

GRiDCASE 1550sx Standby Mode Supplement

**Please read this
important information**



GRiDCASE 1550sx
Standby Mode Supplement

October 1990

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Manual Name: GRiDCASE 1550sx Standby Mode Supplement
Order Number: 1550-41
Issue Date: October 1990
Revision: A

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This booklet provides important information about the Standby feature of your GRiDCASE 1550sx computer and how it works with different programs that you might run on your computer.

Introduction

Standby mode is a valuable power management feature of your computer. It helps you achieve a longer operating time when you are using a battery pack by shutting down almost all computer systems when you are not using the computer, while maintaining your application in memory exactly as you left it. Pressing the **spacebar** powers on the computer fully and returns you back to your work as you left it.

For example, suppose you are working in a mobile field situation where you are moving around and using the computer periodically. If you leave the computer on when you are not using it, your computer continues to run down its battery. Instead of wasting this battery power, you can put your computer into standby mode while doing other tasks. When you are ready to resume computer work, press the **spacebar** to return instantly to your application. You also avoid the time wasted in restarting the computer, restarting your application, and finding your place in your work.

When the computer is in standby mode, it appears as if it is turned off, except the Processor indicator flashes to remind you that it is in standby mode. In standby mode, the computer uses only a small amount of battery power—less than 5% of its normal operating usage. The computer uses only enough power to maintain the system Random Access Memory (RAM), or main memory.

To put your computer into standby mode, hold down the **FN** key and press the **StdBy** key (**F10**). To return to normal operating mode, press the **spacebar** on the internal keyboard. There are other ways your computer can enter standby mode; for example, it can be set up to automatically enter standby mode if there has been no computer activity for a certain number of minutes. This method can help you save battery power without having to remember to activate standby mode manually. Refer to Chapter 4 in the *GRiDCASE 1550sx User's Guide* for more information about standby mode.

Standby Mode and Windows 3.0

Your GRiDCASE 1550sx computer comes bundled with the Windows 3.0 graphical environment. This section contains important information that you should know about using standby mode with Windows.

A Brief Overview

Windows can run in one of three different modes when it starts up; these modes are called "Real" mode, "Standard" mode, and "386 enhanced" mode. The standby feature of your computer operates only when Windows is running in Real mode, its simplest mode. (Real mode does not take advantage of the most powerful features of the microprocessor in your computer.)

To help you get the most out of your computer, we have set it up so that it runs Windows in different modes, depending on whether or not you are using battery power. This feature is automatic and you do not need to do anything differently to start Windows.

Here is how we have optimized Windows on your computer:

- If you are running on internal battery power, we have assumed that you will want to use standby mode to achieve the longest battery life possible. Therefore, Windows is automatically started in Real mode.
- If you are running on external power, we have assumed that you will want to use the most powerful mode of Windows, 386 enhanced mode. Therefore, Windows is automatically started in 386 enhanced mode. The standby feature will not operate while Windows is running in 386 enhanced mode.

If you want to change the way we have optimized the start up of Windows, we have provided you with flexibility to do that. Read the next section, The Technical Explanation, for details.

The Technical Explanation

Windows operates in one of three modes:

- *Real mode.* This operating mode provides maximum compatibility with applications designed for earlier versions of Windows. It does not make use of extended memory, but rather, uses expanded memory. Non-Windows applications run only in a full-screen display.
- *Standard mode.* This is the normal operating mode for Windows. This mode provides access to extended memory and lets you switch among non-Windows applications, though they can run only in a full-screen display.
- *386 enhanced mode.* This mode provides access to the virtual memory capabilities of the 80386SX microprocessor. Virtual memory capabilities let Windows applications use more memory than is physically available. In addition, this mode allows multitasking of non-Windows applications, which can run in their own windows.

The standby feature of your computer operates only with Windows in Real mode. In Windows Real mode, the 80386SX microprocessor is also operating in real mode.

If Windows is operating in Standard or 386 enhanced modes, the microprocessor is operating in protected mode and the standby feature is disabled. It is not possible to reliably save standby information when the microprocessor is in protected mode. In protected mode, Windows takes direct control of the computer hardware, and the standby feature cannot get all of the information it needs to save in order to shut down the computer.

When you give the command **win** to start Windows, the batch file *win.bat* controls which mode of Windows is started. This batch file first executes the program *acdetect.exe*, which detects whether or not you are operating from external power. If you are operating from external power, Windows is started with the **win /3** command to invoke 386 enhanced mode. If you are operating from an internal battery pack, Windows is started with the **win /r** command to invoke Real mode.

For details on how the program *acdetect* is used, look at the batch file *win.bat*.

When your computer is shipped from the factory, the *autoexec.bat* file is set up to start Windows whenever you start up your computer. (The *autoexec.bat* file is a special batch file that is executed automatically whenever you start up your computer.) If you want to prevent Windows from starting up automatically each time you start up your computer, remove the line **win.bat** from the *autoexec.bat* file. For more information about the *autoexec.bat* file and editing batch files, refer to the *MS-DOS User's Guide and Reference*.

If you want to control the mode in which Windows is started, and bypass the automatic external power detection mechanism, this is very easy. Simply rename the file *win.bat* to some other name such as *win.sav*. You can use this command at the MS-DOS prompt:

```
ren win.bat win.sav
```

Then, when you type **win** to start Windows, it will execute the Windows program directly. You can force Windows to start in a specific mode by using the switches **/r** for Real mode, **/s** for Standard mode, or **/3** for 386 enhanced mode. For more information about starting Windows, refer to the *Windows 3.0 User's Guide*.

The following table gives a summary of Windows modes, microprocessor modes, and the availability of the standby feature.

Windows Mode	80386SX Mode	Standby Feature
Real (win /r)	Real	Enabled (best for battery operation)
Standard (win /s)	Protected	Disabled
386 enhanced (win /3)	Protected	Disabled

Standby Mode and Other Programs

The 80386SX microprocessor in your computer operates in either real or protected mode, depending on the program that is running. Most programs run in real mode. The standby feature works with most real mode programs.

There are a few programs that run in protected mode such as the following:

- Windows 3.0 in Standard or 386 enhanced modes
- Lotus 1-2-3 Version 3.0
- Paradox 386
- Q&A 386
- XENIX 386
- 386^{MAX}
- Any 386 memory manager such as
EMM386 or QEMM

If you are using one of these programs, or any other program that operates in protected mode, the standby feature is disabled. This is because it is not possible to reliably save standby information when the microprocessor is in protected mode. Any attempt to invoke standby mode is ignored.

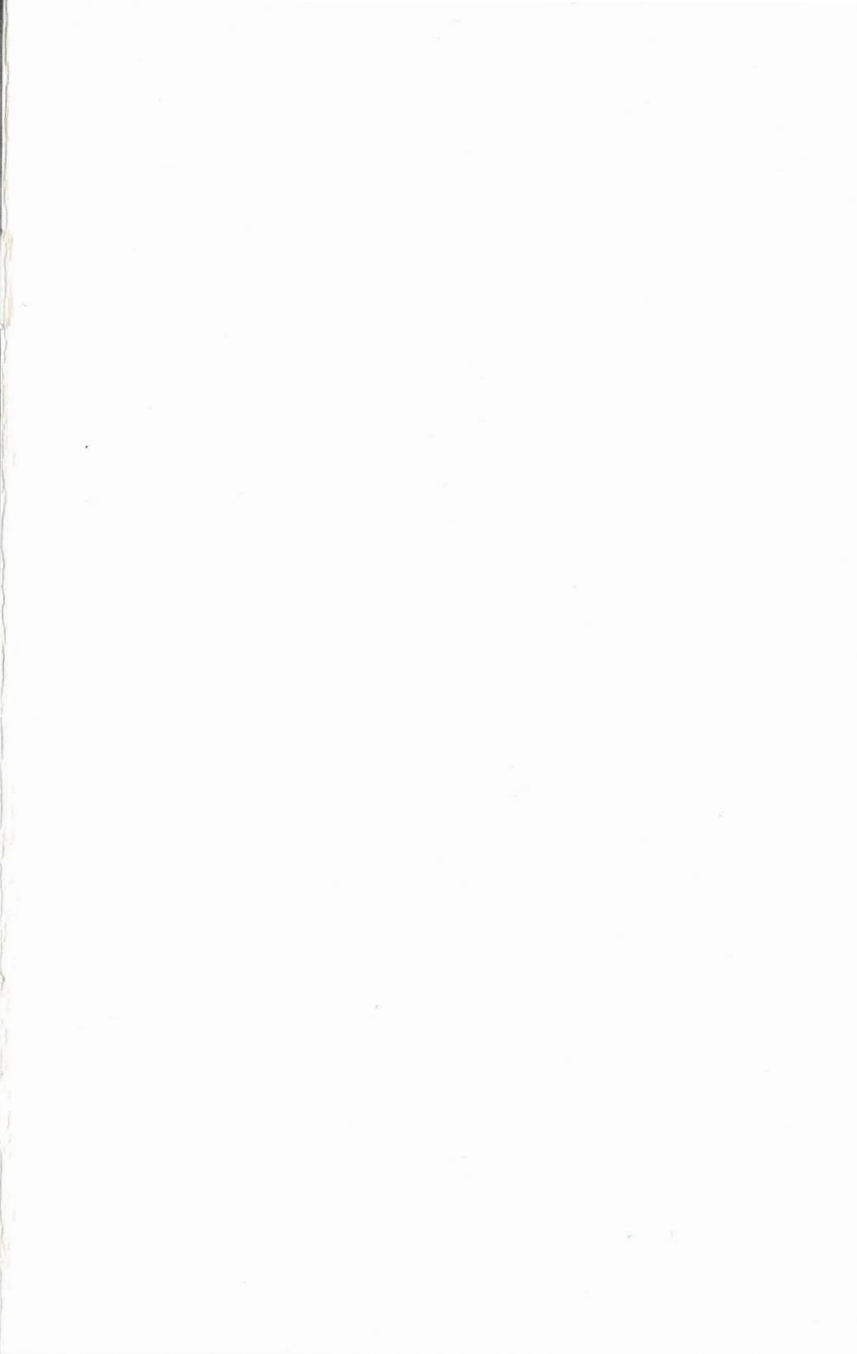
Standby Mode and 386^{MAX}

The memory manager 386^{MAX} is also bundled with your computer. Because this program uses protected mode, it is not compatible with the standby feature. If you install this memory manager in your *config.sys* file, you will not be able to use the standby feature.

Standby Mode Notes

Be aware that when the computer enters standby mode, the parallel and serial ports are reset and the modem is reset. If you have these ports or the modem programmed with specific parameters, these settings are lost. You will need to reprogram them after returning to normal operating mode.

If the computer is performing any type of communication through the ports or the modem when standby mode is invoked, the communication session is interrupted.



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