

Figure S1, Histology from Animal S., related to Figure 1. The same unstained section is shown on the left and center, with labels and electrode indicated in red, on the center. The right pane is Plate 59 labels from “The Rhesus Monkey Brain in Stereotaxic Coordinates”, by Paxinos et al[S1]. The electrode casing was thicker, while the thinner electrode protruded from the shank 2-3 mm. This partial coronal section is taken at A-P 14 interaural, and the electrode tip ends 1mm medial of the Nucleus Basalis. Animals CH, DI, and PU were implanted 2 mm more rostrally to maximize NB exposure. Abbreviations: Thal, thalamus, IC, internal capsule, opt, optic tract, IGP, internal Globus Pallidus, B, Nucleus Basalis, CC, corpus callosum

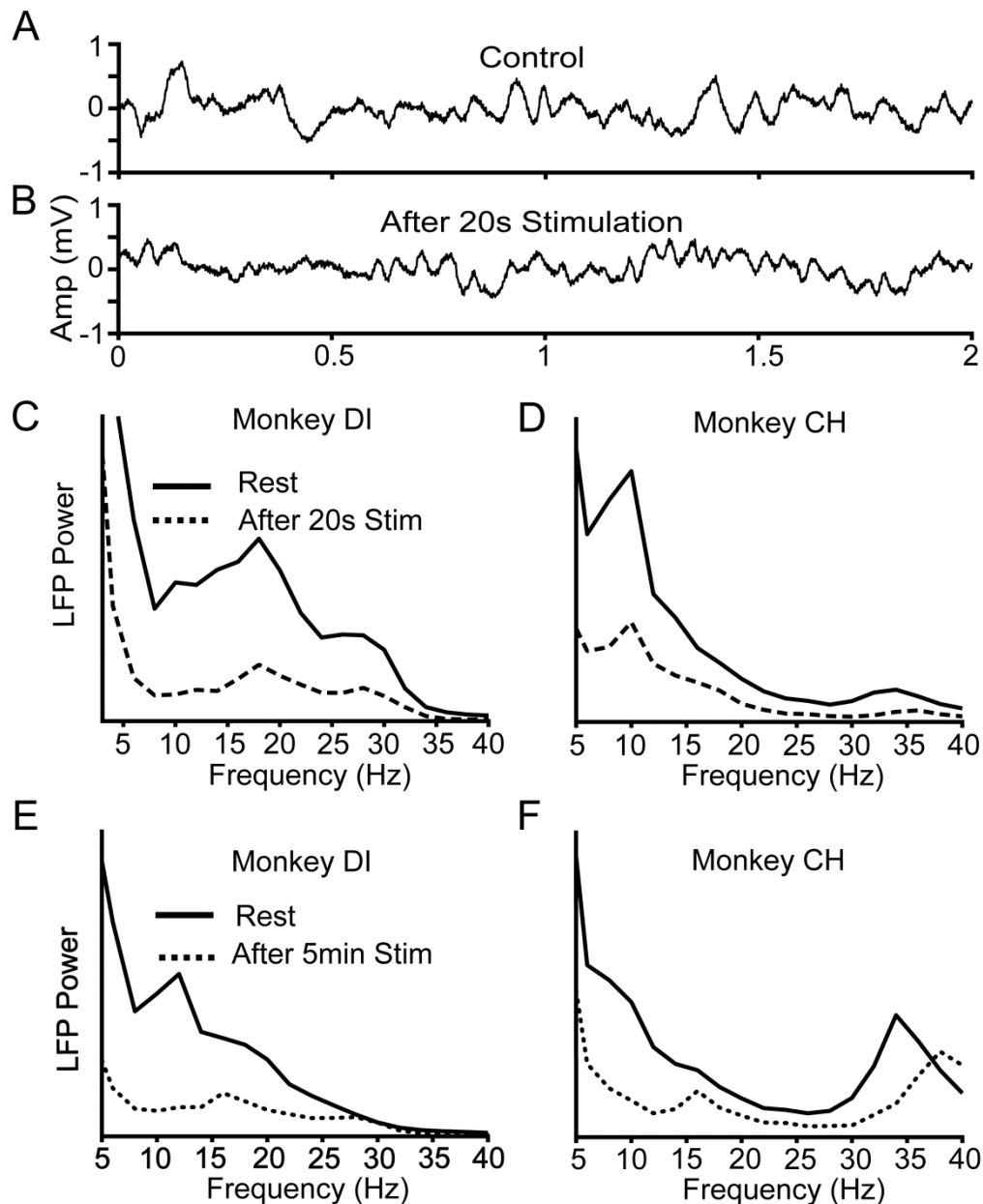


Figure S2, Local Field Potential power as impacted by stimulation, related to Figure 1. A.

The local field potential (LFP) as recorded from a stimulating electrode in the absence of stimulation. B. The LFP from the same electrode after 20 seconds of 60 Hz stimulation. C. The average LFP power from the stimulating electrode in the absence of stimulation (rest) and immediately after stimulation for 20 seconds at 60 Hz (After stim) for Animal DI. D. Animal CH. E. As in panel C, except that stimulation was for five minutes with an 80 Hz continuous stimulation. Data are from Animal DI. F. Animal CH.

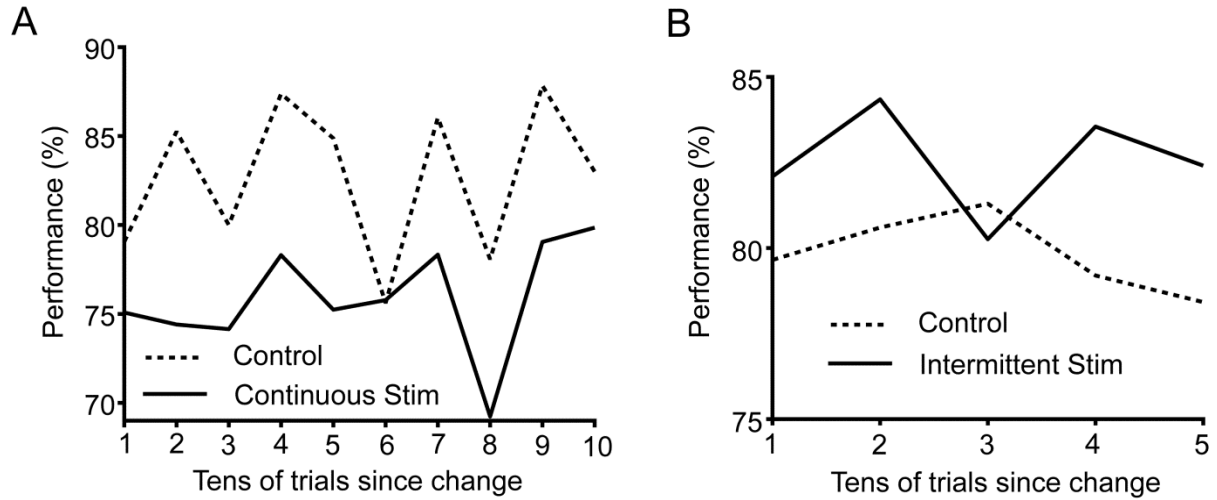


Figure S3, Speed of modulation by stimulation, related to Figure 2. A. The speed of onset of continuous stimulation effects. Performance is averaged over Animals CH and DI and plotted against the tens of trials since the change from a continuous stimulation condition to a control condition, or vice versa. Each ten trials are one to three minutes in time. B. Analogous data for the intermittent stimulation condition. In both graphs, standard errors, assuming a binomial statistical model, are close to 5%.

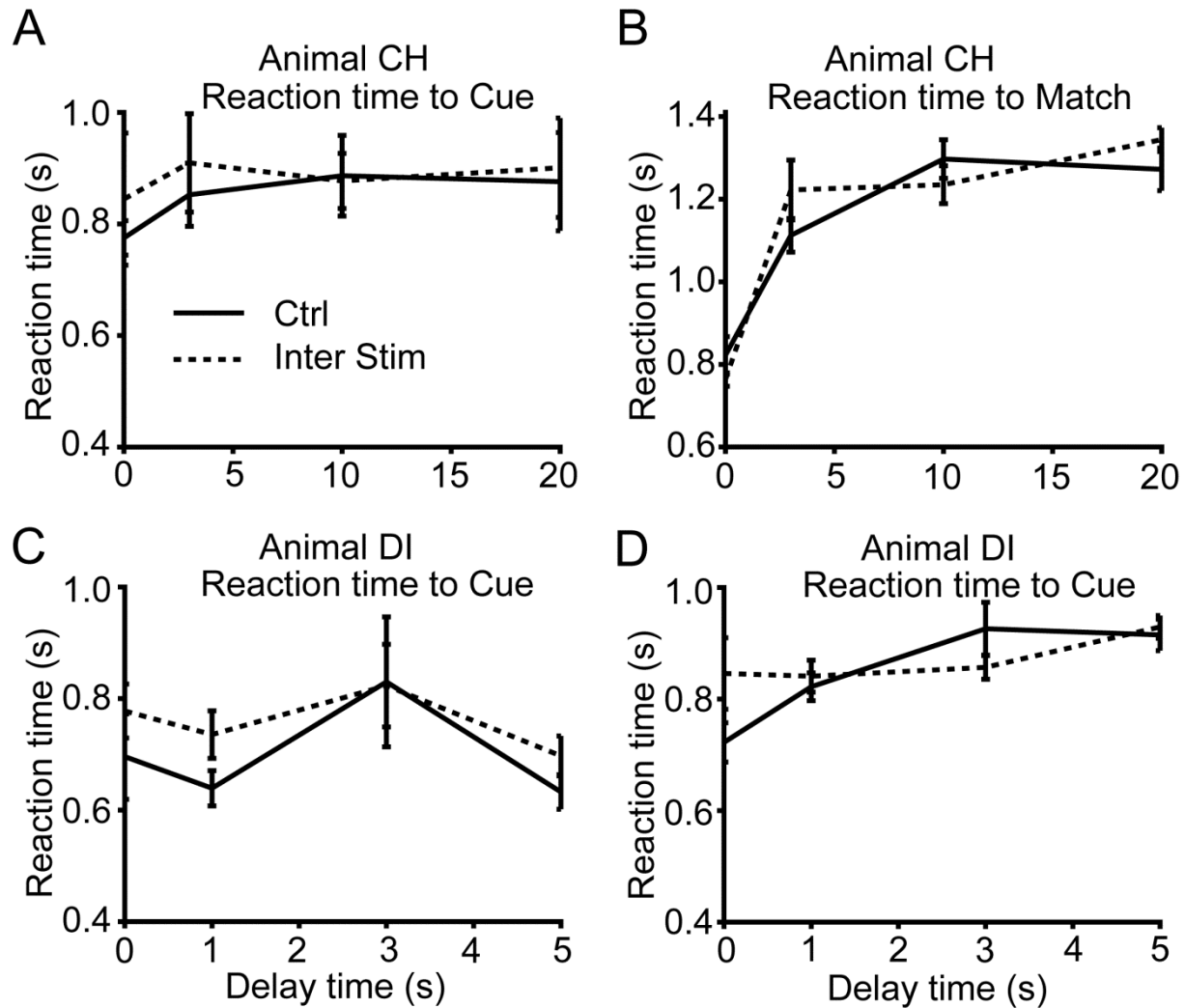


Figure S4, Reaction Times, related to Figure 2. A. The Reaction Times of Animal CH to the Cue are shown in the Intermittent Stimulation Condition (Stim) and in the Control Condition. B. Animal CH reaction times to the match stimulus. C. Animal DI reaction times to the Cue. D. Animal DI reaction times to the Match. In all plots, the reaction times are sorted by the delay lengths used to calculate the delay curves shown in Figure 2E&F.

Supplemental Reference

- S1. G. Paxinos, X. F. Huang, A.W.T. (2000). The Rhesus Monkey Brain in Stereotaxic Coordinates. Academic Press, San Diego, CA, USA