Occupational Standards for Caribbean Vocational Qualifications (CVQ)

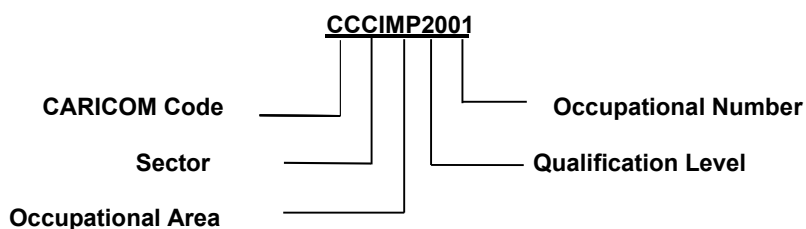**CCCIMP2001**   **CVQ Level 2– Music Production**

Unit Number	Unit Title	Requirement
CI00137	Plan a Career in Music	Mandatory
CI00160	Apply Basic Acoustic Principles	Mandatory
CI00161	Optimize Sound Pickup using Microphones	Mandatory
CI00162	Analyze Music	Mandatory
CI00163	Create Music using MIDI Devices	Mandatory
CI00164	Record Sound using Computerized Digital Equipment/Systems	Mandatory
CI00165	Edit and Mix Sound using Computerized Digital Equipment/Systems	Mandatory
CI00166	Operate Mixing Console and Signal Processors	Mandatory
CI00167	Export and Burn Files	Mandatory
CI00016	Follow Safety, Health, and Security Procedures in the Creative Industries	Mandatory
CI00125	Promote Products and Services to Customers	Mandatory
CI00168	Provide Amplified Sound for Audiences	Mandatory

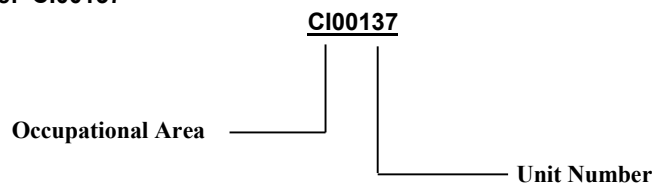To obtain a Caribbean Vocational Qualification (CVQ) all Mandatory Units must be achieved.

Legend to Occupational Standard code

Example: CCCIMP2001

CCCIMP2001

CARICOM Code ——— | | | | ——— Occupational Number

Sector ——— | | | ——— Qualification Level

Occupational Area ——— | |

Legend to Unit Code

Example: CI00137

<div align="center"><u>**CI00137**</u></div>

Occupational Area ──────┐ │

          └──── **Unit Number**

Key: <u>**CI**</u> **– Creative Industries; 00137– unit #;**

Country of Origin

Trinidad and Tobago

Qualification Overview

Occupational Standards can also be used to:

- Prepare job descriptions and specifications
- Determine recruitment criteria
- Appraise staff performance objectively
- Identify skill and training gaps and needs
- Conduct labour market analyses
- Develop curriculum
- Assess the effectiveness of training programmes
- Determine compensation and rewards

The benefits of acquiring the CVQ to Candidates

- Provide a basis for articulation and accreditation
- Provides a broad-based preparation for employment
- Is an alternative route to further / higher education
- Complements and has parallel standing with academic qualifications
- Provides enhanced employability and higher earning potential
- Facilitates an apprenticeship with actual work experience
- Equips candidates with the knowledge, skills and attitudes for the workplace
- Past work experience and skills can count towards achieving the CVQ
- Allows for continuity whereby if a candidate cannot complete the CVQ at a centre or school, they can continue at another approved centre
- CVQ's are recognized qualifications and facilitates free movement of labour throughout CARICOM

The benefits of the CVQ to Employers

- Provides a larger cadre of skilled employees/candidates to choose from
- Reduces cost of recruiting and selecting the ideal job candidate
- Reduces cost for training workers
- Ensures higher levels of productivity

The benefits of the CVQ to the Caribbean region:

- Produces a higher skilled workforce that is ready to adapt to ever-changing global demands
- Provides greater access for persons to achieve higher qualifications
- Contributes to the region's human resource capacity development

CI00137:   Plan a Career in Music

Unit Descriptor:

> This unit deals with the skills and knowledge required to identify career options and plan for a career in the music industry.

ELEMENTS	PERFORMANCE CRITERIA
Candidates must be able to:	
1 Participate in the music industry	1.1 Develop contact with relevant personnel working in the industry to develop knowledge of music products and their commercial value
	1.2 Monitor current industry issues through public and music industry media sources to inform career plans
	1.3 Monitor current professional issues, trends and technological developments to inform career plans and skills development needs
2 Identify own skills and interests	2.1 Evaluate and identify own skills, knowledge, strengths and weaknesses to maximize career development
	2.2 Identify and analyze preferred areas of work in artistic, technical and business areas of the industry
	2.3 Identify opportunities to develop competencies relevant to a range of functions to maximize career development
3 Develop and present an appropriate image	3.1 Maintain a portfolio of evidence that demonstrates skills, knowledge, achievements and work experience to maximize career opportunities
	3.2 Check that all materials are presented in a way that conveys a positive and constructive impression
4 Develop a career plan	4.1 Determine and analyze a range of areas in the industry that coincide with personal skills and interests
	4.2 Seek advice from relevant personnel regarding career potential to determine specific preparation required to meet work requirements

		4.3	Use contacts and other relevant information sources to plan realistic career options
		4.4	Draw up a career plan that includes a timeline and action plan for the development of required competencies, and proposed career actions and outcomes
5	Establish and maintain industry network	5.1	Identify the role of broad support networks within the music industry to inform career ideas and planning
		5.2	Develop and maintain communication with relevant industry practitioners to advance work and career outcomes
		5.3	Identify industry affiliations appropriate to career status and use to develop career goals

RANGE STATEMENT

All range statements must be assessed.

1. Sources of industry information include:
- music industry publications such as journals, papers, magazines, videos, interactive multimedia and books
- other publications related to the music industry
- performances
- industry associations and other organisations
- trade unions
- courses
- conferences
- workshops
- industry conferences
- industry trade fairs
- music events

2. Relevant personnel include:
- producers
- accountants
- heads of department
- client
- investors
- financial sources
- completion guarantor
- distributors, sales agents

6. Media sources include:
- Music Industry Directory
- newspaper reviews and arts column
- other print media
- libraries
- electronic news media
- websites and other online media

7. Broad career areas include:
- origination, performance and direction of music
- technical production
- music business
- administration

- project managers
- conductors
- directors
- artists
- editors
- program managers
- broadcasters
- performers
- other technical staff
- other specialist staff

3. Learning includes:
- courses and private tuition
- development of own skills through practice
- work experience
- informal or formal training
- structured instruction and programs designed to teach specific skills
- assistance and advice from others

4. Broad styles or relevant genres include:

- popular
- jazz
- traditional including Western and other cultures
- world
- folk
- acoustic
- electronic

5. Learning methods include:

- structured training programs
- traineeship or apprenticeship
- contact with people working in the industry
- experience through working in the industry
- courses
- mentoring
- coaching
- industry placement
- exchange/rotation

8. Forms of music include:
- songs
- popular music theatre/opera/ballet
- orchestral
- film/television/multimedia
- groups/chamber/small ensemble
- sound design and sound installation

9. Industry issues include:

- legislation relating to the production and marketing of music products and services :
  - importing and exporting
  - Copyright
  - Intellectual property
  - workplace relations law
  - OSH
  - Taxation
- changes in technology which may have an impact on the marketing and production of products and services

UNDERPINNING KNOWLEDGE & SKILLS

Candidates must know and understand:

1. how to network
2. what are the employment opportunities and pathways in the music industry
3. what is the current legislation in the industry
4. how to seek feedback and integrate constructive advice in work and career planning
5. how to identify own skills and plan and prepare for realistic career opportunities
6. how to identify learning needs to develop appropriate skills
7. how to communicate effectively
8. how to monitor own work and introduce strategies to improve performance
9. how to work effectively in a team environment
10. how to apply knowledge and understanding of different styles of music
11. what are the current industry issues which may affect careers in the music industry
12. how to assess short and long term opportunities in career planning
13. how to identify training opportunities to develop skills and knowledge relevant to planned career goals in the music industry
14. how to evaluate career directions and monitor own learning needs to anticipate and capitalize on actual and potential opportunities
15. how to use feedback to continuously evaluate career development against planned goals
16. how to identify groups and associations relevant to own area, and possible future areas of interest and use to advance career goals

EVIDENCE GUIDE

(1)   Critical Aspects of Evidence
Evidence should include a demonstrated ability to:

a. apply knowledge of the music industry, its structure and organisations
b. develop a career plan
c. communicate effectively
d. perform all tasks to specification

(2)   Method of Assessment
Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including oral questioning, discussion of strategies, authenticated samples of relevant work achievements, and authenticated details of achievement in relevant courses or training sessions, career plans or job interview, simulation, case studies of music careers as a basis to discuss career issues in the music industry, direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

(3)   Context of Assessment
This unit may be assessed on the job, off the job or a combination of both on and off the job. Competence in this unit may need to be assessed over a period of time, in a range of contexts and on multiple occasions involving a combination of direct, indirect and supplementary forms of evidence. Assessment should ensure that a sufficient range of tasks is covered. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

CI00160:   Apply Basic Acoustic Principles

Unit Descriptor:	This unit deal with the skills and knowledge required to understand and apply principles of acoustics.

ELEMENTS	**PERFORMANCE CRITERIA**
Candidates must be able to:	
1 Use surfaces and materials to control sound	1.1 Control sound reflections in an enclosed area to optimize listening experience
	1.2 Minimize sound spill to and from workspace in accordance with environmental regulations
2 Perform basic sound calculations	2.1 Use knowledge of room ratios to select suitable location for sound equipment to optimize sound delivery
	2.2 Calculate room modes to minimize standing waves to ensure appropriate listening environment
	2.3 Equalize sound sources taking room acoustics into consideration to optimize sound delivery
	2.4 Use sound meter to determine appropriate sound levels in accordance with legislation
	2.5 Verify that choice of loud speakers and amplifiers is appropriate to venue or room size in accordance with environmental legislation

RANGE STATEMENT

All range statements must be assessed.

1. Surfaces and materials include:

- concrete
- wood
- metal
- glass
- carpet
- absorbers
- diffusers
- bass traps

3. Legislation includes:

- environmental legislation
- OSH regulations

2. Sound spill includes:

- keeping sound from going in
- keeping sound from going out

UNDERPINNING KNOWLEDGE & SKILLS

Candidates must know and understand:

1. how sound waves are generated
2. what are concepts of frequency, period and wavelength
3. what are concepts of sound absorption and reflection
4. what are the acoustic properties of different surfaces and materials
5. what are the units of sound measurement; e.g. decibels, hertz
6. how to operate sound measurement equipment
7. what is signal analysis

EVIDENCE GUIDE

(1)   Critical Aspects of Evidence
Evidence should include a demonstrated ability to:

a. apply knowledge of basic acoustic principles
b. perform basic sound calculations
c. perform all tasks to specification

(2)   Method of Assessment
Assessors should gather a range of evidence, over a period of time, which is valid, sufficient and authentic. Evidence should be gathered through a variety of ways including direct observation and oral questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit competency. Assessment activities may also include written or verbal short answer testing, practical exercises, research/project work, evaluation of portfolios or observation of practical demonstration. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, manufacturer's specifications, codes, standards, manuals and reference materials.

(3)   Context of Assessment
This unit may be assessed on the job or off the job. Where assessment is done off the job, an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by working individually or as part of a team.

CI00161:   Optimize Sound Pickup Using Microphones

Unit Descriptor:

This unit deals with the skills and knowledge required to prepare for a recording session, live show or broadcast with vocals or instrument, optimize sound pickup using microphones and tear down/break down microphones.

ELEMENTS	PERFORMANCE CRITERIA

Candidates must be able to:

1	Prepare microphones for session	1.1	Select the microphone and microphone stand for the required sound in accordance with industry procedures
		1.2	Select the appropriate type of cable to be used with the microphone according to industry guidelines
		1.3	Set up microphone stand and affix microphone securely to the stand in accordance with workplace procedures
		1.4	Attach cable to microphone ensuring that there is no damage or inconvenience to the performer and/or colleagues in accordance with industry standard
		1.5	Attach cable to mixing console, audio interface, microphone pre amp or snake to capture sound in accordance with manufacturer's specifications
2	Optimize sound pickup	2.1	Select the microphone polar pattern to discriminate against unwanted sound sources according to industry standard
		2.2	Position the microphone to optimize sound pickup according to industry guidelines
		2.3	Identify and report faults, failures and breakdowns to the appropriate personnel in accordance with workplace procedures
3	Tear down/break down microphones	3.1	Secure the microphone when not in use in accordance with manufacturer's specifications
		3.2	Secure cables for storage to avoid breakage or damage to cable and/or connectors in accordance with industry procedures
		3.3	Break down microphone stand and return all items to the designated storage area in accordance with workplace procedures

RANGE STATEMENT

All range statements must be assessed.

1. Micing techniques include:
   - close
   - instrument
   - vocals
   - ambient
   - distant

2. Recording sessions include:
   - live show
   - studio session
   - broadcast with vocals and instrument

3. Equipment includes:
   - microphones
   - cables
   - microphone stands
   - pre amp
   - mixing console
   - audio interface
   - snake

4. Microphones include:
   - dynamic
   - condenser
   - ribbon

UNDERPINNING KNOWLEDGE & SKILLS

Candidates must know and understand:

1. what are the various types of microphones
2. what are the directional and frequency characteristics of each type of microphone
3. what is phantom power
4. what is proximity effect
5. how to apply the different micing techniques

EVIDENCE GUIDE

(1)   Critical Aspects of Evidence
Evidence should include the ability to:

a. demonstrate safe working practices at all times
b. demonstrate correct handling practices to prevent damage to microphone and ancillary equipment
c. plan the tasks in all sessions and reviews task requirements as appropriate
d. apply knowledge of the various types of microphones and their pick up pattern
e. determine when to use the different types of microphones

(2)   Method of Assessment
Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

(3)   Context of Assessment
This unit may be assessed on the job, off the job or a combination of both on and off the job.
Where assessment occurs off the job, that is the candidate is not in productive work, then an

appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team.

CI00162:   Analyze Music

Unit Descriptor:

> This unit deals with the skills and knowledge required to apply knowledge of music styles, trends, artists and repertoire to music industry work and learning.

ELEMENTS	PERFORMANCE CRITERIA
Candidates must be able to:	
1 Develop music knowledge	1.1 Identify and use strategies to review and maintain knowledge of musical styles, artists and/or repertoire relevant to selected music industry contexts
	1.2 Research information on relevant music styles or specialisations to develop current music knowledge
	1.3 Discuss music performances with colleagues and mentors to develop knowledge and capacity to analyze music artists, repertoire and trends
2 Analyze music	2.1 Determine music areas that are most relevant for critical listening and assessment
	2.2 Communicate with musicians and/or other reliable industry sources to assess, maintain and extend own critical listening skills
	2.3 Apply critical listening to live and recorded music appropriate to identified music industry contexts
	2.4 Apply critical listening to identified artists and repertoire and measure performance against artistic and/or commercial standards
	2.5 Listen to a range of music both live and recorded and analyze the contribution of technical and sound production to the success of the product
3 Maintain relevant musical genres and styles	3.1 Identify and use reliable sources of information for a selected musical style or styles to monitor and maintain awareness of artists and repertoire
	3.2 Research artists and repertoire in those styles in their contemporary and historical contexts to inform work and/or learning
	3.3 Develop and maintain productive relationships with artists relevant to identified music industry contexts

RANGE STATEMENT

All range statements must be assessed.

1. Extension of music knowledge includes:
   - courses
   - discussion with colleagues, mentors, artists and music
   - listening to a range of music
   - music or score reading
   - performing music
   - reading about music technicians

3. Application of music knowledge includes:
   - artists' management
   - choosing photographic materials
   - composing and/or performing music
   - contributing music to multimedia
   - preparing for and/or producing audio and video recordings
   - recording or writing biographies
   - selecting appropriate scores
   - talking or writing about music
   - using music software to produce music or music effects

2. Listening include:
   - aural imagination or music innovation
   - commercial potential and feasibility of artists, repertoire and
   - excellence in music products or events
   - instrument tuning
   - instruments and their combinations
   - keys, scales and chords in tonal or other relevant music systems
   - music systems, practices and music products

4. Music knowledge include:
   - awareness of musical forms, systems, practices and customs
   - chordal and melodic formulae
   - instrument knowledge
   - music analysis and research
   - music conventions in identified styles
   - music history
   - performance styles and customs
   - repertoire knowledge
   - sound production
   - special effects
   - writing about music

UNDERPINNING KNOWLEDGE

Candidates must know and understand:

1. how to use critical listening skills to make informed judgements
2. how to use resources to maintain current music knowledge
3. what is the work of music directors and/or record producers in identified styles or genres of music
4. how to apply knowledge of the work of successful musicians in identified musical styles or genres of music
5. how to apply relevant music history knowledge in identified areas of practice, styles or genres of music
6. what are the various processes of music production and presentation
7. how to use accurate and appropriate musical terminology where relevant
8. how to identify genres and their conventions in performance
9. how intervals, chords, scales and chord progressions are used in music to achieve unity and variety relevant to identified styles
10. how to communicate effectively with artists, technicians and others in the music industry
11. how to match repertoire with target, potential or existing audience
12. how to apply music knowledge and understanding to continuously improve capacity to analyze music for its artistic or commercial qualities and features
13. how to apply knowledge of styles and repertoire to contribute to own musical development

EVIDENCE GUIDE

(1)   **Critical Aspects of Evidence**
Evidence should include a demonstrated ability to:

a. use listening skills to analyze music critically
b. apply knowledge of musical styles and genres
c. perform all tasks to specification

(2)   **Method of Assessment**
Assessors should gather a range of evidence that is valid, sufficient, current and authentic.
Evidence of competence may be obtained through a variety of methods including:

- authenticated details of achievement in relevant courses or training sessions
- authenticated samples of relevant work achievements
- case studies and scenarios as a basis for discussion of the application of music analysis and knowledge to a variety of work contexts
- oral questioning on plans for developing music knowledge
- oral/aural test in the nominated area of specialization

Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

(3)   **Context of Assessment**
Competence in this unit may need to be assessed over a period of time, in a range of contexts and on multiple occasions involving a combination of direct, indirect and supplementary forms of evidence. This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflect realistic workplace situations. This unit of competency may be assessed using recorded or live music. Assessment of this unit requires evidence of awareness of broad stylistic features of music and ability to discuss these. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

CI00163:   Create Music using MIDI Devices

Unit Descriptor:

> This unit deals with the skills and knowledge needed to create music using MIDI devices or software.

ELEMENTS	PERFORMANCE CRITERIA
Candidates must be able to:	
1 Determine the purpose and form of the music	1.1 Determine the type and purpose of the music to be created in accordance with production requirements
	1.2 Select the form and stylistic expression of the piece, taking into account the technical scope of the equipment or software to be used in accordance with production requirements
	1.3 Develop and modify the concept using the method/s that best suit the appropriate personnel
2 Select and prepare equipment and software	2.1 Select and connect equipment, components and software to meet the requirements of the production
	2.2 Prepare equipment and peripherals to ensure the quality of the sound
3 Sequence the music	3.1 Use equipment and/or software to analyze the configuration of the music in accordance with specifications
	3.2 Draft the mix and modify throughout the composition process in accordance with production requirements
	3.3 Determine the order of tracks to be recorded and changed in accordance with production requirements
	3.4 Use software and/or hardware to choose and create sounds in accordance with specifications
	3.5 Record tracks on their various channels in accordance with work place procedures
4 Arrange, edit and modify music	4.1 Add parts to build arrangements in accordance with production requirements
	4.2 Modify the form or any part of the music, in accordance with staging and other production requirements

		4.3	Mix the music, using MIDI devices and/or software to achieve the required sound and quality
		4.4	Play and record the final piece using editing tools and strategies in accordance with production requirements
5	Save and export files	5.1	Export MIDI file and information to required media in accordance with industry procedures
		5.2	Self-contain each track of samples and sounds in accordance with production requirements
		5.3	Save and document relevant information in accordance with industry procedures
		5.4	Quit music production software in accordance with standard operating procedures

RANGE STATEMENT

All range statements must be assessed.

1. Methods for developing and modifying concept include:

- putting down tracks using a MIDI controller
- playing an instrument or instruments
- improvising and experimenting alone or with others
- singing
- collaborating with others

2. Tracks recorded include:

- drum track
- harmonic progression
- bass line
- melodies
- harmonies
- selected instruments

3. Composition and adaptation of music using software include:

- changing velocity or volume
- quantizing

5. Drafting the mix includes:

- instrument levels
- instrument sounds
- filters
- panning
- reverb
- voices
- tempi
- tuning

6. Tracks recorded and parts added include:

- in real time with parts played in using a click track
- in step time
- imported from other sources

7. Arranging the parts include adding:

- verses or choruses
- harmonies
- instruments

- note editing:
- note on or off
- note or pitch bend
- control change
- program change
- keyboard after touch
- modulation
- pitch wheel
- other variation

4. Mixing includes:

- delaying harmonies
- adding or changing harmonies
- introducing instrumental effects and distortion
- adjusting balance, tone and intonation
- adding sound elements and/or effects

8. Appropriate personnel includes:

- producers
- client
- investors
- heads of department
- financial sources
- project managers
- conductors
- directors
- artists
- performers
- other technical staff
- other specialist staff

UNDERPINNING KNOWLEDGE & SKILLS

Candidates must know and understand:

1. what software and hardware is used in sequencing and composing music
2. what is music sequencing and synthesis
3. how to use technology to improve creative outcomes
4. how to demonstrate understanding of chosen genres and styles and their musical forms and conventions in performance or composition
5. how to use composing techniques effectively
6. how to recognize intervals, chords, scales and chord progressions commonly used in the selected styles
7. how to demonstrate an understanding of intonation, dynamics, phrasing, rhythm, instrumentation, voicing and expression to produce the required sound
8. how to listen critically to own creative work and the creative work of others to inform and expand work
9. how to listen critically to and adjust own creative work to achieve the required sound
10. what is the application, range and capacity of equipment
11. how to experiment with combining styles or elements in new and effective ways

EVIDENCE GUIDE

(1)   Critical Aspects of Evidence
Evidence should include a demonstrated ability to:

a.   sequence music

     b.   arrange, edit and create music
     c.   use MIDI devices
     d.   perform all tasks to specification

(2)   **Method of Assessment**

Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including oral questioning, discussion of strategies, authenticated samples of relevant work achievements, and authenticated details of achievement in relevant courses or training sessions, career plans or job interview, simulation, case studies of music careers as a basis to discuss career issues in the music industry, direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

(3)   **Context of Assessment**

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CI00164:   Record Sound Using Computerized Digital
                            Equipment/Systems

Unit Descriptor:

> This unit deals with the skills and knowledge required for preparing to record sound, starting up the computer and other devices, opening the music program, renaming auto load/set record path, closing the session and saving files.

ELEMENTS	PERFORMANCE CRITERIA

Candidates must be able to:

1	Prepare to record sound	1.1	Confirm recording requirements in consultation with relevant personnel with reference to scripts and other production documentation
		1.2	Check that equipment, accessories and all components are in proper working order and meet production requirements
		1.3	Check signal levels against required standards
		1.4	Rectify any faults/problems and refer to the appropriate personnel prior to commencement of production
		1.5	Check that all documentation and labelling is accurate, legible and up to date, and meets with workplace requirements
		1.6	Determine storage requirements for recording in accordance with work-place procedures
		1.7	Determine file type to be used in consultation with relevant personnel
		1.8	Determine sample rate and bit depth to use where necessary in accordance with production requirements
2	Start-up computer and other IT devices	2.1	Power up the equipment in accordance with manufacturer's instructions
		2.2	Check that the specified operating system is loaded in accordance with industry procedures
		2.3	Report any problems during start-up of equipment to relevant personnel in accordance with workplace procedures
3	Open music program	3.1	Open music program to be used for recording in accordance with industry guidelines

		3.2	Store media files by creating new folder(s) in relevant medium in accordance with industry guidelines
4	Rename auto load/set record path	4.1	Create folder for recording in accordance with specifications
		4.2	Set record path to relevant folder in accordance production requirements
		4.3	Name individual tracks to be recorded in accordance with specifications
		4.4	Arm tracks for recording in accordance with production requirements
		4.5	Check for audio signal from mixing console/audio interface in accordance with workplace procedures
		4.6	Select inputs from mixing console/audio interface for recording in accordance with workplace procedures
		4.7	Check levels from mixing console/audio interface in accordance with standard operating procedures
		4.8	Set tempo of tune to be recorded in accordance with specifications
5	Save files and close session	5.1	Save files to storage media before shutting down in accordance with standard operating procedures
		5.2	Store any unloaded storage media in area designated for such storage in accordance with workplace procedures
		5.3	Shutdown computer and other IT devices in accordance with manufacturer's specifications

RANGE STATEMENT

All range statements must be assessed.

1. Type of recording includes:
   - musical piece,
   - vocal

3. Storage media includes:
   - diskettes,
   - hard drives
   - CDs
   - DVDs

2. IT Devices include:
   - monitors
   - system Unit

UNDERPINNING KNOWLEDGE & SKILLS

Candidates must know and understand:

1. why is it important to know the use and application of a range of microphones
2. how to connect sound equipment
3. why is critical listening and aural discrimination important
4. how to assess the suitability of equipment for given tasks
5. what are the steps in powering up the various types of equipment
6. what are the characteristics, benefits and limitations of the various operating systems
7. how to avoid software crashes and damage to equipment
8. how to operate software applications effectively

EVIDENCE GUIDE

(1)   **Critical Aspects of Evidence**
      Evidence should include a demonstrated ability to:
          a.   use audio software
          b.   record sound
          c.   perform all tasks to specification

(2)   Method of Assessment
      Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

(3)   Context of Assessment
      This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

CI00165:   Edit and Mix Sound Using Computerized Digital
                    Equipment/Systems

Unit Descriptor:

> This unit deals with the skills and knowledge required for planning digital editing, performing digital sound editing, storing tracks, performing digital sound mix and exporting files.

ELEMENTS	PERFORMANCE CRITERIA

Candidates must be able to:

1   Plan for digital editing

1.1   Check that digital audio editing equipment is operational and functioning according to workplace and production requirements

1.2   Identify, preview and list all audio files to be used in the production according to production requirements

1.3   Create a digital copy of all original audio tracks according to standard operating procedures

1.4   Preview the recorded audio and identify edit positions in accordance with specifications

2   Perform digital sound editing

2.1   Perform editing on audio to enhance the sound recording to meet production requirements

2.2   Navigate around the audio file using markers and verify that there are no tight or loose edits and sudden changes in ambience/levels

2.3   Clean all edits and punches to ensure that there are no clicks and pops with the audio region

2.4   Apply digital processing to enhance sound to meet production requirements

2.5   Use the play back controls and playback list to evaluate the production and identify any problems

2.6   Manipulate the editing software to solve any identified problems in accordance with production requirements

3   Store tracks

3.1   Select appropriate storage media for the files in accordance with industry procedures

3.2   Save track to chosen storage media in accordance with standard operating procedures

4	Perform digital sound mix	4.1	Control sound sources to a level, tonal quality and perspective for the required sound in accordance with production requirements
		4.2	Process audio tracks using software plug ins in accordance with production requirements
		4.3	Remove all unused audio files and consolidate into one continuous audio file in accordance with industry standard
		4.4	Create final stereo mix files and export or save to appropriate location in accordance with industry procedures
5	Export files	5.1	Set sample rate, bit depth, and file type in accordance with specifications
		5.2	Export/Convert and clearly label each track of project to required production standard
		5.3	Export all essential processed audio to separate track to meet production requirements
		5.4	Export files to alternative compressed or uncompressed format to meet production requirements
		5.5	Check that delivery media is clearly labelled with all relevant information in accordance with workplace procedures
		5.6	Save and quit application in accordance with standard operating procedures

RANGE STATEMENT

All range statements must be assessed.

1. Audio include:
- vocal
- musical sequences

2. Storage media include:
- hard drive
- CDs
- DVDs
- flash drives

4. Digital processing include:
- effects
- equalization
- normalizing
- cross fades
- dynamics

5. Equipment/Material include:
- Cassettes and other vintage player
- digital audio systems
- portable audio

3. Editing audio include:
- cut
- copy
- paste
- move
- fade

UNDERPINNING KNOWLEDGE & SKILLS

Candidates must know and understand:

1. how to apply knowledge of the principles and practice of sound editing
2. how to edit both vocals and instrumental pieces
3. what is the importance of basic music theory including bar, beats, pitches, intervals etc.
4. how to create a digital copy of original audio tracks to ensure there is a backup should an error occur
5. what is the significance of continuously saving or backing up one's work

EVIDENCE GUIDE

(1)   Critical Aspects of Evidence

Evidence should include a demonstrated ability to:

a.   perform digital sound editing
b.   measure and calculate using either musical terms or time base references
c.   use computer software
d.   use accepted engineering techniques, practices, processes and workplace procedures

(2)   Method of Assessment
Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

(3)   Context of Assessment
This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

CI00166:   Operate Mixing Console and Signal Processors

Unit Descriptor

This unit deals with the skills and knowledge required for preparing mixing console for operation, operating console during production, operating signal processing devices during production, monitoring technical quality during production, creating sound mix to production requirements and completing work operations.

ELEMENTS		PERFORMANCE CRITERIA	
	Candidates must be able to:		
1	Participate in technical run-through	1.1	Liaise with relevant colleagues and interpret documentation to determine audio requirements
		1.2	Position and prepare equipment according to specifications
		1.3	Implement appropriate changes to audio operation and document in accordance with workplace procedures.
2	Prepare for audio operation	2.1	Power up equipment in proper sequence to ensure functionality
		2.2	Complete audio check and implement and document any adjustments in accordance with industry procedures
		2.3	Identify and/or refer any equipment faults/problems to the appropriate personnel in accordance with workplace procedures
3	Prepare mixing console for operation	3.1	Check that sound mixing equipment is operational according to safety requirements and workplace procedures
		3.2	Input signal into channel according to industry procedures
		3.3	Provide phantom power to input devices where applicable
		3.4	Check that the phasing of all microphones is appropriate and in accordance with industry standards
		3.5	Test input signal levels coming into mixing console or audio interface and adjust as required
		3.6	Assign channel signals to required outputs in accordance with specifications
		3.7	Check that master output is operational and at an optimum level
		3.8	Set up signal processing devices to interface with mixing console via inserts

		3.9	Set device controls for required processing in accordance with specifications
		3.10	Set up effect units to interface with mixing consoles via auxiliaries
4	Operate console during production	4.1	Operate console to produce the required technical level and tonal balances
		4.2	Use filters and equalizers to process audio where applicable
		4.3	Insert signal processor into signal path to alter sound in accordance with workplace procedures
		4.4	Use auxiliary sends to send signal to a signal processor or other internal/external devices in accordance with workplace procedures
		4.5	Return signal to mixing console to enhance sound at an optimal level
		4.6	Control signal by grouping signal using busses in accordance with workplace procedures
		4.7	Adjust equalisation for required tonal balance and balance signal levels appropriately
		4.8	Maintain overall audio level within the requirements of the operating space
		4.9	Monitor equipment for operation throughout the performance and identify and report any problems to relevant personnel
5	Operate signal processing devices during production	5.1	Route signal from auxiliary send to effect unit input in accordance with specifications
		5.2	Route signal from effect unit output to mixer's auxiliary return in accordance with specifications
		5.3	Set device controls for required effects in accordance with production requirements
		5.4	Monitor and adjust the levels and quality of input sources at all stages of production to ensure that the output is within the required technical limits
6	Create sound mix to production requirements	6.1	Control sound sources to a level, tonal quality and perspective for the required sound
		6.2	Check that the stereo and mono sound sources have the required compatibility
		6.3	Adjust sound sources so that they are intelligible in terms of the sound required

		6.4	Adjust sound sources so that they have a position and image for the required sound
		6.5	Position and balance sound sources to achieve the required effect
		6.6	Apply critical listening and control the level of the composite signal within technical limits and the desired dynamic range
7	Complete post performance procedures	7.1	Check that all equipment are handled, cleaned, maintained and stored in accordance with organizational and/or production requirements
		7.2	Power down equipment in the correct sequence and in accordance with manufacturer instructions
		7.3	Identify and complete necessary equipment adjustments, including maintenance and re-setting where appropriate in preparation for the next performance
		7.4	Make appropriate changes to documentation and process in accordance with workplace procedures
		7.5	Create final stereo mix file in accordance with production requirements

RANGE STATEMENT

All range statements must be assessed.

1. Signal includes**:**
- line level,
- microphone level

2. Phantom power includes:
- condenser microphones,
- active direct boxes

3. Signal processors include:
- gates,
- compressors,
- limiters,
- equalizers
- reverb
- delay
- pitch correction
- modulation

4. External devices include:
- effects unit
- reference monitors

5. Return includes:
- auxiliary return
- spare channels

6. Compressors/ Limiters include:
- threshold,
- attack
- release
- ratio
- output
- key
- filters

7. Dynamic Range includes:
    - vocals
    - drums
    - guitars

8. Gating Controls include:
    - threshold
    - attack
    - release
    - ratio
    - output
    - key filters

9. Effects include:
    - reverbs
    - delays
    - modulation

10. Equipment used includes:
    - multi track recorder
    - stereo recorder
    - microphones
    - wireless microphones
    - amplifiers
    - equalizer
    - audio input sources
    - patch bass
    - break out boxes
    - speakers
    - mixing console/desk - analogue, digital, digitally controlled analogue (hybrid)
    - effects rack
    - tape machines
    - turntables
    - CD player/burner
    - sequence sampler
    - computer DAT
    - mini disc
    - hard disc recorder
    - DVD
    - sound recording and playback software

11. Consumables include:
    - DAT
    - CD-R
    - Mini Disc
    - IPods
    - flash drives

12. Documentation includes:
    - track sheets
    - music score/charts
    - scripts
    - cue sheets
    - manuals
    - audio plots
    - designer/director's sound specifications
    - manufacturer specifications
    - occupational health and safety requirements
    - organisation standards
    - performers' requirements
    - production and venue requirements

- production schedule
- stage plans
- text requirements
- recording report
- technical rider

13. Sound components include:
- music
- dialogue
- additional dialogue/ voice overs
- effects
- atmosphere
- foley

14. Appropriate personnel include:
- producers
- conductors
- directors
- artists
- editors
- program managers
- broadcasters
- performers
- other technical staff
- other specialist staff

UNDERPINNING KNOWLEDGE & SKILLS

Candidates must know and understand:

1. what are the features and operating procedures of audio mixing consoles
2. what are the four categories of signal processing
3. what are the applications of each of the four categories of signal processing
4. what type of processing would an insert point be used for
5. what type of processing would an auxiliary send be used for
6. how to recognize the typical faults and problems that may occur in a live audio environment and ways of addressing these
7. why is it important to follow the proper procedures to connect and power on/off sound equipment
8. what are the compatibility issues between mono, stereo, multi-channel and surround sound
9. what is the difference between pre fade and post fade
10. what are the uses of pre fade listen, solo /mute
11. what are the different types of meters and their uses
12. why is grounding important

EVIDENCE GUIDE

(1)   Critical Aspects of Evidence
Evidence should include the ability to:
a. operate mixing console and signal processors
b. create final stereo mix file
c. perform all tasks to specifications

(2)   Method of Assessment
Assessors should gather a range of evidence, over a period of time, which is valid, sufficient and authentic. Evidence should be gathered through a variety of ways including direct observation, oral questioning, examination of portfolio/CV, examples of authenticated assessments and/or assignments from formal education courses and

simulation. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, manufacturer's specifications, codes, standards, manuals and reference materials.

(3)   Context of Assessment
This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is, the candidate is not in productive work then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The assessment context must provide for practical demonstration of skills through the operation of audio for more than one production, involvement of and interaction with a production team to reflect the collaborative nature of the process and use of industry-current equipment.The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

CI00167:   Export and Burn Files

Unit Descriptor:	This unit deals with the skills and knowledge required for exporting, transferring and burning audio files onto various media.

ELEMENTS	PERFORMANCE CRITERIA
Candidates must be able to:	
1 Export files to storage media	1.1 Set sample rate, bit depth, and file type in accordance with production requirements
	1.2 Export/convert and label each track to required production standard
	1.3 Export all essential processed audio to separate track in accordance with specifications
	1.4 Export files to alternative compressed or uncompressed format to meet production standard
	1.5 Check that delivery media is labeled with all relevant information in accordance with industry procedures
	1.6 Save and quit music production application according to standard operating procedures
2 Burn/copy files to media	2.1 Open and create multimedia recording or burning software option according to manufacturer's specifications
	2.2 Select project category to make a disc in accordance with production requirements
	2.3 Add content to project file to transfer in accordance with workplace procedures
	2.3 Check that a recordable disc for file transfer is inserted and record or burn file and info to disc in accordance with specifications
	2.4 Label project in accordance with industry standard
	2.5 Save the project to production requirements and quit software according to manufacturer's specifications

RANGE STATEMENT

All range statements must be assessed.

1. Audio includes:
   - vocal
   - music sequences

2. Disc includes:

   - data
   - audio
   - copy

3. Storage media includes:
   - hard drive
   - CDs
   - DVDs
   - flash drives

4. Equipment/Material includes :
   - cassettes and other vintage players
   - digital audio systems
   - portable audio

UNDERPINNING KNOWLEDGE AND SKILLS

Candidates must know and understand:

1. what is the importance of converting audio files
2. how to apply knowledge of the principles of exporting and burning files onto different recording or storage media
3. what is the significance of labelling different parts of projects

EVIDENCE GUIDE

(1)   Critical Aspects of Evidence

Evidence should include a demonstrated ability to:

a. export, transfer and burn audio files onto various media
b. perform all tasks according to specifications

(2)   Method of Assessment
Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

(3)   Context of Assessment
This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

CI00016:   Follow Safety, Health and Security Procedures in the Creative Industries

Unit Descriptor:

This unit deals with the skills and knowledge required to follow health, safety and security procedures and applies to all individuals operating in the creative industries.

ELEMENTS	PERFORMANCE CRITERIA
Candidates must be able to:	
1 Follow occupational safety and health procedures	1.1 Comply with safety and health procedures in accordance with workplace policies and safety plans.
	1.2 Identify breaches of safety, health and security procedures and report to the appropriate parties
	1.3 Check that all work activities are undertaken in a safe manner and do not present a hazard to others.
2 Deal with emergency situations	2.1 Identify potential emergency situations and take required action within scope of individual responsibility
	2.2 Follow emergency procedures in accordance with workplace policies and procedures.
	2.3 Seek assistance from colleagues and/or supervisors where appropriate
	2.4 Report details of emergency situations in accordance with workplace policies and procedures
3 Maintain personal safety standards	3.1 Use appropriate safety clothing, footwear and, where relevant, personal protection equipment to ensure health and safety of self and others
	3.2 Take appropriate measures to prevent injury or impairment related to workplace activities and to control workplace hazards.
	3.3 Carry out safe manual handling and lifting to avoid back strain and other injuries in accordance with the relevant safety policies and procedures
	3.4 Ensure that accurate posture is maintained and ergonomics are consistently practiced in all work environments

		3.5	Take appropriate action to maintain a safe and secure work environment
		3.6	Comply with safety and health standards of music industry venues and equipment
4	Minimise the potential risk of noise and loud music	4.1	Identify the risks for people exposed to excessive sound/noise levels and possible responses to such risks.
		4.2	Identify methods of protecting hearing and the corresponding hearing protection devices
		4.3	Evaluate hearing protection devices and use the appropriate device
		4.4	Use a sound level meter at music industry venues to ensure appropriate sound level in accordance with health and safety procedures.
5	Provide feedback on health, safety and security	5.1	Identify promptly occupational safety and health issues requiring attention in accordance with workplace procedures
		5.2	Ensure that Occupational Safety and Health (OSH) issues are raised with the designated person in accordance with workplace and legislative requirements

RANGE STATEMENT

All range statements must be assessed.

1. Workplace hazards include:

- occupational overuse injury
- back injury
- hearing impairment
- stress
- performance anxiety
- electricity
- noise/sound level
- adverse weather/lighting conditions

2. Measures to prevent injury or impairment include:

- following all safety procedures accurately
- adopting accurate posture

3. Health, safety and security procedures include:

- emergency, fire and accident
- hazard identification and control
- safe sitting
- lifting and handling
- security of documents, cash, equipment,
- people
- key control systems
- safe use of equipment
- safe use of chemicals and toxic substances
- safe construction of rigs and supports
- safe sound/noise levels
- dealing with difficult customers

4. Relevant policies and procedures include:

- venue, studio or company policy
- legislative requirements

- taking adequate rest breaks
- controlling noise/sound levels and length of
- exposure to high levels of noise
- using personal protective equipment e.g. ear
- plugs
- avoiding eye strain
- accurate use of chemical and dangerous
- substances/equipment
- stress management techniques

UNDERPINNING KNOWLEDGE AND SKILLS

Candidates must know and understand:

1. what are the major safety requirements for the locations in which work is carried out
2. what are the major causes of accidents relevant to the work environment
3. what are the major hazards that exist in the workplace
4. how to follow emergency evacuation procedures
5. what are the symbols used for Occupational Safety and Health
6. how to identify designated personnel responsible for Occupational Safety and Health
7. what are noise control methods
8. what are posture requirements to avoid strain or injury
9. what are the relevant industry safety guidelines
10. what are the relevant national Occupational Safety and Health legislation and codes of practice
11. what are the major safety requirements for entertainment venues
12. what are the major causes of workplace accidents
13. how to identify workplace hazards
14. what are fire hazards and workplace fire hazard minimisation procedures
15. what are workplace safety, health and security procedures
16. how to write safety reports and safety implementation reports
17. how to follow health, safety and security procedures in the music industry
18. how to identify major causes of workplace accidents relevant to the work environment
19. how to identify and appropriately deal with security risks in the work environment

EVIDENCE GUIDE

(1)   Critical Aspects of Evidence

Evidence should include a demonstrated ability to:

a. follow established safety and security procedures and understand the implications of disregarding those procedures
b. comply with Occupational Safety and Health regulations applicable to workplace operations
c. adhere to industry guidelines and relevant legislative and insurance requirements
d. demonstrate understanding of the legal requirement to work in accordance with health, safety
a. and security procedures
e. explain safety procedures to others and deal with emergency situations
f. perform all tasks according to established procedures
g. report problems according to established procedures

(2) **Method of Assessment**
Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

(3) **Context of Assessment**
This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

CI00125:   Promote Products and Services to Customers

Unit Descriptor:

This unit deals with the skills and knowledge required to promote products and services to customers. It relates to situations where the sales function is not the primary focus of work activity.

ELEMENTS	PERFORMANCE CRITERIA
Candidates must be able to:	
1 Develop product/service and market knowledge	1.1 Develop product/service knowledge in accordance with workplace procedures
	1.2 Conduct research to update knowledge in accordance with workplace procedures
	1.3 Seek customer feedback and workplace observation to evaluate products, services and promotional initiatives
	1.4 Share knowledge obtained with colleagues to enhance effectiveness of the team in accordance with organisational procedures
	1.5 Identify changes in customer preference and maintain records in accordance with organisational procedures
2 Encourage customers to buy products and services	2.1 Provide accurate information about products and services to customers in accordance with organisational policies and procedures
	2.2 Use marketing techniques to encourage purchase in accordance with workplace procedures
	2.3 Promote products and services in accordance with current workplace policies and procedures

RANGE STATEMENT

All range statements must be assessed.

1. Products and services include:

- musical productions
- entertainment
- conferences and conventions
- function facilities

2. Research includes:

- accessing the internet
- reading newspapers, books, brochures, promotional items and other references
- organizing information from own memory and experiences
- discussions with colleagues
- reading workplace information

- general media
- personal on site observation

UNDERPINNING KNOWLEDGE & SKILLS

Candidates must know and understand:

1. what are the various marketing techniques
2. how to conduct research to update products and services knowledge
3. how to appreciate value of customer feedback
4. how to promote products and services
5. how to communicate effectively

EVIDENCE GUIDE

(1)   Critical Aspects of Evidence
Evidence should include a demonstrated ability to:

a. promote products and services in the music industry within a specific context
b. apply knowledge of promotional activities
c. perform all tasks to specification

(2)   Method of Assessment
Assessors should gather a range of evidence, over a period of time, which is valid, sufficient and authentic. Evidence should be gathered through a variety of ways including direct observation and oral questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit competency. Assessment activities may also include written or verbal short answer testing, practical exercises, research/project work, evaluation of portfolios or observation of practical demonstration. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, manufacturer's specifications, codes, standards, manuals and reference materials.

(3)   Context of Assessment
This unit may be assessed on the job or off the job. Where assessment is done off the job, an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by working individually or as part of a team.

CI00168:   Provide Amplified Sound for Audiences

Unit Descriptor:

This unit deals the skills and knowledge required to provide a suitably mixed and amplified sound for audiences.

ELEMENTS		PERFORMANCE CRITERIA
	Candidates must be able to:	
1 Provide sound reinforcement for audience	1.1	Check that the equipment is safe and operates in proper working order
	1.2	Provide sound signal for amplification which is free from defects, and suitable for the purpose
	1.3	Match the amplified sound quality to the source material within technical limits and dynamic sound range
	1.4	Provide clear amplified sound at a level which is sufficient for audibility, without exceeding safe levels or adversely affecting the required sound
2 Provide sound mix for audience	2.1	Balance sound sources to satisfy the requirements of the sound reinforcement application
	2.2	Control system gain and microphone equalization and position to avoid audio feedback with a live microphone
	2.3	Identify promptly faults and defects in system and equipment and report them to relevant personnel
	2.4	Explain and assess creative possibilities and problems with sound sources constructively, suggesting suitable options
3 Create sound mix to production requirements	3.1	Control sound sources to a level, tonal quality and perspective for the required sound
	3.2	Make sure that stereo and multi-channel sound sources have the required compatibility
	3.3	Adjust sound sources so that they are intelligible in terms of the sound required
	3.4	Adjust sound sources so that they have a position and image for the required sound
	3.5	Position and balance sound sources to achieve the required effect
	3.6	Control the level of the composite signal within technical limits and the desired dynamic range

RANGE STATEMENT

All range statements must be assessed.

1. Sound reinforcement includes:

   - a point source system
   - a multi-speaker system
   - meeting artistic, technical and budget requirements

2. Disc include:

   - data
   - audio
   - copy

3. Audio includes:
   - vocal
   - music sequences

UNDERPINNING KNOWLEDGE

Candidates must know and understand:

1. what equipment is required to provide sound reinforcement and what are the relevant safety checks
2. what are the relevant national and international interconnection standards (Audio Engineering Society)
3. what acoustic principles are relevant and how to apply them in the current context
4. what are the characteristics of the microphone
5. what are the characteristics of amplifier(s) and loudspeaker(s) and how to optimize their operation for the sound required
6. what are the techniques used with multi-speaker and point source systems
7. how to assess change of acoustics due to presence of audience
8. how to determine the sound mix required
9. what are the current noise at work regulations
10. what is the use of signal processing: equalization, effects, dynamics
11. what are the characteristics of tonal quality
12. what are the compatibility issues between mono, stereo and multi-channel sound
13. how to to rectify problems that may occur

EVIDENCE GUIDE

(1)   Critical Aspects of Evidence
Evidence should include a demonstrated ability to:
   a. apply knowledge of different types of cables and connectors
   b. apply knowledge of safety requirements for mains-operated equipment
   c. apply basic troubleshooting techniques
   d. use signal processors
   e. identify problems such as feedback, phase cancellation and distortion and rectify such problems

(2)   Method of Assessment
Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation and questioning. Questioning

techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

(3)   Context of Assessment
This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

GLOSSARY OF TERMS

Occupational Standards

Occupational Standards of competence are industry-determined specifications of performance, which describe the knowledge, skills and attitudes required by a worker in the performance of a particular role in the workplace. They specify what a person should know and do in order to carry out the functions of a particular job in the work environment. They are the building blocks for all activities in a competency-based training and certification system. An Occupational Standard is made up of a qualification plan, a unit title, elements, performance criteria, range statements, underpinning knowledge and skills and evidence guide.

Qualification Plan – The Qualification Plan identifies the Mandatory units which are those units that are necessary to deem a candidate competent in the occupational area and provide flexibility in different wok environments. It also contains the Title and Level of the qualification to be awarded.

Unit Title - The unit title is a succinct statement of the outcome of the unit of competency. It reflects the major activities or functions of an individual's work as well as the discreet units of work.

Unit Descriptor - The unit descriptor communicates the content of the unit of competency and the skill area it addresses.

Elements - These are the basic building blocks of the unit of competency. They describe the tasks in which competence should be demonstrated in order to carry out the specific function.

Performance Criteria - These are the descriptions of the outcomes of performance required for successful achievement of an element. They specify the required performance in relevant tasks, roles, skills and applied knowledge that enables competent performance.

Range Statement - This describes the essential operating conditions that should be present in training and assessment, depending on the work situation, needs of the candidate, accessibility of the item and local industry contexts. It lists the parameters in which candidates much demonstrate their competence.

Underpinning Knowledge and Skills – The knowledge identifies what a person needs to know to perform the work in an informed and effective manner. The skills describe the application of knowledge to situations where understanding is converted into a workplace outcome.

Evidence Guide - The Evidence Guide is critical in assessment as it provides information to Training Providers and Assessors about how the described competency should be

demonstrated. It provides a range of evidence for the Assessor to make a determination of competence and defines the assessment context. The Evidence Guide describes:

- Conditions under which competency must be assessed including variables such as the assessment environment or necessary equipment
- Suitable methodologies for conducting assessment including the potential for workplace simulation
- Resource implications, for example access to particular equipment, infrastructure or situations
- How consistency in performance must be assessed over time, various contexts and with a range of evidence

Level 1 – Directly supervised worker

Recognizes competence in a range of varied work activities performed in a variety of contexts. Most work activities are simple and routine. Collaboration with others through work groups or teams may often be a requirement. Substantial supervision is required especially during the early months evolving into more autonomy with time.

Level 2 – Supervised skilled worker

Recognizes competence in a broad range of diverse work activities performed in a variety of contexts. Some of these may be complex and non-routine and involve some responsibility and autonomy. Collaboration with others through work groups or teams and guidance of others may be required.

Level 3 – Independent/autonomous skilled worker

Recognizes competence in a broad range of complex, technical or professional work activities performed in a wide variety of contexts, with a substantial degree of personal responsibility and autonomy. Responsibility for the work of others and the allocation of resources are often a requirement. The individual is capable of self-directed application, exhibits problem solving, planning, designing and supervisory capabilities.

Level 4 – Supervisory specialist worker

Recognizes competence involving the application of a range of fundamental principles and complex techniques across a wide and unpredictable variety of contexts. Requires very substantial personal autonomy and often significant responsibility for the work of others, the allocation of resources, as well as personal accountability for analysis, diagnosis, design, planning, execution and evaluation.

Level 5 – Managerial professional worker

Recognizes the ability to exercise personal professional responsibility for the design, development or improvement of a product, process, system or service. Recognizes technical and management competencies at the highest level and includes those who have occupied positions of the highest responsibility and made outstanding contribution to the promotion and practice of their occupation.