

# The cognitive benefits of Artiphon's ingenious Orba 2



In a world where the issue of mental health is becoming increasingly topical, there is a need for solutions that don't necessarily rely on medical intervention. One such field that offers immediate therapeutic effects is sound-healing, which is scientifically proven to improve physical and emotional health and wellbeing.

In 2013, British ambient band Marconi Union worked closely with sound therapists to determine whether their music might have a beneficial effect on listeners' mood. Using brain imaging techniques, the lab behind the studies revealed that the duo's song 'Weightless' produced a 65% reduction in anxiety and 35% decrease in physiological resting rates, proving the band's claim that specific types of music can offer genuine advantages for mental and physical health.

A further example of the power of sound to 'light up' brain areas involved in emotion, memory, and even physical movement, can be found in medical environments. Traditionally, sound in hospital spaces has been considered intrusive and unwanted by patients, yet studies have shown that conceptualising the nature of sound as a soundscape effect is proven to reduce post-operative trauma, eliciting positive emotions in patients and nurses alike.

But what if you could create your own bespoke sounds, personalised to nourish your emotional positivity? Nashville-based Artiphon's Orba 2 is a palm-sized, gesture-based synthesiser able to generate and trigger any sound recorded onto the device for playback through its built-in speaker or headphones. Its unique ability to morph and modulate acoustic instruments to achieve an infinite combination of sounds creates a powerful multi-sensory experience, stimulating regions of the brain associated with creativity and emotional relaxation.

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**“Orba 2 exercises creativity and encourages self-expression in way that is both immersive and therapeutic.”**

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By enabling the user to record, loop and play back specific sounds, Orba 2's innovative, autonomous design encourages users to not just listen but engage in the act of creativity, improvisation and self-expression in a way that is both immersive and therapeutic. Surgeon, neuroscientist and musician Dr. Charles Limb from the University of California has carried out specific research on the neural basis of musical creativity. Using Functional Magnetic Resonance Imaging (fMRI) to study the brains of jazz artists and rappers, Limb was able to capture moving pictures of their brain activity as they create. His experiments uncovered how the creativity of using instruments such as Orba 2 can elicit strong visceral experiences and greater activity in the brain's reward centres.

The conscious and systematic use of the palm-sized device is the key to unlocking its full potential, with Orba 2's pick-up-and-play features designed to be interacted with on multiple levels. Greater application of the technology can create a diverse set of use cases, from a more generalised mental health and art-therapy perspective, to special needs learning environments. Due to its relatively low cost, both as a device and possible vehicle for therapy and education, Orba 2 is a credible economic solution for schools, adults, homes and families.

Whilst Orba 2 is a simple-to-use synth, looper and controller that almost anyone can quickly adapt to, MIDI and desktop customisability opens up new dimensions in terms of creativity and play. Although it arrives with its own custom sound pack, the Orba 2 App provides wireless connectivity, enabling users to explore hundreds of new instruments and import any sound from the real world and transform it into a playable musical instrument. This signals a new drive for physically interactive technologies that are primed for the use of our everyday motor skills and possess numerous cognitive benefits.