



Figure 3-figure supplement 5. Fitting HS-induced EPSCs. (A) The default parameter set is as in Figure 2-figure supplement 3. Each panel shows the first 4 seconds of the simulated trace per parameter setting in black. Traces are overlaid with results of 10 independent fits starting at different initial conditions, shown in red (best fit), green (accepted fit upon visual inspection) and grey (rejected fit upon visual inspection). With the exception of the results for  $2k_{-1}$ , the same scale holds for all curves. (B) Key features encircled in red to judge quality of the fit by visual inspection: (1) Late onset of fit, (2) wrong peak amplitude and/or time-to-peak, (3) too slow decay towards steady state phase, (4) Steady-state phase (refill) is fitted incorrectly. (C) Fit method robustly discriminates between different model parameters. Graphs display fitted model parameters, obtained from fits approved after visual inspection in (A) (red and green curves), as a function of the adapted model parameter. Strong linear correlation is found for the adapted model parameter, whereas the other parameters are invariant.