

Level 2 Audio/video installation for the digital home technology integrator (7575-006)

Assignment guide for Candidates Assignment A

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Level 2 Audio/video installation for the digital home technology integrator (7575-006)

Assignment A

Introduction – Information for Candidates

About this document

This assignment comprises all of the assessment for Level 2 Audio/video installation for the digital home technology integrator (7575-006)

Health and safety

You are asked to consider the importance of safe working practices at all times.

You are responsible for maintaining the safety of others as well as your own. Anyone behaving in an unsafe fashion will be stopped and a suitable warning given. You will not be allowed to continue with an assignment if you compromise any of the Health and Safety requirements. This may seem rather strict but, apart from the potentially unpleasant consequences, you must acquire the habits required for the workplace.

Time allowance

The recommended time allowance for this assignment is **three hours**.

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Candidate Instructions

Time allowance: 3 hours

Assignment set up:

This assignment is made up of **two** tasks

Scenario

ABCInstallTV is a company that specialises in planning and installing multi room audio and video solutions. As part of the process, the company offers customers a free site visit to allow a technician to discuss their requirements.

Following the site visit, your role is to prepare a plan and documentation detailing the layout of the connecting transmission media and the specifications of the devices that will be installed.

When the customer has agreed the design and specifications that have been identified, you will install the chosen products.

Read all of the instructions carefully and complete the tasks in the order given.

The customer has a standalone PC in the dining room which is currently connected to the Internet via a wired connection to a cable modem. The customer has a laptop that can be located anywhere in the home.

During the discussion with the customer the following requirements were identified:

- The customer would like a secure wireless network to be installed and configured.
- The customer would like a new HDTV for the lounge. This HDTV must be able to receive video streamed across the network.
- The customer would like the HDTV and Laptop connected wirelessly to the new network and the standalone PC to use Ethernet for the network connection.
- The customer would like a HD video player and an external speaker system to be installed onto the new HDTV.
- The existing PC is to be used to download music and video from the Internet. The customer would then like to store these programs on a network storage device so they can then be accessible by the rest of the family using the laptop or the HDTV.
- The customer would like to be able to stream photos stored on the laptop to the HDTV.
- The customer would like to upgrade the dining room PC so it can be used for VoIP communications.

Task A

1	<p>Using the Answer sheet and any technical specifications provided by the assessor, produce documentation that details the:</p> <ul style="list-style-type: none"> • devices that are required to meet the customer's requirements. • main technical specifications of the devices that you are going to install, including tuner types. • sources used to find the specifications • transmission media to be used and the associated characteristics, including approximate cable lengths. • software and device drivers required • locations of the devices that you have selected.
2	<p>Using the room diagram provided by the assessor, detail the following:</p> <ul style="list-style-type: none"> • the location of devices you are going to install • the appropriate layout of any transmission media that you are going to use.
3	<p>Please use the Answer Sheet provided to complete Task A3</p> <p>What is the frequency range and maximum network speed of the following IEEE 802.11 standards?</p> <ul style="list-style-type: none"> • 11a • 11g • 11n
4	<p>Please use the Answer Sheet provided to complete Task A4</p> <p>State two devices which can cause interference with a 2.4GHz wireless network.</p>
5	<p>Please use the Answer Sheet provided to complete Task A5</p> <p>Identify one type of connector used to carry uncompressed digital streams and works in conjunction with devices that can use Digital Rights Management (DRM).</p>
6	<p>Please use the Answer Sheet provided to complete Task A6</p> <p>Identify two types of software that can be used to protect a PC which is connected to the internet.</p>
7	<p>Please use the Answer Sheet provided to complete Task A7</p> <p>Identify the function of a codec.</p>
8	<p>Please use the Answer Sheet provided to complete Task A8</p> <p>Identify the maximum segment length for a Cat5e cable.</p>
9	<p>Please use the Answer Sheet provided to complete Task A9</p> <p>Identify three types of transmission media that can be used to carry multimedia data around the home.</p>
10	<p>Please use the Answer Sheet provided to complete Task A10</p> <p>Give two reasons why it is important to plan and document customer installations.</p>

11	Please use the Answer Sheet provided to complete Task A11 Briefly explain the difference between local amplification and centralised amplification.
12	Please use the Answer Sheet provided to complete Task A12 Identify one device that can be used to split a single Ethernet cable connection between two or more PCs.

Task B

In this part of the task you are required to connect and configure the devices to meet the customer's requirements.	
1	<ul style="list-style-type: none"> • Install and configure a router to create a secure wireless network. • Install, configure and calibrate the HDTV. • Connect the HDTV to the wireless network. • Connect the Laptop to the wireless network. • Connect the PC to the router <p>Demonstrate to the assessor that everything functions correctly.</p>
2	Please use the Answer Sheet provided to complete Task B2 Produce documentation that details the IP addresses and subnet masks to be used by each device
3	Install and configure a network or media storage device.
4	Please use the Answer Sheet provided to complete Task B4 Identify the current version of firmware/software of the network storage device and go to the manufacturer's website to ensure that this is the most up-to-date version.
5	Use command line or terminal utilities on the standalone PC or the laptop PC to confirm the network or media storage device is connected to the network. Produce a screen shot showing that you have successfully confirmed the connection and name it Printout 1.
6	Install, configure and calibrate a HD video player and an external speaker system onto the HDTV and test that it functions correctly. Demonstrate to the assessor that the system is installed and functions correctly.
7	Onto the laptop install and configure software required to allow the streaming of photos across the network to the HDTV.
8	Use the HDTV to remotely access the shared contents of the laptop. Demonstrate to the assessor that you have accessed the shared contents of the laptop on the HDTV.

9	<p>Onto the PC install the hardware and software required to allow VoIP communications.</p> <p>Demonstrate to the assessor that the system is installed and functions correctly.</p>
10	<p>Please use the Answer Sheet provided to complete Task B10</p> <p>After completion of the installation, the customers' PC loses its network connectivity. Using the appropriate diagnostic tools, including a cable tester, troubleshoot the network connection and identify the fault.</p> <p>Record the results on your answer sheet.</p>

When you have finished working:

Sign each document above your name and label all removable storage media with your name.

Hand all paperwork and removable storage media to your assessor.

If the assignment is taken over more than one period, all paperwork and removable media must be returned to the test supervisor at the end of each sitting.

End of assignment

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