

## Overview of the role

Supporting the delivery of broadcast and communication services.

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## Standard in development

**L3: Broadcast and media systems technical operator**

Version 1.2

## Title of occupation

Broadcast and media systems technical operator

## UOS reference number

ST0424

## Core and options

No

## Level of occupation

Level 3

## Occupational maps data

**Route:** Creative and design

**Pathway:** Media, Broadcast and Production

**Cluster:** Media and broadcast assistant

## Typical duration of apprenticeship

22 months

**Target date for approval**

01/01/0001

**Resubmission**

No

**Would your proposed apprenticeship standard replace an existing framework?**

No

**Does professional recognition exist for the occupation?**

No

**Regulated occupation**

**Is this a statutory regulated occupation?**

No

**Occupation summary**

This occupation is found in the British and International broadcast and media industries, enabling the delivery of broadcast and media products, such as screen or audio programmes, internet streaming services, pay-per-view or downloadable content. They will typically work for media broadcasters, production companies, media and content streaming companies, broadcaster or media services suppliers, broadcast equipment suppliers or manufacturers. The broadcast and media systems companies and organisations vary in size and the number of employees they have, and are described as small, medium, or large companies. They are to be found across England and the UK

The broad purpose of the occupation is to operate equipment involved in programme making for any of the media outlets supported by their organisation. To do this successfully and professionally, there must be an understanding of workflow, equipment capabilities, and technical standards they are operating within. Equipment is complex, and they are often working within tight timescales, it is also necessary to be able to perform diagnostics in real-time and communicate with engineers, technicians or workflow experts to help solve problems and maintain service.

In their daily work, an employee in this occupation will work collaboratively with broadcast technicians and engineers to re-establish and maintain service when it is interrupted. Their workplace could be in a broadcast or operations centre, as part of screen or audio studio operations, on an outside broadcast operation, at customer premises or outdoors on transmission sites. They need to ensure that working environments and areas are safe from hazards and that specific risks are identified and reported. They must also ensure the required equipment is safe to use both on site and off site. They also need to be aware of the activities of their occupation which contribute to their “professional carbon footprint” and steps to reduce this.

They will typically work within a team reporting to the team or shift leader. Due to the nature of the role, this may include out of hours working or irregular working patterns.

**Typical job titles**

**Audio and visual operator Broadcast playout operator Junior camera operator Livestream operator Multi-skilled technical operator Production specialist Systems operator Technical operator Transmission operator**

**Are there any statutory/regulatory or other typical entry requirements?**

No

**Occupation duties**

Duty	KSBs
<p><b>Duty 1</b> Prepare and assemble the agreed technical set up for live or pre-recorded content including video and sound equipment, broadcast systems and networks.</p>	<p>K1 K2 K4 S1 S2 K3 K5</p>
<p><b>Duty 2</b> Operate broadcast and media or transmission systems to play out or export media and data in line with specifications and approved procedures.</p>	<p>S3 S4 S5 B2 K6 K7</p>
<p><b>Duty 3</b> Monitor channel outputs for quality and continuity of service ensuring adherence to specifications and guidelines.</p>	<p>S6 S7 S8 K8 K9 K10 K11 S9 S10 S11 S12</p>
<p><b>Duty 4</b> Maintain the workflow and security of file based assets.</p>	<p>B1 K12 K13 S13 S14</p>
<p><b>Duty 5</b> Support maintenance of systems and networks maintaining confidentiality and security protocols.</p>	<p>B1 B2 B4 K14 K15 K16 K17 K18 S15</p>
<p><b>Duty 6</b> Support service delivery to stakeholders to achieve the creative ambition of the production.</p>	<p>B1 B4 B5 K19 K20 K21 K22 S16 S17 S18</p>
<p><b>Duty 7</b> Fault find and problem solve both independently and as part of a team.</p>	<p>B5</p>
<p><b>Duty 8</b> Maintain health and safety and security on site.</p>	<p>K13 K23 K24</p>

S19 S20 S21

B1 B2 B3 B4 B5

**KSBs****Knowledge**

**K1:** Industry standards, such as delivery protocols and recommendations for example Digital Production Partnership - DPP, European Broadcasting Union - EBU and Society of Motion Picture Television Engineers - SMPTE.

**K2:** The purpose, benefits, limitations and risks of specific equipment and software required for example microphones, cameras.

**K3:** Differences between cloud based and on premises systems.

**K4:** Principles of design, architecture and maintenance of networks, such as streaming protocols, systems and connectivity.

**K5:** The regulatory environment of own organisation. How the broadcast media and streaming services operate within this.

**K6:** Potential variations from plans and schedules that might occur during system operation for example environmental changes, systems changes, locations, in the event of breaking news.

**K7:** The effects that the working environment can have on colour balance and lighting and sound how to rectify.

**K8:** End-to-end broadcast workflow from production - studio- to distribution - home - and own role within this.

**K9:** Formats required for different transmission methods such as encoders, decoders, bit rates.

**K10:** Industry protocols for metadata in relation to file transfer such as timecode, schemas, DPP standards.

**K11:** How equipment and media systems are used as part of workflow within the organisation.

**K12:** Principles, protocols and processes for network maintenance, and the different types of maintenance, such as preventative, corrective and emergency repair.

**K13:** Safe systems including precautions of work and isolation for working on broadcast and network system areas such as antennas, high voltage, power boards, switchboards and uninterruptable power supplies.

**K14:** The impact of environmental sustainability and organisational processes relating to broadcasting and systems resources.

**K15:** The importance of the level of service agreed in relation to role, technical quality and delivery.

**K16:** Organisational systems for recording information including stakeholder requirements, process requirements, technical details, unique features and agreed changes.

**K17:** Techniques to identify and prioritise operational problems such as equipment failure

**K18:** The procedures for contacting the stakeholder's department or organisation.

**K19:** The business continuity procedures for the organisation and the steps to follow to recover the service.

**K20:** Techniques to gather and analyse data regarding service operations to aid problem solving and incident management.

**K21:** Electrical engineering principles such as the use of an uninterruptable power supply (UPS) and systems earthing.

**K22:** Tools and techniques to use to identify and rectify the causes of faults in broadcast and media systems and equipment.

**K23:** Techniques to assess new and existing sites, event spaces- venues- for safety, operational and creative suitability.

**K24:** Organisational processes for ensuring physical and network security of data and systems.

## **Skills**

**S1:** Agree the operational requirements and protocols relating to broadcast and media systems, software and equipment including who can use them.

**S2:** Connect broadcast and media systems and equipment to network systems.

**S3:** Use industry software, hardware and follow processes to deliver workflow outputs.

**S4:** Work within required safety, security and confidentiality parameters.

**S5:** Check and confirm that broadcast operation complies with relevant regulations, standards, guidelines and procedures such as flashing images, loudness consistency.

**S6:** Check the quality of outputs of broadcast systems using subjective and objective assessments such as output picture and sound quality, comparison with industry standards and system specifications, data stream and signal path analysis.

**S7:** Monitor the operation of broadcast and media systems at required times.

**S8:** Inform relevant personnel of monitoring activities and outcomes.

**S9:** Apply techniques to ingest content, process, play out or export broadcast data or media.

**S10:** Check and confirm the content or data to be broadcast is in the required format for the broadcast method, job, and region.

**S11:** Play out or export media in line with technical requirements.

**S12:** Work in line with organisational procedures to maintain the integrity and security of file-based media content to avoid hacking or theft of assets, reporting if there are any breaches.

**S13:** Record maintenance requirements in organisational systems for future use or corrective action.

**S14:** Follow sustainable practices in line with industry standard recommendations.

**S15:** Establish and agree clear terms of reference with stakeholders to assess if objectives have been met.

**S16:** Provide updates to technical and non-technical stakeholders adapting language to suit the audience.

**S17:** Apply incident management procedures, and report in line with organisational procedures.

**S18:** Recognise faults, and follow procedures to rectify these or escalate within own level of responsibility.

**S19:** Comply with health and safety legislation and policies, including electrical safety procedures, reporting any health and incidents or hazards.

**S20:** Operate within specific safety precautions when working with broadcast equipment, software and systems .

**S21:** Maintain a secure working environment, in line with organisational policies, protect individuals, information and organisational assets.

## **Behaviours**

**B1:** Works on own initiative, is proactive and inquisitive working to timelines; if mistakes are made take personal responsibility to address them.

**B2:** Takes the initiative and responsibility for own learning and development, working with and learning from peers. Keeps abreast of developments in emerging, contemporary and advanced broadcast technologies

**B3:** Maintain commercial confidentiality and professional practice at all times, and in all settings.

**B4:** Works collaboratively with stakeholders and colleagues, developing strong working relationships to achieve common goals. Support an inclusive culture and treat colleagues and stakeholders with respect.

**B5:** Use initiative and innovation to respond to technical failures, problem solve and trouble shoot, providing solutions in time critical environments.

## **Qualifications**

### **English and Maths**

Apprentices without level 2 English and maths will need to achieve this level prior to taking the End-Point Assessment. For those with an education, health and care plan or a legacy statement, the apprenticeship's English and maths minimum requirement is Entry Level 3. A British Sign Language (BSL) qualification is an alternative to the English qualification for those whose primary language is BSL.

**Does the apprenticeship need to include any mandated qualifications in addition to the above-mentioned English and maths qualifications?**

No

### **Consultation**

### **Progression Routes**

[ST0425 Broadcast and media systems technician L5](#)

[ST0426 Broadcast and media systems engineer \(integrated degree\) L6](#)

[ST0342 Outside broadcasting engineer \(integrated degree\) L7](#)

**Supporting uploads**

**Mandatory qualification uploads**

**Mandated degree evidence uploads**

**Professional body confirmation uploads**

**Involved employers**

Arqiva, BBC Academy, Creative Skillset, IABM, Birmingham City University, Hattrick, BT Group, Bauer Media, Suitcase TV, Panasonic, dB Broadcast, The IET, Ravensbourne, International Moving Image Society, University of Salford, High Definition & Digital Cinema Ltd, Ericsson, Babcock International, ITV, Sky, Birmingham City University, Digital UK

**Subject sector area**

9.3 Media and communication