OCR
RECOGNISING ACHIEVEMENT

Digital Audio Technology

Guidance to centres and assessment personnel

September 2007

Issue 1

L1001 0709 Oxford Cambridge and RSA Examinations

Digital audio technology

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The following guidelines have been compiled to assist OCR centres and assessment personnel in the creation and playback of digital audio files. They outline hardware and software requirements and provide some basic principles in how to go about using different technologies to create and access digital audio files. Please be aware that they are general guidelines and not specific to particular makes and models of equipment or brands of software. The guide should be used in conjunction with local technical support.

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When is digital audio technology appropriate?
For assessment purposes there are a number of occasions when digital audio may be used:

1 The playback of pre-recorded audio at a centre to candidates under exam conditions where the candidate has no control over the playback, for example in a language listening exam.

2 The playback of pre-recorded audio at a centre to candidates under exam conditions where each candidate has control over his/her own playback, for example in an audio transcription exam.

3 The recording of candidate responses under exam conditions, for example in a language speaking exam, within controlled assessments, or for coursework/portfolio evidence.

4 The playback of candidate exam responses/coursework/controlled assessment evidence by assessor for marking/moderation purposes.

Structure of this document
The document is structured so that you should only need to refer to the section that applies to you and the particular activity that you are aiming to carry out. For example, if you are a centre, and you wish to record a candidate's response in a language oral exam, you will go to section 3 on page 12.

The following table should help to guide you through and direct you to the appropriate location within the document.

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Who are you?	What do you want to do?			Go to:
			To candidates under exam conditions where each candidate has control over his/her own playback	Section 2, Page 9
	Do you want to record candidate responses?			Section 3, Page 11
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1. Playing pre-recorded audio to candidates under exam conditions where the candidate has no control over the playback

Applicable to: centres, visiting examiners

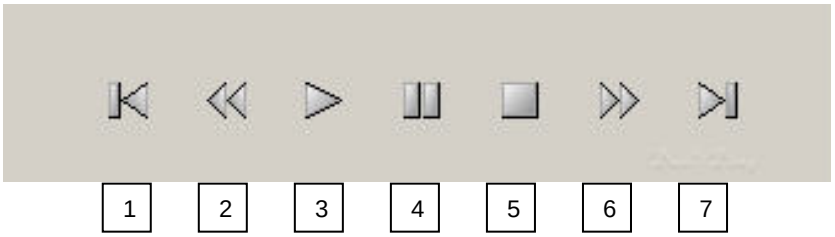
Pre-recorded listening materials will be provided by OCR to centres as .mp3 files on CD. In order to play these CDs, you will need the following:

PC/laptop	Sound enabled, with CD drive (CD-R/CD-RW functionality), and speakers. Plus, appropriate software; either software that is integrated with your existing PC/laptop package, for example, Windows Media Player; or, there are plenty of freely available (no cost) packages downloadable from the internet, for example, RealPlayer or WinAmp.
OR	
Audio player	Capable of playing CDs containing .mp3 files. On CD players, look out for CD-R/CD-RW playback functionality in the specification, which means that the player will playback CDs containing .mp3 files. No additional software is required.

Candidates will not usually need to use headphones under these conditions as they are not controlling the playback of the materials themselves.

Playing the CD (PC/laptop)

Insert the CD into the CD Drive (D: Drive) of your PC/laptop. Upon insertion, wait a few moments and an index screen will appear which will list the files contained on the CD. Select the relevant file according to subject and exam/test which will be indicated by its title. The sound file should automatically start playing once selected. Control over the playback will be via the buttons that appear on the screen similar to the following:



1 Skip to beginning

2 Rewind

3 Play

4 Pause

5 Stop

6 Fast forward

7 Skip to end

Playing the CD (alternative audio player)
Insert the CD into the CD player and navigate through to the relevant file using the CD player controls on the machine which will be similar to the ones shown in the image above.

2. Playing pre-recorded audio to candidates under exam conditions where the candidate has control over his/her own playback

Applicable to: centres, visiting examiners

Pre-recorded listening materials will be provided by OCR to centres as .mp3 files on CD. In order to play these CDs, you will need the following:

PC/laptop	One per candidate, sound enabled, with CD drive (CD-R/CD-RW functionality), speakers/headphones. Plus, appropriate software; either software that is integrated with your existing PC/laptop package, for example, Windows Media Player; or, there are plenty of freely available (no cost) packages downloadable from the internet, for example, RealPlayer or WinAmp.

OR

Audio player	One per candidate, capable of playing CDs containing .mp3 files. No additional software is required.

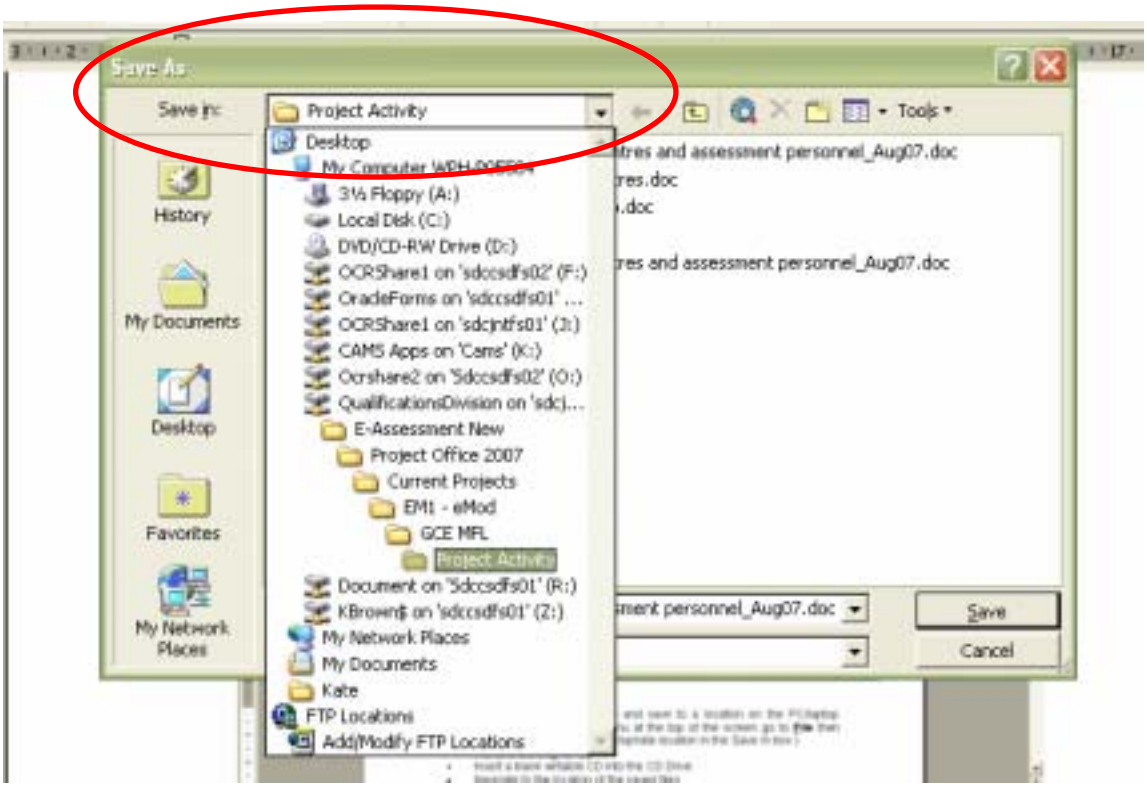
NB: Audio transcription exams/tests may also require candidates to use a foot pedal to control the playback of listening materials while they are typing. There are several packages available (an internet search on 'audio transcription equipment' will present a list) which will provide software, headsets and foot pedals. Before making a decision to purchase, you will need to check that the PCs/laptops you are planning to install the equipment onto meet the minimum requirements stated by the product provider and that the software is able to deal with .mp3 files.

NB: Sufficient copies of the listening materials must be made available for the candidates sitting the exam/test. Copies of the disk may be made, or files may be copied from the disk and distributed digitally within the centre; for example, loaded onto a network, individual PCs/Laptops, or .mp3 players.

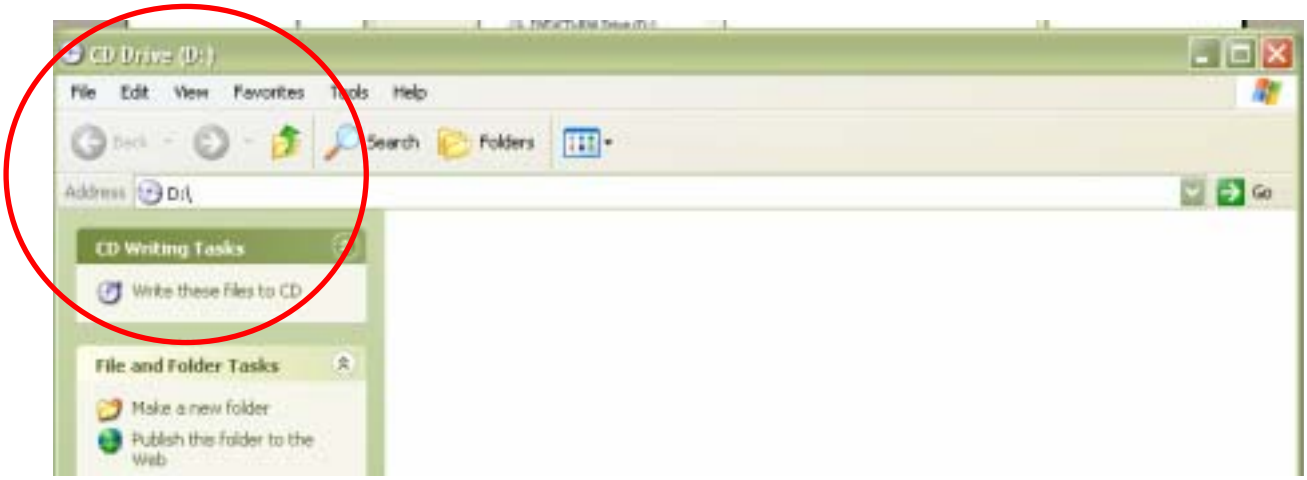
To copy the files from the disk you will need to do the following:

- Insert the OCR CD into the CD Drive (D: Drive) of your PC/laptop
- Upon insertion, wait a few moments and an index screen will appear which will list the files contained on the CD
- Select the files you require and save to a location on the PC/laptop: highlight the file, in the menu at the top of the screen go to **File** then

Save As and choose an appropriate location in the **Save in** box using the drop down arrow:



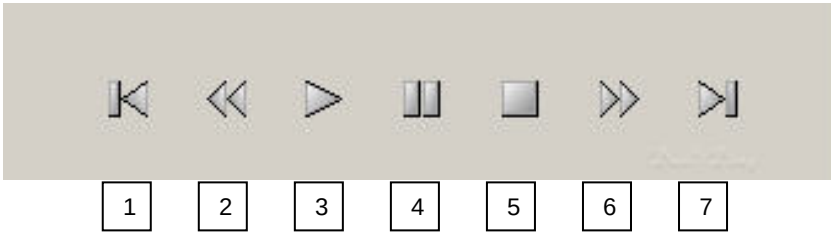
- Remove the original CD
- Insert a blank writable CD into the CD Drive and select the option to **Open writable CD folder using Windows Explorer**
- Through the start menu, navigate to the location of the audio files which have been saved onto your PC/laptop
- Select the files you require. Copy and paste them into the CD Drive (D: Drive) area and select the option to **Write these files to CD**.



- Follow the Wizard clicking **Next** where prompted until complete.

Any copies of CDs or files must be shared in a controlled manner. Candidates must not be able to access them in order to make their own copies or to listen to them outside of the exam/test session.

Playing the CD (PC/laptop)
Insert the CD into the CD Drive (D: Drive) of your PC/laptop. Upon insertion, wait a few moments and an index screen will appear which will list the files contained on the CD. Select the relevant file according to subject and exam/test which will be indicated by its title. The sound file should automatically start playing once selected. Control over the playback will be via the buttons that appear on the screen similar to the following:



1 Skip to beginning

2 Rewind

3 Play

4 Pause

5 Stop

6 Fast forward

7 Skip to end

Playing the CD (alternative audio player)
Insert the CD into the CD player and navigate through to the relevant file using the CD player controls on the machine which will be similar to the ones shown in the image above.

3. Recording audio from candidates under exam conditions, within controlled assessments, or for coursework/portfolio evidence

Applicable to: centres, visiting examiners

What equipment (hardware) will I need?

PC/laptop	Sound enabled, with CD drive (CD-R/CD-RW functionality), microphone input or USB port, and internet connection
AND	
Microphone	Plugged directly into the PC/laptop, either microphone input or USB
OR	
Portable digital device (e.g. MP3 player, mobile phone, PDA, digital voice recorder)	Into which you can record the audio and connect and upload the files to the PC/laptop later

What software will I need?

For use with microphone	There are plenty of freely available (no cost) packages downloadable from the internet (a search on audio recording software will bring up a list), for example, Audacity, Csound, Kristal, Quartz. You will need administration rights on each PC/laptop that you wish to download any free audio recording software to. Your local IT technician will be able to advise. Installation of software will usually be via a Wizard which will require you to click through at each prompt. Alternatively there is usually software integrated within standard PC packages, for example, Windows Sound Recorder. We would recommend that prior to using any software such as this, you make sure it allows you to record for a long enough period of time. Windows Sound Recorder, for example, defaults to 60 seconds of recording time.

For use with portable device	No additional software is required to record the audio files. You will require software that enables the transfer of the files from the device to a PC/laptop. This software will be included on a CD with the device itself and requires installation onto the PC/laptop.

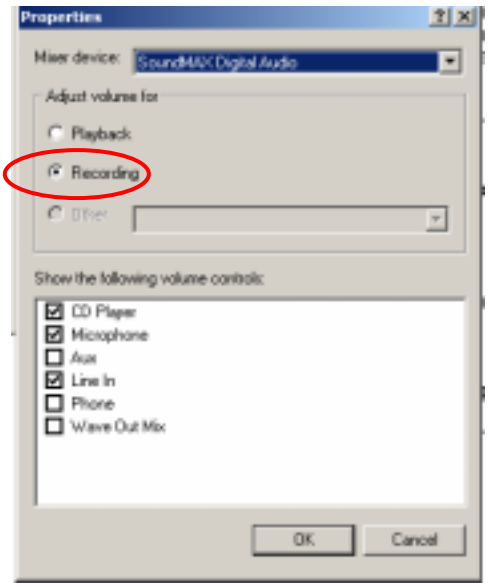
NB: If you are a visiting examiner and the marking (listening back to) is to be done at a different time away from centre premises, you will also need to ensure that you are able to remove the files from any centre equipment they may have been created on.

Recording audio from candidates using a PC/laptop and microphone
You must first of all ensure that you have suitable hardware with appropriate software installed (as per the notes above). When your equipment is ready with software installed, follow the steps below:

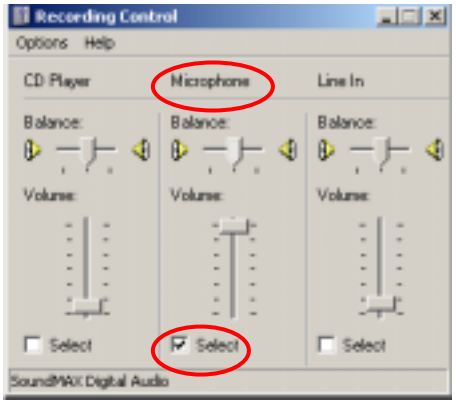
1. Plug your microphone into the PC/laptop
either via an available USB port, or microphone input, depending on the type of microphone you are using. The microphone input will be indicated by a picture of a microphone. Both ports are usually found to the rear of the PC/laptop.

2. Ensure the volume settings are all correct
Go to **Start** > **Programs** > **Accessories** > **Entertainment** > **Volume Control.**

Within the dialogue box that appears, go to **Options** > **Properties** and select the **Recording** button. Click **OK**.



On the next screen that appears, make sure you put a tick in the **Select** box in the **Microphone** section.



3. Launch your audio recording software through the Start menu and record according to the instructions for that particular package.

4. Ensure that you record and save each candidate's file individually. This is important for the purposes of marking/moderation.

5. Ensure that you name each file in the following way: centre number_candidate number_unit code, for example: 24895_6514_B496. This is important for the purposes of identifying candidates for marking/moderation.

6. Save the files as .mp3 as these use less space and are more easily accessible for the purposes of moderation/marking.

You are advised to practise recording and saving files before a live assessment and to check that the files have recorded correctly. OCR cannot bear responsibility for malfunction of software or hardware, or user error during the recording process.

Recording audio from candidates using a portable recording device

There are various different portable devices which enable the recording of digital audio files. These include .mp3 players, digital voice recorders, and some PDAs (Personal Digital Assistants) and mobile phones. Apart from price, one of the main criteria to inform your decision should be memory space: the greater the memory, the greater the amount and length of files you will be able to store before having to transfer to PC/laptop.

In the recording of sound and saving and transferring of files, there are some general steps (below) which will be true of any portable device, but you will need to follow the specific instructions of the type, make and model of your device, to be able to record the sound.

1. Record the audio

according to the instructions provided by the manufacturer of the device. These will be specific to the make and model of you have purchased.

2. Ensure that you record and save each candidate's file individually. This is important for the purposes of marking/moderation.

3. Ensure that all software provided with the device has been installed (this will be on a CD) onto the PC/laptop(s) that you will be using (NB: you may need administrator rights to install software on a networked PC/laptop). This software will enable you to transfer files from the player to the PC/laptop.

4. Transfer the completed files from the device to the PC/laptop by plugging the device into the PC/laptop using the cable provided (usually via a USB port) and launching the software from the Start menu. Follow the instructions provided with your player.

5. Ensure that you name each file in the following way: centre number_candidate number_unit code, for example: 24895_6514_B496. This is important for the purposes of identifying candidates for marking/moderation.

6. Save the files as .mp3 as these use less space and are more easily accessible for the purposes of moderation/marking.

4. Playing back audio created by candidates

Applicable to: all assessment personnel and centres (tutors marking coursework)

What equipment (hardware and software) will I need?

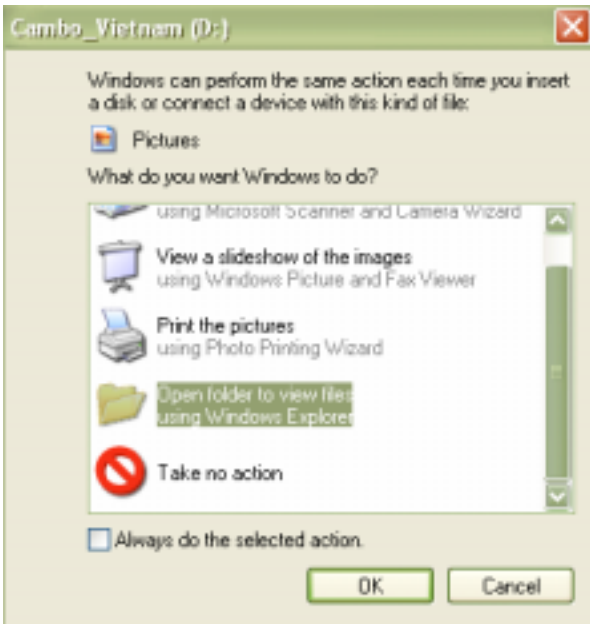
PC/laptop	Sound enabled, with CD drive (CD-R/CD-RW functionality), and speakers. Plus, appropriate software; either software that is integrated with your existing PC/laptop package, for example, Windows Media Player; or, there are plenty of freely available (no cost) packages downloadable from the internet, for example, RealPlayer or WinAmp.

OR

Audio player	Capable of playing CDs containing .mp3 files. No additional software is required.

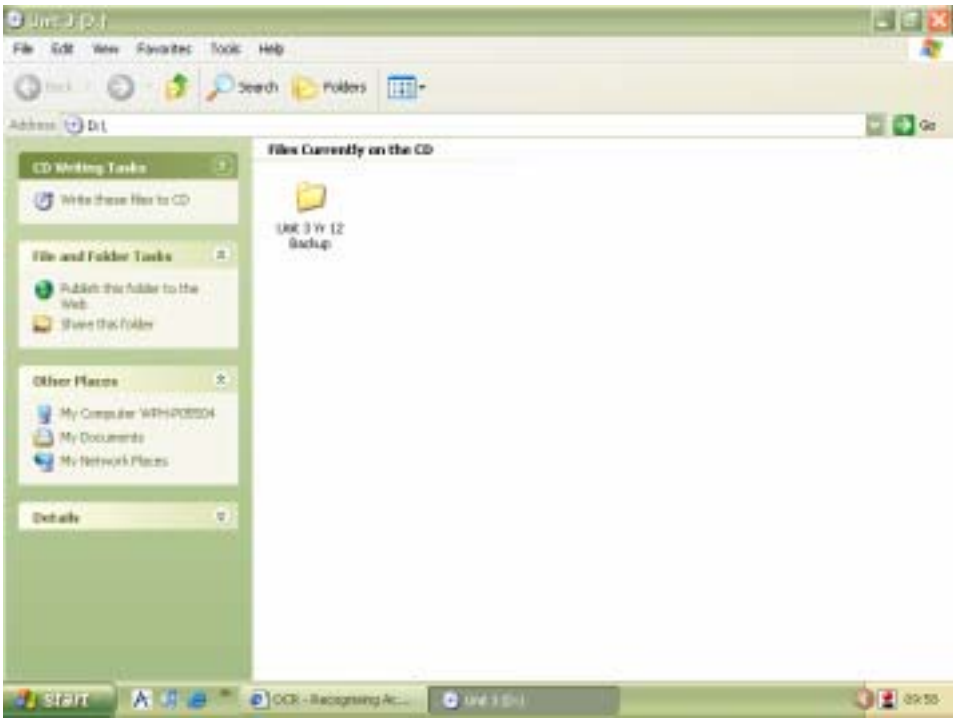
Playing back audio provided on CD (PC/laptop)

Where candidate audio responses/evidence are provided on CD, insert the CD into the CD Drive (D: Drive) of your PC/laptop. Upon insertion, wait a few moments and the following screen will appear:



Select the option highlighted: **Open folder to view files using Windows Explorer**. This will take into Windows Explorer and display all of the candidate files for you to listen to as required.

Alternatively, the following type of screen will appear which takes you directly to the candidate files for you to click into and listen to as required.



Centres are requested to name their candidate files suitably so that they are easily identifiable for assessment purposes. The sound file should automatically start playing once selected (by double-clicking). Control over the playback will be via the buttons that appear on the screen similar to the following:

1 Skip to beginning

2 Rewind

3 Play

4 Pause

5 Stop

6 Fast forward

7 Skip to end

Playing back audio provided on CD (alternative audio player)
Insert the CD into the CD player and navigate through to the relevant file using the CD player controls on the machine which will be similar to the ones shown in the image above.

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