



**Online Resource 4** a) Comparison of intrinsic distances (ordinate) between *Chorthippus biguttulus* (grey boxplots) and *Locusta migratoria* (white boxplots) for increasing levels of processing (abscissa). There were no significant differences between the two species investigated (REZ:  $p = 0.231$ ; LN:  $p = 0.119$ , AN:  $p = 0.695$ , Mann-Whitney-U-Test). b) Comparison of the slopes (ordinate) between *Chorthippus biguttulus* and *Locusta migratoria* for increasing levels of processing (abscissa). Again, there were no significant differences between the two species (REZ:  $p = 0.513$ ; LN:  $p = 0.187$ , AN:  $p = 0.217$ , Mann-Whitney-U-Test).

**article title:** Neuronal Precision and the Limits for Acoustic Signal Recognition in a Small Neuronal Network

**journal name:** J Comp Physiol A

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