

## MIZI - Impossible Music (How to Trick Your Ears)

This is a radio show on musical illusions or an auditory guide on how to trick your ears and brain. A collection of pieces that demonstrates different psychoacoustic phenomena, musical illusions and their use in music. The next hour you will be invited to sit down, adjust the volume of your device on a comfortable level and tune into the world of impossible music. Witness patterns, sounds and signifiers that are completed inside our ears and brains, words that are not there, frequencies that are not being played by any instrument, melodic structures where there should be none. These are just some of the false perceptions that you will be experiencing through this expedition towards impossible music.

The first part of the show focuses on phantom words and musical illusions that are based on the human voice and our brains need to create patterns that adhere to language standards. Additionally, there's a couple of works that make heavy use of hoquet, splitting the melodic and rhythmical trajectory of the work to different voices - instruments - speakers forcing our brains to group the sounds in different ways.

<http://deutsch.ucsd.edu/psychology/pages.php?i=211>  
<https://illusionsongs.tumblr.com/tagged/hocket>  
[https://en.wikipedia.org/wiki/Auditory\\_scene\\_analysis](https://en.wikipedia.org/wiki/Auditory_scene_analysis)

The second part of the show demonstrates the use of combination (tartini) tones, in different contexts. Starting from Guillaume's De Machaut Double Hoquet, a very early example of polyphonic textures that result in tartini tones and moving to the phantom ringing of Thomas Ankersmit's Serge synthesizer and Ligeti's Wind Quintet.

Tartini Tones are a psychoacoustic phenomenon of phantom tones, that are artificially perceived inside our own ears. When two tones of a specific frequency ratio are sounded at the same time, a third tone -that is not present- is also perceived.

[https://www.sfu.ca/sonic-studio-webdav/handbook/Combination\\_Tones.html](https://www.sfu.ca/sonic-studio-webdav/handbook/Combination_Tones.html)

The last part of impossible music delves into the world of endless glides and downfalls, exploring the Shepard - Risset glissando and rhythm with the video game use case of Super Mario 64 and the evermoving rhythms of Stretta's Calculus. We can also experience the Chromatic Illusion through Sarah Angliss' piece "Slip" and lastly some more hoquet, combination tones and auditory stream segregation to top it all off!

<https://deutsch.ucsd.edu/psychology/pages.php?i=204>  
<https://www.bbc.co.uk/programmes/articles/52JjKxXgs2nCk7jCc8YtbD9/can-you-believe-your-ears>  
<https://www.nicolastiteux.com/en/blog/shepard-and-risset-audio-illusions/>  
[https://en.wikipedia.org/wiki/Shepard\\_tone](https://en.wikipedia.org/wiki/Shepard_tone)

Diane Deutsch - Phantom Words - 1  
Steve Reich - Come Out  
Steve Reich - Come Out (Ken Ishii Remix)  
Diane Deutsch - Phantom Words (MIZI Remix)  
Paul Lansky - Idle Chatter (excerpt)  
Musique Du Burundi [Ocora] - Akazehe Par Deux Jenues Filles  
Maryanne Amacher - Head Rhythm & Plaything 2 (excerpt)  
Montgomery Choirs - Combination Tones  
Guillaume De Machaut [Trio Subtillior] - Double Hoquet  
MIZI - III  
Thomas Ankersmit - Perceptual Geography (excerpt)  
Jacob Kirkegaard - Labyrinthitis (excerpt)  
Alvin Lucier - Bird and Person Dyning (excerpt)  
György Ligeti - Ten Pieces for Wind Quintet - 1. Molto Sostenuto e Calmo  
Koji Kondo - Super Mario 64 - Endless Stairs  
Sarah Angliss - Slip  
Pedro Patricio - Perpetual Melody - Contrasting Moments  
Stretta - Calculus  
Dave Parkhurst - Bach - Auditory Stream Segregation  
Alvin Lucier - Ricochet Lady (Blum Hall)  
Diane Deutsch - But They Sometimes Behave So Strangely