



**Australian Government**

# **UEEEEC0073 Troubleshoot professional audio reproduction components**

**Release: 1**

# UEEEEC0073 Troubleshoot professional audio reproduction components

## Modification History

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

## Application

This unit involves the skills and knowledge required to troubleshoot professional audio reproduction components.

It includes fault finding and repairing professional and high-end audio amplifiers, preamplifiers, receivers, graphic equalisers and speakers. It also includes working safely, applying logical fault-finding procedures, conducting repairs, safety and functional testing, and completing the necessary service documentation.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

## Pre-requisite Unit

UEEEEC0056 Repair predictable faults in audio components

## Competency Field

Electronics and Communications

## Unit Sector

Electrotechnology

## Elements and Performance Criteria

### ELEMENTS

Elements describe the essential outcomes.

#### **1 Prepare to find and repair audio reproduction component faults**

### PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

#### **1.1 Work health and safety (WHS)/occupational health and safety (OHS) requirements and workplace procedures for a given work area are obtained and applied**

- 1.2 WHS/OHS risk control measures and procedures are followed in preparation for the work
  - 1.3 Nature of the audio reproduction component fault is obtained from documentation or from work supervisor to determine the scope of work to be undertaken
  - 1.4 Advice is sought from the work supervisor to ensure the work is coordinated effectively with relevant person/s
  - 1.5 Sources of materials required for audio component work are determined in accordance with workplace procedures
  - 1.6 Tools, equipment and testing devices needed to carry out audio component work are obtained in accordance with workplace procedures and checked for correct operation and safety
- 2 **Find audio reproduction component faults**
  - 2.1 WHS/OHS risk control measures and workplace procedures for carrying out audio component work are followed
  - 2.2 Need to test and measure live work is determined in accordance with WHS/OHS requirements and, as required, conducted in accordance with workplace safety procedures
  - 2.3 Audio reproduction apparatus component is checked and isolated in accordance with WHS/OHS requirements and workplace procedures
  - 2.4 Fault finding is approached methodically using measured and calculated values of apparatus parameters of audio reproduction components and circuits
  - 2.5 Apparatus components are dismantled, as required, and parts stored to protect against loss or damage
  - 2.6 Faulty audio components are rechecked and fault status confirmed
  - 2.7 Unplanned situations are responded to in accordance with workplace procedures in a manner that minimises risk to personnel and equipment
  - 2.8 Fault-finding activities are carried out efficiently without waste of materials or damage to apparatus, the surrounding environment or services using sustainable

|                                                    |            |                                                                                                                                 |
|----------------------------------------------------|------------|---------------------------------------------------------------------------------------------------------------------------------|
|                                                    |            | energy practices                                                                                                                |
| <b>3 Repair audio reproduction component fault</b> | <b>3.1</b> | WHS/OHS risk control measures and workplace procedures for carrying out audio reproduction component work are followed          |
|                                                    | <b>3.2</b> | Audio reproduction apparatus component is checked and isolated in accordance with WHS/OHS requirements and workplace procedures |
|                                                    | <b>3.3</b> | Materials required for the repair work are sourced and obtained in accordance with workplace procedures                         |
|                                                    | <b>3.4</b> | Repairs are affected efficiently without damage to audio components apparatus or circuits                                       |
|                                                    | <b>3.5</b> | Effectiveness of the repair is tested in accordance with workplace procedures                                                   |
|                                                    | <b>3.6</b> | Apparatus is reassembled, inspected, finally tested and prepared for return to customer                                         |
| <b>4 Complete and report repair activities</b>     | <b>4.1</b> | WHS/OHS work completion risk control measures and workplace procedures are followed                                             |
|                                                    | <b>4.2</b> | Work area is cleaned and made safe in accordance with workplace procedures                                                      |
|                                                    | <b>4.3</b> | Written justification is made for repairs to audio reproduction apparatus component/s                                           |

## Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

## Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the UEE Electrotechnology Training Package Companion Volume Implementation Guide.

Troubleshooting professional audio reproduction components must include at least the following:

- two different faults in two different components of audio equipment

## Unit Mapping Information

This unit replaces and is equivalent to UEENEEH173A Troubleshoot professional audio reproduction components.

## Links

Companion Volume implementation guides are found in VETNet - -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>

# **Assessment Requirements for UEEEC0073 Troubleshoot professional audio reproduction components**

## **Modification History**

Release 1. This is the first release of this unit of competency in the UEE Electrotechnology Training Package.

## **Performance Evidence**

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions on at least two separate occasions and include:

- applying relevant work health and safety (WHS)/occupational health and safety (WHS/OHS) requirements, workplace procedures and practices, including using risk control measures
- applying sustainable energy principles and practices
- dealing with unplanned situations in accordance with workplace procedures in a manner that minimises risk to personnel and equipment
- finding faults efficiently
- providing written justification for the repairs
- replacing components without damage
- using methodical fault-finding techniques.

## **Knowledge Evidence**

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions and include knowledge of:

- relevant audio electronics
- relevant manufacturer specifications
- relevant job safety assessments or risk mitigation processes
- relevant WHS/OHS legislated requirements
- relevant workplace documentation
- relevant workplace policies and procedures
- sound reproduction equipment
- troubleshooting techniques
- sound reproduction fundamentals.

## **Assessment Conditions**

Assessors must hold credentials specified within the Standards for Registered Training

Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- resources that reflect current industry practices in relation to finding and repairing faults in professional audio reproduction components
- applicable documentation, including workplace procedures, equipment specifications, regulations, codes of practice and operation manuals.

## Links

Companion Volume implementation guides are found in VETNet - -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6>