The design of the experiment was a Split-Plot SPF-23.24, with 2 between-subjects factors (GROUP and SPEAKER) and 2 within-subjects factors (TURNTABLE and CARTRIDGE). The GROUP between-subject factor had two levels, 1 = Audiophile and 2 = Layman. The SPEAKER between-subject factor had three levels, 1 = Infinity's Reference Speaker (IRS), 2 = Magnepan Tympani, and 3 = Apogee Diva. The TURNTABLE within-subject factor had four levels, 1 = Linn Sondek, 2 =Sota, 3 = Oracle, and 4 = Goldmund, while the CARTRIDGE factor had two levels, 1 = Grado Lab Magnectic and 2 = Grado Lab Moving Coil. The dependant variable measures listening pleasure scores, which ranges from 0 (bland), to 70 (best all-around sound). The goal of the experiment was to determine which combination of speaker, turntable and cartridge sounded best as judged by a random sample of 2 different listening types.

The CARTRIDGE*SPEAKER interaction was significant, Wilk's $\Lambda = .327$, $F(2,12) = 12.339$, $p<.001$, $\eta^2 = .673$, as was the CARTRIDGE*TURNTABLE interaction, Wilk's $\Lambda = .408$, $F(3,10) = 4.831$, $p<.025$, $\eta^2 = .592$. Additionally, the GROUP between-subject factor by itself was signficant, $F(1,12) = 6.591$, $p<.025$, $\eta^2 = .355$.

The CARTRIDGE*SPEAKER interaction was significant, so its simple main effects were analyzed. To do this, the mean listening pleasure for Grado Lab Magnectic cartridges was created by taking the means of the four turntables using the magnectic cartridges. The same was done for Grado Lab Moving Coil cartridges, the means of which are displayed in Table 1.

Table 1. Mean listening pleasure seperated by cartridge and speaker type.

	Speaker		
Cartridge	IRS	Magnepan	Apogee
Magnectic	19.63	26.96	25.71
Moving Coil	41.96	30.67	45.29

Paired-samples t-tests were used to compare the means of cartridge type within each speaker, revealing 2 significant differences and the Holm's Sequential Bonferroni procedure was used to correct for Type I error at the .01 level (.01/3 = .003, .01/2 = .005). The moving coil produces significantly greater listening pleasure than the magnectic cartridge for the IRS speakers, $t_{(5)} = -11.884$, $p<.001$ (which is less than .003). Also, the moving coil produced significantly greater listening pleasure for the Apogee speakers, $t_{(5)}=-5.571$, $p<.003$ (which is less than .005).

A 1-way ANOVA was conducted to show that there was a significant difference between speaker types for Moving Coil cartridges only, $F(2,15) = 5.345$, $p<.018$. Tests for the homogeneity of variance were not significant, so the Scheffe post-hoc multiple comparisons were used to show, as in Table 1, that when using Moving Coil cartridges, Apogee and IRS speakers (which did not differ) had a higher listening pleasure score than Magnepan, $p<.05$.

The CARTRIDGE*TURNTABLE interaction was significant, therefore paired-samples t-tests were used to analyze the magnetic versus moving coil cartridge difference for each of the four turntables. The means of this analysis are displayed in Table 2. The Holm's Sequential Bonferroni was employed to control for Type I error at the .01 level. It was found that all of the moving coils had significantly greater listening pleasure scores than magnetic cartridges, for Linn Sondek, $p < .007$ (which is less than .01/1 = .01) and for Sota, Oracle, and Goldmun, $p < .001$ (which is less than .01/4 = .0025, .01/3 = .0033, and .01/2 = .0025, repsectively).

Table 2. Means separate by cartridge and turntable type.

	Turntable			
Cartridge	Linn Sondek	Sota	Oracle	Goldmund
Magnetic	22.22	24.17	25.00	25.00
Moving Coil	30.17	40.28	41.89	44.89

Turntable was significant for Moving Coils only, Wilk's $\Lambda = .492$, $F(3,15) = 5.155$, $p<.012$, $\eta^2 = .508$. Six follow-up pairwise comparisons were conducted to compare turntable types for moving coil cartridges. The Holm's Sequential Bonferroni was used to control for Type 1 familywise error at the .05 level (.05/6 = .0083, .05/5 = .01, .05/4 = .00125). It was found that listening pleasure was the lowest for the Linn Sondek using a moving coil cartridge, as it was significantly less pleasurable than the Sota, $p < .001$ (less than .0083), the Oracle, $p < .011$ (less than .00125) and the Goldmund, $p < .003$ (less than .01). No other differences were found.

Finally, the GROUP between-subjects factor was significant, however it was not involved in a significant interaction. Therefore a mean of all the within-subject factors was created inorder to compare the two groups (mean_ct). It was found that Audiophiles reported significantly higher listening pleasure scores ($\bar{x}$=36.68, SD=7.43) than Layman ($\bar{x}$=26.72, SD=8.44).