



Australian Government

Department of Education, Employment and Workplace Relations

CUESOU11B Set up and operate stage monitor systems

Revision Number: 1

CUESOU11B Set up and operate stage monitor systems

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the skills and knowledge needed to determine the requirements for a stage foldback system, and to set up and operate that system for performers. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.
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Application of the Unit

Application of the unit	Sound technicians or foldback mixers apply the skills and knowledge outlined in this unit. It can be a challenging role since they need to satisfy the on-stage mixing requirements of each individual performer in a group or orchestra. This unit requires detailed knowledge of equipment and the specific issues that apply to the monitoring of foldback. As such it most commonly applies to musical performance. It is strongly recommended that this unit be assessed with or after the following units: • CUESOU07B Apply a general knowledge of audio to work activities • CUESOU10B Operate wireless audio equipment • CUSSOU303A Set up and disassemble audio equipment • CUESOU03C Operate professional audio equipment. This unit also has linkages to other audio units and combined assessment and/or training with those units may be appropriate, e.g.: • CUESOU04C Mix live audio.
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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. Determine performance requirements	1.1. Obtain accurate performance and venue information to inform the planning of the stage monitor system 1.2. Correctly interpret documentation to determine system requirements 1.3. Liaise with venue and other technicians/departments to allocate adequate set-up time and to confirm requirements for stage monitor system set-up and checking
2. Specify stage monitor system	2.1. Prepare accurate stage layout diagram with proposed placements of all required stage monitor equipment 2.2. Select appropriate stage monitor loudspeakers or in-ear monitors for each required send (mix) 2.3. Select appropriate stage monitor loudspeaker or in ear processing and/or amplification, plus cabling 2.4. Ensure adequate monitoring and communication systems are in place for all relevant personnel 2.5. Ensure availability of any in-ear or wireless equipment and accessories through liaison with relevant personnel
3. Set-up equipment and prepare for performance	3.1. Correctly set-up stage monitor console, processing/amplification racks and engineer's monitor, completing all appropriate checks 3.2. Check that all cables are neatly routed and secured and that all equipment is safely positioned 3.3. Ensure that there are adequate resources available in the event of equipment breakdown 3.4. Neatly and correctly label stage monitor console input channel strips, and all processing equipment so that each item is clearly identified as to function and relevant mix 3.5. Position all stage monitor loudspeakers and neatly run/fix all appropriate cables in accordance with health and safety requirements 3.6. Cross check final set-up against production requirements
4. Tune, equalise and adjust system for performance	4.1. Test all components of the stage monitor system, including a complete line check of all inputs, in accordance with health and safety requirements 4.2. Individually equalise each stage monitor send to

ELEMENT	PERFORMANCE CRITERIA
	avoid run-away feedback at all times and set top gain (level) indication for microphones 4.3. Cross check all adjacent stage monitor sends to allow for acoustic interference 4.4. Run complete system up to safe working limit, including while any front of house speaker system is operating, to check adequate performance and mains power availability
5. Liaise with performers on requirements	5.1. Establish and maintain a positive working relationship with relevant performance personnel 5.2. Reconfirm production requirements with each relevant performer and check that set-up meets individual requirements in relation to quality, balance and mix sound levels 5.3. Promptly identify malfunctions and rectify appropriately
6. Prepare sound mixing console for operation	6.1. Liaise with relevant personnel and/or read production documents to interpret and confirm the sound requirements so that technical and creative requirements are met 6.2. Ensure adequate worklights or console illumination and check light spill
7. Operate console during production	7.1. Observe occupational health and safety requirements for operating the sound mixing console 7.2. Operate faders to produce a level appropriate to the required sound and check each send (mix) in regular rotation 7.3. Make appropriate adjustments to equalisers to produce an appropriate tonal quality 7.4. Monitor sources and outputs both aurally and visually to meet with accepted safety standards and production requirements 7.5. Promptly identify and appropriately troubleshoot any problems on stage 7.6. Where required, allow audio signals to be processed, adding desired effects or other signal processing where necessary 7.7. Communicate appropriately with relevant personnel, when required, throughout the production
8. Complete work operations	8.1. Complete all necessary documentation in accordance with organisational procedures and production requirements

ELEMENT	PERFORMANCE CRITERIA
	8.2.Ensure that any equipment is handled, cleaned, maintained and stored in accordance with organisational and/or production requirements 8.3.Ensure that the work environment is clean and restored to its original condition in readiness for the next user

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, draw diagrams
- numeracy skills sufficient to work with measurements and numerical aspects of audio consoles

Required knowledge

- types of information required to plan stage monitor system
- features of different types of stage monitor systems for different contexts, including different equipment requirements
- particular issues and challenges associated with stage monitor systems
- safety issues associated with the set-up and installation of stage monitor systems
- issues associated with foldback mixing for different applications, e.g. concert, theatre
- techniques for equalisation of foldback speakers

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:

- ability to plan, set-up and operate a stage monitor system that meets production and performer requirements
- knowledge of stage monitoring equipment and the range of issues and challenges associated with operation of the equipment in a live production environment.

Context of and specific resources for assessment

The assessment context must provide for:

- practical demonstration of skills through the planning, set-up and operation of stage monitor systems for more than one live production
- involvement of, and interaction with, a production team and performers to reflect the collaborative nature of the 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 foldback quality where the candidate is responsible for set-up and operation
- discussion with performers for whom the candidate has set-up and operated stage monitor systems
- case studies to assess ability to plan and set-up stage monitor systems for different contexts
- oral or written questioning to assess knowledge of equipment, set-up procedures and safety issues
- 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

EVIDENCE GUIDE	
	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).
Guidance information for assessment	Assessment of this unit requires access to: • industry-current stage monitor equipment • venue where stage monitor system can be set-up and operated.

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.	
Information required to plan stage monitor system may include:	• input sources • performance schedule • performance style • stage layout
Requirements for stage monitor system set-up and checking may include:	• need for a clear stage • sound check with performers • stage monitor system equalisation with non-essential personnel removed from the stage area
Stage layout diagram would include positioning of:	• establishment of adequate balanced lines available from splitter system for stage monitors • monitor speakers • multicore stage box • processing and amplification racks • stage monitor console
In-ear or wireless equipment and accessories may include:	• batteries • reverb or external effectors • stands/microphone mounts
Checks to be undertaken when setting up stage monitor system include:	• phantom power switches off • position of equalisation controls • re-setting of external processing gear to flat (if EQ) • setting of external effectors or signal enhancers start-up position • setting of send controls

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		