



THE REPUBLIC OF UGANDA
Ministry of Education and Sports

Business, Technical, Vocational Education and Training [BTVET] Sub sector Reform



Qualification Level: 1

**Occupational Cluster: Physics, Technology
and Design**

January 2022

Developed by:

Qualifications Standards Department
Directorate of Industrial Training

Funded by:

Government of Uganda

DIRECTORATE OF INDUSTRIAL TRAINING

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Under BTVET Act, 2008, the functions of the Directorate of Industrial Training are:

- (a) To identify the needs of the labour market for occupational competencies that falls under the UVQF.
- (b) To regulate apprenticeship schemes.
- (c) To foster and promote entrepreneurial values and skills, as an integral part of the UVQF.
- (d) To secure adequate and sustainable financing for the efficient operations of the Directorate.
- (e) To accredit training institutions or companies as assessment centres.
- (f) To determine fees payable under the Act.
- (g) To develop, apply, expand and improve the purposeful application of Uganda vocational qualifications defined in the UVQF.
- (h) To assess and award Uganda Vocational Qualifications.
- (i) To promote on-the-job training in industry for apprenticeship, traineeship and indenture training and for other training such as further skills training and upgrading.
- (j) To prescribe the procedure for the making of training schemes.

Further to the above provisions, there is an established Uganda Vocational Qualifications Framework (UVQF), under part V of the BTVET Act, 2008. It is stated that:

The purpose of the UVQF is to;

- (a) Define occupational standards in the world of work.
- (b) Define assessment standards.
- (c) Award vocational qualifications of learners who meet the set standards of different studies.
- (d) Provide guidelines for modular training.

The UVQF shall follow principles of Competence Based Education and Training (CBET) which include:

- (a) Flexible training or learning modules.
- (b) Positive assessment and Certification.
- (c) Assessment of Prior Learning.
- (d) Recognition of formal and non-formal training.
- (e) Self-paced or individual learning.
- (f) Work place learning.

For award and recognition of certificates, the BTVET Act, 2008 provides that:

- (1) The Directorate and other examination boards established under the Act shall award certificates and diplomas for Business, Technical or Vocational Education and Training under the UVQF.
- (2) The Certificates and Diplomas to be awarded shall be in the form prescribed by Minister on the recommendation of the Industrial Training Council.
- (3) The Certificates and Diplomas awarded under the Act shall be recognized in the Uganda education system and by the labour market.

Under the TVET Implementation Standards 2020, the proposed new mandate of the Directorate of Industrial Training shall be restricted to promoting the highest standards in the quality and efficiency of industrial training in the country and ensuring an adequate supply of properly trained manpower at all levels in the industry and the world of work.

The functions shall include:

- (a) Regulating Industrial Training and Trainers.
- (b) Developing Industrial Training Curricula.
- (c) Harmonizing Curricula and Certificates of competence.
- (d) Assessing Industrial Training.
- (e) Development of Occupational Standards and Assessment and Training Packages (ATPs) for Trade Testing for the industry and world of work.
- (f) Awarding certificates in that respect.

At operational level in the Directorate, the Qualification Standards Department performs development tasks related to concepts, procedures and instruments for establishment of the UVQF in close collaboration with both public and private stakeholders in vocational training.

In particular, the Department organizes and coordinates the development of Assessment and Training Packages for use in competence-based vocational training as well as standards-based assessment and certification.

The Directorate has therefore produced this Assessment and Training Package for use in implementing Competence-Based Education and Training mechanisms.

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Word from Permanent Secretary

The Ministry of Education and Sports (MoES) through the Directorate of Industrial Training conducts Competence Based Assessment.

The foreseen advantages of CBA include improved access, equity and relevance of skills development, reduced unit costs of training, and recognition of Prior Learning (or on-the-job- training), among others.

As the Ministry executes its obligation of ensuring quality in training standards, the public-private partnership is being strengthened to improve occupational competence of the country's workforce without gender bias.

To achieve the set-out targets, the Directorate embarked on the anticipated UVQF design and development piloting its instruments and mechanisms in order to effectively enhance Competence-Based Assessment (CBA) in Uganda.

To date, the Qualifications Standards Department of DIT has produced Assessment and Training Packages (ATP) for various occupations. Each ATP contains 3 parts namely:

1. Occupational/job Profile
2. Training modules and
3. Assessment instruments Banks

The ATP can be used by any training provider and/or those who wish to present themselves for Occupational Assessment and Certification.

Herewith, the Directorate of Industrial Training presents the "Assessment & Training Package (ATP)" for training, assessment and certification of **SOUND OPERATOR – QUALIFICATION LEVEL 1**.

Finally, I thank all individuals, organizations and development partners who have contributed and/or participated in the review of this noble document.

Ketty Lamaro
Permanent Secretary

Executive Summary

This Assessment and Training Package is a Competence-Based Education and Training (CBET) tool and consists of three major parts:

- 0.1. PART I: The “Occupational Profile” (OP) of SOUND OPERATOR.** This Occupational Profile, which was developed by sound operators practicing in the world of work mirrors the duties, and tasks Tailors are expected to perform.
- 0.2. PART II: “Training Modules”** in the form of guidelines to train **SOUND OPERATORS** both on the job as well as in training centers (or combinations of both venues of learning). The Training Modules herein have been developed basing on the Occupational Profile and hence are directly relevant for employment.
- 0.3. PART III: “Assessment Instruments”** in the form of performance (Practical) and written (theory) test items that can and should be used to assess whether a person complies with the requirements of employment as a **SOUND OPERATOR**. These assessment-based instruments were developed by Job practitioners (Sound operators) based on the occupational profile and training modules.
- 0.4.** While the Occupational Profile (OP) contained in PART I of this document provides the information on **WHAT a person is expected to do** competently in the world of work, the test items, - including performance criteria- of PART III qualify the **HOW and/or HOW WELL a person must do the job.**
- 0.5.** The modular format of the curriculum (PART II) allows learners to acquire job specific skills and knowledge (i.e., competencies) module by module. A single module can be accomplished within a relatively short duration of time allowing flexibility for learners to move directly into an entry level job, go for further modules or advance to higher levels of training. Modular courses allow more learners to access the training system because training centers as well as companies can accommodate more students in a given period of time.
- 0.6.** In addition to improved access, equity and relevance of BTVET, the UVQF will also enable people who are convinced to have acquired competencies laid down in this ATP through prior training and on-the-job experience to access assessment and certification directly; be it on the basis of a single module, a group of modules or all modules pertaining to the occupation at once. This achievement will facilitate Recognition of Prior Learning (RPL).

0.7. The parts of this Assessment and Training Package were sequentially developed as follows:

- i Part 1: Occupational Profile: **January 2022**
- ii Part 2: Training Modules: **January 2022**
- iii Part 3: Assessment Instruments: **January 2022**

This ATP (or parts of it) may be periodically revised to match the dynamic trends in the occupation and hence issued in different versions.

Patrick Byakatonda
Ag. Director DIT

Acknowledgement

The Qualifications Standards Department of DIT wishes to sincerely acknowledge the valuable contributions to the development of this Assessment and Training Package by the following persons, Institutions and organizations:

- Members of the DIT Industrial Training Council;
- The Director and staff of DIT;
- Ministry of Education and Sports;
- The practitioners from the world of work;
- Art and Design Curriculum Specialists from NCDC
- Examination Specialists from UNEB
- The facilitators involved in guiding the development panel in their activities
- The Government of Uganda for financing the development of this ATP

Abbreviations and Acronyms

A&C	Assessment & Certification
ATP	Assessment & Training Packages
BTVET	Business, Technical and Vocational Education and Training
CBA	Competence Based Assessment
CBET	Competency Based Education and Training
DACUM	Develop a Curriculum
DIT	Directorate of Industrial Training
ITC	Industrial Training Council
GoU	Government of Uganda
LWA	Learning-working Assignment
MC	Modular Curriculum
MoES	Ministry of Education and Sports
OP	Occupational Profile
PEX	Practical Exercise
PTI	Performance (Practical) Test Item
QS	Qualification Standards
RPL	Recognition of Prior Learning
TIB	Test Item Bank
TVET	Technical and Vocational Education and Training
UVQ	Uganda Vocational Qualification
UVQF	Uganda Vocational Qualifications Framework
WTI	Written (Theory) Test Item

Key Definitions

Assessment	Assessment is the means by which evidence is gathered and judged to decide if an individual has met the stipulated assessment standards or not. Testing is a form of formal assessment.
Certification	Certification is a formal procedure to issue a certificate (qualification) to an individual that has demonstrated during formal assessment that he/she is competent to perform the tasks specified in the occupational profile.
Competence	Integration of skills, knowledge, attitudes, attributes and expertise in doing/ performing tasks in the world of work to a set standard.
Competency	(Occupational) competency is understood as the ability to perform tasks common to an occupation to a set standard.
CBET	Competence-based education and training means that programmes: <ol style="list-style-type: none">1. have content directly related to work2. focus is on 'doing something well'3. assessment is based upon industry work standards, and4. curricula are developed in modular form
Duty	A Duty describes a large area of work in performance terms. A duty serves as a title for a cluster of related Tasks (see also: TASK).
Learning-Working Assignment (LWA)	LWA are simulated or real job situations / assignments that are suitable for learning in a training environment (e.g. "small projects"). In a working environment LWA are real work situations/assignments.
Modules	Modules are part(s) of a whole curriculum. Modules can be considered as "self-contained" partial qualifications which are described by learning outcomes or competencies and which can be assessed and certified individually.
Occupational Profile (OP)	<p>An Occupational Profile is an overview of the duties and tasks a job incumbent is expected to perform competently in employment.</p> <p>Occupational Profiles developed by practitioners from the world of work enhance the relevance of training and learning to the requirements of the world of work.</p> <p>Occupational Profiles define WHAT a person is supposed to do in performance terms. It also contains generic information regarding</p>

related knowledge and skills, attitudes/behaviour, tools, materials and equipment required to perform as well as trends/ concerns in the occupation.

Occupational profiles are the reference points for developing modular curricular and assessment standards

Qualification A qualification is a formal reward for demonstrating competence, based on formal assessment against set standards and provided to the individual in the form of a certificate specifying the nature of the competence.

Task Job TASKS represent the smallest unit of job activities with a meaningful outcome. Tasks result in a product, service, or decision. They represent an assignable unit of work and have a definite beginning and ending point. Tasks can be observed and measured. (see also: Duty)

1.0 ATP-PART I

Occupational Profile for SOUND OPERATOR

- 1.1 The OCCUPATIONAL PROFILE (OP) for “**SOUND OPERATOR**” below defines the **Duties** and **Tasks** a competent **SOUND OPERATOR** is expected to perform in the world of work (on the job) in Uganda and the East African region today.
- 1.2 Since it reflects the skill requirements of work life, the Occupational Profile is the reference document for the subsequent development of training modules and assessment instruments (test items) which are directly relevant to employment in Ugandan and the East African businesses and industries.
- 1.3 To ensure that the Occupational Profile is relevant for employment in Uganda and East Africa, the DIT used the method of “occupational/job profiling.

This approach involves the brainstorming of a panel of 8 to 12 competent job practitioners guided by trained and experienced facilitators. During a two-day workshop the panellists define the duties and tasks performed in employment, as well as the prerequisite skills, knowledge, attitudes, tools and equipment, and the future trends and concerns in the occupation/job.

- 1.4 The panellists, facilitators and coordinators who participated in developing this Occupational Profile for **SOUND OPERATOR** are listed on the following page.

¹ The DACUM-method was used. DACUM is an acronym for ‘Develop A Curriculum’

Job Expert Panel

Obina Johnson Okeny
St Henry's College Kitovu

Kiguli Abdul
Makerere College School

Suwed Said
Sacred heart Kiteredde SS

Mugabi David
Central College Bulenga

Ssekabira David
St Mary's College Kisubi

Mukalazi David
Maestro Sound and Bantu
productions

Namanda Vad Kisaakye
Gagamel sounds

Ssendikwanawa Raymond
Mityana SS

Kiwuwa Henry
Grayce records

Ike Joshua
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Elizabeth Ruth Mukyala
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Funded by
The Government of Uganda



THE REPUBLIC OF UGANDA
Ministry of Education and Sports

**Business, Technical, Vocational Education and
Training (BTVET) Sub sector Reform**

Occupational Profile

For

“SOUND OPERATOR”

**Developed by: Directorate of Industrial Training
(Qualifications Standards)**

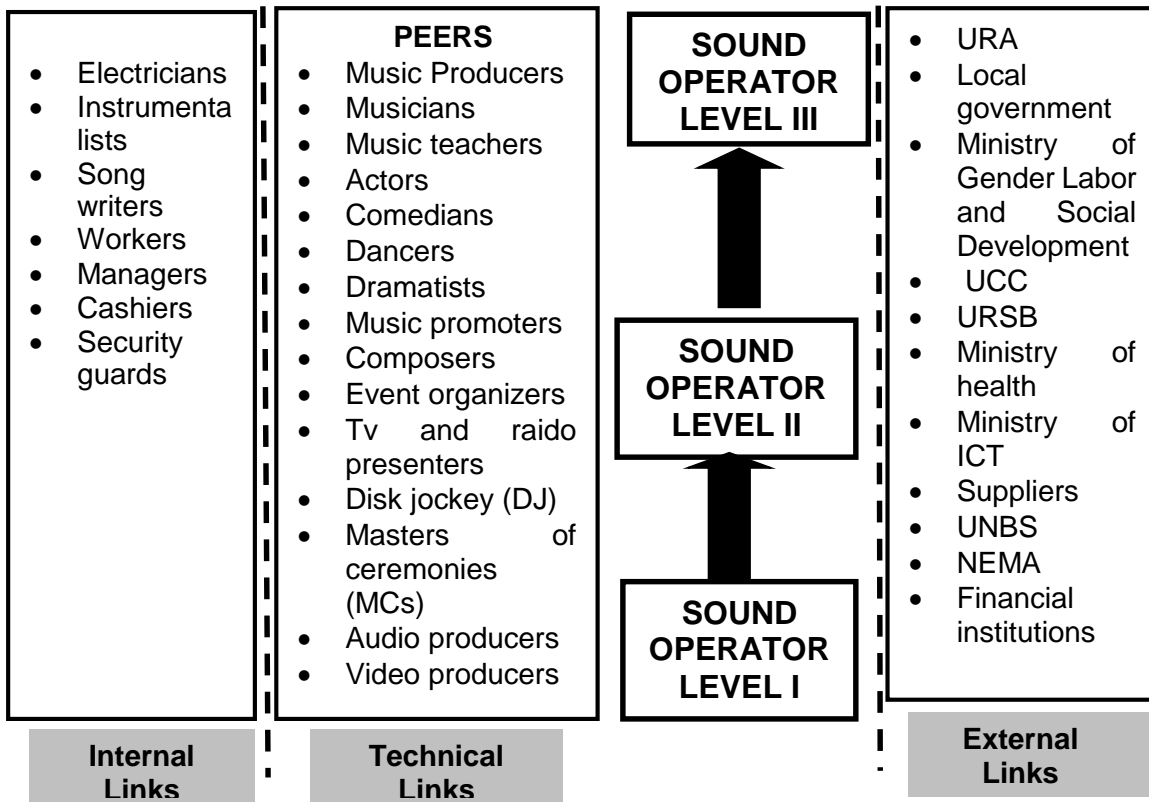
Dates of workshop: 17th – 21st January 2022

NOMENCLATURE FOR THE OCCUPATION OF A SOUND OPERATOR

Definition of a Sound Operator:

This is a person who plans, assembles and operates sound equipments and regulates sound.

JOB ORGANISATION CHART FOR ASOUND OPERATOR



Descriptions for the levels in the occupation of A ‘Sound Operator’

UVQF level I Sound Operator: is a person who has the ability to connect simple sound system, regulate sound and carry out simple maintenance of sound devices.

UVQF level II Sound Operator: is a person who has the ability to connect and regulate sound system and carry out less complex maintenances using improved technology.

UVQF level III Sound Operator: is a person who has the ability to perform advanced connection, sound regulation and carry out complex maintenance.

DUTIES AND TASKS

A. PLAN SOUND SET UP	A1 Make budget for the event	A2 Identify sources of fund	A3 Identify tools, equipment and materials
	A4 Source tools, equipment and materials	A5 Identify means of transport	A6 Determine labour requirements
	A7 Determine power source	A8 Consult stake holders	A9 Make procurement plan

B. PREPARE VENUE	B1 Inspect venue	B2 Measure venue	B3 Determine equipment positioning
	B4 Measure power capacity	B5 Check network coverage	B6 Clean venue

C. CONNECT SOUND SYSTEM	C1 Secure power source	C2 Assemble devices	C3 Inspect devices
	C4 Position devices	C5 Connect mixers to amplifiers	C6 Connect microphones to mixers
	C7 Connect power cables	C8 Switch on power	C9 Check sound

D. REGULATE SOUND	D1 Manage master volume	D2 Mnage individual channels	D3 Manage frequencies
	D4 Apply effects	D5 Balance channel levels	D6 Manage feed back sound
	D7 Inspect mix		

E. MAINTAIN SOUND TOOLS, EQUIPMENT AND MATERIALS.	E1 Repair sound tools and equipments	E2 Clean tools, equipment and materials	E3 Store tools, equipment and materials
	E4 Lubricate equipment and machines	E5 Power equipments and machines periodically	E6 Fumigate equipment and materials

F. PERFORM ADMINISTRATIVE TASKS	F1 Recruit workers	F2 Supervise workers	F3 Attend meetings
	F4 Train Workers	F5 Appraise workers	F6 Assign works
	F7 Register business	F8 Insure business	F9 Train workers
	F10 Keep records	F11 Motivate workers	F12 Remunerate workers
	F13 Provide security	F14 Procure tools, equipment and materials	F15 Pay bills

G. PERFORM OCCUPATIONAL HEALTH, SAFETY AND ENVIRONMENTAL PROTECTION PRACTICES.	G1 Administer first aid	G2 Train subordinates on safety	G3 Sensitize co-workers on health issues
	G4 Manage waste	G5 Display safety signs	G6 Wear protective gears
	G7 Avoid circuits at the venue		

H. MARKET SOUND SERVICE	H1 Advertise service	H2 Brand sound service	H3 Provide quality service
	H4 Network with other service providers	H5 Offer customer care	H6 Perform after sale services
	H7 Give discounts	H8 Price service	

Additional Information

Generic Knowledge & Skills

1. Setting up equipments
2. Sound acoustics
3. Electrical wiring
4. Electricity
5. ICT literacy
6. Marketing
7. Customer care
8. Ethics
9. Sound technology
10. Tools and equipment usage
11. Frequencies
12. Tools and equipment
maintainance
13. Environmental awareness
14. Measuring
15. Communication skills
16. Interpersonal skills
17. Copy right laws
18. Regulations
19. Literacy and numeracy
20. Safety and health precautions
21. Financial management
22. Market demands
23. Geographical knowledge
24. Pricing
25. Audio production
26. Entrepreneurship skills
27. Frequency
28. Tools, equipment operations
29. Operational knowledge on tools,
equipment and materials

Tools, Equipment and materials

- | | |
|-----------------------|---|
| 1. Masks | 35. Soldering wire |
| 2. Wires | 36. Desk tapes |
| 3. Brooms | 37. Drive rack |
| 4. Power source | 38. Tents |
| 5. Furniture | 39. Truss |
| 6. Electricity | 40. Grease |
| 7. First aid kit | 41. Oil |
| 8. Amplifiers | 42. Cleaning spirits |
| 9. Mixing consoles | 43. Stationary |
| 10. Equalizers | 44. MIDI (Musical Instrument Digital Interface) |
| 11. Power stabilizers | 45. Soft wares |
| 12. Power cables | 46. Vehicles |
| audio cables data | 47. Cases |
| cables | 48. Audio interfance |
| 13. Generator | 49. Spirit level |
| 14. Wifi routers | 50. Tape measure |
| 15. Tape measures | |
| 16. Screw drivers | |
| 17. Testers | |
| 18. Multi meters | |
| 19. Tool box | |
| 20. Speakers | |
| 21. Microphone stands | |
| 22. Cross overs | |
| 23. Power savers | |
| 24. Compressors | |
| 25. Tables | |
| 26. Chairs | |
| 27. Computers | |
| 28. Head phones | |
| 29. Head sets | |
| 30. Microphone pins | |
| 31. Stabilizers | |
| 32. Audio cables | |
| 33. Connectors | |
| 34. Soldering iron | |

Attitudes/Traits/Behaviour	Future Trends and Concerns
<ol style="list-style-type: none">1. Honest and transparent2. Tolerant3. Active4. Hard working5. Punctual6. Realistic7. Social8. Able to predict9. Organized10. Respectful11. Confident12. Trustworthy13. Dedicated14. Team player15. Disciplined16. Enthusiastic17. Creative and innovative18. Resourceful19. A good listener20. Result oriented21. Trainable22. Strategic23. Researcher24. Welcoming25. Love for the job26. Leadership27. Empathetic28. Time management	<ol style="list-style-type: none">1. Expansion of market2. Regulation equipment, tools and materials3. Use of computers4. Advanced technology i.e. internet, websites, etc.5. Use of improved machines e.g sound regulating machines6. Sound operator groups formation7. Need for training in sound operations8. Environmental degradation9. Lack of capital10. Taxes11. Lack of hands on training12. Complying with government policies13. Focus on research14. Professionalization of the service15. Encourage creativity and innovation

2.0 ATP – PART II

Training Modules for A SOUND OPERATOR:

- 2.1 A curriculum is a “guide /plan for teaching and learning” which provides a guide to teachers, instructors and learners. In the envisaged system of competence-based or outcome-oriented education and training (CBET), Curricula are no longer the benchmark against which assessment is conducted. It is rather the Occupational Profile that provides the benchmark for Curriculum development as well as assessment.
- 2.2 This modular format of the curriculum allows learners of SOUND OPERATOR to acquire job specific skills and knowledge (i.e. competencies) module by module. A single module can be accomplished within a relatively short duration of time allowing learners to move directly into an entry level job, do further modules and advance to higher levels of training. Modular courses allow more learners to access the training system because training centres, as well as companies can accommodate more students in a given period of time.
- 2.3 The modules were developed jointly by both instructors and job practitioners. They were developed using the Occupational Profile as a reference point and taking into account the specifications of training and learning outcomes.
- 2.4 The modules contain “Learning-Working Assignments” (LWAs) and related “Practical Exercises” (PEXs) as key elements.

LWAs are simulated or real job situations/assignments that are suitable for learning in a training environment (e.g. “small projects”). In a working environment, LWAs are real work situations.

PEXs are therefore sub-sets of a LWA.

- 2.5 In principle, and following the philosophy of Competence-Based Education and Training (CBET), the modules can be used as a guide for learning in a training Centre, at the workplace; or a combination of both.

WHO IS A SOUND OPERATOR LEVEL 1?

A SOUND OPERATOR UVQF LEVEL 1: Is a person who has the ability to connect simple sound system, regulate sound and carry out simple maintenance of sound devices.

OVERVIEW OF MODULES FOR A SOUND OPERATOR UVQF LEVEL 1

Code	Module Title	Average duration	
		Contact hours	Weeks
UE/SO/M1.1	Connect sound system	480	12
UE/SO/M1.2	Regulate sound	320	8
UE/SO/M1.3	Maintain sound devices	240	6
UE/SO/M1.4	Perform entrepreneurship tasks	240	6
Summary	4 Training Modules	1280 hours	32 weeks

Note: Average duration is contact time but NOT calendar duration.

It is assumed that:

- 1 day is equivalent to 8 hours of nominal learning and
- 1 month is equivalent to 160 hours of nominal learning

Information given on the average duration of training should be understood as a guideline. Quick learners may need less time than indicated or vice versa.

At completion of a module, the learner should be able to satisfactorily perform the included Learning Working Assignments, their Practical exercises and attached theoretical instructions, as the minimum exposure.

Prior to summative assessment by recognized Agencies, the users of these Modules Guides are encouraged to carefully consider continuous assessment using samples of (or similar) performance (practical) and written test items available in part 3 of this ATP for **SOUND OPERATOR**.

Code	UE/SO/M1.1
Module title	M1.1: Connect Sound System
Related Qualification	<u>Part of</u> Uganda Vocational Qualification (SOUND OPERATOR UVQ 1)
Qualification Level	1
Module purpose	At the end of this module, the trainee should be able to connect sound system
Learning-Working Assignments (LWAs)	<p>LWA 1/1: Assemble devices LWA 1/2: Connect signal devices LWA 1/3: Connect power cables LWA 1/4: Test system LWA 1/5: Perform occupational health, safety and environmental protection practices00</p> <p>Note: 1. The learning exercises may be repeated till the trainee acquires targeted competence 2. The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning assignment</p>
Related Practical Exercises (PEXs)	<p>LWA 1/1: Assemble devices PEX 1.1: Design site plan PEX 1.2: Position sound devices PEX 1.3: Label connectors PEX 1.4: Inspect volume knob</p> <p>LWA 1/2: Connect signal devices PEX 2.1: Connect input devices to mixers PEX 2.2: Connect mixers to equalizers PEX 2.3: Connect equalizers to crossovers PEX 2.4: Connect crossovers to amplifiers PEX 2.5: Connect speakers to amplifiers PEX 2.6: Check connections</p>
	<p>LWA 1/3: Connect power cables. PEX 3.1: Identify power extension cables PEX 3.2: Identify power stabilizers PEX 3.3: Connect stabilizers to extension PEX 3.4: Connect stabilizers to power</p>

	<p>source</p> <p>PEX 3.5: Connect stabilizers to power centres</p> <p>PEX 3.6: Test power supply</p> <p>PEX 3.7: Connect individual devices to the power centre.</p> <p>PEX 3.8: Test power flow</p> <p>PEX 3.9: Power up devices</p> <hr/> <p>LWA 1/4: Test system</p> <p>PEX 4.1: Test speakers one by one</p> <p>PEX 4.2: Power up individual devices</p> <p>PEX 4.3: Test feed back sound</p> <p>PEX 4.4: Test ground loops</p> <p>PEX 4.5: Test individual input devices</p> <p>PEX 4.6: Test signal flow</p> <p>PEX 4.7: Proof listen all devices</p> <hr/> <p>LWA 1/5: Perform occupational health, safety and environmental protection practices</p> <p>PEX 5.1: Wear protective gears</p> <p>PEX 5.2: Control sound</p> <p>PEX 5.3: Sensitize workers on health issues</p> <p>PEX 5.4: Administer first aid</p> <p>PEX 5.5: Display safety signs</p> <p>PEX 5.6: Provide earthing</p> <p>PEX 5.7: Provide electrical insulators</p>
Occupational health and safety	<p>Precautions, rules and regulations on occupational health safety and environmental protection included in the listed related knowledge should be observed and demonstrated during LWAs and PEXs</p>
Pre-requisite modules	<p>None</p>
Related knowledge/ theory	<p>For occupational theory suggested for instruction/demonstration, the trainer is not limited to the outline below. In any case related knowledge/ theory may be obtained from various recognised reference materials as appropriate:</p> <ul style="list-style-type: none"> • Electric devices • ICT • Sound equipment • Sound proofing • Position of equipment

	<ul style="list-style-type: none"> • Hygiene • Electricity • Art and design • Mental fabrication
Average duration of learning	480hours (60days) of nominal learning suggested to include: <ul style="list-style-type: none"> • 15days of occupational theory and • 45days of occupational practice
Suggestions on organization of learning	The acquisition of competencies (Skills, knowledge, attitudes) described in this module may take place at a training centre or its equivalent provided all equipment and materials required for training are in place.
Assessment	Assessment to be conducted according to the established regulations by recognised assessment body using related Practical and written Test Items from Item Bank
Minimum required tools/ equipment/ implements or equivalent	Power extension, multimeter, pliers, power stabilizers, microphone, sound player, equalizers, crossovers, mixers, power centre, amplifiers, loudspeakers, effect machine, work boots, helmet, pliers, screwdrivers, testers, generator, invertors, wires, soldering gun
Minimum required materials and consumables or equivalent	Insulating tape, gloves, masking tapes, markers, overall, soldering wire,
Special notes	

Code	UE/SO/M1.2
Module title	M1.2: Regulate Sound
Related Qualification	<u>Part of</u> Uganda Vocational Qualification (SOUND OPERATOR UVQ 1)
Qualification Level	1
Module purpose	After completion of this module, the trainee should be able to regulate sound
Learning-Working Assignments (LWAs)	<p>LWA 2/1: Manage volume levels LWA 2/2: Manage frequencies LWA 2/3: Apply effects LWA 2/4: Perform Occupational health, safety and environmental protection practices</p> <p>Note: 1. The learning exercises may be repeated till the trainee acquires targeted competences. 2. The trainer is advised to deliver relevant theoretical instructions with demonstrations as required to perform each learning assignment.</p>
Related Practical Exercises (PEXs)	<p>LWA 2/1: Manage volume levels PEX 1.1: Control individual fader levels PEX 1.2: Control master volume PEX 1.3: Control bus levels PEX 1.4: Control gain volume PEX 1.5: Control auxilliary volume</p> <p>LWA 2/2: Manage frequencies PEX 2.1: Identify low frequency devices PEX 2.2: Identify high frequency devices PEX 2.3: Identify mid frequency devices PEX 2.4: Adjust frequencies</p>
	<p>LWA 2/3: Apply effects PEX 3.1: Select effects PEX 3.2: Equalize sound PEX 3.3: Compress sound PEX 3.4: Apply reverb PEX 3.5: Balance effect levels</p>

	<p>LWA 2/4: Perform Occupational health, safety and environment protection practices.</p> <p>PEX 4.1: Wear protective gears PEX 4.2: Control sound PEX 4.3: Sensitize workers on health issues PEX 4.4: Administer first aid PEX 4.5: Display safety signs PEX 4.6: Provide earthing PEX 4.7: Provide electrical insulators</p>
Occupational health and safety	<p>Precautions, rules and regulations on occupational health safety and environmental protection included in the listed related knowledge should be observed and demonstrated during LWAs and PEXs. E.g.wear protective gears</p>
Pre-requisite modules	None
Related knowledge/ theory	<p>For occupational theory suggested for instruction/demonstration, the trainer is not limited to the outline below. In any case related knowledge/theory may be obtained from various recognised reference materials as appropriate:</p> <ul style="list-style-type: none"> • Usage of equipments • Balancing of sound • Vocal harmonies • Sound design • Acoustic treatment • Sound proofing • Frequency • Compression • Sound effects
Average duration of learning	<p>320hours (40days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> • 10day of occupational theory and • 30days of occupational practice
Suggestions on organization of learning	<p>The acquisition of competencies (Skills, knowledge, attitudes) described in this module may take place at a training centre or its equivalent provided all equipment and materials required for training are in place.</p>
Assessment	<p>Assessment to be conducted according to the established regulations by recognised</p>

	assessment body using related Practical and written Test Items from Item Bank
Minimum required tools/ equipment/ implements or equivalent	Mixing coudels, power amplifiers, compressers, equalizers, drive rack, cross overs, signal cables, speakers, head sets, computer, MIDI (Musical Instrument Digital Interface), tester, Boots,
Minimum required materials and consumables or equivalent	Books, pens, masking tape, cleaning spirits, cleaning towels, gloves,
Special notes	

Code	UE/SO/M1.3
Module title	M1.3: Maintain sound devices
Related Qualification	Part of Uganda Vocational Qualification (SOUND OPERATOR UVQ 1)
Qualification Level	1
Module purpose	After completion of this module, the trainee should be able to maintain sound devices to ensure that they all properly function.
Learning-Working Assignments (LWAs)	<p>LWA 3/1: Clean devices LWA 3/2: Service devices LWA 3/3: Store devices LWA 3/4: Perform Occupational Health, Safety and environment protection practices.</p> <p>Note: 1. The learning exercises may be repeated till the trainee acquires targeted competence 2. The trainer is advised to deliver relevant theoretical instruction with demonstrations as required to perform each learning assignment</p>
Related Practical Exercises (PEXs)	<p>LWA 3/1: Clean devices PEX 1.1: Blow devices PEX 1.2: Dust devices PEX 1.3: Wash equipment</p> <p>LWA 3/2: Service devices PEX 2.1: Grease /oil devices PEX 2.2: Replace equipment PEX 2.3: Up grade devices PEX 2.4: Power devices periodically PEX 2.5: Paint devices PEX 2.6: Solder cables PEX 2.7: Tighten loose nuts/screw</p> <p>LWA 3/3: Store devices PEX 3.1: Clean store PEX 3.2: Categorize devices PEX 3.3: Secure devices PEX 3.4: Check device periodically</p>

	<p>LWA 3/4 : Perform occupational Health, safety and environment protection practices</p> <p>PEX 4.1: Manage waste PEX 4.2: Administer first aid PEX 4.3: Wear protective gear PEX 4.4: Practise personal hygiene PEX 4.5: Sensitize workers on health issues PEX 4.6: Display safety signs</p>
Occupational Health and Safety	Precautions, rules and regulations on occupational health safety and environmental protection included in the listed related knowledge should be observed and demonstrated during LWAs and PEXs
Pre-Requisite Modules	None
Related Knowledge/ Theory	<p>For occupational theory suggested for instruction/demonstration, the trainer is not limited to the outline below. In any case related knowledge/ theory may be obtained from various recognised reference materials as appropriate:</p> <ul style="list-style-type: none"> • Cleaning reagents • Safety precautions • Cleaning tools • Hygiene
Average Duration of Learning	<p>240hours (30days) of nominal learning suggested to include:</p> <ul style="list-style-type: none"> • 5day of occupational theory and • 25days of occupational practice
Suggestions On Organization of Learning	The acquisition of competencies (Skills, knowledge, attitudes) described in this module may take place at a training centre or its equivalent provided all equipment and materials required for training are in place.
Assessment	Assessment to be conducted according to the established regulations by recognised assessment body using related Practical and written Test Items from Item Bank
Minimum Required Tools/ Equipment/ Implements or Equivalent	Screw drivers, Pliers, Blowers, Extension cables, hand dryers, Multimeter, power stabilizer, Testers, Touch, spanners, snake cables, Soldering gun,

Minimum Required Materials and Consumables or Equivalent	Grease, Oil, water, cleaning spirits, detergents, cleaning towels, brush, gloves, Soldering wire, stationary
Special Notes	

Code	UE/SO/M1.4
Module title	M1.4: Perform entrepreneurial tasks
Related Qualification	<u>Part of</u> Uganda Vocational Qualification (SOUND OPERATOR UVQ 1)
Qualification Level	1
Module purpose	After completion of this module, the trainee should be able to effectively perform entrepreneurial tasks which are in line with sound operations
Learning-Working Assignments (LWAs)	<p>LWA 4/1: Plan sound business LWA 4/2: Perform administrative tasks LWA 4/3: Market sound business LWA 4/4: Perform Occupational health, safety and environmental protection practices</p> <p>Note: 1. The learning exercises may be repeated till the trainee acquires targeted competences. 2. The trainer is advised to deliver relevant theoretical instructions with demonstrations as required to perform each learning assignment.</p>
Related Practical Exercises (PEXs)	<p>LWA 4/1: Plan sound service PEX 1.1: Make a budget PEX 1.2: Determine sources of funds PEX 1.3: Identify equipment and materials PEX 1.4: Source equipment and materials PEX 1.5: Determine labor requirements PEX 1.6: Determine sources of labor PEX 1.7: Make procurement plan PEX 1.8: Determine power source PEX 1.9: Determine clientel</p> <p>LWA 4/2: Perform administrative tasks PEX 2.1: Recruit workers PEX 2.2: Train workers PEX 2.3: Register business PEX 2.4: Motivate workers PEX 2.5: Remunerate workers</p>

	<p>PEX 2.6: Pay bills PEX 2.7: keep records PEX 2.8: Insure business PEX 2.9: Supervise workers PEX 2.10: Attend meetings PEX 2,11: Procure tools and equipment PEX 2.12: Provide security</p> <p>LWA 4/3: Market sound business PEX 3.1: Advertise sound service PEX 3.2: Brand soundservice PEX 3.3: Price sound service PEX 3.4: Promote sound service PEX 3.5: Conduct market survey</p> <p>LWA 4/4: Perform Occupational health, safety and environment protection practices. PEX 4.1:Wear protective gears PEX 4.2: Perform fire fighting PEX 4.3: Sensitize workers on health issues PEX 4.4:Administer first aid PEX 4.5: Manage waste</p>
Occupational health and safety	<p>Precautions, rules and regulations on occupational health safety and environmental protection included in the listed related knowledge should be observed and demonstrated during LWAs and PEXs. E.g.wear protective gears</p>
Pre-requisite modules	None
Related knowledge/ theory	<p>For occupational theory suggested for instruction/demonstration, the trainer is not limited to the outline below. In any case related knowledge/theory may be obtained from various recognised reference materials as appropriate:</p> <ul style="list-style-type: none"> • Business planning • Marketing techiques • Book keeping • Accounting • Business registration • Public relations • Talent identification • Insurance • Government policies

Average duration of learning	240hours (30days) of nominal learning suggested to include: <ul style="list-style-type: none"> • 15 day of occupational theory and • 15days of occupational practice
Suggestions on organization of learning	The acquisition of competencies (Skills, knowledge, attitudes) described in this module may take place at a training centre or its equivalent provided all equipment and materials required for training are in place.
Assessment	Assessment to be conducted according to the established regulations by recognised assessment body using related Practical and written Test Items from Item Bank
Minimum required tools/ equipment/ implements or equivalent	Telephone, computer, furniture,
Minimum required materials and consumables or equivalent	Business cards, stationary, fuel,
Special notes	

3.0 ATP- PART III

Assessment Instruments for SOUND OPERATOR

- 3.1 Assessment of occupational competence is the procedure by which evidence is gathered and judged to decide if an individual (candidate) has met the stipulated assessment standards.
- 3.2 Assessment of occupational competence should comprise both practical (performance) testing and written (theory/knowledge) testing.
- 3.3 Based on the Occupational Profile and Training Modules, a combined panel of job practitioners and Instructors developed a substantial number of test items for assessing (practical) performance as well as items for assessing occupational knowledge (theory) all stored in an electronic Test Item Bank (TIB) at the Directorate of Industrial Training.
- 3.4 Performance (Practical) Test Items (PTI) are closely related to typical work situations in Ugandan business enterprises. They comprise a test assignment for candidates and assessment criteria and/or scoring guides for assessors' use.
- 3.5 Written Test items (WTI) for written testing of occupational theory, (knowledge) are presented in different forms which include:
- Short answer test items.
 - Multiple choice test items
 - Matching test items
- These WTIs herein focus on functional understanding as well as trouble-shooting typically synonymous with the world of work.
- 3.6 Composition of assessment/test papers will always require good choices of different types of WTI in order to ensure the assessment of relevant occupational knowledge required of candidates to exhibit competence.
- 3.7 The test items contained in the Test Item Bank may be used for continuous/formative assessment during the process of training as well as for summative assessment of candidates who have acquired their competences non-formally or informally.
- 3.8 In this document, samples of test items for assessing both performance (practical) and occupational knowledge (theory) of SOUND OPERATORS included a larger selection of test items can be obtained as electronic or printed copies from the UVQF Secretariat or designated outlet.

3.9 Overview of Test Item Samples Included

No	Type of test Items	Numbers included
1	Written (Theory)- Short Answer	3
2.	Written (Theory)- Multiple Choice	2
3.	Written (Theory)- Matching with generic	2
4.	Written (Theory)- Matching with cause effect	1
5	Written(theory)-Matching with work-sequence	2
6.	Performance (Practical)Test Items	1
Total		11

WRITTEN TEST ITEM (SAMPLES)

DIT/ QS	Test Item Database		
Written (Theory) Test Item- no. 1			
Occupational Title:	SOUND OPERATOR		
Competence level:	Level 1		
Code no.			
Test Item type:	Short answer	√	
	Multiple choice		
	Matching item	Generi c	Cause- Effect
Complexity level:	C1		
Date of OP:	January 2022		
Related modules:	M.1		
Time allocation:	2Minutes		

Test Item	Identify four examples of signal processing devices
Answer spaces	i. ii. iii. iv.
Expected key (answers)	i. Mixers ii. Amplifiers iii. Equalizers iv. Cross overs v. Microphone vi. Audio interface

DIT/ QS	Test Item Database			
Written (Theory) Test Item- no. 2				
Occupational Title:	SOUND OPERATOR			
Competence level:	Level 1			
Code no.				
Test Item type:	Short answer	√		
	Multiple choice			
	Matching item	Generic	Cause-Effect	Work-sequence
Complexity level:	C1			
Date of OP:	January 2022			
Related modules:	M.3			
Time allocation:	3Minutes			

Test Item	List any five maintenance practices carried out by sound operator to ensure proper functioning of sound devices
Answer spaces	i. ii. iii. iv.
Expected key (answers)	i. Regular cleaning ii. Proper connection iii. Greasing and oiling iv. Proper storage v. Powering using correct voltage vi. Replacing equipment vii. Upgrading equipment

DIT/ QS	Test Item Database		
Written (Theory) Test Item- no. 3			
Occupational Title:	SOUND OPERATOR		
Competence level:	Level 1		
Code no.			
Test Item type:	Short answer	√	
	Multiple choice		
	Matching item	Generic	Cause- Effect
Complexity level:	C1		
Date of OP:	January 2022		
Related modules:	M.4		
Time allocation:	3Minutes		

Test Item	List four ways of marketing a sound service
Answer spaces	i. ii. iii. iv.
Expected key (answers)	i. Through promotions ii. Through advertising iii. Through offering quality service iv. Through offering discounts v. Through giving out business cards vi. Through offering after sale services

DIT/ QS	Test Item Database Written (Theory) Test Item- no. 04			
Occupational Title:	SOUND OPERATOR			
Competence level:	Level 1			
Code no.				
Test Item type:	Short answer			
	Multiple choice	√		
	Matching item	Generi c	Cause-Effect	Work-sequence
Complexity level:	C2			
Date of OP:	January 2022			
Related Module:	M.2			
Time allocation:	3Minutes			

Test Item	The following volume controls can cause increase and decrease in sound loudness EXCEPT.
Distracters and correct answer	A. Fader volume B. Master volume C. Effect volume D. Gain volume
Key (answer)	C

DIT/ QS	Test Item Database Written (Theory) Test Item- no. 05			
Occupational Title:	SOUND OPERATOR			
Competence level:	Level 1			
Code no.				
Test Item type:	Short answer			
	Multiple choice	√		
	Matching item	Generic	Cause-Effect	Work-sequence
Complexity level:	C2			
Date of OP:	January 2022			
Related Module:	M.2			
Time allocation:	3Minutes			

Test Item	Which of the following devices is responsible for regulating sound?
Distracters and correct answer	A. Mixing console B. Head sets C. Speakers D. Microphone
Key (answer)	A

DIT/ QS	Test Item Database Written (Theory) Test Item- no. 06			
Occupational Title:	SOUND OPERATOR			
Qualification level:	Level 1			
Code no.				
Test Item type:	Short answer			
	Multiple choice			
	Matching item	Generic	Cause- Effect	Work-sequence
		√		
Complexity level:	C2			
Date of OP:	January 2022			
Related Module:	M.3			
Time allocation:	3Minutes			

Test Item	Match the following equipments with their corresponding functions
------------------	---

Column (A)[Equipment]	
1	Speaker
2	Amplifier
3	Crossover
4	Multimeter

Column (B)[Functions]	
A	Separates frequencies
B	Mixers sound
C	Powers up speakers
D	Projects sound
E	Levels frequencies
F	Measures current

Key (answer)	1-D, 2-C, 3-A, 4-F
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DIT/ QS	Test Item Database			
Written (Theory) Test Item- no. 07				
Occupational Title:	SOUND OPERATOR			
Competence level:	Level 1			
Code no.				
Test Item type:	Short answer			
	Multiple choice			
	Matching item	Generic	Cause- Effect	Work-sequence
			√	
Complexity level:	C2			
Date of OP:	January 2022			
Related Module:	M.4			
Time allocation:	5Minutes			

Test Item	Match the following terms with their meaning as used in marketing of sound service.
------------------	---

Column (A) (TERMS)	
1	Advertising
2	Promotion
3	Branding
4	Market research

Column (B) (MEANING)	
A	Identifying customer location
B	Dividing customers into groups
C	The spreading of information about service
D	Determining size of demand for the service
E	Stimulating customers to buy a service
F	Creating a positive strong perception of a service

Key (answer)	1-C, 2-E, 3-F, 4-A
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DIT/ QS	Test Item Database		
Written (Theory) Test Item- no. 08			
Occupational Title:	SOUND OPERATOR		
Competence level:	Level 1		
Code no.			
Test Item type:	Short answer		
	Multiple choice		
	Matching item	Generic	Cause- Effect
		√	
Complexity level:	C3		
Date of OP:	January 2022		
Related Module:	M.2		
Time allocation:	5Minutes		

Test Item	Match the following effects with their causes in sound operations
------------------	---

Column (A) (CAUSES)	
1	Too much voltage
2	Improper insulation of power cables
3	Improper positioning of speakers
4	Placing microphones close to speakers
5	Connecting speakers to mixers

Column (B) (EFFECTS)	
A	Feed back sound
B	Speakers produce no sound
C	No signal flow in the system
D	Burning of devices
E	Electric short circuit
F	Un balanced sound
G	Echoes in sound

Key (answer)	1-D, 2-E, 3F-,4-A , 5-B
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DIT/ QS	Test Item Database			
	Written (Theory) Test Item- no. 09			
Occupational Title:	SOUND OPERATOR			
Competence level:	Level 1			
Code no.				
Test Item type:	Short answer			
	Multiple choice			
	Matching item	Generic	Cause- Effect	Work-sequence
				√
Complexity level:	C 3			
Date of OP:	January 2022			
Related Module:	M.1			
Time allocation:	5Minutes			

Test Item	Arrange the process of testing the sound system in its correct order
------------------	--

Column A (Order)		Column B (Steps in wrong order)
1 st	A	Test the signal flow from the input devices to the mixing console
2 nd	B	Proof listen to all devices combined together to determine sound output
3 rd	C	Test the signal flow from the crossover to the amplifier
4 th	D	Test individual input and output devices
5 th	E	Test the signal flow from the amplifier to the speakers
6 th	F	Test the signal flow from the mixing console to the equalizer
7 th	G	Test the signal flow from the equalizer to the crossove

Key (answer)	1-D, 2-A, 3-F, 4-G, 5-C, 6-E, 7-B
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DIT/ QS	Test Item Database			
Written (Theory) Test Item- no. 10				
Occupational Title:	SOUND OPERATOR			
Competence level:	Level 1			
Code no.				
Test Item type:	Short answer			
	Multiple choice			
	Matching item	Generic	Cause- Effect	Work-sequence
				√
Complexity level:	C3			
Date of OP:	January 2022			
Related Module:	M.1			
Time allocation:	5Minutes			

Test Item	Arrange the process of connecting signal cables of a sound system in its correct order.
------------------	---

Column A (Order)		Column B (Steps in wrong order)
1 st	A	Connect the negative terminals of the amplifier to the negative terminals of the speaker and the positive terminals of the amplifier to the positive terminals of the speaker
2 nd	B	connect the output port of the equalizer to the input port of the crossover
3 rd	C	Connect the output port of the input devices to the input port of the mixer
4 th	D	connect the output port of the crossover to the input port of the amplifier
5 th	E	connect the output port of the mixer to the input port of the equalizer

Key (answer)	1-C, 2-E, 3-B, 4-D, 5-A
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PERFORMANCE TEST ITEMS (SAMPLES

DIT/ QS	Test Item Database Performance Test Item- no.11
Occupational Title:	SOUND OPERATOR
Competence level:	1
Code no.	
Test Item:	Prepare and connect sound system in a main hall of 15 by 15 square meter for a function of swearing in of a new prefectorial body.
Complexity level:	P2
Date of OP:	JANUARY 2022
Related Module:	M. 1
Related skills and knowledge:	<ul style="list-style-type: none"> • Electric devices • ICT • Sound equipment • Sound proofing • Position of equipment • Hygiene • Electricity • Art and design • Mental fabrication
Required tools, materials and equipment:	Power extension, multimeter, pliers, power stablizers, microphone, sound player, equalizers, crossovers, mixers, powe centre, amplifiers, loudspeakers, effect machine, work boots, helment, screwdrivers, testers, generator, invertors, wires, soldering gun Insulating tape, gloves, masking tapes, markers, overall, soldering wire, ear buds, nose mask
Time allocation:	5Hours
Preferred venue:	Main hall
Remarks for candidates	Avail protective gear Observe health safety and environment
Remarks for assessors	Provide all the tools equipment and materials listed above

#	Assessment criteria	Scoring guide	Max. Score	
			Process	Result
+ 1	Preparation before task	<u>Wore protective gear</u> - Overall - Gloves - Helmet - Nose mask - Ear buds		4
		Cleaned work area	1	
		Cleaned work area observed		1
		Assembled tools and equipment		3
		Made a site plan		2
2	Positioning of equipments	Positioned speakers		2
		Positioned power cables		2
		Positioned signal cabbles		3
		Positioned mixing console, amplifier, crossover, equalizer, power stabilizer and microphone receivers	4	
		Mixing console, amplifier, crossover, equalizer, power stabilizer and microphone receivers positioned at the control centre observed		4
		Positioned microphones		1
4	Connecting of signal cables	Connected input devices to mixers	2	
		The output port of the input devices connected to the input port of the mixer observed		2
		Connected mixer to equalizer	2	
		Output ports of the mixer connected to the input ports of the eaqualizer observed		2
		Connected equalizer to crossover	2	
		Output ports of the equalizer connected to the input ports of the crossover observed		2
		Connected crossover to the amplifiers	3	

#	Assessment criteria	Scoring guide	Max. Score	
			Process	Result
		Output ports of the crossover connected to the input ports of the amplifiers verified		3
		Speakers connected to amplifiers	3	
		The negative terminals of the speakers connected to the negative terminals of the amplifiers and the positive terminals of the speakers connected to the positive terminal of the amplifiers.		4
5	Connecting of power cables	Identified power extension cabbles		3
		Identified power stabilizers		2
		Connected power stabilizers to the main power source		3
		Connected power centre to the stabilizer.		3
		Switched off devices		3
		Lowered volume knobs		2
		Plugged individual devices to the power centre	2	
		Started by plugging power cabbles to the devices and then to the power centre		2
		Switched on the power source, stabilizer, power centre and then individual devices.	3	
		Switched on devices in the following order Amplifier, crossover, equalizer and mixer.	3	
6	Testing of the system	Tested individual input and output devices		3
		Tested signal flow from the input devices to the mixer	2	
		Tested the signal flow from the mixer to the equalizer	2	
		Tested signal flow from the Equalizer to the crossover	2	
		Tested signal flow from the crossover to the amplier	2	

#	Assessment criteria	Scoring guide	Max. Score	
			Process	Result
		Tested signal flow from the amplifiers to the speakers	2	
		Proof listened to all the devices combined together to determine sound output		3
7	Dissambling of the sound system	Turned down volume		2
		Turned all devices off		2
		Turned power off		2
		Disconnected devices from the power source and the power centre	2	
		Disconnected input devices from the mixer	2	
		Disconnected signal cables from the speakers and amplifiers	2	
		Cleaned tools and equipment		2
		Stored tools and equipment		2
TOTAL (Y)		Process + Results	38	68
			= 106	
MAXIMUM SCORE				

4.0 ATP- PART IV

INFORMATION ON DEVELOPMENT PROCESS

4.1 Occupational Profile Development (January 2022)

The Occupational Profile was exclusively developed by job practitioners who were working in the SOUND OPERATOR occupation. The job expert panel, guided by UVQF Facilitators defined duties and tasks performed and provided additional generic information regarding the occupation.

4.2 Training Module development (January 2022)

Based on the Occupational Profile for SOUND OPERATOR of January 2022, Training Modules were developed by job practitioners, guided by UVQF Facilitators.

4.3 Test Item Development (January 2022)

Based on the Occupational Profile for SOUND OPERATOR of January 2022, and Training Modules, Test Items were developed by combined panels of instructors and job practitioners, guided by UVQF Facilitators.

4.4 Methodology

The rationale for the Assessment and Training Package development was to link Vocational Education and Training to the real world of work by bridging Occupational Standards to Training Standards through industry-led Standards-Based Assessment.

Active participation of both instructors and job practitioners' panels consolidated the development philosophy.

The panelists worked as teams in workshop settings complemented by off-workshop field research and literature review activities including international benchmarking.

4.5 Development Panel

The participating panels of Job Practitioners required at different stages were constituted by members from the following organizations:

No.	Name	Institution/ Organization
1.	Obina John Okeny	St Henry's college Kitovu
2.	Ssendikwanawa Raymond	Mityana SS
3.	Suwed Said	Sacred Heart Kiteredde SS
4.	Kiwuuwa Henry	Grayce records
5.	Ssekabira David	St Mary's College Kisubi
6.	Ike Joshua	Sound District records
7.	Mugabi David	Central College School Bulenga
8.	Mukalazi David	Maestro Sound and Bantu productions
9.	Namanda Vad Kisaakye	Gagamel Sounds
10.	Kiguli Abdul	Makerere College School

4.6 Facilitator team

This Assessment and Training Package was developed by a Facilitator team listed below:

1. Team Leader – Mr. Byakatonda Patrick, Ag Deputy Director, DIT
2. Coordinated by - Ms. Mukyala Ruth, Ag.DD/DIT
3. Facilitators - Mr. Muwanguzi Willy Verifier QS and Mr. Kirinya Steven Verifier QS
4. Compiled and edited by Mr. Kirinya Steven Verifier QS and Mr. Muwanga Willy verifier QS

4.7 Reference time:

The Assessment and Training Package was reviewed in January 2022 and may be periodically revised to match the dynamic trends in the occupation and hence issued in different versions.

REFERENCE BOOKS

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7. Bill Evans (2011) Live sound fundamentals.