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**Supplemental Information**

**Noninvasive Deep Brain Stimulation  
via Temporally Interfering Electric Fields**

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**SUPPLEMENTAL TABLES**

**Table S1. Interferential neural activation in intact mouse brain** (Related to Figure 1)

**Cortex**

Group number	Group name	Group mean ( $\pm$ st.d.) firing frequency (Hz)
1	Firing rate during 10 Hz stimulation	9.97 ( $\pm$ 0.85)
2	Firing rate during 1 kHz + 1.01 kHz TI stimulation	10.2 ( $\pm$ 0.83)
3	Firing rate during 2 kHz + 2.01 kHz TI stimulation	9.7 ( $\pm$ 0.85)
4	Firing rate during 1 kHz stimulation	0.2 ( $\pm$ 0.45)
5	Firing rate during 2 kHz stimulation	0.4 ( $\pm$ 0.31)
6	Spontaneous firing rate	0.35 ( $\pm$ 0.6)

**ANOVA firing rates, cortex**

Source	SS	df	MS	F	Prob>F
Groups	1122	5	224.5	502.6	2.8E-38
Error	20.1	45	0.44		
Total	1142	50			

**Post-hoc multiple comparison test for neural firing rates, cortex**

Group A	Group B	Mean (Group A – Group B)	95% CI (Group A – Group B)	p-value
1	2	-1.39	-0.23 0.91	1.00E+00
1	3	-0.78	0.32 1.43	1
1	4	8.56	9.77 10.98	7.79E-27
1	5	8.41	9.57 10.72	2.19E-27
1	6	8.72	9.63 10.54	6.57E-32
2	3	-0.58	0.56 1.71	1.00E+00
2	4	8.75	10.01 11.26	1.16E-26
2	5	8.61	9.8 11.0	3.71E-27
2	6	8.91	9.87 10.84	2.84E-31
3	4	8.23	9.44 10.66	3.25E-26
3	5	8.09	9.24 10.39	9.45E-27
3	6	8.4	9.31 10.22	2.92E-31
4	5	-1.45	-0.2 1.05	1.00E+00
4	6	-1.17	-0.13 0.90	1
5	6	-0.89	0.07 1.03	1.00E+00

## Hippocampus

Group number	Group name	Group mean ( $\pm$ st.d.) firing frequency (Hz)
1	Firing rate during 10 Hz stimulation	9.74 ( $\pm$ 0.49)
2	Firing rate during 2 kHz + 2.01 kHz TI stimulation	10.22 ( $\pm$ 0.61)
3	Firing rate during 2 kHz stimulation	0.2 ( $\pm$ 0.47)
4	Spontaneous firing rate	0.45 ( $\pm$ 1.06)

## ANOVA firing rates, hippocampus

Source	SS	df	MS	F	Prob>F
Groups	816	3	272.1	390.83	2.09E-26
Error	23.7	34	0.691		
Total	839.8	37			

## Post-hoc multiple comparison test for neural firing rates, hippocampus

Group A	Group B	Mean (Group A – Group B)	95% CI (Group A – Group B)	p-value	
1	2	-1.74	-0.48	0.77	1
1	3	8.12	9.54	10.95	8.05E-19
1	4	8.17	9.26	10.36	5.93E-22
2	3	8.69	10.02	11.36	2.55E-20
2	4	8.76	9.75	10.73	3.74E-24
3	4	-1.44	-0.27	0.9	1