

LAPT

LONDON ACADEMY OF PROFESSIONAL TRAINING

CERTIFICATE

Certificate in Live Sound Reinforcement

Foundation Level



LAPT — London Academy of Professional Training

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Reference MU-LSE-F • Music and Performing Arts Centres

UKPRN 10067351 • Registered in England and Wales, company 4984798

AT A GLANCE

REFERENCE	MU-LSE-F
AWARD	Certificate
ASSESSMENT	445 marks — 267 to pass (60%)
PREREQUISITES	None
VALIDITY	Lifetime
AWARDING BODY	LAPT — London Academy of Professional Training

CURRICULUM

1 Acoustics and Venue Analysis 4 chapters · 20 classes45 marks	• 1 Fundamentals of Acoustics in Live Sound — 5 classes › 1.1 Understanding Sound Waves: Characteristics and Behavior › 1.2 Exploring Frequency and Amplitude: The Basics of Sound Measurement › 1.3 Analyzing Acoustic Properties: Reflections, Absorption, and Diffraction › 1.4 Evaluating Venue Acoustics: Identifying Acoustic Challenges › 1.5 Applying Acoustic Principles: Optimizing Sound for Live Venues • 2 Acoustic Characteristics of Different Venues — 5 classes › 2.1 Understanding Venue Acoustics: An Introduction › 2.2 Identifying Acoustic Challenges in Various Venues › 2.3 Analyzing How Shape and Size Affect Sound Quality › 2.4 Evaluating Acoustic Materials and Their Impact › 2.5 Applying Acoustic Principles to Different Venue Types	• 3 Sound Reflection, Absorption, and Diffusion — 5 classes › 3.1 Understanding Sound Reflection: Fundamentals and Principles › 3.2 Exploring Sound Absorption: Techniques and Materials › 3.3 Analyzing Diffusion in Acoustics: Key Concepts and Practices › 3.4 Evaluating Acoustic Properties of Venues: Practical Assessment › 3.5 Applying Sound Reflection, Absorption, and Diffusion: Real-World Scenarios • 4 Practical Venue Acoustics Assessment Techniques — 5 classes › 4.1 Understanding Acoustic Characteristics of Venues › 4.2 Identifying Critical Acoustic Problems in Live Settings › 4.3 Analyzing Venue Sound with Acoustic Measurement Tools › 4.4 Assessing Sound Distribution and Reflection Patterns › 4.5 Applying Acoustic Solutions for Optimal Sound Reinforcement
2 Equipment Operation and Safety 4 chapters · 20 classes65 marks	• 1 Introduction to Live Sound Equipment — 5 classes › 1.1 Understanding the Basics of Live Sound Equipment › 1.2 Identifying and Describing Key Audio Components › 1.3 Ensuring Electrical Safety in Live Sound Settings › 1.4 Setting Up Microphones and Mixing Consoles › 1.5 Operating Amplifiers and Speaker Systems Effectively • 2 Signal Flow and Connectivity — 5 classes › 2.1 Understanding Signal Pathways in Live Sound › 2.2 Connecting Audio Sources to Mixing Consoles › 2.3 Utilizing Signal Processing Equipment Effectively › 2.4 Ensuring Proper Output and Signal Distribution › 2.5 Troubleshooting Common Connectivity Issues	• 3 Operating Sound Equipment Safely — 5 classes › 3.1 Understanding Sound Equipment: Components and Functions › 3.2 Identifying Potential Hazards with Audio Equipment › 3.3 Implementing Safety Protocols in Sound Equipment Operation › 3.4 Practicing Safe Setup for Audio Equipment › 3.5 Conducting Safety Checks Before and After Use • 4 Advanced Equipment Operation Techniques — 5 classes › 4.1 Mastering Mixer Operations for Live Sound Control › 4.2 Navigating Signal Flow and Routing with Confidence › 4.3 Fine-Tuning Equalization Techniques for Different Venues › 4.4 Harnessing Dynamics Processors to Optimize Sound Clarity › 4.5 Implementing Advanced Audio Effects for Live Performances

3

Event Setup and Troubleshooting

4 chapters · 20 classes

90 marks

• 1 Understanding Event Venues and Stage Layouts — 5 classes

- › 1.1 Identifying Key Features of Event Venues
- › 1.2 Analyzing Stage Layout Possibilities
- › 1.3 Understanding Acoustics in Different Venues
- › 1.4 Designing Efficient Stage Setups
- › 1.5 Troubleshooting Common Venue and Stage Issues

• 2 Audio Equipment Setup and Connections — 5 classes

- › 2.1 Identifying Key Audio Equipment and Their Roles
- › 2.2 Understanding Signal Flow in Audio Systems
- › 2.3 Connecting Audio Components: Cables and Connectors
- › 2.4 Setting Up Microphones and Instruments for Optimal Sound
- › 2.5 Troubleshooting Common Audio Connection Issues

• 3 Signal Flow and Sound Check Procedures — 5 classes

- › 3.1 Understanding Signal Flow: From Source to Output
- › 3.2 Analyzing Input Channels and Signal Routing
- › 3.3 Setting Up the Stage: Equipment and Cabling
- › 3.4 Conducting an Efficient Sound Check: Best Practices
- › 3.5 Troubleshooting Common Sound Check Issues

• 4 Diagnosing and Resolving Common Audio Issues — 5 classes

- › 4.1 Identifying Common Audio Issues in Live Events
- › 4.2 Understanding Signal Flow in Sound Systems
- › 4.3 Analyzing Causes of Feedback and How to Prevent It
- › 4.4 Troubleshooting Audio Distortion and Clarity Problems
- › 4.5 Applying Practical Solutions to Resolve Audio Issues

4

Introduction to Live Sound Systems

4 chapters · 20 classes

65 marks

• 1 Fundamentals of Sound and Acoustics — 5 classes

- › 1.1 Understanding Sound Waves and Their Properties
- › 1.2 Exploring Frequency, Wavelength, and Amplitude
- › 1.3 Analyzing the Human Perception of Sound
- › 1.4 Examining Acoustic Environments and Sound Behavior
- › 1.5 Applying Acoustical Concepts to Live Sound Scenarios

• 2 Components of a Live Sound System — 5 classes

- › 2.1 Understanding Live Sound System Basics
- › 2.2 Identifying Key Components of Sound Systems
- › 2.3 Exploring Microphones and Input Devices
- › 2.4 Analyzing Mixers and Signal Processors
- › 2.5 Implementing Amplification and Speaker Systems

• 3 Signal Flow and Sound System Setup — 5 classes

- › 3.1 Understanding Signal Flow: From Source to Output
- › 3.2 Identifying Components in a Live Sound System
- › 3.3 Connecting Equipment: Signal Path Configuration
- › 3.4 Setting Up a Basic Live Sound System
- › 3.5 Troubleshooting Common Signal Flow Issues

• 4 Basic Troubleshooting and Problem-solving — 5 classes

- › 4.1 Identifying Common Sound System Issues
- › 4.2 Utilizing Diagnostic Tools Effectively
- › 4.3 Implementing Quick Fixes for Common Problems
- › 4.4 Developing Problem-solving Strategies in Real-time
- › 4.5 Applying Preventative Measures to Avoid Issues

5

Practical Sound Design

4 chapters · 5 classes

65 marks

• 1 Foundations of Sound Design for Live Settings — 5 classes

- › 1.1 Understanding the Basics of Acoustics in Live Sound
- › 1.2 Identifying and Utilizing Essential Live Sound Equipment
- › 1.3 Setting Up and Configuring Live Sound Systems
- › 1.4 Applying Sound Design Techniques for Various Venues
- › 1.5 Troubleshooting Common Issues in Live Sound Environments

• 2 Sound Equipment and Signal Flow in Live Environments

• 3 Live Audio Effects and Processing Techniques

• 4 Practical Application and Troubleshooting in Live Sound

6

Sound Engineering Principles

4 chapters · 20 classes

115 marks

• 1 Understanding Sound and Acoustics — 5 classes

- › 1.1 Exploring the Nature of Sound Waves
- › 1.2 Identifying Frequency and Pitch
- › 1.3 Understanding Sound Intensity and Decibels
- › 1.4 Examining the Principles of Acoustics
- › 1.5 Applying Room Acoustics for Live Sound

• 2 Audio Signal Flow and Equipment Basics — 5 classes

- › 2.1 Explore: Understanding the Basics of Audio Signal Flow
- › 2.2 Identify: Components of an Audio System
- › 2.3 Examine: The Role of Mixers in Signal Flow
- › 2.4 Analyze: Signal Pathways in Live Sound Environments
- › 2.5 Implement: Setting Up Basic Audio Equipment

• 3 Sound System Design and Configuration — 5 classes

- › 3.1 Understanding Sound System Components
- › 3.2 Exploring Signal Flow in Sound Systems
- › 3.3 Designing a Basic Sound System Layout
- › 3.4 Configuring Audio Equipment Settings
- › 3.5 Evaluating Sound System Performance

• 4 Troubleshooting and Live Sound Management — 5 classes

- › 4.1 Understanding Common Live Sound Issues
- › 4.2 Identifying and Diagnosing Audio Problems
- › 4.3 Implementing Effective Sound Solutions
- › 4.4 Managing Live Sound in Dynamic Environments
- › 4.5 Ensuring Optimal Sound Quality during Performances

