What's coming up?

- Introductions
- What is **accessibility** and why is it important?
- What can you do? Best practice guidelines
- Break
- Developer spotlight: **Ableton** – Move, Live 12, and Note
- Developer spotlight: **Arcana Instruments** – Arcana Strum
- Q&A

Heads up: minimal code involved.

Interaction

- Use this workshop's Discord channel or Zoom Q&A for interaction throughout the session
  - **What does accessibility mean to you?**
  - **Why do you feel it is important?**
  - **Your ideas for access top tips.**

- Wireless mic for questions in the room.

Who am I?

- An imposter!
- A (partially sighted) user of the tools.
- Music Support Officer at **RNIB** (Royal National Institute of Blind People).
- Founder of **Sound Without Sight**.

jay.pocknell@rnib.org.uk
jay@soundwithoutsight.org

Jay Pocknell

RNIB

See differently

SOUND WITHOUT SIGHT

SOUND WITHOUT SIGHT

Connecting blind and partially sighted musicians to one another, and to resources, opportunities, and support.

Tim Yates
Research and Innovation Executive, Drake Music

About Drake Music

- National organisation with 30 years' experience working at the intersection of music, technology and Disability.

- We believe everyone has the right to express themselves creatively through music.

- We use new technologies and ideas to open up access to music for all.

- Our vision is a world where Disabled and Non-Disabled musicians work together as equals.

- Everything we do is informed by the Social Model of Disability.

DM
DRAKE MUSIC

What we do

- Supporting Disabled Musicians:
    - Residencies
    - Commissions
    - Career Development
    - Workshops and Ensembles
- Advocacy
- Training
- Research and Innovation

What we do

- Research and Innovation

  - Instrument Development: Co-design methodology

  - DMLab: Connecting people

  - Partnerships

    - Industry

    - Academia

    - Arts Organisations

    - Third Sector

  - AMIC: The Accessible Musical Instrument Collection

Hello.
I'm Elizabeth.

- Music artist, vocalist, producer, songwriter and tech-enthusiast.

- Music facilitator and advocate, mainly around inclusion, music technology and songwriting.

- elizabeth@elizabethjbirch.com

Tim Burgess

- Musician
- Music Technology Accessibility Consultant

tim@raisedbar.net

Andre Louis

- Musician
- Music Technology Accessibility Consultant

  Website: onj.me

Adi Dickens

- Accessibility Specialist, Ableton
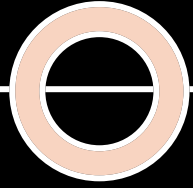
  accessibility@ableton.com

Haim Kairy

- CEO, Arcana Instruments

  hello@arcanainstruments.com

arcana
INSTRUMENTS

What do we mean by accessibility?

Social Model of Disability

"The social model of disability is the understanding that disability is something that is created by society… Disability isn't something that exists inside your body or your mind. It's something that is created by an inaccessible society."

(From https://www.sense.org.uk/about-us/the-social-model-of-disability/)

Who might face access barriers if a product is not designed inclusively?

- Anybody not included in the design and test team
- People with sensory impairments
- People with physical disabilities
- Neurodivergent people
- **Disabilities can (and very often do) intersect!**

Useful definitions

- **Accessibility** – is it possible for everyone to use all functions of my product?

- **Usability** – is the UX efficient, and equitable for different user groups?

- **Inclusive design** – asking these questions **during** development, and empowering potential users to co-create.
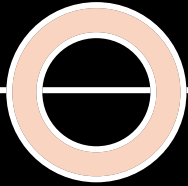
The Big W:
Why?

Why is accessibility important?

- Diversity is important.
  - ~7 in 10 music fans believe that diversity within music artists is important (RNIB, Opinium 2023).

- Give a voice to the voiceless.
  - Only ~3% of music fans could think of a current blind or partially sighted professional musician (RNIB, Opinium 2023).

Why is accessibility important?

- Inclusion encourages innovation.
  - From both developers, and musicians.
- Inclusion done right doesn't need to be obvious.
  - We all have a social responsibility to be inclusive.
  - While it sometimes might feel thankless, we don't want tokenism or gimmicks.

Potential user base – *the business case*

- 23% working age adults are disabled (UK ONS 2023).
- Globally, more than 2.5 billion people need one or more assistive products.
- Employers & education institutes have a responsibility to purchase inclusively designed tools.
- Customers are loyal to companies who recognise their requirements.
- Designing inclusively is cheaper in the long run.

Why design inclusively?

- Start as you mean to go on.
- Disabled users are the experts in their own UX and are eager to get involved.
- Have a legacy mindset.
  - You're not just impacting now; you're impacting future generations.
- Inclusive / universal design benefits **everyone**.
  - Everyone has access needs, not just disabled people.

A 360 view of Access

Accessible
Authentic
Affordable
Available
Adaptable

5 Accessibility Tips

- Are your accessibility settings accessible?

- Stick to standards

- Transportable settings

- Multipress

- Don't remove access features

Examples of UI design considerations

Inclusive Design within Audio Products: What, Why, How?

How might users access my software?

- Screen reader
- Keyboard navigation
- Magnification
- Hardware controllers – MIDI control, Stream Deck etc.
- Eye tracking / head tracking

Accessible UI design

- Minimise clicks.
- Clearly label UI elements, ideally with visual text too.
- Group related UI elements visually and structurally.
- JUCE offers a good starting point for screen reader accessibility.
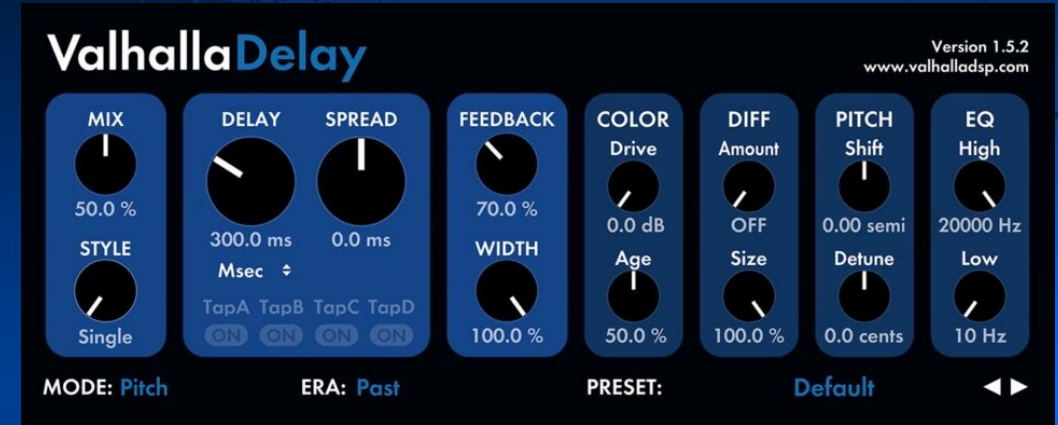
Accessible UI design

- Ensure good contrast - WCAG.
- Avoid tiny UI elements.
- Add space between elements.
- Scalable GUI.
- Name automation parameters clearly and concisely.
- Use meaningful scales for parameters.

- Avoid forcing users to click in blank space.
- Avoid forcing users to click and drag.

Are skeuomorphic UIs less accessible than those with a flat design?

- It depends on the hardware being emulated!
- Adapt realistic UIs for better accessibility where possible.

What else?

Inclusive Design within Audio Products: What, Why, How?
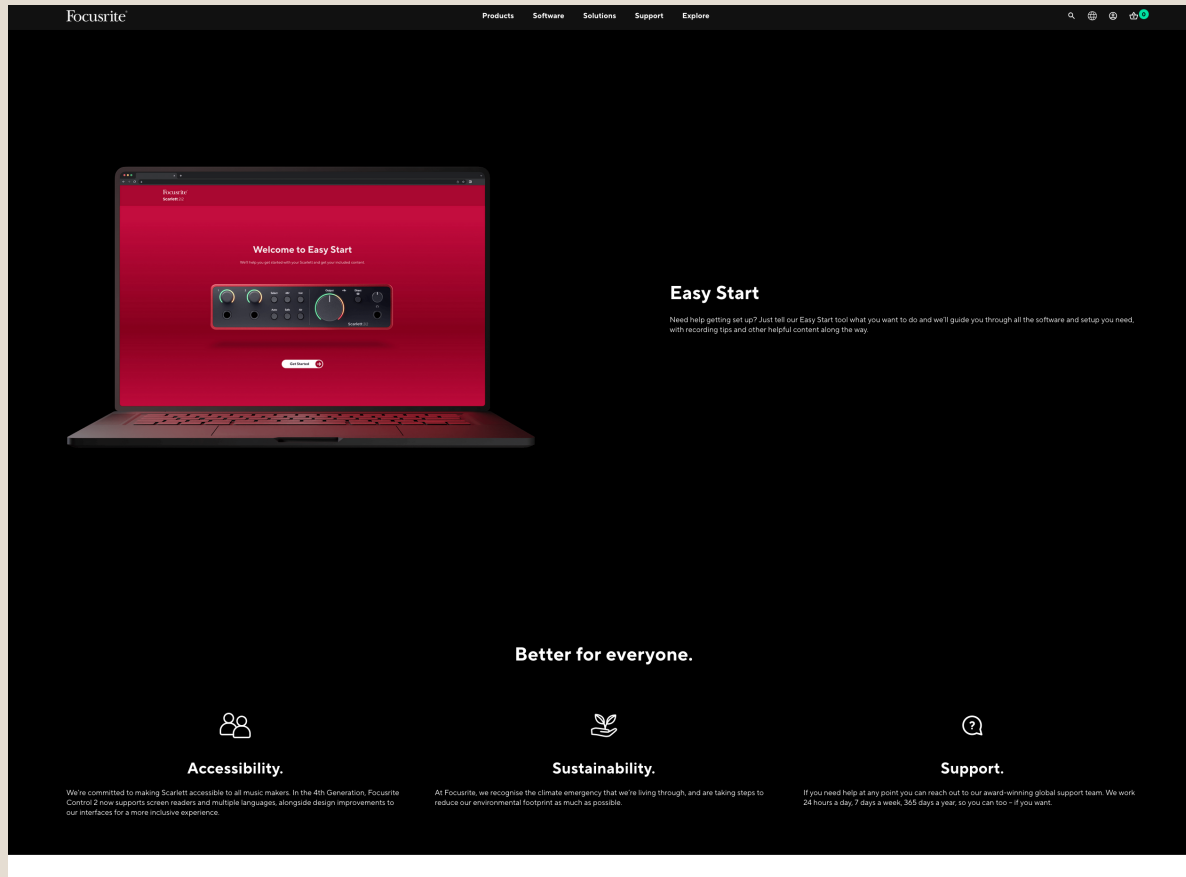
3 Examples

- Focusrite Scarlett: Screen reader enabled

- Zoom essential recorders

- Digit CMPSR

- Focusrite Scarlett: Screen reader enabled

  - Ubiquitous
  - Integrated accessibility of hardware and software
  - Available on all models
  - Clear documentation

Scarlett 4th Generation Screen Reader Accessible Features

Feature	Scarlett Solo 4th Generation	Scarlett 2i2 4th Generation	Scarlett 4i4 4th Generation
Input Gain	NO — *gain dials have a min and max*	YES	YES
Input Peak Level Indicator	YES	YES	YES
Channel Linking	Not applicable	YES	YES — *for input 1 and 2*
48 Volt Phantom Power	YES — *input 2 only*	YES	YES
Instrument Level	YES — *input 1 only*	YES	YES
Auto Gain	Not applicable	YES	YES
Clip Safe	Not applicable	YES	YES
Air Mode	YES — *input 2 only*	YES	YES
Direct Monitor	YES	YES	Not applicable
Direct Monitor Mode — Mono or Stereo	Not applicable	YES	Not applicable
Mixes	Not applicable	Not applicable	YES
Mixer Channel Pan	Not applicable	Not applicable	YES
Mixer Channel Level	YES	YES	YES
Mixer Channel Mute	YES	YES	YES
Mixer Channel Solo	YES	YES	YES
Presets	YES	YES	YES
Combine Input 1 and 2	YES	Not applicable	Not applicable
Loopback	YES	YES	YES
Reset to Default Settings	YES	YES	YES
Sample Rate	YES	YES	YES
Software and Firmware Versions and Updates	YES	YES	YES
Serial Number	YES	YES	YES
Other App Settings, Links, and Feedback	YES	YES	YES

- Zoom essential recorders: On board screen reader

  - Available across the range
  - Access 4th item on the product website
  - Pro level equipment with access as standard
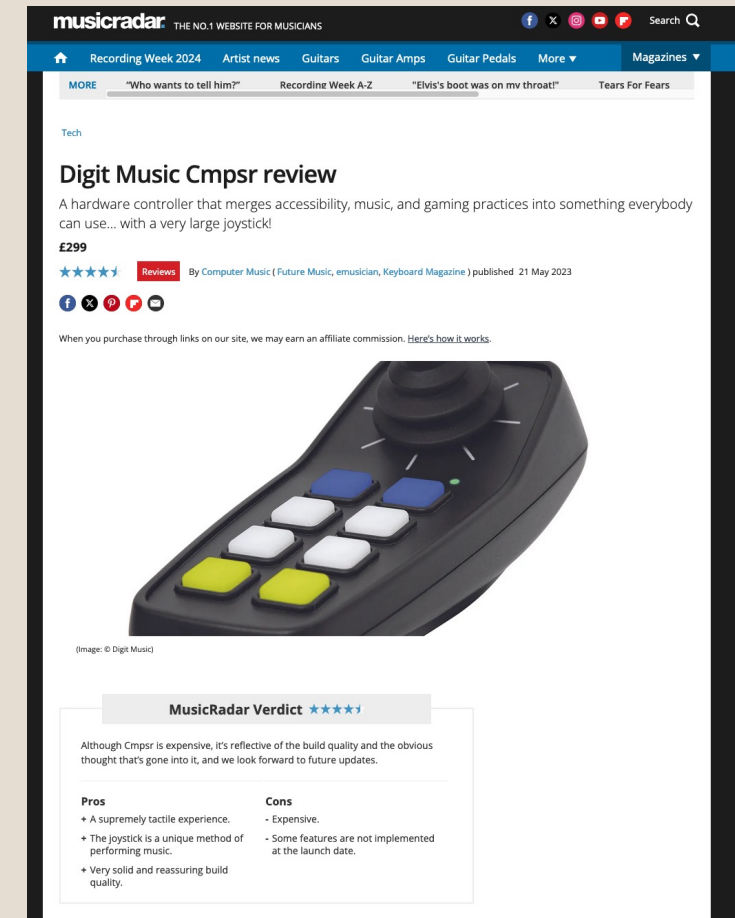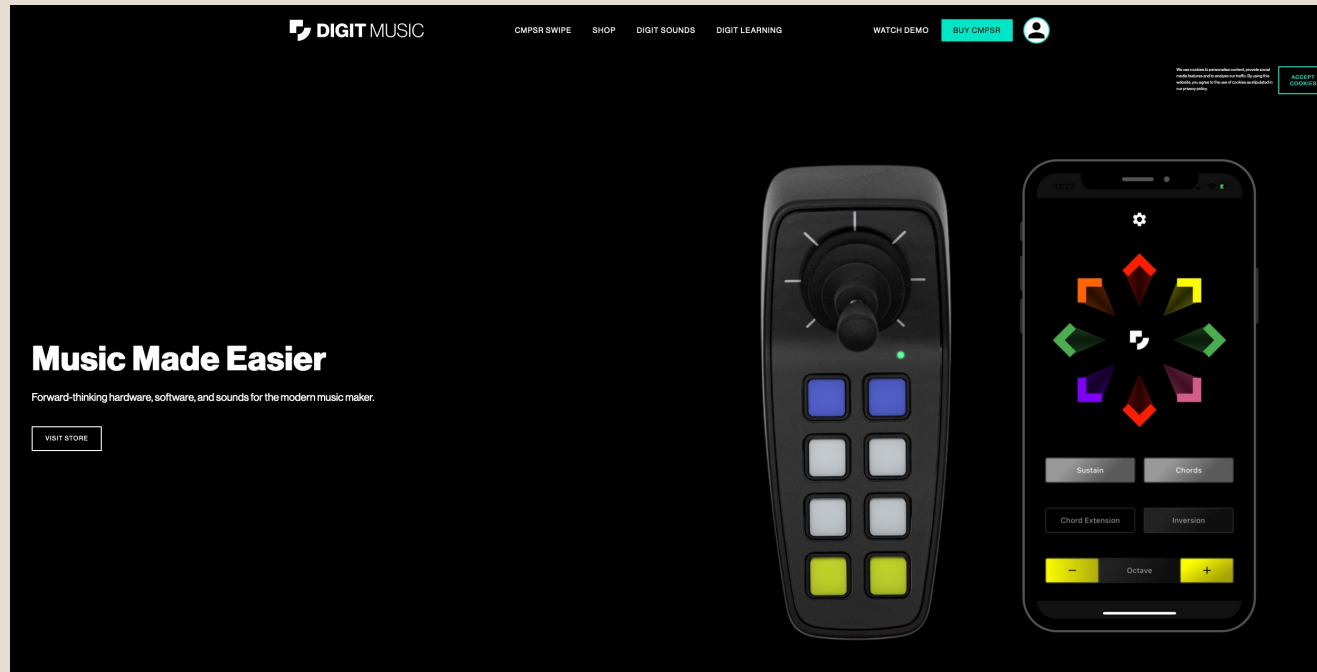 - Ubiquitous
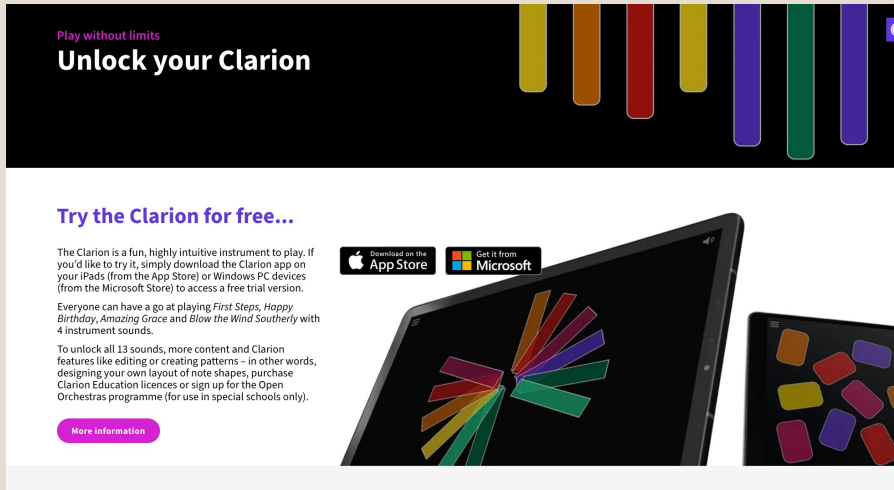
- Digit CMPSR
  - Explicitly accessible instrument
  - Focused beyond the product
  - A MIDI controller integrating with standard rigs
  - Broad range of applications
  - Supported by a flexible app

Broader Landscape

- Clarion; eye-gaze instrument and app: Open Up Music

- One-handed clarinet: Peter Worrall and OHMI

Broader Landscape

- Haptic Baton: Human Instruments
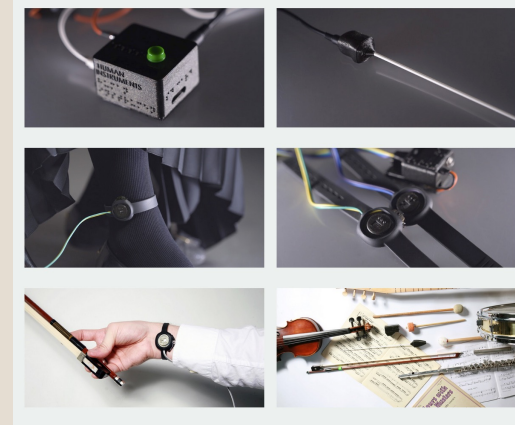
- Kellycaster: John Kelly

Broader Landscape

- **MiMU Gloves:**

The Future

- Share, share, share!

- Taxonomy and standards

- Consolidate knowledge

- Make access ordinary

Contact Drake Music

timyates@drakemusic.org

Find out more at www.drakemusic.org

Follow us @drakemusicorg

10 min break

Developer spotlight: Ableton

Accessibility at Ableton

Dr Adi Dickens

What we will cover

Ableton's Accessibility Journey

Our products: Live 12, Note, Push, and Move

Ableton Move Demonstration with Andre Louis

Ableton's Accessibility Learnings

The future for Accessibility at Ableton

Ableton's Accessibility Journey

Adi starts working with Ableton as an external accessibility consultant

Initial research interviews started with 23 VIB music makers

Work starts on auditing and improving the VoiceOver experience for Note

A weekly test group of 4 VIB music makers is formed for Note testing and feedback

Note reaches the first milestone - we move into a process of maintaining accessibility

Code fix for Live 12 release - focus turns to bug reporting and documentation, we begin hosting weekly office hours

Nov 2020

Nov 2022

Dec 2022

May 2023

Oct 2023
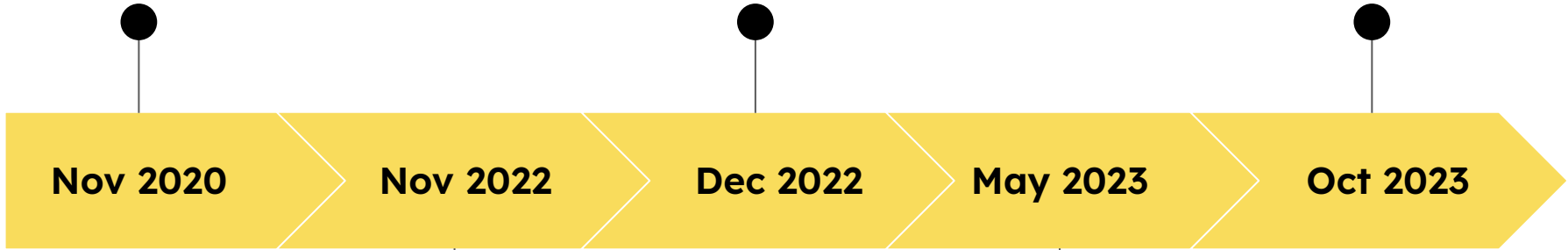
Adi joins Ableton as the Accessibility Specialist to continue the work with Live as well as support improving accessibility for all other products and services.

Private beta starts for Live 12 Screen Reader Accessibility

Onboarding sessions run for 10 weeks to introduce our new test group to Live 12

Note's first accessible release launches in April

Public beta for Live 12 is announced, we engage with ~100 new VIB community members for testing

Focus turns to the next scheduled release

Audit of Ableton move begins with accessibility consultant Andre Louis

Ableton Move release

Nov 2023 **March 2024** **April 2024** **July 2024** **Oct 2024**

Live 12.0 release

Plans to integrate our Live 12 test groups into our QA processes

Looking towards accessibility processes the future as we prepare for the next Live release

Live 12

Process

December 2020 Research interviews with 23 visually impaired and blind (VIB) music makers

May 2023 Private beta (around 30 VIB music makers) and onboarding begins

September 2023 Weekly office hours for feedback begin following the onboarding sessions.

November 2023 Public beta announced, soon we will get feedback from a further 70+ VIB music makers

March 2024 Live 12 release

April 2024 Documentation work with consultant Tim Burgess

Achievements

Live 12 is the **first accessible version of Live**

New keyboard workflows have been added to Live, making it possible to use Live without a mouse

Feedback from our research group has been **overwhelmingly positive**

Computer Music Magazine featured about accessibility of Live and Note, entitled "Ableton's Accessibility Revolution"

Ableton is the **one of first companies in the industry to engage with this number of testers** with lived experience during the development process

Community Reactions

"Ableton really thought about everything—great attention to detail. Thanks for all your work on accessibility. Live is my go-to DAW at this point."

"I can't express how happy I am to finally see the accessibility support in Ableton live! As a legally blind professional musician, the lack of this kind of support created a love and hate for Ableton Live for me. Better late than never!"

"Ableton has recently started taking accessibility very seriously, and it shows. Nearly everything is usable, from the plug-in interfaces to midi and audio editing"

Note

Process

December 2022 We invited three VIB music makers to audit the Note app (Tim Burgess, Andre Louis, Trahern Culver)

April 2023 first release on the app store that supports VoiceOver

October 2023 Note becomes Ableton's first accessible product available to the public

Achievements

Five months from zero to functional with VoiceOver

Ten months from zero to over 95% accessible with VoiceOver

Reviewed on AppleVis as "probably **one of the most accessible music production apps** on iOS aside from GarageBand"

Community Reactions

"I just got this app and I'm really really impressed"

"one of the most accessible fun pieces of creative music software right now"

Push

Process

December 2023 - First audit started

Goals

Identify any **immediate show stoppers** for accessibility

Establish improvements that can happen through **firmware updates**

Understand any **small changes** we could make to improve accessibility

Future design considerations for updates

Move

Process

December 2023 - Move devices provided for accessibility audit

February 2024 - Report outcomes of first pass accessibility audit

April 2023 - Planning with Move development team for any required updates

Goals

Assess the screen reader UX of Move paired with Move Manager

Identify accessibility improvements for onboarding materials.

Create documentation to support onboarding and the use of Move by members of the VIB community

Community Reactions

"…even if the move isn't for you I think we wall have to give a big shout out to Ableton for making the move accessible to totally blind users"

"Kudos to the dev team for putting the Able in Ableton."

"it's great that another piece of accessible tech is available"

"That's awesome, do you know if they (Ableton) developed it to be accessible like this on purpose?"

Ableton Move Demo with Andre Louis

Ableton's Accessibility Learnings

1. Involve the community as soon as possible

2. Schedule regular meetings with your testers

3. Be present and be honest about capacity for changes

4. Admit faults

5. Start your documentation early

6. Progress over perfection

7. Try your best to not isolate your communities from each other

8. Audit through a Voluntary Product Accessibility Template after release

9. If you have the ability to dedicate a team to this - DO IT

10. Beware! Multiple points of feedback can create big gaps in communication

The Future for Accessibility at Ableton

Live

Making accessibility everyone's responsibility, while avoiding the trap of it becoming no one's responsibility

Updating our QA and testing processes with the community

Documentation and guidance

Note

Voluntary Product Accessibility Template

Growing our community of testers

Auditing new features

Changing our schedule with testers for more regular feedback (based on release schedule)

Push

Voluntary Product Accessibility Template

Finish the full accessibility audit

Ask the community about the updates that would be the most helpful at this point in time

Move

Voluntary Product Accessibility Template

Research and design for the initial start up process (before accessing move manager)

Introduce more testers to review the released product from multiple viewpoints

Future Releases

Testing as soon as there is an MVP

Being accessibility aware during the research, prototyping, and developing stages

Accessibility training inside of Ableton to help our developers understand and recognise accessibility issues at an early stage

And the rest

Web Accessibility (the European Accessibility Act 2025 requirements)

Focusing on multiple access requirements beyond assistive technology support

Community development

Where can you learn more?

Ableton Access: A mailing list on groups.io

abletonaccess+subscribe@groups.io

Live 12 Manual: ableton.com/en/live-manual/12/

Knowledge Base: help.ableton.com

Community: Search YouTube for "Ableton [product name] Accessibility"

Thank you

accessibility@ableton.com

Dr Adi Dickens

Developer spotlight:
Arcana Instruments

Thank you!

Attendees, panellists, ADC and its sponsors, MIDI Association, Focusrite

Inclusive Design within Audio Products: What, Why, How?