

Liverpool John Moores University

Title: Live Performance Operations and Technology
Status: Definitive
Code: **6002AMP** (120141)
Version Start Date: 01-08-2019

Owning School/Faculty: Electronics and Electrical Engineering
Teaching School/Faculty: Electronics and Electrical Engineering

Team	Leader
Colin Robinson	Y
David Ellis	
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Academic Level: FHEQ6 **Credit Value:** 24 **Total Delivered Hours:** 72
Total Learning Hours: 240 **Private Study:** 168

Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	40
Practical	12
Tutorial	20

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Room calculations	20	
Test	AS2	Acoustics	20	
Technology	AS3	Stage set up	60	

Aims

To consolidate and extend knowledge of technical operations in the broadcast media and creative industries, with specific regard to the additional challenges encountered in technical management of live performances.

Learning Outcomes

After completing the module the student should be able to:

- 1 Develop safety plans and technical specifications for a live performance scenario
- 2 Evaluate and/or use appropriate live performance technology in a relevant situation
- 3 Apply acoustic properties such as standard pressure level, intensity level, acoustic impedance etc
- 4 Calculate relevant acoustic properties of typical environments

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Room Calculations	4
Acoustics	3
Stage Set-Up	1 2

Outline Syllabus

*Health & Safety legislation for live performance & OB etc.
Power system planning & implementation for live performance & OB etc.
Show Control, Advanced Control Network systems for stage technology control
Types of performance and requirements for audio
Audio monitoring for performers (foldback vs feedback), FOH level control
EQ and outboard equipment
Analogue vs digital in live sound reinforcement systems, control and signal routing
Live & pre-sequenced operations & technology*

*Luminaires and bulbs, colourimetry, quality and characteristics
Lantern arrangement for specific applications, DMX etc
Live vs pre-programmed control systems, broadcast vs live audience requirements
Image operations, Large displays and potential conflict with OB
Interaction with audio control system
Concepts of projection mapping for events*

*The nature of sound: wavelength, spectra, sound pressure and intensity
Inverse square law, temporal considerations, Haas effect
Sabine's equation, RT60
Room modes, standing waves, resonance, harmonics*

*Sound proofing and sound treatment
Loudness perception
Sound intensity, power and pressure levels
Decibels and standards*

Learning Activities

Attend all lectures, tutorial and practical sessions.
Engage with on-line learning materials via Blackboard.
Research and produce the material for the assignment

Notes

This module extends the knowledge gained in level 5 to encompass the additional challenging technical requirements imposed when managing entertainment technology during live performance.