

Technical Setup of Recordings

Content: This file gives information about the calibration of the technical equipment and provides a list of all steps for a complete and correct recording.

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Preparation and execution of the recordings

The recordings take place in the speech cabin. The speech cabin is a noise-reduced room.

For the recordings the following equipment is used:

- a Yamaha 02R Digital Mixer
- a DAT-recorder
- a personal computer with Windows XP environment
- an oscilloscope
- a laryngograph
- a Beyerdynamic MCE10 CV15PV-N(C)-E headset micro
- a stand microphone Neumann TLM 103
- three LCD monitors (one in the cabin)

Settings of the recordings:

Sample Frequency (Computer and Mixer) 48000 Hz

Bits per sample: 32 (downsized to 16)

Computer:

Checking of the settings by means of the „Delta Control Panel“:

- Hardware Settings:

- „Master Clock“ is set as „TDIF Clock“ (The TDIF sound card in the computer generates the clock for the TDIF interface)
- „DMA Buffer Size“ is 2048 sample frames

- Monitor Mixer:

- On the monitor mixer page should be in the inputs 1,2 and 3 a signal. The inputs 1,2 and 3 correspond to the headset, stand microphone and laryngograph.

Mixer:

The stored scene memory „BITS -Synthese 3k" (No. 17) is recalled using the „RECALL“ button.

In the mixer channel 5 is the channel for the headset, channel 7 for the microphone and channel 9 for the laryngograph.

- Incoming signals 5 (headset) and 7 (stand microphone):
 - The +48 V DC phantom power is turned on for the XLR-3-31 connector
 - The XLR-3-31 connector is selected ('A' button)
 - Incoming recording level should be maximal -12 dB
- Incoming signal 9 (laryngo):
 - The +48 V DC is turned off
 - The XLR-3-31 connector is selected ('A' button)
 - Incoming recording level should be maximal -12 dB
 - 20 dB pad switch selected (This switch attenuate the input signal by 20 dB)

Preparation of the recording:

1. DAT tape in the DAT recorder as back up for the recording session
2. The recording tool is started and the correct speaker is chosen
3. The speaker is instructed for the recording, takes his place on a seat which position is marked on the floor. The speaker should be seated 60 cm from the microphone and should be comfortable and able to see the prompts on the monitor, situated on the window outside the speech cabin.
4. The electrodes are placed on the sides of the pan head by the instructor. The signal of the laryngograph is checked via the oscilloscope.
5. The headset is placed and adjusted to the head of the speaker. The distance between the mouth of the speaker and the headset should be approximately 6 -7 cm. Noises in the signal through breathing, or the blowing through the mouth should be avoided.
6. A test recording is made in order to check the settings.

7. The Praat program is used to control the test recording. The recording level should be approximately -6dB. There should be no clippings or background noises.

During the Recording:

- Monitoring 1: The technician is controlling whether the recording tool is running well, whether there are clippings in the signal or the recording level is too high.
- Monitoring 2: The two instructors control the pronunciation of the prompts:
 - accentuation
 - the phoneme class
 - the prosody

If both monitorings are okay, then the technician switches to the next prompt.

After the recording:

- the electrodes are being taken off, the DAT tape is labelled, the monitor at the window of the speech cabin is switched off.
- It's being controlled, whether all the recordings are saved in the correct directory, and whether the size of each sound file is more than 2kByte.
- If everything went well, the recordings are transferred to the correct „BITS DATA“ directory through the „Copy to BITSDATA“ tool.
- The computer is switched off.