

Risk Assessment - Electrical Safety: Scenery Construction & Dressing

The people that might be harmed: Studioworks employees, contractors, public and artists

HAZARDS	CONTROLS
<ul style="list-style-type: none"> • Fire • 'Live' Electrical Parts Exposed • Risk of electric shock injuries through faulty or poorly maintained equipment, inappropriate electrical supply and inappropriate use of equipment 	<p>Electrical integrity of the scenery - The work of fixing wiring and electrical equipment to scenery should be carried out by a competent electrician. The electrical equipment and wiring should be suitable for the use and environment that the scenery will experience. The following requirements should be met:</p> <ul style="list-style-type: none"> • the equipment must be suitable for the voltages that will be present • the equipment must be suitable for the current involved, the overcurrent protection of the supply should take this into account. • all wiring should be in sheathed multi-core cables or flexible cords. For general use, the minimum cross sectional area of conductors should be 1.5 sq.mm; all wiring should include a protective conductor (earth wire) • connection to the supply should be through a fixed plug attached to the scenery, the type might be 13, 15 or 16 A. • terminal blocks or connectors should be used for terminating or joining conductors and these should be adequately protected. 'Screwits' and taped up terminal blocks or wires twisted together and taped, must not be used.

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	<ul style="list-style-type: none"> • all equipment and wiring must be secured to the scenery, nothing should be loose or likely to fall off, or cause a tripping or entanglement hazard, • the equipment must be protected from mechanical damage • each separate piece of scenery with electrical equipment attached, should be considered as an individual piece of electrical equipment • each separate piece of scenery with electrical equipment attached, should have its own separate means of connecting to a supply of power • each separate piece of scenery with electrical equipment attached, should have evidence of having passed a formal visual inspection and electrical test such as a Portable Appliance Test. Evidence of this inspection and test should be provided.
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	<ul style="list-style-type: none"> • striking, including all handling • storage arrangements • repeated re-use, for the same purpose
<ul style="list-style-type: none"> • Fire • 'Live' Electrical Parts Exposed • Risk of electric shock injuries through faulty or poorly maintained equipment, inappropriate electrical supply and inappropriate use of equipment 	<p>Protection of wiring - Adequate protection will often be afforded by adopting the following: -</p> <ul style="list-style-type: none"> • the constructional form of scenery can allow wiring to be fixed so that it is protected • wiring should not be run along or across outside edges or along surfaces which will cause the wiring to be the point projecting outside the general outline of the scenery • wiring should follow routes which reduce the chance of accidental damage to a minimum • wiring and equipment that can be seen and in a protected position, allow easier inspection and make their presence self-evident. Such places may be surfaces unseen to the production • where a significant risk of damage to wiring exists and no suitable alternative protected route is available, then specific additional protection must be provided. This may mean the use of conduit or other suitable protection.

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<ul style="list-style-type: none"> • Fire • 'Live' Electrical Parts Exposed • Risk of electric shock injuries through faulty or poorly maintained equipment, inappropriate electrical supply and inappropriate use of equipment 	<p>Scenery as items of electrical equipment</p> <ul style="list-style-type: none"> • Each piece of scenery should be considered as a separate piece of electrical equipment. As such it is recommended that: • The supply to all scenery should take account of the current involved and contain a circuit protective conductor (CPC or earth wire) of adequate size. All wiring fixed to the scenery should include a protective conductor • The connection to a supply should be via a fixed plug attached to the scenery. The fixed plug should be placed in a protected position but where its presence can be easily found. A fixed plug removes the problems associated with lengths of trailing lead, these are always in the way and easily damaged during handling, transport, and storage • It should be possible to isolate each piece from its source of supply; where a supply is from a 13, 15 or 16 A connector the simplest isolation is by unplugging from the source of power • Where power in excess of 16A is required or where complex scenery requires its own simple electrical distribution system, then a suitable system should be designed and fitted by a competent electrician • Metalwork directly associated with electrical equipment as a part of scenery should be bonded to the protective conductor. In this case the scenery would be tested as though it were class 1. It is likely that this will be the normal arrangement

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	<ul style="list-style-type: none"> • The organisation responsible for constructing or providing the scenery should carry out the initial formal inspection and test before delivery. The test results should be provided with the scenery • Scenery with electrical equipment being placed into service should be visually inspected to ensure no transport damage has been incurred. If the way the scenery is to be used is not as intended by the design and construction then it will require a further formal inspection and test • When in service, additional inspections and tests will be required; the intervals at which these occur should be decided by an electrically competent person representing the users of the scenery. The intervals will be decided by considering the design of the scenery and the severity of its use, transit and storage • A suitable test will be a thorough visual inspection and a test with a PAT instrument carried out by a person electrically competent in this work. If the electrical equipment on a piece of scenery is more complex the testing procedure should be decided by a competent electrician who understands the electrical system and the use of the piece of scenery.