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Do you want to experience the joy of enhanced sound with your current music equipment? Are you familiar with the quality but craving more? Explore potential ways to enhance your sound without new purchases, and discover how simple tweaks might lead to better audio quality. Continue reading for valuable insights. [Aul Converter 48x44 \[2025\]](#)

NEW Optimize music files to reach your devices sound quality limit, get compatible audio format or save disk space. accurate audio file converter software for music production and discerning music lovers **FLAC, WAV, AIFF, ALAC, SACD ISO, DSF, DFF, mp3, m4a, CD...** We think about quality. You just work with music. **DOWNLOAD "FREE" WINDOWS DOWNLOAD "FREE" MAC** Watch and share video: [How to improve sound quality. Explained \[English subtitles\]](#) Watch and share video: [How to improve sound quality. Explained \[English subtitles\]](#) In addition to the equipment, you have multiple recordings in heterogeneous audio resolution. But what resolution is the best for listening to music on your equipment? Below you'll find guide how to look for audio-quality improvement. In this article, the quality may be improved via playback-distortion decreasing. One of places, where we can do it, is the analog output of digital-to-analog converter. Resolution is combination of bit depth and sampling rate. Read below how to try to decrease the distortions for your audio equipment or portable device (digital audio player, mobile phone, etc.). Disclaimer: Efficiency of the sound quality improvement, that described in the guideline, depends on used playback hardware and software. Sound quality improvement isn't guaranteed. Back to top

audio system and playback sound quality All components of audio system impact to playback sound quality. Here you can see list of the equipment itmes that impact to the quality: Listening room, Speakers, Amplifier, Digital-to-analog converter (DAC), Playback software, Resolution, format and distortion level in recordings (audio files, disks and other mediums). Each electronic device, loudspeakers and the room cause distortions. The speakers works together with the listening room. A room is capable to "kill sound". When you purchase a device or loudspeaker, it should cause minimum distortions. Loudspeakers and amplifier should work at optimal loudness that correlates with the room size. Also, speaker size also defined by the room volume. Read how to how to perform acoustic treatment... Recording resolution work only together with DAC. Below we'll consider it. Back to top

Resampling and sound quality Digital-to-analog converter (DAC) is audio hardware that may have different distortion levels for various modes. In the article, DAC mode means a combination of sample rate, bit depth, PCM/DSD. Different distortions for different DAC modes One or several modes may have minimal distortions. Below such mode is called "the best sounding mode". Audio file resolution may be converted to values (sample rate, bit depth, PCM/DSD) of "the best sounding mode" to improve playback sound quality optimization of audio files. Read below about: dithering, audio resolution, conversion software (and a step-by-step guide on how to check your audio system abilities. Probably it will help to improve the system's sound. Exampl DAC can be able to prevent issues distortions for mode 192 kHz/24 bit/PCM than for 96 kHz/24 bit/PCM. Therefore, the conversion of audio file resolution to 192 kHz/24 bit/PCM is recommended for playback at the DAC. Theoretically, a higher sample rate and bit depth cause lesser noise/distortion level. However, it is an implementation matter rather. "The best sounding mode" may be found via measurements of the test signals (see in the picture above). However, it demands precise measurement equipment and skills in the measurements. The article describes step-by-step how to found "the best sounding mode" by ears. It is not a precise way, unlike measurements. But ears allow approximate estimating of the DAC's modes at home without additional measurement equipment. Read more: [About DAC...](#) [About NOS DAC...](#) [Watch and share video: How to improve sound quality \[Your Guide\]](#) [Back to top](#) [Dithering and audio quality](#) [In contrast, audio-file resolution changing, that work together with DAC, dithering allows increasing the sound quality of an audio file itself in some cases. Because non-linear distortions of quantization, initially correlated with an audio signal, are smoothed and transformed into uncorrelated noise after dithering. Dither can improve the sound quality of an audio file via correlated distortion decreasing If DAC has a noise level above the quantization noise of the audio file, the dithering impact may be decreased or disappeared even. But modern DACs, as rule, have noise level below 16-bit error quantization and dithering noise. Therefore, dithering of such DAC may impact perceived sound quality. How to listen to dithering? To make sound check of dithering, you should choose recording fragment with low level. Convert this recording with and without dithering. To better listening, you can some increase volume of amplifier. Compare sound of this fragment in converted files with and without dithering. WARNING: Be careful, to avoid ear damage due to high sound level pressure. Read more: \[Back to top\]\(#\) \[How audio converter software impacts to the quality\]\(#\) \[Below pro audio conversion software is suggested to convert audio files. It has low distortion noise. Theoretically, we can neglect quality losses of conversion, including non-multiple resampling, for pro class audio converters. However, different modes of the audio converter's resampling filters may be there, which can cause different ear perceptions due to different features: steepening filters's transient band, ringing, flatness of frequency response, phase response linearity, etc. Different converters also have different features of resampling filters. Currently, the author knows nothing about reliable results of researches on impact of resampling filter features to sound perception. Also, the filtration bandwidth may impact intermodulation distortions at an analog output of DAC. Watch video about the experiment: we can hear ultrasound noise on some equipment. Video about intermodulation distortions:Experiment with removing ultrasound upper 20 kHz \\("Optimized resampling filter"\\) during audio file conversion. Watch and share: \\[How to remove audible noise for high-resolution audio\\]\\(#\\) \\[Read more: Back to top\\]\\(#\\)\]\(#\)](#)

Recommendations for audio player For a purer experiment, audio playback software (audio player and system audio driver) should transfer digital audio data from file to DAC without changes of binary content. As example, a preferable way for audio player software is using ASIO or WASAPI output and turning the player processing off. For hardware (devices) adjusting settings for minimal/without sound processing is recommended. About digital acoustic correction of a listening room read below. Read more: [About audio players and list...](#) [DSD audio player list...](#) [Read the step-by-step guide on how to check your audio system abilities. Probably it will help you to improve the sound. Watch and share video: Hi-Res Audio \[How it works. Real advantages. Myths\]](#) [Back to top](#) [How to improve sound quality via "the best sounding mode"](#) [Described below testing algorithm may be used for DAC, digital audio player, music server, or any audio device, that has DAC chip. Find several samples of audio files with different bit depth \(16, 24 bit, DSF, DFF, ISO, etc.\) for testing of your audio equipment. Launch Aul Converter 48x44 For sound checking, Aul Converter 48x44 Free may be used. Despite free version limitations, it allows estimating the abilities of audio file optimization for your equipment or device. Open source audio file\(s\) from step #1. Go to Aul Converter's Settings, General tab. Uncheck "Don't make DSP for unchanged sample rates" switch. In Filter Mode list select "Optimized resampling filter" \(read about filter modes\). Uncheck "Use minimum phase filter \(without pre-ringing\)" switch. Minimum-phase filter causes post-ringing only \(no pre-ringing\). But, approximately, the energy of the post-ringing is doubled comparing post-ringing of linear \(non minimum\) phase filter, which causes both pre- and post-ringing. Click OK button. Select one of output format: WAV, FLAC, AIFF. If DAC supports DSD mode only, go to step #19. Select output sample rate, bit depth. Recommended to begin for maximal sample rate and bit depth, which are native to your DAC. However, a higher sample rate and/or bit depth don't guarantee better sound quality. In Aul Converter's main window set parameters On. For both input and output bit depth upper 16-bit "Dither" button will be ignored. Select new target directory Advice: use special name directory for recognizing parameters of used conversion for further testing. Example: "44100-16bit-DthOn", "DSD64-DthOn", etc. Push Start button and wait for the end of conversion. In the main window set Dither Off. Select new target directory. Push Start button and wait for the conversion end. Repeat steps #10 ... 16 for all available sample rate and bit depth combinations, that are available for your DAC or device. Repeat steps #10 ... 17 for all filter modes \(Settings > General > Filter Mode\). For "Optimized resampling filter" test both checked and unchecked "Use minimum phase filter \(without pre-ringing\)" switch. For other filter modes, this switch is ignored. If your DAC support DSD mode, repeat steps #10 ... 18 for output format DSF. Listen and compare similar files for all conversion modes: compare files with similar audio content, that are placed in the different target directories \(see steps #12 and #15\). Conversion parameters of converted audio files, that have the most preferable sound, you may use for conversion \(optimization\) of your library to playback on tested DAC. In general, for the DAC mode comparison, the author recommends turning off digital room acoustic correction. But you can compare results with the room correction and without. Back to top](#)

Resampling filter modes Aul Converter has 3 resampling filter modes (Settings > General > Filter Mode): Optimized; Non-optimized; Non-optimized wide; Optimized GS (since version 11.x). Resampling filter modes click to enlarge Optimized filter cut ultrasound (all above 20 kHz). Non-optimized filter (traditional) Non-optimized filter for PCM signals, cut half of minimum sampling rate between input and output; for DSD signals, cut all above 20...100 kHz depending on input sampling rate (always lesser half of minimum sampling rate between input and output ones). Non-optimized wide filter Non-optimized wide filter: for PCM signals, cut half of minimum sampling rate between input and output; for DSD signals, cut all above 20...100 kHz depending on input sampling rate (always lesser half of minimum sampling rate between input and output ones). Optimized GS filter Optimized GS filter cuts ultrasound (all above 20 kHz) and causes shorter ringing length for given threshold than Optimized one. GS filter is slower other filters. Optimized GS transpase 440 to 432 Hz filter Optimized GS filter cuts ultrasound (all above 20 kHz) and transpase 440-Hz pitch to 432-Hz one.GS filter is slower other filters. Read details... Our recommendations for the filter using: Optimized mode is common recommended for better sound quality of playback. However, you can use any mode, that you like more. Refer to your personal listening experience. If non-optimized mode causes noise at specific software-hardware, try optimized mode. If you distribute converted recordings, non-optimized mode for PCM may be recommended. For DSD files, either non-optimized or non-optimized wide mode may be recommended. If you use optimized mode, the distributed recording may looks like conversion from CD. Despite it is not the same, your customers may have doubts in source of the distributed hi-res recordings, and additional explanation is need. Tips If Settings > General > "Don't make DSP..." switch is checked and no audio processing (resampling, gain, DSD to/from PCM, etc.) is applied, resampling filter is ignored. Filters are calibrated for maximum level of seep sines, but big spectrum energy of musical signal can cause distortions. So, reducing of output level at 0.4 ... 3 dB may be recommended when distortions are happen. Back to top

Conclusions If optimization of audio files gives audible sound advantages in your case, you can convert your audio library to "the best sounding mode"'s parameters: sample rate, bit depth, DSD/PCM. If in your case no audible sound advantages by optimization, there is not necessary to optimize your library. It is strongly recommended, original audio files are backup. Because you, probably, will buy new devices or/and new resolution conversion algorithms will be released. Back to top

Frequently Asked Questions What is meant by sound quality? Sound quality is larity of sound. Read details... How can I improve sound quality? To improve sound quality you are need pay attention components of your audio system (in importance descending order): Also, read music-file optimization guide... How do I make my audio clearer? To make audio clearer, it's necessary to reduce distortions and noise. Read that you can do to here... How do I make sound clear and crisp? In the general case, it should be done on recording and mixing stage. Though, you can try it on mix. General concept: boosting of high frequencies, optional its parallel compressing and mixing to target audio; noise should be suppressed available way. How do you fix a muffled sound? Muffled sound may have different reasons. It may be partially compensated via: boosting of high frequencies with EQ; compression of dynamic range with boosting level with compressor effect; boosting level. Which is best audio quality? Audio quality is estimated 2 ways: how it sounds subjectively, and how many distortions are measured objectively. Anyway, zero distortions is the best. But sound is not exists in the vacuum. Listening conditions does matter. Thus, sound quality is individual criteria, that may refer to persons or their groups. Read more... What gives sound its quality? In the first place, sound quality is result of low distortion level. However, some details are there. Read more... How can I improve MP3 sound quality? You can't improve mp3 sound quality as itself. However, you can optimize the audio resolution of the mp3's content, when you convert it to WAV/FLAC/AIFF/ALAC/AAC/etc. this way... Is there an app to improve sound quality? Sound quality may be improved different ways and kinds of applications, respectively. In instance, you can use equalizer (EQ) app and boost high and/or low frequencies, can press dynamic range with compressor or application, etc. By the author opinion, music may be upsampled or downsampled with proper audio conversion to optimization of sound quality capabilities. Software like Realtek Audio Console or Dolby Access can provide additional controls for fine-tuning your audio setup. These tools often offer equalizers and presets tailored to specific types of audio, ensuring that you can customize your sound profile to suit your preferences. After you can install special software. Look at a search terms "real time boost volume windows" or "real time boost volume mac". [Tutorials](#) [Back to top](#) [Improving sound quality on your Windows 11 PC is easier than you might think. By adjusting a few settings and using some handy tools, you can enhance your audio experience significantly. This process involves tweaking sound settings, updating drivers, and possibly incorporating some external software or devices. With these steps, you can enjoy clearer, crisper sound whether you're listening to music, watching movies, or participating in video calls. In this section, we'll look at how you can elevate your PC's audio performance on Windows 11. Follow these straightforward steps to get the best sound experience. Ensure your sound drivers are up-to-date by checking for updates in the Device Manager. Updating your audio drivers is crucial as outdated drivers can cause sound distortions or issues. To do this, open the Device Manager, find your audio device under Sound, video and game controllers, right-click on it, and select Update driver. Follow the prompts to complete the update. Navigate to the Sound Control Panel to optimize your sound settings. To access sound settings, right-click the speaker icon in the taskbar and select Sound settings. Here, click on Advanced sound options to manage your devices and fine-tune your sound preferences. You can test different configurations to see what works best for your setup. Enable Spatial Sound for an immersive audio experience. Spatial Sound can dramatically improve your listening experience by providing a 3D sound effect. Go to the Sound settings, select your audio device, and choose Properties. Under the Spatial sound tab, select Windows Sonic for headphones or another available option. Turn on sound enhancements to amplify audio quality. In the sound settings, navigate to the Enhancements tab and check options like Bass Boost or Loudness Equalization. Experiment with these settings to see which ones improve your sound quality without causing distortions. Calibrate your audio settings using third-party software for precision. Software like Realtek Audio Console or Dolby Access can provide additional controls for fine-tuning your audio setup. These tools often offer equalizers and presets tailored to specific types of audio, ensuring that you can customize your sound profile to suit your preferences. After completing these steps, you'll notice a remarkable improvement in your computer's audio quality. Whether you're gaming, working, or just relaxing with music, the sound should now be richer and more detailed. Regularly check for updates for both your operating system and audio drivers to ensure compatibility and performance. Consider investing in quality headphones or speakers, as hardware plays a significant role in sound quality. Use noise-cancellation features if available to minimize background noise during recordings or calls. Adjust the balance of your speakers or headphones to suit your personal preference for a more tailored sound. Explore third-party applications that provide additional sound enhancements and equalizer settings. Open Device Manager, find your audio device, right-click, and select Update driver. Windows will automatically check for any available updates. Yes, by adjusting built-in sound settings, updating drivers, and enabling enhancements in Windows 11, you can significantly improve sound quality. Spatial Sound creates a 3D sound effect, making the audio more immersive and realistic, especially beneficial in games or cinematic experiences. Not always; while they can improve audio quality, some enhancements might distort the sound, depending on the hardware. Test them to see what works best for you. Not necessary, but third-party software can provide additional customization and fine-tuning options that aren't available in Windows settings. Update Audio Drivers Adjust Sound Settings Turn On Spatial Sound Use Sound Enhancements Calibrate Audio Settings Improving sound quality on your Windows 11 PC can transform your listening experience from mediocre to exceptional. By taking the time to update drivers, adjust sound settings, and utilize sound enhancements, you can optimize your computer's audio output. The steps outlined in this guide are simple yet effective, ensuring that users of all tech levels can follow along without hassle. Don't forget that hardware matters, too. Investing in good-quality speakers or headphones can make a big difference. While Windows 11 offers robust capabilities for audio management, exploring third-party software can add an extra layer of customization, allowing you to tailor the sound to your liking. If you want to dive deeper, there are plenty of resources available online that can help you understand more about sound frequencies and equalization. And remember, experimenting with different settings is key. What works for someone else might not work for you, so be patient and tweak until you find that sweet spot. Keep your sound drivers regularly updated and explore all the audio features Windows 11 has to offer. By doing so, you'll ensure the best possible audio experience on your PC. \[Matthew Burleigh\]\(#\) has been writing tech tutorials since 2008. His writing has appeared on dozens of different websites and been read over 50 million times. After receiving his Bachelors and Masters degrees in Computer Science he spent several years working in IT management for small businesses. However, he now works full time writing content online and creating websites. His main writing topics include iPhones, Microsoft Office, Google Apps, Android, and Photoshop, but he has also written about many other tech topics as well. Read his full bio here. How can financial brands set themselves apart through visual storytelling? Our experts explain how. \[Learn More\]\(#\) The Motorsport Images Collections captures events from 1895 to todays most recent coverage. Discover The Collection Curated, compelling, and worth your time. Explore our latest gallery of Editors Picks. \[Browse Editors' Favorites\]\(#\) How can financial brands set themselves apart through visual storytelling? Our experts explain how. \[Learn More\]\(#\) The Motorsport Images Collections captures events from 1895 to todays most recent coverage. Discover The Collection Curated, compelling, and worth your time. Explore our latest gallery of Editors Picks. \[Browse Editors' Favorites\]\(#\) Microphone and audio quality on your PC may still be subpar, even if you use high-end audio input and output devices. Fortunately, Windows 10 and 11 come with many built-in enhancements that can help you get a superior audio experience. We've gathered a series of tips to help you improve sound and microphone quality on your Windows PC. Tip: learn how to customize your Windows 11 settings to optimize sound features manually for each audio device connected to your PC. Follow the steps laid out below to enhance audio features for output/input devices. Go to the Settings app by right-clicking the Start menu. Go to System in the left pane, then click the Sound option on the right. Select All sound devices under the Advanced section. Select the audio device you want to enhance under either the Output devices or Input devices sections. Scroll down to find the Enhance audio option under the Output/Input settings section and click it to turn it on. In some cases, turning on the audio enhancement feature can lead to more sound issues on your Windows PC. If that happens, repeat the same steps to turn it off before moving on to the next solution. Windows 11 audio devices, such as Realtek, offer audio enhancement features. Follow the steps below to turn them on. Open Settings -> System -> Sound -> Advanced and select More sound settings. Click on a device, such as Speakers that we are selecting here, then choose Properties. Move to the Enhancements tab, make sure Immediate mode is on and choose the sound effects you prefer from the list, like Voice Cancellation or Pitch Shift, then hit Apply to save the settings. Low-quality microphone sound may happen due to two reasons: a microphone array quality issue or low volume of the microphone in use. Rectify this situation by following the steps below. Make sure you've turned on Enhanced audio for your Microphone Array in the Input section, as shown above. If the above solution didn't improve the microphone array quality, you may want to try increasing its volume. Search for the Control Panel app from the Start menu and open it by clicking it. Select the Hardware and Sound option. Under Sound, click on Manage audio devices. At the top of the pop-up window, move to the Recording tab, then click the microphone in use and choose Properties. Click on the Levels tab to find the Microphone volume bar, change the volume by dragging the arrow to the right, then hit Apply to save the changes before closing the window. Tip: Test you mic in the Settings app to determine whether it is working. If the microphone is not working, you may have to reinstall the audio drivers. Enabling Spatial Sound will simulate a surround sound setup that also improves the audio devices sound quality. Follow the steps below to enable it. Open Settings -> System -> Sound. Select the output device you want to change, then click on the arrow next to it. Scroll down to the Spatial sound section, click the down arrow beside Type, and select Windows Sonic for Headphones. In Windows 10, you'll need to tap on the Device properties button under Choose your output device to view this option. If Windows default three-dimensional audio is not satisfying, you can download and enable other spatial sound formats from Microsoft Store. For instance, DTS Sound Unbound can help you experience an immersive sound while gaming with headphones on. If you are a cinephile, you can download Dolby Access audio format to hear more details and realism while watching a movie. Mono audio makes both right and left audio channels produce a single sound simultaneously. As a result, it can be a useful feature to improve sound quality, especially when using headphones. Enable it as shown in the following steps. Open Settings -> System -> Sound. Find the Mono audio option under the Output section, then enable it to combine both audio channels. If you're running Windows 10, you'll need to go to Settings -> Ease of Access -> Audio to find the option. Good to know: learn how to increase the maximum volume in Windows. Keeping Windows up to date may improve audio and microphone quality and fix any related issues. However, you also need to remember to update your audio drivers manually, as new OS updates wont do that. Follow the instructions below to update them. Right-click the Start menu and select Device Manager from the pop-up window. Scroll down to find Sound, video and game controllers, click on its arrow to expand it, then right-click the concerned audio driver to select Update driver. Choose Search automatically for drivers. Repeat these steps for other audio drivers to ensure that they are all up to date. Windows 11 and 10 come with a built-in Realtek Audio Console app that allows you to remove echoes and other unwanted sounds when using the microphone. We show you how to use it below. Click on the Start menu, search for Realtek Audio Console and open it. Select the Equalizer APO Letsoft Sound Booster FXSound Boom 3D Good to know: dont get your Windows software from just anywhere. Check out the best websites to download Windows software. First, check your speakers. Make sure your speaker jack is securely inserted into the computers speaker/headphone port. If the distortion persists, try switching speakers or headphones to determine whether they are the cause of the distortion. Audio driver issues may also be to blame, so make sure they are up to date. Sometimes the mic actively receiving input will cause a feedback loop and pick up audio from your speakers, while your PC sends the mic input back through the speakers. In this case, you'll need to create more distance between the mic and speakers. Alternatively, try turning down the speakers or decreasing the mics sensitivity. If, on the other hand, youre not receiving sound in Windows, follow this helpful guide. Give the app microphone permission. If you have accidentally selected Deny or the app didnt ask for microphone access, you can enable it in Settings -> Privacy and Security -> Microphone. Make sure the app you are using has access to the mic. Image credit: Pexels. All screenshots by Farhad Pashaei. If you feel the audio experience on your Windows PC is a bit underwhelming or lacks the punch when you play music on it. It is high time you change these audio settings on your Windows PC to get the best sound quality out of your speakers. Changing these settings will vastly improve the sound quality of Windows speakers. Whether you are using Windows 10 or 11, these settings will improve the overall sound quality of your computer or laptops speakers. If you are using multiple audio devices, you might have to enable the settings for each device. This article will show you how to tweak your audio settings to enhance the sound quality of your laptop speakers. Both Windows 10 and Windows 11 have built-in audio enhancement features that enable you to get the best possible audio experience. Enabling the Audio Enhancements feature is the easiest way to fine-tune your windows sound quality. You can enable or disable audio enhancements by following the steps below on both Windows 10 and Windows 11. Go to Start and open the Settings app on your computer. You can also press the Win + I keyboard shortcut to open the Settings app directly. Inside the Settings window, open Sound. Now click on Speakers inside the Output section. Scroll down and change Audio Enhancement to Device Default Effects to enable Audio Enhancements on your Windows PC, and you are done. Now try playing music on your computer and see how much of a difference this tweak makes to your overall audio experience. In our testing, doing this alone drastically improved the sound quality on our Windows PC. Also read: Best Screen Dimmer Apps for Windows 10/11! Enable Spatial Audio. Enabling Spatial Audio will add virtual surround sound effects to your audio listening experience. If you usually watch movies or play games on your computer, you can enable Windows Sonic for Headphones to create an immersive 3D audio experience. For Spatial Audio to work, you'll need to enable Audio Enhancements first; otherwise, you won't hear a difference. To enable Spatial Audio on your Windows 11/10 PC, follow the steps below. Go to Start, open the Settings app. \(or press the Win + I shortcut key!\) Inside the Settings app, open Sound and then click on Speakers inside the Output section. Scroll down and change Spatial audio to Windows Sonic for Headphones. If Windows Sonic for Headphones doesnt do justice to you, you can also try the paid alternatives like Dolby Access or DTS Sound Unbound from the Microsoft Store. Increase sample rate and audio bit depth. Another way you can get the most out of your Windows audio experience is by bumping up the audio quality by changing the sample rate and audio bit depth inside Windows Settings. Both Windows 10 and Windows 11 support changing the sample rate, as well as audio bit depth. By default, both Windows operating systems are configured to use a lower-quality sample rate, which you can easily change from the settings. Here is how to change the sample rate and audio bit depth inside Windows 10 and Windows 11. Go to Start and open the Settings app on your computer. You can also press the Win + I keyboard shortcut to open the Settings app directly. Inside the Settings window, open Sound. Then click on Speakers in the Output section to open your speakers properties. Now look for the drop-down menu next to the Format option, change it to the highest possible quality, and click on the Settings app on your computer. You can also press the Win + I keyboard shortcut to open the settings app directly. Inside the Settings window, look for one of your speakers. This tweak works best if you have paired your Windows PC with some high-end speakers/headphones, with a sensitive driver for a dynamic and detailed music-listening experience. Also read: Best way install Windows without bloatware app! Enable Bass Boost and add extra bass to your speaker. Windows 10 and 11 also come with a built-in Bass Boost feature that enables you to add some extra thump to your speakers. This is great if you want to add extra oomph to your music-listening experience. One thing to note is that the Bass Boost option isnt available to all Windows PCs. Only if you have supported hardware, you'll see the Bass Boost option on your windows computer. Here is how you can enable Bass Boost on Windows 10 and Windows 11. Just follow the steps mentioned below. Hit Win + R to open the run window on your Windows System. Then type mmsys.cpl and hit enter to open legacy sound settings. On the Playback tab, double-click on your default speaker to open its property window. Now click on the Enhancements tab and check the Bass Boost, and then hit OK to save your settings. Now play bass-heavy music to experience the thump you were missing on your computer. If you are unhappy with the results or want to tweak more, you can change the bass frequency and boost level from the Bass Boost settings. The default is set to 80 Hz/6 dB.I found 75 Hz/8 dB the sweet spot for some extra oomph over the default bass settings for my speakers. But dont touch these settings unless you know what you are doing at the expense of your speakers. Update your Audio Driver to improve sound quality on Windows. Lastly, keeping your Windows audio driver up to date is the most important thing you can do to improve sound quality on your Windows 10/11 PC. If you are using outdated audio drivers, you may be unable to take advantage of features like Audio enhancement and 3D spatial audio. The manufacturer also fixes audio-related issues time-to-time, timely updates to drivers will solve audio issues related to an old driver. For most parts, Windows automatically handles updating drivers through Windows updates. You can also manually update your Windows Audio drive through Device Manager. Here is how. Hit Win + R to open the run window on your Windows System. Then type devmgmt.msc and press enter to open Device Manager. Inside the Device manager windows, look for your audio device under Sound, video, and game controller. Right-click on it and choose Update Drive. On the Update Drivers window, select Search automatically for drivers and let the device manager search for the latest available audio driver and install it automatically on your computer. But, if nothing works, the last option to update your Windows audio driver is directly through the device manufacturers website. First, identify your audio device model; visit the Manufacturers website to download the latest Windows audio driver file for your device. After downloading, open the file and install the latest driver on your Windows computer. Improve Sound Quality on Windows Final words! These tips will improve the sound quality of your Windows Laptop/PC to a great extent. But if none of the settings mentioned above enhances the audio quality on your computer, you should consider third-party options like Equalizer APO or FX Sound. These sound enhancer apps are improved sound drivers compatible with Windows 10, Windows 7, and Windows 8. Using these third-party equalizer apps, you can significantly improve the sound quality of your Windows PC. Poor audio quality used to take the enjoyment out of watching my favorite movies, listening to music, or gaming. That all changed when I tweaked a few default audio settings on my Windows PC. If you're an audiophile who can't tolerate subpar audio, here's how you can improve the sound quality. Enable Audio Enhancements Windows offers several audio enhancements that can significantly improve your computer's sound quality when used correctly for different use cases. For instance, you can turn on Bass Boost to amplify low-frequency sounds. It's an ideal enhancement for for music and gaming. You can also enable Windows Sonic for headphones, which simulates a surround sound setup, as if you were listening to audio through a multi-speaker system. To enable these enhancements, go to Settings > System > Sound > More Sound Settings. Next, navigate to the "Playback" tab, right-click your audio output device, and select "Properties." Then, go to the "Enhancements" tab, enable the enhancements supported by your headphones or speakers, click "Apply," and hit "OK." Increasing the sample rate and bit depth can also improve overall audio quality. A higher sample rate captures more detail from the original sound, while higher bit depths reduce distortion and noise. These adjustments make audio playback clearer and more accurate, which improves the overall sound quality. However, you can't just set both of these settings to the highest possible levels. Instead, you should match these settings to the audio file you're playing to prevent unnecessary upscaling or downscaling. If you set your system to a higher sample rate and bit depth than the files native quality, it'll likely introduce artifacts that degrade the audio. For example, if you're playing a CD-quality file, a 44.1 kHz - 16-bit setting is ideal. If you have a higher-resolution file, you can opt for a higher bit depth and sample rate combination. To adjust these settings, go to the "Advanced" tab in the properties window and select your desired sample rate and bit depth from the drop-down menu. This is also a decent place to start troubleshooting if you're experiencing strange audio glitches, especially if you're actually hearing strange noises. Spatial Sound improves your audio by adding a sense of direction and space. It makes it feel like the sound is coming from various directions, like raindrops falling all around you. By default, Windows offers only Windows Sonic, a free spatial sound technology. For an advanced audio experience, you can install Dolby Atmos, unlike Windows Sonic, Dolby Atmos requires a subscription if you want to use it with standard headphones. If you want to try its free trial or are willing to pay for it, download the Dolby Access app from the Microsoft Store, follow the on-screen instructions to set it up and enable it in your sound settings. To select your preferred spatial sound format, go to the "Spatial Sound" tab and select either "Windows Sonic for Headphones" or "Dolby Atmos for Headphones" from the drop-down menu. Some applications come with built-in features to adjust sound quality. For instance, many media players have an equalizer feature that allows you to fine-tune the frequency response and apply additional audio effects. Streaming services like Spotify also come with an equalizer, which can even bring studio-quality audio to your car. Similarly, many modern games provide options to adjust sound quality, surround sound, and dynamic range. Communication apps like Discord feature noise suppression and echo cancellation settings for clearer audio. So, check if the app you're using has sound customization options. If it does, experiment with the settings to find the combination that delivers the best audio quality per your preferences. The quality of the source audio file impacts your audio experience. For example, MP3 files, due to compression, can lose considerable audio quality, especially if their bitrate is below 192 kbps. In contrast, lossless formats like FLAC and ALAC maintain high audio quality and deliver the best listening experience. To ensure optimal audio quality, you should always download files from reputable music stores, use streaming services that support lossless and high-resolution formats, and always check the file quality before downloading. For a more detailed check, tools like Audacity can help you verify that the file has been unsampled from a lower-quality source. Although updating your audio drivers may not drastically improve the audio quality, you should keep them up-to-date to get optimal performance out of your hardware. If you use headphones from a specific brand, regularly check their official website for updates and install them as they become available. If you use your laptops built-in speakers, you can update the driver through Device Manager. Download the latest drivers from the manufacturers website. Then, open Device Manager, expand the Sound, Video and Game Controllers section, right-click on your audio device, and select Update Driver. Choose Browse My Computer for Drivers, select the downloaded drivers, and follow the on-screen instructions. You can customize your sound using equalizer software, which allows you to adjust specific frequency bands to match your preferences. An equalizer app can help offset hardware limitations if you have lower-end headphones or speakers. However, don't expect it to make a significant difference if your hardware is too subpar. You can use preset filters for activities like music, movies, and games or create custom profiles if you have some experience tweaking audio settings. Equalizer APO, FXSound, and Boom3D are solid equalizer options for Windows, and they're all available on the Microsoft Store. Download them and experiment with different profiles. A digital-to-analog converter \(DAC\) converts digital audio signals into analog signals for playback through headphones. Although built-in DACs do this job well, they are prone to electrical interference. This can introduce noise and distortion, which affect audio quality. An external DAC can help address this issue. The impact of using an external DAC on audio quality is a matter of debate. In my view, its effectiveness depends on your PCs built-in audio quality. If your PCs sound is already clear and well-balanced, an external DAC may not significantly improve it. However, an external DAC could make a noticeable difference if the audio quality is subpar. Likewise, you can use an amplifier that takes a low-level analog signal and increases its amplitude, boosting the signal's power. It also maintains the audio quality at higher volumes. You deserve the best audio quality from the premium headphones or speakers you've invested in. Hopefully, you now better understand how you can improve the audio quality on your Windows PC. By following these steps, you should see some improvement in the audio output quality. However, these changes might not have much effect if you have low-quality headphones or speakers. So, you should consider investing in a high-end gadget. Quick Tips You can quickly improve sound quality on Windows by enabling audio enhancement features. For an enhanced movie or gaming experience, consider enabling spatial sound. Try different equalizer settings and update the audio driver for better results. Your Windows 11 PC has an audio enhancement feature that automatically improves sound quality. Hence, if you want better audio quality, this is the first thing you should enable. Step 1: Press the Windows key + I to open the Settings app and head to System > Sound. Step 2: Scroll down to the Advanced section and click on All sound devices. Step 3: Select your audio device from the list. Step 4: Use the drop-down menu next to Audio enhancements and select Device Default Effects. You'll have to repeat the steps above for the audio input and output devices separately. Spatial sound on Windows offers an immersive audio experience by simulating a surround sound setup. Its similar to a three-dimensional audio experience where the sound comes in from all directions. If you're looking to enhance your movie or gaming experience on Windows, enabling spatial sound would help. Step 1: Press the Windows key + I to open the Settings app and head to System > Sound. Step 2: Select your audio device. Step 3: Use the drop-down menu next to Spatial audio and select Windows Sonic for Headphones. You can also try different spatial audio formats, such as DTS Sound Unbound, Dolby Access, and more, by downloading them from the Microsoft Store. Another way to improve the sound quality on Windows is to bump up the sample rate and bit depth. This can be also useful if the audio is distorted. Step 1: Press the Windows key + I to open the Settings app. Then, go to System > Sound. Step 2: Click on your audio device to open its properties. Step 3: Under Output settings, use the drop-down menu next to Format to set a higher sample rate and bit depth. Step 4: Click the Test button to hear sample audio. Windows 11 also offers audio presets, such as Bass Boost, Loudness Equalization, Virtual Surround, etc. You can use different audio presets to achieve the best sound output possible. Step 1: Press the Windows key + I to open the Settings app and head to System > Sound. Step 2: Scroll down to Advanced and click on More sound settings. Step 3: Double-click on your audio device to open its properties. Step 4: Switch to the Enhancements tab and find all the available sound effects with descriptions. Step 5: Select your preferred sound effects and click Apply. Besides audio presets, Windows also offers a sound equalizer. Although its basic, you can use it to adjust the sound effects and emulate the frequency to your liking. Heres how. Step 1: Press the Windows key + I to open the Settings app and head to System > Sound. Step 2: Scroll down to Advanced and click on More sound settings. Step 3: Double-click on your audio device to open its properties. Step 4: Under the Enhancements tab, select Equalizer. Then, click the three-dot menu icon next to Settings to adjust the bands yourself. Step 5: After tweaking the equalizer, click on Save. Then, enter a name for your preset and click OK. Step 6: Click Apply to save changes. Lastly, keep the audio drivers on your PC. Besides improving audio quality, updating drivers will keep you from running into audio issues on Windows 11. Step 1: Press the Windows key + X and select Device Manager from the list. Step 2: Double-click on Sound, video and game controllers to expand it. Right-click on your device and select Update driver. From there, follow the on-screen prompts to finish updating the drivers. The article above may contain affiliate links which help support Guiding Tech. The content remains unbiased and authentic and will never affect our editorial integrity.](#)

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