

-SQA-SCOTTISH QUALIFICATIONS AUTHORITY

HIGHER NATIONAL UNIT SPECIFICATION

GENERAL INFORMATION

-Unit number-	D7YK 04
-Unit title-	COMMISSIONING, MAINTENANCE (SERVICING) AND FAULT LOCATION OF CCTV SYSTEMS
-Superclass category-	XM
-Date of publication- (month and year)	JANUARY 2002
-Originating centre for unit-	SQA

-DESCRIPTION-

GENERAL COMPETENCE FOR UNIT: Developing knowledge and understanding of commissioning, maintenance (servicing) and fault location of CCTV systems in the Security Industry CCTV sector.

OUTCOMES:

1. describe the system tests required to be completed;
2. explain the requirements of the regulatory authorities for a CCTV system;
3. describe basic fault finding procedures with reference to the CCTV Systems within the Security Industry;
4. describe the hand over procedures and customer care associated a CCTV System.

CREDIT VALUE: 1 HN Credit.

ACCESS STATEMENT: Access to this unit is at the discretion of the centre. However, it would be beneficial if the candidate has completed Introduction to the Security Industry CCTV unit and prior knowledge of Electrical/Electronic Principles and Components.

Additional copies of this unit can be obtained from:

The Committee and Administration Unit, SQA, Hanover House, 24 Douglas Street, Glasgow G2 7NQ, (Tel: 0141-242 2168).

At the time of publication the cost is £2.50 per unit (minimum order £5.00).

HIGHER NATIONAL UNIT SPECIFICATION**STATEMENT OF STANDARDS**

Unit number: D7YK 04

Unit title: COMMISSIONING, MAINTENANCE (SERVICING) AND FAULT LOCATION OF CCTV SYSTEMS

Acceptable performance in this Unit will be the satisfactory achievement of the standards set out in this part of the specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

OUTCOME

1. **DESCRIBE THE SYSTEM TESTS REQUIRED TO BE COMPLETED**

PERFORMANCE CRITERIA

- (a) Explain the need for each recorded test or check.
- (b) Describe typical results expected from given tests.

RANGE STATEMENT

Commissioning procedure: visual inspection, operational check to specification, tests and certification to appropriate, British Standards and Codes of Practice; notification of installation to local police and fire authorities.

Maintenance and servicing: requirements as prescribed by appropriate British Standards and Codes of Practice.

EVIDENCE REQUIREMENTS

Written and/or oral evidence of the candidate's ability to explain the features for all performance criteria and the range.

OUTCOME

2. **EXPLAIN THE REQUIREMENTS OF THE REGULATORY AUTHORITIES FOR A CCTV SYSTEM**

PERFORMANCE CRITERIA

- (a) Describe the publications defining the routine maintenance requirements.
- (b) Explain the factors, which determine the periodicity of maintenance.

- (c) Outline the checks to be made during a specified maintenance or servicing visit.
- (d) Tabulate and explain the details to be recorded during a specification, maintenance or servicing visit.

RANGE STATEMENT

Maintenance and servicing requirements as prescribed by appropriate British Standards and Codes of Practice.

EVIDENCE REQUIREMENTS

Written and/or oral responses covering typical checks and tests to be made and information to be recorded.

OUTCOME

3. DESCRIBE BASIC FAULT FINDING

PERFORMANCE CRITERIA

- (a) Interpret circuit and block diagrams.
- (b) Identify and explain the function of components in a circuit.
- (c) Recognise which component if faulty is liable to cause given fault conditions and explain why.
- (d) Explain the effect of on equipment performance of given fault conditions.
- (e) For a given test select suitable equipment, show how the equipment should be connected and interpret results.

RANGE STATEMENT

Logical procedures for the location and rectification of typical faults on cameras, monitors, VCRs, pan and tilt units, telemetry transmitters and receivers, video switchers and wiring. Use of multi-meter, signal/pattern generator, CRO, insulation tester and event recorders.

EVIDENCE REQUIREMENTS

Written and/or oral evidence of the candidate's ability to provide explanations and identifications which satisfy all performance criteria and cover the range.

OUTCOME**4. DESCRIBE THE HAND OVER PROCEDURES AND CUSTOMER CARE ASSOCIATED A CCTV. SYSTEM****PERFORMANCE CRITERIA**

- (a) Identify persons to whom it is appropriate to hand over the system.
- (b) Explain what is required from the users of a CCTV system.
- (c) Describe the procedures required to successfully hand over a CCTV system.
- (d) Describe the need for ongoing care of the CCTV system.

RANGE STATEMENT

Handover procedures: instruct users on use of system, maintenance of the system, and emergency procedures. Maintenance of environment. Handover documentation.

EVIDENCE REQUIREMENTS

Written and/or oral evidence which satisfies all the performance criteria and covers the range.

MERIT STATEMENT: To gain a pass in this unit, a candidate must meet the standards set out in the outcomes, performance criteria, range statements and evidence requirements.

To achieve a merit in this unit, a candidate must demonstrate a superior or more sophisticated level of performance. In this unit this might be shown in the following ways:

- (i) working independently with minimum supervision and able to complete all the relative handover documentation;
- (ii) demonstrating successfully a complete systems handover to the customer.

ASSESSMENT

In order to achieve this unit, candidates are required to present sufficient evidence that they have met all the performance criteria for each outcome within the range specified. Details of these requirements are given for each outcome. The assessment instruments used should follow the general guidance offered by the Scottish Qualifications Authority (SQA) assessment model and an integrative approach to assessment is encouraged. (See references at the end of support notes).

Accurate records should be made of the assessment instruments used showing how evidence is generated for each outcome and giving marking schemes and/or checklists, etc. Records of candidates' achievements should be kept. These records will be available for external verification.

SPECIAL NEEDS

Proposals to modify outcomes, range statements or agreed assessment arrangements should be discussed in the first place with the external verifier.

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HIGHER NATIONAL UNIT SPECIFICATION**SUPPORT NOTES**

Unit number: D7YK 04

Unit title: COMMISSIONING, MAINTENANCE (SERVICING) AND FAULT
LOCATION OF CCTV SYSTEMS

SUPPORT NOTES: This part of the unit specification is offered as guidance. None of the sections of the support notes is mandatory.

Outcome 1

Candidates should have an understanding of the requirements of tests required for commissioning in line with British Standards and Industry Codes of Practice (NACOSS, BSIA, SSAIB)

Outcome 2

Candidates should have an understanding of the requirements of routine maintenance in line with British Standards and Industry Codes of Practice (NACOSS, BSIA, SSAIB)

Outcome 3

Here candidates must be able to interpret circuit diagrams for faultfinding purposes. Candidates must show competence in the selection and use of test equipment (Digital Multi-Meters and Oscilloscope, Signal Generators) for faultfinding purposes.

Outcome 4

Candidates should have an understanding of the requirements of a system handover in line with British Standards and Industry Codes of Practice (NACOSS, BSIA, SSAIB). Candidates should be aware of the customer's requirements under the Data Protection Act 1998.

NOTIONAL DESIGN LENGTH: SQA allocates a notional design length to a unit on the basis of time estimated for achievement of the stated standards by a candidate whose starting point is as described in the access statement. The notional design length for this unit is 40 hours. The use of notional design length for programme design and timetabling is advisory only.

PURPOSE SQA publishes summaries of HN units for easy reference, publicity purposes, centre handbooks, etc. The summary statement for this unit is as follows:

On completion of this module, the candidate will have a good knowledge of the Security Industry CCTV Sector.

RECOGNITION This unit has been developed in conjunction with SQA and the unit has the full support of the Security Industry, as forming part of the underpinning knowledge component for the Security Industry PDA in CCTV. Many SQA HN units are recognised for entry/recruitment purposes. For up-to-date information see the SQA guide 'Recognised Groupings of Higher National.

REFERENCES

1. Guide to unit writing, SQA, 1993 (Code: A018).
2. Guide to assessment, SQA, 1993 (Code: B005).
3. Guide to certification, SQA, 1996 (Code: F025).
4. Notes for unit writers, SQA, 1995 (Code: A041).

For details of other SQA publications, please contact staff in the Sales and Despatch section (Tel: 0141-242 2168) who can supply you with a copy of the publication list (Code: X037).

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