Fig. S1. Simulated ensemble representation of pulse-gap-pulse and single-pulse signals. Numbers in the center column indicate the gap duration. The single pulse signals have matching duration to gap plus surrounding 2 ms pulses. Ensemble spike histograms were generated using 500 weakly correlated neurons using the method of random spike sequences (r = 0.2; CCG width = 9 ms). Numbers in parentheses indicate the probability that the distribution of ensemble spike times contains two or more modes (Harnad's dip test, p<0.05). Histogram binwidth is 1 ms. a, Raw responses. Four examples are shown for the two signal types at each value of $\Delta t$. Those with two distinct modes are colored red. Notice that many responses on the right side exhibit more than one mode. b, Smoothed responses. Smoothing is achieved by delaying each spike by a random time drawn from an exponential distribution ($t = 10$ ms). This degree of smoothing attenuates the fluctuations in the ensemble representation of longer pulses at the expense of the shortest pulse-gap-pulse.