Midi Humanizer

An Interactive Midi Player

Midi Humanizer Help

What is Midi Humanizer about?

Midi Humanizer is an interactive Midi player. You can use it to play an arbitrary Midi file, interactively. The Midi Humanizer does not automatically play the whole Midi file. Instead it lets you play the file note by note. Just connect you Midi keyboard and use it as an input device. Each time you hit a key on your keyboard, the midi file advances one step.

Important note: The Midi Humanizer does **not** produce any sound by itself! It only generates Midi data. Therefore you need to connect its Midi outputs to a device, which is able to handle Midi data. In the simplest case this would be the default midi implementation of your system. For example Windows 7 has the "Microsoft GS Wavetable Synth" midi device. But these default device does not sound that good. So normally you would assign the Midi output to a Digital Audio Workstation (DAW) like Cubase or to any other Midi instrument.

Features

- Play back Midi file manually by using your Midi keyboard or your computer keyboard
- Can work with arbitrary Midi files
- Route the Midi to any Midi device in your system.
- Select different Midi out devices for each track of your Midi file
- Piano roll, which visualizes the Midi data.
- Different options for midi playback. E.g. disable track and set chord threshold.

Standard Workflow

1. Create a virtual midi device/cable. On Windows I recommend the free "loopMidi" tool by Tobias Erichsen (http://www.tobias-erichsen.de/software/loopmidi.html). On a Mac, this functionality is part of the operating system.
2. Start the Midi Humanizer
3. Klick on the "Load Midi File" icon and load the Midi file you want to play. As a result the Midi file loads and the Midi data is displayed in the piano roll window.
4. From the "Midi Input" drop-down menu choose a midi input (unless you want to use the computer keyboard as input).
5. There is a special track window called "Change all tracks". Use its "Midi Out" drop-down box in order to select the Midi output for all the tracks.
6. Open your DAW (for example Cubase).
7. Use the Midi device from step 5 as an input.
8. Start playing!

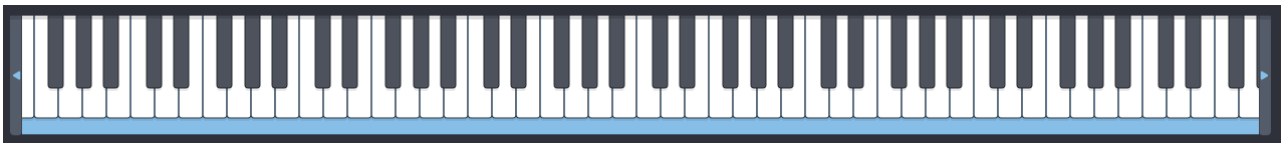
How to play

Using a midi keyboard

The best way to play the Midi Humanizer is to use an external Mid keyboard or digital piano. Power on and connect the Midi keyboard before starting the Midi Humanizer application. Once you start the Midi Humanizer, the device is available from the "Midi Input" menu.

Using the computer keyboard

If you do not have a Midi keyboard, you can use the virtual midi keyboard, which is part of the Midi Humanizer. It is displayed at the bottom of the application:



If you click on it with the mouse, it will play the note which you clicked. Once you have clicked on it it has keyboard focus. Once it has focus you can use your normal computer keyboard to trigger it. Just test one of the following keys: "a-s-d-f-g-h-j-k-l".

Choosing an output

The Midi Humanizer application does not generate sound by itself. Instead it creates Midi data. Therefore you have to select a Midi output, where the Midi data should be sent to. Every track in a Midi file can be assigned to a different Midi output. Just select the desired output from the "Midi Output" menu. Additionally you can assign a Midi channel from the "Midi Channel" menu. A Midi channel is not the same as a Midi output. A Midi channel is part of a Midi output. Every Midi output has 16 Midi channels.
You can read more about how to create virtual Midi cables, which can be used as an output. See the chapter "Setting up a virtual Midi cable".

How playing works

Once you have setup both Midi input and Midi output, you can start playing. When you hit a note you are going to notice, that the application is not playing the very note, which you pressed. Instead it takes the "note-pressed" event in order to step foward one chord in the Midi file. This is inidicated by notes being higlighted in the piano roll. So the Midi Humanizer application lets you interactively step through the Midi file and play it chord by chord.

Options

General options

There are three general options, which you find at the top of the main screen.

- **Midi Input.** Here you can choose the Midi Input device, which you want to use. Any Midi device, which is connected to your computer, can be used as an input. For example a Midi keyboard would be a good choice.
- **Midi Position.** Midi Position corresponds to the current playing position in the Midi file, in seconds. When you play a note, the number augments. You can also enter a value in order to jump to a certain position.
- **Chord Threshold.** Chord Threshold indicates how close notes (in the Midi file) have to be, in order to be treated as a chord. I you have a Midi file, which is based on a live performance, different notes of a chord do not start at the exact same time. Instead the start time can differ by several milliseconds. The option gives you the possibility to choose a threshold, which which allows notes with different starting position to be treated as a chord. The time is in seconds.

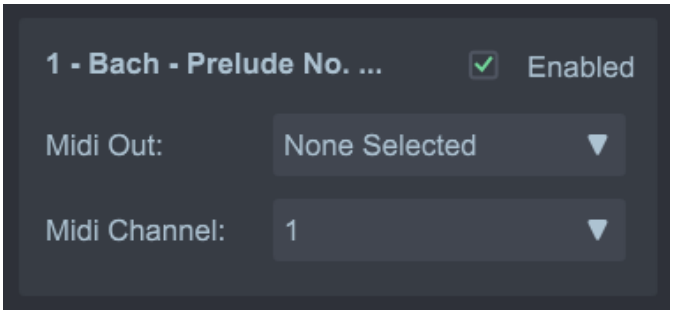
Loading and saving

The Midi Humanizer has different options to load and save your project.

-  Load a Midi file. After the Midi file has been loaded, the project settings are reset to default values.
-  Once you have made changes to your project, you can save it using the "Save Project" button.
-  Maybe you want to save you project under a different name. You can do so using the "Save Project As" button.
-  Once you have saved a project, you can reopen it at a later time using the "Open Project" button.

Track panel options

A Midi file can consist of several tracks. Each track can contain several note and Midi events. Each of these tracks is displayed by the Midi Humanizer.



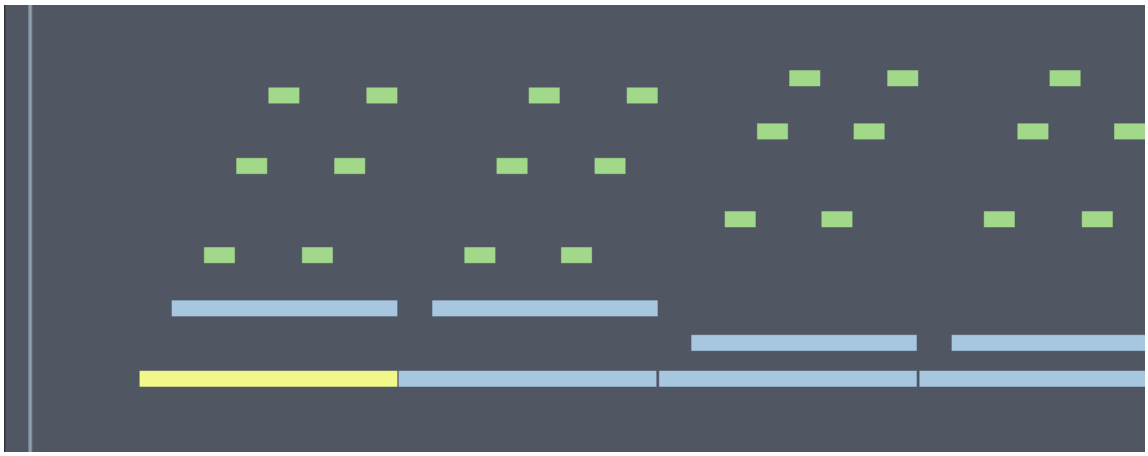
Every track has a number. Most tracks also have a name. In the above example the name is "Piano right". A track can be enabled or disabled. If a track is disabled, the Midi events in it are not played. But the most important option of the track panel is "Midi Out". The "Midi Out" option lets you specify the Midi output. The Midi Humanizer does not create any sound itself. Therefore you have to assign a Midi output, which is routed to a DAW (e.g. Cubase, Garageband, etc) or to a virtual instrument. The routing is done via "virtual midi cables". You can read more about them in the section "Setting up a virtual Midi cable". The last option of the track panel is the "Midi Channel". Every Midi output has 16 different Midi channels, which you can choose from.

Change all tracks

A Midi file can consist of many tracks. Sometimes you might want all of these tracks to use the same track option. For example you might want to assign all tracks to the same Midi output. For these cases, there exist a special track lane called "Change all tracks". Any changes in this track, affects all other tracks.

The piano roll

The central element of the Midi Humanizer GUI is the piano roll. It displays all Midi notes and it shows, which notes and chords are currently beeing played.



Note colours

Every note is displayed according to its starting position and length. Notes can have several colours to indicate different information.

- Light Grey notes are normal notes.
- Yellow notes are currently beeing played or held by the keyboard.
- Green notes indicate that the track, which these notes belong to, is currently highlighted.
- Dark Grey notes are disabled and won't be played.

Changing playing position

You can scroll the piano roll, in order to look at other parts of the Midi file. If you want the piano roll to start playing from a certain position, click inside the piano roll. A light grey line appears, indicating that the playing position has been changed. Also the "Midi Position" text field is updated accordingly.

Zoom

Above the piano roll you find a "+" and a "-" sign. These buttons let you zoom in and out. In-between the two buttons you find a text field, which shows the current zoom level. There you can enter a specific zoom level

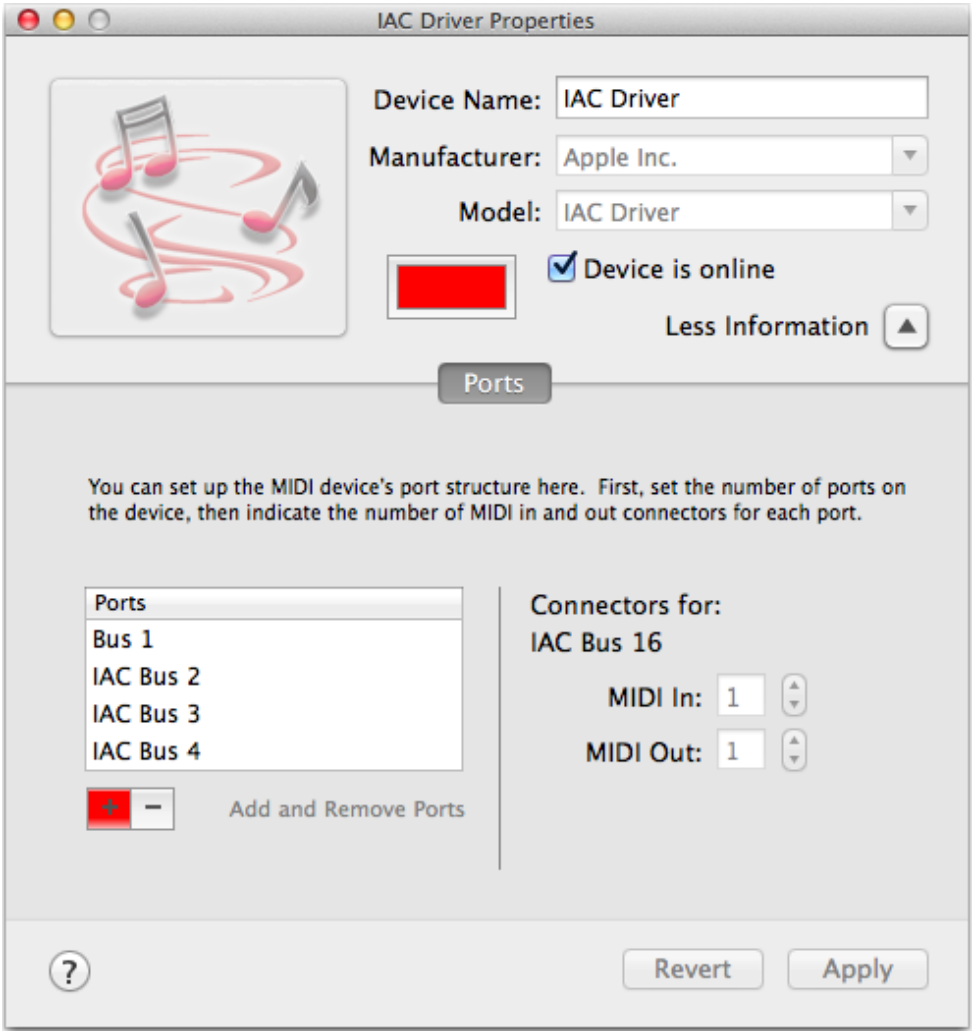
Setting up a virtual Midi cable

On Mac/OSX

On OSX virtual Mid cables are already part of the operating system. In order to activate them proceed as follows:

1. Open the "Audio Midi Setup" utility, located under "Applications > Utilities".
2. Open the MIDI window
    - in OSX 10.5, click on the "MIDI" tab
    - in OSX 10.6 and later go to WINDOW > MIDI WINDOW (or MIDI Studio)
3. Now you should see a Window similar to below screenshot:

4. Double click on the "IAC Driver" icon to open it. A new window appears:

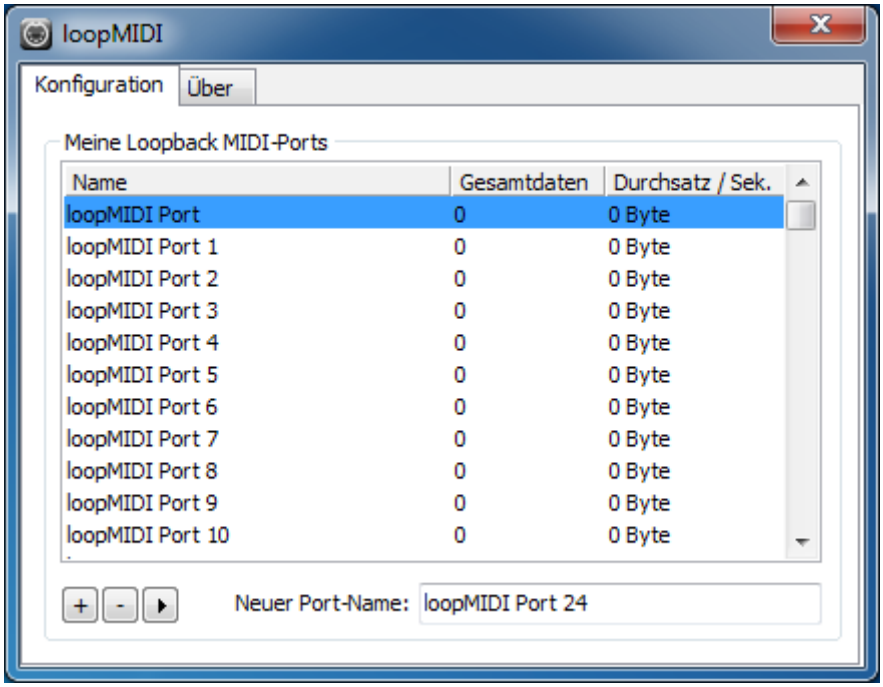


5. Klick on the "+" icon in order to create one or more virtual Midi cables.

On Windows

On Windows there are different options for third party tools, which provide virtual midi cables. I recommend the free "loopMidi" tool by Tobias Erichsen (http://www.tobias-erichsen.de/software/loopmidi.html).

Once you have installed the application, you are presented with the following interface:



Click on the “+” icon in order to add new virtual midi cables.

- The End -