Title	**Install electronic security intruder alarm and control systems**		
Level	**3**	**Credits**	**8**

Purpose	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 installation of security intruder alarm systems. People credited with this unit are able to: – demonstrate knowledge of installation of electronic security alarm control system components; – install components in simple alarm systems in accordance with specifications and client requirements; – program simple alarm systems to prove installation is performing to manufacturer specifications and client requirements; and – test, commission, and handover the alarm systems.

Classification	Electronic Engineering > Electronic Security

Available grade	Achieved

Prerequisites	Unit 26841, *Demonstrate knowledge of electronic security systems and equipment*, or demonstrate equivalent knowledge and skills.

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
Detection devices – may include but are not limited to: passive infra-red (PIR) detector, microwave detector, point-to-point beam, ultrasonic detector, reed switches, vibration sensors, glass break detectors.
Devices – may include but are not limited to: local alerting devices, on board dialler, key pad, detection devices.

Industry practice – those practices that competent practitioners within the industry recognise as current industry best practice.
LAN – local area network.
Local alerting devices – internal audibles, external audibles, strobe lights.
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).*

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 Camera Surveillance Systems*, 2012;
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 (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 Guidelines for connection of intruder alarm systems to telephone lines are contained in *Access Standards Newsletters* issued periodically by Spark New Zealand Ltd, available from www.telepermit.co.nz.

6 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.

7 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 installation of electronic security alarm control system components.

Range alarm panel, input expander, output expander, local alerting devices, keypads, onboard dialler, LAN card, power supplies, battery, anti-tamper, bus systems, detection devices;
evidence of eight is required.

Performance criteria

1.1 Describe the components of an alarm 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 simple alarm systems in accordance with specifications and client requirements.

Range 4-16 zone alarm panel, end of line monitoring techniques, detection devices, monitoring connection, remote programming software, local alerting devices, power supply and electrical connection;
evidence is required from four different installations;
evidence of six different components is required for each installation.

Performance criteria

2.1 Complete installation and confirm connections.

2.2 Install end-of-line monitoring and tamper monitoring.

2.3 Install detectors.

2.4 Install local alerting devices.

2.5 Connect onboard dialler to monitoring station for two of the four systems.

2.6 Install power supplies in accordance with AS/NZS 3000.

2.7 Secure devices in such a manner that they cannot be prized from mountings or easily compromised without activating an alarm.

Outcome 3

Program simple alarm systems to prove installation is performing to manufacturer specifications and client requirements.

Range evidence is required from four different installations each with six different devices.

Performance criteria

3.1 Program the inputs and outputs of a 4-16 zone alarm panel to ensure it operates to manufacturer specifications and user requirements.

3.2 Program codes to allow for hierarchical authority access.

Range technician, master and user.

3.3 Program two separate areas to operate independently of each other from a single keypad.

Range evidence for two of the four installations is required.

3.4 Program the alarm system for offsite monitoring by a monitoring company using standard communicator formats.

Range evidence for two of the four installations is required.

3.5 Implement programming by laptop, remote access, and keypad entry.

Outcome 4

Test, commission, and handover the alarm systems.

Range tests may include but are not limited to – 24-hour circuit test, anti-tamper, audible cut-off, audible delay, audible test, circuit isolate, reset, first zone to alarm, lockout, night set, duress function, setting on final exit, timed entry and exit mode, walk test, zone indication, battery test, remote monitoring function; remote programming;
evidence is required from four different installations;
evidence is required for six tests per installation;
test results are recorded in accordance with NZS/AS 2201.1:2007.

Performance criteria

4.1 Confirm connection of intruder alarm devices to panel to ensure that detection and alerting devices are fully operational and cannot be easily compromised.

Range system malfunctions include but are not limited to – zone not sealed, false alarm (environment, pets), bright sunlight, radio frequency interference, high frequency audible interference, vibrations (earthquake), running water, monitoring link disconnect; evidence of five is required.

4.2 Record the performance of the installed intruder alarm devices and compare with the manufacturer specifications and customer requirements.

4.3 Test to confirm connection to monitoring station and document test results.

Range includes but is not limited to – alarm set/unset received, alarm received, zone identified, hours for set confirmed, tamper received, user codes identified.

4.4 Rectify any system performance failure or deficiency and retest the system.

4.5 Describe the operational relationships between the people involved in the installation, alarm monitoring, and alarm activation and response to alarms.

Planned review date	31 December 2026

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
Rollover	9	26 September 2024	N/A

Consent and Moderation Requirements (CMR) reference	0003

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.