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Voice-Tracker user guide

1. General presentation

Name: Voice-Tracker
Categories: MIDI and audio editing
Plug-in: NO
Versions: 0.0 (Windows)
Platforms (systems): Windows (from Windows 98)
URL (last log-on date):
http://perso.wanadoo.fr/lebazar/voicetracker.zip
(15/10/2003)
Size of file to download: 180 Ko
After decompression, use Meter.exe
Language: French
Skill level: Advanced

2. Technical description

Functionalities

This software allows you to transform an audio signal into MIDI data. The pitches recognised are transformed into MIDI notes. The aim is to whistle or sing in front of a microphone and have this signal transformed into MIDI notes in order to use them with a synthesiser, a sequencer, etc. It analyses the sound spectrum, determines the energy peaks and transforms the frequencies detected this way, into MIDI notes. The detected frequencies are memorised in a table that can contain up to five tracks recorded one after the other.

Settings

Number of analyses per second

The number of analyses per second determines the number of notes to be captured per second. There is no need to go above 10 analyses per second. With an older computer, it is better to do less.

Width of spectum

The wider the spectrum, the more it will be pulled to the higher tones. For lower pitches, it is advisable to reduce the width.

Detection threshold

The spectrum is shown in the grey zone. Lower frequencies are to the left and energy levels are represented from top to bottom. Background noise therefore stay at the top of the image and energy peaks point down. Start off the analysis by clicking on "Essai" ("trial"), then click in the grey zone so that the red zone is to the left of the first peak and the black zone below the background noise. The red zone is set with the "fréquence de marge" (margin frequency) and indicates frequency 0 Hz. No pitch will be detected to its left. In other words, it limits the generated MIDI notes in the bass

Acquisition of MIDI notes

Two "methods" are available to fill a five-track table with frequencies detected while playing: "Insertion" (only new notes replace those on the table) and "Remplacement" (all notes on the table are replaced).

MIDI rendering

If all the notes are separated by a short silence (in other words detached), choose "Blanc" (white). The software can generate a new MIDI note if the space between one frequency and the next is bigger than one note value. Set this value in "Ecart en demi note" ("space in half-tone", if for instance the frequencies are in half-tones). To generate as many notes as there are frequencies, choose "Case" ("box"). Each box on the table will now correspond not only to a detected frequency, but also to a MIDI note.

"Prendre" ("take")

When a note stays the same for several successive frequencies detected (several boxes on the table), a choice must be made between a note from the average of these frequencies or from their maximum. Options are available to fine-tune the correspondance between frequencies and notes.

"Accompagnement" ("accompaniment")

It is possible, if the computer allows it, to play each MIDI note immediately as it is acquired.

MIDI editor

The table forms a small five-track MIDI sequencer. A scrolling menu allows you to choose the instrument played by each track. The "Play" and "Stop" buttons control the playback of the MIDI data stored in the table. The content of the boxes on the table can be edited, for instance filling in numbers, copy, paste…

Saving in a MIDI file

The result can be saved in a MIDI file (.mid) that can be read by any sequencer and partition editor: "Fichier" ("File") menu, "Enregistrer" ("Save").

To save the settings

Go into "Réglages" ("settings") to save the settings.

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3. Detail of the different windows

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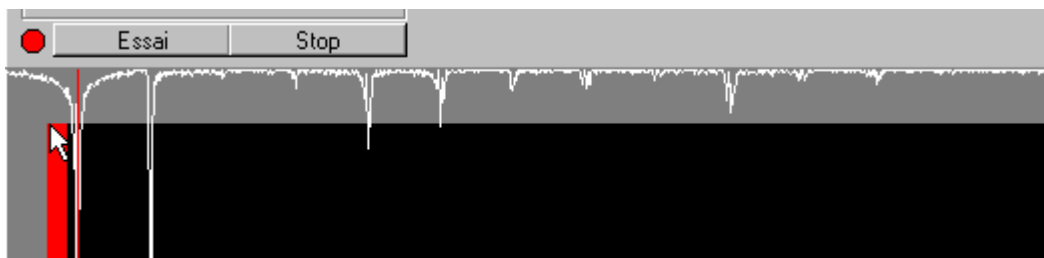

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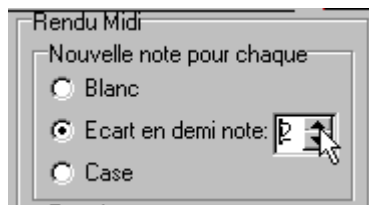
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"Prendre" ("take")

When a note stays the same for several successive frequencies detected (several boxes on the chart), a choice must be made between a note from the average of these frequencies or from their maximum.

Options are available to fine-tune the correspondance between frequencies and notes.
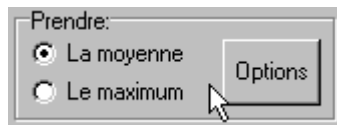
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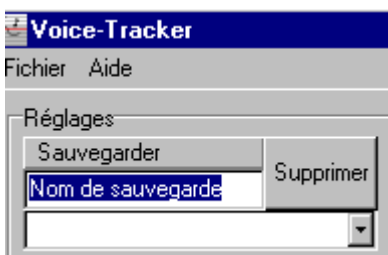

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To save the settings

Go into "Réglages" ("settings") to save the settings.

4. Comments, tips

The audio signal should be as clean as possible (no background noise or interference). A high-pitched melody with well separated notes is easier to detect.

The main difficulty lies in setting the detection threshold in the "Essai" ("trial") phase. The result depends to a large extent on this setting.

The audio signal should be monodical, since the detection is not polyphonic.

By default, the MIDI notes are played by the sound card synthesiser.