Non-uniform weighting of local motion inputs underlie dendritic computation in the fly visual system

Ohad Dan¹, Elizabeth Hopp³, Alexander Borst³ and Idan Segev^{*1,2}

¹Department of Neurobiology and ²Edmond and Lily Safra Center for Brain Sciences, the Hebrew University of Jerusalem, Jerusalem 91904, Israel. ³Department of Circuits-Computation-Models, Max-Planck-Institute of Neurobiology, Am Klopferspitz 18, 82152 Martinsried, Germany

*Correspondence to: idan@lobster.ls.huji.ac.il

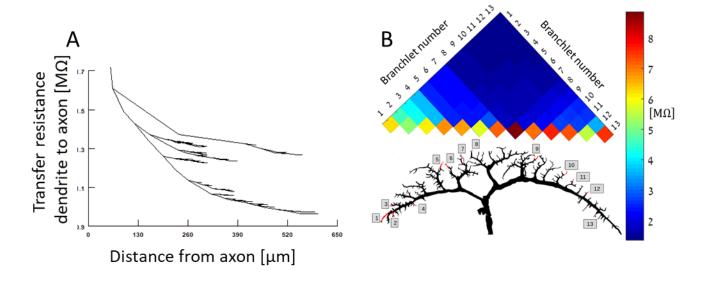


Fig. S1. Approximation of the effect of voltage-dependent membrane ion channels. A. Transfer resistance (V_{axon}/I_{ded}) between each dendritic locus and the axon when the specific membrane resistivity, R_m , is reduced by a factor of 2 (to mimic the opening of voltage-dependent ion channels) as compared to Fig. 3B. The input resistance at the axon (V_{axon}/I_{axon}) is now reduced to 2.2 M Ω . Parameters used were $R_m = 1,000 \ \Omega \cdot cm2$, $R_i = 40 \ \Omega \cdot cm$. B. As in Figure 4, but with the reduced R_m value as in A.