



Higher National Unit Specification

General information for centres

Unit title: Sound Production Practice 2

Unit code: DR1K 35

Unit purpose: This Unit is designed to give candidates a clear knowledge and advanced understanding of sound production practice. It will prepare them to undertake complex recording tasks, from a brief, by providing them with the practical skills involved in the spatial miking, recording and accurate replay of audio sources. This Unit is intended primarily for candidates who are interested in pursuing a career in sound production.

On completion of the Unit, the candidate should be able to:

- 1 Identify suitable microphones and techniques to accurately capture an audio source.
- 2 Design a multi-channel system to record and reproduce an audio source.
- 3 Evaluate the effectiveness of the system.

Credit points and level: 1 HN Credit at SCQF level 8: (8 SCQF credit points at SCQF level 8*)

**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.*

Recommended prior knowledge and skills: Candidates should have completed and passed the HN Units: Sound Production Theory 1 and Sound Production Practice 1.

Access to this Unit will be at the discretion of the centre.

Core skills: There may be opportunities to gather evidence towards Core Skills in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

Context for delivery: If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

General information for centres (cont)

Unit title: Sound Production Practice 2

Assessment: The assessment is designed to check the candidate's practical ability to utilise theoretical knowledge of spatial miking techniques and multi-channel reproduction to produce an accurate audio sound field from a given source. It is envisaged that the Outcomes will be assessed individually. Alternatively, the assessment of Outcomes 1 and 2 could be carried out as a single task in response to a given brief.

Outcome 1 is assessed by a practical exercise.

Outcome 2 is assessed by a practical exercise.

Outcome 3 should be assessed by the production of a written report.

Please note candidates must address all knowledge and/or skills and achieve all of the minimum evidence specified for each Outcome, combination of Outcomes or for the Unit as a whole in order to pass the Unit.

Higher National Unit specification: statement of standards

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The sections of the Unit stating the Outcomes, knowledge and/or skills, and evidence requirements are mandatory.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the knowledge and/or skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

Outcome 1

Identify suitable microphones and techniques to accurately capture an audio source

Knowledge and/or skills

- ◆ Microphone types
- ◆ Polar response
- ◆ Frequency response
- ◆ Coincident pair
- ◆ Spaced pair
- ◆ Mid-side array
- ◆ Dummy head (binaural)
- ◆ Spot microphones
- ◆ Phase anomalies

Evidence Requirements

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can:

- ◆ select microphones fit for the purpose of the brief with reference to construction, polar and frequency response and sensitivity
- ◆ demonstrate knowledge of microphone placement and arrays

Evidence should take the form of a practical exercise generated in response to a written or verbal brief. Candidates should provide a detailed floor plan indicating the nature of the audio source, including microphone choice and placement. The response should also include justification of microphone choice, relative phasing and an explanation of array arrangements such as coincident pair, mid-side, spaced pair or spot.

There are no conditions for this assessment.

Higher National Unit specification: statement of standards (cont)

Unit title: Sound Production Practice 2

Assessment guidelines

This assessment may be combined with the assessment of Outcome 2 where candidates will identify suitable microphones and techniques to capture audio then, undertake the design and set-up of a multi-channel system to record and reproduce the original audio source. Candidates should provide justification of microphone choice, relative phasing and an explanation of array arrangements, format used, channel bussing and panning equalisation and speaker placement.

Should there be ambiguity regarding a candidate's response, oral questioning may be used to eliminate any doubt as to the candidate's understanding. The lecturer should note questions and responses.

Outcome 2

Design a multi-channel system to record and reproduce an audio source

Knowledge and/or skills

- ◆ Multiple channel recording
- ◆ Multiple speaker reproduction systems
- ◆ Output bussing/panning
- ◆ Equalisation
- ◆ Creation of a sound field with regard to image perspective and timing

Evidence Requirements

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can:

- ◆ identify and assemble the components required to perform a multi-channel recording and multi-speaker reproduction of the recording
- ◆ correctly operate the system to record an audio source using spatial recording techniques
- ◆ correctly, operate the system to reproduce an accurate representation of the source sound field with regard to image perspective and timing

Evidence should take the form of a practical exercise generated in response to a written or verbal brief where candidates are involved in a recording session that recreates an original sound field by combining multi-channel techniques with multiple speaker monitoring systems (four or more). A detailed diagram of the selected system should be produced along with justification of the format used, channel bussing and panning equalisation and speaker placement.

There are no conditions for this assessment.

An observation checklist must be used to record evidence of the recording session.

Higher National Unit specification: statement of standards (cont)

Unit title: Sound Production Practice 2

Assessment guidelines

This assessment may be combined with the assessment of Outcome 1 where candidates will identify suitable microphones and techniques to capture audio, then undertake the design and set-up of a multi-channel system to record and reproduce the original audio source. Candidates should provide justification of microphone choice, relative phasing and an explanation of array arrangements, format used, channel bussing and panning equalisation and speaker placement.

Should there be ambiguity regarding a candidate's response, oral questioning may be used to eliminate any doubt as to the candidate's understanding. The lecturer should note questions and responses.

Outcome 3

Evaluate the effectiveness of the system

Knowledge and/or skills

- ◆ Imaging
- ◆ Acoustic conditions
- ◆ Monitoring systems
- ◆ Current multi-speaker formats

Evidence Requirements

Candidates will need to provide evidence to demonstrate their knowledge and/or skills by showing that they can:

- ◆ evaluate the effectiveness of the selected system in capturing and reproducing an audio source
- ◆ evaluate the acoustic conditions and the effect on techniques employed at the time of recording

Candidates should provide a written report, which accurately and clearly explains the choice of equipment used, the techniques employed and compares the effectiveness of recreating the sound field against that of current multi-speaker formats.

There are no conditions for this assessment.

Assessment guidelines

It is recommended that this Outcome is assessed individually.

Should there be ambiguity regarding a candidate's response, oral questioning may be used to eliminate any doubt as to the candidate's understanding. The lecturer should note questions and responses.

Administrative Information

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Version	Description of change	Date
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Higher National Unit specification: support notes

Unit title: Sound Production Practice 2

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 is primarily intended to give candidates knowledge of sound production practice for use within, but not exclusively, the HN Sound Production framework.

Outcome 1 looks at the practical application of advanced microphone selection and techniques. This Outcome is covered within three key areas of knowledge: spatial microphone techniques, multi-microphone and spaced arrays, and the correct placement of microphones in relation to the technique being used. Sound Production Theory 2 would be ideal for augmenting the delivery of this Unit.

Outcome 2 looks at the recording and reproduction of a sound field by the use of multi-channel/multi-speaker systems. This Outcome is covered within three key areas of knowledge: multi-channel recording, reproduction using multiple speaker systems and the use of panning, bussing and equalisation to recreate a sound field.

Outcome 3 looks at how effective the choice of technique and equipment has been. Candidates will have to evaluate their chosen method against current formats.

Guidance on the delivery and assessment of this Unit

This has been developed as a mandatory Unit in the HN Sound Production framework. It complements the Unit Sound Production Theory 2 and provides practical activity required for the Group Award.

It is recommended that this Unit be delivered after completion of the Units Sound Production Theory 1 and Sound Production Practice 1. If not included in a specific framework, it would be beneficial to run this Unit with other theoretical and practical Sound Production Units — this would allow candidates the opportunity to use and underpin their knowledge and skills.

The assessment of this Unit is designed to test candidates' retained knowledge of sound production practice.

It is envisaged that the Outcomes will be assessed individually. Alternatively, the assessment of Outcomes 1 and 2 could be carried out as a single task in response to a given brief.

Outcome 1 is assessed by a practical exercise.

Outcome 2 is assessed by a practical exercise.

Outcome 3 should be assessed by the production of a written report.

Higher National Unit specification: support notes (cont)

Unit title: Sound Production Practice 2

There are no conditions for assessments.

Open learning

It may be possible for this Unit to be completed on an open learning basis, although centres will need to devise and approve methods for ensuring the validity of submitted work that contributes to assessment evidence.

For further information and advice please refer to *Assessment and Quality Assurance for Open and Distance Learning* (SQA, — publication code A1030).

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.

General information for candidates

Unit title: Sound Production Practice 2

This Unit is designed to enable you to identify, describe and undertake the practical applications of the principles of sound production theory, and is intended to enable you to further develop and use the knowledge and skills of sound production.

On completion of the Unit, you should be able to:

- 1 Identify suitable microphones and techniques to accurately capture an audio source.
- 2 Design a multi-channel system to record and reproduce an audio source.
- 3 Evaluate the effectiveness of the system.

In order to complete this Unit successfully, you will be required to achieve a satisfactory level of performance in all three Outcomes. Outcomes 1 and 2 may be assessed individually or combined together in the form of a practical exercise which you will carry out from a written or verbal brief. Outcome 3 should be assessed by the production of a written report.

Much of the basic knowledge can be found in *Modern Recording Techniques*, written by Huber and Runstein, or the *Music Technology* series published by the Focal Press.

The internet can be a good source of information but you should check with your tutor as to the validity and authenticity of any site and/or information.