



Australian Government

Department of Education, Employment and Workplace Relations

CUSSOU302A Record and mix a basic music demo

Revision Number: 2

CUSSOU302A Record and mix a basic music demo

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 undertake the technical side of making a basic music demo. There are two stages to the process - making a multi-track recording of the music performance and then mixing the recording down to a stereo format. An ability to work collaboratively with musicians is essential, together with an ability to troubleshoot equipment problems.

Application of the Unit

The skills and knowledge described in this unit would typically be applied in a home-based studio equipped with a digital audio workstation (DAW). The unit complements CUSMPF304A Make a music demo, which covers the process of making a demo from the perspective of performers.

More complex skills associated with mixing music are covered in:

- CUSSOU405A Mix recorded music

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>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Clarify music demo requirements	1.1 In consultation with relevant personnel confirm the purpose of the demo 1.2 Contribute to the development of a recording plan that takes into account a range of factors as required 1.3 Agree on method and format for final recording
2. Record performers	2.1 Position performers, musical instruments and equipment for optimum sound quality 2.2 Check that equipment is installed and aligned correctly 2.3 Ensure that microphones are operational at all times 2.4 Route test signals to the correct signal path and check that level of test signal is correct 2.5 Create a headphone mix for musicians 2.6 Capture sound sources according to the agreed method
3. Mix sound sources	3.1 Use appropriate panel controls to mix and balance sound sources to achieve required artistic effects 3.2 Produce transitions between sounds that are technically accurate and produce the required effect 3.3 Apply sonic effects and signal processing as required 3.4 Ensure that monitoring levels meet current safety standards 3.5 Ensure that the level of the composite signal is within technical limits and desired dynamic range
4. Finalise music demo	4.1 Assess the mix on speakers appropriate to the particular end use 4.2 Assess each track for correctness and quality and evaluate the mix in terms of meeting demo requirements 4.3 Listen to final mix with relevant personnel and agree on changes required to improve the quality of the mix 4.4 Incorporate final adjustments to the sound mix as required 4.5 Produce a master in the agreed format and make a backup 4.6 Keep documentation as required 4.7 Clean work environment after use and restore to pre-use condition

Required Skills and Knowledge

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

Required skills

- critical-listening and aural-discrimination skills
- literacy skills sufficient to:
 - log and label tracks
 - note and report faults and problems
 - read and understand mixing documentation
- numeracy skills sufficient to calculate duration of tracks
- communication and teamwork skills sufficient to:
 - liaise with sound-production personnel and performers
 - understand and follow instructions
- planning and organisational skills sufficient to:
 - prioritise work tasks
 - meet deadlines
 - seek expert assistance when problems arise
- problem-solving skills sufficient to identify faults that may occur in audio-production environments and refer problems to relevant personnel
- learning skills in the context of acting on constructive feedback about own work performance
- technology skills sufficient to operate:
 - a variety of mixing consoles
 - signal-processing and effects devices

Required knowledge

- 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
 - signal distortion
- 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
- characteristics of musical instruments in the context of recording and mixing
- techniques for manipulating input signals and gaining structure through use of:
 - equalisers
 - filters
 - compressors/expanders
 - faders and auxiliaries
 - effects devices
- issues and challenges that typically arise in the context of recording and mixing a basic music demo
- OHS requirements, including:
 - safe manual-handling techniques
 - working safely with electricity and hazardous substances
 - principles of safe listening, such as 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	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> record and mix at least two basic music demos work cooperatively with performers to achieve the required effect.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> access to performers requiring a basic music demo access to industry-current sound mixing equipment use of culturally appropriate processes, and techniques appropriate to the language and literacy capacity of learners and the work being performed.
Method of assessment	<p>The following assessment methods are appropriate for this unit:</p> <ul style="list-style-type: none"> observation or video recording of the candidate during recording and mixing sessions evaluation of authenticated audio recordings where the candidate was responsible for recording and mixing music written or oral questioning to test industry knowledge as listed in the required knowledge section of this unit.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> CUFSOU204A Perform basic sound editing CUSSOU201A Assist with sound recordings CUSSOU303A Set up and disassemble audio equipment.

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.

Relevant personnel may include:	<ul style="list-style-type: none"> • artists, musicians and performers • audio and sound engineers • broadcasters • producers • post-production personnel • program managers • camera operators.
Purpose may include:	<ul style="list-style-type: none"> • pitching a product at record labels • pursuing work at live music venues • getting work via live music or advertising agencies • getting air play on media outlets • accompanying a funding application • uploading onto music and/or social networking websites • developing media for band or solo artist websites • supporting applications for study and/or remote auditions • expanding a music portfolio • documenting a music project or other creative body of work.
Factors may include:	<ul style="list-style-type: none"> • musical style • contractual arrangements • copyright • budget • timelines • availability of personnel, including: <ul style="list-style-type: none"> • musicians • sound recordists • sound mixers • post-production personnel • promotional materials • distribution strategies

	<ul style="list-style-type: none"> • recording location, including: <ul style="list-style-type: none"> • live music venue • recording studio • private residence • rehearsal requirements • number of recording sessions required • equipment requirements • hire of equipment or venue • instruments • props • costumes • make-up.
Method may include:	<ul style="list-style-type: none"> • live to two-track stereo • live multi-tracking • multi-tracking with click • combination live recording and prerecorded samples • recording to analogue tape • recording to hard disk or digital tape • remixing existing music • video • using music production software for mixing and mastering.
Format may include:	<ul style="list-style-type: none"> • compact disc (CD) • audio file formats for upload and distribution within virtual environments and/or onto relevant media players, such as: <ul style="list-style-type: none"> • MP3 • WAV • AIFF • audiotape • video: <ul style="list-style-type: none"> • digital (high resolution) • digital (compressed for online environment) • analogue.
Equipment may include:	<ul style="list-style-type: none"> • digital audio workstation (DAW) with software, such as: <ul style="list-style-type: none"> • Pro Tools • Logic • Cubase

	<ul style="list-style-type: none"> • Ableton Live • Reason • Nuendo • Garage Band • Digital Performer • Soundscape • Sonic Studio • hard disk recorders • multi-track recorder • stereo recorders • microphones, such as: <ul style="list-style-type: none"> • dynamic • condenser • lavalier • shotgun • directional • radio • microphone stands • microphone accessories • microphone windscreens • headphones • amplifiers • speakers • mixing console/desk, including: <ul style="list-style-type: none"> • analogue • digital • digitally controlled analogue (hybrid) • effects rack • sequence sampler • cables and connectors.
<i>Sonic effects</i> may include:	<ul style="list-style-type: none"> • change in pitch • change in speed • echo • pan • fade in and fade out • filter • invert • normalise • repeat • reverb • modulation

	<ul style="list-style-type: none">• wahwah.
<i>Signal processing</i> may include:	<ul style="list-style-type: none">• amplification• compression• noise processing• spectrum signal processing• equalisation• time signal processing.
<i>Documentation</i> may include:	<ul style="list-style-type: none">• pre-mix scripts• mixing sheets• track sheets• cue sheets• dubbing sheets• queries• notes• manuals.
<i>Work environment</i> may include:	<ul style="list-style-type: none">• dubbing theatre• outside broadcast• post-production studio• recording studio• sound stage• home studio.

Unit Sector(s)

Media and entertainment production - audio/sound