Non-Examined Assessment

Band 4 Exemplar Learner Response

NCFE Level 1/2 Technical Award in Music Technology (603/7008/7)

V1.0 October 2023

Contents

Introduction

The following are sample learner responses for each task within an assignment alongside examiner commentary for each assignment. They show how learners might respond and can help assessors in making their overall marking decisions.

Learner responses

Each learner response should demonstrate *what* a **mark band four / top band** response looks like alongside any evidence which is required to be completed. All responses use content from the mark schemes and align with the standards in the mark band descriptors and indicative content.

Assessor commentary

The assessor commentary demonstrates *why* the responses given throughout the assignment meet the criteria for the mark band they have been awarded. The assessor commentary will be linked to, and supported by, the descriptors in the mark scheme.

Production of the piece	
Marks	**Descriptors**
10–12	**AO5 – Excellent** analysis and evaluation of the processes used and decisions made as they progress in producing the piece, providing a **comprehensive and highly detailed** evaluation of all processes and tools used that is **highly relevant** to the brief, showing understanding of all being used in context. **AO2 – Excellent** application of knowledge and understanding of the creative use of hardware and software. The musical piece **fully** meets the requirements of the brief, **successfully** and with **highly accomplished** execution. The piece is **fully** realistic and would be suitable for submission in a real-life context. **AO1 – Excellent** recall of knowledge and understanding of the creative use of hardware and software that is **comprehensive** and **highly detailed**.
7–9	**AO5 – Good** analysis and evaluation of the processes used and decisions made as they progress in producing the piece, providing a **mostly detailed** evaluation of **most** processes and tools used that is **mostly relevant** to the brief, showing understanding of being used in context. **AO2 – Good** application of knowledge and understanding of the creative use of hardware and software. The musical piece **mostly** meets the requirements of the brief and with some **accomplished** execution. The piece is **mostly** realistic and would be suitable for submission in a real-life context. **AO1 – Good** recall of knowledge and understanding of the creative use of hardware and software that is **mostly detailed**.
4–6	**AO5 – Reasonable** analysis and evaluation of the processes used and decisions made as they progress in producing the piece, providing a **reasonably detailed** evaluation of **some** processes and tools used that has **some relevance** to the brief, showing **some** understanding of being used in context. **AO2 – Reasonable** application of knowledge and understanding of the creative use of hardware and software. The musical piece meets **some** requirements of the brief and with **reasonable** execution. The piece is **reasonably** realistic and would be **reasonable** suitable for submission in a real-life context. **AO1 – Reasonable** recall of knowledge and understanding of the creative use of hardware and software that has **some detail.**
1–3	**AO5 – Limited** analysis and evaluation of the processes used and decisions made as they progress in producing the piece, providing a **minimally detailed** evaluation of **limited** processes and tools used that has **minimal relevance** to the brief, showing **limited** understanding of being used in context. **AO2 – Limited** application of knowledge and understanding of the creative use of hardware and software in meeting the brief. The piece is **limited** in terms of its suitability for submission in a real-life context. **AO1 – Limited** recall of knowledge and understanding of the creative use of hardware and software that has **limited detail.**
0	No rewardable material

Project brief

Sounds for Your New Content (S.Y.N.C)

You are a music producer running your own company called Sounds for Your New Content (S.Y.N.C).

S.Y.N.C specialises in sound creation and music for use in TV shows, adverts, film and games. A well-known sports brand has sent you a brief requesting original music and sounds to be used in an advert for a new range of running shoes.

The brief states that the final piece **must:**

- be produced using DAW software and hardware
- be between 1 and 2 minutes in length
- be submitted as a stereo audio file
- include sounds which create the atmosphere of a sporting event
- include music written in the style of 21st century pop:
  - the music must be energetic and recreate the excitement of a race
  - the music must use a four to the floor rhythm
  - the music must use a drop in the structure
  - the music must use audio recordings and software instrument.

Task 1: responding to the brief

Evidence:

You **must** provide:

- your proposal for the piece
- your internet browsing history used for research and planning purposes.

Your proposal **must** include the following to meet the requirements of the brief:

- the musical elements of your piece including:
  - melody
  - harmony
  - rhythm
  - structure
  - instrumentation
  - style
  - the sound creation elements of your piece
  - your reasoning for the decisions made.

You should present your work as a word document but may use the following formats to provide supporting evidence for your proposal:

- written report
- mind maps
- technical notes
- digital presentation
- annotated diagrams.

Introduction

The brief asks for a "four to the floor rhythm' which suggests dance music. Online research (wikipedia.com) tells me that this type of pattern is normally found in EDM, in particular house and techno. It normally sits between 120 - 140bpm and is in a 4/4 time signature. Once I had discovered this I did some further research around house music.

House music originated in Chicago in the early 1980's and quickly expanded around the world. Its early pioneers included Frankie Knuckles, Ron Hardey and Jesse Saunders. Early synthesiser technology from brands such as Kong and Roland were embraced by the scene and used to develop its sound. As it spread beyond Chicago it began to change and further sub-genres were created (e.g. Acid house, Funky House, Detroit Techno) (masterclass.com). Current modern producers include David Guetta, Avicii and Deadmau5 (lastfm.com).

Melody

It is very common in a lot of dance music for the melody to be on vocals, often sung by a female singer. The melody is often quite repetitive and memorable, particularly in the chorus. Sometimes the vocals are sampled from another track. The lyrics usually relate to the song title somehow. I will have to make sure that whatever melody I create works musically with the piano chords I use and will rely on my music theory skills for this. I will use notes from my chosen major scale. From lessons at school, I know that melodies are made strong using triadic writing (arpeggios) and arching melodies, whilst ascending melodies sound more positive than ones which go downwards.
So, for two of the main chords:
D major chord – D F# A would be the arpeggio notes
G major chord – G B D etc

One nice approach is using the same melodic idea over different chords and just varying it a bit to fit each chord. This is something I will try to use in my track. *Conclusion: the track that I create will have a lead vocalist, hopefully female if I can find one, but if not I can record myself singing. I will use short ideas to create a memorable hook for my track.*

Assessor comments:

The two hours preparation time should assist them in their research for writing this task. A high level response such as this will evidence a clear learner response to the brief with a definite structure that allows the learner to cover all aspects of the brief.

AO1: Throughout the work the learner demonstrates an excellent knowledge and understanding of music and sound creation elements. Their response is comprehensive and highly detailed throughout. The use of technical terminology (for example, music theory, genre specific terminology and production references) throughout is fully accurate and appropriate. There is clear evidence of relevant research that is correctly referenced and backs up their assertions.

Harmony
Often dance music samples chord riffs from other records (e.g. soul or disco) and then pitches them around using a sampler. Piano chords in particular are very popular at the moment, played with a syncopated rhythm, (e.g. Avicii - Better Day). Often they are 4 bars long. This website (https://mixedinkey.com/captain-plugins/wiki/best-chords-for-edm/) gives lots of examples of EDM style chord progressions which is really helpful.

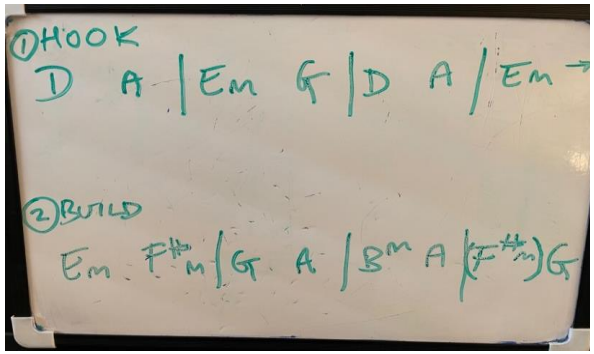
We have been learning piano in school as part of our music theory lessons so I'm confident I will be able to create a four-bar chord progression which will be appropriate for this brief. I intend to start with the following two chord progressions to show the variation in sections:

Hook (A section)

The verse chords are mostly positive sounding and all taken from the D major scale. The G major chord (chord 4) I've chosen for the ends of phrases works well as it sounds like it's unresolved and wants to move to the next section. I felt it was more expressive than an A major chord (chord V) and it is easier to fit repeating melodies over the top of both chord 1 and chord 4.

Most major key pop music uses chord vi in the progression. I'm going to try chord ii instead (E minor) so it might sound less cheesy. I think it will be also good to add some extra notes (extensions) to make the chords more colourful and expressive. This will hopefully fit the set brief well.

Breakdown/build (B section)



The B section chords are a bit 'darker' and more brooding using more minor chords. Like lots of middle 8 sections in songs, I've chords that rise at the end of the section to hint at something more uplifting coming back again.

Conclusion: I will need to create catchy piano based 4-bar chord progressions which I can use as the basis of my piece. I will then be able to use my knowledge of music theory to create a melody line that works with this progression. I will also try to add extensions to enhance the chords.

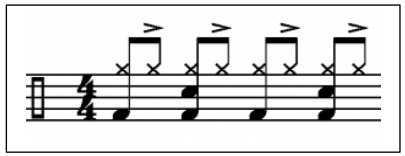
Assessor comments:

AO2: The learner has created a response that is comprehensive and highly detailed throughout. This is aided by a clear and logical structure which ensures they are covering all aspects of the brief.

The learner's response is highly relevant to the brief, applying knowledge and understanding of key terms, and applying them in a relevant and practical manner to the requirements of the brief. One clear example here is the shortened song structure which demonstrates a clear understanding of common house music structures, but which has been appropriately manipulated to fit within the constraints of the brief.

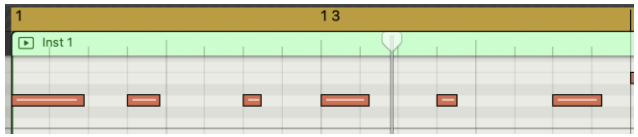
Rhythm

House music uses a “four to the floor rhythm” which normally sits between 120 - 140bpm and is in 4/4 time signature. Claps and snares are used on the two and four with hi-hats and other percussion instruments added as required. Here is an example beat I could use:



The bassline will make use of ‘driving’ 8th rhythms to give a feeling of motion, which fits the brief and makes it sound more lively too.

From listening to loads of EDM songs, I’ve worked out that most of the syncopated piano rhythms have a ‘3-3-2’ division feel to them, much like some Latin American music (salsa, samba etc). I’ll use a similar rhythm, which I made a quick score of in Logic so I wouldn’t forget it!



Conclusion: the track that I create will be in 4/4 with a bpm of 120bpm following the house drum groove style.

Structure / arrangement

A normal house music radio edit structure contains the following elements, but it would be too long and complicated for a TV advert:

- Verse
- Chorus
- Drop
- Breakdown
- Drop
- Fadeout.

Most sections last for 8,16 or 32 bars with variations occurring every 4 or 8 bars. However, this normally ends up about 4 minutes long, which is about right for a radio single. As the length of the piece required by the brief is quite short, I will need to ensure that the structure is representative of house music but also fits within the time frame (1 - 2 mins) allowed to this piece.

I think an advert should be relatively short and ‘snappy’ and so I’m aiming for nearer the one-minute time limit. At a typical EDM tempo of 120bpm, this would be 30 bars in total. After studying pop music in lessons, I really like the strong ideas of a ‘Tin Pan Alley’ structure, where you have two main sections – an uplifting A section (a verse that sounds like a chorus and has the title hook from the song) and a contrasting B section (this is usually called the bridge and contrasting in mood – often more reflective or sad.)

Assessor comments:

AO3: The learner has offered well considered approaches in order to meet the brief.

They have used research and current tracks to synthesise an appropriate response to the brief, demonstrating highly reasoned judgements and decisions. This structured response allows the learner to present their approach for each section of the brief. Overall, the response is an excellent analysis of the requirements of the brief.

I also like the idea of it feeling like the piece is cycling around/starting and finishing in a similar way. Therefore, I want to use both an intro and outro that are thin in texture and have the sense of fading in and then fading out. I also like the idea of a more abrupt ending, so I'm planning to shorten the outro to just 2 bars. This would make my piece almost exactly 1 minute at 30 bars (excluding and effects tails).

- Intro (hook) – thin texture and fading in – 4 bars
- Hook (A section) – 8 bars
- Breakdown/build/drop (B section) – 8 bars
- Hook (A section) – 8 bars
- Outro (hook) – thin texture and fading out – 2 bars.

One of the key features of house music is the 'drop' where the full track kicks in. You can see here that the structure allows the drop to occur quite quickly so as to keep the listeners' interest. I will then vary it a bit with variations to keep the interest and allow the track to build to a final end point (like the end of the race or even meeting a personal goal) before fading out with the sound of the crowd cheering.

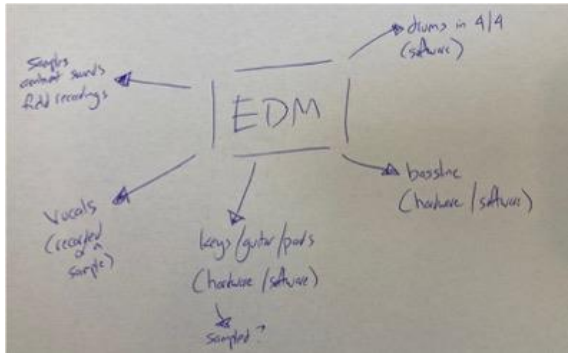
Conclusion: I will create a reduced structure based upon house music tracks, but which suits the brief and retains the listeners' interest with variation throughout.

Instrumentation

How will I achieve this?

- Drums - I will programme the drums using sampled kits in Logic Pro. I will change the pitch of some of the drums, e.g. for a deeper kick drum.
- Bass - I intend to record this from the Moog synth in our school recording studio. I can then edit it up and compress and adjust the sound, maybe adding distortion and other effects to give it lots of energy in the track.
- Piano - I will use a software piano plugin and then I intend to use a tape plugin in to manipulate the recording to make an echo that sounds a bit wobbly and filtered, like I have sampled this from an old soul record.
- Synths - for other synths / pads I intend to use one of the various software synths we have at school to create some interesting sounds which I can then manipulate them further as required. Instead of using presets, I will create sounds from scratch and/or adjust filter and envelope settings to personalise existing sounds.
- Vocals - these will be recorded in the school studio by one of the other learners. I will then edit these vocals and perhaps cut them up to again make them sound like they have been sampled from an old record.

Conclusion: the instrumentation should be the same as other house tracks I have listened to and should emulate the vibe of these tracks.



Style
I'd like to target the overall genre of EDM (electronic dance music) to make the music have widespread appeal. I am intending to create something in the style of progressive house like Avicci. This style is energetic, and I think will help to recreate the excitement of a race or reaching a goal in life.
Conclusion: progressive house is the type of house I will use for my track and I will make sure to listen to lots of examples as this will influence and aid my own creativity when writing the track.

Sound creation and production elements
The brief requires sounds which create the atmosphere of a sporting event so I intend to use crowd noise that I will either record live or sample from an already existing recording. There is also the possibility of using the starting count down and maybe the pistol sound in the build-up or maybe even as part of the percussion track.

The bass sound is also very important for house music as different types of bass often relate to different genres (www.edmprod.com). I will aim to use a bass sound that is appropriate for progressive house and which leaves space within the frequency spectrum for the kick drum to cut through.

Production points I've got through reading and listening are below. I'm going to try each of these out to see if they fit in my piece.

- Drums often have distortion effects which make them more powerful.
- There's a process called ducking, where the drums are used to.
- In a busy mix, should be panned to be spread out and oppose each other, but you should leave bass instruments, snare and main vocal in the centre.
- Vocal tracks often use automatic tuning in a creative way.

Conclusion: the sounds I use need to be authentic house sounds but also relevant to the brief for this project. I will trial all the main production features I identified in the reference tracks and my reading.

Finalised project proposal

BPM = 120bpm in 4/4

Structure (just over 1 min):

4 bars	8 bars	8 bars	8 bars	2 bars
Intro	Hook (A)	Breakdown/build (B)	Hook (A)	Outro

- Instrumentation - sampled drums / percussion, synth bass line (hardware synth), piano (software), synths (software)
- Sound creation - crowd noises / starting guns / cheering / use of risers & manipulation of the instrument sounds (recorded / sampled or taken from sample packs)
- Melody - vocal line which fits around the chord progression (recorded)
- Harmony - 4-bar piano chord progressions with a strong, syncopated rhythm
- Style - progressive house.

Internet browsing history (all accessed 12th – 14th April 2023)

- https://www.edmprod.com/how-to-make-house-music/
- https://calculator.academy/bars-per-minute-calculator/#cp_calculatedfieldsf_pform_1
- https://www.edmtips.com/edm-song-structure/
- https://www.masterclass.com/articles/house-music-guide
- https://www.last.fm/tag/house/artists
- https://help.apple.com/pdf/logicpromac/en_US/logic-pro-mac-user-guide.pdf.

Evidence:

You **must** provide:

- your **plan** for the musical piece
- your internet browsing history used for research and planning purposes.

Your **plan** must include:

- a timeline for your production
- the hardware requirements including recording equipment and DAW hardware
- the software requirements including DAW software features and software instruments
- required audio materials
- health and safety considerations of the production
- evaluation of the skills, processes tools and techniques used in the planning process.

You could use the following formats to provide evidence for your plan:

- written report
- mind maps
- technical notes
- digital presentation
- flow chart
- annotated screenshots.

Task 2: planning for production

My timeline

I've come up with a timeline than enables me to first spend time at the digital piano working out chords and melodies. This is to avoid the distraction of the computer screen and can also limit eye strain. I've also tried to make a note of any logistical challenges, e.g., things I need to remember to do in the background to make the project work smoothly! I'm going to set up reminders on my phone for the stages of Tasks 3 and 4 to help keep track of progress.

Project phase	Producing the music (Task 3)				Mixing & mastering (Task 4)		Evaluation (Task 5)
Time allocated	1 hour	2 hours	2 hours	2 hours	2 hours	2 hours	2 hours
Practical activities	Sketching out chord, melody and structure ideas Create ideas on a whiteboard	Composing – building the intro/hook and outro sections in Logic Pro	Composing - building the breakdown/ build section in Logic Pro Arranging the sections to create the correct structure	Record vocal parts	Mixing 1 – establish a draft mix: 1 volume 2 pan, 3 EQ 4 reverb 5 editing vocal parts	Mixing 2 / mastering - dynamics processes, delay, distortion, other effects. Add master effects – 1 EQ 2 Limiter	Evaluate each aspect / stage of the project Cover positives, development points and set targets for future projects
Logistics	Find singer who agrees to doing project Ask them to sing a bit to check suitability of singer and the key	Provide singer with musical plan	Book studio Update singer on musical ideas	Listen through the vocal parts – select best takes etc before mixing	Writing up about the session as I go on Saving in increments and lots of screenshots	Write-up and screenshot Check the exported files work properly!	

Hardware list

Equipment	*Specifications/notes*	*Explanation*
Digital piano	This must have a USB MIDI output to connect to the computer	This will allow me to work out the initial musical ideas and then play them in to the DAW using the piano as a MIDI controller keyboard
Mac Mini	Needs 2 spare USB sockets – I may have to use a hub – to connect MIDI keyboard and the audio interface. Needs 16GB RAM and free disk space.	This will run the DAW software and plugins. Having a higher amount of RAM means that I could trigger lots of samples in the project if needed. Disk space is needed to store projects – if this is nearly full it can cause crashing when trying to save.
Condenser mic with pop shield; mic stand	A large diaphragm condenser as it will sound slightly smoother than a small diaphragm but is still very bright sounding. Mic stand should have everything tightened up.	Large diaphragm condensers are very bright (good for female vocals), but there are less spiky dynamics than a small diaphragm. The pop shield avoids plosive pops being picked up and can also help the singer to stay at a consistent distance. Secure mic stand means no rattling.
Audio interface	Needs to have phantom power and be USB. The driver should be low latency. Needs high dynamic range.	USB for easy connection to the computer and this can carry enough data for audio tracks. Low latency means I can play software instruments without any obvious delay. High dynamic range means it will be less noisy when adding gain to the mic.
Headphones and monitor speakers	Closed back headphones. Monitors should have a 7-inch bass speaker or larger.	Closed back headphones avoid spill/leakage when recording but don't always have the most natural sound. Check mixes on both headphones/speakers – the monitors need to be quite large otherwise you might not hear problems in the bass end.

Software

- I'm going to use Logic Pro as the DAW to create the piece, as that is what is available at school. A DAW allows live recorded tracks, programmed drums/synths plus samples to be added. I can then easily use copy/paste and other tools to build the arrangement. Audio buffer settings will be set low when playing software instruments for less latency, but I may have to increase this to allow more processing power when mixing.
- For software instruments, I will use some that come with Logic, but I do have access to a few extra piano plugins from UVI, which might be good to create a sound with more character and vintage feel, since these have been sampled from old pianos.

Assessor comments:

High level responses will be focused, typically using concise writing to clearly organise ideas and intentions.

Here, the learner establishes tasks in a timeline and allots suitable periods of time to them. In this more considered approach, logistical factors are also considered as well as the specific practical activities associated with producing and mixing the piece.

A wide range of health, safety and other risks are clearly identified, with multiple ways to avoid each suggested.

The learner presents an effective, concise evaluation of their planning processes.

AO2: The learner exhibits excellent application of knowledge in relation to the specific brief they've been set. There is a reasonably detailed timeline, plus a comprehensive plan for hardware and software resources, underpinned by a consistent use of technical terms relating specifically to each aspect (microphone-related terms in hardware, latency within software, for example).

Other audio

- I have been looking at a free collection of audio recordings for some crowd noise – these should have some movement in them but not vary in level too dramatically. If they are fairly long, it will be easier to loop them without hearing the joins.
- I've also used this to find some riser effects, bass drops and reverse cymbals.
- All the files should be uncompressed audio formats if possible – e.g. wav – so that they sound clear and don't have data compression noise.

Health, safety and other risks

Using my knowledge leaned from our tutor in lessons, I've identified some risks associated with composing, recording and mixing, and came up with ways to carry out the processes more safely.

Risk identified	How to avoid the risk
Eye strain	Take breaks at regular intervals. Shut eyes and look away from screen whenever I can. Make sure there's good lighting in the room.
Hearing safety	Monitor on headphones and speakers at safe levels. Take regular breaks.
Electrical safety	Keep food and drink out of the studio. Ensure all equipment has a PAT sticker. Ask member of staff to do electrical plugging/unplugging.
Physical hazards in the studio	Avoid trailing mic cables. Put bags under desk. Place heavy mics on a boom directly over a mic stand leg to avoid toppling.
File management and backup	Save with incremental file names (using save as) every time I change something big, or at least once per coursework session. Check with tutor/technician that files are being backed up at the end of each session!
The singer might be ill/not turn up or not be able to sing very well	Send singer regular reminders. Ask the singer for examples of their recorded work/get them to sign to you. Allow plenty of time for recording so they don't get stressed. Don't leave recording right until the end – allow some extra time in case things go wrong.

Target: use the above table in every session to check on health, safety and other risks

Assessor comments:

AO3: The learner's close consideration of the brief requirements is reflected in their work, with clear, contextually-appropriate decisions taken that are almost always accompanied by justifications and/or explanations. The risk assessment is a good example in this respect.

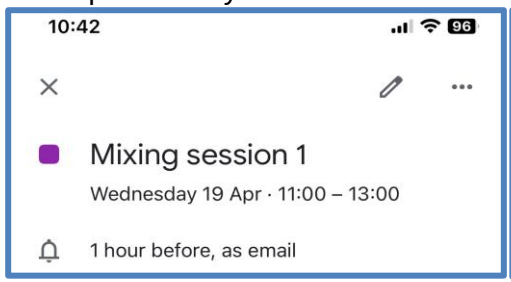
Evaluation

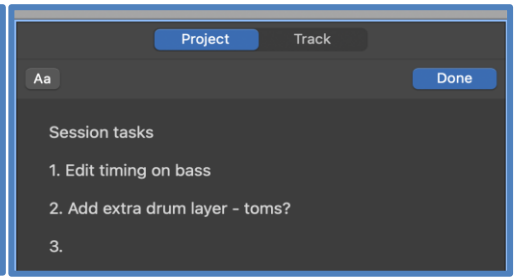
Positives:

It was really useful to put timelines, equipment plans and the risk assessment into a table. I could view at a glance what I needed to do and monitor progress easily. With the equipment plan, thinking about specifications also meant that I had a better idea of the extra things not on the list that would be needed, e.g. a music stand, XLR cable for the mic etc.

Doing a risk assessment a bit like a band would do when putting on an event turned out to be a great idea. In table form, it's easy to check on and some research around this got me to think about less obvious risks like file management.

Reminders on my phone will work well to track progress. After putting the main stages into a list and setting notifications, it will be good to break down each part into separate task lists for each session once I've started. I started on a to-do list app on my phone but then realised it will be more useful to type tasks straight into the Notes panel in my DAW:





Development points:

The timeline could perhaps have had the practical activities sub-divided a little more, with more specific detail about how many bars to compose each time etc. but then again, this might get in the way of the creative process. The equipment plan could have also included a list of leads required. I tend to just know what I need, but it would better to have a list and then book these things out with the technician.

Internet browsing history

- https://www.teamwork.com/blog/project-timeline/
- https://freesound.org/
- https://www.allaboutvision.com/en-gb/digital-eye-strain/get-relief/
- https://www.lastminutemusicians.com/blog/risk-assessment-musicians/.

Assessor comments:

AO5: The learner presents an excellent yet concise evaluation of the skills and techniques used for planning purposes, weighing-up the merits of each. They also reflect upon alternative approaches and provide some highly relevant targets for similar projects in the future.

Task 3: production of the piece

Evidence:

You **must** provide:

- an exported stereo audio file
- evaluation of the production process.

You **must** consider:

- set up of equipment
- configuration of software
- use of hardware
- use of software
- use of musical elements
- creative use of sound creation
- export of stereo audio file.

You could use any of the following formats to provide evidence of your production process:

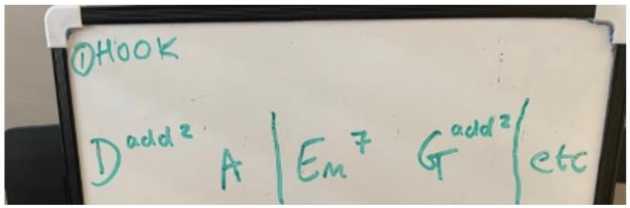
- digital presentation
- written report
- blog/vlog
- annotated screenshots
- annotated images
- video/screencast with commentary.

Introduction

Below is an account of the musical creation/composing process. I have attempted to justify my choices throughout each phase and explain how I solved problems. Phase 1 is taken from the blog I kept to keep a record of progress:

Producing my piece – working out chords

1. I played through the chords I'd outlined in my plan on the piano. I used the syncopated rhythm found in lots of EDM music, which sounded lively and exciting.
2. In some places I ended up simplifying the chord sequence as it felt like the changes were too regular, which made it seem too regular
3. I then started to experiment with making the chords more expressive by adding extra notes (called extensions). I felt that added seconds in the major chords and added sevenths in minor chords were really effective and not too difficult to play or too jazzy! This made the chords seem less repetitive somehow, so would be engaging for the listeners
4. **TARGET** – try chord extensions for the second section too!



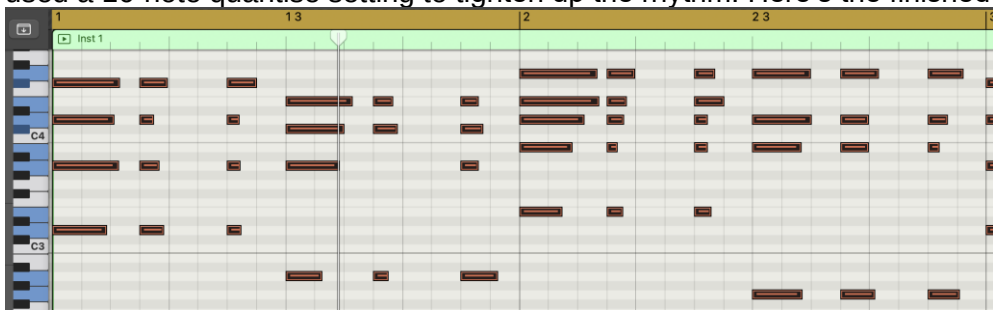
Assessor comments:

The learner in this example offers a step-by-step account of the musical creation process, with nearly all decisions justified with a link to the set brief, the chosen style, or a description of the intended musical effect.

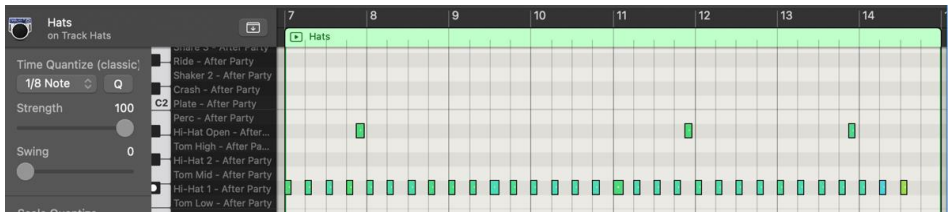
There is a skilful and confident use of both musical and technical resources to realise the piece. The repetitive nature of the music created means that it's catchy as intended, with the learner effectively recreating many of the traits they observed with researching and listening to EDM music in the preparatory phases of the project.

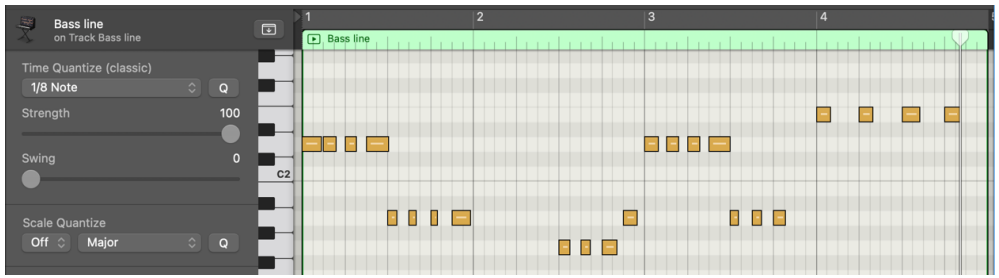
Phase 2 - Getting started in the DAW
In the DAW I checked the tempo; 120bpm seemed just right. I saved the file straightaway, making sure I used the folder format (this avoids you ending up with multiple copies of the audio files when doing a 'save as') and used a date in the filename to indicate the version.

Phase 3 - Writing the hook (A section)
I decided to work on the two main parts separately, to build them up in layers, some of which I would remove or drop in/out when I started arranging the piece. The 4-bar piano riff came first. I played this in and then used a 16-note quantise setting to tighten up the rhythm. Here's the finished riff:



Next up, I played in each layer of the drum beat as per my plan but added a bit of variation to the hi-hat part, with some 16th notes on the open hat sound of the electronic drum kit I chose. Quantise was used to put everything tightly in time, which is a key aspect of EDM.





I added in a bass synth playing 8th notes on the root notes of each of the chords - this seemed to drive the music forward, giving the idea of running.

Assessor comments:

AO1: The learner demonstrates detailed knowledge and understanding of hardware and software, using it in creative and efficient ways when producing the piece. Accounts are detailed, with excellent use of terminology.

AO2: The learner shows detailed understanding of the interaction between dedicated hardware, software and musical production processes. This results in an accomplished finished piece that comprehensively satisfies the brief requirements, the final piece would not appear out of place in a genuine advertising campaign.

AO4 –Technical skills: A range of technical skills are used in a consistently secure way to produce the music. Hardware and software resources are efficiently handled and the learner demonstrates a methodical approach to using their skills to experiment and solve problems whilst producing. There is confident use of terminology throughout.

There was too much variation in the note dynamics (velocities), so I used the MIDI Transform editing function to make all velocities the same – this 'mechanical' approach works on EDM to make the bass line stronger!

A string pad was added to fill out the texture of the mid range of pitches (the piano chords and bass were above and below this point). This is also a very common EDM feature and worked wonders to fill out the sound. In the same range as the pad I played similar long chords on a monophonic lead synth sound with an arpeggiator to add more motion and rhythmic interest, which sounded really cool.

Phase 4 - Writing the breakdown/build (B section)
I felt this should have fewer drum layers and a simpler piano part (a lower, arpeggio focus and no exciting syncopation). Hi-hats were played in at a steadier 1/4-note rhythm and then I added the piano chords. Again, if felt too regular with all the chords I'd planned to add, so I left chords to hold on longer at the ends of phrases as I knew I'd be adding some riser features there using drums and riser samples. I added long root notes in the synth bass, but thought it would be interesting for the pitch of the final note in the section to glide up a couple of octaves to add to the riser effect I was about to create. I did this by setting the bend range to 24 semitones on the synth plugin and then drawing in a ramp in the piano roll edit screen.

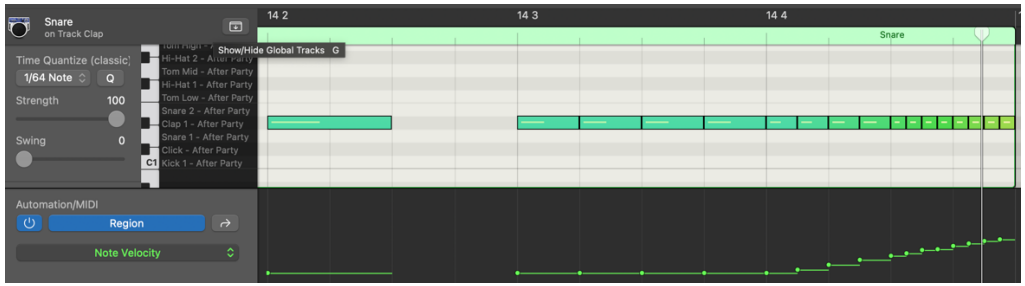
To create a build at the end of this section I added in some riser samples I'd found earlier - these had to be carefully lined up so they worked with the music. A bass drop was also placed at the start and end of the sections to mark the transition/change in moods and fill texture in the gaps. I also added reverse cymbal samples to give movement.

I also wanted to bring some of the drums back in and create one of those EDM builds where the rhythms get faster and faster, like what you can do on an MPC/performance sampler by pressing a button. In the example below (claps) I drew in groups of notes where the note length halves each time, adding loads of energy to the build. To emphasise this further on the clap I drew in a velocity ramp to make the really fast notes fade up – it was another way to add motion and excitement. I did this with some kick notes too.

AO4 – Techniques: A wide range of production and musical techniques are demonstrated. The learner demonstrates a high level of understanding and decisions made are similar to those of the real-life context of producing music.

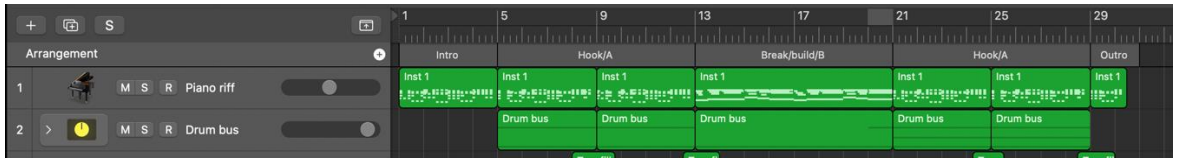
AO4 – Processes: Production processes are sequenced in a highly logical order. The learner selects efficient solutions to solve problems, for example, the use of MIDI Transform to fix velocity and automation of MIDI data in the piano roll date editing lane.

AO5: There is excellent analysis and evaluation of the processes used, including embedded examples of how the learner responded to challenges and made decisions based on ongoing observations during production. Highly relevant development points for future work are presented concisely.



Phase 5 - Finalising the arrangement

I marked out the arrangement using the Arrangement bar at the top of the screen in Logic. Using my earlier structure plan, I was able to duplicate blocks and move them to sections where they were to be repeated and/or varied.

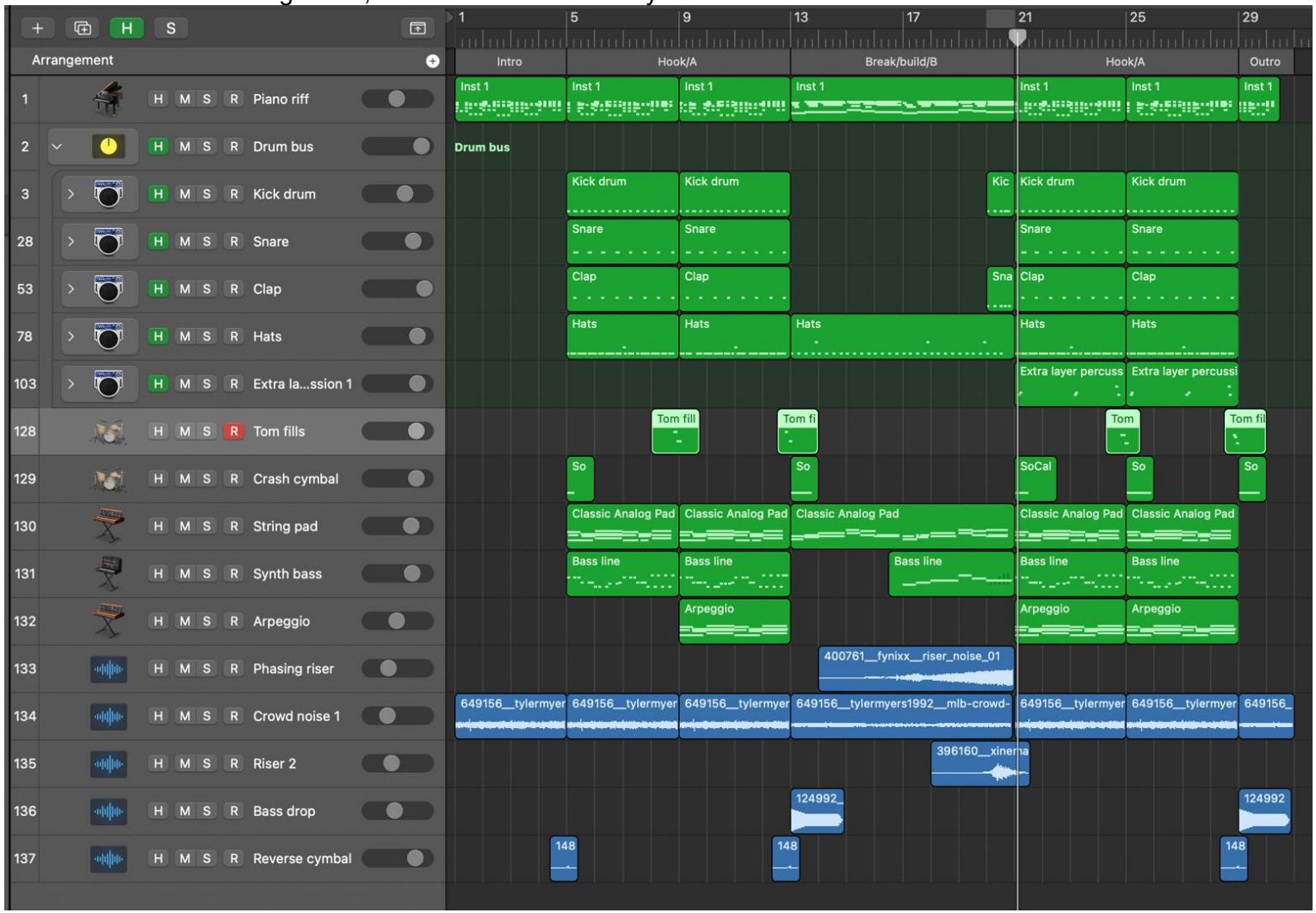


The idea of variation and progressively building texture in the hook was vital to making the arrangement work. Here are some ways I achieved this:

- The intro only has crowd noise and the piano riff
- Drums, bass and the synth string pad enter in the first hook to give impact
- The arpeggiating synth is not heard at the start of the hook but gradually fades in the second half of this section. It re-appears at full volume in the second hook/A section to increase texture
- Extra percussion layers are added later on
- The drum tom fills become more regular towards the end of the piece.

I achieved my aim of having a cyclical feel with an ‘arching’ texture by dropping everything out at the end except piano riff and crowd noise, and then cut the piano riff off after two bars – this gave the element of surprise I was hoping for!

Here's the finished arrangement, without the vocal line in yet:

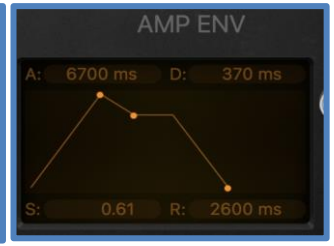


Phase 6 – Working out and recording the vocal parts.
I prepared for the recording session in the studio by:

- Plugging in and placing the microphone and performer headphones – I checked the mic's weight was counterbalanced and nothing was loose
- Screwing the pop shield to the mic stand – too close still gave pops, so I moved it a couple of inches further away
- Providing vocalists with lyric/melody notes on paper – we put this on a music stand to avoid paper rustling being picked up
- The vocalist was a little croaky so I asked her to warm up her voice – I realised this was something I'd left out of my risk analysis
- Turning on phantom power (with speakers/headphones turned down to avoid pops – again this could have been added to my risk assessment)
- Setting the gain/checking the recording level – I experimented with distance and decided 20cm was best. Closer, there was too much boom, and further away, too many reflections from the room
- Checking that the performer could hear themselves and the backing track OK. Singer found it hard to pitch the starting note, so I suggested that they took one of the headphone ear cups off, so only one ear was covered.

We jammed out A and B sections in turn – I would hum melody lines over the backing whilst the vocalist repeated those, trying out positive words. I decided that a spiky line was best for the A section to make it catchy and 'hook' the listener – this would also leave space for the piano riff. 'Rise up' was a key lyric here. We decided on spoken parts for the B section to add intrigue. I took three takes of each of the vocal parts, so I could edit and 'comp' parts together later on, e.g. if there were some words in phrases better than others or the vocalist ran out of breath. You don't always hear this in the pressured environment of the recording session, so it's good to do this for a back-up.

Sound creation with sampling and synthesis
I loaded some chunks of the vocal lyrics into the Quick Sampler. With one-shot turned off, I created small sections of stutter effect, to emphasise these words. I triggered these quickly in the intro and outro and then quantised them to make them more robotic (see screenshot below, left). For the bass sound, I mixed a sawtooth and square wave. I decreased attack time on the envelope to give a sharper/louder start to each note. On the second oscillator I used the fine tune control to make it slightly out with the first one. I though the sound was a bit thin to start with - this gave a thickening effect, a bit like a chorus.



The string pad was made in the RetroSynth plugin using two saw waves mixed together. This gave a bright and immediate sound, so lowered the filter cutoff to make them duller and dialled in a slower attack so they would sound more like strings being bowed (middle and right screenshots above).

Exporting the stereo file
I set the cycle locaters to set the start and end point and then pressed bounce. A Stereo Interleaved file was selected so it would play back on all systems and not be two separate waveforms. I named the file Task 3 and select 16bit/44.1kHZ wav file as this is CD quality, uncompressed audio and would play back on any Windows PC, Mac or video software – so it could be used when making an advert.

Evaluation of the production process
Positives:
The initial sketches at the piano worked well to keep focus on the task and not get distracted with playing around with different sounds. Writing ideas on a board was great fun too and also kept me away from on-screen distractions. After this, the DAW environment worked brilliantly as it suited the loop-based music that I was creating, and allowed me to easily edit and automate after parts had been recorded.

Since the entire piece revolved around a catchy hook rather than expressive, flowing vocal lines, it made sense to construct this part first, and then build the EDM rhythmic/other production features around this. It helped to separate tasks and have a better sense of progress by working mainly on the A section hook, and then mainly on the B section after that. This was a musical way to construct the piece. Despite the limited time available, I felt the music was quite convincing and suited the brief well. I can imagine voiceover lines over the top for the advert, so leaving space in the hook would prove to be a good idea. The drop works pretty well following the build in drum fill intensity and riser samples.

The audio interface and condenser mic I chose worked well for the female vocal – it was nice and clear so she could hear the signal in the headphones, with no noise even at a fairly high gain, so it won't need much EQ later on to boost the top end or cut unwanted noise. The way I set up for the recording meant that the lines were recorded at a strong level without distortion and not too much proximity and reverb from the room. Having multiple takes recorded meant I could chose bits to stitch together if I needed to.

Quick Sampler was a great choice for getting stutter vocals set up quickly – I was running out of time and didn't want to spend ages on this. In a similar way, RetroSynth allowed me to set up synth sounds quickly as it's laid out like a real hardware synth. Using the extra UVI plugin allowed me to experiment with more interesting piano sounds but wasted some time as there were too many options. I ended up fixing the velocities, which made it sound more robotic – I could just have used a stock Logic sound ad edited instead (this would have been more efficient).

Development points:
- Next time, I'll use a more complex synth plugin so that more aspects of the sound can be modulated and shaped with more complex envelopes.
- Try creating drum patterns using step sequencing so more variation can be added. Plus adding more drum layers in the drop.
- There was a bit of headphone spill when recording the vocals, which I'll try to avoid next time by reducing the gain and moving the singer closer. I might then have to cut low frequencies due to the proximity effect.
- It would also be nice to experiment with adding monitor effects so the singer can have some reverb in the headphones.

Task 4: mixing

Evidence:

You **must** provide:
- a stereo audio file
- evaluation and evidence of the mixing process.

When mixing your music, you **must** consider the following:
- placement in the sound stage
- balance
- editing
- EQ
- effects
- dynamics processing
- export to stereo audio.

You **could** use the following formats to provide evidence of your mixing process:
- digital presentation
- written report
- blog/vlog
- annotated screenshots
- annotated images
- video with commentary.

Mixing stage 1 – volume, pan, EQ and reverb

It's good to start with these more basic mixing moves, as the mix sounds more finished more quickly – I spent the first half of the mixing process on balancing, blending and adding a little bit of reverb to introduce some space in the piece. I've summarised mixing for main parts in the table.

Parts	Drums	Pad	Piano	Synth bass	Arpeggio synth	Crowd noise / samples	Vocals
Volume	It was annoying adjusting individual faders to change the 'global' drum level. So - all drum layers bussed to a summing stack, so that I could adjust the volume of whole kit	Mixed at medium volume – I couldn't get them to sit right so will duck these later	Mixed at high volume – velocities also set consistently high using MIDI transform	Velocity fixed at 100 with MIDI transform so it's clearly heard throughout. Pretty high in mix too	Came in too suddenly, so, volume automated to fade up in first hook (A) section	Mixed in at suitable level so as not over-powering	High in mix
Pan	Kick and snare in centre to keep focused. Clap slightly off-centre because it was hard to distinguish otherwise. Hi-hats and toms panned in opposition to balance left/right	Mid left to oppose the piano	Slightly right	Left in centre to remain a focal point. Also, low frequency sounds are not very directional but should also have energy shared between two speakers/ drivers	Centre	Crowd and risers mid panned to oppose each other/even-up the L/R balance. Bass drop centre – same reason as synth bass!	Lead vocal remains focused in centre. Backing vocals panned in opposition slightly off-centre

Continued on next page.

Parts	Drums	Pad	Piano	Synth bass	Arpeggio synth	Crowd noise / samples	Vocals
EQ / filters	High mid band boost added to both the snare and clap to give them more snap	Slight high frequency cut to make it move to back of mix	I felt it was too obvious at the start. High pass felt too tinny so I used an automated low pass filter – sweeping up at start to get brighter/ down at end to go duller for outro	It didn't need any EQ	Added some resonance to the low pass filter to make this more squelchy!	Subtle low pass on crowd noise to push it back. Bass drop had a subtle low cut as it was too rumbly	High/high mid boost to help the vocals cut through. High pass filter to thin out the proximity a bit
Reverb	Heavy plate reverb added to snare, clap and hi-hats but not the kick (so it would stay punchy)	A little bit of plate reverb	A little bit of plate reverb	No reverb added – needs to remain clear	Some hall reverb added	No reverb added	1.5 sec room reverb added

Mixing stage 1 screenshots

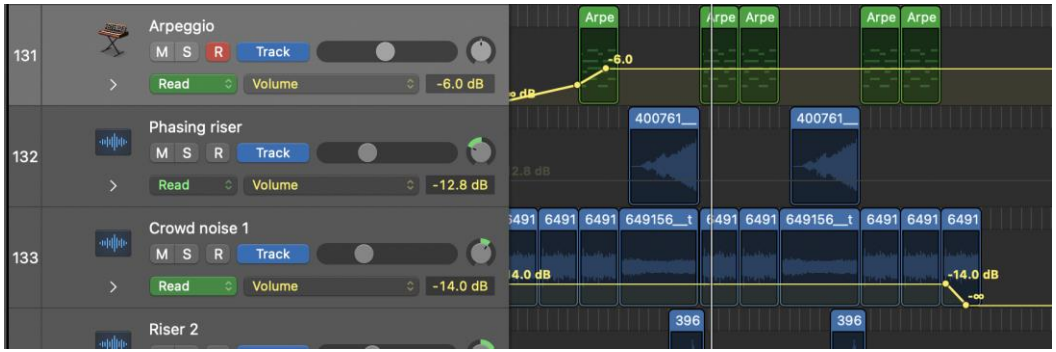
Automating low pass (high cut) frequency on piano – B section dropped again to move back in mix.

Assessor comments:

The finished mix shows excellent attention to detail. Parts are well balanced and there is appropriate EQ/stereo balance and blend, all enhanced by creative effects processing. The final master is free of unwanted noise and at an appropriate level to match that of commercial releases.

The learner provides a detailed, mostly concise account of the mixing and mastering processes, as well as expanding upon sound creation and manipulation techniques. They explain their choices as they go, with both technical and musical justification. Terminology is used confidently and explained clearly where required.

AO1: The written account and accompanying stereo mix down demonstrates that the learner has an excellent understanding of mixing practices and even gives insight into how mastering processes affect the commercial viability of a finished piece.



Fading in the arpeggio synth volume using automation / fading out crowd noise in the outro. You can see the opposition panning in action here too.

Mixing stage 2 – compression, distortion, delay, other effects

I used fairly heavy compression on vocals and synth bass so that they had a narrower dynamic range and could be heard above other parts (this is the norm for EDM). To make the vocal compression less squashed I used a soft knee – this meant the compression was applied more gradually when threshold was reached.

I'd read in my research how to make synth pads duck/pump down in volume, like you hear in lots of EDM. I put a compressor on the synth pad part and then had to set up the kick drum to trigger the compressor using a special input on the plugin called a sidechain. To make this more effective I had to adjust the ratio, threshold and attack and release controls to the pumping was obvious enough, and also in time with the music – it created a kind of off-beat ducking effect.

< *Setting up the ducking compressor – the kick is selected at the top right to trigger the compressor.*

Drums were sounding a bit weedy. I tried lots of bass EQ but that caused nasty sounding digital clipping. Next I tried the Clip Distortion plugin on the drums bus to make them louder and more gritty/punchy. In isolation this sounded too aggressive, but I found in the mix there was much more sustain in the drum sounds so they could be heard for longer in each beat – the distortion was bringing quieter parts of the performance out. The distortion also makes the drums sound slightly retro, like they're playing on an early digital sampler.

Assessor comments:

AO4 – Technical skills:

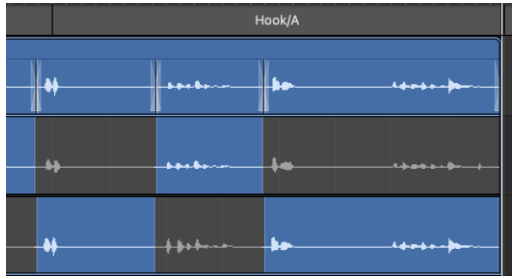
The learner demonstrates excellent technical skills, evidenced in the use of software functions and the modification (and automation) of effects plugin parameters. Technical practices are audible in the final piece but not 'over-done', this shows confident technical control of the chosen resources.

Drums sent to a bus, so they are controlled/processed together. Distortion then added to bus.

I added a tape delay to the piano part, using the tape flutter and filter controls to make the echoes sound wobbly and old. You notice it most at the end, where it adds a bit of a tail when the piano suddenly cuts out. I added pitch correction to the vocals with a fast response time, to give the creative AutoTune effect heard in lots of EDM.

Vocal audio editing

I 'comped' together the best parts using 'Quick Swipe' – this puts crossfades in at the joins so you don't hear any annoying clicks. There were a few annoying mouth noises at the start of some of the parts. I zoomed in and used the scissors tool to create a cut in the region and then deleted the unwanted bit.



The bass drop sample ended with a nasty digital noise that was distracting – I had to solo each of the tracks to work out where this was coming from. I trimmed the region by resizing from the right-hand edge and then used the fade tool to fade out each drop.

Assessor comments:

AO4 – Mixing techniques:

It is clear that the learner has a great understanding of accepted mixing and mastering techniques. More challenging creative effects processing is covered, as well as a multi-stage mastering chain. This all results in very accomplished final master stereo file.

AO4 – Mixing processes:

The learner demonstrates detailed understanding of mixing/mastering processes in written counts and uses this understanding to separate the task into highly logical phases (for example, starting with preparing an initial/draft mix, which could be sent to a client in a genuine, commercial project). The assembled evidence comprehensively meets the requirements of the brief.

Master effects & bouncing down

I first added a standard EQ plugin, and added a slight loudness boost (this is used to make masters stand out). It sounded a little cold and I instead investigated the graphic EQ in the Vintage EQ section in Logic as I'd seen on reviews online that this could also be used to emulate an API analogue EQ that has a very nice high frequencies and some subtle distortion (saturation). I added a little high frequency content at the top and this was not too harsh. The drive was set to a medium value – this did add a little thickness to the sound without sounding obviously distorted – the default value of 3 was too subtle so I chose 5. I also boosted the lows a tiny bit to help bring the bass parts through even more.

The mastering plugin chain.

Next in the chain was the Adaptive Limiter. I placed it after the EQ because the EQ had boosted some parts and so added some gain overall. With this, the piece would sound more like a commercial track and sit at a similar level. Without this, by music for the advert would appear very quiet and not as punchy.

To find out my average level I used the Loudness Meter at the end of the chain. I was trying to go moderately loud, so that my piece could stand alongside commercial tracks without the listener wanting to turn the volume up, but not so it wouldn't sound too squashy. The amount shown in the screenshot was not quite enough so I increased this a few dB until the average level was over -15 LUFS (the level that Spotify uses).

Next I exported the song to a stereo file. I chose where the export would start/end using the loop markers. I chose a CD quality .wav file (16bit/44.1kHz sample rate) so that I would not degrade the music with data compression (like you get with mp3s etc).

I also made a short screen recording (see band 4 screencast MP4) to show this process. I did it once and on playback I noticed I was getting images but no audio from Logic. I solved this by using software called Loopback which could capture Logic's audio stream and send it to the capture app (QuickTime).

Evaluation

Positives:

- It worked well to think of the first stage of the task being a draft mix, with simple EQ panning, level etc. Parts sounded more finished and this made more sense to start things off rather than spending ages on one instrument. The first draft introduced much of the width (with opposition panning) and depth (with reverb)
- The side-chaining worked well – I'm pleased to have extended my knowledge by doing this. It seemed a bit daunting beforehand
- Making mix notes in Logic's Notes panel worked really well to record progress and quickly set targets for the next session (or make a note of things before they were forgotten)
- I'm happy that the instruments can all be heard in the mix and that both the treble and bass are quite pleasing, without it sounding too much
- The mastering effects really made the piece sound more controlled and finished. The master limiter made it louder – that's good for a commercial release to compete with others and be heard above background noises when listening on radio in the car/at work etc.

Development points:

- With more time, I'd spend longer automating parts of the vocal line, and also experimenting with compression on all parts
- If I had access to a transient shaper, I'd have a go at making drums and synth bass more punchy that way.

Targets for future composing projects:

- Try to get earlier parts of mix done more swiftly, so I can spend more time on automation and different types of dynamic processing
- Try out thickening synth lines with more oscillators and filter envelopes
- Make drums punch out of the mix more with a transient shaper and/or multi-band compression. With multi-band compression I might be able to compress the drums a bit more without making the cymbals or snare attack sound too squashed
- Take creative effects further – I'm more interested in saturation after trying out the analogue emulation on the EQ plugin.

Assessor comments:

AO5: The learner demonstrates excellent analysis and evaluation of the mixing skills and processes they used in the project, and how these relate to a real-world music production context. Target setting also pays close attention to context, with a wide range of points offered for honing skills and knowledge further.

Task 5: summative evaluation of musical piece

Evidence:

You **must** provide:

- your evaluation.

You should consider the following when evaluating your practice:

- how the demonstration of essential skills, processes, tools and techniques used in your finished musical piece met the brief
- how you could improve your finished musical piece in relation to the brief
- an alternative approach to the brief.

You could use the following formats to provide evidence of your evaluation:

- annotated screenshots
- written responses
- video with commentary
- digital presentation.

Preparation and project proposal

I watch lots of YouTube videos on music production in my spare time and so, when doing preparation work for the project, it was great to find out this can count as research! Watching things whilst taking notes suited my learning style, as well as sheets with bullet points to summarise key points.

Creating an outline proposal for musical content in the piece was very handy, going forwards. It meant I knew what tasks I needed to put in my timeline and plan in the following task.

If I had more time, I would have dedicated it to doing more in-depth research on chord patterns and also the more advanced techniques to make the mixed music more 'driving' – things to do with compression, gating etc.

For future projects, I'll try to focus more on the production aspects – I'll try to watch more short YouTube clips to find out how to do things, rather than reading guides and manuals. The musical research can probably take slightly less priority as often ideas get really worked out and changed at the creating stage.

Producing a plan

Producing a timeline was helpful in reminding me I had limited time - to stick the task and not wander off getting lost in the minute details of plugin settings and perfecting sounds on the synthesiser when what I had would be good enough (given the tight deadlines). I was surprised at how well I managed my time as I usually tend to lose focus or get distracted!

This all gave me an idea of what it'd be like to respond to a music composing brief in the real world. I'd definitely take some of the techniques forward to real composing jobs in the future! If there was slightly more time, I would have tried to sub-divide bigger practical tasks and also experiment with Gantt charts – this way I could have considered a bit more how tasks would actually overlap each other. For my next project I'll make sure I do some research on these types of planning methods before starting out.

Assessor comments:

AO5: The learner methodically reviews each stage of the project, demonstrating excellence in their evaluative approach. Ideas are neatly organised using subheadings.

They outline positives, development points and targets for future work in a usefully reflective way.

Lessons learned are really insightful, with highly relevant solutions and future adaptations put forward that are highly appropriate to music production projects in real world.

If there was slightly more time, I would have tried to sub-divide bigger practical tasks and also experiment with Gantt charts – this way I could have considered a bit more how tasks would actually overlap each other. For my next project I'll make sure I do some research on these types of planning methods before starting.

Producing the piece
The order of events worked really well – starting with jamming out the ideas on piano alone, building each main section in the DAW and then finalising the arrangement. In this case, it made sense for the vocal parts to come last. I needed to do more work on creating sounds from scratch on a synthesiser. For future projects I aim to use at least 5 synth sounds that I've created myself. Similarly, I didn't have time to go out and record my own field sounds – crowd noise etc – so I'd like to try this next time.

Mixing and mastering
Starting with level, pan, EQ and reverb allowed me to make progress more quickly at the beginning of the mixing phase – this made me feel better that I'd produced something good! I was also able to listen to the piece lots and decide which creative effects would work best, instead of just throwing in everything I'd just learned (there's a tendency to over-use new things!)

In future projects I'm planning to use more busses (summing Track Stacks in Logic) so I can process multiple, similar tracks in the same way, e.g. all the vocal parts. Then I might have more time for experimenting with creative effects.

Evaluating the finished piece
I think the piece works well to the brief. It contains 21st Century pop music elements, samples taken from sports crowds and there's a mood of excitement (and a four-on-the-floor kick) I think. I've also been able to get a positive message across in the lyrical content and the way the tonality and chords support and elevate the melody. It's also the right length to work really well for an advert on TV, YouTube etc – I'm imagining lines being spoken over the top in the quieter sections especially (intro, breakdown/build and outro).

I'm pleased with how the software instruments, samples and the recorded vocals have all integrated to form the final piece. As well as cutting unwanted noises and getting everything to balance and blend, it was great to experiment a bit with some of the creative processing used on EDM including filtering, side-chaining and AutoTune. This has inspired me to do more research on side-chained effects and saturation. These made more of a difference than I thought they would.

I'd have liked to have developed a longer structure to the piece with more chord and rhythm variations, although the format I did produce does fit the set brief. For future projects I'd like to try composing a piece with at least three contrasting sections and more variations in chords.

A possible **different approach to the brief** would have been instrumental, perhaps with a synth lead line – this might have left more space for a voiceover on top. Instead of time spent recording and editing the vocal I could have used a hardware synth and perhaps have spent time loading crowd noises I'd recorded myself into the sampler and trying to give them some sort of rhythm and pitch. A clean guitar line might add to this alternative idea too, e.g. recorded DI or experiment with placing microphones on an amp.