

# **THE RSVP KEYBOARD™: A BRAIN-COMPUTER INTERFACE FOR COMMUNICATION BY PEOPLE WITH LOCKED-IN SYNDROME**

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## **ABSTRACT**

This study explored the use of the RSVP Keyboard™ brain-computer interface as a typing and communication tool for people with locked-in syndrome (LIS). Six participants with LIS and nine participants without disabilities completed calibration sequences and attempted a word copying task with five levels of difficulty. Level difficulty corresponded with the degree of support provided by the RSVP Keyboard™'s integrated language model for pre-selected target words.

All participants were able to spell words with the RSVP Keyboard™ on the easiest level of the task. Better calibration scores were required for success at higher levels, when less support was provided by the language model. Participants with LIS demonstrated lower calibration scores and poorer performance on the word copy task than participants without disabilities.

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