

## QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR MEDIA AND ENTERTAINMENT INDUSTRY

### What are Occupational Standards(OS)?

- OS describe what individuals need to do, know and understand in order to carry out a particular job role or function
- OS are Performance standards that Individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding

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## Introduction

### Qualifications Pack- Sound Engineer

**SECTOR:** MEDIA AND ENTERTAINMENT

**SUB-SECTOR:** Film, Television, Radio, Animation, Gaming, Advertising

**OCCUPATION:** Sound Creation

**REFERENCE ID:** MES/Q3402

**ALIGNED TO:** NCO-2015/2153.0501

**Sound engineer in the Media & Entertainment Industry is also known as a Sound Mixer or Sound Recordist**

**Brief Job Description:** Individuals at this job are responsible to record and mix sound sources to create end-products that meet the quality standards and requirements of production.

**Personal Attributes:** This job requires the individual to know how to operate a range of sound equipment and software. The individual must be well-versed with the principles of sound and acoustics. The individual must be able to select sound sources and apply various mixing techniques and treatments to create quality end-products that meet production requirements.

Job Details

<b>Qualifications Pack Code</b>	<b>MES/Q3402</b>		
<b>Job Role</b>	<b>Sound Engineer</b> This job role is applicable in both national and international scenarios		
<b>Credits (NSQF)</b>	<b>TBD</b>	<b>Version number</b>	<b>1.0</b>
<b>Sector</b>	<b>Media and Entertainment</b>	<b>Drafted on</b>	<b>08/11/2014</b>
<b>Sub-sector</b>	<b>Film, Television, Radio, Animation, Gaming, Advertising</b>	<b>Last reviewed on</b>	<b>26/11/2018</b>
<b>Occupation</b>	<b>Sound Creation</b>	<b>Next review date</b>	<b>20/06/2021</b>
<b>NSQC Clearance on</b>	<b>22/08/2019</b>		

<b>Job Role</b>	<b>Sound Engineer</b>
<b>Role Description</b>	Record or mix sound sources to create required end-products
<b>NSQF level</b>	4
<b>Minimum Educational Qualifications</b>	Class XII, preferably with a background in physical sciences
<b>Maximum Educational Qualifications</b>	Graduation, preferably in Arts/Technology
<b>Prerequisite License or Training</b>	Sound mixing and editing software
<b>Minimum Job Entry Age</b>	18 years
<b>Experience</b>	1-3+ Years of work experience, with experience installing or working with studio equipment
<b>Applicable National Occupational Standards (NOS)</b>	<p><b>Compulsory:</b></p> <ol style="list-style-type: none"> <li><a href="#">MES /N3405 (Prepare sound equipment)</a></li> <li><a href="#">MES/N3407 (Record sound)</a></li> <li><a href="#">MES/N3412 (Mix sound)</a></li> <li><a href="#">MES/N0104 (Maintain workplace health and safety)</a></li> </ol> <p><b>Optional: N.A.</b></p>
<b>Performance Criteria</b>	As described in the relevant OS units

Keywords /Terms	Description
Acoustics	Acoustics is the science of sound production, creation of effects and their transmission
Budget	Budget is an estimate of the total cost of production that may include a break-up of cost components
Continuity	Continuity represents the seamless transition from one shot to another
Copyright Laws	A legal framework linked to intellectual property and the rights given to creators of original products/ concepts
Creative Brief	Creative brief is a document that captures the key questions that serve as a guide for the production including the vision, objective of the project, target audience, timelines, budgets, milestones, stakeholders etc.
Target Audience	Group of people at whom content/ adverting is aimed. A target audience is typically defined by age, gender, economic classification, geography and any other relevant parameters
Timelines	Timelines is a listing of dates by which the production milestones/stages need to be completed
Sector	Sector is a conglomeration of different business operations having similar businesses and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sound concept	Sound concept is a description of the overall sound experience for the production
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Vertical	Vertical may exist within a sub-sector representing different domain areas or the client industries served by the industry.
Occupation	Occupation is a set of job roles, which perform similar/related set of functions in an industry
Function	Function is an activity necessary for achieving the key purpose of the sector, occupation, or area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of OS.
Sub-functions	Sub-functions are sub-activities essential to fulfill the achieving the objectives of the function.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the knowledge and understanding they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria	Performance Criteria are statements that together specify the standard of performance required when carrying out a task
National Occupational Standards (NOS)	NOS are Occupational Standards which apply uniquely in the Indian context.
Qualifications Pack Code	Qualifications Pack Code is a unique reference code that identifies a qualifications pack.
Qualifications Pack(QP)	Qualifications Pack comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A Qualifications Pack is assigned a unique qualification pack code.
Unit Code	Unit Code is a unique identifier for an Occupational Standard, which is

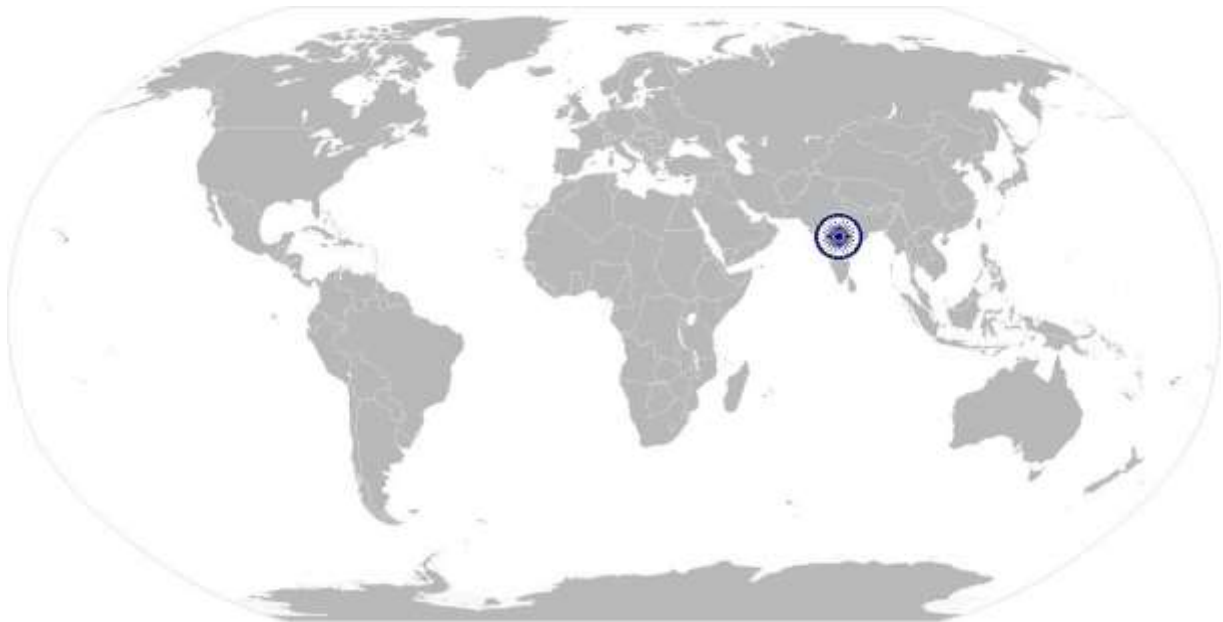
	denoted by an 'N'.
Unit Title	Unit Title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Scope	Scope is the set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on the quality of performance required.
Knowledge and Understanding	Knowledge and Understanding are statements which together specify the technical, generic, professional and organizational specific knowledge that an individual needs in order to perform to the required standard.
Organizational Context	Organizational Context includes the way the organization is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical Knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/Generic Skills	Core Skills or Generic Skills are a group of skills that are key to learning and working in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
<b>Keywords /Terms</b>	<b>Description</b>
NOS	National Occupational Standard(s)
QP	Qualifications Pack
NSQF	National Skill Qualifications Framework
NVEQF	National Vocational Education Qualifications Framework
NVQF	National Vocational Qualifications Framework

MES/N3405

Prepare sound equipment

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# National Occupational Standard



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## Overview

This unit is about preparing sound equipment prior to recording/ playback to ensure that they are correctly aligned in accordance to requirements

MES/N3405

Prepare sound equipment

National Occupational Standard

<b>Unit Code</b>	MES/N3405
<b>Unit Title (Task)</b>	Prepare sound equipment
<b>Description</b>	This OS unit is about preparing sound equipment prior to recording/ playback to ensure that they are correctly aligned in accordance to requirements
<b>Scope</b>	This unit/task covers the following: <ul style="list-style-type: none"> <li>Aligning the sound input and output interfaces</li> </ul>
<b>Performance Criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Aligning the sound input and output interfaces</b>	To be competent, the user/individual on the job must be able to: <ul style="list-style-type: none"> <li>PC1. understanding the sound requirements of production</li> <li>PC2. align/synchronize the inputs and output interfaces (including sound levels, polarity/phase, acoustic impedance, frequency, path, interferences, troubleshooting, sampling rate, bandwidth) of sound systems to ensure that the sound signals are sent and received at the correct specifications</li> <li>PC3. test sound signals for an appropriate duration to ensure that they meet requirements and are free from disturbances and defects</li> <li>PC4. respond positively to feedback and changes in creative requirements</li> </ul>
<b>Knowledge and Understanding (K)</b>	
<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> <li>KA1. the acoustics of the performance area and how they affect sound production requirements (e.g.: the bifurcation of different sound sources)</li> <li>KA2. the layout and positioning of sound equipment, including the various origin and destination points</li> </ul>
<b>B. Technical Knowledge</b>	The user/individual on the job needs to know and understand: <ul style="list-style-type: none"> <li>KB1. the principles of sound and acoustics</li> <li>KB2. how to use and handle various types of sound equipment (input and output devices)</li> <li>KB3. how to create a good signal-to-noise ratio, amplifying certain sounds while limiting ambient noises to a safe and appropriate sound level</li> <li>KB4. how to align sound equipment to the appropriate polarity, acoustic impedance, frequency etc.</li> <li>KB5. how to use audio metering devices to meter, monitor and level sound, mitigating sound-quality deviations</li> <li>KB6. how to place output devices such as amplifiers, speakers, headphones etc. in an optimum way so as to not cause interference with input devices</li> <li>KB7. how to phone in and out</li> </ul>
<b>Skills (S) (Optional)</b>	
<b>A. Core Skills/</b>	<b>Writing Skills</b>

MES/N3405

**Prepare sound equipment**

<b>Generic Skills</b>	The user/individual on the job needs to know and understand how to: SA1. record the technical requirements of sound, to refer to while aligning sound equipment
	<b>Reading Skills</b>
	The user/individual on the job needs to know and understand how to: SA2. read recording schedules to ensure that the sound equipment is aligned and ready for recording/play out ahead of timelines SA3. read user manuals, handling specifications and safety considerations to aid the correct use and handling of sound equipment
	<b>Oral Communication (Listening and Speaking skills)</b>
	The user/individual on the job needs to know and understand how to: SA4. discuss the sound requirements and the layout of sound equipment with the relevant parties and clarify doubts, if any SA5. discuss handling guidelines and safety considerations with contributors (artists, commentators, presenters, field journalists etc.)
<b>B. Professional Skills</b>	<b>Plan and Organize</b>
	The user/individual on the job needs to know and understand how to: SB1. plan work according to requirements and agreed timelines SB2. have a methodical, organized approach to work
	<b>Problem Solving</b>
	The user/individual on the job needs to know and understand how to: SB3. identify potential issues/variations from sound requirements and identify solutions to be able to resolve/correct them proactively
	<b>Decision making</b>
	The user/individual on the job needs to know and understand how to: SB4. select the equipment that will be used throughout the duration of the project
	<b>Customer Centricity</b>
	The user/individual on the job needs to know and understand how to: SB5. check that your own work meets project requirements
	<b>Analytical Thinking</b>
	The user/individual on the job needs to know and understand how to: SB6. have a keen eye for detail and maintain an aesthetic sense towards the final output
<b>Critical Thinking</b>	
The user/individual on the job needs to know and understand how to: SB7. have precise attention to all the details	



MES/N3405

Prepare sound equipment

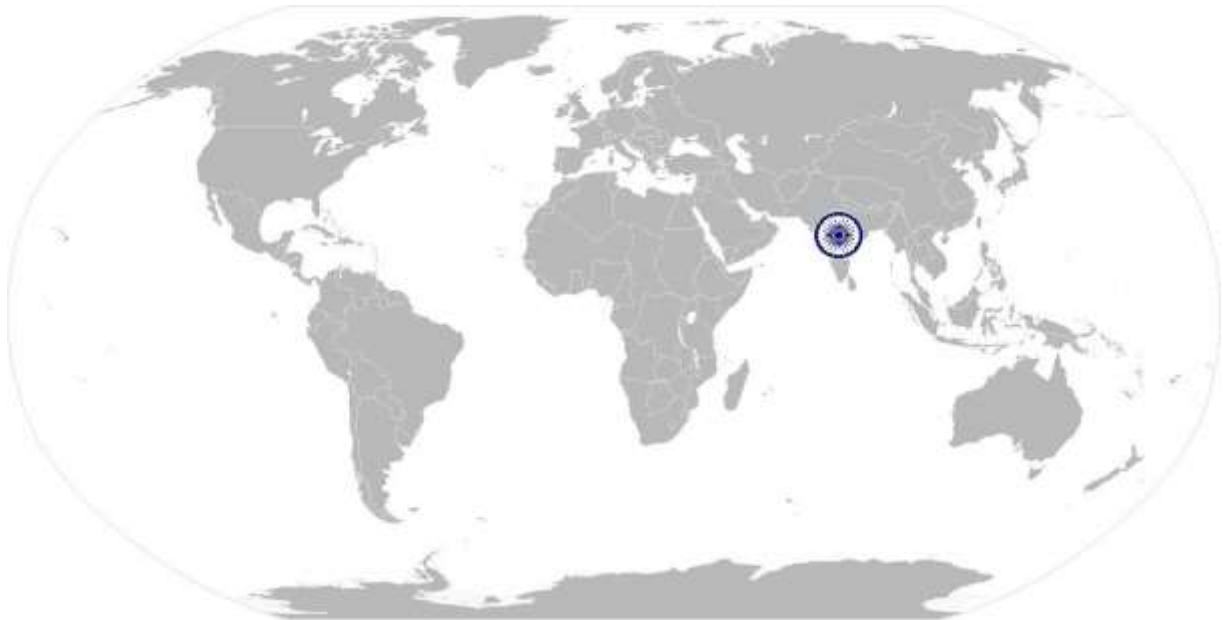
## NOS Version Control

<b>NOS Code</b>	MES/N3405		
<b>Credits (NSQF)</b>	TBD	<b>Version number</b>	<b>1.0</b>
<b>Sector</b>	Media and Entertainment	<b>Drafted on</b>	<b>08/11/2014</b>
<b>Sub-sector</b>	Film, Television, Radio, Animation, Gaming, Advertising	<b>Last reviewed on</b>	<b>26/11/2018</b>
<b>Occupation</b>	Sound Creation	<b>Next review date</b>	<b>20/06/2021</b>





# National Occupational Standard



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## Overview

This unit is about procedures for preparing and making recordings in a variety of styles as per the production requirements

MES/N3407

Record sound

National Occupational Standard

<b>Unit Code</b>	<b>MES/N3407</b>
<b>Unit Title (Task)</b>	<b>Record sound</b>
<b>Description</b>	This OS unit is about procedures for preparing and making recordings in a variety of styles as per the production requirements
<b>Scope</b>	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>• Monitor the recorder line-up</li> <li>• Make sound recordings</li> <li>• Maintain documentation</li> </ul> <p>Across productions and sound sources such as:</p> <ul style="list-style-type: none"> <li>• Productions could include sound tracks/bytes/compressed formats, background scores, interviews, documentaries, live events, news broadcasts, radio programmer</li> <li>• Sound sources can include live music, songs, interviews, announcements, dialogues, commentaries etc., pre-recorded sound tracks/clips, phone-ins</li> </ul>
<b>Performance Criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Monitor the recorder line-up</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. confirm that the recorded line-up meets the standards required of the production (required frequency response, signal-to-noise ratio, free from audible defects, maintains the phase relationship of the line-up signals)</p> <p>PC2. include in the recorded line-up the identifying codes and information for its correct reproduction</p> <p>PC3. supply, monitor and check the correct line-up tone at either the camera, mixer and/or recorder</p> <p>PC4. assess locations and report to the appropriate person any problems or potential problems that will prevent the making of an acceptable recording</p>
<b>Make sound recordings</b>	<p>PC5. provide, or ensure availability of, suitable equipment for any reasonable audio requirements likely to arise within the expected parameters of the job</p> <p>PC6. make test recordings, using typical programmer material, which are free from audible defects</p> <p>PC7. make sure the recording medium has sufficient capacity for the expected duration of the recording</p> <p>PC8. make sure that previously recorded material that may be needed is not lost or recorded over</p> <p>PC9. make sure that, when synchronization is required, the recording machine is correctly referenced, and that it runs stably</p> <p>PC10. where appropriate control background sound levels to be consistent and suitable for the subsequent use of the recording</p> <p>PC11. produce required sound in the desired format, at the required level, and with the dynamic range appropriate for the recording medium or technology</p>

MES/N3407

**Record sound**

	<p>PC12. record sufficient sound at the beginning and end of the take to allow a smooth transition to adjacent material</p> <p>PC13. make any additional recordings that are required by the editor or sound editor such as wild tracks of atmosphere, sound effects or dialogue</p>
<b>Maintain documentation</b>	<p>PC14. produce documentation and labelling which is accurate, legible, up-to-date, readily accessible and which meets the requirements of the production</p> <p>PC15. identify and log all recording accurately, and in a way that is acceptable and understandable by subsequent users in editing and post-production</p>
<b>Knowledge and Understanding (K)</b>	
<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. the technical and creative requirements of sound as laid down in the sound concept</p> <p>KA2. the expected quality standards for the production and formats in which they need to be stored</p> <p>KA3. the end-use and likely output devices from which the sound would be heard</p> <p>KA4. applicable timelines and budget for recording the required sound</p>
<b>B. Technical Knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. how to assess the acoustic characteristics of the sound stage (interior) or location (exterior)</p> <p>KB2. the sources of different types of sound that would be required during recordings and the estimated cost of procurement and copyrights for pre-recorded sound tracks (if applicable)</p> <p>KB3. how to use sound recording equipment, including the correct alignment and configuration of recording equipment</p> <p>KB4. how to record sound onto digital audio tape or hard disk recorders</p> <p>KB5. the operational and technical limitations of the medium being used (e.g.: the duration/capacity of recording media at the speed or sample rate used)</p> <p>KB6. the application and principles of ADR and Foley recording (if applicable)</p> <p>KB7. the significance of signal-to-noise ratio, signal phase, and control of audio level and headroom</p> <p>KB8. the types of common recording formats and the compatibility of relevant digital standards/output with different types of playback- and use this to deliver tracks with the appropriate configurations for editing</p> <p>KB9. the use of timecodes and/or other logging requirements in relevant digital and analogue applications</p> <p>KB10. the proper use and care of commonly used sound recording equipment</p>
<b>Skills (S) (Optional)</b>	
<b>A. Core Skills/ Generic Skills</b>	<b>Writing Skills</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA1. prepare notes to use during recording sessions</p>
	<b>Reading Skills</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA2. read and understand the sound concept</p> <p>SA3. read and understand the creative and technical requirements for recording</p>

MES/N3407

**Record sound**

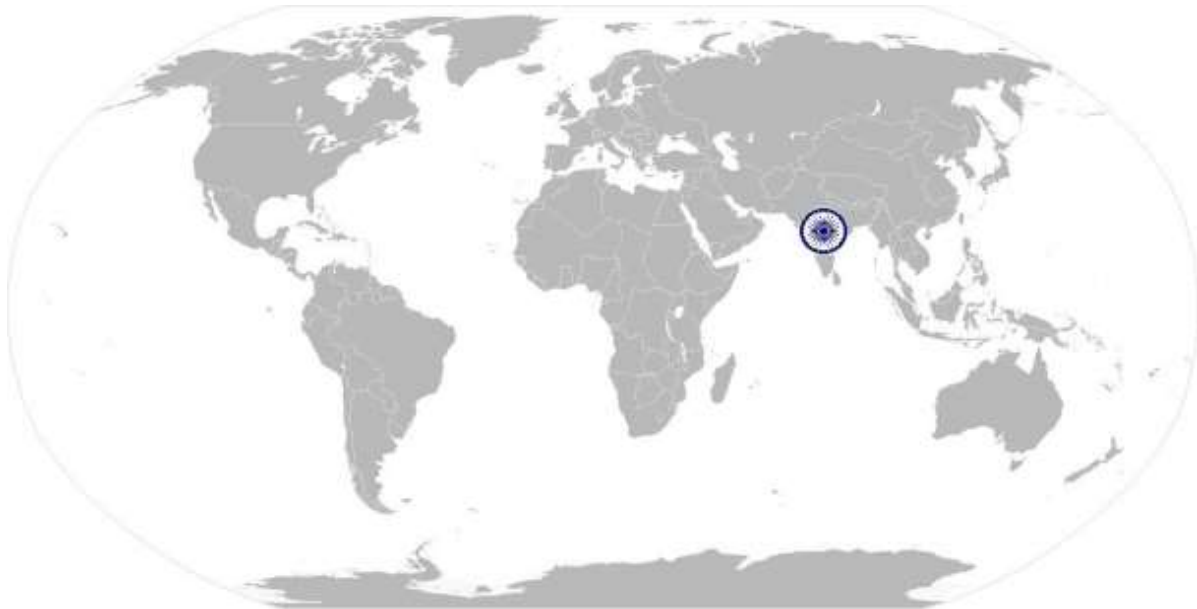
	SA4. read the script and understand the context/emotion that would need to be expressed through the sound
	<b>Oral Communication (Listening and Speaking skills)</b>
	The user/individual on the job needs to know and understand how to: SA5. communicate with the sound supervisor, producers or contributors regarding the sound concept, and any other creative/technical requirements SA6. discuss the possibilities of creating sound with the given sound sources so as to conform to the sound concept SA7. present/solicit feedback on end-products and identify modifications required
<b>B. Professional Skills</b>	<b>Plan and Organize</b>
	The user/individual on the job needs to know and understand how to: SB1. plan individual work and timelines so as to deliver the end-products required within timelines and within the designated budget
	<b>Problem Solving</b>
	The user/individual on the job needs to know and understand how to: SB2. identify problems with successful execution of the task and resolve them in consultation with the sound supervisor
	<b>Critical Thinking</b>
	The user/individual on the job needs to know and understand how to: SB3. critically analyses the end-products to ensure they are of the optimum quality and meet the requirements of post-production
	<b>Decision making</b>
	The user/individual on the job needs to know and understand how to: SB4. manage decision on suitable course of action to meet creative and technical project requirements
	<b>Customer Centricity</b>
	The user/individual on the job needs to know and understand how to: SB5. check that your own work meets customer requirements
<b>Analytical Thinking</b>	
The user/individual on the job needs to know and understand how to: SB6. have a keen eye for detail and maintain an aesthetic sense towards the final output	

MES/N3407

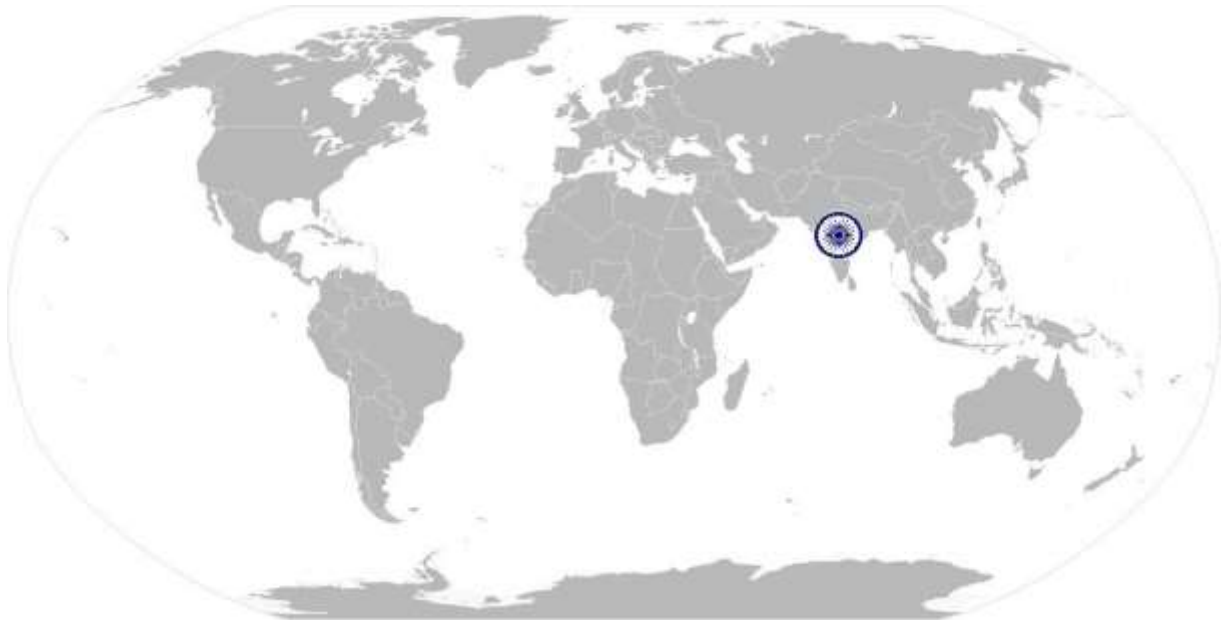
Record sound

## NOS Version Control

<b>NOS Code</b>	MES/N3407		
<b>Credits (NSQF)</b>	TBD	<b>Version number</b>	1.0
<b>Sector</b>	Media and Entertainment	<b>Drafted on</b>	08/11/2014
<b>Sub-sector</b>	Film, Television, Radio, Animation, Gaming, Advertising	<b>Last reviewed on</b>	26/11/2018
<b>Occupation</b>	Sound Creation	<b>Next review date</b>	20/06/2021



# National Occupational Standard



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## Overview

This unit is about mixing sound during post-production or live recordings in accordance with production requirements



MES/N3412

Mix sound

National Occupational Standard

<b>Unit Code</b>	<b>MES/N3412</b>
<b>Unit Title (Task)</b>	<b>Mix sound</b>
<b>Description</b>	This OS unit is about recording/mixing sound using different sound sources in accordance to production requirements
<b>Scope</b>	<p>This unit/task covers the following:</p> <p>Tasks:</p> <ul style="list-style-type: none"> <li>• Work with sound sources</li> <li>• Mix sound during post-production or live recordings to achieve the level, tone quality, audio image and intelligibility required</li> <li>• Work with contributors and colleagues</li> </ul> <p>Across productions and sound sources such as:</p> <ul style="list-style-type: none"> <li>• Productions could include sound tracks, background scores, interviews, documentaries, live events, news broadcasts, radio programmer</li> <li>• Sound sources can include live music, songs, interviews, announcements, dialogues, commentaries etc., pre-recorded sound tracks/clips, phone-ins</li> </ul>
<b>Performance Criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Work with sound sources</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. select valid criteria and use reliable methods to assess the sources required for the final mix</p> <p>PC2. confirm that sound sources have the desired intelligibility, position and image in terms of the required sound</p> <p>PC3. ensure that stereo and multi-channel sound sources have the required compatibility, where appropriate</p> <p>PC4. control the level of the composite signal within technical limits and within the desired dynamic range</p>
<b>Mix Sound during post-production or live recordings to achieve the level, tone quality, audio image and intelligibility required</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC5. manipulate sound sources to achieve the level, balance, tonal quality, perspective and dynamic range appropriate to the required sound</p> <p>PC6. create the sound mix within production constraints</p> <p>PC7. create a sound mix which is appropriate to the context in which it will be heard</p> <p>PC8. accurately identify and promptly correct any problems in creating the mix, minimizing disruption to contributors and colleagues</p> <p>PC9. ensure that tracks and mixes are organized in a way that is suitable for later use in editing</p> <p>PC10. ensure that any paperwork is accurate, legible and conforms with conventions that will be understood by other mixers, sound technicians etc.</p>
<b>Work with Contributors and Colleagues</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC11. efficiently communicate with sound or other crew regarding equipment positioning and requirements</p> <p>PC12. respond to and interpret suggestions from the contributor, colleagues, client or production during sound mixing, clarify any ambiguities or</p>



MES/N3412

Mix sound

	<p>misunderstandings, and take appropriate action PC13. explain clearly any problems with the sound mix, and offer realistic options</p>
<b>Knowledge and Understanding (K)</b>	
<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. the creative and technical requirements of the production/sound concept KA2. the expected quality standards for the production KA3. applicable timelines and budget for recording the required sound</p>
<b>B. Technical Knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. the functional and operating characteristics of commonly used mixing, ancillary and encoding equipment KB2. the principles of “storytelling” and the conventions of different genres and styles of film and programmer-making KB3. the requirements for dynamic range and intelligibility, and how to achieve them KB4. the different kinds of sound treatment and equalization, and how to achieve them KB5. the characteristics of tonal quality and perspective, and how to achieve them KB6. basic principles of pitch, rhythm, melody, harmony and time signatures and how to apply them KB7. the characteristics, uses and requirements of mono, stereo and surround formats, and how to achieve them KB8. the principles and styles of music and different musical ensembles (orchestra, string quartet, rock group, jazz quartet, soloist, etc.) KB9. the context in which the mix will be played, what the end-product will be used for and the equipment it will be heard through- and how to take this into account when creating the mix KB10. the needs of post-production sound and editing, and how the sound will be used in postproduction KB11. sound editing/mixing software (e.g.: Adobe Audition, Nuendo, Pyramix) w.r.t. both their theoretical and practical components KB12. The applicable copyright norms and intellectual property rights</p>
<b>Skills (S) (Optional)</b>	
<b>A. Core Skills/ Generic Skills</b>	<b>Writing Skills</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA1. prepare notes to use during the recording/mixing sessions</p>
	<b>Reading Skills</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA2. read and understand the sound concept SA3. read and understand the creative and technical requirements for recording SA4. read the script and understand the context/emotion that would need to be expressed through the sound</p>

MES/N3412

Mix sound

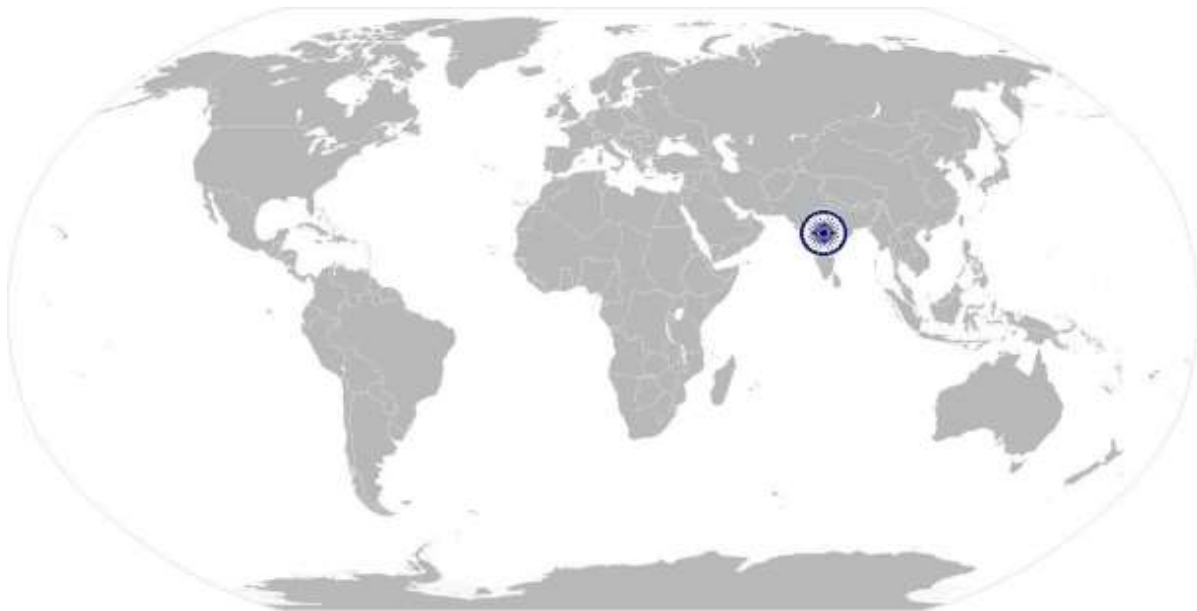
	<p><b>Oral Communication (Listening and Speaking skills)</b></p>
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> <li>SA5. communicate effectively with the Sound Supervisor, producers or contributors regarding the sound concept, as well as creative/technical requirements</li> <li>SA6. discuss the possibilities of creating sound with the given sound sources so as to conform to the sound concept</li> <li>SA7. present and solicit feedback on the end-products and identify modifications required</li> </ul>
<p><b>B. Professional Skills</b></p>	<p><b>Plan and Organize</b></p>
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> <li>SB1. plan individual work and timelines so as to deliver the end-products required within timelines and within the designated budget</li> </ul>
	<p><b>Problem Solving</b></p>
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> <li>SB2. identify problems with successful execution of the task and resolve them in consultation with the Sound Supervisor</li> </ul>
	<p><b>Critical Thinking</b></p>
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> <li>SB3. critically analyze the end-products to ensure they are of the optimum quality and meet the requirements of post-production</li> </ul>
	<p><b>Decision making</b></p>
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> <li>SB4. manage decision on suitable course of action to meet creative and technical project requirements</li> </ul>
	<p><b>Critical Thinking</b></p>
<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> <li>SB5. mix more subtle sounds to enhance mood and feeling</li> </ul>	
<p><b>Analytical Thinking</b></p>	
<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> <li>SB6. have a keen eye for detail and maintain an aesthetic sense towards the final</li> </ul>	

MES/N3412

Mix sound

## NOS Version Control

<b>NOS Code</b>	MES/N3412		
<b>Credits (NSQF)</b>	TBD	<b>Version number</b>	1.0
<b>Sector</b>	Media and Entertainment	<b>Drafted on</b>	08/11/2014
<b>Sub-sector</b>	Film, Television, Radio, Animation, Gaming, Advertising	<b>Last reviewed on</b>	26/11/2018
<b>Occupation</b>	Sound Creation	<b>Next review date</b>	20/06/2021

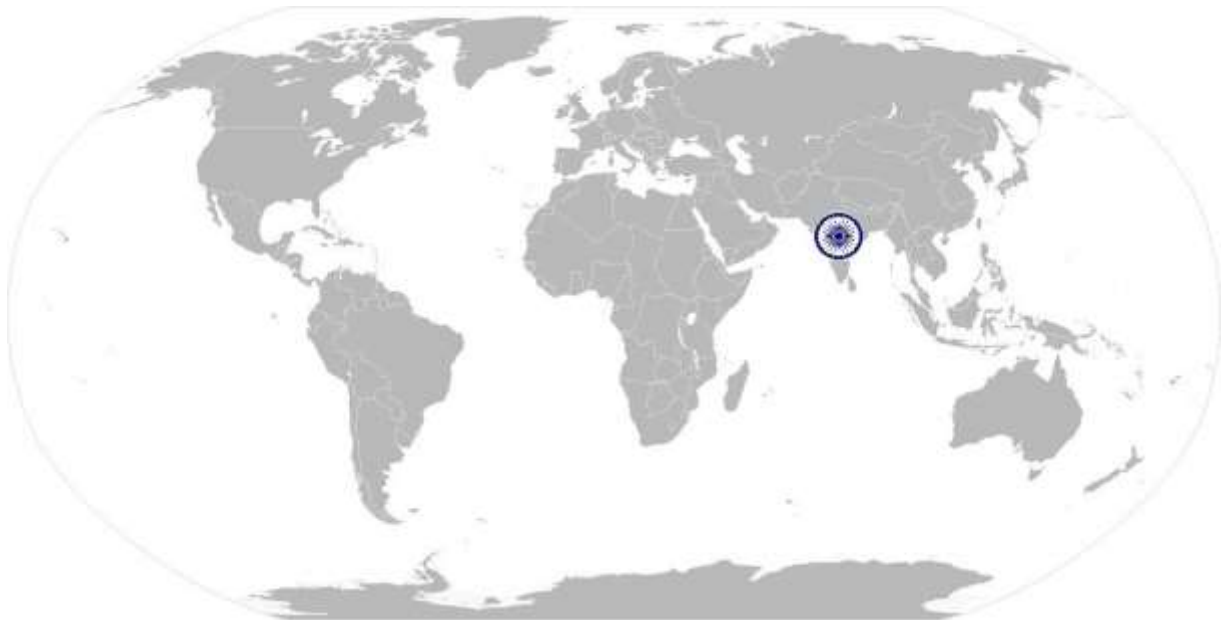


MES/N0104

Maintain workplace health and safety

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# National Occupational Standard



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## Overview

This unit is about contributing towards maintaining a healthy, safe and secure working environment

MES/N0104

### Maintain workplace health and safety

National Occupational Standard

<b>Unit Code</b>	<b>MES/N0104</b>
<b>Unit Title (Task)</b>	<b>Maintain workplace health and safety</b>
<b>Description</b>	This OS unit is about contributing towards maintaining a healthy, safe and secure working environment
<b>Scope</b>	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>• understanding the health, safety and security risks prevalent at the workplace</li> <li>• knowing the people responsible for health and safety and the resources available</li> <li>• identifying and reporting risks</li> <li>• complying with procedures in the event of an emergency</li> </ul>
<b>Performance Criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Understanding the health, safety and security risks prevalent in the workplace</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. maintain one's posture and position to minimize fatigue and any risk of injury</p> <p>PC2. maintain first aid kit and keep oneself updated on the first aid procedures</p> <p>PC3. identify and document potential risks like sitting postures while using computer, eye fatigues and other hazards at the workplace</p> <p>PC4. accurately maintain accident reports</p> <p>PC5. report health and safety risks/ hazards to the concerned personnel</p> <p>PC6. participate in organization's health and safety knowledge sessions and drills</p>
<b>Knowing the people responsible for health and safety and the resources available</b>	<p>PC7. identify the people responsible for health and safety at the workplace, including those to contact in case of an emergency</p> <p>PC8. identify security signals e.g. fire alarms and places such as staircases, fire warden stations, first aid and medical rooms</p>
<b>Identifying and reporting risks</b>	<p>PC9. identify aspects of your workplace that could cause potential risk to own and others health and safety</p> <p>PC10. ensure own personal health and safety, and that of others at the workplace through precautionary measures</p> <p>PC11. identify and recommend opportunities for improving health, safety, and security to the designated person</p> <p>PC12. report any hazards outside the individual's authority to the relevant person in line with organisational procedures and warn other people who may be affected</p>

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<b>Complying with procedures in the event of an emergency</b>	<p>PC13. follow organization's emergency procedures for accidents, fires or any other natural calamity in case of a hazard</p> <p>PC14. identify and correct risks like illness, accidents, fires or any other natural calamity safely and within the limits of individual's authority</p>
<b>Knowledge and Understanding (K)</b>	
<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. organization's norms and policies relating to health and safety</p> <p>KA2. government norms and policies regarding health and safety and related emergency procedures</p> <p>KA3. limits of authority while dealing with risks/ hazards</p> <p>KA4. the importance of maintaining high standards of health and safety at a workplace</p>
<b>B. Technical Knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. the different types of health and safety hazards in a workplace</p> <p>KB2. safe working practices for own job role</p> <p>KB3. evacuation procedures and other arrangements for handling risks</p> <p>KB4. names and contact numbers of people responsible for health and safety in a workplace</p> <p>KB5. how to summon medical assistance and the emergency services, where necessary</p> <p>KB6. vendors' or manufacturers' instructions for maintaining health and safety while using equipment's, systems and/or machines</p>
<b>Skills (S) (Optional)</b>	
<b>A. Core Skills/ Generic Skills</b>	<p><b>Writing Skills</b></p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA1. how to write and provide feedback regarding health and safety to the concerned people</p> <p>SA2. how to write and highlight potential risks or report a hazard to the concerned people</p> <p><b>Reading Skills</b></p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA3. read instructions, policies, procedures and norms relating to health and safety</p> <p><b>Oral Communication (Listening and Speaking skills)</b></p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA4. highlight potential risks and report hazards to the designated people</p> <p>SA5. listen and communicate information with all anyone concerned or affected</p>
<b>B. Professional Skills</b>	<p><b>Decision making</b></p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. make decisions on a suitable course of action or plan</p> <p><b>Plan and Organize</b></p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SB2. plan and organize people and resources to deal with risks/ hazards that lie within the scope of one's individual authority</p> <p><b>Problem Solving</b></p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SB3. apply problem solving approaches in different situations</p>

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	<b>Critical Thinking</b>
	The user/individual on the job needs to know and understand how to: SB4. understand hazards that fall within the scope of individual authority and report all hazards that may supersede one's authority SB5. apply balanced judgements in different situations
	<b>Analytical Thinking</b>
	The user/individual on the job needs to know and understand how to: SB6. analyze data and activities
	<b>Customer Centricity</b>
	The user/individual on the job needs to know and understand how to: SB7. build and maintain positive and effective relationships with colleges and customers

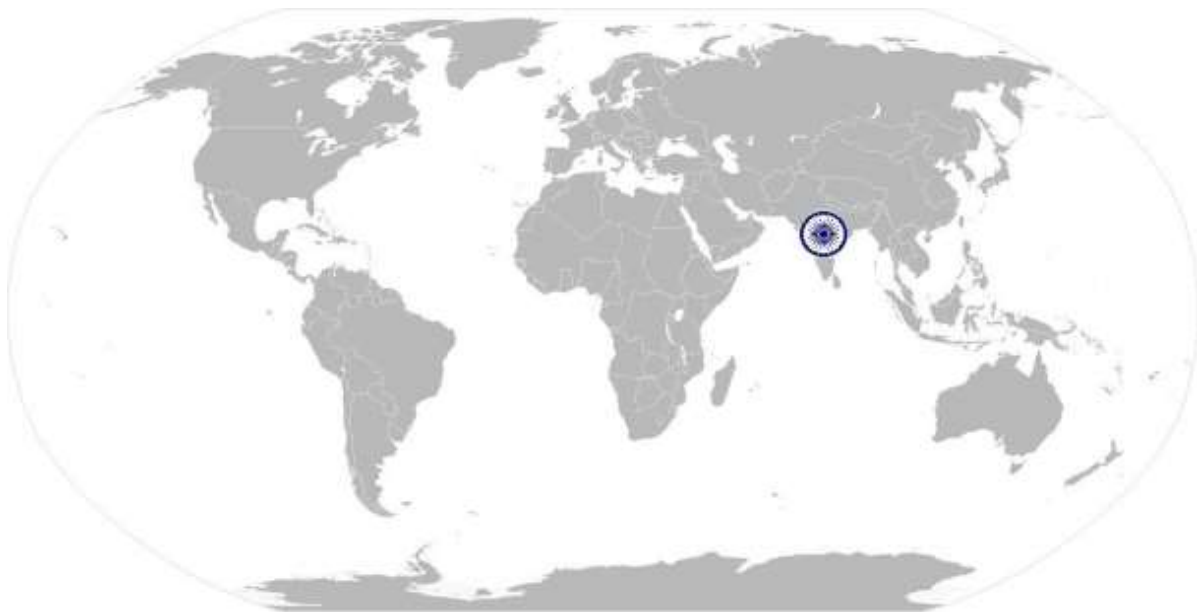


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## Annexure

### Nomenclature for QP and NOS

#### Qualifications Pack

9 characters  
**MES/ Q 0101**

MES denotes the Media and Entertainment Sector

Q denoting Qualifications Pack

QP number (2 numbers)

Occupation (2 numbers)

#### Occupational Standard

An example of NOS with 'N'

9 characters  
**MES / N 0101**

MES denotes the Media and Entertainment Sector

N denoting National Occupational Standard

OS number (2 numbers)

Occupation (2 numbers)

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The following acronyms/codes have been used in the nomenclature above:

Sub-sector	Range of Occupation numbers
Film	01-20
Television	21-30
Print	31-35
Animation	36-45
Gaming	46-55
Radio	56-60
Digital	61-70
OOH / Advertising	71-80
Creative & Performing Art	81-85
Sound & Music	86-90
Theme & Amusement Park	91-95
Event Management	96-99

Sequence	Description	Example
Three letters	Media and Entertainment	MES
Slash	/	/
Next letter	Whether QP or NOS	Q
Next two numbers	Sound	34
Next two numbers	QP number	02

## CRITERIA FOR ASSESSMENT OF TRAINEES

**Job Role:** Sound Engineer

**Qualification Pack:** MES/Q3402

**Sector Skill Council:** Media and Entertainment Skills Council

### **Guidelines for Assessment:**

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the theory & Practical part will be based on knowledge bank of questions created by the AA and approved by SSC.
3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below)
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criteria.
5. To pass the Qualification Pack, every trainee should score a minimum of 70% cumulatively (Theory and Practical).
- 6 In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack

Assessment Outcome	Assessment Criteria for outcomes	Total Mark	Marks Allocation		
			Out Of	Theory	Skills Practical
<b>MES/N3405 (Prepare sound equipment)</b>	PC1. Understanding the sound requirements of production	100	30	10	60
	PC2. Align/synchronize the inputs and output interfaces of sound systems to ensure that the sound signals are sent and received at the correct specifications		30	10	
	PC3. Test sound signals for an appropriate duration to ensure that they meet requirements and are free from disturbances and defects		20	10	
	PC4. Respond positively to feedback and changes in creative requirements		20	10	
		Total	60	40	60
	PC1. Confirm that the recorded line-up meets the standards required of the production (required frequency response, signal-to-noise ratio, free from audible defects, maintains the phase relationship of the line-up signals)		5	2	
	PC2. Include in the recorded line-up the identifying codes and information for its correct reproduction		5	2	
	PC3. Supply, monitor and check the correct line-up tone at either the camera, mixer and/or recorder		5	2	
	PC4. Assess locations and report to the appropriate person any problems or potential problems that will prevent the making of an acceptable recording		5	2	

<b>MES/N3407 (Record sound)</b>	PC5. Provide, or ensure availability of, suitable equipment for any reasonable audio requirements likely to arise within the expected parameters of the job	100	10	4	60
	PC6. Make test recordings, using typical programmer material, which are free from audible defects		5	2	
	PC7. Make sure the recording medium has sufficient capacity for the expected duration of the recording		10	4	
	PC8. Make sure that previously recorded material that may be needed is not lost or recorded over		10	4	
	PC9. Make sure that, when synchronization is required, the recording machine is correctly referenced, and that it runs stably		5	2	
	PC10. Where appropriate control background sound levels to be consistent and suitable for the subsequent use of the recording		10	4	
	PC11. Produce required sound in the desired format, at the required level, and with the dynamic range appropriate for the recording medium or technology		10	4	
	PC12. Record sufficient sound at the beginning and end of the take to allow a smooth transition to adjacent material		5	2	
	PC13. Make any additional recordings that are required by the editor or sound editor such as wild tracks of atmosphere, sound effects or dialogue		5	2	
	PC14. Produce documentation and labeling which is accurate, legible, up-to-date, readily accessible and which meets the requirements of the production		5	2	
PC15. Identify and log all recording accurately, and in a way that is acceptable and understandable by subsequent users in editing and post-production	5	2			
	<b>Total</b>	<b>100</b>	<b>40</b>	<b>60</b>	
<b>MES/N3412 (Mix sound)</b>	PC1. Select valid criteria and use reliable methods to assess the sources required for the final mix	100	10	4	60
	PC2. Confirm that sound sources have the desired intelligibility, position and image in terms of the required sound		10	4	
	PC3. Ensure that stereo and multi-channel sound sources have the required compatibility, where Appropriate		5	2	
	PC4. Control the level of the composite signal within technical limits and within the desired dynamic range		5	2	
	PC5. Manipulate sound sources to achieve the level, balance, tonal quality, perspective and dynamic range appropriate to the required sound		10	4	
	PC6. Create the sound mix within production Constraints		5	2	
	PC7. Create a sound mix which is appropriate to the context in which it will be heard		10	4	
	PC8. Accurately identify and promptly correct any problems in creating the mix, minimizing disruption to contributors and colleagues		10	4	
	PC9. Ensure that tracks and mixes are organized in a way that is suitable for later use in editing		5	2	

	PC10. Ensure that any paperwork is accurate, legible and conforms with conventions that will be understood by other mixers, sound technicians etc.		10	4	
	PC11. Efficiently communicate with sound or other crew regarding equipment positioning and requirements		10	4	
	PC12. Respond to and interpret suggestions from the contributor, colleagues, client or production during sound mixing, clarify any ambiguities or misunderstandings, and take appropriate action		5	2	
	PC13. Explain clearly any problems with the sound mix, and offer realistic options		5	2	
		Total	100	40	60
<b>MES/N0104 (Maintain workplace health and safety)</b>	PC1. maintain one's posture and position to minimize fatigue and the risk of injury	100	10	5	50
	PC2. maintain first aid kit and keep oneself updated on the first aid procedures		10	5	
	PC3. identify and document potential risks like sitting postures while using computer, eye fatigues and other hazards at the workplace		5	3	
	PC4. accurately maintain accident reports		5	3	
	PC5. report health and safety risks/ hazards to concerned personnel		10	5	
	PC6. participate in organization's health and safety knowledge sessions and drills		10	5	
	PC7. identify the people, responsible for health and safety at the workplace, including those to contact in case of an emergency		10	5	
	PC8. identify security signals e.g. fire alarms and places such as staircases, fire warden stations, first aid and medical rooms		10	5	
	PC9. identify aspects of workplace that could cause potential risk to own and others health and safety		5	3	
	PC10. ensure own personal health and safety, and that of others in the workplace through precautionary measures		5	3	
	PC11. identify and recommend opportunities for improving health, safety, and security to the designated person		5	2	
	PC12. report any hazards outside the individual's authority to the relevant person in line with organisational procedures and warn other people who may be affected		5	2	
	PC13. follow organisation's emergency procedures for accidents, fire or any other natural calamity in case of a hazard		5	2	
	PC14. identify and correct risks like illness, accidents, fires or any other natural calamity safely and within the limits of individual's authority		5	2	
	Total	100	50	50	