



D-LUSiON is a bunch of german computer maniacs dedicated to the development of comparable cheap but cutting edge multimedia software.

Founded back in 1992, the group is an unselfish non-profit project since every incoming buck is spent right away on hard & software, pizza and bottles of coffein instead of new sport cars.

Driven by the passion for beautiful code and the search for the yet unexperienced our goal is to stimulate human creativity by providing easy-to-use, intuitive, but complex software that enables new ways of expression and interaction on widely available and cheap personal computers.

D-LUSiON is a member of PURGE.

The Brotherhood consists of:

mockery | bop | twan | cannibal | vivid

Check our homepage at www.waste.uni-essen.de/d-lusion/ for the latest chit chat.

Dump comments, bug reports, suggestions etc. about RuBBeR DuCK to rubduck@delu.bb.bawue.de.

“Und ob ihr wirklich richtig steht merkt ihr wenn das Licht angeht”

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What is a RuBBeR DuCK ?

RuBBeR DuCK is an approach to design a realtime virtual analog bassline synthesiser on PC. The program is roughly based on the TB 303. We didn't intend to copy the 303 exactly, which is said to be an impossible task, but lent the basic synthesis model, a single oscillator wave with a resonant filter sweep applied to it, and the hardware sequencer design.

We are not claiming to have come near the sound of the real thing, since this is just a deterministic digital program not a mystic analog machine.

What's that number 303 ?

The TB 303 an analog bassline built by Roland in the early 80s. It's massive use in contemporary electronic dance music made the little fancy silver box immortal.

To find out more about the 303 check the following world wide web pages, we found very inspiring:

Hyperreal's Synth Archive
www.hyperreal.com/machines/manufacturers/Roland/TB-303

The 303 page
www.teknet.ch/tb303.htm

What's the purpose of all this ?

Establishing a new world order by distributing interactive sound software that through its use, changes the perception of the world as it is, catalyses thought processes and manipulates global consciousness in a way that enables the entity of mankind to fulfil the innermost conditions of mental abstraction.

Personal regards

The idea of implementing the bassline machine in software was inspired by Gerhard Brandt. Check out his program "GB 303" found on many underground sites.

Ways to control the noise

The synthesis model used in this program is a single oscillator routed through a resonant low pass filter. The controls, represented by the sliders, are organised in such a way that various aspects of the sound can be controlled in REALTIME.

The Oscillator Controls

Oscillator Type

Select one of the available oscillator types. The form of the oscillator wave defines the sound source. The different wave types generate different forms of high order spectrums relative to the base frequency.

Volume

The Volume control adjusts the level of the oscillator output into the filter section, effects the self oscillation of the resonant filter and the sound frequency spectrum. A to high input level causes distortion in the filter section.

Tune

Sets the tuning of the oscillator. The range is 2 half tones up or down.

The Filter Controls

Cut Off

Cut Off defines the lowest possible frequency that may be reached in a filter sweep. It interacts with the Modulation control.

Attack/Decay

Controls the attack and decay rate of the volume and filter envelope. A slow decay results into buzzing, a fast decay generates more kind a tweety noise.

Modulation

The famous 303 like filter modulation control. It is linked with the envelope and the cut off control. Try fiddling around with it while something is playing.

Resonance

Defines the amount of resonance in the filter. Depending on the input volume the filter can be driven to self oscillation.

Overdrive

Factor for the output amplification, to high settings generate a linear distortion which boosts the high order frequencies.

The Sequencer Controls

Tempo

The tempo of the sequence can be set with this control. Next to it the current tempo is displayed in BPM, based on the assumption that 4 rows in the pattern define a beat.

Accent

Adjusts the strength of an accent events. The accent effects the volume and filter behaviour of a note with accent mark turned on.

The Minimalistic Sequencer

Sequencer

The sequencer holds 14 patterns (1 to E) which can be selected with the appropriate buttons. The used range of patterns in the sequence can be set up with the sequencer range fields.

Sequencer Modes

Single Pattern

Plays the currently selected pattern over and over. Nice for realtime composing, manipulate the accent and slide buttons while the pattern is running to achieve trancy beat changes.

Loop in Range

Plays the selected pattern range in a loop.

Shuffle in Range

Randomly selects pattern in the sequence range, for mind bubbling background music.

Pattern

A pattern consist of 16 x 1/16 Note Slots. For each note accent and slide can be set up.

Note Values

The note can range from C-0 to C-9 (but only notes in the range C-3 to C-8 are in a audible useable frequency). Additional a note entry can hold the last note “...” or be a note off “---“, entered through the SPACE and the DEL keys. A note entry can be transposed a octave up or down with the PAGE UP and PAGE DOWN keys. The LEFT and RIGHT CURSORS transpose it an half note step up or down.

Accent

Gives the note a bigger slap. The note will be louder and the filter sweep will go up to a higher frequency. Can be used to define the rhythm of the “melody”. (see [accent control](#))

Slide

Notes marked with slides will slide from the previous note to the given note value, the note will not be retriggerd. The slides are constant time so they always reach the given note value in the time of the duration of the 1/16 note slot.

The Future

The version you are just using is the first free public 0.85 beta sort of version. We are still enhancing the capabilities of RuBBeR DuCK. Here's a short list of what we are thinking of:

- a smoother filter
- additional weird sound effects
- DirectX sound support
- midi controllable
- enhanced response time
- joystick support
- syncable to other zerres devices
- implemented record function
- more exciting background states

You can encourage the development by [registering](#) this piece of software.

RuBBeR DuCK is just a part of something big [D-LUSiON](#) has in mind.

Additional Controls

The Sample Deck

Can be used to let a drum loop sample, or something, run a long to the RuBBeR DuCK Noise. The sync option will restart the sample every time a pattern start is reached, this can be used, in combination with the speed control, to synchronise the sample to a pattern.

Delay Module

The delay module implements a simple delay effect. The possible delay time reaches from 1 ms to 1 sec. The gain control regulates the amount of input into delay module. The feedback slider controls the number of echos that can be heard.

The delay can be turned off by setting the time slider completely to the left.

You just pressed the record button. The intended function of this button is to start recording all output of the program to a .wav file on your harddisk. But...

This feature is disabled in the unregistered shareware version. For how to pass by this limitation read on [here](#).

This program is distributed as Shareware, which means you can try this program for a certain time period to see if you like it.

But we think, a program worth using is worth a little donating.

The benefits of registering

- You don't have to stare at the shareware hint each start up
- You can use all functions of the program
- You support the development of future version

How to register

Fill in and print out the included form, in the file register.doc, and send it with \$15,- (or 20,- DM if available), payable in cash or cheque, to:

Toine Diepstraten, DeLUSION
Tennessee Allee 20 - D203
76149 Karlsruhe
Germany

In return we will send you a registration code (per email and/or letter) which you can enter under "Enter Registration Code" in the help popup menu.

The code you receive will be at least useable up to version 1.99 of RuBBeR DuCK, so you can use future versions of the program, as soon as available.

By the way

If you use the output of this program for your creativity we would love to hear it, drop us a message !

