



Australian Government

Department of Education, Employment and Workplace Relations

CUESOU07B Apply a general knowledge of audio to work activities

Revision Number: 1

CUESOU07B Apply a general knowledge of audio to work activities

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the foundation skills and knowledge required to complete a range of general audio-related tasks in a live venue environment.</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 assisting with audio operations in the screen, media and entertainment industries apply the skills and knowledge outlined in this unit. They are working under the direct supervision of an experienced sound technician.</p> <p>The role includes the need for an understanding of the role of sound technicians, the process for setting up audio equipment and the functions of a range of sound equipment. Equipment operation is at a routine level.</p> <p>This unit underpins and has linkages to general technical units and all other audio units, and combined training and assessment with those units may be appropriate, e.g.:</p> <ul style="list-style-type: none"> • CUSOHS301A Follow occupational health and safety procedures • CUETGE15B Handle physical elements safely during bump in/bump out.
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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. Make preparations for audio set-up	1.1. Extract key information from audio installation plans and confirm requirements with supervisor 1.2. Correctly identify preferred rigging and positioning points for audio <i>equipment</i> 1.3. Correctly identify cables used to connect different audio components 1.4. Correctly identify and sort equipment and <i>accessories</i> in preparation for set-up, ensuring appropriate handling and taking account of <i>equipment differences</i>
2. Complete tasks using audio equipment	2.1. Correctly connect, disconnect and position audio system cables, including microphone, speaker, multicore and power feeds, in accordance with supervisor's instructions and safety requirements 2.2. Wire the audio system in correct sequence and confirm with supervisor 2.3. Set <i>start up</i> and operating settings in <i>correct sequence</i> and correctly use features of audio desk in accordance with instructions 2.4. Identify any problems with equipment promptly, take action within scope of individual responsibility or report to supervisor 2.5. Use positioning and equalising techniques to create optimum <i>sound</i> quality 2.6. Communicate appropriately with other technicians, performers or customers during the completion of tasks

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 extract key information from audio installation plans
- numeracy skills sufficient to sort and count equipment

Required knowledge

- the general scope and potential of audio operations within different live production contexts, e.g. theatre, music, corporate
- the relationship between audio operations and other technical and performance areas, including lighting, vision systems and performance
- typical roles and responsibilities of audio technicians in different contexts, including different career paths
- fundamentals of sound in a circuit, including understanding that microphone level is 40 to -60dB line level
- features and meaning of a typical sound system signal flow chart, including signal chains, gain structure and levels
- decibel levels and basic sound pressure level measurement, including that frequency is measured in Hertz, understanding the differences between 100Hz and 1kHz
- understanding of phase, including phase cancellation, and that at 180 degree phase difference signals do cancel each other out
- common terminology used in relation to audio
- occupational health and safety requirements and legislation that relate to audio personnel, in particular with regard to working safely with electricity
- requirements for the storage of audio equipment
- key features, purpose and basic operating procedures of major types of audio equipment, including different types of loudspeakers, audio mixing consoles, signal processing equipment, input source equipment and common accessories
- different types of cable, their usage in different situations and how to care for them, including:
 - microphone cables; how to run safely and neatly and where to store excess
 - speaker cables; how to run safely and neatly and avoid lighting components
 - multicore cables, how to run safely and neatly and where to store excess
 - power cables, how to run safely and neatly and where to store excess

Evidence Guide

EVIDENCE GUIDE	
<p>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.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The following evidence is critical to the judgement of competence in this unit:</p> <ul style="list-style-type: none"> • recognition of sound equipment, including key features and purpose • understanding of signal flow through the audio chain • completion of audio-related tasks in accordance with health and safety procedures.
Context of and specific resources for assessment	<p>The assessment context must provide for:</p> <ul style="list-style-type: none"> • practical demonstration of skills through the completion of a range of preparatory and set-up tasks with industry-current audio equipment • project or work activities that allow knowledge to be applied to specific production contexts and situations.
Method of assessment	<p>Assessment may incorporate a range of methods to assess performance and the application of essential underpinning knowledge, and might include:</p> <ul style="list-style-type: none"> • direct observation of the candidate completing audio-related tasks • evaluation of equipment which has been set-up by the candidate • oral or written questioning to assess knowledge of equipment and audio theory • review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate. <p>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 than English, remote communities and those with interrupted schooling).</p>
Guidance information for	<p>Assessment of this unit requires access to:</p>

EVIDENCE GUIDE**assessment**

- a range of sound equipment as identified in the Range Statement
- a sound system
- an environment in which an audio system can be run.

Range Statement

RANGE STATEMENT	
<p>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.</p>	
<p>Equipment must include:</p>	<ul style="list-style-type: none"> • audio mixing consoles • input source equipment • loudspeakers
<p>Accessories used in live audio may include:</p>	<ul style="list-style-type: none"> • active splits • analysis software • continuity and phase testers • DI boxes • insulation transformers • spectrum analysers • SPL meters • white or pink noise generators
<p>Equipment differences for loudspeakers may include:</p>	<ul style="list-style-type: none"> • features of high frequency compression driver types • size of paper cone loudspeakers
<p>Equipment differences for audio mixing consoles may include:</p>	<ul style="list-style-type: none"> • how front of house consoles differ from stage monitor consoles, particularly the difference between pre and post fade auxiliary sends
<p>Equipment differences for input source equipment may include:</p>	<ul style="list-style-type: none"> • devices in the main signal chain, e.g. equalisers, CD, cassette, mini disk • devices inserted over individual channels, such as noise gates, limiters, compressors, preamps
<p>Correct start up sequence and operating settings for an audio system would include:</p>	<ul style="list-style-type: none"> • ensuring all amplifier volume controls are down (at minimum settings) • ensuring all output faders on console are down (at minimum settings or muted) • powering up all front-of-house equipment first • powering up amplifiers last • winding up amplifier volumes after all equipment is powered up
<p>Correct sequencing of wiring would include:</p>	<ul style="list-style-type: none"> • connection of adequate mains to all components and understanding of power isolation • patching to create a complete signal chain

RANGE STATEMENT	
	from input to output <ul style="list-style-type: none"> • safe and neat positioning of cables and multicore
<i>Sound</i> equipment may include:	<ul style="list-style-type: none"> • amplifiers to suit the system • analogue FOH mixing desk of at least 24:8:2 format • CD player • computer DAT • effects rack • hard disc recorder • microphones of different pickup patterns and types • mini disc • signal processing equipment • speakers as part of the system • stereo 3-way PA system for audiences of different sizes

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	