

Technical Tips for Windows Last-Minute Information

This document will be easiest to read if you maximize it, and can be printed if you have a printer attached to your computer.

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Using Write to View This Document

To make this document easier to read, you can enlarge the Write window to its maximum size. To do so, click the Maximize button in the upper-right corner of the window. Or open the Control menu in the upper-left corner of the Write window (or press ALT+SPACEBAR), and then choose the Maximize command.

To move through the document, press PAGE UP or PAGE DOWN. Or click the arrows at the top and bottom of the scroll bar along the right side of the Write window.

To print the document, choose Print from the File menu.

For Help on using Write, press F1.

What Is This Document?

This document is intended to be a source of technical information and tips to help you get your Windows-based Maxis product running.

This document is NOT a replacement for the documentation for Windows, for you computer, or for your video or sound cards. You should use those other docs as your primary source of information and as the final authority on how Windows, your computer or your cards work.

Warning!

Some of the information in this document is very technical. Read it very carefully before you do anything to your computer. If you don't understand something, don't do it. It is possible to cause bigger problems than you're trying to solve if you aren't experienced--and careful.

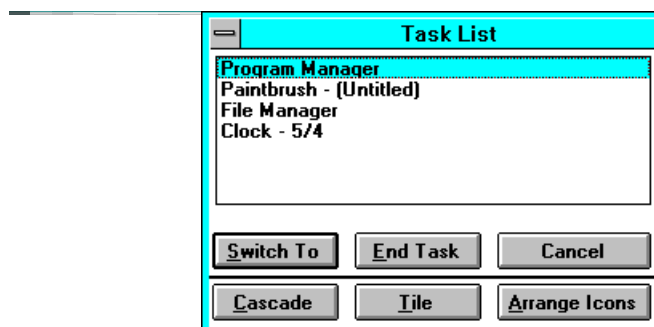
With that in mind, read on!

Some Common Questions and Answers

What Are System Conflicts and What Can I Do About Them?

Conflicts are rare but they do occur. If you are using other programs in Windows that load on startup, you may want to disable those programs to prevent potential conflicts and free up additional memory and system resources. The most common potential conflicts come from screen savers. If you are using a screen saver other than the default Windows screen saver, you may wish to disable it to prevent conflicts. Some virus protection programs may also cause conflicts. If you experience trouble running a Maxis product for Windows, try disabling virus protection programs.

The best way to determine if there is something else running in Windows is to press the **Ctrl** and **Esc** keys on your keyboard at the same time. This will bring up the Windows Task List:



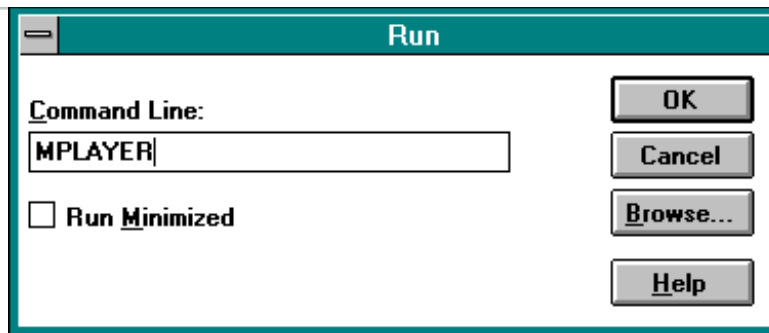
The only item shown in the Task List window should be Program Manager. If there are any other items shown, and you want to disable them, simply click on the item to highlight it and press the End Task button to shut it off. If there are several programs running, hit **Ctrl+Esc** again, and follow the previous steps. Do this until only Program Manager is active, then close the Task List window. Now run your Maxis game.

What Do I Do About Problems with Sound or Music?

Maxis products for Windows support all sound cards that are compatible with Windows 3.1. If you do not have a sound card, you will not hear sound effects or music.

If you do have a sound card, check the Options menu (if any) in your Maxis game. There may be two menu items in the Options menu called "Music" and "Sound." For music and sound effects to play, both menu items MUST be checked.

If you have a sound card and the "Music" and "Sound" menu items are both checked, but you cannot hear sound or music, your sound card or its Windows drivers may not be installed correctly for Windows. To check if your sound card is installed properly, choose "Run" from the Program Manager's File menu. In the Command Line type "MPLAYER" as shown below:



"MPLAYER" is the command to run a Windows program called Media Player. Select the File option by clicking once with the mouse on the word File in the upper left of the Media Player window. Select Open and a list of available files will be displayed. Find the file called **canyon.mid** (in your Windows directory), click on it so that it is highlighted, then click on the OK button. You will now see the Media Player again, and the title bar will say "Media Player - CANYON.MID [stopped]." Click on the play arrow (the black triangle pointing to the right) to play the file. If you do not hear music, or if you get an error, your sound card is probably not installed properly. Please consult the documentation that came with your sound card or contact the manufacturer for assistance on correcting the problem, or see the next section about Sound Card Drivers.

Now, select the File option again. Select Open, and find the file **tada.wav**, and click on it so that it is highlighted, then click on the OK button. You will see Media Player again, but now the title bar will say "Media Player - TADA.WAV [stopped]." Again, click on the play arrow. If you do not hear a sound effect, or if you get an error, your sound card is probably not installed properly. Please consult the documentation that came with your sound card or contact the manufacturer for

assistance on correcting the problem, or see the next section about Sound Card Drivers.

What's the Deal With Sound Card Drivers?

Sound cards use drivers in Windows to play sounds. We take advantage of sound cards to play music and sounds via the Windows drivers that are installed for your sound card. If you are using a sound card and you experience lock-ups or General Protection Faults, your sound card drivers may be out of date and require a new version be installed. Below are some steps that you can take to determine if your sound card drivers need to be updated to the latest version.

1. Read **ALL OF THE DIRECTIONS BELOW** before you make any changes to your system.
2. Open the Main window located in the Program Manager.
3. Double-click on the Control Panel icon. (This will open the Control Panel window)
4. Double-click on the Drivers icon located within the Control Panel window.
5. Remove all drivers that make reference to MIDI and Wave. NOTE: Different sound cards have different names for their sound drivers. Most drivers do make reference to Wave or MIDI, though.
6. Restart Windows after your sound card drivers have been removed and run your Maxis game.
7. If the problem is corrected, you will need to obtain the latest version of your sound card drivers from your sound card's manufacturer. Please consult the documentation that came with your sound card for information on this.
8. If the problem persists, please refer to the **Video Card Drivers** section of this document.
9. To re-install the sound card drivers, consult the documentation that came with your sound card.

Video, Palettes and Pictures

What Are Video Drivers?

Windows uses a set of programs called **Video Drivers** to control how it accesses your particular hardware to display things on the screen. Usually, the video card that you have installed in your machine will come with a set of video drivers that you can install for use with Windows. Windows comes with some video drivers that work on almost any video card and allow Windows to display 16 colors at a resolution of 640x480 pixels.

What does this have to do with your Maxis Game?

Most Maxis games are written for a 256-color environment (more colors!). Since many people may only have the generic 16-color video drivers installed or may have video drivers for more than 256 colors, we allow our games to run in color

resolutions other than 256. Obviously, trying to run a program with 256-color artwork in 16 colors is going to look downright yucky. Additionally, due to the way many high-color and true-color cards work, some animations may not work properly with systems running in more than 256 colors. However, in most cases, the games are still playable, so if you don't have 256-color drivers or are not sure how to install them, you can still play the game while calling your video card manufacturer or reading up on the documentation that came with your video card. For absolutely best results, we recommend that you run our games on a system configured for exactly 256 colors.

The steps to change the type of video driver you are using are system-specific; you may well have an icon in your Control Panel or even a separate Program Group in Program Manager for setting and changing resolutions (screen size) and color depths (number of colors). **We recommend that you check with your vendor or manufacturer for information on your display card**, but here are some general hints and tips we can run through:

Find and double-click the **Windows Setup** icon, usually located in the group **Main**. Check what you are set to for **Display**. If it's just "VGA", that means it has 640x480 resolution (which is fine) but only 16 colors (which we need to change). To change, you will likely need your original Windows disks, so keep them handy. Go to **Options** and choose **Change System Settings**. After clicking on the down arrow on the far right end of the **Display** bar, you'll want to scroll up and down to see the available selections. We want one that lists specifically 256 colors. ***Important: Do not select the 'Video 7', 'XGA', or any other 256 color driver without making sure you have that type of adapter installed!*** Selecting the wrong video driver **will** result in an improper or unreadable Windows display. The proper display driver is specific to your video hardware, and is supplied by your vendor or video card manufacturer.

Once you find the proper video driver, select that setting, click on **OK** and insert disks as requested. Let Windows restart itself (click on **Restart Windows**) and off you go. If the driver has already been installed, you *may* not need the disks and you can just select **Current** when prompted.

If you don't see the proper video drivers in the list of available drivers, then chances are the video card software is not installed on your system. Contact your vendor or video card manufacturer to obtain the proper software for your video card. We cannot get 256 colors on a system without software from the video card manufacturer.

An alternative...

If you have Windows for Workgroups 3.11, you should see the option for "SuperVGA"; make sure to select one that lists 256 colors. "SuperVGA (640x480,

256 colors)" or "SuperVGA (800x600, 256 colors)" should be good choices. This is a generic Microsoft driver that works with many cards; although it isn't optimized for your card specifically, it should get you going. If you experience problems with it, we would recommend that you obtain a driver that is specific to your card from your dealer or the card's manufacturer. This Microsoft generic driver is available through many shareware dealers or from Microsoft.

It is possible that after Windows restarts with the new driver that your display will blank out or not function properly. This indicates that you will need a specific driver for your card, but here's how to put things back the way they were. At the **C:** prompt, go to the Windows directory (type **CD\WINDOWS [Enter]**) and then start the configuration program (**SETUP [Enter]**). Use the up arrow to highlight the display, then hit **[Enter]** and scroll down to **VGA**. Go back down to **Accept these settings...** and off you go.

Nevertheless, this driver will do the trick in the majority of cases and get you up and running; certainly, if you have it, it's worth a whirl.

You may also see a message from the Windows Graphics package, WinG. It runs a calibration test the first time it installs to optimize video performance. It may warn you that it is using a slower method of video due to "an older version" of your video card software; your game and WinG will run for now, but we would recommend obtaining an updated version of your display driver (one that is WinG-friendly) at your first convenience, from the dealer or manufacturer of your video card. For more information about WinG, keep reading...

A note about WinG

Some Maxis games use some of Microsoft's newest video Extensions for better video performance and increased speed. Although these utilities allow for better performance, they can be a bugger to get working properly sometimes.

WinG will require 100% cooperation from your video card. The problems we have are usually not related to the hardware (video card itself), but rather the software which comes with your video card. WinG is going to push your video card's capabilities to the limit. If the software which came with your video card is not up to Windows' full specification, you may get error messages, lock-ups, blank screens, or other graphical glitches.

Problems using WinG

WinG does its best to detect problems with video card software. If WinG anticipates any problems running on your system, it will give you a message which says it has encountered problems, and will not install on your system until the problem is corrected. **Note: Even if WinG fails to install on your system, the program should still run fine.** But it will run at a reduced rate because the

program will not run using WinG. In order to fix this problem and run the game using WinG, **contact your vendor or video card manufacturer and have them send you an update (Windows video drivers) for your system.** This update must come from the video card manufacturer, and cannot be provided by Maxis or Microsoft. Specifically, the video drivers need to be "WinG compatible" in order for WinG to operate without problems. Most video cards are shipped with software that is WinG compatible.

If the video card manufacturer is unable to provide you with software, or if the "newest" version of their software does not support WinG, then you may wish to use the generic Microsoft SuperVGA video drivers. Information about Microsoft's SuperVGA drivers are explained above under "**An alternative....**"

Video Card Drivers

Cirrus Logic Chipset

Certain older drivers shipped with Cirrus Logic video cards may be incompatible with Maxis games. Make sure you have the absolutely most recent versions of the video drivers for your card or use the Microsoft Generic SVGA drivers, available on most on-line systems or from Microsoft.

Diamond Stealth 64 DRAM/VRAM

>>Important! Really Important!<< If you have a Diamond Stealth 64 VRAM or DRAM video card, you need to disable **all** "Power Saver" features (**even the DOS ones**)! Otherwise, your system may inexplicably power off while the game is in the foreground.

Memory Issues

Overview of memory

Most Maxis games for Windows require that you run Windows in **386 Enhanced Mode** (Microsoft calls it that whether you've got a 386, 486 or a Pentium). You can check to see if you are in Enhanced Mode by choosing Help in your Program Manager, then going to About Program Manager.... If About Program Manager says you are in Standard Mode, exit Windows, then restart with the command **WIN/3 [Enter]** instead of **WIN**. This will force Windows to start in Enhanced Mode. If you cannot run Windows in Enhanced Mode, please verify that your system meets or exceeds the minimum system requirements printed on the system requirements label on the box that the game came in.

Depending in the game (check the box or the Quick-Start Guide) it may require either 4 or 8 Megabytes (MB) of real RAM, and require at least a 2-4 Megabyte swap file in Windows. Under Windows, we prefer you to have about 8 MB free

(between both the real RAM and the swap file). Most computer systems with 4 Megabytes of real RAM can have up to 10 or 12 MB free under Windows by using Virtual Memory (a swap file).

Virtual Memory and Win32s...

The newer Maxis games for Windows use a 32-bit Microsoft memory extension called Win32s. Win32s allows us to take advantage of the advanced processing nature of the 386, 486, and Pentium systems. Using Win32s will result in faster performance.

Win32s will automatically be installed on your system when you install the game. It is a Microsoft Extension for Windows, and will not interfere with the performance of your system.

Win32s requires a swap file (Virtual Memory) in Windows. This means that in addition to the RAM installed in your system, Windows must use a portion of your hard-drive to "emulate" RAM. On a 4 MB system, you should be able to get about 10-12 MB of free memory in Windows. On an 8 MB system, it is possible to obtain over 20 MB of free memory.

A Windows swap file is required when using Win32s, regardless of how much RAM is installed on the system. This is due to the advanced 32-bit addressing which is performed by Win32s.

Win32s will alert you to any problems if it is unable to allocate virtual memory. If Windows is not set up for using a swap file, or if the current swap file has been corrupted, Win32s will prompt you to set up a swap file before running the application.

For more information about setting up a swap file under Windows, refer to your documentation for Microsoft Windows. If you're industrious, we have provided some information about setting up a swap file in the next section below.

If your computer doesn't have enough memory...

If you don't have enough memory available to run your Maxis game, first ensure that you close any other program that may be running to free up the necessary memory. If this doesn't correct the problem, consult your Windows manual and refer to the section entitled MEMORY. There are several different options explained within this area, from editing your startup configuration files to using virtual memory. Virtual memory actually uses your system's hard drive to temporarily store information that would normally be kept in the system RAM memory. With most Maxis games, a swap file will be required on your system.

WARNING!!

DON'T USE VIRTUAL MEMORY IF YOU ARE USING DISK COMPRESSION!

e.g. DoubleSpace/DriveSpace, Stacker, Super Stor, etc. Most of these programs will come with their own utilities to use virtual memory, so **refer to the documentation that came with your compression program** for more information.

You may run Virtual Memory by following these steps:

1. Open the Main window from within the Program Manager.
2. Double-click on the Control Panel icon. (This will open the Control Panel window.)
3. Double-click on the Enhanced icon (the icon looks like a computer chip -- if it is not there, you are not running Windows in Enhanced Mode. See the instructions above on how to start Windows in Enhanced Mode).
4. Click on the Virtual Memory... button located on the right side of the window.
5. This will open the Virtual Memory window from which you can view the current virtual memory settings. You can increase the size by clicking on the Change button and increasing the size of virtual memory available on your system.
6. Please see your Windows manual for more information concerning virtual memory.

Finally, if you are using Sound and Music in your Maxis game for Windows, you will need as much free conventional memory as possible. Conventional memory is memory below 640K. Please see your DOS manual for instructions on freeing conventional memory.

Installing or running with Windows shells other than Program Manager

Shell programs are third party replacement programs that you can use in place of the standard Windows Program Manager, such as HP Dashboard, the Norton Desktop, and XSoft's TabWorks (which comes installed on most Compaq computers). If you are having trouble installing or running a Maxis game for Windows, try either turning off the shell you are using, or using that program's File - Run command to run Program Manager. The command line to run Program Manager is **C:\WINDOWS\PROGMAN.EXE**. Once you have installed the game, you should be able to close Program Manager and run the game through the shell program you usually run.

Some shell programs simply won't let you run our games properly. This will depend on which shell you are running. Once you have successfully installed the program, if you find that the game still won't run, try turning off the shell program you have been using.

A Special Note About TabWorks

If you are running TabWorks, you might be able to eliminate any conflicts you are

having by going to the Options menu. Select File Tracking Options, and unselect (make sure there is no check mark) Track File Creation and Track File Modification. This will allow you to install the game through TabWorks without having to run Program Manager.

Error Messages / Troubleshooting

General troubleshooting

Before diving into the depths of what causes error messages, it is a good idea to make sure that we do our best to resolve conflicts before they occur. Anytime you run more than one Windows application at the same time, you run the risk of encountering errors. To help solve and/or prevent errors, it is a good idea to shut down all other applications before running large programs (like our games).

If you get General Protection Faults, memory errors, blank screens, glitched graphics, sound glitches, or other problems, first disable all other applications that are not necessary to run your system. Follow the guidelines outlined above under the **Some Common Questions and Answers** section about System Conflicts. Windows is designed to operate several applications at the same time, but sometimes it burps a little. (You can't pull two carts with the same horse at the same time!)

WinG has encountered a problem...

WinG may detect problems with some video interfaces. If you see this message prompting you to contact your video card manufacturer, then do exactly that. Check with the people who sold you your video card (or the folks who made the video card) and have them send you updated software (video drivers) specifically for your system. New software should be "WinG compatible" and better support Microsoft Windows. For more information, read the above section entitled **Video, Palettes, and Pictures**.

<something> caused a General Protection Fault...

General Protection Faults (GPFs) occur when the program is unable to perform a specific operation. This operation may be anything from putting a dot on the screen to playing a sound effect. Windows is a collaboration of many different types of software working together; all from different manufacturers. Sometimes it's hard to get all of these different software products to agree in the same system.

Rarely are GPFs harmful to your system. In some cases, they will lock-up your computer, but they shouldn't destroy or corrupt anything. GPFs just warn you that something couldn't be done because there's a problem with some of the software on the system. Updating the "problem" software with a new version usually fixes these Faults.

In order to identify what software is conflicting with the program, we try to interpret the error. The important part of the General Protection Fault is the Module that it reports. That tells us what part of your computer's memory crashed. Here are some of the important Modules, and what they usually mean:

KRNL386.EXE - A basic memory error occurred. This is usually due to a conflict with video or sound card drivers. Video and sound card manufacturers update their software as frequently as every other month. Contact the manufacturers and obtain the latest version of software for your computer.

If you receive a General Protection Fault in Module KRNL386.EXE, and you've also had problems with WinG detecting errors, then you can almost bet that your video card software needs updating.

MM<whatever> or MCI<whatever> - The game is having problems with your sound card. If you are able to actually start the game, then try turning off the sound to see if this corrects the problem.

Follow the tests given above in the **Common Questions and Answers** section. Perform the tests for Music and Sound. If these tests fail, then most likely your sound card software is not properly installed. Refer to your sound card documentation or contact the vendor or sound card manufacturer for assistance with properly setting up your sound card's software.

If the tests pass okay, then you should probably contact the sound card vendor or manufacturer for an updated version of your sound card software. Meanwhile, you can see if this will help:

From Program Manager, open up your Main group, then open up Control Panel. Inside the Control Panel, open up the Drivers section. In the list of drivers, find the one marked MCI [sound] and select it. Either double-click on MCI [sound] or click the Setup button. The sound buffer setting defaults to 4 seconds. Increase this to at least 8 or 10 seconds. Then click OK, close the Drivers Window, and restart Windows before running the game.

Again, if you still get errors after making sure the sound card software is fully installed, try to obtain an updated version of your sound card drivers from the vendor or sound card manufacturer.

256_1280.DRV or <whatever>.DRV - Usually you'll see numbers in this one, like 256_1280.DRV, W31-62B.DRV, or some other number/letter combination with a .DRV at the end. This is usually the video software. If you get this error along with problems reported by WinG, you can bet that your video card software

should be updated.

With errors like this, it is best to update your video card software. Contact the vendor or video card manufacturer and obtain the latest release of the video card drivers for Windows. If you've already got the latest version, then you may wish to try the Microsoft SuperVGA drivers which may conform closer to Windows specifications. The Microsoft generic SVGA drivers are available through many shareware dealers or from Microsoft. You may wish to read the section above entitled **An alternative...** in the **Video, Palettes, and Pictures** section.

Win32s Error - ...Windows need to run with virtual memory enabled

Win32s requires that Windows runs with a swap file under virtual memory. At least a 2 MB swap file will be required, and a total of 8-10 MB should be free in Windows. For more information about setting up swap files and virtual memory, refer to your Windows documentation and/or your computer vendor. You may wish to read the sections above about Win32s and memory.

You will probably be asked to reinstall Win32s. Make changes to your Windows system following the suggestions above to enable virtual memory. Then reinstall the game. Installing the game will automatically install Win32s; there's no need to separately install it.

How to Reach Maxis Customer Support

What To Do Before You Call Customer Support

Before you call Customer Support, please be sure that you have read this file and any other appropriate material first. When you are at your wit's end, scratching your head and grumbling, read on to find out what to have ready when you call, so that we can get you up and running as quickly as possible.

Note: Please make sure that your computer system meets or exceeds the requirements defined on the system label. The system label is located in the lower-left portion on the front of the box or on the spine of the box. If your computer doesn't meet these requirements, then there's nothing Maxis Customer Support can do for you. Sorry.

What You Should Have With You When You Call

1. Have a printout of your WIN.INI and SYSTEM.INI files as well as your CONFIG.SYS and AUTOEXEC.BAT files. You can easily print all of these files by typing MSD [ENTER] at the C:\ prompt. This will run the Microsoft Diagnostics program which will allow you to print out a report of your system. If you can't print out your system files (you don't have a printer), it isn't the end of the world, *as long as you are at your computer when you call!*

2. If you are getting error messages or General Protection Faults (GPFs), write down *exactly what the error message says*. That will help us diagnose the problem.
3. Write down all of the steps you have taken to solve the problem. If we know what you've already done, we may be able to get you running faster.
4. Have your program disks, your manual, and your Quick-Start Guide available and within easy reach.

Where You Should Be When You Call

Please, please call us *from your computer!* We need to have you at your computer to explore your system to identify what is causing your problem.

Let's Do the Numbers!

There are a number of different options that you can use to contact Customer Support. The best way to reach us is by e-mail, FAX, or telephone. If you decide that you would like to call and hear a friendly voice, you'll find the number for Customer Support listed on the Maxis Maxims sheet, included in the box your program came in. There's lots of other useful info there, so keep your Maxis Maxims somewhere handy.

We have established an automated Support service in addition to our live Support team. Automated Support is available 24 hours a day, 7 days a week. By calling our Customer Support technical line, you may select automated Support in lieu of live assistance. Calling during non-Support hours will automatically prompt you for automated Support. Automated Support allows us to help you find a solution quicker, and helps to reduce on-line waiting time.

We are present on all of the major on-line services and the Internet if you subscribe to any of these services. If you don't currently subscribe, many on-line services will give you a 30-day trial membership. Refer to the Maxis Maxims for more information.

If you have a modem, on-line support is often a better option for you. We maintain a BBS that is free-of-charge (excluding long distance charges from your phone company) to all registered users of Maxis products. The BBS number is (510) 254-3869 and it is available 24 hours a day, 7 days a week. We support up to 14.4k bps and currently have four nodes. The settings are 8-N-1. You can also find the latest FAQs (Frequently Asked Questions), hints and tips from other users and other good stuff.

Fill in That Card!

Make sure you register your software! We've included a handy little postcard for

you to send in. This will entitle you to FREE Customer Support for the life of the product. The product life ends when a new version is released or the product is discontinued.

Introducing Maxis Customer Support...

And now what you've all been waiting for. Here's a little bit about the support staff: It just wouldn't be fair to give you all of this information without mentioning a little bit about the guys in Customer Support. No, they didn't make or write the code and no, they didn't write the manual, but they do provide support for the product which far outlasts jelly doughnuts (and other comestibles).

Roger Johnsen (Customer Support Manager - Our Fearless Leader)
Aaron Shephard AKA Dr Emu
Kirk Lesser AKA Blud (like the stuff in your veins)
Chris Charman AKA Kwak
Owen Nelson AKA well, Owen (we still haven't given him a cute nickname yet)
Jeff Feil AKA Quam
Rick "A Chief Apache" Acquistapace
Brian "Can you get me this driver..." Smith
Shannon "Not SHARON!" Dawes
Leo "Here 4 Ya" Kunkle II
Lisa "Now where did I file that..." Laverty

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