

HammerHead Rhythm Station

software drumcomputer for Windows 95/NT

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Disclaimer

I hate this part, because you're probably not going to read it anyway....

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Or, to put it in normal English:
If you screw stuff up, it's just your problem !

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0. Freeware notes

HammerHead is freeware. You are allowed to copy it and use it just as much and as long as you like. If you make a copy of the software, all the original files (including the text) must be included. It is strictly prohibited to make any changes to any file, except for the demo .HH files and the .HUB files...

Though HammerHead costs you nothing, a small donation would be appreciated a lot. Consider it an incentive for me to make a 2.0 version with SYNC-features, MIDI-capabilities, maybe more channels and additional FX... I know you want it ;-)

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1. Introduction

Looking for an easy to use program to create some cool drumloops for use with your sampler / tracker ? Here's HammerHead... A cool Win32 program that makes drumloops on your Windows PC like a breeze.

You can edit on the fly and record your actions to a high quality and completely noise-free WAV-file. No more problems with sampling... This drum computer features 23 separate drum patches and 6 complete loops to sequence cool breakbeats right away ! Plus a feature to implement banks with 6 samples of your own... That makes a total of 35 samples at a time. Sounds like enough to me to kick it away.

2. Creating a simple drumloop

- **Start HammerHead** by clicking on that cool hammer icon in your HammerHead directory. The program should be called "hammer.exe".
- **Select Channel 1.** You do this by clicking on the button saying "channel 1". The button then should light up. The other channel-buttons are blackened-out. (Look at those cool leds !)
- **Choose your instrument.** We'll take the "Hardcore 909 BD 1". You can find it in the pull-down menu underneath the Channel 1-button. All notes you enter in channel 1 will now be these 909 Bassdrums.
- We'll edit this pattern on the fly... This means that you let the pattern play while entering notes. You can thus hear immediately what you do. **Do so by clicking on the "PLAY" button.**
- Look at the row of sixteen colored buttons. This represents one measure. One measure consists on four beats, which are made out of sixteen ticks. Using these buttons you can enter note-on messages. **Click on the first of every four buttons.** (The first, fifth, etc...) These are the yellow colored ones. You should hear a basic "four-to-the-floor" bassdrum-rhythm repeat over ad over again.
- **Repeat this for the other channels and you'll end up with a cool beat** (or a great mess...). Experimenting is the secret to everything. You'll get the feeling of it soon.

3. General features

3.1 Play

This will play the current pattern (all available measures in a row). If you press the play-button again playback will end. If you chose "Stream a whole session" and specified a filename in the "Stream to Disk" option recording will start when you click the play-button. It will not end until you click play again to stop playback.

3.2 Tempo

This adjusts the tempo ;-) The tempo is measured in Beats per Minute (BPM). Adjusting the tempo will not affect the pitch of the normal drumsamples, but does so with the samples placed between brackets (like for example "[Jungle 1]"). These samples are treated as breakbeats and will be stretched to fit exactly in one measure. This means that if you change the tempo the pitch of the beat will change according to your action. This also applies to the usersamples which have the "Stretch to measure" option checked.

3.3 Shuffle

The shuffle is an effect that gives your drumloops a bit swing. You should feel it on a not too fast pattern (around the 145 BPM...).

3.4 Measures

Each pattern consists of a number of measures. This is usually just one measure (one screen...) but you can change it to 8 measures (max). You do this by clicking on the "available" buttons. Because you can't see all measures at once, you select the measure you are currently editing by clicking on the "current" buttons. Usually you have a multiple of 4 measures...

3.5 Distortion / Feedback

This determines the effect of the digital-distortion unit. If you switch on the distortion on one of the channels, you can change the amount of distortion with these sliders. "Distortion" lets you specify how much the instruments will be overdriven. "Feedback" tells how much of the distorted signal will be fed back to the mixing-unit.

4. Channel-features

4.1 Instrument selector

The first 23 instruments are various drum-sounds. The 6 sounds between brackets are a special case: these are complete breakbeats which fit exactly in a measure. [Giz 1] and [Giz 2] can not play simultaneously. This is also true for [Jungle 1] and [Jungle 2]. Why is this ? Well, to allow you to sequence those distinctive Jungle patterns with frantic bass/snare combinations. Check out the "jungle demo" which is supplied with this program.

The last 6 instruments are user-defined samples. You can specify these samples using the separate utility called "makebank.exe", which will be discussed later in more detail.

Please note that hihats have a special behaviour too. An open hihat is shut up when a closed or pedal hihat is received. This is to emulate the real-life situation (when you hit an open hihat and then shut it, it won't sound on).

4.2 REV

The "Reverse" feature plays the samples back reversed. This can give you can-never-heard-before-sounds...

4.3 DIS

Distortion. This enables the digital-distortion unit on the specified channel.

4.4 ON/OFF

Mute or unmute channels. Just straightforward and easy and simple.

5. Menu features

5.1 New Track

Does the same as "Clear Pattern", but erases the filename in memory too. So if you press "CTRL-S" you will be asked for a new name.

5.2 Save Track / Save Track as

Lets you save your current pattern and settings to disk and specify a name for the file. Is you press CTRL-S and have not specified a name yet, HammerHead will ask you for a name.

5.3 Load Track

Lets you load a previously save pattern from a HH-file on disk.

5.4 Stream to Disk

You can record a session (everything you do) to disk, or save specific measure to disk to make it loop perfectly. Specify a filename in the dialogbox and as soon as you hit the play-button recording will start. The output-file is a 44.1KHz 16-Bit Mono WAV or a RAW data file. If you choose to save one measure (or all measures) you do not have to press "play", but the sample will automatically be generated for you and saved to disk according to you your specifications.

5.5 Quit

This exits the program. You should not use this option :-)

5.6 Clear Pattern

This erases all data in the current pattern. All settings will be set to their defaults.

5.7 486 Performance

If your computer is not really fast enough to run HammerHead, give it a try with this option turned on. The interface will get more sluggish - less realtime - but there's a chance your problems will be solved. The computation buffer HammerHead uses, is then doubled and some code is optimized for integer-operations, instead of floating-point divisions.

5.8 About HammerHead

Shows the intro-screen again, containing my E-Mail address: hint-hint-hint.

5.9 More info

What do you think this is ? Just read it...

5.10 Copy measure - all 6 channels

Copies the entire measure you are currently editing to the clipboard.

5.11 Copy measure - active channel

Copies the measure of the instrument you are currently editing to the clipboard. You can paste it to any channel in any measure...

5.12 Paste

Pastes the contents of the clipboard to the currently visible measure.

5.13 Paste Mix

Mixes the contents of clipboard with the measure you are editing.

5.14 Userbank

This lets you select an external userbank, containing 6 samples, which you can make using the Userbank Creator.

6. Userbank Creator 1.4

Because of the innumerable requests from yo'all to implement user-sample handling... I proudly present HammerHead Userbank Creator 1.4. It enables you to import 6 samples of your own. These samples are represented by the last six instruments in the instrument pull-down list (called <User 1>,<User2>,...). The user-samples are saved in the file with the extension ".HUB".

Because I absolutely do not feel like writing a routine that will recognise and parse all thousands of WAV-file formats and variations (PCM, ADPCM, 8/16Bit, Mono/Stereo,...) and compressions, I let you take responsibility over the samples. Using Userbank Creator you can load raw data to a size-limit of 256Kb (which is in fact a total of 262144 bytes).

These piles of raw samples will be interpreted as 16Bit/Mono data. If you import 8Bit/Stereo samples, you'll just hear rubbish. You may like that if you're into industrial noise ;-) but otherwise I advise you to grab a wave-editor and make you're own 16Bit/mono/44.1 Khz samples.

Each user-sample has the option "Stretch to measure". When this option is checked HammerHead will treat the sample like a breakbeat and stretch it to fit exactly in the measure - depending on the tempo. In the other case (unchecked) HammerHead will play the sample at 44.1 Khz.

7. System requirements

A Pentium (any speed) with at least 8 Megs of RAM and any 16 Bit soundcard will do just fine. The program will run on a 486 DX2-80 / DX4-100 with ample memory, but tends to crash when a lot of actions run simultaneously...

The recommended system is a Pentium 90 MHz with 16 Megs of RAM and a 16Bit soundcard with the Windows'95 drivers installed. HammerHead does not require DirectX/DirectSound to be installed, but it will not do any harm ;-)

To get optimum display-pleasure set your monitor to high (16 Bit) color or more...

New versions of HammerHead can be found at

[HTTP://INSIDE.HKU.NL/~BRAM/HAMMER/INDEX.HTM](http://inside.hku.nl/~bram/hammer/index.htm)

If you find any bugs (=undocumented features) please contact me (Bram Bos) so I can swat the little bastard. You can reach me at my E-Mail address:

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