LOGS>UMH>UNDELIVERED.LOG
[CONVERT_LOG Rev. 22.0 Copyright (c) 1988, Prime Computer, Inc.]
Error: "DSM*>LOGS>UMH>UNDELIVERED.LOG" is already a version
2 logfile.
(CONVERT_LOG)
      r DSM*>convert_log DSM*>LOGS>PRIMOS>PRIMOS.LOG
[CONVERT_LOG Rev. 22.0 Copyright (c) 1988, Prime Computer, Inc.]
Error: "DSM*>LOGS>PRIMOS>PRIMOS.LOG" is already a version
2 logfile.
(CONVERT_LOG)
      r DSM*>convert_log DSM*>LOGS>NETWORKS>NETWORK.LOG
[CONVERT_LOG Rev. 22.0 Copyright (c) 1988, Prime Computer, Inc.]
Error: "DSM*>LOGS>NETWORKS>NETWORK.LOG" is already a version
2 logfile.
(CONVERT_LOG)
nsed SEARCH_RULES*>ENTRY$.SR
1 DSMLIB,d
i LIBRARIES*>DSMLIB.RUN
    ...
    ...
    ...

LIBRARIES*>DSMLIB.RUN
BOTTOM
file
SEARCH_RULES*>ENTRY$.SR

================================================================

Access of DSM
15 Jul 88 11:39:20 Friday

================================================================

Setting ACLs on DSM*...

    ...
    ...
    ...

****************************************************************

DSM.INSTALL_ACL completed successfully

****************************************************************
```

```
**********************************************************************

DSM.INSTALL completed successfully

**********************************************************************

OK,
```

Similarly, run any product.INSTALL_ACL.CPL programs that are in the SYSTEM directory.

CREATING THE SAD WITH EDIT_PROFILE

From the supervisor terminal, invoke EDIT_PROFILE and execute the following series of commands to create the default SAD and to add a user to the system. In the example below, user ADMIN is defined as the System Administrator of the SAD, and user CSR is added. When you set up your SAD, be sure to specify an appropriate existing partition in your designated original attach points.

1. Invoke the EDIT_PROFILE utility:

```
OK, EDIT_PROFILE

[Edit_Profile Rev. 22.0 Copyright (c) 1988,  Prime Computer, Inc.]
In initialization mode 24 Feb 88 15:07:16.
SAD does not exist.  Create it? Y

*** From PRIMOS: Priority ACL set on partition "CMDDSK"
    by user "SYSTEM" (#1) at 24 Feb 88 15:07:20 Wednesday.
*** Creating User Validation File.  Projected number of users: 200
System administrator name: ADMIN

Create project "DEFAULT"? YES

Set system-wide attributes for user "ADMIN":

    Password: ISTRATOR
    Groups: <CR>

User Validation File created 24 Feb 88 15:07:56
44 entries in prime area; file is 3 records long.

Security Information File created 24 Feb 88 15:07:56
44 entries in prime area; file is 3 records long.

Master Project File created 24 Feb 88 15:07:56

Master Group File created 24 Feb 88 15:07:56

System Default File created 24 Feb 88 15:07:56
```

```
*** New group added to system: ".PROJECT_ADMINISTRATORS$".


Set limits for project "DEFAULT":
    Groups: <CR>
    Maximum number of command levels: 10
    Maximum number of live program invocations per command level: 10
    Maximum number of private, dynamic segments: 64
    Maximum number of private, static segments: 64

Set attributes for user "ADMIN" in project "DEFAULT":
    Groups: <CR>
    Initial attach point: <CMDDSK>CMDNCO
Create/change user attributes: NO

Set profile attributes for project "DEFAULT":
    Groups: <CR>
    Initial attach point: <CMDDSK>CMDNCO

Attribute limits for the project:
    Maximum number of command levels: 10
    Maximum number of live program invocations per command level: 10
    Maximum number of private, dynamic segments: 64
    Maximum number of private, static segments: 64
------------------------------------------------------------
    Number of command levels: 10
    Number of live program invocations per command level: 10
    Number of private, dynamic segments: 64
    Number of private, static segments: 64
Project "DEFAULT" created.
44 entries in prime area; file is 3 records long.
Check entry? NO
```

2. To enable system defaults (for command levels, live program invocations, and number of static and dynamic segments), use the SYSTEM_DEFAULTS command.

```
> SD -ON
```

3. Enter the ADD_USER command to add a user to the system.

Note

If you have questions while executing ADD_USER, type HELP to display a list of commands and options.

```
> AU
Enter user id: CSR

Set system-wide attributes for user "CSR":
    Password: CSR
    Groups: <CR>
```

```
    Password lifetime in days (-1 = infinite, 0 = default): 0
Create user profile: YES

    Default login project: DEFAULT

Set attributes for user "CSR" in project "DEFAULT":
    Groups: <CR>
    Initial attach point: <CMDDSK>CMDNCO
Create/change user attributes: NO

User "CSR" added to system.
Check entry? NO
```

4. To display a list of all system users, enter the following.

```
> LS -ALL
```

5. Exit the EDIT_PROFILE utility.

```
> QUIT
OK,
```

INSTALLING SPOOL ACL RIGHTS

You will need to create some directories for the spooler subsystem. They are SPOOL_DATA* and SPOOL_QUEUE*. You will also need to set the proper access rights for the various SPOOL directories. Enter the following commands to install the spooler.

1. Attach to the partition where the SPOOL* directory exists.

```
OK, ATTACH <CMDDSK>MFD
OK,
```

2. Create the SPOOL_DATA* and SPOOL_QUEUE* directories.

```
OK, CREATE SPOOL_DATA*
OK, CREATE SPOOL_QUEUE*
OK,
```

3. Attach to the SYSTEM directory on the COMDEV.

```
OK, ATTACH SYSTEM
OK,
```

4. Run the SPOOL.INSTALL_ACL.CPL file.

```
OK, RESUME SPOOL.INSTALL_ACL.CPL
set_access <TPLAB>SPOOL* .spool_administrator$:all $rest:lur
-nq
set_access <TPLAB>SPOOL_QUEUE* $rest:lur -nq
```

```
set_access <TPNET>SPOOL_DATA* .spool$$:all $rest:none -nq
set_access <TPLAB>SPOOL_QUEUE* .spool$$:all $rest:none -nq
OK,
```

SETTING UP SPOOLER ENVIRONMENT FILES

Environment files, which are ASCII text files located in the SPOOL* top-level directory, are required for each printer configured in the system. The syntax for an environment file is: environment.ENV, where environment is an environment name of 16 or fewer characters.

Figure 2-3 shows a sample environment file named QUME.ENV.

```
/* QUME.ENV
/* This contains the environment definition for the QUME Printer.
/*
ASYNC  -LINE 4  -PROTOCOL TTY -CD 200
                        /* Sets the line configuration.
                        /* Default values except for protocol.
DEVICE QUME -EVFU_OFF   /* Specifies name of device Driver.
                        /* No EVFU so software emulation
                        /* of EVFU is needed.
FORMAT -W 80 -L 66      /* Set number of columns and lines
                        /* on the page.
MESSAGE                 /* This is the QUME printer on SYSA.
                        /* Define message to appear on each
                        /* page of the header.
LOG -ON                 /* Log details of current despooler only.
                        /* Don't keep details of earlier
                        /* invocations.
ATTRIBUTE QUME -MAN     /* Accept only requests that include
                        /* QUME as an attribute.
ATTRIBUTE SYSB          /* Accept requests for SYSB machine.
ATTRIBUTE SITE_1        /* Printer located at SITE_1.
CONFIG QUEUES           /* Refer to SPOOL*>QUEUES for list of Nodes
                        /* and Disks where spool queues are located.
HEADER 1 -SAME          /* Define number of header pages, and which
                        /* symbols to make large characters from.
TRAILER -ON             /* Print standard trailer.
WARNING -ON             /* Give notification on the printer itself
                        /* when a job is dropped, despooler phantom
                        /* stopped or started, or similar
                        /* major event occurs.
```

Figure 2-3
Sample Spooler Environment File

When you have written and filed an environment file, enter the following command:

```
PROP environment -VERIFY
```

The system checks the syntax of the file and issues a message if there is an error.

Be sure to add the appropriate PROP environment -START commands to the SYSTEM>SPOOL.SHARE.COMI file.

If any of your printing devices require special buffer sizes, use a CAB command in the PRIMOS.COMI file to allocate enough memory for the printing device.

INSTALLING THE NONCHARGEABLE TRANSLATOR RUNFILES AND LIBRARIES

You should now run the TRANSLATORS.INSTALL.CPL file. This will ensure that you have the most recent versions of the nonchargeable T Family runfiles and libraries. If you have bought any of the T Family compilers, then you should install them now. The following example illustrates the installation of just the nonchargeable runfiles and libraries.

1. Attach to the TRANSLATORS directory.

```
OK, A TRANSLATORS
OK,
```

2. List the contents of the directory.

```
OK, LD

<CMDDSK>TRANSLATORS (ALL access)
2 records in this directory, 2907 total records out of quota of 0.

1 File.

TRANSLATORS.INSTALL.CPL

7 Directories.

CMDNCO          HELP*           INFO            LIB
LIBRARIES*      LOAD_MAPS*      SYSOVL

OK,
```

3. Execute the install file.

```
OK, R TRANSLATORS.INSTALL.CPL

SEG related files deleted from TRANSLATORS to prevent their
installation. SEG is not part of the T1-21.0 FCS release.
     DELETE TRANSLATORS>CMDNCO>SEG.SAVE -RPT
"TRANSLATORS>CMDNCO>SEG.SAVE" deleted.
     DELETE TRANSLATORS>LIB>SHARE4.BIN -RPT
"TRANSLATORS>LIB>SHARE4.BIN" deleted.
DELETE TRANSLATORS>SEG -NVFY -NQ -RPT
"TRANSLATORS>SEG" deleted.

COPY TRANSLATORS>CMDNCO>@@  CMDNCO>== -NQ -NVFY -REPORT
"TRANSLATORS>CMDNCO>UPCASE.SAVE" copied to "CMDNCO>UPCASE.SAVE".
    ...
    ...
    ...

"TRANSLATORS>CMDNCO>IPSD16.SAVE" copied to "CMDNCO>IPSD16.SAVE".

COPY TRANSLATORS>HELP*>@@ HELP*>== -NQ -NVFY -REPORT
"TRANSLATORS>HELP*>HELP_INDEX.HELP" copied to
   "HELP*>HELP_INDEX.HELP".
    ...
    ...
    ...

"TRANSLATORS>HELP*>TRANSLATORS.HELP" copied to
   "HELP*>TRANSLATORS.HELP".

COPY TRANSLATORS>LIB>@@  LIB>== -NQ -NVFY -REPORT
"TRANSLATORS>LIB>PASLIB.BIN" copied to "LIB>PASLIB.BIN".
    ...
    ...
    ...

"TRANSLATORS>LIB>CCLIB.BIN" copied to "LIB>CCLIB.BIN".

COPY TRANSLATORS>LIBRARIES*>@@  LIBRARIES*>== -NQ -NVFY -REPORT
"TRANSLATORS>LIBRARIES*>CC_LIBRARY.RUN" copied to
   "LIBRARIES*>CC_LIBRARY.RUN".
    ...
    ...
    ...

"TRANSLATORS>LIBRARIES*>COMMON_ENVELOPE.RUN" copied to
   "LIBRARIES*>COMMON_ENVELOPE.RUN".

COPY TRANSLATORS>SYSOVL>@@  SYSOVL>== -NQ -NVFY -REPORT
"TRANSLATORS>SYSOVL>COMPILERDATA" copied to "SYSOVL>COMPILERDATA".
ED SEARCH_RULES*>ENTRY$.SR
L pll_library.run;D
    ...
```

```
     ...
     ...

I LIBRARIES*>PL1_SYSTEM_LIBRARY.RUN
FILE
SEARCH_RULES*>ENTRY$.SR

MSTR_OK: Unchargeable Translators installation successful.

OK,
```

INSTALLING ADDITIONAL CHARGEABLE SOFTWARE

You should now run any of the INSTALL or INITINSTALL files for the chargeable products that were restored earlier in this installation procedure. A chargeable product may have either an INSTALL.COMI or INSTALL.CPL file. The purpose of an INSTALL file is to copy a product's files from the directories restored from the M220C1 tape, into the proper directories from which the chargeable product can then successfully execute. A product.INSTALL file may also run an appropriate conversion utility, modify the SEARCH_RULES, or set appropriate directory ACLs, depending on the product being installed. To install your chargeable product, check the product directory that was restored from the M220C1 tape, for either an INSTALL.COMI or INSTALL.CPL file. If you are installing a chargeable product for the first time on your system, use the appropriate INITINSTALL file for that product.

> **Caution**
>
> If you will be installing any of the network products such as NTS, PRIMENET, X.25, or PRIMOS TCP/IP, you must make sure to install a version of the nonchargeable T Family runfiles and libraries. The LHC300 transient downline load server that is spawned by the COMM_CONTROLLER command will not be able to operate without those runfiles and libraries. You must also make sure that you have restored the NETWORK_MGT directory from the M220C1 logical tape. The INSTALL files for all of the network products reference the NETWORK_MGT directory in some way.

In the example that follows, X.25 is being installed.

1. Attach to the product's directory.

```
OK, A X.25
OK,
```

2. List the contents of the directory,

```
OK, LD

<CMDDSK>X.25 (ALL access)
6 records in this directory, 873 total records out of quota of 0.

3 Files.

INTER.CPL          X.25.INITINSTALL.COMI          X.25.INSTALL.COMI

7 Directories.

CMDNCO             INFO               LIB             OBJ
PRIMENET*          SEGRUN*            SYSCOM

OK,
```

3. Execute the install file.

```
OK, CO X.25.INITINSTALL.COMI
OK, /* X.25.INITINSTALL.COMI, X.25, NS GROUP, 12/18/87
OK, /* installs X.25 into system directories for the first time
OK, /* Copyright (C) 1987, Prime Computer, Inc., Wellesley, MA  02181
OK, /*
OK, A MFD XXXXXX
OK, CREATE PRIMENET*
OK, /* Install new files in PRIMENET*
OK, COPY X.25>PRIMENET*>NETMAN.SAVE          PRIMENET*>NETMAN.SAVE -NQ
OK, COPY X.25>PRIMENET*>RT_SERVER.SAVE       PRIMENET*>RT_SERVER.SAVE -NQ
OK, COPY X.25>PRIMENET*>RT.COMI              PRIMENET*>RT.COMI -NQ
OK, COPY X.25>PRIMENET*>ISCNSR.CPL           PRIMENET*>ISCNSR.CPL -NQ
OK, COPY X.25>PRIMENET*>ISC_NETWORK_SERVER.RUN  PRIMENET*>ISC_NETWORK_SERVER.RUN -NQ
OK, COPY X.25>PRIMENET*>NETWORK_SERVER.COMI  PRIMENET*>NETWORK_SERVER.COMI -NQ
OK, COPY X.25>PRIMENET*>SLAVE.COMI           PRIMENET*>SLAVE.COMI -NQ
OK, COPY X.25>PRIMENET*>CONVERT_ACLS.CPL     PRIMENET*>CONVERT_ACLS.CPL -NQ
OK, COPY X.25>PRIMENET*>CONFIG_NET_HELP      PRIMENET*>CONFIG_NET_HELP -NQ
OK, COPY X.25>PRIMENET*>NETLINK              PRIMENET*>NETLINK -NQ
OK, RESUME X.25>INTER.CPL
OK, COPY X.25>PRIMENET*>MONITOR_NET>DEFAULT  PRIMENET*>MONITOR_NET>DEFAULT -NQ
OK, /* Install new VNETLB
OK, COPY X.25>LIB>VNETLB.BIN                 LIB>VNETLB.BIN -NQ
OK, /* Install new run files in CMDNCO
OK, COPY X.25>CMDNCO>CONFIG_NET.RUN          CMDNCO>CONFIG_NET.RUN -NQ
OK, COPY X.25>CMDNCO>NETLINK.SAVE            CMDNCO>NETLINK.SAVE -NQ
OK, COPY X.25>CMDNCO>HDXSTAT.SAVE            CMDNCO>HDXSTAT.SAVE -NQ
OK, COPY X.25>CMDNCO>START_NET.RUN           CMDNCO>START_NET.RUN -NQ
OK, COPY X.25>CMDNCO>STOP_NET.RUN            CMDNCO>STOP_NET.RUN -NQ
OK, COPY X.25>CMDNCO>FIND_RING_BREAK.SAVE    CMDNCO>FIND_RING_BREAK.SAVE -NQ
OK, COPY X.25>CMDNCO>MONITOR_NET.RUN         CMDNCO>MONITOR_NET.RUN -NQ
OK, COPY X.25>CMDNCO>START_NSR.RUN           CMDNCO>START_NSR.RUN -NQ
OK, COPY X.25>CMDNCO>START_ISCNSR.RUN        CMDNCO>START_ISCNSR.RUN -NQ
OK, /* Copy keys files to SYSCOM
OK, COPY X.25>SYSCOM>X$KEYS                  SYSCOM>X$KEYS -NQ
OK, COPY X.25>SYSCOM>X$KEYS.INS.FTN          SYSCOM>X$KEYS.INS.FTN -NQ
OK, COPY X.25>SYSCOM>X$KEYS.INS.PL1          SYSCOM>X$KEYS.INS.PL1 -NQ
OK, COPY X.25>SYSCOM>X$KEYS.INS.PASCAL       SYSCOM>X$KEYS.INS.PASCAL -NQ
OK, COPY X.25>SYSCOM>X$KEYS.H.INS.CC         SYSCOM>X$KEYS.H.INS.CC -NQ
OK, /* Perform Network Management install
OK, ATTACH NETWORK_MGT
OK, RESUME NETWORK_MGT.INSTALL.CPL

================================================================
Install LAN300 Network Management
================================================================

11 May 88 09:02:00 Wednesday

Install network management servers RUN and COMI files

"*>NETWORK_MGT*>NMSR.RUN" copied to "NETWORK_MGT*>NMSR.RUN".
"*>NETWORK_MGT*>NMSR.COMI" copied to "NETWORK_MGT*>NMSR.COMI".
"*>NETWORK_MGT*>LHCDLLTSR.RUN" copied to "NETWORK_MGT*>LHCDLLTSR.RUN".
"*>NETWORK_MGT*>LHCDLLTSR.COMI" copied to "NETWORK_MGT*>LHCDLLTSR.COMI".
"*>NETWORK_MGT*>LHCULDTSR.RUN" copied to "NETWORK_MGT*>LHCULDTSR.RUN".
"*>NETWORK_MGT*>LHCULDTSR.COMI" copied to "NETWORK_MGT*>LHCULDTSR.COMI".
"*>NETWORK_MGT*>LTSDLLTSR.RUN" copied to "NETWORK_MGT*>LTSDLLTSR.RUN".
"*>NETWORK_MGT*>LTSDLLTSR.COMI" copied to "NETWORK_MGT*>LTSDLLTSR.COMI".
"*>NETWORK_MGT*>LTSULDTSR.RUN" copied to "NETWORK_MGT*>LTSULDTSR.RUN".
```

```
Install NM EPF and BINARY library files for NTS and PRIMENET

"*>NETWORK_MGT*>START_STOP_NMSR.BIN" copied to "NETWORK_MGT*>START_STOP_NMSR.BIN".
"*>LIBRARIES*>START_STOP_NMSR.RUN" copied to "LIBRARIES*>START_STOP_NMSR.RUN".

Install network management COMMANDS

"*>CMDNCO>LOOPBACK.RUN" copied to "CMDNCO>LOOPBACK.RUN".
"*>CMDNCO>LIST_LHC_STATUS.RUN" copied to "CMDNCO>LIST_LHC_STATUS.RUN".
"*>CMDNCO>LIST_LTS_STATUS.RUN" copied to "CMDNCO>LIST_LTS_STATUS.RUN".
"*>NETWORK_MGT*>LAN300_MONITOR.RUN" copied to "NETWORK_MGT*>LAN300_MONITOR.RUN".

Modify search rules

EDIT
top
l start_stop_nmsr.run
libraries*>start_stop_nmsr.run
d
bottom
i libraries*>start_stop_nmsr.run
top
l CC_LIBRARY.RUN
LIBRARIES*>CC_LIBRARY.RUN
d
bottom
i LIBRARIES*>CC_LIBRARY.RUN
file
SEARCH_RULES*>ENTRY$.SR

Set the appropriate acls for the DLL servers


=====================================================================
Create UP_LINE_DUMP*>LAN300 directory structure if it doesnt exist
and set a quota limit on the LAN300 directory. Also set the
appropriate acl.
=====================================================================

Set the appropriate acls for the DSM_LOGGER server

=========================================================
LAN300 Network Management install completed successfully
=========================================================
OK, ATTACH X.25
OK, /* All done with Primenet
OK, CO -CONTINUE 6
OK, CO -END
```

4. Repeat steps 1 and 2 for all additional products.

Note

Some software contains library directories that must be installed and shared. Review the LIBRARIES* directory in the command partition and install and share any libraries as required.

CONVERTING PARTITIONS TO INTELLIGENT CONTROLLER MODE

If you wish to make use of dynamic badspot handling or disk mirroring on your Rev. 22.0 partitions, the disk drive on which the partition is located must be associated with an intelligent disk controller and the partition must be in Dynamic Badspot Handling (-IC) mode. As your partitions were created in Nondynamic Badspot Handling (-AC) mode, you will need to use the FIX_DISK utility to change the controller mode. See the Operator's Guide to File System Maintenance (DOC9300-4LA) for a discussion of this procedure and examples of it's implementation.

BOOTING PRIMOS FROM DISK

You should now edit the PRIMOS.COMI file to enable the products that are now fully installed. Remove the comments from the lines containing SHARE commands, COMM_CONTROLLER commands, system utility startup commands, system monitor commands, and the startup commands for any network products that you have. PRIMOS.COMI should allow your system to be fully functional. Execute the following series of commands to cold start the system.

1. Shutdown PRIMOS and clear the system.

```
OK, SH ALL
REALLY? YES
WAIT,
PRIMOS NOT IN OPERATION

DPM400: CPU halted at 000006/637515 013404
        24 Feb 88 19:30:00 Wednesday

CP> SYSCLR
DPM006: Central Processor system initialization completed.
        24 Feb 88 19:30:00 Wednesday
```

2. Boot to multi-user PRIMOS.

```
CP> BOOT 14114
DPM007: System booting, please wait.
[CPBOOT Rev. 8.0 Copyright (c) Prime Computer, Inc., 1988]
[BOOT Rev. 22.0 Copyright 1988, (c) Prime Computer, Inc.]

BOOTING FROM 001460          PRIRUN>PRIMOS.SAVE

Coldstarting PRIMOS, Please wait...

CONFIG -DATA CONFIG          /* Specify CONFIG file after -DATA
PRIMOS REV. 22.0 Copyright (c) Prime Computer, Inc. 1988

 2048K BYTES MEMORY IN USE

Starting up revision 22 partition "CMDDSK"
SET -TZ -0500 -DLST  /* Set internal clock
/*
      ...
      ...
      ...
OK,
```

CHAPTER 3

UPGRADING TO REV. 22.0 WITH REV. 22.0 DISK FORMAT

This chapter describes how to upgrade a system from Rev. 19.4, 20.2, or 21.0 to Rev. 22.0 disk format, and how to install Rev. 22.0 software. Figure 3-1 provides a quick reference flowchart, followed by detailed instructions.

SPECIAL CONSIDERATIONS

Before you perform the upgrade, do the following.

- If you use MAKE on a partition containing a ROAM system file, you must save the ROAM files in a specific order before installing Rev. 22.0. See the ROAM Administrator's Guide for details.

- If you have any remaining password directories, consider converting them to ACL directories now. Only ACL directories can be converted to Rev. 21.0 or Rev. 22.0 hashed directories.

- In order to minimize possible confusion concerning the various recreated partitions and access to their respective MFDs, you should open a COMO file, attach to the various MFDs, and run LAC. This will capture the ACLs for future reference and furnish some guidance in editing the access rights for the new Rev. 22.0 partitions.

The twenty steps in Figure 3-1 must be followed in order.

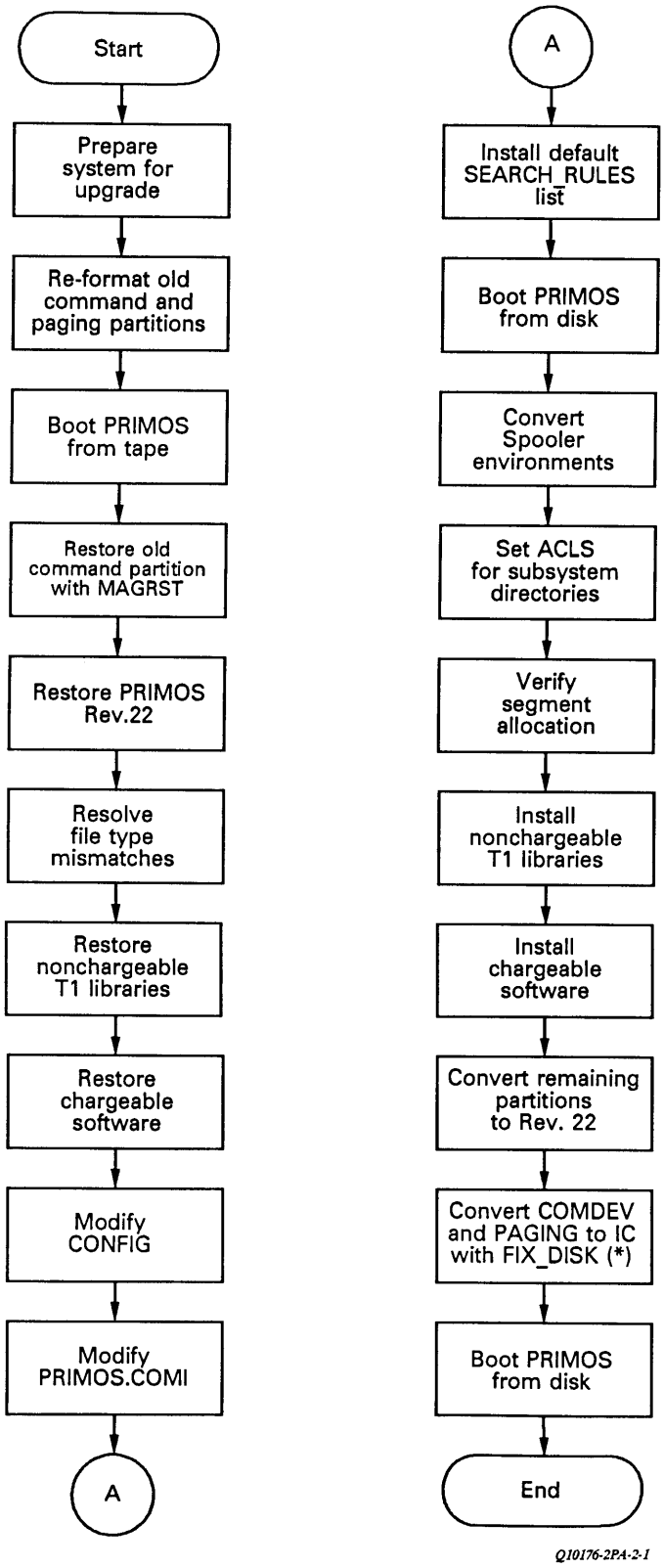

Figure 3-1
Upgrade With New Disk Format

UPGRADE PROCEDURE

Perform the following steps to upgrade your system to Rev. 22.0. This procedure saves the contents of your existing command partition to tape, then boots the system to Rev. 22.0 PRIMOS in order to utilize the MAKE command to format your original command device as a Rev. 22.0 partition. It then restores your original command partition software to the new Rev. 22.0 partition to preserve your old files and directories. The procedure then restores the new Rev. 22.0 software onto the command partition, thus upgrading those utilities and systems that have been improved for the current revision, while retaining your site-specific software implementations.

PREPARING THE SYSTEM FOR UPGRADE

Before performing the upgrade, prepare the system by following these steps.

1. Use the MESSAGE command to warn users well in advance that they are going to be logged out for several hours for a software upgrade.

2. Spool a copy of your configuration file and the PRIMOS.COMI file. See also Chapter 1 for saving certain DSM configuration files.

3. Open a COMO file, list all spooler environment files, and spool the COMO file to preserve a hard-copy record for later use. The format of Spooler environment files received major changes at Rev. 21. (Refer to CONVERTING THE SPOOL ENVIRONMENT later in this chapter for details.)

4. If you use the Batch system, open a COMO file, execute the BATGEN -DISPLAY command, and then spool the file to preserve a hard-copy record of your Batch queue definitions for later reference.

5. Use the LOGOUT ALL command to clear the system of users. Then set MAXUSR to 0.

6. Make sure that all top-level directories are ACL directories so that they will be hashed when they are restored.

7. Set a priority ACL on the command partition to permit access to all directories on the partition to be backed up, as shown in the following example.

```
OK, SPAC CMDDSK SYSTEM:ALL
***From PRIMOS: Priority ACL set on partition "CMDDSK"
   by user "SYSTEM" (#1) at 24 Feb 88 12:03:40 Wednesday
OK,
```

8. Save the contents of your existing command partition to tape (or disk), as shown in the following example.

```
OK, A MFD 0
OK, ASSIGN MTO
Device MTO assigned.
OK, MAGSAV
[MAGSAV Rev. 20.0 Copyright (c) Prime Computer, Inc. 1985]
Tape unit (9 Trk): 0
Enter logical tape number: 1
Tape name: BACKUP
Date (MM DD YY): 02 28 88
Rev no: 20.2
Name or Command: MFD
*** Start of Save ***
*** End of Save ***
Name or Command: $R
3 Recovered MT IO errors.
OK,
```

9. Make sure the Batch queues are empty to avoid loss of waiting jobs. Use the BATCH command with the -DISPLAY and -STATUS options to determine the general status and contents of your various batch queues. If you are the Batch Administrator, you can also use the JOB -STATUS command to display specific information about the currently submitted batch jobs. You should capture this information in a COMO file, so that you can resubmit the jobs after PRIMOS has been upgraded and the Batch system has been reinstalled. Use the JOB -CANCEL command to remove deferred or waiting batch jobs from the queue, and the JOB -ABORT command to cancel executing jobs. Then use the BATCH -STOP command to stop the Batch monitor and log out the Batch phantom. Please refer to the Operator's Guide to the Batch Subsystem (DOC9302-3LA) for more information.

10. Go through your normal disk and system shutdown procedures. If you have both DSM and any of the networks running, be sure to invoke the network shutdown utilities (for example, STOP_NTS, STOP_NET) before you invoke the STOP_DSM utility. This will ensure that any network shutdown errors will be captured in the DSM logs.

REMAKING THE OLD COMMAND AND PAGING PARTITIONS

Use the following procedure to boot the system to PRIMOS Rev. 22.0 and run Rev. 22.0 MAKE on the old command partition.

1. Mount a Rev. 22.0 boot tape on Tape Drive 0.

2. From Control Panel mode, execute the following set of commands to boot MAKE.SAVE from tape and remake the command partition.

   A) Master Clear the system.

```
CP> SYSCLR
DPM0006: Central Processor system initialization completed.
         28 Feb 88 09:30:00 Sunday
```

B) Boot MAKE.SAVE.

```
CP> BOOT 10005
DPM007: System booting, please wait.
[CPBOOT Rev. 9.0 Copyright (c) Prime Computer, Inc. 1985]

RUN FILE TREENAME= MAKE.SAVE

BOOTING FROM MTO      MAKE.SAVE

****MAKE <Rev.22>**** Copyright (c)1988, Prime Computer, Inc.

Enter command line options:
```

C) Enter the appropriate command line options to create your Rev. 22.0 command partition.

```
-DISK 1460 -PART CMDDSK -DT MODEL_4735 -NO_INIT -NEW_DISK
-FORMAT -AC

Which file sectoring scheme would you like?
Type "0" (Reverse Sector)
 or  "1" (Forward Sector)
>0

Making      6 head partition CMDDSK
Tracks:                  711
Sectors per track:        14
Partition is using Reverse Sectoring
Partition is in All_Controller Mode
Partition size in decimal records:      59724
Checking for badspots.
Disk created.

DPM400: CPU halted at 025175: 103775
        28 Feb 88 10:21:00 Sunday

CP>
```

Note

If you will be using Dynamic Badspot Handling, be sure to create any additional partitions in sequential order.

3. Boot MAKE.SAVE from tape a second time and remake the paging partition. (This step is necessary only if you will be using intelligent disk controllers.)

A) Clear the system.

```
CP> SYSCLR
DPM006: Central Processor system initialization completed.
        28 Feb 88 10:23:00 Sunday
```

B) Boot MAKE.SAVE.

```
CP> BOOT 10005
DPM007: System booting, please wait.
[CPBOOT Rev. 4.0 Copyright (c) Prime Computer, Inc. 1985]

RUN FILE TREENAME= MAKE.SAVE

BOOTING FROM MTO      MAKE.SAVE

****MAKE <Rev.22>**** Copyright (c)1988, Prime Computer, Inc.

Enter command line options:
```

C) Enter your command line options.

```
-DISK 130460 -PART PAGDSK -DT MODEL_4735 -NO_INIT -AC -SPLIT

Which file sectoring scheme would you like?
Type "0" (Reverse Sector)
 or  "1" (Forward Sector)
>0

Total decimal number of records available:      19908
Decimal records for paging? 19888

Making         2 head partition PAGDSK
Tracks:                    711
Sectors per track:          14
Partition is using Reverse Sectoring
Partition is in All_Controller Mode

File system records:       20
Paging records:         19888

Beginning format.
Format completed.
Checking for badspots.
Disk created.

DPM400: CPU halted at 025175: 103775
        28 Feb 88 10:57:00 Sunday

CP>
```

BOOTING THE SYSTEM FROM TAPE

Execute the following series of commands to boot the system to PRIMOS. The sense-switch setting of 100005 instructs BOOT to bypass the configuration file and prompt for the physical boot device, COMDEV, PAGING device, NTUSR, SYSNAM and runfile treename.

1. Clear the system.

```
CP> SYSCLR
DPM006: Central Processor system initialization completed.
        28 Feb 88 11:02:00 Sunday
```

2. Boot from the tape drive.

```
CP> BOOT 100005
DPM007: System booting, please wait.
[CPBOOT Rev. 4.0 Copyright (c) Prime Computer, Inc. 1985]

PHYSICAL DEVICE= MT0

RUN FILE TREENAME= PRIRUN>PRIMOS.SAVE

BOOTING FROM MT0      PRIRUN>PRIMOS.SAVE

Coldstarting PRIMOS, Please wait...
```

3. Enter values for COMDEV, PAGING device, NTUSR, and SYSNAM.

```
Enter COMmand DEVice: 1460
Enter PAGing Device: 130460
Enter Number Terminal USeRs: 3

[PRIMOS Rev. 22.0 Copyright (c) 1988, Prime Computer, Inc.]
[Serial # XXXXXXX]

8192K BYTES MEMORY IN USE
Starting up revision 22 partition "CMDDSK"
Enter system name:SYSB
Initializing profile data for the supervisor from the SAD.
Can't attach to the SAD: Not found.
Please contact System Administrator.
Profile data cannot be initiated from the SAD for the supervisor.
System defaults are being used.
Please enter date and time.
Not found, "SAD"
Error initializing Search_Rules. Please check template files in
SEARCH_RULES*.
OK,
```

Note

Ignore error messages at this time.

RESTORING THE OLD COMMAND PARTITION

To restore the old command partition from the saved tape to the new Rev. 22.0 command partition, follow the steps below.

1. Attach to the Rev. 22.0 command partition.

```
OK, A <CMDDSK>MFD
OK,
```

2. Assign the tape drive holding the Rev. 22.0 boot tape.

```
OK, ASSIGN MTO
Device MTO assigned
OK,
```

3. Execute MAGRST.

```
OK, MTRESUME MTO MAGRST.SAVE
This is a revision 20 MAGSAV tape.
Date: 01-01-00
Revision: 0
Reel: 1
Name: R22OBT
[MAGRST Rev. 22.0 Copyright (c) 1988, Prime Computer, Inc.]
Tape unit (9 Trk):
```

4. Unload the boot tape, mount the tape containing the old command partition software, and continue with MAGRST.

```
Tape Unit (9 Trk): 0
Enter logical tape number: 1
Name: BACKUP
Date: 2-28-88
Rev: 20.2
Reel: 1
Ready to Restore: YES
***Starting Restore***
***End Logical Tape***
***Restore Complete***
OK,
```

5. Delete the following files from the command partition if they exist. The file type has changed and MAGRST will not restore the new ones over the old ones.

```
SYSCOM>X$KEYS
SYSCOM>X$KEYS.INS.PL1
SYSCOM>X$KEYS.INS.FTN
PRINET/X.25>PRIMENET*>CONFIG_NET_HELP>EDIT_NAMED_NODE.HELP
PRINET/X.25>SYSCOM>X$KEYS
PRINET/X.25>SYSCOM>X$KEYS.INS.PL1
PRINET/X.25>SYSCOM>X$KEYS.INS.FTN
LIB>VSRTLI.BIN
```

```
LIB>IFTNLB.BIN
T&MRUN>WFT.SEG>1
```

UPGRADING PRIMOS SOFTWARE TO REV. 22

To restore the PRIMOS software from the M220U1 logical tape onto the new Rev. 22.0 command partition, over your previous version, follow the steps below.

Note

When performing this procedure, be sure to open a COMO file to record any possible file-type mismatches.

1. Mount the M220U1 tape in MTO.

2. Modify the read/write locks on MAGRST and SEG.SAVE (both in CMDNCO). By setting the read/write locks to give any number of readers and any number of writers access to these files, you avoid leaving the files open during MAGRST and permit MAGRST to overwrite itself. Refer to the example that follows.

```
OK, A CMDNCO
OK, RWLOCK MAGRST NONE
OK, RWLOCK SEG.SAVE NONE
OK,
```

3. Attach to the Rev. 22.0 command partition.

```
OK, A <CMDDSK>MFD
OK,
```

4. Open a COMO file.

```
OK, COMO FILE.TYPES
OK,
```

5. Execute MAGRST.

```
OK, MAGRST
[MAGRST Rev. 20.0 Copyright (c) 1988, Prime Computer, Inc.]
Tape Unit (9 Trk): 0
Enter logical tape number: 1
Positioning to logical tape      2 .....
(Rev. 19 tape without ACLs)
Name: M220U1
Date: 02-14-88
Rev: 22.0
Reel: 1
Ready to Restore: YES
```

```
***Starting Restore***
***End Logical Tape***
***Restore Complete***
OK,
```

6. Return the read/write locks to their original values, as in the following example:

```
OK, A CMDNCO
OK, RWLOCK MAGRST EXCL
OK, RWLOCK SEG.SAVE EXCL
```

RESTORING ADDITIONAL SYSTEM SOFTWARE

The M220U2 logical tape contains the HELP* and INFO22.0 directories. Restore these directories to your system. It is also recommended that you restore the appropriate nonchargeable T Family runfiles and libraries.

Note

If you use the Remote Job Entry system, then you must restore the contents of the M220U2 logical tape. The files in the RJSPLQ* must be upgraded.

Follow this procedure to install additional system software from the M220U2 and TRANSLATORS logical tapes.

1. Mount the M220U2 tape in MT0 and assign the tape drive.

```
OK, ASSIGN MT0
Device MT0 assigned
OK,
```

2. Execute MAGRST.

```
OK, MAGRST
MAGRST Rev. 22.0 Copyright (c) Prime Computer, Inc., 1985]
Tape Unit (9 Trk): 0
Enter logical tape number: 2
Positioning to logical tape      2 .....
(Rev. 19 tape without ACLs)
Name: M220U2
Date: 02-14-88
Rev: 22
Reel: 1
Ready to Restore: YES
***Starting Restore***
***End Logical Tape***
***Restore Complete***
```

```
OK,
```

3. Mount the tape containing the nonchargeable T Family runfiles and libraries on MTO.

4. Execute MAGRST again.

```
OK, MAGRST
[MAGRST Rev. 22.0 Copyright (c) 1988, Prime Computer, Inc.]
Tape Unit (9 Trk): 0
Enter logical tape number: 1
(Rev. 19 tape without ACLs)
Name: MT10U1
Date: 02-14-88
Rev: 22
Reel: 1
Ready to Restore: YES
***Starting Restore***
***End Logical Tape***
***Restore Complete***
OK,
```

5. Close the FILE_TYPES.COMO file.

```
OK, COMO -END
OK,
```

RESOLVING FILE-TYPE MISMATCHES

Review the COMO file you opened in the previous step. Any file-type mismatch errors (for example, a SAM file tried to overwrite a DAM file) are reported in the following format:

```
Filetype mismatch, file omitted:  <pathname>
```

To resolve the error, delete the file, or save it to tape, then reinstall that file from the appropriate nonchargeable software tape.

RESTORING ADDITIONAL CHARGEABLE SOFTWARE

Follow this procedure to install additional chargeable software from the M220C1 logical tape.

1. Assign the tape drive. Use the print out supplied with the tapes to ascertain which physical tape contains Rev. 22.0 M220C1, and mount that reel on MTO.

```
OK, ASSIGN MTO
Device MTO assigned
OK,
```

2. Execute MAGRST.

```
OK, MAGRST
MAGRST Rev. 22.0 Copyright (c) Prime Computer, Inc., 1985]
Tape Unit (9 Trk): 0
Enter logical tape number: 1
(Rev. 19 tape without ACLs)
Name: M220C1
Date: 02-14-88
Rev: 22
Reel: 1
Ready to Restore: YES
***Starting Restore***
***End Logical Tape***
***Restore Complete***
OK,
```

Note

You must wait until after the next cold start to run the INSTALL files for the various chargeable software that has just been restored. The shared editor (ED) has not yet been shared, and any INSTALL files that use it would fail if executed now.

MODIFYING THE CONFIGURATION FILE

Use the non-shared editor (NSED) to edit the configuration file, usually called CONFIG, in the CMDNCO directory.

1. Add the SYSNAM directive if you do not already have it. This directive is required as of Rev. 21. Use the name that you used while booting the system to Rev. 22.0 PRIMOS from tape. If the system is networked, use the PRIMENET node name.

2. Check the NPUSR directive. As of Rev. 21, NPUSR should have a value of at least 12. At Rev. 22.0, several system servers or phantoms are automatically configured and do not need to be included in the count for the NPUSR directive. They are listed in Chapter 1. You will still need to configure a phantom for each printer environment. If you use disk mirroring, you will need an additional phantom for each COPY process spawned. You may need additional phantoms for FTS, Batch, and other subsystems and utilities.

3. Delete the PRATIO directive, if present. As of Rev. 21, you can specify a maximum of 8 paging surfaces using the PAGING configuration directive. If you do not specify the paging ratio, PRIMOS uses an algorithm based on the size of the paging partitions to determine the paging ratio to be used for each partition.

4. Delete LOGREC, NETREC, and NUSEG directives if they exist. They were obsolete at Rev. 21. You should also delete the TPDUMP and FILUNT directives, if you have used them in the past. They are obsolete at Rev. 22.0.

5. It is strongly recommended that you remove any obsolete AMLBUF, NTSABF, NTSBUF, and REMBUF configuration directives from your configuration file. The CAB (Change Asynchronous Buffers) command replaces these directives at Rev. 22.0. Use the CONVERT_BUFFER_DIRECTIVES utility to translate these directives into CAB commands or add them to your PRIMOS.COMI file manually.

6. If you are upgrading from any Rev. 20 release, you must replace the PAGDEV and ALTDEV directives with a single PAGING directive. For example, if your configuration file has the directives

```
PAGDEV 100461
ALTDEV 100463
```

then you must replace both of these directives with

```
PAGING 100461 100463
```

MODIFYING THE PRIMOS.COMI FILE

You will need to examine your existing PRIMOS.COMI file. It may be necessary to modify the file to incorporate changes made in PRIMOS at Rev. 22.0.

Be sure to perform the following steps.

1. Delete any references to products that were not restored. Comment out any SHARE commands or startup references to products that were restored but have not yet been installed. Products and utilities that are not yet installed and/or configured for Rev. 22.0 could cause PRIMOS.COMI to halt with an error when a reference to that product is encountered. For the first attempted boot from disk under Rev. 22.0, it will be better to run with a "bare bones" PRIMOS.COMI file. You will be removing the comments from the appropriate product share command lines and references later on in the installation process.

2. Add the SET_TIME_INFO command as shown in the Rev. 22 template if you have not already done so.

3. Delete the Spooler share command SHARE SYSTEM>$2167, and add the new Spooler command line as in the template.

4. Verify that segment 40 is not shared in your file.

5. Add the START_DSM command as shown in the template, before any commands to start any of the network products that you may be using. Remove any reference to DSM.SHARE.COMI.

6. Be sure that you comment out any COMM_CONTROLLER commands that you may be using. You must wait until the nonchargeable T Family runfiles and libraries are installed before you attempt to start your communication controllers.

7. Add CAB commands if you cannot use the CONVERT_BUFFER_DIRECTIVES utility.

8. If you have purchased PRIMOS TCP/IP, insure that it is shared before MAXUSR, as shown in the template.

INSTALLING DEFAULT SEARCH_RULES LIST

Install default system search rules by executing the CPL program SYSTEM>ENTRY$.INSTALL.CPL. This install file will add required new entries to your file and remove any libraries no longer supplied. For example:

```
OK, R SYSTEM>ENTRY$.INSTALL.CPL
EDIT
   MOV STRA/I LIBRARIES*.PRIMOS_LIBRARY.RUN/
              ...
              ...
              ...
   FILE
SEARCH_RULES*>ENTRY$.SR
OK,
```

After running ENTRY$.INSTALL.CPL, you should execute the SET_SEARCH_RULES command to ensure that the system uses the search rules that were just installed.

```
OK, SSR SEARCH_RULES*>ENTRY$.SR
OK,
```

You should also execute the following search rule install files:

```
SYSTEM>COMMAND$.INSTALL.CPL
SYSTEM>ATTACH$.INSTALL.CPL
SYSTEM>INCLUDE$.INSTALL.CPL
SYSTEM>BINARY$.INSTALL.CPL
```

BOOTING PRIMOS FROM DISK

You must reboot your system at this time, to reset the entry points in core memory for the various system utilities. Here is the procedure to cold start the system.

1. Shut down PRIMOS and clear the system.

```
OK, SH ALL
REALLY? YES
WAIT,
PRIMOS NOT IN OPERATION

DPM400: CPU halted at 000006/637515 013404
        28 Feb 88 17:30:00 Sunday

CP> SYSCLR
DPM006: Central Processor system initialization completed.
        28 Feb 88 17:30:00 Sunday
```

2. Boot to multi-user PRIMOS.

```
CP> BOOT 14114
DPM007: System booting, please wait.
[CPBOOT Rev. 8.0 Copyright (c) Prime Computer, Inc., 1988]
[BOOT Rev. 22.0 Copyright 1988, (c) Prime Computer, Inc.]

BOOTING FROM 001460          PRIRUN>PRIMOS.SAVE

Coldstarting PRIMOS, Please wait...

CONFIG -DATA CONFIG          /* Specify CONFIG file after -DATA
PRIMOS 22 Copyright (c) Prime Computer, Inc. 1988

 2048K BYTES MEMORY IN USE

Starting up revision 22 partition "CMDDSK"
SET -T2 -0500 -DLST  /* Set internal clock
/*
      ...
      ...
      ...
OK,
```

Note

Ignore any LINKAGE_FAULT$ error conditions that may come up during this cold start. Type "CO CONTINUE" to restart the COMI file.

3. Reestablish the Priority Access on the COMDEV.

```
OK, SPAC CMDDSK SYSOP:ALL
***From PRIMOS: Priority ACL set on partition "CMDDSK"
   by user "SYSTEM" (#1) at 28 Feb 88 17:43:00 Sunday
OK,
```

INSTALLING SPOOL ACL RIGHTS

If you are upgrading your system from a Rev. 20 release, you will need to create some new directories. They are SPOOL_DATA* and SPOOL_QUEUE*. You will also need to set the proper access rights for the various SPOOL directories. If you are upgrading from a Rev. 21 release, then these procedures have already been performed. Here are the procedures:

1. Attach to the partition where the SPOOL* directory exists.

```
OK, ATTACH <CMDDSK>MFD
OK,
```

2. Create the SPOOL_DATA* and SPOOL_QUEUE* directories.

```
OK, CREATE SPOOL_DATA*
OK, CREATE SPOOL_QUEUE*
OK,
```

3. Attach to the SYSTEM directory on the COMDEV.

```
OK, ATTACH SYSTEM
OK,
```

4. Run the SPOOL.INSTALL_ACL.CPL file.

```
OK, RESUME SPOOL.INSTALL_ACL.CPL
set_access <TPLAB>SPOOL* .spool_administrator$:all $rest:lur -nq
set_access <TPLAB>SPOOL_QUEUE* $rest:lur -nq
set_access <TPNET>SPOOL_DATA* .spool$$:all $rest:none -nq
set_access <TPLAB>SPOOL_QUEUE* .spool$$:all $rest:none -nq
OK,
```

CONVERTING THE SPOOL ENVIRONMENT

You will need to do this only if you are installing Rev. 22.0 over a pre-Rev. 21 PRIMOS. Convert your spool environment files using the conversion tool CONVERT_ENV.RUN in the SPOOL* directory.

As of Rev. 21, you may need several slightly different versions of each environment. In that case, use the utility as described to produce a template that can be modified for each printer.

To invoke the conversion utility, enter the following command.

```
R SPOOL*>CONVERT_ENV      old_env new_env
                          -ENVIRONMENT name
                          -HELP
```

- old_env represents the pathname for the pre-Rev. 21.0 environment file.
- new_env represents the pathname of the file in which the environment file is to be stored.
- name represents an environment name file without either the "E." prefix or the ".ENV" suffix.

If you use the -ENVIRONMENT option, the utility looks for the file SPOOL*>E.name and produces the file SPOOL*>name.ENV from it. If you specify pathnames, you can file both the old and the new files anywhere in the file system. Refer to SETTING UP SPOOLER ENVIRONMENT FILES in Chapter 2 for information about setting up new environment files.

SETTING UP THE DSM* DIRECTORY

Set the proper system ACLs for the DSM* directory by executing the CPL program SYSTEM>DSM.INSTALL_ACL.CPL. An example follows.

```
OK, R SYSTEM>DSM.INSTALL.CPL

================================================================

Install of DSM Logfiles and Config Files
28 Feb 88 18:03:42 Sunday

Converting logs to latest format......
Errors here are not fatal.

      r DSM*>convert_log DSM*>LOGS>UMH>DEFAULT.LOG
[CONVERT_LOG Rev. 22.0 Copyright (c) 1988, Prime Computer, Inc.]
Logfile converted OK.
      r DSM*>convert_log DSM*>LOGS>UMH>UNDELIVERED.LOG
[CONVERT_LOG Rev. 22.0 Copyright (c) 1988, Prime Computer, Inc.]
Logfile converted OK.
      r DSM*>convert_log DSM*>LOGS>PRIMOS>PRIMOS.LOG
[CONVERT_LOG Rev. 22.0 Copyright (c) 1988, Prime Computer, Inc.]
Logfile converted OK.
      r DSM*>convert_log DSM*>LOGS>NETWORKS>NETWORK.LOG
[CONVERT_LOG Rev. 22.0 Copyright (c) 1988, Prime Computer, Inc.]
Logfile converted OK.
nsed SEARCH_RULES*>ENTRY$.SR
1 DSMLIB,d
```

```
        ...
        ...
        ...

    LIBRARIES*>DSMLIB.RUN
    BOTTOM
    file
    SEARCH_RULES*>ENTRY$.SR

    ================================================================

    Access of DSM
    28 Feb 88 18:06:21 Sunday

    ================================================================

    Setting ACLs on DSM*...

        ...
        ...
        ...

    ****************************************************************

    DSM.INSTALL_ACL completed successfully

    ****************************************************************

    ****************************************************************

    DSM.INSTALL completed successfully

    ****************************************************************

    OK,
```

Similarly, run any product.INSTALL_ACL.CPL programs that are in the SYSTEM directory.

VERIFYING SEGMENT ALLOCATION

Rev. 22.0 of PRIMOS requires a minimum of 64 static segments and a minimum of 64 dynamic segments. To verify that the correct values are configured, use the LIST_LIMITS command. If the static and dynamic segments are not 64 each, invoke EDIT_PROFILE in System Administrator mode and enter the commands shown in the following example.

```
OK, EDIT_PROFILE
[EDIT_PROFILE Rev. 22 Copyright (c) 1988, Prime Computer, Inc.]
In system administrator mode.
> CSD -SS 64 -DS 64
> SD -ON
```

```
> QUIT
OK,
```

The new values are loaded at the next cold start.

INSTALLING THE NONCHARGEABLE TRANSLATOR RUNFILES AND LIBRARIES

You should now run the TRANSLATORS.INSTALL.CPL file. This will ensure that you have the most recent versions of the nonchargeable T Family runfiles and libraries. If you have purchased any of the T Family compilers, then you should install them now. The following example illustrates the installation of just the nonchargeable runfiles and libraries.

1. Attach to the TRANSLATORS directory.

```
OK, A TRANSLATORS
OK,
```

2. List the contents of the directory.

```
OK, LD

<CMDDSK>TRANSLATORS (ALL access)
2 records in this directory, 2907 total records out of quota of 0.

1 File.

TRANSLATORS.INSTALL.CPL

7 Directories.

CMDNCO          HELP*           INFO            LIB
LIBRARIES*      LOAD_MAPS*      SYSOVL

OK,
```

3. Execute the install file.

```
OK, R TRANSLATORS.INSTALL.CPL

SEG related files deleted from TRANSLATORS to prevent their
installation. SEG is not part of the T1-21.0 FCS release.
     DELETE TRANSLATORS>CMDNCO>SEG.SAVE -RPT
"TRANSLATORS>CMDNCO>SEG.SAVE" deleted.
     DELETE TRANSLATORS>LIB>SHARE4.BIN -RPT
"TRANSLATORS>LIB>SHARE4.BIN" deleted.
DELETE TRANSLATORS>SEG -NVFY -NQ -RPT
"TRANSLATORS>SEG" deleted.

COPY TRANSLATORS>CMDNCO>@@  CMDNCO>== -NQ -NVFY -REPORT
"TRANSLATORS>CMDNCO>UPCASE.SAVE" copied to "CMDNCO>UPCASE.SAVE".
```

```
     ...
     ...
     ...

"TRANSLATORS>CMDNCO>IPSD16.SAVE" copied to "CMDNCO>IPSD16.SAVE".

COPY TRANSLATORS>HELP*>@@ HELP*>== -NQ -NVFY -REPORT
"TRANSLATORS>HELP*>HELP_INDEX.HELP" copied to
   "HELP*>HELP_INDEX.HELP".
     ...
     ...
     ...

"TRANSLATORS>HELP*>TRANSLATORS.HELP" copied to
   "HELP*>TRANSLATORS.HELP".

COPY TRANSLATORS>LIB>@@  LIB>== -NQ -NVFY -REPORT
"TRANSLATORS>LIB>PASLIB.BIN" copied to "LIB>PASLIB.BIN".
     ...
     ...
     ...

"TRANSLATORS>LIB>CCLIB.BIN" copied to "LIB>CCLIB.BIN".

COPY TRANSLATORS>LIBRARIES*>@@  LIBRARIES*>== -NQ -NVFY -REPORT
"TRANSLATORS>LIBRARIES*>CC_LIBRARY.RUN" copied to
   "LIBRARIES*>CC_LIBRARY.RUN".
     ...
     ...
     ...

"TRANSLATORS>LIBRARIES*>COMMON_ENVELOPE.RUN" copied to
   "LIBRARIES*>COMMON_ENVELOPE.RUN".

COPY TRANSLATORS>SYSOVL>@@  SYSOVL>== -NQ -NVFY -REPORT
"TRANSLATORS>SYSOVL>COMPILERDATA" copied to "SYSOVL>COMPILERDATA".
ED SEARCH_RULES*>ENTRY$.SR
L pll_library.run;D
     ...
     ...
     ...

I LIBRARIES*>PL1_SYSTEM_LIBRARY.RUN
FILE
SEARCH_RULES*>ENTRY$.SR

MSTR_OK: Unchargeable Translators installation successful.

OK,
```

INSTALLING ADDITIONAL CHARGEABLE SOFTWARE

You should now run any of the INSTALL or INITINSTALL files for the chargeable products that were restored earlier in this installation procedure. A chargeable product may have either an INSTALL.COMI or INSTALL.CPL file. To install your chargeable product, check the product directory that was restored from the M220C1 tape, for either an INSTALL.COMI or INSTALL.CPL file. If you are installing a chargeable product for the first time on your system, use the appropriate INITINSTALL file for that product.

> **Caution**
>
> If you will be installing any of the network products such as NTS, PRIMENET, X.25, or PRIMOS TCP/IP, you must make sure that you also install a version of the nonchargeable T Family runfiles and libraries. The LHC300 transient downline load server that is spawned by the COMM_CONTROLLER command will not be able to operate without those runfiles and libraries. You must also make sure that you have restored the NETWORK_MGT directory from the M220C1 logical tape. The INSTALL files for all of the network products reference the NETWORK_MGT directory in some way.

In the example that follows, X.25 is being installed.

1. Attach to the product's directory.

   ```
   OK, A X.25
   ```

2. List the contents of the directory.

   ```
   OK, LD

   <MASTER>X.25 (ALL access)
   6 records in this directory, 873 total records out of quota of 0.

   3 Files.

   INTER.CPL        X.25.INITINSTALL.COMI          X.25.INSTALL.COMI

   7 Directories.

   CMDNCO           INFO             LIB           OBJ
   PRIMENET*        SEGRUN*          SYSCOM

   OK,
   ```

3. Execute the install file.

```
OK, CO X.25.INSTALL.COMI
OK, /* X.25.INSTALL.COMI, X.25, NS GROUP, 12/18/87
OK, /* installs X.25 into system directories for the first time
OK, /* Copyright (C) 1987, Prime Computer, Inc., Wellesley, MA  02181
OK, /*
OK, /* Install new files in PRIMENET*
OK, COPY X.25>PRIMENET*>NETMAN.SAVE          PRIMENET*>NETMAN.SAVE -NQ
OK, COPY X.25>PRIMENET*>RT_SERVER.SAVE       PRIMENET*>RT_SERVER.SAVE -NQ
OK, COPY X.25>PRIMENET*>RT.COMI              PRIMENET*>RT.COMI -NQ
OK, COPY X.25>PRIMENET*>ISCNSR.CPL           PRIMENET*>ISCNSR.CPL -NQ
OK, COPY X.25>PRIMENET*>ISC_NETWORK_SERVER.RUN  PRIMENET*>ISC_NETWORK_SERVER.RUN -NQ
OK, COPY X.25>PRIMENET*>NETWORK_SERVER.COMI  PRIMENET*>NETWORK_SERVER.COMI -NQ
OK, COPY X.25>PRIMENET*>SLAVE.COMI           PRIMENET*>SLAVE.COMI -NQ
OK, COPY X.25>PRIMENET*>CONVERT_ACLS.CPL     PRIMENET*>CONVERT_ACLS.CPL -NQ
OK, COPY X.25>PRIMENET*>CONFIG_NET_HELP      PRIMENET*>CONFIG_NET_HELP -NQ
OK, COPY X.25>PRIMENET*>NETLINK              PRIMENET*>NETLINK -NQ
OK, RESUME X.25>INTER.CPL
OK, COPY X.25>PRIMENET*>MONITOR_NET>DEFAULT  PRIMENET*>MONITOR_NET>DEFAULT -NQ
OK, /* Install new VNETLB
OK, COPY X.25>LIB>VNETLB.BIN                 LIB>VNETLB.BIN -NQ
OK, /* Install new run files in CMDNCO
OK, COPY X.25>CMDNCO>CONFIG_NET.RUN          CMDNCO>CONFIG_NET.RUN -NQ
OK, COPY X.25>CMDNCO>NETLINK.SAVE            CMDNCO>NETLINK.SAVE -NQ
OK, COPY X.25>CMDNCO>HDXSTAT.SAVE            CMDNCO>HDXSTAT.SAVE -NQ
OK, COPY X.25>CMDNCO>START_NET.RUN           CMDNCO>START_NET.RUN -NQ
OK, COPY X.25>CMDNCO>STOP_NET.RUN            CMDNCO>STOP_NET.RUN -NQ
OK, COPY X.25>CMDNCO>FIND_RING_BREAK.SAVE    CMDNCO>FIND_RING_BREAK.SAVE -NQ
OK, COPY X.25>CMDNCO>MONITOR_NET.RUN         CMDNCO>MONITOR_NET.RUN -NQ
OK, COPY X.25>CMDNCO>START_NSR.RUN           CMDNCO>START_NSR.RUN -NQ
OK, COPY X.25>CMDNCO>START_ISCNSR.RUN        CMDNCO>START_ISCNSR.RUN -NQ
OK, /* Copy keys files to SYSCOM
OK, COPY X.25>SYSCOM>X$KEYS                  SYSCOM>X$KEYS -NQ
OK, COPY X.25>SYSCOM>X$KEYS.INS.FTN          SYSCOM>X$KEYS.INS.FTN -NQ
OK, COPY X.25>SYSCOM>X$KEYS.INS.PL1          SYSCOM>X$KEYS.INS.PL1 -NQ
OK, COPY X.25>SYSCOM>X$KEYS.INS.PASCAL       SYSCOM>X$KEYS.INS.PASCAL -NQ
OK, COPY X.25>SYSCOM>X$KEYS.H.INS.CC         SYSCOM>X$KEYS.H.INS.CC -NQ
OK, /* Perform Network Management install
OK, ATTACH NETWORK_MGT
OK, RESUME NETWORK_MGT.INSTALL.CPL

================================================================
Install LAN300 Network Management
================================================================

11 May 88 09:06:16 Wednesday

Install network management servers RUN and COMI files

"*>NETWORK_MGT*>NMSR.RUN" copied to "NETWORK_MGT*>NMSR.RUN".
"*>NETWORK_MGT*>NMSR.COMI" copied to "NETWORK_MGT*>NMSR.COMI".
"*>NETWORK_MGT*>LHCDLLTSR.RUN" copied to "NETWORK_MGT*>LHCDLLTSR.RUN".
"*>NETWORK_MGT*>LHCDLLTSR.COMI" copied to "NETWORK_MGT*>LHCDLLTSR.COMI".
"*>NETWORK_MGT*>LHCULDTSR.RUN" copied to "NETWORK_MGT*>LHCULDTSR.RUN".
"*>NETWORK_MGT*>LHCULDTSR.COMI" copied to "NETWORK_MGT*>LHCULDTSR.COMI".
"*>NETWORK_MGT*>LTSDLLTSR.RUN" copied to "NETWORK_MGT*>LTSDLLTSR.RUN".
"*>NETWORK_MGT*>LTSDLLTSR.COMI" copied to "NETWORK_MGT*>LTSDLLTSR.COMI".
"*>NETWORK_MGT*>LTSULDTSR.RUN" copied to "NETWORK_MGT*>LTSULDTSR.RUN".
"*>NETWORK_MGT*>LTSULDTSR.COMI" copied to "NETWORK_MGT*>LTSULDTSR.COMI".
"*>NETWORK_MGT*>MONITOR_HELP_TEXT" copied to "NETWORK_MGT*>MONITOR_HELP_TEXT".
```

```
"*>NETWORK_MGT*>LTSULDTSR.COMI" copied to "NETWORK_MGT*>LTSULDTSR.COMI".
"*>NETWORK_MGT*>MONITOR_HELP_TEXT" copied to "NETWORK_MGT*>MONITOR_HELP_TEXT".

Install NM EPF and BINARY library files for NTS and PRIMENET

"*>NETWORK_MGT*>START_STOP_NMSR.BIN" copied to "NETWORK_MGT*>START_STOP_NMSR.BIN".
"*>LIBRARIES*>START_STOP_NMSR.RUN" copied to "LIBRARIES*>START_STOP_NMSR.RUN".

Install network management COMMANDS

"*>CMDNC0>LOOPBACK.RUN" copied to "CMDNC0>LOOPBACK.RUN".
"*>CMDNC0>LIST_LHC_STATUS.RUN" copied to "CMDNC0>LIST_LHC_STATUS.RUN".
"*>CMDNC0>LIST_LTS_STATUS.RUN" copied to "CMDNC0>LIST_LTS_STATUS.RUN".
"*>NETWORK_MGT*>LAN300_MONITOR.RUN" copied to "NETWORK_MGT*>LAN300_MONITOR.RUN".

Modify search rules

EDIT
top
l start_stop_nmsr.run
BOTTOM
d
bottom
i libraries*>start_stop_nmsr.run
top
l CC_LIBRARY.RUN
LIBRARIES*>CC_LIBRARY.RUN
d
bottom
i LIBRARIES*>CC_LIBRARY.RUN
file
SEARCH_RULES*>ENTRY$.SR

Set the appropriate acls for the DLL servers


================================================================
Create UP_LINE_DUMP*>LAN300 directory structure if it doesnt exist
and set a quota limit on the LAN300 directory. Also set the
appropriate acl.
================================================================

Set the appropriate acls for the DSM_LOGGER server

=========================================================
LAN300 Network Management install completed successfully
=========================================================
OK, ATTACH X.25
OK, /* All done with Primenet
OK, CO -CONTINUE 6
OK, CO -END
OK,
```

4. Repeat steps 1 and 2 for all additional products.

Note

Some software contains library directories that must be installed and shared. Review the LIBRARIES* directory in the command partition and install and share any libraries as required.

CONVERTING REMAINING PARTITIONS TO REV. 22

Save the other partitions to tape or disk and run Rev. 22 MAKE to convert those partitions to Rev. 22.

Note

Make sure that all top-level directories are ACL directories so that they are hashed when they are restored.

After running MAKE, restore the files from the backup tapes or disks. If you used MAGSAV, then use MAGRST. If you used BACKUP, then use BACKUP_RESTORE.

CONVERTING PARTITIONS TO INTELLIGENT CONTROLLER MODE

If you wish to make use of dynamic badspot handling or disk mirroring on your Rev. 22.0 partitions, the disk drive on which the partition is located must be associated with an intelligent disk controller and the partition must be in Dynamic Badspot Handling (-IC) mode. As your partitions were created in Nondynamic Badspot Handling (-AC) mode, you will need to use the FIX_DISK utility to change the controller mode. See the Operator's Guide to File System Maintenance (DOC9300-4LA) for a discussion of this procedure and some examples.

BOOTING PRIMOS FROM DISK

You should now edit the PRIMOS.COMI file to enable the products that are now fully installed. Remove the comments from the lines containing SHARE commands, COMM_CONTROLLER commands, system utility startup commands, system monitor commands, and the startup commands for any network products that you have. PRIMOS.COMI should allow your system to be fully functional. Execute the following series of commands to cold start the system.

1. Shut down PRIMOS and clear the system.

```
OK, SH ALL
REALLY? YES
WAIT,
PRIMOS NOT IN OPERATION

DPM400: CPU halted at 000006/637515 013404
        28 Feb 88 18:30:00 Sunday

CP> SYSCLR
DPM006: Central Processor system initialization completed.
        28 Feb 88 18:30:00 Sunday
```

2. Boot to multi-user PRIMOS.

```
CP> BOOT 14114
DPM007: System booting, please wait.
[CPBOOT Rev. 8.0 Copyright (c) Prime Computer, Inc., 1988]
[BOOT Rev. 22.0 Copyright 1988, (c) Prime Computer, Inc.]

BOOTING FROM 001060          PRIRUN>PRIMOS.SAVE

Coldstarting PRIMOS, Please wait...

CONFIG -DATA CONFIG          /* Specify CONFIG file after -DATA
PRIMOS 22 Copyright (c) Prime Computer, Inc. 1988

 2048K BYTES MEMORY IN USE

Starting up revision 22 partition "CMDDSK"
SET -TZ -0500 -DLST  /* Set internal clock
/*
      ...
      ...
      ...
OK,
```

CHAPTER 4

UPGRADING TO REV. 22.0 WITHOUT REFORMATTING YOUR DISKS

This chapter describes how you may upgrade a system to Rev. 22.0 without reformatting your existing disk partitions. Use this procedure if you already have disks formatted to the Rev. 21 standard or if the system you are upgrading does not have a 4006 intelligent disk controller and you do not want to use such features as disk mirroring or reverse sectoring.

Figure 4-1 provides a quick reference flowchart, followed by detailed instructions.

The seventeen steps in Figure 4-1 must be followed in order.

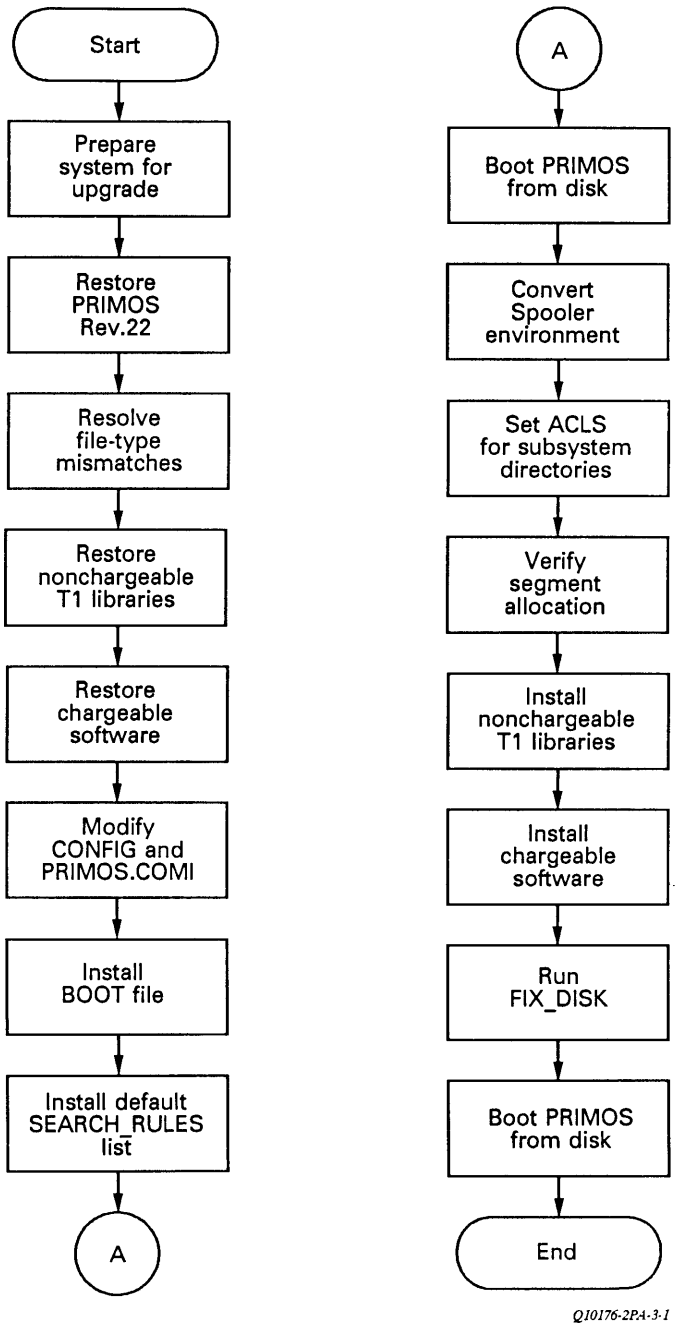

Figure 4-1
Upgrade Without New Disk Format

PREPARING THE SYSTEM FOR UPGRADE

Before performing the upgrade, prepare the system by following these steps.

1. Use the MESSAGE command to warn users well in advance that they are going to be logged out for a software upgrade.

2. Spool a copy of your configuration file and the PRIMOS.COMI file.

3. Open a COMO file, list all Spooler environment files, then spool the file to preserve a hard-copy record for later use. The format of Spooler environment files changes significantly at Rev. 21. (Refer to CONVERTING THE SPOOL ENVIRONMENT in this chapter for details.)

4. If you use the Batch system, open a COMO file, execute the BATGEN -DISPLAY command, and then spool the file to preserve a hard-copy record of your Batch queue definitions for later reference.

5. Use the LOGOUT ALL command to clear the system of users. Then set MAXUSR to 0.

6. Set a priority ACL on the COMDEV to permit access to all directories on the command partition, as in the following example.

```
OK, SPAC CMDDSK SYSOP:ALL
***From PRIMOS: Priority ACL set on partition "CMDDSK"
   by user "SYSTEM" (#1) at 24 Feb 88 12:03:40 Wednesday
OK,
```

   You will need to substitute the actual name of your command partition for the name CMDDSK in the above example.

7. Save the old command partition to disk or tape for backup purposes.

8. Make sure that all top-level directories are ACL directories so that they will be hashed when they are restored.

9. Make sure the Batch queues are empty to avoid loss of waiting jobs.

10. Delete the following files from the command partition if they exist. The file type has changed for these files at Rev. 22.0 and MAGRST will not restore the new ones over the old ones.

```
SYSCOM>X$KEYS
SYSCOM>X$KEYS.INS.PL1
SYSCOM>X$KEYS.INS.FTN
PRINET/X.25>PRIMENET*>CONFIG_NET_HELP>EDIT_NAMED_NODE.HELP
PRINET/X.25>SYSCOM>X$KEYS
PRINET/X.25>SYSCOM>X$KEYS.INS.PL1
PRINET/X.25>SYSCOM>X$KEYS.INS.FTN
LIB>VSRTLI.BIN
LIB>IFTNLB.BIN
```

```
T&MRUN>WFT.SEG>1
```

UPGRADING PRIMOS SOFTWARE TO REV. 22.0

To restore PRIMOS software from the M220U1 logical tape to the command partition, follow these steps.

Note

Before performing this procedure, be sure that you open a COMO file to record any possible file-type mismatches.

1. Modify the read/write locks on MAGRST and SEG.SAVE (both in CMDNCO). By setting the read/write locks to give any number of readers and any number of writers access to these files, you avoid leaving the files open during MAGRST and permit MAGRST to overwrite itself, as in the following example.

```
OK, A CMDNCO
OK, RWLOCK MAGRST NONE
OK, RWLOCK SEG.SAVE NONE
OK,
```

2. Issue the REMEPF command to release all active EPFs.

```
OK, REMEPF @@ -NQ -NVFY
OK,
```

3. Open a COMO file if you haven't done so already.

```
OK, COMO FILE_TYPES.COMO
OK,
```

4. Attach to the command partition.

```
OK, A MFD 0
OK,
```

5. Mount the M220U1 nonchargeable tape on MT0 and assign the tape drive.

```
OK, ASSIGN MT0
Device MT0 assigned
OK,
```

6. Execute MAGRST.

```
OK, MAGRST
[MAGRST Rev. 20.0 Copyright (c) Prime Computer, Inc. 1985]
Tape Unit (9 Trk): 0
```

```
Enter logical tape number: 1
(Rev. 19 tape without ACLs)
Name: M22OU1
Date: 02-14-88
Rev: 22
Reel: 1
Ready to Restore: YES
***Starting Restore***
***End Logical Tape***
***Restore Complete***
OK,
```

7. Return the read/write locks to their original values, as in the following example.

```
OK, A CMDNCO
OK, RWLOCK MAGRST EXCL
OK, RWLOCK SEG.SAVE EXCL
```

RESTORING ADDITIONAL SYSTEM SOFTWARE

The M22OU2 logical tape contains the HELP* and INFO22.0 directories. Restore these directories to your system. It is also recommended that you restore the appropriate nonchargeable T Family runfiles and libraries.

Note

If you use the Remote Job Entry system, then you must restore the contents of the M22OU2 logical tape. The files in the RJSPLQ* must be upgraded.

Follow this procedure to install additional system software from the M22OU2 and TRANSLATORS logical tapes.

1. Mount the M22OU2 tape in MT0 and assign the tape drive.

```
OK, ASSIGN MT0
Device MT0 assigned
OK,
```

2. Execute MAGRST.

```
OK, MAGRST
MAGRST Rev. 22.0 Copyright (c) Prime Computer, Inc., 1985]
Tape Unit (9 Trk): 0
Enter logical tape number: 2
Positioning to logical tape      2 .....
(Rev. 19 tape without ACLs)
Name: M22OU2
```

```
Date: 02-14-88
Rev: 22
Reel: 1
Ready to Restore: YES
***Starting Restore***
***End Logical Tape***
***Restore Complete***
OK,
```

3. Mount the tape containing the nonchargeable T Family runfiles and libraries on MT0.

4. Execute MAGRST again.

```
OK, MAGRST
[MAGRST Rev. 22.0 Copyright (c) 1988, Prime Computer, Inc.]
Tape Unit (9 Trk): 0
Enter logical tape number: 1
(Rev. 19 tape without ACLs)
Name: MT10U1
Date: 02-14-88
Rev: 22
Reel: 1
Ready to Restore: YES
***Starting Restore***
***End Logical Tape***
***Restore Complete***
OK,
```

5. Close the FILE_TYPES.COMO file.

```
OK, COMO -END
OK,
```

RESOLVING FILE-TYPE MISMATCHES

Review the COMO file you opened in step 2. Any file-type mismatch errors (for example, a SAM file tried to overwrite a DAM file) are reported in the following format:

```
Filetype mismatch, file omitted:  <pathname>
```

To resolve the error, delete the file or save the file to tape, then reinstall the nonchargeable software.

RESTORING ADDITIONAL CHARGEABLE SOFTWARE

Follow this procedure to install additional chargeable software from the M220C1 logical tape.

1. Assign the tape drive. Use the printout supplied with the tapes to ascertain which physical tape contains Rev. 22.0 M220C1, and mount that reel on MT0.

```
OK, ASSIGN MT0
Device MT0 assigned
OK,
```

2. Execute MAGRST.

```
OK, MAGRST
MAGRST Rev. 20.0 Copyright (c) Prime Computer, Inc., 1985]
Tape Unit (9 Trk): 0
Enter logical tape number: 1
(Rev. 19 tape without ACLs)
Name: M220C1
Date: 02-14-88
Rev: 22
Reel: 1
Ready to Restore: YES
***Starting Restore***
***End Logical Tape***
***Restore Complete***
OK,
```

Note

You must wait until after the next cold start to run the INSTALL files for the various chargeable software that has just been restored.

MODIFYING THE CONFIGURATION FILE

If you are upgrading from Rev. 21 PRIMOS, you may have already performed some of the tasks listed below. Use the non-shared editor (NSED) to edit the configuration file CONFIG in the CMDNCO directory. Be sure to perform the following steps.

1. Add the SYSNAM directive. This directive is required as of Rev. 21.0. Use the same name you used when booting the system to Rev. 21 PRIMOS from tape. If the system is networked, use the PRIMENET node name.

2. Check the NPUSR directive. At Rev. 21, NPUSR should have a value of at least 12. At Rev. 22.0, several system servers or phantoms are automatically configured and do not need to be included in the count for the NPUSR directive. They are listed in Chapter 1. You will still need to configure phantoms for each Spooler printer environment. If you use disk mirroring, you will need an additional phantom for each COPY process spawned. You may need additional phantoms for FTS, Batch, and other subsystems and utilities.

3. Delete the PRATIO directive if present. As of Rev. 21, you can specify a maximum of 8 paging surfaces using the PAGING configuration directive. PRIMOS uses an algorithm based on the size of the paging partitions to determine the ratio to be used for each partition.

4. Delete LOGREC, NETREC, and NUSEG directives if they exist. They were obsolete at Rev. 21. You should also delete the TPDUMP and FILUNT directives, if you have used them in the past. They are obsolete at Rev. 22.0.

5. It is strongly recommended that you remove any obsolete AMLBUF, NTSABF, NTSBUF, and REMBUF configuration directives from your configuration file. The CAB (Change Asynchronous Buffers) command replaces these directives at Rev. 22.0. Use the CONVERT_BUFFER_DIRECTIVES utility to translate these directives into CAB commands or add them to your PRIMOS.COMI file manually.

6. If you are upgrading from any Rev. 20 release, you must replace the PAGDEV and ALTDEV directives with a single PAGING directive. For example, If your CONFIG file has the directives:

```
PAGDEV 100461
ALTDEV 100463
```

   Then you must replace both of these directives with:

```
PAGING 100461 100463
```

MODIFYING THE PRIMOS.COMI FILE

Check the PRIMOS.COMI.TEMPLATE file in the PRIRUN directory as supplied on the tape of the Master Disk partition M220U1. (The template is also provided in CUSTOMIZING THE PRIMOS.COMI FILE in Chapter 2 of this guide.)

1. Delete any references to products that were not restored. Comment out any SHARE commands or startup references to products that were restored but have not yet been installed. Products and utilities that are not yet installed and/or configured for Rev. 22.0 could cause PRIMOS.COMI to halt with an error when a reference to that product is encountered. For the first attempted boot from disk under Rev. 22.0, it is better to run with a "bare bones" PRIMOS.COMI file. You will be removing the comments from the appropriate product share command lines and references later on in the installation process.

2. Add the SET_TIME_INFO command as shown in the Rev. 22 template if you have not already done so.

3. Delete the Spooler share command SHARE SYSTEM>$2167, and add the new Spooler command line as in the template.

4. Verify that segment 40 is not shared in your file.

5. Add the START_DSM command as shown in the template, before any commands to start any of the network products that you may be using. Remove any reference to DSM.SHARE.COMI.

6. Be sure that you comment out any COMM_CONTROLLER commands that you may be using. You must wait until the nonchargeable T Family runfiles and libraries are installed before you attempt to start your communication controllers.

7. Add CAB commands if you cannot use the CONVERT_BUFFER_DIRECTIVES utility.

8. If you have purchased PRIMOS TCP/IP, make sure that it is shared before MAXUSR, as shown in the template.

INSTALLING THE BOOT FILE

To install the BOOT file on the command partition follow these steps.

1. Attach to the BOOTRUN directory.

```
OK, A BOOTRUN
OK,
```

2. The BOOT.INSTALL.COMI file installs the new boot sector on the command partition. The default baud rate for the supervisor terminal is 300 baud. If your supervisor terminal runs at another baud rate, then use the non-shared editor (NSED) to modify the BOOT.INSTALL.COMI file accordingly. If you still use owner passwords, enter your owner password in the command line in place of the "xxxxxx".

3. Use the COMINPUT command to execute the file.

```
OK, CO BOOT.INSTALL.COMI
```

INSTALLING DEFAULT SEARCH_RULES LIST

Install default system search rules by attaching to the SYSTEM directory and executing the CPL program ENTRY$.INSTALL.CPL. An example follows.

```
OK, A SYSTEM
OK, R ENTRY$.INSTALL.CPL
EDIT
   MOV STRA/I LIBRARIES*.PRIMOS_LIBRARY.RUN/
              ...
              ...
```

```
                ...
    FILE
SEARCH_RULES*>ENTRY$.SR
OK,
```

After running ENTRY$.INSTALL.CPL, you should execute the SET_SEARCH_RULES command to ensure that the system uses the search rules that were just installed.

```
OK, SSR SEARCH_RULES*>ENTRY$.SR
OK,
```

You should then execute the following search rule install files:

```
ATTACH$.INSTALL.CPL
BINARY$.INSTALL.CPL
COMMAND$.INSTALL.CPL
INCLUDE$.INSTALL.CPL
```

BOOTING PRIMOS FROM DISK

You must reboot your system at this time to reset the entry points in core memory for the various system utilities. Here is the procedure to cold start the system.

1. Shut down PRIMOS and clear the system.

```
OK, SH ALL
REALLY? YES
WAIT,
PRIMOS NOT IN OPERATION

DPM400: CPU halted at 000006/637515 013404
        28 Feb 88 17:30:00 Sunday

CP> SYSCLR
DPM006: Central Processor system initialization completed.
        28 Feb 88 17:30:00 Sunday
```

2. Boot to multi-user PRIMOS.

```
CP> BOOT 14114
DPM007: System booting, please wait.
[CPBOOT Rev. 8.0 Copyright (c) Prime Computer, Inc., 1988]
[BOOT Rev. 22.0 Copyright 1988, (c) Prime Computer, Inc.]

BOOTING FROM 001060          PRIRUN>PRIMOS.SAVE

Coldstarting PRIMOS, Please wait...

CONFIG -DATA CONFIG          /* Specify CONFIG file after -DATA
PRIMOS 22 Copyright (c) Prime Computer, Inc. 1988
```

```
 2048K BYTES MEMORY IN USE

Starting up revision 22 partition "CMDDSK"
SET -T2 -0500 -DLST  /* Set internal clock
/*
      ...
      ...
      ...
OK,
```

Note

Ignore any LINKAGE_FAULT$ error conditions that may come up during this cold start. Type "CO CONTINUE" to resume the COMI file.

3. Reestablish the Priority Access on the COMDEV.

```
OK, SPAC CMDDSK SYSOP:ALL
***From PRIMOS: Priority ACL set on partition "CMDDSK"
   by user "SYSTEM" (#1) at 28 Feb 88 17:43:40 Sunday
OK,
```

INSTALLING SPOOL ACL RIGHTS

If you are upgrading your system from a Rev. 20 release, you will need to create some new directories. They are SPOOL_DATA* and SPOOL_QUEUE*. You will also need to set the proper access rights for the various SPOOL directories. If you are upgrading from a Rev. 21 release, then these procedures have already been performed. Here are the procedures:

1. Attach to the partition where the SPOOL* directory exists.

```
OK, ATTACH <CMDDSK>MFD
OK,
```

2. Create the SPOOL_DATA* and SPOOL_QUEUE* directories.

```
OK, CREATE SPOOL_DATA*
OK, CREATE SPOOL_QUEUE*
OK,
```

3. Attach to the SYSTEM directory on the COMDEV.

```
OK, ATTACH SYSTEM
OK,
```

4. Run the SPOOL.INSTALL_ACL.CPL file.

```
OK, RESUME SPOOL.INSTALL_ACL.CPL
set_access <TPLAB>SPOOL* .spool_administrator$:all $rest:lur -nq
set_access <TPLAB>SPOOL_QUEUE* $rest:lur -nq
set_access <TPNET>SPOOL_DATA* .spool$$:all $rest:none -nq
set_access <TPLAB>SPOOL_QUEUE* .spool$$:all $rest:none -nq
OK,
```

CONVERTING THE SPOOL ENVIRONMENT

You will need to do this only if you are installing Rev. 22.0 over a pre-Rev. 21 PRIMOS. Convert your spool environment files using the conversion tool CONVERT_ENV.RUN in the SPOOL* directory.

As of Rev. 21, you may need several slightly different versions of each environment. In that case, use the utility as described to produce a template that can be modified for each printer.

To invoke the conversion utility, enter the following command.

```
R SPOOL*>CONVERT_ENV      old_env new_env
                          -ENVIRONMENT name
                          -HELP
```

- old_env represents the pathname for the pre-Rev. 21.0 environment file.
- new_env represents the pathname of the file in which the environment file is to be stored.
- name represents an environment name file without either the "E." prefix or the ".ENV" suffix.

If you use the -ENVIRONMENT option, the utility looks for the file SPOOL*>E.name and produces the file SPOOL*>name.ENV from it. If you specify pathnames, you can file both the old and the new files anywhere in the file system. Refer to SETTING UP SPOOLER ENVIRONMENT FILES in Chapter 2 for information about setting up new environment files.

SETTING UP THE DSM* DIRECTORY

Set the proper system ACLs for the DSM* directory by executing the CPL program SYSTEM>DSM.INSTALL_ACL.CPL. An example follows.

```
OK, R SYSTEM>DSM.INSTALL.CPL

==========================================================================

Install of DSM Logfiles and Config Files
28 Feb 88 18:03:42 Sunday

Converting logs to latest format......
Errors here are not fatal.

      r DSM*>convert_log DSM*>LOGS>UMH>DEFAULT.LOG
[CONVERT_LOG Rev. 22.0 Copyright (c) 1988, Prime Computer, Inc.]
Logfile converted OK.
      r DSM*>convert_log DSM*>LOGS>UMH>UNDELIVERED.LOG
[CONVERT_LOG Rev. 22.0 Copyright (c) 1988, Prime Computer, Inc.]
Logfile converted OK.
      r DSM*>convert_log DSM*>LOGS>PRIMOS>PRIMOS.LOG
[CONVERT_LOG Rev. 22.0 Copyright (c) 1988, Prime Computer, Inc.]
Logfile converted OK.
      r DSM*>convert_log DSM*>LOGS>NETWORKS>NETWORK.LOG
[CONVERT_LOG Rev. 22.0 Copyright (c) 1988, Prime Computer, Inc.]
Logfile converted OK.
nsed SEARCH_RULES*>ENTRY$.SR
1 DSMLIB,d
    ...
    ...
    ...

LIBRARIES*>DSMLIB.RUN
BOTTOM
file
SEARCH_RULES*>ENTRY$.SR

==========================================================================

Access of DSM
28 Feb 88 18:06:21 Sunday

==========================================================================

Setting ACLs on DSM*...

    ...
    ...
    ...
```

```
**********************************************************************

DSM.INSTALL_ACL completed successfully

**********************************************************************

**********************************************************************

DSM.INSTALL completed successfully

**********************************************************************

OK,
```

Similarly, run any product.INSTALL_ACL.CPL programs that are in the SYSTEM directory.

VERIFYING SEGMENT ALLOCATION

Rev. 22.0 of PRIMOS requires a minimum of 64 static segments and a minimum of 64 dynamic segments. To verify that the correct values are configured, use the LIST_LIMITS command. If the static and dynamic segments are not 64 each, invoke EDIT_PROFILE in System Administrator mode and enter the commands shown in the following example.

```
OK, EDIT_PROFILE
[EDIT_PROFILE Rev. 22 Copyright (c) 1988, Prime Computer, Inc.]
In system administrator mode.
> CSD -SS 64 -DS 64
> SD -ON
> QUIT
OK,
```

The new values are loaded at the next cold start.

INSTALLING THE NONCHARGEABLE TRANSLATOR RUNFILES AND LIBRARIES

You should now run the TRANSLATORS.INSTALL.CPL file. This will ensure that you have the most recent versions of the nonchargeable T Family runfiles and libraries. If you have purchased any of the T Family compilers, then you should install them now. The following example illustrates the installation of just the nonchargeable runfiles and libraries.

1. Attach to the TRANSLATORS directory.

```
OK, A TRANSLATORS
OK,
```

2. List the contents of the directory.

```
OK, LD

<CMDDSK>TRANSLATORS (ALL access)
2 records in this directory, 2907 total records out of quota of 0.

1 File.

TRANSLATORS.INSTALL.CPL

7 Directories.

CMDNCO          HELP*           INFO            LIB
LIBRARIES*      LOAD_MAPS*      SYSOVL

OK,
```

3. Execute the install file.

```
OK, R TRANSLATORS.INSTALL.CPL

SEG related files deleted from TRANSLATORS to prevent their
installation. SEG is not part of the T1-21.0 FCS release.
     DELETE TRANSLATORS>CMDNCO>SEG.SAVE -RPT
"TRANSLATORS>CMDNCO>SEG.SAVE" deleted.
     DELETE TRANSLATORS>LIB>SHARE4.BIN -RPT
"TRANSLATORS>LIB>SHARE4.BIN" deleted.
DELETE TRANSLATORS>SEG -NVFY -NQ -RPT
"TRANSLATORS>SEG" deleted.

COPY TRANSLATORS>CMDNCO>@@  CMDNCO>== -NQ -NVFY -REPORT
"TRANSLATORS>CMDNCO>UPCASE.SAVE" copied to "CMDNCO>UPCASE.SAVE".
    ...
    ...
    ...

"TRANSLATORS>CMDNCO>IPSD16.SAVE" copied to "CMDNCO>IPSD16.SAVE".

COPY TRANSLATORS>HELP*>@@ HELP*>== -NQ -NVFY -REPORT
```

```
"TRANSLATORS>HELP*>HELP_INDEX.HELP" copied to
   "HELP*>HELP_INDEX.HELP".
    ...
    ...
    ...

"TRANSLATORS>HELP*>TRANSLATORS.HELP" copied to
   "HELP*>TRANSLATORS.HELP".

COPY TRANSLATORS>LIB>@@  LIB>== -NQ -NVFY -REPORT
"TRANSLATORS>LIB>PASLIB.BIN" copied to "LIB>PASLIB.BIN".
    ...
    ...
    ...

"TRANSLATORS>LIB>CCLIB.BIN" copied to "LIB>CCLIB.BIN".

COPY TRANSLATORS>LIBRARIES*>@@  LIBRARIES*>== -NQ -NVFY -REPORT
"TRANSLATORS>LIBRARIES*>CC_LIBRARY.RUN" copied to
   "LIBRARIES*>CC_LIBRARY.RUN".
    ...
    ...
    ...

"TRANSLATORS>LIBRARIES*>COMMON_ENVELOPE.RUN" copied to
   "LIBRARIES*>COMMON_ENVELOPE.RUN".

COPY TRANSLATORS>SYSOVL>@@  SYSOVL>== -NQ -NVFY -REPORT
"TRANSLATORS>SYSOVL>COMPILERDATA" copied to "SYSOVL>COMPILERDATA".
ED SEARCH_RULES*>ENTRY$.SR
L pll_library.run;D
    ...
    ...
    ...

I LIBRARIES*>PLl_SYSTEM_LIBRARY.RUN
FILE
SEARCH_RULES*>ENTRY$.SR

MSTR_OK: Unchargeable Translators installation successful.

OK,
```

INSTALLING ADDITIONAL CHARGEABLE SOFTWARE

You should now run any of the INSTALL or INITINSTALL files for the chargeable products that were restored earlier in this installation procedure. A chargeable product may have either an INSTALL.COMI or INSTALL.CPL file. To install your chargeable product, check the product directory that was restored from the M220C1 tape, for either an INSTALL.COMI or INSTALL.CPL file. If you are installing a chargeable product for the first time on your system, use the appropriate INITINSTALL file for that product.

> **Caution**
>
> If you will be installing any of the network products such as NTS, PRIMENET, X.25, or PRIMOS TCP/IP, you must make sure that you also install a version of the nonchargeable T Family runfiles and libraries. The LHC300 transient downline load server that is spawned by the COMM_CONTROLLER command will not be able to operate without those runfiles and libraries. You must also make sure that you have restored the NETWORK_MGT directory from the M220C1 logical tape. The INSTALL files for all of the network products reference the NETWORK_MGT directory in some way.

In the example that follows, X.25 is being installed.

1. Attach to the product's directory.

   ```
   OK, A X.25
   ```

2. List the contents of the directory.

   ```
   OK, LD

   <MASTER>X.25 (ALL access)
   6 records in this directory, 873 total records out of quota of 0.

   3 Files.

   INTER.CPL        X.25.INITINSTALL.COMI          X.25.INSTALL.COMI

   7 Directories.

   CMDNCO           INFO             LIB           OBJ
   PRIMENET*        SEGRUN*          SYSCOM

   OK,
   ```

3. Execute the install file.

```
OK, CO X.25.INSTALL.COMI
OK, /* X.25.INSTALL.COMI, X.25, NS GROUP, 12/18/87
OK, /* installs X.25 into system directories for the first time
OK, /* Copyright (C) 1987, Prime Computer, Inc., Wellesley, MA  02181
OK, /*
OK, /* Install new files in PRIMENET*
OK, COPY X.25>PRIMENET*>NETMAN.SAVE          PRIMENET*>NETMAN.SAVE -NQ
OK, COPY X.25>PRIMENET*>RT_SERVER.SAVE       PRIMENET*>RT_SERVER.SAVE -NQ
OK, COPY X.25>PRIMENET*>RT.COMI              PRIMENET*>RT.COMI -NQ
OK, COPY X.25>PRIMENET*>ISCNSR.CPL           PRIMENET*>ISCNSR.CPL -NQ
OK, COPY X.25>PRIMENET*>ISC_NETWORK_SERVER.RUN  PRIMENET*>ISC_NETWORK_SERVER.RUN -NQ
OK, COPY X.25>PRIMENET*>NETWORK_SERVER.COMI  PRIMENET*>NETWORK_SERVER.COMI -NQ
OK, COPY X.25>PRIMENET*>SLAVE.COMI           PRIMENET*>SLAVE.COMI -NQ
OK, COPY X.25>PRIMENET*>CONVERT_ACLS.CPL     PRIMENET*>CONVERT_ACLS.CPL -NQ
OK, COPY X.25>PRIMENET*>CONFIG_NET_HELP      PRIMENET*>CONFIG_NET_HELP -NQ
OK, COPY X.25>PRIMENET*>NETLINK              PRIMENET*>NETLINK -NQ
OK, RESUME X.25>INTER.CPL
OK, COPY X.25>PRIMENET*>MONITOR_NET>DEFAULT  PRIMENET*>MONITOR_NET>DEFAULT -NQ
OK, /* Install new VNETLB
OK, COPY X.25>LIB>VNETLB.BIN                 LIB>VNETLB.BIN -NQ
OK, /* Install new run files in CMDNCO
OK, COPY X.25>CMDNCO>CONFIG_NET.RUN          CMDNCO>CONFIG_NET.RUN -NQ
OK, COPY X.25>CMDNCO>NETLINK.SAVE            CMDNCO>NETLINK.SAVE -NQ
OK, COPY X.25>CMDNCO>HDXSTAT.SAVE            CMDNCO>HDXSTAT.SAVE -NQ
OK, COPY X.25>CMDNCO>START_NET.RUN           CMDNCO>START_NET.RUN -NQ
OK, COPY X.25>CMDNCO>STOP_NET.RUN            CMDNCO>STOP_NET.RUN -NQ
OK, COPY X.25>CMDNCO>FIND_RING_BREAK.SAVE    CMDNCO>FIND_RING_BREAK.SAVE -NQ
OK, COPY X.25>CMDNCO>MONITOR_NET.RUN         CMDNCO>MONITOR_NET.RUN -NQ
OK, COPY X.25>CMDNCO>START_NSR.RUN           CMDNCO>START_NSR.RUN -NQ
OK, COPY X.25>CMDNCO>START_ISCNSR.RUN        CMDNCO>START_ISCNSR.RUN -NQ
OK, /* Copy keys files to SYSCOM
OK, COPY X.25>SYSCOM>X$KEYS                  SYSCOM>X$KEYS -NQ
OK, COPY X.25>SYSCOM>X$KEYS.INS.FTN          SYSCOM>X$KEYS.INS.FTN -NQ
OK, COPY X.25>SYSCOM>X$KEYS.INS.PL1          SYSCOM>X$KEYS.INS.PL1 -NQ
OK, COPY X.25>SYSCOM>X$KEYS.INS.PASCAL       SYSCOM>X$KEYS.INS.PASCAL -NQ
OK, COPY X.25>SYSCOM>X$KEYS.H.INS.CC         SYSCOM>X$KEYS.H.INS.CC -NQ
OK, /* Perform Network Management install
OK, ATTACH NETWORK_MGT
OK, RESUME NETWORK_MGT.INSTALL.CPL

================================================================
Install LAN300 Network Management
================================================================

11 May 88 09:06:16 Wednesday

Install network management servers RUN and COMI files

"*>NETWORK_MGT*>NMSR.RUN" copied to "NETWORK_MGT*>NMSR.RUN".
"*>NETWORK_MGT*>NMSR.COMI" copied to "NETWORK_MGT*>NMSR.COMI".
"*>NETWORK_MGT*>LHCDLLTSR.RUN" copied to "NETWORK_MGT*>LHCDLLTSR.RUN".
"*>NETWORK_MGT*>LHCDLLTSR.COMI" copied to "NETWORK_MGT*>LHCDLLTSR.COMI".
"*>NETWORK_MGT*>LHCULDTSR.RUN" copied to "NETWORK_MGT*>LHCULDTSR.RUN".
"*>NETWORK_MGT*>LHCULDTSR.COMI" copied to "NETWORK_MGT*>LHCULDTSR.COMI".
"*>NETWORK_MGT*>LTSDLLTSR.RUN" copied to "NETWORK_MGT*>LTSDLLTSR.RUN".
"*>NETWORK_MGT*>LTSDLLTSR.COMI" copied to "NETWORK_MGT*>LTSDLLTSR.COMI".
"*>NETWORK_MGT*>LTSULDTSR.RUN" copied to "NETWORK_MGT*>LTSULDTSR.RUN".
"*>NETWORK_MGT*>LTSULDTSR.COMI" copied to "NETWORK_MGT*>LTSULDTSR.COMI".
"*>NETWORK_MGT*>MONITOR_HELP_TEXT" copied to "NETWORK_MGT*>MONITOR_HELP_TEXT".
```

```
Install NM EPF and BINARY library files for NTS and PRIMENET

"*>NETWORK_MGT*>START_STOP_NMSR.BIN" copied to "NETWORK_MGT*>START_STOP_NMSR.BIN".
"*>LIBRARIES*>START_STOP_NMSR.RUN" copied to "LIBRARIES*>START_STOP_NMSR.RUN".

Install network management COMMANDS

"*>CMDNCO>LOOPBACK.RUN" copied to "CMDNCO>LOOPBACK.RUN".
"*>CMDNCO>LIST_LHC_STATUS.RUN" copied to "CMDNCO>LIST_LHC_STATUS.RUN".
"*>CMDNCO>LIST_LTS_STATUS.RUN" copied to "CMDNCO>LIST_LTS_STATUS.RUN".
"*>NETWORK_MGT*>LAN300_MONITOR.RUN" copied to "NETWORK_MGT*>LAN300_MONITOR.RUN".

Modify search rules

EDIT
top
l start_stop_nmsr.run
libraries*>start_stop_nmsr.run
d
bottom
i libraries*>start_stop_nmsr.run
top
l CC_LIBRARY.RUN
LIBRARIES*>CC_LIBRARY.RUN
d
bottom
i LIBRARIES*>CC_LIBRARY.RUN
file
SEARCH_RULES*>ENTRY$.SR

Set the appropriate acls for the DLL servers


================================================================
Create UP_LINE_DUMP*>LAN300 directory structure if it doesnt exist
and set a quota limit on the LAN300 directory. Also set the
appropriate acl.
================================================================

Set the appropriate acls for the DSM_LOGGER server

============================================================
LAN300 Network Management install completed successfully
============================================================
OK, ATTACH X.25
OK, /* All done with Primenet
OK, CO -CONTINUE 6
OK, CO -END
```

4. Repeat steps 1 and 2 for all additional products.

Note

Some software contains library directories that must be installed and shared. Review the LIBRARIES* directory in the command partition and install and share any libraries as required.

RUNNING FIX_DISK

While it is not mandatory, it is recommended that you run FIX_DISK on each partition after a software upgrade. Follow this procedure.

1. Shut down the partition.

```
OK, SHUTDN 130460
OK,
```

2. Place the partition on the Assignable Disks Table.

```
OK, ASSIGN DISK 130460
OK,
```

3. Run FIX_DISK as in the following example.

```
OK, FIX_DISK -DISK 130460 -FIX
```

Note

If you are running FIX_DISK on the command device, first stop the Login Server with the STOP_LSR command, stop DSM with the STOP_DSM command, and then use the FIX_DISK -COMDEV option to shut down and assign the disk. (Do not use the SHUTDN command.) When FIX_DISK is finished, the utility unassigns and restarts the disk. Issue the START_LSR and START_DSM commands. Also restart any other phantoms. If you cold start the system after running FIX_DISK on the COMDEV, phantoms restart automatically via the PRIMOS.COMI file. For more information on this procedure, refer to the Operator's Guide to File System Maintenance (DOC9300-4LA),

4. Remove the partition from the Assignable Disks Table.

```
OK, DISKS NOT 130460
OK,
```

5. Unassign the partition.

```
OK, UNASSIGN DISK 130460
OK,
```

6. Add the partition to the system, making it available to users.

```
OK, ADDISK 130460
OK,
```

For a list of FIX_DISK options, type FIX_DISK -HELP.

BOOTING PRIMOS FROM DISK

You should now edit the PRIMOS.COMI file to enable the products that are now fully installed. Remove the comments from the lines containing SHARE commands, COMM_CONTROLLER commands, system utility startup commands, system monitor commands, and the startup commands for any network products that you have. PRIMOS.COMI should allow your system to be fully functional. Execute the following series of commands to cold start the system.

1. Shut down PRIMOS and clear the system.

```
OK, SH ALL
REALLY? YES
WAIT,
PRIMOS NOT IN OPERATION

DPM400: CPU halted at 000006/637515 013404
        24 Feb 88 19:30:00 Wednesday

CP> SYSCLR
DPM006: Central Processor system initialization completed.
        24 Feb 88 19:30:00 Wednesday
```

2. Boot to multi-user PRIMOS:

```
CP> BOOT 14114
DPM007: System booting, please wait.
[CPBOOT Rev. 8.0 Copyright (c) Prime Computer, Inc., 1988]
[BOOT Rev. 22.0 Copyright 1988, (c) Prime Computer, Inc.]

BOOTING FROM 001460          PRIRUN>PRIMOS.SAVE

Coldstarting PRIMOS, Please wait...

CONFIG -DATA CONFIG          /* Specify CONFIG file after -DATA
PRIMOS REV. 22.0 Copyright (c) Prime Computer, Inc. 1988

 2048K BYTES MEMORY IN USE

Starting up revision 22 partition "CMDDSK"
```

```
SET -TZ -0500 -DLST  /* Set internal clock
/*
      ...
      ...
      ...
OK,
```