Backroom Ltd

1. Learning Outcomes

1. To develop an understanding of how electrical energy is generated and measured.
2. Develop an understanding of electrical safety provision and the performance of simple electrical tests.
3. To gain an understanding of the variety of conductive cabling and connectors used in concert and event production
4. To gain experience of safe cable management and maintenance technique

2. Assessment Criteria. At the end of this unit students shall be able to:

1.1 Explain the concepts of Voltage, Current, Resistance, AC, DC and The Circuit.
1.2 Identify S.I. Units of measurement including Volts, Amps, Ohms, Watts and Hertz, and the prefixes Milli-, Mega-, Kilo-.
1.3 Explain the hazards associated with electricity
1.4 Demonstrate practical electrical safety techniques

2.1 Identify protective devices, including the Circuit Protective Conductor and describe their operation
2.2 Perform basic electrical load calculations
2.3 Safely perform mains and continuity tests, using appropriate test equipment
2.4 Explain the role played by Portable Appliance Testing in electrical safety management

3.1 Explain the difference between 'mains' and 'signal' cables and connectors.
3.2 Identify appropriate cable and connector types for a variety of applications.
3.3 Explain the importance of colour coding of cables and connections
3.4 Identify cables according to colour coding conventions.
3.5 Correctly wire 13-, 15- and 16A connectors using appropriate hand tools.

4.1 Demonstrate appropriate techniques for cable routing and layout to avoid trip hazard, cable damage, Inductance and interference.
4.2 Demonstrate safe cable management including, packing, storage, cleaning and visual inspection
4.3 Correctly identify and mark a variety of cables 4.4 Correctly record test results and data.