



Australian Government

Department of Education, Employment and Workplace Relations

CUESOU10B Operate wireless audio equipment

Revision Number: 1

CUESOU10B Operate wireless audio equipment

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the skills and knowledge required to specify, fit and operate radio microphones and in-ear wireless monitors for any production within the cultural industries.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>People working as sound technicians apply the skills and knowledge described in this unit. They are working at a senior level since their responsibilities go beyond the basic skills required to attach microphones to individual performers/presenters. They are responsible for using a range of radio microphone technology during a production and for managing spectrum. In this role they require a sound knowledge of the technical and production issues that impact on radio microphone operation.</p> <p>The work often involves long or irregular hours and can be physically demanding. The ability to work cooperatively as part of a production team is essential, along with the interpersonal skills required to work with performers.</p> <p>It is strongly recommended that this unit be assessed with or after the following units:</p> <ul style="list-style-type: none">• CUESOU07B Apply a general knowledge of audio to work activities• CUESOU08B Select and manage microphone and other audio input sources. <p>This unit also has linkages to a range of other audio units and combined assessment and/or training with those units may be appropriate.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assess wireless audio equipment requirements and plan spectrum management	<p>1.1. Liaise with relevant personnel to determine the various production factors that will impact on wireless audio equipment operation</p> <p>1.2. Assess both technical and performance factors to establish the most appropriate approach to the use of wireless audio equipment in accordance with any regulatory requirements</p> <p>1.3. Establish all other wireless frequencies in use within range, including security and building services users</p> <p>1.4. Research and establish wireless instrument and in-ear monitor frequencies to be used by all acts, performers and musicians associated with the performance</p> <p>1.5. Plot proposed and currently used frequencies onto suitable plot and compare with legal and available frequencies</p> <p>1.6. Establish actual frequencies to be used, allocated to each person, performer, musician, and/or department</p> <p>1.7. Where multiple use of the same frequency for different performers or segments is required, prepare a suitable spreadsheet/plot</p> <p>1.8. Accurately document wireless audio equipment requirements prior to the production to ensure easy interpretation by others</p> <p>1.9. Ensure availability of equipment and accessories in accordance with production requirements</p>
2. Set-up wireless equipment	<p>2.1. Establish suitable location for equipment and technician work area in consultation with relevant personnel</p> <p>2.2. Run audio lines appropriately from wireless equipment to stage box or patch point and make correct connections in accordance with plot</p> <p>2.3. Run standby microphone cable/s as required, and have wired and wireless standby equipment on hand</p> <p>2.4. Establish backup channels with appropriate personnel, and put in place other appropriate contingency management measures</p>
3. Check and fit wireless audio equipment	<p>3.1. Make appropriate checks on wireless audio equipment prior to fitting to ensure equipment is correctly labelled, in working order and fully charged with new batteries</p>

ELEMENT	PERFORMANCE CRITERIA
	<ul style="list-style-type: none">3.2. Check that frequency setting on microphones and transmitters is matched and complete appropriate tuning3.3. Identify the most appropriate position for the equipment based on performance and technical issues3.4. Fit wireless audio equipment using appropriate attachment techniques to meet performance requirements3.5. Follow <i>appropriate protocols</i> with performers during the fitting process3.6. Clearly explain any technical operation issues to performers3.7. Check and adapt gain structure to fit production requirements
4. Monitor wireless audio equipment systems	<ul style="list-style-type: none">4.1. Correctly set wireless audio equipment so that signal is received by the sound desk4.2. Politely request performer to use equipment to ensure it is working correctly and crosscheck4.3. Monitor all wireless systems throughout production, identify any <i>problems</i> and take appropriate action to rectify
5. Complete work operations	<ul style="list-style-type: none">5.1. Retrieve wireless equipment from performers at conclusion of their performance5.2. Clean and arrange or store wireless equipment in readiness for the next user or the next performance

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- literacy skills sufficient to interpret production documentation and regulatory requirements
- numeracy skills sufficient to work with frequency allocations

Required knowledge

- the performance factors which impact on the use of wireless audio technology
- different types of wireless audio equipment available, and their use and application in different types of production
- role of different antennae
- ways in which radio equipment can be fitted to performers
- common frequencies used with wireless audio equipment, how these may be reserved or affected by local TV or radio transmitters
- protocols for dealing with performers during equipment fitting
- regulatory requirements for the use of wavelengths, including the Australian Communications Authority frequency allocations
- frequency spacing required for adjacent wireless channels, and how to establish number of practical and available channels at a given location

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The following evidence is critical to the judgement of competence in this unit:

- knowledge of the regulatory and technical issues that affect the use of wireless audio technology
- ability to determine appropriate approaches to the use of wireless audio technology to meet the needs of a particular production.

Context of and specific resources for assessment

The assessment context must provide for:

- practical demonstration of skills through the appropriate selection and use of equipment for a production where multiple performers need to be fitted with wireless equipment
- interaction with others to demonstrate the interpersonal skills required for the fitting process
- use of industry-current equipment.

Method of assessment

Assessment may incorporate a range of methods to assess performance and the application of essential underpinning knowledge, and might include:

- evaluation of a performance using multiple pieces of wireless equipment where the candidate has been responsible for the selection and set-up of equipment
- case studies to assess ability to suggest approaches and equipment for different production circumstances
- oral or written questioning to assess knowledge of technical or performance issues that impact on wireless audio operation
- review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate.

Assessment methods should closely reflect workplace demands and the needs of particular groups (e.g. people with disabilities, and people who may have literacy or numeracy difficulties such as speakers of languages other

EVIDENCE GUIDE	
	than English, remote communities and those with interrupted schooling).
Guidance information for assessment	<p>Assessment of this unit requires access to:</p> <ul style="list-style-type: none">• radio microphones, in-ear monitors, transmitters and receivers• a venue where a production requiring wireless audio technology can be held.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Relevant personnel</i> may include:	<ul style="list-style-type: none"> • director • front of house engineer • performers • stage manager • stage monitor engineer • systems engineer. • other technical specialists
<i>Technical factors</i> that impact on wireless audio equipment operation may include:	<ul style="list-style-type: none"> • frequencies for operation • need for back up microphones • number of radio microphones being used • options for different antennae • other equipment on stage • presence of moisture or water • volume required
<i>Performance factors</i> that impact on wireless audio equipment operation may include:	<ul style="list-style-type: none"> • level of movement by the performer • number of costume changes • singing requirement • speaking requirement
<i>Fitting</i> techniques may include:	<ul style="list-style-type: none"> • attachment to hair strands • attachment to other clothing • use of tape
<i>Appropriate protocols</i> when dealing with performers may include:	<ul style="list-style-type: none"> • acknowledging privacy issues • assessment of performer allergies or history • checking comfort levels • clarifying positioning or fitting details • requesting permission to commence fitting
<i>Problems</i> with wireless audio equipment may include:	<ul style="list-style-type: none"> • faulty/intermittent signal • need for more secure attachment

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Media and entertainment production - audio/sound
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Co-requisite units

Co-requisite units		