



Australian Government

Department of Education, Employment and Workplace Relations

CUSSOU504A Create a final sound balance

Revision Number: 2

CUSSOU504A Create a final sound balance

Modification History

Release	Comments
Release 2	Created to fix formatting errors only. Released with CUS09 Music Training Package version 1.2

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to create a final sound balance for a production. Thorough understanding of a wide range of sound equipment and techniques for mixing and recording sound is required, along with the ability to supervise others, including engineers, sound mixers, sound editors and other studio technicians. The ability to solve problems that arise in the context of creating a final sound balance is essential.

Application of the Unit

Sound producers apply the skills and knowledge described in this unit. They work in live theatre, film, television and radio and are responsible for collaborating with other creative and technical personnel to create a final sound balance. Productions may be recorded or produced live.

Licensing/Regulatory Information

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

Pre-Requisites

Not applicable

Employability Skills Information

Not applicable

Elements and Performance Criteria Pre-Content

<i>Elements describe the essential outcomes of a unit of competency.</i>	<i>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.</i>
--	---

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assess sound sources for simultaneous balance	1.1 Assess the compatibility of sound sources for productions 1.2 Discuss creative possibilities for achieving the simultaneous balance with relevant personnel 1.3 Propose options for meeting production requirements to relevant personnel as required 1.4 Collaborate effectively with others during the assessment process
2. Identify creative and artistic possibilities	2.1 Explore creative possibilities of sound sources and seek agreement on best options with relevant personnel 2.2 Take account of relevant information contained in production documentation when developing options 2.3 In consultation with relevant personnel ensure that the position and blend of sound sources meet artistic/creative requirements
3. Direct the final mix	3.1 Ensure that the relative levels of sound sources conform to loudness parameters 3.2 Ensure that transitions between sound sources are technically accurate and artistically appropriate 3.3 Adapt and adjust balance techniques to meet production requirements 3.4 Confirm that the sound balance and characteristics of sound are artistically and technically appropriate 3.5 Identify and remedy problems promptly as required to minimise disruption to the production process 3.6 Ensure that the level of the composite signal is within technical limits and the desired dynamic range 3.7 Work sensitively and constructively with relevant personnel to achieve best production outcomes 3.8 Apply critical listening throughout production to ensure that sound quality meets production requirements 3.9 Complete all work to meet production requirements and ensure that the work environment is cleaned and ready for the next user
4. Evaluate completed audio master	4.1 In consultation with relevant personnel identify aspects of the process of creating the final sound balance that worked well and those that could be improved 4.2 Evaluate own role in operations and note areas for improvement 4.3 Provide feedback to team members on their performance

ELEMENT	PERFORMANCE CRITERIA
	as required 4.4 Document evaluation of operations in line with enterprise procedures

Required Skills and Knowledge

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

Required skills

- literacy skills sufficient to:
 - read and interpret recording documentation
 - write reports documenting the production process
- initiative, enterprise and creativity in the context of:
 - listening critically to continuously evaluate and adjust the sound balance
 - using aural imagination to develop coherent and innovative artistic sound outcomes within the scope of productions
 - accurately identifying and enhancing the characteristics of sound sources
 - listening critically to the creative and technical work of others
- communication skills sufficient to:
 - communicate the production vision and concept within the constraints of the production requirements
 - provide feedback to recording personnel on appropriate recording and production techniques
 - clearly explain/offer suitable alternatives when production recording difficulties cannot be resolved within operational constraints
- planning and organisational skills sufficient to prioritise work tasks and meet deadlines
- problem-solving skills sufficient to promptly and effectively rectify performance, performance environment and other technical issues that may affect the achievement of a simultaneous sound balance
- teamwork skills sufficient to work cooperatively with and provide leadership to personnel involved in creating the final sound balance
- technology skills sufficient to work with a variety of sound recording, production and playback equipment
- self-management skills sufficient to provide appropriate and timely documentation

Required knowledge

- well-developed understanding of psychoacoustic principles, including:
 - spatial hearing
 - direct sound
 - early sound
 - reverberant sound
 - studio and control room design
 - ergonomics
- industry knowledge, including:
 - varied characteristics of sound in a range of recording and performance

environments

- operational knowledge of a range of sound recording, production and playback equipment
- understanding compatibility in mono, stereo or multi-channel systems
- principles and techniques involved in achieving a simultaneous balance
- computer technologies relevant to sound production
- styles of musical interpretation and sound production
- relevant musical terminology
- well-developed knowledge of recording techniques, such as:
 - microphone and instrument/voice placement
 - application of special effects
 - mixing sound sources
- issues and challenges that typically arise in the context of creating a final sound balance
- OHS principles of safe listening, including safeguards against hearing loss

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	Evidence of the ability to: • create final sound balances on at least two occasions that: • demonstrate well-developed critical-listening and aural-discrimination skills • meet creative and artistic requirements • work creatively, collaboratively and constructively in a team environment, including providing leadership to others.
Context of and specific resources for assessment	Assessment must ensure: • access to a range of industry-current equipment as listed in the range statement • access to a range of productions • use of culturally appropriate processes, and techniques appropriate to the language and literacy capacity of learners and the work being performed.
Method of assessment	The following assessment methods are appropriate for this unit: • evaluation of final sound balances created by candidate and of their quality in terms of meeting specifications • written or oral questioning to test knowledge as listed in the required knowledge section of this unit • case studies to assess ability to create final sound balances for different types of productions or events • authenticated recordings of productions where the candidate created the final sound balance.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example: • CUSSOU401A Record sound • CUSSOU403A Perform advanced sound editing • CUSSOU405A Mix recorded music • CUSSOU501A Develop sound designs

	• CUSSOU503AImplement sound designs.
--	--

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.

Sound sources may include:	• dialogues and voice-overs • additional dialogue recording (ADR) • special effects • music • walla • ambient sound • atmospheric sound • foley.
Productions may include:	• live performance or event • commercial • print advertisement • corporate video • feature film and/or video • filmed event and/or performance • interactive media product • internet production • electronic game production • music recording and/or video • promotional trailer • musical theatre • dance • radio broadcast • short film and/or video • television program • training film and/or video • voice-over.
Relevant personnel may include:	• clients • artists, musicians and performers • directors • producers • post-production personnel • program managers • sound designers and editors • video and sound recorders

	• audio personnel: • sound engineers • sound technicians • sound editors • sound designers • sound effects personnel • post-production editors • foldback mixers • front-of-house mixers • recordists • re-recording mixers • audio stagehands • broadcasters • broadcast engineers • stage managers • floor managers • film/video crew.
Production requirements may include:	• technical • creative • artistic • attributions • audience • budget • confidentiality • content • contractual arrangements • copyright • deadlines • direct quotes • duration • intellectual property • interviews • location • purpose • schedule • style.
Documentation may include:	• pre-mix scripts • mixing sheets • track sheets • cue sheets • dubbing sheets

	• queries • notes • manuals.
Characteristics of sound may include:	• level • frequency • mono/stereo/5.1 surround sound • spatial position/image • balance • tonal quality • perspective • acoustic • dynamic range.
Work environment may include:	• dubbing theatre • on location, including interior and exterior • outside broadcast • post-production studio • recording studio • sound stage.

Unit Sector(s)

Media and entertainment production - audio/sound