

**-SQA-SCOTTISH QUALIFICATIONS AUTHORITY**

**Hanover House  
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**NATIONAL CERTIFICATE MODULE DESCRIPTOR**

<b>-Module Number-</b>	<b>0091317</b>	<b>-Session-1989-90</b>
<b>-Superclass-</b>	<b>KG</b>	
<b>-Title-</b>	<b>MUSIC PRODUCTION AND SOUND ENGINEERING: FOUR TRACK SOUND RECORDING 1</b>	
<b>-DESCRIPTION-</b>		
Purpose	The purpose of this module is to develop the student's skills in four track sound recording. The module is designed for those who wish to further their skills in stereo recording and may be of interest to both music students and also those who have had no previous musical experience. The module may be offered in conjunction with many of the other National Certificate Music modules.	
Preferred Entry Level	91315 Music Production and Sound Engineering: Stereo Sound Recording 1 or evidence of proficiency in skills equivalent to the above.	
Learning Outcomes	The student should: <ol style="list-style-type: none"><li>1. demonstrate a practical ability in using four track sound production equipment;</li><li>2. produce stereo master recordings mixed from four tracks of recorded music.</li></ol>	
Content/ Context	<u>Corresponding to Learning Outcomes 1-2:</u>  N.B. Safety procedures and safe working practices must be observed at all times.  <ol style="list-style-type: none"><li>1. Functions and purposes, assembly, interconnection, operation and dismantling of equipment to include:  plugs/sockets, fuses, amplifier, power cables and audio leads, speakers, headphones, microphones, microphone stands, tapes with bias compatible with equipment, stereo tape deck, a mixing desk and a four track tape recorder or equipment which</li></ol>	

combines the functions of the latter two items of equipment.

Correct arrangement of mains and recording cables.

Care of equipment with regard to:

tidiness and methodical approach both when in use and in transportation; tape storage and tape-head cleaning; safety procedures including regular inspection of all power and audio leads and connectors.

2. Recording procedures to include:

recording on four tracks; use of microphone placement or direct injection where appropriate; signal routing; noise reduction; recording levels; cueing and fading; click tricks; foldback monitoring; overdubbing and simultaneous synchronisation; monitoring of recording to ensure that input and output levels are sufficient without overloading tape, amplifier and speakers.

Mixing procedures to include:

mixing down of four tracks onto stereo master tape; reference to recording levels, balance, panning, equalisation, noise reduction; editing to include appropriate location, cueing and fading; awareness of problems caused by generation loss, crosstalk; monitoring of recordings to ensure that input and output levels are sufficient without overloading tape, amplifier and speakers.

Suggested  
Learning and  
Teaching  
Approaches

The Learning Outcomes should be developed through an integrated programme with the routines supporting the central outcome, ie the production of stereo master recordings mixed from four tracks of recorded music. The tutor should advise, facilitate and teach directly employing varied approaches which include demonstration and discussion. Care should be taken throughout the module to adjust teaching approaches according to each student's needs.

The size of the teaching group will be determined by the availability of equipment but it is essential that each student is continuously engaged in practical tasks. Tutors should be aware of the advantages of running this module in conjunction with others such as Music Making, Music Invention and Listening to Music: viable teaching groups can be formed where the amount of sound recording equipment is limited; students who are competent musicians can employ their skills in taking part as performers in recording sessions; a range of competencies can be developed, providing the students with the opportunities to be certificated in more than one module.

Students should be encouraged to take a good measure of responsibility for their own learning, e.g. in personal routines and general duties. The importance of individual responsibilities and well structured work routines should be outlined during induction and regularly reinforced and the needs of other students emphasised.

Students should work from progressive pre-prepared units of work which include core, remedial and extension materials which allow them to progress at their own level and pace. They should also be encouraged to use structured materials, trade magazines and books for reference. Well produced worksheets with graphics, illustrating equipment and practical procedures, can assist in the management of programmes of work and the execution of skills. They can also be invaluable in promoting independent study habits.

Teaching methods could involve work stations, each catering for two or three students in different tasks to ensure full student participation. The simultaneous operation of several different work stations would allow more than one activity to take place within the teaching block. Individual targets should be set at the beginning of each lesson but students studying for this module should be encouraged to take some initiative and to try to work independently, with occasional support from the tutor. Work already attempted should be revised and consolidated before moving on. Students should keep tape recordings of work which they have engineered along with a note of the details, location and date. These recordings should be used as a basis for personal and group discussion and also as a record of the student's achievement. The tapes may also be used for teaching purposes.

Verbal and written instructions should be framed in terms which the student can apply to recording and mixing routines and course organisation. A working knowledge of the basic technical language appropriate to these procedures should be encouraged and simplified in any way necessary to assist the student to achieve Learning Outcome 2.

#### Assessment

#### Procedures

Formative assessment should operate as an integral part of learning and teaching in the module. It may include assessment of the student's work by the tutor, by the student and by peers. This will be achieved in the main through discussion of work completed, and should be supported by the tutor's checklist. Work should be recorded on audio for playback and review. Each student should keep a diary of work during this module. Diaries and audio recordings should be available to a Subject Assessor. Each student should be issued with a record sheet at the outset of the module and its various purposes should be explained:

- (a) it informs the students of the minimum which is taught and learned;
- (b) it informs the students of the learning/teaching activities they will undertake (this section of the record sheet is open and is completed by the tutor);
- (c) it provides a continuous record of attainment and should help both students and tutors to keep a track of learning and teaching;
- (d) it could be used by students to inform a third party (e.g. a potential employer) of what they have learned.

The performance criteria which follow provide tutors and students with a statement of the minimum performance which is judged to be acceptable in the key aspects of each Learning Outcome. Many students, given the opportunity and encouragement may go well beyond the minimum required. A decision on whether or not a student has achieved the criteria should be taken only after he/she has had the benefit of additional teaching support in areas of weakness and the opportunity to revise and improve on unsatisfactory efforts.

Acceptable performance in the module will be satisfactory achievement of all the performance criteria specified for each Learning Outcome.

The following abbreviations are used below:

- LO Learning Outcome
- IA Instrument of Assessment
- PC Performance Criteria

NB. Safety procedures and safe working practices should be observed at all times.

LO1 DEMONSTRATE A PRACTICAL ABILITY IN USING FOUR TRACK SOUND PRODUCTION EQUIPMENT

PC The student:

- (a) correctly assembles and interconnects equipment;
- (b) correctly operates equipment;
- (c) correctly dismantles equipment;
- (d) consistently demonstrates good working practices with a regard to safety, efficiency and the care of all equipment.

IA Practical Exercises and Record of Work

The student will be involved in practical exercises which will test his/her ability consistently to assemble, interconnect, operate, dismantle and care for equipment. Over the four performance criteria, the following pieces of equipment must be used at least once:

plugs/sockets, fuses, amplifier, power cables and audio leads, speakers, headphones, microphones, microphone stands, tapes with bias compatible to equipment, stereo tape deck, a mixing desk and a four track tape recorder or equipment which combines the functions of the latter two items of equipment.

The student will also be required to maintain a diary or record of work containing observation checklists and details of practical exercises countersigned and dated by the tutor.

Satisfactory performance will be based on evidence contained in the record of work that equipment has been used competently and that the student has consistently demonstrated good working practices with regard to safety, efficiency and care of all equipment.

LO2 PRODUCE A STEREO MASTER RECORDING  
MIXED FROM FOUR TRACKS OF RECORDED  
MUSIC

PC The student:

- (a) produces accurate recordings on four tracks which demonstrate use of:

microphone placement or direct injection;  
signal routing;  
noise reduction;  
recording levels;  
overdubbing and simultaneous  
synchronisation.

Satisfactory performance will be based on the production of accurate recordings appropriate to the chosen musical style taking into account click tracks and fold back monitoring.

- (b) mixes down the four tracks previously recorded with due regard to the chosen musical style to produce a stereo master tape taking into account:

recording levels;  
balance;  
panning;  
equalisation;  
noise reduction;  
editing to include location, cueing and  
fading.

IA Practical Exercises

The student will be involved in a two stage practical exercise which will test his/her ability to record at least four tracks of recorded music in any style and to mix down these tracks to produce a stereo master recording. The finished stereo master recording will amount to between three and four minutes duration.

The student will keep details of the recordings (multi-track and stereo master) including instrumentation, date, location and acoustical conditions.

Satisfactory performance will be based on the production of a technically competent stereo master recording.