

In this Chapter...

- [Logging-On as service3070](#), 8-2
- [The Root Directory Environment Variable](#), 8-3
- [Directory Descriptions](#), 8-6
- [Editing Files](#), 8-8
- [MS Windows Quick-Reference](#), 8-16
- [BT-BASIC Quick-Reference](#), 8-17
- [NT Korn Shell Quick Reference](#), 8-18
- [vi and viw Editor Quick Reference](#), 8-21
- [Codewords](#), 8-25
- [System Config File Specifics](#), 8-26
- [Standard Config File Specifics](#), 8-29
- [Compiling the System and Standard Config Files](#), 8-35
- [The bootptab File](#), 8-36
- [The hosts File](#), 8-38
- [Device Files](#), 8-40
- [Vacuum Control](#), 8-42
- [Rotating the Testhead](#), 8-43
- [Testhead Cards](#), 8-44

- [DUT Power Supplies](#), 8-47
- [Controller Cables and Devices](#), 8-52
- [Testhead LAN and Serial Port MUX](#), 8-59

Referenced Manuals

The following manuals are referenced within this chapter:

- *Administering Agilent 3070 MS Windows Systems* E9970-90000.
- *Agilent 3070 / 79000 Family Site Preparation Manual* 03066-90114.
- *Agilent 3070 / 79000 Repair I Manual* E4000-90160.
- *Agilent 3070 Family Users' Manual*.

Introduction

The information in this chapter may be helpful when installing an Agilent 3070 system that uses a MS Windows controller.

Logging-On as service3070

The `service3070` logon allows system configuration and testing.

Display the Logon Status from a Current Login

- 1 Press the <Ctrl><Alt><Delete> keyboard keys at the same time.
- 2 If logged-on as `service3070`, click **Cancel**. Otherwise, click **Logoff...**

Logon as `service3070`

- 1 Click **Start > Shut Down...**
- 2 Select **Close all programs and log on as a different user?**
- 3 Enter the logon information:
 - **Logon Name** = `service3070`
 - **Default Password** = `service`

The Root Directory Environment Variable

This section contains:

- [Introduction](#), 8-3
- [Determine the Value of the Root Directory Environment Variable](#), 8-3
- [Use of the Root Directory Environment Variable in a BT-BASIC Window](#), 8-3
- [Use of the Root Directory Environment Variable in a Korn Shell Window](#), 8-4
- [Use of the Root Directory Environment Variable in a MS-DOS Command Prompt Window](#), 8-5

Introduction

3070 systems now establish a root directory environment variable.

Beginning with software revision 3070 04.00pa, an environment variable is used to allow 3070 board files to be easily transferred between 3070 systems running either MS Windows or UNIX.

The environment variable is named **\$AGILENT3070_ROOT**. It replaces the root directory path (upper path names) on both operating systems.

The directories, `/var/hp3070` and `/opt/hp3070`, are replaced by **\$AGILENT3070_ROOT** on all MS Windows systems.

The root directory environment variable is usually set to `D:\Agilent3070`, but could change.

Determine the Value of the Root Directory Environment Variable

- 1 Open a Korn shell window:
 - Double-click the desktop **Korn Shell** icon OR
 - Click **Start > Programs > Agilent 3070 > Korn Shell**.

- 2 At the prompt, enter:

```
echo $AGILENT3070_ROOT
```

The string returned is usually:

```
D:\Agilent3070
```

Use of the Root Directory Environment Variable in a BT-BASIC Window

Table 8-1 illustrates new path equivalents using the system config file in a **BT-BASIC** window.

NOTE

BT-BASIC usage is the same in both UNIX and MS Windows.

Table 8-1 New file path usage in a BT-BASIC window

Pre 3070 Software Release 3070 04.00pa	3070 Software Release 3070 05.00p	At and After 3070 Software Release 3070 04.00pa
msi "D:/Agilent3070/diagnostics/th1 /config"	msi "C:/Agilent3070/diagnostics/th1 /config"	msi btgetenv\$ ("AGILENT3070_ROOT") & "/diagnostics/th1/config"
get "D:/Agilent3070/diagnostics/th1 /config"	get "C:/Agilent3070/diagnostics/th1 /config"	get btgetenv\$ ("AGILENT3070_ROOT") & "/diagnostics/th1/config"

NOTE

The `btgetenv$ ("AGILENT3070_ROOT") &` is only required for BT-BASIC commands which are referenced to the root.

If the BT-BASIC `msi btgetenv$ ("AGILENT3070_ROOT") & <command>` is typed prior to the next BT-BASIC command (for example `compile` or `faon`), then using the environment variable which defines the path from the root is unnecessary. BT-BASIC commands which normally contain paths (`msi`, `load`, `copy`, `save`, `get`, `store`, `unlink`, `rcall`) for example, will require:

`btgetenv$ ("AGILENT3070_ROOT") & <rest of path>`

Use of the Root Directory Environment Variable in a Korn Shell Window

In a **Korn shell** window, follow the UNIX syntax:

- Use `$<variable>` (instead of `%<variable>%`).
- Use the correct case.
- Use `/` (forward slash) instead of `\` (backslash).

Table 8-2 illustrates new path usage when working in a **Korn shell** window.

Table 8-2 New file path usage in a **Korn shell** window

Pre 3070 Software Release 3070 04.00pa	At and After 3070 Software Release 3070 04.00pa
D:\Agilent3070\diagnostics\th1	\$AGILENT3070_ROOT\diagnostics\th1
\opt\hp3070\help\C\SERVICE	\$AGILENT3070_ROOT\Documentation\SERVICE

Use of the Root Directory Environment Variable in a MS-DOS Command Prompt Window

In a **MS-DOS Command Prompt** window:

- Use %<variable>% (instead of \$<variable>).

- Use \ (backslash) instead of / (forward slash).

Table 8-3 on page 8-5 illustrates new path usage using the `dev` directory as an example when working in a **MS-DOS Command Prompt** window.

Table 8-3 New file path usage in a **MS-DOS Command Prompt** window

Before Software Release 3070 04.00pa	At and After Software Release 3070 04.00pa
D:\Agilent3070\dev	%AGILENT3070_ROOT%\dev

Directory Descriptions

Table 8-4 lists descriptions of some 3070 MS Windows system directories.

Table 8-4 Descriptions of various 3070 MS Windows system directories

\$AGILENT3070_ROOT\ 	The directory beneath which the vast majority of the 3070 system software resides.
\$AGILENT3070_ROOT\autofile	The directory that contains all the autfiles for the system.
\$AGILENT3070_ROOT\bin	The directory that contains most of the executable programs for the 3070 system.
\$AGILENT3070_ROOT\boards	The directory that should contain customer board directories.
\$AGILENT3070_ROOT\contrib	The directory where user-contributed software that may be of use to 3070 customers is redistributed by Agilent.
\$AGILENT3070_ROOT\dev	A directory that contains pseudo device files for use by the 3070 software.
\$AGILENT3070_ROOT\diagnostics	A directory that contains testhead configuration and diagnostic information / programs.
\$AGILENT3070_ROOT\etc	A directory that contains miscellaneous files.
\$AGILENT3070_ROOT\help	A directory that contains help information.
\$AGILENT3070_ROOT\home	The directory that contains the MS Windows user's home directories.
\$AGILENT3070_ROOT\lib	The directory that contains digital libraries and other executables.
\$AGILENT3070_ROOT\library	The directory that contains device libraries provided by Agilent for board development.
\$AGILENT3070_ROOT\qm	The directory to which statistics are logged.
\$AGILENT3070_ROOT\standard	A directory that contains templates used throughout the system.

Table 8-4 Descriptions of various 3070 MS Windows system directories (continued)

\$AGILENT3070_ROOT\temp	A directory that is used by the 3070 software for storing temporary files and logs.
\$AGILENT3070_ROOT\util	A directory that is used for storing a few utility files.

Editing Files

This section contains:

- [Forward-Slashes versus Back-Slashes in Command Lines Containing File Paths, 8-8](#)
- [Use BT-BASIC, 8-8](#)
- [How to Edit the System Config File to Match the Testhead Configuration, 8-9](#)
- [How to Resolve the Standard Config File from the System Config File, 8-10](#)

Forward-Slashes versus Back-Slashes in Command Lines Containing File Paths

A general rule for commands using a path to a directory or file is to use a forward-slash (/) for commands tied to a 3070 application, and use a back-slash (\) for operating system-related commands.

If a command line containing a file path fails to execute, it may be because the slash used is of the wrong type.

Reversing the slash(es) may resolve the issue.

This is because:

- Many Korn shell commands are used in the MS Windows environment, and require forward-slashes (/) in command lines containing file paths.

- In MS Windows, when opening a file from the **Start > Run...** menu, both forward-slashes (/) and back-slashes (\) are recognized.
- A command may be performed in or with some relationship to the MS-DOS environment, which can require back-slashes in command lines containing file paths.

Use BT-BASIC

BT-BASIC is the designated file-editing tool. Unless otherwise specified, editing described in this chapter is performed using **BT-BASIC**.

Korn shell, vi, and viw editors can also be used to edit files.

Reference information for all these tools:

- [BT-BASIC Quick-Reference](#) on page 8-17.
- [NT Korn Shell Quick Reference](#) on page 8-18.
- [vi and viw Editor Quick Reference](#) on page 8-21.

Open BT-BASIC

- Double-click the desktop **BT-BASIC** icon OR
Click **Start > Programs > Agilent 3070 > BT-BASIC**.
BT-BASIC will open with the cursor on the command line.

Open a File in BT-BASIC

- From the command line, enter:

```
get btgetenv$ ("AGILENT3070_ROOT") &  
"<path to the file>"
```


For more information about this command, see [Use of the Root Directory Environment Variable in a BT-BASIC Window](#) on page 8-3.

Edit in BT-BASIC

- Press **F1** on the keyboard, if necessary, to toggle to the workspace.

To move the cursor, use the keyboard arrow keys, and the **Insert Char**, and **Delete Char** keys.

Save in BT-BASIC

- 1 Press **F1** on the keyboard, if necessary, to toggle to the command line.
- 2 Enter:

```
re-save
```

Exit BT-BASIC

- 1 Press **F1** on the keyboard, if necessary, to toggle to the command line.
- 2 Enter:

```
exit
```

How to Edit the System Config File to Match the Testhead Configuration

If the testhead configuration has changed, the system config file **MUST** be updated to reflect the change.

[Table 8-5](#) describes the process.

Table 8-5 Edit the system config file to match the testhead configuration

Task	Step
1 Open the system config file in a BT-BASIC window.	<p>a Open a BT-BASIC window by double-clicking the desktop icon.</p> <p>b From the BT-BASIC command line, enter:</p> <pre>get btgetenv\$ ("AGILENT3070_ROOT") & "/diagnostics/th1/config"</pre>
2 Arrange or modify statements to reflect the actual testhead configuration.	<p>Do this as required.</p> <p>See Table 8-8 on page 8-17 for commonly used BT-BASIC commands.</p>
3 Save and exit the system config file.	<ul style="list-style-type: none"> • Enter: <ul style="list-style-type: none"> 1) <code>re-save</code> 2) <code>exit</code>
4 Compile the system config file.	See Compiling the System and Standard Config Files on page 8-35.

How to Resolve the Standard Config File from the System Config File

If the system config file has changed it is good practice to edit the standard config file to reflect the changes.

This is a service to board test development programmers.

See [Table 8-6](#) to resolve the standard config file from the system config file.

[Figure 8-1](#) on page 8-15 illustrates the concept.

The desired end result is to copy the `cards ...`, `serial ports ...`, `supplies ...` and `ports ...` statements from the system config file to the standard config file.

No changes to the system config file are made.

Table 8-6 Resolve the standard config file from the system config file

Task	Step
1 Make a backup copy of the standard config file:	<p>a Open a BT-BASIC window by double-clicking the desktop icon.</p> <p>b At the prompt, type:</p> <pre>msi btgetenv\$ ("AGILENT3070_ROOT") & "/standard"</pre> <p>c copy "config" over "config.temp"</p>
2 Open the standard config file:	<p>a Type:</p> <pre>get "config"</pre>
3 Open the system config file in a new BT-BASIC window:	<ul style="list-style-type: none"> At the new BT-BASIC window command line, enter: <pre>get btgetenv\$ ("AGILENT3070_ROOT") & "/diagnostics/th1/config"</pre>
4 Arrange the two BT-BASIC windows so that each can be readily accessed.	

Table 8-6 Resolve the standard config file from the system config file (continued)

Task	Step
5 Copy the appropriate statements from the system config file to the clipboard buffer:	<p>In the BT-BASIC window containing the system config file:</p> <ol style="list-style-type: none"> a Press F1 on the keyboard to enter the workspace. b Locate the <code>module <number></code> that contains un-commented <code>cards 1 ...</code> statements using the arrow keys or the Prev and Next keys. c Scroll the text up until the <code>end module</code> statement is visible. d Click and drag with the mouse to highlight the text including the <code>ports ...</code> statement <p>The highlighted text is now copied in the clipboard buffer.</p>
	<p>NOTE</p> <p>Do not include <code>probe</code>, <code>debug port</code>, <code>bank</code>, or <code>end bank</code> statements. These statements are not valid in the standard config file.</p>

Table 8-6 Resolve the standard config file from the system config file (continued)


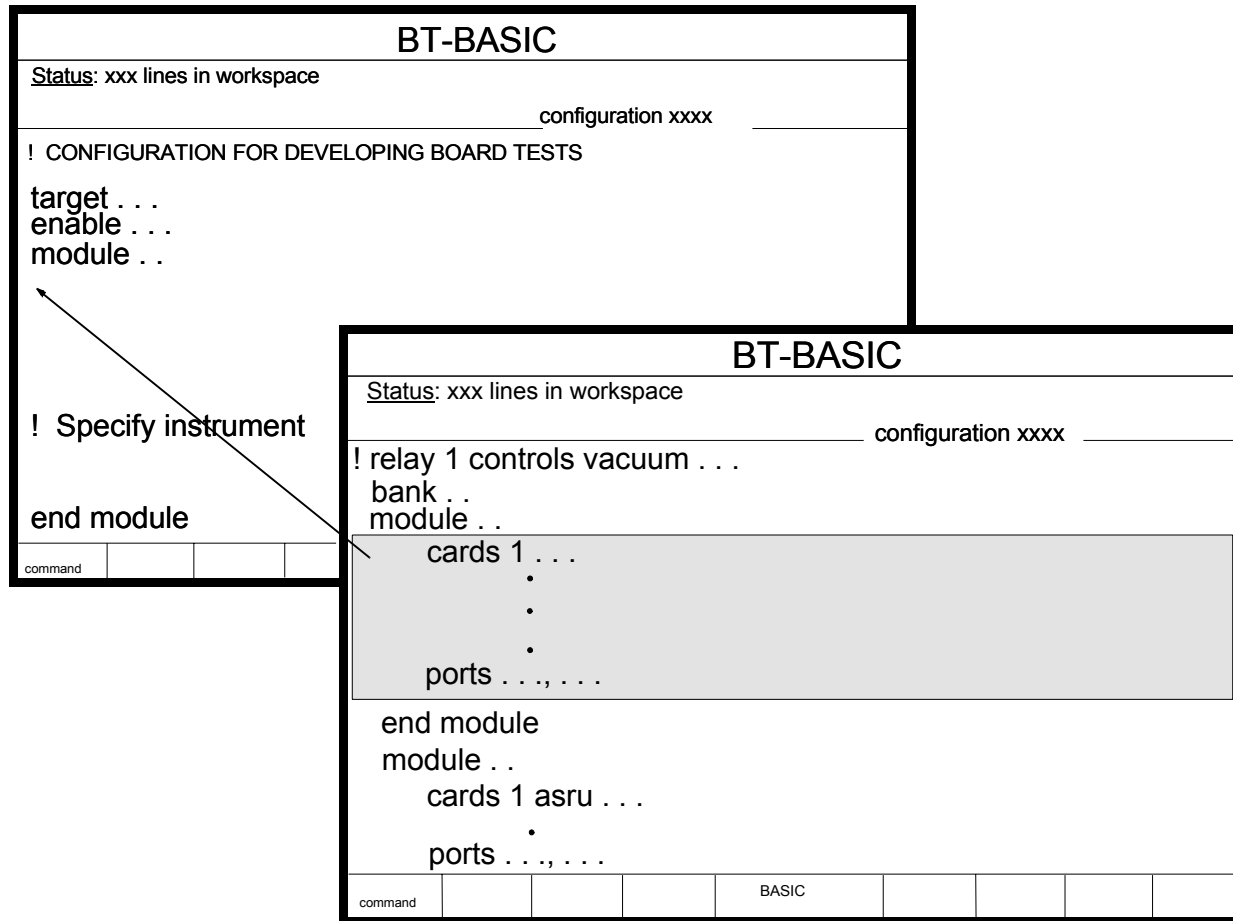
Task	Step
<p>6 Paste the copied text in the standard config file:</p>	<div data-bbox="936 375 1955 423" style="background-color: yellow; padding: 2px;">CAUTION</div> <div data-bbox="936 423 1003 483" style="display: inline-block; vertical-align: middle;"></div> <div data-bbox="1010 431 1619 537" style="display: inline-block; vertical-align: middle;"> <p>Do not delete the ! Specify instrument ... through ! connect ... statements.</p> </div> <hr/> <p>a Activate the window containing the standard config file by clicking on the window border.</p> <p>b Press F1 on the keyboard to enter the workspace.</p> <p>c Move the cursor immediately below the <code>module <number></code> statement that corresponds to the <code>module <number></code> statement copied in the previous task.</p> <ul style="list-style-type: none"> ■ Take care not to overwrite other lines. <p>d Click the right mouse button.</p> <p style="padding-left: 20px;">The text from the buffer will be inserted into the standard config file.</p> <hr/> <p>7 Verify that each un-commented <code>module <number></code> and <code>end module</code> statement in the system config file is un-commented in the standard config file.</p>

Table 8-6 Resolve the standard config file from the system config file (continued)

Task	Step
8 Save , then exit the standard config file:	<p>a In the window containing the standard config file, press F1 to return to the command line.</p> <p>b Enter:</p> <ol style="list-style-type: none"> 1) re-save 2) exit
9 Exit the system config file without saving it:	<p>a In the window containing the system config file, press F1 to return to the command line.</p> <p>b Enter:</p> <p>exit</p>
10 Compile the standard config file.	Instructions are given in Compiling the System and Standard Config Files on page 8-35.

Figure 8-1 Copying configuration information

\$AGILENT3070_ROOT/standard/config



\$AGILENT3070_ROOT/diagnostics/th1/config

MS Windows Quick-Reference

See [Table 8-7](#) for a MS Windows quick-reference.

Table 8-7 MS Windows quick-reference

To Do This...	Enter This...
<ul style="list-style-type: none"> • Kill processes and applications • Monitor CPU and memory usage 	<p>Open the MS Windows Task Manager:</p> <ol style="list-style-type: none"> Hold down the <Ctrl><Alt><Delete> keys at the same time (or right-click on the toolbar). Click Task Manager...
<ul style="list-style-type: none"> • View error logs • Perform diagnostics • Use other various administrative tools 	<p>Open the MS Windows Event Viewer:</p> <ol style="list-style-type: none"> Click Start > Settings > Control Panel. Double-click Administrative Tools, then select the appropriate application.

BT-BASIC Quick-Reference

Table 8-8 lists some commonly used BT-BASIC statements.

Additional BT-BASIC information is given in [Editing Files](#) on page 8-8.

NOTE

If uncertain whether to use forward-slashes or back-slashes, see [Forward-Slashes versus Back-Slashes in Command Lines Containing File Paths](#) on page 8-8.

NOTE

For a more complete list of BT-BASIC statements, see the *Agilent 3070 Family Users' Manual* Quick Reference Guide available in the online User manuals or on paper as part number E9900-13602.

Table 8-8 Commonly used BT-BASIC statements

BT-BASIC Statement	Statement Function
<code>msi btgetenv\$ ("AGILENT3070_ROOT") & "<path to the file>"</code>	Change to file location
<code>get btgetenv\$ ("AGILENT3070_ROOT") & "<path to the file>"</code>	Retrieve an existing file
<code>save "<filename>"</code>	Create a new file
<code>re-save</code>	Save an existing file
<code>compile "<filename>"</code>	Compile a file
<code>compile "<filename>";testhead</code>	Compile a testhead file
<code>findn "<string expression>"</code>	Find the next occurrence of a string expression
<code>exit</code>	Quit BT-BASIC

NT Korn Shell Quick Reference

Although the operating system is MS Windows, a number of 3070 UNIX commands are valid in the Korn shell.

See [Table 8-9](#) for a Korn shell quick reference. Keyboard keys are in { }.

For complete information about a command, at a Korn shell window prompt, enter:

```
man <command_name>
```

Table 8-9 Korn shell quick reference

To Do This . . .	Enter This . . .
Working with directories	
Show current working directory	<code>pwd</code>
Change directory	<code>cd <pathnames></code>
Change to home directory	<code>cd</code>
Create a directory	<code>mkdir <directoryname></code>
Remove and (empty) directory	<code>rmdir <directoryname></code>
Display permissions for a directory	<code>ls -ld <directoryname></code>
Working with files	
List files and directories in current directory	<code>ls</code>
List all files or directories, including hidden (“dot”) files	<code>ls -a</code>

NOTE

If uncertain whether to use forward-slashes or back-slashes, see [Forward-Slashes versus Back-Slashes in Command Lines Containing File Paths](#) on page 8-8.

Table 8-9 Korn shell quick reference (continued)

To Do This . . .	Enter This . . .
List files, and show directories with / and executables with *	<code>ls -F</code>
Display permissions for a file	<code>ls -l <filename></code>
Create or edit a file	<code>vi <filename></code> Or <code>vim <filename></code>
Display file contents	<code>more <filename></code> (q to quit) (v to vi)
Copy a file with permissions and owners	<code>cp -p <file1> <file2></code>
Move a file to a new filename	<code>mv <old_file> <new_file></code>
Append file1 onto the end of file2	<code>cat <file1> >> <file2></code>
Remove a file	<code>rm <filename></code>
Finding and organizing	
Find file(s) beginning with x in the current and sub-directories	<code>find . -name 'x*' -print</code>
Find all occurrences of word in all files in the current directory	<code>grep word *</code>
Display date and time	<code>date</code>
Display manual page for <command name>	<code>man <commandname></code>
Find name of current host system	<code>hostname</code>
Find current system information	<code>uname -a</code>
System operations	
Clear screen	<code>clear</code>

Table 8-9 Korn shell quick reference (continued)

To Do This . . .	Enter This . . .
Exit / close Korn shell window	<code>exit</code>
Set Korn shell for vi	<code>set -o vi</code>
Edit the command line (in Korn shell set for vi)	<code>{ESC}</code> (use vi commands)
Recall previous command line (in Korn shell set for vi)	<code>{ESC}k</code> (back) or <code>j</code> (forward)
Execute previous command line (in Korn shell set for vi)	<code>{Return}</code> (when line is displayed)
List current process status and PIDs	<code>ps -ef</code>
Redirect input from a file to a command	<code>command < infile</code>
Connect two processes with a “pipe”	<code>command1 command2</code>
Network operations	
Invoke ftp and connect to remote host	<code>ftp <remote_hostname></code>
Set transfer mode to ASCII	<code>ascii</code>
Set transfer mode to binary	<code>bin</code>
Copy a file using ftp from remote_hostname	<code>get <remote>file></code>
Copy a file using ftp from the local current directory to current directory on the remote_hostname.	<code>put <local_file></code>
Exit ftp	<code>bye</code>

vi and viw Editor Quick Reference

See [Table 8-10](#) for a vi and viw editor quick reference. Keyboard keys are in { }.

NOTE

If uncertain whether to use forward-slashes or back-slashes, see [Forward-Slashes versus Back-Slashes in Command Lines Containing File Paths](#) on page 8-8.

Table 8-10 vi and viw editor quick reference

To Do This . . .	Enter This in Command Mode . . .
Getting started with vi	
Create or edit a file in a Korn shell window	vi <filename>
Create or edit a file in a vi window	viw <filename>
Make sure you are in command mode	{ESC}
Show if you are in command or insert mode	:set showmode
Find out what file you are in	{CTRL}g
Moving within a file	
Move the cursor left or right	h or l or arrow keys
Move the cursor up or down	k or j or arrow keys
Cursor to end of line	\$
Cursor to beginning of line	o (Zero) or ^

Table 8-10 vi and viw editor quick reference (continued)

To Do This . . .	Enter This in Command Mode . . .
Cursor to end of file	G
Cursor to line <n>	<n>G
Inserting text	
Insert text at the cursor position	i
Insert a new line after the current line	o (capital)
Insert (Append) text after the cursor position	a
Backspace to overwrite previous character (in Insert Mode)	{CTRL}h or {Backspace}
Replace single character	r <character>
Replace until {ESC} is pressed	R
Deleting text	
Delete characters at cursor	x
Delete word (cursor at beginning of word)	dw
Delete the entire line at the cursor position	dd
Delete from cursor to end of the current line	D
Delete from cursor to end of the file	dG

Table 8-10 vi and viw editor quick reference (continued)

To Do This . . .	Enter This in Command Mode . . .
Moving text	
Join lines of text	J
Copy a line into a buffer	YY
Put copied or deleted text line from buffer after cursor line	p
Read in another file after cursor line	:r <filename>
Searching text	
Search forward for <words>	/<>words>
Search backward for <words>	?<words>
Repeat the previous search for words	n (next) or N (previous)
Saving and printing files	
Save file in same filename	:w
Save file to a new filename	:w <new_filename>
Exit from file without saving changes	:q!
Overwrite another existing file with this file	:w! or wq!
Save and exit from the vi editor	:wq

Table 8-10 vi and viw editor quick reference (continued)

To Do This . . .	Enter This in Command Mode . . .
Repairing mistakes	
Undo the previous action	u
Restore a line to its previous state	U
Restore ("put") last delete	p
Restore current file to last saved text and disregard changes	:e!
Undo last edit	u (repeat to toggle)
Recover a file after a system interruption (from the Korn shell)	vi -r <filename>

Codewords

Codewords are pre-installed at the factory and normally do not require adjustment.

Introduction

The capabilities of a 3070 system are based on the codewords installed.

Codeword information is used by the system config file compiler and allows confirmation that the hardware and the supported software features are compatible.

Install Codewords

Instructions for installing codewords are included with the software license(s).

Verify Installed Codewords

To verify the codewords:

- a Click **Start > Programs > Accessories**.
- b At a command window prompt, enter:
`codeword -l (el, not one)`

Compile the Two Config Files

CAUTION



If the codewords have changed in any way, it will be necessary to compile both the system and standard config files. Instructions are given in [Compiling the System and Standard Config Files](#) on page 8-35.

CAUTION



Incorrectly entered codewords, blank lines or spaces before or after a codeword may cause errors when compiling the config files. `User` and `Operator` logins may not boot if the `$AGILENT3070_ROOT/lib/.enable` file contains invalid information. Codeword order does not make any difference.

System Config File Specifics

The path to the system config file is:

```
$AGILENT3070_ROOT/diagnostics/th1/config
```

It must match the actual testhead card configuration.

It will be necessary to edit the system config file if the testhead cards or locations of the testhead cards have changed.

To edit the system config file:

- 1 Login as `service3070` (default password is `service`).
- 2 At a **BT-BASIC** window prompt, enter:


```
msi btgetenv$ ("AGILENT3070_ROOT") &
"/diagnostics/th1"
```
- 3 Enter:


```
get "config"
```
- 4 Edit the file to match the actual testhead card configuration.
- 5 Enter:


```
re-save
```
- 6 Compile the changed system config file. See [Compiling the System and Standard Config Files](#) on page 8-35

The "Official" and "Actual" System Config Files

The "official" system config file is the system config file as when the system was shipped.

It is contained on a printout shipped with the system, and can be used as a model if it should be necessary to customize the system config file.

The "actual" system config file is the system config file in use which reflects the actual cards and card locations in the testhead.

If the System Config File is Corrupt

One of the `sys.config.xxx` templates can be copied from the `$AGILENT3070_ROOT/diagnostics` directory and edited to match the actual system configuration.

NOTE

Changes to the system config file should be reflected in the standard config file. See [Standard Config File Specifics](#) on page 8-29.

Descriptions of Some Statements in the System Config File

The `testhead name` Statement

The `testhead name` statement in the system config file identifies, via the `hosts` file, the block in the `bootptab` file that contains the hardware and internet protocol addresses for the System Card and ControlXT Card.

The `testhead name` statement in the system config file includes only the modules that are present; for a four-module system it looks like:

```
testhead name "testhead1" "module3" "module2"
"module1" "module0"
```

The System Card is represented by `testhead1`

The ControlXT Card in each module is represented by `module<n>`

Modules are mapped in the `hosts` file. Using this information, specific hardware addresses (HAs) can be determined in the `bootptab` file.

The `line frequency` Statement

In this statement, the unused frequency is commented. For example, if the system power is connected to 60 hertz, 50 is commented.

NOTE

"Commented" means that the comment character, an exclamation mark (!), has been placed at the beginning of a line.

"Un-commented" means the "!" has been deleted from the beginning of the line.

The `relay` Statement

See [Vacuum Control](#) on page 8-42.

The `cards <keywords>` Statements

These statements identify to the system which cards are installed and where they are installed.

See [Table 8-15](#) on page 8-44 for available 3070 testhead cards with diagnostics names, `cards <keywords>` statements, pattern applications rates and part numbers.

The `cards <keywords>` statements can be delimited by commas (,); a range can be separated by the word "to."

Valid examples are:

- `cards 2, 3, 4, 5 hybrid standard double density`
- `cards 2 to 5 hybrid standard double density`
- `cards 2, 4, 7 to 11 hybrid standard double density`

NOTE

Single-density Hybrid Pin Cards cannot be used.

The `supplies` <keywords> Statements

Numbering of the supplies in the `supplies` <keywords> statements is arbitrary.

The software will accept any mapping of supply numbers to modules.

If the customer plans to share board test fixtures with other systems, it is possible they may have modified the default power supply setting.

If so, reconcile the supplies numbering with existing systems.

Standard Config File Specifics

This section contains:

- [Introduction, 8-29](#)
- [The Board Config File, 8-29](#)
- [Standard Config File Syntax Similarities to and Differences from the System Config File, 8-29](#)
- [Statements Allowed in the Standard, System, and Board Config Files, 8-30](#)
- [Statements Not Allowed in either the Standard or Board Config Files, but Are Allowed in the System Config File, 8-30](#)
- [Descriptions of Some Statements in the Standard Config File, 8-30](#)

Introduction

The path to the standard config file is:

```
$AGILENT3070_ROOT/standard/config
```

It should reflect the complete testhead resources available for the board test developer.

The standard config file as when the system was shipped:

- Has the correct `target <keywords>` statement.
- Includes commented `enable <keywords>` statements for optional components.

The Board Config File

The board test developer can use the standard config file as a template when developing a board config file.

The board config file is located in each board's subdirectory, and is a copy or subset of the standard config file.

The board config file can describe the resources in any one system or system subset.

Standard Config File Syntax Similarities to and Differences from the System Config File

The `cards <keywords>` syntax is the same for the system config file and the standard config file.

However, some of the syntax for the standard config file is different from that of the system config file.

Statements Allowed in the Standard, System, and Board Config Files

- target
- enable
- module
- end module
- access ports
- boards wired in parallel
- cards
- supplies
- ports
- boards
- connect

NOTE

connect statements allow programmers to name and define the use of external ports.

Usually these can remain as-shipped until the customer decides how to use these ports.

Statements Not Allowed in either the Standard or Board Config Files, but Are Allowed in the System Config File

- testhead name
- line frequency
- board handler
- relay <x> controls vacuum <y>
- bank
- end bank
- probe
- debug port

Descriptions of Some Statements in the Standard Config File

The target <keywords> Statements

A target <keywords> statement is needed in each board config file.

See [Table 8-11](#) for factory default target <keywords> statements.

NOTE

The target <keywords> statement should be the first un-commented statement in the file and must exist before the cards <keywords> statements.

Table 8-11 Factory default `target <keywords>` statements

Pattern Application Rate	<code>target <keyword></code> Statement
6 MP/s (megapatterns-per-second)	<code>target hp3073 standard</code>
12 MP/s	<code>target hp3070 advanced</code>
20 MP/s	<code>target high accuracy</code>

See [Table 8-12](#) for 3X72 process test system default `target <keywords>` statements.

Table 8-12 3X72 process test system default `target <keywords>` statements

Product Description	<code>target <keyword></code> Statement
Agilent 3172-U Unpowered Test (up to 2modules)	<code>target unpowered</code>
Agilent 3072-U Unpowered Test (up to 4 modules)	<code>target unpowered</code>
Agilent 3172-P Powered Test (up to 2 modules)	<code>target unpowered</code> <code>enable powered testing</code>
Agilent 3072-P Powered Test (up to 4 modules)	<code>target unpowered</code> <code>enable powered testing</code>

The `enable <keywords>` Statements

These statements are used in combination with codewords to selectively enable software functionality.

CAUTION

enable <keywords> statements should exist after the target <keywords> statements, and must be outside of a module block.

NOTE

Codewords must be installed to enable optional software features. For more information, see [Codewords](#) on page 8-25.

The programmer will un-comment the correct enable <keywords> statements which correspond to standard or optional software features as the board config file is developed.

[Table 8-13](#) contains some enable <keywords> statements in the standard config file.

Table 8-13 Some enable <keywords> statements in the standard config file

enable <keywords>	Functional Description:
advanced boundary scan	Allows more advanced techniques in boundary scan testing, such as powered shorts testing.
all high accuracy resources	For double density, high accuracy HybridPlus Cards, this option enables channel resources to pins that would otherwise be used for extended grounding on XG-50 fixtures. Because the resource assignments change, this option cannot be used with XG-50 fixtures.
combo test	Enables both in-circuit and functional testing.
common delimiter	Enables Interoperability between UNIX and MS Windows.
connect check	Enables Agilent Connect Check.
dual well shared wiring	Enables Dual-Well Shared Wiring.

Table 8-13 Some enable <keywords> statements in the standard config file

enable <keywords>	Functional Description:
drivethru	Enables the testing of digital devices through series resistors using Agilent TestJet technology. Use the Agilent Drive Thru Test in combination with the Agilent Access Consultant to identify and selectively remove nonessential probing locations.
express fixturing	Allows Agilent SimPlate Express or cassette fixtures for your board test. If this option is not enabled, only an Agilent SimPlate Fixture can be used.
flash70	Enables flash memory programming mode.
flash isp	Enables flash isp software, which supports new data formats. Test system must have ControlXTP cards installed to utilize this feature.
incircuit test	Enables automatic in-circuit test generation for systems which do not have it.
magic	Enables Agilent MagicTest circuit analysis mode.
multiple board versions	Enables Agilent Multiple Board Versions.
paneltest	Enables software that helps you develop tests for multiple-board panels on one fixture.
pld isp	Enables native PLD programming on the 3070 and supports CPLD programming with STAPL, SVF, Jam and JBC file types.
polarity check	Enables Polarity Check testing.
powered testing	Allows limited powered testing on an Agilent 3072 system (a maximum of two HybridPlus Cards, one HybridPlus and one ChannelPlus Card, or one HybridPlus and one AccessPlus Card per module).
silicon nails	Enables automatic generation of silicon nails ITL test files.

Table 8-13 Some `enable <keywords>` statements in the standard config file

<code>enable <keywords></code>	Functional Description:
<code>testjet</code>	Enables the TestJet testing technique on your board. This option is automatically enabled on the Agilent 3072 system.
<code>throughput multiplier</code>	Allows testing up to four boards simultaneously (one per module), which increases board throughput. It can only be used with the <code>paneltest</code> option.

Compiling the System and Standard Config Files

For changes to the system config file and the standard config file to be enabled, they must be compiled.

NOTE

If codewords have been modified in any way, both the system config and the standard config files must be compiled.

To compile the config files:

- 1 Login as `service3070` (default password is `service`)
- 2 Open **BT-BASIC**.
- 3 Compile the system config file. At the command line, enter:
 - a `msi btgetenv$ ("AGILENT3070_ROOT") & "/diagnostics/th1"`
 - b `compile "config"; testhead`
- 4 Compile the standard config file. At the command line, enter:
 - a `msi btgetenv$ ("AGILENT3070_ROOT") & "/standard"`
 - b `compile "config"`
- 5 When the config files have compiled without errors, exit BT-BASIC.

The bootptab File

This section contains:

- [Hardware Addresses](#), 8-36
- [IP Addresses](#), 8-37

Hardware Addresses

Each control card has a unique hardware address.

If a control card in the testhead is changed, the `bootptab` file must be edited to reflect a changed hardware address.

CAUTION



Changes made to the `bootptab` file **MUST** be done through the **Bootp Server** program.

Given below is a method to edit the `bootptab` file:

- 1 Login as `service3070` (password is `service`).
- 2 Make a backup copy. One example:

NOTE

The environment variable `$SystemRoot` is usually set to `c:\winnt\`

a Open Windows Explorer:

- For Windows NT, click **Start > Programs > Windows NT Explorer**.
- For Windows 2000, click **Start > Programs > Accessories > Windows Explorer**.

b Navigate to:

`c:\winnt\system32\drivers\etc\`

Right-click on the `bootptab` file then select **copy**.

c Navigate to:

`C:\Temp`

d Right-click and select **paste**.

An unchanged copy is now in `C:\Temp`

3 Open **Bootp Server**:

a Click **Start > Settings > Control Panel**.

b Double-click **BOOTP Server NT**.

4 In the **BOOTP Server properties** window, click the **Clients** tab.

- 5 If a ControlXT Card was removed, delete its hardware address:
 - 10.3.112.6 for module 2
 - 10.3.112.7 for module 3
 - a Pull down the **Hardware Address** menu and select the address of the card you removed.
 - b Click **Delete**.
 - 6 Add the hardware address of the ControlXT Card you are installing:
 - a Click **New**.
 - b Enter the hardware address of the ControlXT Card. The complete hardware address is typically 0060B0B2xxxx (xxxx = the number on the card).
 - 7 Configure the card's address:
 - a In the **Available options** menu, select the following three options one at a time and click >> to move them to the **Configured options** menu:
 - **IP address >>**
 - **Merit dump file >>**
 - **Subnet mask >>**
 - b In the **Configured options** menu, select each option and click **Edit**.

Enter:

 - **IP Address** = 10.3.112.4 for module 0
10.3.112.5 for module 1
 - **Merit dump file** = This is a comment; enter the module number (e.g., module 2).
 - **Subnet mask** = 255.255.255.0
 - 8 In the **BOOTP Server properties** window, click **Close**.
 - 9 Restart the BOOTP Server:
 - a From **Control Panel** click **Administrative Tools**, then **Services**.
 - b Double-click **Weird Solutions BOOTP Server**.
 - c Click **Stop > Start** (wait).
 - 10 Close the **Services** and **Administrative Tools** windows.
- This completes the procedure.

IP Addresses

The `bootptab` file, in conjunction with the `hosts` file, manages IP addresses for the modules in the testhead.

See [The hosts File](#) on page 8-38 to view IP addresses for the testhead modules.

The `hosts` File

The path to the `hosts` file is:

- `$SystemRoot/system32/drivers/etc/hosts`

NOTE

`$SystemRoot` is an environment variable that is usually set to: `c:/winnt`

The `hosts` file must include these IP addresses:

```
10.3.112.2 testhead1 (System Card)
```

```
10.3.112.7 module3
```

```
10.3.112.6 module2
```

```
10.3.112.5 module1
```

```
10.3.112.4 module0
```

Example 8-1 on page 8-39 shows a sample `hosts` file.

Test Device Communication

To verify connection to each of the devices listed in the `hosts` file:

- 1 Boot the testhead.
- 2 From a DOS window prompt, enter:

```
ping <system name> OR
```

```
ping <IP address>
```

Example 8-1 A sample `hosts` file

```
#
# This is a sample HOSTS file used by Microsoft TCP/IP for MS Windows.
#
# This file contains the mappings of IP addresses to host names. Each
# entry should be kept on an individual line. The IP address should
# be placed in the first column followed by the corresponding host name.
# The IP address and the host name should be separated by at least one
# space.
#
# Additionally, comments (such as these) may be inserted on individual
# lines or following the machine name denoted by a '#' symbol.
#
# For example:
#
#       102.54.94.97      rhino.acme.com          # source server
#       38.25.63.10     x.acme.com            # x client host

127.0.0.1      localhost
# 10.3.112.1    UNIX Controller uses this
# 10.3.112.10  MS Windows Controller uses this
10.3.112.2     testhead1
10.3.112.3     hpibgw
10.3.112.4     module0
10.3.112.5     module1
10.3.112.6     module2
10.3.112.7     module3
```

Device Files

This section contains:

- [Introduction](#), 8-40
- [Location of Device Files](#), 8-40
- [If a DUT Power Supply is Replaced](#), 8-40
- [DUT Power Supply Device Files](#), 8-41

Introduction

Management of devices on MS Windows controllers are very different than on UNIX controllers.

On MS Windows controllers, most devices are managed invisibly by the operating system. A small number of devices (primarily GPIB) are mirrored in the `$AGILENT3070_ROOT/dev` directory so that the 3070 software will execute properly.

Location of Device Files

Device files can be found in the directory:

```
$AGILENT3070_ROOT/dev
```

and are listed in [Table 8-14](#).

Table 8-14

Device Files in <code>\$AGILENT3070_ROOT/dev</code>		
gpio1	hpib1	dmm
null	scope	dmm_ref
ps0. . . ps11	hp3488	synth

If a DUT Power Supply is Replaced

Change the appropriate `ps<x>` file if the GPIB address of any power supply changes.

Example 2 shows the contents of the default `ps0` file. In the line:

```
7,22
```

22 represents the GPIB address.

Example 8-2 Contents of the default `ps0` file

```
!!!! 26 0 1 664499475 0000
hpib
7,22
```


DUT Power Supply Device Files

See [Table 8-18](#) on page 8-49 for DUT power supply GPIB addresses and device files.

Vacuum Control

Location of Vacuum Control Statements

These are contained in the system config file:

```
$AGILENT3070_ROOT/diagnostics/th1/config
```

Vacuum Control Specifics

The `relay <x> controls vacuum <y>` statements need to match the actual hardware configuration after the customer decides how to implement vacuum control.

For testheads without internal vacuum valves, the default statements are:

```
relay 1 controls vacuum 2,3  
relay 2 controls vacuum 0,1
```

For testheads with the Agilent E9945A two-module internal vacuum system, the default statements are:

```
relay 1 controls vacuum 3  
relay 2 controls vacuum 2
```

For testheads with the Agilent E9946A four-module internal vacuum system, the default statements are:

```
relay 1 controls vacuum 3  
relay 2 controls vacuum 2  
relay 3 controls vacuum 1  
relay 4 controls vacuum 0
```

There is nothing special about the defaults except that each matches a configuration shown in the site preparation manual.

See the *Agilent 3070 / 79000 Family Site Preparation Manual* 03066-90114 for a drawing of this default vacuum hookup.

Modify the relay statements so they will work with your customer's hardware.

For example, to turn on all four vacuum ports with a single relay, the following statement might be used in the system config file:

```
relay 1 controls vacuum 0,1,2,3
```

Rotating the Testhead

CAUTION



Remove all objects, including the monitor / keyboard support arms, from the rotational path of the testhead.

During rotation, should the testhead hit anything, damage could result.

CAUTION



Remove the shipping bolts before attempting to rotate the testhead. Otherwise, damage can result.

- 1 Open the pod door.
- 2 Press and hold the testhead rotation switch inside the pod until the testhead rotates to the desired position.

There is also sometimes a testhead rotation switch on the rear of the pod.

NOTE

The PDU must be turned on for the testhead rotation switch to be active.

Testhead Cards

See [Table 8-15](#) for available testhead cards with diagnostics names, `cards <keywords>` statements, pattern applications rates and part numbers.

If Replacing the ControlXT Card

- The ROM from the old card must be removed and installed on the new card.
- Its hardware address in the system software must be changed.

Table 8-15 For MS Windows systems – supported testhead cards with diagnostics names, `cards <keywords>` statements, pattern applications rates and part numbers

Card Type	DGN Config Screen Name	<code>cards <keywords></code> Statement in the System Config File	Pattern Application Rate (MP/s)	Part Number of the Card
Access	Access	<code>access</code>	6/12/20	E1061-66501
Analog	Analog	<code>analog</code>	6/12/20	E1121-66526
	Ana_DD	<code>analog double density</code>	6/12/20	E4000-66542
ASRU	ASRU_C	<code>asru c revision</code>	6/12/20	03066-66532
Control	Ctl_Xt	<code>control xt</code>	6/12/20	E4000-66512
Hybrid	H_StdDD	<code>hybrid standard double density</code>	6	E4000-66540

NOTE

DO NOT change the hardware address of the System Card.

System Card / Control Card LAN Information

See [Testhead LAN and Serial Port MUX](#) on page 8-59.

Table 8-15 For MS Windows systems – supported testhead cards with diagnostics names, `cards <keywords> statements`, pattern applications rates and part numbers (continued)

	H_StdDD2	hybrid standard double density	6	E4000-66550
	H_PpuDD	hybrid standard double density	6	E4000-66546
	HPpuDD2	hybrid standard double density	6	E4000-66550
	H_AdvDD	hybrid advanced double density	12	E4000-66544
	HAdvDD2	hybrid advanced double density	12	E4000-66550
	H_HA_DD	hybrid high accuracy double density	20	E4000-66545
	HHADD2	hybrid high accuracy double density	20	E4000-66550
	HStd_32	hybrid standard double density 32	6	E9900-66502
	HAdv_32	hybrid advanced double density 32	12	E9900-66502
	H_HA_32	hybrid high accuracy double density 32	20	E9900-66502
	HPpu_32	hybrid high accuracy double density 32	20	E9900-66502

CAUTION



If a `serial` keyword exists in the system config. file, then `serial ports` statements **MUST** be defined in the standard config file `/var/hp3070/diagnostics/th1/config` for each STC Plus Card. Also the serial test codeword **MUST** be in the `/var/hp3070/bin/.enable` file.

Table 8-15 For MS Windows systems – supported testhead cards with diagnostics names, cards <keywords> statements, pattern applications rates and part numbers (continued)

	STC_B	serial b revision	6/12/20	E1085-66502
	STC_B	serial b revision with cables	6/12/20	E1085-66502 with E1093-61601

DUT Power Supplies

Voltage Ranges

DUT power supplies are set at the factory to one of two configurations:

- Option 220 for line voltages of 200–220 volts.
- Option 240 for line voltages of 230–240 volts.

DUT Power Supplies Allowed

See [Table 8-16](#) for the DUT power supplies allowed.

Table 8-16 DUT power supplies allowed

Product No.	Model No.	Description
44940A	6624A	4 outputs: 2 @ 0-7 V, 0-5 A or 0-20 V, 0-2 A and 2 @ 0-20 V, 0-2 A or 0-50 V, 0-0.8 A
44941A	6621A	2 outputs: 0-7 V, 0-10 A and 0-20 V, 0-4 A
E4034A	6634A	1 output: 1-100 V, 0-1 A
E3784A	6642A	1 output: 0-20 V, 0-10 A

Module Mappings

See [Table 8-17](#) for default DUT power supply mappings for each module.

Table 8-17 Default DUT power supply mappings for each module (rear view of testhead)

Module 0	Module 2
supplies hp6624 13 to 16 asru channels 1 to 4	! supplies hp6624 5 to 8 asru channels 1 to 4
! supplies hp6621 13 to 14 asru channels 1 to 4	supplies hp6621 5 to 6 asru channels 1 to 4

Table 8-17 Default DUT power supply mappings for each module (rear view of testhead) (continued)

! supplies hp6624 23 to 24 asru channels 5 to 6	! supplies hp6624 19 to 20 asru channels 5 to 6
supplies hp6621 23 asru channels 5 to 6	! supplies hp6621 19 asru channels 5 to 6
! supplies hp6634 23 asru channels 5	supplies hp6634 19 asru channels 5
! supplies hp6634 24 asru channels 6	supplies hp6634 20 asru channels 6
! supplies hp6642 23 asru channels 5 to 6	! supplies hp6642 19 asru channels 5 to 6
Module 1	Module 3
supplies hp6624 9 to 12 asru channels 1 to 4	supplies hp6624 1 to 4 asru channels 1 to 4
! supplies hp6621 9 to 10 asru channels 1 to 4	! supplies hp6621 1 to 2 asru channels 1 to 4
! supplies hp6624 21 to 22 asru channels 5 to 6	supplies hp6624 17 to 18 asru channels 5 to 6
! supplies hp6621 21 asru channels 5 to 6	! supplies hp6621 17 asru channels 5 to 6
supplies hp6634 21 asru channels 5	! supplies hp6634 17 asru channels 5
supplies hp6634 22 asru channels 6	! supplies hp6634 18 asru channels 6
! supplies hp6642 21 asru channels 5 to 6	! supplies hp6642 17 asru channels 5 to 6

The commented ("!") statements illustrate that you cannot assign a power supply number (1 through 24) more than once in a testhead, and you cannot assign a channel number (1 through 6) more than once in a module.

For 307X systems with a support bay, if it is necessary to determine which DUT power supply is wired to

which module, the DUT/ASRU cables E4000-61602 are labeled on both ends with the module numbers to which they are routed.

Agilent 317X systems use cable numbers E4000-61606 and E1170-61607.

GPIB Addresses and Device Files

If the DUT power supplies are functional, a supply's GPIB address can be determined by tracing the cabling to determine which supply is connected to the module.

If the supply has a front panel and is accessible, the GPIB address can be read from the front panel of the supply.

Table 8-18 lists DUT power supply GPIB addresses and device files. See **If a DUT Power Supply is Replaced**

Table 8-18 DUT power supply GPIB addresses and device files

Power Supply Connection	GPIB Address	Device File
Module 0, asru channels 1-4	22	\$AGILENT3070_ROOT/dev/ps0
Module 1, asru channels 1-4	23	\$AGILENT3070_ROOT/dev/ps1
Module 2, asru channels 1-4	24	\$AGILENT3070_ROOT/dev/ps2
Module 3, asru channels 1-4	25	\$AGILENT3070_ROOT/dev/ps3
Module 0, asru channel 5 or 5-6	26	\$AGILENT3070_ROOT/dev/ps4
Module 0, asru channel 6	27	\$AGILENT3070_ROOT/dev/ps5
Module 1, asru channel 5 or 5-6	28	\$AGILENT3070_ROOT/dev/ps6
Module 1, asru channel 6	29	\$AGILENT3070_ROOT/dev/ps7
Module 2, asru channel 5 or 5-6	1	\$AGILENT3070_ROOT/dev/ps8
Module 2, asru channel 6	2	\$AGILENT3070_ROOT/dev/ps9

on page 8-40 for more information about DUT power supply GPIB addresses.

NOTE

The customer has the flexibility to modify the DUT power supply GPIB addressing.

Table 8-18 DUT power supply GPIB addresses and device files (continued)

Module 3, asru channel 5 or 5-6	3	\$AGILENT3070_ROOT/dev/ps10
Module 3, asru channel 6	4	\$AGILENT3070_ROOT/dev/ps11

To Change DUT Power Supply GPIB Addresses

For 307X systems only where the power supplies are mounted in a support bay:

- Open the support bay and find the correct power supply.

Systems without support bays have the power supplies mounted in the testhead:

- Panels must be removed from the testhead in order to access the front panel of the power supplies.

To change the GPIB address, press **ADDR** (beside the display), enter the desired address on the **ENTRY keypad**, and then press **ENTER** on the **ENTRY keypad**.

NOTE

If a power supply is split between two modules, the default GPIB address (and device file) is the one for the lower-numbered module.

Controller Cables and Devices

There are two supported MS Windows testhead controllers:

For the Kayak XU700, use

Figure 8-2 on page 8-53 with

Table 8-19 on page 8-54.

For the Visualize P600, use

Figure 8-3 on page 8-56 with

Table 8-20 on page 8-57.

Figure 8-2 Kayak XU700 cabling diagram

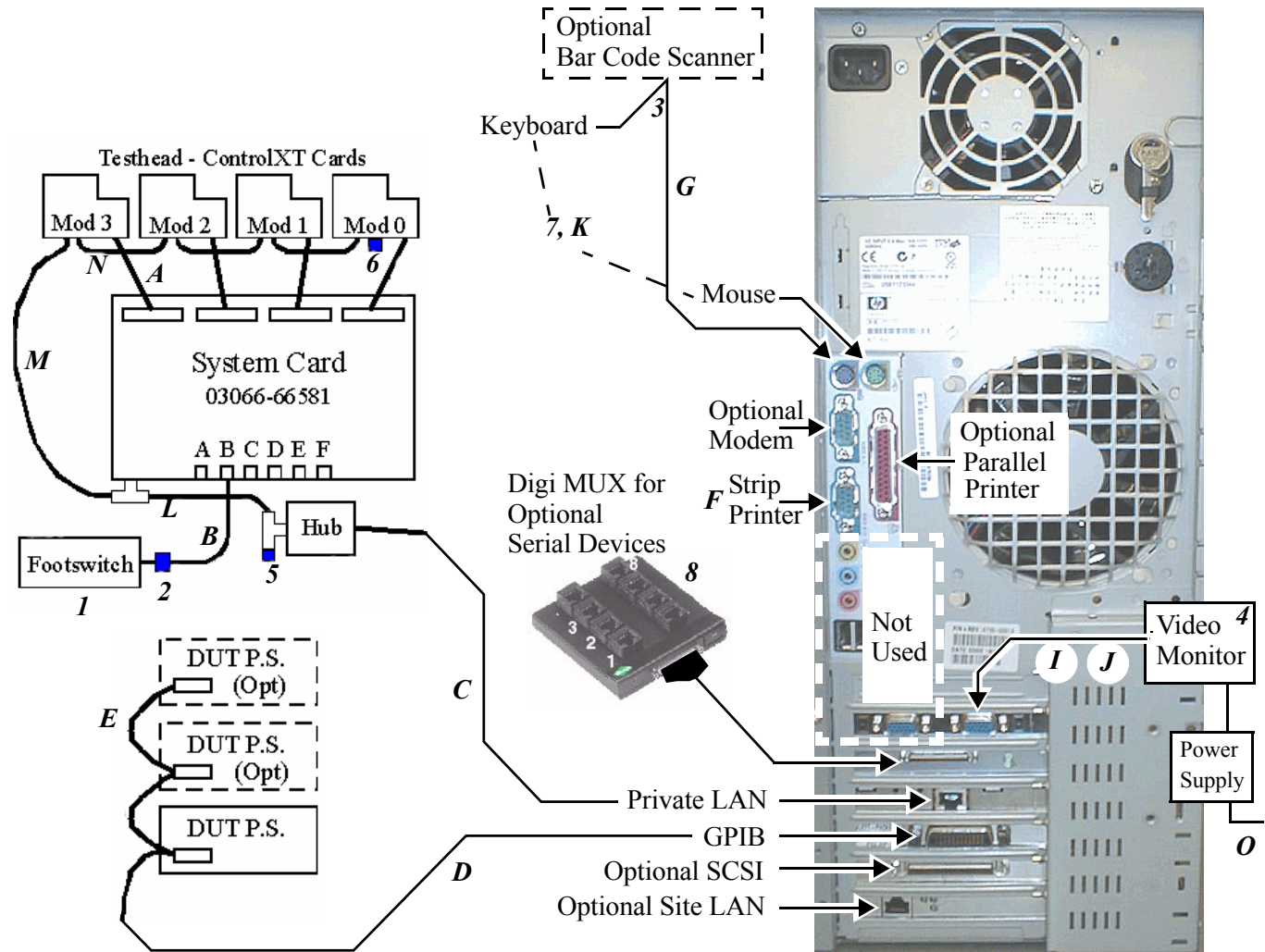


Table 8-19 Kayak XU700 cables and devices

Cables		
Figure 8-2 Reference	Part Number	Description
A	E4000-61628	Control Cable
B	8120-6713	Footswitch Extension Cable, RJ-11
C	8120-8728	LAN Cable, RJ-45 to RJ-45
D	E9927-61607	4-meter GPIB Cable (for TAMS 70488-10 card)
E	8120-3445	1-meter GPIB Cable
F	03066-61629	Strip Printer Cable, RS-232, DB9(f) to DB25(m) cross-conn., 3-m
G	8120-6751	Bar Code Scanner Cable
H	Not Used	Not Used
I	03066-61640	Video Extension Cable (1 for 327X / 79000, 2 for 307X / 317X)
J	D2800-80006	Video Cable
K	8120-6794	Keyboard / Mouse Extension Cable
L	8120-5371 or . . . 8120-3543	6-meter LAN Cable, BNC to BNC (for 307X and 317X) or . . . 2-meter LAN Cable, BNC to BNC (for 327X)
M	E4000-61630	LAN Cable, BNC to SMB for ControlXT Cards

Table 8-19 Kayak XU700 cables and devices (continued)

N	E4000-61629	LAN Cable, SMB to SMB for ControlXT Cards
O	8120-1763 2 ea. (327X) or 8120-1763 + 8120-4188 (307X and 317X) power cords	

Devices		
Figure 8-2 Reference	Part Number	Description
1	44902-60000	Footswitch with Cable
2	E4000-62102	Footswitch Adapter
3	0950-2946	Bar Code Scanner Wedge (optional) (p/o E3786A)
4	E9900-69301	NEC MultiSync LCD Flat Panel Display
5	1250-0207	50-ohm BNC Load / Termination
6	1250-2076	50-ohm SMB Load / Termination
7	A4030E	Keyboard and Mouse
8	1250-3154	Digi 77000707 EIA-232 AccelePort 8p controller PCI card
	1250-3156	Digi 76000527 EIA-232 AccelePort 8p interface box

Figure 8-3 Visualize P600C cabling diagram

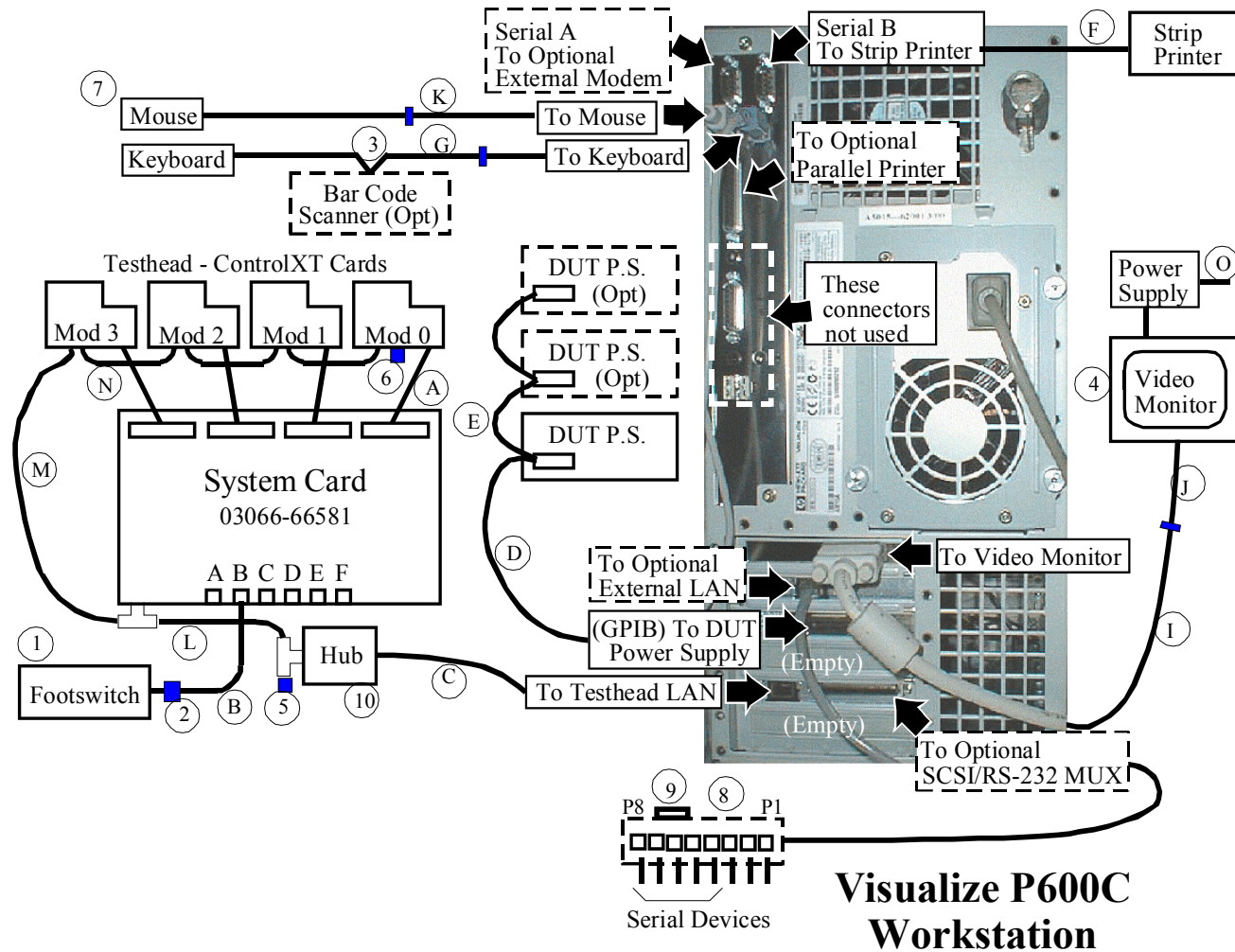


Table 8-20 Visualize P600C cables and devices

Cables		
Figure 8-3 Reference	Part Number	Description
A	E4000-61628	Control Cable
B	8120-6713	Footswitch Extension Cable, RJ-11
C	8120-8728	LAN Cable, RJ-45 to RJ-45
D	E9927-61607	4-meter GPIB Cable (for TAMS 70488-10 card)
E	8120-3445	1-meter GPIB Cable
F	03066-61629	Strip Printer Cable, RS-232, DB9(f) to DB25(m) cross-conn., 3-m
G	8120-6751	Bar Code Scanner Cable
H	Not Used	Not Used
I	03066-61640	Video Extension Cable (1 for 327X / 79000, 2 for 307X / 317X)
J	D2800-80006	Video Cable
K	8120-6794	Keyboard / Mouse Extension Cable
L	8120-5371 or . . . 8120-3543	6-meter LAN Cable, BNC to BNC (for 307X and 317X) or . . . 2-meter LAN Cable, BNC to BNC (for 327X)
M	E4000-61630	LAN Cable, BNC to SMB for ControlXT Cards

Table 8-20 Visualize P600C cables and devices (continued)

N	E4000-61629	LAN Cable, SMB to SMB for ControlIXT Cards
O	8120-1763 2 ea. (327X) or 8120-1763 + 8120-4188 (307XPC and 317XPC) power cords	

Devices		
Figure 8-3 Reference	Part Number	Description
1	44902-60000	Footswitch with Cable
2	E4000-62102	Footswitch Adapter
3	0950-2946	Bar Code Scanner Wedge (optional) (p/o E3786A)
4	E9900-69301	NEC MultiSync LCD Flat Panel Display
5	1250-0207	50-ohm BNC Load / Termination
6	1250-2076	50-ohm SMB Load / Termination
7	A4030E	Keyboard and Mouse
8	E4000-37900	SCSI/RS-232 w/E4000-37911 pwr sup, SCSI-2 cable (p/o E3788A)
9	A1658-62016	SCSI Terminator
10	J3128A	Agilent AdvanceStack 10Base-T Hub-8E with 0950-3612 power supply

Testhead LAN and Serial Port MUX

Testhead LAN IP Address

The testhead LAN IP address is 10.3.112.10 with a subnet mask of 255.255.255.0

System Card / Control Card LAN Information

The System Card and the ControlXT Cards communicate via a private LAN.

Because the System Card and ControlXT Card IP addresses are local to each system, their assigned addresses are the same from one system to the next.

However, their hardware addresses (ha) are unique in each system.

The hardware address of the System Card is printed on its sheet-metal panel.

The last four digits of the ControlXT Card's hardware address are printed on one of its ROMs; it's the last line (hexadecimal number) on the label.

To verify communication to the testhead (system card), use the `ping` command.

- 1 Power-on the testhead.
- 2 From a DOS prompt, enter:

```
ping 10.3.112.2
```

If the communication test fails, check that the LAN ports in the testhead are terminated properly.

See [Controller Cables and Devices](#) on page 8-52 for the locations of the LAN terminations.

Serial Port MUX

The Kayak 700 controller contains a Digi AccelePort Xp serial port MUX as standard equipment.

This 8-port EIA-232 serial MUX adapter provides eight 8-pin RJ-45 EIA-232 ports for supporting PPU, JOT, and other optional serial-controlled devices.

CAUTION



Many SCSI adapters use the same HD-68 connector type as the AccelePort Xp. **DO NOT** plug SCSI devices into the Digi connector, and **DO NOT** plug Digi peripheral cables into SCSI adapters. Damage can result.

Connect cabling for serial devices as listed in [Table 8-21](#) or communication errors can result.

Table 8-21 Connector box MUX assignments

Serial Port	Reserved For
1	Pay-Per-Use (PPU)
2	JOT Board Handler
3—4	JOT Bar Code Readers
5—8	Other EIA-232 Devices