

450-1301-211

DMS-100 Family

TOPS VSN Software

Release Notes

VSN07 and up

Standard 01.02

April 1998

NORTEL

NORTHERN TELECOM

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TOPS VSN Software

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Table of Contents

1.0	Introduction	9
2.0	TOPS/VSN Release Deliverables	11
2.1	U.S. Loads	11
2.2	Canadian Loads	11
2.3	Common to All Loads	11
2.4	TOPS/VSN Tape Content Overview	12
2.5	TOPS/VSN Document Content Overview	13
2.6	Summary of Major VSN07 Enhancements	13
3.0	Installing TOPS/VSN Software Releases	15
3.1	TOPS/VSN and DMS Software Compatibility Rules	15
3.1.1	Compatibility Rules	15
3.1.2	Impact of Naming Convention Changes	15
3.2	TOPS/VSN Pre-Installation Considerations	16
3.3	TOPS/VSN Installation Sequence	20
3.4	TOPS VSN Upgrade Sequence	21
3.5	Conventions Used in this Document	22
3.6	TOPS/VSN Software Installation	23
3.7	80 MB Disk Installation	46
3.8	TOPS/VSN Patch Installation	58
3.9	TOPS/VSN Feature Installation	59
3.9.1	Installing the TOPS/VSN Feature Authorization Tape	59
3.9.2	Enabling/Disabling Optional Features	59
3.10	TOPS/VSN Datafill Modification	61
3.10.1	T1 Trunk ID Mappings	61
3.10.2	DMS CLLI	63
3.10.3	Physical Plant Alarms Datafill	64
3.10.4	Changing the VSN Site Name	65
3.10.5	MMI DataFill	70
3.10.6	TOPS/VSN Prompt Tables Update Procedure	73
3.10.7	Making New Datafill Current	74
3.11	TOPS/VSN DVIX Installation	74
3.12	TOPS/VSN Prompt Manager Installation	79
3.13	Custom Branding Datafill	82
3.13.1	Custom Branding Datafill Sequence	82
3.13.2	Custom Branding Prompt Installation	83
3.14	Save-Restore of Customer Datafill	85
3.14.1	Preparing for Save-Restore	85
3.14.2	Save	86
3.14.3	Restore	86

-
- 3.14.4 Restoring ACPE-2 to service 87
 - 3.15 TOPS/VSN Locality Database Management 89
 - 3.16 TOPS/VSN System Backup 90
 - 3.17 Duplicate TOPS/VSN System Disks 105
 - 3.17.1 Creating Duplicate Disks 105
 - 3.17.2 Installing Duplicate Disks 105
 - 3.18 TOPS/VSN Installation of Multiple Systems 107
 - 3.18.1 48 Channel System from a 48 Channel System's BMS 107
 - 3.18.2 24 Channel System from a 24 Channel System's BMS 110
 - 3.19 Removal of Previous Release 114
 - 4.0 Steps for Deviations 115
 - 4.1 VSN Booting Deviations 115
 - 4.2 Installation Deviations 116
 - 4.3 M4020 Diagnostics Errors 116
 - 4.4 No Prompt Manager Access from FIELDSUPPORT 116
 - 4.5 No OMs When ACPEs are Rebooted 117
 - 5.0 TOPS/VSN System Restore 118
 - 5.1 350 MByte and 160 MByte Disk 118
 - 5.2 80 MByte Disk 125

Appendices

- A: TOPS/VSN Power Up/Power Down Procedure 130
- B: Upgrade Determination Procedure 132
- C: Restoring the Previous Release 133
- D: TOPS/VSN Hardware/Software Configurations 134
- E: Testing the ASCII Terminal 150
- J: NT 220 Terminal Settings 152
- G: NT 320 Terminal Settings 156
- H: NT Printer Settings 160
- I: Default Userids and Passwords 162
- J: TOPS/VSN Herald Page 165
- K: Remote VT-100 (ASCII Dial up) Access 166
- L: TOPS/VSN Error Messages/Codes 167
- M: Prompt Name Changes from Patches (Canadian Load) 170
- N: VSN36 Patch Prompt Name Changes (US Load) 172
- O: VSN04 Prompts and French_Prompts Datafill Changes 174
- P: Verifying Load Tape Contents 176
- Q: Commissioning Procedure 180
- R: VSN05 ACI Prompt Name Changes 182
- S: VSN05 MDS Prompt Datafill 183
- T: Datafilling Brand Before Bong in VSN07 184

1.0 Introduction

This document details the procedures required to install TOPS/VSN software release 07¹. Information provided includes:

- Installation procedures
- Procedures for applying patches
- Summary of major enhancements and a feature list
- List of steps for events which deviate from what is expected

Please **read the entire document** including appendices before proceeding with any of the procedures contained within. This will insure that the reader is aware of any changes to procedures since the last release of this document.

It is also suggested that the following documents be obtained and available to the reader during a VSN install or upgrade:

NTP 297-2261-3500 - Operator Services Translations Guide, Volume 1.

NTP 297-2261-3501 - Operator Services Translations Guide, Volume 2.

NTP 297-2261-3502 - Operator Services Translations Guide, Volume 3.

NTP 297-2271-451 - TOPS 07 Data Schema Reference Manual.

NTP 450-1201-310 - TOPS VSN System Administration and Maintenance.

1. NOTE: The VSN 07 software release succeeds the previous VSN 06, 05, 04,... releases.

Release Note Change History		
Stream	Issue	Change Summary
VSN 07	AE01	1. New VSN07 version. Changed all release specific references.
		2. CT63839 - Move Herald page comments 'Hard Boot Procedure'.
	AE02	1. CT63845 - Clarification to 80 Meg Disk installation procedure
		2. CT71186 - Create the Load Letter variable and use in both herald page and load name.
		3. CT71185 - Corrected reference 1 in section 1.1 and correct country name in section 1.2
		4. CT71187 - Add comment to section 1.4 for DVIX tape.
	AE03	1. CT71186 - Clarification of VSN Naming Convention.
		2. BY63168 - Clarification of section 2.3, 2.4 and 2.6.
		3. CT71188 - Clarification of section 2.2 - TOPS Pre-Installation Consideration.
		4. CT71186 - Clarification of section 2.0 and 2.1.
		5. Add new feature information to section 1.6.

2.0 TOPS/VSN Release Deliverables

Following are the components that make up a TOPS/VSN software release. The versions of software listed are required unless otherwise noted. The procedure to install a TOPS/VSN software release is described in “Installing TOPS/VSN Software Releases” on page 15.

2.1 U.S. Loads

The following deliverables constitute a U.S. TOPS/VSN software release:

1. TOPS/VSN Tape 1A (NSR05AA)
2. TOPS/VSN Tape 2 (VUU07AE)¹
3. TOPS/VSN Feature Authorization Tape (VSN07AA) is delivered if any optional VSN features have been purchased
4. TOPS/VSN Prompt Manager Tape (PM04AL)
5. TOPS/VSN Patch Tape (VSN07RTM, PATCH_000) is optionally delivered if software patches are required for optimal TOPS/VSN operation.

2.2 Canadian Loads

The following deliverables constitute a Canadian TOPS/VSN software release:

1. TOPS/VSN Tape 1A (NSR05AA)
2. TOPS/VSN Tape 2 (VCB07AA)¹.
3. TOPS/VSN Feature Authorization Tape (VSN07AA) is delivered if any optional VSN features have been purchased
4. TOPS/VSN Prompt Manager Tape (PM04AL)
5. TOPS/VSN Patch Tape (VSN07RTM, PATCH_000) is optionally delivered if software patches are required for optimal TOPS/VSN operation.

2.3 Common to All Loads

The following deliverables are common to all TOPS/VSN loads.

1. DVIX Timesharing System For TOPS/VSN Version 03.20.24/03.20.25, PEC# NT4G91HK (brand new systems) or NT4G95HK (all others).

1. Please note that Northern Telecom may refer to a release differently than what appears on the tape 2 label. The installation process refers to a release numbering scheme (located on the tape 2 label) resembling VCB07AE for Canadian tapes and VUU07AE for US tapes. For Canadian tapes, NT refers to VCB07BM release as VSN 07. Actually, any release VCB07xx is referred to as VSN 07. This format is also true for US tapes.

NOTE: DVIX is licensed software. Tapes are supplied for initial system installation, but not with subsequent VSN software releases. Contact a NT representative for information on replacing DVIX tapes.

2. TOPS/VSN Software Release Notes Addendum (ALLVSNAD - optional)

2.4 TOPS/VSN Tape Content Overview

Each TOPS/VSN software release is comprised of at least 4 tapes, as described below. Note that all of the tapes listed below are required for a full installation, but that some may not be required for a software upgrade. Refer to 3.2 TOPS/VSN Pre-Installation Considerations and Appendix B: Upgrade Determination Procedure for more information about installations versus upgrades.

Tape 1A Tape 1A is a bootstrap tape, which is used in the installation procedures to initialize the disk and install a mini system. Tape 1A is required for full installations, but not for a software upgrade. In full installations, Tape 1A must be loaded before Tape 2 can be installed.

Tape 2 Tape 2 contains the necessary release software for the TOPS/VSN (TABS) application. The system cannot boot from this tape. The TOPS/VSN application software is delivered with a predefined VSN system configuration (SRUs, PRUs, user groups, userids, datafill, etc.). Tape 2 is required for both full installations and software upgrades.

DVIX The DVIX Release Tape contains all of the necessary software for loading DVIX on the TOPS/VSN (TABS). The DVIX tape is required for full installations, but not software upgrades. The DVIX software must be loaded prior to loading the Prompt Manager tape. Since this tape is licensed software, it is initially supplied with a new system, but not in subsequent software releases. A new version of DVIX has not been released for several years, so it is unlikely that a site will receive a new tape at any time.

Prompt The Prompt Manager Tape contains the necessary release software for the

Manager TOPS/VSN Prompt Manager. The Prompt Manager allows customers to record and administer locality prompts and custom brands. DVIX must be installed before the Prompt Manager can be installed. The Prompt Manager tape is required for full installations and upgrades.

2.5 TOPS/VSN Document Content Overview

VSNRN This document.

ALLVSNAD An optional documentation addendum may be delivered with the TOPS/VSN software release. This document includes descriptions of patches for this release and the instructions for applying these patches.

2.6 Summary of Major VSN07 Enhancements

This section highlights the major enhancements in the VSN07 TOPS/VSN Software Release. A list of the TOPS/VSN features included in this release is also provided.

- The disk addresses were changed in VSN33. Special attention should be paid to “TOPS/VSN Software Installation” on page 23
- The ability to perform an upgrade is available in VSN07. A minimum software release of VSN33 is required. See “TOPS/VSN Pre-Installation Considerations” on page 16
- As of VSN03, the U.S. and Canadian versions of the VSN Release Notes (this document) are consolidated into one document. Be aware that some steps will require you to know the system configuration (24 or 48 channels, tower or rack) of the VSN system you are working on.
- The Seagate 160M disk drive is supported in addition to the existing drives. Sites replacing 350M or 80M disks with Seagate 160M disks need to do a full install of NSR03BG or greater base software to use the 160M disk.
- As of VSN03, the Canadian 24 channel and 48 channel loads were combined and are now delivered on the same set of tapes. The system configuration (24 or 48 channels) is selected during the installation.
- A number of Canadian customer prompts that were previously only available by patch were included in the VSN04 load. As a result, many of their names have changed. Refer to Appendix M: Prompt Name Changes from Patches (Canadian Load) on page 170 for details concerning these changes.
- A number of U.S. customer prompts that were provided by patch in VSN36 were incorporated into the VSN03 load. As a result, their names have changed. Refer to Appendix N: VSN36 Patch Prompt Name Changes (US Load) on page 172 for details concerning these changes.
- The call flow for collect and bill to third calls was modified slightly. There are no changes from a customer’s perspective, but prompt datafill was affected. Refer to Appendix O: VSN04 Prompts and French_Prompts Datafill Changes on page 174 for details.

New features in this release include:

- **MDS Retirement - AF6490**

This feature implements the retirement of the VSN's support for intentional and intercept messaging for the Message Delivery System (MDS). Removing this unused feature and its associated code will aid in future VSN support by reducing call flow complexity and freeing additional memory for the VSN's Application Call Processing Engines (ACPE).

3.0 Installing TOPS/VSN Software Releases

The procedures outlined in this chapter should be followed when you receive a new TOPS/VSN software release, or an unrecoverable disk failure requires that the system be reloaded.

3.1 TOPS/VSN and DMS Software Compatibility Rules

3.1.1 Compatibility Rules

To ensure basic compatibility between DMS and TOPS/VSN software loads, the following compatibility rules exist:

As of January 1, 1995, the compatibility rules are:

- BCS_n will be compatible with VSN_n, VSN_{n+1}, VSN_{n+2} and VSN_{n+3}.
Note: BCS loads no longer support regressive VSN loads.

Some examples of future supported and unsupported configurations are given below:

- BCS34 is compatible with VSN34, VSN35, VSN36, and VSN03.
- BCS34 is not compatible with VSN33 or any earlier TOPS/VSN load.
- TOPS05 is compatible with VSN05.
- TOPS05 is not compatible with VSN04 or any earlier TOPS/VSN load.

3.1.2 Impact of Naming Convention Changes

Naming conventions for DMS CM loads have changed for post BCS36 loads. CM loads are replaced by individual application DRUs (Development Resource Unit). The DRU to which VSN is coupled is the TOPS DRU. The first TOPS DRU is introduced as TOPS03. The VSN naming convention is changed to be consistent with the TOPS DRU as the VSN schedules are coupled with the TOPS DRU schedules. Thus the first VSN release that maps to TOP03 is VSN03. An example of the load name convention is seen in the following matrix:

BCS35	BCS36	TOPS03	TOPS04	TOPS05	TOPS06	TOPS07	...
VSN35	VSN36	VSN03	VSN04	VSN05	VSN06	VSN07	...

3.2 TOPS/VSN Pre-Installation Considerations

Approximately eight hours will be required to perform a new install. Five hours will be required for an upgrade, and an additional two hours will be required for a BMS backup.

Note: The VSN Install/Upgrade process cannot be performed using a dial-up connection.

The following items should be reviewed before starting the software installation.

1. Refer to “Upgrade Determination Procedure” on page 132 to determine whether this installation is a new install or an upgrade. The option to do an upgrade is new as of VSN34. This method allows VSN call processing to continue during the initial phases of the installation and reduces the amount of time required to perform the installation. Certain instructions in this document apply only to a new install. Other instructions apply only to an upgrade. These instructions are labelled appropriately.

2. If the VSN is a DVS Tower VSN¹, continue with the next step.

If the VSN is a Rack configuration, it is important to note that the logical hardware mapping is different from the physical hardware mapping. For example, in SAS Maintenance the VSN refers to Cabinets and Slots, while the physical configuration consists of bays and shelves.

It is a good idea to become familiar with the differences between the logical and the physical mapping of the hardware. Please see “TOPS/VSN DVS Towers to Bays Hardware Mapping” on page 134 for more details.

3. Ensure that you have at least four tapes (TOPS/VSN Tape 1A, TOPS/VSN Tape 2, DVIX Release Tape and the Prompt Manager tape). A TOPS/VSN Feature Authorization tape and/or a TOPS/VSN Patch tape may accompany these.

Sites choosing to verify their load tapes prior to beginning an installation or upgrade can perform Appendix P: Verifying Load Tape Contents.

4. Make sure that NTP 450-1301-310 is available to reference Prompt Manager and Locality Database administrative procedures. Refer to the Appendix, “Prompt Manager and Locality Database Administration Guide”, of this NTP.
5. If the VSN is a Rack configuration, ensure that there is an ASCII terminal connected to the terminal port on the FSP. If the VSN is a Tower configuration, ensure that there is an ASCII terminal connected to the 9-pin connector on the back of the Primary Processor in cabinet 1.

1. All Canadian VSN sites are currently using Rack mounted systems. Some U.S. sites use Tower systems, and some use Rack systems.

Sites choosing to test their ASCII terminal prior to beginning an installation or upgrade can perform Appendix E: Testing the ASCII Terminal. Note that the terminal test briefly removes the VSN OA&M application processor from service.

Once your TOPS/VSN has been installed with a TOPS/VSN software release, the release configuration assumes this is a VT100 terminal. TOPS/VSN is shipped with a NT220 terminal¹ which may be configured to operate in “VT-100” emulation mode. See “NT 220 Terminal Settings” on page 152 for information on the required settings of this terminal. If these settings are changed, it is best to “Save” the settings by entering the “Save Current Values” option when configuring the terminal.

During the installation, your keyboard input will typically be terminated via a carriage return, which will be indicated in this documentation symbolically as “<enter>”.

When typing commands on the NT220 terminal and a typing error is made, it is suggested that the delete key (large key on the upper right corner of the keyboard) be used to “backspace” to the erroneous character. The cursor keys **should not** be used. If you are in doubt that what you have typed is correct and you want to reenter the command from the beginning, then press the delete key several times until the terminal “beeps”. Then press <enter>. A “Command Interpreter” message will be displayed along with the command interpreter prompt. You may then begin typing again.

6. All commands must be typed in upper case unless explicitly shown otherwise. It is suggested that the “LOCK” key on the NT-220 terminal be used to ensure that all alphabetic characters are uppercase. The one exception to this rule is when installing the Prompt Manager. This operation is case sensitive, and care must be taken to use the appropriate case.
7. Many commands are made up of multiple words separated by spaces. Do not omit spaces from any command, but the exact number of space characters between words is not important unless otherwise indicated. At least one space character must be typed whenever a space is indicated.
8. Some key sequences request that both keys be depressed simultaneously. For example, <CNTRL+B> indicates that the Control key, in addition to the key labelled “B” must be simultaneously depressed.
9. When entering system commands, be careful to note the differences between 0 (zero) and O (Capital letter O).
10. If this is a currently working system print the following customer datafillable tables:

1. NOTE: This version of the VSN Release Notes refers to the NT220 terminal to be used during installation. Instead you may be using an NT320 terminal. The NT320 is the replacement of the NT220 terminal.

- DATALINK_CONFIG
- VSN_SYSTEM
- USER INTERACTION
- VSN_RETRY_COUNTS
- VSN_DIGIT_TIMING
- SCREENING_CODES
- LOC_SCREEN_CODES
- PROMPTS
- FEATURES
- BILINGUAL_INTERACTION (Canadian Bilingual System Only)
- FRENCH_PROMPTS (Canadian Bilingual System Only)

To print the tables above, access SDM Table Editor from the VSN Main Menu and for each of the tables:

- a) Press the “FIND” Softkey
 - b) Type the name of the table and press enter
 - c) Press the “PRINT” Softkey
 - d) Press the “CURRENT TABLE” Softkey
 - e) After the first table finishes printing, repeat the 4 steps above with the other tables on the list
 - f) After all the tables are printed, press the “EXIT” softkey and you will be returned to the VSN Main Menu.
11. If this is a currently working system, record the Trunk ID Mapping information by doing the following:
- a) From the Main Menu, position on Configuration and hit Return.
 - b) Position on Browse and hit Return.
 - c) Position on Digital Trunk Link and hit Return.
 - d) For each cabinet listed, position on the cabinet, hit Return and follow the next two steps.
 - e) Position on Trunk ID Mapping and hit Return.
 - f) Record the mapping of all the Channel Numbers and Trunk Identification numbers on to a piece of paper and store with the above table print outs.

-
- g) After recording all listed cabinets, press the Exit key until you are at the Main Menu again.
 - h) After all calls are complete, busy Data links between DMS and VSN.
12. For Canadian systems, refer to Appendix M: Prompt Name Changes from Patches (Canadian Load) on page 170 to determine if any of the prompts you currently use have been renamed.
 13. For U.S. systems, refer to Appendix N: VSN36 Patch Prompt Name Changes (US Load) on page 172 to determine if any of the prompts you currently use have been renamed.
 14. If this is a currently working system, determine the system name. This may be done by examining a system log printout or by entering the Log utility from the Main Menu and looking under the heading "LAN". This information will be necessary in step 22. on page 39.
 15. Do a BMS backup of the system to be upgraded. Backup both the :LOCAL and :VSNFS2 disks.
 16. Save existing VSN datafill. See 3.14 Save-Restore of Customer Datafill on page 85.
 17. Archive the Locality Database onto tape. Follow the procedure in NTP 450-1301-310, "TOPS VSN System Administration and Maintenance Operating Procedures".
 18. Archive the Prompt Manager onto tape. Follow the procedure in NTP 450-1301-310, "TOPS VSN System Administration and Maintenance Operating Procedures", section "Prompt Archive Management".

3.3 TOPS/VSN Installation Sequence

To complete the TOPS/VSN installation, the following procedures **MUST** be followed exactly as indicated.

1. "TOPS/VSN Software Installation" on page 23.
2. "80 MB Disk Installation" on page 46.
3. "TOPS/VSN Patch Installation" on page 58.
4. "TOPS/VSN Feature Installation" on page 59.
5. "TOPS/VSN Datafill Modification" on page 61.
6. "TOPS/VSN DVIX Installation" on page 74.
7. "TOPS/VSN Prompt Manager Installation" on page 79.
8. "Save-Restore of Customer Datafill" on page 85.

Post upgrade procedure: The following step may be postponed until after system acceptance is completed. However, it should not be skipped.

9. "TOPS/VSN System Backup" on page 90.

Refer to section "TOPS/VSN Installation of Multiple Systems" on page 107. for installing a load on additional TOPS/VSN systems from system backup tapes.

3.4 TOPS VSN Upgrade Sequence

To complete the TOPS/VSN upgrade, the following procedures **MUST** be followed exactly as indicated.

1. “TOPS/VSN Software Installation” on page 23.
2. “80 MB Disk Installation” on page 46.
3. “TOPS/VSN Patch Installation” on page 58.
4. “TOPS/VSN Feature Installation” on page 59.
5. “TOPS/VSN Datafill Modification” on page 61.
6. “TOPS/VSN Prompt Manager Installation” on page 79.
7. “Save-Restore of Customer Datafill” on page 85.

Post upgrade procedure: The following steps may be postponed until after system acceptance is completed. However, they should not be skipped.

8. “TOPS/VSN System Backup” on page 90.
9. “Removal of Previous Release” on page 114.

Refer to section “TOPS/VSN Installation of Multiple Systems” on page 107. for installing a load on additional TOPS/VSN systems from system backup tapes.

3.5 Conventions Used in this Document

Several conventions are used throughout this document to show system responses and expected user input. All commands that must be input by the user are printed in a Bold Italics font. For example:

Type this command<enter>

The command should be typed exactly as shown in the document.

Responses that will be received back from the VSN are printed in an Italic font. For example:

This is a response given by the VSN system.

Responses are as close as possible to what the system is expected to give. However, some variance is acceptable.

3.6 TOPS/VSN Software Installation

After carefully reviewing the “TOPS/VSN Pre-Installation Considerations” on page 16, begin the TOPS/VSN Software installation as outlined in this section. If it has not yet been determined whether an upgrade or a new install is being performed, please refer to “Upgrade Determination Procedure” on page 132.

Please note that throughout the new install and upgrade process several system responses may differ slightly than what is documented here. Specifically, several utilities have version numbers and dates which will change over time; similarly, disk sector references (example system output refers to N1, N2, N3, etc.) may vary.

1. **If an upgrade is being performed, skip to step 19. on page 36 and continue there. If a new install is being performed, continue with step 2 below.**
2. If this is a new install of a currently working system, then perform the following:
 - a) At the DMS, isolate the TABS system by making all the voice trunks BSY INB.
 - b) At the VSN, busy trunks between DMS and VSN. Select T1 Maintenance Position from the Main menu, select softkey Change State, followed by Man Busy and then Many Busy Pending.
3. If the system is currently powered up, power the system down (see “TOPS/VSN Rack System Hard Boot Procedure” on page 130) and wait one minute before going to the next step. Otherwise, proceed directly to the next step.
4. Ensure that:¹
 - There is a LANLink SRU in cabinet 1, slot 15.
 - There is at least one M4020 terminal attached to line 11 and/or 12 of the aforementioned LANLINK SRU.
 - The Prime Processor is in Cabinet 1 Slot 6.
 - The SRU “80MB Disk QIC-150 Tape” (Cabinet 1, Slot 10), must have the following switch settings (the switches are located beneath the front panel on the SRU):
 - The disk should be set to 2 (i.e. all disk dip switch settings should be set to off, except the switch labelled 2, which should be on).
 - The tape should be set to 1 (i.e. all tape dip switch settings should be set to off, except the switch labelled 1, which should be on).

1. After hardware installation, the hardware configuration should be exactly as required.

-
- If your VSN system has a 350 MByte disk, the SRU “Storage 350M” (Cabinet 2, Slot 16), has a rotary thumbwheel which must be set to 0. The thumbwheel is located on the back on the SRU.
 - If your VSN system has a 160 MByte disk, the SRU “160 MB/QIC - 150 CO” (Cabinet 2, Slot 10), must have the following switch settings (the switches are located beneath the front panel on the SRU):
 - The disk should be set to 0 (i.e. all disk dip switch settings should be set to off).
 - The tape should be set to 5 (i.e. all tape dip switch settings should be set to on, except the switch labelled 2, which should be off).
5. Clean the head of the tape drive (Cabinet 1, Slot 10), connected to the Prime Processor.
 6. Place Tape 1A into the tape drive. Power the system on. (see “TOPS/VSN Rack System Hard Boot Procedure” on page 130.) After about 5 minutes, the system will display a sequence of messages on the ASCII terminal, similar to that shown below:

.

.

.

OSP successfully loaded.

SDE User Debugger version 4.2.6 - enhanced

Delay 60 seconds for tape...

Patch StartCI flag to force CI to run on this console

Loading CI...

Command Interpreter Version xx/xx/xx xx:xx

CI DEFINITIONS:

If, within 5 minutes, the system does not respond with these prompts refer to “Steps for Deviations” on page 115.

7. Type:

<ctrl+B>

The system will respond with:

>>

Type:

M<enter>

The system should respond with:

PC = XXXXXX SR=XXXX US=XXXXXXXXXX SS=XXXXXXXX

D0 = XXXXXXXXXXX D1 = XXXXXXXXXXX D2 = XXXXXXXXXXX D3 = XXXXXXXXXXX

D4 = XXXXXXXXXXX D5 = XXXXXXXXXXX D6 = XXXXXXXXXXX D7 = XXXXXXXXXXX

A0 = XXXXXXXXXXX A1 = XXXXXXXXXXX A2 = XXXXXXXXXXX A3 = XXXXXXXXXXX

The X's in this example represent arbitrary hexadecimal digits (i.e. 0..9, 'A', 'B', 'C', 'D', 'E', and 'F'). The actual values listed are irrelevant.

Now type (EXACTLY AS SHOWN BELOW):

SM 9003F0 'XXX'<enter>

The system should respond with:

*

If the system responds with something other than that shown above, repeat the above command (SM 9003F0 'XXX') up to three more times.

-
8. Without removing the Tape 1A from the drive, power the system down. (see “TOPS/VSN Rack System Hard Boot Procedure” on page 130.) Wait about 1 minute before powering up again. After about 5 minutes, the system will again display a sequence of messages on the ASCII terminal, similar to that shown below:

.

.

.

OSP successfully loaded.

SDE User Debugger version 4.2.6 - enhanced

Delay 60 seconds for tape...

Command Interpreter Version xx/xx/xx xx:xx

CI DEFINITIONS:

DIRLISTDIR

You are now running the Command Interpreter using the tape as your file system.

If, within 5 minutes, the system does not respond with these prompts refer to “Steps for Deviations” on page 115.

9. Format the disk. Type:

SCSIINIT<enter>

If your system's LOCAL disk is a 350 MByte disk, the system will respond with:

MERIDIAN DVS SCSI DISK INITIALIZATION

Disk is : Mercury 350 MByte Disk

Is this correct? (Y or N)

If your system's LOCAL disk is a 160 MByte disk, the system will respond with:

MERIDIAN DVS SCSI DISK INITIALIZATION

Disk is : Seagate 1/4 Wide 160 MByte Disk

Is this correct? (Y or N)

If the correct disk type for your system is not displayed, contact your NT representative. Otherwise, type:

Y<enter>

The system will respond with another query:

Reformat? (Y or N)

Type:

Y<enter>

If a typing error was made while entering the above data, begin executing "TOPS/VSN Software Installation" on page 23 to recover.

-
10. After approximately 30 minutes¹, the following messages should then be displayed:

Formatting complete

Spindle initialization completed

Standard file server initialization part 1 version 3.1.2

Do you wish to reinitialize the File Server?

Type:

Y<enter>

The system will then respond with:

Using the standard defaults.

Volume Name ->

Type:

VSNFS1<enter>

If the system responds that VSNFS1 is already used, i.e. does not accept this name, it is because the command “**SM 9003F0 ‘XXX’**” in step 7. on page 25 was typed incorrectly.

You will need to start the procedure again from step 1. on page 23.

1. The Seagate 160 MByte disk will complete in about 15 minutes.

If the command “**SM 9003F0 ‘XXX’**” in step 7. on page 25 was typed correctly, the system will respond with:

Volume ID ->

Type:

101<enter>

If a typing error was made while entering the above data, type:

<Ctrl-A>

and begin executing step 9. on page 26 again.

11. The system will then respond with:

Volume Name= VSNFS1

Volume ID= 101

Enter new configuration parameters

Respond to each of these prompts with either a <enter> (thereby, requesting that the default be used), or by overriding the default by entering a new value, as indicated in the table below:

<i>Configuration Item</i>	<i>Default</i>	<i>Change To</i>
<i>Number of Object Tasks</i>	<i>10</i>	<i>30</i>
<i>Number of Agent Tasks</i>	<i>5</i>	
<i>Number of Open Files</i>	<i>50</i>	<i>81</i>
	<i>100</i>	
<i>Number of Open File Clients</i>	<i>200</i>	
	<i>4</i>	
<i>Number of Small Cache Frames</i>	<i>0</i>	<i>400</i>
	<i>30</i>	
<i>Number of Large Cache Frames</i>	<i>10</i>	
	<i>50</i>	
<i>Number of Backup Agent Buffers(0..16)</i>	<i>3</i>	
	<i>0</i>	
<i>Number of Helix Communication Buffers</i>	<i>500</i>	
	<i>5</i>	
<i>Number of FOS Communication Buffers</i>	<i>3000</i>	
	<i>1</i>	
<i>Number of Users</i>	<i>3000</i>	
	<i>FALSE</i>	
<i>Daily audit time - HOUR</i>		<i>TRUE</i>

If a typing error was made while entering the above data, type:

<Ctrl-A>

and begin executing step 9. on page 26 again.

If no typing error was made, the system will respond with:

Part 1 has completed successfully.

Initialization complete

If the system responds with a series of messages, significantly different than that shown above, see “Steps for Deviations” on page 115 for further information.

If a system RESTORE is being performed, (i.e. the system is being installed from a BMS BACKUP tape), go to step 3. on page 118.

-
12. Carefully verify the spelling of the following command before pressing <enter>. If you make a typing error, the system may not detect it because the syntax might be valid. If you mistype this command, stop and contact your NT representative.

Write the disk boot volume by typing:

WRBT @TP:IPL.CODE @TP:PH_SYSTEM.SYS<enter>

The system will then display the following messages (it will take about 3 minutes to complete):

*IPL successfully written to disk.
IPL occupies blocks 0 through N1*

*KERNEL successfully written to disk.
KERNEL occupies blocks N2 through N3*

INSTALL=>

Where N1, N2, and N3 are positive numbers (which may vary from one release to another). If the system responded differently than that shown above, repeat this step.

For example, the system may respond with:

*IPL successfully written to disk.
IPL occupies blocks 0 through 19*

*KERNEL successfully written to disk.
KERNEL occupies blocks 50 through 992*

INSTALL=>

You may proceed after the “INSTALL =>” prompt is displayed.

13. Start the File Server by typing:

FORK FS<enter>

After the “INSTALL=>” prompt is displayed, wait about 30 seconds for the File Server to initialize itself. Then type:

LOGOUT<enter>

The system will then respond with:

=> *File Server(s) not available*

Type:

LOGIN L/:LOCAL<enter>

The system will then respond with:

Enter User Name >>

Type:

0<enter>

(Note: This is a zero)

The system will respond with:

Enter Password >>

Type:

0<enter>

(Note: This is a zero. The password will not echo to the terminal.)

The system should respond with:

=> *Accessible File Servers are - LOCAL*

INSTALL=>

If the system did not respond with these messages, repeat this step, starting at “**LOGIN L/:LOCAL<enter>**”

14. Now set the work directory by typing:

W :LOCAL<enter>

The system should then respond:

=> *:LOCAL*

INSTALL=>

Note: If this response is not received, then reenter the “**W :LOCAL**” command.

Type:

FLAGS PROMPT OFF<enter>

The system will respond with:

=> PROMPT is OFF

If this response is not received, then reenter the “**FLAGS PROMPT OFF**” command.

Now type:

MAKEPATH :LOCAL :LOCAL:LOCAL<enter>

After about 3 minutes, the system will respond with:

*Linking dir :LOCAL
...as path :LOCAL:LOCAL[RWLU]
INSTALL=>*

If this response is not received, then execute the previous step, beginning at “**LOGOUT<enter>**” (i.e. follow the procedure again from that point onwards).

15. Type:

COPYDIR @TP:MINISYS :LOCAL:LOCAL +R<enter>

The system will then respond with:

*COPYDIR Version xx/xx/xx xx:xx
OK to create temporary backup files and console file in :LOCAL (Y or N)?*

Type:

Y

The system will then respond with a series of messages similar to that shown below. After about 10 minutes, the Command Interpreter prompt (“*INSTALL=>*”) will be displayed.

Copying :CI.CODE

.

.

Copying :PP_SYSTEM.SYS

Copying :PH_SYSTEM.SYS

.

.

Creating directory :UTILS

.

.

Linking :CI.CODE as :INSTALL:TOOLS:CI.CODE

If this series of responses is not received, then repeat this step, from the beginning.

16. After the previous step has successfully completed (“*INSTALL=>*” prompt is displayed):
 - a) remove the tape from the tape drive
 - b) power down the complete system (see “TOPS/VSN Rack System Hard Boot Procedure” on page 130.)
 - c) wait about 1 minute
 - d) power up the system (see “TOPS/VSN Rack System Hard Boot Procedure” on page 130.)

The system should reboot from the disk in a similar manner as when the system was booted from tape. After about 5 minutes, the system should display several boot messages, culminating in a display similar to the following:

Loading Central Maintenance

Central Maintenance Program Failed to load:

Could not open :LOCAL:VSS:VSS.PD.TEXT, IO result 102

Command Interpreter Version xx/xx/xx xx:xx

CI Definitions:

WORKDIR

The last line displayed (i.e. the “>”) is the command interpreter prompt.

If, within 5 minutes, the system does not respond with this prompt refer to “Steps for Deviations” on page 115.

17. **If this is a new install**, initialize the Tape System, by typing the following command:

FORK CTAPE.CODE<enter>

The system will respond with another command interpreter prompt (i.e. “>”). After the prompt is displayed, wait 1 minute and then continue with step 20. on page 38.

18. **If this is an upgrade**, Change Disk Small Cache Frame parameters which is done by positioning the cursor on “System Administration” and pressing the <Enter> key.
 - a) Position the cursor on “Utilities” and press the <Enter> key.
 - b) Position the cursor on “File Processor Admin” and press the <Enter> key.
 - c) Position the cursor on “H.A. Prime Processor”.
 - d) Press the “Region Level” softkey.
 - e) Position the cursor on the “File Server” line containing “VSNFS1”.
 - f) Press the “Change Region” softkey.

-
- g) Repeatedly press the <Enter> key until the cursor is on the line “Number of Small Cache Frames”.
 - h) Change the number “575” to “400”.
 - i) Press the “Exit Screen” softkey followed by the “Save and Exit” softkey.
 - j) Move the cursor down to the “file Server” line containing “VSNFS2”.
 - k) Press the “Change Region” softkey.
 - l) Repeatedly press the <Enter> key until the cursor is on the line “Number of Small Cache Frames”.
 - m) Change the number “100” to “200”.
 - n) Press the “Exit Screen” softkey followed by the “Save and Exit” softkey.
 - o) Press the “Exit Screen” softkey.
 - p) Press the “Exit Service” softkey 3 times to return to the VSN Main Menu.
 - q) Log out of the VSN.
 - r) Reboot the system.
19. Do the following from the M4020 terminal:
- a) Login to the system as SUPERUSER.
 - b) From the main menu, enter System Administration.
 - c) Enter Maintenance and press the Cabinet State softkey.
 - d) Locate the cabinet and slot for the FOS Manager PRU in your system:

System Type	Cabinet	Slot
Tower	3	12
Rack	1	4

- e) Position the cursor on the appropriate slot and press the Next Level softkey.
- f) Position the cursor on the FOS Manager PRU.
- g) Press the More Softkeys softkey.
- h) Press the Courtesy Down and then the Down Only softkeys.
- i) Wait for the FOS Manager PRU to enter the “Down” state.

- j) Locate the DVIX Application Processor SRU in your system:

System Type	Cabinet
Tower	1
Rack	2

- k) Position the cursor on the DVIX Application Processor SRU.
- l) Press the Courtesy Down softkey. (Bringing down the FOS Manager PRU causes the DVIX SRU to courtesy down so this SRU may already be in the “down” state.)
- m) Wait for the DVIX Application Processor SRU to enter the “Down” state.
- n) Locate the File Server-2 PRU in Cabinet 1 Slot 6.
- o) Position the cursor on the File Server-2 PRU.
- p) Press the Courtesy Down and then the Down Only softkeys.
- q) Wait for the File Server-2 PRU to reach the “Down” state.
- r) Press the Exit softkey three times to return to the Main Menu.
- s) Position the cursor on Command Interpreter and press enter.
- t) The system will respond with:

Enter Password>>

- u) Type:

0<enter>

Note: This is a zero. The password will not echo to the screen. The system will respond with:

*=>:LOCAL:CI_DIR
>*

- v) Type:

SEARCH + :LOCAL:UTILS :LOCAL:XUTILS <enter>

The system will respond with:

```
=> :LOCAL:CI_DIR * :LOCAL:UUTILS :LOCAL:XUTILS  
>
```

w) Type:

```
REMOVEDIR :LOCAL:NEW_UTILS -P <enter>
```

20. Insert TOPS/VSN Tape 2 in the drive and wait about 1 minute before typing:

```
TRET<enter>
```

If the system responds with a message that it could not locate user specified tape server retype the command (**TRET<enter>**).

The system will respond with:

```
TRET Version AD03  
Do NOT remove the tape cartridge until the tape is no longer moving!  
Retensioning tape...
```

After about 5 minutes, when the tape retensioning has completed, the command interpreter prompt will be redisplayed (>).

Now:

- a) Remove the tape.
- b) Clean the tape drive head.
- c) Insert the tape.
- d) Wait 1 minute before continuing to the next step.
- e) Now start the Tape Server by typing:

```
FT<enter>
```

The system will respond with:

```
>
```

- f) Wait 2 minutes before continuing to the next step.

If an error occurs at this point, it is most likely that the tape is unreadable.
Use another tape and repeat this step.

21. Obtain the release utilities by typing (note that the “1” in DV1TAPE2 is the number 1, not the letter I),

COPYDIR :#TAPE:DV1TAPE2:UUTILS :LOCAL:NEW_UTILS -P<enter>

The system will respond with:

COPYDIR Version xx/xx/xx xx:xx

OK to create temporary backup file and console file in :LOCAL:CI_DIR (Y or N)?

Respond by typing:

Y

After 2 to 3 minutes, the system will respond with the COPYDIR statistics and the CI prompt,

>

22. The `INSTALL_VSN` command begins the process of loading the software from tape to disk. This command contains three parameters:
 - **SYS_NAME** - This is the customer defined site identifier used in logs, OM reports, and Locality Database printouts. In the command below, substitute the system name of your choice (8 characters or less) for [Sys_Name] or enter **VSN1** to use the default system name.

- **SITE_NUM** - This identifies which prompts to install. Choose the correct site number from the applicable list below and enter it in place of [Site_Num].

U.S. Site Numbers

- 1 - Michigan Bell
- 2 - Ohio Bell
- 3 - Illinois Bell
- 4 - Wisconsin Bell
- 5 - Indiana Bell
- 6 - New England Bell
- 7 - New York Bell
- 8 - Pennsylvania Bell
- 9 - C and P Bell

Canadian Site Numbers

- 1 - Bell Canada
- 2 - Alberta (English Only)
- 3 - British Columbia (English Only)
- 4 - New Brunswick
- 5 - Quebec
- 6 - Manitoba (English Only)
- 7 - Maritime (English Only)
- 8 - New Foundland (English Only)
- 9 - North West (English Only)
- 10 - Prince Edward Island (English Only)
- 11 - Saskatchewan (English Only)

- **CONFIG** - This specifies whether the system has 24 or 48 channels and whether it should be bilingual or unilingual. Choose the number below which identifies your system and substitute that number in place of [Config].

U.S Configurations

1 - 24 Channel System (Tower Configuration, 5 Cabinets)

2 - 48 Channel System (Tower Configuration, 7 Cabinets)

Canadian Configurations

1 - 24 Channel Unilingual System (English Only)

2 - 48 Channel Unilingual System (English Only)

3 - 24 Channel Bilingual System (Eng./Fr. or Fr./Eng.)

4 - 48 Channel Bilingual System (Eng./Fr. or Fr./Eng.)

For example,

```
:LOCAL:NEW_UTILS:INSTALL_VSN VSN1 1 4
```

would install a 48 channel bilingual system with the Bell Canada prompts and VSN1 as the system name if installing a Canadian system. If a U.S. system is being installed, the same example would install a 48 channel Rack system with the Michigan Bell prompts and VSN1 as the system name..

If any of the parameters you enter are not valid, you will be prompted to enter them later in the install.

Now enter the command below, substituting the appropriate values for [Sys_Name], [Site_Num], and [Config].

```
:LOCAL:NEW_UTILS:INSTALL_VSN [Sys_Name] [Site_Num] [Config]<enter>
```

The system should respond with:

COUNTRY IS <x>

.

.

Creating :LOCAL:NEW

COPYDIR Version xx/xx/xx xx:xx

.

.

Copying

.

.

.

The system will now copy all the software from the tape to disk. Although this procedure takes about 1 hour and 35 minutes to complete, monitor the system messages displayed on the terminal for about 10 minutes (before leaving the system unattended) to ensure that the system has not stopped (this might occur if a typing error was made).

Note that if the download completes in a much shorter time than listed above such as 30 minutes or an hour; the download may have failed due to a bad tape. The presence of “bad block” and “tape read” error messages can also indicate a bad tape.

In such a case, if this is a new install, reexecute step 17. on page 35. and use another copy of Tape 2, then continue the install from this step. If this is an upgrade, reexecute step w) on page 38 and use another copy of Tape 2, then continue the upgrade from this step.

You may see some messages that mention “ERROR executing line xx ==> Failed SDMGR.add_table.” Do not be concerned about these messages because they are a normal part of the installation process.

After the software has been copied from tape to disk, the following messages will appear:

If a new install is being performed, type OK<enter> to continue.

If an upgrade is being performed, halt all VSN Call Processing as described in

As stated by these messages, the next action to take depends on whether an upgrade or a new install is being performed. Continue with the following procedure that applies to your situation.

23. **IF THIS IS A NEW INSTALL**, skip to step 25. on page 44
24. **IF THIS IS AN UPGRADE**, halt all VSN Call Processing as follows:
 - a) Press the Main Menu key to perform the following in a separate window.
 - b) Busy trunks between DMS and VSN. This will allow calls in progress to gracefully complete. To do this:
 - (i) From the VSN Main Menu, enter ACPE Maintenance.
 - (ii) Position the cursor on an “InService” ACPE.
 - (iii) Press the Manbusy softkey.
 - (iv) Press the Confirm softkey.
 - (v) Repeat for each “InService” ACPE.
 - c) After all calls are complete, busy the datalinks between the DMS and the VSN. To do this:
 - (i) From the VSN Main Menu, position the cursor on Maintenance, under System Administration.
 - (ii) Press <enter>.
 - (iii) Press the Cabinet State softkey.
 - (iv) Position the cursor on the LANlink SRU.
 - (v) Press the Next Level softkey.
 - (vi) Press the More Softkeys softkey.
 - (vii) For each LIU-HDLC/RS-232 datalink PRU:
 - Position the cursor on the datalink PRU.
 - Press the Courtesy Down softkey.

-
- (viii) Press the Exit Level softkey once to return to the Cabinet 1 Shared Resource Units Screen.
 - d) Courtesy down all the ACPEs in the system. To do this:
 - (i) Use the Next Cabinet softkey and the Next Level softkey to go to the cabinet(s) containing the ACPE(s) in your system. Refer to “TOPS/VSN Hardware/Software Configurations” on page 134 to determine the location of your ACPE(s).
 - (ii) Position the cursor on the ACPE PRU.
 - (iii) Press the Courtesy Down softkey followed by the Down Only softkey.
 - (iv) For 48 channel systems, repeat step (i) through step (iii) for the second ACPE.
 - (v) Exit SAS Maintenance by pressing the Exit Level softkey, followed by the Exit Service softkey.
 - e) Use the window key to return to the Installation window.
25. At the '>>' prompt, type:

OK<enter>

The system should respond with:

```
COPYDIR Version xx/xx/xx xx:xx
.
.
.
**** INSTALL_VSN COMPLETE ****
```

Any warning messages (i.e. “Could not remove...”) should be ignored.

Approximately 25 minutes are required before the *INSTALL_VSN COMPLETE* message is displayed. It is possible that during this time, you may be prompted to enter parameters that were entered previously but are invalid. If the system presents the prompt “Enter Selection >>” or “Enter Name >>” and waits, type the appropriate response and press <enter>.

*Note that if the system responds with the *INSTALL_VSN COMPLETE* message within several minutes of typing *OK*, the exec has probably failed. If this is a new install, reexecute step 17. on page 35 and continue from there. If this is an upgrade, go to step w) on page 38 and continue from there.*

26. Remove the tape from the tape drive.

-
27. Reset Disk Cache Frame parameters which is done by positioning the cursor on “System Administration” and pressing the <Enter> key.
 28. Position the cursor on “Utilities” and press the <Enter> key.
 29. Position the cursor on “File Processor Admin” and press the <Enter> key.
 30. Position the cursor on “H.A. Prime Processor”.
 31. Press the “Region Level” softkey.
 32. Position the cursor on the “File Server” line containing “VSNFS1”.
 33. Press the “Change Region” softkey.
 34. Repeatedly press the <Enter> key until the cursor is on the line “Number of Small Cache Frames”.
 35. Change the number “400” to “575”by typing:

575 <enter>
 36. Press the “Exit Screen” softkey followed by the “Save and Exit” softkey.
 37. Power down the complete system, wait about 1 minute, and power up again. (see “TOPS/VSN Rack System Hard Boot Procedure” on page 130.)

3.7 80 MB Disk Installation

1. Sign on to the system as SUPERUSER (see “Default Userids and Passwords” on page 162 for valid userids and passwords). Once logged on, you will be presented with the TOPS/VSN main menu.

If this is an upgrade, the bulk of the 80 MB Disk Installation is not required, skip to step 3. on page 130.

For a new install or for a system restore, continue with the instructions below.

2. Select “System Administration” from the main menu by positioning the cursor over it (the up and down arrow cursor keys are used), and press ENTER. The System Administration menu will then be displayed.
3. Select “Maintenance” from the system administration main menu by placing the cursor over it (the up and down arrow cursor keys are used), and pressing ENTER. The “Maintenance Services - Faulty Units” menu will then be displayed. You may notice that one PRU is listed as faulty (“File Server - 2”). At this point of the installation, this is expected -- no action is required.
4. Press the “Cabinet State” and “More Softkeys” softkeys.
5. Courtesy down each SRU configured within the system (Except for the Prime Processor and the LanLink). This is accomplished by:
 - a) Position the cursor over an SRU and press the “Courtesy down” softkey.
 - b) Press the “Down Only” softkey. (“Down Only” not applicable for Digital Trunk Link SRUs).
 - c) Use the “Next Cabinet”/“Previous Cabinet” softkeys to move from one cabinet to the next/previous one; use the up/down cursor keys to position the cursor over a particular SRU in each cabinet.
 - d) Repeat these steps for each SRU in the system (except for the Prime Processor and the LANLink).

Note: It is not necessary to wait on all SRUs to go down before moving from cabinet to cabinet. However, you should go back to each cabinet and verify that all SRUs are in a Down state except the Prime Processor and the LanLink.

6. Once all of the specified SRUs have been taken out of service (i.e. the above procedure was completed), press the “Exit Service” softkey, the system will now display the System Administration main menu.
7. Select “Utilities” and press ENTER. The utilities menu will then be presented.

8. Select “File Processor Admin”. A list of currently configured file processors will be displayed, similar to that shown in Figure 1:.

UTILITIES SERVICE		- File Processor List	

Cab	Slt	Device Type	Device Name
1	6	H.A.Prime Processor	(HAPP #1)

Figure 1: File Processor Administration Main Menu

9. Press the softkey “Disk Level”. The system will then display the currently configured disks, similar to that shown in Figure 2:¹.

UTILITIES SERVICE		- Disk List	

Location (C/S): 1/ 6		Device Type: H. A. Prime Processor	
		Device Name: (HAPP #1)	

Disk Address	Disk Type		
0	Mercury 350 Mbyte Disk		

Figure 2: File Processor Administration Disk List Menu

1. If the LOCAL disk in your VSN system is a Seagate 160 MByte disk, it will be displayed instead of the Mercury 350 MByte Disk in all File Processor Admin. screens.

10. Press the softkey "Add Disk". The system will then display a disk selection display, similar to that shown in Figure 3:

```
UTILITIES SERVICE          -  Disk Type Selection
-----
Mercury 350 MByte Disk
1/4 Wide 80 MByte Disk
1/4 Wide 160 MByte Disk
Seagate 160 MByte Disk
```

Figure 3: File Processor Administration Disk Type Selection Menu

11. Position the cursor over "1/4 Wide 80 MByte Disk" using the up and down cursor keys. Press the "Select Item" softkey. The system should then display a modified disk list menu, similar to that shown in Figure 4:

```
UTILITIES SERVICE          -  Disk List
-----
Location (C/S):  1/ 6   Device Type: H. A. Prime Processor
                   Device Name: ( HAPP #1 )
-----
Disk Address      Disk Type
    0              Mercury 350 MByte Disk
    2              1/4 Wide 80 MByte Disk   DON'T FORMAT
```

Figure 4: File Processor Administration Disk List Menu

12. Ensure that the cursor is positioned over the “1/4 Wide 80 MByte Disk” entry.
 - Press the “Connect Disk” softkey.
 - Press the “Halt SCSI Bus” softkey.
 - Press the “Restart SCSI Bus” softkey.

The system will then momentarily display a progress message at the top of the menu “*Restarting System Bus, Please Wait*”. Wait until that message has been cleared.

 - Now press the “Exit Screen” softkey.
13. Press the “Region Level” softkey. The system will display a region list menu, similar to that shown in Figure 5:¹

UTILITIES SERVICE		- Region List	
-----		-----	
Location (C/S): 1/ 6		Device Type: H. A. Prime Processor	
		Device Name: (HAPP #1)	
-----		-----	
Region Size	Region Type	Name (if File Server)	Volume ID (if File Server)
1000	IPL		
500	LOGGER		
5000	SWAPPER		
248460	File Server	VSNFS1	101

Figure 5: File Processor Administration Disk List Menu

1. The actual size numbers shown will be different if your VSN system has a Seagate 160 MByte LOCAL disk.

-
14. Press the “Add Region” softkey. The system will display a region type selection menu, similar to that shown in Figure 6:.

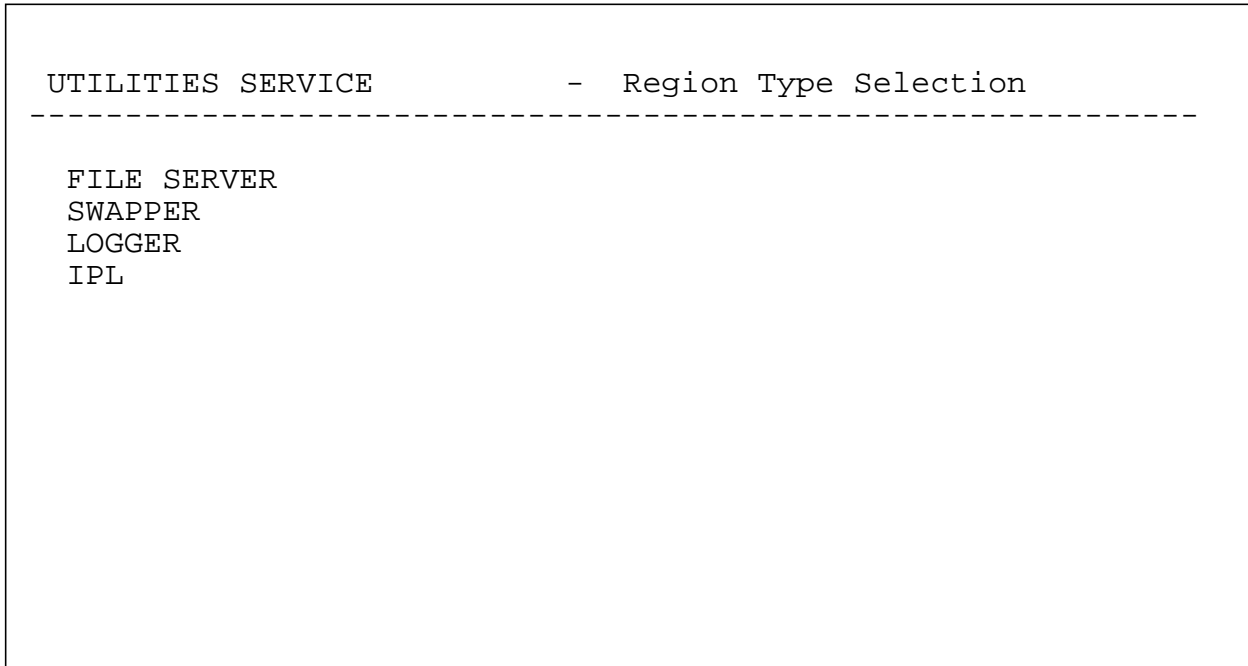


Figure 6: File Processor Administration Region Selection Menu

15. Select the "File Server" entry by positioning the cursor over this entry via the up and down cursor keys. Press the "Select Item" softkey. The system will then display a region characteristics menu, similar to that shown in Figure 7:.

UTILITIES SERVICE - Add a Region			

Location (C/S): 1/ 6		Device Type: H. A. Prime Processor	
		Device Name: (HAPP #1)	

Region Type: FILE SERVER		File Server Name :	
Region Size: 77785		File Server Volume ID :	

Disk Address	Total Space	Available Space	Space To Use In New Region
0	255360	0	0
2	78185	0	77785

Figure 7: File Processor Administration Region Characteristics Menu

16. Datafill the “File Server Name” field as VSNFS2 (Note: Uppercase must be used), and the “File Server Volume ID” field as 102, using the RETURN key on your M4020 terminal to move between the various input fields.

Press the “More Details” softkey. The system will then display another screen similar to that shown in Figure 8:. In those instances where the default values must be changed, those values have been highlighted (e.g. **30**). Use the <return> key to move from one field to the next.

UTILITIES SERVICE - Config. a File Server - Page 1	

Location (C/S): 1/ 6	Device Type: H. A. Prime Processor
	Device Name: (HAPP #1)

File Server Name	VSNFS2
File Server Volume ID	102
Number of Object Tasks	30
Number of Agent Tasks	5
Number of Open Files	81
Number of Open File Clients	100
Number of Small Cache Frames	100
Number of Large Cache Frames	4
Number of Backup Agent Buffers	0
Number of Helix Communication Buffers	30
Number of FOS Communication Buffers	10
Number of Users	50

Figure 8: File Processor Administration File Server Configuration Page 1

17. Press the “Next Page” softkey. The system will then display Page 2 of the File Server Configuration menu, similar to that shown in Figure 9:. As in the last step, in those instances where the default values must be changed, those values have been highlighted (i.e. **20**).

Use the RETURN or TAB keys to move the cursor to the next field. To change the setting of a check box, position the cursor over the box to be changed and press the Space Bar to toggle the selection.

Note that the field “Daily File Server Audit Time” must be changed, and that there are actually two fields within this time value: HH and MM for hours

and minutes. The RETURN key may be used to move from the hours input field to the minutes input field.

```

UTILITIES SERVICE                - Config. a File Server - Page 2
-----
Location (C/S):  1/ 6   Device Type: H. A. Prime Processor
                   Device Name: ( HAPP #1 )
-----
File Server Write Protected                
Users must wait during File Server Audit  
Administrator Access Only                 
Virtual File Copies Disabled              
Daily Audit Disabled                      
Do Initial FID Directory and Bit Map Audit 
Do Initial File Audit                    

Daily File Server Audit Time              03:20

Transactional File Set Commit Timeout    500
Static RAM Commit Frequency              5
Static RAM Commit Timeout                3000

Max Security Agent Communication Errors   1
User Audit Delay                         3000
Default File Protect Mask                 755      (Octal)

```

Figure 9: File Processor Administration File Server Configuration Page 2

18. To commit these file server configuration requests:

- Press the “Exit Screen” softkey.
- Press the “Save & Exit” softkey.

The system will then display an earlier menu.

- Press the “Exit Screen” softkey.
- Press the “Save & Exit” softkey.

The system will then momentarily display the progress message “*Initializing File Server Region, please wait*”.

About 15 seconds later, the system will then display a menu, similar to that shown in Figure 10:.

```

UTILITIES SERVICE           - Region List
-----
Location (C/S):  1/ 6      Device Type: H. A. Prime Processor
                        Device Name: ( HAPP #1 )
-----

Region  Region Type      Name                Volume ID
Size                                     (if File Server)   (if File Server)

1000    IPL
500     LOGGER
5000    SWAPPER
248460  File Server          VSNFS1              101
77785   File Server          VSNFS2              102

```

Figure 10: File Processor Administration Final Disk List Menu

If the region creation is successful, continue with step 19. on page 57.

If the file server region **could not** be created (a log will be present in the system logger indicating that it was unable to create a static SRAM segment), then follow the procedure below.

- a) Press the “Ignore and Exit” softkey to quit the add region process, returning to the processor level as shown in Figure 11:.

```

UTILITIES SERVICE           - File Processor List
-----
Cab Slt Device Type          Device Name
-----
 1   6  H.A.Prime Processor   ( HAPP #1 )

```

Figure 11: File Processor Administration Menu

b) Press the “Disk Level” softkey, listing a display similar to Figure 12:.

```

UTILITIES SERVICE          -  Disk List
-----
Location (C/S):  1/ 6    Device Type: H. A. Prime Processor
                       Device Name: ( HAPP #1 )
-----
Disk Address          Disk Type
    0                Mercury 350 MByte Disk
    2                1/4 Wide 80 MByte Disk DON'T FORMAT

```

Figure 12: File Processor Administration Disk List Menu

- c) Move the cursor to the line on which the 80 MByte Disk is shown and press the “Delete Disk” softkey to remove the 80 MByte entry.
- d) Press the “Delete” softkey to confirm. This will display Figure 13:.
- e) Press the “Halt SCSI Bus” softkey.
- f) Press the “Restart SCSI Bus” softkey.

```

UTILITIES SERVICE          -  Disk List
-----
Location (C/S):  1/ 6    Device Type: H. A. Prime Processor
                       Device Name: ( HAPP #1 )
-----
Disk Address          Disk Type
    0                Mercury 350 MByte Disk

```

Figure 13: File Processor Administration Disk List Menu (after Delete)

-
- g) Press the “Exit Screen” softkey.
h) From the NT220 terminal connected directly to the Prime Processor,
Type:

<ctrl+B>

The system will respond with:

>>

- i) Type:

M<enter>

The system should respond with:

PC = XXXXXX SR=XXXX US=XXXXXXXX SS=XXXXXXXX

D0 = XXXXXXXX D1 = XXXXXXXX D2 = XXXXXXXX D3 = XXXXXXXX

D4 = XXXXXXXX D5 = XXXXXXXX D6 = XXXXXXXX D7 = XXXXXXXX

A0 = XXXXXXXX A1 = XXXXXXXX A2 = XXXXXXXX A3 = XXXXXXXX

The X's in this example represent arbitrary hexadecimal digits (i.e. 0..9, 'A', 'B', 'C', 'D', 'E', and 'F'). The actual values listed are irrelevant.

- j) Type the following:

SM 9003F0 'XXX'<enter>

The system should respond with:

*

If the system responds with something other than that shown above,
repeat the above command (SM 9003F0 'XXX') up to three more times.

k) Type:.

G<enter>

G<enter>

- l) Power the system down. Wait about 1 minute, and power up the system again. (see “TOPS/VSN Rack System Hard Boot Procedure” on page 130.) The system will require approximately 10 to 15 minutes to completely initialize itself.

Continue executing step 1. on page 46.

19. To exit from the File Processor Administration Menus:

- Press the “Exit Screen” softkey.
- Press the “Exit Service” softkey.
- Press the “Exit Service” softkey.
- Press the “Exit Service” softkey.

20. **If you are at this step as a result of a System Restore**, return to Step 35. on page 124.

21. Reboot the VSN (see “TOPS/VSN Power Up / Power Down Procedures” on page 130.) The system will require approximately 10 to 15 minutes to completely initialize itself.

22. Be sure to set the system time as described in the “TOPS/VSN Power Up / Power Down Procedures” on page 130.

23. The next step to follow depends on:

- a) If you received a patch tape (Vyy07xx_PATCH_nnn) you may continue with section “TOPS/VSN Patch Installation” on page 58.
- b) If you did not receive a patch tape you may skip section “TOPS/VSN Patch Installation” on page 58 and continue with section “TOPS/VSN Feature Installation” on page 59.
- c) If you did not receive a feature authorization tape you may skip section “TOPS/VSN Feature Installation” on page 59 and continue with “TOPS/VSN Datafill Modification” on page 61.
- d) If no datafill changes are required, continue with “TOPS/VSN DVIX Installation” on page 74.

3.8 TOPS/VSN Patch Installation

As indicated in “TOPS/VSN Tape Content Overview” on page 12, an optional patch tape may have been delivered with the TOPS/VSN Software. It would be labeled VSNnnRTM, PATCH_0xx¹ for all sites (ex: VSN07RTM, PATCH_000)

If you do not have a patch tape, assume that there are currently no patches for this release.

To install any patches refer to the document ALLVSNAD - VSN RELEASE NOTE ADDENDUM. This document will give information on any patches and instructions on their application.

This completes the “TOPS/VSN Patch Installation”. Continue with “TOPS/VSN Feature Installation” on page 59.

1. As noted earlier, “nn” and “xx” will vary from one release to the next.

3.9 TOPS/VSN Feature Installation

As indicated in “TOPS/VSN Release Deliverables” on page 11, a TOPS/VSN Feature Authorization tape will have been delivered with the TOPS/VSN Software if any optional VSN features were purchased. If no optional features were purchased with the current VSN release but optional features were purchased with a previous VSN release then a feature authorization tape should still have been delivered with the current VSN release of the standard VSN software load tapes.

3.9.1 Installing the TOPS/VSN Feature Authorization Tape

Install the TOPS/VSN Feature Authorization tape using the following procedure:

1. Ensure that the SDM table FEATURES is not currently being edited. If this table is accessed in the “Edit” mode it must be exited.
2. From the TOPS/VSN Main Menu, enter System Administration.
3. From the System Administration Main Menu, enter Utilities.
4. From the Utilities Main Menu, enter Feature Install.
5. Clean the tape drive heads and then insert the TOPS/VSN Feature Authorization tape into the tape drive.
6. Press the “Install Features” softkey. After the feature installation is complete, the message “Features installed successfully. Enable via Features table.” will be displayed and the status field for those features installed will be updated to “Available”.
7. Remove the feature authorization tape from the tape drive.

The newly installed features may now be enabled as described below.

3.9.2 Enabling/Disabling Optional Features

Enable/disable optional features using the following procedure:

1. Exit out of the Feature Install Utility.
2. Select “Tables” from the Main Menu. Press the “Find” softkey and type:

FEATURES<enter>

3. Press the “Select” and then the “Edit” softkeys. The system will display the FEATURES table.
4. For each feature that you have purchased and would like active, position the cursor over the feature and press the “Change” softkey. Only purchased features should be enabled.

5. Enter “Yes” or “No”, as applicable, in the “Enabled” field and save the change by pressing the appropriate save softkey¹.
6. After all features have been enabled or disabled as desired, exit the SDM table editor by pressing the “Exit” and then the “Save” softkeys.
7. The last step towards enabling/disabling optional features is to reboot the ACPE PRUs. However, if an install or upgrade is being performed at this time then the next section to be covered is the “TOPS/VSN Datafill Modification” on page 61. That section describes changes that require hardbooting the entire VSN upon completion. If those datafill modifications are to be made as part of the install or upgrade, then there is no need to reboot the ACPEs now since they will be rebooted when the system hardboot is performed. If an install or upgrade is not being performed at this time, or no datafill modifications are to be made as part of the install or upgrade, then all ACPE PRUs must be rebooted to effect the changes of enabling/disabling optional features.

This completes the “TOPS/VSN Feature Installation”. Continue with “TOPS/VSN Datafill Modification” on page 61 if applicable.

1. Only those features with a status of “Available” may be enabled. This status is updated by installing the feature authorization tape as described above.

3.10 TOPS/VSN Datafill Modification

Since TOPS/VSN is delivered with reasonable default values for all options, it is unlikely that datafill changes will be required. However, for expediency, the following sections will summarize the most likely changes that might occur. Please read the following sections carefully to insure that all datafill is set as expected. If no datafill changes are required, continue with “TOPS/VSN DVIX Installation” on page 74.

While VSN contains many datafillable items, there are only 2 areas which truly must be datafilled for your system to be operational. These are described below. Other datafillable items come pre-datafilled with reasonable values. See the TOPS/VSN NTPs for further information.

It is suggested that a backup of all customer data be performed after all datafill changes have been completed. This includes all Table data, Prompt Manager data, and Locality Database data.

Note: If the system was upgraded or was installed using a BMS Backup of another VSN, enter the datafill that was previously printed during step 10. on page 17.

3.10.1 T1 Trunk ID Mappings

Each T1 channel is identified by a logical number. This number appears in a DMS table and in a VSN table. The values in these two tables must be the same for calls to be properly processed. To change the datafill in the TOPS/VSN, perform the following procedure:

1. Select “System Administration” from the Main Menu. The system will then display the System Administration Services Main Menu.
2. Select “Configuration”. The system will then display the Configuration Services Menu.
3. Select “Online Update”. The system will then display the Configuration Services Selection Menu.
4. Position the cursor to select “Digital Trunk Link” and press <enter>. The system will then display a menu similar to that shown in Figure 14: below. The actual Cabinets and Slots will vary depending on your system configuration.

```

T1 - Node Selection
-----

Cabinet : 6Slot : 4

Cabinet : 4Slot : 8

```

Figure 14: Example T1 Node Selection

5. Select the appropriate T1 which you wish to modify the configuration of by positioning the cursor over the desired item and pressing the ENTER key on your M4020 terminal. The system will then display another menu. Select “Trunk ID Mapping” from this menu. The system will then display a menu similar to that shown below:

```

T1 - Trunk ID Mapping
-----
DMS CLLI:      AABS-DMS                Link Config: InService
-----
Chan  Trunk          Chan  Trunk
Num.  Ident.  Channel Config.  Num.  Ident.  Channel Config.
 01   0025   InService          13   0037   InService
 02   0026   InService          14   0038   InService
 03   0027   InService          15   0039   InService
 04   0028   InService          16   0040   InService
 05   0029   InService          17   0041   InService
 06   0030   InService          18   0042   InService
 07   0031   InService          19   0043   InService
 08   0032   InService          20   0044   InService
 09   0033   InService          21   0045   InService
 10   0034   InService          22   0046   InService
 11   0035   InService          23   0047   InService
 12   0036   InService          24   0048   InService

```

Figure 15: Example T1 Trunk ID Mapping Menu

Use the TAB key to move the cursor from field to field.

Note: The DMS CLLI (see the next section) may also be modified in this screen. Use the TAB key until the cursor is positioned over the DMS CLLI input field at the top left of the menu.

6. Modify each channel as appropriate and then press the “Exit” softkey, the “Save & Exit softkey”, and the “Exit” softkey again.
7. At this point, if you wish to modify the logical trunk ID mappings (or DMS CLLIs) of other T1 Trunks, then modify these as described earlier.
8. Once completed, continue to press the “Exit” or “Exit Service” softkeys, until the Main Menu is displayed.

A feature is provided that allows the N+1 T1 to be set up as a hot standby. By placing this T1 as hot standby, you will be protected from a loss of service if any of the other T1s should ever fail. In that case, the failed T1 will be out of service, but the N+1 T1 will take over from then on.

For consistency with previous releases, the default state of the spare T1 link is “MANBUSY”. You have the option to change the state of the T1 to “STANDBY BUSIEDOUT” (the “hot standby state”). If you wish to do so, follow these steps:

1. Select “T1 Maintenance” from the Main Menu. The system will then display the T1 Link Maintenance Menu.
2. Position the cursor on the T1 Link whose state is “Manbusy” and press the following softkeys:
 - Change State
 - StandBy
 - Force Standby
 - Return
3. When the T1 Link State changes to “StandBy BusiedOut” press the following softkeys:
 - Save Config
 - Exit

At this point you are back at the VSN Main Menu and you may continue with the next section.

3.10.2 DMS CLLI

The previous section described the procedure by which a DMS CLLI can be modified. The purpose of this section is to describe how to modify a datafill table to ensure that the DMS CLLI changed in the T1 Trunk ID Mapping Menu is consistent with the DMS CLLI identified in the datalink configuration table.

While the DMS CLLI that occurs in these two tables need not match the CLLI of the actual switch the TOPS/VSN is connected to, it is advisable that they do so as to prevent confusion.

To change the datalink configuration DMS CLLI, perform the following proce-

dure:

1. Select “Tables” from the Main Menu. Press the “Find” softkey and type:

DATALINK_CONFIG<enter>

2. Press the “Select” and then the “Edit” softkeys. The system will then display a menu similar to that shown in the figure below.

Link Name
DMS CLLIX.25 PRUVSN CL PRU
VSN-1AABS-DMS8220000094410000
VSN-2AABS-DMS8220000194410000

Figure 16: Example of Datalink Configuration Table

3. Change the DMS CLLIs as necessary (via the “CHANGE” softkey).¹ Once finished, press the “Save and Exit”, then “Exit”, then the “Save” softkeys. Continue exiting each screen until the main menu is displayed.

3.10.3 Physical Plant Alarms Datafill

If this system is a rack system, the name displayed/printed during an alarm can be datafilled by the customer. This ability can be used anytime, but it is most useful in sites with multiple VSNs. If this is a tower system, skip this section.

To change the physical plant location datafill:

1. Sign on to the system where the changes are to be made. Type:

MAINTENANCE<enter>

for both the USER Id and the PASSWORD request.

Once logged on, you will be presented with the TOPS/VSN Main Menu.

2. Select “Command Interpreter” with the cursor and press <enter>.

1. NOTE: The CLLIs (both of them) indicated in this table and in the T1 table must be identical.

-
3. When asked for a password, type:.

0<enter>

4. When the Command Interpreter prompt is displayed, type:

ALNAMES<enter>

You will be given the choice to use the default names or to type in new ones.

Once the program finishes, type:

EXIT<enter>

to return to the VSN Main Menu.

5. Place cursor on “System Administration” and press <enter>.
6. Place cursor on “Maintenance” and press <enter>.
7. Depress the “Cabinet State” Softkey. You will be placed in Cabinet 1. Move the cursor to slot 14 and hit the “Next Level” Softkey.
8. Press the “More Softkeys” softkey.
9. Place the cursor on “Alarm Subsystem” and press the “Courtesy Down” softkey.
10. Press the “Down Only” softkey.
11. When the Alarm Subsystem PRU State changes to “Down” press the “Put into Service” Softkey.
12. When the Alarm Subsystem PRU State changes to “Working” press the “Exit Level” Softkey.
13. Press the “Exit Service” Softkey.
14. Press the “Exit Service” Softkey.
You are back to the VSN Main Menu.
15. From now on, any alarms generated will display the new names.

3.10.4 Changing the VSN Site Name

The VSN site name is the customer defined site identifier that is printed on LOG and OM reports and on Locality Database printouts. The customer is prompted for the site name as part of the VSN install process, however, the site name may also be changed using the following procedure.

Note that to make the new site name effective, the system must be hardbooted.

1. Login to the VSN to access the VSN Main Menu.

-
2. Cursor to the Command Interpreter item and depress the enter key. This will put you in the HELIX Command Interpreter.
 3. The system will respond with:

Enter Password >>

Type:

0<enter>

Note: This is a zero. The password will not echo to the screen. The system will respond with:

=> :LOCAL:CI_DIR

4. Type:

SEARCH + :LOCAL:UTILS :LOCAL:XUTILS

The system should respond with something like:

*=> :LOCAL:CI_DIR * :LOCAL:UTILS :LOCAL:XUTILS*

5. Type:

FLAGS VERBOSE ON

The system should respond with:

VERBOSE is ON

6. Type:

L :LOCAL:OBJ

The system should respond with a minimum of one ADMIN.OBJ file as follows:

:LOCAL:OBJ

Files:

ADMIN.OBJ

(Note: There may be other .OBJ files depending on your system configuration.)

- The next step depends on the configuration of your VSN system. Use only the commands that are applicable to your system. Go to the appropriate step for your system configuration.

System Configuration	Go to step...
24 channel rack system	step 8. on page 67
48 channel rack system	step 9. on page 67
24 channel tower system	step 10. on page 68
48 channel tower system	step 11. on page 68

- Canadian 24 channel system:

COPY :LOCAL:OBJ:ADMIN.OBJ :LOCAL:OBJ:VZ2ADMIN.OBJ -P +R<enter>

The system will respond with:

Copying :LOCAL:OBJ:ADMIN.OBJ

. . . to :LOCAL:OBJ:VZ2ADMIN.OBJ

Continue with step 12. on page 68.

- Canadian 48 channel system:

COPY :LOCAL:OBJ:ADMIN.OBJ :LOCAL:OBJ:VZ4ADMIN.OBJ -P +R<enter>

The system will respond with:

Copying :LOCAL:OBJ:ADMIN.OBJ
... to :LOCAL:OBJ:VZ4ADMIN.OBJ

Continue with step 12. on page 68.

10. U.S. 24 channel system:

COPY :LOCAL:OBJ:ADMIN.OBJ :LOCAL:OBJ:VX24ADMIN.OBJ -P +R<enter>

The system will respond with:

Copying :LOCAL:OBJ:ADMIN.OBJ
... to :LOCAL:OBJ:VX24ADMIN.OBJ

Continue with step 12. on page 68.

11. U.S 48 channel system:

COPY :LOCAL:OBJ:ADMIN.OBJ :LOCAL:OBJ:VXADMIN.OBJ -P +R<enter>

The system will respond with:

Copying :LOCAL:OBJ:ADMIN.OBJ
... to :LOCAL:OBJ:VXADMIN.OBJ

Continue with step 12. on page 68.

12. For a Canadian system, type:

:LOCAL:VSN_TOOLS:VZ.AREA<enter>

For a U.S. system, type:

:LOCAL:VSN_TOOLS:VX.AREA<enter>

The system will respond with:

*Please enter the name of the system and press <enter>
when finished, or just press <enter> for default name VSN1.*

Follow the above system instruction. Note that the site name is limited to 1-8 characters. If more than 8 characters are typed in only the first 8 are used. If nothing is typed in the default of VSN1 is used.

Also, ignore messages that are not in reference to the exact system being installed. For example, the message “ADMIN24 file used for 24 Rack Mount System not present.” may be received but if the system being installed is not a 24 channel rack mount, ignore the message. If the message does apply to the system being installed, contact your NT representative.

13. The next step depends on the configuration of your VSN system. Use only the commands that are applicable to your system. Go to the appropriate step for your system configuration.

System Configuration	Go to step...
24 channel rack system	step 14. on page 69
48 channel rack system	step 15. on page 69
24 channel tower system	step 16. on page 70
48 channel tower system	step 17. on page 70

14. Canadian 24 channel system:

MOVEPATH :LOCAL:OBJ:VZ2ADMIN.OBJ :LOCAL:OBJ:ADMIN.OBJ -P<enter>

The system should respond with the following message:

*Replacing path :LOCAL:OBJ:ADMIN.OBJ
...with :LOCAL:OBJ:VZ2ADMIN.OBJ (RWLU)*

>

Continue with step 18. on page 70.

15. Canadian 48 channel system:

MOVEPATH :LOCAL:OBJ:VZ4ADMIN.OBJ :LOCAL:OBJ:ADMIN.OBJ -P<enter>

The system should respond with the following message:

*Replacing path :LOCAL:OBJ:ADMIN.OBJ
...with :LOCAL:OBJ:VZ4ADMIN.OBJ (RWLU)*

>

Continue with step 18. on page 70.

16. U.S 24 channel system:

MOVEPATH :LOCAL:OBJ:VX24ADMIN.OBJ :LOCAL:OBJ:ADMIN.OBJ -P<enter>

The system should respond with the following message:

*Replacing path :LOCAL:OBJ:ADMIN.OBJ
...with :LOCAL:OBJ:VX24ADMIN.OBJ (RWLU)*

>

Continue with step 18. on page 70.

17. U.S. 48 channel system:

MOVEPATH :LOCAL:OBJ:VXADMIN.OBJ :LOCAL:OBJ:ADMIN.OBJ -P<enter>

The system should respond with the following message:

*Replacing path :LOCAL:OBJ:ADMIN.OBJ
...with :LOCAL:OBJ:VXADMIN.OBJ (RWLU)*

>

Continue with step 18. on page 70.

18. Power the system down. Wait about 1 minute, and power up the system again (refer to the “TOPS/VSN Rack System Hard Boot Procedure” on page 130).

3.10.5 MMI DataFill

Since the TOPS/VSN is delivered with reasonable default values for man machine interface options, it is unlikely that changes to the MMI datafill will be required. However, the following tables may be modified by the customer. It may be helpful to print the default datafill in these tables for comparison with the previous customer datafill.

NOTE: There may be changes to the default datafill from one VSN release to the next. As a rule, datafill items should not be added or deleted from tables unless the documentation explicitly says to do so. Values may be changed, but it is important that existing datafill is not removed and extra datafill is not added. Making changes improperly may cause the VSN PRU(s) to boot to a Faulty state or to behave in an unexpected manner.

1. DATALINK_CONFIG
2. VSN_SYSTEM¹
3. USER INTERACTION
4. VSN RETRY COUNTS
5. VSN DIGIT TIMING
6. SCREENING_CODES
7. LOC_SCREEN_CODES
8. PROMPTS

Default *Prompts* table datafill may change from one load to the next. For this reason, it may not be possible to exactly copy the prompt datafill from the previous release. Do not add extra prompt segments to any prompt that does not already contain a prompt segment of the same type in the default datafill. Doing so may result in the caller receiving double prompting. Also note that *Prompts* table datafill should be uppercase.

Some MDS prompts have been defaulted to silence in order to conserve available application memory. If MDS is to be activated on this VSN, the craftsperson should refer to NTP 450-1302-105 “TOPS Voice Service Node - AABS Voice Announcements - Canada”, Section 2, for default prompt datafill information.

9. FRENCH_PROMPTS (Canadian bilingual systems only)

Default *French Prompts* table datafill may change from one load to the next. For this reason, it may not be possible to exactly copy the prompt datafill from the previous release. Do not add extra prompt segments to any prompt that does not already contain a prompt segment of the same type in the default datafill. Doing so may result in the caller receiving double prompting. Also note that *French Prompts* table datafill should be uppercase.

10. BILINGUAL_INTERACTION (Canadian bilingual systems only)

For further information on these tables, please consult the appropriate NTP.

1. NOTE: If this VSN is one of multiple VSNs connected to the same DMS, you will have to change the VSN Id in this table in order to make it unique.

NOTE: New voice prompts are sometimes provided between releases through patches.

When these prompts are included in the next release, their names often must be changed. Refer to appendices M,N, and O for a list of any changed prompts and their new names.

The NTP's 450-1301-103 (U.S.) and 450-1301-105 (Canada) contain the text of all VSN prompts. The prompts listed in appendices M,N and O appear in the NTPs under their VSN05 names.

3.10.6 TOPS/VSN Prompt Tables Update Procedure

The following procedure is to be followed whenever there is an update to the table “PROMPTS” or the table “FRENCH_PROMPTS”.¹ It is advised that this procedure be performed during a low traffic period since it requires that traffic be disabled on the affected VSN.

1. Make the necessary changes to the tables “PROMPTS” and/or “FRENCH_PROMPTS”.² Note that datafill for these tables should always be uppercase.
2. Manbusy the T1s using T1 Maintenance from the VSN Main Menu. This will disable traffic from the VSN.
3. Courtesy Down each ACPE(PRU) using Maintenance from within System Administration on the VSN Main Menu.
4. Enter the Command Interpreter from the VSN Main Menu.
5. When prompted for the password, type:

0<enter>

6. Type

FIXAUDEX<enter>

This program will install all the prompts defined in tables “PROMPTS” and “FRENCH_PROMPTS”.

You can ignore any messages of the form:

Error: File not found -- :LOCAL:AUD:xx

Type:

EXIT<enter>

7. Reboot all ACPE PRUs using SAS from the VSN Main Menu.
8. RTS the T1s using T1 Maintenance from the VSN Main Menu.

1. NOTE: SUPERUSER access is required to change the tables “PROMPTS” and “FRENCH_PROMPTS”.

2. NOTE: The table “FRENCH_PROMPTS” does not exist in U.S VSN sites or Canadian Unilingual VSN sites.

3.10.7 Making New Datafill Current

For the datafill changes that have been made in this section to take effect, the VSN must be rebooted. See section “TOPS/VSN Rack System Hard Boot Procedure” on page 130 for instructions. You are not required to do the reboot now, but it must be done before the VSN system is put in service.

You may now continue with “TOPS/VSN DVIX Installation” on page 74.

3.11 TOPS/VSN DVIX Installation

If this is an upgrade, skip this section. Proceed to section “TOPS/VSN Prompt Manager Installation” on page 79.

1. Ensure that a 68020-10 Application Processor is in the appropriate location for your system type:

System Type	Cabinet	Slot
Tower	1	4
Rack	2	8

2. If you have not already done so, sign on to the system as:

SUPERUSER<enter>

for both the USER Id and the PASSWORD request.

Once logged on, you will be presented with the TOPS/VSN main menu (see “Default Userids and Passwords” on page 162).

3. Place the cursor on “System Administration” and press <enter>.
4. Place the cursor on “Maintenance” and press <enter>.
5. Press the “Cabinet State” softkey.
6. Ensure that the FOS Manager is down. Refer to the following table for its location in your system:

System Type	Cabinet	Slot
Tower	3	14
Rack	1	4

- a) Press the “Next Cabinet” softkey to go to the appropriate Cabinet.
- b) Cursor to the slot listed for your system and press the “Next Level” Softkey.:

-
- c) If the FOS Manager is not in a “Down” state cursor to the FOS Manager and press the “Courtesy Down” softkey and the “Down Only” softkey.
If you don't see these softkeys, press the “More Softkeys” softkey and they will become available.
 - d) Press the “Exit Level” Softkey.
7. Ensure that the DVIX SRU is down. Refer to the table below for its location in your system:

System Type	Cabinet	Slot
Tower	1	4
Rack	2	8

- a) Press the “Next Cabinet” or “Previous Cabinet” softkey to go to the appropriate Cabinet.
 - b) If the DVIX SRU is not in the “Down” state, cursor to it and depress the “Courtesy Down” Softkey.
 - c) Wait till the DVIX SRU is in the “Down” State.
8. Press the “Exit Service” Softkey once to reach the SAS Main Menu.
9. Clean the head of the tape drive (Cabinet 1, Slot 10), connected to the Prime Processor.
10. Place the DVIX tape into the cartridge drive.
11. From the SAS Main Menu:
- a) Cursor to “Utilities” and press <enter>.
 - b) Cursor to “Command Interpreter” and press <enter>.
12. The system may respond with a few messages and the prompt:

>

13. Type:

W TEMPORARY <enter>

The system will then respond with:

=> :LOCAL:TEMPORARY

-
14. Type:

INSTALL_DVIX<enter>

The system will then respond with:

WAITING FOR TAPE

Installing 68020 DVIX Release xx.xx.xx/xx.xx.xx

Creating DVIX 68020 directories.

Loading DVIX INSTALL IPL from tape

KTAPE (#TAPE server shutdown utility) - version xx

#TAPE responding shutdown request!

A few seconds after the last message is displayed, the VSN will respond with the prompt:

>

15. Type:

EXIT<enter>

The system will then respond with the utilities services menu.

16. Depress the Exit Service Softkey. This should return you to the System Administrative Services-Main Menu.
17. Place the cursor on “Maintenance” and press <enter>.
18. Press the “Cabinet State” softkey.
19. Place the FOS Manager In Service. Refer to the table below for its location in your system:

System Type	Cabinet	Slot
Tower	3	14
Rack	1	4

- a) Press the “Next Cabinet” or “Previous Cabinet” softkey to go to the appropriate Cabinet.
 - b) Cursor to appropriate slot and press the “Next Level” softkey.
 - c) Cursor to the FOS Manager and press the “Put into Service” softkey.
If you don't see this softkey, press the “More Softkeys” softkey and it will become available.
 - d) Wait until the FOS Manager state changes to “Working”, about 1 min.
 - e) Press the “Exit Level” Softkey.
20. Place the DVIX SRU In Service. Refer to the table below for its location in your system:

System Type	Cabinet	Slot
Tower	1	4
Rack	2	8

- a) Press the “Next Cabinet” or “Previous Cabinet” softkey to go to the appropriate Cabinet.
 - b) Cursor to the DVIX SRU and press the “Put into Service” Softkey.
 - c) Ensure that the DVIX SRU is in the “Working” State.
 - d) Press the “Next Level” softkey.
 - e) Ensure that the DVIX PRU software is in the “Working” State.
21. Press the “Exit Level” softkey once and then press the “Exit Service” Softkey twice to return to the VSN Main Menu.
22. Cursor to DVIX-1 and press <enter>.

Note the message “Welcome to Installation DVIX XX.YY.ZZ” along with a message that asks you to “Wait 15 seconds for this window to close.”

“XX.YY.ZZ” will look something like “03.20.24” but might be different depending upon the release installed.

When the window closes, select DVIX-1 from the main menu and press the <enter> key.

23. The messages of “INIT: SINGLE USER MODE”, “Welcome to Installation DVIX XX.YY.ZZ” and “/etc/fpinit.sh initializing. Please wait ...” will appear. It will show you which cabinet and slot that the processor is located. You will now be asked to enter the Primary File Server name.

Type:

VSNFSI<enter>

24. You will be asked if this is a new SFS install, an SFS update or a quick delta (change) update.

Press the **“NEW SFS INSTALL”** softkey

25. The System will now ask about a 802.3 application processor.

Press <enter>

26. You will be asked “Do you want to install DVIX Automatically?”.

Press the **“Yes”** softkey.

27. You will be asked if you wish to use the default tape device.

Press the **“Yes”** softkey.

28. Verify that the DVIX release tape is in the cartridge drive.

Press <enter>

The system will then respond with:

LOADING NEW SOFTWARE

This will take about 15 minutes.

29. When the installation is completed, it will print “DVIX installation completed.” and ask if you wish to reset from DVIX. Remove the DVIX tape from the cartridge drive. Now depress the “Yes” Softkey.

You will now be returned to the VSN Main Menu.

The DVIX installation is complete. Wait 3 minutes for DVIX to reset itself before continuing with the “TOPS/VSN Prompt Manager Installation” on page 79.

3.12 TOPS/VSN Prompt Manager Installation

The Prompt Manager has changed in the VSN04 load. If you have a version less than PM04AL, the installation instructions in this section must be followed regardless of whether a new install or an upgrade is being performed. If you have a Prompt Manager version of PM04AL already installed, then this section can be skipped.

Note: The commands in this section are case sensitive. You must type all commands in the case shown.

1. If you are not already logged on as the SUPERUSER, logon to the VSN as the System Administrator (SUPERUSER).
2. Cursor to DVIX-1 on the Main Menu and Depress the Enter key.

After the credits, the system will respond with:

#

3. Type:

cd /tmp<enter>

4. Place the Prompt Manager tape in the cartridge drive.
5. **NOTE:** Please verify the spelling of the following command before pressing <enter>. If you make a typing error, the system might not detect it because the syntax might be valid. If you mistype this command, stop and contact your NT representative.

Pay special attention to the “**B**” in “**-ivB**”. It must be capitalized. Also, “**cart0**” must end with “**0**” (**zero**), not an “**O**”.

Type:

cpio -ivB installpm </dev/cart0 <ENTER>

After about 4 minutes, the system will respond with:

*installpm
XXXX Blockx
#*

The XXXX will be a number which will change from release to release.

6. Type:

sh installpm<Enter>

The System should respond with:

*Select the correct time zone by entering the corresponding letter
p - Pacific m - Mountain c - Central e - Eastern
a - Atlantic*

Default time zone is Central.

Enter Time Zone:

Type the appropriate letter and press <enter>.

The system will respond with:

Changing time zone to XXXXXXXX time . . .

Creating directories . . .

Copying files from tape . . .

This step will take approximately 5 minutes to complete.

The system will then prompt you with:

*Select desired Prompt Manager implementation.
u - unilingual b - bilingual*

For installations in the U.S., choose “u”. For Canadian installations, choose “b”.

Type:

b<enter>

or

u<enter>

For Canadian systems, the system will respond with:

Installing bilingual implementation . . .

**** Prompt Manager Files copied successfully ****

Access the Prompt Manager from the DVS Main Menu as Superuser to complete the installation.

#

For U.S systems, the system will respond with:

Installing unilingual implementation . . .

**** Prompt Manager Files copied successfully ****

Access the Prompt Manager from the DVS Main Menu as Superuser to complete the installation.

#

7. Remove the Prompt Manager tape from the cartridge drive.
8. Type:

exit<Enter>

9. Wait one minute, then access the Prompt Manager from the Main Menu. After the credits, the following messages should appear:

Installing the Prompt Manager . . .

Installation complete.

The Prompt Manager installation is now complete. You can now access the Prompt Manager by logging in as the Maintenance user and selecting Prompt Manager from the Main Menu.

If backup tapes were made previously of the information contained in the Locality Database and Prompt Manager, restore this data now. These tapes are not the same as the save & restore tape, which cannot be restored from previous releases. For information concerning administration and use of the Prompt Manager, refer to NTP 450-1301-310.

Continue with “Custom Branding Prompt Installation” on page 83.

3.13 Custom Branding Datafill

This section describes the datafill necessary to activate the Custom Branding¹ feature.

After completing this section, continue with “Save-Restore of Customer Datafill” on page 85.

3.13.1 Custom Branding Datafill Sequence

1. In the *Prompts* and *French_Prompts*² tables, datafill the prompt segments to use for the custom brand prompts. If changes are made to either table, the FIXAUDEX command must be executed. Refer to NTP 450-1301-100 for details about building custom branding prompts.
2. Install all custom branding prompts that will be used by the system using the VSN Prompt Manager. Section 3.13.2 Custom Branding Prompt Installation describes the process for installing custom brand prompts. Note: Rebooting the ACPE(s) as described in step 11. on page 84 may be skipped at this time if there is more custom branding datafill to perform. Refer to NTP 450-1301-310, Section 6 for a description of the Prompt Manager.
3. Datafill the *Custom Brands* SDM table. The *Brand_Index* must be a unique number. The custom brand segment(s) used must exist in the Locality Database. Ensure that the correct brand segment(s) are chosen for the context of the header and trailer segments selected in step Step 1. on page 82. A tuple must exist for each different custom brand that will be supported by the system. NTP 450-1301-310, Section 3 contains a description of the *Custom Brands* table.
4. If custom branding will be provided based on Carrier Identification Code, datafill SDM table *Carrier Brands*. All carriers that should receive custom branding treatment must exist in this table. The *Brand_Index* datafilled for the carrier must exist in the *Custom Brands* table. NTP 450-1301-310, Section 3 contains a description of the *Carrier Brands* table. Note that changes made to the *Carrier Brands* table will not be active until the Locality Database is rebooted. This will be done in a later step.
5. If custom branding will be provided based on directory number, datafill entries in the Locality Database for the directory numbers. All DNs that should receive custom branding treatment must exist here. The *Brand_Index* datafilled for the DN must exist in the *Custom Brands* table. Refer to NTP 450-1301-310, Section 5 for instructions for using the Locality Database.

1. Custom Branding is an optional feature. This section should be skipped if Custom Branding is not installed at your site.

2. Canadian systems only.

6. Using the Table Editor, edit the *Features* table and enable the Custom Branding feature by setting the *Enabled* field to *YES*.
7. Reboot the Locality Database. Locality information will not be available while the Locality Database is out of service.
8. Reboot all of the ACPEs in the system. Note that this will affect call processing.¹
9. To make branding changes to a VSN that already supports custom branding, the same steps should be followed with the exception of step 6. on page 83.

3.13.2 Custom Branding Prompt Installation

Custom Branding prompts are provided separately from the TOPS/VSN Software Release by the NT Voice Services group in Rochester. These prompts must be installed before they can be used. The following procedure is used to install custom branding prompts:

1. Insert the tape containing the Custom Branding prompts in the primary tape drive.
2. From the VSN Main Menu, select **Prompt Manager**. Import the prompts following the same process as for Locality prompts. Refer to NTP 450-1301-310, Section 6 for details concerning the use of the Prompt Manager.
3. Using the **Prompt Management** function of the Prompt Manager, create a prompt set containing all the Branding prompts that will be used. Before saving the set, change the set type to *Brand*. This is done by repeatedly pressing the **Change Set Type** softkey until the Type field at the bottom of the screen shows "*Type: Brand*".
4. Save the set.
5. Press the **Exit** and **Confirm** softkeys to return to the Prompt Manager Main Menu.
6. Select **Set Management**.
7. Fill in the *Find String* field with an appropriate find string (*.*) will find all sets) and press the **Find** softkey.
8. Select the brand set that you would like installed using the **Select/Unselect** softkey.
9. Press the **Install** softkey followed by the **Confirm** softkey to install the branding prompts.
10. Exit from the Prompt Manager, returning to the VSN Main Menu.

1. The ACPE(s) need to be rebooted only if changes have been made to the *Prompts* or *French_Prompts* tables, the *Features* table, or the *Custom Brands* table.

11. In System Administrative Services, select **Maintenance** and reboot the ACPE(s) to activate the newly installed branding prompts. **Note that rebooting the ACPE(s) will impact call handling.**
12. From the VSN Main Menu, check the Logs system to make sure no error messages were printed by the ACPE(s) indicating missing prompts.

The branding prompts are now available for use. Datafill the *Custom Brands* SDM table to use these prompts.

Custom Branding prompts may also be created using the Prompt Manager in the same manner as for Locality prompts. To do this, record that prompts and then continue with step 3. above.

Note: Custom Branding prompts may not be given the names **RECORDED**, **BRAND**, or **LOCALITY**. These are reserved words. In addition, custom branding prompts must have unique names throughout the system. Check the *Prompts* and *French_Prompts* tables to insure the names you have chosen are unique.

3.14 Save-Restore of Customer Datafill

The Save-Restore feature provides a method of saving and restoring customer datafill to/from cartridge tape. It is only for use to archive data for a single release. It is not for use in restoring data when upgrading to a new VSN software release. Follow the save procedure after any change to customer datafill (i.e. Tables or T1 Trunk ID Mappings). This may be done as an alternative to making a new BMS system backup after datafill changes.

If this is a new install or an upgrade of VSN 07 and datafill changes have been made, then for 24 port systems, perform the Save procedure 3.14.2 Save at this time. For 48 port systems, perform 3.14.1 Preparing for Save-Restore at this time. When the Save procedure is complete, you may also perform “TOPS/VSN System Backup” on page 90.

The Restore procedure is described for future reference and is not to be performed unless the datafill is lost. It should not be used to transfer datafill to a VSN software release other than the release it was Saved from. However it should be noted that if multiple VSNs in an office are being upgraded to the same release, than a restore from the first newly saved system can be used to datafill the other VSNs. Before doing a Restore on 48 port systems, perform 3.14.1 Preparing for Save-Restore.

NOTE: For 48 Port VSN05 systems, Save-Restore should remain out of service when not in use.

3.14.1 Preparing for Save-Restore

On 48 port systems, it is necessary to remove ACPE-2 from service to run Save-Restore. ACPE-1 remains in-service to maintain call processing capability.

1. Enter System Administration from the Main Menu. Select MAINTENANCE and verify that Save-Restore is out of service (Down). If Save-Restore is in service, Courtesy Down Save-Restore. Remain in MAINTENANCE.
2. Enter ACPE Maintenance from the Main Menu.
3. Manbusy ACPE-2 using the Manbusy softkey. Press the Confirm softkey.
4. When ACPE-2 usage drops to 00/24, press the Exit softkey to leave ACPE Maintenance.
5. From MAINTENANCE, Courtesy Down ACPE-2.
6. When the ACPE-2 state is displayed as Down, put Save-Restore back into service. Press Exit three times to leave MAINTENANCE and System Administration.
7. If saving datafill, proceed to 3.14.2 Save. If restoring datafill, proceed to 3.14.3 Restore. When the Save-Restore utility completes, ACPE-2 must be returned to service. See step 3.14.4 Restoring ACPE-2 to service.

3.14.2 Save

To save customer data to tape:

1. Enter System Administration from the Main Menu.
2. Enter UTILITIES and then Save-Restore.
3. Put a scratch tape into the tape drive (ensure that the write protect arrow is pointing away from "Safe").
4. Press the Dump To Tape softkey.
5. After the menu appears, press the Select All softkey.
6. Press the Done softkey.
7. Press the Copy Data to Tape softkey.
8. Status messages will now appear near the top of the screen.
9. When the Save function is complete, press the Exit softkey twice.
10. Press the Exit Service softkey twice.
11. Remove the tape and label it appropriately.
12. On a 48 port system, execute 3.14.4 Restoring ACPE-2 to service

3.14.3 Restore

In the event that the system software has to be rebuilt or a new software load is installed and the datafill from the prior software load is to be used, this restore procedure may be used.

1. Enter System Administration from the Main Menu.
2. Enter UTILITIES and then Save-Restore.
3. Put the most recently made Save tape into the tape drive.
4. Press the Restore from Tape softkey.
5. After the menu appears, press the Select All softkey.
6. Press the Done softkey.
7. Press the Restore Data softkey.
8. Status messages will now appear near the top of the screen.
9. When the Restore function is complete, press the Exit softkey twice.
10. Press the Exit Service softkey twice.
11. Remove the tape.

-
12. If the PROMPTS or FRENCH_PROMPTS table has been changed since the last time a Save was performed, the following procedure must be used to ensure the prompts from the Save tape are installed correctly. (If the PROMPTS and FRENCH_PROMPTS tables being restored from the Save tape are the same as those on the currently working system, proceed to the next step.)¹
 - a) Manbusy the T1s using T1 Maintenance from the VSN Main Menu. This will disable traffic from the VSN.
 - b) Courtesy Down each ACPE using Maintenance from within System Administration on the VSN Main Menu.
 - c) Enter the Command Interpreter from the VSN Main Menu.
 - d) Press “0” (zero) when prompted for the password.
 - e) Type:

FIXAUDEX<enter>

This program will install all the prompts defined in tables “PROMPTS” and “FRENCH_PROMPTS”.

You can ignore any messages of the form:

Error: File not found -- :LOCAL:AUD:xx

Type:

EXIT<enter>

- f) RTS the T1s using T1 Maintenance from the VSN Main Menu.
13. For the restore to take affect, the system needs to be rebooted. Refer to “TOPS/VSN Rack System Hard Boot Procedure” on page 130.

3.14.4 Restoring ACPE-2 to service

After datafill is saved on 48 port systems, ACPE-2 must be restored to an in-service state. If datafill is restored, this procedure is not needed. The system gets booted as a part of the restore process. However, after doing a restore for 48 port systems, enter MAINTENANCE and Courtesy Down Save-Restore after the system is booted.

1. Enter System Administration from the Main Menu.

1. NOTE: The table “FRENCH_PROMPTS” does not exist in a Canadian Unilingual English VSN or in a U.S. system.

2. Enter MAINTENANCE and Courtesy Down Save-Restore.
3. Put ACPE-2 back into service.
4. Press Exit twice to leave MAINTENANCE.
5. Enter ACPE Maintenance from the Main Menu.
6. Verify that ACPE-2 completes booting and transitions to an InService state.
7. Press Exit to leave ACPE Maintenance.

3.15 TOPS/VSN Locality Database Management

The TABS Locality Database is used to determine the announcement to present to the billed party of a collect or bill-to-third number call. The database maintains a mapping of Directory Numbers to locality announcements. Thus, the announcement presented to the billed party is determined by the Directory Number associated with the calling station.

The Locality Database provides a Man Machine Interface (MMI) for database viewing and database management. Database management tools provided from the MMI include the ability to add, delete and edit database entries as well as to print, archive, and restore the entire database.

After the Locality Database is installed, it is recommended that an archive of the database be made and that a listing of the database be printed. Softkeys to perform both of these actions are available from the MMI as follows:

1. Choose the Locality Database option from the Main Menu
2. Press the 'More Softkeys' softkey
3. The 'Archive' and 'Print' softkeys will then be displayed. Consult the applicable NTPs for further details.

Note: It is suggested that the Prompt Manager also be archived whenever an archive of the Locality Database is performed. Refer to NTP 450-1301-310 for instructions concerning Prompt Manager administration and use.

3.16 TOPS/VSN System Backup

This procedure is optional and may be performed after the TOPS/VSN system has been successfully installed and datafilled. Creating a backup takes approximately 2 hours.

A backup may be used to speed the installation of the software onto another TOPS/VSN system at the same site¹ or to reduce the time required to rebuild the system if the need arises.

A backup may be used to install other TOPS/VSN systems at the same site or to reduce the time required to rebuild the system if the need arises. A backup is not required in order to archive customer specific datafill. This function is provided via the Save-Restore procedure. If you do not wish to perform a backup, skip to "Removal of Previous Release" on page 114.

Before the backup is performed the user must perform the following:

1. Change Disk Cache Frame parameters which is done by positioning the cursor on "System Administration" and pressing the <Enter> key.
2. Position the cursor on "Utilities" and press the <Enter> key.
3. Position the cursor on "File Processor Admin" and press the <Enter> key.
4. Position the cursor on "H.A. Prime Processor".
5. Press the "Region Level" softkey.
6. Position the cursor on the "File Server" line containing "VSNFS1".
7. Press the "Change Region" softkey.
8. Repeatedly press the <Enter> key until the cursor is on the line "Number of Small Cache Frames".
9. Change the number "575" to "400".
10. Press the "Exit Screen" softkey followed by the "Save and Exit" softkey.
11. Move the cursor down to the "file Server" line containing "VSNFS2".
12. Press the "Change Region" softkey.
13. Repeatedly press the <Enter> key until the cursor is on the line "Number of Small Cache Frames".
14. Change the number "100" to "200".
15. Press the "Exit Screen" softkey followed by the "Save and Exit" softkey.

1. Each VSN system must have its own licensed copy of DVIX installed. Therefore, if the backup is used to install the software onto another TOPS/VSN system, do not restore the 80 Megabyte disk. DVIX and the Prompt Manager must be installed from tape to avoid violating this license.

16. Press the “Exit Screen” softkey.
17. Press the “Exit Service” softkey 3 times to return to the VSN Main Menu.
18. Log out of the VSN.
19. Reboot the system.
20. After the system has rebooted, login to the system as SUPERUSER.
21. Reset the Small Cache Frames parameter back to its original value. (Note: This must be done to insure the disk image contains the correct parameter when a restore is done from BMS backup.) This is done by positioning the cursor on “System Administration” and pressing the <Enter> key.
22. Position the cursor on “Utilities” and press the <Enter> key.
23. Position the cursor on “File Processor Admin” and press the <Enter> key.
24. Position the cursor on “H.A. Prime Processor”.
25. Press the “Region Level” softkey.
26. Position the cursor on the “File Server” line containing “VSNFS1”.
27. Press the “Change Region” softkey.
28. Repeatedly press the <Enter> key until the cursor is on the line “Number of Small Cache Frames”.
29. Change the number “400” to “575”.
30. Press the “Exit Screen” softkey followed by the “Save and Exit” softkey.
31. Move the cursor down to the “file Server” line containing “VSNFS2”.
32. Press the “Change Region” softkey.
33. Repeatedly press the <Enter> key until the cursor is on the line “Number of Small Cache Frames”.
34. Change the number “200” to “100”.
35. Press the “Exit Screen” softkey followed by the “Save and Exit” softkey.
36. Press the “Exit Screen” softkey.
37. Press the “Exit Service” softkey 3 times to return to the VSN Main Menu.
38. Select “System Administration” from the Main Menu by positioning the cursor over it (the up and down arrow cursor keys are used), and press ENTER. The System Administration menu will then be displayed.
39. Select “Maintenance” from the system administration Main Menu by placing the cursor over it (the up and down arrow cursor keys are used), and pressing

ENTER. The “Maintenance Services - Faulty Units” menu will then be displayed.

40. Press the “Cabinet State” and “More Softkeys” softkeys.
41. Courtesy down each SRU configured within the system (except for the Prime Processor (cabinet 1, slot 6), the LanLink (cabinet 1, slot 15), and the Application Processor where the XSRU program executes. Refer to the following table to find its location in your VSN.

System Type	Cabinet	Slot
Tower	4	16
Rack	4	12

This is accomplished by positioning the cursor over the specified SRU and pressing the “Courtesy-down”, followed by the “Down Only” softkeys. (“Down Only”, not applicable for Digital Trunk SRUs). Use the “Next Cabinet”/“Previous Cabinet” softkeys to move from one cabinet to the next/previous one; use the up/down cursor keys to position the cursor over a particular SRU in each cabinet.

Note: it is not necessary to wait for all SRUs to go down before moving from cabinet to cabinet. However, you should go back to each cabinet and verify that all SRUs are in a Down state except the Prime Processor, the LanLink, and the Application Processor.

42. Using the “Next Cabinet”/“Previous Cabinet” softkeys, go to cabinet 4. Cursor down to the processor identified in step 41. on page 92 as containing the XSRU program and press the “Next Level” softkey. Courtesy down each PRU configured within this cabinet, except for the XSRU Application Agent and the XSRU Boss Task. Press the “Exit Level” softkey. Press the “Exit Service” softkey twice. You will be returned to the VSN Main Menu.
43. Obtain three 600 foot tapes required for the backup of **:LOCAL**. Note: Only two will generally be required, but, depending on the condition of the tape media, the third may also be required.
44. Obtain one 600 foot tape required for the backup of **:VSNFS2**.
45. Ensure no traffic is presented to the TOPS/VSN system. This can be achieved by busying the T1 trunks.
46. Clean the tape heads on the tape SRU located in Cabinet 1, Slot 10
47. Ensure that the tape write protect tab is not in the “SAFE” position.

The following steps specify the procedure required to backup both the 350 Mbyte disk (logically referred to as **:LOCAL**) and the 80 Mbyte disk (logically referred to as **:VSNFS2**).

48. From the TOPS/VSN Main Menu select “**Command Interpreter**”

The system will respond with:

Command Interpreter Version xx/xx/xx xx:xx

Enter Password >>

49. Type:

0<enter>

Note: Note that this is a zero. The password will not echo to the screen when typed. This is a zero. The password will not echo to the screen.

The system will respond with:

=> *:LOCAL:CI_DIR*

50. Type:

L *:LOCAL:OBJ* <enter>

The system should respond with a minimum of one ADMIN.OBJ file as follows:

:LOCAL:OBJ:

Files :

ADMIN.OBJ

1 / 1 listed.

>

If you see anything different, follow these steps: If you see any files name 'ADMWRKxx.OBJ' (where 'xx' represents some number), follow these steps:

- a) Press the **Main Menu** key located in the upper left hand corner of the keyboard.

This will place you on the TABS Main Menu.

- b) Position the cursor on **System Administration** and press <enter>.

This will place you on System Administrative Services - Main Menu.

- c) Place the cursor on **CONFIGURATION** and press <enter>.

This will place you on Configuration Service - Main Menu.

- d) Place the cursor on **Online Update** and press <enter>.

This will place you on Configuration Services.

- e) Press the **Exit Screen** softkey.
You will return to the Configuration Service - Main Menu.
- f) Press the **Exit Service** softkey.
You will return to the System Administrative Services - Main Menu.
- g) Press the **Exit Service** softkey.
This will return you on the TABS Main Menu.
- h) Press the **Window** key located in the upper right hand corner of the keyboard until you return to the Command Interpreter window.

Restart this step from the beginning.

51. In order to retension the tapes, insert each backup tape into the drive and type:

TRET<enter>

The system will respond with:

*TRET Version AD03
Do NOT remove the tape cartridge until the tape is
no longer moving!
Retensioning tape...*

This takes about 4 minutes for each 600 foot tape. When completed the system will respond with:

>

Remove the tape, and repeat this step for each tape to be used in the backup (One for the 80 MByte disk, Three for the 350 Mbyte disk, Four total for both disks).

52. Type:

BMS<enter>

The system will respond with Figure 17: on page 95.

```

                                BACKUP MANAGEMENT SYSTEM (1.02)
                                -----
                                Main Menu

A dministration      (Administration menu)
B ackup              (Backup servers)
T ape                (Tape drive cluster statuses)
L og                 (Log displayed to output)
H istory             (History of backup volumes)
F uture              (Future backups)
C onnect             (Connect (login) to server)
O utput              (Output redirection)
P olicy              (Policy inspection)
R estore             (Restore Servers)
Q uit                (Terminates BMS)

        Select item (B) >

note: ( ) contains the default assumed if no input is given.
```

Figure 17: BMS Main Menu

If the system does not respond with the above message insure that the system time was set to the current time and date. If it wasn't repeat step 3. on page 130

53. To start the actual backup, Type:

B

54. The system will respond with Figure 18: on page 96.

DATABASE INITIALIZATION

Enter pathname where database "BMS_DB" is to reside
(:LOCAL:CI_DIR) >

Figure 18: Database Initialization

Type:

<enter>

55. If this is the first time that a BMS Backup is done, follow the instructions on this step. If a BMS Backup was done before, skip to the next step.

The system will respond with Figure 19: on page 97:


```
SERVER BACKUP: YY MM DD

The following servers require backup

SERVER/cluster  LAST BACKUP  VOLUME  TYPE Required
LOCAL/TABS      none         F

Full backup overdue for LOCAL by xxxx days.
WHY >
```

Figure 19: LOCAL Server Backup Overdue

where **xxxx** is a number between 0 and 9999.

Type:

First BMS Backup of :LOCAL<enter>

The system will respond with Figure 20: on page 98

```
SERVER BACKUP: YY MM DD

The following servers require backup

SERVER/cluster    LAST BACKUP    VOLUME    TYPE Required
LOCAL/TABS        none           F
VSNFS2/TABS       none           F

Full backup overdue for VSNFS2 by xxxx days.
WHY >
```

Figure 20: VSNFS2 Server Backup Overdue

where xxxx is a number between 0 and 9999.

Type:

First BMS Backup of :VSNFS2<enter>

56. The system will respond with Figure 21: on page 99.297-2211-211.02.01.ps

```

SERVER BACKUP: YY MM DD

The following servers require backup

SERVER/cluster    LAST BACKUP    VOLUME    TYPE Required
LOCAL/TABS        none           LOCAL     F
VSNFS2/TABS       none           VSNFS2    F

Enter names of servers that you wish to back up

Enter server name (ALL) >

```

Figure 21: Server Backup List

NOTE: If the system responds with “*ACCESS DENIED LOCAL CI_DIR BMS_DB LOG*” Then you must exit the COMMAND INTERPRETER and reenter paying attention that you enter the correct password.

57. If both disks are to be backed up or if a BMS has not been done previously, type:

<enter>

(for backup of BOTH disks).

If a BMS has been done previously, the servers may be selected individually for backup. To select the 350 MByte disk only for backup, type:

LOCAL<enter>

(for backup of 350 MByte disk only).

To select the 80 MByte disk only for backup, type:

VSNFS2<enter>

(for backup of 80 MByte disk only).

The system will respond with Figure 22: on page 100.

```
Tape clusters have been initiated
      (or)
(Initiating fast backup for <Server> on cluster <Cluster>)
```

```
HIT SPACE TO CONTINUE
```

Figure 22: Cluster Initiated Confirmation

58. Press:

<*space bar*>

The system will respond with the Server backup screen as seen in Figure 21:
on page 99.

59. Type:

<*ESC*>

to return to the Backup Management System (BMS) Main Menu. See Figure
17: on page 95.

60. Type:

T

for tape access.

The system will respond with Figure 23, shown below.

TAPE CLUSTER STATUS BOARD			

CLUSTER	ACTION	TAPE LABEL	OPERATOR Action
TABS	backing up	LOCAL.F.2.1.1	LOAD TAPE + press RETURN

For cluster interaction, move cursor to display line, and press

Q: To view list of servers waiting in the cluster backup queue.

RETURN: For all other interactions

Figure 23: Cluster Status Display

61. Ensure that a tape is inserted into the drive. If not, insert a tape, and wait one minute.

Type:

<enter>

Wait at least 30 seconds after hitting the **<enter>** key for the “OPERATOR Action” field to go blank.

If “**ATTENTION required**” appears in the Operator Action display, Press the **<enter>** key to view the error message. The most likely message that will appear is the following:

Warning: Unexpected label encountered :LOCAL.F.X.X.X

Do you want to:

R)etry, D)iscontinue, F)ail or C)ontinue (ESC) >

This message indicates that the tape being used contains an unexpected label. To force the backup, type the following:

C

for Continue.

The backup will take about:

- 45 mins for LOCAL.F.2.1.1 (1st LOCAL Blank Tape)
- 45 mins for LOCAL.F.2.1.2 (2nd LOCAL Blank Tape)
- 25 mins for VSNFS2.F.2.1.1 (1st VSNFS2 Blank Tape)

for a total of about 2 hrs.

As each tape completes, the system will respond with

<TAPE LABEL> -> LOAD TAPE + press RETURN

Remove the completed tape, label it as listed above, load the requested tape, wait one minute and then type:

<enter>

When the backup is completed, the system will respond with Figure 24: on page 103.

TAPE CLUSTER STATUS BOARD			

CLUSTER	ACTION	TAPE LABEL	OPERATOR Action
TABS	backup complete		tape may be removed

For cluster interaction, move cursor to display line, and press

Q: To view list of servers waiting in the cluster backup queue.

RETURN: For all other interactions

Figure 24: Cluster Status Display - 2

62. Type:

<ESC>

to return to the Backup Management System (BMS) Main Menu.

63. Type:

<ctrl+A>

to Quit BMS and return to the Command Interpreter.

The system will respond with:

=> program killed

>

The backup is now complete, remove the tape and type:

EXIT<enter>

The system will display the TOPS/VSN Main Menu.

You must now reboot the VSN. Power down and up the system (see “TOPS/VSN Rack System Hard Boot Procedure” on page 130.)

64. The system time and date needs to be reset after the system has been rebooted.
 - a) Five minutes after the Herald is displayed, logon to the system.
 - b) Select “System Administration” from the Main Menu.
 - c) Press the “Set Date Time” softkey.
 - d) Using the <return> key, to move from one input field to the next, change the year, month, day, hour, and minute to the current date and time.
 - e) Press the “Set Time And Exit” softkey.
 - f) Press the “Exit Service” softkey.

3.17 Duplicate TOPS/VSN System Disks

A duplicate set of system disks may be created to lessen the impact of a system disk failure. If a disk problem occurs, the duplicate disks may be placed in the system and the system quickly returned to service.¹

3.17.1 Creating Duplicate Disks

Duplicate disks may be created using either of two different methods. The first is to replace the disks in the system with another set of disks and perform a complete install. The other method is to perform a backup of the working system and restore it on another set of disks. Both methods provide the same result, but the second method is generally faster.

3.17.2 Installing Duplicate Disks

Following is the procedure to install a set of duplicate disks in the TOPS/VSN system:

1. Power down the TOPS/VSN system.
2. Remove the currently installed disks from the system.
3. Install the duplicate disks in the system.
4. Power up the system.
5. Observe the maintenance terminal connected to the Prime Processor to ensure the TOPS/VSN loads properly. The system may fail to boot with the error:

CENTRAL MAINTENANCE PROGRAM FAILED TO LOAD:

If this occurs, perform the following steps:

- a) From the maintenance terminal connected to the Prime Processor, press:

<Ctrl-B>or<Break>

The system will respond with:

>>

If this response is not received when one of these keys is pressed, press the other.

1. It is suggested that the 350 Mbyte (or 160 Mbyte) and 80 MByte disks be replaced as a pair.

Type:

M<enter>

The system should respond with:

PC = XXXXXX SR=XXXX US=XXXXXXXXX SS=XXXXXXXXX

D0 = XXXXXXXXXXX D1 = XXXXXXXXXXX D2 = XXXXXXXXXXX D3 = XXXXXXXXXXX

D4 = XXXXXXXXXXX D5 = XXXXXXXXXXX D6 = XXXXXXXXXXX D7 = XXXXXXXXXXX

A0 = XXXXXXXXXXX A1 = XXXXXXXXXXX A2 = XXXXXXXXXXX A3 = XXXXXXXXXXX

The X's in this example represent arbitrary hexadecimal digits (i.e. 0..9, 'A', 'B', 'C', 'D', 'E', and 'F'). The actual values listed are irrelevant.

b) Type (exactly as shown):

SM 9003F0 'XXX'<enter>

c) Reboot the system.

This will correct the error and the system should boot normally.

Any customer data that was changed on the original set of disks but not changed on the duplicate disks will not be present in the system. It will need to be restored from an archive tape or entered manually. Refer to the appropriate section of this document for instructions.

3.18 TOPS/VSN Installation of Multiple Systems

Once a TOPS/VSN system has been installed, datafilled, and backed up, other TOPS/VSN systems at the site can be restored (installed) from the first system's backup (BMS) tapes. Restoring from another system's BMS tapes propagates the same datafill to other systems, eliminating the need to datafill each system separately. Any differences in datafill between systems can be resolved by changing the datafill on each system after restoring from BMS tapes.

NOTE: This process **MUST** be done using BMS tapes created from a system installed from installation tapes (NOT from a system restored from another system's BMS tapes).

WARNING: Each DVIX tape is coded for use only on one VSN. DO NOT install a 80 Mbyte BMS Backup from a VSN into a different VSN. This would violate the DVIX licensing agreement.

After restoring the 350 Mbyte disk, follow the DVIX Installation Notes (“TOPS/VSN DVIX Installation” on page 74) and the Prompt Manager Installation Notes (“TOPS/VSN Prompt Manager Installation” on page 79) for the new system, making sure that the new system's DVIX tape is used.

3.18.1 48 Channel System from a 48 Channel System's BMS

Section “TOPS/VSN System Restore” on page 118 describes the process to restore a system's 350 Mbyte disk from BMS tapes. Turn to this section and follow step 1. on page 118 through step 33. on page 124. When step 33. on page 124 is finished, complete the 350 Mbyte disk restore process with the following steps:

1. Login to the VSN and access the VSN Main Menu.
2. Cursor to the Command Interpreter item and depress the enter key. This will put you in the HELIX Command Interpreter.
3. The system will then respond with:

Enter Password >>

Type:

0<enter>

Note: This is a zero. The password will not echo to the screen as typed.

The system will respond with:

=> :LOCAL:CI_DIR

-
4. Type:

SEARCH + :LOCAL:UUTILS :LOCAL:XUTILS<enter>

The system should respond with something like:

=> :LOCAL:CI_DIR * :LOCAL:UUTILS :LOCAL:XUTILS

5. Type:

FLAGS VERBOSE ON

The system should respond with:

VERBOSE is ON

6. Type:

L :LOCAL:OBJ<enter>

The system should respond with a minimum of one ADMIN.OBJ file as follows:

:LOCAL:OBJ:

Files :

ADMIN.OBJ

1 / 1 listed.

>

If you see any files with names like 'ADMWRKxx.OBJ', contact your NT Representative. This problem might have been caused by not following step 50. on page 93 when making the BMS Backup.

7. For a rack system, type:

COPY :LOCAL:OBJ:ADMIN.OBJ :LOCAL:OBJ:VZ4ADMIN.OBJ -P +R<enter>

The system will respond with:

Copying :LOCAL:OBJ:ADMIN.OBJ

...to :LOCAL:OBJ:VZ4ADMIN.OBJ

>

For a tower system, type:

COPY :LOCAL:OBJ:ADMIN.OBJ :LOCAL:OBJ:VXADMIN.OBJ -P +R<enter>

The system will respond with:

*Copying :LOCAL:OBJ:ADMIN.OBJ
...to :LOCAL:OBJ:VXADMIN.OBJ*

>

8. For a Canadian system, type:

:LOCAL:VSN_TOOLS:VZ.AREA<enter>

For a U.S. system, type:

:LOCAL:VSN_TOOLS:VX.AREA<enter>

This gives the opportunity to choose a 1-8 character name that will be printed out on all Logs and OM reports. If more than 8 characters are typed in only the first 8 are used. If nothing is typed in the default of VSN1 is used.

The system will respond with:

*Please enter the name of the system and press <enter>
when finished, or just press <enter> for default name VSN1.*

Follow the above system instruction. Ignore messages that are not in reference to the exact system being installed. For example, the message "ADMIN24 file used for 24 Rack Mount System not present." may be received but if the system being installed is not a 24 channel rack mount, ignore the message. If the message does apply to the system being installed, contact your NT representative.

9. For a rack system, type:

MOVEPATH :LOCAL:OBJ:VZ4ADMIN.OBJ :LOCAL:OBJ:ADMIN.OBJ -P<enter>

The system should respond with the following message:

*Replacing path :LOCAL:OBJ:ADMIN.OBJ
...with :LOCAL:OBJ:VZ4ADMIN.OBJ (RWLU)*

>

For a tower system, type:

MOVEPATH :LOCAL:OBJ:VXADMIN.OBJ :LOCAL:OBJ:ADMIN.OBJ -P<enter>

The system should respond with the following message:

*Replacing path :LOCAL:OBJ:ADMIN.OBJ
...with :LOCAL:OBJ:VXADMIN.OBJ (RWLU)*

>

10. Return to step step 36. on page 124.

3.18.2 24 Channel System from a 24 Channel System's BMS

Section “TOPS/VSN System Restore” on page 118 describes the process to restore a system's 350 Mbyte disk from BMS tapes. Turn to this section and follow step 1. on page 118 through step 33. on page 124. When step 33. on page 124 is finished, complete the 350 Mbyte disk restore process with the following steps:

1. Login to the VSN and access the VSN Main Menu.
2. Cursor to the Command Interpreter item and depress the enter key. This will put you in the HELIX Command Interpreter.
3. The system will then respond with:

Enter Password >>

Type:

0<enter>

Note: This is a zero. The password will not echo to the screen as typed.

The system will respond with:

=> :LOCAL:CI_DIR

-
4. Type:

SEARCH + :LOCAL:UUTILS :LOCAL:XUTILS<enter>

The system should respond with something like:

*=> SEARCH * :LOCAL:CI_DIR :LOCAL:UUTILS :LOCAL:XUTILS*

5. Type:

L :LOCAL:OBJ<enter>

The system should respond with:

:LOCAL:OBJ:

*Files :
ADMIN.OBJ
1 / 1 listed.
>*

If you see anything different, contact your NT Representative. This problem might have been caused by not following step 50. on page 93 when making the BMS Backup.

6. For a rack system, type:

MOVEPATH :LOCAL:OBJ:ADMIN.OBJ :LOCAL:OBJ:VZ2ADMIN.OBJ -P<enter>

The system will respond with:

*Copying :LOCAL:OBJ:ADMIN.OBJ
...to :LOCAL:OBJ:VZ2ADMIN.OBJ*

>

For a tower system, type:

MOVEPATH :LOCAL:OBJ:ADMIN.OBJ :LOCAL:OBJ:VX24ADMIN.OBJ -P<enter>

The system will respond with:

*Copying :LOCAL:OBJ:ADMIN.OBJ
...to :LOCAL:OBJ:VX24ADMIN.OBJ*

>

7. For a Canadian system, type:

:LOCAL:VSN_TOOLS:VZ.AREA<enter>

For a U.S. system, type:

:LOCAL:VSN_TOOLS:VX.AREA<enter>

This gives the opportunity to choose a 1-8 character name that will be printed out on all Logs and OM reports. If more than 8 characters are typed in only the first 8 are used. If nothing is typed in the default of VSN1 is used.

The system will respond with:

*Please enter the name of the system and press <enter>
when finished, or just press <enter> for default name VSN1.*

Follow the above system instruction. Ignore messages that are not in reference to the exact system being installed. For example, the message "ADMIN24 file used for 24 Rack Mount System not present." may be received but if the system being installed is not a 24 channel rack mount, ignore the message. If the message does apply to the system being installed, contact your NT representative.

8. For a rack system, type:

MOVEPATH :LOCAL:OBJ:VZ2ADMIN.OBJ :LOCAL:OBJ:ADMIN.OBJ -P<enter>

The system should respond with the following message:

*Replacing path :LOCAL:OBJ:ADMIN.OBJ
...with :LOCAL:OBJ:VZ2ADMIN.OBJ (RWLU)*

>

For a tower system, type:

MOVEPATH :LOCAL:OBJ:VX24ADMIN.OBJ :LOCAL:OBJ:ADMIN.OBJ -P<enter>

The system should respond with the following message:

*Replacing path :LOCAL:OBJ:ADMIN.OBJ
...with :LOCAL:OBJ:VX24ADMIN.OBJ (RWLU)*

>

9. Return to step 36. on page 124.

3.19 Removal of Previous Release

If this release of the TOPS/VSN software has been installed using the upgrade procedure, then the previous software release is still located on the LOCAL (VSNFS1) disk. Once the current release has been determined to be satisfactory and acceptable, the following procedure must be executed in order to recover the disk space used by the previous load. Note that this procedure should be executed within a maximum of 5 days after the upgrade.

If for some reason the current software release is not acceptable, do not follow the procedure below, but refer to “Restoring the Previous Release” on page 133.

1. From the Main Menu, enter the Command Interpreter.
2. Enter “0” at the prompt for password.
3. Type:

:LOCAL:NEW_UTILS:CLEANDISK<enter>

The system should respond with:

CLEANDISK COMPLETED.

4. Type:

EXIT<enter>

4.0 Steps for Deviations

The purpose of this section is to provide a list of steps to take when the system response deviates from what the procedure indicates.

The following five subsections describe areas known to have responses that deviate from procedure.

4.1 VSN Booting Deviations

The system was just rebooted, but instead of displaying:

```
OSP successfully loaded.
SDE User Debugger version 4.2.6 - enhanced
Delay xx seconds for tape...
```

```
Command Interpreter Version xx/xx/xx xx:xx
```

```
CI DEFINITIONS:
DIR LISTDIR
L LISTDIR
S SEARCH
W WORKDIR
TP :#TAPE:DVITAPE1
```

```
*****          DVS INSTALL UTILITY          *****
```

it requests the pathname of the CI.

If that is the case, press **<enter>** five or six times and the above messages will be displayed.

If after a few attempts you are still not successful, reboot the VSN by powering off and then on. See “TOPS/VSN Rack System Hard Boot Procedure” on page 130.

4.2 Installation Deviations

There is one known problem which may occur at some points during the installation process.

```
Run Error -- unknown error  
Executing EIS Line: ? LR = NNNNNNNN  
Executing SWERR Line: 27 LR = NNNNNNNN  
Executing EXCEPTIO Line: 8 LR = NNNNNNNN  
Executing MONITOR Line: 58 LR = NNNNNNNN  
execution error in user task  
User Error -- Locale 2 destroyed -- no supervisor found  
Executing DESTROYL Line: ? LR = NNNNNNNN  
Executing EXECERRO Line: 6 LR = NNNNNNNN  
.  
.  
.
```

If the system responds in this manner while processing this particular step, the system response can be ignored. No workaround is required as the installation will still have been executed successfully.

4.3 M4020 Diagnostics Errors

When diagnostics are run on the M4020 terminals certain tests will fail due to boards not present. You may ignore messages indicating that tests 11-15 failed.

4.4 No Prompt Manager Access from FIELDSUPPORT

Any attempts to access the Prompt Manager while logged in as FIELDSUPPORT are rejected and the user is returned to the Main Menu. The workaround is to access the Prompt Manager by logging in as MAINTENANCE.

4.5 No OMs When ACPEs are Rebooted

There is a slight chance that an In Service VSN will not print some of the OMs after the ACPEs are rebooted. This is due to the fact that between an ACPE reboot and the time when the OMs are collected to be printed, no OMs of that type had been pegged by the ACPEs.

For example: The OMs are set to print on a daily basis. If the ACPEs are rebooted at 23:30 and no collect calls are processed by the VSN between 23:30 and 24:00, the OMs for collect calls for that period will be 0.

NOTE: The current OM count will be kept correctly.

All the OMs will be printed as actual numbers once each one of all the possible OMs are pegged. No action is required by the telephone company.

5.0 TOPS/VSN System Restore

5.1 350 MByte and 160 MByte Disk

This procedure is used to restore the system disk with the backup. This procedure is only used to restore the 350 Mbyte disk or the 160 MByte disk, **:LOCAL**.¹ A 350 MByte backup may only be restored to a 350 MByte disk. A 160 Mbyte backup may only be restored to a 160 MByte disk. Restoring from one type of disk to another type should not be attempted.

Before restoring the disk, perform the following:

- Clean the tape heads on the tape SRU located in Cabinet 1, Slot 10.

The following specifies the procedure required to restore the 350 Mbyte or 160 MByte disk logically referred to as **:LOCAL**.

Please note the following:

- This procedure is performed via the ASCII terminal connected directly to the prime processor.
- Command response will be somewhat slower than that of the M4020 terminals, as the tape is being used as the file server, every command is directed to the tape.

1. Start the restore process by initializing the disk. This is specified at the start of these release notes up to and including step 11. on page 29.
2. After the disk is initialized, the following response should have been received:

Part 1 has completed successfully.

Initialization complete

INSTALL=>

3. Type:

DVIFSRESTORE<enter>

1. The NT220 (or NT320) terminal may not be connected to the VSN at this point. If that is the case the terminal must be connected.

After a 1 to 2 minute delay the system will respond with the following:

Fast Restore - Version X.X.X

Enter server cabinet/slot as CCSS (Prime is 0816):

4. Type:

0816<enter>

The system will respond with the following:

Enter File Server Region (1, 2, 3, or 4):

5. Type:

1<enter>

The system will respond with the following:

Select restore type: F)ull I)ncremental Q)uit ->

6. Type:

F

The system will respond with the following:

Full restore selected

Restore From M)agnetic Tape or C)artridge Tape:

7. Type:

C

The system will respond with the following:

Restoring from Cartridge Tape

Enter BMS volume name (<server>.F.X.Y) ->

-
8. Look at the information on the tape label. There should be a series of characters and digits such as “LOCAL.F.2.1.3”. The last digit is the tape number (in this case it is “3”). The remainder is the BMS Volume Name (in this case, the Volume Name is “LOCAL.F.2.1”). Enter the BMS Volume Name by typing:

LOCAL.F.2.1<enter>

The system will respond with the following

LOAD tape LOCAL.F.2.1.1 and hit a key to continue

9. Remove tape 1A from the drive.
10. Clean the tape heads.
11. Insert the backup tape, and wait 1 minute.
12. Press:

<space bar>

The system will respond with the following

*Proceeding with restoration of LOCAL.F.2.1.1
Restoring from tape LOCAL.F.2.1.1
RESTORE: Tape starts at disk address: 0*

The restore process takes about 1 hour to complete. If an error message occurs, restart the restore process from the beginning. When the restore process is completed the system will respond with:

*RESTORE: Tape finished at disk address: 0
“n” KBytes restored from tape LOCAL.F.2.1.1
Continue with next tape? (y/n):*

Where “n” is some number like 124288

13. Type:

Y

The system will respond with the following:

*UNLOAD tape LOCAL.F.2.1.1 and LOAD tape LOCAL.F.2.1.2 and
hit a key to continue*

-
14. Remove the first backup tape, insert the appropriate tape, and wait one minute.
 15. Press:

<space bar>

The system will respond with the following

*Proceeding with restoration of LOCAL.F.2.1.2
Restoring from tape LOCAL.F.2.1.2
RESTORE: Tape starts at disk address: 124224*

The process takes about 1 hour for this tape. If an error message occurs, restart the restore process from the beginning. When the restore process is completed the system will respond with:

*"n" KBytes restored from tape LOCAL.F.2.1.2
Continue with next tape? (y/n):*

16. IMPORTANT: If the prior backup of the 350 MByte or 160 MByte disk took 2 tapes, then the restore is complete. Go to step 19. on page 122.

Otherwise, if the prior backup of the 350 MByte disk took 3 tapes, then continue the restore process. Type:

Y

(NOTE: For prior '3' tape backup of the 350 MByte or 160 MByte disk)

The system will respond with the following:

*UNLOAD tape LOCAL.F.2.1.2 and LOAD tape LOCAL.F.2.1.3 and
hit a key to continue*

17. Remove the second backup tape and insert the appropriate tape.
18. Press:

<space bar>

The system will respond with the following:

*Proceeding with restoration of LOCAL.F.2.1.3
Restoring from tape LOCAL.F.2.1.3*

The process will take only about 1 minute for this tape. When the restore process is completed the system will respond with:

*“n” KBytes restored from tape LOCAL.F.2.1.3
Continue with next tape? (y/n):*

19. Type:

N

The system will respond with the following message:

*FULL restore complete
Select restore type: F)ull I)ncremental Q)uit ->*

20. Type:

Q

21. Wait about 5 minutes, and then type

<ctrl+A>

The system should display the following prompt:

*=> program killed
INSTALL=>*

If the system responds with a series of messages, significantly different than that shown above, see “Steps for Deviations” on page 115 for further information.

22. Remove the backup tape from the drive.

23. Reinsert Tape 1A into the drive.

24. Wait one minute.

25. Type the following:

FORK FS<enter>

After 2 minutes the system will respond with

INSTALL=>

26. Wait an additional 3 minutes, allowing the file server to initialize itself.

27. Type

LOGIN<enter>

The system will respond with:

Enter User Name >>

28. Type:

0<enter>

Note: This is a zero.

The system will respond with:

Enter Password >>

29. Type:

0<enter>

Note: This is a zero. The password will not echo to the screen as typed.

The system will respond with:

Accessible File Servers are - LOCAL, VSNFSI

If this response is not received, then repeat the "LOGIN" step.

30. **NOTE:** Please verify the spelling of the following command before pressing <enter>. If you make a typing error, the system might not detect it because the syntax may be valid. If you mistype this command, stop and contact your NT representative.

Type the following command:

WRBT :LOCAL:INSTALL_UTILS:IPL.CODE :LOCAL:SYSTEM.SYS<enter>

The system will then display the following messages (it will take about 5 minutes to complete):

*IPL successfully written to disk.
IPL occupies blocks 0 through N1*

*KERNEL successfully written to disk.
KERNEL occupies blocks N2 through N3*

INSTALL=>

31. Remove the tape from the drive and power off the system. (see “TOPS/VSN Rack System Hard Boot Procedure” on page 130.)
32. Wait 1 minute.
33. Power the system on. (see “TOPS/VSN Rack System Hard Boot Procedure” on page 130.)
34. Once the system has booted, the 80 MByte disk will have to be initialized. This may be achieved by following with step 1. on page 46 through, and including, step 19. on page 57. After that is complete, continue with step 35. on page 124
35. What to do now depends on the type of system being restored:
 - a) If this is a normal system restore, continue with step 36. on page 124.
 - b) If this is a multiple 48 Channel System Installation, continue with step 1. on page 107 to (and including) step 9. on page 109 before going to step 36. on page 124.
 - c) If this is a multiple 24 Channel System Installation, continue with step 1. on page 110 to (and including) step 8. on page 112 before going to step 36. on page 124.
36. Power the system down. Wait about 1 minute, and power up the system again. (see “TOPS/VSN Rack System Hard Boot Procedure” on page 130.) The system will require approximately 10 to 15 minutes to completely initialize itself. It will now be a completely configured TOPS/VSN system. All maintenance interaction is now via the M4020 terminal.
37. The Restore is completed.

5.2 80 MByte Disk

This procedure is used to restore the 80 MByte system disk with the backup. The 80 MByte disk contains the DVIX and Prompt Manager.

Before restoring the disk, perform the following:

- Clean the tape heads on the tape SRU located in Cabinet 1, Slot 10.

The following specifies the procedure required to restore the 80 Mbyte disk (logically referred to as **:VSNFS2**).

1. Select “System Administration” from the Main Menu by positioning the cursor over it (the up and down arrow cursor keys are used), and press <Enter>. The system Administration menu will then be displayed.
2. Select “Maintenance” from the system administration Main Menu by placing the cursor over it (the up and down arrow cursor keys are used), and pressing ENTER. The “Maintenance Services - Faulty Units” menu will then be displayed.
3. Press the “Cabinet State” and “More Softkeys” softkeys. The SRUs for Cabinet 1 will be displayed.
4. Locate the FOS Manager PRU in your system.

System Type	Cabinet	Slot
Tower	3	12
Rack	1	4

5. Position the cursor on the FOS Manager PRU.
6. Press the “More Softkeys” softkey.
7. Press the “Courtesy Down” and then the “Down Only” softkeys.
8. Wait for the FOS Manager PRU to enter the “Down” state.
9. Locate the DVIX Application Processor SRU in your system.

System Type	Cabinet	Slot
Tower	1	4
Rack	2	8

10. Position the cursor on the DVIX Application Processor SRU.
11. Press the “Courtesy Down” softkey. (Bringing down the FOS Manager PRU causes the DVIX SRU to courtesy down so this SRU may already be in the “Down” state.)
12. Wait for the DVIX Application Processor SRU to enter the “Down” state.

13. Locate the File Server 2 PRU in Cabinet 1 Slot 6.
14. Position the cursor on the File Server 2 PRU.
15. Press the “Courtesy Down” and then the “Down Only” softkeys.
16. Wait for the File Server 2 PRU to enter the “Down” state.
17. Press the “Exit Level” softkey and then the “Exit Service” softkey twice. The system will now display the TOPS/VSN Main Menu.
18. From the TOPS/VSN Main Menu select “**Command Interpreter**”

The system will respond with

Command Interpreter Version xx/xx/xx xx:xx

Enter Password >>

19. Type:

0<enter>

Note: This is a zero. The password will not echo to the screen as typed.

The system will respond with:

=> :LOCAL:CI_DIR

20. Type:

FSRESTORE<enter>

After a short delay the system will respond with the following:

Fast Restore - Version 2.9.7

Enter server cabinet/slot as CCSS (Prime is 0816):

21. Type:

0106<enter>

Note: These are zeros.

The system will respond with the following

Enter File Server Region (1, 2, 3, or 4):

22. Type:

2<enter>

The system will respond with the following:

Select restore type: F)ull I)ncremental Q)uit ->

23. Type:

F

The system will respond with the following:

Full restore selected

Restore from M)agnetic Tape or C)artridge Tape:

24. Type:

C

The system will respond with the following:

Restoring from Cartridge Tape

Enter BMS volume name (<server>.F.X.Y) ->

25. Look at the information on the tape label. There should be a series of characters and digits such as "LOCAL.F.2.1.3". The last digit is the tape number (in this case it is "3"). The remainder is the BMS Volume Name (in this case, the Volume Name is "LOCAL.F.2.1"). Enter the BMS Volume Name by typing:

VSNFS2.F.2.1<enter>

The system will respond with the following

LOAD tape VSNFS2.F.2.1.1 and hit a key to continue

26. Insert the backup tape, and wait 1 minute.

27. Press:

<space bar>

The system will respond with the following:

*Proceeding with restoration of VSNFS2.F.2.1.1
Restoring from tape VSNFS2.F.2.1.1*

The process takes about 25 minutes for this tape. If an error message occurs, restart the restore process from the beginning. When the restore process is completed the system will respond with:

*"n" KBytes restored from tape VSNFS2.F.2.1.1
Continue with next tape? (y/n):*

28. Type:

N

The system will respond with the following message:

*FULL restore complete
Select restore type: F)ull I)ncremental Q)uit ->*

29. Type:

Q

The system will redisplay the Command Interpreter prompt.

30. Remove the tape from the tape drive.

31. Type

EXIT<enter>

The system will return to the Main Menu.

32. Select “System Administration” from the Main Menu by positioning the cursor over it (the up and down arrow cursor keys are used), and press ENTER. The System Administration menu will then be displayed.
33. Select “Maintenance” from the system administration Main Menu by placing the cursor over it (the up and down arrow cursor keys are used), and pressing ENTER. The “Maintenance Services - Faulty Units” menu will then be displayed.
34. Press the “Cabinet State” and “More Softkeys” softkeys. The SRUs for Cabinet 1 will be displayed.
35. Locate the File Server 2 PRU in Cabinet 1 Slot 6.
36. Position the cursor on the File Server 2 PRU.
37. Press the “Put into Service” softkey.
38. Wait for the File Server 2 PRU to enter the “Working” state.
39. Press the “Exit Level” softkey.
40. Locate the FOS Manager PRU in Cabinet 1, Slot 4.
41. Position the cursor on the FOS Manager PRU.
42. Press the “Put into Service” softkey.
43. Wait for the FOS Manager PRU to enter the “Working” state.
44. Locate the DVIX Application Processor SRU in Cabinet 2.
45. Position the cursor on the DVIX Application Processor SRU.
46. Press the “Put into Service” softkey.
47. Wait for the DVIX Application Processor SRU to enter the “Working” state.
48. Press the “Exit Level” and then the “Exit Service” softkeys. The system will now display the System Administration Main Menu.

The restore of the 80 MByte disk is now complete.

Appendix A: TOPS/VSN Power Up / Power Down Procedures

The following procedure must be executed whenever a VSN needs to be rebooted.

A “**Hard Boot**” is necessary when a VSN is being installed.

A.1 TOPS/VSN Rack System Hard Boot Procedure

1. Power Down Procedure

- a) Turn OFF all load share switches (S1-S4) In Bay 1 and Bay 2 (if provided).
- b) Turn OFF circuit breaker CB1 in Bay 1.
- c) Turn OFF circuit breakers CB2, CB3, CB4 in Bay 1.
- d) Turn OFF circuit breakers CB1, CB2, CB3, CB4 in BAY2 (if provided).
- e) Turn OFF all circuit breakers (CB1-CB4) in the AUXILIARY BAY (if not supporting another live system; otherwise leave powered).
- f) Always wait at least 1 minute after powering down before trying to power up again.

2. Power Up Procedure

- a) Ensure all circuit breakers (CB1-CB4) and load share switches are (S1-S4) are OFF.
- b) Turn ON circuit breakers CB1, CB2, CB3, CB4 in AUXILIARY BAY.
- c) Turn ON circuit breakers CB1, CB2, CB3, CB4 in Bay 2 (if provided).
- d) Turn ON circuit breakers CB2, CB3, CB4 in Bay 1.
- e) Turn ON circuit breaker CB1 in Bay 1.
- f) Turn ON all load switches (S1-S4) on all Bays.

Note: For the second VSN in a dual setup, the LIU will appear to maintenance to remain in “preload” since there is no physical LIU. Sites may call ETAS to remove extra system configuration datafill if desired. System configuration changes should not be attempted by craftspersons.

3. The system time and date needs to be reset after the system has been rebooted.
 - a) Login to the system as SUPERUSER.
 - b) Select “System Administration” from the main menu.
 - c) Press the “Set Date Time” softkey.

-
- d) Using the <return> key, to move from one input field to the next, change the year, month, day, hour, and minute to the current date and time.
 - e) Press the “Set Time And Exit” softkey.
 - f) Press the “Exit Service” softkey.

A.2 TOPS/VSN Tower System Hard Boot Procedure

1. Power Down Procedure
 - a) Turn OFF the circuit breaker at the rear of Cabinet 1.
 - b) Always wait at least 1 minute after powering down before trying to power up again.
2. Power Up Procedure
 - a) Turn ON the circuit breaker at the rear of Cabinet 1.

Note: After approximately 10-15 minutes, the system will have booted and the M4020 maintenance terminal should display the herald as defined in “TOPS/VSN Herald Page” on page 165. WAIT 5 minutes after the herald page is displayed before attempting to sign into the system.

Note: For the second VSN in a dual setup, the LIU will appear to maintenance to remain in “preload” since there is no physical LIU. Sites may call ETAS to remove extra system configuration datafill if desired. System configuration changes should not be attempted by craftspersons.

3. The system time and date needs to be reset after the system has been rebooted.
 - a) Login to the system as SUPERUSER.
 - b) Select “System Administration” from the main menu.
 - c) Press the “Set Date Time” softkey.
 - d) Using the <return> key, to move from one input field to the next, change the year, month, day, hour, and minute to the current date and time.
 - e) Press the “Set Time And Exit” softkey.
 - f) Press the “Exit Service” softkey.

Appendix B: Upgrade Determination Procedure

In order for this installation to be done using the upgrade procedure, none of the below conditions must be present. If any of the following conditions are met, a new install must be done.

1. The current VSN release in the system is less than VSN33.
2. There is a change in the system configuration. For example, if the system is currently a 24 channel system, a new install must be performed to make it a 48 channel system.
3. The release level of the DVIX tape has changed since the last install. The release level is indicated on the tape label. DVIX is not installed as part of the upgrade process. If a new release of DVIX has been issued since the last install, then this installation must be done as a new install.
4. The LOCAL disk is more than 48 percent full. To make this determination:
 - a) From the Main Menu, enter System Administration.
 - b) Position the cursor on Utilities and press <enter>.
 - c) Position the cursor on Helix Command Interpreter and press <enter>.
 - d) Type:

STATUS :LOCAL<enter>

The return information includes the Percentage Full for the LOCAL disk. If this percentage is 48 or greater, then a new install must be performed. If this percentage is 48 or greater, make sure that the CLEANDISK utility was run after the last upgrade. See “Removal of Previous Release” on page 114. If it was run, and the percentage is 48 or greater, then a full install must be performed.

5. A 350M or 80M disk is being replaced with a Seagate 160M disk.

If none of the above conditions are met, this installation may be done as an upgrade. The advantages of the upgrade procedure are that VSN call processing may continue during the first phase of the installation (approximately 90 minutes). Additionally, the overall time required for the installation is substantially less for an upgrade than for a new install.

Notes:

- An upgrade should be done only during non-prime time (low VSN traffic periods).
- The Prompt Manager may not be used during an upgrade.

Appendix C: Restoring the Previous Release

If the current TOPS/VSN software release was installed using the upgrade procedure and CLEANDISK has not been executed, then the previous release may be restored via the procedure below. **This procedure should only be done if the current release is unacceptable and NT TAS has been notified. Do not perform this procedure without NT support.**

1. From the Main Menu, enter System Administration.
2. Enter UTILITIES.
3. Enter Command Interpreter.
4. Determine the name of the previous release by typing:

L :LOCAL:NSR=

5. Type:

MAKECURRENT NSRnnxx <enter>

where NSRnnxx represents the name of the previous release.

The system should respond with:

Making NSRNNXX the current system

*.
. .
.*

6. Wait for the system to display the prompt “>”, then reboot the system. Refer to “TOPS/VSN Rack System Hard Boot Procedure” on page 130.

Appendix D: TOPS/VSN Hardware/Software Configurations

D.1 TOPS/VSN DVS Towers to Bays Hardware Mapping

Logical Mapping =====		Physical Mapping =====		
Cabinet -----	Slot -----	Bay ---	Shelf -----	Slot -----
1	4	1	Lower Shelf	Leftmost
1	6			
1	10			Next to the right
1	14			
1	15			Next to the right
2	4	1	2nd. From Bottom	Next to the right
2	8			Next to the right
2	16			
3	4	1	3rd. From Bottom	Next to the right
3	8			Leftmost
3	12			
3	16			Next to the right
4	4	1	4th. From Bottom	Next to the right
4	8			Next to the right
4	12			
4	16			Leftmost
5	4	2	2nd. From Bottom	Next to the right
5	8			Next to the right
5	12			
5	16			Next to the right
6	4	2	3rd. From Bottom	Next to the right
6	8			Next to the right
6	12			
6	16			Leftmost
7	4	2	4th. From Bottom	Next to the right
7	8			Next to the right
7	12			
7	16			Next to the right

TABLE 1. TOPS/VSN DVS Towers to Bays Hardware Mapping

D.2 TOPS/VSN Tower Hardware Minimum Revision Levels

In the table below, each SRU type used in TOPS/VSN Towers are listed, along with the minimum SRU revision level which is required for correct TOPS/VSN operation.

SRU Type	PEC Code	Minimum Revision Level
H.A. Prime Processor	NT4G16EA	0N
80MB Disk QIC-150 Tape	NT4G20LA	08
Storage 350M	NT4G20JA	04
Digital Trunk Link	NT4G23BA	07
Voice Interface	NT4G27BA	09
App. Proc. 68020 - 2, 6, 10	NT4G25GA	09
LANLink	NT4G14BA	0C
LIU	NT4G46CA	05
ALIU	NT4G46BK	02
-48 V. Power Converter	NT4G50DA	06

TABLE 2. TOPS/VSN Tower Minimum Hardware Revision Levels

D.3 TOPS/VSN Rack Hardware Minimum Revision Levels

In the table below, each SRU type used in TOPS/VSN Racks are listed, along with the minimum SRU revision level which is required for correct TOPS/VSN operation.

SRU Type	PEC Code	Minimum Revision Level
H.A. Prime Processor	NT4G16EF	06
80MB Disk QIC-150 Tape	NT4G20LC	05
Storage 350M	NT4G20TB	04
Digital Trunk Link	NT4G23DA	07
Digital Trunk Link	NT4G23EA	01
Voice Interface	NT4G27BA	09
Voice Interface	NT4G27CA	02
App. Proc. 68020 - 2, 6, 10	NT4G25GB	03
LANLink	NT4G14DB	03
LIU	NT4G46CA	05
ALIU	NT4G46BK	03

TABLE 3. TOPS/VSN Rack Minimum Hardware Revision Levels

D.4 TOPS/VSN Tower 48-Port SRU Configurations

Cabinet	Slot	SRU Type	Name	Status	Alt. Addr. Cabinet	Alt. Addr. Slot
1	4	App. Proc. 68020-2, 6,10	(DVIX)	Active	0	0
	6	H.A. Prime Processor	(HAPP #1)	Active	0	0
	10	80MB Disk QIC-150 Tape	Storage Unit :VSNFS2	N/A	N/A	N/A
	14	App. Proc. 68020-2, 6,10	(VSN OAM)	Active	0	0
	15	LANLink ^a	(LAN #1)	Active	N/A	N/A
2	2	Cabinet Power Converter	-48 V. Power Converter	N/A	N/A	N/A
	4	Cabinet Power Converter	-48 V. Power Converter	N/A	N/A	N/A
	16	Storage 350M	Storage Unit :LOCAL	N/A	N/A	N/A
3	2	Cabinet Power Converter	-48 V. Power Converter	N/A	N/A	N/A
	8	Voice Interface	(VI #1)	Active	0	0
	12	App. Proc. 68020-2, 6,10	(AP N+1)	Active	0	0
	16	Digital trunk Link	(T1 N+1)	Active	0	0
4	2	Cabinet Power Converter	-48 V. Power Converter	N/A	N/A	N/A
	8	Voice Interface	(VI #2)	Active	0	0
	12	Voice Interface	(VI #3)	Active	0	0
	16	App. Proc. 68020-2, 6,10	(VSN App + Voice)	Active	0	0
5	2	Cabinet Power Converter	-48 V. Power Converter	N/A	N/A	N/A
	8	Voice Interface	(VI #4)	Active	0	0
	12	Voice Interface	(VI #5)	Active	0	0
	16	Digital trunk Link	(T1 #1)	Active	0	0
6	2	Cabinet Power Converter	-48 V. Power Converter	N/A	N/A	N/A
	4	Cabinet Power Converter	-48 V. Power Converter	N/A	N/A	N/A
	8	Voice Interface	(VI #6)	Active	0	0
	12	Voice Interface	(VI #7)	Active	0	0
	16	App. Proc. 68020-2, 6,10	(VSN App + Data)	Active	0	0
7	4	App. Proc. 68020-2, 6,10	(VSN Mtce)	Active	0	0
	8	Voice Interface	(VI #8)	Active	0	0
	12	Voice Interface	(VI #8)	Active	0	0
	16	Digital trunk Link	(T1 #2)	Active	0	0

TABLE 4. TOPS/VSN Tower 48-Port SRU Configuration

a. See TABLE 6. on page 138 for RRU configuration details for this SRU.

D.5 TOPS/VSN Tower 24-Port SRU Configurations

Cabinet	Slot	SRU Type	Name	Status	Alt. Addr. Cabinet	Alt. Addr. Slot
1	4	App. Proc. 68020-2, 6,10	(DVIX)	Active	0	0
	6	H.A. Prime Processor	(HAPP #1)	Active	0	0
	10	80MB Disk QIC-150 Tape	Storage Unit :VSNFS2	N/A	N/A	N/A
	14	App. Proc. 68020-2, 6,10	(VSN OAM)	Active	0	0
	15	LANLink ^a	(LAN #1)	Active	N/A	N/A
2	2	Cabinet Power Converter	-48 V. Power Converter	N/A	N/A	N/A
	4	Cabinet Power Converter	-48 V. Power Converter	N/A	N/A	N/A
	16	Storage 350M	Storage Unit :LOCAL	N/A	N/A	N/A
3	2	Cabinet Power Converter	-48 V. Power Converter	N/A	N/A	N/A
	8	Voice Interface	(VI #1)	N/A	N/A	N/A
	12	App. Proc. 68020-2, 6,10	(AP N+1)	Active	0	0
	16	Digital Trunk Link	(T1 N+1)	Active	0	0
4	4	App. Proc. 68020-2, 6,10	(VSN Mtce)	Active	0	0
	8	Voice Interface	(VI #2)	Active	0	0
	12	Voice Interface	(VI #3)	Active	0	0
	16	App. Proc. 68020-2, 6,10	(VSN App + Voice)	Active	0	0
5	2	Cabinet Power Converter	-48 V. Power Converter	N/A	N/A	N/A
	4	Cabinet Power Converter	-48 V. Power Converter	N/A	N/A	N/A
	8	Voice Interface	(VI #4)	Active	0	0
	12	Voice Interface	(VI N+1)	Active	0	0
	16	Digital Trunk Link	(T1 #1)	Active	0	0

TABLE 5. TOPS/VSN Tower 24-Port SRU Configuration

a. See TABLE 6. on page 138 for RRU configuration details for this SRU.

D.6 TOPS/VSN Tower LANLink/RRU Configurations

Cabinet	Slot	Line	Port	Device Type	Name	Status
1	15	1	-	M4020 Terminal	(FSP Terminal I/F #1)	Active
		2	-	LIU - HDLC / RS-232	(DMS Synch I/F #2)	Active
			2	LIU Port - LAPB/SDLC L2	(X.25 Datalink Port #2)	Active
		3	-	LIU - HDLC / RS-232	(DMS Synch I/F #3)	Active
			2	LIU Port - LAPB/SDLC L2	(X.25 Datalink Port #1)	Active
		4	-	LIU - Asynch Personalities	(VSN Printers I/F #4)	Active
			2	Printer Port	PUBLIC_PRINTER	Active
			3	Printer Port	LOG_PRINTER	Active
		5	-	LIU - Asynch Personalities	(Alarms I/F #5)	Active
			2	LIU Port - APIO	(Alarm Unit Bay 1)	Active
			3	LIU Port - APIO	(Alarm Unit Bay 2)	Active
		6	-	LIU - Asynch Personalities	(TAS Synch I/F #6)	Active
			2	LIU Port - LAPB/SDLC L2	(M4020 Access)	Active
			3	LIU Port - LAPB/SDLC L2	(Patch Access)	Defined
		7	-	LIU - ASCII Term Access	(ASCII Access I/F #7)	Active
			2	LIU Port - ATA	(ASCII Access - 1)	Active
			3	LIU Port - ATA	(ASCII Access - 1)	Active
		12	-	M4020 Terminal	(Addn Terminal I/F #12)	Active

TABLE 6. TOPS/VSN Tower LANLink/RRU Configurations (48 and 24 Port)

D.7 TOPS/VSN Rack 48-Port SRU Configurations

Cabinet	Slot	SRU Type	Name	Status	Alt. Addr. Cabinet	Alt. Addr. Slot
1	4	App. Proc. 68020-2, 6,10	(AP N+1)	Active	0	0
	6	H.A. Prime Processor	(HAPP #1)	Active	0	0
	10	80MB Disk QIC-150 Tape	Storage Unit :VSNFS2	N/A	N/A	N/A
	14	App. Proc. 68020-2, 6,10	(VSN OAM)	Active	0	0
	15	LANLink ^a	(LAN #1)	Active	N/A	N/A
2	4	Voice Interface	(VI #1)	N/A	N/A	N/A
	8	App. Proc. 68020-2, 6,10	(DVIX)	Active	0	0
	16	Storage 350M	Storage Unit :LOCAL	N/A	N/A	N/A
3	4	Voice Interface	(VI #2)	Active	0	0
	8	Voice Interface	(VI #3)	Active	0	0
	12	Voice Interface	(VI #4)	Active	0	0
	16	Voice Interface	(VI #9)	Active	0	0
4	4	Digital trunk Link	(T1 N+1)	Active	0	0
	8	Digital trunk Link	(T1 #1)	Active	0	0
	12	App. Proc. 68020-2, 6,10	(VSN App + Voice)	Active	0	0
	16	App. Proc. 68020-2, 6,10	(VSN App + Data)	Active	0	0
5	4	Voice Interface	(VI #5)	Active	0	0
	8	Voice Interface	(VI #6)	Active	0	0
	12	Voice Interface	(VI #7)	Active	0	0
	16	Voice Interface	(VI #8)	Active	0	0
6	4	Digital trunk Link	(T1 #2)	Active	0	0
	8	Filler	-	N/A	N/A	N/A
	12	App. Proc. 68020-2, 6,10	(VSN App + Mtce)	Active	0	0
	16	Filler	-	N/A	N/A	N/A
7	4	Filler	-	N/A	N/A	N/A
	8	Filler	-	N/A	N/A	N/A
	12	Filler	-	N/A	N/A	N/A
	16	Filler	-	N/A	N/A	N/A

TABLE 7. TOPS/VSN 48-Port SRU Configuration

a. See TABLE 6. on page 138 for RRU configuration details for this SRU.

D.8 TOPS/VSN Rack 24-Port SRU Configurations

Cabinet	Slot	SRU Type	Name	Status	Alt. Addr. Cabinet	Alt. Addr. Slot
1	4	App. Proc. 68020-2, 6,10	(AP N+1)	Active	0	0
	6	H.A. Prime Processor	(HAPP #1)	Active	0	0
	10	80MB Disk QIC-150 Tape	Storage Unit :VSNFS2	N/A	N/A	N/A
	14	App. Proc. 68020-2, 6,10	(VSN OAM)	Active	0	0
	15	LANLink ^a	(LAN #1)	Active	N/A	N/A
2	4	Voice Interface	(VI #1)	N/A	N/A	N/A
	8	App. Proc. 68020-2, 6,10	(DVIX)	Active	0	0
	16	Storage 350M	Storage Unit :LOCAL	N/A	N/A	N/A
3	4	Voice Interface	(VI #2)	Active	0	0
	8	Voice Interface	(VI #3)	Active	0	0
	12	Voice Interface	(VI #4)	Active	0	0
	16	Voice Interface	(VI N+1)	Active	0	0
4	4	Digital Trunk Link	(T1 N+1)	Active	0	0
	8	Digital Trunk Link	(T1 #1)	Active	0	0
	12	App. Proc. 68020-2, 6,10	(VSN App + Voice)	Active	0	0
	16	App. Proc. 68020-2, 6,10	(VSN App + Data)	Active	0	0

TABLE 8. TOPS/VSN Rack 24-Port SRU Configuration

a. See TABLE 6. on page 138 for RRU configuration details for this SRU.

D.9 TOPS/VSN Rack LANLink/RRU Configurations

Cabinet	Slot	Line	Port	Device Type	Name	Status
1	15	1	-	M4020 Terminal	(FSP Terminal I/F #1)	Active
		2	-	LIU - HDLC / RS-232	(DMS Synch I/F #2)	Active
			2	LIU Port - LAPB/SDLC L2	(X.25 Datalink Port #2)	Active
		3	-	LIU - HDLC / RS-232	(DMS Synch I/F #3)	Active
			2	LIU Port - LAPB/SDLC L2	(X.25 Datalink Port #1)	Active
		4	-	LIU - Asynch Personalities	(VSN Printers I/F #4)	Active
			2	Printer Port	PUBLIC_PRINTER	Active
			3	Printer Port	LOG_PRINTER	Active
		5	-	LIU - Asynch Personalities	(Alarms I/F #5)	Active
			2	LIU Port - APIO	(Alarm Unit Bay 1)	Active
			3 ^a	LIU Port - APIO	(Alarm Unit Bay 2)	Active
		6	-	LIU - Asynch Personalities	(Alarms I/F #6)	Active
			2 ^b	LIU Port - APIO	(Alarm Unit Aux Bay)	Active
		7	-	LIU - ASCII Term Access	(ASCII Access I/F #7)	Active
			2	LIU Port - ATA	(ASCII Access - 1)	Active
			3	LIU Port - ATA	(ASCII Access - 1)	Active
		8	-	LIU - Asynch Personalities	(Audit Trail I/F #8)	Active
			2	Printer Port	(AUDIT PRINTER)	Active
11	-	M4020 Terminal	(Addn Terminal I/F #11)	Active		
12	-	M4020 Terminal	(Addn Terminal I/F #12)	Active		

TABLE 9. TOPS/VSN Rack LANLink/RRU Configurations (48 and 24 Port)

a. For a 24 Channel VSN port 3 will remain “offline” as this port is used to connect to the ALIU for Bay 2, which is not required for the 24 Channel VSN.

b. For the second VSN in a dual setup, this LIU will appear to maintenance to remain in “preload” since there is no physical LIU.

D.10 TOPS/VSN Tower 48-Port PRU Configurations

Cabinet	Slot	PRU Type	Name	Status	Alt. Addr. Cabinet	Alt. Addr. Slot
1	6	SCSI Tape Server	(Tape #1)	Active	0	0
		Data Connection Manager	(DCM)	Active	0	0
		System Admin Services	(SAS)	Active	0	0
		Synchronization Manager	(SSM)	Active	3	12
		File Server - 2	(VSNFS2)	Active	0	0
		Screen Activities Manager	(SAM)	Active	0	0
	14	Application Scheduler	(Sched)	Active	0	0
		Printer Queue Manager	(QMan)	Active	0	0
		Log Notification Server	(Log_Notify)	Active	0	0
		Job Manager	(Job_Mgr)	Active	0	0
		Alarm Subsystem	(Alarms)	Active	0	0
		SDM Table Editor	(SDM Edit)	Active	0	0
		Report Generator	(Report)	Active	0	0
		Logger	(Logs)	Active	0	0
		Log Query	(Log_Query)	Active	0	0
		OM Reporter Subsystem	(OMRep)	Active	0	0
		OM Collector Subsystem	(OMSub)	Active	0	0
		Log Printer	(Log_Print)	Active	0	0
		VSN Maintenance Notices	(VSNNot)	Active	3	12
		Simple Forms Handler - 1	(SFH 1)	Active	0	0
Spooler User Interface	(SUI)	Active	0	0		
3	12	SDM Notification	(SDMNot)	Active	0	0
		VI Resource Manager	(VI - RM)	Active	4	16
		FOS Manager	(DVIX Disk Interface)	Active	0	0
4	16	XSRU Application Agent	(XSRU Appl Agent)	Active	0	0
		ACPE 1 (VA)	(ACPE 1)	Active	3	12
		ACPE-RM (VD)	(ACPE-RM)	Active	3	12
		T1 Resource Manager	(T1-RM)	Active	3	12
		XSRU Boss	(Command Interpreter)	Active	0	0
		Voice Network Manager	(VNM)	Active	3	12
6	16	VSN Datalink Manager	(VSN Datalink Manager)	Active	3	12
		X.25 Datalink 1	(X.25 Datalink_1)	Active	3	12
		X.25 Datalink 2	(X.25 Datalink_2)	Active	3	12
		Network Resource Manager	(NRM)	Active	3	12
		Host Agent	(HAG)	Active	3	12
		Locality Database	(LDB)	Active	0	0

TABLE 10. TOPS/VSN Tower 48-Port PRU Configuration

Cabinet	Slot	PRU Type	Name	Status	Alt. Addr. Cabinet	Alt. Addr. Slot
7	4	ASCII Conn. Agent	(ACA)	Active	3	12
		Save - Restore	(XR)	Active	0	0
		Network Support	(Net Sup)	Active	3	12
		T1 - Maintenance	(T1-Mtce)	Active	0	0
		Simple Forms Handler - 2	(SFH 2)	Active	0	0
		VI - Maintenance	(VI-Mtce)	Active	0	0
		ACPE 2 (VA)	(ACPE 2)	Active	3	12
	ACPE Maintenance	(ACPE MMI)	Active	0	0	
		Audit Printer	(Audit Trail Printer)	Active	3	12

TABLE 10. TOPS/VSN Tower 48-Port PRU Configuration

D.11 TOPS/VSN Tower 24-Port PRU Configurations

Cabinet	Slot	PRU Type	Name	Status	Alt. Addr. Cabinet	Alt. Addr. Slot
1	6	SCSI Tape Server	(Tape #1)	Active	0	0
		Data Connection Manager	(DCM)	Active	0	0
		System Admin Services	(SAS)	Active	0	0
		Synchronization Manager	(SSM)	Active	3	12
		File Server - 2	(VSNFS2)	Active	0	0
		Screen Activities Manager	(SAM)	Active	0	0
	14	Application Scheduler	(Sched)	Active	0	0
		Printer Queue Manager	(QMan)	Active	0	0
		Log Notification Server	(Log_Notify)	Active	0	0
		Job Manager	(Job_Mgr)	Active	0	0
		Alarm Subsystem	(Alarms)	Active	0	0
		SDM Table Editor	(SDM Edit)	Active	0	0
		Report Generator	(Report)	Active	0	0
		Logger	(Logs)	Active	0	0
		Log Query	(Log_Query)	Active	0	0
		OM Reporter Subsystem	(OMRep)	Active	0	0
		OM Collector Subsystem	(OMSub)	Active	0	0
		Log Printer	(Log_Print)	Active	0	0
		VSN Maintenance Notices	(VSNNot)	Active	3	12
		Simple Forms Handler - 1	(SFH 1)	Active	0	0
Spooler User Interface	(SUI)	Active	0	0		
3	12	SDM Notification	(SDMNot)	Active	0	0
		VI Resource Manager	(VI - RM)	Active	4	16
		FOS Manager	(DVIX Disk Interface)	Active	0	0
4	4	VSN Datalink Manager	(VSN Datalink Manager)	Active	3	12
		X.25 Datalink 1	(X.25 Datalink_1)	Active	3	12
		X.25 Datalink 2	(X.25 Datalink_2)	Active	3	12
		Network Resource Manager	(NRM)	Active	3	12
		Host Agent	(HAG)	Active	3	12
		Locality Database	(LDB)	Active	0	0
		Save - Restore	(XR)	Active	0	0
		Network Support	(Net Sup)	Active	3	12
		T1 - Maintenance	(T1-Mtce)	Active	0	0
		Simple Forms Handler - 2	(SFH 2)	Active	0	0
		VI - Maintenance	(VI-Mtce)	Active	0	0
		ACPE Maintenance	(ACPE MMI)	Active	0	0

TABLE 11. TOPS/VSN Tower 24-Port PRU Configuration

Cabinet	Slot	PRU Type	Name	Status	Alt. Addr. Cabinet	Alt. Addr. Slot
4	16	ASCII Conn. Agent	(ACA)	Active	3	12
		XSRU Application Agent	(XSRU Appl Agent)	Active	0	0
		ACPE 1 (VA)	(ACPE 1)	Active	3	12
		ACPE-RM (VD)	(ACPE-RM)	Active	3	12
		T1 Resource Manager	(T1-RM)	Active	3	12
		XSRU Boss	(Command Interpreter)	Active	0	0
		Voice Network Manager	(VNM)	Active	3	12

TABLE 11. TOPS/VSN Tower 24-Port PRU Configuration

D.12 TOPS/VSN Rack 48-Port PRU Configurations

Cabinet	Slot	PRU Type	Name	Status	Alt. Addr. Cabinet	Alt. Addr. Slot
1	4	SDM Notification	(SDMNot)	Active	0	0
		VI Resource Manager	(VI - RM)	Active	4	12
		FOS Manager	(DVIX Disk Interface)	Active	0	0
	6	SCSI Tape Server	(Tape #1)	Active	0	0
		Data Connection Manager	(DCM)	Active	0	0
		System Admin Services	(SAS)	Active	0	0
		Synchronization Manager	(SSM)	Active	1	4
		File Server - 2	(VSNFS2)	Active	0	0
		Screen Activities Manager	(SAM)	Active	0	0
	14	Application Scheduler	(Sched)	Active	0	0
		Printer Queue Manager	(QMan)	Active	0	0
		Log Notification Server	(Log_Notify)	Active	0	0
		Job Manager	(Job_Mgr)	Active	0	0
		Alarm Subsystem	(Alarms)	Active	0	0
		SDM Table Editor	(SDM Edit)	Active	0	0
		Report Generator	(Report)	Active	0	0
		Logger	(Logs)	Active	0	0
		Log Query	(Log_Query)	Active	0	0
		OM Reporter Subsystem	(OMRep)	Active	0	0
		OM Collector Subsystem	(OMSub)	Active	0	0
		Log Printer	(Log_Print)	Active	0	0
		VSN Maintenance Notices	(VSNNot)	Active	1	4
		Simple Forms Handler	(SFH 1)	Active	0	0
Spooler User Interface	(SUI)	Active	0	0		
Save - Restore	(XR)	Active	0	0		

TABLE 12. TOPS/VSN Rack 48-Port PRU Configuration

Cabinet	Slot	PRU Type	Name	Status	Alt. Addr. Cabinet	Alt. Addr. Slot
4	12	XSRU Application Agent	(XSRU Appl Agent)	Active	0	0
		ACPE 1 (VA)	(ACPE 1)	Active	1	4
		XSRU Boss	(Command Interpreter)	Active	0	0
		Voice Network Manager	(VNM)	Active	1	4
		Audit Printer	(Audit Trail Printer)	Active	1	4
	16	VSN Datalink Manager	(VSN Datalink Manager)	Active	1	4
		X.25 Datalink 1	(X.25 Datalink_1)	Active	1	4
		X.25 Datalink 2	(X.25 Datalink_2)	Active	1	4
		Network Resource Manager	(NRM)	Active	1	4
		Host Agent	(HAG)	Active	1	4
		Locality Database	(LDB)	Active	0	0
		ACPE-RM (VD)	(ACPE-RM)	Active	1	4
		T1 Resource Manager	(T1-RM)	Active	1	4
6	16	T1 - Maintenance	(T1-Mtce)	Active	0	0
		VI - Maintenance	(VI-Mtce)	Active	0	0
		ACPE Maintenance	(ACPE MMI)	Active	0	0
		ASCII Conn. Agent	(ACA)	Active	1	4
		Network Support	(Net Sup)	Active	1	4
		Simple Forms Handler - 2	(SFH 2)	Active	0	0
		ACPE 2 (VA)	(ACPE 2)	Active	1	4

TABLE 12. TOPS/VSN Rack 48-Port PRU Configuration

D.13 TOPS/VSN Rack 24-Port PRU Configurations

Cabinet	Slot	PRU Type	Name	Status	Alt. Addr. Cabinet	Alt. Addr. Slot
1	4	SDM Notification	(SDMNot)	Active	0	0
		VI Resource Manager	(VI - RM)	Active	4	12
		FOS Manager	(DVIX Disk Interface)	Active	0	0
		ACPE-RM (VD)	(ACPE-RM)	Active	0	0
		T1 Resource Manager	(T1-RM)	Active	0	0
	6	SCSI Tape Server	(Tape #1)	Active	0	0
		Data Connection Manager	(DCM)	Active	0	0
		System Admin Services	(SAS)	Active	0	0
		Synchronization Manager	(SSM)	Active	1	4
		File Server - 2	(VSNFS2)	Active	0	0
		Screen Activities Manager	(SAM)	Active	0	0
	14	Application Scheduler	(Sched)	Active	0	0
		Printer Queue Manager	(QMan)	Active	0	0
		Log Notification Server	(Log_Notify)	Active	0	0
		Job Manager	(Job_Mgr)	Active	0	0
		Alarm Subsystem	(Alarms)	Active	0	0
		SDM Table Editor	(SDM Edit)	Active	0	0
		Report Generator	(Report)	Active	0	0
		Logger	(Logs)	Active	0	0
		Log Query	(Log_Query)	Active	0	0
		OM Reporter Subsystem	(OMRep)	Active	0	0
		OM Collector Subsystem	(OMSub)	Active	0	0
		Log Printer	(Log_Print)	Active	0	0
VSN Maintenance Notices	(VSNNot)	Active	0	0		
Simple Forms Handler	(SFH 1)	Active	0	0		
Spooler User Interface	(SUI)	Active	0	0		

TABLE 13. TOPS/VSN Rack 24-Port PRU Configuration

Cabinet	Slot	PRU Type	Name	Status	Alt. Addr. Cabinet	Alt. Addr. Slot
4	12	ACPE 1 (VA)	(ACPE 1)	Active	1	4
		Voice Network Manager	(VNM)	Active	1	4
		Audit Printer	(Audit Trail Printer)	Active	1	4
		ASCII Conn. Agent	(ACA)	Active	1	4
	16	VSN Datalink Manager	(VSN Datalink Manager)	Active	1	4
		X.25 Datalink 1	(X.25 Datalink_1)	Active	1	4
		X.25 Datalink 2	(X.25 Datalink_2)	Active	1	4
		Network Resource Manager	(NRM)	Active	1	4
		Host Agent	(HAG)	Active	1	4
		Save - Restore	(XR)	Active	0	0
		Network Support	(Net Sup)	Active	1	4
		T1 - Maintenance	(T1-Mtce)	Active	0	0
		Simple Forms Handler - 2	(SFH 2)	Active	0	0
		VI - Maintenance	(VI-Mtce)	Active	0	0
		ACPE Maintenance	(ACPE MMI)	Active	0	0
	12	XSRU Application Agent	(XSRU Appl Agent)	Active	0	0
		XSRU Boss	(Command Interpreter)	Active	0	0
		Locality Database	(LDB)	Active	0	0

TABLE 13. TOPS/VSN Rack 24-Port PRU Configuration

Appendix E: Testing the ASCII Terminal

This procedure describes a quick test that can be run to verify that the ASCII terminal connected to the Prime Processor is working properly before beginning a software install or upgrade.

NOTE : During steps 4 and 5, the VSN OA&M Processor will be offline. While this does not affect call processing - alarms, logs, print queues and OMs are not captured until step 6 is executed. This will not be a problem since steps 4 and 5 only take several seconds to execute. If the user delays in executing step 6, the VSN OA&M processor will reboot itself which will extend down-time to several minutes. During this time, alarms, logs and OMs will not be captured. Therefore, it is recommended that this procedure be executed during periods of low call traffic.

1. From the rear of the VSN system, locate the Cabinet 1 Slot 6 Prime Processor. For Tower configurations, this is simply Cabinet 1 Slot 6. For Rack configurations, refer to Appendix D.1 TOPS/VSN DVS Towers to Bays Hardware Mapping to determine what bay, shelf and slot corresponds to Cabinet 1 Slot 6.
2. Locate the Cabinet 1 Slot 14 Application Processor (VSN OA&M).
3. Unplug the ASCII terminal cable from the 9-pin connector on the rear of the Cabinet 1 Slot 6 SRU. Plug the ASCII terminal cable into the 9-pin connector on the rear of the Cabinet 1 Slot 14 SRU.

Steps 4 and 5 verify terminal setup, cable integrity, and that the terminal transmits and receives properly.

4. At the ASCII terminal, type:

<ctrl+B>

The system will respond with:

>>

5. At the ASCII terminal, type:

LP<enter>

The system should display a list of VSN OA&M programs similar to the following:

<i>number</i>	<i>name</i>	<i>locale</i>	<i>initptr</i>
1	MONITOR	0	007807CC
2	OSP	0	00840108
	.		
	.		
	.		
25	MONITOR	12	007807CC

26	<i>BSOCPROG</i>	12	<i>0003FFFC</i>
27	<i>MONITOR</i>	13	<i>007807CC</i>
28	<i>BSLPPROG</i>	13	<i>0003FFFC</i>

When the >> prompt reappears, immediately execute the next step.

- At the >> prompt, type:

GO

The system should respond with a blank line (carriage return, linefeed).

- Unplug the ASCII terminal cable from the 9-pin connector on the rear of the Cabinet 1 Slot 14 SRU. Plug the ASCII terminal cable back into the 9-pin connector on the rear of the Cabinet 1 Slot 6 SRU.
- From the VSN main menu, enter the Logs subsystem. Verify that the logger screen is displayed showing system logs. Exit the Logs subsystem.

If the Logs subsystem cannot be entered from the main menu, enter System Administrative Services - Maintenance. Press the Cabinet State softkey and cursor down to the Cabinet 1 Slot 14 SRU. Reboot this VSN OA&M SRU by pressing the “More Softkeys”, “Courtesy Down”, and “Down Only” softkeys. When the SRU state transitions to *down*, press the “Put Into Service” softkey to reboot the SRU.

Testing is now complete.

If the system does not respond as described above, reseal the terminal cable and check the settings as specified by Appendix F: NT 220 Terminal Settings, and Appendix G: NT 320 Terminal Settings for the type of terminal in use. Try steps 4,5, and 6 once again. If the terminal setup was correct and reseating the cable did not produce correct results on the retry, the cable and/or terminal are probably faulty.

Appendix F: NT 220 Terminal Settings

The following NT 220 terminal settings are known to work with TOPS/VSN.¹

General Set Up	
To Next Set Up Screen	VT100 Mode
On Line	VT100 ID
Clear Display	User Defined Keys Unlocked
Clear Communications	User Features Unlocked
Reset Terminal	Numeric Keypad
Recall "Saved" Values	Normal Cursor Keys
Save Current Values	No New Line
Default Values	Set Up = English
Refresh Rate = 60 Hz	North American Keyboard

Figure 25: NT 220 Setup Menu - Page 1

1. Various other settings will also work. Consult the NT 220 Video Display Terminal Operation Manual.

The NT220 terminal may not be connected to the VSN at this point. If that is the case the terminal must be connected.

Printer Comm. Set Up	Host Comm. Set-Up
To Next Set Up Screen	Transmit = 9600
Speed = 9600	Receive = Transmit
Normal Print Mode	XOFF at 128
8 Bits, No Parity	8 Bits, No Parity
1 Stop Bit	1 Stop Bit
Print Full Page	No Local Echo
Print National Only	EIA Port, Data Leads Only
No Terminator	Disconnect, 2 S Delay
	Limited Transmit

Figure 26: NT 220 Setup Menu - Page 2

Display Set Up	Keyboard Set Up
To Next Set Up Screen	Typewriter Keys
80 Columns	CAPS Lock
Interpret Controls	Auto Repeat
No Auto Wrap	Key Click
Jump Scroll	Margin Bell
Light text, Dark Screen	Warning Bell
Cursor	Break
Block Cursor Style	Multinational
Flip Off	Del = Del; Shift/Del = BS

Figure 27: NT 220 Setup Menu - Page 3

Answerback/Tab Set Up	Enhance/Block Mode Set Up
To Next Set Up Screen	CRT Saver Enabled
No Auto AnswerBack	Clear Screen after Size Change
Not Concealed	Defined Function Key
Answerback =	
Clear All Tabs	
Set 8 Column Tabs	

Figure 28: NT 220 Setup Menu - Page 4

Appendix G: NT 320 Terminal Settings

The following NT 320 terminal settings are known to work with TOPS/VSN.¹

Global Set-Up	
Host Port	1
Background	Dark
Screen Saver	15 min
Refresh Rate	72 Mhz
Keyclick	No
Keyboard	U.S.
Message Translations	English
Setup Translations	English
Clear Display	
Clear Comm	
ROM Revision	5181-5672-3014

Figure 29: NT 320 Setup Menu - Page 1

1. Various other settings will also work. Consult the NT 320 Video Display Terminal Operation Manual.

User Set Up			
Smooth Scroll	Jump	DISPLAY Width	80
Cursor Type	Blink Box	DISPLAY Width Allowed	80 or 132
Cursor	On	Char Cell Hight	16 Dots
2nd Message Line	On	Clr on Width Change	Yes
Message Line	On	Aux Mode	Off
Status Line	On	Aux to Host	Off
On Line	Yes	Print Terminator=FF	No
Local Echo	Off	Logical Page Size	24
Auto Wrap	Off	Number of Pages	1
Auto Linefeed	Off		
Display Ctrl Codes	Off		

Figure 30: NT 320 Setup Menu - Page 2

Emulation Set Up	
Emulation	VT100
Terminal Id	VT100
Control Codes	7-Bit
Characters Mode	7-Bit (8-Bit in some instances)
Preferred Char Set	DEC Supplemental
Keypad Mode	Numeric
Cursor Keys	Normal
Print Scroll Region	Off
User Features Locked	No
User Keys Locked	No
Data Processing Keys	No

Figure 31: NT 320 Setup Menu - Page 3

```
Port1 Set Up

Communication      Full Duplex      CD              Ignore
Data Lenght       8 Bits          Break Duration  170 ms
Parity            None            Disconnect Delay Never
Stop Bits         1              Aux Printer Type National
Xmit Baud         9600
Recv Baud         = Xmit
Xmit Pace         Xon/Xoff
Recv Pace         Xoff at 128
Limited Transmit  Off
DSRI              No
CIS               Ignore
```

Figure 32: NT 320 Setup Menu - Page 4

```
Port2 Set Up

Communication      Full Duplex
Data Lenght       8 Bits
Parity            None
Stop Bits         1
Xmit Baud         9600
Recv Baud         = Xmit
Xmit Pace         DSR/Xon/Xoff
Recv Pace         Xoff at 128
Limited Transmit  Off
Break Duration    170 ms
Aux Printer Type  National
```

Figure 33: NT 320 Setup Menu - Page 5

```
Keyboard Set Up

Lock Key           Caps Lock   Tab Setting
Kdb Loack Enable  Yes
Save Tabs          Yes
Auto Repeat       Yes
Margin Bell       Yes
Warning Bell      Yes
Auto Answerback   No
Answerback=
Conceal Answerback No
Clear All Tabs
Set 8 Coulms Tabs
```

Figure 34: NT 320 Setup Menu - Page 6

```
Program Set Up

Hit Space, then Key to be programmed
Destination       Remote
Clear all Keys
Hit Return to end definition
```

Figure 35: NT 320 Setup Menu - Page 7

Appendix H: NT Printer Settings

The following NT printer settings are known to work with TOPS/VSN:¹

```
FIRMWARE: (00511161) RESOLUTION: MED PRINTHEAD: 18S
```

1. Font:
Style - (44A51181) Draft
CPI - 10.0
Country - US/EBCDIC
Mode - Normal
2. LPI - 6
3. Forms Control:
Form Length - 11.0"
Top Margin - 0.0"
Bottom Margin - 0.0"
4. Interface Control:
Interface Type - Serial
Input Buffer Length 0512
Interface Straps A:
0 1 2 3
12345678901234567890123456789012
00001000000001000000100000001000
Interface Straps B:
0 1 2 3
12345678901234567890123456789012
11000000000000000000000000000000
Speed - 9600
Parity - None
5. Margin Settings:
Left Margin - 0.0"
Right Margin - 13.6"
6. Horizontal Tabs Stops:
None
7. Vertical Tabs Stops:
None
8. Printer Control Straps:
Printer Straps A:
0 1 2 3
12345678901234567890123456789012
10001000101100010000000000000000
Printer Straps B:
0 1 2 3
12345678901234567890123456789012
00000100000111110010000010010000
9. Emulation Mode - Normal

Figure 36: Printer Settings

1. Various other settings may also work. Consult the appropriate documentation for further information.

With the above configuration, 11" X 15" paper is required in the printer. If print-outs are required on 8.5" X 11" paper, the CPI in selection item "1" should be 16.7.

Appendix I: Default Userids and Passwords

Each VSN System is preconfigured with 4 default userids¹ as shown below:

UserID	Password
SUPERUSER	SUPERUSER
MAINTENANCE	MAINTENANCE
FIELDSUPPORT	FIELDSUPPORT
PMUSER	PMUSER

Each user has access to tools that make up the VSN environment. Specifically, the following Main Menu display is accessible by the MAINTENANCE and FIELD-SUPPORT users:

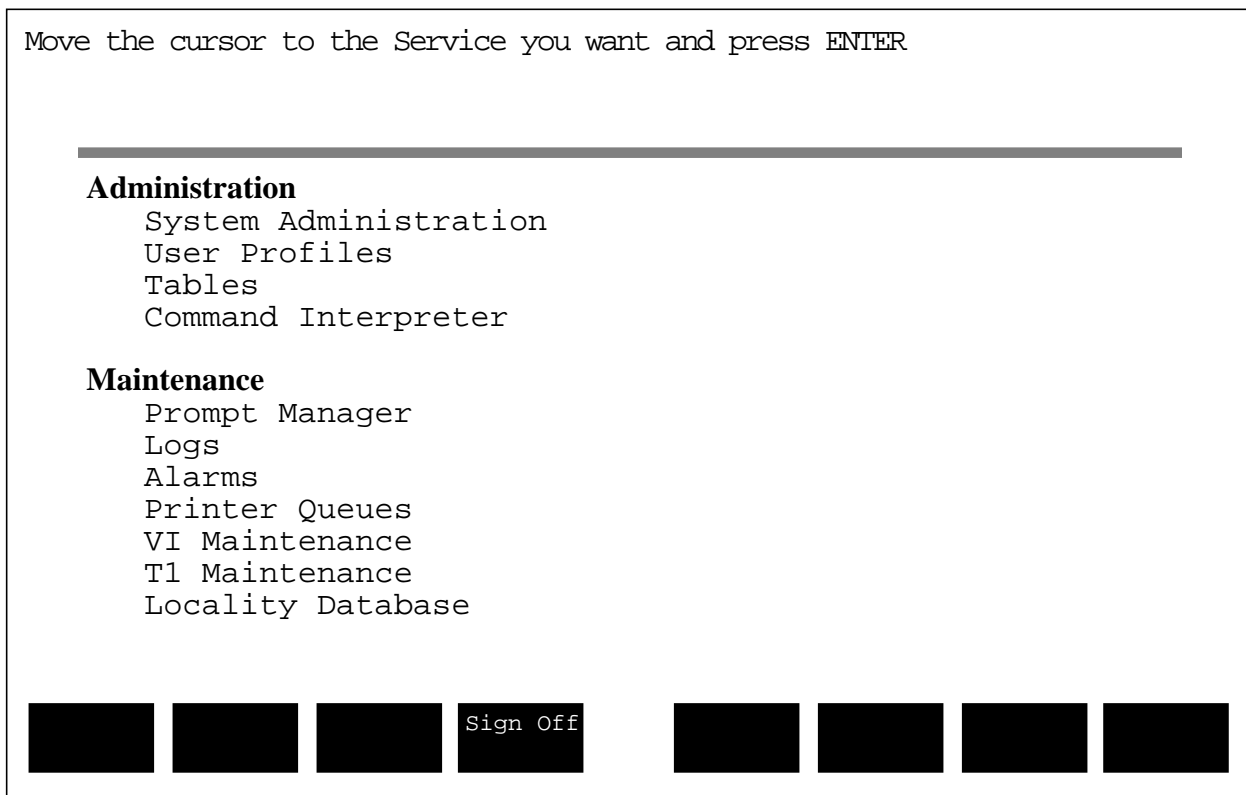


Figure 37: TOPS/VSN MAINTENANCE and FIELDSUPPORT Main Menu

1. SUPERUSER access is for DVIX / Prompt Manager installation only.

The following Main Menu display is accessible by the SUPERUSER user:

```
Move the cursor to the Service you want and press ENTER

-----

Administration
  System Administration
  User Profiles
  Tables
  Command Interpreter

Maintenance
  Logs
  Alarms
  Printer Queues
  VI Maintenance
  T1 Maintenance
  Locality Database
  Prompt Manager
  DVIX-1

[ ] [ ] [ ] Sign Off [ ] [ ] [ ] [ ]
```

Figure 38: TOPS/VSN SUPERUSER Main Menu

The following Main Menu display is accessible by the PMUSER user:

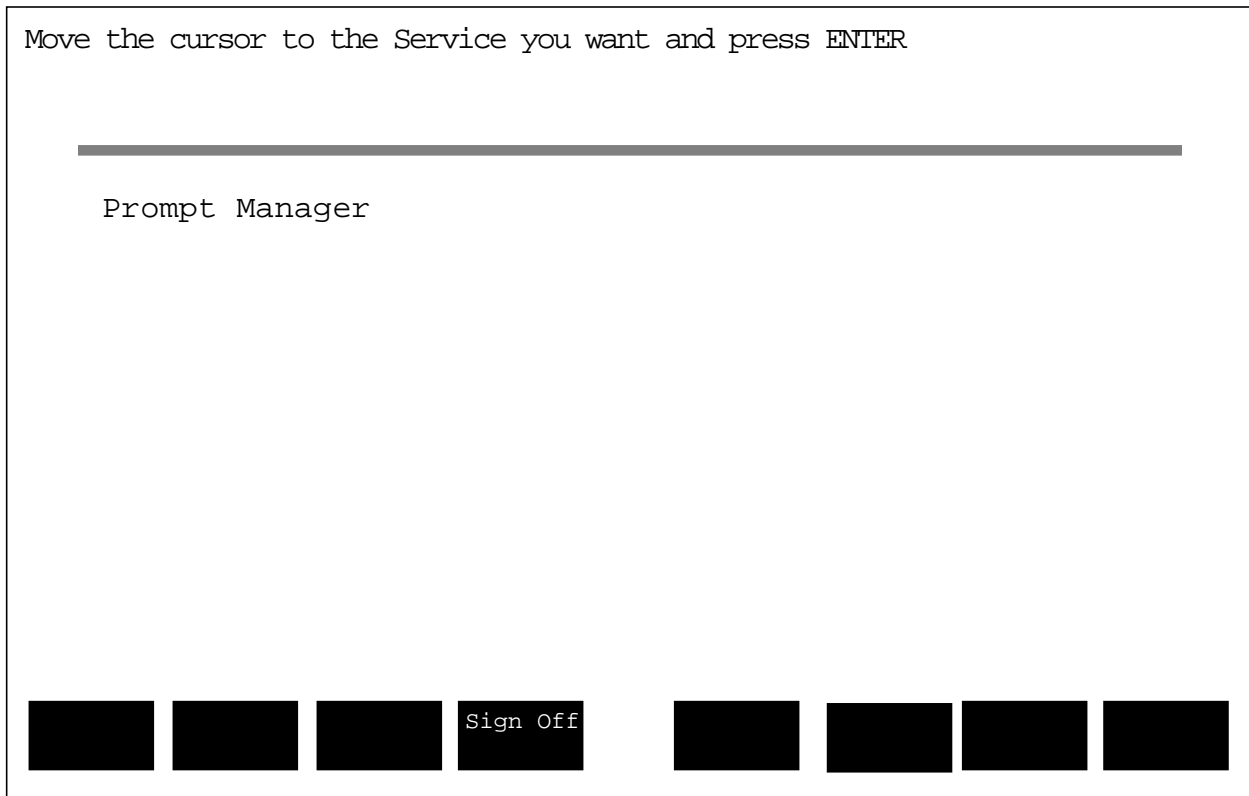


Figure 39: TOPS/VSN PMUSER Main Menu

Appendix J: TOPS/VSN Herald Page

The herald page is the screen which is displayed after M4020 terminal booting, before a user has signed on to TOPS/VSN. This is also known as the login screen.

If the Release Number shown is not correct (as shown in Section Figure 40: on page 165), contact your NT/BNR representative for assistance.

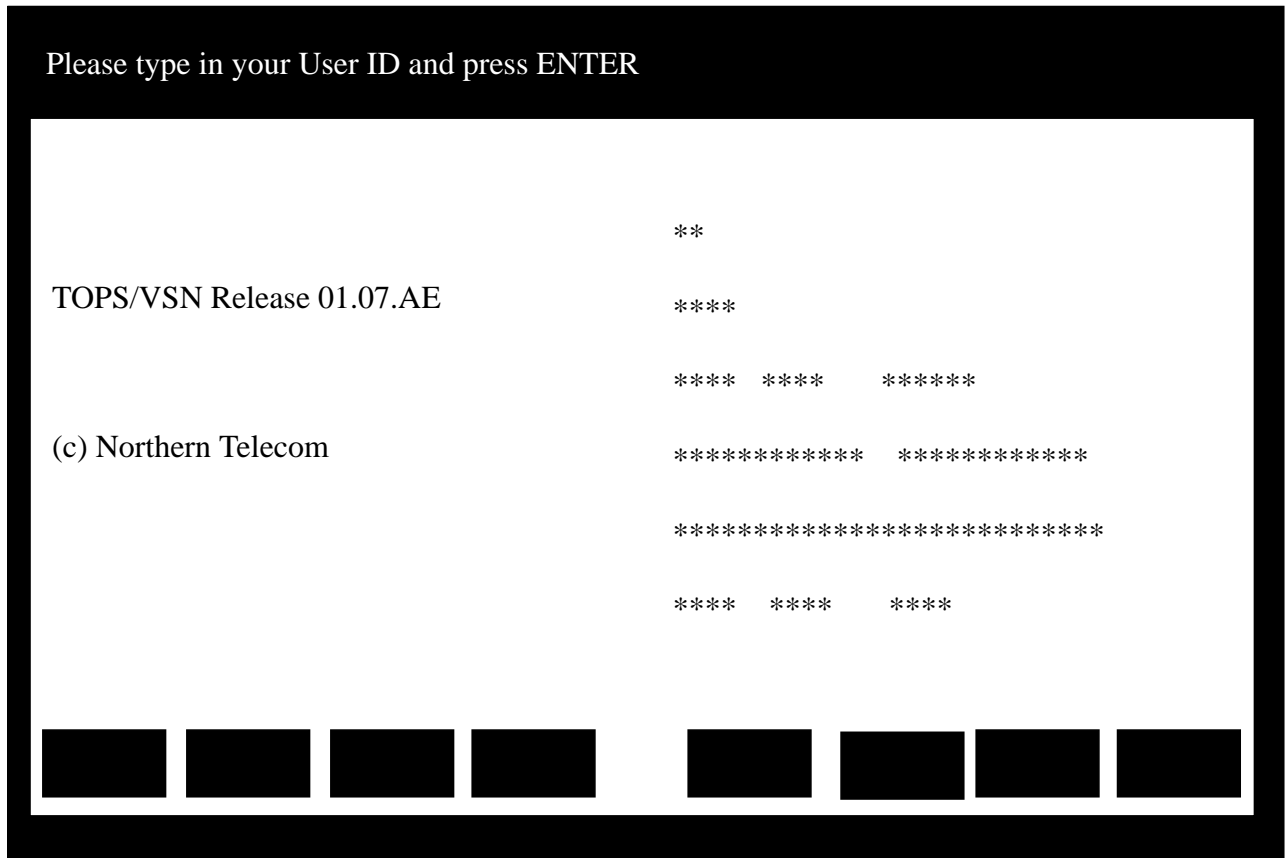


Figure 40: TOPS/VSN Herald

Appendix K: Remote VT-100 (ASCII Dial up) Access

TOPS/VSN is pre-configured to support remote VT-100 access via dial up modem (2 ports). Therefore, TAS/ESAC can dial in to a TOPS/VSN and perform diagnoses and most maintenance functions remotely. VSN software installations and upgrades cannot be performed via dial-up access.

For your convenience, the following table indicates some of the more common VT-100 key sequences which emulate M4020 keys.

VT-100 Key Sequence	DV-1 Key Cap
ESC 1	Softkey 1
ESC 2	Softkey 2
ESC 3	Softkey 3
ESC 4	Softkey 4
ESC 5	Softkey 5
ESC 6	Softkey 6
ESC 7	Softkey 7
ESC 8	Softkey 8
ESC Delete	Erase EOF
ESC .	TAB Forward
ESC ,	TAB Backward
ESC y	Insert Mode
ESC c	Command
ESC l	Close
ESC m	MainMenu
ESC n	Next Window
ESC r	Reset
ESC w	Window Menu
ESC x	X_Cancel
LineFeed	Enter

TABLE 14. VT-100 Key Sequences for ASCII dial up

Appendix L: TOPS/VSN Error Messages/Codes

While the TOPS/VSN is booting, there are several error messages that may be displayed by the system. Some of these messages are for information only and require no corrective action or intervention. Others may indicate more serious problems that require attention. These messages are displayed on the NT220 terminal connected directly to the Prime Processor.

L.1 Information Messages

The following messages are for information only and require no intervention. They are typically seen after the system is booted and in service. These messages may be followed on the next line by a row of numbers.

PACKET SMALLER THAN MINIMUM

BADCRC

L.2 Boot Time Error Messages

The following messages may require intervention before the TOPS/VSN will go in service. They are typically seen during boot time and may prevent the system from going in service. If the TOPS/VSN will not go in service and one of these messages is seen, perform the corrective action indicated. If no corrective action is indicated and the TOPS/VSN is not in service, power down the system for 5 minutes any try again. If the TOPS/VSN system is in service, record the message for future reference in case the system begins to behave unexpectedly. If this does not solve the problem, contact your NT/BNR representative for assistance.

Messages in this section will usually follow the following format:

<Description of the Problem>:

<Name of file or disk with problem> I/O RESULT <Error Number>.

For example:

**CENTRAL MAINTENANCE PROGRAM FAILED TO LOAD:
COULD NOT OPEN `LOCAL`VSS`VSS.PD.TEXT I/O RESULT 45.**

The error number can be matched with the numbers in the following list:

- **40 = File not open**
A file that should have been open for use by the system is not accessible.
- **41 = Attempt to open an already open file**
The system has attempted to open a file that is already open.
- **45 = Server not found**

The disk drive that the system is attempting to access cannot be found. This is usually due to a mismatch between the Prime Processor and the system disk drive(s) that occurs when a new disk drive or Prime Processor is installed. It may be corrected using the following procedure.

- a) From the maintenance terminal connected to the Prime Processor, press **<CTRL-B>** or the **<Break>** key. The system should respond with:

*

If this response is not received when one of these keys is pressed, press the other.

- b) Type:

SM 9003F0 'XXX'<enter>

- c) Reboot the system

This will correct the error and the system should boot normally. If problems persist, contact your NT/BNR representative for assistance.

- **49 = Value/Field Overflow**

The system has encountered a value that is larger than expected.

- **102 = File not found**

The system is unable to locate a file it is attempting to access.

- **109 = Access denied**

The system has been denied access to a file or directory it is attempting to access.

- **112 = Server communication problem**

The disk or tape device the system is attempting to access has gone off line and is not available.

- **118 = Illegal access specification**

The system is unable to access a file because the access permissions will not allow it.

- **134 = Server timeout**

The disk drive the system is attempting to communicate with is not responding within the allowed time.

L.3 Command Interpreter Error Messages

The following error messages may be seen while using the Command Interpreter from the TOPS/VSN Main Menu or from the System Administration Utilities

menu. Most are user errors caused by entering a command incorrectly. These messages are seen on the system M4020 terminal.

- **101 = Bad Pathname**

The directory and/or file name specified contains illegal characters or is too long. Use a shorter name or insure only alphanumeric characters are used.
- **103 = Cannot create object**

The file or directory name specified cannot be created. This is probably caused by the user not having write access to the disk or directory named.
- **104 = Duplicate name**

The new file or directory name that the user is trying to create already exists. Use a unique name.
- **105 = Bad address**

A bad address has been specified, probably when referring to a tape device.
- **113 = Server resource limit**

A resource limit has been reached on the indicated disk drive. Exit the Command Interpreter and re-enter it.
- **115 = Disk write protected**

The disk that the user is attempting to write a file or directory to is configured to prevent writing information on it. This is probably due to a mistake during configuration. Contact your NT/BNR representative for assistance.
- **132 = No room on volume**

The disk being written to is full. Remove some user files to free space on the disk.

Appendix M: Prompt Name Changes from Patches (Canadian Load)

The VSN04 load included a number of Canadian prompts that were only previously available in patch form. The names for some of these prompts have been changed as shown in the following table.

Prior to a VSN07 upgrade, affected sites should identify any prompts in their datafill which have changed names. Following restoration of customer datafill, convert any affected PROMPTS or FRENCH_PROMPTS table entries to the new names. At this point, FIXAUDEX can be run and the ACPEs rebooted. Refer to the section 3.14 Save-Restore of Customer Datafill, step 12. on page 87 for details.

AFFECTED SITE(S)	PREVIOUS NAME	VSN07 NAME
Alberta	CS-1B-AGT-E	CS-1B-BC-E
Alberta	OT-6G-AGT-E	OT-6G-BC-E
Alberta	OT-6D-AGT-E	OT-6H-BC-E
Alberta	OT-7B-AGT-E	OT-7B-BC-E
Alberta	SS-2G-AGT-E	SS-2G-BC-E
Alberta	SS-2I-AGT-E	SS-2J1-BC-E
Alberta	SS-2J-AGT-E	SS-2J-BC-E
Alberta	SS-2K-AGT-E	SS-2J2-BC-E
Bell Canada	OT-6D-BC-E	OT-6H-BC-E
Bell Canada	OT-7B-BC-E	OT-7C-BC-E
Bell Canada	SS-2I-BC-E	SS-2J1-BC-E
Bell Canada	MD-7B-BC-E	MD-7F-BC-E
Bell Canada	MD-8B-BC-E	MD-8D-BC-E
Bell Canada	MD-8C-BC-E	MD-8E-BC-E
Bell Canada	TP-23C-BC-F	TP-23F-BC-F
Bell Canada	MD-7B-BC-F	MD-7F-BC-F
Bell Canada	MD-8B-BC-F	MD-8G-BC-F
Bell Canada	MD-8C-BC-F	MD-8H-BC-F
British Columbia	OT-6D-BC-E	OT-6H-BC-E
British Columbia	SS-2I-BC-E	SS-2J1-BC-E
Maritime	OT-6D-BC-E	OT-6H-BC-E
Maritime	OT-7B-AGT-E	OT-7B-BC-E
Maritime	SS-2I-BC-E	SS-2J1-BC-E

AFFECTED SITE(S)	PREVIOUS NAME	VSN07 NAME
New Brunswick	OT-6D-BC-E	OT-6H-BC-E
New Brunswick	SS-2I-BC-E	SS-2J1-BC-E
New Brunswick	TP-23C-BC-F	TP-23F-BC-F
Newfoundland	OT-6D-BC-E	OT-6H-BC-E
Newfoundland	SS-2I-BC-E	SS-2J1-BC-E
Saskatchewan	CS-1A-SK-E	CS-1B-BC-E
Saskatchewan	OT-6A-SK-E	OT-6I-BC-E
Saskatchewan	OT-6B-SK-E	OT-6J-BC-E
Saskatchewan	OT-7A-SK-E	OT-7D-BC-E
Saskatchewan	TP-23A-SK-E	TP-23D-BC-E
Saskatchewan	SS-2A-SK-E	SS-2J1-BC-E
Saskatchewan	SS-19A-SK-E	SS-19B-BC-E
Saskatchewan	SS-20A-SK-E	SS-20B-BC-E

Note: Prompt SS-2I-BC-E has been removed from the load. Prompts SS-2J1-BC-E and SS-2J2-BC-E are replacements.

Note: Prompt SS-10A-BC-F has been removed from the load. Prompt SS-10B-BC-F is used as a replacement.

Note: NTP 450-1301-105 contains the text for all Canadian announcements.

Appendix N: VSN36 Patch Prompt Name Changes (US Load)

A number of new audio prompts were distributed in VSN36 patches. Some of these prompts were given new names when they were incorporated into the VSN03 release. The following table lists these prompts, their new names, and the affected telcos. Sites upgrading from VSN36 should change any PROMPTS table references from the old prompt names to the new names and run the FIXAUDEX program. Failure to do so will result in the ACPEs booting to a FAULTY state. Refer to the section 3.14 Save-Restore of Customer Datafill, step 12. on page 87 for details.

AFFECTED SITE(S)	VSN36 PROMPT NAME	VSN07 PROMPT NAME
Sprint - United	SS-0-UTF-SE	SS-0
Sprint - United	SS-0A-UTF-SE	SS-0A
Sprint - United	OT-0-UTF-SE	OT-0
Sprint - United	OT-0A-UTF-SE	OT-0A
Sprint - United	OT-12-UTF-SE	OT-12
Sprint - United	OT-12A-UTF-SE	OT-12A
Sprint - United	OT-12B-UTF-SE	OT-12B
Ameritech	SS-0-AM-SE	SS-0
Ameritech	SS-0A-AM-SE	SS-0A
Ameritech	SS-0B-AM-SE	SS-0B
Ameritech	OT-0-AM-SE	OT-0
Ameritech	OT-12-AM-SE	OT-12
Nynex	SS-0-NX-JE	SS-0
Nynex	SS-0A-NX-JE	SS-0A
Nynex	OT-12-NX-JE	OT-12
Sprint - CT	SS-0-CT-SE	SS-0
Sprint - CT	SS-0A-CT-SE	SS-0A
Sprint - CT	SS-0B-CT-SE	SS-0B
Sprint - CT	SS-0C-CT-SE	SS-0C
Sprint - CT	OT-0-CT-SE	OT-0
Sprint - CT	OT-0A-CT-SE	OT-0A
Sprint - CT	OT-12-CT-SE	OT-12
Sprint - CT	OT-12A-CT-SE	OT-12A
Sprint - CT	OT-12B-CT-SE	OT-12B

AFFECTED SITE(S)	VSN36 PROMPT NAME	VSN07 PROMPT NAME
All US sites	OT-2-SE	OT-2
All US sites	OT-2A-SE	OT-2A
All US sites	OT-20-SE	OT-20
All US sites	OT-20A-SE	OT-20A
All US sites	OT-25B-SE	OT-25B
All US sites	OT-6-SE	OT-6

Appendix O: VSN04 Prompts and French_Prompts Datafill Changes

The default datafill of the Prompts and French_Prompts tables changed as of VSN04. The announcements received by the subscriber have not changed. However, the call flow that provides these announcements has been modified. The following tables detail the changes.

U.S. PROMPTS Table						
Prompt Name	Pre-VSN04 datafill				VSN07 Datafill	
CS4	OT-0	5	CS-4	0	CS-4	0
CS5	OT-0	5	CS-5	0	CS-5	0
CS6	OT-0	5	CS-6	0	CS-6	0
CS18	OT-0	5	CS-4	0	CS-4	0
TP7	OT-0	5	TP-7	0	TP-7	0
TP14	OT-0	5	TP-14	0	TP-14	0
TP18	OT-0	5	TP-19	0	TP-19	0

Canadian PROMPTS Table						
Prompt Name	Pre-VSN04 datafill				VSN07 Datafill	
CS4	OT-0A-BC-E	5	CS-4A-BC-E	0	CS-4A-BC-E	0
CS5	OT-0A-BC-E	5	CS-5A-BC-E	0	CS-5A-BC-E	0
CS6	OT-0A-BC-E	5	CS-6A-BC-E	0	CS-6A-BC-E	0
CS18	OT-0A-BC-E	5	CS-18A-BC-E	0	CS-18A-BC-E	0
TP7	OT-0A-BC-E	5	TP-7A-BC-E	0	TP-7A-BC-E	0
TP14	OT-0A-BC-E	5	TP-14A-BC-E	0	TP-14A-BC-E	0
TP18	OT-0A-BC-E	5	TP-19A-BC-E	0	TP-19A-BC-E	0

FRENCH_PROMPTS Table (Canada Only)						
Prompt Name	Pre-VSN04 datafill				VSN07 Datafill	
CS4	OT-0A-BC-F	5	CS-4A-BC-F	0	CS-4A-BC-F	0
CS5	OT-0A-BC-F	5	CS-5A-BC-F	0	CS-5A-BC-F	0
CS6	OT-0A-BC-F	5	CS-6A-BC-F	0	CS-6A-BC-F	0
CS18	OT-0A-BC-F	5	CS-18A-BC-F	0	CS-18A-BC-F	0
TP7	OT-0A-BC-F	5	TP-7A-BC-F	0	TP-7A-BC-F	0
TP14	OT-0A-BC-F	5	TP-14A-BC-F	0	TP-14A-BC-F	0
TP18	OT-0A-BC-F	5	TP-19A-BC-F	0	TP-19A-BC-F	0

Do not datafill the segment OT-0 for the prompts listed in these tables. Doing so will cause the called/billed party to receive two welcome messages.

Appendix P: Verifying Load Tape Contents

The following procedure describes how to spot-check the VSN load tapes for problems prior to a full installation or upgrade. This procedure will catch instances of cross-labeled tapes or bad tapes which cannot be read. This procedure will not detect an incomplete tape or the presence of corrupted files on tape. Tape 1A, Tape 2, the Patch tape and Features tape can be verified from the Command Interpreter. The Prompt Manager tape can only be verified from the DVIX environment.

P.1 Enter the Command Interpreter

From the Main Menu, cursor to the “*Command Interpreter*” menu item and press enter. The system will respond with:

Enter Password >>

Type:

0 <enter>

Note that this is a zero. The password will not echo to the screen. The system will respond with:

=> :LOCAL:CI_DIR

>

At this point, any or all of tapes 1A, 2, Patches or Features can be verified. If after entering the “*L :#TAPE*” command in the following steps, the system responds with:

Filename in error at - :#TAPE

Unable to get complete pathname - :#TAPE

=> Unable to get complete pathname - :#TAPE

Wait a minute before repeating the command. The tape is probably not ready to be accessed. If the problem persists, try rebooting the SCSI Tape Server PRU located in Cabinet 1 Slot 6.

Note that the “KTAPE” command should always be executed before removing a mounted tape.

P.2 Verifying Tape 1A

1. Insert Tape 1A into the tape drive in Cabinet 1.
2. Mount the tape by typing:

FT \$ <enter>

Wait several minutes for the tape to mount before continuing to the next step.

3. List the root directory by typing:

L :#TAPE <enter>

The system should respond with:

:#TAPE:

Directories :

DVITAPE1:

4. Dismount the tape by typing:

KTAPE <enter>

The system should respond with:

KTAPE (:#TAPE server shutdown utility) - version AE01

:#TAPE responding shutdown request!

=> :#TAPE server has responded to shutdown request.

5. Remove the tape from the tape drive after receiving the “*responded to shutdown*” message.

P.3 Verifying Tape 2

1. Insert Tape 2 into the tape drive in Cabinet 1.

2. Mount the tape by typing:

FT <enter>

Wait several minutes for the tape to mount before continuing to the next step.

3. List the root directory by typing:

L :#TAPE <enter>

The system should respond with:

:#TAPE:

Directories :

DVITAPE2:

4. Dismount the tape by typing:

KTAPE <enter>

The system should respond with:

KTAPE (:#TAPE server shutdown utility) - version AE01

:#TAPE responding shutdown request!

=> :#TAPE server has responded to shutdown request.

5. Remove the tape from the tape drive after receiving the “*responded to shutdown*” message.

P.4 Verifying the Patch tape

1. Insert the Patch tape into the tape drive in Cabinet 1.
2. Mount the tape by typing:

FT <enter>

Wait several minutes for the tape to mount before continuing to the next step.

3. List the root directory by typing:

L :#TAPE <enter>

The system should respond with:

:#TAPE:

Directories :

PATCH:

4. Dismount the tape by typing:

KTAPE <enter>

The system should respond with:

KTAPE (:#TAPE server shutdown utility) - version AE01

:#TAPE responding shutdown request!

=> :#TAPE server has responded to shutdown request.

5. Remove the tape from the tape drive after receiving the “*responded to shutdown*” message.

P.5 Verifying the Features tape

1. Insert the Features tape into the tape drive in Cabinet 1.
2. Mount the tape by typing:

FT <enter>

Wait several minutes for the tape to mount before continuing to the next step.

3. List the root directory by typing:

L :#TAPE <enter>

The system should respond with:

:#TAPE:

Directories :

FEATDIR:

4. Dismount the tape by typing:

KTAPE <enter>

The system should respond with:

KTAPE (:#TAPE server shutdown utility) - version AE01
:#TAPE responding shutdown request!

=> *:#TAPE server has responded to shutdown request.*

5. Remove the tape from the tape drive after receiving the “*responded to shutdown*” message.

P.6 Verifying the Prompt Manager tape

1. If in the Command Interpreter, type ***EXIT*** to return to the Main Menu. At the Main Menu, enter DVIX by cursoring to the *DVIX-1* menu item and press enter. After the DVIX banner and copyright information is displayed, the system will respond with:

#

2. To list the contents of the Prompt Manager tape, type:

cpio -ivtB < /dev/cart0

The system should respond with:

100644 root ... Prompt_Mgr/bin/patchpm
100755 root ... Prompt_Mgr/bin/pm_patch
100755 root ... Prompt_Mgr/bin/pm_init
100755 root ... Prompt_Mgr/bin/pm_install
 .
 .
 .
40755 root ... Prompt_Mgr/bin
40755 root ... Prompt_Mgr/etc
40755 root ... Prompt_Mgr
100644 root ... installpm

3. Remove the tape from the tape drive.
4. Type ***EXIT*** to leave DVIX and return to the Main Menu.

Appendix Q: Commissioning Procedure

The following commissioning Procedure is recommended for sites that have just completed a VSN New Installation or VSN Upgrade. This is a basic commissioning procedure containing a mix of VSN call types. A more comprehensive test package that addresses the particular feature mix available on a given VSN should be considered whenever possible.

Q.1 Commissioning Procedure Setup

1. After the VSN has been Installed or upgraded, Identify at least two phones where billing acceptance and call completion can be verified. Ensure someone is available to answer the phones.
2. Identify a phone that can be used to originate 0+ calls or a blue box configuration that has access to trunks for 0+ call traffic. Note that when using the Blue Box configuration correct ANI spill digits must be available.

Q.2 Making Calls

1. ManBusy the T1s on all other VSNs in the same cluster, this will isolate call processing to the newly loaded VSN.
2. Place the following calls and ensure you complete each call to verify all steps of the call progression. Exercise all major aspects of an AABS call (i.e., Front End and Back End language selection for bilingual systems, Name Record, Speech Recognition and Error Paths):

0+ Collect	(Originate from coin, restricted, and private)
0+ Bill to Third	(Originate from coin, restricted, and private)
0+ Calling Card	(Originate from coin, restricted, and private)
0+	Press 0 after Front End Language selection to go to the operator.
0-	Handoff collect call (for bilingual systems, give operator front end and back end languages if possible).
0-	Handoff Bill to Third call (for bilingual systems, give operator front end and back end languages if possible).
0+Collect	Select calling number (or ANI Spill) that is in the Locality Database (where applicable). For bilingual systems, ensure language treatment works as specified in the Locality Database. (i.e., English followed by French, French followed by English,

or English only)

Note: If a serious call processing error is detected during commissioning, immediately bring up the T1s to the other VSNs and busy out the T1s to the VSN under test. Correct the source of the problem before resuming commissioning testing.

3. Ensure logs are printing on the correct printer with the correct VSN identifier on the log header.
4. If possible, verify that the OMs print at the correct time of day with the correct VSN identifier on the OM report header. You may have to contact the staff at the remote printer site where applicable.
5. Ensure that both T1 links are exercised during test calling.
6. Enter each MMI from the Main Menu and visually verify the sanity of each.
7. Return all T1 Trunks and facilities to normal working status. This will re-enable call processing on all VSNs in this cluster.
8. Courtesy down one ACPE on the newly loaded VSN. **PLEASE NOTE THAT CALL PROCESSING WILL BE HALTED ON THIS VSN IF IT ONLY HAS ONE ACPE.** Ensure that the correct EXT log is generated on the DMS and that a DMS alarm is generated. Put the ACPE back in service and ensure the correct EXT log is generated and that the DMS alarm is cleared.

Appendix R: VSN05 ACI Prompt Name Changes

The VSN05, and subsequent loads, includes the ACI brands from the VSN05ACI_000 patch. In adding these brands to the final VSN05 load, it was necessary to change their names to those shown in the below table.

Prior to a VSN07 upgrade, ACI sites should identify any prompts in their datafill which have changed names. Following restoration of customer datafill, convert any affected prompt names in the “Prompt1” through “Prompt3” fields of the PROMPTS table.

At this point, FIXAUDEX can be run and the ACPEs rebooted.

PROMPT NAME ON PATCH	NAME IN VSN07 LOAD
SS-0	SS-0C
SS-0A	SS-0D
OT-0	OT-0C
OT-12	OT-12D
OT-12A	OT-12B
OT-12B	OT-12A

Appendix S: VSN05 MDS Prompt Datafill

The VSN05 load defaulted the AudioGram MDxx prompts in tables PROMPTS and FRENCH_PROMPTS to "MPLPC_SILENCE". Sites not using the Message Delivery Service should not propagate the MD1 through MD29 datafill into VSN07.

Appendix T: Datafilling Brand Before Bong in VSN07

Patch VSN36RTM_002 was released against VSN36 loads to allow branding before the bong tone. This patch was provided to Ameritech along with a custom Ameritech brand, SS-0B-AM-SE, to be used in datafill. Ameritech sites that applied this VSN36 patch must make the following datafill changes when upgrading from VSN36 to a newer VSN load.

1. Edit the PROMPTS table and change the Prompt1 field in tuple Brand_Bong to be *SS-0B* (use upper case). The SS-0B text is given below:

SS-0B: *“Ameritech”*

2. Edit the PROMPTS table and ensure that the Prompt1 field in tuple SS0 is whatever SS-0xx prompt is desired. For Ameritech, this may be SS-0 or SS-0A (use upper case). The text is given below:

SS-0 : *“This is Ameritech’s automated operator service.”*

SS-0A : *“This is Ameritech’s automated operator services.”*

3. Exit the PROMPTS table.
4. Edit the USER INTERACTION table. Change tuple Brand_Before_Bong to a value of *YES*.

For single branding such as *“Ameritech” <bong tone>*; change tuple Welcome_Msg_Enable to a value of *NO*.

For double branding such as *“Ameritech” <bong tone> “This is Ameritech...”*; change tuple Welcome_Msg_Enable to a value of *YES*.

5. Exit the USER INTERACTION table.
6. Reboot the ACPEs to have these changes take affect.

General Brand Before Bong Notes:

1. Brand Before Bong is activated by setting tuple Brand_Before_Bong in table USER INTERACTION to *YES*.
2. The brand played before the bong tone is datafilled in tuple Brand_Bong in table PROMPTS (and FRENCH_PROMPTS for bilingual sites).
3. Single or double branding is determined by tuple Welcome_Msg_Enable in table USER INTERACTION.
4. Bilingual sites using Brand Before Bong will have the Brand_Bong prompt played once in the primary language prior to the bong tone.

DMS-100 Family

TOPS VSN Software

Release Notes

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