



**Australian Government**

# **UEENEEH150A Assemble and set up basic security systems**

**Release: 2**

# UEENEEH150A Assemble and set up basic security systems

## Modification History

Not applicable.

## Unit Descriptor

### Unit Descriptor

#### 1) Scope:

##### 1.1) Descriptor

This unit covers installing electronic security systems with up to 50 connected devices typically used in single domestic and small commercial premises. It encompasses, working safely and to standards, following oral and written instructions and procedures, securely placing and connecting security system components, and applying customer relation protocols.

## Application of the Unit

### Application of the Unit 2)

This unit is intended for competency development in entry-level employment based programs incorporated in approved contracts of training or approved training programs.

## Licensing/Regulatory Information

### License to practice 3)

The skills and knowledge described in this unit require a license to practice in the workplace where plant and equipment operate at voltage above 50 V a.c. or 120 V d.c. However other conditions may apply in some States/Territories subject to regulations related to electrical work.

Practice of this unit in the work place is subject to State and Territory Security Industry regulations. Where the

**License to practice****3)**

security system has a call-back-to-base facility practice in the workplace is also subject to ACMA regulations to undertake cabling work.

Note:

Units 'UEENEEF101A and UEENEEF102A provide the required skill and knowledge for registration in accordance with ACMA regulations for undertaking cabling work.

Practice in the workplace and during training is also subject to regulations directly related to occupational health and safety and where applicable contracts of training such as apprenticeships.

**Pre-Requisites****Prerequisite Unit(s)****4)****Competencies****4.1)**

Granting competency in this unit shall be made only after competency in the following unit(s) has/have been confirmed.

|                 |  |
|-----------------|--|
| UEENEEE1<br>02A | Fabricate, dismantle, assemble of utilities industry components        |
| UEENEEE1<br>05A | Fix and secure electrotechnology equipment                             |
| UEENEEE1<br>07A | Use drawings, diagrams, schedules, standards, codes and specifications |

**Literacy and numeracy skills****4.2)**

Participants are best equipped to achieve competency in this unit if they have reading, writing and numeracy skills indicated by the following scales. Description of each scale is given in Volume 2, Part 3 'Literacy and Numeracy'

Reading 3      Writing 3      Numeracy 3

## Employability Skills Information

### Employability Skills 5)

This unit contains Employability Skills

The required outcomes described in this unit of competency contain applicable facets of Employability Skills. The Employability Skills Summary of the qualification in which this unit of competency is packaged will assist in identifying Employability Skill requirements.

## Elements and Performance Criteria Pre-Content

6) Elements describe the essential outcomes of a competency standard unit      Performance Criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the Evidence Guide.

## Elements and Performance Criteria

### ELEMENT

### PERFORMANCE CRITERIA

- |   |   |     |   |
|---|---|-----|---|
| 1 | Prepare to assemble and set up basic wired and wireless security systems. | 1.1 | OHS procedures for a given work area are identified, obtained and understood through established routines.  |
|   |   | 1.2 | Established OHS risk control measures are followed in preparation for the work.   |
|   |   | 1.3 | Safety hazards, which have not previously been identified, are reported and advise on risk control measures, are sought from the work supervisor. |
|   |   | 1.4 | The nature and location of the work is obtained from work supervisor or other appropriate person to establish the scope of work to be             |

**ELEMENT****PERFORMANCE CRITERIA**

- undertaken.
- 1.5 Advice is sought from the work supervisor or other appropriate person to ensure the work is co-ordinated effectively with others.
- 1.6 Sources of materials that may be required for the work are established in accordance with established routines.
- 1.7 Tools, equipment and testing devices needed to carry out the work are obtained and checked for correct operation and safety.
- 2 Assemble basic wired and wireless security systems.
- 2.1 Established OHS risk control measures for carrying out the work are followed.
- 2.2 Circuits/machines/plant are checked as being isolated where necessary in strict accordance OHS requirements and procedures.
- 2.3 Security controllers, access, intrusion and surveillance devices are located for optimum performance within limitation imposed by customers and regulations.
- 2.4 Accessories are installed straight and square in the required locations and within acceptable tolerances.
- 2.5 Cables and conductors are terminated at accessories in accordance with manufacture's specifications and regulatory requirements.
- 2.6 Procedures for referring non-routine events to immediate supervisor for directions are followed.
- 2.7 Security installation is carried out efficiently without waste of materials or damage to apparatus, circuits or the surrounding environment and using sustainable energy practices.

| <b>ELEMENT</b>   | <b>PERFORMANCE CRITERIA</b>   |
|--|---|
| 3 Complete and document security systems installation. | 3.1 OHS work completion risk control measures and procedures are followed.                            |
|  | 3.2 Work site is cleaned and made safe in accordance with established procedures.                     |
|  | 3.3 Security system is documented in accordance with regulatory requirement and established routines. |

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

8) This describes the essential skills and knowledge and their level, required for this unit.

Evidence shall show that knowledge has been acquired of safe working practices and assembling and setting up basic wired and wireless security systems.

All knowledge and skills detailed in this unit should be contextualised to current industry practices and technologies.

#### KS01-EH150A

#### Basic security system assembly and set up

Evidence shall show an understanding of basic security system assembly and set up, applying safe working practices and relevant Standards, Codes and Regulations to an extent indicated by the following aspects:

T1. Regulations applicable to the security industry

- Security Act
- Occupational Health and Safety Act
- Australian Standards AS630, AS2201
- ACMA Standards

T2. Circuit arrangements

- Range of typical resistor values used in alarm systems
- End line resistors
- Wiring of a detector with split EOL resistors
- Zone doubling
- Open circuits and short circuits

T3. Mechanical detectors

- Pressure pads
- Trip wires
- Window tape
- Screens
- Switches
- Vibration

T4. Electro-mechanical detectors

- Ultrasonic
- Microwave
- Glass break
- Smoke
- Active infrared beams
- Passive infrared
- Strain system

## REQUIRED SKILLS AND KNOWLEDGE

- Renamed magnetic reed switches
- Optical fibre cable

### T5. Relays

- NC and NO relays
- transistor as a switch
- wiring diagram for a relay connected to an open collector output on an alarm panel
- typical uses for a relay type output

### T6. Security panels

- Features of commonly used panels
- Operation of programmable and non-programmable panels
- Sound sources used with security alarms
- Power sources used with security systems
- Panel to base communication systems
- Locks commonly used in the security industry
- Batteries:
  - types
  - application
  - maintenance

### T7. Communication systems

- Panel to base systems
- Dialler sequence
- Secsoa dialling system
- Dual tone multi frequency
- Ademco high speed
- Ademco contact ID

### T8. Closed circuit television

- Application
- Types of cameras
- Types of monitors
- Switching methods
- Earthing
- Ambient lighting



## Evidence Guide

### EVIDENCE GUIDE

9) The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package. .

The Evidence Guide forms an integral part of this unit. It must be used in conjunction with all parts of the unit and performed in accordance with the Assessment Guidelines of this Training Package.

#### Overview of Assessment 9.1)

Longitudinal competency development approaches to assessment, such as Profiling, require data to be reliably gathered in a form that can be consistently interpreted over time. This approach is best utilised in Apprenticeship programs and reduces assessment intervention. It is the Industry-preferred model for apprenticeships. However, where summative (or final) assessment is used it must include the application of the competency in the normal work environment or, at a minimum, the application of the competency in a realistically simulated work environment. It is recognised that, in some circumstances, assessment in part or full can occur outside the workplace. However, it must be in accord with industry and regulatory policy.

Methods chosen for a particular assessment will be influenced by various factors. These include the extent of the assessment, the most effective locations for the assessment activities to take place, access to physical resources, additional safety measures that may be required and the critical nature of the competencies being assessed.

The critical safety nature of working with electricity, electrical equipment, gas or any other hazardous substance/material carries risk in deeming a person competent. Sources of evidence need to be 'rich' in nature to minimise error in judgment.

Activities associated with normal everyday work influence decisions about how/how much the data gathered will contribute to its 'richness'. Some skills are more critical to safety and operational requirements while the same skills may be more or less frequently practised. These points are raised for the assessors to consider when choosing an assessment method and developing assessment instruments. Sample assessment instruments are included for Assessors in the Assessment Guidelines of this Training Package.

**Critical aspects of evidence required to demonstrate competency in this unit 9.2)**

Before the critical aspects of evidence are considered all prerequisites shall be met.

Evidence for competence in this unit shall be considered holistically. Each Element and associated performance criteria shall be demonstrated on at least two occasions in accordance with the 'Assessment Guidelines – UEE11'. Evidence shall also comprise:

- A representative body of work performance demonstrated within the timeframes typically expected of the discipline, work function and industrial environment. In particular this shall incorporate evidence that shows a candidate is able to:
  - Implement Occupational Health and Safety workplace procedures and practices, including the use of risk control measures as specified in the performance criteria and range statement
  - Apply sustainable energy principles and practices as specified in the performance criteria and range statement
  - Demonstrate an understanding of the essential knowledge and associated skills as described in this unit. It may be required by some jurisdictions that RTOs provide a percentile graded result for the purpose of regulatory or licensing requirements.
  - Demonstrate an appropriate level of skills enabling employment
  - Conduct work observing the relevant Anti Discrimination legislation, regulations, policies and workplace procedures
- Demonstrated consistent performance across a representative range of contexts from the prescribed items below:
  - Assemble and set up basic wired and wireless security systems as described in 8) and including:
    - A Reading and interpreting drawings related to cable layouts and apparatus locations.
    - B Placing and securing devices and accessories accurately.
    - C Maintaining fire integrity.

- D Terminating cable and conductors correctly.
- E Documenting installation.
- F Dealing with unplanned events by drawing on essential knowledge and skills to provide appropriate solutions incorporated in a holistic assessment with the above listed items.

Note:

Successful completion of relevant vendor training may be used to contribute to evidence on which competency is deemed. In these cases the alignment of outcomes vendor training with performance criteria and critical aspects of evidence shall be clearly identified.

**Context of and specific resources for assessment 9.3)**

This unit should be assessed as it relates to normal work practice using procedures, information and resources typical of a workplace. This should include:

- OHS policy and work procedures and instructions.
- Suitable work environment, facilities, equipment and materials to undertake actual work as prescribed by this unit.

Resources required to assess this unit are listed above in Context of assessment', which should also be used in the formal learning/assessment environment.

Note:

Where simulation is considered a suitable strategy for assessment, conditions must be authentic and as far as possible reproduce and replicate the workplace and be consistent with the approved industry simulation policy.

The resources used for assessment should reflect current industry practices in relation to assembling and setting up basic wired and wireless security systems.

**Method of assessment 9.4)**

This unit shall be assessed by methods given in Volume 1, Part 3 'Assessment Guidelines'.

Note:

Competent performance with inherent safe working practices is expected in the industry to which this unit applies. This requires that the specified essential knowledge and associated skills are assessed in a structured environment which is primarily intended for learning/assessment and incorporates all necessary equipment and facilities for learners to develop and demonstrate the essential knowledge and skills described in this unit.

**Concurrent  
assessment and  
relationship with  
other units**

**9.5)**

For optimisation of training and assessment effort, competency development in this unit may be arranged concurrently with unit:

UEENEEE10 2A Fabricate, dismantle, assemble of utilities industry components

UEENEEE10 5A Fix and secure electrotechnology equipment

UEENEEE10 7A Use drawings, diagrams, schedules, standards, codes and specifications

The critical aspects of occupational health and safety covered in UEENEEE101A and other discipline specific occupational health and safety units shall be incorporated in relation to this unit.

## Range Statement

### RANGE STATEMENT

**10)** This relates to the unit as a whole providing the range of contexts and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

This unit shall be demonstrated by installing for a representative range of basic wired and wireless security systems at least two basic security system.

Systems shall consist of a controller and access device and at least two other different connected device both wire and wireless.

Generic terms used throughout this Vocational Standard shall be regarded as part of the Range Statement in which competency is demonstrated. The definition of these and other terms that apply are given in Volume 2, Part 2.1.

## Unit Sector(s)

Not applicable.

## Competency Field

|                         |             |
|-------------------------|-------------|
| <b>Competency Field</b> | <b>11)</b>  |
|                         | Electronics |