

# De-Generator SD-Ram card and firmware update

V 1.00 Date 19.02.2019



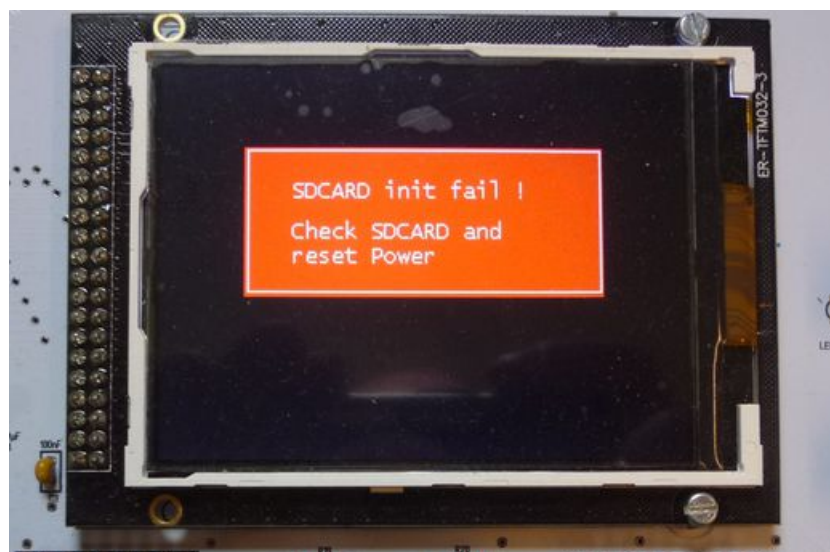
The basis of the samples and sound management in the De-Generator is the SD-Ram card.

When the device is switched on, parts of the operating system are also loaded from the SD-Ram card into the memory of the de-generator.

The complete data/sounds/samples can be downloaded from our website and copied directly to the SD-Ram card.

Without the SD-Ram card the De-Generator will not work.

You get the following error message :



The de-generator accepts SD-Ram cards from 2...64 GB.

The SD-Ram card must be formatted in FAT 32 and contains the following data structure in the ROOT .

```
Preset      -----|
Sample      -----|
System      -----|
Waveform    -----|
degenera.tor
```

---

**degenera.tor** is the new firmware. More about this later.

**Preset, Sample, System,** and **Waveform** are folders containing the following subfolders/files.

**Preset** contains the folder structure of the individual sound programs. These are arranged under Prbank00....99 and Sound000-127. Thus 99 sound banks with 128 sounds each can be managed in the De-Generator. = 12672 sounds. Should be enough for now!

**Preset**

```
-----|
Prbank00  -----|
          Sound000  -----|
                        Sample1.bin
                        Data.bin
```

**Sample** contains all samples of the degenerator arranged in banks. The de-generator can manage 99 banks with 128 samples each = 12672 samples.

**Sample**

```
-----|
Sabank00  -----|
          mySamples.Wav
```

System parameters, the start image, the button images and various waveforms are stored in the **System**.

\*\*\* The start screen PIC1.bin can be edited to personalize the device.

\*\*\* The image must have exactly 320x200 pixels and 256 colors.

### **System**

```
-----|
SHAPE.bin
PIC1.bin
KNOB.bin
SOUND.bin
SEQ.bin
USERWAVE.bin
DATA.bin
```

In Waveform user created waveforms / LFO waveforms are saved. The first bank is used to exchange sounds, or . The standard waveforms are copy-protected and cannot be overwritten.

### **Waveform**

```
-----|
Lfowave.bin
Waveform01.bin
Waveform00.bin
```

And finally the most important file : **Degenera.tor**

This contains the new firmware and is used to update the processor.

## The Firmware Update

Updating the firmware is very easy. To check with which firmware the de-generator works, the last page in the menu of the de-generator, the system page, is called up.



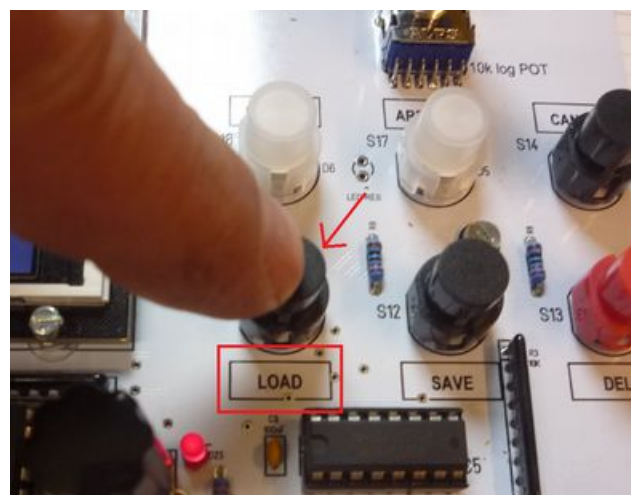
On the system page you can now see the version of the firmware .  
In our example ' **Build 5.30g Beta** '.

On our homepage we publish updates with new features or bugfixes.

If the firmware is a newer version, e.g. '**Build 532 Beta**' the new update can be downloaded as file '**degenera.tor**' from our site.

This file will be copied to the SD-Ram card of the de-generator in the root, the old file '**degenera.tor**' can be overwritten.

The '**LOAD**' key is now pressed and held while the de-generator is **switched on**. As soon as the LEDs flash the key can be released.



The LFO LED'S as well as the REC button and the LEDs and potentiometers will start flashing during data transfer.  
The transmission only takes 10...20 seconds. Then the degenerator starts with the start screen and the new firmware.

If you now call the system page in the de-generator, the new version of the firmware should be displayed.

\*\*\* Some parameters in the system page may have to be reset because old data have been overwritten during flashing.

Yep, that was the update.

Andre'  
TubeOhm 19.02.2019

acknowledgement

We would like to thank Thomas Margolf from XOR Electronics for programming the bootloader of the de-generator.

Thanks Thomas saved us a lot of time.