



## Using Digital Tools in Music Making

In Pier:One we have been using music technology alongside acoustic and electric instruments as part of the ensemble. For our next project we will be exploring using technology as part of the group composition process.

### WHY DIGITAL TOOLS?

#### **Digital tools for music making can offer:**

- A wide range of sounds and instruments
- Different ways to interact with, explore, create and manipulate sounds
- Recording your own sounds
- Manipulating and combining sounds
- Opportunities to incorporate with singing and acoustic music making
- Multi sensory engagement

#### **Digital tools for music making can be used in:**

- Composition
- Performance
- Musical learning – rhythm, pitch, timbre, dynamics
- Listening activities
- Cross arts creative activities
  - Story making
  - Drawing
  - Physical Movement






#### **Digital tools for music making can support and encourage:**










- Creativity
- Interaction
- Exploring together
- Self-expression and agency
- Playing as an ensemble



## APPS FOR MAKING MUSIC





There are so many apps for music making available, always new apps being developed and sometimes favourite apps are no longer available.



The list below includes some favourite apps and some new to us that look interesting. We are always on the lookout for creative music apps so if you have any favourites you like to use please do share with us what they are.

App & Developer	Platform	Description	Link	Cost	App Icon
<b>Amplify Studio</b>	Mac OS Windows	Drag and drop samples to create music tracks	<a href="https://ampifymusic.com/ampify-studio/">https://ampifymusic.com/ampify-studio/</a>	free	
<b>AudioKit L7 - AUv3 Live Looper</b> By: Coda Labs Incorporated	IOS	Live looper	<a href="https://apps.apple.com/gb/app/audio-kit-l7-auv3-live-looper/id1485507635">https://apps.apple.com/gb/app/audio-kit-l7-auv3-live-looper/id1485507635</a>	£2.99	
<b>AUMI</b> By: Deep Listening Institute	IOS Mac OS Windows	Uses the camera as an input “to play sounds and musical phrases through movement and gestures”	<a href="http://aumiapp.com/index.php">http://aumiapp.com/index.php</a>	free	
<b>AUFX:Dub</b> By: Kymatica AB	IOS	Delay effect, great for voice changing effects, and very long delays for live soundscapes. Use with external mic and speaker or headphones. Be careful of feedback!	<a href="http://kymatica.com/apps/afx_dub">http://kymatica.com/apps/afx_dub</a>	£5.99	
<b>Beatonal - Easy Music Maker</b> By: drievier	Android	Create and share musical ideas using the built-in synthesizers & drum machine. Create drum loops using pattern pads, sketch bass lines, chord progressions and melodies.	<a href="https://play.google.com/store/apps/details?id=nl.drievier.beatonal">https://play.google.com/store/apps/details?id=nl.drievier.beatonal</a>	free + in app purchase	

<b>Bebot</b> By: Normalware	IOS  Android	Fun synthesized animated robot. Great fun for a robot chat. 4-finger multitouch polyphony, adjust synth settings and effects	<a href="http://normalware.com/">http://normalware.com/</a>	£1.99	
<b>Blocswave: Record Music Live</b> By: Novation	IOS	Record and combine vocals, loops & beats. Live looping	<a href="https://ampifymusic.com/blocswave">https://ampifymusic.com/blocswave</a>	free + in app purchase	
<b>Bloom</b> By: Opal Limited	IOS	Developed by Brian Eno. Melodic coloured circles repeat and layer from tapping phrases on the screen	<a href="https://apps.apple.com/gb/app/bloom/id292792586">https://apps.apple.com/gb/app/bloom/id292792586</a>	£3.99	
<b>Bloom: 10 Worlds</b> By: Opal Limited	IOS Android	10 worlds of generative music. Developed by Brian Eno and Peter Chilvers	<a href="http://www.generativemusic.com/bloom10worlds.html">http://www.generativemusic.com/bloom10worlds.html</a>	£7.99	
<b>Chrome Music Lab</b> By: Various/Google	Any device with internet connection	Chrome Music Lab is a website that makes learning music more accessible through fun, hands-on experiments.	<a href="https://musiclab.chromeexperiments.com/Experiments">https://musiclab.chromeexperiments.com/Experiments</a>	free	
<b>DMI -The Drum Machine</b> By: Fingerlab	IOS	Drum machine with step sequencer	<a href="http://fingerlab.net/portfolio/dm1">http://fingerlab.net/portfolio/dm1</a>	£4.99	
<b>DrumJam</b> By: Sonosaurus LLC	IOS	High quality percussion app. Great to jam with	<a href="https://itunes.apple.com/gb/app/drumjam/id530162824">https://itunes.apple.com/gb/app/drumjam/id530162824</a>	£7.99	
<b>GarageBand</b> By: Apple	IOS	Digital audio workstation with some great touch instruments	<a href="https://apps.apple.com/gb/app/garageband/id408709785">https://apps.apple.com/gb/app/garageband/id408709785</a>	free	
<b>iKaossilator</b> By: KORG INC.	IOS Android	XY interface. Colourful, synths and beats	<a href="https://apps.apple.com/gb/app/korg-ikaossilator/id452559831">https://apps.apple.com/gb/app/korg-ikaossilator/id452559831</a>	£19.99	

<b>Impaktor</b> By: BeepStreet	IOS	Turns a surface into a percussion instrument	<a href="http://beepstreet.com/ios/impaktor">http://beepstreet.com/ios/impaktor</a>	£4.99	
<b>The Improvise Approach</b>	iBooks	10 backing tracks to use with C pentatonic scale + guide to setting up Thumbjam	<a href="https://www.improviseapproach.com">https://www.improviseapproach.com</a>	free	
<b>Jam Synth</b> By: Primitive Digital Software	IOS	Tracks the pitch and amplitude of an incoming signal and uses this information to control digital oscillators	<a href="https://apps.apple.com/gb/app/jam-synth/id732618765">https://apps.apple.com/gb/app/jam-synth/id732618765</a>	free +in app purchase	
<b>Launchpad</b> By: Novation	IOS	Remix electronic music: combine beats, basslines, melodies, vocals and FX loops – v easy to use + can buy extra genres	<a href="https://ampifymusic.com/launchpad">https://ampifymusic.com/launchpad</a>	free +in app purchase	
<b>Loopify: Live Looper</b> By: Zuidsoft	Android	9 channel live looper	<a href="https://play.google.com/store/apps/details?id=com.zuidsoft.looper&amp;gl=US">https://play.google.com/store/apps/details?id=com.zuidsoft.looper&amp;gl=US</a>	free +in app purchase	
<b>Loopseque Lite</b> By: Casual Underground	IOS	Circular step sequencer	<a href="https://www.loopseque.com">https://www.loopseque.com</a>	free	
<b>Loopseque Kids</b> By: Casual Underground	IOS	Circular step sequencer with colourful characters and playful sounds	<a href="https://www.loopseque.com">https://www.loopseque.com</a>	free	
<b>Loopy HD</b> By: A Tasty Pixel	IOS	Live looping	<a href="https://loopyapp.com">https://loopyapp.com</a>	free +in app purchase	
<b>Musyc</b> By: Fingerlab	IOS	Build music by bouncing sounds on surfaces	<a href="https://itunes.apple.com/us/app/musyc/id489836689">https://itunes.apple.com/us/app/musyc/id489836689</a>	free +in app purchase	

<b>Nodebeat- Playful Music</b> By: AffinityBlue	IOS Android	Generative beat based visual app. Can be gentle or upbeat electronic music	<a href="http://nodebeat.com">http://nodebeat.com</a>	free £3.89	
<b>Noise</b> By: Roli Ltd	IOS	Create beats, melodies, and songs with a library of sounds	<a href="https://roli.com/products/software/noise">https://roli.com/products/software/noise</a>	free	
<b>Orphion</b> By: Sebastian Trump	IOS	Configurable virtual pads that play instrument that sounds “between string instrument and percussion.” Timbre changes depending on how you play the circles	<a href="http://www.orphion.de/">http://www.orphion.de/</a>	£3.99	
<b>Paint with Music</b> By: Google Arts & Culture	Any device with internet connection	Paint on the screen. 4 different scenes: In the Sky; Underwater; On the Street; On Paper	<a href="https://artsandculture.google.com/experiment/YAGuJyDB-XbbWg">https://artsandculture.google.com/experiment/YAGuJyDB-XbbWg</a>	free	
<b>PlayGround • Organic Remix</b> By: HLO S.A.	IOS	swipe and tap on the shapes to control the music flow in an audio-visual experience	<a href="https://apps.apple.com/us/app/playground-organic-remix/id963753435">https://apps.apple.com/us/app/playground-organic-remix/id963753435</a>	free + in app purchase	
<b>Reason Compact</b> By: Propellerhead	IOS	Basic version free. Nice synth sounds. Paid version gives control over synth parameters	<a href="https://apps.apple.com/us/app/reason-compact-make-music/id1253419004">https://apps.apple.com/us/app/reason-compact-make-music/id1253419004</a>	free +in app purchase	
<b>Remixlive</b> By: MIXVIBES	IOS Android	Play loops, drums on pads and make tracks	<a href="http://www.mixvibes.com/remixlive-remix-app/">http://www.mixvibes.com/remixlive-remix-app/</a>	free +in app purchase	
<b>SampleBot</b> By: A Tasty Pixel	IOS	Sample sounds, finger-drum colourful looping sequencer	<a href="https://apps.apple.com/gb/app/samplebot/id1265824117">https://apps.apple.com/gb/app/samplebot/id1265824117</a>	£3.99	

<b>Saucillator</b> By: soundandfeury	Android	Digital synthesizer: uses the touchscreen to play and manipulate oscillators and effects. Also has live-looping and recording.	<a href="https://play.google.com/store/apps/details?id=com.matteury.saucillator.android">https://play.google.com/store/apps/details?id=com.matteury.saucillator.android</a>	free	
<b>Sensory Light box</b> By: Cognable	IOS Android	Very visual sound making apps. Some quite stimulating	<a href="https://lightbox.cognable.com">https://lightbox.cognable.com</a>	£3.99 £2.39	
<b>Skoog Scratch</b> By: Skoogmusic	IOS MAC OS PC	Record up to 5 samples on 5 coloured tiles	<a href="https://skoogmusic.com/apps/">https://skoogmusic.com/apps/</a>	free	
<b>Sound Forest</b> By: Justin Alexander	IOS	Compose a song using a collection of musical trees and creatures	<a href="https://apps.apple.com/gb/app/sound-forest/id1194745290">https://apps.apple.com/gb/app/sound-forest/id1194745290</a>	free In app purchase £1.99	
<b>Audanika</b> By: Audanika GmbH	IOS Android	Synth music making on grid	<a href="https://audanika.com/en/">https://audanika.com/en/</a>	free	
<b>Take</b> By: Reason Studios AB	IOS	Creative vocal recorder. With a single tap you'll be recording, beatboxing, overdubbing, riffing, writing and sketching out song ideas.	<a href="https://www.reasonstudios.com/mobile-apps">https://www.reasonstudios.com/mobile-apps</a>	free	
<b>Thumbjam</b> By: Sonosaurus LLC	IOS	Over 40 high-quality real instruments multi-sampled or sample your own sounds. 100's of scales. Configure size, controls	<a href="https://thumbjam.com">https://thumbjam.com</a>	£8.99	
<b>Walk Band</b> By: evontulet Soft Inc	Android	Music studio app with some virtual musical instruments	<a href="https://play.google.com/store/apps/details?id=com.gamestar.pianoperfect&amp;hl=en_GB">https://play.google.com/store/apps/details?id=com.gamestar.pianoperfect&amp;hl=en_GB</a>	free +in app purchase	

## SPEAKERS

Where possible, we highly recommend using an external speaker for better quality sound. We use a mixture of Minirigs (<https://minirigs.co.uk>) and amps in Pier:One.

Another to try is a Vibration speaker (vibration transducers) which turns any resonant surface (window, wall, or table) into a speaker. You will also feel the vibrations by touching the surface.

## IDEAS FOR ACTIVITIES WITH APPS



### Thumbjam

By: Sonosaurus LLC


Cost: £8.99

App description: Good quality instruments, configurable playing area, amazing choice of scales, control parameters for expression, record and sample your own sounds

#### Tips

- Change the key with the #b button in the top toolbar
- Change the scale by tapping Sound – Change Scale
- Change the size of the notes with Span + - on the toolbar at the top of the screen
- Controls (volume, vibrato, pitch bend, tremolo) and Effects can be changed in Edit (bottom left hand corner)
- The Improve Approach ibook has a handy Thumbjam set up guide for setting the key, scale, instrument
- If using as an instrument you might want to use guided access to disable the toolbar and menus once instrument is set up

#### Ideas

- Explore the different instruments
- Explore the many different scales
- Use in your musical making with other acoustic instruments
- Try different ways to play the instrument – write your name, tickle it, hold your hand on it
- Toe jamming – a great app to get the toes and feet playing music
- Take it in turns to copy, mirror and respond to each other's phrases, rhythms, patterns and gestures
- Create your own ensemble by choosing several instruments to play at once.
  - Tap the  icon on the top toolbar and #splits up to 4 different instruments on the screen
- Jam with other instruments. Pitched instruments will sound good in C pentatonic scale (C, D, E, G, A, C)
- Record loops. Red circle in top toolbar records, the Finish Record in top right hand corner. Pause, delete, simple mixer and loop options in the Loop tab in top right corner
- Jam using Thumbjam and acoustic instruments with the music tracks on The Improve Approach. Tracks are in C pentatonic scale
- Jam with Launchpad. Key can be set on Launchpad – match the key on Thumbjam
- Make your own Thumbjam instrument - Record your own sound using voice, sound making objects or acoustic instruments. Have fun playing and listening to your sounds at different pitches
  - Sound – Create instrument – Record





## AUMI

By: Deep Listening Institute

Cost: free

App description: Uses the camera as an input “to play sounds and musical phrases through movement and gestures” using small and large movement ranges. Can be played by individuals or groups depending on the setup. Different instrument sounds to choose from that can be played horizontally, vertically or set to zones. Change the key and the scale. Midi notes can also be sent. It is more useful for free improvisation than precise rhythmic playing.

### Tips:

- The app is sensitive to lighting so test different positions and lighting (try strong light but with the camera not directly pointed at the light source)
- Can be played with small or large movements. Change the size of the active instrument playing area by pinching and expanding with 2 fingers
- Can be used for general movement or choose a particular point to track by touching the screen on the point you want to track – experiment by trying different objects or points to follow. You will need to keep choosing the tracking point
- Check the angle and placement of the camera so the person or object you are tracking is in frame
- Moving the camera will trigger notes so keep the device still unless you are experimenting with playing like this
- Change the trigger area mode by tapping ‘Looks’ and changing ‘Layout’
- Change the key and scale in the ‘Instruments’ tab

### Ideas:

- Grandmother’s footsteps
  - If the sound is triggered -
    - everyone claps a rhythm together
    - sings or chants a phrase
    - or everyone moves freely to play the instrument until stop signal
- Musical statues
- Red light / green light (stop and go). Try signalling start (moving) and stop (moving) with the voice and red and green objects like scarves or coloured card. Take in turns to conduct the group to stop and start
- Bounce balls, beanbags on parachute or lycra. Position the camera so when they bounce in the air the sounds are played
- Throw a ball to trigger the sounds.
  - Everyone keeps out of camera frame either side. Throw the ball across the app playing area
  - Set up the playing zone vertically and throw the ball up in the air to play the instrument
- Improvise with backing, for example Launchpad, Drumjam or The Improvise Approach
- Experiment with different movement, for example ‘put your hands in the air’, ‘pretend you are an elephant’, ‘write names in the air’.
- Expressive movement with scarves or ribbons
- Play whilst drumming. Check the camera is pointed towards the drummer and experiment with different camera positions

Other apps to use for movement: Color Band, AirHarp





### **AUFX:Dub**

By: Kymatica AB

Cost £4.99

App description: Delay effect great for long delays to make live soundscapes. Lots of different effects including robot, flying saucer, as well as chorus, flanger.

#### **Need:**

- Microphone, lead, Mic Adaptor, Speaker

#### **Tips:**

- Watch out for feedback! - keep the microphone away from the speaker and keep near the speaker volume just in case
- Make sure you have speaker and/or mic plugged in and you know where the volume is before turning on at the top left of the screen
- If the effected sound is too quiet increase the Dry/Wet mix

#### **Ideas:**

- Use the long delay preset to create a soundscape based on a theme, for example the jungle, the seaside, a walk in the park, a day in the city, the weather. Take turns to make a sound into the microphone using voice, sound making objects or instruments to make a soundscape based on your theme
- Use instruments or sound making objects with the long delay to create a live performance
- Explore the different presets – can be used to encourage vocalising
- Use in story making. A science fiction based theme could use the 'Funny Robot', 'Dark Alien' 'Dark Space' and 'Flying Saucer' presets

#### **Other apps to encourage vocalising and sound making:**

- Jam Synth - Tracks the pitch and amplitude of an incoming signal and uses this information to control digital oscillators
- Vio - Transform your voice and change the sound with beautiful visual interface



### **Loopseque Kids**

By: Casual Underground

Cost: free

App description: Circular wheel based step sequencer and circular keyboard with colourful characters and playful sounds

#### **Tips:**

- Change between the pads and the piano wheel on the main menu by pressing pause button in top right of screen
- Add and remove sounds to the wheel. Rings on the wheel have different colours and sounds. Remove a sound added by touching it
- Change between the 3 scenes and sound worlds with the central button
- Play the characters and scenery around the circle

#### **Ideas:**

- Take it in turns to add or remove a new sound
- Build up the sound patterns gradually listening to how adding or removing sounds creates different rhythms and grooves
- Pick a red or green object (could be building blocks, bean bags) from a bag or box (without looking). If you pick green add a sound, if you pick red remove a sound
- Pick a yellow, red, green, blue object (could be building blocks, bean bags) from a bag or box (without looking) and place a new sound of that colour on the pad wheel
- Explore the characters and scenery together

- copy each other's rhythms played on the characters and scenery
- Jam with the app using instruments, household objects, or body percussion



### **Sound Forest**

By: Justin Alexander

Cost: free / In app purchase £1.99

App description: Compose using a collection of musical trees and creatures

#### **Tips:**

- Free version goes through the tutorial before you can compose
- Select a new or saved composition
- Scroll the sounds along the bottom of the screen and tap to hear them
- Choose a sound and place it on the screen
- Tap a sound to remove it
- Tap the play line at the top of the screen to start and stop
- Tap the play line twice to change the speed between slow, medium and fast
- Make the composition longer by scrolling right

#### **Ideas:**

- Take turns to choose a sound / character to make a group composition
- Choose a sound, roll a dice. If the dice rolls 4 add 4 of this sound to the composition. Choose another sound and roll the dice again.
- Compose a piece of music along with a story using the various woodland characters and shapes
  - Act out the story for your composition or use toys to act it out
- Make up a song based on the characters in your composition
- Dance or jam along with your composition using voice, body percussion, sound making objects, instruments
  - Change the speed of your piece and practice listening, moving and playing instruments with the different tempos



### **Skoog Scratch**

By: Skoogmusic

Cost: free

App description: Record up to 5 samples on coloured tiles.

#### **Tips:**

- Record quiet sounds close to the mic and louder sounds further away
- Be ready to make your sound before you tap the coloured square to record
  - It might help to have a count down and a thumbs up when recording signal

#### **Ideas:**

- Match the sounds. Record a sound into each square. Play back one of the sounds and identify what the sound is.
- Match the pairs with transport, instruments, cooking sounds, household objects, other themes.
- Record body percussion and play rhythms with the percussion instruments you have created in the app
- Explore the sounds of your environment and record in the app
  - Use these in poems, stories and story creation

- Make a soundscape. This could be based on a theme, for example 'a visit to the moon', 'swimming with the penguins'
- Play homemade sounds to record into Skoog Scratch to make your own homemade orchestra