



OpenVMS Systems Operations Guide:
VAX 8820, 8830, 8840 Systems

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About This Guide

This document is a quick reference guide of basic systems operations for VAX 8800 systems. It summarizes in one place basic information concerning such system tasks as booting and console operation as they relate to the VAX 8800 series of systems.

Intended Audience

This guide is designed primarily for the following:

- System software support personnel
- Digital Services personnel
- System managers
- Instructors and participants in certain OpenVMS operating system courses:
 - Systems Troubleshooting
 - System and Network Management I, II, and III

Document Scope

This guide describes various aspects of VAX 8800 systems operations including:

- System overview
- Operators control panel
- Console command language
- System power-up and power-down procedures
- System boot and backup procedures

1

Console Subsystem Overview

1.1 Introduction

Before you install or upgrade the OpenVMS operating system, you should be familiar with the console subsystem. The console subsystem consists of the following:

- MicroVAX II microcomputer with console control panel
- Console terminal and optional printer
- Console fixed disk drive
- Console tape cartridge drive

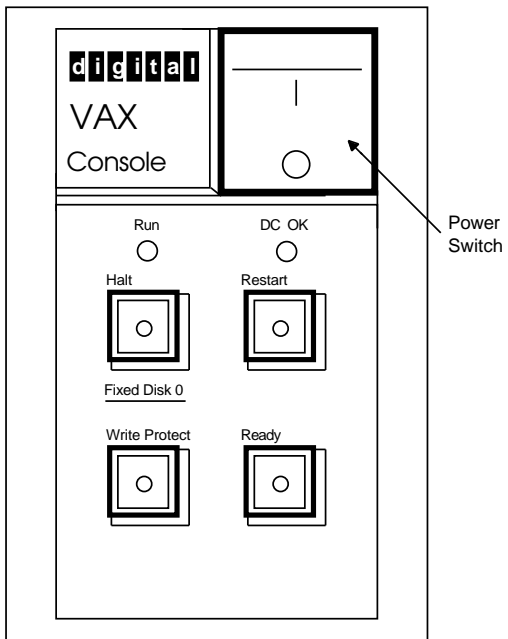
In general, use the console subsystem to examine and deposit data in memory or processor registers, stop the processors, and boot the operating system. During installation, use the console subsystem to boot the system and monitor the installation process.

1.2 Console Control Panel

Figure 1–1 shows the console control panel and Table 1–1 describes the switches and indicators.

1-2 Console Subsystem Overview

Figure 1-1 Console Subsystem Control Panel



ZK-7446-GE

Table 1-1 Console Controls and Indicators

Control/Indicator	Description
Power switch	Turns the ac power on. This rocker switch is labeled 1/0 (on/off). The orange light glows when power is on.
Run light	Glows green when the console subsystem is running.
DC OK light	Glows green if all dc voltages are present and within proper tolerance levels.
Halt button	Stops the console subsystem. When you push the Halt button in, it glows red and stays in. Releasing the Halt button, by pressing it again, causes the console subsystem to display the >>> prompt.
Restart button	Stops the console subsystem and runs the ROM-based diagnostics for the console subsystem.
Write Protect button	Controls writing to the console fixed disk. When pushed in, the button glows red and the disk is write-protected. Only the console software has write access to the console fixed disk.
Ready button	Controls writing to or reading from the console fixed disk. When the button is pushed in, the disk is protected from reading or writing. When the button is released, the button glows green; the disk is available for reading and writing. The Ready button flashes when data is read from or written to the fixed disk.

1.3 Console Terminal

The console terminal is the video terminal attached to the console microcomputer. It has the device name OPA0. The console terminal is the only terminal on the system that can execute all the console commands. Use it to control and monitor system operations.

Remote Console Terminal

A Digital diagnostics center uses a **remote console terminal** (located at the diagnostics center) to control system operations during diagnostic testing. A remote console terminal has the device name OPA5. It can execute a subset of the console commands.

Tracking System Operations

During the OpenVMS installation and upgrade procedures, Digital recommends that you keep track of system operations by doing the following:

- Save the information in a console log file
- Send the information to a printer

Console Log File

The console terminal can keep a record of system operations in a **console log file**. Information that has scrolled off the terminal screen is stored in a console log file. When you want a console log file, enter the following command and press the Return key:

```
PS-CIO-0> ENABLE LOG
```

When you no longer want a log file, enter the following command and press Return:

```
PS-CIO-0> DISABLE LOG
```

Console Printer

Another way to keep track of system operations is to attach a printer to the console subsystem. The printer can then record the terminal display. To send the terminal display to the printer, enter the following command and press Return:

```
PS-CIO-0> ENABLE PRINTER
```

To stop sending the terminal display to the printer, enter the following command and press Return:

```
PS-CIO-0> DISABLE PRINTER
```

1.4 Console Fixed Disk

The console fixed disk contains an application program called the **console software** which runs the console subsystem. When you use the console software, refer to the console fixed disk as DUA0. Otherwise, refer to the console fixed disk as CSA3. You cannot write to the console fixed disk when you are logged in to the VMS operating system on a VAX 8820, 8830, or 8840 system.

Restoring the Console Disk

If the console fixed disk should become damaged or unusable, restore it using the distribution TK50 tape cartridges that contain the console software and standalone BACKUP. Directions for installing the console software are given in the console user's guide.

2

System Operations

2.1 Orderly Shutdown with SHUTDOWN.COM

To use the SHUTDOWN command procedure, log in to the SYSTEM account, enter the following command, and press the Return key:

```
$ @SYS$SYSTEM:SHUTDOWN
```

To stop the system after the procedure completes, press Ctrl/P and enter the HALT/CPU=ALL command at the PS-OS-0> prompt.

2.2 Emergency Shutdown with CRASH

If OPCCRASH fails, perform an emergency shutdown with CRASH.COM, which is located on the console fixed disk.

NOTE

Use CRASH only if the system is hung and you cannot log in to the SYSTEM account to use SHUTDOWN.COM or OPCCRASH.

The CRASH command procedure causes the system to fail, resulting in immediate shutdown. To force your system to fail with CRASH, do the following:

1. Press Ctrl/P to stop the system. At the PS-OS-0> prompt, enter the following command and press the Return key:

```
PS-OS-0> HALT/CPU=ALL
```

2. At the PS-CIO-0> prompt, enter the following command and press Return:

```
PS-CIO-0> @CRASH
```

2-2 System Operations

CRASH displays a fatal bugcheck message, as well as additional messages and information. The procedure examines the program counter (PC), the processor status longword (PSL), and the stack pointers. It then deposits values in the PC and PSL to cause an exception condition that sends the contents of memory to the dump file on the system disk. Later you can read the dump file to determine why the system did not respond.

3. CRASH stops the system, displays the contents of the program counter, and displays the console prompt.

If AUTO REBOOT is enabled, the system reboots after CRASH runs. If the system does not automatically reboot, reboot it manually.

4. After the system reboots, you can examine the dump file. To examine the dump file, log in to the SYSTEM account. Enter the following commands and press Return after each one:

```
$ ANALYZE/CRASH SYS$SYSTEM:SYSDUMP.DMP  
SDA> SHOW CRASH
```

For more information about the System Dump Analyzer (SDA), see the *VMS System Dump Analyzer Utility Manual*.

3

Console Commands

3.1 Console Prompt

The console prompt conveys information about the state of the system. Table 3–1 lists the prompts that might be displayed during the OpenVMS installation procedure.

Table 3–1 Console Prompt

Prompt¹	Meaning
PS-HW-n>	System power is on, but the microcode is not loaded and the system is not initialized.
PS-CIO-n>	System power is on, microcode is loaded, and the system is initialized.
PS-OS-n>	The OpenVMS operating system is running, but the console has control.
PCON-SPAWN>	Console software is interpreting DCL commands.
\$	OpenVMS operating system is running.

¹The “n” in the prompt represents the CPU that is the current CPU. For example, if the prompt ends with a 0, CPU 0 is the current CPU. If the prompt ends with a 1, CPU 1 is the current CPU.

You can enter some console commands only at certain prompts. For example, enter the HALT command only when PS-OS-0> is displayed.

3-2 Console Commands

Other commands are valid at several different prompts. For example, you can enter the COPY command at any of the following prompts:

```
PS-HW-0>
PS-CIO-0>
PCON-SPAWN>
$
```

The console user's guide contains complete information on console commands and tells when you can use them.

3.2 Console Commands

Unlike some other VAX computers, this one does not have a control panel to set power, auto boot, and auto restart functions. Use the console commands to control all functions. The console commands let you perform the following tasks:

- Turn on the system
- Boot the system
- Obtain information on the operational state of the CPUs and other system components
- Dictate how the system reacts to initial booting, shutdowns, and restarts

Table 3-2 describes some of the commonly used commands. Refer to the console user's guide for detailed information on all console commands.

Table 3-2 Console Commands

Command	Meaning
BOOT	<p>Boots the system. During the installation procedure you can use the abbreviation B for the BOOT command. The following example uses the boot command procedure DEFBOO.CMD to boot the system:</p> <pre>PS-CIO-0> B</pre>
DEPOSIT	<p>Puts a value in the specified register or memory location. For example, the following command puts a 0 in register 2 (R2):</p> <pre>PS-CIO-0> DEPOSIT R2 0</pre>
ENABLE/DISABLE AUTO BOOT	<p>In combination with AUTO RESTART, determines how the system reacts after one of the following events:</p> <ul style="list-style-type: none"> • The system is initialized • A power failure occurs • An error halt after a restart attempt fails <p>For example, the following commands cause the system to reboot automatically after any of the preceding events:</p> <pre>PS-HW-0> DISABLE AUTO RESTART PS-HW-0> ENABLE AUTO BOOT</pre>
ENABLE/DISABLE AUTO POWERON	<p>The following command prevents the system from automatically rebooting after any of the preceding events:</p> <pre>PS-HW-0> DISABLE AUTO BOOT</pre> <p>Determines what happens when power is restored after a power failure. For example, the following command automatically supplies power to the CPU when power is restored after a power failure:</p> <pre>PS-HW-0> ENABLE AUTO POWERON</pre> <p>The following command prevents the automatic supply of power to the CPU when power is restored after a power failure:</p> <pre>PS-HW-0> DISABLE AUTO POWERON</pre>

Table 3-2 (Continued) Console Commands

Command	Meaning
ENABLE/DISABLE AUTO REBOOT	<p>Determines whether the console executes the boot command procedure DEFBOO.COM after you execute SHUTDOWN.COM and ask for an automatic system reboot. It also causes or prevents automatic system reboot after a system crash.</p>
ENABLE/DISABLE AUTO RESTART	<p>In combination with AUTO BOOT, determines what happens after a power failure or an error halt. For example, the following command causes automatic restart after a power failure or an error halt:</p> <pre data-bbox="474 966 876 997">PS-HW-0> ENABLE AUTO RESTART</pre> <p>The following command prevents automatic restart after a power failure or an error halt:</p> <pre data-bbox="474 1092 876 1123">PS-HW-0> DISABLE AUTO RESTART</pre> <p>AUTO RESTART takes precedence over AUTO BOOT. If AUTO RESTART and AUTO BOOT are both enabled, the system first tries to restart. If that fails, the system tries to reboot.</p>
HALT	<p>Halts the execution of macroinstructions in the specified CPU. Use the HALT command to stop a CPU. For example, the following command stops CPU 0:</p> <pre data-bbox="474 1354 665 1386">PS-OS-0> HALT</pre>

Table 3-2 (Continued) Console Commands

Command	Meaning
POWER	<p>Changes the state of the power system. For example, the following command turns power on for the entire system (except for the environmental monitoring module [EMM], which is already on):</p> <pre>PS-HW-0> POWER ON</pre> <p>The following command turns power off for all components of the system except the EMM and memory. The contents of memory are preserved.</p> <pre>PS-HW-0> POWER STANDBY</pre> <p>The following command turns power off for the entire system except the EMM (the only time power is off to the EMM is when a power disruption occurs or the circuit breaker that controls power to the system is tripped):</p> <pre>PS-HW-0> POWER OFF</pre>
SHOW CPU	<p>Displays information about the CPUs. For example, the following command displays information about all the CPUs:</p> <pre>PS-HW-0> SHOW CPU/ALL</pre>

4

System Boot Procedures

4.1 Overview

The VAX 8800 series of systems use command procedures to boot the operating system from the system disk into memory. Boot command procedures perform the following:

- Sets up the system environment
- Deposits values in registers
- Tells the system what type of controller the system disk is on and the unit number of the drive
- Loads the OpenVMS operating system into memory
- Starts the CPU

Boot Devices

The instructions for booting the system vary slightly for each type of controller. There is a boot command procedure for each type of controller that the system supports.

For example, the boot command procedure BCIBOO.COMD lets you boot from disk drives connected to a CIBCI or CIBCA controller. All boot command procedures are stored on the console fixed disk (CSA3).

Setting SYSGEN Parameters

By setting certain SYSGEN parameters, you can control how many CPUs are activated at boot time and the characteristics of a multiprocessing system. In a multiprocessing system, the primary CPU is always booted. By default, all available CPUs are also booted. If you want to change this, you can set the SYSGEN parameter SMP_CPUS to tell the system which secondary CPUs to boot.

For information on SYSGEN parameters that affect multiprocessing, see the *VMS System Generation Utility Manual*.

4.2 Booting with DEFBOO.CMD

The most direct way to boot the system is to enter the BOOT command and press the Return key.

To boot the system with DEFBOO.CMD, use the following procedure:

1. If the OpenVMS operating system is not running, go to step 2.

If the OpenVMS operating system is running, log in to the SYSTEM account. Enter the following command and press Return:

```
$ @SYS$SYSTEM:SHUTDOWN
```

Answer the questions. When the procedure asks if an automatic system reboot should be performed, press Return for NO. When the procedure is finished, it displays the following message:

```
SYSTEM SHUTDOWN COMPLETE - USE CONSOLE TO HALT SYSTEM
```

2. Press Ctrl/P. At the PS-OS-0> prompt, enter the following command and press Return:

```
PS-OS-0> HALT/CPU=ALL
```

3. At the PS-CIO-0> prompt, enter the following command and press Return:

```
PS-CIO-0> B
```

4.3 Booting from Another System Disk

To boot the system from a system disk other than the one specified in DEFBOO.COMD, use the following procedure:

1. If the OpenVMS operating system is not running, go to step 2.

If the OpenVMS operating system is running, log in to the SYSTEM account. Enter the following command and press the Return key:

```
$ @SYS$SYSTEM:SHUTDOWN
```

Answer the questions. When the procedure asks if an automatic system reboot should be performed, press Return for NO. When the procedure is finished, it displays the following message:

```
SYSTEM SHUTDOWN COMPLETE - USE CONSOLE TO HALT SYSTEM
```

2. Press Ctrl/P. At the PS-OS-0> prompt, enter the following command and press Return:

```
PS-OS-0> HALT/CPU=ALL
```

3. At the PS-CIO-0> prompt, enter the BOOT command in the following format:

```
PS-CIO-0> B dddn
```

Substitute BCI or BDA for *ddd*. Substitute the unit number of the drive holding the system disk for *n*.

For example, suppose the system disk is on a CIBCI-controlled drive and the unit number is 6. Enter the following command and press Return:

```
PS-CIO-0> B BCI6
```

4.4 Conversational Boot

A conversational boot is most commonly used in research and development environments for experimentation and during software upgrades. Perform a conversational boot when you want to stop the boot process before it completes. The boot process stops after it loads SYS\$SYSTEM:SYSBOOT.EXE and displays the SYSBOOT> prompt. At the SYSBOOT> prompt, you can enter certain SYSGEN commands to do the following:

- Look at system parameter values
- Change system parameter values
- Specify another parameter file
- Specify another system startup command procedure
- Select the default system parameter file if you modified system parameters to values that render the system unbootable
- Specify a minimum startup

Suggested Procedure

There are several ways to perform a conversational boot. The following procedure is the most direct way:

1. If the OpenVMS operating system is not running, go to step 2.

If the OpenVMS operating system is running, log in to the SYSTEM account. Enter the following command and press the Return key:

```
$ @SYS$SYSTEM:SHUTDOWN
```

Answer the questions. When the procedure asks if an automatic system reboot should be performed, press Return for NO. When the procedure is finished, it displays the following message:

```
SYSTEM SHUTDOWN COMPLETE - USE CONSOLE TO HALT SYSTEM
```

2. Press Ctrl/P. At the PS-OS-0> prompt, enter the following command and press Return:

```
PS-OS-0> HALT/CPU=ALL
```

3. At the PS-CIO-0> prompt, enter the following command and press Return:

```
PS-CIO-0> B/R5=1
```


This command uses DEFBOO.CMD and deposits 1 in register 5 (R5). When R5 contains 1, the boot process stops at the SYSBOOT> prompt.

Alternatives

If you want to boot from a drive other than the one specified in DEFBOO.CMD, enter the BOOT command in the following format:

```
PS-CIO-0> B dddn /R5=1
```

Substitute BCI or BDA for *ddd*. Substitute the unit number of the drive holding the system disk for *n*. The /R5=1 qualifier deposits 1 in register 5 (R5).

For example, suppose the system disk is on a CIBCI-controlled drive and the unit number is 2. Enter the following command and press Return:

```
PS-CIO-0> B BCI2 /R5=1
```

This command tells the console to boot with BCIBOO.CMD, deposit 2 in register 3 (R3), and deposit 1 in register 5 (R5).

At the SYSBOOT> prompt, you can enter any of the SYSGEN commands.

4.5 Booting from a Different Directory on the System Disk

The OpenVMS operating system is installed on the system disk in the root directory named [SYS0]. You can use VMSKITBLD, described in the *Guide to Setting Up a VMS System*, to put a copy of the OpenVMS operating system into another root directory on the system disk.

To boot the system from a directory other than [SYS0], use the following procedure:

1. If the OpenVMS operating system is not running, go to step 2.

If the OpenVMS operating system is running, log in to the SYSTEM account. Enter the following command and press the Return key:

```
$ @SYS$SYSTEM:SHUTDOWN
```

Answer the questions. When the procedure asks if an automatic system reboot should be performed, press Return for NO. When the procedure is finished, it displays the following message:

```
SYSTEM SHUTDOWN COMPLETE - USE CONSOLE TO HALT SYSTEM
```

4-6 System Boot Procedures

2. Press Ctrl/P. At the PS-OS-0> prompt, enter the following command and press Return:

```
PS-OS-0> HALT/CPU=ALL
```

3. At the PS-CIO-0> prompt, enter the BOOT command in the following format:

```
PS-CIO-0> B dddn /R5=root_directory
```

Substitute BCI or BDA for *ddd*. Substitute the unit number of the drive holding the system disk for *n*. Use *root_directory* to identify the root from which you want to boot.

For example, suppose the system disk is on a CIBCI-controlled drive, the unit number is 6, and you want to boot from [SYS3]. Enter the following command and press Return:

```
PS-CIO-0> B BCI6 /R5=30000000
```

4.6 Booting from [SYSF] During an Upgrade

During the upgrade procedure, you will be instructed to boot the system from the [SYSF] directory.

To boot the system from the [SYSF] directory, use the following procedure:

1. Press Ctrl/P. At the PS-OS-0> prompt, enter the following command and press the Return key:

```
PS-OS-0> HALT/CPU=ALL
```

2. At the PS-CIO-0> prompt, enter the BOOT command in the following format:

```
PS-CIO-0> B dddn /R5=root_directory
```

Substitute BCI or BDA for *ddd*. Substitute the unit number of the drive holding the system disk for *n*. Use *root_directory* to identify the root from which you want to boot.

For example, suppose the system disk is on a CIBCI-controlled drive and the unit number is 6. To boot from the root directory [SYSF], enter the following command and press Return:

```
PS-CIO-0> B BCI6 /R5=f0000000
```

5

Backup Procedures

5.1 Introduction

Standalone BACKUP makes an exact copy of the system disk. You should back up the system disk for the following reasons:

- In case a problem occurs during a OpenVMS upgrade or update, or during the installation of other software products. *Before* you attempt any of these procedures, you should back up the system disk. If a problem occurs, you can restore the backup copy of the system disk.
- To prevent loss of system files if they are accidentally deleted. *After* you install or upgrade the OpenVMS operating system, or any other software products, you should back up the system disk. If a system file is deleted or renders the system disk inoperable, you can restore the backup copy and continue to use the system.
- In case the drive that holds the system disk malfunctions. If you have a backup copy of the OpenVMS operating system, you can restore it to a functioning disk and continue to use the system.
- To eliminate disk fragmentation, which happens when files are stored noncontiguously on the disk. The BACKUP command creates a copy on which files are stored contiguously.
 - If the system disk is removable, eliminating disk fragmentation is a one-step process. Use the backup copy as the new system disk. Store the old system disk in a safe place.
 - If the system disk is fixed, back it up to a disk or magnetic tape. Then restore the files to the original system disk.

Digital recommends that you use standalone BACKUP to back up and restore your system disk.

5.2 Using Standalone BACKUP

Before installing the OpenVMS operating system, you install standalone BACKUP on the console fixed disk. You can also install standalone BACKUP on the system disk or on any other media that your system supports. Usually you boot standalone BACKUP from the system disk because it saves time. However, you need standalone BACKUP on the console fixed disk in case the system disk becomes damaged.

5.3 Installing Standalone BACKUP on the System Disk

You can install standalone BACKUP in any available root directory on the system disk from [SYS1] to [SYSE]. However, Digital has established [SYSE] as the standard directory for standalone BACKUP.

To install standalone BACKUP in [SYSE] on the system disk, use the following procedure:

1. Log in to the SYSTEM account.
2. Enter the following command and press the Return key:

```
$ @SYS$UPDATE:STABACKIT SYS$SYSDEVICE:
```

The procedure places the files in the directories [SYSE.SYSEXE] and [SYSE.SYS\$LDR] on the system disk. It lists the files as they are copied. When the procedure finishes, it displays the following message:

```
The kit is complete.
```

3. Create a boot command procedure that lets you boot standalone BACKUP from [SYSE].

5.4 Booting Standalone BACKUP from the System Disk

You need a special boot command procedure to boot standalone BACKUP from the system disk. Digital recommends that you modify an existing boot command procedure. Ideally, this should be the default boot command procedure, DEFBOO.CMD.

You can choose any unique name in the form xxxBOO.CMD for the command procedure you create. However, Digital suggests you use an existing file name and change the first letter to an X. For example, if you use a copy of DEFBOO.CMD, name the new file XEFBOO.CMD.

To create a boot command procedure that boots standalone BACKUP from [SYSE], use the following procedure. The procedure assumes you are making a copy of DEFBOO.CMD and renaming it XEFBOO.CMD.

1. To make a copy of DEFBOO.CMD, enter the following command and press the Return key:

```
PS-CIO-0> COPY DEFBOO.CMD XEFBOO.CMD
```

2. Enter the following command and press Return:

```
PS-CIO-0> EDIT XEFBOO.CMD
```

3. Edit the line that contains the BOOT command so that it specifies the [SYSE] directory. For example:

```
BOOT BCI12 /R5:E0000000
```

4. Exit from the editor to save the modified version of the file.

To boot standalone BACKUP from [SYSE] on the system disk, use the following procedure:

1. If the OpenVMS operating system is not running, go to step 2.

If the OpenVMS operating system is running, log in to the SYSTEM account. Enter the following command and press the Return key:

```
$ @SYS$SYSTEM:SHUTDOWN
```

Answer the questions. When the procedure asks if an automatic system reboot should be performed, press Return for NO. When the procedure is finished, it displays the following message:

```
SYSTEM SHUTDOWN COMPLETE - USE CONSOLE TO HALT SYSTEM
```

2. Press Ctrl/P. At the PS-OS-0> prompt, enter the following command and press Return:

```
PS-OS-0> HALT/CPU=ALL
```

3. At the PS-CIO-0> prompt, enter the following command and press Return:

```
PS-CIO-0> @XEFBOO
```

4. The procedure asks you for the date and time. Enter the date and time using the 24-hour clock format and press Return. For example:

```
PLEASE ENTER DATE AND TIME (DD-MMM-YYYY HH:MM) 19-JUN-1990 15:00
```

```
VAX/VMS Version V5.4 Major version id = 1 Minor version id = 0
```

5-4 Backup Procedures

5. The procedure displays a list of the local devices on your system and, if you have them, HSC- and MSCP-served devices. For example:

```
Available device MINE$DJA2:    device type RA60
Available device MINE$DJA3:    device type RA60
.
.
.
```

Check the list of devices. If the list is incomplete, make sure that all the drives are properly connected to the system. See your hardware manuals for details.

6. When standalone BACKUP finishes booting, it displays an identification message followed by the dollar sign prompt (\$):

```
%BACKUP-I-IDENT, standalone BACKUP V5.4; the date is 19-JUN-1990 15:00
$
```

5.5 Booting Standalone BACKUP from the Console Fixed Disk

If the system disk containing standalone BACKUP should become unusable, you can boot standalone BACKUP from the console fixed disk.

To boot standalone BACKUP from the console fixed disk, use the following procedure:

1. If the OpenVMS operating system is not running, go to step 2.

If the OpenVMS operating system is running, log in to the SYSTEM account. Enter the following command and press Return:

```
$ @SYS$SYSTEM:SHUTDOWN
```

Answer the questions. When the procedure asks if an automatic system reboot should be performed, press Return for NO. When the procedure is finished, it displays the following message:

```
SYSTEM SHUTDOWN COMPLETE - USE CONSOLE TO HALT SYSTEM
```

2. Press Ctrl/P. At the PS-OS-0> prompt, enter the following command and press Return:

```
PS-OS-0> HALT/CPU=ALL
```

3. At the PS-CIO-0> prompt, enter the following command and press Return:

```
PS-CIO-0> @CSABOO
```

4. The procedure asks you for the date and time. Enter the date and time using the 24-hour clock format and press Return. For example:

```
PLEASE ENTER DATE AND TIME (DD-MMM-YYYY HH:MM) 19-JUN-1990 15:00
VAX/VMS Version V5.4 Major version id = 1 Minor version id = 0
```

5. The procedure displays a list of the local devices on your system and, if you have them, HSC- and MSCP-served devices. For example:

```
Available device MINE$DJA2:    device type RA60
Available device MINE$DJA3:    device type RA60
.
.
.
```

Check the list of devices. If the list is incomplete, make sure that all the drives are properly connected to the system. See your hardware manuals for details.

6. When standalone BACKUP finishes booting, it displays an identification message followed by the dollar sign prompt (\$):

```
%BACKUP-I-IDENT, standalone BACKUP V5.4; the date is 19-JUN-1990 15:00
$
```


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