



Australian Government

Department of Education, Employment and Workplace Relations

CPPSEC2023A Install CCTV equipment and system

Release: 1

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Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit of competency specifies the outcomes required to install a range of CCTV equipment and audio systems. It requires the ability to select and use materials, tools and equipment to install CCTV equipment and audio systems using approved methods and procedures. This work applies in extra low voltage as defined through the Australian Standards AS 2201 (1986) environments.

This unit may form part of the licensing requirements for persons responsible for installing CCTV equipment and audio systems in those states and territories where these are regulated activities.

Application of the Unit

Application of the unit

This unit of competency has application in those work roles involving the installation of CCTV equipment and audio systems. Competency requires legal and operational knowledge applicable to relevant sectors of the security industry. The knowledge and skills described in this unit are to be applied within relevant legislative and organisational guidelines.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not Applicable

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge section and/or the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Prepare for installation.	<p>1.1 Applicable provisions of <i>legislative</i> and <i>organisational requirements</i> relevant to installing <i>CCTV equipment and audio systems</i> are identified and complied with.</p> <p>1.2 <i>Assignment instructions</i> are obtained, reviewed and confirmed as required with <i>relevant persons</i>.</p> <p>1.3 CCTV equipment and audio system to be installed is identified and confirmed.</p> <p>1.4 <i>Tools, equipment</i> and <i>materials</i> needed to carry out the work are selected and checked for correct operation and safety.</p> <p>1.5 Potential and existing <i>risks and hazards</i> in the work area are identified and controlled in accordance with <i>Occupational Health and Safety (OHS)</i> requirements and own role, competence and authority.</p>
2 Install CCTV and audio systems.	<p>2.1 <i>Personal protection equipment</i> is selected and used in accordance with OHS requirements.</p> <p>2.2 CCTV equipment and audio system is accurately positioned in accordance with installation specifications and assignment instructions.</p> <p>2.3 CCTV equipment and audio system is securely fixed, terminated and connected to cabling using appropriate methods and procedures.</p> <p>2.4 CCTV equipment and audio system is installed without damage or distortion to the surrounding environment or services.</p> <p>2.5 Safe workplace practices are applied throughout installation process in accordance with OHS requirements.</p> <p>2.6 Changing circumstances and <i>factors</i> affecting the achievement of assignment instructions are identified and recommendations for variation to installation plans are approved by relevant persons.</p>
3 Complete installation.	<p>3.1 Installed CCTV equipment and audio system is inspected and checked to confirm operational effectiveness.</p> <p>3.2 Checks are conducted to confirm that all terminations are electrically and mechanically sound.</p> <p>3.3 Work area is restored to original condition, waste disposed of and tools and equipment cleaned and stored in accordance with organisational requirements.</p> <p>3.4 Malfunctions, faults, wear or damage to tools or equipment is documented and reported for repair or replacement in accordance with organisational procedures.</p>

ELEMENT**PERFORMANCE CRITERIA**

- 3.5 Notification of work completion is made to relevant persons in accordance with organisational procedures.
- 3.6 Relevant *documentation* is completed and securely maintained in accordance with organisational procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge and their level required for this unit.

Required skills

- apply safe and environmentally aware work practices
- carry out basic carpentry
- carry out soldering and drilling
- communicate in a clear and concise manner
- complete documentation
- estimate and organise materials, tools and equipment requirements
- fit end-of-line devices
- identify and comply with applicable legislative requirements including licensing
- identify and control workplace hazards
- identify and follow routine workplace safety procedures
- identify and report faulty equipment
- identify, terminate and connect cables
- install and fix a range of CCTV equipment and audio systems
- organise and prioritise work tasks
- read and interpret plans and specifications
- restore work area to pre-installation condition
- solve routine problems
- test and confirm operational effectiveness of CCTV equipment and audio system
- use suitable tools and equipment, including hand and power tools
- work at heights and in confined spaces.

Required knowledge

- applicable legislative requirements including licensing and client confidentiality
- cable identification, termination and connection procedures
- earthing systems arrangements and requirements
- electrical concepts
- emergency procedures
- installation methods and procedures relevant to CCTV equipment and audio

REQUIRED SKILLS AND KNOWLEDGE

systems

- methods of sealing cable entries
- procedures for accessing and storing tools, equipment and materials
- procedures for reporting malfunctioning or faulty tools and equipment
- reporting and documentation requirements
- requirements for compliance with Australian building codes and regulations and Australian Communications Authority cabling standards
- requirements for working at height and in a confined space
- risks and hazards associated with installation procedures
- safe workplace procedures
- technical terminology
- types, functions and features of CCTV equipment and audio systems
- waste disposal procedures.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of:

- applying appropriate methods and using suitable tools and equipment to position, fix and install a range of CCTV equipment and audio systems
- cleaning and storing tools and equipment and reinstating work site to a clean and safe condition
- organising own work tasks within specified installation timeframes and completing documentation related to installation services
- interpreting and complying with all applicable legislative and licensing requirements for installation
- safely following installation procedures and carrying out checks to ensure integrity, security and safety of CCTV equipment and system.

Context of and specific resources for assessment

Context of assessment includes:

- a setting in the workplace or environment that simulates the conditions of performance described in the elements,

performance criteria and range statement.

Resource implications for assessment include:

- access to plain English version of relevant statutes and procedures
- access to a registered provider of assessment services
- access to a suitable venue and equipment
- assessment instruments including personal planner and assessment record book
- work schedules, organisational policies and duty statements.

Reasonable adjustments must be made to assessment processes where required for people with disabilities. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

This unit of competency could be assessed using the following methods of assessment:

- observation of processes and procedures
- questioning of underpinning knowledge and skills.

Guidance information for assessment

Assessment processes and techniques must be culturally appropriate and suitable to the language, literacy and numeracy capacity of the candidate and the competency being assessed. In all cases where practical assessment is used, it should be combined with targeted questioning to assess the underpinning knowledge.

Oral questioning or written assessment may be used to assess underpinning knowledge. In assessment situations where the candidate is offered a choice between oral questioning and written assessment, questions are to be identical.

Supplementary evidence may be obtained from relevant authenticated correspondence from existing supervisors, team leaders or specialist training staff.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements may relate to:

- applicable commonwealth, state and territory legislation which affects work such as:
 - workplace safety
 - environmental issues
 - equal employment opportunity
 - industrial relations
 - anti-discrimination and diversity
- Australian building codes and regulations
- Australian Communications Authority cabling standards
- Australian standards and quality assurance requirements
- award and enterprise agreements
- evidence collection
- freedom of information
- licensing arrangements and certification requirements
- privacy requirements
- relevant industry codes of practice
- telecommunications
- trade practices.

Organisational requirements may relate to:

- access and equity policies, principles and practices
- business and performance plans
- client service standards
- code of conduct, code of ethics
- communication and reporting procedures
- complaint and dispute resolution procedures
- emergency and evacuation procedures
- employer and employee rights and responsibilities
- OHS policies, procedures and programs
- own role, responsibility and authority
- personal and professional development
- privacy and confidentiality of information
- quality assurance and continuous improvement processes and standards
- resource parameters and procedures
- roles, functions and responsibilities of security personnel
- storage and disposal of information.

CCTV equipment and audio systems may include:

- camera brackets and housings eg external, dome, internal, and pole
- cameras eg black and white, and colour
- microphones
- monitors
- recording systems eg DVD, VCR, tape, still, and digital
- speakers.

Assignment instructions may include:

- access to site and specific site requirements
- CCTV equipment and audio system information:
 - features, functions and capabilities
 - installation procedures
 - manufacturer's instructions
 - service and maintenance requirements
 - type
 - warranties and guarantees
- CCTV equipment and system location and positioning information
- equipment, tools and material requirements
- personal protection clothing and equipment requirements
- reporting requirements
- specific client requirements
- timeframes
- work schedules
- work tasks and procedures.

Relevant persons may include:

- CCTV equipment and audio systems manufacturers
- clients
- colleagues
- engineers and technicians
- security consultants
- security personnel
- site managers or project managers
- supervisor.

Tools and equipment may include:

- cable testing equipment
- communications equipment
- communications equipment
- consumable items eg batteries
- drop sheet
- fixing tools
- hand tools
- ladder
- multimeter
- personal protection equipment
- power tools
- soldering iron
- spirit level
- strippers
- welder.

Materials may

- cleaning rags

include:

- electrical components
- fixings
 - conduit
 - girderclips
 - hollow wall anchors
 - loxins
 - parts and components
 - saddles
 - screws
 - silicon
 - wall plugs
- lens cleaner
- solder
- wire and cable.

Risks and hazards may relate to:

- chemical hazards eg battery corrosion
- exposed electrical wiring
- exposure to
 - asbestos
 - building debris
 - dust
 - glass fibre
 - live power
 - natural and other gas build-up
 - noise
 - vermin
 - water

Occupational Health and Safety (OHS) requirements may relate to:

- manual handling
- non-compliance with building codes and regulations.
- emergency procedures
- following confined spaces procedures
- implementation of safety policies and procedures
 - chemicals, gas and vapour
 - isolation procedures
 - monitoring and testing procedures
 - use of personal protection equipment and clothing
 - work clearance procedures
- risk and hazard recognition
- safety training
- working with electrical wiring and cables
- working with tools and equipment.

Personal protection equipment may include:

- breathing apparatus
- fire extinguisher
- first aid kit
- gloves
- head protection
- hearing protection
- knee pads
- masks
- safety boots
- safety glasses.
- warning signs and tapes
- witches hats.

Factors may relate to:

- budget constraints
- codes of practice
- environment eg time, weather
- health, safety and welfare
- non-availability of resources and materials
- regulations and limitations
- risks and hazards
- site conditions
- technology, tools or equipment breakdowns.

Documentation may include:

- adjustments to original installation plan
- CCTV equipment and audio system positioning
- faulty or malfunctioning tools and equipment
- materials used, parts and components replaced
- testing and inspection results
- written and electronic reports.

Unit Sector(s)

Unit sector Security

Competency field

Competency field Technical security

