



. studio .

MIDIFILE TO CSOUND SCORE AND ORCHESTRA CONVERTER

High End Digital Audio Rendering

MIDI2CS - FAQ

© freeware by [Songlab](#)® 1995, 1996

at <http://www.snafu.de/~rubo/songlab/midi2cs>

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frequently asked questions

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faq answers

Q1: What is Midi2Cs ?

[Midi2Cs](#) is a music production tool. It enables 'music production dummies' to use the worlds fastest and most powerful software sound processor [Csound](#) without almost any knowledge about it.

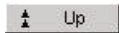
Midi2Cs is designed to produce Csound input files from MIDIfiles. Csound plays the created input without any further modification in realtime on fast (*n*x) machines.

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Q2: What is "audio rendering" ?

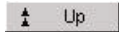
Audio rendering is a new term for **calculating sound**.

The sense of audio rendering is to get the highest possible sound quality directly to harddisk for mixing without additional analog equipment.



Q3: Why should I create WAVs from MIDIfiles ?

You can create high quality audio tracks for cutting and mixing in your harddisk recording system. Also you can prepare studios sessions by using digital PC/ADAT transfers. This is the most important case, because it saves much time and money in expensive studios.



Q4: How can I create WAVs from MIDIfiles in realtime?

If you'd like to get the highest possible quality it is not preferable to do it in realtime for several reasons.

- MIDI communication causes variable delays up to 30ms which makes your song less danceable if you are using lots of rhythm instruments. You can hear that.
- Realtime rendering software on PCs uses mono samples and rates less than 22kHz to be able to do it. This is maybe acceptable for people playing midifiles, but not enough for any music production.
- If it is done by a soundcard you'll probably do not have enough memory on board and very often bad soundchips. So the saved output is not 'high end digital audio'. It's just a WAVfile containing crappy soundbytes.

Maybe you'd like to try out 'High End Digital Audio Rendering'. Therefore you should take a look at my tutorial. This shows how you can do it using Midi2Cs and Csound. You will find it at

<http://www.snafu.de/~rubo/songlab/midi2cs/tutorial.html>.

If you just want to create a WAVfile easily for hobby purpose take your wavetable manual and do it that way or watch out for Timidity, Cubic Player and others. You can start on Songlab's **Music Producer's WWW links** page at

<http://www.snafu.de/~rubo/songlab/musichops.html>.



Q5: Why use Csound to do the rendering ?


The reason I choose Csound for soundprocessing was explained best by [Tommy Anderberg](#):

Csound was a nice experiment when it came out. It originated in an academic environment, on workstation or mainframe class computers. It's popular in academic circles because for a long time only universities had enough

computing power to do that kind of thing.

And that's not all. Its success story is still going on. Csound always has been the standard other programs had to look at, because:

- Csound is taught around the world in nearly every university that has a studio for electronic music.
- Lots of students at MIT and elsewhere are working on it to enhance it with every new sound synthesis you are able to think of. Rendering from samples is just the smallest part of it.
- Because Csound was developed in times where computers were slow it is speed optimized and therefore "the fastest thing around the block" (Jean Piche). Some Csounders just finished the Windows realtime version.
- With Midi2Cs also novices are able to start using Csound without having a degree in electronic music.

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Q6: Do you have a version of Midi2Cs for ...

DOS ?

yes.

Windows ?

Not yet.

Linux ?

yes.

Mac ?

You can use *Midi2Cs* in the DOS box of *SoftWindows*. It is not as fast as on a PC, but it works. After creating score and orchestra you'll have to load and save it with a Mac Editor like *BBEDIT* to make sure that the EOLs (end of lines) are in Mac style.

SunOS ?

yes.

SGI ?

not yet.


Alpha ?

not yet.

Atari Falcon ?

Probably I'll never have. Who uses Csound on Atari Falcon ?.

What else do you need ?

 Up

Q7: Where do I get a good GM library ?

I'll try to explain how you can build your first GM library without to much effort:

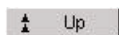
- Get yourself the GUS patches.
- Get a tool that is able to convert the GUS patches into *.AIF (for instruments) and *.WAV (for drums). Awave 3.x (at <http://www.windows95.com>) should be doing a good job for Windows '95 users.
- Rename them to:

```
#.wav      ('#' - instrument number of the MIDI drum set)

note_#.aif or
#_note.aif ('#' - instrument number of the MIDI instr set
            'note' - tone denotation (c#3, a5, g1, ... ) )
```

This should be a good start.

If you have already done the conversion and you've put those samples somewhere on Ftp or Web space I'd appreciate to add your link here. It would be also very useful to have a program that does the suggested conversion automatically.



Q8: What soundcard is best ?

This depends very much on what you are going to do with it. I do not recommend any soundcard for music production. NO soundcard is professional. I am using digital I/O directly to DAT and a cheap FM soundcard for midifile preproduction stuff.



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