

How the CymaScope was born

In the beginning was Cymatics

Ever since Leonardo Da Vinci noticed that sand in the bottom of a vibrating wooden box formed structured patterns, many scientists have been fascinated by how matter is influenced by sound. Scientific explorers such as Robert Hooke, Michael Faraday and Ernst Chladni, helped to propel our understanding of this phenomenon. Perhaps the greatest contributions in this field took place in the 1960's with the work of Mary D. Waller and Hans Jenny, the latter of whom coined the term 'cymatics' from the Greek word 'kyma' meaning 'wave', Jenny's name for this emerging science.

Research in Egypt

In 1997 English acoustics engineer, John Stuart Reid, carried out cymatics research in the King's Chamber of the Great Pyramid of Egypt. He published his research in a booklet entitled *Egyptian Sonics*, which contains photographs of the cymatic patterns that had formed on a membrane he stretched over the sarcophagus. To Reid's surprise many of the images strongly resembled hieroglyphs, patterns that represent the inherent resonances of the ancient granite box. He concluded from the success of this experiment that cymatics could become an important tool with applications in many other fields of science.

Sound Made Visible

Reid became motivated to take the science of cymatics to a new level. He began to experiment with instrumentation that would enable an accurate visual equivalent of sound to be created. After seven years of research and development the worldwide-patented CymaScope® instrument was born. Reid worked with American design engineer, Erik Larson in this undertaking. The difference between the CymaScope and other devices, such as the oscilloscope, is that while they give only a graphical representation of sound, the CymaScope provides a visual representation, enabling us to see the actual patterns of sound.

In Good Company

The CymaScope, together with the microscope and the telescope, reveals previously hidden realms. The CymaScope reveals the once invisible world of sound. It has the unique ability to convert any audible sound into its visual equivalent. The results are presently displayed as still photographs; however, Reid and Larson are working on the next development of the CymaScope, the creation of moving video-stream images. In the future it will be possible to hear and see music in real time via a DVD.

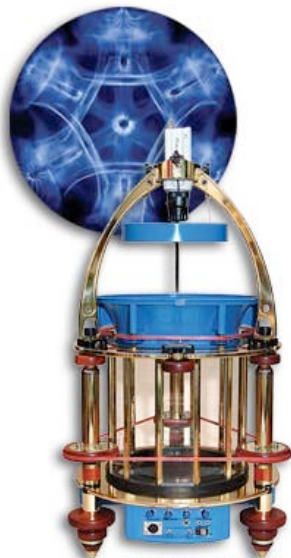
Music Made Visible

The CymaScope reveals that sound, and classical music in particular, contains beautiful kaleidoscopic-like structures, unfolding like the petals of a flower. Imagine seeing the voice patterns of great musical masters such as Pavarotti, Caruso and Callas! A new section of CymaArt entitled "Voices from the Past" will soon be added to our expanding *MusicMadeVisible* collection.

Scientific Applications

In addition to making music visible for art and entertainment, many other applications are possible with this innovative instrument. For example, when a particular sound is made into the CymaScope's microphone, it results in a visual pattern that represents that sound. This instant visual feedback can help support autistic children, stroke victims and the deaf. Other applications include new ways to study musicology, ornithology and zoology, to name a few.

The age of the CymaScope is here!



THE CYMASCOPE®
Innovative 21st century
sonic instrument that creates
visual patterns of sound
so that the world around
us can be appreciated and
understood at an
entirely new level

www.cymascope.com

John Stuart Reid is an English acoustics engineer, scientist and inventor. He has studied the world of sound for over 30 years and speaks extensively to audiences throughout the USA and the UK. His work has revealed some surprising aspects of sound, including its spherical and holographic nature. He is the inventor of the CymaScope, an innovative instrument that makes visible sound's once hidden structures, just as the microscope and the telescope have brought previously hidden realms into view. Inspired by acoustic pioneers Ernst Chladni, Margaret Watts-Hughes and Hans Jenny, John Stuart Reid has taken their findings to a new level.