



National Unit Specification: general information

UNIT Digital Acquisition and Editing: Audio (SCQF level 6)

CODE F3T7 12

SUMMARY

The overall aim of this Unit is to enable candidates to be able to successfully capture, edit and manipulate audio files incorporating multi-track techniques. The Unit will provide candidates with the knowledge and skills required to manipulate an audio file to a professional standard using industry standard file types, and prepare it for insertion to multi-track software by use of cropping tools, effects and amplitude fades. The candidate will also gain knowledge of the correct use of appropriate file types and correct storage and labelling processes. The candidate will have the knowledge of copyright law and its application in the field of audio.

OUTCOMES

- 1 Describe the effect on digital audio of recording, editing and playback techniques.
- 2 Identify and plan the acquisition of digital audio for a specified multi-track brief.
- 3 Acquire and manipulate sound using multi-track techniques in accordance with a specified multi track brief.
- 4 Playback and evaluate a multi-track recording in accordance with a given brief.

RECOMMENDED ENTRY

While entry is at the discretion of the centre, candidates would normally be expected to have attained one of the following:

- ◆ F1JT 10 *Digital Media: Audio Acquisition*
- ◆ F1KT 11 *Digital Media: Audio Editing*

Administrative Information

Superclass: CB

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CREDIT VALUE

1 credit(s) at National Certificate (6 SCQF credit points at SCQF level 6*).

**SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

CORE SKILLS

While there is no automatic certification of Core Skills in this Unit there may be opportunities for developing aspects of Core Skills.

National Unit Specification: statement of standards

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Acceptable performance in this Unit will be the satisfactory achievement of the standards set out in this part of the Unit Specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

OUTCOME 1

Describe the effect on digital audio of recording, editing and playback techniques.

Performance Criteria

- (a) Describe the effects of sampling rates and compression on audio recording
- (b) Describe the effect of impedance on audio signals
- (c) Describe a range of multi-track recording and editing techniques

OUTCOME 2

Identify and plan the acquisition of digital audio for a specified multi-track brief.

Performance Criteria

- (a) State the expected quantity, type and quality of digital audio from the brief
- (b) State the possible sources of digital audio and any potential copyright issues
- (c) Identify the hardware requirements for acquisition of digital audio for the brief
- (d) Plan a schedule for digital audio acquisition to meet the requirements of the brief

OUTCOME 3

Acquire and manipulate sound using multi-track techniques in accordance with a specified multi track brief.

Performance Criteria

- (a) Acquire audio files in accordance with the acquisition schedule
- (b) Mix a multi-track recording using acquired audio tracks in accordance with the given brief
- (c) Manipulate audio tracks using multi-track recording techniques accordance with the given brief
- (d) Use appropriate media to store the manipulated multi-track audio file in accordance with the given brief

National Unit Specification: statement of standards (cont)

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OUTCOME 4

Playback and evaluate a multi-track recording in accordance with a given brief.

Performance Criteria

- (a) Ensure completeness and quality by playing back the multi-track recording
- (b) Evaluate the finished product against the requirements of the brief
- (c) Evaluate own performance in planning, acquiring and mixing the multi-track recording

EVIDENCE REQUIREMENTS FOR THIS UNIT

Written and/or oral recorded, performance and product evidence is required which demonstrates that the candidate has achieved the requirements of all the Outcomes and Performance Criteria to show that the candidate has appropriate knowledge and understanding of the content of this Unit.

Candidates are required to provide written and/or oral recorded evidence for Outcome 1. The evidence for this Outcome must be obtained under controlled, supervised conditions. The assessment will be closed-book and should last no more than 45 minutes. The instrument of assessment will provide opportunities for the Outcome to be fulfilled by means of sampling across the range of the content of Outcome 1. Where re-assessment is required it should contain a different sample from the range of mandatory content. Achievement can be decided by use of a cut-off score. Each sample must include the following:

- ◆ at least two different sampling rates in relation to digital audio
- ◆ identification of the effect of two different types of compression techniques on both files size and audio quality
- ◆ two examples of impedance and their impact on an audio signal
- ◆ two examples of multi-track audio techniques from: reverb, equalisation, panning and setting of individual track levels
- ◆ two examples of how phase can cause problems in multi microphone recording
- ◆ two examples of how phase can cause problems in multi-track audio file playback
- ◆ two examples of solutions to phase problems

Performance and product evidence is required for Outcomes 2 and 3. For Outcomes 2 and 3 the centre must provide the candidate with a brief which covers the following:

- ◆ a multi-track recording, of at least two tracks, lasting at least two minutes and no more than 4 minutes
- ◆ at least three different audio components
- ◆ at least two multi-track editing effects
- ◆ specification of the file formats required for all audio files

National Unit Specification: statement of standards (cont)

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For Outcomes 2 and 3 candidates are required to provide:

- ◆ written and/or recorded evidence which consists of:
 - a plan that identifies:
 - appropriate expected quality of audio deduced from brief
 - possible sources of audio and potential copyright issues
 - practical hardware requirements for audio acquisition
 - a schedule for audio acquisition within the constraints of the given brief
 - an assessor checklist that confirms that the candidate can:
 - correctly connect, set up and adjust recording and computer equipment to optimise the audio capture and recording quality for the given brief
 - convert captured audio to a suitable file format
 - demonstrate that the recording is carried out with proper regard to relevant health and safety regulations
 - demonstrate that the completed recording is clearly identified, quality assured for suitable quality and using appropriate file format in accord with the given brief
 - demonstrate that copyright law is observed in the acquisition of audio materials and that clearance has been obtained for relevant materials.
 - apply at least two appropriate audio effects to the multi track audio file chosen from reverb, equalisation and compression and setting of individual track levels

- ◆ Product evidence which consists of a portfolio of at least:
 - at least three digital audio samples which have been acquired and stored as required by the brief and the plan of activities
 - a modified digital audio multi track presented in a manner specified within the brief
 - copyright acknowledgement for all digital audio samples within the portfolio

The assessor observation checklist will be used to record that all the tasks have been undertaken correctly by the candidate. An assessor must endorse each checklist with the candidate's name, their name, signature and date.

Written and/or oral recorded evidence is required for Outcome 4 which demonstrates that the candidate has evaluated the final product against the multi-track brief and their own performance related to the original plan.

National Unit Specification: support notes

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This part of the Unit Specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

GUIDANCE ON THE CONTENT AND CONTEXT FOR THIS UNIT

The overall aim of this Unit is to enable candidates to be able to successfully capture, edit and manipulate audio files incorporating multi-track techniques. The Unit will provide candidates with the knowledge and skills required to manipulate an audio file to a professional standard using industry standard file types, and prepare it for insertion to multi-track software by use of cropping tools, effects and amplitude fades. The candidate will also gain knowledge of the correct use of appropriate file types and correct storage and labelling processes. The candidate will have the knowledge of copyright law and its application in the field of audio. The candidate will also be made aware of risk assessments and health and safety when setting up and working with audio equipment.

Any appropriate software can be used to deliver the Unit and is not prescriptive, providing that the software is capable of providing multi-track manipulation processes required. The use of multi-track audio will include effects, equalising, panning and setting of individual track levels

Multi-track techniques should include inserting tracks, setting individual track levels to achieve a clear mix, adding equalising, adding effects to each track appropriate to context eg reverb, chorus etc also panning of tracks to create a stereo sound stage.

The given brief should incorporate all the knowledge and skills learned in the Unit ie edit, insertion, equalising, effects and panning. Candidates should store the completed files appropriately and prepare a report outlining process and justifying decisions made such as choice of effects.

The candidate will evaluate their own performance of the finished product and will draw conclusions from the activity

Candidates could be exposed to the different acquisition sources/methods through short practical/demonstration sessions.

National Unit Specification: support notes (cont)

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GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

Outcome 1

A practical hands on approach to learning should be adopted to engage learners and exemplify key concepts. Practical activities should be underpinned by appropriate knowledge before candidates commence these activities.

Outcome 2

Candidates should be introduced to a range of scheduling and planning techniques such as storyboarding. This could be carried out as a group activity but assessed on an individual basis. The recording of audio is likely to involve group activity. Candidates should ensure that health and safety guidelines are followed and that the audio captured is of an appropriate quality.

Outcome 3

The purpose of this Outcome is to allow the candidate to work with the multi-track software and become comfortable with its features such as individual channel volumes and how to add effects such as pan, eq and reverb. The multi-track file may contain recordings the candidate has made for instance a solo performer or band. The candidate may alternatively mix a number of differing audio tracks to create a composite track or the candidate could also be mixing audio for video purposes, mixing audio commentary with the original recording and adding music to create a composite track for example.

A hands on approach should be adopted to give the candidate as much exposure as possible to the software to allow them to become competent on its use.

Outcome 4

Candidates may evaluate a number of existing multi-track audio files to identify the appropriateness of various multi-track techniques. A pro forma list detailing appropriate criteria may be used to assist evaluation skills.

OPPORTUNITIES FOR CORE SKILL DEVELOPMENT

In this Unit candidates will have the opportunity to gather evidence towards Core Skills.

The use of specialist audio software may provide opportunities to develop aspects of the Core Skill of *Information Technology* at an appropriate level. The practical activities of recording and mixing audio files may provide opportunities to develop aspects of the Core Skill of *Working with Others* at an appropriate level. The evaluation of the final product and the candidate's own performance may provide opportunities to develop aspects of the Core Skill of *Problem Solving* at an appropriate level

National Unit Specification: support notes (cont)

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GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

Opportunities for the use of e-assessment

E-assessment may be appropriate for some assessments in this Unit. By e-assessment we mean assessment which is supported by information and communications technology (ICT), such as e-testing or the use of e-portfolios or e-checklists. Centres which wish to use e-assessment must ensure that the national standard is applied to all candidate evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. Further advice is available in *SQA Guidelines on Online Assessment for Further Education (AA1641, March 2003)*, *SQA Guidelines on e-assessment for Schools (BD2625, June 2005)*.

The assessment for Outcome 1 may be in the form of an objective test consisting of a suitable number and range of questions to cover all Outcomes and Performance Criteria. It is anticipated that this assessment will be carried out towards the end of the Unit once candidates have had an opportunity to acquire the essential knowledge and understanding required to give them a realistic prospect to pass the assessment.

The assessment for Outcome 1 is well-suited to online assessment. The assessment of knowledge and understanding may be assessed using an item bank of appropriate questions.

The assessment for Outcomes 2 and 3 is a practical assessment consisting of observation of the candidate over an extended period of time during which the assessor is required to maintain a checklist of activity. It is recommended that this assessment is started at the earliest opportunity, as soon as the candidate has acquired the necessary knowledge and skills to permit him/her to commence appropriate tasks.

The brief, should where possible, take account of the candidates' interests. For example it may allow the use of recordings the candidate has made as a solo performer or band member. Or it could allow the mixing of a number of differing audio tracks to create a composite track or the candidate could also be mixing audio for video purposes, mixing audio commentary with the original recording and adding music to create a composite track.

In Outcome 4 a pro forma checklist may be provided to assist the candidate with the evaluation of the product and also their own performance.

CANDIDATES WITH DISABILITIES AND/OR ADDITIONAL SUPPORT NEEDS

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering alternative Outcomes for Units. Further advice can be found in the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs* (www.sqa.org.uk).