Examiners' Report
Principal Examiner Feedback

Summer 2023

Pearson Edexcel GCE
Music Technology (8MT0)
Paper 04

Edexcel and BTEC Qualifications

Edexcel and BTEC qualifications are awarded by Pearson, the UK's largest awarding body. We provide a wide range of qualifications including academic, vocational, occupational and specific programmes for employers. For further information visit our qualifications websites at www.edexcel.com or www.btec.co.uk. Alternatively, you can get in touch with us using the details on our contact us page at www.edexcel.com/contactus.

Pearson: helping people progress, everywhere

Pearson aspires to be the world's leading learning company. Our aim is to help everyone progress in their lives through education. We believe in every kind of learning, for all kinds of people, wherever they are in the world. We've been involved in education for over 150 years, and by working across 70 countries, in 100 languages, we have built an international reputation for our commitment to high standards and raising achievement through innovation in education. Find out more about how we can help you and your students at: www.pearson.com/uk

Summer 2023
Publications Code 8MT0_04_2306_ER

Pearson Education Limited. Registered company number 872828
with its registered office at 80 Strand, London, WC2R 0RL, United Kingdom

Principal Examiner's Report to Centres

8MT0 04 Music Technology AS 2023

Producing and Analysing

The paper is designed to assess students' understanding and ability with music production, through a mixture of written questions and practical tasks completed with a digital audio workstation (DAW).

Students are supplied with four tracks; three are audio and will require several editing and processing tasks, and one is a MIDI sequenced part that requires timbre selection based on a supplied example, and editing. The tracks are always drums, bass, harmony instrument(s) and vocal.

There are 6 questions.

Questions 1 to 4 have a mix of multiple choice, short response and longer written responses, plus production tasks to complete on three of the supplied tracks including the MIDI timbre selection and refinement.

These four questions are worth 50 marks in total.

Question 5 is a mix task, with further audio processing required to produce a final stereo mix.

Question 5 is out of 18 marks.

The essay question is worth 16 marks. The marks are split between AO3 and AO4. A maximum of four marks of the 16 are awarded for AO3 answers, the rest are for the evaluative AO4 answers.

The paper total is 84 marks and candidates have 1 hr 45 mins to complete it.

Headlines

The grading boundaries were decided in line with Ofqual requirements that the standards from 2019 were used, the last pre-pandemic year in which the paper was sat.

The written responses from candidates showed a number of trends:
- many had some basic knowledge of the function and use of compressors and EQ (filters)
- deeper knowledge was lacking for many, including being able to explain why effects and processing are used in different scenarios
- technical understanding of electronics and the function of common studio equipment (DI box, XLR cable, analogue synthesiser) was extremely limited

- a lack of understanding of mic choice & placement (essay question).

The audio responses also presented several common themes:
- many students could select and automate a suitable phaser
- most attempts at the bass timbre from the MIDI part were creditable
- hardly any students could program a note slide using MIDI editing
- some candidates struggled to set up a delay with a single repeat on the vocal
- candidates did not know what double tracking was and how to create it
- vocal compression was attempted successfully by a good proportion of students
- setting up a reverb on send & return to avoid it panning with vocal movements was beyond most candidates. This is surprising; send and return is the standard configuration for many time-based effects and should be a basic technique
- basic errors in stereo mix production were common: long lead in/out and cut effect tail.

Question/Item Analysis

1a	Straightforward, most got both words (select 2 from 6 choices) Some got them back to front but nearly all chose some suitable words that relate to EQ/filters
1b	**PRACTICAL** Most got 2 marks from 3. Many could not set the filter so it removed all the kick, or if they did it made the percussion/clap too thin. Sometimes timing of when the filter was taken off (before end of b5 usually, sometimes left on for whole song)
1c	**PRACTICAL** Most got 2 and many got 3 marks from 3. Very rare to do nothing or use a completely inappropriate phaser. Common issue was timing of start end to interfere with other drums or not be on the whole of the cymbal
2ai	Majority knew direct inject or input. More said input than inject. Common error was digital interface
2aii	Hardly any knew this.
2aiii	A good response will get 2, 3 or even 4 for this, and show some understanding about how balanced cables eliminate noise. Often students gave vague answers, with maybe1 mark for saying removes noise.
2aiv	Most got XLR for one. Very few got TRS jack for second mark.
2b	Many managed at least 2 marks from 4. Sometimes this would be just by mentioning two types of processing and giving no description of how this benefits the sound. Better responses get 3 or 4 with suitable description of how the chosen process will enhance the sound. Many vague or incomplete responses got 1 or even 0.
3a	**PRACTICAL** Many could do this for 4 marks, which was good to see. Even responses

	with errors often got 2 or 3. Common issues – not detune, wrong octave (one octave too high, at least one oscillator). Some strange envelopes that were too long/short or had unwanted filtering.
3bi	Most got 2 marks for this though some repeated 'square'. Sine and Saw were common, also triangle.
3bii	Poor responses. Hardly any got even 1 mark for this. Voltage and current were clearly not commonly connected with analogue in student's minds. Some knew about atmospheric conditions (heat, humidity) affecting tuning.
3c	**PRACTICAL** Very rare to get any marks. Surprising that students do not know how to use or program pitch bend or portamento.
3d	**PRACTICAL** Many did this well, fairly easy to line up with drum hits even though QP mentions keyboard part. Some made the second note too long by dragging the start, instead of moving the whole note. This was incorrect and did not get credit, as it changes the articulation.
4aii	Very few got both marks for this. A lot of vague answers about being cheaper (not necessarily true). Being able to save with project for future recall and use automation in tracks are two massive benefits over hardware (hardware automation is possible but usually more complex to implement).
4b	**PRACTICAL** Many did well and got 3/3 for this. Sometimes there was more than 1 repeat which lost a mark.
4ci	Better responses used clearer language and got two marks. Most knew something about wide dynamic range. Weaker responses used confused technical language and often got no marks Common issues were talking about velocity or frequency; or balance, or high and low with no context.
4cii	Good responses mentioned heavy compression led to unnatural sound, increased noise or potential distortion.
4di	Most got threshold, ratio seemed more challenging
4dii	Some responses had both correctly drawn; more usual to get 1:1 than limiting, or drew flat line across width of graph, sometimes at the top or bottom (for limiting), but hence ignoring the question requirement to use the same threshold.
4diii	Very few could do this
Q5 MIX	Tasks: create vocal double track, compress vocals, pan vocal on specified words, apply reverb to vocal and keyboard/guitar combined track, reverb staying stereo while vocal pans, balance parts, remove unwanted noise (guitar), produce mix.
	Rare to see full marks. Errors were in various places, not consistent. Good responses will get 12 or more (max 18). Weaker attempts got 4 – 5.
5a	Not answered well, very few got this right. It seems double tracking is not taught very much.

	Scaffolding designed to help students may have led them to make wrong decisions, many created long delays.
5b	Students who did this usually successful and got 3 marks. Many did not achieve any discernible change and got 0.
5c	Many could do this. Some had moving pan positions during one or both words, or got the pan on the wrong words. Confusing L and R was rare.
5d	Most applied a reverb with a suitable level. Seemed to be quite a lot of small room reverbs, this is ok stylistically. Also seemed to be more very wet reverb levels than other series. Few got the third mark for maintaining the reverb in stereo on panned vocal – some because of unsuccessful vocal pan, but most because they used reverb on a channel insert so it panned with vocals. It's surprising that after many years of highlighting this as bad practice it still happens.
5e	Many did this well with suitable relative levels. Drums were sometimes an issue, and a bit quiet.
5f	Nearly all did this with no issues.
5g	Common to have over 1 second at the end, or a cut effect tail, which leads to 2 marks not 3. Some missing/out of sync parts but fairly rare.
Q6	Guitar amp settings, mic choice & placement for bright guitar
	Most students managed to get a few marks for talking about the EQ settings. They were notable because they were unsuitable for a bright guitar, and most noticed this. Opportunities to make simple statements about the settings which would gain marks were often neglected such as: • bass setting is high, leads to bassy sound (or any mention of low frequencies, descriptive terms such as muddy, boomy), unsuitable for bright tone • high freq content reduced by low setting on treble control Another opportunity with the EQ settings that was often missed was to mention that bass setting is HPF and treble LPF (though in practice may be something more complex) but these would receive credit. Simple observations about microphone choice not made in many cases: • dynamic microphone has limited freq response • not as good at high freq • can cope with high SPL. Limited success discussing impact of polar patterns being Cardioid: • vague when talking about sound being rejected from rear & sides • good terms used by some were less spill / less room ambience (reverb) • often terms like unwanted noise were used which is too vague – noise can also come from in front; or background noise (can be anywhere).

	Position • often said by candidates that off-axis is brighter; it's not. HF much more directional than LF • many realised that the mic was probably too close to the speaker, some knew this would make it bassy, fewer used the term 'proximity' Some thought twin speaker is stereo. It was quite common for mention to be made of second speaker but not always with a useful explanation of how that affected recording. Some essays talked about using different recording methods, including DI. This missed the point as the question asks them to evaluate the settings shown, not come up with anything about guitar recording.