

Title	Install electronic security surveillance systems		
Level	3	Credits	7

Purpose	<p>This unit standard is intended for the training and assessment of people working in or intending to work in the electronic security industry and covers the installation of security surveillance systems.</p> <p>People credited with this unit standard are able to:</p> <ul style="list-style-type: none"> – demonstrate knowledge of surveillance system components; – install components in surveillance systems; – program surveillance systems; and – test, commission, and handover surveillance systems.
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Classification	Electronic Engineering > Electronic Security
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Available grade	Achieved
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Prerequisites	Unit 26841, <i>Demonstrate knowledge of electronic security systems and equipment</i> , or demonstrate equivalent knowledge and skills.
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Guidance Information

- 1 This unit standard has been developed for learning and assessment on-job at client premises.
- 2 Persons working or intending to work as a security officer or in related security employment may require a Security Guards Licence or, if an employee of a Security Guard Licence holder, a Certificate of Approval to be the Responsible Employee of a Security Guard. These licences are issued by the Private Security Personnel Licensing Authority available through: www.justice.govt.nz/tribunals/licences-certificates/pspla/.
- 3 Definitions

Industry practice – those practices that competent practitioners within the industry recognise as current industry best practice.

Lighting – illumination across the visible and invisible spectrum.

PTZ – pan tilt zoom.

Safe and sound practice – as it relates to the installation of electrical equipment is defined in AS/NZS 3000:2007, *Electrical Installations (known as the Australian/New Zealand Wiring Rules)*.

Surveillance systems – may include but are not limited to – camera fixed lens, auto iris lens, video monitor, video intercom, lighting.

USB – universal serial bus.

- 4 References – Specific to Electronic Security Industry
New Zealand Security Association (Inc), *Code of Practice for Alarm Monitoring Centres*, 2007;
New Zealand Security Association (Inc), *Code of Practice for Closed Circuit Television Surveillance Systems*, 2006;
New Zealand Security Association (Inc), *Code of Practice for Electronic Access Control*, 2008;
New Zealand Security Association (Inc), *Code of Practice for Intruder Alarm Systems*, 2007;
Codes of Practice available from: <http://security.org.nz>.

AS/NZS 2201.1:2007, *Intruder alarm systems – Client's premises – Design, installation, commissioning and maintenance*;
AS/NZS 2201.5:2008, *Intruder alarm systems – Alarm transmission systems*;
and all subsequent amendments and replacements.

References – General to Electronic Security Industry

Building Act 2004;
Electricity Act 1992;
Electricity (Safety) Regulations 2010;
Health and Safety at Work Act 2015;
Private Security Personnel and Private Investigators Act 2010;
Privacy Act 2020;
AS/NZS 3000:2018, *Electrical installations (known as the Australian/New Zealand Wiring Rules)*;
NZS 4512:2021, *Fire detection and alarm systems in buildings*;
NZS 4514:2021, *Interconnected smoke alarms for houses*;
Telecommunications Act 2001;
Local territorial authority requirements;
and all subsequent amendments and replacements.

- 5 Where not stated, evidence for the number and type of equipment chosen is left to the discretion of the assessor, but must be sufficient to assess competence in all outcomes of the unit standard.
- 6 Range
- a Candidates must refer to current legislation and Standards during assessment.
 - b Demonstration of safe working practices in accordance with *safe and sound practice* are essential components of assessment of this unit standard.
 - c All activities and evidence presented for all outcomes and performance criteria in this unit standard must be in accordance with:
 - i legislation;
 - ii policies and procedures;
 - iii ethical codes;
 - iv Standards;
 - v applicable site, enterprise, and industry practice; and,
 - vi where appropriate, manufacturer instructions, specifications, and data sheets.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of surveillance system components.

Range analogue cameras and lenses, analogue cabling systems, high resolution digital cameras and lenses, digital cabling systems, analogue and digital power supplies, digital recording systems, display systems, simple network solutions, lighting systems.

Performance criteria

- 1.1 Describe the components of a surveillance system and identify the features in terms of functionality.
- 1.2 Explain the purpose of each component with respect to the complete system.
- 1.3 Use specifications to identify variations of performance and operation of equivalent components from two manufacturers.

Outcome 2

Install components in surveillance systems.

Range single analogue camera and lens, digital camera and lens cabling, camera display systems and connection, 4 to 16 channel digital recorder, remote access to digital recorder, digital and network recorder, analogue and digital power supplies, lighting;
evidence of five systems is required which must include all components.

Performance criteria

- 2.1 Complete installation and confirm connections.
Range camera, remote network access, digital recorder.
- 2.2 Install lighting system for cameras.
- 2.3 Install power supplies.

Outcome 3

Program surveillance systems.

Range evidence of five installations is required.

Performance criteria

- 3.1 Program recorder's recording hours of operation to ensure they meet client requirements.
- 3.2 Program motion detection to the situation and time requirements of the client.
- 3.3 Program network IP address and gateway for remote access.
- 3.4 Program user access permission levels.

Range may include but is not limited to – hierarchy of authority, access to control PTZ cameras, image retrieval, camera viewing; evidence of two is required.

Outcome 4

Test, commission, and hand over surveillance systems.

Range commission cameras and lenses, commission user functions, commission recording and display functions, commission remote access; evidence of five installations is required.

Performance criteria

- 4.1 Test for camera focus and ability to operate in the expected lighting conditions, and record results.
- 4.2 Test the recorded image, noting quality and images per second, record images to external media, and record results.
 - Range external media – may include but is not limited to: USB drive, CD, DVD, hard drive; media link – local, network.
- 4.3 Test to confirm camera images are displayed on monitors and are recorded on media in accordance with client needs and system specifications.
- 4.4 Test system remote access, user functions and ability to remotely record images, and record results.
- 4.5 Communicate the equipment operation, warranty, and service options to the customer in accordance with the equipment manual.
- 4.6 Describe the operational relationships between the people involved in the installation, alarm monitoring, and alarm activation and response to alarms.
- 4.7 Complete hand over documentation in the agreed format and in accordance with customer and industry practice.
- 4.8 Brief client on system operation.

Planned review date	31 December 2023
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	18 November 1997	31 December 2011
Revision	2	3 April 2001	31 December 2011
Revision	3	11 March 2004	31 December 2012
Rollover	4	21 November 2008	31 December 2012
Review	5	19 November 2010	31 December 2022
Revision	6	17 June 2011	31 December 2022
Review	7	14 December 2017	N/A
Rollover and Revision	8	27 October 2022	N/A

Consent and Moderation Requirements (CMR) reference	0003
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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 Waihanga Ara Rau Construction and Infrastructure Workforce Development Council qualifications@waihangaararau.nz if you wish to suggest changes to the content of this unit standard.