CHAPTER 2

# Getting Started

System administration refers to the menu-driven functions that interface with the database, system configuration, maintenance, and diagnostics software resident on the switch. You can access these functions from the master console.

## Installing Software

Use Installation Utilities to install system software, screen formats, database tables, and to download files. The system software and all optional software applications are shipped with an Installation Utilities version specific to the software. You will need to access the Installation Utilities screen as part of the installation process. Refer to the *Cisco VCO/4K System Software Version 5.n(n) Release Notes* for detailed information.

## Logging In and Out

System administration is accomplished through one of three terminal configurations:

- Local Video Display Terminal (VDT)
- Remote TTY via modem
- Telnet TTY (if the system is equipped with the Ethernet Communications option)

For information on these configurations, refer to the “Peripheral Configuration” section on page 4-2.

A user can log in through any one of the three types as long as they are properly configured. However, only one type can be configured and active at any point in time. For example, if the master console is configured, Telnet TTY users cannot configure their terminal for system administration. If users attempt to configure their terminals for system administration while another system administrator terminal is active, one of the following error messages appears:

```
User <username> Logged In On Console
User <username> Logged In On Remote
User <username> Logged In On Telnet
```

# Initial Login

Your system was shipped with a single preconfigured username: *admin* (lowercase letters). There is no password associated with this username. The admin username has access to all system screens and utilities. This allows you or installation personnel to gain access to system administration and configure the system. Once usernames and passwords have been defined, you can delete the admin username to restrict unauthorized access.

**Caution** Passwords and usernames are case sensitive and must be typed exactly as entered in the database.

# Logging In

To access system administration functions, you must first log in to the master console with a valid username and password. The system provides a password check to prevent unauthorized personnel from accessing system administration functions. When the system is booted, the System Login screen appears.

To access the main menu and system administration functions, perform the following steps:

**Step 1** Type your username and press **Return**.

The cursor advances to the Password field.

**Step 2** Type your personal password, if applicable, and press **Return**.

The system checks the system configuration files for verification. If your username and password are valid, the Administrator Main Menu is displayed.

**Note** If you are unable to log in to the system, you may need to reselect the keyboard type. The information in the Peripheral Configuration file must match the terminal you are using. Press **CTRL** and **K** simultaneously to reselect the keyboard type. The keyboard type options appear in the bottom right corner of the screen. Select **V** for VT220, **S** for Sun, **X** for Xview, or **U** for Universal.

# Logging in from a Remote Console

Users can log in to the system from a remote console via a modem. The system acknowledges a remote login attempt when it detects connect signals—a CONNECT message (in ASCII) followed by a carriage return (<CR>) or line feed (<LF>) over the TTY01/Modem port.

**Note** These connect signals are automatically generated by the Hayes 1200 Smartmodem recommended and supplied by Cisco Systems. Cisco recommends that users purchase a Type 212A asynchronous modem, and configure the modem according to system requirements (refer to the OEM documentation supplied with the modem for setup and operation parameters).

Approximately 3 seconds after these signals are detected, the System Login screen is displayed. Users can then log in and perform system administration functions. Password checking for remote login is the same as for the local console. A failed login attempt is written to the system log file.

**Note** The operating parameters for the remote maintenance modem must match the settings defined in the system database within the Peripheral Configuration function (refer to the "Peripheral Configuration" section on page 4-2). Refer to the OEM documentation supplied with the modem for instructions on configuring the modem's operating characteristics.

A user can log in to the system from a remote location only if the Local TTY console is not logged on. If a user attempts to log on remotely while the local console is in use, the "User <username> Logged In On Console" message appears on screen, where <username> is the username with which the connection was established. While the remote console is in use, the local console cannot log on. If an attempt is made to log on to the local console while the remote console is in use, the "User <username> Logged In On Remote" message appears on the screen.

## Logging in Over Ethernet by Establishing a Telnet Session

You can perform system administration functions over a Telnet connection with the Telnet TTY option if your system is equipped with the Ethernet Communications option. Refer to the "Peripheral Configuration" section on page 4-2 for more information.

## Logging Out Manually

When you have performed all system administration functions, log out of the system by following these steps:

**Step 1** Press **Main Menu** to return to the Main Menu screen.

The Main Menu screen appears.

**Step 2** Press **Prev Menu** or **Exit.**

The System Login screen appears.

## Logging Out Automatically

The system software logs out any console if no input is received from it within 15 minutes, unless a Diagnostic display screen is in use. Any key that is pressed during this 15-minute interval resets the timer. After 15 minutes of local console inactivity, or 5 minutes of remote console inactivity, the display returns to the login screen. When this occurs, the "Local Console Timed Out" message appears on the screen. If the console was connected remotely, that is also indicated in the message.

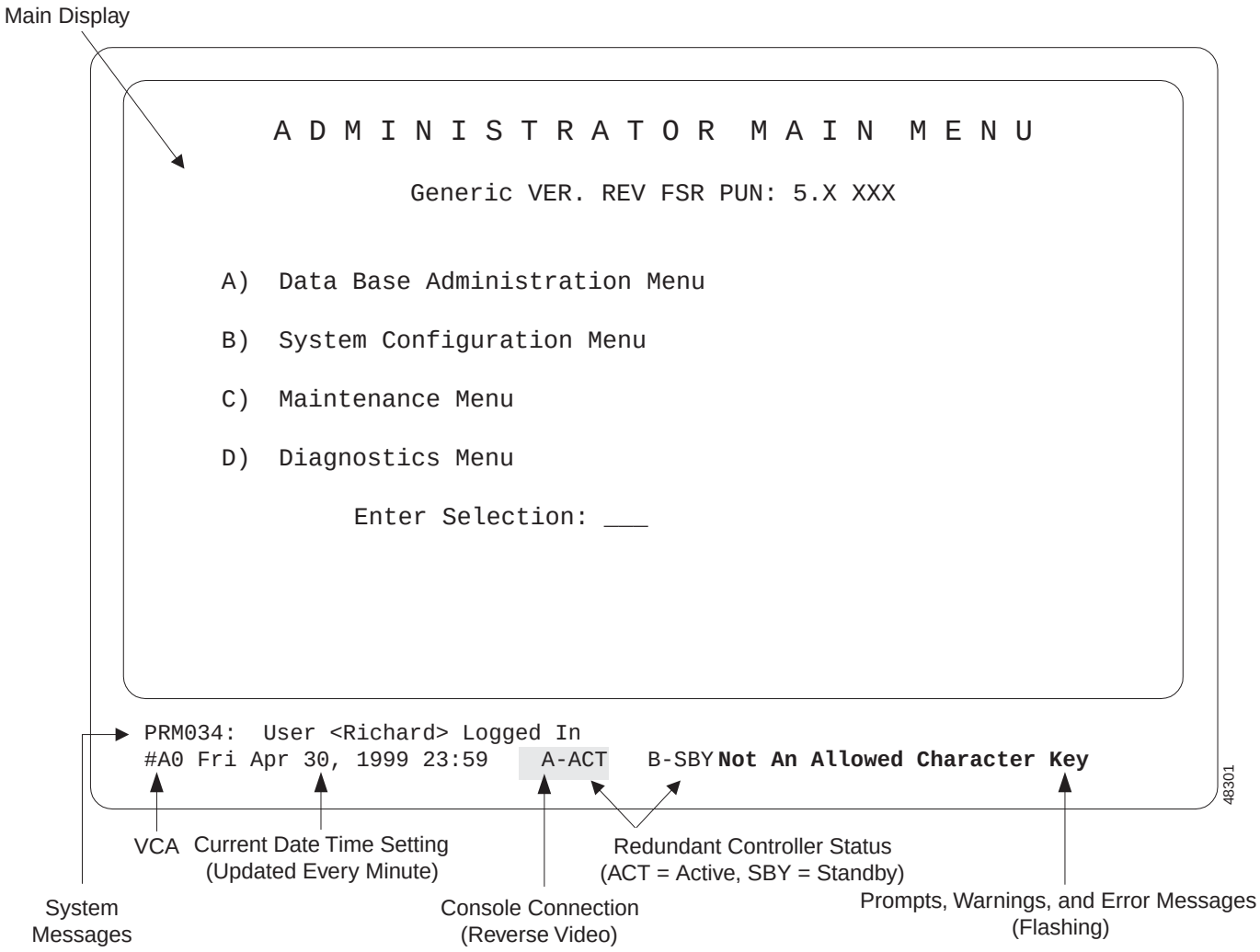
For local and Telnet access, the system will not log you out after 15 minutes of inactivity if the screen displayed on the console is updating (the cursor is continuously scrolling through the fields). (Not all screens provide the screen update feature.)

**Note** While the Telnet connection is established, the local master console is disabled (a login screen is not displayed at the local console). If you are logged in via Telnet, and you know other users may need to log in via the local master console, make sure the screen update feature has ceased. Press any key to cease screen updating.

# Master Console Screen

The master console screen is divided into several areas of information. These areas are identified in Figure 2-1, followed by a brief description.

***Figure 2-1 Master Console Screen Layout***




Main Display—The largest area on the screen. This area provides access to system administration functions and options.

System Messages—Displays system error and status messages, which are also sent to the system printer and system log file. A complete list of these messages and their meanings is provided in the Cisco VCO/4K System Messages.

VCA—Identifies the Virtual Communications Address assigned to your system by the host computer.

Current Date Time Setting—Indicates the current day, date, and time according to the system clock.

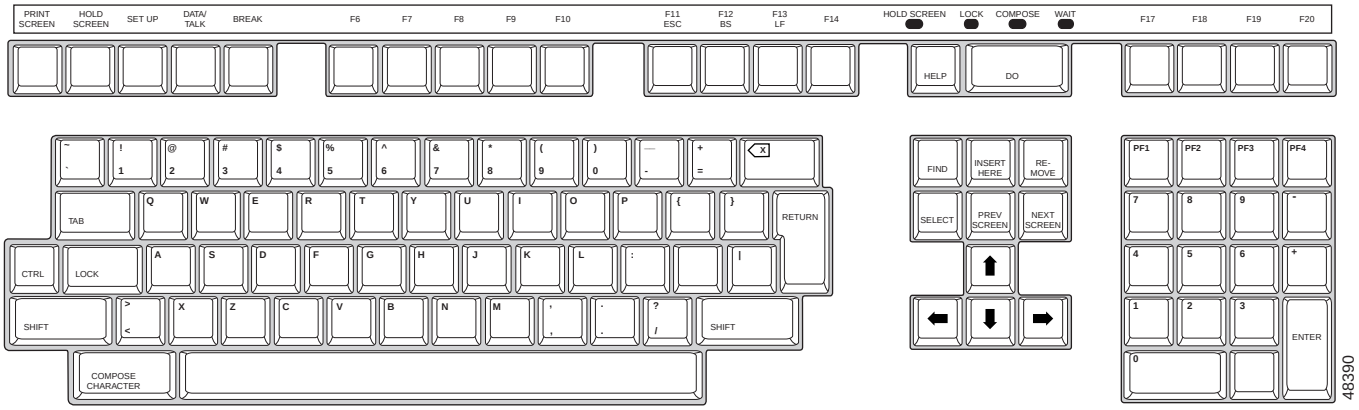
Console Connection/Redundant Controller Status—Displays only on redundant systems. It indicates the controller to which the master console is connected: A or B, and Active or Standby. The connected controller is shown in reverse video.

Prompts, Warnings, and Error Messages—Informs you when data has been entered incorrectly, you are attempting to use an invalid key, or a system error has occurred. A list of all possible on-screen messages, and from which function they are generated, is provided in the Cisco VCO/4K System Messages.

# Console Entry and Editing Keys

The master console's VT220/320 keyboard is divided into the following areas: main keypad, cursor movement keys, administrative keypad, and programmable function keys. These areas are displayed in Figure 2-2, followed by a description of each area and its function with the System Administration software.

***Figure 2-2 System Administration Keyboard***




# Main Keypad

The main keypad contains the group of keys used to type data into the system. All alphanumeric information is specified using this keypad. Throughout this guide, the phrase *Data entry via main keypad* means to use the keys on the main keypad to type information into the fields.

The special purpose keys on the main keyboard are:

- Tab—Use the Tab, and within certain screens the backtab (<) key, to move among sets of data (such as between inpulse rules), or as a rapid method of displaying other data in the Diagnostic screen. Its use is mentioned where applicable.
- Return—Use the Return key in place of the Enter key on the administrative keypad.

# Cursor Movement Keys

Use the following keys for cursor movement:

- Hyphen key (-) and equal key (=)—move the cursor in the direction indicated within a data entry field.
- Plus key (+)—Moves the cursor to the first data entry field on a screen.
- Left bracket key ( [ )—Moves the cursor to the last data entry field on a screen.

# Administrative Keypad

The administrative keypad used by a VT220/320 console provides special functions unique to the system. These functions and the keys to which they assigned are shown in Figure 2-3. Each function is defined in Table 2-1.

***Figure 2-3 Administrative Keypad***

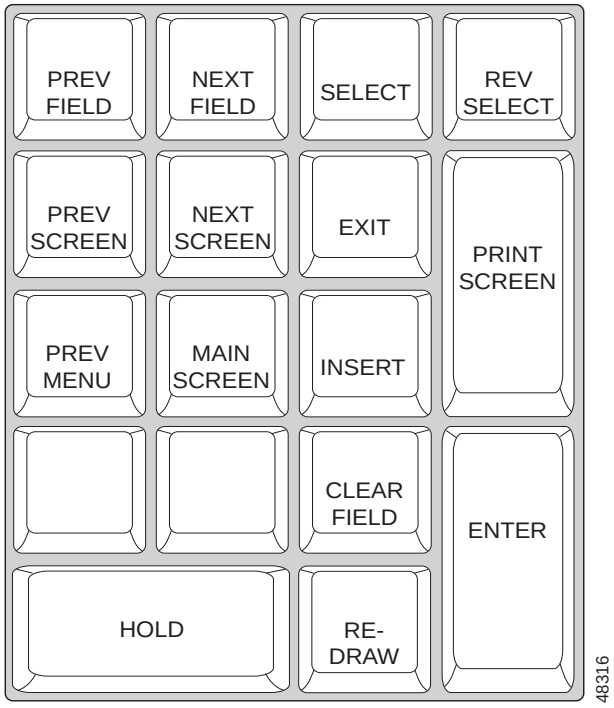



***Table 2-1 Administrative Keypad Definitions***

| VT220 Label | System Label | Function |
|---|---|---|
| PF1 | PREV FIELD | Advances the cursor to the previous data entry field. |
| PF2 | NEXT FIELD | Advances the cursor to the next data entry field. |
| PF3 | SELECT | Throughout this guide the use of this key is indicated by *Data entry via Select key.* Scrolls forward through a list of values for certain data entry fields. |

*Table 2-1 Administrative Keypad Definitions (continued)*

| VT220 Label | System Label | Function |
|---|---|---|
| PF4 | REV SELECT | Throughout this guide the use of this key is indicated by *Data entry via Select key.* Scrolls backward through a list of values for certain data entry fields. |
| 7 | PREV SCREEN | Displays the previous screen for multiscreen functions. |
| 8 | NEXT SCREEN | Displays the next screen for multiscreen functions. |
| 9 | EXIT | Displays the screen from which the current screen was accessed. |
| - | STOP PRINT | Stops printing triggered by the print system log function or print database functions. |
| 4 | PREV MENU | Displays the top-level screen for that menu branch. |
| 5 | MAIN MENU | Displays the Administrator Main Menu. |
| 6 | INSERT | Inserts a token into an inpulse or outpulse rule list. |
| , | PRINT SCREEN | Prints a hard copy of the currently displayed screen. |
| 1 | — | — |
| 2 | — | — |
| 3 | CLEAR FIELD | Clears the data in the field in which the cursor is located. |
| 0 | HOLD | Toggles dynamic displays On/Off within certain Diagnostics screens. |
| . | REDRAW | Updates the display after screen changes have been made. |
| Enter | ENTER | Instructs the system to accept data currently displayed (perform a command, update a database, etc.) The Return key on the main keypad can also be used. |

## Programmable Function Keys

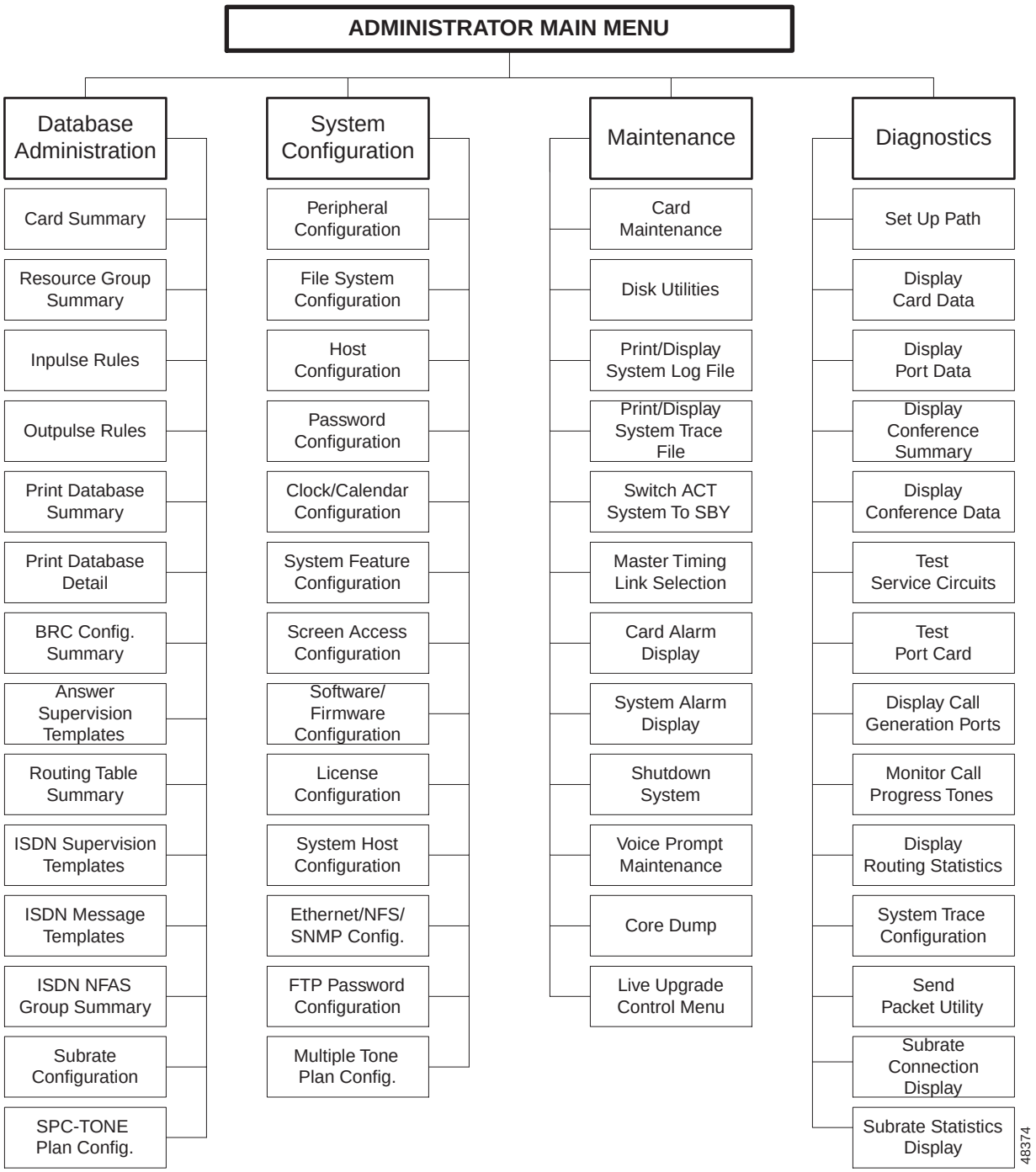
You can map up to 15 programmable function keys to system administration screens. Use the VT220/320 keys marked F6 through F20 for single keystroke access, as defined by system default parameters or from the Screen Access Configuration screen.

# Menu Structure

System administration is organized in four major functions: Database Administration, System Configuration, Maintenance, and Diagnostics. You can access these functions from the master console's Administrator Main Menu while the system is processing calls.

Figure 2-4 shows the functions available from the four main system administration functions.

***Figure 2-4 System Administration Menu Structure***



## Database Administration

Use this function, and related options, to specify line and trunk card characteristics, resource groups, inpulse and outpulse rules, and answer supervision templates. You can also print hard copies of all or part of the database.

## System Configuration

Use this function, and related options, to specify system interaction with peripheral equipment, storage devices, and host computers. You can also assign system passwords, change the system clock, and view the system software/firmware configuration.

## Maintenance

Use this function, and related options, when changes are made in system hardware or software. These changes include adding or deleting cards, changing the operational status of cards, maintaining the disk, and managing the system log file.

## Diagnostics

Use this function, and related options, to test or view the operating status of various system components. These functions are especially useful for debugging during the application development process because they allow the engineer to view call processing activity for a port.

# Access to Other Screens and Menus

When a screen is displayed, you can access other screens by pressing the appropriate key on the administrative keypad. The following screens are accessible from most other screens:

- Administrator Main Menu—Press the **Main Menu** key.
- Function Screen—Press the **Prev Menu** or **Exit** key.

**Note** When you have the option of accessing a screen from within a screen, the steps required are mentioned in that section. For example, from the Card Maintenance screen, you can access the Programmable Trunk Configuration screen: move the cursor to the **DISP CARD** field, then type any key and press **Enter**. To return to the Card Summary screen, rather than going back to the main menu, press the **Prev Screen** key.

In some cases, the information on the screen is updated every few seconds to show the current status. To access the above mentioned screens, you must first *halt the screen updates,* then press the appropriate key on the administrative keypad.

# System Initialization

When powered up or reset, the system first checks if a floppy diskette has been inserted into the drive. If a disk is there, the system checks for the files necessary to boot the system. If the boot files are not on that disk, the system issues an error message.

If no floppy diskette is present, the system checks the hard disk for boot files. If the boot files are on that disk, the system begins the tasks necessary for normal system operation. Changes in card LED status that take place during system initialization are described in the installation manual for your hardware platform.

The system can also be booted from information contained on one or more floppy diskettes; either the system software diskettes or a optional software diskette. Refer to the *Cisco VCO/4K Software Installation Guide* for instructions on using the Installation Utilities.

## Resetting or Rebooting the System

You might need to reset (or reboot) the system, either under the direction of Cisco Systems Technical Support or as part of a procedure described in this or another system publication. This is accomplished via the Alarm Arbiter Card (AAC).

The AAC card has two Reset buttons on the front panel, one for each system controller in a redundant system. In a nonredundant system, you can only use the side A Reset button for system reboot. Set the Select toggle switch to **A** for nonredundant systems. The status indicator always shows side **A** as active when the system is in operation.

Each side of a redundant system can be reset independently of the other. The status indicator shows the currently active side. Special controller reboot considerations for redundant system configurations should be taken into account.

- Control must be transferred to the standby side before the currently active side is reset (either by host command or from the Switch ACT System to SBY screen). Regardless of whether the Select toggle switch is set to the active side or Auto, when the active side is reset, control is not transferred to the standby side. When the active system controller is reset, all calls are lost. When system initialization has completed for that side, call processing is reestablished.
- When booting the system from floppy diskette, set the Select toggle switch to the active side. This prevents an accidental reset of the active side during the boot from floppy diskette.

## Booting from System Software and Optional Software Diskettes

To boot the system from system software or optional software diskettes, follow these steps:

**Caution** These steps automatically load the generic software into system memory, but do not save the files on the hard drive. If the system is later reset, the software files currently in memory are lost. The initialization process attempts to reload system software into memory from the floppy drive first, and then from the hard drive.

**Step 1** If the system is redundant, set the Select toggle switch to the active side.

**Step 2** Insert Generic Disk 2 or a optional software diskette into the disk drive.

**Note** The system requests you to insert SUMMA4 in the floppy drive; SUMMA4 is the same as the disk labeled Disk 3.

**Step 3** Power up the system or press the Alarm Arbiter Card (AAC) **Reset** button for the side to be booted from floppy diskette.

The system performs several diagnostic tests, and the **"**V300 Initializing…" and "Reading boot file from device A:" messages appear on the screen.

**Step 4** Proceed to one of the following substeps, depending upon your boot procedure. Proceed to Substep a. if you are booting the system from the generic diskettes. Proceed to Substep b. if you are booting the system from a optional software diskette.

**a.** The "Loading file A:[filename]" message appears on the screen while the first generic diskette is being read, where [filename] is the name of the file currently being loaded. Several of these messages appear during this process. This is followed by the "Please insert disk volume [volumename]" and "Press ENTER key when ready:" messages, which indicate that the system is ready to read the diskette named. The process is repeated until all required files have been loaded. Proceed to Step 5.

**b.** The "Loading file A:[filename]" message appears on the screen while the diskette is being read. The system takes several minutes to boot from the optional software diskette, then the Installation Utilities menu is displayed. Refer to the *Cisco VCO/4K Software Installation Guide* for more information on the Installation Utilities. Do not proceed to Step 5. The system boot is complete.

**Step 5** Remove the diskette, insert the diskette indicated, and press **Enter**.

**Note** The system requests you to insert SUMMA4B in the floppy drive; SUMMA4B is the same as the disk labeled Disk 2.

The "Loading file A:[filename]" message appears on the screen while the diskette is being read. The process is repeated until all required files have been loaded. When all files are loaded, the System Login screen is displayed. The system boot is complete.

The system is now ready for call processing.