
Overview

This standard is about the essential key features and the operation of mixing and recording consoles.

Recording engineers are required to work with different types of recording setups and to be familiar with a range of studio layouts and mixing and recording consoles. This standard focus on the signal chain paths of professional mixing and recording consoles.

This standard utilises the multi tasking skills expected of today's recording engineers and programmers.

Good practice and operation:

Recording engineers are required to work with many different types of recording set-up and need to be able to operate a diverse range of mixing consoles, understanding different layouts and hybrid combinations of split console and in-line analogue and digital mixing consoles.

This standards covers all sections of the mixing console and why recording studios require a certain configuration of mixing console. It is important that you understand the very differing aspects of mixing and recording consoles for the recording industry sectors and that of other broadcast radio, television/film and Club DJ sectors.

You also need to understand the technical and practical rationales behind such features as input channels, metering, routing, EQ sections, monitor sections, groups, auxiliaries, fold back and master sections.

This standard focuses primarily on the recording and playback signal chain of a standard 24-96 channel mixing console found in music recording studios.

You will need to show that you understand the need to maintain proper gain structures and follow procedures on the mixing console which will allow it to function properly without damage. This standard will also cover the basic background to the operation of a mixing console before being expected to master or operate it's practical professional use. You will demonstrate this understanding by making use of relevant equipment. You will also use a range of recording console designs and layouts and will be able to identify the main differences between split, in-line and digital recording and mixing consoles.

You will be required to use a minimum 24-48 channel frame with a fully wired patch bay to complete this unit.

CCSMT19

Operate analogue and digital mixing and recording consoles

Performance criteria

You must be able to:

- P1 produce charts representing elements of signal flow
- P2 route and exit 8-24 differing signals through professional mixing and recording consoles
- P3 examine console layouts on professional industry recording and mixing consoles (24-96 channel)
- P4 competently and safely operate professional mixing and recording console
- P5 demonstrate how signals can enter, route through and exit mixing and recording consoles
- P6 record several summed signals to a stereo mix.
- P7 locate features of split, in-line and digital console layouts
- P8 research requirements for recording and mixing console types in related music industry sectors
- P9 recall a small session on a chosen mixing console
- P10 tidy & reset all areas

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Knowledge and understanding

You need to know and understand:

- K1 how signals can enter, route through and exit mixing and recording consoles
- K2 how to identify common signal routing stages of mixing and recording consoles
- K3 the relationship between the stereo master section and a single channel -Describe
- K4 types of professional mixing and recording consoles
- K5 the features of different professional recording consoles
- K6 the types of console different music and sound sectors require
- K7 the main sector manufacturers of equipment for studio recording and mixing studios/programming consoles
- K8 the main sector manufacturers of equipment for broadcast/TV/AV/radio consoles
- K9 the main sector manufacturers of equipment for live mobile recording, theatre/performance and live sound/PA equipment for venues

Developed by

Creative & Cultural Skills

CCSMT19

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Version number	1
Date approved	April 2012
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Validity	Current
Status	Original
Originating organisation	Creative & Cultural Skills
Original URN	CCSMT19
Relevant occupations	Recording Engineers; recording Producers; mix engineers; assistant engineers; programmers; composers; writers; artists; film editors; film scores; PA performance spaces/venues; installations; tape ops;
Suite	Music Technology
Key words	Recording and Mixing consoles; Split design layout; in-line design layout; hybrid digital designs and layouts; SSL; AMS NEVE; API; AMEK; CADAC; CALREC; Trident, Soundtracs; MTA; Euphonics; Studer, DDA; Audient; TLA, Allen & Heath; Harrison; HELIOS; Oram; Neotek; Yamaha; Tascam; Panasonic; Sony Professional; Mackie; Logic; API; Euphonix; Studer; Harrison; audiodevelopments; Audix; ADT; Harris; TBC; Seemix; Crest audio; Eela; Lafont; D&R;,, Cooper; Wheatstone; Gain structure; phantom power; mic/line input; mic/line trims; console routing and patching; bussing matrix; pans; solo's; mutes; EQ sections; sub; master and VCA groups; phase; metering; fader; monitor section; auxiliaries; channel strip; signal routing; PFL; AFL; SIP; cuts, mutes; selects and assigns; groups; busses; amps;, monitors; 2 track stereo returns; sound; music; music technology;