



THE MED-EL Mu.S.I.C. TEST

Recently, an increasing number of CI users have expressed interest in listening to music. People now have higher expectations from their cochlear implant and want to hear music through their implants. The Mu.S.I.C. Test is designed to measure aspects of music perception and can also measure the effectiveness of rehabilitation training provided for cochlear implant users.

The test is comprised of the following 8 modules.

Pitch Test

This module determines the subject's pitch difference limen with the finest step being a quartertone. It uses a staircase algorithm described by Levitt in *Up-Down Methods in Psychoacoustics* (1970). The test can be conducted using any of the following instrumental runs: piano, clarinet, twin reeds, strings, trombones, horns, pure tone and flutes.

Rhythm

This module determines the subject's ability to distinguish temporal rhythms. The sound files for this test consist of 58 pairs of rhythms recorded on the snare drum. In addition, 20 of these pairs have also been recorded on bongos, 26 pairs on woodblock, and 24 pairs on tympani.

Melody

This module determines the subject's ability to detect melodic differences between two short phrases, where the phrases have the same rhythmic pattern. 139 phrases have been recorded on the piano in both mono and stereo. 120 of these are also available as mono recordings on either the violin or cello, depending on register. 58 pairs have also been recorded on the flute in mono.

Distinguish Chords

This module determines the subject's ability to distinguish differences between two piano chords. 51 pairs of chords are included in the package, available in both mono and stereo.

What Instrument

This test determines whether subjects can identify what instrument they are hearing. 24 instruments are included. For most instruments, there are sound files of ascending and descending scales, a short piece of the nursery rhyme "Baa Baa Black Sheep", and a piece typical of the instrument.

Number of Instruments

This module determines how many different instruments subjects can distinguish in a short piece of music. It uses a short piece of music created specially for this test. The piece is scored for cello, snare drum, flute, trumpet and xylophone; these instruments have been selected to have timbres as different as possible.

Emotional

This module asks subjects to rate a short piece of music on a happy-to-sad scale, where 1 is the saddest piece of music and 10 is the happiest. This module uses short pieces of music created specially for this test.

Dissonance

This module asks subjects to grade a piano chord on a consonance/dissonance scale, where one is the harshest possible sound and 10 is the most melodious, smoothest sound.

The Mu.S.I.C. Test costs € 650.- and is available from MED-EL.
Please contact your local office or email us at: music@medel.com

