NDSRS Manual

NDSRS is a powerful multimedia flashcard learning application for Nintendo DS using spaced repetition system. Cards will be learned following an individual schedule depending on the actual learning progress.
NDSRS comes with a python-based Windows GUI to make it easier to build your own card sets or import already existing cardsets for instance from **Pauker** or http://www.studystack.com.

Preparing the Memory Card

Make ndsrs/ folder on the root of your ds cart.
Put ndsrs.nds and menu.raw into ndsrs/ folder
Download default.ttf off DH, or supply your own font file. Copy it in the ndsrs/ folder
Make .srs file and place into ndsrs/ folder (more later).

Ndsrs folder should now look like:
> **Root:\NDSRS\ndsrs.nds**
> > **menu.raw**
> > **default.ttf**
> > **sample.srs**

If pronounciation/sound support is used with the help of the included NDSRS-Import, the soundfiles will be place by default in:
> **Root:\NDSRS\data\snd**

Like:
> **Root:\NDSRS\data\snd\beep.wav**

If pictures are used the default place to put them is:
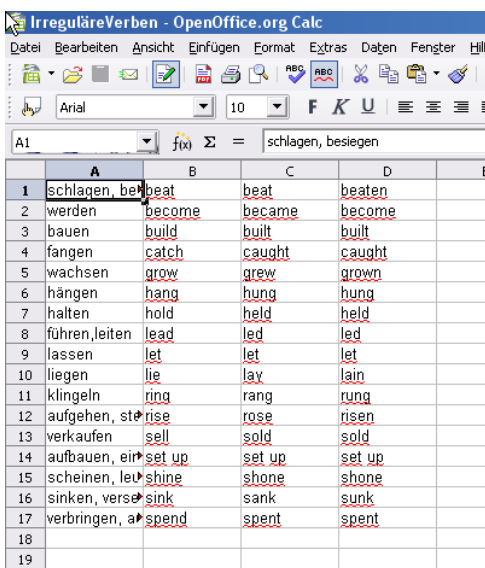> **Root:\NDSRS\data\img**

Like:
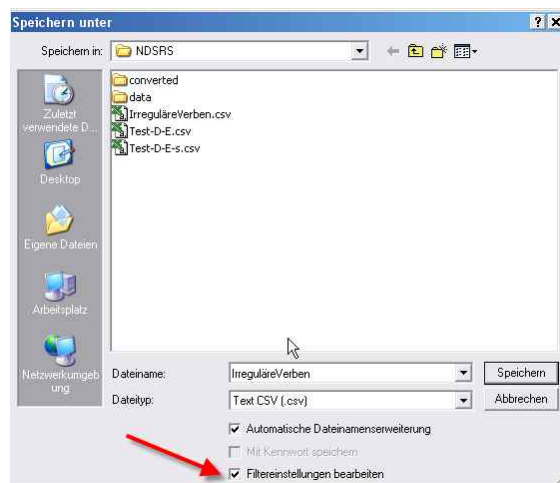> **Root:\NDSRS\data\img\math.png**

Making SRS files

NDSRS is using SRS fileformat to store the cardsets in [see explaining SRS format].
The easies way to build your own decks is explained next in 3 steps:
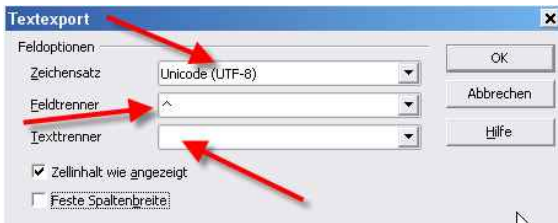
1) **Build a vocabulary list** in OpenOfficeCalc.

If newline [CR] is wanted put | as newline tag into cell. [example: "**Question:|3*3** " is shown as "**Question:**
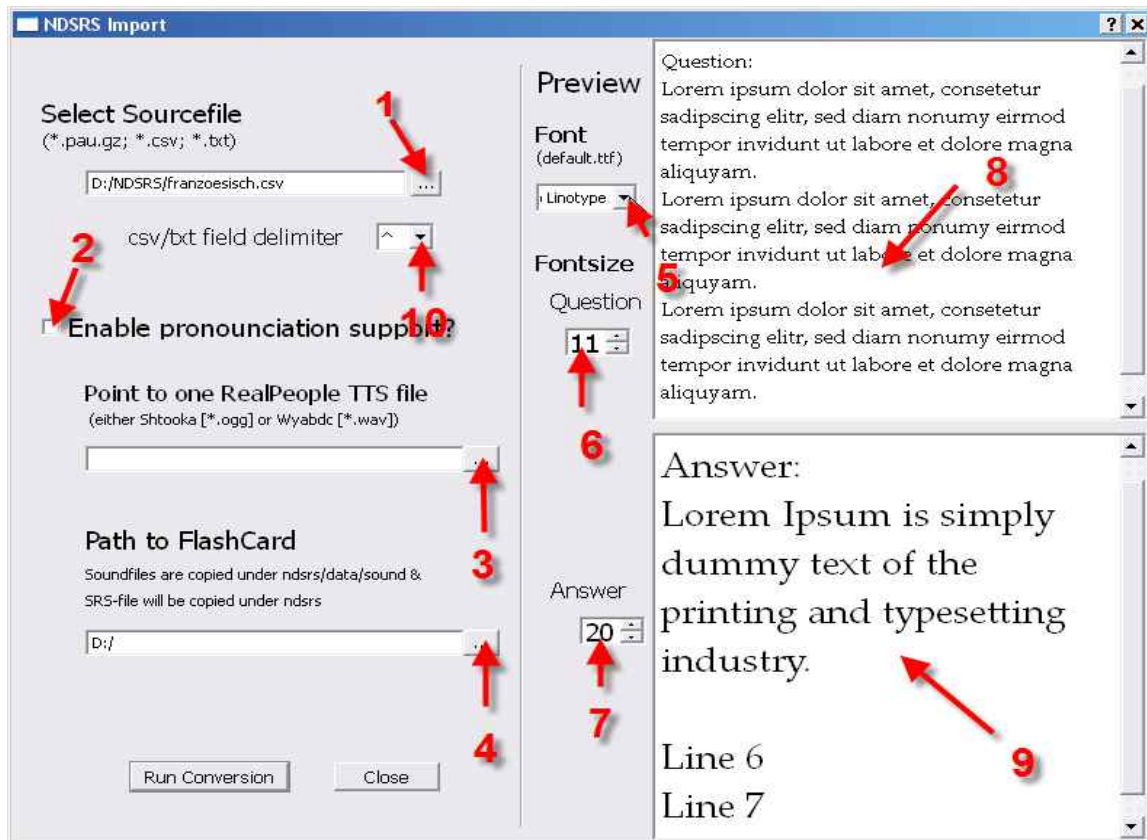> > > > > **3*3** "

2) **Export it to csv** (save f.i. as franzoesisch.csv) !!!Make sure that the filename is in pur ASCII (no öäüßáà ....).
Activate : change filter settings

Set: Character encoding to Unicode (UTF-8)
     Field delimiter to ^
     Remove text delimiter

Newline [CR] support in the decks can also be done by building the deck in **Pauker** **and converting it with NDSRS-Import.**

3) **Run NDSRS-Import**

Select:

Sourcefile (1):   It can either be a csv oder txt file exported from **OpenOfficeCalc**.oder a Pauker file made in Pauker or downloaded from **Pauker** . Make sure to use only standard ASCII signs in the path/filename [äüöß.... are not working]. (8)+(9) give a preview.

csv/txt field delimiter (10): change that only if you didn't use ^ in [2] Export it to csv {previous chapter}]

Path to FlashCard (4): Vocabulary files (SRS-files) will be stored under this path in subfolder /ndsrs.

Preview Font & Fontsize: To have a preview how it will look in NDSRS select here font and size. Standardfontsize is 14point. It is changeable with (5)+(6)+(7). (8)+(9) give a preview.

Enable or disable pronounciation support (2):To get the path right just point to one of the prepared pronounciation files [either ogg or wav (3)] f.i. **E:/ogg/abaisser.ogg** [don't point to a file with non ASCII signs, NDSRS-Import will not accept them but will normally process them right] [see Preparing pronounciation support]. Since NDSRS is accepting only wav files with a 22050Hz, 16bit, 1channel encoding, files have to converted after integration [see Conversion of soundfiles]
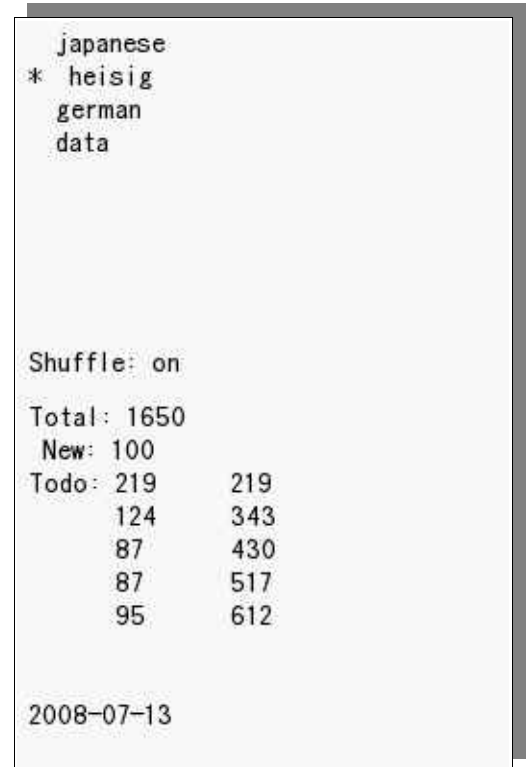
Using NDSRS on the DS

Startscreen:

It shows a selection of SRS files stored under root:/ndsrs
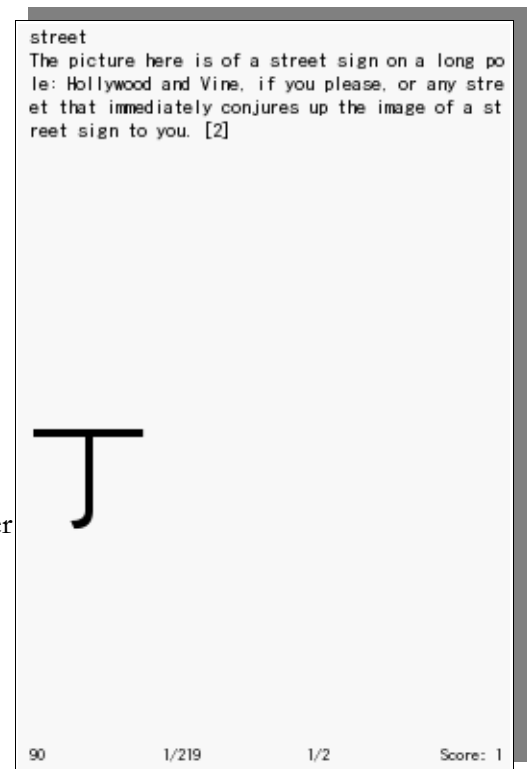and some statistics for the flashcard sets.

Buttons:

A/B/Start	select card
Y	move all cards up one day
L	shuffle off
R	shuffle on
Select	change light

```
   japanese
*  heisig
   german
   data




Shuffle: on

Total: 1650
 New: 100
Todo: 219      219
      124      343
       87      430
       87      517
       95      612


2008-07-13
```

Review Screen:

Buttons:

A	show answer
X	Doodle mode
Y	card stats
Up/Down	change score
Left/Right	change bottom page [if multiple answers exists]
Start	next card
Left+Right +Y	back to Startscreen
B	repeat sound [if existent] otherwise show answer
L+ Up/Down	Scroll question
R+ Up/Down	Scroll answer
L+Left	Score answer with 0 + next card
L+Right	Score answer with 4 + next card

```
street
The picture here is of a street sign on a long po
le: Hollywood and Vine, if you please, or any stre
et that immediately conjures up the image of a st
reet sign to you. [2]




90        1/219        1/2        Score: 1
```

Doodle mode:

Allows to draw on lower screen.

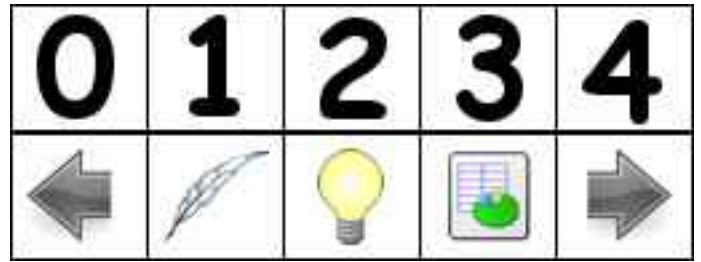Buttons:

X	exit doodle mode
L/R:	clear

Touch screen:

Comes up when stylus touches lower screen. [Doodle mode must be left.]
!!! Touch effect is activated when stylus is removed from the screen while hovering over one of these squares.!!!

0-4	scoring
left arrow:	next answer card left
feather	doodle mode
lamp	display answer
chart	show card stats
right arrow	answer card right

Misc:

Buttons:

select	change backlight intensity
L+A	autohinting on/off
L+R+Y	back to file select

Explaining SRS format

NDSRS is using srs file format. The following examples will explain the different types of carddecks NDSRS can handle (file must be safed in UTF8):

Simple Question – One Answer Deck:

```
<deck>
 <card>
  <question>Fabel</question>
  <answer>fable</answer>
 </card>
 <card>
  <question>Gebilde, Bau</question>
  <answer>fabric</answer>
 </card>
 <card>
  <question>Fakultät, Fachbereich</question>
  <answer>faculty</answer>
 </card>
</deck>
```

Simple Question – One Answer Deck with sound support:

```
<deck>
 <card>
  <question>Fabel</question>
  <answer sound="data/snd/fable.wav">fable</answer>
 </card>
 <card>
  <question>Gebilde, Bau</question>
  <answer sound="data/snd/fabric.wav">fabric</answer>
 </card>
 <card>
  <question>Fakultät, Fachbereich</question>
  <answer sound="data/snd/faculty.wav">faculty</answer>
 </card>
</deck>
```

Question – Multiple Answer Deck:

```
<deck>
 <card>
  <question>schlagen, besiegen</question>
  <answer>beat</answer>
  <answer>beat</answer>
  <answer>beaten</answer>
 </card>
 <card>
  <question>werden</question>
  <answer>become</answer>
  <answer>became</answer>
  <answer>become</answer>
 </card>
 <card>
  <question>bauen</question>
  <answer>build</answer>
  <answer>built</answer>
  <answer>built</answer>
 </card>
 <card>
  <question>fangen</question>
  <answer>catch</answer>
  <answer>caught</answer>
  <answer>caught</answer>
 </card>
</deck>
```

Multiple-Choice Answer Deck:

```
<deck>
 <card type="multi">
  <question>What is your favorite color?</question>
  <answer tf="false">Red</answer>
  <answer tf="false">Green</answer>
  <answer tf="true">Blue</answer>
  <answer tf="false">Purple</answer>
  <explanation>I dont remember enough of the movie to quote anything else</explanation>
 </card>
</deck>
```

Formated Decks + Sound + Pics + custome FonSize

```
<deck>
 <card>
  <question>Here is an example using the new features</question>
  <answer>I am some text! With CR
Spanning over multiple lines|Even so newline is working|
But it could be easier to do this in Pauker and import the result.</answer>
   <answer image="data/img/math.png"></answer>
   <answer sound="data/snd/Franzoesisch-0.wav">à point nommé</answer>
 </card>
 <card>
  <question size="34" image="data/img/file.png" sound="data/snd/test.wav">That is
something written over an image in 34 point size.
Even sound is possible</question>
   <answer size="44" sound="data/snd/Franzoesisch-0.wav">And here is some large text
and sound|and not to forget a newline</answer>
 </card>
</deck>
```

Multiple Choice support [not implemented in NDSRS-Import]

NDSRS supports Multiple choice but it is implemented in a rather unwieldy fashion:

Each option gets its own answer page.

To select an answer, hit B on the frame you wish to select, a "Correct" / "Incorrect" will appear on the bottom screen. Press Start to go to the next card

Upon selection, if 'explanation' is set [see example], the top card will change to the content in explanation [This is optional].

A score of 1 is set if you get it incorrect; a score of 4 is set if it is still in InitialState [see schedule.cpp for explanation of the algorithm], and a score of 3 otherwise.

Preparing pronounciation support

After some preparation NDSRS supports pronounciation with RealpeopleTTS files either from WyabdcRealPeopleTTS [Language: only english| Format: *.wav] or from Stooka [Languages: French, Deutch, English, Swedish, Czech, Chinese, German | Format: *.ogg].

Download the relevant ogg or wav packages, deflate it and point NDSDS-Import to one file of the package [*.wav|*.ogg](3). NDSRS-Import is comparing the content of the answer field with the filenames of the RealpeopleTTS files.

It finds the following example [make sure that unecessary spaces are removed]:

answer	filename
abort	/a/abort.wav
abort	abort.ogg
à ses dépens	à ses dépens.ogg

It will **not** find:

answer	filename
abort; abscess	/a/abort.wav + abscess.wav

Since Stooka RealpeopleTTS filenames don't match the names of the pronounced words they have to be renamed using ogg-tags. Open TagScanner to rename them.
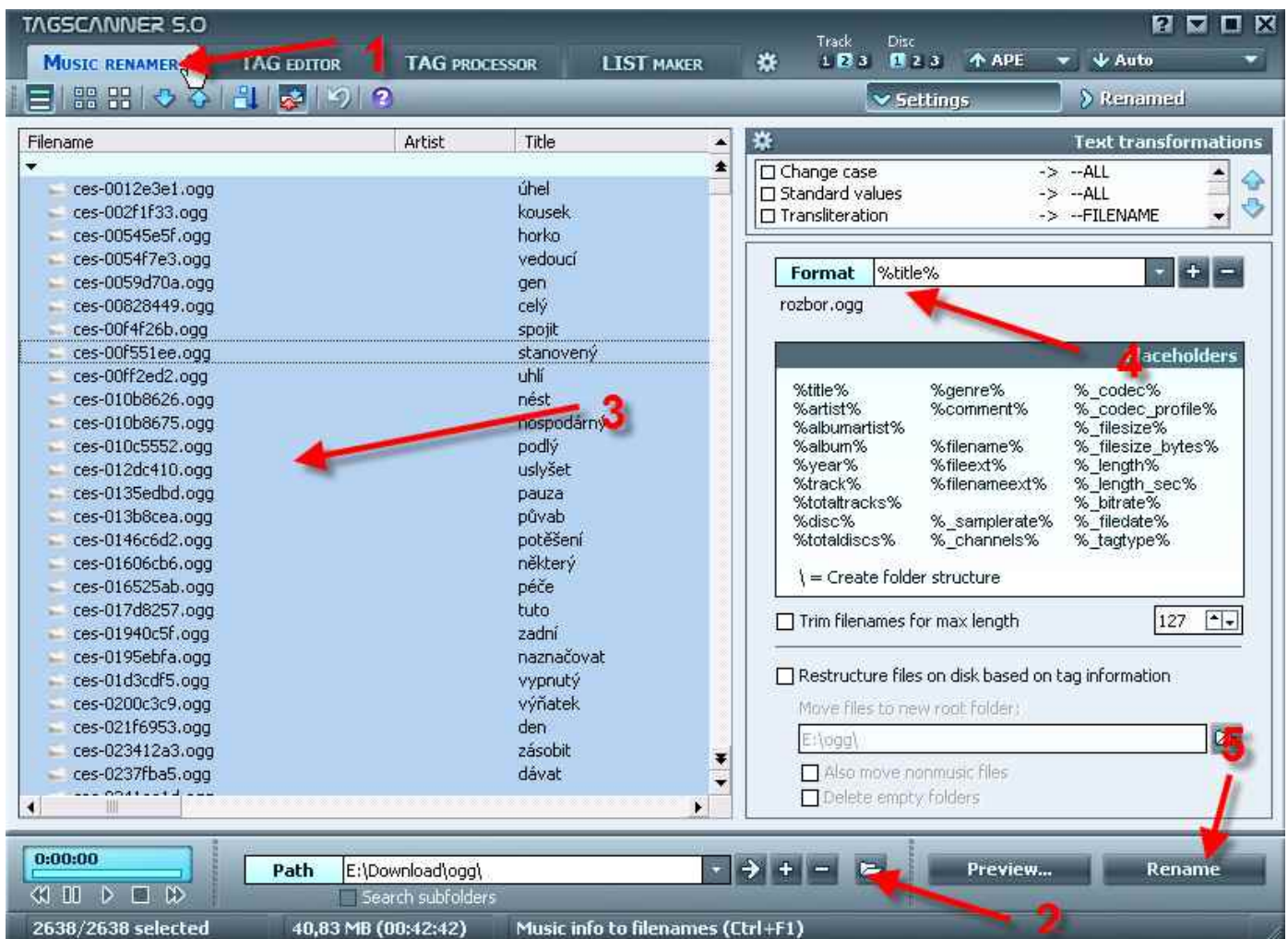
Select Music Renamer tab (1)
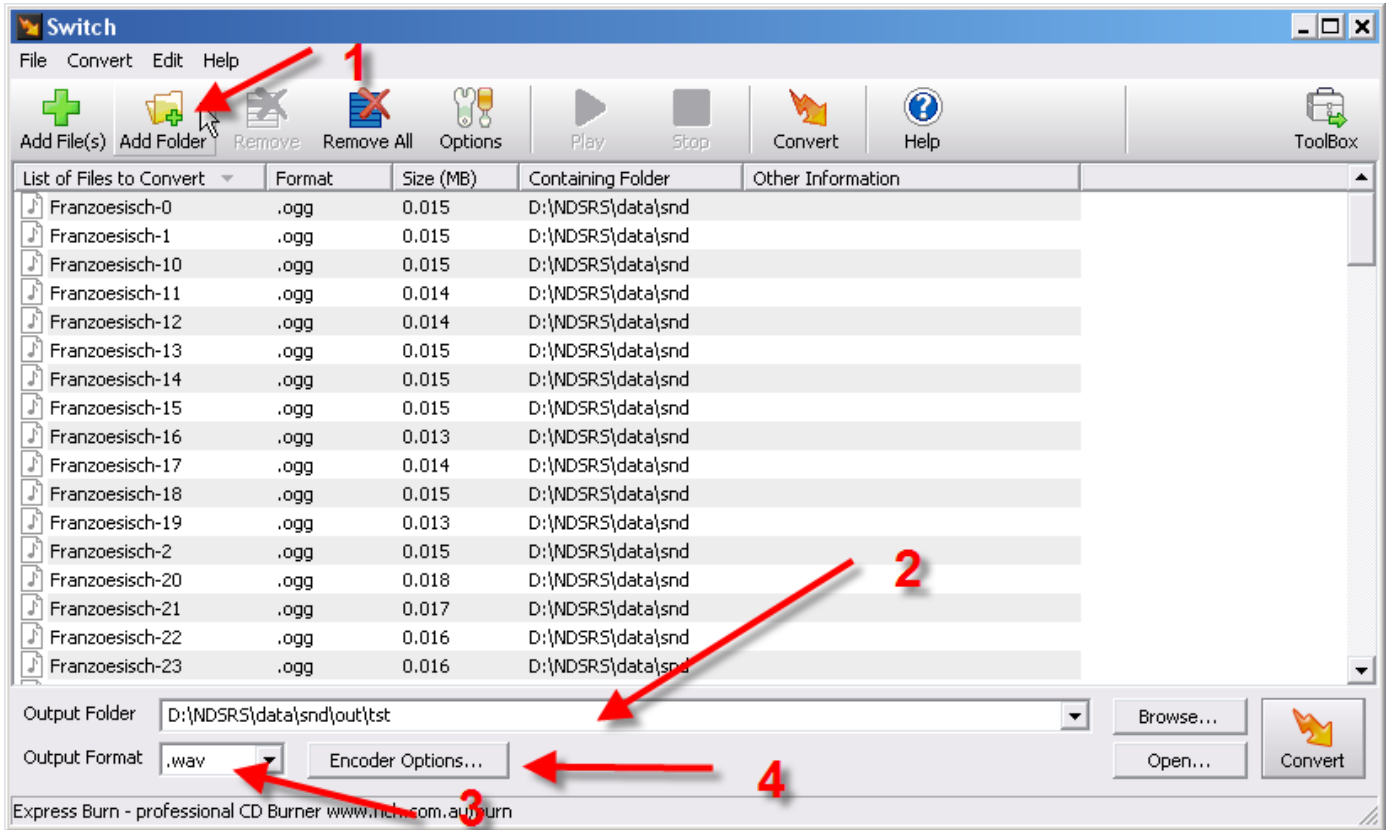Point to the path of the *.ogg files (2)
Select all [STRG+a] (3).
Select Format "%title%" (4)
Rename (5).

Conversion of soundfiles

Since I failed with putting an automatic converter into NDSRS-Import, the soundfiles found in the data/snds folder of the ndsrs folder ["Path to Flashcard":/ndsrs/data/snd/] have to be converted as a last step.
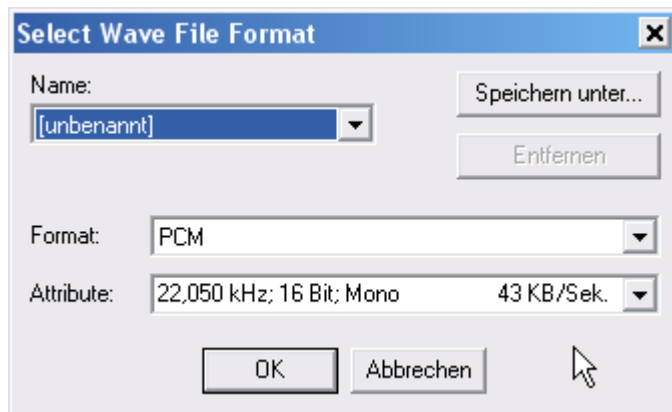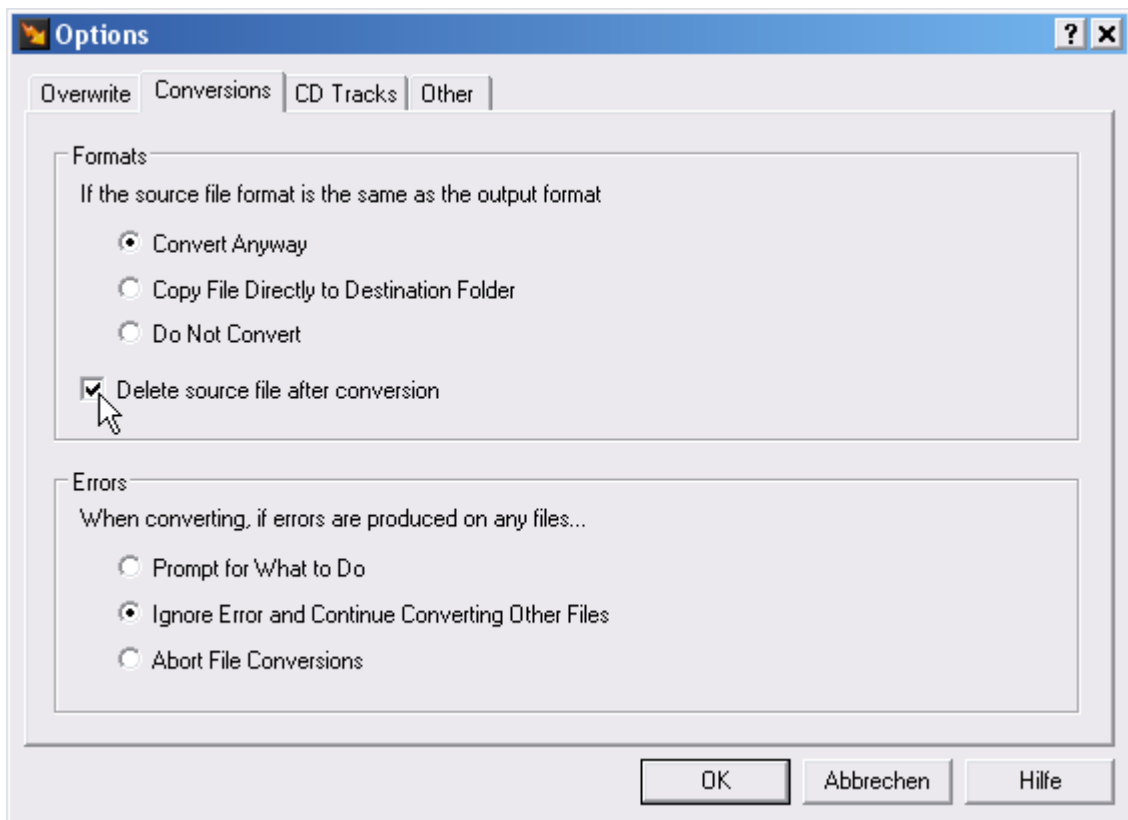
Switch is doing the job nicely.

Add Folder (1)
Add Output folder (2) - !!! Same as input folder (differs from the screenshot).
Select Output Format "wav"(3)
Select Encoder Option (4) – Format PCM, 22050kHz; 16bit; Mono

Under File – Option – Select"Conversions" tab. Select "Delete source after conversion" and "Convert Anyway".
Run Convert.

Supported file formats

CSV/TXT-import files:
    Encoding UTF-8, standard field delimiter (changable): ^
Pauker-import files:
    Newest Pauker format [09/2008] (ending *.pau.gz)
SRS-files:
    Encoding UTF-8
Images:
    Only .png files are currently supported [not likely to change]
    Full alpha blending support
    256x180px max size
Sound:
    22050Hz, 16bit, 1channel .wav support