

Tiple Cheese V1.0

u-he.com

Thanks for checking out Triple Cheese! I think it's a great sounding plugin, even though it's free and not too capable. As the name says, it's great for cheesy sounds, but it has also room for some surprisingly nice things.



Preface

Triple Cheese is a 16-voice software synthesizer plugin. It should work on Macs (Mac OS X 10.3.9 and up, both PowerPC and Intel processors) and PCs (Windows XP). You need a hosting software that's either compatible to VST or AU to run it.

If you don't know what this is all about, go to <http://www.google.com> and search for "VST AU plugin synthesizer host".

In any case, please read the license agreement. It's freeware, but there's still some terrible stuff in there!



Installation

On Windows just doubleclick the installer. It'll guide you through the process. Just make sure that you have "msvcrt.dll" in your SYSTEM32 directory. It's badly needed, but sometimes it disappears. If you don't have it, grab it here:

<http://www.dll-files.com/dllindex/dll-files.shtml?msvcr71>

On Mac, drag files here:

TripleCheese.component: MacHD/Library/Audio/Plug-Ins/Components/

TripleCheese.vst: MacHD/Library/Audio/Plug-Ins/VST/

Presets: MacHD/Library/Audio/Plug-Ins/Presets/u-he/Triple Cheese/

To uninstall, just delete all these files.

Synthesis concept

Unlike many other synthesizers that use synthesis forms like subtractive (oscillators and filters), fm (interacting oscillators), additive (piled up sine waves), Triple Cheese mainly uses various forms of comb filters (chromatically tuned delays) to create or modify sound. So, it's a bit different from most of the stuff you've already seen. No, it does not have any analogue sounding resonant lowpass filter.

The basic idea is this: You have three cheesy modules (hence Triple Cheese!) that either generate sound, or manipulate what's been created by previous modules. The first module can only generate sound, while the second and third module can also manipulate.

Each of the three cheesy modules looks like this:



The selector on the top left holds a menu for 8 different modes it can work in. The knobs in the top row (Tune, Detune, Vibrato) determine the module's tuning relatively to the note that's played.

The eight knobs below that show 4 parameters (Tone, Damp, Volume and Pan), with their respective modulation sources and modulation amounts. A modulation amount knob with "..." has no modulation source assigned, so that a menu with all modulation sources pops up when you click it. If you want to change an assigned modulation source, just right-click or ctrl-click that knob for the menu.

While Volume and Pan may be obvious parameters, Tone and Damp depend on the actual mode of any cheesy module. Here's a little chart:

Mode	Description	Tone	Damp
Pluck	Creates a pluck based on noise excitation, good for plucked strings	spectral richness of the noise excitation	drains higher partials out of the pluck. The decay time goes shorter with higher damping
SawPluck	Creates a pluck based on a sawtooth waveform	same as above, at 0.00 it's almost a sine wave	same as above
SquarePluck	Creates a pluck based on a square wave	same as above	same as above
Bowed	creates a constant noisy sound that is somehow reminiscent to bowed strings	makes the pitch of the noisiness appear higher or lower	if damp is low, it sounds a bit like a violin. If damp is high, it's more ensemblish
Blown	creates a noisy sound that's reminiscent to flute and reed. Caution: This mode ay sound pretty out of tune	tunes the resonance of the tube, closing in on partials. Can sound overblown	the more damp, the less noise is inside here
Noise*	Creates white noise	–	lowpass filters the noise a bit
DC*	Injects a dc offset. Almost only useful in combination with a subsequent Resonator module	–	–
Crackle*	Creates crackled noise	the amount of crackles, the higher Tone, the less crackles come through	lowpass filters the crackles
Resonator**	A stereo comb filter. Replaces the input signal from previous modules by its output!	Feedback of the comb filter	lowpass filters the feedback
Damp**	A combined 12dB lowpass and highpass filter. The center frequency (Cutoff) is tuned relative to the note played	Tunes the cutoff of the lowpass filter	Tunes the cutoff of the highpass filter
Stressor**	Another stereo comb filter, but with a waveshaper in the feedback path and 100% feedback	Amplification before waveshaping	lowpass filtering after waveshaper

* only for cheesy module one

** only for cheesy odules two and three

Note that for "Resonator" and "Damp" the Pan parameter is a stereo balance. Also, Detune detunes left side and right side in opposite directions for "Resonator" and "Stressor"

So, this is what it's all about. It's pretty flexible though, almost like a miniature modular synthesizer. Examples:

SawPluck – SawPluck – SawPluck: You can hear three SawPlucks

Noise – Damp – Resonator: You can hear white noise going through a lowpass and a highpass filter before entering a feedback comb filter

DC – Resonator – Damp: A square wave–alike bell with filters

Modulations

For modulation there are a bunch of typical Midi Controls, 2 classical ADSR envelopes with a Fall/Rise parameter on Sustain, a Gate control (key pressed or lifted) a global tempo-syncable LFO and a Vibrator. Latter is basically an LFO for each voice, with delay and amplitude modulation.

All this stuff should be pretty self explanatory.

Effects

Triple Cheese also has a really cheesy built-in effects section. The quality isn't too bad, but it really only covers a few essential effects:

Chorus1: A wide chorus with pretty long center delay

Chorus2: A bit narrower and better suited for percussive material

Flanger: A chorus with short center delay, suited for flanging (feedback!)

Phaser: Classical out-of-phase phaser effect

Delay1: Stereo delay synced to host tempo in quarters

Delay2: Stereo delay synced to host tempo in eighth notes

Delay3: Ping Pong delay based on quarters and dotted eighths

Reverb: A cheesy reverb based on only 4 delays

Note that you can modulate the delay times of the Delay effects which can add some nice warmth to the sound. Same for the reverb, which might sound a bit out of tune with too much modulation.

Global Parameters

Well, these are all self explanatory, aren't they? Volume, VCA source (Gate or one of the envelopes), few/medium/many voices, Portamento time, Pitchbend...

Presets

Triple Cheese comes pre-equipped with a bunch of presets by fine patch designers. You can browse through them within its user interface, either by showing the full patch list of its patch directories or by the "<" and ">" buttons on the bottom.

You can always get the full list of presets in the current directory by clicking the big value display in the center!

You can also save presets directly from the gui into the currently selected patch directory.

A word to Mac users: Please make sure that your local patch directory is *writable* when saving presets – MacHD/Library/Audio/Presets/u-he/Triple Cheese/

Midi Learn

Some people love to control parameters by external Midi Devices with lots of real knobs. Although this concept has never caught up on me, it's available in Triple Cheese as well:

Right-click (or ctrl-click for those with one-button-mice) a knob in Triple Cheese's gui. Then turn the knob on your hardware midi device that you want to assign to it. Boom. There you go.

To get rid of such an assignment, just right-click (or ctrl click...) that knob twice.

A word about this: Some hosts tend to reset Midi Controls i.e. when you start playback. In that case an assigned parameter will jump to its lowest most position. If you experience trouble here, just right-click (or ctrl-...) that knob twice.

Okay, now you've made it through the manual! Congrats and...

enjoy,

;) Urs

urs heckmann
www.u-he.com
urs@u-he.com

Credits:

Copyright 2006, Concept, Design & Development: Urs Heckmann

Thanks for presets & help to (in no particular order)

Tasmaniandevil (tas), Tim Conrardy (TC – like Triple Cheese), biomechanoid (bio), Gordon Sauve (GJS), Jouni Alkio (JA), Steve Bates (b78), Stephen Wey (SW), Hans Hafner (HH), Stephan Muesch (SM), Dave VitaminD (VD), Sascha Franck (SF), Chris Scheidel (crscheid), Marius Braasch (luCi) and to those that I might have accidentally forgotten in the rush shortly before deadline.

Thanks for tuz on kvraudio.com for motivating me to do something like this!

Also thanks to following projects/companies for providing helpful sources and files used in the version for Windows:

ZLib – <http://www.zlib.net/>
libpng – <http://www.libpng.org/pub/png/libpng.html>
FreeType – <http://www.freetype.org/>
Bitstream Vera.ttf – <http://www.gnome.org/fonts/>
Anti-Grain Geometry – <http://www.antigrain.com/>