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Prepared By:  
Portables Software  
Product Marketing

Compaq Computer  
Corporation

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## Limitations When Using Microsoft Windows 98 on Compaq Armada Portables

*Compaq provides a number of software enhancements, including system-unique BIOS, hardware-enabling drivers and software enhancements that it pre-installs on Armada portables. These enhancements are made available to customers through the Compaq web site and Compaq Support Software CD beginning with the 98.08 release.*

*These enhancements enable many hardware features and complement the operating system by improving the overall user experience. With the introduction of Windows 98, many of these Compaq software enhancements change. When upgrading to Windows 98, upgraded Compaq software enhancements **must** be installed in order to maintain functionality that is equivalent to what was provided under the previous operating system.*

*Compaq has made available the Windows 98 specific software enhancements (BIOS, hardware-enabling drivers, and software applications) for the **Armada 7800, 7700, 7400, 7300, 4200, 4100, 3500, 1700, 1500, 1100, SB, and LTE 5000**. These enhancements can be found on the Compaq web site or on the Compaq Support Software CD.*

*Although Compaq will support customers that upgrade to Windows 98 on the **Armada 6500**, doing so at this time is not recommended. Compaq continues to test Windows 98 on the Armada 6500 and intends to release updates to many existing Compaq drivers, BIOS and other software enhancements specifically for Windows 98 in 3Q98. Windows 98 will install and run on the Armada6500. However, it is important to note that without the updated versions of various Compaq enhancements, users will experience a loss of functionality.*

*For additional information about Windows 98 on Compaq Armada Portable products, please refer to the following documents located on the Compaq web site:*

- *For instructions on installing Windows 98 on your Compaq Armada Portable product, please refer to the White Paper titled "Installing Microsoft Windows 98 on Compaq Armada Portable Products." It is very important to utilize this White Paper when upgrading to Windows 98 in order to ensure that all Compaq enhancements are successfully installed.*
- *For details on Compaq's overall operating system strategy and supported operating system features please refer to the White Paper titled "Operating System Support for Compaq Portable Platforms."*

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## Limitations When Using Microsoft Windows 98 on Compaq Armada Portables

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## 1 OVERVIEW

As with any new operating system, users upgrading to Microsoft Windows 98 will need to update the BIOS, various drivers and software enhancements in order to maintain functionality. Compaq has identified certain drivers and utilities it provides that have been updated to be compatible with Windows 98. Failure to install these updated enhancements will result in reduced functionality or performance in a number of areas, including but are not limited to:

- Reduced performance and features in the audio and video drivers. For example, the hardware and software volume controls are not synchronized. New audio and video drivers have been provided.
- The previous version of Compaq's Intelligent Manageability does not operate under Windows 98 and a new version has been provided.
- The previous version of Compaq's Power Management utility does not operate under Windows 98 and new version has been provided. Without Compaq's Power Management utility, panel brightness and processor speed cannot be managed in order to improve battery life.
- The previous version of Compaq's Programmable Keys utility does not operate under Windows 98 and a new version has been provided.

Section 3 elaborates on the limitations when using Windows 98 on the Armada 7800, 7700, 7400, 7300, 4200, 4100, 1700, 1500, 1100, SB and the LTE 5000. In all cases, Compaq is working to resolve these limitations and will provide updates as available.

## 2 ADVANCED CONFIGURATION AND POWER INTERFACE (ACPI)

ACPI (Advanced Configuration and Power Interface) represents a significant innovation in power and configuration management that allows operating systems and applications to manage power based on activity and usage. Compaq worked closely with Microsoft and Intel on the implementation of ACPI, and provided Microsoft with one of the first notebook test platforms with ACPI hardware, the Armada 4200.

The Armada 1700, Armada 3500, Armada 4200, the Armada 7400/7800 and the are all ACPI-hardware ready. All new Armada platforms will also be ACPI-hardware ready.

Compaq remains committed to ACPI and firmly believes ACPI will become the preferred model for power and configuration management in the long term. As with introduction of any new technological innovation, it takes time for it to be adopted by the industry at large. In order to gain the full benefit of ACPI, the operating system, applications, hardware and drivers must all be ACPI aware. Windows 98 is the first ACPI-aware operating system. At this time, no ACPI-aware applications have been developed. It is also important to note that once ACPI has been enabled it is not possible to switch back to APM without reinstalling the operating system.

For these reasons, Compaq anticipates that, in the near term, many customers will not want to switch from the current power management standard, APM (Advanced Power Management).

Compaq continues to work closely with Microsoft to extensively test ACPI to ensure Compaq customers get comparable battery life under ACPI as they experienced under APM. We will release ACPI support for each Compaq platform only after we complete our testing and are comfortable with the battery performance under ACPI.

Compaq's ACPI strategy for Armada notebooks has been designed to allow customers to continue using APM until Compaq's ACPI testing is complete, then allow customers to choose for themselves the power management model that best suits their particular requirements. In order to

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accomplish this, all ACPI-aware notebooks will be set up to use APM as the default power management model. Then, anytime after the initial setup, customers will be able to convert their factory-installed version of Windows 98 to ACPI using an easy-to-use tool to be provided by Compaq. This tool will be available as a SoftPaq on Compaq's web site and Support Software CD.

### 3 LIMITATIONS

#### 3.1 Advanced Power Management (APM)

Armada 7300 and 7700 portable users may see video corruption when resuming from hibernation in a low battery state. Users can workaround this problem by suspending and resuming.

On Armada 7800 and 7400 models, resuming from low-battery hibernation, users will experience a lockup condition when devices are connected to the USB port.

All Armada users may experience lock-ups when resuming from a critical hibernation. A critical hibernation will occur when the battery reaches a critically low level and the system initiates the hibernation itself in order to save the environment and data to the hard drive. Users can prevent this problem from occurring by disabling hibernation support.

Compaq has provided an updated ROM for the Armada 7800, 7700, 7300, 1700 and 1500 series that helps in resolving this limitation. The recently announced Armada 7400 and 3500 ROMs were updated prior to their release. See Microsoft KB article Q189194 (<http://support.microsoft.com/support/kb/articles/q189/1/94.asp>) for information.

Select Armada SB models have Norton AntiVirus installed. This version conflicts with the APM support in Windows 98.

An update is available directly from Symantec via the web at [http://www.symantec.com/nav/index\\_updates.html#nav95update98](http://www.symantec.com/nav/index_updates.html#nav95update98) and should be installed prior to upgrading to Windows 98. If you do not have Internet access, you should call Symantec Customer Service directly for a replacement CD.

#### 3.2 Intelligent Manageability

Armada users cannot use the Compaq Insight Management console to view information about PC Card NICs.

Administrators will not receive fault notifications until they obtain the updated Windows 98 SNMP files from the Windows 98 CD or directly from Microsoft.

Armada 4110 and 4120 users should not install DMI support when updating their Insight Management Agents.

#### 3.3 External CRT Utility

A Windows 98 version of the External CRT utility is currently not available for the Armada 7300 and 7700 platforms. If an older version of the utility is used, that version will no longer work after upgrading to Windows 98.

#### 3.4 Docking

In configurations with a floppy drive in the unit and in the ArmadaStation, the user should not attempt to format a floppy located in the ArmadaStation after a Hot Dock.

### **3.5 Hot Docking**

When hot-docking the Armada 7300 and 7700 into an ArmadaStation with two hard drives installed, the unit may lock up or become unstable. Users should not hot dock in this configuration.

### **3.6 QuickBlank Feature**

Since Windows 98 screen savers, together with other security features, offer equivalent functionality to the current Compaq QuickBlank feature, Compaq recommends that QuickBlank not be used.

### **3.7 Infrared and Other Serial Devices**

Users who perform a clean installation of Windows 98 on a blank hard drive may need to enable Infrared manually via the Infrared utility in the Control Panel.

Windows 98 is a multitasking operating system they will try and share serial devices. This may cause problems if the user wishes to use an external serial modem while Infrared is enabled or when they try to run Diagnostics for Windows. If Diagnostics for Windows fails to load at either DL\_SER.DLL or DL\_MODEM.DLL, disable Infrared via the Infrared utility in the Control Panel and then try running Diagnostics.

### **3.8 Just Connect**

The Just Connect application pre-installed on select Armada models is not supported under Windows 98. This application should be removed when upgrading to Windows 98.

## **4 SUMMARY**

Compaq remains committed to Windows 98 and will continue testing the operating system on Compaq Armada and LTE 5000 portables.

For platforms addressed in this document, Compaq will release updates to BIOS, drivers, and software enhancements to address the limitations described in this document, as they become available.

For platforms not addressed in this document, Compaq will provide updates to BIOS, drivers, and software enhancements along with updated White Papers once testing is complete.