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(57) Abstract :

A brainwave-controlled input interface (101) enables hands-free computing by detecting mental commands through a wearable headset (102) fitted with dry EEG electrodes (103). A pre-processing circuit (105), feature extraction module (106), and hybrid classification engine (107) decode brainwave signals into actionable computer inputs. A mapping module (108) translates user intentions, while Bluetooth module (110) ensures wireless operation. Calibration and power management modules (109, 111) enhance usability and efficiency, offering an intuitive and accessible computing experience.

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