Audio Configuration

Basic Windows Multimedia Configuration

Advanced Windows Multimedia Configuration

Windows Multimedia Configuration (Settings | Audio Options)

Audio Sampling Rate
The Sampling Rate drop-down list allows you to specify the audio sampling rate for a new.WRK file. Once any audio has been added to a.WRK file either by recording audio or by using Insert | Wave File you cant change the sampling rate for that.WRK file. Therefore, you should choose the sampling rate immediately after choosing File | New to start a new song.

You can choose one of four sampling rates: 11025 Hz, 22050 Hz, 44100 Hz, and 48000 Hz. The default used by Cakewalk Pro Audio is 44100 Hz, the same rate as audio CDs. However, you may choose a lower rate if your PC is slow or has a slow hard disk.

> **Note:** For most sound cards, all digital audio in the same song must be at the same sampling rate. Some dedicated audio systems let you mix different sampling rates in the same song; Cakewalk Pro Audio only lets you do this if the audio system supports it. This feature is meant primarily for sound cards that use different Windows drivers for input and output; Cakewalk treats such cards as two different programs.

Playback Timing Master and Record Timing Master
These two options determine which sound cards should control timing for the song, if youre using multiple wave drivers for playback or recording. Note that if youve got two wave drivers, but all audio tracks are playing on only one wave driver, then that driver will be the timing master no matter what you choose.

Every sound cards clock crystal is slightly different, which causes minor differences in the actual playback rate on each card. These differences may lead to slight synchronization problems if you use one card for recording and a different one for playback. Multiple wave drivers on the same card will not have sync problems.

Mono Record/Playback
This option forces monaural recording and playback. It is required for full-duplex recording on the Roland RAP-10.

Enable Low-Latency Mixing
Checking this causes Cakewalk to instantly recognize Volume and Pan messages (theres usually a slight delay.) This lets you use StudioWare View to automate audio mixes. You set the exact delay time by choosing Advanced and setting the Queue Time value.

Turning Low-Latency Mixing on, especially when using short Queue times, will put a strain on your computers CPU. Therefore, you must close all applications besides Cakewalk Pro Audio when you choose this option. The default setting is Off.

Wave Profiler
Wave Profiler attempts to detect the make and model of your sound card, which determine the cards DMA settings. Once Wave Profiler identifies the card, it displays the results and asks whether you want to use the default settings for that card or to override them:

If Wave Profiler has identified your card correctly, you may accept the default settings. Otherwise, Wave Profiler will run a series of tests to attempt to determine the correct DMA settings. Usually this process is successful; however, if it is not, you will need to enter the correct settings in the Advanced Windows Multimedia Configuration dialog box.

To determine the correct settings, consult your sound card documentation. Our **website**, at www.cakewalk.com,contains the latest DMA settings for commonly used sound cards.

The Wave Profiler utility runs automatically the first time you run Cakewalk. You need not run it again

unless you install a new sound card or an updated driver for your current sound card.

Wave Profiler will not analyze the card at the 48 kHz sampling rate. It assumes that 48 kHz settings are the same as 44 kHz settings. If your sound card doesnt sync to 48kHz, you may need to enter the settings manually.

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Data Directory
This item specifies the directory in which Cakewalk Pro Audio stores audio data files. You many want to keep your audio files in a separate data directory or on a different drive; just be sure to enter that data directorys path here.

> **Note:** Do not casually change the data directory! Any.WRK files that contain digital audio will be unable to locate their audio files if you enter the wrong directory.

Take Vault
This feature safeguards against accidental loss of recorded takes. When you choose a Take Vault, all newly recorded material will be saved as.WAV files in the specified directory. Cakewalk will use the files time and date of creation as the filename.

Cakewalk will never automatically delete files in the Take Vault when you choose Clean Audio Disk or Undo. You must delete Take Vault files by hand.

Copy and Manage Imported Files
By default, Cakewalk will make a new copy of any audio data imported via the Insert | Wave File command. If you dont choose this option, Cakewalk will attempt to share the original file, thereby saving disk space.

If you accidentally delete the original audio file, its gone forever!

Enable Read Caching and Enable Write Caching
Choosing either of these options lets Cakewalk bypass the Windows 95 disk cache while reading or writing audio data. Cakewalk will usually perform best with all caching disabled. If your computer has an older IDE disk controller, or a disk controller that does not use DMA transfers, enabling caching may improve Cakewalks audio performance.

Polyphony
This determines the maximum number of audio events that may be mixed in real time. The value must be greater than zero.

Polyphony determines the maximum number of audio events that may be played during the same 1/4-second time interval. This means if you have one track consisting solely of end-to-end audio events, youll need polyphony=2 to play it back.

Each unit of polyphony consumes 64KB of memory at 44.1kHz, and 22KB at 11kHz. If you dont have a lot of RAM in your machine, dont set this value larger than necessary. Note that if your song overflows the maximum polyphony voices, Cakewalk Pro Audio will steal voices, much like what happens in a polyphonic MIDI synthesizer.

Queue Buffers and Queue Time (ms)
When Low-Latency Mixing is disabled, you can set the number of Queue Buffers digital audio buffers used for playback. Increasing this value lets Cakewalk Pro Audio use more memory, thereby lessening the chance of hiccups in playback.

When Low-Latency Mixing is enabled, you can set the Queue Time in milliseconds. This defines how quickly Cakewalk responds to Volume and Pan messages. Lower values may make Cakewalk respond faster, but too low a value may cause hiccups during playback.

Scrub (ms)
Scrub determines the length of each snippet, in milliseconds, that you hear when you scrub in the Audio view.

Freeze Frame
This determines the number of times an audio snippet repeats when you scrub in the Audio view and hold the mouse still.

Enable Simultaneous Record/Playback
Check this option if your audio hardware is supposed to support simultaneous record and playback, but for some reason is unable to do so.

Use Wave-Out Position For Timing
Select this option if you have sync problems between MIDI and audio tracks. (In earlier Cakewalk versions, this option was available as the AltTiming=1 variable in AUDMM.INI.)

DMA
These options are critical for proper synchronization between audio and MIDI in Cakewalk Pro Audio. They must be set to the proper values for your particular make and model of sound card. Use the Wave Profiler utility to analyze your hardware and automatically enter the appropriate DMA values.

SMPTE/MTC Sync
Cakewalk gives you three choices for synchronizing your audio tracks to SMPTE or MIDI Time Code:

- Freewheel-allows audio to drift away from SMPTE time.
- Normal-may introduce slight audio distortion.
- High-Quality-requires Pentium CPU or better.

Note: Choosing Use Wave-Out Position for Timing disables these options.

Clip Audio Mix Upon Overflow
When this option is enabled, Cakewalk will clip every mixed output sample instead of letting it wrap, or overflow. This often reduces the audio artifacts of mixing too hot, and creates a warmer, more pleasing type of distortion when you overdrive tracks. You may find it especially useful on guitar-heavy mixes.

This option adds more overhead to the mix engine, so you may notice a reduction in the maximum number of playable tracks when clipping is enabled.