

Speaker Quality and Psychological Stress Test Report

Test Master : 邱永林 心理師 Alan Chou, Licensed Psychologist

Experience : Licensed Psychologist (Taiwan and China)

Master Degree in Psychology, University of Pittsburgh

Director, United Counseling Center

TV Program host, (CTITV, Taiwan) & (Young Channel, Shanghai)

Test Date : July~August, 2007

Test Venue : United Counseling Center

10F, No. 41, Sec. 1, ZhongXiao E. Rd, Taipei City,

Taiwan R.O.C.

(台灣 台北市忠孝東路一段 41 號 10F)

1. Summary :

Ten volunteers (5 male, 5 female, please refer Note 1) participated in the test, which required listening to different music played from four speaker systems. Two of the speaker systems were modified with the ETL-Module and the other two were not modified. The participants were subjected to the Heart Rate Variability (HRV) test which measures psychological stress.

The results indicate that the two types of speaker systems (speaker systems and earphones) containing the ETL-Module (as modified by Formosa Prosonic) significantly lessened the psychological stress levels of the participants. (See Note 2)

The ETL modified earphones dramatically reduced the stress levels of the participants by 14.32%. The ETL modified speaker systems reflected a significant stress reduction of 7.33%.

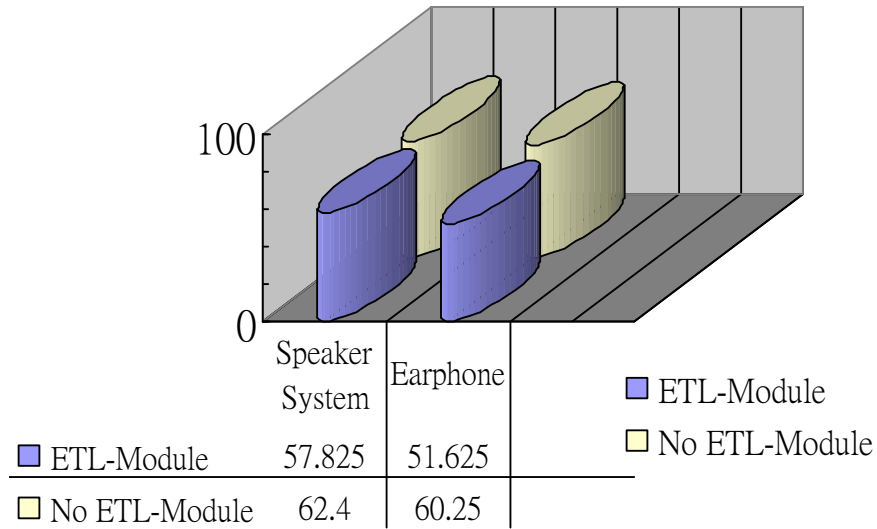
The sound testing involved the playing of four different styles of music (please see Note 3). However the musical style had no effect on the resulting measurements.

2. Test Environment :

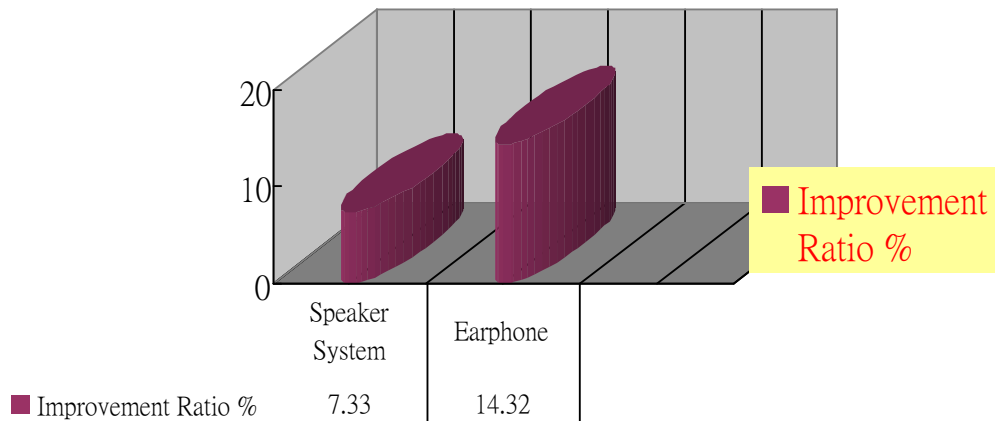
Environment description of the Test Lab :

- I. The test was conducted in an isolated room (Length 4.50m / Width 3.80m / Height 2.25m)
- ii. The distance between the speakers and the volunteers was 3.90m.
- iii. The music was played at a normal volume

Note 2 : Relation of Psychological Stress vs Speakers with & without ETL Module



Test Result: (ETL module)Speaker System & Earphone improve Psychology Stress Percentage Ratio



Note 3:

Music used:

Track 3, Classic: Dvorak "From the new world" No. 9 in E minor OP95

Track 12, Female vocal: Mariah Carey "So Blessed"

Track 14, Female vocal: Gloria Estefan "Oye"

Track 24: Assorted sound for movie



(1) ETL module SpeakerSystem 3inch driver
speaker size: 3 inches

(2) ETL module-Earphone

Test Master: 邱永林 心理師 Alan Chou, Licensed Psychologist