



**Australian Government**

# **CUASOU308 Install and disassemble audio equipment**

**Release: 2**

# CUASOU308 Install and disassemble audio equipment

## Modification History

| Release   | Comments                                                                                                                       |
|-----------|--------------------------------------------------------------------------------------------------------------------------------|
| Release 2 | This version first released with CUA Creative Arts and Culture Training Package version 3.0.<br>Updates to Knowledge Evidence. |
| Release 1 | This version first released with CUA Creative Arts and Culture Training Package version 2.0.                                   |

## Application

This unit describes the skills and knowledge required to install and disassemble audio equipment for a range of live performance and entertainment productions.

It applies to individuals who work collaboratively as part of a production team to install, align, test and disassemble audio equipment for playback, mixing and recording purposes.

The model Work Health and Safety (WHS) Regulations list the work that requires a high risk work licence, including dogging and rigging. Completion of the following units is required for certification at basic, intermediate and advanced levels:

- CPCCLDG3001A Licence to perform dogging
- CPCCLRG3001A Licence to perform rigging basic level
- CPCCLRG3002A Licence to perform rigging intermediate level
- CPCCLRG4001A Licence to perform rigging advanced level.

Sets and staging for some productions may fall within the definition of construction work. Under section 274 of the WHS Act, it is a requirement of the approved Code of Practice for Construction Work that any person entering a construction site must successfully complete general construction induction training through a Registered Training Organisation. Completion of the unit CPCCOHS1001A Work safely in the construction industry fulfils this requirement.

## Unit Sector

Media and entertainment production – audio/sound

## Elements and Performance Criteria

| ELEMENT                                          | PERFORMANCE CRITERIA                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Elements describe the essential outcomes.</i> | <i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>                                                                                                                                                                                                                                                                                                                                                                        |
| 1. Prepare for installation of audio equipment   | 1.1 Interpret production documentation and requirements, and confirm with relevant people<br>1.2 Assess acoustic characteristics of venue with relevant people and select appropriate equipment and accessories<br>1.3 Calculate power requirements and identify power locations and patching requirements<br>1.4 Confirm and organise special requirements with relevant people                                                                                              |
| 2. Install audio equipment                       | 2.1 Secure and label cabling in line with production requirements<br>2.2 Set up power distribution in line with production requirements<br>2.3 Position microphones, accessories and cabling<br>2.4 Confirm fitted lapel microphones meet technical performance standards<br>2.5 Confirm phantom power is provided at microphone inputs<br>2.6 Connect effects rack to mixer in line with production requirements<br>2.7 Follow safe work practices when installing equipment |
| 3. Align audio equipment                         | 3.1 Match audio equipment according to level, impedance, phase and frequency<br>3.2 Route test signals to correct destination<br>3.3 Confirm test signal level meets production requirements<br>3.4 Tune the system to avoid feedback                                                                                                                                                                                                                                         |
| 4. Test audio equipment                          | 4.1 Check microphone lines for continuity and patching<br>4.2 Test microphones and confirm they are functioning correctly<br>4.3 Fit microphones to relevant people and perform sound cues as required<br>4.4 Patch, test and tune sound reinforcement system to suit production venue<br>4.5 Conduct sound check and document any adjustments in line with production requirements<br>4.6 Inform relevant people of any problems that arise during                           |

| ELEMENT                        | PERFORMANCE CRITERIA                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                | testing processes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 5. Disassemble audio equipment | 5.1 Disassemble equipment in line with production requirements<br>5.2 Check audio equipment against inventory before packing, and report lost or damaged equipment to appropriate people<br>5.3 Pack equipment and accessories and prepare for transit or storage in line with safe work practices and production requirements<br>5.4 Clean and restore work environment to previous condition<br>5.5 Seek feedback from relevant people on own work performance, and note areas for improvement |

## Foundation Skills

*This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.*

| Skill                      | Performance Criteria              | Description                                                                                                                                                                                                                                                                                                                           |
|----------------------------|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Reading                    | 1.1, 2.1, 2.4, 4.5, 5.2           | <ul style="list-style-type: none"> <li>Recognises and interprets textual information in accordance with regulations and job requirements</li> </ul>                                                                                                                                                                                   |
| Writing                    | 2.1, 5.2                          | <ul style="list-style-type: none"> <li>Applies labels accurately and legibly, using correct technical vocabulary</li> <li>Uses specific and relevant language to complete workplace documentation</li> </ul>                                                                                                                          |
| Oral Communication         | 1.1, 1.2, 1.4, 4.2, 4.5, 4.6, 5.5 | <ul style="list-style-type: none"> <li>Clearly articulates requirements using language appropriate to audience and environment, and participates in a verbal exchange of ideas/solutions</li> <li>Listens attentively for acoustic and audio issues, making suitable adjustments to equipment to improve the audio quality</li> </ul> |
| Numeracy                   | 1.3, 3.1, 5.2                     | <ul style="list-style-type: none"> <li>Compares documented figures against actual equipment and accessories</li> <li>Uses basic mathematical skills to calculate electricity requirements and match equipment appropriately</li> </ul>                                                                                                |
| Navigate the world of work | 2.4, 2.7, 5.3, 5.4                | <ul style="list-style-type: none"> <li>Follows organisational practices for safety and housekeeping</li> </ul>                                                                                                                                                                                                                        |
| Interact with              | 1.1, 1.2, 1.4, 4.6, 5.5           | <ul style="list-style-type: none"> <li>Works collaboratively to identify and complete task</li> </ul>                                                                                                                                                                                                                                 |

|                   |                                 |                                                                                                                                                                                                                                      |
|-------------------|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| others            |                                 | requirements <ul style="list-style-type: none"> <li>• Use appropriate communication practices to seek feedback about work performance from others</li> </ul>                                                                         |
| Get the work done | 1.1-1.4, 3.1, 4.5, 4.6, 5.2-5.4 | <ul style="list-style-type: none"> <li>• Plans and implements tasks to meet production and organisational requirements</li> <li>• Makes decisions directly related to own tasks, seeking input from others where required</li> </ul> |

## Unit Mapping Information

| Code and title<br>current version                             | Code and title<br>previous version                            | Comments                      | Equivalence status |
|---------------------------------------------------------------|---------------------------------------------------------------|-------------------------------|--------------------|
| CUASOU308 Install and disassemble audio equipment (Release 2) | CUASOU308 Install and disassemble audio equipment (Release 1) | Updates to Knowledge Evidence | Equivalent unit    |

## Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1db201d9-4006-4430-839f-382ef6b803d5>

# Assessment Requirements for CUASOU308 Install and disassemble audio equipment

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## Performance Evidence

Evidence of the ability to:

- interpret production documentation and requirements in collaboration with others
- safely install and disassemble audio equipment for at least three productions
- test audio equipment and accessories in line with production requirements

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

## Knowledge Evidence

The candidate must be able to demonstrate the following knowledge to effectively complete the tasks outlined in the elements and performance criteria of this unit, and to manage tasks and reasonably foreseeable contingencies in the context of the work role.

- Basic audio principles and practice, including:
  - range of microphones and contexts in which they are used
  - microphone characteristics, e.g. frequency response, sensitivity and polar patterns
  - effect of microphone placement on quality of sound
  - characteristics of sound in a range of environments
  - signal-to-noise ratio, signal phase and audio level/headroom control
  - audible defects in analogue and digital technologies
  - features of mixers, amplifiers, speakers and effects racks
- Basic principles of acoustics, including:
  - frequency
  - pitch

- amplitude
- loudness
- velocity
- wavelength
- acoustical phase
- timbre
- sound envelope
- Basic understanding of psychoacoustic principles, including:
  - spatial hearing
  - direct sound
  - early sound
  - reverberant sound
  - room design
- Techniques for installing, aligning and testing audio equipment, including:
  - understanding electrical power (e.g. voltage, distribution, phasing, load and circuit breaking)
  - knowledge of a range of sound equipment and associated operating principles (e.g. level, impedance, phase and frequency)
  - testing and tagging all electrical fittings in accordance with safety regulations
- Issues and challenges that typically arise in the context of setting up and disassembling audio equipment
- OHS requirements, including:
  - licensing requirements for persons performing high risk work and entering building sites
  - safe manual-handling techniques
  - working safely with electricity and hazardous substances
  - principles of safe listening, such as safeguards against hearing loss

## Assessment Conditions

Assessment must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities experienced in creative arts industry environments. The assessment environment must include access to:

- audio equipment
- suitable venue
- relevant production documentation
- interaction with others.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational educational and training legislation, frameworks and/or standards.

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