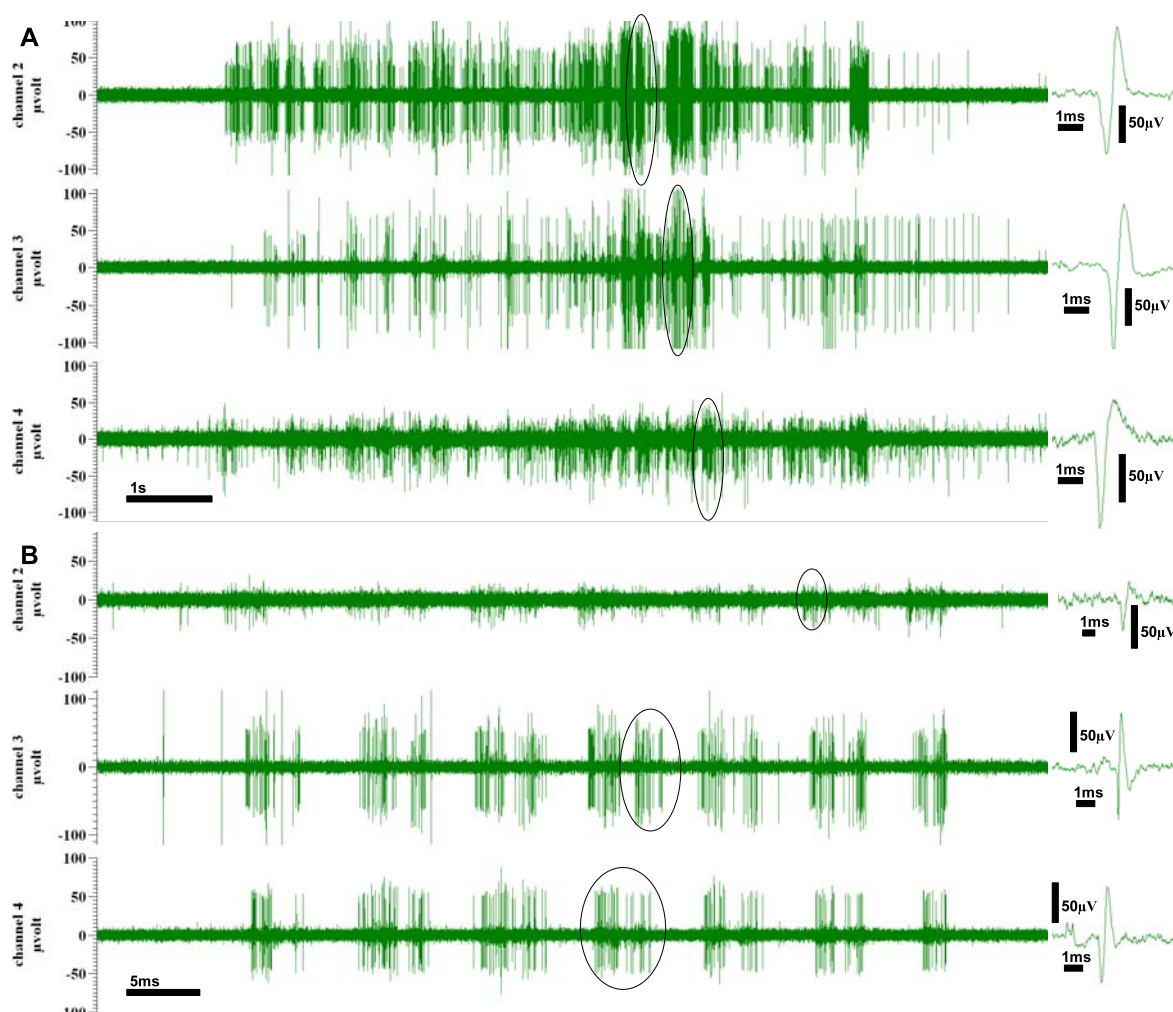


Supplementary figure 1. Hook electrode recording of bladder afferent activity from an anaesthetized rat. Background noise peak-to-peak amplitude is $25\mu\text{V}$, whereas the peak-to-peak amplitude of afferent activity is $70\mu\text{V}$.



Supplementary figure 2. Activity recorded from the A) S1 and B) L6 rootlets, during cutaneous stimulation at the base of the tail of an anaesthetized rat. Three rootlets were inserted in 3 micro-channels of the device. All channels record distinct activity during stimulation.



Supplementary figure 3. Recordings from three cut L6 rootlets in three micro-channels. During the recordings, constant cutaneous stimulation is applied at the base of the tail of the anaesthetized rat. However, as the rootlets are cut, no activity is recorded.