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| Title | Explain equipment, components and video signal quality relating to video systems for performances or events | | |
| Level | 4 | Credits | 10 |

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| Purpose | People credited with this unit standard are able to: explain the purpose and characteristics of equipment used in a video system; describe the characteristics of input and output units for a video system; apply knowledge of the equipment used in a video system to draw a simple video signal flow diagram; explain the factors that contribute to the quality of the video signal; and explain timelines and workflows for pack-in, set-up, operation and pack out of video equipment. |
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| Classification | Performing Arts General > Entertainment and Event Technology |
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| Available grade | Achieved |
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Guidance Information

- All learning and assessment leading to this unit standard must be carried out in accordance with the following as relevant:
 - legislation including Health and Safety at Work Act 2015 and subsequent amendments;
 - current industry best practice and industry guidelines (where available) including *Safe Rigging Practices for the Entertainment Industry in New Zealand*, June 2015, and *A Guide for Safe Working Practices in the New Zealand Theatre & Entertainment Industry*, April 2011, or replacements that supersede these guidelines, available from the WorkSafe website, www.worksafe.govt.nz.
- The Entertainment and Event Technology programme guidance document should be consulted when developing assessments leading to this unit standard. It can be found at www.skillsactive.org.nz.
- Definition
LED means light emitting diode.

Outcomes and performance criteria

Outcome 1

Explain the purpose and characteristics of equipment used in a video system for a performance or event.

Performance criteria

- 1.1 Explain selection criteria for video equipment for a video system in terms of the quality of the video signal.
- Range may include but is not limited to - input devices, content capture or generation elements, video switchers and mixers, distribution amplifiers, video converters, output devices, cable and signal format options.
- 1.2 Explain the functions of a video production switcher in terms of signal flow requirements, functionality and features, and video input and output options.
- 1.3 Explain the purpose of scan converters and video scalers in terms of converting video signals.
- 1.4 Explain the purpose of a distribution amplifier in terms of distribution of the video signal and multiple video outputs.
- 1.5 Explain types of video connectors in terms of different interface requirements.
- 1.6 Explain projector lens ratios in terms of optimising projector placement, audience view and projection of image onto the screen.

Outcome 2

Describe the characteristics of input and output units for a video system for a performance or event.

Performance criteria

- 2.1 Describe the characteristics of input devices and image capture or creation devices in terms of requirements for a performance or event.
- 2.2 Describe the characteristics of camera control units and vision switchers in terms of incoming and outgoing video signals.
- 2.3 Describe the characteristics of projectors, monitors, LED walls, screens and other output devices in terms of the requirements for a performance or event.

Outcome 3

Apply knowledge of the equipment used in a video system to draw a simple video signal flow diagram.

Performance criteria

- 3.1 Follow standard video signal flow diagram drawing conventions and formats.
- 3.2 Equipment for the video signal flow diagram matches the requirements for the performance or event.

Outcome 4

Explain the factors that contribute to the quality of the video signal.

Performance criteria

- 4.1 Explain the importance of identifying the type of video interface in terms of compatibility and the quality of video signal transfer.
- 4.2 Explain video formats in terms of their respective quality, benefits or issues in regards to the video signal quality.
- 4.3 Explain the purpose of a test signal generator in terms of timing a video system and smooth transitions.
- 4.4 Explain latency, lag and conversion delay in relation to video reproduction and methods of minimising its impact.

Outcome 5

Explain timelines and workflows for pack-in, set-up, operation and pack out of video equipment.

Performance criteria

- 5.1 Explain time lines and workflows for pack in, set up, operation and pack out in terms of risk assessment plans and venue requirements.

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| Planned review date | 31 December 2022 |
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Status information and last date for assessment for superseded versions

| Process | Version | Date | Last Date for Assessment |
|--------------|---------|-------------------|--------------------------|
| Registration | 1 | 28 September 2017 | N/A |

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| Consent and Moderation Requirements (CMR) reference | 0099 |
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Skills Active Aotearoa Limited info@skillsactive.org.nz if you wish to suggest changes to the content of this unit standard.