



Line 6 Monkey Compatibility Check Windows



This document is designed to provide information for using Line 6 Monkey's Compatibility Check utility. One of the very useful functions Line 6 Monkey is capable of is to perform a scan of your Windows system and let you know if there are any components that do not meet the requirements for the GearBox software. To follow are details on the items Line 6 Monkey reports to you.

Be sure to connect the USB cable from TonePort into your computer's USB port, and then proceed with the following steps...

Check for updates

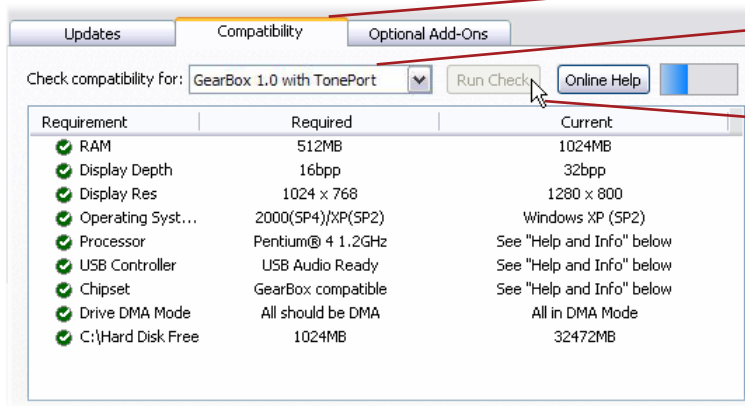
Line 6 Monkey uses your computer's Internet connection to check for updates specific to your hardware and software configuration. You should first be sure your computer's Internet connection is active, and then launch Line 6 Monkey to allow it to check for updates.

Note to Laptop computer owners... It is important that you boot your laptop while your AC power adaptor is connected (rather than from battery power) before running Line 6 Monkey's compatibility check. Booting a laptop from battery power can often set it into a "power saving" mode which can result in Monkey not accurately testing for the full performance of your processor.

Launch Line 6 Monkey by going to the Windows **Start Button > Programs > Line 6 > Tools > Line 6 Monkey**. Your TonePort device should be automatically detected, and shown in the top left of Line 6 Monkey's screen. If it is not, click on the Change Device button and choose your TonePort in the subsequent dialog.



Download and install all updates Monkey finds and recommends for you, following the instructions provided in the Line 6 Monkey dialog. Once all updates are installed, you can also have Monkey check your computer system to see if it meets the GearBox requirements...



Go to the **Compatibility** tab

Choose **GearBox 1.0 with TonePort**

Click on the **Run Check** button

You'll see the Compatibility window populate with a report on several of your computer's components, as shown here

Requirement	Required	Current
✓ RAM	512MB	1024MB
✓ Display Depth	16bpp	32bpp
✓ Display Res	1024 x 768	1280 x 800
✓ Operating Syst...	2000(SP4)/XP(SP2)	Windows XP (SP2)
✓ Processor	Pentium® 4 1.2GHz	See "Help and Info" below
✓ USB Controller	USB Audio Ready	See "Help and Info" below
✓ Chipset	GearBox: compatible	See "Help and Info" below
✓ Drive DMA Mode	All should be DMA	All in DMA Mode
✓ C:\Hard Disk Free	1024MB	32472MB

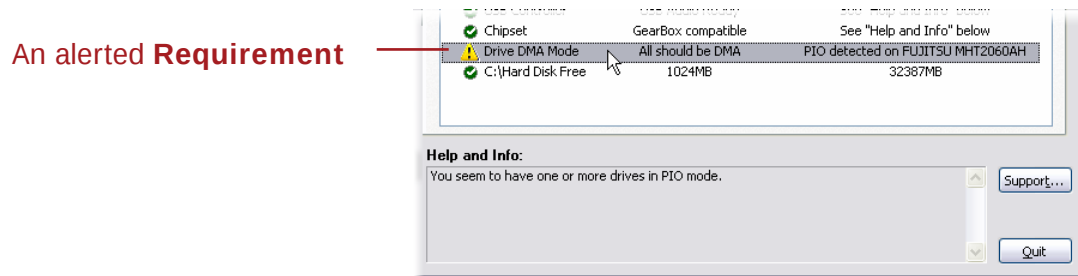
For each **Requirement** at the left, you'll see the minimum requirement for TonePort/GearBox in the **Required** column, and your computer's specification for this item in the **Current** column. For all items that meet or exceed the Required specification, a green check will appear at the left. In the example above, all items meet or surpass the requirement. If your system meets all the requirements, then you can exit Line 6 Monkey and get on to using TonePort and GearBox!



If a Requirement does **not** meet the minimum, then you will be alerted with a dialog – just click the OK button to acknowledge the alert:



A yellow alert symbol will also appear to the left of any Requirement that did not pass the check. Click on an item with this alert and read the information that appears within the **Help and Info** section at the bottom of the dialog.



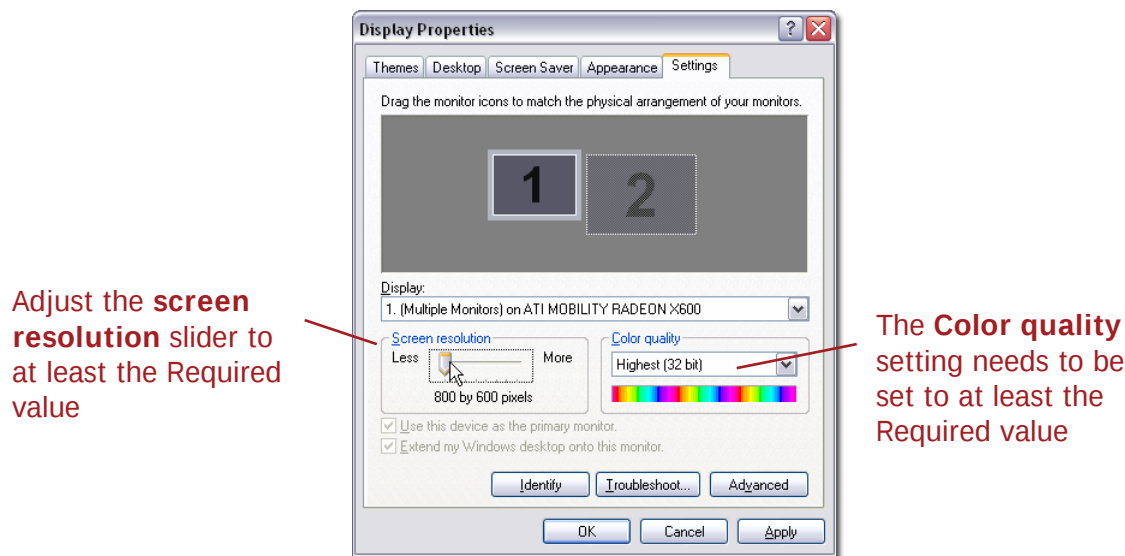
Requirement details

To follow are details describing what Line 6 Monkey is looking for when checking these requirements.

RAM –If your computer has less than the Required minimum of RAM, you can upgrade your system by adding more. Check the documentation for your computer or motherboard to make sure you order the correct type. RAM is a very cost-effective upgrade, and you'll typically see better performance from all your software with more.

Note – some computers have a “shared RAM” configuration, where a portion of the RAM is dedicated to the video display and, therefore, not available to the operating system or software. Unfortunately this “shared” amount of RAM is also hidden from Monkey, and it could result in the compatibility check seeing less than the Required amount of RAM on your system, even though you may physically have enough RAM installed. If you do have the Required minimum amount of RAM (or greater) in your system, then you should be fine to run GearBox with this configuration – just keep in mind that your available amount of RAM is reduced as reported by Monkey, and you might consider adding more RAM if needed.

Display Depth – Windows offers a “**Color quality**” setting, and its options are determined by the specifications of your computer's video display adapter. If this item is not meeting the requirement in your system, go to Windows **Start button > Settings > Control Panel > Display > Settings tab** and try adjusting the **Color quality** option to a higher setting. Most modern display adapters offer settings of up to 32 bit (or 32 bpp), and the higher this setting, the better the display quality. If you have no selectable option that meets the GearBox Required minimum, then you may need to upgrade to a video display adapter that does support it.



Display Resolution – Windows also offers a **Screen resolution** slider in the Display Properties dialog that allows you to adjust the size of the content displayed on your screen. Your video display adapter's specifications determine the maximum resolution size. If yours does not allow this setting to be adjusted as high as the Required values, then you might need to upgrade to a video display adapter that does support this.

Operating System – This item refers to your Windows version. Windows 95, 98 and ME are not supported by GearBox. Specifically, you must have either Windows 2000, or Windows XP with the Required "Service Pack" (SP) version. If Line 6 Monkey is telling you your Operating System is not meeting the requirement, and you have Windows 2000 or XP, you may be able to update to the Required Service Pack version by going to the Microsoft Windows Update site (www.windowsupdate.com).

Processor – Monkey checks the type and speed of your processor (CPU). The listed Requirement is noted as an Intel® Pentium® 4 1.2 GHz, and GearBox was developed and tested with this processor architecture as its recommended system. However, there are several other models of processors that have undergone limited testing and can be used with TonePort/GearBox. For example, Intel® Pentium® M and Celeron®, AMD Athlon™, Duron™ and Sempron™ processors that offer an equivalent clock speed as the posted requirements have been demonstrated to work well with TonePort and GearBox.

Monkey is actually smart enough to know there are several other competent processor types and will also allow processors that offer equivalent or faster clock speed as well. Most processors that report an equivalent speed will also pass the compatibility check, but a wide variety of processor models exist (with new and updated models being released frequently), and other architectural differences exist that may affect the performance of these processors with GearBox. In other words, clock speed alone is one good indicator of performance for your processor, but it may not guarantee the same performance as the Intel® Pentium® 4 Requirement we have published.

USB Controller – Monkey checks to see if your USB controller hardware is a PCI bus model, since this model offers sufficient two-way bandwidth for the demands of USB audio. If it is detected that your USB controller is an ISA bus model, then Monkey will alert you since this architecture is not suitable for USB audio devices. If yours does not pass, and if you do not have an additional PCI based USB controller on your system, it is possible to purchase an add-on PCI bus model USB Controller card. These are available as PCI card types for desktop computers, or as CardBus or PCMCIA card types that fit into the PCMCIA-type of slot offered on most laptops. (See the next section for more about USB Controller cards).

Note that you also need to be sure to avoid connecting other USB devices into a USB slot on the same Controller with TonePort if they also require power from the USB port. If you are plugging into a USB hub, it needs to be a unit that is powered by its own AC power adapter, rather than one that gets its power from the USB port it is connected to.

Chipset – Your computer's motherboard has a specific chipset type and Line 6 Monkey scans this to see if yours might be one known to have problems with USB audio hardware. TonePort and other USB audio devices require a maximum bandwidth as well as an uninterrupted data flow in two directions to continually input and output audio data at a fixed sample rate. The USB isochronous transfer mode is intended to guarantee this uninterrupted data flow. Standard USB 1.1 specifications do provide for this performance, but there are some chipsets that have been identified as having a flaw where the USB data flow can be interrupted, causing dropouts and bursts of white noise from the analog outputs of the USB device. The chipsets we have verified as having this type of problem are several using the Intel ICH6 architecture, including models 915G, 915P and 925X.

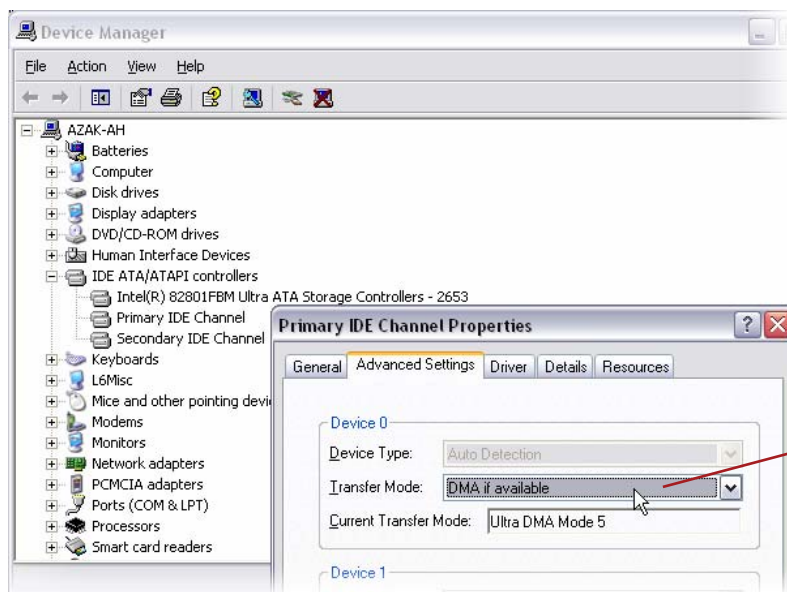
Note that this chipset issue is one that affects all USB 1.1 audio interfaces and not just those manufactured by Line 6. Intel has published information on their website acknowledging this issue and provides more technical details. Other USB audio hardware manufacturers have posted warnings of this issue as well. It is also important to note that you may not experience problems with other USB devices such as printers or hard drives on systems with these problem chipsets, since these devices utilize a USB bulk transfer mode, and momentary data interruptions do not result in noticeable problems in the performance of these types of devices.

The most successful workaround we have found is adding a PCI-based USB card (to desktop computers with these chipsets) or a CardBus or PCMCIA USB controller card (for laptops with these chipsets). Once these cards are installed, these computers often stop exhibiting the "white noise burst" problem, because the USB implementation on these cards overrides the flawed built-in USB implementation of the computers. We have had positive reports on USB add-on cards that utilize NEC chipsets, such as the SIIG USB 2.0 Dual-Port PCI model. For a PCMCIA card, the USB 2.0 models manufactured by D-Link have also performed well in our testing. Some problems reported have been specific to USB cards with VIA chipsets. It's important to note, however, that adding a USB card doesn't always solve the problem. Some computers, probably because of the way they handle USB, still exhibit this problem even after a card is installed. Line 6 and other audio

manufacturers unfortunately cannot overcome these problems because they are due to the flawed implementation of USB on these systems.

Drive DMA mode – The IDE controllers for your disk drives will optimally operate in Direct Memory Access (DMA) Mode to provide a fast disk access. Line 6 Monkey checks to see that all your drives are operating in DMA mode, and will warn specifically for any that are not. If you get this warning, you may be able to manually set the IDE controller for the drive to DMA mode.

Go to **Control Panel > System > Hardware tab > Device Manager button**. Expand the entry labeled **IDE ATA/ATAPI controllers**. Right click on the **Primary IDE Channel** item and select **Properties** and go to the **Advanced Settings** tab. Check that the **Transfer Mode** options are set to **DMA if available** for all channels. Repeat this for all IDE channel items beneath **IDE ATA/ATAPI controllers**. Click **OK** to exit the dialog.



Setting a drive to
operate in **DMA mode**

Free Hard Disk space – If you have less than the Required amount of available hard disk space, Line 6 Monkey will alert you. If you need to free up some space, you might try backing up some of your old files onto a CD or DVD and removing them from your hard disk. Also try Disk Cleanup by going to the **Start button > Programs > Accessories > General tab**. Choose your hard disk and click the **Disk Cleanup** button to free some space. If these suggestions don't provide enough space, then a new, larger hard drive is the best idea.

Use the Windows **Disk Cleanup** utility to free up some space

