Figure 3. Separate Effects of Shunting and Noise on Response Gain and Variability

(A) Firing rate versus constant driving current for a neuron without (closed circles), and with (open squares) 32 nS of additional constant conductance in the absence of any additional noise from background synaptic input. The result is a pure shift of the firing-rate curve. (B) Firing rate versus constant driving current for a different neuron in the 1X condition (closed circles) and with the same level of conductance but input noise equivalent to the 3X condition (open squares). The effect is an increase in firing rate that is largest at low rates, resulting in a change in the slope of the firing-rate curve.