Figure S7 Average LD activity profiles for the *dVMAT* mutant and rescue lines. Average diurnal activity profiles were done in parallel but displayed in separate panels for clarity: (A) Histograms presenting the mean activity level as number of beam breaks per 30 min for the indicated genotypes. Genotypes showing improvement in the mean activity level compared to the *dVMAT* mutant are indicated (Kruskal-Wallis test with Dunn's Multiple comparisons test, $p < 0.05$). (B) Activity of WT control flies (black diamonds), the *dVMAT* mutant (red circles) or the *dVMAT* mutant with DVMAT expression restored in dopaminergic neurons (*TH-Gal4* rescue, cyan triangles). The *dVMAT* mutant has a reduced morning activity peak that is exacerbated by rescue of DVMAT expression in DA neurons. (C) Activity of WT control flies (black diamonds), versus the *dVMAT* mutant rescued with *Tdc2-Gal4* (green triangles) or *Trh-Gal4* (yellow triangles). Expression of DVMAT with *Tdc2-Gal4* results in an abnormally broad and quasi-bimodal peak of morning activity. (D) Average activity plots for WT control (black diamonds), and the *dVMAT* mutant rescued using two drivers: Tdc + TH (gray triangles), Tdc + TrH (gold triangles) and TrH + TH (brown triangles). All three combinations rescue morning activity.

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