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A.   Identify Ziff-Davis, the name and version number of the benchmark Software used (i.e., Ziff-Davis' Winstone® 96 ver. 1.0);

B.   Identify the specific Winstone 96 score(s) being reported and in all cases include the Winstone 96 overall score.

C.   Identify the exact name, processor speed and type, amount of RAM, amount of secondary RAM cache, if any, hard disk model, type of hard disk controller, and size of hardware hard disk cache, if any, of the PC used for the test (e.g., WXY Corp. Model 466 with 66-MHz Intel® 486DX2-66 CPU, 8MB of RAM, 64KB RAM cache, 200MB hard disk, IDE controller, and no hardware disk cache);

D.   Identify the exact graphics adapter name, amount and type of RAM on it, graphics driver name and date, refresh rate, Microsoft® Video for Windows® version, and CODEC version that produced the result (e.g., XYZ Corp. XYZ Graphics adapter with 2MB VRAM with XYZ.DRV version 1.1 driver, a refresh rate of 72 Hz, Microsoft Video for Windows version 1.1e, and Intel Indeo™ Video version 3.2 CODEC);

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F.   Identify the operating system version (e.g., MS-DOS® 5.0 and Microsoft Windows 3.1), size and type of software disk cache, if any (e.g., SMARTDRV 2MB cache), graphics resolution and color depth (e.g., 800 by 600 pixels with 256 colors), and any other special conditions used to achieve the result (e.g., disk compression utility ABC version 1.0 enabled);

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Overview

This is the tester's handbook for Winstone® 96. This handbook provides the minimum information you need to install Winstone, run its tests, and save the results. The handbook also includes some introductory material on how to read and analyze Winstone 96's scores. For additional information on what happens when you run a test and what can affect a PC's scores, see Chapter 15 in the *Understanding and Using Winstone® 96 Version 1.0* manual.

> **NOTE:**
> Before you do anything with the software, you need to read the license agreement at the front of this handbook. (The same license agreement appears on the PC's screen the first time you start Winstone 96.)

Finding the information you need

This handbook includes the following parts:

Part 1: <u>**Updated applications**</u>
Lists the changes and new features in this year's benchmark.

Part 2: <u>**Winstone 96 minimum requirements**</u>
Provides a list of Winstone 96's minimum requirements, explains what you need to think about before you install or run the benchmark, and gives brief instructions on how to install the program's files.

Part 3: <u>**Using the Configuration Information window**</u>
Explains how to use the Configuration Information window, run Winstone 96's suites, save results, and run Winstone 96's suites in batch mode.

Part 4: <u>**Viewing scores**</u>
Explains how to view results and briefly discusses what the results for the main suite mean about a PC's performance.

Part 5: <u>**Getting technical support**</u>
Tells you how to contact us if you have technical questions or problems with Winstone 96.

At the end of this handbook, you'll find an appendix that briefly introduces Winstone 96's main concepts. While you don't need to read the appendix to successfully run Winstone 96's suites, you may want to read it for a clearer understanding of how the benchmark works.

Conventions this handbook uses

This handbook uses a few general conventions. For example, it:

- Uses the pronoun "we" to refer in general to either the Ziff-Davis Benchmark Operation (ZDBOp) or Ziff-Davis.

- Uses bold type face for DOS and Windows® commands, file names, and directory names. For example, you'll see sentences similar to the following:

  "The **WS96HBK.DOC** file is in the **\ZDBENCH\DOCS\WS96\HANDBOOK** directory on the CD-ROM."

- Uses a `monospace` or typewriter font for information you must enter verbatim from the command line. The handbook also displays system responses that appear on the PC's screen in the same font. For example:

  ```
  D:\ZDBENCH\WS96\SETUP.EXE
  ```

- Uses the terms "select" and "choose" in the same way Windows documentation uses these terms. In Windows documentation, the terms "select" and "choose" have different, and specific, meanings. When you *select* an item, you mark it with the selection cursor, and the selection appears as a highlight, a dotted rectangle, or both. You also select check boxes in dialog boxes. Selecting alone doesn't initiate an action.

  You *choose* an item to carry out an action. For example, when you choose the Winstone 96 icon, Winstone 96 opens its main window. You can also choose an item from a menu or choose a command button in a dialog box. You often need to select an item before you can choose it.

Available Winstone 96 documentation

This document:	Is located in the:	And contains:
README.WRI	**\ZDBENCH\WS96** directory on the CD-ROM.	The license agreement, a list of new features, and a list of known problems as of the CD-ROM's release.
Winstone® 96 Version 1.0 Tester's Handbook (WS96HBK.*)	**\ZDBENCH\DOCS\WS96\HANDBOOK** directory on the CD-ROM. The CD-ROM may include three different formats of the handbook (**.DOC**, **.TXT**, and **.RTF**).	The minimum information you need to install Winstone 96, run the tests, and analyze the results. (This is the document you're reading now.) The on-line help also contains most of the information in this tester's handbook.
Understanding and Using Winstone® 96 Version 1.0 (WS96REF.*)	**\ZDBENCH\DOCS\WS96\REF** directory on the CD-ROM. The CD-ROM may include three different formats of the manual (**.DOC**, **.TXT**, and **.RTF**).	The Winstone 96 reference manual.

Updated applications

Winstone 96 includes the most current available versions of all the applications it uses in its tests. Here's a list of Winstone 96's categories, applications, and application version numbers.

Business Graphics/DTP:	Adobe™ PageMaker™ 5.0a for Windows
	Corel Corporation CorelDRAW!® 5.0E2
	Microsoft PowerPoint® 4.0c for Windows
Database:	Borland® dBASE® 5.0 for Windows
	Borland Paradox® 5.0 for Windows
	Microsoft Access® 2.0c for Windows
	Microsoft Works 3.0b for Windows*
Spreadsheet:	Lotus® 1-2-3® Release 5 for Windows
	Microsoft Excel 5.0c for Windows
	Microsoft Works 3.0b for Windows*
	Novell® Quattro® Pro 6.01 for Windows
Word Processing:	Lotus Ami Pro® Release 3.1 for Windows
	Microsoft Word 6.0c for Windows
	Microsoft Works 3.0b for Windows*
	Novell WordPerfect® 6.1 for Windows

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* To reflect the way most users work with Works for Windows, Works for Windows is part of three categories: Database, Spreadsheet, and Word Processing. To make the performance of Works for Windows have the right amount of effect on each of those three categories, Winstone 96 spreads the weight for Works for Windows across those categories in the following way: By putting 20% in the Database category, 40% in the Spreadsheet category, and 40% in the Word Processing category.

The Configuration Information window

Winstone 96 checks the PC under test to make sure it meets a minimum set of requirements before a test run begins. If Winstone 96 finds any areas that may cause the test to fail, it reports those areas in the new Configuration Information window. (For information on disabling the configuration check, see <u>Disabling Winstone 96's configuration check</u>.)

> **NOTE:**
> You can open the Configuration Information window from the **Run** menu on the main window menu bar without running a test suite.

You may also want to use the Configuration Information window to compare the test PC with either a pre-set list of optimization tips or a custom configuration file you create.

The Configuration Information window has three sections:

- **Potential Problems.** Lists any area of the PC's setup and configuration that doesn't meet the minimum test requirements.

- **Optimization Tips.** Compares the PC's setup and configuration to a pre-set list of optimization tips.

- **Custom Configuration File.** Compares the PC's setup and configuration to a custom configuration file. For more information, see <u>Custom Configuration File</u>.

For information on how to use this window, see <u>Using the Configuration Information window</u> or Chapter 8, "Using the Configuration Information Window," in the *Understanding and Using Winstone® 96 Version 1.0* manual.

Improved cleanup program

As with previous versions of Winstone, when you exit the benchmark program, it restores the test PC to its original state. However, Winstone 96 includes an improved cleanup program that automatically restores the PC to its pretest state even when there are problems with the benchmark's test run.

For example, if you need to interrupt a Winstone 96 test run, or if Winstone 96 halts, stops, or hangs the PC and you must exit Winstone 96 in any way other than clicking the Exit button, all you need to do is restart Windows. Winstone 96's cleanup program will automatically run when you restart Windows and restores the PC's system files.

Disclosure fields for multimedia

Winstone 96 includes new Disclosure fields for multimedia. The following table lists the new fields as they appear in the **WST_SYS.DBF** results file.

> **NOTE:**
> The following list shows the fields exactly as they appear in the results file. If you use a **.DBF-**compatible application to view the file, the fields may appear in a different order.

Result:	Result field name:	Field type:	Width (bytes):
CD-ROM drive description	CD_DRV_DES	Character	80
CD-ROM controller description	CD_CONT_DE	Character	80
CD-ROM controller RAM	CD_CONT_RA	Character	10
CD-ROM software cache description	CD_SCH_DES	Character	80
CD-ROM software cache size	CD_SCH_SZ	Character	10
Sound adapter description	SND_ADP_DE	Character	80
Video for Windows version	VFW_VER	Character	20
Win32s version	WIN32S_VER	Character	20
Windows drivers	WIN_DRVS	Memo	

If you'd like more information on using the database files, see Working with database files. For additional information on the database fields Winstone 96 uses, see Appendix A, "The Database Files," in the *Understanding and Using Winstone® 96 Version 1.0* manual.

Error messages log file

Winstone 96 logs all error messages in a file named **ERRORS.TXT** in the parent directory where you installed the benchmark (probably **\ZDBENCH**). (Winstone 96 shares this log file with WinBench® 96.) The automatic logging feature frees you from having to keep track of any error messages Winstone 96 may display during a test run.

NOTE:
The error message included in Winstone 96's **ERRORS.TXT** file do not include errors from the applications or application scripts Winstone 96 uses.

You can view the **ERRORS.TXT** file with any text editor.

Winstone 96 minimum requirements

If the PC doesn't meet Winstone 96's minimum requirements, Winstone 96 won't be able to run the tests properly. The following chart lists the minimum requirements to install and run Winstone 96.

Windows 3.1 or 3.11* or Windows for Workgroups 3.1 or 3.11*	Windows 95
MS-DOS® (or compatible) version 5.0 or later or Novell® DOS 7	N/A
Microsoft CD Extension software or equivalent	N/A
8MB of RAM	
130MB of free disk space for a full install (if you're not running Winstone 96 from the CD-ROM or network). Winstone 96 requires 90MB of free space for the base directory, and an additional 40MB (whether you're running Winstone 96 from the CD-ROM, the hard disk, or a network drive) of free space for the working directory.†	
80386 (or compatible) or higher processor	
CD-ROM drive	
A swapfile for Windows at least 6MB in size.	
A temporary directory with 2MB or more of available space.	
VGA resolution (640x480) or higher graphics adapter	

* We didn't test Winstone 96 on earlier versions of these operating systems. So, we can't guarantee it will run on them, or, if it does, that the results will be valid.

† The exact software and hardware requirements for a PC depend on how you choose to run Winstone 96. For information on the different ways to run Winstone 96, see the next section.

Think about how you want to run Winstone 96

Winstone 96 measures the performance of a PC by executing actual Windows-based applications. The CD-ROM that includes Winstone 96 in its **\ZDBENCH\WS96** directory also contains all the files and application portions Winstone 96 needs; therefore, you don't need to install any applications to run Winstone 96.

When you run Winstone 96, it copies the files it needs from a base directory to a work directory. The base directory holds all Winstone 96's application files, and the work directory holds the files Winstone 96 creates when you run a suite.

You can set these directories to any path you want, but the work directory should be on the hard disk of the PC you plan to test. (For example, the base directory could be on a network drive, **F: \ZDBENCH\WS96**, and the work directory could be on the test PC's hard disk, **C: \ZDBENCH\WS96\WORK**.)

NOTE:
The location of the base directory doesn't affect a PC's scores.

The following picture illustrates the different ways you can run Winstone 96 and the amount of free disk space you need for each option.
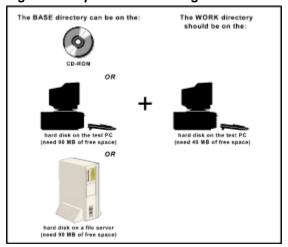
Figure 1:   Options for running Winstone 96

Installing Winstone 96

To install Winstone 96, execute **SETUP.EXE** from the **\ZDBENCH\WS96** directory on the CD-ROM or from a network file server.

NOTE:
If you received Winstone 96 on CD-ROM, that CD-ROM may contain the Ziff-Davis PC Benchmarks Installer program. With this installer program, you can install both Winstone 96 and WinBench 96, as well as other programs WinBench 96 requires, at one time. If you're running Windows 95, the installer program starts automatically if the CD-ROM is in the CD-ROM drive. If you need to start the installer program, execute **INSTALL.EXE** from the CD-ROM's root directory using the **File | Run** command under Windows.

The setup program displays a series of screens and dialog boxes in which you enter information such as the directory where you want Winstone 96 to install its files. Each of these screens contains text explaining what you should do.

NOTE:
Although you don't have to install Winstone 96's files to the default directory, **\ZDBENCH\WS96**, you should choose the default directory for compatibility with other Ziff-Davis benchmarks.

While the setup program is installing Winstone 96's files, it displays a status bar. If you want to stop the setup procedure, choose the Cancel button. (It may take a few moments for Winstone 96 to stop the procedure once you've chosen the button.)

Once the setup process is complete, Winstone 96 displays a verification box to let you know it has installed the files it needs. Choose the OK button to exit this box.

The setup program also creates a **\ZDBENCH\RESULT96.ZDB** directory for the common results database if it doesn't already exist. If you didn't install Winstone 96 in a **\ZDBENCH** directory, Winstone 96 creates the **RESULT96.ZDB** directory in the directory where you installed the files.

Using the Configuration Information window

Winstone 96 checks the PC under test to make sure it meets a minimum set of requirements before a test run begins. If Winstone 96 finds any areas that may cause the test to fail, it reports those areas in the new Configuration Information window. (For information on disabling this check, see Disabling Winstone 96's configuration check.)

The Configuration Information window has three sections:

- Potential Problems
- Optimization Tips
- Custom Configuration File

When Winstone 96 displays this window, the section that contains any warnings will be on top. For example, if Winstone 96 doesn't find any potential problems with the PC's setup and configuration, but instead, finds a setting in the PC's system files that differs from the pre-set list of optimization tips, it will display the Optimization Tips section first. (You can look at the other sections if you'd like. Just click on the button at the top of the window that corresponds to the section you wish to view.)

In the top left corner of the Configuration Information window, you'll find the **Options** drop-down menu. You can use this menu to tell Winstone 96 what areas to check before running tests (for example, you can have Winstone 96 check potential problems and nothing else) and to load or unload a custom configuration file.

Related Topics:

Potential Problems

Optimization Tips

Custom Configuration File

Disabling Winstone 96's configuration check

Potential Problems

The following chart explains briefly what to do if Winstone 96 warns you of problems that may cause a test to fail.

Potential Problem:	Solution:
Low system resources	Winstone 96 requires at least 60% of memory in the GDI and USER heap free for its applications. Close any other applications before continuing with the test run.
Swap file too small	Winstone 96 requires a total of 14MB of memory, of which at least 8MB must be physical RAM.
Not enough free disk space	Winstone 96 needs a minimum of 40MB of free disk space for its work directory. You can: • Change the work directory to another disk drive on the test PC that has enough free disk space. • Free disk space by deleting files and/or applications from the test PC's hard disk.
Not enough free TEMP space	Winstone 96 needs at least 2MB of available space in a **TEMP** directory. You can: • Make sure the **TEMP** directory is on the same drive as the Winstone 96 work directory. • Make sure the **TEMP** directory is empty. • Increase the amount of space for the **TEMP** directory by putting the directory on a drive that has adequate space or by deleting files and/or applications to increase the available space on the drive where **TEMP** is located.
Missing VSHARE device driver	On Windows 3.1 and Windows for Workgroups 3.11, Winstone 96 requires VSHARE. If the VSHARE driver isn't installed, you can reinstall Winstone 96 and when the program asks if you want to install the VSHARE.386 driver, choose Yes.
Missing display fonts	If the PC is missing any of the fonts Winstone 96 needs to successfully run its tests, the Configuration Information window lists the missing fonts. You'll need to install these fonts before continuing. (To see a list of fonts installed on the test PC, select Fonts from the Windows Control Panel program group.)
Quit other applications	Running Winstone 96 while you have other applications running in the background can affect a PC's scores. Winstone 96 lists all other applications that are running, but will not automatically terminate these other applications. You should quit all other applications before running a Winstone 96 test.

Optimization Tips

When Winstone 96 performs its configuration check, it notes areas where the PC differs from a pre-set list of optimization tips. For example, when you run Winstone 96, the `load=` entry in the `[Windows]` section of the PC's **WIN.INI** file should be empty. So, if `load=` isn't empty, Winstone 96 lists this difference on the Optimization Tips page.

For information on why a certain setting may cause problems for Winstone 96, highlight the setting in the Configuration Information window and Winstone 96 displays an explanation at the bottom of the window.

Custom Configuration File

In addition to comparing the PC to a list of pre-set optimization tips, you can also use a custom configuration file. Then, when Winstone 96 performs its configuration check, it will compare the pre-defined settings in the custom configuration file with the settings the test PC uses. If you're testing multiple PCs, you can use a custom configuration file to assure that each PC matches the custom settings.

Winstone 96 includes a sample configuration file (**SAMPLE.CFG**) in the **\ZDBENCH\WS96\UI** directory on the CD-ROM.

To create a custom configuration file, first copy the **SAMPLE.CFG** file to another file name (for example, **CUSTOM.CFG**). Then, edit the custom file so it contains the settings you want. (For information on the different settings the **SAMPLE.CFG** file can contain, see Creating a custom configuration file.)

After you've edited the custom file and before you run any Winstone 96 tests, go to each PC you want to test and follow the steps below:

1. Select **Run | Configuration Information...** from the Winstone 96 main window.

2. Select **Option | Load custom configuration file...** from the Configuration Information window.

3. Enter the directory and file name of the custom file in the Load Custom Configuration File dialog box.

4. Select OK.

After you load the custom file, Winstone 96 continues to check differences between the custom file and the PC under test for the remainder of the current session and in future sessions on that PC until you unload the file.

To unload a custom configuration file:

1. Select **Run | Configuration Information...** from the Winstone 96 main window.

2. Select **Options | Unload custom configuration file** from Configuration Information window.

Disabling Winstone 96's configuration check

You may want to disable the configuration check if you're running Winstone 96 on the same PC over and over again without changing that PC's configuration. Once Winstone 96 performs the configuration check and you're sure the PC is set up correctly, you can then disable the check. You can also tell Winstone 96 to perform only certain portions of its configuration check. For example, you could have the program check for Potential Problems but not check for Optimization Tips.

NOTE:
If you change the PC's configuration at all, you should enable the configuration check. The configuration check is a good way to be certain Winstone 96 will complete the test without problems.

To disable one portion or all of the configuration check:

1. Select **Options | Check before running tests** from the Configuration Information window.

2. From the sub-menu Winstone 96 displays, select those areas you want the program to check. For example, if you only want Winstone 96 to look for potential problems, select **Potential Problems** from the list. Winstone 96 marks each selection with a check mark.

If you don't select any of the items in this list, Winstone 96 doesn't perform its configuration check.

Until you change these options, Winstone 96 will perform the configuration checks you select for the current session and for future sessions.

Running the Overall Winstone 96 suite

To run the main suite:

1. Choose Winstone 96 from the Ziff-Davis Benchmarks program group to open the main window.

   > **NOTE:**
   > If you haven't previously licensed Winstone 96, you'll have to read and agree to the license agreement before you can continue.
   >
   > If Winstone 96 fails during initialization with a General Protection Fault (GPF) or system hang, you can use three command line options to disable Winstone 96's automatic detection of some disclosure fields.
   >
   > The **NOCPUCHECK** option prevents Winstone 96 from detecting the CPU type and speed and the FPU type.
   >
   > The **NOVIDCHECK** option prevents Winstone 96 from detecting the display refresh rate, VESA support, and graphics adapter types. The **NOVIDCHECK** option is useful if display corruption occurs after Winstone 96 initializes.
   >
   > The **NOREGCHECK** option prevents WinBench 96 from gathering information from the Windows 95 or Windows NT registry.
   >
   > The **NOSYSCHECK** option disables nearly all detection.

2. Choose the Run button. (When you open the main window, Winstone 96 displays "Overall Winstone 96" in the list of names to the right of the Run button. So, choosing the Run button runs the main test.)

   > **NOTE:**
   > By default, Winstone 96 displays the Configuration Information window if there are problems that may cause the test to fail. If there are problems, you should select Cancel Test in this window and then correct the problems before continuing. (See Using the Configuration Information window for more information.)

The time Winstone 96 takes to run its main suite varies based on the PC's speed and configuration. Here are a few examples to give you an idea of how long it took to run the suite on machines in our research center. Faster machines will take less time, while slower machines will take more time.

This machine:	Took approximately this much time:
A typical Pentium™ 100 with 32MB of RAM	27 minutes
A typical Pentium 66 with 16MB of RAM	40 minutes
A typical 486DX2/66 with 16MB of RAM	1 hour
A typical 486SX/25 with 8MB of RAM	2 hours

While Winstone 96 is running the main suite, you'll see application windows opening and closing on the PC's screen as Winstone 96 executes its application scripts. When the suite finishes, Winstone 96 displays the PC's results in the Chart of Results.

Interrupting a test run

If you need to interrupt a suite, choose the Cancel button when Winstone 96 installs an application's files. If you need to stop a test run immediately, press Ctrl-Alt-Del to quit Winstone 96, and then restart Windows.

IMPORTANT NOTE!
If you halt Winstone 96 using Ctrl-Alt-Del, you should exit Windows, reboot the PC, and restart Windows so Winstone 96's cleanup program can restore the PC's system files to their original state.

Saving scores

After Winstone 96 finishes a test suite, it automatically displays that suite's scores in the Chart and Table of Results windows.

To save results:

1. Choose the Save button from the Winstone 96 functions window.

   Winstone 96 displays the Save to Database dialog box.

   > **NOTE:**
   > You must enter a Description for the test run before you can save results. If you haven't entered a Description, Winstone 96 prompts you for that information before you can continue the save operation. It's also a good idea to check the other fields in the Disclosure Questionnaire for accuracy. After you've entered a Description and verified the other fields, choose the Continue with Save button.

2. Choose the Save button in the Save to Database dialog box.

   Winstone 96 saves the results to the current database using the Description you supplied, along with other information in the Disclosure.

   > **NOTE:**
   > You can change the destination database by choosing the Database button in this window.

Running a Category suite

Winstone 96 includes four application category suites, and when you run the main suite, Winstone 96 reports the overall score as well as scores for each of these category suites. In addition to running the main suite, you can also run each of the category suites individually. Each category suite runs just the application scripts for the applications within that category.

The following table tells you which application scripts Winstone 96 runs when you choose a particular category suite.

This suite:	Runs the scripts for:
Business Graphics/DTP	PageMaker, CorelDRAW!, and PowerPoint.
Database	Access for Windows, dBASE, Paradox for Windows, and Works for Windows.
Spreadsheet	1-2-3 for Windows, Excel, Quattro Pro for Windows, and Works for Windows.
Word Processing	Ami Pro, Word for Windows, WordPerfect for Windows, and Works for Windows.

To run a category suite:

1. Select the category suite name from the list of names to the right of the Run function button. (To display this list, choose the down arrow to the right of the text box.)

2. Choose the Run button.

After you choose the Run button, if Winstone 96 finds any circumstance that may cause the suite to fail, it displays the Configuration Information window and warns you about the potential problem (see Using the Configuration Information window for more details).

Winstone 96 does basically the same thing when you run an application category suite as when you run its main suite. The differences between a category suite and the main suite are:

Winstone 96 runs only those application scripts included in that category.

Winstone 96 computes a score for just that category.

The time Winstone 96 takes to run its category suites varies based on the PC's speed and configuration. Here are a couple of examples to give you an idea of how long it took to run this suites on machines in our research center. Faster machines will take less time, while slower machines will take more time.

*   Machine A is a typical Pentium 66 with 16MB of RAM.

*   Machine B is a typical 486SX/25 with 8MB of RAM (Winstone 96's base machine).

This category suite:	Machine A:	Machine B
Business Graphics/DTP	10 minutes	34 minutes 20 seconds
Database	12 minutes 36 seconds	40 minutes 30 seconds
Spreadsheet	10 minutes 30 seconds	35 minutes
Word Processing	14 minutes 14 seconds	47 minutes 35 seconds

NOTE:

The time it takes to run all four category suites won't equal the time it takes to run the main suite. Winstone 96 runs the Microsoft Works script in each of three different categories. This means, if you run all the category suites, Winstone 96 runs the Microsoft Works script three times instead of the one time it would run the script if you ran the main suite. So, the total execution times for all the category suites will be slightly more than the total execution time for the main suite.

Running Winstone 96 in batch mode

You don't have to sit at the PC and click the buttons to run Winstone 96's suites. To make the best use of your time, you may decide to run Winstone 96 in batch mode. When you run Winstone 96 this way, it gets the information it needs to run the suites from a file called **RUNWS.INI**. This file supplies the environment settings, the names of the tests Winstone 96 will run, and the names for the database files it produces. Winstone 96 includes a prototype **RUNWS.INI** file in the **\ZDBENCH\WS96\UI** directory on the CD-ROM.

> **NOTE:**
> You can only use the Winstone 96 **RUNWS.INI** file with Winstone 96. Winstone 95 won't accept this file format.

To run Winstone 96 in batch mode:

1. Copy the **RUNWS.INI** prototype file to another file name (for example, **MYFILE.INI**).

2. Edit the new file so it contains the information Winstone 96 needs.

   You can use any text editor to modify this file. You can also use the Step*N* section(s) of this file to refer to files that define suites to run in that step. The **\ZDBENCH\WS96\UI** directory on the CD-ROM that includes Winstone 96 contains the following sample files you can use to refer to in the Step*N* section(s):

This file:	Runs this suite:
OVERALL.WSS	Overall Winstone 96
BG_DTP.WSS	Business Graphics/DTP
DB.WSS	Database
SS.WSS	Spreadsheet
WP.WSS	Word Processing

   For complete information on the different sections of the **RUNWS.INI** file you can modify, see Chapter 10, "Running Winstone 96's Tests," in the *Understanding and Using Winstone® 96 Version 1.0* manual.

3. After you've edited and saved the new file, run Winstone 96 with the AUTO command option and specify the name of the new file.

   For example, if **MYFILE.INI** is the edited copy of the prototype file, you'd use the following command line:

   ```
   WS96 AUTO MYFILE.INI
   ```

   How you execute Winstone 96 in batch mode depends on the Windows shell you're using.

   - If you're using Program Manager, select **Run** from the Program Manager **File** menu. Use the Browse feature to enter the Winstone 96 command line, and then add the AUTO option and the name of the **.INI** file to that command line.

   - If you're using Explorer, select **Run** from the **Start** menu. Use the Browse feature to enter the Winstone 96 command line, and then add the AUTO option and the name of the **.INI** file to that command line.

   If you want to automate this process so Winstone 96 runs in batch mode each time Windows

starts, you can add the Winstone 96 icon with the AUTO command line option and the name of the **.INI** file to the Windows StartUp group.

Viewing scores

You can view scores saved to a database from the Chart and Table of Results. After you run a test, Winstone 96 automatically displays the score(s) for that test in the Chart of Results. The Chart of Results shows the name of the suite and the score for that suite in a horizontal bar graph.

Related Topics:

Adding results to the display

Changing the display

Removing results from the display

Printing results

Adding results to the display

To add results to the Chart and Table of Results windows, choose the Compare... button in the Functions window. Winstone 96 then displays the Comparison Machines dialog box. (You only need to add results to these windows if you want to view results other than the current results.) You can display up to five sets of comparison results in the Chart and Table of Results windows.

From the Comparison Machines dialog box, you can add results from:

- A database by choosing the Add from Database... button.
- An exported file by choosing the Import from File... button.

Changing the display

You can use the **Display** option from the **Edit** drop-down menu to change the way Winstone 96 displays its results.

Choosing this option:	Displays:
All Categories	Scores for the main suite and category suites.
Categories Run	Scores for the suites run during the current session.
Selected Categories	Scores for the suites as specified in the drop-down list of suites to the right of the Run function button. For example, if the drop-down list displays "Word Processing," then Winstone 96 displays the score(s) for its Word Processing suite.

Removing results from the display

To remove a set of results from the Chart and Table of Results:

1. Open the Comparison Machines dialog box by choosing the Compare... button in Winstone 96's Functions window.

    This dialog box lists all the results currently displayed in the Chart and Table of Results. (You can display up to four sets of comparison results in the Chart and Table of Results.)

2. Select the set of results you'd like to remove from the display, and then choose Remove.

    Winstone 96 removes that set of results from the Chart and Table of Results. It doesn't, however, permanently delete those results from the database. (If you'd like to know how to permanently remove results from the database, see <u>Deleting results permanently from the database</u>.)

Printing results

You can print the current results, the Chart and Table of Results, and the Disclosure using the **Print** option from the **File** menu.

If you want to print . . .	Then choose . . .
The results and Disclosure information for tests run during the current session.	Current results.
The current contents of the Chart of Results and/or the Table of Results.	Chart of Results and/or Table of Results.
Disclosure information.	Disclosure. (Winstone 96 prints the Disclosure information for the current results. If you want to print Disclosure information for other sets of comparison results, change the Description listed at the top of the Disclosure window before selecting **Print** from the **File** menu.)

When you choose one of these options, Winstone 96 prints the currently selected default printer.

Working with database files

Winstone 96 saves scores and disclosure information in a database format it shares with WinBench 96. You use results stored in a database as comparison machines in the Chart and Table of Results windows.

Winstone 96 stores results in a *database directory*. The database directory typically has an extension of **.ZDB**. The database directory contains many dBASE-compatible tables and indexes.

If you installed Winstone 96 in a subdirectory of **\ZDBENCH**, the setup program creates a database directory called **\ZDBENCH\RESULT96.ZDB**. If you didn't install Winstone 96 under a common **\ZDBENCH** directory, it creates the **RESULT96.ZDB** database directory in the directory where you installed the program files. Winstone 96 can't then share the database with WinBench 96.

When you're working with database files:

- Always treat a database directory as a single object.

- Always move, copy, or delete the entire directory.

- Never move, copy, delete, or rename the files in a database directory.

- Never use a dBASE-compatible database management system to edit the database directory. Doing so may break the relationship between the files and the benchmark, and you'll lose the results.

NOTE:
You can merge the contents of one database into another using the **Merge Databases...** option from the **File** drop-down menu. Winstone 96 copies all results from the source database to the target database. (For more information, see Merging results into one database.)

Winstone 96 stores results in a database using a key consisting of the Description, Variant1-5, PIN, and Project fields of the Disclosure. You can store many sets of results using the same key. Winstone 96 distinguishes the results by a unique time stamp.

Related Topics:

Merging results into one database

Exporting results

Deleting results permanently from the database

Merging results into one database

Winstone 96 lets you merge results from one database into another. When you merge two databases, you specify a target database and a source database. The *target* database is the database to which you wish to add results. The *source* database contains the records you wish to add to the target database.

To merge databases:

1. Select **Merge Databases...** from the **File** menu in the main menu bar. Winstone 96 then displays its Merge Databases dialog box.

2. Select the target and source databases.

3. Choose Merge.

Winstone 96 adds all the records from the source database to the target database. To view these records, you need to add them to the display (see Adding results to the display).

> **NOTE:**
> Depending on the number of records in the source database, it may take a while to merge the records from one database to another.

Exporting results

In addition to saving results to a database, you can export results to an ASCII text file (**.TXT**), a Lotus 1-2-3 spreadsheet (**.CSV**), an Excel spreadsheet (**.XLS**), or a Windows Metafile (**.WMF**) for use in other applications.

To export results:

1. Select **Export** from the **File** menu.

You can export:	Which contains:	To this format:
Current Results	Results and Disclosure for the tests run in the current session	**.TXT**, **.CSV**, or **.XLS**
Chart of Results	Results the Chart of Results currently displays	**.WMF**
Table of Results	Results currently listed in the Table of Results	**.TXT**
Disclosure	The information currently listed in the Disclosure window	**.TXT**

Choosing any of the above options from the **Export** submenu displays the Export Results to File dialog box.

2. Enter the name of the file in the File Name dialog box. (You can change the drive and directories using the Drives and Directories portions of this dialog box.)

3. Choose OK.

Winstone 96 saves the results to the file name and format you specified.

Deleting results permanently from the database

To permanently delete a set of results from the database:

1. Select **Delete...** from the **File** menu in the main menu bar. Winstone 96 then displays its Delete Results from Database dialog box.

   > **NOTE:**
   > Winstone 96 only lets you delete select records from its database. You can't delete an entire database from within Winstone 96.

   When you open the Delete Results from Database dialog box, Winstone 96 automatically displays all the records in the current database. (To change the database, choose the Database... button.)

2. Locate the record(s) you want to delete from the list of records.

   To select more than one record, hold down the Shift key then click on the additional record name(s).

3. Choose Delete.

   Winstone 96 prompts you with a warning asking if you're sure you want to delete the selected record(s).

4. Choose Yes, and Winstone 96 removes the selected record(s) from its database and closes the dialog box.

Working with Disclosure information

When you start Winstone 96, it checks the PC's configuration and stores the information it finds in the Disclosure. When you save a set of scores, Winstone 96 saves the disclosure information for that set of scores. If you publish results, you'll need to include information in the Disclosure with the results you publish.

> **NOTE:**
> If you run and save several suites on the same PC with the exact same configuration, Winstone 96 only stores the PC's configuration information once to conserve disk space.

Related Topics:

Viewing Disclosure information for the current displayed scores

Viewing Disclosure information for other sets of scores

Editing the Disclosure Questionnaire

Printing Disclosure information

Viewing Disclosure information for the current displayed scores

To view the disclosure information for each set of scores currently displayed in the Chart and Table of Results, choose **Edit | Disclosure** from Winstone 96's main menu.

By default, Winstone 96 displays the disclosure information for the current set of scores first. Winstone 96 uses a drop-down list to display the Description for each set of scores you're currently displaying.

Disclosure information for a PC will most likely cover more than one page of the Disclosure window. Use the scroll bars to view portions that don't fit within the boundary of the window.

Viewing Disclosure information for other sets of scores

To look at disclosure information for another set of scores:

1. Select the down arrow to the right of Current Results.

2. Select the Description for the set of scores whose Disclosure information you wish to view.

Winstone 96 then changes the display to show the Disclosure information for that test run.

Editing the Disclosure Questionnaire

If you need to add to or change the Disclosure information about the PC, you can edit Winstone 96's Disclosure Questionnaire. There are two ways to edit the questionnaire. You can choose:

- The Edit button if the Disclosure window is open.

- The **Disclosure Questionnaire** option from the **Edit** menu in the main window menu bar.

Either of these actions opens the Disclosure Questionnaire window.

To update the Disclosure Questionnaire:

1. Select the group on the left-hand side of the window that corresponds to the area of the Disclosure you wish to edit.

   When you select one of these groups, Winstone 96 changes the Disclosure Questionnaire window to display just the information about that group. For example, if you want to edit the Description, select the button beside Description, and Winstone 96 changes the display in the window to the Description information.

   > **NOTE:**
   > Winstone 96 by default displays the first group, Instructions, each time you open the Disclosure Questionnaire.

2. Once you have the Disclosure Questionnaire information the way you want it, choose the Update Disclosure button.

   If at any point you wish to exit the Disclosure Questionnaire window without saving the changes and updating the disclosure, choose the Cancel button. When you choose either the Update Disclosure or Cancel buttons, Winstone 96 automatically closes the Disclosure Questionnaire window.

Printing Disclosure information

To print Disclosure information:

1. Select **Print** from the **File** menu in Winstone 96 main window.

2. Select the **Disclosure...** option from the **Print** submenu.

When you print the Disclosure information, Winstone 96 prints the information currently displayed in the Disclosure window.

NOTE:
If you're displaying results for several different types of machines, you can print disclosure information for each of them. To specify the set of comparison results for which you want to print the Disclosure, change the Description listed above the Disclosure information in the Disclosure window and then select **Print** from the **File** menu.

What the numbers mean

Winstone 96 runs today's top-selling Windows-based applications. For each application, Winstone 96 performs tasks the way typical users would perform tasks in the application. This approach lets Winstone 96 reflect the center of the software market.

So, Winstone 96's scores represent how the PC performs these tasks when running these Windows-based applications. Winstone 96 gives you an accurate and repeatable measurement of how a PC runs those applications under Windows.

Remember, a PC's configuration will affect its Winstone 96 scores. Comparing scores for two machines with different configurations is at best a potentially confusing experience. For more information on how to make the most accurate comparison possible, see Making sure a comparison is valid.

Related Topics:

Bigger means better: Comparing Winstone 96 scores

The units Winstone 96 uses

Bigger means better: Comparing Winstone 96 scores

When you first look at Winstone 96's Chart of Results, the numbers may seem a little overwhelming. The most important thing to remember, however, is with Winstone 96, bigger numbers mean better performance.

To make it easier to understand a PC's scores, Winstone 96 has a base machine. The base machine receives a score of 10.0 Winstone 96 units on the overall suite. The same base machine receives a score of 1.0 Winstone 96 units on each category suite. (For statistics on the base machine, see Using the base machine to compare results.)

So, if a PC scores 20.0 Winstone 96 units on the main suite, it's two times as fast as the base machine at executing the main suite. Or, if a PC scores 5.0 Winstone 96 units on the main suite, the base machine is twice as fast as that PC at executing the main suite.

You can carry this over to Winstone 96 scores for any two machines. For example, if Machine A scores 20.0 Winstone 96 units on the main suite and Machine B scores 40.0 Winstone 96 units on the main suite, then Machine B is twice as fast as Machine A at executing the "Overall Winstone 96" suite.

For the category suites, if a PC scores 2.0 Winstone 96 units on a category suite, it's five times faster at executing that category suite than the base machine. Likewise, if a PC scores 0.5 on a category suite, that machine is half as fast as the base machine at executing that suite.

The units Winstone 96 uses

Winstone 96 reports its results in arbitrary units. It's a *relative* score: it's only meaningful when you compare it to other Winstone 96 scores. So, the score isn't pixels per second, or bytes per second, or any other type of measurement.

The base machine's overall score is set at 10.0 Winstone 96 units, and each of the category suites is set at 1.0 Winstone 96 units. Winstone 96 sets these scores this way as a basis for comparison.

Just remember, the base machine is a basis for understanding a PC's performance at a glance. Faster PCs have larger numbers than the base machine, while slower PCs have smaller numbers than the base machine.

Using the base machine to compare results

The base machine for Winstone 96 is a Dell® PC with a 25-MHz Intel® 486 SX CPU running Microsoft Windows version 3.1 in enhanced mode. The following chart provides the statistics on the base machine.

Facts about the base machine

PC Manufacturer	DELL
Model	NETPLEX 425s/P (25-MHz 486SX)
BIOS manufacturer	Phoenix Technologies Ltd.
BIOS version	1.10 A01
Bus type	ISA
DMA Controller	yes
Memory	8MB
Memory management software	HIMEM.SYS version 3.10
Video	Super VGA (800x600, 16 colors)
Controller	on motherboard
Video Manufacturer	Cirrus Logic
Video BIOS	CL-GD540 x 1542 x VGA BIOS version 1.20
Hard Disk	162MB
Controller type	IDE
Hardware caching	no
Software caching	**SMARTDRV.EXE** version 5.0 (defaults to 512KB while running Windows)
Swap file for Windows	19,679KB (permanent)
Mouse	Genius Mouse Systems, model: Jx mouse
LPT ports	LPT1: (I/O address = 03BC)
COM ports	COM1: (I/O address = 03F8), COM2: (I/O address = 02F8)
MS-DOS	Version 6.2
Windows	Version 3.1
Network	Novell® NetWare® Shell version 3.26

Getting technical support

If you have problems with Winstone 96, you can report those problems to us using the Problem Report Form. You can find the Problem Report Form at the back of this handbook, at the back of the *Understanding and Using Winstone® 96 Version 1.0* manual, and on ZD Net/CompuServe Edition in the ZD Benchmark forum (GO ZDBENCH).

To submit a problem report, you can:

- Post a message about the problem on the ZD Benchmark forum on ZD Net/CompuServe Edition (GO ZDBENCH). Access to CompuServe is available for a fee.

- Fax the form directly to Winstone 96 Technical Support (919-380-2879).

- Mail the form to us at the following address:

    Ziff-Davis Benchmark Operation
    1001 Aviation Parkway, Suite 400
    Morrisville, North Carolina 27560

    Attn.: Winstone 96 Technical Support

Requesting a benchmark

If you'd like to request copies of Winstone 96 or other Ziff-Davis benchmarks, fill out a Benchmark Request Form and then:

- Fax it to our dedicated benchmark request fax number (919-380-2879)
- Mail it to us at:

Ziff-Davis Benchmark Operation
1001 Aviation Parkway, Suite 400
Morrisville, North Carolina 27560

Attn.:   Distribution Coordinator

Winstone 96:   A brief definition

Winstone 96 is a benchmark that runs test suites of Windows-based applications. In developing Winstone 96's suites, we did extensive research into which applications are leaders in today's software market. We also did usability surveys and tests to determine how typical users work with these applications. The result of this research is an accurate and repeatable benchmark you can use to determine a PC's overall performance when running today's top-selling Windows-based applications.

Winstone 96 doesn't mimic applications; it actually runs applications. When you choose one of Winstone 96's test suites, it runs the application scripts associated with that suite. Each application script starts its application, performs tasks within that application, and exits the application. Winstone 96 times how long it takes each application script to complete and then computes a single, relative score for that test suite. You can compare a PC's score with the scores of other PCs−higher scores mean faster overall performance.

Making sure a comparison is valid

Once you've run Winstone 96, you'll want to use its scores to judge a PC's performance. You should, however, remember a few very important details before you begin making any comparisons:

1. **IMPORTANT!**   You can't meaningfully compare the most current release's scores with scores from previous versions of Winstone. Each new version of Winstone includes substantial changes, and those changes affect scores. So, you should always compare scores from the same version of Winstone.

2. Winstone 96's scores are *relative* scores. A relative score is an arbitrary unit that is meaningless until you compare it with other similar scores. So, to understand what a Winstone 96 Unit Score of 40.0 means about a PC, you'll need to compare that score to Winstone 96 scores for other PCs. (For more details, see <u>The units Winstone 96 uses</u>.)

3. If you're trying to determine which of two PCs outperforms the other, keep in mind that a PC's hardware and software setup affects its performance. To find out about a PC's system information at the time you ran Winstone 96, you can view its Disclosure information (for more details, see <u>Viewing Disclosure information for the current displayed scores</u>).

Creating a custom configuration file

Winstone 96 includes a prototype configuration file, **SAMPLE.CFG**, in the **\ZDBENCH\WB96** directory on the CD-ROM.

To create a custom configuration file:

1. Copy the **SAMPLE.CFG** file to another file name, such as **CUSTOM.CFG**.

2. Edit the new file so it contains the configuration information you want Winstone 96 to check. (Functions provides details on the list of available commands. For a few examples to use as guidelines when you edit the file, see Examples.)

Once you've edited and saved the custom file, you'll need to load the file during the Winstone 96 session for Winstone 96 to use it during its configuration check (see Custom Configuration File for more information).

How Winstone 96 uses a custom file

After you load a custom file, Winstone 96 compares the test PC's system configuration with the settings in the custom file before each test run.

To increase the speed of execution, Winstone 96 parses the custom configuration file entirely within memory. Thus, a custom configuration file must be less than 64KB in size.

Winstone 96 executes the custom configuration file one line at a time. The file contains five elements: Comments, *Entry* = lines, *[section]* lines, Functions, and Expressions.

Comments

Comments in a custom configuration file explain what each command in the file does. You enter comments in the file using two adjacent slashes (//) at the beginning of the line. The comment can start anywhere on a line and extends until the next new line. Winstone 96 treats double slashes enclosed within quotation marks (" ") as part of a literal string and not a comment.

Comments are for your use only; Winstone 96 ignores all text within a comment.

entry = lines

Winstone 96 uses *entry* = lines to retrieve information from the test PC's environment variables, the benchmark's disclosure fields, or the PC's **.INI** files. You can specify where the *entry* = line looks for information by using the **#focus( )** function (see focus(FOCUS)).

All *entry* = lines have the following general syntax:

```
entry = [FormatString,] VariableList
```

Where:

- *entry* is the name of the environment variable, disclosure field, or **.INI** file entry whose value you want to retrieve. Winstone 96 scans the value of *entry* as a series of input fields.

- *FormatString* defines a format specifier (similar to the C **sscanf( )** function).

  The *FormatString* option recognizes three format specifiers: **%d**, **%f**, and **%s**. With these three format specifiers the parser can format integers (from -2,147,483,684 to 2,147,483,687), floating point numbers (from 1.7 x 10-308 to 1.7 x 10308), and strings.

  You don't have to specify a *FormatString* option. If the *FormatString* is missing, Winstone 96 stores the contents of *entry* in the one variable you specify. This is useful for reading entire strings, rather than formatting them one token at a time.

- V*ariableList* defines where you want Winstone 96 to store the formatted input.

  The V*ariableList* option can contain up to 32 variables, separated by commas. Variable names must be unique within the first 31 characters and must follow C rules for naming variables.

  Variables are only valid until the next *entry* = line. The V*ariableList* for each *entry* = line replaces the V*ariableList* from the previous *entry* = line.

[section] lines

A *[section]* line specifies the section Winstone 96 uses when retrieving entries from an **.INI** file. You can use *[section]* lines only if the current focus is an **.INI** file; otherwise, Winstone 96 will issue an error message because it cannot find the **.INI** file. You can set the focus using the **#focus( )** function (see focus(FOCUS)).

Functions

if(expression)

else

endif

focus(FOCUS)

text(FormatString[,VariableList])

note(FormatString[,VariableList])

notify(void)

if(expression)

You can use the **#if(expression)** function to check if certain conditions exist on the test PC. You can use the following BOOL operators in the **#if** function:

&&	numbers only
||	numbers only
==	numbers and strings
!=	numbers and strings
in	strings only
<	numbers and strings
<=	numbers and strings
>	numbers and strings
>=	numbers and strings

For information on variables you can use in the **(expression)** see <u>Expressions</u>.

else

The **#else** function tells the benchmark what to do if the **#if** function is not true. The **#else** function is optional.

endif

The **#endif** function marks the end of the **#if** function.

focus(FOCUS)

The **#focus(FOCUS)** function sets the system location where the benchmark retrieves configuration information.

Valid values for **FOCUS** are:

Disclosure	benchmark disclosure fields
Environment	environment variables
inifile	**.INI** file name

text(*FormatString*[,*VariableList*])

The **#text(*FormatString*[,*VariableList*])** function overrides the default text for the previous *entry* = line. Winstone 96 displays this text in the top portion of the Configuration Information window. The syntax rules for this function are the same as the C **printf( )** function except that **%d**, **%f**, and **%s** are the only allowable format specifiers.

note(*FormatString*[,*VariableList*])

The **#note(*FormatString*[,*VariableList*])** function links a note to the previous *entry* = line. Winstone 96 displays this note in the Note section of the Configuration Information window when the tester selects the corresponding text message in top portion of that window.

The syntax rules for this function are the same as the C **printf( )** function except that **%d**, **%f**, and **%s** are the only allowable format specifiers.

notify(void)

The **#notify(void)** function notifies the benchmark of a conflict. When the benchmark receives a **#notify** function, it displays either a default text message or text specified in the **#text** function in the Configuration Information window. If the tester supplies a note, the benchmark displays this note in the Note text box.

Expressions

The general syntax for an expression is:

    A operator B

A and *B* can be any of the following:

> A variable name.
>
> A string or numeric constant.
>
> One of the following pre-defined constants:

TRUE	1
FALSE	0
WIN16	TRUE if OS is 16-bit Windows.
WFWG	TRUE if OS is Windows for Workgroups.
WIN95	TRUE if OS is Windows 95.
DISKSPACE	Amount of free space on the working drive.
FREEMEM	Amount of free memory.
SYSTEMRAM	Amount of processor RAM.

- Another expression.

The *operator* can be any one of the following:

<	less than
<=	less than or equal to
>	greater than
>=	greater than or equal to
==	equal to
!=	not equal to
&&	logical AND
||	logical OR
in	tests if *A* is a substring of *B*

Examples

This section provides examples you can build upon for a custom configuration file (see the **SAMPLE.CFG** file in the **\ZDBENCH\WB96** directory).

Related Topics:

Checking DOS environment variables

Checking entries in WIN.INI

Checking entries in SYSTEM.INI

Checking DOS environment variables

If you want Winstone 96's system to check to verify DOS environment variables before it runs a test, you'd use settings similar to the following in the custom configuration file. (Lines beginning with double slashes, "//," are comment lines.)

```
// Set the focus to the DOS environment variables.
#focus(Environment)
// Read the "TEMP" variable as a string and store the value
// in ENVVAR.
TEMP = envvar
// If ENVVAR is empty, set NOTE and call NOTIFY to update
// the Configuration Information Window.
#if (envvar != "")
#else
   #note("You need to set the TEMP environment variable in the
AUTOEXEC.BAT file. For example, 'TEMP=C:\DOS'."
   #notify()
#endif
```

Checking entries in WIN.INI

If you want Winstone 96's system to check to verify entries in the PC's **WIN.INI** file before it runs a test, you'd use settings similar to the following in the custom configuration file. (Lines beginning with double slashes, "//," are comment lines.)

```
// Set the focus to the WIN.INI file.
#focus("win.ini")
// Set the topic to the [windows] section of the WIN.INI
// file.
[windows]
// Read the "run" entry in the [windows] section as a
// string and store the value in RUNVAR.
run = runvar
// If RUNVAR is not empty, set NOTE and call NOTIFY to
// update the Configuration Information Window.
#if (runvar != "")
   #note ("The 'run =' line in the WIN.INI file should be empty.")
   #notify()
#endif
// Read the "load" entry in the [windows] section as a
// string and store the value in LOADVAR.
load = loadvar
// If LOADVAR is not empty, set NOTE and call NOTIFY to
// update the Configuration Information Window.
#if (loadvar != "")
   #note ("The 'load =' line in the WIN.INI file should be empty.")
   #notify()
#endif
```

Checking entries in SYSTEM.INI

If you want Winstone 96's system to check to verify entries in the PC's **SYSTEM.INI** file before it runs a test, you'd use settings similar to the following in the custom configuration file. (Lines beginning with double slashes, "//," are comment lines.)

```
// Set the focus to the SYSTEM.INI file.
#focus("system.ini")
// Set the topic to the [boot] section of the SYSTEM.INI
// file.
[boot]
// Read the "shell" entry in the [boot] section as a string
//and store the value in SHELLVAR.
shell = "%s", shellvar
// If SHELLVAR is not equal to "PROGMAN.EXE", set NOTE and
// call NOTIFY.
#if (shellvar != "progman.exe")
    #note("We've only tested Winstone 96 on systems running Windows
PROGMAN.EXE as the shell program.")
    #notify()
#endif
```

Benchmark Request Form

Please check the boxes of the products you want:

___**PC Benchmarks CD-ROM** containing **Winstone**® and **WinBench®** for desktop PCs running Windows®.

___**Server Benchmarks CD-ROM** containing **NetBench®** for file servers and **ServerBench®** for client/servers (for x86-compatible processors).

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Please return this form:

Fax to: **(919) 380-2879**

or Mail to: Ziff-Davis Benchmark Operation
              1001 Aviation Parkway, Suite 400
              Morrisville, NC 27560

Problem Report Form

Information about you:

Name:

_____

Address:

_____

Company:

_____

E-mail address:

_____

Phone:

_____

Fax:

_____

Benchmark you're using:

_____

A description of the PC:

Example: WXY Corp. Model 486DX-66 with 8MB of RAM, 64 KB RAM cache, 200MB hard disk, IDE
controller, no hardware disk cache, running Windows 3.1 and DOS 6.0

_____
_____
_____
_____
_____

Details of the problem:

What is the problem, and what did the benchmark do just before the problem occurred?
_____

_____
_____
_____
_____

What message was in the status bar at the bottom of the benchmark's main window
_____

_____
___

Can you reproduce the problem? _____

Could you please attach the contents of the benchmark's Disclosure and the **ERRORS.TXT** file? (You can
find the **ERRORS.TXT** file in the benchmark's main directory.)

Other comments:

_____
_____
_____

_____
_____

Please return this form:

Fax to:　　**(919) 380-2879**

or Mail to:　Ziff-Davis Benchmark Operation
　　　　　　1001 Aviation Parkway, Suite 400
　　　　　　Morrisville, NC 27560