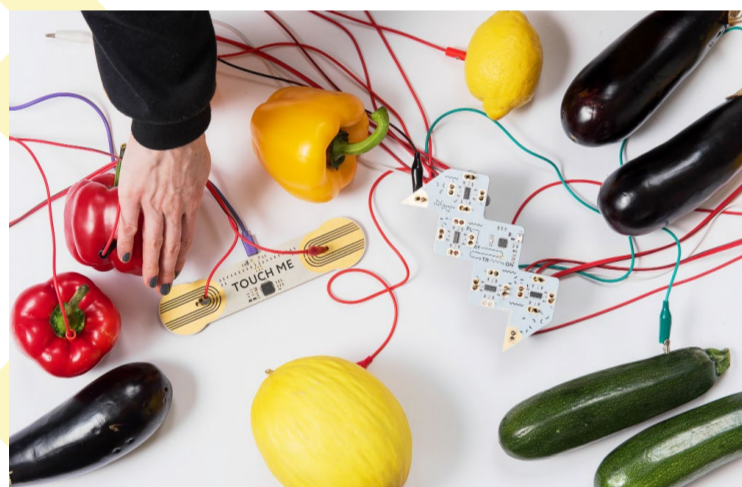


Making Digital Music More Accessible

Digital music devices have come a long way since their inception, evolving from simple electronic sound generators to sophisticated tools that allow musicians to manipulate sound in real time. The journey began in the mid-20th century with the development of early electronic instruments like the theremin and the synthesiser. As technology advanced, so did the complexity and capabilities of these devices, leading to the creation of digital music workstations (DAWs) and MIDI controllers that transformed how music was produced and performed.

Prototype of the Cmpsr Music Controller



A Brief History of Digital Music Devices

In the 1980s, the introduction of MIDI (Musical Instrument Digital Interface) revolutionised the music industry by allowing electronic instruments and computers to communicate. This standardisation opened the door to a new world of digital music devices, including keyboards, drum machines, and sequencers, which enabled musicians to explore endless sonic possibilities. With the rise of personal computing in the 1990s and 2000s, digital audio software and controllers became more accessible, allowing both professional musicians and hobbyists to create complex compositions from their home studios.

Today, digital music devices have evolved beyond traditional instruments and controllers, incorporating touch, gesture, and other forms of interaction to make music creation more inclusive. Companies like Playtronica and Salsus Design are some examples of companies at the forefront of this evolution, pushing the boundaries of how we interact with sound and making music-making more accessible to a wider audience.

Turning Everyday Objects into Instruments

Playtronica takes an innovative approach to digital music devices. Their philosophy is rooted in the idea that music can be created from anything through the power of sound and touch. By using principles of conductivity and resistance, Playtronica's devices, such as Playtron and TouchMe,



allow users to turn everyday objects into musical instruments. A banana, a plant, or even a human touch can produce melodies and rhythms, making music creation a tactile and interactive experience.

Playtronica's technology provides an accessible way for people of all ages and abilities to engage with music, offering an alternative to traditional instruments and controllers. Their devices encourage exploration and creativity, making digital music more inclusive by inviting everyone to participate in the creation of sound.

Digit Audio and the Cmpsr Music Controller

Digit Audio collaborated with Salsus Design to refine their prototype of the Cmpsr Music Controller, aiming to turn it into a fully manufactured product. The objective was not just to enhance the device's functionality but also to improve its ergonomic and accessibility features. By combining Digit's passion for accessible music-making with Salsus's expertise in surface modelling and design for manufacture, the Cmpsr was transformed into an intuitive and inclusive tool for digital music creation.

The Cmpsr's success is marked by its win of the Tech4Good Accessibility Award, highlighting the importance of thoughtful design in digital music devices. This award-winning controller provides an intuitive interface that allows users of varying abilities to interact with music technology, breaking down barriers and making digital music creation more inclusive.

The Importance of Inclusive Design in Digital Music Devices

By focusing on the user experience, these companies create tools that are not only functional but also inviting to a diverse audience. In the case of the Cmpsr Music Controller, Salsus and Digit refined the device to ensure that it could be used comfortably by individuals with different levels of dexterity. Playtronica, on the other hand, emphasises the use of touch and interaction, allowing music creation to become a sensory-rich experience that is accessible to everyone.

The intersection of digital music devices and inclusive design has the potential to transform how we perceive and interact with sound. Companies like Playtronica and Salsus Design are at the forefront of this movement, creating tools that make digital music creation more accessible and engaging for all. Whether through the refined ergonomics of the Cmpsr Music Controller or the playful use of everyday objects by Playtronica, these innovations invite a broader audience into the world of music-making.

Free KS3 Context

We have developed a free KS3 context with Salsus design as part of our 'Inspired by Industry' initiative. It encourages students to design digital music devices that cater to diverse users, including those with disabilities and the elderly. It involves exploring electronics, materials like polymers and e-textiles, and creating

custom controls like switches and joysticks. Students are guided to think creatively and empathetically, developing functional prototypes that allow users to interact with sound in new ways.

Visit: www.inspiredbyindustry.org.uk or scan the QR code below to download the PowerPoint and supporting document. Salsus's framework encourages students to explore how music controllers can be adapted for users with various needs, such as the elderly, children, or individuals with disabilities. This approach opens up opportunities to design bespoke switches, handles, and mechanisms that make digital music creation more accessible, pushing the boundaries of what these devices can do. By adopting a user-centred approach to design, the focus shifts from traditional instruments to more innovative and inclusive methods of making music. ✕



Inspired by Industry – Salsus Design – FREE KS3 Context
www.designtechnology.org.uk/resource-shop/industry/inspired-by-industry-salsus-design



Inspired by Industry – Salsus Design – Member Only Supporting Units
www.designtechnology.org.uk/for-education/inspired-by-industry-member-only-content/focused-tasks-and-investigative-and-evaluative-activities/salsus-design-fts-and-ieas/

