

## Overview

This standard is about mixing audio material to meet creative requirements. This standard focuses primarily on the mixing activities found in music recording studios but it can apply to other contexts.

This standard includes selecting and using automation techniques, using control surfaces, operating mixing consoles, maintaining gain structures and creating mixes.

This standard is for recording engineers and programmers who mix audio material to meet creative requirements.

## Performance criteria

### *You must be able to:*

1. select automation techniques which meet creative requirements
2. set up and confirm the operation of required automation systems in line with manufacturers' instructions
3. use appropriate control surfaces to input, edit and manage automation data
4. route and exit signals through mixing and recording consoles to meet requirements
5. follow procedures which allow mixing consoles to function without damage
6. operate mixing and recording consoles in line with safety requirements relating to noise control
7. create mixes and make stereo recordings which meet creative requirements
8. maintain gain structures that achieve target volumes whilst minimising noise and distortion
9. reset and recall automated mixes to meet requirements
10. tidy and reset all areas when work is complete

## Knowledge and understanding

### *You need to know and understand:*

1. information about creative requirements
2. the main manufacturers, types and features of mixing and recording consoles
3. the types of console different music and sound sectors require including studio recording, mixing studios, programming consoles, broadcast, TV, AV, radio consoles, live mobile recording, theatre, performance and live sound and PA equipment
4. the different types of studio layout and how to work within them
5. the signal chain paths of mixing and recording consoles including how signals can enter, route through and exit
6. how to identify common signal routing stages of mixing and recording consoles
7. the main differences between split, in-line and digital recording and mixing consoles
8. the relationship between stereo master sections and single channels
9. the technical and practical rationales behind input channels, metering, routing, EQ sections, monitor sections, groups, auxiliaries, fold back and master sections.
10. the principals of automation systems, edit automation data and automation as a production tool including automation techniques including multi effects and dynamic software
11. key features of mixing consoles which can be automated and how automation is set up, written and played back on software-based and hardware-based mixing systems
12. automation techniques and parameters associated with writing and playing back automation data
13. automation modes and the ways in which real time, graphical and snapshot automation is edited
14. the range, principles, key developments and comparison of audio control surfaces including automation and hybrid
15. the principles of signal to noise ratio and how to adjust gain structures to achieve it
16. how to record summed signals to stereo mixes

Mix audio material to meet creative requirements

---

**Developed by** ScreenSkills

---

**Version Number** 2

---

**Date Approved** 29 Mar 2020

---

**Indicative Review Date** 30 Mar 2024

---

**Validity** Current

---

**Status** Original

---

**Originating Organisation** Creative & Cultural Skills

---

**Original URN** CCSMT19

---

**Relevant Occupations** Recording Engineers, Recording Producers, Mix Engineers, Assistant Engineers, Programmers, Tape Ops, Film Editors, Writers, Artists, PA Performance Spaces/Venues, OB/Post Engineers, Editing Engineers, Maintenance Engineers, Technical support roles for Sound Recording and Music Technology, Live Sound Engineers, Mastering Engineers, Co-writers, Studio Manager, Installations, Jingle Composer, Film Scorers

---

**Suite** Sound Recording and Music Technology

---

**Keywords** Mix; Mixing; Audio material; Creative requirements; Sound; Music; Sound Recording; Music Technology;

---