

WorldSkills Fire & Security

CCTV Specification



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Introduction

Client	Site
Specification Number	1001-19
Issue Number	1
Dated	

This system is to be installed to conform to the following British and European Standards and Security Industry codes of practice:-

The following specification is for a CCTV system intended to comply with National Inspectorate code of practice NCP 104 (Design, Installation and maintenance of CCTV systems) Including the requirements of BS EN 62676-4 (Requirements for the selection, planning, installation, commissioning, maintaining and testing of CCTV systems) also making reference to the previous standard BS EN 50132-7

Scope of Work

This system is comprised of two IP cameras connected to a four channel NVR to be located on the desk provided at the front of the booth. There are two network points provided and connected for you. This system is to be programmed with the IP address provided. You will need to use the laptop to program the system correctly.

The System Layout and Orientation

The position of all the detection devices and CIE are taken from the observer standing outside facing the entrance to the booth as detailed in this specification and in conjunction with the installation drawings SEC-001 (See Appendix 1- Installation Drawings).

Health and Safety

The work undertaken by the service technicians must be carried out in accordance with the Health & Safety at Work Regulations 1974. Technician's should be wearing the correct the PPE, maintain a safe working environment, ensuring that the work space is clear of hazards and any tools are stored in a safe place when the workspace is unoccupied e.g. tea & lunch breaks.

Any specialised tools / equipment should have a valid calibration certificate / label.

Service technicians would be expected to wear the following equipment:

- Company Uniform
- High Vis Vest
- Safety Glass
- Safety Shoes
- Gloves

Installation

The installation of the CCTV cameras shall be in accordance with BS7671 18th Edition. The diameter of the cable has been confirmed at 6mm and a suitable length has been supplied for the installation of the system.

Power should be made available via two double sockets for the NVR, Monitor and Laptop to plug into. This will be pre-installed for the purpose of the competition.

Sufficient cable will be issued to each team for the purpose of the installation, additional cabling will be available, however marks will be deducted if additional information is required to complete the installation.

The installation of the cable should include:

Location	Requirements
Cabling	RJ45 cable to be installed for 2 x CCTV Camera RJ45 to be made to connect the laptop to the NVR for programming
Mains	Two double sockets will be made available for the NVR, Monitor and Laptop to use.
Camera 1	One static Hikvision internal IP camera fitted on the right-hand side of the booth. This camera must be focused on the shock detector on the left-hand wall of the booth. This camera's purpose is to identify anyone pressing activating the shock detector. This camera must be named as RIGHT-HAND SIDE DOME
Camera 2	One static Hikvision Fixed lens camera to be fitted on the left-hand side of the booth. This camera must be focused on the CCTV control equipment for the purpose of being able to identify anyone using the NVR. This camera must be named as LEFT-HAND SIDE BULLET.

Camera 3	One static Hikvision Analogue camera with a fixed lens will be preinstalled, will be required to be converted to IP using a convertor, so that it works with the NVR. This camera must be named as ANALOGUE CAMERA.
NVR	One Hikvision DS-7608NI-K2/8P 4K capable 8 channel NVR with 8 port POE, to be installed on the desk provided at the right-hand side of the booth. 8/16 Channel 1U 8PoE 4K & H.265 Pro Network Video Recorder
Monitor	One Hikvision DS-D5022FC 21-Inch Monitor to be fitted adjacent the control equipment
Convertor	Analogue to IP convertor
POE Network Switch	POE Network Switch

Programming

The following programming information should be used for the system:

Storage Info	All footage must be automatically deleted after 31 days.
Date & Time	Accurate at time of assessment
Recording Type	Between hours of 9am and 5pm the system must continuously record but between 17:01 and 08:59 the system must be set up for motion detection.
Recording FPS	The frame rate for continuous record must be set at 3FPS. The frame rate for motion detection must be set for 15FPS.
IP Addresses	<p>The cameras must be set up for the IP addresses listed in the overlay to this specification.</p> <ul style="list-style-type: none"> • IP Address Camera 1 • 10.1.1.101 • IP Address Camera 2 • 10.1.1.102 • IP Address Camera 3 • 10.1.1.103
Log in NVR	<p>NVR Log in User Name : Admin Password: Admin!1234</p> <p>This information is not to be changed, use this log in to create the user in your specification</p> <p>Create a new user account:</p> <p style="padding-left: 40px;">User name - competition Password – Competition!1234</p>
	All camera passwords are Competition1

Handover of the System

The technician will be responsible for handing over the system to the adjudicator, the handover should demonstrate the control functions of the NVR and cameras, functional testing of the system, instruction how to review information displayed on the screen, access recording, add new users, change passwords, alter the screen resolution and any other technical questions.

Completion of Documentation

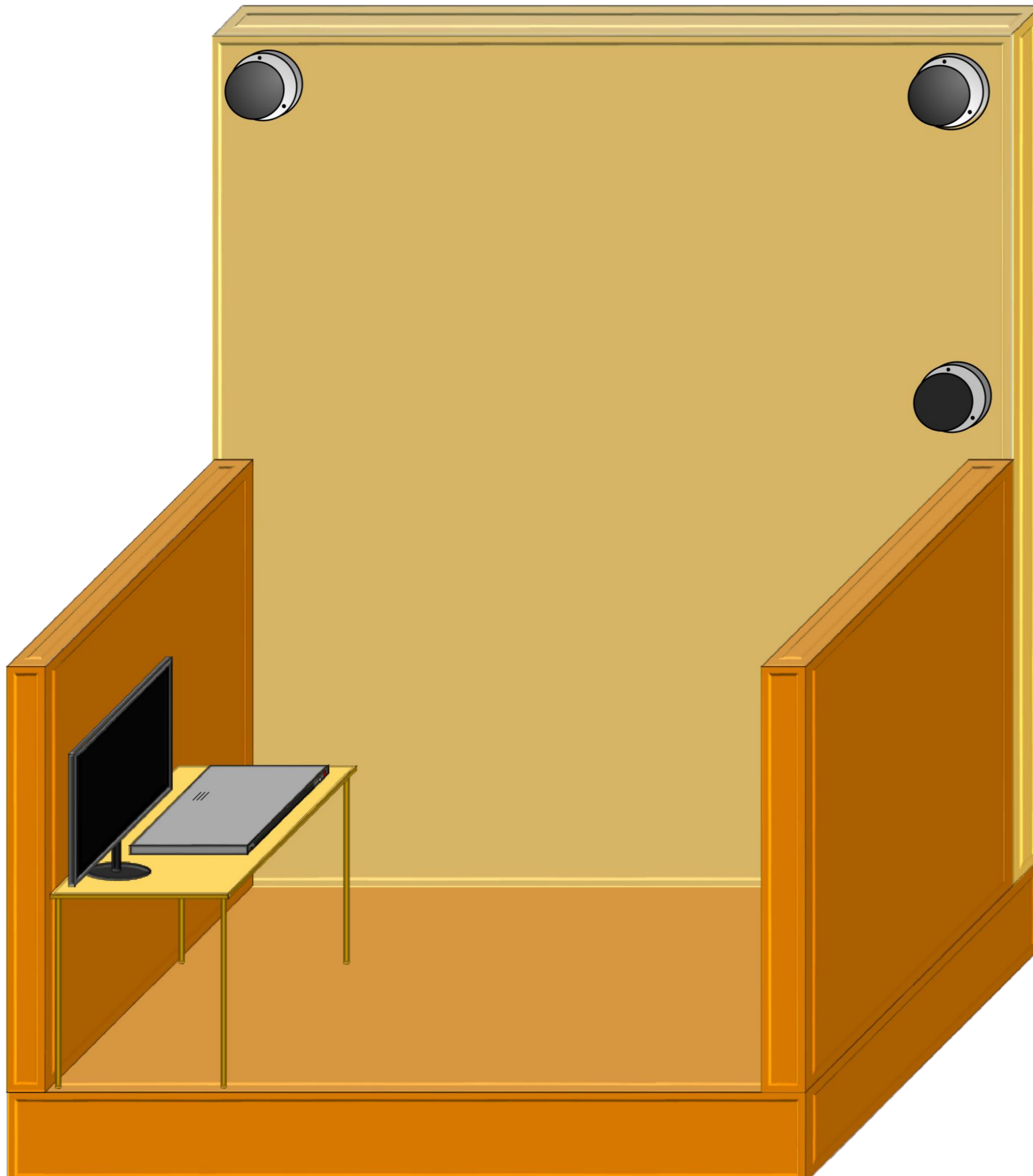
On completion of the competition the commissioning technicians should complete all supporting documentation included within the specification and provide a demonstration / handover to the client.

- CCTV Commissioning & Handover Checklist
- CCTV Acceptance Certificate

A copy of all required certificates can be found in Appendix 2- Commissioning / Testing Certificates.

Appendix 1

Installation Drawings



KEY



Surveillance NVR



HD Surveillance Monitor



IP Surveillance Camera

World Skills – CCTV Installation



Appendix 2

Commissioning/Testing Certificates

COMMISSIONING CHECKLIST FOR CCTV SYSTEMS

Company Name:

Company Address:

Customer:

Site:

Site ref:

Date:

CHECKS TO BE MADE	CONFIRM CHECK (✓)	COMMENTS
Check the installation is in strict accordance with the agreed specification (*and/or Customer Operational Requirement document) and is to a high standard of workmanship.		
Check that the system complies with current industry standards, i.e. BS EN 50132-7 or BS EN 62676-4, inspectorates' code of practice. Note: The agreed specification should state the standards to which it is installed.		
*Check the installed system meets the requirements in the agreed system test plan (where used/agreed with the customer).		
Check all wiring is correctly terminated and that cables are installed as recommended by the equipment manufacturer(s).		
Check the supply voltage is correct to all parts of the system. Record the voltage of all Extra Low voltage equipment. i.e. Cameras, PSUs etc.		
Check the system continues to operate correctly when the mains supply is disconnected (if stand-by power supply is specified / used).		
Check the correct operation of all monitoring, multiplexing, switching & recording equipment (including time synchronisation) meets the agreed specification, including image quality & image export requirements.		

Check privacy masking zones are set up as agreed / where appropriate, and in accordance with the agreed specification.		
Check ancillary equipment such as lighting & movement detectors are functioning correctly (if applicable).		
Check all interfaces to alarms trigger the correct camera, preset and recording modes as applicable.		
Check appropriate warning notices have been provided and affixed as necessary.		
For remote monitored CCTV systems, check with the Remote centre for image quality, recording, receipt of alarms etc. Note: For detector activated CCTV systems, BS8418 applies.		
Comments/outstanding works:		

* where applicable

Engineer Name:

Engineer signature:

Date:

i. Check warning labels in place for cameras subject to sudden movement / mains supply warnings										
Comments/outstanding works:										

Engineer Name:

Engineer signature:

Date:

CUSTOMER CCTV HANDOVER & ACCEPTANCE CERTIFICATE

Company Name:

Company Address:

Customer:

Site:

Site ref:

Date:

CHECKS TO BE MADE	CONFIRM CHECK (✓)	COMMENTS
The system has been installed in accordance with the agreed specification (*and Customer Operational Requirement document).		
The designated user(s) has received a demonstration and instruction on the correct operation of the system including any adjustable features.		
The correct documentation has been provided to enable the system to be operated correctly.		
*Recordings made during the demonstration have been shown to the user and are in accordance with the agreed test plan.		
A system logbook has been provided and an explanation of how to record / report events given.		
Contact details for summoning assistance have been provided in the logbook and their use explained to the user.		
For remote monitored CCTV systems, procedures for summoning support and any agreed requirements have been explained to the user.		

Any security code numbers, keys and software license details have been issued and explained to the user.		
Privacy masking zones have been set up as agreed and information on compliance with the Data Protection Act has been provided.		
Comments/outstanding work.		

* where applicable

Engineer Name:

Engineer signature:

Date:

I confirm that the CCTV system has been installed to my satisfaction, and that the premises have been left in a tidy condition and that I have received:

1. Training & full written instruction in the operation of the system
2. Demonstration showing compliance to the agreed specification (and test plan where provided)
3. A CCTV system logbook duly explained, completed with contact details for summoning support

Customer Name:

Customer signature:

Date:

CCTV Details

Premises
Company Name:
Premise Type:
Address:
Town:
Postcode:
Tel Number:
Key-holder(s):
Installer:
Email:
Camera & System Details (include Sketch Plan showing positions and angles)
Internal Cameras:
External Cameras:
Model Number / Name:
Make / Manufacturer:
Other System Details:
Any Other Comments:
Hard Drive Capacity (equivalent hours approx.):
Retention Period:
Quality: (Recorded resolution)
Playback Method:
Camera View:
Grid References:
For Police Use Only
BCU:
NPU: