CCSMT20
Carry out advanced studio routing and wiring for music and audio industries – patchbays & tie lines

Overview	This standard is about basic connector identification and lead types, and awareness of studio wiring and routing conventions.
	You will be expected to demonstrate a good knowledge of interconnection protocols in order to maintain a clean analogue signal path. You will need to understand the importance of connecting equipment correctly to maintain good quality signal flow along the analogue or digital audio chain. You will also be required to identify and rectify common faults in professional audio setups.
	Good practice and operation:
	Contemporary studio engineers or music technology practitioners require a good working knowledge of various different types of interconnection protocols and topologies in order to maintain a clean analogue signal path.
	They also need to know about different digital audio routing issues in order to allow pieces of digital equipment to talk to each other whilst maintaining a good quality digital signal.
	This standard expects you to be able to identify names of connectors, to be aware of common connections between types of equipment and to be able to put this knowledge into practice and to identify faults.
	You should all be aware of some of the technical background to various types of signals and routing as this will improve your ability to carry out good quality signal flow along the analogue or digital audio chain. Patchbay wiring will be a main understanding within this standard.
	This standard utilises the multi tasking skills expected of today's recording engineers and programmers.

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Performance criteria

You must be able to:

P1   identify and use different types of connectors
P2   assess differing characteristics of connectors
P3   observe types of interconnections -digital/analogue
P4   follow correct wiring procedures between pieces of equipment
P5   route analogue signals between pieces of equipment
P6   route digital signals between pieces of equipment
P7   observe and analyse the setup of common audio wiring configurations
P8   use patchbay systems to route audio signals between pieces of equipment
P9   carry out continuity tests between electrical conductors
P10 measure signal presence at key points
P11 produce patchbay and recall sheets

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Knowledge and understanding

You need to know and understand:

K1   different types of connectors and identification

K2   the requirements for separate conductors for each signal path

K3   electrical characteristics for mono, stereo, balanced and un-balanced

K4   analogue and digital connectors

K5   the requirements for strength and durability of connectors

K6   the professional types of adaptors

K7   advantages and disadvantages for using patchbay wiring to rationalise studio environment systems

K8   the types of patchbay leads-State types/terminology

K9   the correct uses of patchbay configurations

K10 the continuity testing of a signal between two points

K11 common methods used to verify a signal has arrived at its destination within the audio signal chain

K12 the types of professonal patchbays in use in recording sectors

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Relevant occupations	Recording Engineers; recording Producers; mix engineers; assistant engineers; programmers; tape ops;
Suite	Music Technology; Live Events Management
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