

Protocol

This document gives a brief description of the humming data collection process.

DATABASE

Target melodies will be hummed by an accurate hummer for which, these samples will be used as references to subjects.

The selection of sample melodies sums up to cover all possible pitch intervals in a full musical scale. (Majors, minors and perfects)

SUBJECTS

All kinds of people are welcome.

A form will be presented to the subjects that will help us to collect their information including their name, gender, age, nationality, and whether they are musically trained or not, if so in what way and etc... This will help us to categorize our data which may be effective in data processing.

RECORDING PROCESS

-Environment

A quite room.

-The Equipment:

Marantz PMD690, a digital stereo recorder will be used to record the humming samples, which we presume it will help us to create a noiseless environment, and a convenient way to store the data to flash memory cards. The humming samples are going to be ready-to-process.

Shure, a close talk microphone is also preferred that has its own built-in filters which will be helpful to decrease the noise level.

A camcorder is also be recording the whole data collection process.

A cd player will be used to make the subjects listen to the previously hummed target melodies to use as references.

-Recording:

In total, three kinds of humming will be performed that are; 1) music scale, 2) random selected melodies, and 3) 10 out of 20 chosen melodies.

1. **Music scale:** Participants are asked to hum an ascending and a descending music scales.
2. **Random selected melodies:** To increase variability and randomization, we will ask each subject to hum 3 melodies which are not in our provided melody list.
3. **10 out of 20 chosen melodies:** Each subject is going be asked to rate the melodies we provide, with respect to their familiarity, and the best 10 of the melodies will be hummed by the subjects. The selected pieces will be hummed 2 times by the subject.

-Subjective testing

After a recording process is finished, each subject is asked to rate a random number of music scale humming (scale of 1 to 10), which will be used in subjective analysis of data process.

-Scheduling

Each recording sample will be around 15 seconds. There will be 30 recording intervals, $2*2=4$ music scale, $3*2=6$ random melodies which are not in our list, and $10*2=20$ for selected melodies.

Each recording section will take around 30-60 minutes, including all the necessary actions mentioned above.

Please feel free to contact via email to unal@usc.edu for questions and comments.

Erdem UNAL
University of Southern California