

Title	Install, operate and remove sound equipment for performances, events or a live recording		
Level	4	Credits	20

Purpose	People credited with this unit standard are able to: interpret a sound plan and set up sound system equipment; demonstrate knowledge of the preparation, loading and transportation of sound equipment; install sound system equipment; draw a simple signal flow diagram and set up the sound equipment for a small scale performance, event or live recording; select and apply techniques to improve the sound quality during a performance, event or live recording; pack out and load sound system equipment at the end of a performance, event or live recording.
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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

1. Recommended skills and knowledge: Unit standard 17600 *Explain safe work practices for working at heights*.
2. 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.
3. 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
4. For outcomes 1, 2, 3, 5 and 6 technical skills must be demonstrated across a range of performances and events, including a minimum of four complex events. For outcome 4 technical skills must be demonstrated across a range of performances and events, including a minimum of four small scale events.

5. Definition

Complex events are defined as having technical complexity and must meet at least three of the following criteria:

- audience or guest capacity > 500
- hours of technical production > 150 hours
- production budget (covering technical and staffing requirements for rigging, lighting, video, live sound, stage mechanics and scenic construction) > \$100,000
- quantity of Performers/Presenters > 20
- length of time in the venue (or venues if a touring production) > 7 days.

Outcomes and performance criteria

Outcome 1

Interpret a sound plan and set up sound system equipment for a performance, event or live recording.

Performance criteria

- 1.1 Interpret the sound plan to determine requirements in terms of the type of performance or event or live recording.
- 1.2 Explain safety requirements for set up, installation and pack out in accordance with risk assessment plans and venue requirements.
- 1.3 Identify and comply with any restrictions or guidance for operating sound levels.

Range may include but is not limited to - district plans, WorkSafe guidelines, venue requirements.
- 1.4 Explain sound check requirements in terms of sound plan, time restraints and line check.
- 1.5 Interpret the sound plan to ensure safe and adequate electrical power supply.

Outcome 2

Demonstrate knowledge of the preparation, loading and transportation of sound equipment to an entertainment or event venue or site.

Performance criteria

- 2.1 Select and prepare relevant sound equipment and other resources to meet the requirements of sound riders, technical riders and prep sheets.
- 2.2 Complete labelling of racks, road cases and sound gear in terms of rack and case contents, required location at the event and meeting transportation requirements.
- 2.3 Load equipment in accordance with safety guidelines.

- 2.4 Select safety equipment for cable runs in accordance with requirements of the venue.
- 2.5 Determine destination, site access and parking distance from the venue and document in the loading plan.
- 2.6 Transport equipment in accordance with safety guidelines.

Outcome 3

Install sound system equipment for a performance, event or live recording.

Performance criteria

- 3.1 Install sound system equipment in accordance with industry best practice, the sound plan and venue requirements.
- 3.2 Use terminology consistent with the sound plan throughout the setup and operating phase of the performance, event or live recording.
- 3.3 Use PPE and access equipment in accordance with safety guidelines and legislation requirements.
- 3.4 Application of earth loop principles demonstrates an understanding of their use in fault finding and removing an earth loop in a sound system.
- 3.5 Solve problems using a logical process and problem solving techniques to remedy issues arising during set-up.

Outcome 4

Draw a simple signal flow diagram and set up the sound equipment for a small scale performance, event or live recording.

Performance criteria

- 4.1 Draw a signal flow diagram for a small scale performance or event using commonly used conventions and formats.
- 4.2 Set up sound equipment for the small scale performance or event on stage in a safe and tidy manner.
- 4.3 Test sound equipment and make adjustments for good sound quality in accordance with performers' requirements.

Outcome 5

Select and apply techniques to improve the sound quality during a performance, event or live recording.

Performance criteria

- 5.1 Select and apply troubleshooting techniques to improve sound quality.
- 5.2 Apply feedback control mechanisms to meet sound system requirements.
- 5.3 Select and apply equalisation to improve sound quality.
- 5.4 Select and apply processing to improve sound quality.

Range may include but is not limited to - dynamics such as gate, compressor, de-essor, limiter, effects such as reverb and delay.

Outcome 6

Pack out and load sound system equipment at the end of a performance, event or live recording.

Performance criteria

- 6.1 Complete pack-out and loading of sound system equipment in accordance with the sound plan.
- 6.2 Packing of equipment follows a logical process and in reverse to pack-in procedures.
- 6.3 Return equipment in the appropriate condition as required by the suppliers and venue.
- 6.4 Loading of equipment in removal vehicle is completed safely and the load meets the requirements for even weight spread.
- 6.5 Storage of sound equipment meets production and transportation requirements.

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

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.