## Training Package

**ENTERTAINMENT INDUSTRY (CUE98)**

### Title:

**CARRY OUT MANUAL SOLDERING AND DESOLDERING**

### Unit Code

**CUETGE7A**

### Unit Descriptor:

This unit describes the skills and knowledge required to carry out manual soldering including preparation and de-soldering.

### HSC Indicative Hours:

40

### Methods and Context of Assessment

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<th>Critical aspects of Evidence</th>
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| Evidence to demonstrate consistent achievement of this unit’s outcomes include:  
  - demonstrating safe working practices at all times;  
  - performing all tasks in accordance with standard operating procedures;  
  - performing all tasks to specifications | This unit may be assessed in conjunction with any other units addressing the safety, quality, communication, material handling, recording and reporting associated with manual soldering and desoldering or other competencies requiring the exercise of the skills and knowledge covered by this unit. | The unit of competency should be assessed using:  
  - all tools, equipment, material and documentation required  
  - any relevant workplace procedures  
  - any relevant product and manufacturing specifications | **Key Terms and Concepts:**  
  - job specifications  
  - designated procedures  
  - operational procedures, principles and teaching techniques  
  - manufacturers recommendation  
  - standards  
  - safe working practices  
  - codes  
  - standard operating procedures  
  - specifications  
  - work site procedures  
  - components  
  - appropriate techniques |

### HSC Requirements and Advice

The candidate will be required to:

- orally, or by other methods of communication, answer questions put by the assessor
- identify colleagues who can be approached for the collection of competency evidence where appropriate
- present evidence of credit for any off-job training related to this unit.

This unit may be assessed on the job, off the job or a combination of on and off the job. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate. Tasks involved will be completed within reasonable timeframes relating to typical workplace activities. Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge.
<table>
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<tr>
<th>ELEMENT</th>
<th>PERFORMANCE CRITERIA</th>
<th>RANGE OF VARIABLES</th>
<th>EVIDENCE GUIDE</th>
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</table>
| 1. Prepare materials for soldering | • Materials are prepared for soldering in accordance with instructions and work site procedures  
• Materials are prepared using correct soldering tools, equipment, materials and procedures | The following variables may apply:  
• Work is undertaken in a production or maintenance environment using predetermined standards or quality, safety and work procedures. Component protection procedures are pre-determined.  
• Correct and appropriate soldering tools and equipment may include all types of soldering irons, cutters, brushes, files, soldering tips, solder syringes, holding devices.  
• Correct and appropriate materials may include solder (solid resin cord and paste) and flux (resin or powder). | Learning experiences for the HSC must address:  
- Knowledge of soldering equipment required for the installation, maintenance and fabrication of electrical/electronic components and cabling which may be used to support a production in the Entertainment industry |
| 2. Solder materials | • Correct soldering techniques, procedures, materials and soldering tools are selected in accordance with work site procedures  
• Materials are jointed, mounted and shaped to specifications using standard operating procedures  
• An appropriate soldering technique is used to apply solder to the materials to be jointed, in accordance with work site procedures  
• Where appropriate, excess material is removed, using correct and appropriate tools and techniques  
• Procedures for the protection of components are observed according to standard operating procedures | • All materials and procedures are specified via job instructions.  
• Inspections are carried out using visual, mechanical or electric techniques with pre set up equipment.  
• Handling refers to methods of physical handling and stress relief methods of preventing damage caused by electrostatic discharge. This may include wrist straps and anti-static work areas and practices. This unit does not include skills in silver soldering or brazing skills. | UNDERPINNING KNOWLEDGE AND SKILLS  
Skills and knowledge are required in:  
• communicating information about processes, events or tasks being undertaken to ensure a safe and efficient working environment;  
• taking responsibility for the quality of their own work;  
• planning tasks in all situations and reviewing the requirements as appropriate;  
• using accepted engineering techniques, practices, processes and workplace procedures.  
• identifying the preparation requirements of materials prior to soldering  
• identifying the consequence of incorrect material preparation prior to soldering  
• identifying the correct application of a range of soldering tools and equipment | Learning experiences for the HSC must address:  
- Knowledge of soldering equipment selection and safe working practices  
- Understanding of relevant safety precautions  
- Understanding of how to select appropriate soldering equipment and consumables including types of soldering iron, (solder and flux) to contribute to a production in the Entertainment industry  
- Knowledge of a range of soldering equipment and materials (as outlined in the Range of Variables), their varied uses, properties, applications and maintenance |
### 3. Inspect solder joints

- Inspection is undertaken to standard operating procedures
- Inspection results are recorded/reported in accordance with work site procedures

### 4. Undertake desoldering

- Correct and appropriate techniques, procedures, desoldering tools and equipment are selected in accordance with work site procedures
- Materials/components are desoldered using correct procedures to minimise damage to materials and components
- Material/device is removed and cleaned to specifications using standard operating procedures

### Learning experiences for the HSC must address:

- Identification of both correct and incorrect soldering procedures and correct and incorrect solder work
- Understanding of codes, standards, manuals and manufacturers specifications

- identifying the applications of different solders and fluxes with respect to the materials to be soldered
- applying alternative soldering and desoldering techniques and procedures
- identifying methods of solder removal and their application
- applying component protection procedures
- identifying methods of minimising damage to materials/components
- identifying and applying methods of cleaning colder from materials/devices
- Depending on the actual soldering job, hand and power tools and measuring skills may be required.
## KEY COMPETENCIES

<table>
<thead>
<tr>
<th>KEY COMPETENCY</th>
<th>LEVEL</th>
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<tr>
<td>Collecting, analysing and organising ideas and information</td>
<td>1</td>
</tr>
<tr>
<td>Communicating ideas and information</td>
<td>1</td>
</tr>
<tr>
<td>Working with others and in teams</td>
<td>1</td>
</tr>
<tr>
<td>Solving problems</td>
<td>1</td>
</tr>
<tr>
<td>Using technology</td>
<td>1</td>
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