

Music Technology

Sampling is a very popular way of putting different sounds into your music. Samples can be fiddled with and looped to make long repeated sections.

Samplers let you 'Pinch' Other People's Sounds

- 1) A sampler is a piece of equipment that can record, process (change) and play back bits of sound.
- 2) These sections of sound are called samples.
- 3) Samplers are often used to take a bit of a piece of music that's already been recorded to use in some new music.
- 4) You can sample anything from instruments to birdsong — even weird things like a car horn.
- 5) Today, samplers are most often used to reproduce the sound of real instruments, such as strings or piano. Most pop music is sampled.
- 6) Pop stars often use samples of other people's music in their own music — anything from other pop songs to bits from Classical pieces. For example:

- Madonna used a sample of ABBA's 'Gimme! Gimme! Gimme! (A Man After Midnight)' in her 2005 hit 'Hung Up'.
- Take That used a sample from Verdi's Requiem (see p.103) in 'Never Forget' (1995).
- Fallout Boy used a sample of 'Tom's Diner' by Suzanne Vega in their song 'Centuries' in 2014.

Samples Can be Added to Other Pieces

- 1) You don't have to create a piece made up entirely of samples — you can just add one or two, or use a whole range to create a collage of sound. The collage can then be put over the top of a repeating drum and bass loop.
- 2) DJs and producers often do this when they make a dance remix of a piece.

REMIX is a term used for a different version of a piece of music. They're often used to turn pop or rock tunes into dance music — e.g. by speeding them up and giving them a fast drum beat.

- 3) Samples can be added to a piece by over-dubbing — adding tracks over the top of other tracks. You can record a drum track, then overlay the guitar part, then the vocal part, etc.

DJs Choose, Play and Alter Music

- 1) DJs (disc jockeys) choose which tracks (lines of music) to play, and change bits of them (e.g. by adding samples). They choose compatible tracks — ones that work well together, e.g. tracks in the same key.
- 2) DJs play music in clubs and on the radio.
- 3) At a live performance in a club, the DJ sometimes adds extra sounds using samples, keyboards or a drum machine to build the piece up. Some DJs also rap over the top of the music.
- 4) DJs use a mixing desk to combine different tracks and add extra sounds to the music, and a set of decks to play their music.
- 5) The amplification is important — DJs need to make sure the right parts stand out, and that all parts can be heard. The amplification can be changed in live performances.

There's even a dance remix of Beethoven's 5th Symphony...

Again, there's lots of technical bits on this page. You might choose to use some samples in your own compositions, but even if you don't, you need to know how other people (like DJs) might use them.

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Modern technological and 'virtual' instruments allow a huge variety of sounds to be created.

MIDI lets you Connect Electronic Musical Instruments

- 1) MIDI was invented in 1983. It stands for Musical Instrument Digital Interface. It's a way of connecting different electronic instruments.
- 2) MIDI equipment is connected by MIDI cables.
- 3) MIDI data is digital information (i.e. in zeroes and ones). It's sent down the MIDI cables. MIDI instruments turn MIDI information into sound (or vice versa).
- 4) One important advantage of MIDI is that it allows musical equipment to be linked with computers, opening up a whole new world of music-making.

Synthesizers Let You Make New Sounds

Synthesizers come in different forms — some have keyboards and some don't. The most common ones today are virtual synthesizers, which are software-based (see below). The point of them is to let you create sounds, which often imitate musical instruments. There are different types of synthesizers:

- 1) Analogue synthesizers were mainly made in the 70s and early 80s. They've often got lots of knobs and sliders — you use these to change the sound.
- 2) Digital synthesizers started to be popular in the 80s. Most modern synthesizers are digital, though some of them try to mimic analogue synths. Digital synths usually have fewer knobs and sliders than analogue ones.
- 3) Software synths started to become popular in the late 90s. Software synths are computer programs (often linked to a sequencer — see below). They often have graphical sliders and knobs that you can move with a mouse. Some of them try to be like analogue and early digital synthesizers. They also try to recreate classic electric instruments like the Hammond organ.

Sequencers Let You Record, Edit and Replay Music

- 1) Sequencer is the posh word for equipment that can record, edit (mess about with) and replay music stored as MIDI or audio information. A "sequenced composition" is a musical piece produced mainly from synthesized sounds using a sequencer.
- 2) Modern sequencers are usually computer programs, which often include synthesizers and samplers.
- 3) Most sequencers can record audio (real sounds) as well as the MIDI stuff, so you can create synthesized music and then record your own voice or instruments along with it. If you're unhappy with part of a recording, it's easy to replace that section with a re-take.
- 4) Modern sequencers are multi-track recorders. This allows the various lines of music, such as those played by different instruments, to be recorded on separate tracks. The individual tracks can then be edited separately to achieve the perfect balance of sounds.
- 5) One of the big advantages of a sequencer is that it shows your music as actual notation or as representative boxes — this makes it much easier to change and try out new ideas.
- 6) Drum machines are special sequencers that play back rhythm patterns using built-in drum sounds.



This can all be a bit confusing...

Some of this stuff is quite technical — but don't panic. You don't need to have an in-depth understanding of how the different types of technology work — as long as you know what they do and what people use them for. You can even have a go at using them in your compositions