Unit 9: Delivering a Music Product

Unit code: R/600/6964

QCF Level 3: BTEC National

Credit value: 10

Guided learning hours: 60

● Aim and purpose

The aim of this unit is to enable learners to experience the process of creating and delivering a product – probably a CD recording within guidelines typical within the music industry.

● Unit introduction

There are many roles within the music industry that contribute to the effective creation and delivery of a commercial music product. Alongside the artist, key roles are those of the recording engineer and the producer.

This unit will encourage learners to undertake a range of roles in the studio as part of a team, with the aim of creating a product that satisfies current technical and creative trends whilst utilising the best of current technology. Each team will plan and create an audio CD with a number of tracks. Material can be derived from any style of performance, including live musicians, MIDI sequences, sample-based material and DJ techniques. Material used can be original compositions written by team members or sourced elsewhere, or it can be 'cover versions' of material from any source. When working with existing material, correct copyright procedures must be followed. If the material is original, each writer will be credited and the work protected effectively.

Each team member will be 'The Producer' for a range of contrasting material and participate in the remainder of the tracks. The focus for the unit is on teamwork, where each team member will have clearly-defined roles in the studio whilst creating a series of recordings. All learners will perform a range of roles and be expected to demonstrate effectively and record their skills in these areas. All learners must also 'engineer' for other producers in the team, but can perform these duties whilst 'producing' if appropriate to the style of music.

On completion of this unit each learner will have participated in the production of a fully finished, mastered audio CD recording.

● Learning outcomes

On completion of this unit a learner should:

1   Know how to plan and set up recording sessions that encompass a variety of techniques

2   Be able to undertake a range of roles in the recording and production of contrasting multi-track material

3   Be able to complete effective stereo mixes of the multi-track recordings

4   Be able to edit and master the material.

Unit content

1 Know how to plan recording sessions that encompass a variety of techniques

Plan recording sessions: session planning diary with diagrams of microphone setups; choice of microphones; DI box setups and equipment/instrument/drum set positioning; screens; EQ notes; talkback and fold-back; control of dynamics: compression, limiting, noise gates

Techniques: choosing direct injection against microphones eg for keyboards and bass instruments in particular, but other instruments where appropriate; choice of microphone technique eg close or ambient microphone techniques depending on genre of music

2 Be able to undertake a range of roles in the recording and production of contrasting multi-track material

Undertake roles: eg producer, arranger, engineer, studio assistant, musician, vocalist, DJ, MC

Recording: choose multi-track format eg hard-disc, tape-based, MiniDisc™, computer based; planning effectively; track sheets; balance; routing; sub-grouping; patch-bay

Production: time management; directing musicians and assistants eg tuning issues, timing issues; effective fold-back balance; acoustic separation

Contrasting material: eg up-tempo rock; rock ballad; acoustic/vocal; R&B; country; classical eg string quartet, chamber group; hip-hop; rap; choir; pop; indie

3 Be able to complete effective stereo mixes of the multi-track recordings

Stereo mixing: level balance; tonal range; stereo image; clarity; control of dynamics; processing eg reverb, chorus, echo, auto-tuning, normalising, harmonising; control of dynamics eg gating, compression, limiting; format eg CD, DAT, MiniDisc™

4 Be able to edit and master the material

Editing and mastering: track sequencing; track numbering; topping and tailing; track markers; cross-fades; processing eg equalise, normalise, time stretch, phase; control of dynamics eg compression, limiting

Assessment and grading criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P1 identify how to plan and set up recording sessions that utilise both microphones and directly recorded source material, taking into consideration the needs of the performers [IE]	**M1** describe how to plan and set up recording sessions that utilise both microphones and directly recorded source material, taking into consideration the needs of the performers	**D1** explain the planning and setting up of recording sessions that utilise both microphones and directly recorded source material, taking into consideration the needs of the performers
P2 record and/or produce multi-track material competently using given resources and personnel [EP]	**M2** record and/or produce multi-track material competently selecting resources and personnel	**D2** record and/or produce multi-track material competently selecting and justifying resources and personnel
P3 produce stereo mixes of the multi-track recordings competently using given resources [RL]	**M3** produce stereo mixes of the multi-track recordings competently selecting resources	**D3** produce stereo mixes of the multi-track recordings competently selecting and justifying resources
P4 edit and master the stereo material competently using given parameters. [CT]	**M4** edit and master the stereo material competently selecting parameters.	**D4** edit and master the stereo material competently selecting and justifying parameters.

PLTS: This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers	RL – reflective learners	SM – self-managers
	CT – creative thinkers	TW – team workers	EP – effective participators

Essential guidance for tutors

Delivery

This unit will need to be delivered within the context of a real production project. Production teams should be of a size that will ensure all members have the opportunity to carry out aspects of each role. It is likely that learners will utilise the skills developed in the unit *Music Production Techniques*, and/or *Sequencing Systems and Techniques* for the practical elements of this unit, but there should be a focus on organisational and creative elements of the process at all times.

The technology available should reflect current trends and enable learners to concentrate on these elements effectively. Multi-track recording can be done on a range of devices, including tape and dedicated hard disc recorder, although it is perfectly acceptable to complete the whole project within a computer system utilising software designed for the purpose. Similarly, mixing can be to tape, MiniDisc™, CD or a software file within the computer system used. Mastering can be via a dedicated hard-drive system or computer but must use audio CD at its conclusion. Teams may find it useful to prepare an MP3 version of their master.

Learners should be encouraged to listen to productions in a similar genre to those being attempted in order to analyse the results of the process in these commercial recordings. Learners should then discuss within their groups the techniques used before applying these techniques whilst engineering and in their own productions. Recordings may use both acoustic instruments and sequenced performances, and ideally should use a vocalist on at least one track per producer. Producers may choose to record wholly sequenced and wholly live tracks, or combine techniques where appropriate to style of music.

Learners should be encouraged to experiment with a range of technologies in a creative sense and, when in the 'producer' role, organise the sessions to a realistic time frame as they would in real world where budgets and deadlines can be tight. Each learner should, at the outset, be given a limited amount of rehearsal and studio time in which to complete the project, depending on the resources available. This time could be divided into rehearsal/track-laying/overdub/mixing/mastering sessions if desired. Within each team, learners will adopt a range of roles during the process.

In addition to their role as producer on contrasting tracks and engineer on further tracks, learners should assist in the studio for another producer or engineer by offering their services as a musician/vocalist at the discretion of the producer of each track. Each learner must '**Produce**' recordings totalling a minimum of 15 minutes of contrasting material. When in the role of the producer, each learner must ensure technical quality with the cooperation of the engineers, and quality of performance when directing the performer.

When choosing material to record, it is important that the producer considers available resources, including the ability of performers, before making the decision to undertake the recording of each track.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

Topic and suggested assignments/activities and/assessment
Introduction to the unit and structure of the programme of learning.
Whole class sessions on effective planning for production.
Assignment 1: Planning the Recordings – P1, M1, D1 Assignment overview: • individual, group and class sessions – example and method • research and preparation/diary • assessment, feedback and review.
Whole class sessions covering the choice of roles and tasks associated with a range of typical roles in production teams, and methods of production.
Assignment 2: Teamwork – P2, M2, D2 Assignment overview: • individual, group and class sessions – example and method/review • basic track recording and production • assessment, feedback and review.
Whole class sessions covering effective mixing of multi-track recording.
Assignment 3: The Right Mix – P3, M3, D3 Assignment overview: • individual, group and class sessions – example and method/review • mixing and sweetening of multi-track recordings • assessment, feedback and review.
Whole class sessions covering effective editing and mixing.
Assignment 4: Edit and Master – P4, M4, D4 Assignment overview: • individual, group and class sessions – example and method/review • editing and mastering of material • assessment, feedback and review.

Assessment

Learners will already be developing relevant practical skills when studying other units for example *Music Production Techniques* and *Sequencing Systems and Techniques*. This unit is an opportunity to use these skills to deliver a real production project in a real-world situation whilst performing a range of roles within a team chosen for its strengths by the participants. In order to meet P1 learners could identify ways to plan and set up a range of different recording sessions for example:

- four-piece group with drum set, electric guitar (amplified), bass guitar and keyboards

- sequenced piece utilising synthesisers, samplers and a live vocalist

- a solo vocal overdub session

- backing (multiple vocalist) vocal session

- acoustic guitar.

Learners would provide diagrams showing the placement of instruments, microphones, screens and musicians, plus information on the type of microphone or direct injection used for each application. As this is a production project, the comfort of the performer should be a major factor learners should consider when deciding on placement in the performance area or control room. Communication between the performers and producer/engineer should also be considered, as should acoustic separation between sound sources both in live areas and the control room.

Learners will need to provide details of any control of dynamics required – compression/gating/limiting likely to be needed to a greater or lesser degree in each situation, and diagrams to show how insertion points work when applying these devices should be provided. Each example should also have details of the type of headphone monitoring and talkback systems to be used.

For M1, the learner will further amplify, inform and guide, whilst for D1 there will in addition be some analysis, with proof that the learner has clear knowledge of the areas in question.

One way of meeting P2 could be to divide learners into production teams, with each team member rotating through a range of roles whilst creating the portfolio of multi-track recordings, with some tutor support. Each recording would have a team member as producer, and the producer would draw on the rest of the team for assistance whilst recording the track.

The producer could appoint team members over a range of roles, for example:

- engineer

- studio assistant

- production assistant

- musician(s)

- vocalist

- arranger.

Evidence could include tutor and peer observation reports, as well as audio recordings (with track sheets), studio diagrams and lyric sheets. Learners using software systems could use screenshots to illustrate methods of working.

One way of meeting P3 would be for learners to produce stereo mixes of their multi-track recordings, keeping records of relevant mixer setting, for example:

- fader settings
- equaliser settings
- effects used, and their settings
- control of dynamics
- sub-grouping
- patch-bay connections.

Learners utilising software systems could use screenshots as evidence. Other evidence could include tutor and peer observations to support the actual audio mixes produced. Some tutor support is allowed at pass level.

An effective way to meet P4 would be to put learners back into their production teams to work together on their completed portfolio of mixed recordings. The collective mixes produced for P3 will need to be matched to make a cohesive package and to this end the producers will need to agree certain aspects, for example:

- running order
- frequency characteristics
- dynamic range
- cross-fades.

It is at this point that the separate productions become a 'compilation' CD package, although producers will be responsible for their own tracks. Tutor witness statements would record the amount of support needed by each learner. Further evidence could be through screenshots from the mastering software used, or written notes detailing changes in equalisation and the control of dynamics. A production diary recording meetings to decide running order, etc would also be useful. Written evidence will be provided in the form of track sheets, studio diagrams, session diaries, and minutes of production meetings. When in the role of the producer, it would be beneficial for learners to keep a diary in which they record creative decisions during the recording and mixing process, and also technical information from editing and mastering sessions.

In order to meet M1, learners should describe why certain equipment choices were made. Learners should also be able to describe why separation is important when recording with microphones in a multi-track scenario. Any diagrams of studio layouts provided should be accompanied by a description of why learners have chosen to place performers and/or instruments in this way. In order to meet M2, learners must be able to perform all of the tasks with only occasional tutor/technician support. In order to meet M3, learners must be able to produce the mixes of multi-track recordings with only occasional support. In order to meet M4, learners should be able to edit and master the material with only occasional support. All tasks must be completed competently.

In order to meet D2, learners should perform all tasks competently and independently to near professional expectations. Learners should also show a comprehensive understanding of the range of techniques required in the production of contrasting material.

In order to meet D3, learners will produce mixes independently which reflect near professional expectations – both creative and technical. In order to meet D4, learners will have edited and mastered the material competently and independently. The resultant finished product will be to near professional expectations.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the grading grid. This is for guidance and it is recommended that centres either write their own assignments or adapt any Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
P1 M1 D1	Planning the Recordings	Brief to present a request for resources needed for the production project.	Evidence may include: • presentation • equipment lists • report.
P2 M2 D2	Teamwork	Brief to present a selection of multi-track recordings with rough mixes to a record company for a development project.	Evidence may include: • production diary • recordings • tutor observation • A/V evidence • proposal.
P3 M3 D3	The Right Mix	Brief to take a selection of the recordings to the next level – mixing.	Evidence may include: • production diary • stereo mixes • tutor observation • A/V evidence.
P3 M3 D3	Edit and Master	Learners have been given the go-ahead from the record company to complete the contrasting material.	Evidence may include: • production diary • mastered CD • tutor observation • A/V evidence.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC Music and Music Technology sector suite. This unit has particular links with the following unit titles in the BTEC Music and Music Technology suite:

Level 1	Level 2	Level 3
	Planning and Creating a Music Product	Music Production Techniques
	Producing a Musical Recording	Sequencing Systems and Techniques

This unit also has links with the following National Occupational Standards:

Technical Theatre

- CPD1 – Improving your skills
- HS1 – Working safely.

Essential resources

Ideally, learners should have access to soundproofed recording studios in order to be able to work undisturbed and not disturb others. Equipment available should mirror current trends but can include 'vintage' technology where appropriate. The mixer used should have at least eight group outputs, both pre- and post-fade sends, and a minimum of three-band equalisation, but preferably with swept-midrange. Insert points should be available for the connection of external devices.

A full range of microphones, including dynamic and condenser types should be available, as well as multi-track facilities. A multi-track recorder must have a minimum of eight tracks, but can use a variety of formats, including tape, hard disc and computer system.

If a computer system is used for multi-track recordings, its sound card should have a minimum of eight separate inputs. The studio should have an effective monitoring system and use suitable acoustic treatment where necessary to enable learners to produce mixes of optimum quality that will sound good in a range of different situations on different speaker systems.

A range of effects are required such as reverb, chorus, and delay, plus units for the control of dynamics – compression, limiting and gating. Effects and control of dynamics can also be via inboard on a desk, or with plug-ins in a computer system where this method has been chosen. Suitable, reliable storage and backup of material is essential, particularly where the whole process is to be performed within a computer system. Foldback and talkback systems via headphones should be utilised for effective communication between studio and control room.

Learners should aim to keep a diary, track-sheets and other session documentation by electronic or other means and the resources to print screenshots – preferably in colour.

An effective mastering system, either in a computer-based software system or dedicated hardware system should be available, although if the budget will support it, the centre may choose to commercially master the project.

Indicative reading for learners

Websites

www.record-producers.com	Management agency for record producers
www.recordproduction.com	Producers blog and news site

Delivery of personal, learning and thinking skills

The table below identifies the opportunities for personal, learning and thinking skills (PLTS) that have been included within the pass assessment criteria of this unit.

Skill	When learners are …
Independent enquirers	researching specialist microphone types for track recording
Creative thinkers	editing material for CD master
Reflective learners	reviewing stereo mixes for possible improvements
Team workers	setting up for track recording, in teams
Self-managers	working alone in studio/developing mixes
Effective participators	contributing at Production team meetings.

Although PLTS are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are …
Independent enquirers	considering production alternatives
Creative thinkers	selecting effects when mixing
Reflective learners	selecting studio 'takes'
Team workers	rehearsing with musicians prior to tracking sessions
Self-managers	ensuring deadlines are met
Effective participators	supporting others in the production team.

Functional Skills – Level 2

Skill	When learners are …
ICT – Use ICT systems	
Use ICT to effectively plan work and evaluate the effectiveness of the ICT system they have used	completing a studio diary
Manage information storage to enable efficient retrieval	saving and retrieving electronic diary – where applicable
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	completing internet research
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	discussing the group repertoire.