Switching ON

In the latest in the series covering the fundamentals of teaching music technology, **Mortimer Rhind-Tutt** looks at getting started with sequencing, with the GCSE sequenced performance option especially in mind

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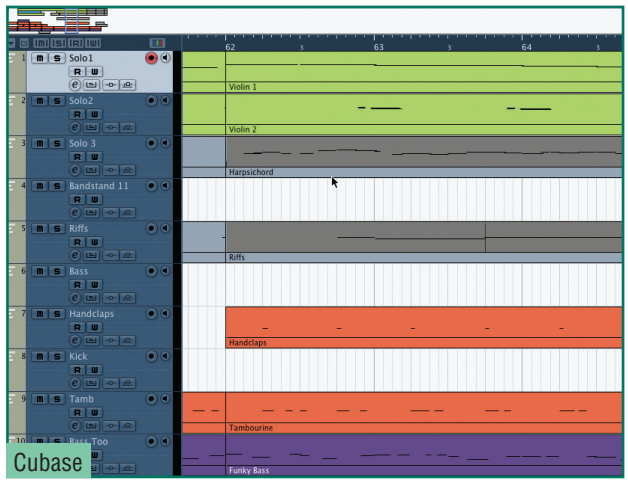
What is required? For GCSE, a sequenced performance is a transcription of an existing piece from a score. This enables the accuracy of pitch and rhythm to be judged.

Choice of material: For a successful outcome, the first issue is the choice of music to sequence. *A relatively straightforward piece performed well is likely to score more highly than a complex orchestral score which the candidate has struggled to transcribe accurately.

Which software? All sequencers have some common features, showing music as 'tracks' across the screen with a timeline running above them (see above *right*). The timeline shows bars and beats and a vertical line (cursor) moves across as the music plays or records. Each section of music recorded appears as a coloured block, usually known as a part or region. These can be copied and pasted, trimmed and coloured. *If you're new to music technology, think of each track as a stave and each part as a block of bars that you can work on.

Setting up with a guide track: Starting with a blank project, add the required number of tracks. *If the music is in sections, maybe with repeats, add an extra 'guide' track at the top of the screen. Divide it into blocks to signpost each section, which can be colour-coded and labelled (verse 1, verse 2, first-time bar etc.) and don't choose an instrument – it's just a coloured guide.

Timbre: Make sure that the tracks you create are software-instrument tracks. These will allow you to choose an instrument from a menu or panel. *Don't waste too much time on this at the beginning – when the sequence is finished, you can look for exactly the sound you need.



Note entry: If possible, notes should be played in from a MIDI keyboard. Alternatively, they can be entered with the computer mouse, drawn into the graphic editor. *Keep saving – learn the shortcuts control–S (PC)/Apple–S (Mac) and hit those keys after every recording or edit.

Editing: Double-clicking on a section of music usually opens a graphic editor. This is where most of the coursework marks are likely to be obtained. Look at the notes and see how accurately they fit the time grid. If they have been played in, many of them may start before or after a beat. These can be manually adjusted note by note by dragging with the mouse. *If the note won't drag as you want it to, there may be a 'snap' setting pulling it to the nearest bar or beat and there will be a button to turn this off.

When to quantise: Quantisation pulls every note to the nearest beat or subdivision that can be chosen from a note-value menu. For example, if you select 1/8 followed by the quantise command, every note will be pulled to the nearest quaver beat. Quantisation should be used sparingly to avoid the sequence sounding too robotic. *Quantise drum parts and maybe accompanying lines, but play the melody line 'live' if possible.

Articulation and phrasing: Musical shaping can be added by dragging the length of notes in the graphic editor. A legato effect will be produced by having the note graphics almost overlapping. For shorter notes, leave a gap before the next note and then listen back to see if it sounds realistic. *Find out how to adjust 'velocity' – the strength of attack of each note. On some sequencers this is represented graphically under each note; on others it may appear in a separate window. This needs detailed, note-by-note editing, generally following the conventions of stronger first and third beats in a bar of $\frac{4}{4}$, for example, and emphasising important notes in a melody. *A combination of note-shaping and velocity-editing will give the sequence articulation and phrasing that can be examined.

Dynamics: Volume can sometimes be set in the track info box – a panel which is displayed when you click on the track. Every track needs a starting volume to balance the parts. *A good starting point is to set every track to around 100 and then to adjust the level of some tracks down as you listen to them, using the melody as a reference. Changes in volume can be drawn in during the piece. Some sequencers have a separate track running parallel to the music that controls volume. The value is represented by a line which can be pulled up or down.

Panning: 'Pan' is short for 'panorama' – the position of a sound from left to right as you hear it. Drawing a sketch of how the instruments would be placed really helps with this. A pan value needs to be set at the beginning of each track and it is unusual to change it during the piece except as a (probably unwanted) special effect. Extreme panning is best avoided, as is the 'hole in the middle' effect where everything is pushed to the sides. *Bass and vocals (melody) are usually central with accompaniment tracks distributed around them.

Mastering: If everything is finished, then a stereo track needs to be created which can be put on a CD or become an MP3 file. This is called 'mixing down', or 'bouncing down' on some sequencers. *It's important to make sure all the music is included and you may need to select the tracks that you are going to mix down. If you are going to burn a CD it is best to choose the WAV format with a sample rate of 44,100 and resolution of 16 bit. Once the file is exported it is important to check it and easy to repeat the process if something is missing.