

## Audio-Technics – Handout

### Recording and Editing:

#### Digital formats for audio files:

- wav (PCM): best quality, biggest data files
- mp3: reduced data, smaller data files, quality depending on kbit/second:  
good quality: Mono 128 kbit/s or more (or Stereo 256 kbit/s or more)  
do not use lower rate than 64 kbit/s Mono
- ogg: reduced data – similar to mp3

#### Recorder-Configuration / REC MENU:

- REC – Mode
  - Format: wav or mp3 ( $\geq 128$  kbit/s mono)
  - SampleRate: 44.100 Hz (= 44.1 kHz)
  - (Bitrate: 16 bit (or 24 bit))
- Rec-Level: round about -6 to -3 dB – never exceed 0dB!!!
- while recording always listen by headphone!!! : Volume and sound quality
- check recording is started?
- always carry batteries with you to replace the old ones
- transmit recordings to PC via USB
- recording by smartphone: transmit recordings to PC via USB-handycable or mail

#### Editing with Audacity 2.x:

- Opensource , free multitrack editor and recorder
- for Windows, Linux, Mac
- download: <http://sourceforge.net/projects/audacity/>
- lame encoder required (guide to install it during „Export Audio“-dialogue or here: <http://sourceforge.net/projects/lame/>)
- installation of a manual in different languages
- general workflow:
  - use Multipurpose-Mode/Multifunction-Tool
  - Open or Create Project (44.1 kHz) –
  - Import (or Record) Audios – Save Project -
  - Edit Audio:
    - Trim/Cut: Ctrl – i;
    - Volume: by Volume-View oder Effect – Normalize;
    - Undo: Ctrl – z, Redo: Ctrl - y
  - while editing always listen by headphone or speaker!!!
- don' t forget to Save the Project several times in between (...) -
- Export Audio to Stereo / Joint Stereo (wav/mp3/ogg audiofile) => distribute mp3 or ogg format only

#### Free audio and video player

VLC: <http://sourceforge.net/projects/vlc/>