General Linear Model

Within-Subjects Factors

Measure: HeadMovement

Cursor	Amp	Width	Dependent Variable
1	1	1	Head__amp_7__width_1
		2	Head__amp_7__width_2
		3	Head__amp_7__width_4
	2	1	Head__amp_25__width_1
		2	Head__amp_25__width_2
		3	Head__amp_25__width_4
	3	1	Head__amp_40__width_1
		2	Head__amp_40__width_2
		3	Head__amp_40__width_4
2	1	1	Low__amp_7__width_1
		2	Low__amp_7__width_2
		3	Low__amp_7__width_4
	2	1	Low__amp_25__width_1
		2	Low__amp_25__width_2
		3	Low__amp_25__width_4
	3	1	Low__amp_40__width_1
		2	Low__amp_40__width_2
		3	Low__amp_40__width_4
3	1	1	Mid__amp_7__width_1
		2	Mid__amp_7__width_2
		3	Mid__amp_7__width_4

Within-Subjects Factors

Measure: HeadMovement

Cursor	Amp	Width	Dependent Variable
	2	1	Mid__amp_25__width_1
		2	Mid__amp_25__width_2
		3	Mid__amp_25__width_4
	3	1	Mid__amp_40__width_1
		2	Mid__amp_40__width_2
		3	Mid__amp_40__width_4
4	1	1	High__amp_7__width_1
		2	High__amp_7__width_2
		3	High__amp_7__width_4
	2	1	High__amp_25__width_1
		2	High__amp_25__width_2
		3	High__amp_25__width_4
	3	1	High__amp_40__width_1
		2	High__amp_40__width_2
		3	High__amp_40__width_4

Descriptive Statistics

	Mean	Std. Deviation	N
Head__amp_7__width_1	4.6238207079	1.5585987721	28
Head__amp_7__width_2	5.0361529841	1.6672459934	28
Head__amp_7__width_4	5.3597997946	1.8482999367	28
Head__amp_25__width_1	23.187267115	3.5361093442	28
Head__amp_25__width_2	23.560571677	3.3827392866	28
Head__amp_25__width_4	24.389412534	3.5125245810	28
Head__amp_40__width_1	38.364890851	5.4755043888	28
Head__amp_40__width_2	38.546243065	5.3118967593	28
Head__amp_40__width_4	38.923433140	5.3051146915	28
Low__amp_7__width_1	5.5980146251	1.3516040708	28
Low__amp_7__width_2	5.5436945719	1.2563063725	28
Low__amp_7__width_4	5.8978793705	1.6514790697	28
Low__amp_25__width_1	22.323574985	2.6322649563	28
Low__amp_25__width_2	22.736830647	2.8825756667	28
Low__amp_25__width_4	23.144792653	2.6112013849	28
Low__amp_40__width_1	37.458360596	4.0521938244	28
Low__amp_40__width_2	36.997241843	4.4622809560	28
Low__amp_40__width_4	37.132423930	4.4296905749	28
Mid__amp_7__width_1	4.7088559377	1.2254207138	28
Mid__amp_7__width_2	4.9100725351	.93384858288	28
Mid__amp_7__width_4	5.4372253279	1.1575801941	28
Mid__amp_25__width_1	19.019910652	2.5309120751	28
Mid__amp_25__width_2	19.166340448	2.4031984632	28
Mid__amp_25__width_4	19.270380662	2.5021944431	28
Mid__amp_40__width_1	28.730362541	3.3336504065	28
Mid__amp_40__width_2	29.275918611	3.6248718121	28
Mid__amp_40__width_4	29.085687024	3.2746311401	28
High__amp_7__width_1	4.6095938992	1.0913982428	28
High__amp_7__width_2	5.1844761558	1.1440663250	28
High__amp_7__width_4	5.2891427582	1.3420392302	28
High__amp_25__width_1	18.892869724	2.4622551317	28
High__amp_25__width_2	19.017400798	2.7112589565	28
High__amp_25__width_4	19.532506320	2.8009012939	28
High__amp_40__width_1	27.568521094	3.7083177005	28
High__amp_40__width_2	27.540248944	3.9943384455	28
High__amp_40__width_4	28.627696289	3.5467187943	28

Multivariate Tests[a]

Effect		Value	F	Hypothesis df	Error df
Cursor	Pillai's Trace	.910	83.881[b]	3.000	25.000
	Wilks' Lambda	.090	83.881[b]	3.000	25.000
	Hotelling's Trace	10.066	83.881[b]	3.000	25.000
	Roy's Largest Root	10.066	83.881[b]	3.000	25.000
Amp	Pillai's Trace	.990	1292.296[b]	2.000	26.000
	Wilks' Lambda	.010	1292.296[b]	2.000	26.000
	Hotelling's Trace	99.407	1292.296[b]	2.000	26.000
	Roy's Largest Root	99.407	1292.296[b]	2.000	26.000
Width	Pillai's Trace	.501	13.065[b]	2.000	26.000
	Wilks' Lambda	.499	13.065[b]	2.000	26.000
	Hotelling's Trace	1.005	13.065[b]	2.000	26.000
	Roy's Largest Root	1.005	13.065[b]	2.000	26.000
Cursor * Amp	Pillai's Trace	.958	84.001[b]	6.000	22.000
	Wilks' Lambda	.042	84.001[b]	6.000	22.000
	Hotelling's Trace	22.909	84.001[b]	6.000	22.000
	Roy's Largest Root	22.909	84.001[b]	6.000	22.000
Cursor * Width	Pillai's Trace	.436	2.834[b]	6.000	22.000
	Wilks' Lambda	.564	2.834[b]	6.000	22.000
	Hotelling's Trace	.773	2.834[b]	6.000	22.000
	Roy's Largest Root	.773	2.834[b]	6.000	22.000
Amp * Width	Pillai's Trace	.142	.996[b]	4.000	24.000
	Wilks' Lambda	.858	.996[b]	4.000	24.000
	Hotelling's Trace	.166	.996[b]	4.000	24.000
	Roy's Largest Root	.166	.996[b]	4.000	24.000
Cursor * Amp * Width	Pillai's Trace	.711	3.287[b]	12.000	16.000
	Wilks' Lambda	.289	3.287[b]	12.000	16.000
	Hotelling's Trace	2.465	3.287[b]	12.000	16.000
	Roy's Largest Root	2.465	3.287[b]	12.000	16.000

Multivariate Tests[a]

Effect		Sig.	Partial Eta Squared
Cursor	Pillai's Trace	<.001	.910
	Wilks' Lambda	<.001	.910
	Hotelling's Trace	<.001	.910
	Roy's Largest Root	<.001	.910
Amp	Pillai's Trace	<.001	.990
	Wilks' Lambda	<.001	.990
	Hotelling's Trace	<.001	.990
	Roy's Largest Root	<.001	.990
Width	Pillai's Trace	<.001	.501
	Wilks' Lambda	<.001	.501
	Hotelling's Trace	<.001	.501
	Roy's Largest Root	<.001	.501
Cursor * Amp	Pillai's Trace	<.001	.958
	Wilks' Lambda	<.001	.958
	Hotelling's Trace	<.001	.958
	Roy's Largest Root	<.001	.958
Cursor * Width	Pillai's Trace	.034	.436
	Wilks' Lambda	.034	.436
	Hotelling's Trace	.034	.436
	Roy's Largest Root	.034	.436
Amp * Width	Pillai's Trace	.429	.142
	Wilks' Lambda	.429	.142
	Hotelling's Trace	.429	.142
	Roy's Largest Root	.429	.142
Cursor * Amp * Width	Pillai's Trace	.014	.711
	Wilks' Lambda	.014	.711
	Hotelling's Trace	.014	.711
	Roy's Largest Root	.014	.711

a. Design: Intercept
Within Subjects Design: Cursor + Amp + Width + Cursor * Amp + Cursor * Width + Amp * Width + Cursor * Amp * Width

b. Exact statistic

Mauchly's Test of Sphericity[a]

Measure: HeadMovement

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon[b] Greenhouse-Geisser
Cursor	.189	42.810	5	<.001	.493
Amp	.084	64.426	2	<.001	.522
Width	.635	11.811	2	.003	.733
Cursor * Amp	.002	150.632	20	<.001	.285
Cursor * Width	.203	39.501	20	.006	.691
Amp * Width	.465	19.487	9	.022	.756
Cursor * Amp * Width	.008	110.876	77	.010	.558

Mauchly's Test of Sphericity[a]

Measure: HeadMovement

Within Subjects Effect	Epsilon[b] Huynh-Feldt	Lower-bound
Cursor	.514	.333
Amp	.524	.500
Width	.764	.500
Cursor * Amp	.303	.167
Cursor * Width	.832	.167
Amp * Width	.861	.250
Cursor * Amp * Width	.761	.083

Tests the null hypothesis that the error covariance matrix of the orthonormalized transformed dependent variables is proportional to an identity matrix.

a. Design: Intercept
Within Subjects Design: Cursor + Amp + Width + Cursor * Amp + Cursor * Width + Amp * Width + Cursor * Amp * Width

b. May be used to adjust the degrees of freedom for the averaged tests of significance. Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Tests of Within-Subjects Effects

Measure: HeadMovement

Source		Type III Sum of Squares	df	Mean Square
Cursor	Sphericity Assumed	5411.361	3	1803.787
	Greenhouse-Geisser	5411.361	1.478	3661.059
	Huynh-Feldt	5411.361	1.543	3506.496
	Lower-bound	5411.361	1.000	5411.361
Error(Cursor)	Sphericity Assumed	1858.021	81	22.939
	Greenhouse-Geisser	1858.021	39.908	46.557
	Huynh-Feldt	1858.021	41.667	44.592
	Lower-bound	1858.021	27.000	68.816
Amp	Sphericity Assumed	132650.274	2	66325.137
	Greenhouse-Geisser	132650.274	1.044	127084.500
	Huynh-Feldt	132650.274	1.049	126462.267
	Lower-bound	132650.274	1.000	132650.274
Error(Amp)	Sphericity Assumed	1376.825	54	25.497
	Greenhouse-Geisser	1376.825	28.182	48.854
	Huynh-Feldt	1376.825	28.321	48.615
	Lower-bound	1376.825	27.000	50.994
Width	Sphericity Assumed	59.029	2	29.514
	Greenhouse-Geisser	59.029	1.465	40.290
	Huynh-Feldt	59.029	1.528	38.626
	Lower-bound	59.029	1.000	59.029
Error(Width)	Sphericity Assumed	73.228	54	1.356
	Greenhouse-Geisser	73.228	39.558	1.851
	Huynh-Feldt	73.228	41.262	1.775
	Lower-bound	73.228	27.000	2.712
Cursor * Amp	Sphericity Assumed	3660.610	6	610.102
	Greenhouse-Geisser	3660.610	1.711	2139.177
	Huynh-Feldt	3660.610	1.816	2016.201
	Lower-bound	3660.610	1.000	3660.610
Error(Cursor*Amp)	Sphericity Assumed	569.265	162	3.514
	Greenhouse-Geisser	569.265	46.203	12.321
	Huynh-Feldt	569.265	49.021	11.613
	Lower-bound	569.265	27.000	21.084
Cursor * Width	Sphericity Assumed	11.750	6	1.958
	Greenhouse-Geisser	11.750	4.147	2.833
	Huynh-Feldt	11.750	4.993	2.353
	Lower-bound	11.750	1.000	11.750
Error(Cursor*Width)	Sphericity Assumed	126.640	162	.782
	Greenhouse-Geisser	126.640	111.966	1.131
	Huynh-Feldt	126.640	134.820	.939
	Lower-bound	126.640	27.000	4.690

Tests of Within-Subjects Effects

Measure: HeadMovement

Source		F	Sig.	Partial Eta Squared
Cursor	Sphericity Assumed	78.636	<.001	.744
	Greenhouse-Geisser	78.636	<.001	.744
	Huynh-Feldt	78.636	<.001	.744
	Lower-bound	78.636	<.001	.744
Error(Cursor)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Amp	Sphericity Assumed	2601.317	<.001	.990
	Greenhouse-Geisser	2601.317	<.001	.990
	Huynh-Feldt	2601.317	<.001	.990
	Lower-bound	2601.317	<.001	.990
Error(Amp)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Width	Sphericity Assumed	21.765	<.001	.446
	Greenhouse-Geisser	21.765	<.001	.446
	Huynh-Feldt	21.765	<.001	.446
	Lower-bound	21.765	<.001	.446
Error(Width)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Cursor * Amp	Sphericity Assumed	173.621	<.001	.865
	Greenhouse-Geisser	173.621	<.001	.865
	Huynh-Feldt	173.621	<.001	.865
	Lower-bound	173.621	<.001	.865
Error(Cursor*Amp)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Cursor * Width	Sphericity Assumed	2.505	.024	.085
	Greenhouse-Geisser	2.505	.044	.085
	Huynh-Feldt	2.505	.033	.085
	Lower-bound	2.505	.125	.085
Error(Cursor*Width)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			

Tests of Within-Subjects Effects

Measure: HeadMovement

Source		Type III Sum of Squares	df	Mean Square
Amp * Width	Sphericity Assumed	3.460	4	.865
	Greenhouse-Geisser	3.460	3.022	1.145
	Huynh-Feldt	3.460	3.446	1.004
	Lower-bound	3.460	1.000	3.460
Error(Amp*Width)	Sphericity Assumed	74.373	108	.689
	Greenhouse-Geisser	74.373	81.595	.911
	Huynh-Feldt	74.373	93.029	.799
	Lower-bound	74.373	27.000	2.755
Cursor * Amp * Width	Sphericity Assumed	22.310	12	1.859
	Greenhouse-Geisser	22.310	6.692	3.334
	Huynh-Feldt	22.310	9.129	2.444
	Lower-bound	22.310	1.000	22.310
Error(Cursor*Amp*Width)	Sphericity Assumed	208.502	324	.644
	Greenhouse-Geisser	208.502	180.695	1.154
	Huynh-Feldt	208.502	246.483	.846
	Lower-bound	208.502	27.000	7.722

Tests of Within-Subjects Effects

Measure: HeadMovement

Source		F	Sig.	Partial Eta Squared
Amp * Width	Sphericity Assumed	1.256	.292	.044
	Greenhouse-Geisser	1.256	.295	.044
	Huynh-Feldt	1.256	.294	.044
	Lower-bound	1.256	.272	.044
Error(Amp*Width)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			
Cursor * Amp * Width	Sphericity Assumed	2.889	<.001	.097
	Greenhouse-Geisser	2.889	.008	.097
	Huynh-Feldt	2.889	.003	.097
	Lower-bound	2.889	.101	.097
Error(Cursor*Amp*Width)	Sphericity Assumed			
	Greenhouse-Geisser			
	Huynh-Feldt			
	Lower-bound			

Tests of Within-Subjects Contrasts

Measure: HeadMovement

Source	Cursor	Amp	Width	Type III Sum of Squares	df
Cursor	Linear			4732.117	1
	Quadratic			2.566	1
	Cubic			676.677	1
Error(Cursor)	Linear			1203.780	27
	Quadratic			459.130	27
	Cubic			195.111	27
Amp		Linear		131753.006	1
		Quadratic		897.268	1
Error(Amp)		Linear		1341.290	27
		Quadratic		35.534	27
Width			Linear	57.238	1
			Quadratic	1.791	1
Error(Width)			Linear	57.460	27
			Quadratic	15.768	27
Cursor * Amp	Linear	Linear		3304.080	1
		Quadratic		27.840	1
	Quadratic	Linear		9.702	1
		Quadratic		18.720	1
	Cubic	Linear		292.013	1
		Quadratic		8.254	1
Error(Cursor*Amp)	Linear	Linear		374.682	27
		Quadratic		15.577	27
	Quadratic	Linear		85.095	27
		Quadratic		12.950	27
	Cubic	Linear		63.840	27
		Quadratic		17.121	27
Cursor * Width	Linear		Linear	.008	1
			Quadratic	7.759E-5	1
	Quadratic		Linear	8.795	1
			Quadratic	.430	1
	Cubic		Linear	.703	1
			Quadratic	1.813	1
Error(Cursor*Width)	Linear		Linear	26.760	27
			Quadratic	18.273	27
	Quadratic		Linear	18.565	27
			Quadratic	21.043	27
	Cubic		Linear	26.112	27
			Quadratic	15.888	27
Amp * Width		Linear	Linear	1.111	1
			Quadratic	.579	1

Tests of Within-Subjects Contrasts

Measure: HeadMovement

Source	Cursor	Amp	Width	Mean Square	F	Sig.
Cursor	Linear			4732.117	106.138	<.001
	Quadratic			2.566	.151	.701
	Cubic			676.677	93.641	<.001
Error(Cursor)	Linear			44.584		
	Quadratic			17.005		
	Cubic			7.226		
Amp		Linear		131753.006	2652.171	<.001
		Quadratic		897.268	681.768	<.001
Error(Amp)		Linear		49.677		
		Quadratic		1.316		
Width			Linear	57.238	26.896	<.001
			Quadratic	1.791	3.067	.091
Error(Width)			Linear	2.128		
			Quadratic	.584		
Cursor * Amp	Linear	Linear		3304.080	238.096	<.001
		Quadratic		27.840	48.256	<.001
	Quadratic	Linear		9.702	3.078	.091
		Quadratic		18.720	39.031	<.001
	Cubic	Linear		292.013	123.501	<.001
		Quadratic		8.254	13.016	.001
Error(Cursor*Amp)	Linear	Linear		13.877		
		Quadratic		.577		
	Quadratic	Linear		3.152		
		Quadratic		.480		
	Cubic	Linear		2.364		
		Quadratic		.634		
Cursor * Width	Linear		Linear	.008	.008	.929
			Quadratic	7.759E-5	.000	.992
	Quadratic		Linear	8.795	12.792	.001
			Quadratic	.430	.552	.464
	Cubic		Linear	.703	.727	.401
			Quadratic	1.813	3.082	.091
Error(Cursor*Width)	Linear		Linear	.991		
			Quadratic	.677		
	Quadratic		Linear	.688		
			Quadratic	.779		
	Cubic		Linear	.967		
			Quadratic	.588		
Amp * Width		Linear	Linear	1.111	1.025	.320
			Quadratic	.579	.684	.415

Tests of Within-Subjects Contrasts

Measure: HeadMovement

Source	Cursor	Amp	Width	Partial Eta Squared
Cursor	Linear			.797
	Quadratic			.006
	Cubic			.776
Error(Cursor)	Linear			
	Quadratic			
	Cubic			
Amp		Linear		.990
		Quadratic		.962
Error(Amp)		Linear		
		Quadratic		
Width			Linear	.499
			Quadratic	.102
Error(Width)			Linear	
			Quadratic	
Cursor * Amp	Linear	Linear		.898
		Quadratic		.641
	Quadratic	Linear		.102
		Quadratic		.591
	Cubic	Linear		.821
		Quadratic		.325
Error(Cursor*Amp)	Linear	Linear		
		Quadratic		
	Quadratic	Linear		
		Quadratic		
	Cubic	Linear		
		Quadratic		
Cursor * Width	Linear		Linear	.000
			Quadratic	.000
	Quadratic		Linear	.321
			Quadratic	.020
	Cubic		Linear	.026
			Quadratic	.102
Error(Cursor*Width)	Linear		Linear	
			Quadratic	
	Quadratic		Linear	
			Quadratic	
	Cubic		Linear	
			Quadratic	
Amp * Width		Linear	Linear	.037
			Quadratic	.025

Tests of Within-Subjects Contrasts

Measure: HeadMovement

Source	Cursor	Amp	Width	Type III Sum of Squares	df
		Quadratic	Linear	1.758	1
			Quadratic	.012	1
Error(Amp*Width)		Linear	Linear	29.270	27
			Quadratic	22.862	27
		Quadratic	Linear	13.991	27
			Quadratic	8.250	27
Cursor * Amp * Width	Linear	Linear	Linear	1.296	1
			Quadratic	.822	1
		Quadratic	Linear	5.650	1
			Quadratic	.017	1
	Quadratic	Linear	Linear	2.524	1
			Quadratic	4.393	1
		Quadratic	Linear	.111	1
			Quadratic	.517	1
	Cubic	Linear	Linear	.014	1
			Quadratic	2.975	1
		Quadratic	Linear	3.136	1
			Quadratic	.855	1
Error(Cursor*Amp*Width)	Linear	Linear	Linear	28.775	27
			Quadratic	19.483	27
		Quadratic	Linear	24.097	27
			Quadratic	11.767	27
	Quadratic	Linear	Linear	11.425	27
			Quadratic	13.982	27
		Quadratic	Linear	22.232	27
			Quadratic	19.012	27
	Cubic	Linear	Linear	17.574	27
			Quadratic	11.519	27
		Quadratic	Linear	14.669	27
			Quadratic	13.967	27

Tests of Within-Subjects Contrasts

Measure: HeadMovement

Source	Cursor	Amp	Width	Mean Square	F	Sig.
		Quadratic	Linear	1.758	3.393	.076
			Quadratic	.012	.040	.844
Error(Amp*Width)		Linear	Linear	1.084		
			Quadratic	.847		
		Quadratic	Linear	.518		
			Quadratic	.306		
Cursor * Amp * Width	Linear	Linear	Linear	1.296	1.216	.280
			Quadratic	.822	1.139	.295
		Quadratic	Linear	5.650	6.330	.018
			Quadratic	.017	.039	.844
	Quadratic	Linear	Linear	2.524	5.966	.021
			Quadratic	4.393	8.484	.007
		Quadratic	Linear	.111	.134	.717
			Quadratic	.517	.734	.399
	Cubic	Linear	Linear	.014	.022	.884
			Quadratic	2.975	6.974	.014
		Quadratic	Linear	3.136	5.772	.023
			Quadratic	.855	1.653	.209
Error(Cursor*Amp*Width)	Linear	Linear	Linear	1.066		
			Quadratic	.722		
		Quadratic	Linear	.892		
			Quadratic	.436		
	Quadratic	Linear	Linear	.423		
			Quadratic	.518		
		Quadratic	Linear	.823		
			Quadratic	.704		
	Cubic	Linear	Linear	.651		
			Quadratic	.427		
		Quadratic	Linear	.543		
			Quadratic	.517		

Tests of Within-Subjects Contrasts

Measure: HeadMovement

Source	Cursor	Amp	Width	Partial Eta Squared
		Quadratic	Linear	.112
			Quadratic	.001
Error(Amp*Width)		Linear	Linear	
			Quadratic	
		Quadratic	Linear	
			Quadratic	
Cursor * Amp * Width	Linear	Linear	Linear	.043
			Quadratic	.040
		Quadratic	Linear	.190
			Quadratic	.001
	Quadratic	Linear	Linear	.181
			Quadratic	.239
		Quadratic	Linear	.005
			Quadratic	.026
	Cubic	Linear	Linear	.001
			Quadratic	.205
		Quadratic	Linear	.176
			Quadratic	.058
Error(Cursor*Amp*Width)	Linear	Linear	Linear	
			Quadratic	
		Quadratic	Linear	
			Quadratic	
	Quadratic	Linear	Linear	
			Quadratic	
		Quadratic	Linear	
			Quadratic	
	Cubic	Linear	Linear	
			Quadratic	
		Quadratic	Linear	
			Quadratic	

Tests of Between-Subjects Effects

Measure: HeadMovement

Transformed Variable: Average

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	397276.526	1	397276.526	2187.650	<.001	.988
Error	4903.191	27	181.600			

Estimated Marginal Means

1. Grand Mean

Measure: HeadMovement

Mean	Std. Error	95% Confidence Interval	
		Lower Bound	Upper Bound
19.853	.424	18.982	20.723

2. Cursor

Estimates

Measure: HeadMovement

Cursor	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	22.444	.639	21.131	23.756
2	21.870	.488	20.868	22.872
3	17.734	.404	16.906	18.562
4	17.362	.428	16.484	18.241

Pairwise Comparisons

Measure: HeadMovement

(I) Cursor	(J) Cursor	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	.573	.428	1.000	-.646	1.792
	3	4.710*	.612	<.001	2.968	6.452
	4	5.081*	.555	<.001	3.501	6.661
2	1	-.573	.428	1.000	-1.792	.646
	3	4.136*	.321	<.001	3.222	5.051
	4	4.508*	.277	<.001	3.720	5.296
3	1	-4.710*	.612	<.001	-6.452	-2.968
	2	-4.136*	.321	<.001	-5.051	-3.222
	4	.371	.216	.585	-.244	.987
4	1	-5.081*	.555	<.001	-6.661	-3.501
	2	-4.508*	.277	<.001	-5.296	-3.720
	3	-.371	.216	.585	-.987	.244

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Multivariate Tests

	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Pillai's trace	.910	83.881[a]	3.000	25.000	<.001	.910
Wilks' lambda	.090	83.881[a]	3.000	25.000	<.001	.910
Hotelling's trace	10.066	83.881[a]	3.000	25.000	<.001	.910
Roy's largest root	10.066	83.881[a]	3.000	25.000	<.001	.910

Each F tests the multivariate effect of Cursor. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

3. Amp

Estimates

Measure: HeadMovement

			95% Confidence Interval	
Amp	Mean	Std. Error	Lower Bound	Upper Bound
1	5.183	.203	4.766	5.600
2	21.187	.445	20.274	22.100
3	33.188	.673	31.807	34.568

Pairwise Comparisons

Measure: HeadMovement

					95% Confidence Interval for Difference[b]	
(I) Amp	(J) Amp	Mean Difference (I-J)	Std. Error	Sig.[b]	Lower Bound	Upper Bound
1	2	-16.004*	.311	<.001	-16.798	-15.210
	3	-28.004*	.544	<.001	-29.392	-26.616
2	1	16.004*	.311	<.001	15.210	16.798
	3	-12.001*	.251	<.001	-12.641	-11.361
3	1	28.004*	.544	<.001	26.616	29.392
	2	12.001*	.251	<.001	11.361	12.641

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Multivariate Tests

	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Pillai's trace	.990	1292.296[a]	2.000	26.000	<.001	.990
Wilks' lambda	.010	1292.296[a]	2.000	26.000	<.001	.990
Hotelling's trace	99.407	1292.296[a]	2.000	26.000	<.001	.990
Roy's largest root	99.407	1292.296[a]	2.000	26.000	<.001	.990

Each F tests the multivariate effect of Amp. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

4. Width

Estimates

Measure: HeadMovement

Width	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	19.591	.419	18.731	20.450
2	19.793	.436	18.898	20.688
3	20.174	.428	19.297	21.052

Pairwise Comparisons

Measure: HeadMovement

(I) Width	(J) Width	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
1	2	-.202*	.066	.015	-.371	-.034
	3	-.584*	.113	<.001	-.871	-.296
2	1	.202*	.066	.015	.034	.371
	3	-.381*	.085	<.001	-.598	-.165
3	1	.584*	.113	<.001	.296	.871
	2	.381*	.085	<.001	.165	.598

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Multivariate Tests

	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Pillai's trace	.501	13.065[a]	2.000	26.000	<.001	.501
Wilks' lambda	.499	13.065[a]	2.000	26.000	<.001	.501
Hotelling's trace	1.005	13.065[a]	2.000	26.000	<.001	.501
Roy's largest root	1.005	13.065[a]	2.000	26.000	<.001	.501

Each F tests the multivariate effect of Width. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

5. Cursor * Amp

Estimates

Measure: HeadMovement

Cursor	Amp	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
1	1	5.007	.294	4.403	5.610
	2	23.712	.651	22.377	25.048
	3	38.612	1.010	36.539	40.684
2	1	5.680	.254	5.158	6.202
	2	22.735	.499	21.711	23.759
	3	37.196	.805	35.545	38.847
3	1	5.019	.193	4.623	5.414
	2	19.152	.447	18.235	20.070
	3	29.031	.623	27.753	30.308
4	1	5.028	.209	4.598	5.457
	2	19.148	.474	18.176	20.119
	3	27.912	.674	26.529	29.295

Pairwise Comparisons

Measure: HeadMovement

Amp	(I) Cursor	(J) Cursor	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for [b]... Lower Bound
1	1	2	-.673*	.221	.031	-1.302
		3	-.012	.263	1.000	-.762
		4	-.021	.210	1.000	-.620
	2	1	.673*	.221	.031	.044
		3	.661*	.197	.014	.099
		4	.652*	.201	.019	.081
	3	1	.012	.263	1.000	-.738
		2	-.661*	.197	.014	-1.223
		4	-.009	.162	1.000	-.470
	4	1	.021	.210	1.000	-.578
		2	-.652*	.201	.019	-1.223
		3	.009	.162	1.000	-.452
2	1	2	.977	.423	.173	-.227
		3	4.560*	.627	<.001	2.774
		4	4.565*	.571	<.001	2.940
	2	1	-.977	.423	.173	-2.182
		3	3.583*	.366	<.001	2.540
		4	3.587*	.323	<.001	2.667
	3	1	-4.560*	.627	<.001	-6.347
		2	-3.583*	.366	<.001	-4.626
		4	.005	.281	1.000	-.794
	4	1	-4.565*	.571	<.001	-6.190
		2	-3.587*	.323	<.001	-4.508
		3	-.005	.281	1.000	-.803
3	1	2	1.416	.691	.302	-.551
		3	9.581*	.978	<.001	6.796
		4	10.699*	.923	<.001	8.072
	2	1	-1.416	.691	.302	-3.382
		3	8.165*	.504	<.001	6.731
		4	9.284*	.435	<.001	8.044
	3	1	-9.581*	.978	<.001	-12.366
		2	-8.165*	.504	<.001	-9.600
		4	1.119*	.259	.001	.381
	4	1	-10.699*	.923	<.001	-13.327
		2	-9.284*	.435	<.001	-10.523
		3	-1.119*	.259	.001	-1.856

Pairwise Comparisons

Measure: HeadMovement

Amp	(I) Cursor	(J) Cursor	95% Confidence Interval for [b]... Upper Bound
1	1	2	-.044
		3	.738
		4	.578
	2	1	1.302
		3	1.223
		4	1.223
	3	1	.762
		2	-.099
		4	.452
	4	1	.620
		2	-.081
		3	.470
2	1	2	2.182
		3	6.347
		4	6.190
	2	1	.227
		3	4.626
		4	4.508
	3	1	-2.774
		2	-2.540
		4	.803
	4	1	-2.940
		2	-2.667
		3	.794
3	1	2	3.382
		3	12.366
		4	13.327
	2	1	.551
		3	9.600
		4	10.523
	3	1	-6.796
		2	-6.731
		4	1.856
	4	1	-8.072
		2	-8.044
		3	-.381

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Multivariate Tests

Amp		Value	F	Hypothesis df	Error df	Sig.
1	Pillai's trace	.386	5.240[a]	3.000	25.000	.006
	Wilks' lambda	.614	5.240[a]	3.000	25.000	.006
	Hotelling's trace	.629	5.240[a]	3.000	25.000	.006
	Roy's largest root	.629	5.240[a]	3.000	25.000	.006
2	Pillai's trace	.831	40.929[a]	3.000	25.000	<.001
	Wilks' lambda	.169	40.929[a]	3.000	25.000	<.001
	Hotelling's trace	4.911	40.929[a]	3.000	25.000	<.001
	Roy's largest root	4.911	40.929[a]	3.000	25.000	<.001
3	Pillai's trace	.948	151.083[a]	3.000	25.000	<.001
	Wilks' lambda	.052	151.083[a]	3.000	25.000	<.001
	Hotelling's trace	18.130	151.083[a]	3.000	25.000	<.001
	Roy's largest root	18.130	151.083[a]	3.000	25.000	<.001

Multivariate Tests

Amp		Partial Eta Squared
1	Pillai's trace	.386
	Wilks' lambda	.386
	Hotelling's trace	.386
	Roy's largest root	.386
2	Pillai's trace	.831
	Wilks' lambda	.831
	Hotelling's trace	.831
	Roy's largest root	.831
3	Pillai's trace	.948
	Wilks' lambda	.948
	Hotelling's trace	.948
	Roy's largest root	.948

Each F tests the multivariate simple effects of Cursor within each level combination of the other effects shown. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

6. Cursor * Amp

Estimates

Measure: HeadMovement

Cursor	Amp	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
1	1	5.007	.294	4.403	5.610
	2	23.712	.651	22.377	25.048
	3	38.612	1.010	36.539	40.684
2	1	5.680	.254	5.158	6.202
	2	22.735	.499	21.711	23.759
	3	37.196	.805	35.545	38.847
3	1	5.019	.193	4.623	5.414
	2	19.152	.447	18.235	20.070
	3	29.031	.623	27.753	30.308
4	1	5.028	.209	4.598	5.457
	2	19.148	.474	18.176	20.119
	3	27.912	.674	26.529	29.295

Pairwise Comparisons

Measure: HeadMovement

Cursor	(I) Amp	(J) Amp	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
1	1	2	-18.706*	.420	<.001	-19.777	-17.634
		3	-33.605*	.773	<.001	-35.578	-31.632
	2	1	18.706*	.420	<.001	17.634	19.777
		3	-14.899*	.371	<.001	-15.847	-13.952
	3	1	33.605*	.773	<.001	31.632	35.578
		2	14.899*	.371	<.001	13.952	15.847
2	1	2	-17.055*	.362	<.001	-17.980	-16.131
		3	-31.516*	.691	<.001	-33.280	-29.752
	2	1	17.055*	.362	<.001	16.131	17.980
		3	-14.461*	.359	<.001	-15.376	-13.545
	3	1	31.516*	.691	<.001	29.752	33.280
		2	14.461*	.359	<.001	13.545	15.376
3	1	2	-14.133*	.314	<.001	-14.934	-13.333
		3	-24.012*	.499	<.001	-25.287	-22.737
	2	1	14.133*	.314	<.001	13.333	14.934
		3	-9.878*	.247	<.001	-10.508	-9.249
	3	1	24.012*	.499	<.001	22.737	25.287
		2	9.878*	.247	<.001	9.249	10.508
4	1	2	-14.120*	.353	<.001	-15.021	-13.219
		3	-22.884*	.566	<.001	-24.328	-21.440

Pairwise Comparisons

Measure: HeadMovement

Cursor	(I) Amp	(J) Amp	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
	2	1	14.120*	.353	<.001	13.219	15.021
		3	-8.765*	.268	<.001	-9.449	-8.080
	3	1	22.884*	.566	<.001	21.440	24.328
		2	8.765*	.268	<.001	8.080	9.449

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Multivariate Tests

Cursor		Value	F	Hypothesis df	Error df	Sig.
1	Pillai's trace	.987	956.756[a]	2.000	26.000	<.001
	Wilks' lambda	.013	956.756[a]	2.000	26.000	<.001
	Hotelling's trace	73.597	956.756[a]	2.000	26.000	<.001
	Roy's largest root	73.597	956.756[a]	2.000	26.000	<.001
2	Pillai's trace	.988	1068.450[a]	2.000	26.000	<.001
	Wilks' lambda	.012	1068.450[a]	2.000	26.000	<.001
	Hotelling's trace	82.188	1068.450[a]	2.000	26.000	<.001
	Roy's largest root	82.188	1068.450[a]	2.000	26.000	<.001
3	Pillai's trace	.988	1116.010[a]	2.000	26.000	<.001
	Wilks' lambda	.012	1116.010[a]	2.000	26.000	<.001
	Hotelling's trace	85.847	1116.010[a]	2.000	26.000	<.001
	Roy's largest root	85.847	1116.010[a]	2.000	26.000	<.001
4	Pillai's trace	.984	806.745[a]	2.000	26.000	<.001
	Wilks' lambda	.016	806.745[a]	2.000	26.000	<.001
	Hotelling's trace	62.057	806.745[a]	2.000	26.000	<.001
	Roy's largest root	62.057	806.745[a]	2.000	26.000	<.001

Multivariate Tests

Cursor		Partial Eta Squared
1	Pillai's trace	.987
	Wilks' lambda	.987
	Hotelling's trace	.987
	Roy's largest root	.987
2	Pillai's trace	.988
	Wilks' lambda	.988
	Hotelling's trace	.988
	Roy's largest root	.988
3	Pillai's trace	.988
	Wilks' lambda	.988
	Hotelling's trace	.988
	Roy's largest root	.988
4	Pillai's trace	.984
	Wilks' lambda	.984
	Hotelling's trace	.984
	Roy's largest root	.984

Each F tests the multivariate simple effects of Amp within each level combination of the other effects shown. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

7. Cursor * Width

Estimates

Measure: HeadMovement

Cursor	Width	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
1	1	22.059	.649	20.727	23.390
	2	22.381	.636	21.075	23.687
	3	22.891	.644	21.569	24.213
2	1	21.793	.473	20.822	22.764
	2	21.759	.514	20.705	22.813
	3	22.058	.496	21.040	23.076
3	1	17.486	.417	16.630	18.343
	2	17.784	.418	16.927	18.641
	3	17.931	.406	17.098	18.764
4	1	17.024	.417	16.168	17.879
	2	17.247	.458	16.307	18.188
	3	17.816	.444	16.905	18.728

Pairwise Comparisons

Measure: HeadMovement

Width	(I) Cursor	(J) Cursor	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for [b]... Lower Bound
1	1	2	.265	.446	1.000	-1.005
		3	4.572*	.622	<.001	2.801
		4	5.035*	.592	<.001	3.349
	2	1	-.265	.446	1.000	-1.536
		3	4.307*	.313	<.001	3.416
		4	4.770*	.291	<.001	3.942
	3	1	-4.572*	.622	<.001	-6.343
		2	-4.307*	.313	<.001	-5.198
		4	.463	.215	.245	-.151
	4	1	-5.035*	.592	<.001	-6.721
		2	-4.770*	.291	<.001	-5.597
		3	-.463	.215	.245	-1.076
2	1	2	.622	.436	.990	-.618
		3	4.597*	.629	<.001	2.807
		4	5.134*	.567	<.001	3.520
	2	1	-.622	.436	.990	-1.862
		3	3.975*	.349	<.001	2.981
		4	4.512*	.296	<.001	3.669
	3	1	-4.597*	.629	<.001	-6.387
		2	-3.975*	.349	<.001	-4.969
		4	.537	.229	.161	-.116
	4	1	-5.134*	.567	<.001	-6.748
		2	-4.512*	.296	<.001	-5.355
		3	-.537	.229	.161	-1.189
3	1	2	.833	.436	.402	-.410
		3	4.960*	.604	<.001	3.241
		4	5.074*	.547	<.001	3.518
	2	1	-.833	.436	.402	-2.075
		3	4.127*	.346	<.001	3.143
		4	4.242*	.313	<.001	3.350
	3	1	-4.960*	.604	<.001	-6.679
		2	-4.127*	.346	<.001	-5.111
		4	.115	.307	1.000	-.760
	4	1	-5.074*	.547	<.001	-6.631
		2	-4.242*	.313	<.001	-5.134
		3	-.115	.307	1.000	-.989

Pairwise Comparisons

Measure: HeadMovement

Width	(I) Cursor	(J) Cursor	95% Confidence Interval for [b]... Upper Bound
1	1	2	1.536
		3	6.343
		4	6.721
	2	1	1.005
		3	5.198
		4	5.597
	3	1	-2.801
		2	-3.416
		4	1.076
	4	1	-3.349
		2	-3.942
		3	.151
2	1	2	1.862
		3	6.387
		4	6.748
	2	1	.618
		3	4.969
		4	5.355
	3	1	-2.807
		2	-2.981
		4	1.189
	4	1	-3.520
		2	-3.669
		3	.116
3	1	2	2.075
		3	6.679
		4	6.631
	2	1	.410
		3	5.111
		4	5.134
	3	1	-3.241
		2	-3.143
		4	.989
	4	1	-3.518
		2	-3.350
		3	.760

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Multivariate Tests

Width		Value	F	Hypothesis df	Error df	Sig.
1	Pillai's trace	.916	90.393[a]	3.000	25.000	<.001
	Wilks' lambda	.084	90.393[a]	3.000	25.000	<.001
	Hotelling's trace	10.847	90.393[a]	3.000	25.000	<.001
	Roy's largest root	10.847	90.393[a]	3.000	25.000	<.001
2	Pillai's trace	.896	72.061[a]	3.000	25.000	<.001
	Wilks' lambda	.104	72.061[a]	3.000	25.000	<.001
	Hotelling's trace	8.647	72.061[a]	3.000	25.000	<.001
	Roy's largest root	8.647	72.061[a]	3.000	25.000	<.001
3	Pillai's trace	.886	64.800[a]	3.000	25.000	<.001
	Wilks' lambda	.114	64.800[a]	3.000	25.000	<.001
	Hotelling's trace	7.776	64.800[a]	3.000	25.000	<.001
	Roy's largest root	7.776	64.800[a]	3.000	25.000	<.001

Multivariate Tests

Width		Partial Eta Squared
1	Pillai's trace	.916
	Wilks' lambda	.916
	Hotelling's trace	.916
	Roy's largest root	.916
2	Pillai's trace	.896
	Wilks' lambda	.896
	Hotelling's trace	.896
	Roy's largest root	.896
3	Pillai's trace	.886
	Wilks' lambda	.886
	Hotelling's trace	.886
	Roy's largest root	.886

Each F tests the multivariate simple effects of Cursor within each level combination of the other effects shown. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

8. Cursor * Width

Estimates

Measure: HeadMovement

Cursor	Width	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
1	1	22.059	.649	20.727	23.390
	2	22.381	.636	21.075	23.687
	3	22.891	.644	21.569	24.213
2	1	21.793	.473	20.822	22.764
	2	21.759	.514	20.705	22.813
	3	22.058	.496	21.040	23.076
3	1	17.486	.417	16.630	18.343
	2	17.784	.418	16.927	18.641
	3	17.931	.406	17.098	18.764
4	1	17.024	.417	16.168	17.879
	2	17.247	.458	16.307	18.188
	3	17.816	.444	16.905	18.728

Pairwise Comparisons

Measure: HeadMovement

Cursor	(I) Width	(J) Width	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for [b]...
						Lower Bound
1	1	2	-.322*	.101	.011	-.581
		3	-.832*	.153	<.001	-1.222
	2	1	.322*	.101	.011	.064
		3	-.510*	.093	<.001	-.747
	3	1	.832*	.153	<.001	.443
		2	.510*	.093	<.001	.273
2	1	2	.034	.119	1.000	-.270
		3	-.265	.153	.285	-.656
	2	1	-.034	.119	1.000	-.338
		3	-.299	.133	.100	-.640
	3	1	.265	.153	.285	-.126
		2	.299	.133	.100	-.042
3	1	2	-.298*	.104	.024	-.564
		3	-.445	.186	.072	-.920
	2	1	.298*	.104	.024	.032
		3	-.147	.169	1.000	-.578
	3	1	.445	.186	.072	-.030
		2	.147	.169	1.000	-.284
4	1	2	-.224	.176	.645	-.673
		3	-.793*	.180	<.001	-1.251
	2	1	.224	.176	.645	-.226
		3	-.569*	.172	.008	-1.007

Pairwise Comparisons

Measure: HeadMovement

Cursor	(I) Width	(J) Width	95% Confidence Interval for [b]... Upper Bound
1	1	2	-.064
		3	-.443
	2	1	.581
		3	-.273
	3	1	1.222
		2	.747
2	1	2	.338
		3	.126
	2	1	.270
		3	.042
	3	1	.656
		2	.640
3	1	2	-.032
		3	.030
	2	1	.564
		3	.284
	3	1	.920
		2	.578
4	1	2	.226
		3	-.334
	2	1	.673
		3	-.131

Pairwise Comparisons

Measure: HeadMovement

Cursor	(I) Width	(J) Width	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for [b]... Lower Bound
	3	1	.793*	.180	<.001	.334
		2	.569*	.172	.008	.131

Pairwise Comparisons

Measure: HeadMovement

Cursor	(I) Width	(J) Width	95% Confidence Interval for [b]... Upper Bound
	3	1	1.251
		2	1.007

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Multivariate Tests

Cursor		Value	F	Hypothesis df	Error df	Sig.
1	Pillai's trace	.557	16.362[a]	2.000	26.000	<.001
	Wilks' lambda	.443	16.362[a]	2.000	26.000	<.001
	Hotelling's trace	1.259	16.362[a]	2.000	26.000	<.001
	Roy's largest root	1.259	16.362[a]	2.000	26.000	<.001
2	Pillai's trace	.160	2.469[a]	2.000	26.000	.104
	Wilks' lambda	.840	2.469[a]	2.000	26.000	.104
	Hotelling's trace	.190	2.469[a]	2.000	26.000	.104
	Roy's largest root	.190	2.469[a]	2.000	26.000	.104
3	Pillai's trace	.266	4.700[a]	2.000	26.000	.018
	Wilks' lambda	.734	4.700[a]	2.000	26.000	.018
	Hotelling's trace	.362	4.700[a]	2.000	26.000	.018
	Roy's largest root	.362	4.700[a]	2.000	26.000	.018
4	Pillai's trace	.439	10.189[a]	2.000	26.000	<.001
	Wilks' lambda	.561	10.189[a]	2.000	26.000	<.001
	Hotelling's trace	.784	10.189[a]	2.000	26.000	<.001
	Roy's largest root	.784	10.189[a]	2.000	26.000	<.001

Multivariate Tests

Cursor		Partial Eta Squared
1	Pillai's trace	.557
	Wilks' lambda	.557
	Hotelling's trace	.557
	Roy's largest root	.557
2	Pillai's trace	.160
	Wilks' lambda	.160
	Hotelling's trace	.160
	Roy's largest root	.160
3	Pillai's trace	.266
	Wilks' lambda	.266
	Hotelling's trace	.266
	Roy's largest root	.266
4	Pillai's trace	.439
	Wilks' lambda	.439
	Hotelling's trace	.439
	Roy's largest root	.439

Each F tests the multivariate simple effects of Width within each level combination of the other effects shown. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

9. Amp * Width

Estimates

Measure: HeadMovement

Amp	Width	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
1	1	4.885	.210	4.453	5.317
	2	5.169	.190	4.778	5.559
	3	5.496	.239	5.005	5.987
2	1	20.856	.440	19.952	21.759
	2	21.120	.458	20.180	22.060
	3	21.584	.451	20.659	22.509
3	1	33.031	.659	31.678	34.383
	2	33.090	.708	31.637	34.543
	3	33.442	.667	32.074	34.810

Pairwise Comparisons

Measure: HeadMovement

Width	(I) Amp	(J) Amp	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
						Lower Bound	Upper Bound
1	1	2	-15.971*	.311	<.001	-16.764	-15.177
		3	-28.145*	.532	<.001	-29.503	-26.788
	2	1	15.971*	.311	<.001	15.177	16.764
		3	-12.175*	.247	<.001	-12.806	-11.543
	3	1	28.145*	.532	<.001	26.788	29.503
		2	12.175*	.247	<.001	11.543	12.806
2	1	2	-15.952*	.333	<.001	-16.801	-15.102
		3	-27.921*	.584	<.001	-29.411	-26.432
	2	1	15.952*	.333	<.001	15.102	16.801
		3	-11.970*	.281	<.001	-12.687	-11.252
	3	1	27.921*	.584	<.001	26.432	29.411
		2	11.970*	.281	<.001	11.252	12.687
3	1	2	-16.088*	.315	<.001	-16.892	-15.284
		3	-27.946*	.546	<.001	-29.340	-26.553
	2	1	16.088*	.315	<.001	15.284	16.892
		3	-11.858*	.267	<.001	-12.540	-11.176
	3	1	27.946*	.546	<.001	26.553	29.340
		2	11.858*	.267	<.001	11.176	12.540

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Multivariate Tests

Width		Value	F	Hypothesis df	Error df	Sig.
1	Pillai's trace	.990	1349.323[a]	2.000	26.000	<.001
	Wilks' lambda	.010	1349.323[a]	2.000	26.000	<.001
	Hotelling's trace	103.794	1349.323[a]	2.000	26.000	<.001
	Roy's largest root	103.794	1349.323[a]	2.000	26.000	<.001
2	Pillai's trace	.989	1127.855[a]	2.000	26.000	<.001
	Wilks' lambda	.011	1127.855[a]	2.000	26.000	<.001
	Hotelling's trace	86.758	1127.855[a]	2.000	26.000	<.001
	Roy's largest root	86.758	1127.855[a]	2.000	26.000	<.001
3	Pillai's trace	.990	1292.739[a]	2.000	26.000	<.001
	Wilks' lambda	.010	1292.739[a]	2.000	26.000	<.001
	Hotelling's trace	99.441	1292.739[a]	2.000	26.000	<.001
	Roy's largest root	99.441	1292.739[a]	2.000	26.000	<.001

Multivariate Tests

Width		Partial Eta Squared
1	Pillai's trace	.990
	Wilks' lambda	.990
	Hotelling's trace	.990
	Roy's largest root	.990
2	Pillai's trace	.989
	Wilks' lambda	.989
	Hotelling's trace	.989
	Roy's largest root	.989
3	Pillai's trace	.990
	Wilks' lambda	.990
	Hotelling's trace	.990
	Roy's largest root	.990

Each F tests the multivariate simple effects of Amp within each level combination of the other effects shown. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

10. Amp * Width

Estimates

Measure: HeadMovement

Amp	Width	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
1	1	4.885	.210	4.453	5.317
	2	5.169	.190	4.778	5.559
	3	5.496	.239	5.005	5.987
2	1	20.856	.440	19.952	21.759
	2	21.120	.458	20.180	22.060
	3	21.584	.451	20.659	22.509
3	1	33.031	.659	31.678	34.383
	2	33.090	.708	31.637	34.543
	3	33.442	.667	32.074	34.810

Pairwise Comparisons

Measure: HeadMovement

Amp	(I) Width	(J) Width	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for [b]...
						Lower Bound
1	1	2	-.284*	.074	.002	-.472
		3	-.611*	.150	.001	-.994
	2	1	.284*	.074	.002	.095
		3	-.327*	.115	.025	-.622
	3	1	.611*	.150	.001	.228
		2	.327*	.115	.025	.033
2	1	2	-.264*	.071	.003	-.446
		3	-.728*	.141	<.001	-1.089
	2	1	.264*	.071	.003	.082
		3	-.464*	.116	.001	-.759
	3	1	.728*	.141	<.001	.368
		2	.464*	.116	.001	.169
3	1	2	-.059	.150	1.000	-.442
		3	-.412*	.156	.040	-.809
	2	1	.059	.150	1.000	-.323
		3	-.352	.142	.059	-.715
	3	1	.412*	.156	.040	.015
		2	.352	.142	.059	-.010

Pairwise Comparisons

Measure: HeadMovement

Amp	(I) Width	(J) Width	95% Confidence Interval for [b]... Upper Bound
1	1	2	-.095
		3	-.228
	2	1	.472
		3	-.033
	3	1	.994
		2	.622
2	1	2	-.082
		3	-.368
	2	1	.446
		3	-.169
	3	1	1.089
		2	.759
3	1	2	.323
		3	-.015
	2	1	.442
		3	.010
	3	1	.809
		2	.715

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Multivariate Tests

Amp		Value	F	Hypothesis df	Error df	Sig.
1	Pillai's trace	.412	9.124[a]	2.000	26.000	<.001
	Wilks' lambda	.588	9.124[a]	2.000	26.000	<.001
	Hotelling's trace	.702	9.124[a]	2.000	26.000	<.001
	Roy's largest root	.702	9.124[a]	2.000	26.000	<.001
2	Pillai's trace	.503	13.183[a]	2.000	26.000	<.001
	Wilks' lambda	.497	13.183[a]	2.000	26.000	<.001
	Hotelling's trace	1.014	13.183[a]	2.000	26.000	<.001
	Roy's largest root	1.014	13.183[a]	2.000	26.000	<.001
3	Pillai's trace	.246	4.252[a]	2.000	26.000	.025
	Wilks' lambda	.754	4.252[a]	2.000	26.000	.025
	Hotelling's trace	.327	4.252[a]	2.000	26.000	.025
	Roy's largest root	.327	4.252[a]	2.000	26.000	.025

Multivariate Tests

Amp		Partial Eta Squared
1	Pillai's trace	.412
	Wilks' lambda	.412
	Hotelling's trace	.412
	Roy's largest root	.412
2	Pillai's trace	.503
	Wilks' lambda	.503
	Hotelling's trace	.503
	Roy's largest root	.503
3	Pillai's trace	.246
	Wilks' lambda	.246
	Hotelling's trace	.246
	Roy's largest root	.246

Each F tests the multivariate simple effects of Width within each level combination of the other effects shown. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

11. Cursor * Amp * Width

Estimates

Measure: HeadMovement

Cursor	Amp	Width	Mean	Std. Error	95% Confidence Interval	
					Lower Bound	Upper Bound
1	1	1	4.624	.295	4.019	5.228
		2	5.036	.315	4.390	5.683
		3	5.360	.349	4.643	6.076
	2	1	23.187	.668	21.816	24.558
		2	23.561	.639	22.249	24.872
		3	24.389	.664	23.027	25.751
	3	1	38.365	1.035	36.242	40.488
		2	38.546	1.004	36.487	40.606
		3	38.923	1.003	36.866	40.981
2	1	1	5.598	.255	5.074	6.122
		2	5.544	.237	5.057	6.031
		3	5.898	.312	5.258	6.538
	2	1	22.324	.497	21.303	23.344
		2	22.737	.545	21.619	23.855
		3	23.145	.493	22.132	24.157
	3	1	37.458	.766	35.887	39.030
		2	36.997	.843	35.267	38.728
		3	37.132	.837	35.415	38.850
3	1	1	4.709	.232	4.234	5.184
		2	4.910	.176	4.548	5.272
		3	5.437	.219	4.988	5.886
	2	1	19.020	.478	18.039	20.001
		2	19.166	.454	18.234	20.098
		3	19.270	.473	18.300	20.241
	3	1	28.730	.630	27.438	30.023
		2	29.276	.685	27.870	30.681
		3	29.086	.619	27.816	30.355
4	1	1	4.610	.206	4.186	5.033
		2	5.184	.216	4.741	5.628
		3	5.289	.254	4.769	5.810
	2	1	18.893	.465	17.938	19.848
		2	19.017	.512	17.966	20.069
		3	19.533	.529	18.446	20.619
	3	1	27.569	.701	26.131	29.006
		2	27.540	.755	25.991	29.089
		3	28.628	.670	27.252	30.003

Pairwise Comparisons

Measure: HeadMovement

Amp	Width	(I) Cursor	(J) Cursor	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for [b]... Lower Bound
1	1	1	2	-.974*	.225	.001	-1.616
			3	-.085	.256	1.000	-.814
			4	.014	.196	1.000	-.542
		2	1	.974*	.225	.001	.332
			3	.889*	.228	.003	.240
			4	.988*	.216	<.001	.374
		3	1	.085	.256	1.000	-.644
			2	-.889*	.228	.003	-1.538
			4	.099	.175	1.000	-.399
		4	1	-.014	.196	1.000	-.571
			2	-.988*	.216	<.001	-1.603
			3	-.099	.175	1.000	-.597
	2	1	2	-.508	.253	.329	-1.228
			3	.126	.309	1.000	-.753
			4	-.148	.271	1.000	-.919
		2	1	.508	.253	.329	-.213
			3	.634*	.194	.017	.083
			4	.359	.215	.634	-.252
		3	1	-.126	.309	1.000	-1.005
			2	-.634*	.194	.017	-1.185
			4	-.274	.197	1.000	-.835
		4	1	.148	.271	1.000	-.623
			2	-.359	.215	.634	-.970
			3	.274	.197	1.000	-.287
	3	1	2	-.538	.280	.394	-1.337
			3	-.077	.297	1.000	-.924
			4	.071	.291	1.000	-.757
		2	1	.538	.280	.394	-.260
			3	.461	.218	.266	-.161
			4	.609	.265	.179	-.147
		3	1	.077	.297	1.000	-.769
			2	-.461	.218	.266	-1.082
			4	.148	.206	1.000	-.437
		4	1	-.071	.291	1.000	-.898
			2	-.609	.265	.179	-1.364
			3	-.148	.206	1.000	-.734
2	1	1	2	.864	.461	.432	-.449
			3	4.167*	.657	<.001	2.298
			4	4.294*	.657	<.001	2.424

Pairwise Comparisons

Measure: HeadMovement

Amp	Width	(I) Cursor	(J) Cursor	95% Confidence Interval for [b]... Upper Bound
1	1	1	2	-.332
			3	.644
			4	.571
		2	1	1.616
			3	1.538
			4	1.603
		3	1	.814
			2	-.240
			4	.597
		4	1	.542
			2	-.374
			3	.399
	2	1	2	.213
			3	1.005
			4	.623
		2	1	1.228
			3	1.185
			4	.970
		3	1	.753
			2	-.083
			4	.287
		4	1	.919
			2	.252
			3	.835
	3	1	2	.260
			3	.769
			4	.898
		2	1	1.337
			3	1.082
			4	1.364
		3	1	.924
			2	.161
			4	.734
		4	1	.757
			2	.147
			3	.437
2	1	1	2	2.176
			3	6.037
			4	6.165

Pairwise Comparisons

Measure: HeadMovement

Amp	Width	(I) Cursor	(J) Cursor	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for [b]... Lower Bound
		2	1	-.864	.461	.432	-2.176
			3	3.304*	.386	<.001	2.205
			4	3.431*	.377	<.001	2.357
		3	1	-4.167*	.657	<.001	-6.037
			2	-3.304*	.386	<.001	-4.403
			4	.127	.297	1.000	-.718
		4	1	-4.294*	.657	<.001	-6.165
			2	-3.431*	.377	<.001	-4.505
			3	-.127	.297	1.000	-.972
	2	1	2	.824	.443	.442	-.436
			3	4.394*	.653	<.001	2.535
			4	4.543*	.541	<.001	3.003
		2	1	-.824	.443	.442	-2.084
			3	3.570*	.428	<.001	2.351
			4	3.719*	.373	<.001	2.657
		3	1	-4.394*	.653	<.001	-6.254
			2	-3.570*	.428	<.001	-4.790
			4	.149	.315	1.000	-.748
		4	1	-4.543*	.541	<.001	-6.084
			2	-3.719*	.373	<.001	-4.782
			3	-.149	.315	1.000	-1.045
	3	1	2	1.245	.450	.061	-.037
			3	5.119*	.629	<.001	3.328
			4	4.857*	.605	<.001	3.133
		2	1	-1.245	.450	.061	-2.526
			3	3.874*	.401	<.001	2.733
			4	3.612*	.403	<.001	2.465
		3	1	-5.119*	.629	<.001	-6.910
			2	-3.874*	.401	<.001	-5.016
			4	-.262	.459	1.000	-1.568
		4	1	-4.857*	.605	<.001	-6.580
			2	-3.612*	.403	<.001	-4.760
			3	.262	.459	1.000	-1.044
3	1	1	2	.907	.742	1.000	-1.205
			3	9.635*	1.024	<.001	6.719
			4	10.796*	1.017	<.001	7.900

Pairwise Comparisons

Measure: HeadMovement

Amp	Width	(I) Cursor	(J) Cursor	95% Confidence Interval for [b]... Upper Bound
		2	1	.449
			3	4.403
			4	4.505
		3	1	-2.298
			2	-2.205
			4	.972
		4	1	-2.424
			2	-2.357
			3	.718
	2	1	2	2.084
			3	6.254
			4	6.084
		2	1	.436
			3	4.790
			4	4.782
		3	1	-2.535
			2	-2.351
			4	1.045
		4	1	-3.003
			2	-2.657
			3	.748
	3	1	2	2.526
			3	6.910
			4	6.580
		2	1	.037
			3	5.016
			4	4.760
		3	1	-3.328
			2	-2.733
			4	1.044
		4	1	-3.133
			2	-2.465
			3	1.568
3	1	1	2	3.018
			3	12.550
			4	13.693

Pairwise Comparisons

Measure: HeadMovement

Amp	Width	(I) Cursor	(J) Cursor	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for [b]... Lower Bound
		2	1	-.907	.742	1.000	-3.018
			3	8.728*	.478	<.001	7.367
			4	9.890*	.477	<.001	8.532
		3	1	-9.635*	1.024	<.001	-12.550
			2	-8.728*	.478	<.001	-10.089
			4	1.162*	.368	.023	.114
		4	1	-10.796*	1.017	<.001	-13.693
			2	-9.890*	.477	<.001	-11.247
			3	-1.162*	.368	.023	-2.210
	2	1	2	1.549	.672	.174	-.363
			3	9.270*	.973	<.001	6.500
			4	11.006*	.959	<.001	8.277
		2	1	-1.549	.672	.174	-3.461
			3	7.721*	.549	<.001	6.158
			4	9.457*	.512	<.001	8.000
		3	1	-9.270*	.973	<.001	-12.040
			2	-7.721*	.549	<.001	-9.285
			4	1.736*	.357	<.001	.718
		4	1	-11.006*	.959	<.001	-13.735
			2	-9.457*	.512	<.001	-10.913
			3	-1.736*	.357	<.001	-2.753
	3	1	2	1.791	.722	.118	-.264
			3	9.838*	.989	<.001	7.021
			4	10.296*	.893	<.001	7.754
		2	1	-1.791	.722	.118	-3.846
			3	8.047*	.595	<.001	6.354
			4	8.505*	.496	<.001	7.092
		3	1	-9.838*	.989	<.001	-12.654
			2	-8.047*	.595	<.001	-9.740
			4	.458	.380	1.000	-.624
		4	1	-10.296*	.893	<.001	-12.838
			2	-8.505*	.496	<.001	-9.917
			3	-.458	.380	1.000	-1.540

Pairwise Comparisons

Measure: HeadMovement

Amp	Width	(I) Cursor	(J) Cursor	95% Confidence Interval for [b]... Upper Bound
		2	1	1.205
			3	10.089
			4	11.247
		3	1	-6.719
			2	-7.367
			4	2.210
		4	1	-7.900
			2	-8.532
			3	-.114
	2	1	2	3.461
			3	12.040
			4	13.735
		2	1	.363
			3	9.285
			4	10.913
		3	1	-6.500
			2	-6.158
			4	2.753
		4	1	-8.277
			2	-8.000
			3	-.718
	3	1	2	3.846
			3	12.654
			4	12.838
		2	1	.264
			3	9.740
			4	9.917
		3	1	-7.021
			2	-6.354
			4	1.540
		4	1	-7.754
			2	-7.092
			3	.624

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Multivariate Tests

Amp	Width		Value	F	Hypothesis df	Error df	Sig.
1	1	Pillai's trace	.492	8.081[a]	3.000	25.000	<.001
		Wilks' lambda	.508	8.081[a]	3.000	25.000	<.001
		Hotelling's trace	.970	8.081[a]	3.000	25.000	<.001
		Roy's largest root	.970	8.081[a]	3.000	25.000	<.001
	2	Pillai's trace	.352	4.519[a]	3.000	25.000	.012
		Wilks' lambda	.648	4.519[a]	3.000	25.000	.012
		Hotelling's trace	.542	4.519[a]	3.000	25.000	.012
		Roy's largest root	.542	4.519[a]	3.000	25.000	.012
	3	Pillai's trace	.204	2.129[a]	3.000	25.000	.122
		Wilks' lambda	.796	2.129[a]	3.000	25.000	.122
		Hotelling's trace	.256	2.129[a]	3.000	25.000	.122
		Roy's largest root	.256	2.129[a]	3.000	25.000	.122
2	1	Pillai's trace	.774	28.495[a]	3.000	25.000	<.001
		Wilks' lambda	.226	28.495[a]	3.000	25.000	<.001
		Hotelling's trace	3.419	28.495[a]	3.000	25.000	<.001
		Roy's largest root	3.419	28.495[a]	3.000	25.000	<.001
	2	Pillai's trace	.803	34.065[a]	3.000	25.000	<.001
		Wilks' lambda	.197	34.065[a]	3.000	25.000	<.001
		Hotelling's trace	4.088	34.065[a]	3.000	25.000	<.001
		Roy's largest root	4.088	34.065[a]	3.000	25.000	<.001
	3	Pillai's trace	.832	41.148[a]	3.000	25.000	<.001
		Wilks' lambda	.168	41.148[a]	3.000	25.000	<.001
		Hotelling's trace	4.938	41.148[a]	3.000	25.000	<.001
		Roy's largest root	4.938	41.148[a]	3.000	25.000	<.001
3	1	Pillai's trace	.951	160.534[a]	3.000	25.000	<.001
		Wilks' lambda	.049	160.534[a]	3.000	25.000	<.001
		Hotelling's trace	19.264	160.534[a]	3.000	25.000	<.001
		Roy's largest root	19.264	160.534[a]	3.000	25.000	<.001
	2	Pillai's trace	.929	109.023[a]	3.000	25.000	<.001
		Wilks' lambda	.071	109.023[a]	3.000	25.000	<.001
		Hotelling's trace	13.083	109.023[a]	3.000	25.000	<.001
		Roy's largest root	13.083	109.023[a]	3.000	25.000	<.001
	3	Pillai's trace	.917	91.667[a]	3.000	25.000	<.001
		Wilks' lambda	.083	91.667[a]	3.000	25.000	<.001
		Hotelling's trace	11.000	91.667[a]	3.000	25.000	<.001
		Roy's largest root	11.000	91.667[a]	3.000	25.000	<.001

Multivariate Tests

Amp	Width		Partial Eta Squared
1	1	Pillai's trace	.492
		Wilks' lambda	.492
		Hotelling's trace	.492
		Roy's largest root	.492
	2	Pillai's trace	.352
		Wilks' lambda	.352
		Hotelling's trace	.352
		Roy's largest root	.352
	3	Pillai's trace	.204
		Wilks' lambda	.204
		Hotelling's trace	.204
		Roy's largest root	.204
2	1	Pillai's trace	.774
		Wilks' lambda	.774
		Hotelling's trace	.774
		Roy's largest root	.774
	2	Pillai's trace	.803
		Wilks' lambda	.803
		Hotelling's trace	.803
		Roy's largest root	.803
	3	Pillai's trace	.832
		Wilks' lambda	.832
		Hotelling's trace	.832
		Roy's largest root	.832
3	1	Pillai's trace	.951
		Wilks' lambda	.951
		Hotelling's trace	.951
		Roy's largest root	.951
	2	Pillai's trace	.929
		Wilks' lambda	.929
		Hotelling's trace	.929
		Roy's largest root	.929
	3	Pillai's trace	.917
		Wilks' lambda	.917
		Hotelling's trace	.917
		Roy's largest root	.917

Each F tests the multivariate simple effects of Cursor within each level combination of the other effects shown. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

12. Cursor * Amp * Width

Estimates

Measure: HeadMovement

Cursor	Amp	Width	Mean	Std. Error	95% Confidence Interval	
					Lower Bound	Upper Bound
1	1	1	4.624	.295	4.019	5.228
		2	5.036	.315	4.390	5.683
		3	5.360	.349	4.643	6.076
	2	1	23.187	.668	21.816	24.558
		2	23.561	.639	22.249	24.872
		3	24.389	.664	23.027	25.751
	3	1	38.365	1.035	36.242	40.488
		2	38.546	1.004	36.487	40.606
		3	38.923	1.003	36.866	40.981
2	1	1	5.598	.255	5.074	6.122
		2	5.544	.237	5.057	6.031
		3	5.898	.312	5.258	6.538
	2	1	22.324	.497	21.303	23.344
		2	22.737	.545	21.619	23.855
		3	23.145	.493	22.132	24.157
	3	1	37.458	.766	35.887	39.030
		2	36.997	.843	35.267	38.728
		3	37.132	.837	35.415	38.850
3	1	1	4.709	.232	4.234	5.184
		2	4.910	.176	4.548	5.272
		3	5.437	.219	4.988	5.886
	2	1	19.020	.478	18.039	20.001
		2	19.166	.454	18.234	20.098
		3	19.270	.473	18.300	20.241
	3	1	28.730	.630	27.438	30.023
		2	29.276	.685	27.870	30.681
		3	29.086	.619	27.816	30.355
4	1	1	4.610	.206	4.186	5.033
		2	5.184	.216	4.741	5.628
		3	5.289	.254	4.769	5.810
	2	1	18.893	.465	17.938	19.848
		2	19.017	.512	17.966	20.069
		3	19.533	.529	18.446	20.619

Estimates

Measure: HeadMovement

Cursor	Amp	Width	Mean	Std. Error	95% Confidence Interval	
					Lower Bound	Upper Bound
	3	1	27.569	.701	26.131	29.006
		2	27.540	.755	25.991	29.089
		3	28.628	.670	27.252	30.003

Pairwise Comparisons

Measure: HeadMovement

Cursor	Width	(I) Amp	(J) Amp	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for [b]...
							Lower Bound
1	1	1	2	-18.563*	.459	<.001	-19.736
			3	-33.741*	.812	<.001	-35.814
		2	1	18.563*	.459	<.001	17.391
			3	-15.178*	.391	<.001	-16.175
		3	1	33.741*	.812	<.001	31.668
			2	15.178*	.391	<.001	14.180
	2	1	2	-18.524*	.412	<.001	-19.576
			3	-33.510*	.763	<.001	-35.457
		2	1	18.524*	.412	<.001	17.473
			3	-14.986*	.389	<.001	-15.979
		3	1	33.510*	.763	<.001	31.563
			2	14.986*	.389	<.001	13.992
	3	1	2	-19.030*	.469	<.001	-20.227
			3	-33.564*	.777	<.001	-35.548
		2	1	19.030*	.469	<.001	17.832
			3	-14.534*	.381	<.001	-15.505
		3	1	33.564*	.777	<.001	31.579
			2	14.534*	.381	<.001	13.563
2	1	1	2	-16.726*	.377	<.001	-17.688
			3	-31.860*	.658	<.001	-33.540
		2	1	16.726*	.377	<.001	15.764
			3	-15.135*	.327	<.001	-15.971
		3	1	31.860*	.658	<.001	30.181
			2	15.135*	.327	<.001	14.299
	2	1	2	-17.193*	.403	<.001	-18.221
			3	-31.454*	.716	<.001	-33.281
		2	1	17.193*	.403	<.001	16.165
			3	-14.260*	.377	<.001	-15.223

Pairwise Comparisons

Measure: HeadMovement

Cursor	Width	(I) Amp	(J) Amp	95% Confidence Interval for [b]... Upper Bound
1	1	1	2	-17.391
			3	-31.668
		2	1	19.736
			3	-14.180
		3	1	35.814
			2	16.175
	2	1	2	-17.473
			3	-31.563
		2	1	19.576
			3	-13.992
		3	1	35.457
			2	15.979
	3	1	2	-17.832
			3	-31.579
		2	1	20.227
			3	-13.563
		3	1	35.548
			2	15.505
2	1	1	2	-15.764
			3	-30.181
		2	1	17.688
			3	-14.299
		3	1	33.540
			2	15.971
	2	1	2	-16.165
			3	-29.626
		2	1	18.221
			3	-13.298

Pairwise Comparisons

Measure: HeadMovement

Cursor	Width	(I) Amp	(J) Amp	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for [b]... Lower Bound
		3	1	31.454*	.716	<.001	29.626
			2	14.260*	.377	<.001	13.298
	3	1	2	-17.247*	.368	<.001	-18.185
			3	-31.235*	.750	<.001	-33.148
		2	1	17.247*	.368	<.001	16.309
			3	-13.988*	.461	<.001	-15.164
		3	1	31.235*	.750	<.001	29.321
			2	13.988*	.461	<.001	12.811
3	1	1	2	-14.311*	.358	<.001	-15.224
			3	-24.022*	.510	<.001	-25.323
		2	1	14.311*	.358	<.001	13.398
			3	-9.710*	.287	<.001	-10.444
		3	1	24.022*	.510	<.001	22.720
			2	9.710*	.287	<.001	8.977
	2	1	2	-14.256*	.331	<.001	-15.101
			3	-24.366*	.563	<.001	-25.802
		2	1	14.256*	.331	<.001	13.412
			3	-10.110*	.352	<.001	-11.008
		3	1	24.366*	.563	<.001	22.930
			2	10.110*	.352	<.001	9.211
	3	1	2	-13.833*	.343	<.001	-14.709
			3	-23.648*	.523	<.001	-24.983
		2	1	13.833*	.343	<.001	12.957
			3	-9.815*	.300	<.001	-10.580
		3	1	23.648*	.523	<.001	22.314
			2	9.815*	.300	<.001	9.050
4	1	1	2	-14.283*	.376	<.001	-15.243
			3	-22.959*	.619	<.001	-24.538
		2	1	14.283*	.376	<.001	13.323
			3	-8.676*	.403	<.001	-9.705
		3	1	22.959*	.619	<.001	21.380
			2	8.676*	.403	<.001	7.647
	2	1	2	-13.833*	.422	<.001	-14.911
			3	-22.356*	.670	<.001	-24.065
		2	1	13.833*	.422	<.001	12.755
			3	-8.523*	.346	<.001	-9.406

Pairwise Comparisons

Measure: HeadMovement

Cursor	Width	(I) Amp	(J) Amp	95% Confidence Interval for [b]... Upper Bound
		3	1	33.281
			2	15.223
	3	1	2	-16.309
			3	-29.321
		2	1	18.185
			3	-12.811
		3	1	33.148
			2	15.164
3	1	1	2	-13.398
			3	-22.720
		2	1	15.224
			3	-8.977
		3	1	25.323
			2	10.444
	2	1	2	-13.412
			3	-22.930
		2	1	15.101
			3	-9.211
		3	1	25.802
			2	11.008
	3	1	2	-12.957
			3	-22.314
		2	1	14.709
			3	-9.050
		3	1	24.983
			2	10.580
4	1	1	2	-13.323
			3	-21.380
		2	1	15.243
			3	-7.647
		3	1	24.538
			2	9.705
	2	1	2	-12.755
			3	-20.647
		2	1	14.911
			3	-7.640

Pairwise Comparisons

Measure: HeadMovement

Cursor	Width	(I) Amp	(J) Amp	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for [b]... Lower Bound
		3	1	22.356*	.670	<.001	20.647
			2	8.523*	.346	<.001	7.640
	3	1	2	-14.243*	.375	<.001	-15.200
			3	-23.339*	.556	<.001	-24.757
		2	1	14.243*	.375	<.001	13.287
			3	-9.095*	.396	<.001	-10.106
		3	1	23.339*	.556	<.001	21.920
			2	9.095*	.396	<.001	8.084

Pairwise Comparisons

Measure: HeadMovement

Cursor	Width	(I) Amp	(J) Amp	95% Confidence Interval for [b]... Upper Bound
		3	1	24.065
			2	9.406
	3	1	2	-13.287
			3	-21.920
		2	1	15.200
			3	-8.084
		3	1	24.757
			2	10.106

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Multivariate Tests

Cursor	Width		Value	F	Hypothesis df	Error df	Sig.
1	1	Pillai's trace	.985	832.260[a]	2.000	26.000	<.001
		Wilks' lambda	.015	832.260[a]	2.000	26.000	<.001
		Hotelling's trace	64.020	832.260[a]	2.000	26.000	<.001
		Roy's largest root	64.020	832.260[a]	2.000	26.000	<.001
	2	Pillai's trace	.987	979.495[a]	2.000	26.000	<.001
		Wilks' lambda	.013	979.495[a]	2.000	26.000	<.001
		Hotelling's trace	75.346	979.495[a]	2.000	26.000	<.001
		Roy's largest root	75.346	979.495[a]	2.000	26.000	<.001
	3	Pillai's trace	.986	897.934[a]	2.000	26.000	<.001
		Wilks' lambda	.014	897.934[a]	2.000	26.000	<.001
		Hotelling's trace	69.072	897.934[a]	2.000	26.000	<.001
		Roy's largest root	69.072	897.934[a]	2.000	26.000	<.001
2	1	Pillai's trace	.989	1136.236[a]	2.000	26.000	<.001
		Wilks' lambda	.011	1136.236[a]	2.000	26.000	<.001
		Hotelling's trace	87.403	1136.236[a]	2.000	26.000	<.001
		Roy's largest root	87.403	1136.236[a]	2.000	26.000	<.001
	2	Pillai's trace	.986	943.633[a]	2.000	26.000	<.001
		Wilks' lambda	.014	943.633[a]	2.000	26.000	<.001
		Hotelling's trace	72.587	943.633[a]	2.000	26.000	<.001
		Roy's largest root	72.587	943.633[a]	2.000	26.000	<.001
	3	Pillai's trace	.988	1060.356[a]	2.000	26.000	<.001
		Wilks' lambda	.012	1060.356[a]	2.000	26.000	<.001
		Hotelling's trace	81.566	1060.356[a]	2.000	26.000	<.001
		Roy's largest root	81.566	1060.356[a]	2.000	26.000	<.001

Multivariate Tests

Cursor	Width		Partial Eta Squared
1	1	Pillai's trace	.985
		Wilks' lambda	.985
		Hotelling's trace	.985
		Roy's largest root	.985
	2	Pillai's trace	.987
		Wilks' lambda	.987
		Hotelling's trace	.987
		Roy's largest root	.987
	3	Pillai's trace	.986
		Wilks' lambda	.986
		Hotelling's trace	.986
		Roy's largest root	.986
2	1	Pillai's trace	.989
		Wilks' lambda	.989
		Hotelling's trace	.989
		Roy's largest root	.989
	2	Pillai's trace	.986
		Wilks' lambda	.986
		Hotelling's trace	.986
		Roy's largest root	.986
	3	Pillai's trace	.988
		Wilks' lambda	.988
		Hotelling's trace	.988
		Roy's largest root	.988

Each F tests the multivariate simple effects of Amp within each level combination of the other effects shown. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

13. Cursor * Amp * Width

Estimates

Measure: HeadMovement

Cursor	Amp	Width	Mean	Std. Error	95% Confidence Interval	
					Lower Bound	Upper Bound
1	1	1	4.624	.295	4.019	5.228
		2	5.036	.315	4.390	5.683
		3	5.360	.349	4.643	6.076
	2	1	23.187	.668	21.816	24.558
		2	23.561	.639	22.249	24.872
		3	24.389	.664	23.027	25.751
	3	1	38.365	1.035	36.242	40.488
		2	38.546	1.004	36.487	40.606
		3	38.923	1.003	36.866	40.981
2	1	1	5.598	.255	5.074	6.122
		2	5.544	.237	5.057	6.031
		3	5.898	.312	5.258	6.538
	2	1	22.324	.497	21.303	23.344
		2	22.737	.545	21.619	23.855
		3	23.145	.493	22.132	24.157
	3	1	37.458	.766	35.887	39.030
		2	36.997	.843	35.267	38.728
		3	37.132	.837	35.415	38.850
3	1	1	4.709	.232	4.234	5.184
		2	4.910	.176	4.548	5.272
		3	5.437	.219	4.988	5.886
	2	1	19.020	.478	18.039	20.001
		2	19.166	.454	18.234	20.098
		3	19.270	.473	18.300	20.241
	3	1	28.730	.630	27.438	30.023
		2	29.276	.685	27.870	30.681
		3	29.086	.619	27.816	30.355
4	1	1	4.610	.206	4.186	5.033
		2	5.184	.216	4.741	5.628
		3	5.289	.254	4.769	5.810
	2	1	18.893	.465	17.938	19.848
		2	19.017	.512	17.966	20.069
		3	19.533	.529	18.446	20.619
	3	1	27.569	.701	26.131	29.006
		2	27.540	.755	25.991	29.089
		3	28.628	.670	27.252	30.003

Pairwise Comparisons

Measure: HeadMovement

Cursor	Amp	(I) Width	(J) Width	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for [b]... Lower Bound
1	1	1	2	-.412*	.145	.026	-.784
			3	-.736*	.275	.037	-1.438
		2	1	.412*	.145	.026	.041
			3	-.324	.222	.467	-.889
		3	1	.736*	.275	.037	.034
			2	.324	.222	.467	-.242
	2	1	2	-.373	.155	.070	-.770
			3	-1.202*	.176	<.001	-1.652
		2	1	.373	.155	.070	-.023
			3	-.829*	.143	<.001	-1.193
		3	1	1.202*	.176	<.001	.752
			2	.829*	.143	<.001	.465
	3	1	2	-.181	.133	.553	-.521
			3	-.559*	.181	.014	-1.020
		2	1	.181	.133	.553	-.158
			3	-.377*	.125	.016	-.695
		3	1	.559*	.181	.014	.097
			2	.377*	.125	.016	.059
2	1	1	2	.054	.098	1.000	-.195
			3	-.300	.188	.370	-.781
		2	1	-.054	.098	1.000	-.304
			3	-.354	.172	.148	-.794
		3	1	.300	.188	.370	-.181
			2	.354	.172	.148	-.085
	2	1	2	-.413	.173	.073	-.855
			3	-.821*	.220	.003	-1.383
		2	1	.413	.173	.073	-.029
			3	-.408	.212	.196	-.950
		3	1	.821*	.220	.003	.260
			2	.408	.212	.196	-.134
	3	1	2	.461	.241	.200	-.155
			3	.326	.265	.686	-.349
		2	1	-.461	.241	.200	-1.077
			3	-.135	.191	1.000	-.624
		3	1	-.326	.265	.686	-1.001
			2	.135	.191	1.000	-.353
3	1	1	2	-.201	.130	.403	-.534
			3	-.728*	.162	<.001	-1.142

Pairwise Comparisons

Measure: HeadMovement

Cursor	Amp	(I) Width	(J) Width	95% Confidence Interval for [b]... Upper Bound
1	1	1	2	-.041
			3	-.034
		2	1	.784
			3	.242
		3	1	1.438
			2	.889
	2	1	2	.023
			3	-.752
		2	1	.770
			3	-.465
		3	1	1.652
			2	1.193
	3	1	2	.158
			3	-.097
		2	1	.521
			3	-.059
		3	1	1.020
			2	.695
2	1	1	2	.304
			3	.181
		2	1	.195
			3	.085
		3	1	.781
			2	.794
	2	1	2	.029
			3	-.260
		2	1	.855
			3	.134
		3	1	1.383
			2	.950
	3	1	2	1.077
			3	1.001
		2	1	.155
			3	.353
		3	1	.349
			2	.624
3	1	1	2	.132
			3	-.315

Pairwise Comparisons

Measure: HeadMovement

Cursor	Amp	(I) Width	(J) Width	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for [b]... Lower Bound
		2	1	.201	.130	.403	-.132
			3	-.527*	.141	.003	-.888
		3	1	.728*	.162	<.001	.315
			2	.527*	.141	.003	.166
	2	1	2	-.146	.177	1.000	-.597
			3	-.250	.279	1.000	-.964
		2	1	.146	.177	1.000	-.304
			3	-.104	.260	1.000	-.768
		3	1	.250	.279	1.000	-.463
			2	.104	.260	1.000	-.560
	3	1	2	-.546	.297	.231	-1.303
			3	-.355	.278	.634	-1.064
		2	1	.546	.297	.231	-.212
			3	.190	.304	1.000	-.587
		3	1	.355	.278	.634	-.353
			2	-.190	.304	1.000	-.967
4	1	1	2	-.575*	.148	.002	-.953
			3	-.680*	.143	<.001	-1.045
		2	1	.575*	.148	.002	.196
			3	-.105	.155	1.000	-.500
		3	1	.680*	.143	<.001	.314
			2	.105	.155	1.000	-.290
	2	1	2	-.125	.279	1.000	-.836
			3	-.640	.349	.233	-1.530
		2	1	.125	.279	1.000	-.587
			3	-.515	.245	.136	-1.141
		3	1	.640	.349	.233	-.251
			2	.515	.245	.136	-.111
	3	1	2	.028	.387	1.000	-.960
			3	-1.059*	.391	.035	-2.057
		2	1	-.028	.387	1.000	-1.017
			3	-1.087*	.372	.021	-2.038
		3	1	1.059*	.391	.035	.061
			2	1.087*	.372	.021	.137

Pairwise Comparisons

Measure: HeadMovement

Cursor	Amp	(I) Width	(J) Width	95% Confidence Interval for [b]... Upper Bound
		2	1	.534
			3	-.166
		3	1	1.142
			2	.888
	2	1	2	.304
			3	.463
		2	1	.597
			3	.560
		3	1	.964
			2	.768
	3	1	2	.212
			3	.353
		2	1	1.303
			3	.967
		3	1	1.064
			2	.587
4	1	1	2	-.196
			3	-.314
		2	1	.953
			3	.290
		3	1	1.045
			2	.500
	2	1	2	.587
			3	.251
		2	1	.836
			3	.111
		3	1	1.530
			2	1.141
	3	1	2	1.017
			3	-.061
		2	1	.960
			3	-.137
		3	1	2.057
			2	2.038

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Multivariate Tests

Cursor	Amp		Value	F	Hypothesis df	Error df	Sig.
1	1	Pillai's trace	.261	4.600[a]	2.000	26.000	.019
		Wilks' lambda	.739	4.600[a]	2.000	26.000	.019
		Hotelling's trace	.354	4.600[a]	2.000	26.000	.019
		Roy's largest root	.354	4.600[a]	2.000	26.000	.019
	2	Pillai's trace	.662	25.443[a]	2.000	26.000	<.001
		Wilks' lambda	.338	25.443[a]	2.000	26.000	<.001
		Hotelling's trace	1.957	25.443[a]	2.000	26.000	<.001
		Roy's largest root	1.957	25.443[a]	2.000	26.000	<.001
	3	Pillai's trace	.293	5.385[a]	2.000	26.000	.011
		Wilks' lambda	.707	5.385[a]	2.000	26.000	.011
		Hotelling's trace	.414	5.385[a]	2.000	26.000	.011
		Roy's largest root	.414	5.385[a]	2.000	26.000	.011
2	1	Pillai's trace	.139	2.092[a]	2.000	26.000	.144
		Wilks' lambda	.861	2.092[a]	2.000	26.000	.144
		Hotelling's trace	.161	2.092[a]	2.000	26.000	.144
		Roy's largest root	.161	2.092[a]	2.000	26.000	.144
	2	Pillai's trace	.352	7.051[a]	2.000	26.000	.004
		Wilks' lambda	.648	7.051[a]	2.000	26.000	.004
		Hotelling's trace	.542	7.051[a]	2.000	26.000	.004
		Roy's largest root	.542	7.051[a]	2.000	26.000	.004
	3	Pillai's trace	.120	1.776[a]	2.000	26.000	.189
		Wilks' lambda	.880	1.776[a]	2.000	26.000	.189
		Hotelling's trace	.137	1.776[a]	2.000	26.000	.189
		Roy's largest root	.137	1.776[a]	2.000	26.000	.189
3	1	Pillai's trace	.443	10.324[a]	2.000	26.000	<.001
		Wilks' lambda	.557	10.324[a]	2.000	26.000	<.001
		Hotelling's trace	.794	10.324[a]	2.000	26.000	<.001
		Roy's largest root	.794	10.324[a]	2.000	26.000	<.001
	2	Pillai's trace	.037	.506[a]	2.000	26.000	.609
		Wilks' lambda	.963	.506[a]	2.000	26.000	.609
		Hotelling's trace	.039	.506[a]	2.000	26.000	.609
		Roy's largest root	.039	.506[a]	2.000	26.000	.609
	3	Pillai's trace	.119	1.762[a]	2.000	26.000	.192
		Wilks' lambda	.881	1.762[a]	2.000	26.000	.192
		Hotelling's trace	.136	1.762[a]	2.000	26.000	.192
		Roy's largest root	.136	1.762[a]	2.000	26.000	.192
4	1	Pillai's trace	.496	12.789[a]	2.000	26.000	<.001
		Wilks' lambda	.504	12.789[a]	2.000	26.000	<.001

Multivariate Tests

Cursor	Amp		Partial Eta Squared
1	1	Pillai's trace	.261
		Wilks' lambda	.261
		Hotelling's trace	.261
		Roy's largest root	.261
	2	Pillai's trace	.662
		Wilks' lambda	.662
		Hotelling's trace	.662
		Roy's largest root	.662
	3	Pillai's trace	.293
		Wilks' lambda	.293
		Hotelling's trace	.293
		Roy's largest root	.293
2	1	Pillai's trace	.139
		Wilks' lambda	.139
		Hotelling's trace	.139
		Roy's largest root	.139
	2	Pillai's trace	.352
		Wilks' lambda	.352
		Hotelling's trace	.352
		Roy's largest root	.352
	3	Pillai's trace	.120
		Wilks' lambda	.120
		Hotelling's trace	.120
		Roy's largest root	.120
3	1	Pillai's trace	.443
		Wilks' lambda	.443
		Hotelling's trace	.443
		Roy's largest root	.443
	2	Pillai's trace	.037
		Wilks' lambda	.037
		Hotelling's trace	.037
		Roy's largest root	.037
	3	Pillai's trace	.119
		Wilks' lambda	.119
		Hotelling's trace	.119
		Roy's largest root	.119
4	1	Pillai's trace	.496
		Wilks' lambda	.496

Multivariate Tests

Cursor	Amp		Value	F	Hypothesis df	Error df	Sig.
		Hotelling's trace	.984	12.789[a]	2.000	26.000	<.001
		Roy's largest root	.984	12.789[a]	2.000	26.000	<.001
	2	Pillai's trace	.154	2.359[a]	2.000	26.000	.114
		Wilks' lambda	.846	2.359[a]	2.000	26.000	.114
		Hotelling's trace	.181	2.359[a]	2.000	26.000	.114
		Roy's largest root	.181	2.359[a]	2.000	26.000	.114
	3	Pillai's trace	.284	5.151[a]	2.000	26.000	.013
		Wilks' lambda	.716	5.151[a]	2.000	26.000	.013
		Hotelling's trace	.396	5.151[a]	2.000	26.000	.013
		Roy's largest root	.396	5.151[a]	2.000	26.000	.013

Multivariate Tests

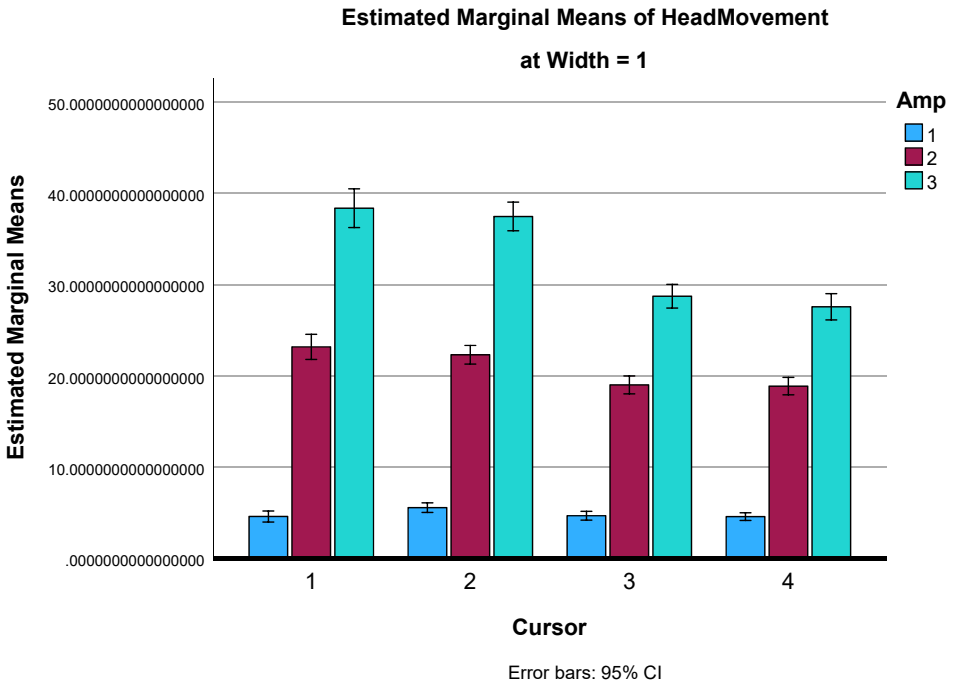
Cursor	Amp		Partial Eta Squared
		Hotelling's trace	.496
		Roy's largest root	.496
	2	Pillai's trace	.154
		Wilks' lambda	.154
		Hotelling's trace	.154
		Roy's largest root	.154
	3	Pillai's trace	.284
		Wilks' lambda	.284
		Hotelling's trace	.284
		Roy's largest root	.284

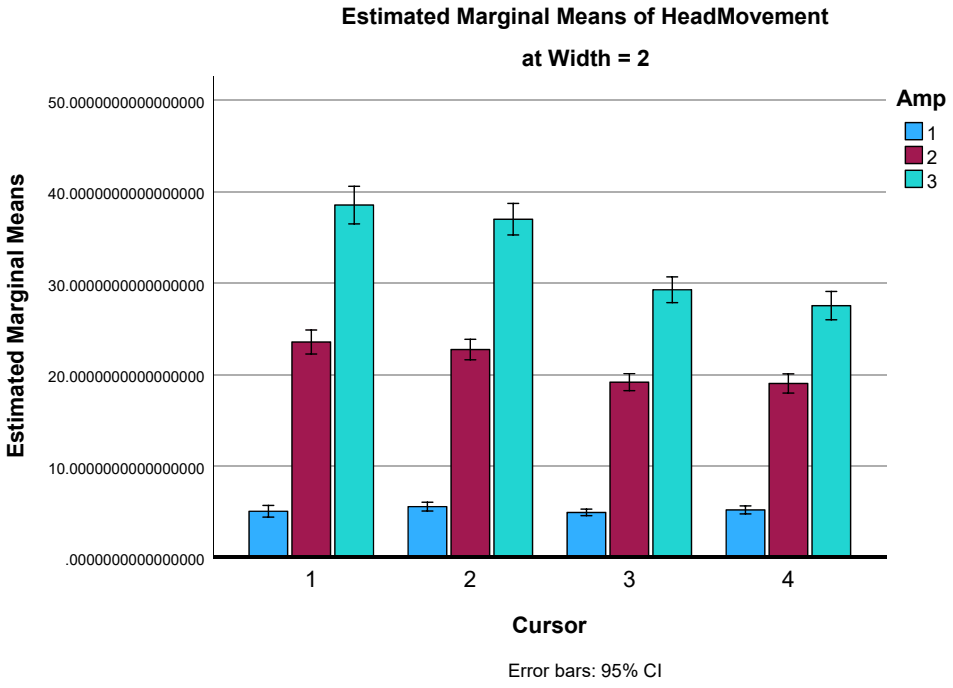
Each F tests the multivariate simple effects of Width within each level combination of the other effects shown. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

a. Exact statistic

Profile Plots

Cursor * Amp * Width


Estimated Marginal Means of HeadMovement
at Width = 1
Estimated Marginal Means
50.00000000000000000
40.00000000000000000
30.00000000000000000
20.00000000000000000
10.00000000000000000
.00000000000000000
1
2
3
4
Cursor
Amp
1
2
3
Error bars: 95% CI


Estimated Marginal Means of HeadMovement
at Width = 2
Estimated Marginal Means
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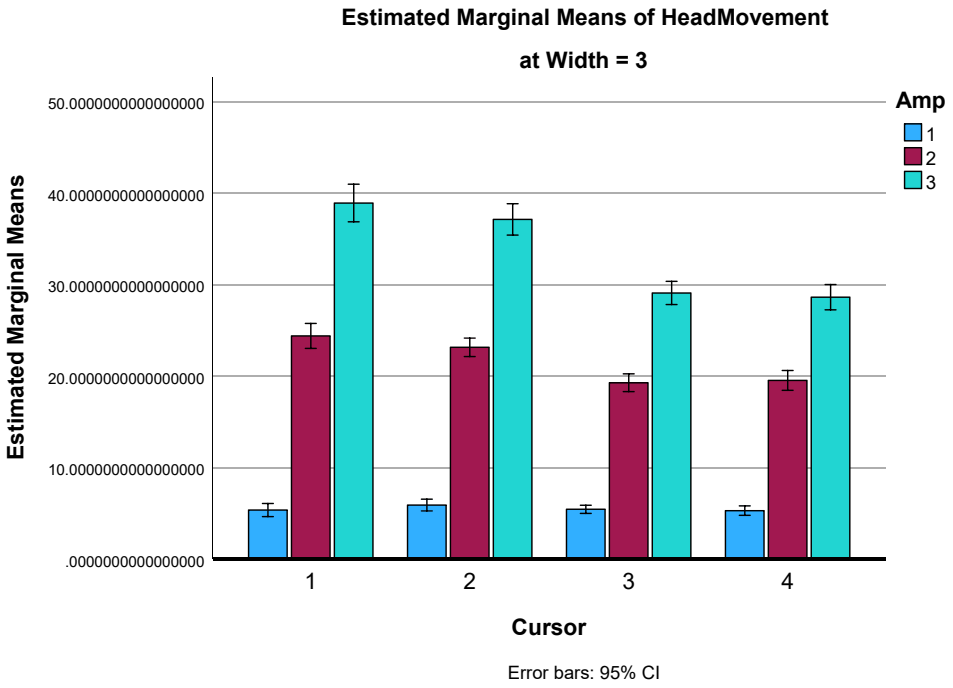
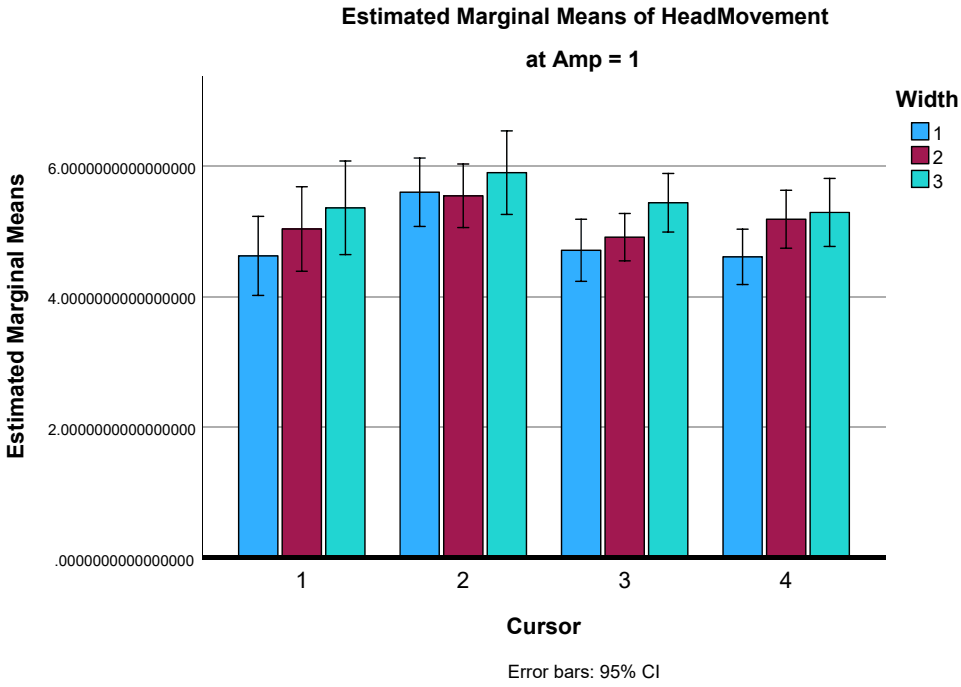
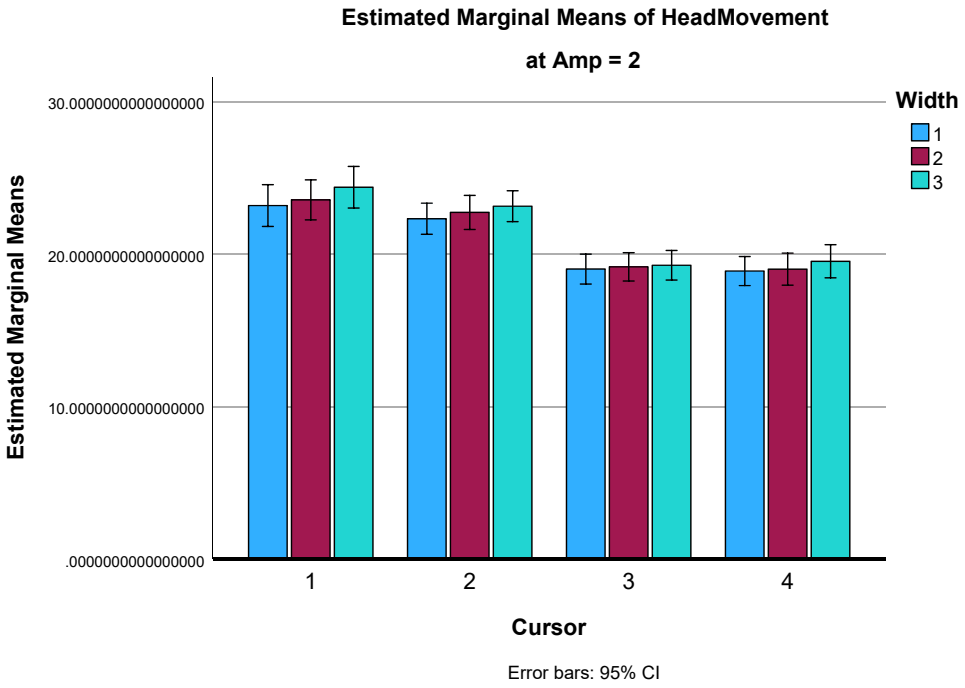
40.00000000000000000
30.00000000000000000
20.00000000000000000
10.00000000000000000
.00000000000000000
1
2
3
4
Cursor
Amp
1
2
3
Error bars: 95% CI



Cursor * Width * Amp




Estimated Marginal Means of HeadMovement
at Amp = 2
Estimated Marginal Means
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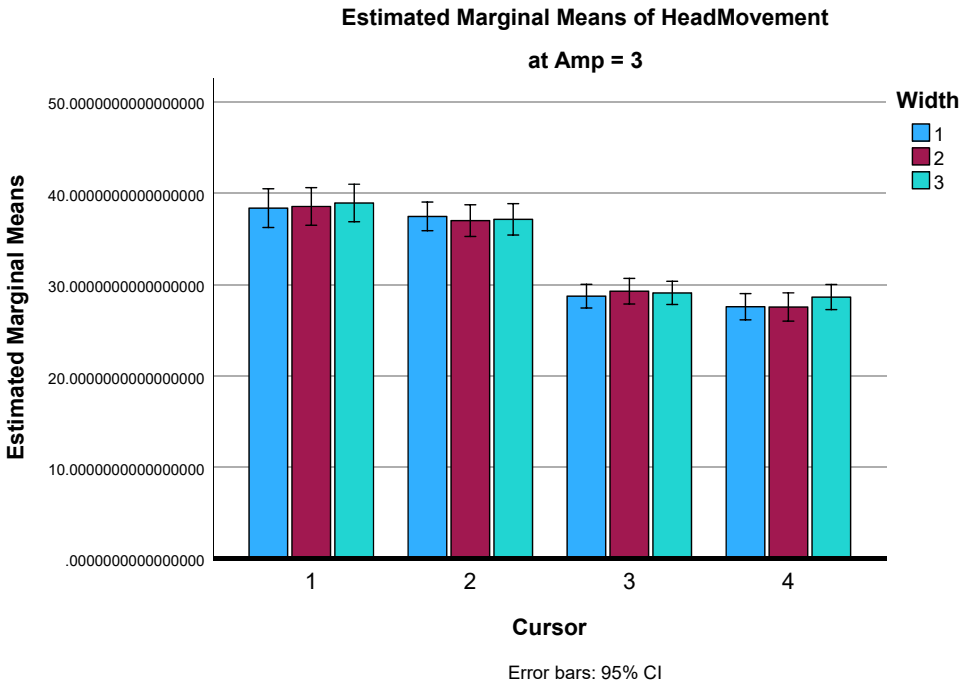
20.000000000000000
10.000000000000000
.000000000000000
1
2
3
4
Cursor
Width
1
2
3
Error bars: 95% CI


Estimated Marginal Means of HeadMovement
at Amp = 3
Estimated Marginal Means
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40.000000000000000
30.000000000000000
20.000000000000000
10.000000000000000
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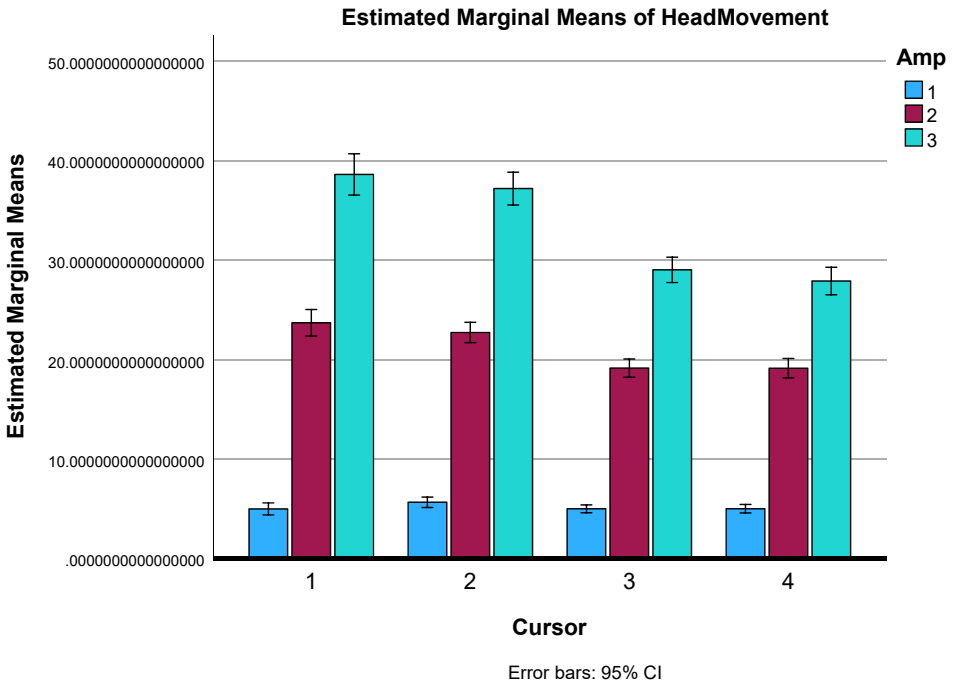
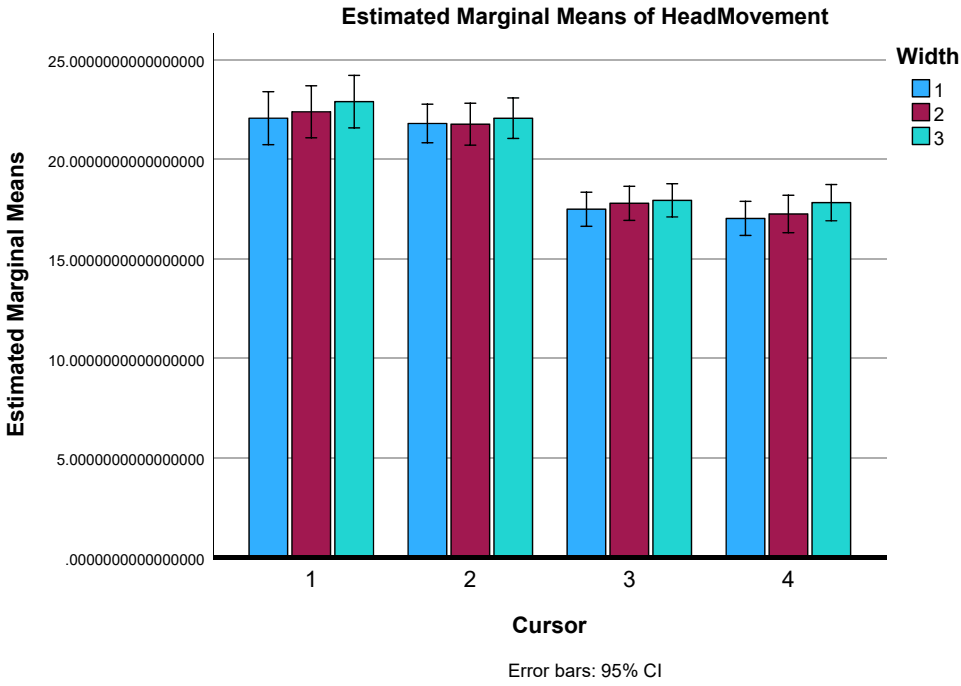
1
2
3
4
Cursor
Width
1
2
3
Error bars: 95% CI


Estimated Marginal Means of HeadMovement
Amp
1
2
3
Estimated Marginal Means
50.0000000000000000
40.0000000000000000
30.0000000000000000
20.0000000000000000
10.0000000000000000
.0000000000000000
1
2
3
4
Cursor
Error bars: 95% CI


Estimated Marginal Means of HeadMovement
Width
1
2
3
Estimated Marginal Means
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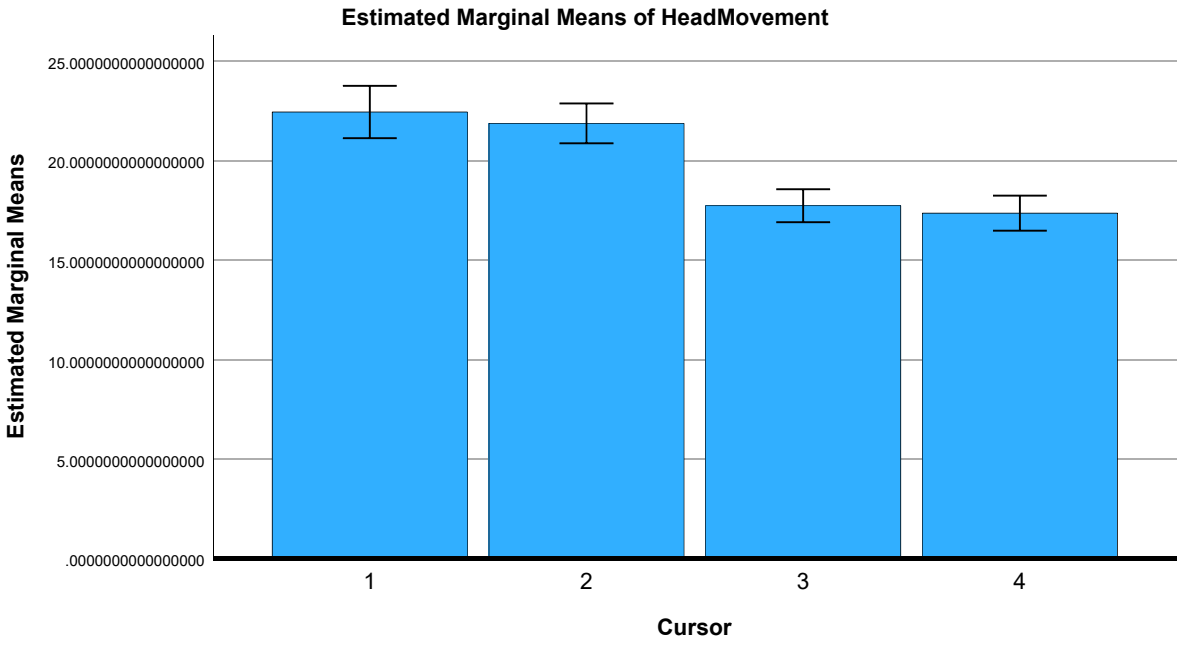
20.0000000000000000
15.0000000000000000
10.0000000000000000
5.0000000000000000
.0000000000000000
1
2
3
4
Cursor
Error bars: 95% CI



Error bars: 95% CI