

Supplementary materials

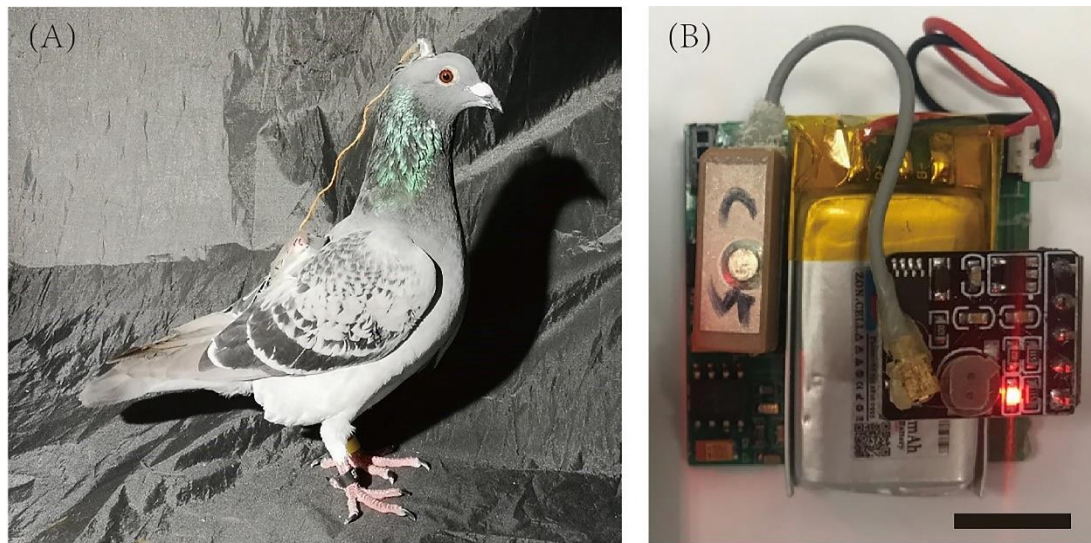


Fig. S1. (A) A robo-pigeon carrying a control module on its back with a wire connection to the BCI on the head; (B) The top view of the control module. It is in size of 30 mm × 30 mm × 12 mm (L × W × H) and in mass of 11.8 g including a rechargeable battery. Scale bar, 1 cm.

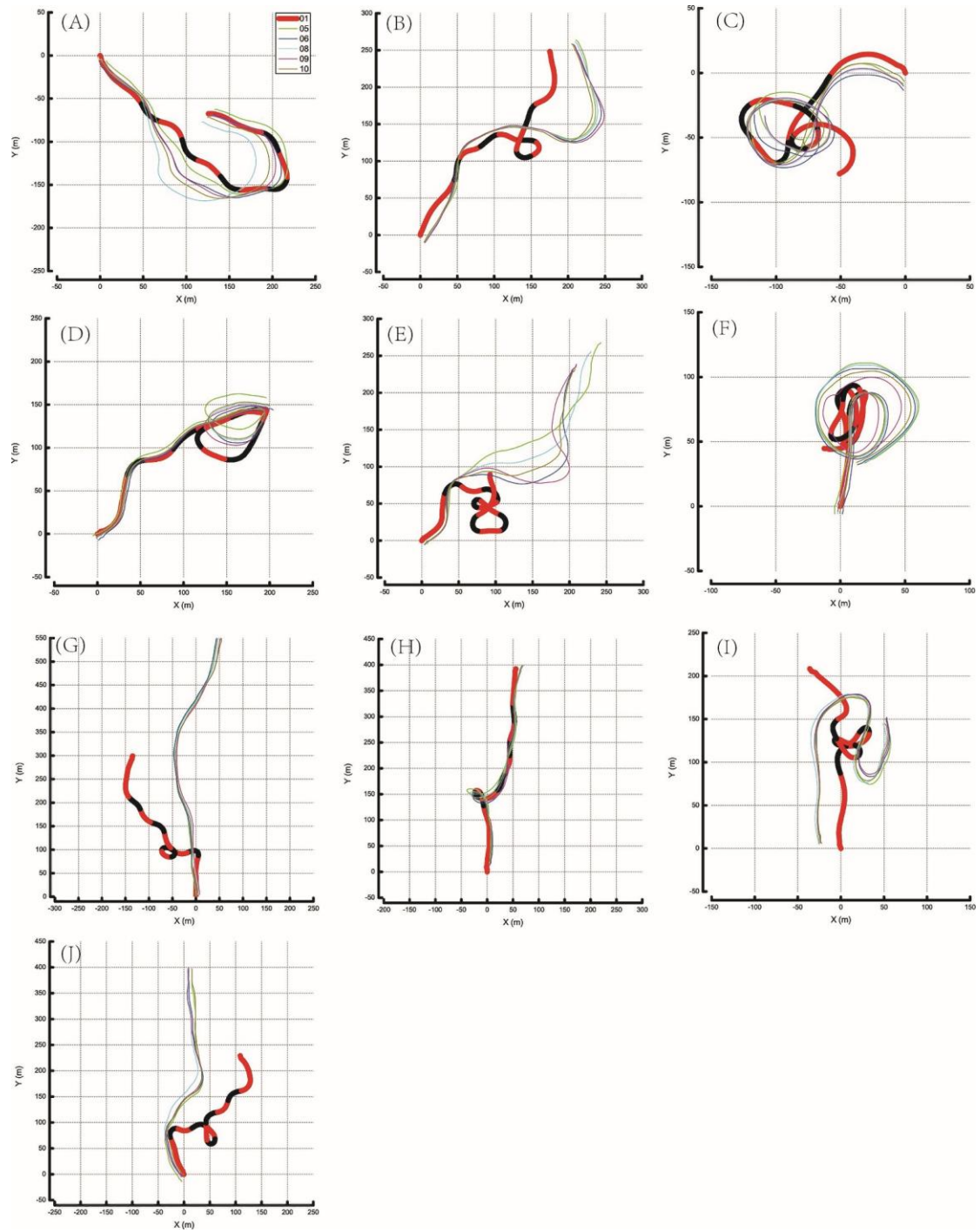


Fig. S2. All ten flight trajectories of the pigeon flock under the influence of robo-pigeons #01. The color curves represent animals' flight trajectories, and the thick one is the robo-pigeon with a running control module. The black parts of the curve indicate the time when the brain microstimulation was onset. The panel (D) is identical to Fig 2A in the text. The panels (A), (C), (D), (F), (H) and (I) correspond to the trials 1 to 6 listed in Table 2 in the text, respectively.

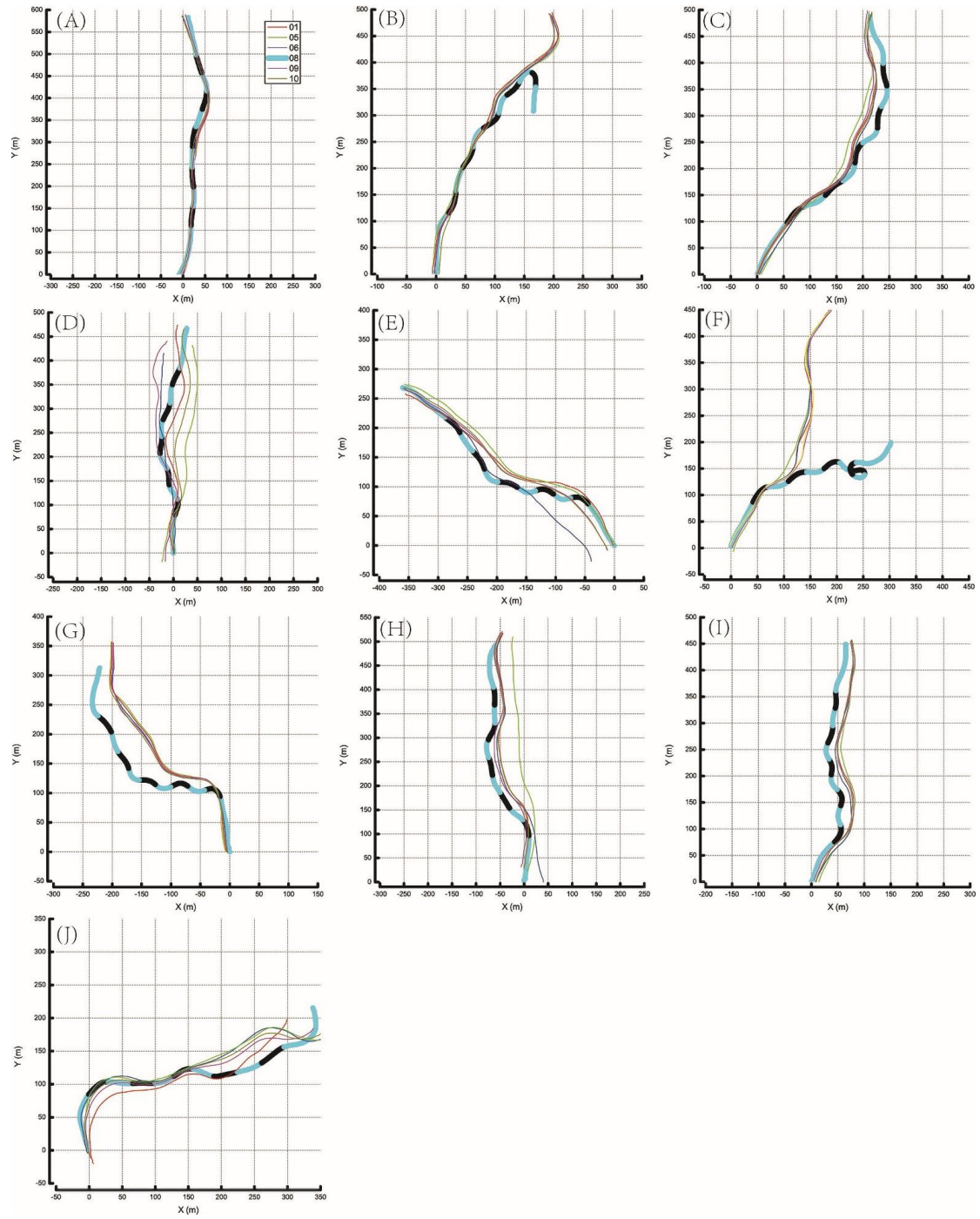


Fig. S3. All ten flight trajectories of the pigeon flock under the influence of robo-pigeons #08. The color curves represent animals' flight trajectories, and the thick one is the robo-pigeon with a running control module. The black parts on the curve indicate the time when the brain microstimulation was onset. The panels (A) and (F) are identical to Fig 2C and 2B in the text, respectively.