

Academy of Sound

Assignment 309 Surround sound film audio

Tasks

Background information

Because the learner needs to demonstrate the full range of audio effects a maximum of two music-effects is allowed to be incorporated within this assignment.

In this set of tasks, learners will produce the following three products:

- stereo audio dub synchronised to the film clip of a soundtrack encoded onto a DVD between 2-4 minutes in length
- 5.1 surround sound mix (minimum requirement)
- portfolio containing a film storyboard, report and evaluation.

Task A Record music and effects (M&E)

Learners will be assigned a film and storyboard by their tutor to develop a soundtrack.

Learners are required to complete the following:

- analyse the film and storyboard to develop a new audio soundtrack
- map and key a timeline of 12 or more audio effects
- experiment, develop and record audio effects
- source or commission audio requirements.

An outline of the audio effects and any music should be mapped out on the storyboard timeline and keyed to any spoken words (if required) by the script.

Learners will then need to use a professional location recording medium, such as CD, DVD, HD, DAT or 15-30 ips analogue, to record their audio material. All recordings should then be compiled onto one master CD, DVD or DAT, labelled and ready to download into a video editing and audio dubbing system.

Learners should keep log/diary of ideas, recording techniques and equipment used for the audio material.

Task B Integrate music and sound/Foley effects with film clips

Learners are required to use hardware and software systems to edit and dub sound to picture. They will create a series of stereo audio dubs for the film, consisting of at least 12 separate audio effects.

Learners must evaluate this product with a view to how it can later be developed into a surround sound mix. They must produce the following.

- DVD of the film clip and stereo soundtrack
- proposals for spatial imaging of audio effects in the surround field.

Learners must update their log/diary with comments on the following areas of the project:

- software used
- hardware used
- stem mixing
- audio synchronisation.

Task C Encode surround sound and produce a report

Learners must now develop their audio materials to provide a 5.1 surround sound audio mix to accompany the film clip which they have been allocated.

Learners should encode and render their product for playback on an external 5.1 surround sound system. They should set up the surround sound system for monitoring purposes, keeping records of all settings (eg recall/track-sheet) and loudspeaker positions.

Learners are required to produce a report (approximately 750-1000 words) reviewing the process/project (using their log/diary as reference) including the following:

- description of the surround sound system used
- differences in specifications and options
- research into bass managed and non-bass managed systems
- diagram of surround sound speaker positions
- keyed timeline of audio effects and all routing information
- notes regarding the rendering process.

Assignment 310 Live sound and performance technology

Tasks

Background information

This assignment is to be researched, developed and presented in teams of two to four learners. It is essential that learners use their previous knowledge of acoustics and sound systems to deliver this assignment effectively.

Learners need to submit their own work individually. Learners' individual contributions will be continuously assessed throughout the project by the assessor by means of observation notes.

The project's aims are to develop and contribute towards a live event and deliver this work to a live audience.

The project will consist of four stages:

- feasibility report/treatment
- pre-production rehearsals
- live event with audience
- post-production report and evaluation.

Task A Produce a feasibility report

Learners are required to research and produce a feasibility report consisting of a proposal for the live sound re-enforcement requirements for a live production at a venue.

Learners must make notes relating to the likely programme of events at the venue to include all musical acts, dialogue-based acts/events and other types of act requiring sound re-enforcement. Learners should examine any written proposals of technical requirements (if available) from acts to be incorporated in the production. A timetable/outline of the production must be presented along with a schedule of production meeting dates.

It is essential to identify team roles within the group. Each learner should be able to clearly state their exact role in the proceedings for the following task. Tutors will help negotiate the taking on of roles by members of the group to ensure a fair and even work load is distributed between members of the group.

Task B Update feasibility study

Once the feasibility report has been approved by the tutor, learners will need to identify the venue and the sound system required for the live event. They will need to select the sound equipment required for the event, along with any acoustic modifications (customised requirements) to the room/venue.

Learners must include a preliminary risk assessment and outline any health and safety issues and in-house policies of the venue. They must also hold at least two production meetings.

All information and notes should be used to refine and update the feasibility study as version 2.

Task C Plan and realise the live event

Using the feasibility study from tasks A and B above, learners are required to plan and realise the live event. The event should contain as a minimum:

- two pieces of original music or SFX (pre and post show music to set the mood for the event)
- at least two microphones
- at least two other live audio sources

Learners must set-up sound equipment whilst working effectively as a team. After the event, all equipment will need to be packed away efficiently and professionally and the venue left as it was found.

The live event should be captured with an audio visual recording.

NB. Learners will be observed by their tutor whilst carrying out this task.

Task D Produce an evaluation

Learners are required to evaluate the live event both technically and creatively including their own contribution and that of others. The evaluation should be approximately 1000-1500 words. The evaluation should be supported by the following documentation, where appropriate:

- production notes
- diagrams of the technical systems used
- floor plans
- scripts
- running orders
- cue sheets
- plot sheets
- production meeting schedules
- production meeting minutes
- time line of event
- copies of any tapes, discs and recorded media
- log/diary.

Assignment 311 Digital broadcast network media

Tasks

Task Ai Create a basic library of media

Learners are required to produce their own digitally recorded video content. This should be completed using at least one digital camcorder in either HD or tape format. Still images should also be captured for incorporation into the final product

Sound should be recorded at source using at least one professional microphone or more complex audio feeds from a small mixing console.

Learners should create a basic library of media content to include as a minimum:

- moving image sequences (video)
- still image/s
- soundtrack.

The content should be topical, appeal to all age groups and be viable as a broadcast item.

Learners are required digitise, save and archive media files into a suitable format for import to a video editing program in Task Aii below. All files should be saved into a single media-library project folder.

Task Aii Compile a video sequence

In this task learners will use a suitable piece of audio/video software to compile a video sequence from their library of media files. Learners are required to compile and edit the audio visual content (from task Ai above) within the DAW editor to a synchronised timeline.

At least one still image must be incorporated within the video sequence.

To compile the content, learners should consider the following:

- running order of visuals
- timeline-based editing
- repeat of images
- edit decision list (EDL)
- placement and timing of audio and visuals
- scripts
- soundtrack audio pieces or atmospheric layers
- foley effects
- enhanced dynamics/effects
- triggered spot effects/sounds/ambience
- dialogue.

Learners are also required to clean up and add any additional content that may assist with the viewer's experience. They should add/import the following, if required:

- background effects
- graphic colours
- titles
- subtitles
- text aligned information
- credits.

Learners are required to save and archive media files into their own project folder.

Task Bi Export to test DVD and review

Learners are required to use the content from task Aii above for this task.

Learners should export the final video sequence onto a DVD disc for testing/review.

Learners should review all content on the disc using an independent DVD player/screen/audio monitor system and correct any errors noted.

This may include any of the following:

- post production edits
- cut, copy, paste, delete visuals and audio files
- image correction
- final content and presentation review
- enhance audience experience.

Learners should re-burn a final post-production DVD of edited content.

Task Bii Create a podcast

Learners are required to upload and broadcast the completed audio-visual content as edited in task Bi above. Learners must migrate files and produce a podcast using publishing software in order to upload and broadcast media content to a delivery minimum of 64 kbps. They must syndicate (RSS, really simple syndication) the podcast to three categorised podcast portals or feeds.

Learners are required to save their podcast as an archive.

Finally, learners are required to upload and broadcast their final media files to an online presence (eg youtube or myspace account). Learners must use FTP or media publishing upload software in order to upload and broadcast media content to a delivery minimum of 64 kbps.

Task C Write an evaluative report

Learners are required to produce an evaluation of at least 250 words on the success of the tasks outlined in tasks A and B above. The evaluation should include:

- technical quality
- media file formats used
- audio visual audience experience
- contents' suitability for purpose
- assessment of own role.

Assignment 312 Audio mastering and restoration

Tasks

Background information

The assignment allows learners to develop the practical skills needed to perform basic mastering and restoration tasks. Learners will demonstrate the ability to manage a mastering/restoration project and produce a professional quality product.

Task A Produce a report

Learners are required to research and write a report outlining the following:

- different types of historical audio disc formats
- manufacturing techniques for each format
- respective requirements for equipment used for reproducing, restoring and preserving their audio signals.

Learners are required to evaluate the characteristic sound quality of reproduction from historical disc formats:

- 78 rpm shellac disc
- 33.3 rpm vinyl microgroove disc (mono/stereo)
- 45 rpm vinyl disc (7, 12 inch).

This will require the setting-up of a disc replay system using a professional monitoring system.

Learners should add to their report, evaluating both technical aspects (noise, frequency bandwidth, pitch stability, etc) and subjective aspects (warmth, tone, dynamics, etc) of the sound.

Task B Produce a master and keep notes

Learners are required to transfer audio source materials from the following formats onto a suitable DAW platform:

- analogue tape
- DAT
- CD
- DVD.

NB. The audio source materials should be selected from the learners' previous recordings, otherwise original recordings must be made.

Where possible a digital copy to the DAW is preferable to an analogue one. Where an analogue copy is made of a digital format, learners should make notes as to the limitations of this system of transfer and why it was adopted in this case.

This material must then be compiled into a pre-determined sequential order with attention paid to start/stop times, duration, spacing, edits and cross-fades.

Learners are required to listen to and evaluate the transferred audio tracks as separate audio files and also to review the running order of these files for the compilation.

Learners are required to:

- make level adjustments
- perform any processing that may be required
- reduce or remove any noise.

Learners are required to keep comprehensive mastering logs/notes outlining their completed mastering process.

Learners are required to produce a professional quality production master of the audio sequence on a recognised format that is presented to industry standards.

Task C Restore audio and keep notes

Learners are required to clean and inspect a copyright-free analogue disc, set-up a suitable playback system and transfer the audio signal to a high resolution DAW platform. They should keep notes throughout this process.

NB. If learners cannot obtain a copyright-free analogue disc, they are permitted to use suitable downloaded un-restored audio.

Learners are required to analyse the restoration requirements of the original audio format, recording their assessments using comprehensive restoration timeline log and mastering notes.

Learners are required to produce a restored copy of the original audio format using any appropriate audio processing software. This restored copy should be labelled and archived along with the original audio format file onto a CD.

Learners should submit this with documentation outlining archival information and storage requirements.

Assignment 313 Sound studio facility design

Tasks

Background information

In the following tasks, learners will research, cost and design a studio environment capable of housing a 24-48 track recording facility. Learners are expected to deliver a series of completed research exercises for their proposed studio designs along with detailed project planning stages that should produce a report for a potential new studio build.

Learners are required to choose an existing used or unused building space they feel is suitable for conversion to a working studio environment.

Task A Produce a feasibility report

Learners are required to produce a feasibility report and rationale for selection of a building space with a control room and at least one isolated live performance area, to include:

- list of any health and safety considerations
- accurately measured floor plan of building area(s)
- list of existing room surfaces and materials
- proposed plans for new working area layout.

NB. The design of more complex facilities with more than one isolated live performance area will enable learners to achieve a higher grade.

Learners must estimate the following first stage requirements for building preparation:

- list any important structural/infrastructure issues
- estimated calculations of new designed room responses
- preliminary list of building materials and costs required
- proposed timetable of labour costs and completion
- projected external and internal health and safety requirements.

Learners are required to report any changes that may impact on initial design plans at all stages (ie asbestos report, signs of subsidence, noted previous incorrect building work, etc).

Task B Produce spreadsheets

Learners are required to produce spreadsheets including quantities and unit costs (to include VAT and delivery) in order to calculate the construction costs to build the recording facility. The spreadsheet must include as a minimum:

- all building materials required
- HVAC (heating, ventilation and air conditioning)
- telecommunications and networking
- furnishings and fittings
- power requirements (mains intake) and fittings

- health and safety implementation
- furniture, cosmetics and decorations
- soundproofing treatments (including noise reduction coefficients (NRC), and noise control (NC))
- installation and labour costs.

Learners are required to research and provide specification sheets (where available) for all materials to be used.

Task C Complete final floor plans

During this task, learners should review all previous data produced and update details of previous design plans wherever necessary, such as room lengths, widths and heights.

Learners must further develop their studio floor plan by linking it to sub-diagrams showing details of the following structural elements:

- walls
- floors
- windows
- doors.

NB. Learners can either create diagrams/drawings from scratch or use appropriately referenced specification sheets from commercial product suppliers.

Learners are required to supply the following information for each of the structural elements above:

- side views of construction/cut-away diagrams
- materials used/construction methods
- dampening and sound proofing properties
- all dimensions.

Learners must further develop their studio floor plan to incorporate the location of the following items:

- fire exits
- health and safety features
- alarm points
- power and mains supply points
- fuse boxes
- services and utilities
- telecommunications
- lighting
- cable, trunking and audio tie-lines
- furniture
- storage.