

## 5 words to remember

**beat sequencer:** a grid representation for creating a repeating percussion sequence, which helps to show exactly when individual instruments are hit

**live loops:** a GarageBand tool for creating and performing electronic music, where multiple samples are played and synchronised by the software

**piano roll:** an interface within GarageBand for controlling the pitch and duration of individual notes

**touch instruments:** in GarageBand, this refers to the keyboards, strings and percussion instruments that can be played and recorded

**tracks:** a GarageBand tool for combining and modifying music recorded, performed or created using the program

## Knowledge check: The piano roll

GarageBand has a **piano roll** view where detailed editing can take place. The term 'piano roll' comes from an earlier form of music-storage technology first introduced in the 19th century. The piano roll was made up of long rolls of paper punched with holes to show the position of different musical notes.

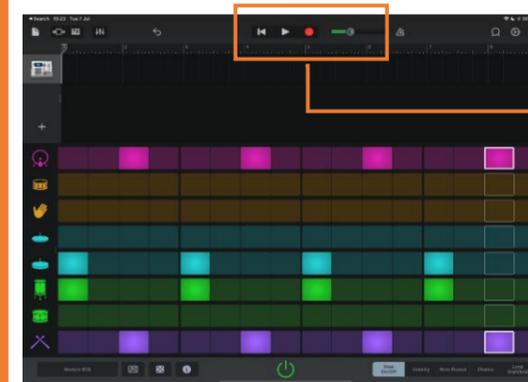


**Test yourself:**

- 1) Which other forms of recording and storing music can you think of?
- 2) Why are some forms of recording storage better than others?

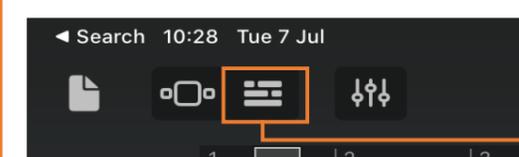
## Key takeaways

- Software and tools such as GarageBand allow users to compose and record music.
- Sounds can be recorded onto GarageBand, but it also contains a range of virtual **touch instruments** and samples (short pieces of recorded audio) that can be played, recorded and arranged into a musical composition.
- When creating a percussion sequence in GarageBand, the beat sequencer allows users to add, view and edit easily when different sounds are playing. The complete sequence can also be recorded in this view.

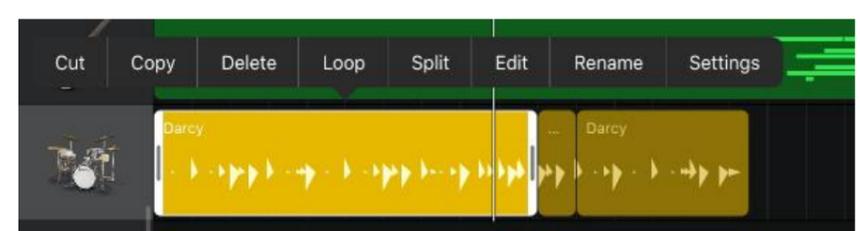


Recording and playback controls in GarageBand's beat sequencer.

- After recording, tracks can be viewed, combined (multitrack) and edited in the **track view**.



In 'track view', recorded sounds can be edited, for example trimmed or looped.



- The live-loops feature shows how digital music software can synchronise musical samples (short pieces of recorded audio) in a clever way to create a piece of music. This approach works particularly well for dance-type music, and different musical styles can be chosen.

## Knowledge check: GarageBand

**Test yourself:**

- 1) Which different types of instruments can be found in the **beat sequencer** and what do they all have in common?
- 2) What is a 'multitrack composition'?
- 3) What are the benefits of making music using software and apps such as GarageBand?
- 4) **Live loops** uses different-coloured circular loops to represent different types of sound. Can you match the colours to their definitions?

blue	drummer loops
yellow	instrument / beat-sequenced loops
green	audio recording loops

