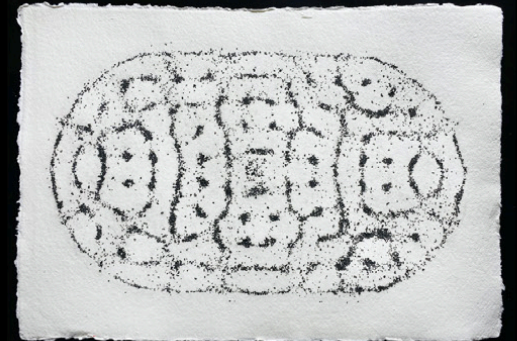
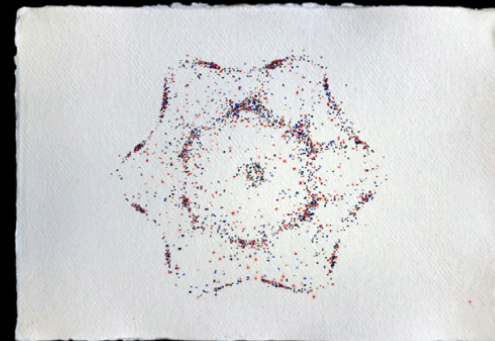
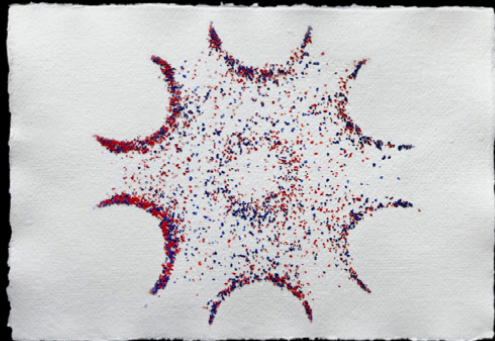
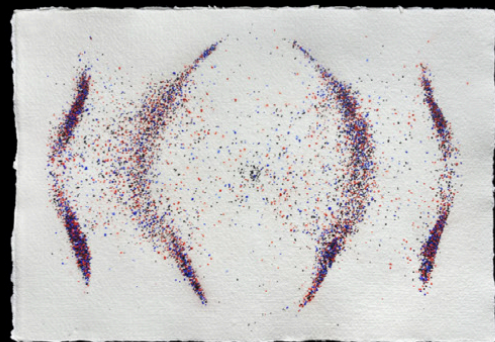
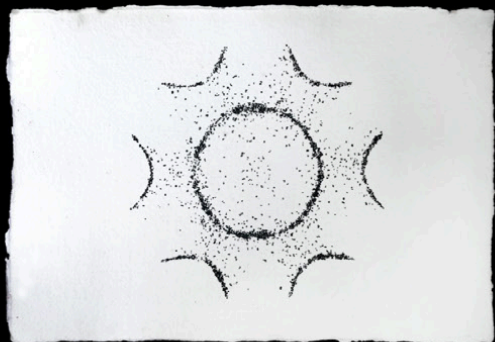
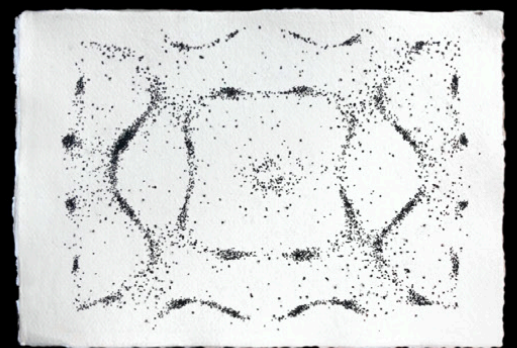


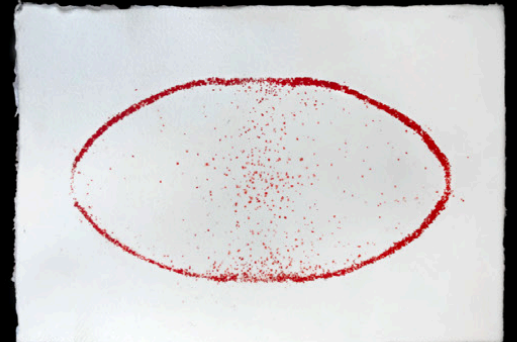
**Sonic Pattern  
Workshops**



**Making  
the  
Invisible  
Visible**



**with  
Ruth Montgomery  
and  
Chris Wight**



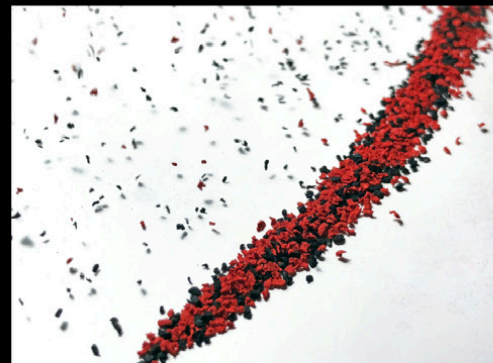
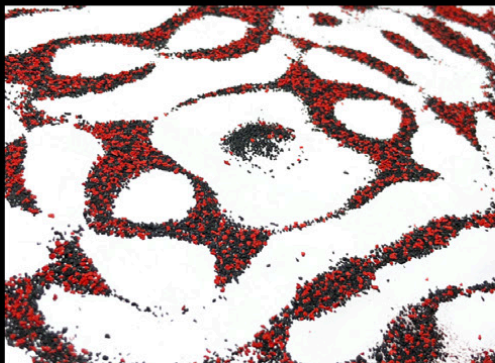
# Seeing and Feeling Sound in Action



Photographs by charliesportraits.com

Flarewave Festival 2025 - Workshop participants exploring the vibrational link between Sound & Sound Source, and creating their own Sonic Patterns to print. BSL interpreters (seen here in blue) enable access to our workshops for deaf groups.

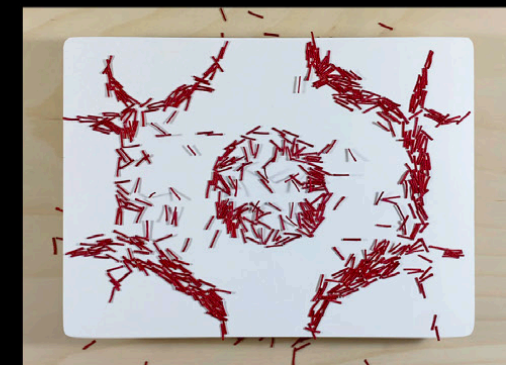
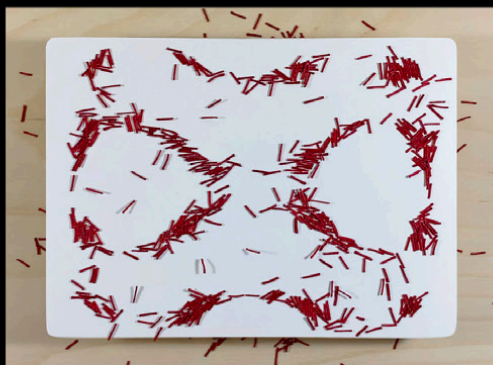
# Sound Visualising Media



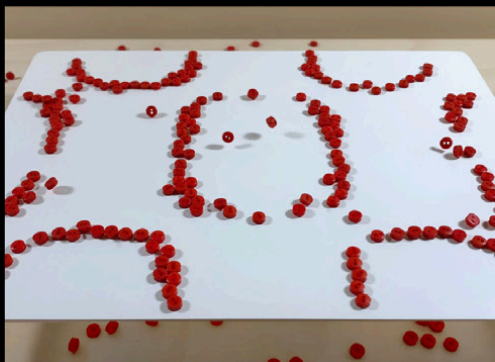
Paint granules

A custom-built Sonic Vibration Generator (SVG) transforms Sounds made by workshop participants into vibrations on 'vibration plates' of different shapes. The 'vibration plates' double as a printing plates, enabling participants to capture a dynamic moment of sound as a Sonic Pattern to print and take home.

Various kinds of Visualising Media become 'physical pixels', revealing invisible Sonic Vibrations and Sound Wave patterns on the vibration plates. In this highly engaging way, workshop participants gain an insight into the vibrational link between Sound and Sound Source.



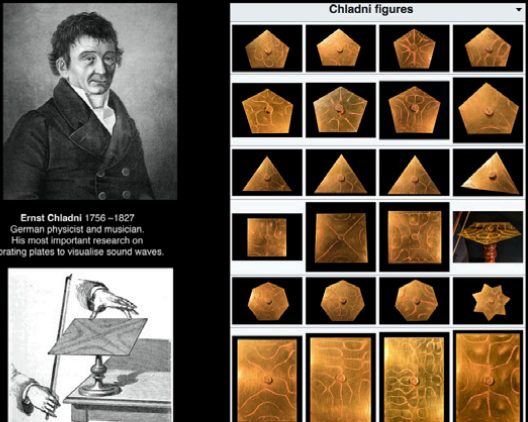
Threads



Buttons

Using a range of musical instruments, vocalisation and highly resonant bone china to create their sounds, and as the Sonic Patterns instantaneously form and transform before their eyes on the SVG, participants can observe and learn about the physical dynamics of sound and sound behaviour.

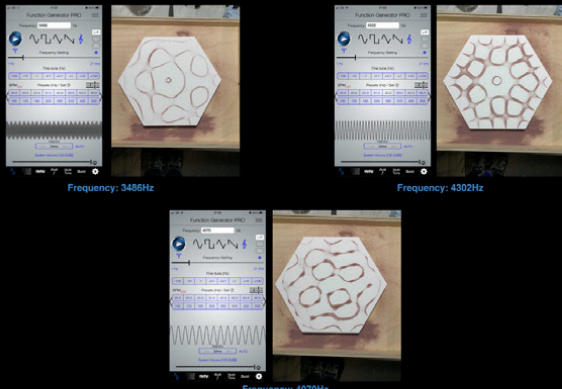
# Teaching Slides



**Chladni figures**

Ernst Chladni 1756–1827  
German physicist and musician.  
His most important research on vibrating plates to visualise sound waves.

Sonic Patterns in Garnet on a Hexagonal Bone china plate.



Frequency: 3458Hz

Frequency: 4302Hz

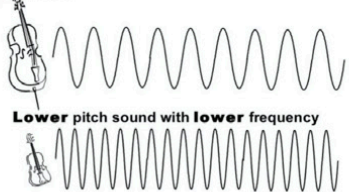
Frequency: 4070Hz

Examples of teaching slides used when working with school children of different ages.

Vibration  
from Latin vibrō 'to shake'




Compare the frequencies of sound with same loudness:



**Lower** pitch sound with **lower** frequency

**Higher** pitch sound with **higher** frequency

High frequency Pattern



Hummingbird



High frequency - Super fast wingbeats are almost invisible.  
Very High frequency Sounds can be impossible for humans to hear.


High Frequency: 5900Hz




A High Frequency Wave Form

Pitch = sound placement


high 5–10 kHz




800–2000 kHz "Mid-range"




low 100–200 kHz



Low frequency Pattern

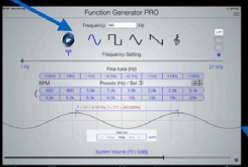


Albatross



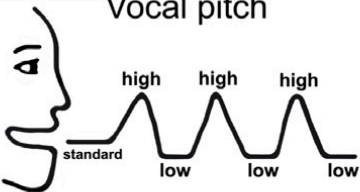
Low frequency - Slow wingbeats.  
Low frequency Sounds you can hear.

Low Frequency: 240Hz




A Low Frequency Wave Form

Vocal pitch

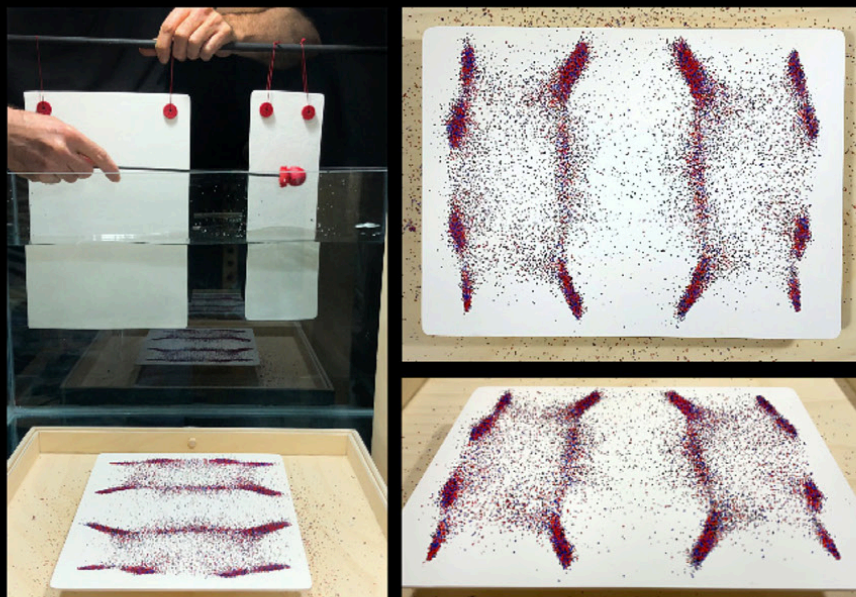
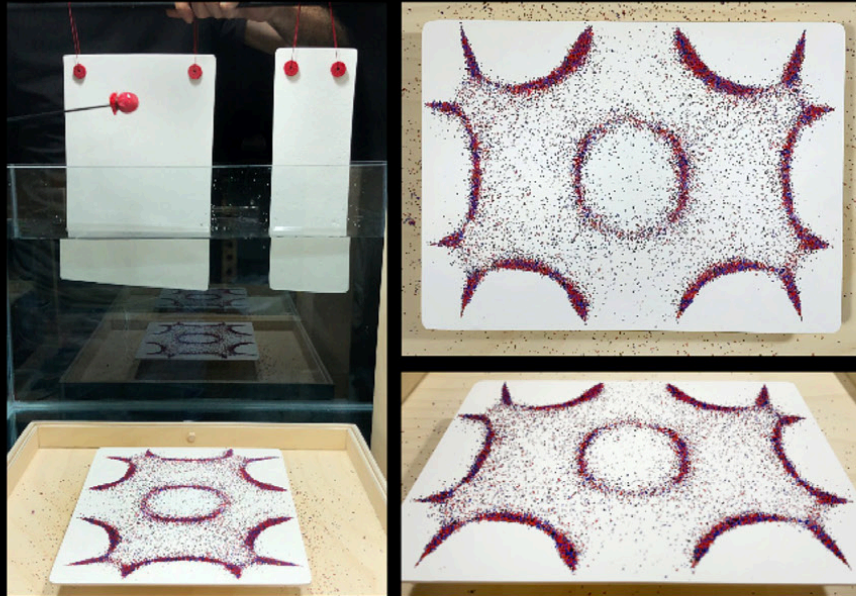


Pitch  
low and high sounds



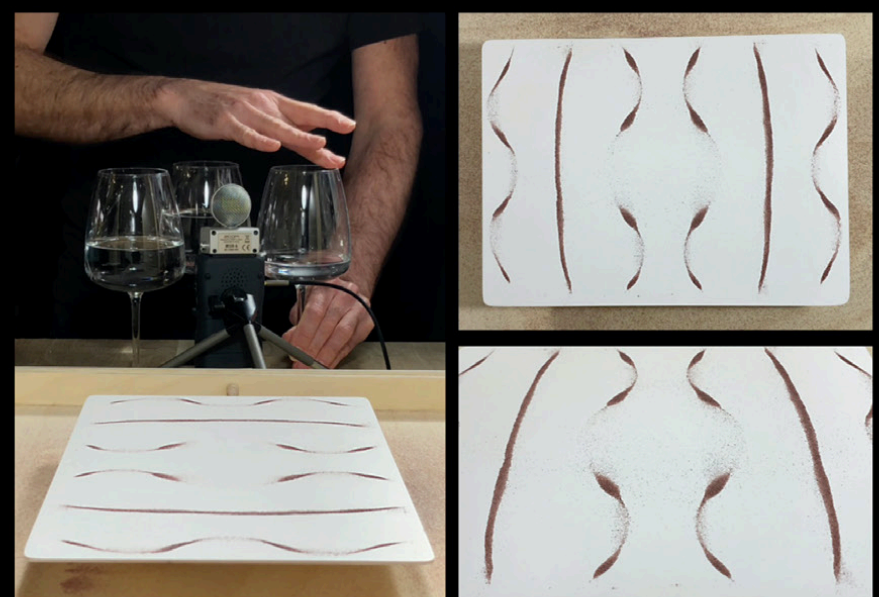
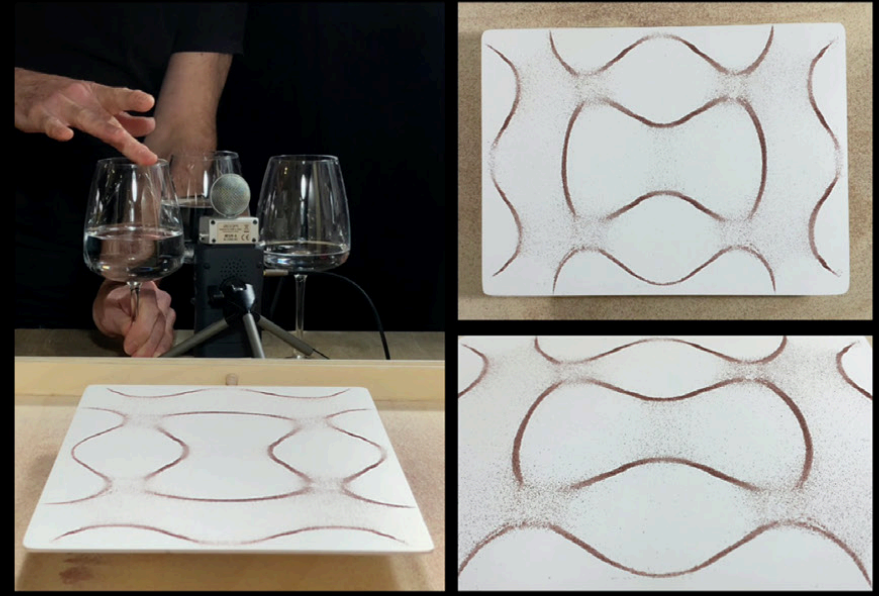
# Demonstrations on Pitch

Pitch Bending with a fish tank and sheets of Bone China.



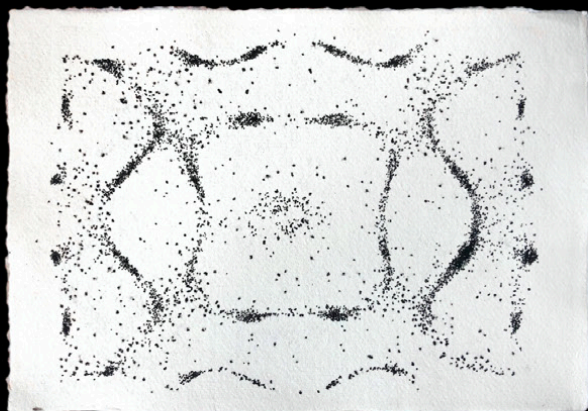
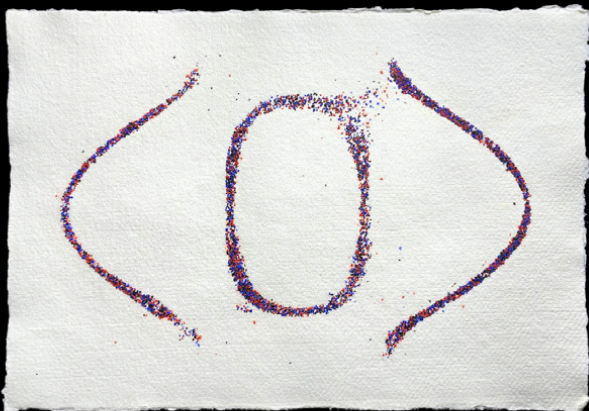
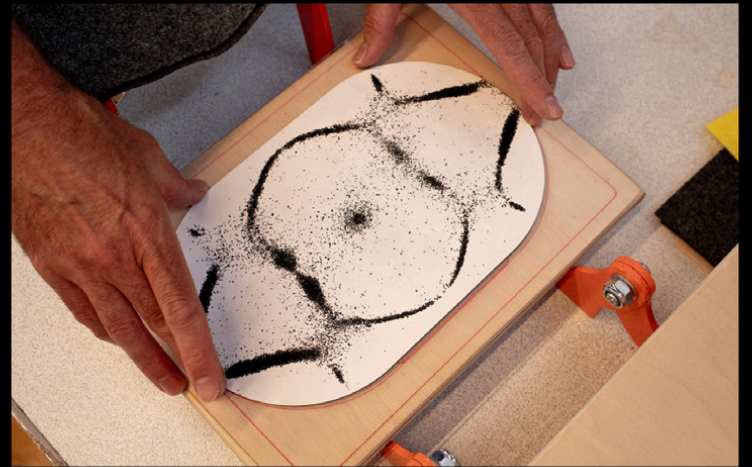
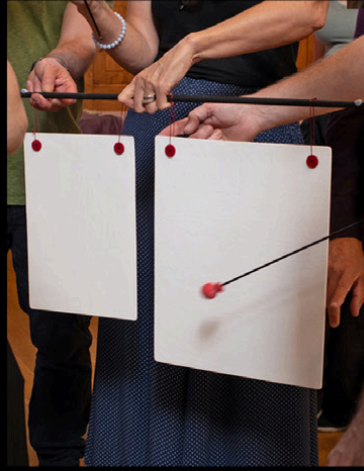
Pattern and Pitch changes when moving ceramic sheets in and out water.

Pitch Patterns with water filled wine glasses.



Pattern and Pitch changes playing wine glasses filled to different levels.

# Sound + Vibration = Pattern & Print

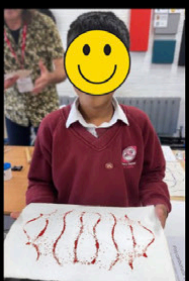
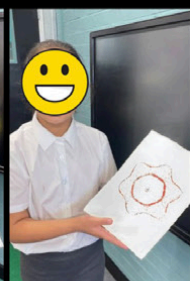


Photographs by Martha Wight.

# Sonic Pattern Workshops for all age groups



Photographs by Martha Wight.



Top Row: Workshop participants at Flarewave 2025 - Discuss the Feeling of Sound as they experience its intrinsic Vibrational component.

Bottom Row: Our very first Sonic Pattern Workshop with pupils at Percy Shurmer School for the Deaf.



## What people have said about the Sonic Pattern Workshops -

“..heartfelt thanks once again. The pupils had a fantastic time and were talking about it for ages. Even now when the staff mention it the pupils can recall what they did. Thank you so much for sharing this experience with the pupils” - Sarah Mannion, Braidwood School for the Deaf.

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“We used the vibrations from sound waves to create beautiful printed patterns. It was amazing - I'm definitely going to frame it and hang it up on the wall - thank you!”  
- James Merry , Flarewave festival participant.

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“Thank you for bringing yet another fantastic experience for our pupils and allowing them to experience the world of sound in a way they wouldn't normally get chance to do. Please pass our massive thanks to Chris as well for showing us and allowing us to play with sound.” - Braidwood School for the Deaf.

## Sonic Pattern Workshops

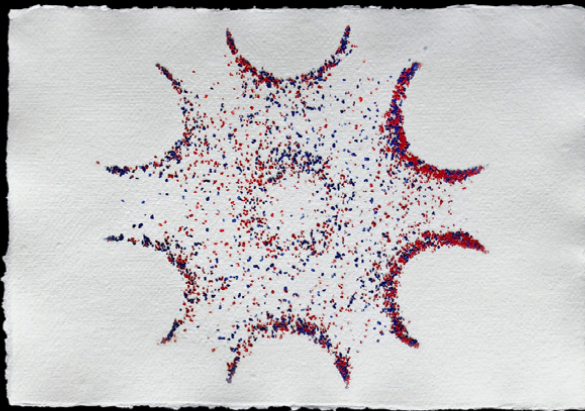
- \* Create and Visualise Sounds
  - \*Make Patterns with Sound Waves
  - \*Print your own Sonic Patterns
  - \*See how changes in Pitch alter Patterns
  - \*Explore the Physicality of Sound
  - \*Magically reveal Invisible Sound Waves
- 
- \*Workshops devised for both deaf and hearing participants, and different age groups
  - \*BSL interpreters present at workshops for deaf groups





AUDIOVISABILITY

Ruth Montgomery is Founder & Artistic Director of Audiovisability, a charitable organisation that brings the highest quality of music and musical opportunity to deaf people through teaching and outreach projects. Working with deaf role models, using sign language and visual resources to ensure full access to music.



To enquire about the Sonic Pattern Workshops please contact us to learn more: -

**Ruth Montgomery**

e: [ruth@audiovisability.com](mailto:ruth@audiovisability.com)

w: [www.audiovisability.com](http://www.audiovisability.com)

**Chris Wight**

e: [chriswight@cone8.co.uk](mailto:chriswight@cone8.co.uk)

t: 07969 423245

w: [www.cone8.co.uk](http://www.cone8.co.uk)



Chris Wight is a ceramic artist who combines traditional skills with new technologies to create highly technical pieces at various scales.

His current work harnesses the Sonic and Acoustic properties of fine bone china to design vibra-tactile plates that explore sound movement and visualisation through vibration.

