



National Unit Specification: general information

UNIT Sound Engineering and Production (SCQF level 4)

CODE F78F 10

SUMMARY

This Unit will give candidates the opportunity to develop basic practical sound engineering and production skills which will allow them to use multi-track recording equipment to record and mix audio from a variety of sources. Candidates will use sound engineering equipment and techniques to create a multi-track recording and will then use this material to produce an edited stereo mix to achieve a final audio product. Current sound production standards and practices will be used in conjunction with creative mixing techniques.

This Unit is available as a free-standing Unit, which may be studied as part of a general education, as a leisure interest, or for vocational reasons. It provides an introduction to the study of sound engineering and production for those with little or no previous experience. It is one of a series of *Sound Engineering and Production* Units which progress from SCQF level 4 to SCQF level 7.

OUTCOMES

- 1 Create a multi-track recording in accordance with a given brief.
- 2 Create an edited stereo mix from a multi-track recording in accordance with a given brief.

RECOMMENDED ENTRY

Entry is at the discretion of the centre.

CREDIT VALUE

1 credit at SCQF level 4 (6 SCQF credit points at SCQF level 4*).

**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.*

Administrative Information

Superclass: KG

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National Unit Specification: general information (cont)

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CORE SKILLS

There is no automatic certification of Core Skills in this Unit.

The Unit provides opportunities for candidates to develop aspects of the following Core Skills:

- ◆ *Communication*
- ◆ *Problem Solving*
- ◆ *Working with Others*

These opportunities are highlighted in the Support Notes of this Unit Specification.

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

Create a multi-track recording in accordance with a given brief.

Performance Criteria

- (a) Select appropriate microphone(s) and placement techniques for the source signals.
- (b) Set appropriate system gain structure and input monitoring levels for the source signals.
- (c) Effectively record sources with appropriate signal levels, quality and tracking arrangements.
- (d) Create and maintain an accurate recording log.

OUTCOME 2

Create an edited stereo mix from a multi-track recording in accordance with a given brief.

Performance Criteria

- (a) Apply panning and equalisation mixing techniques to achieve an even stereo balance.
- (b) Apply time domain effects in the mix.
- (c) Apply signal level balancing to achieve appropriate mix and output bus levels.
- (d) Create a stereo mixdown.
- (e) Edit stereo mixdown to create a stereo master.

National Unit Specification: statement of standards (cont)

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EVIDENCE REQUIREMENTS FOR THIS UNIT

Product evidence is required to demonstrate that candidates have achieved all Outcomes and Performance Criteria.

Outcome 1

Each candidate will work to a given brief and produce a multi-track recording for this assessment using a minimum of:

- ◆ four discrete recorded tracks
- ◆ one microphone source
- ◆ one line source

The recording should be of at least one minute's duration.

Each track should be recorded:

- ◆ at an appropriate signal level
- ◆ with as little electrical and background noise as possible
- ◆ with appropriate EQ and mic placement to achieve acceptable tonal qualities

Candidates are also required to create and maintain a recording log. The recording log should accurately detail:

- ◆ microphone types selected
- ◆ recording times
- ◆ a track sheet

Product evidence should be supplemented with an Assessor Observation Checklist, detailing the candidate's ability to meet the standards specified in the Outcome and Performance Criteria.

This assessment will take place under supervised conditions at appropriate points in the Unit.

Outcome 2

Each candidate will work to a given brief and produce a stereo mix from a multi-track recording using a minimum of:

- ◆ two channels panned
- ◆ two channels equalised

The mixdown should be an edited stereo master.

Product evidence should be supplemented with an Assessor Observation Checklist, detailing the candidate's ability to meet the standards specified in the Outcome and Performance Criteria.

This assessment will take place under supervised conditions at appropriate points in the Unit.

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

This Unit allows candidates to gain experience and competence in basic multi-track recording, simple editing techniques and applying an understanding of sound engineering and production skills.

Candidates may require guidance in the set up and dismantling of equipment. Industry conventions and standards on health and safety must be observed at all times.

The use of equalisation and pan control should reflect an appropriate stereo image and frequency content with regard to the brief. The use of effects and signal balancing should be appropriate to the musical or source content and the requirements of the given brief.

The mixdown master will be edited and the creation of the final format should be correct in terms of industry standard.

When using microphones, candidates should be aware that microphone techniques and placement are critical to the capture/recording quality, and that the placement and application is dependent upon factors such as acoustic environment, instrumentation and performer.

GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

Learning and teaching should be practical and fully integrated with, and related to audio for multimedia, musical performance or radio production with dialogue.

Useful classroom activities might include teacher/lecturer demonstrations of industry standard practice and, more generally, good working practice.

Candidates would benefit from the experience of comparing their mixes with commercial recordings of a similar genre, which would allow a technical comparison and aural discrimination of recording and production values. Candidates should continually evaluate their work and make decisions based on signal quality, quality of performance and whether or not another take/pass of the source recording is required.

Working with musicians, producers or musical groups will require candidates to liaise closely with performers/clients/producers and show organisational, interpersonal and communication skills.

Microphone types should be discussed focusing on polar pattern, frequency response and application. Example recordings could be listened to and test recordings could be made by candidates to aid learning through practice.

The use of equalisation and panning should be taught by listening to and analysing examples. The application of time domain effects and mix level balancing should be taught by listening to and analysing examples of different effect types and uses.

National Unit Specification: support notes (cont)

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Initial practice recordings could be done in small groups to allow group evaluation and discussion to take place.

Health and safety should be integral to teaching and learning, and centres should view this holistically in any practical exercises. Candidates should be made aware that Health and Safety is the concern of all professionals and should adhere to current legislation.

Candidates must be aware of, and adhere at all times to the requirements of current copyright legislation in relation to the creation, performance and use of music and other forms of intellectual property.

OPPORTUNITIES FOR CORE SKILL DEVELOPMENT

Candidates will have the opportunity to develop aspects of the Core Skill of *Problem Solving* during Outcomes 1 and 2, when they will be carrying out the task of creating and editing a recording. They will also develop aspects of *Problem Solving* as they continually evaluate their work and make decisions based on signal quality and quality of performance.

If initial practice recordings are done in small groups to allow group evaluation and discussion to take place, candidates will also have the opportunity to develop aspects of the Core Skills of *Communication* and *Working with Others*.

GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

A suitable method of assessment would be a project brief within which candidates undertake a series of practical exercises. The brief could, for example, detail the recording of a musical performance, Foley sound effects or speech dialogue.

The brief could specify:

- ◆ purpose and instruments/source to be recorded (eg music, Foley, or dialogue)
- ◆ recording format (eg digital file type, sampling frequency and bit depth)
- ◆ type of effect to be used and where (eg reverb on percussion, delay on vocal)
- ◆ master fade in or fade out (eg 5 or 10 second)
- ◆ appropriate master output level
- ◆ type of edit required (eg top and tail)
- ◆ industry standard stereo format for submission

National Unit Specification: support notes (cont)

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Outcome 1: Practical exercise with session log

Different audio sources should be routed to individual tracks of a multi-track recorder and should be recorded at an appropriate level without distortion.

A log of the recording and a track sheet are required for submission and marking. The multi-track recording format should be stored on an appropriate medium for marking.

Outcome 2: Practical exercise

Equalisation, time-domain effects, panning and balancing will be used when producing the stereo mix and the piece should be assessed for the quality of production and the output bus levels. Candidates will be encouraged to compare their mix(es) with commercial recordings of a similar style.

The stereo audio mixdown will be edited in a manner that meets the requirements of the brief. For example, basic topping and tailing could be applied to ensure a noiseless start and end to the mix. The appropriate industry format for submission will be stated in the brief.

Time should be allowed for any necessary re-assessment.

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)*.

DISABLED CANDIDATES AND/OR THOSE WITH ADDITIONAL SUPPORT NEEDS

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering whether any reasonable adjustments may be required. Further advice can be found on our website

www.sqa.org.uk/assessmentarrangements