Big Tick
http://www.chez.com/rainbowvst

TickyClav

1. Overview

TickyClav is a **free** program that attempts to emulate the ultra-funky sound of the Hohner Clavinet.
Like all our synths, TickyClav can be used either as a standalone synthesizer (PC-only), or as a vst plugin (all platforms).

2. Installation

The downloaded package should consist in the following files:

TickyClav.dll	The actual plugin file. You should copy this file into your vst plugins directory before being able to use it in your favourite vst host.
TickyClav.exe	The standalone version of the synth
TickyClav.pdf	The document you are reading right now !
TickyClav.fxb	The default presets bank for the synth.

3. Interface description

TickyClav is based on a physical model of the original clavinet. A modified, non-linear version of the Karplus-Strong algorithm is used to simulate the strings vibration. Then, two electric pickups models simulate the original pickups of the instrument. Just like on a D6 model, it is possible to select various combinations for the pickup outputs. Finally, a wah-wah pedal simulation is also included for that funky sound !

The control parameters are:

(20) Pickup 1	The physical location of the first pickup along the string
(21) Pickup 1	The physical location of the second pickup along the string
(22) A/B/A+B/A-B modes	The pickups output modes (individual, dual, dual and out-of-phase). **One of these must be engaged for the synth to produce sound !**
(19) Damping	The amount of damping on the string
(18) Brightness	The overall tone brightness
(23) Click	The amount of click noise on notes release
(26) Rez	The amount of resonance for the wah-wah effect
(28) Low	The lowest frequency of the wah-wah effect.

(24) LFO/Follow/Manual	The mode of the wah-wah effect: in manual mode, the wah frequency is controlled by the "value" knob. In "autowah" mode, it is controlled by a low-frequency oscillator. In "follower" mode, it is controlled by the amplitude of the signals from the pickups.
(25) Value	If the wah is in "manual" mode, this selects the current frequency. If the wah is in "autowah" mode, it selects the speed of the autowah. If the wah is in "follower" mode, it selects the sensitivity of the follower.
(7) Level	The main output level
Voices	Controls the maximum number of sustaining notes the synth can play. The internal voice stealing algorithm will try to reuse any non-sustaining notes. If the same note than the one being played is already in use, it will be reused immediatly. Otherwise, the program will try to find a note to steal using the following rules: • never steal the lowest playing note • if there are notes currently being released, but not terminated, steal the one that has been playing since the longest time • if all notes are sustained, steal the one that was played with the lowest velocity.

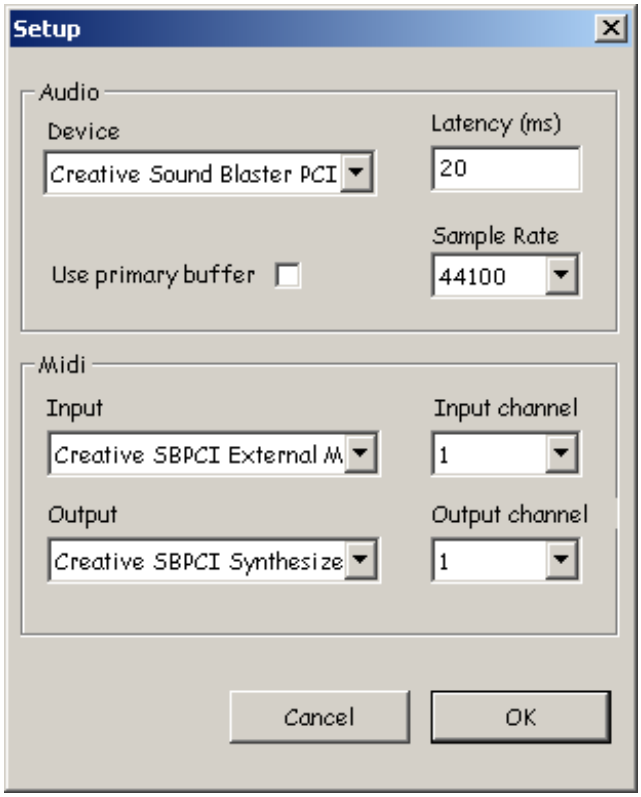
The number between brackets in the above list is the midi controller that can be used to control the parameter.

Every changes you do to a patch are stored into a temporary patch. This temporary patch is commited into one of the 8 patches slots whenever:

- You save the current bank. The temporary edits are then stored to the currently selected patch slot.
- You use alt-click on one of the 8 patches buttons. The temporary edits are then stored to the clicked patch slot. You can use this feature to quickly copy a patch in any of the 8 slots.

4. Standalone operation (PC only)

Running the TickyClav.exe file will launch the standalone version of the synth. In this mode the program does not require a VST host, but is directly controlled by a MIDI input device. You can configure the standalone mode settings by clicking on the setup button, in the top right bar. This should bring up the following window:



The audio section, to the top, configures settings for the audio (DirectSound) interface:

Device	The audio device to use.
Latency	The desired playing latency (for 44100 sample rate). Experiment with this value, too high a value will cause a noticeable delay when playing your MIDI keyboard. Too low a value will cause audible noise and crackle.
Use primary buffer	When set, the system will use exclusive access to the audio device. This will allow for better latency settings, but will prevent other applications from playing sound while the synth is in use.
Sample rate	The desired sample rate. The higher this value, the lower the actual latency, but the higher the CPU usage.

The midi section below defines settings for the MIDI interface:

Input	The midi input device to use.
Input Channel	The desired MIDI input channel.
Output	The midi output device to use (currently not used by TickyClav)
Output Channel	The desired MIDI output channe (currently not used by TickyClav)

All these settings are stored within the registry, under the following key:
HKEY_CURRENT_USER/Software/BigTick/TickyClav
If you wish to uninstall the program (and have used the standalone version) you should remove this key manually.

5. Credits

Credits go to:

- Markus Tinner for the beautiful user interface
- Alejandro Ceppi for the samples of the original D6 model.
- Warren "Dub Jay" for compiling the Mac versions.

and to everyone who helped beta-testing this thing.
Thanks to all, if you make anything nice with this program please let us know.