Pre-Recorded Submissions

Created by the Recording & AV Department, April 2020

This document contains guidance for music students on how to home-record and submit recordings of their Guildhall assessments.

After you have read this document, if you have any further questions,
do not hesitate to contact us at av@gsmd.ac.uk

Contents

Introduction

Your examination brief will let you know whether you need to make a video recording, or an audio-only recording.

The first important thing to note is that the technical quality of the recording **will not in any way** affect the grade you receive. A good performance captured on an iPhone will receive a better mark than a poor performance captured on studio-grade microphones and equipment.

Having said that, there are some simple things you can do to improve the quality of your recording, and the aim of this document is to guide you in making the best recordings possible with the equipment you have.

In general, we are recommending that a good way for students to submit good quality recordings is by using the built-in mics and camera of their **smartphones** because:

- the recording quality on most modern smartphones is generally very good.
- it is easy to make simple video recordings using built-in apps.
- they do not generate fan noise.
- they can be placed easily on music stands, etc.

If you happen to have additional equipment, such as external mics, audio interfaces, computer software, etc, and the expertise to create good results with them, you are more than welcome to use them if you wish.

However, do bear in mind that increasing the technical complexity of your recording setup increases the potential for additional stress/distraction/problems on the day, and in general we would recommend keeping things simple.

Whichever approach you take, our biggest piece of advice on getting this right is to **make plenty of test recordings in advance of your exam day**.

Not only is recording yourself a great practice tool in in itself, it will help you to be confident and calm about the whole technical process, so you can focus on your performance, which is the most important thing.

Video Recordings

If your assessment requires a video submission (eg most classical music exams), the advice in this section is to help you make the best quality recordings you can with the equipment you have.

Using Smartphones/Tablets

If you have decided to use a smartphone (or tablet) to make your video recording, read this section for advice on how to set them up.

Camera

Use your phone's **front camera**, so you can see the phone screen from your performance position for reassurance that it is still recording.

You may record in landscape or portrait (see chapter on Room Setup for further advice). If recording in portrait, orient your device upside down so the mic (which is situated on the bottom of most smartphones/tablets) is not covered.

Audio

Built-in mics

The built-in mics on most modern smartphones are generally capable of making good quality recordings, and we recommend this as the simplest solution for most people.

External mics

Using external mics can give higher-quality audio when set up correctly, but adds complexity to your setup.

If you want to use external mics with your smartphone, you can use a USB mic, such as the **Rode NT-USB Mini**, or regular mics into a **class-compliant** USB audio interface, such as the **Focusrite Scarlett** range of audio interfaces. Using USB devices with your smartphone usually requires an adaptor (see your smartphone manual for details).

In specific cases, the School will have provided you with a Røde NT-USB Mini mic - please see the chapter in this document's appendix on how to set this up.

Also, be aware that when using external mics, you may need to set the gain manually - to set this, you will need to make multiple test recordings of the loudest passage in your performance, adjusting the gain each time to ensure it is metering as **loud as possible without distorting**.

Power

We highly recommend powering your phone from its charger so that it does not run out of battery during your recording.

If you are recording in portrait orientation, this is another reason to orient your phone upside down – to allow clear access to the charging port from above.

Storage

As a guide, a 40 minute iPhone recording at 720p 30fps takes 1.6 GB space, so you will need to make sure you will have enough storage on your phone – you may need to delete content (eg apps, videos, photos, music, etc) to clear enough space. To check how much storage you have on your phone:

iOS

Settings → General → About → Available

Alternatively, you can go to Settings, scroll down to reveal the search box, type 'Storage', and choose the result called **Storage**.

Android

Settings → Storage

If this is not correct for your particular Android phone, try searching for 'Storage' inside your Settings app.

Software

If you are using a smartphone or tablet, we recommend recording to your built-in video recording software – normally called the **Camera** app.

Settings

We recommend the following settings to avoid the recording being interrupted, or you being disturbed by phone activity.

We also recommend recording at a resolution of **1280 x 720**, as the videos will be converted to this resolution on upload to Stream anyway. Shooting at a higher resolution will result in unnecessarily high file sizes that could give problems with storage upload further down the line, and may in fact result in a worse uploaded quality. To set these modes up on your device:

iPhone

Settings → Battery → Low Power Mode → **OFF**

Settings → Do Not Disturb → Do Not Disturb → **ON**

Settings → Airplane Mode → **ON**

Settings → Camera → Record Video → **720p HD at 30fps**

Android

Settings → Battery → Menu button → Battery saver → **ON**

Settings → Sound → Do Not Disturb → **ON**

Settings → Network and Internet → Aeroplane Mode – **ON**

Setting your camera's resolution is different depending on your particular Android device, but in most cases it is found within the **Settings** of your **Camera** app, and you are looking for a setting called **Video Size**, **Video Quality**, **Resolution**, or similar. Choose the resolution that includes **1280 x 720** (or at least **720**) somewhere in its description.

Please note that there is variety amongst different versions of operating systems, so the settings you need may be in a different place, or have extra options you may want to consider – we recommend using this advice as a starting point, and consult your device's manual if things look different on your device.

Using Laptop/Desktop Computers

If you decide to use a laptop or desktop computer to make your video recording, read this section for advice relating to how to set up your hardware.

Camera

Most modern laptops have a built-in webcam. If it does not, or if you are using a desktop computer, you will need to use an external webcam.

Audio

Most modern laptops have a built-in mic. If it does not, or if you are using a desktop computer, you will need to use external mics:

External mics

Using external mics can give higher-quality audio when set up correctly, but adds complexity to your setup.

If you want to use external mics, you will either need to plug them in via a USB audio interface (such as the **Focusrite Scarlett** range) or you can use a USB mic can be used (such as the **Rode NT-USB Mini**) USB mic.

If the school have provided you with a Røde NT-USB Mini microphone, please see the appendix later in this document on how to set this up.

Setting the gain

To set mic gain, make test recordings of the loudest passage in your performance to ensure that it meters healthily without distorting.

On Mac OS X, go to → **System Preferences → Sound,** then click on **Input** and drag the volume slider to adjust the mic gain.

On Windows, right-click on the **Volume** icon in the bottom-right: 

Then go to **Open Sound settings → Input → Device properties → Levels**, and drag the Microphone slider to adjust the mic gain.

Power

We highly recommend having your powering your laptop from its charger so that it does not run out of battery during your recording.

Storage

You will need to make sure you will have enough storage on your computer.

Make test recordings with your chosen software to determine how much space you will need for your performance.

If you do not have enough space, you may need to delete files from your computer (eg apps, videos, photos, music, etc), or you might consider buying an external hard drive.

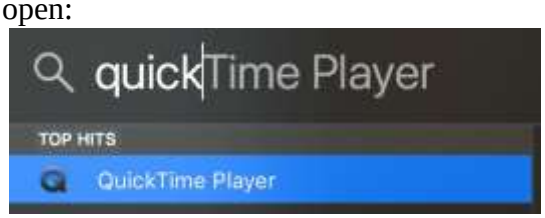
Software

This section gives advice on simple laptop/desktop computer software you can use to make video recordings.

Mac OS X

Mac OS X comes pre-installed with **QuickTime Player**, which can take videos easily.

- To find it, click on the magnifying glass in the top-right of your screen, and start typing "QuickTime Player" – when you see the app appear in the results below, double-click to open:



- You will then see the image captured by your webcam, so you can place your device and set your shot.
- When you are ready to record, click the red circle as shown below:

- Make sure your audio is metering, as shown above.

VIDEO

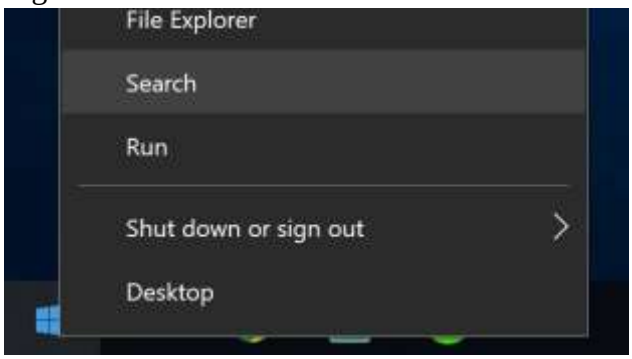
- During recording, the red circle turns into a dark square, the timer displays the increasing length of recording, and it shows you the increasing size of the recording:

- Click the dark square to finish recording.
- Go to **File → Save…** and enter a filename and location to save your recording.

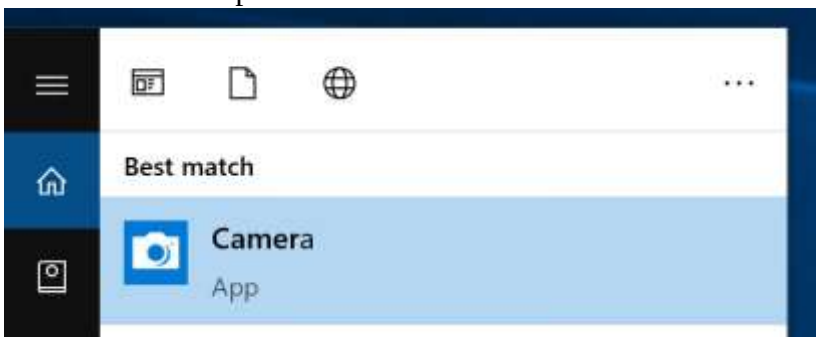
Windows

Windows 8 and above comes pre-installed with the **Camera** app, which can take videos easily:

- Right-click the Windows icon in the bottom-left of the screen, and click Search:

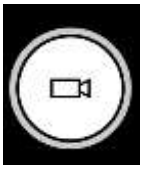


- Type “Camera” into the search bar, and you should see the Camera app appear in the results – click to open:



By default, it launches in 'photo' mode – to set it to 'video' mode, click on the **video camera icon** to the right of the image:

- To start recording, click the main icon that is now a video camera:



- While recording, the record icon turns red, and a red circle and a timer appear at the bottom of the screen:

- To stop the recording, click the red square.
- Your recording will be in the camera roll, normally at the following location:

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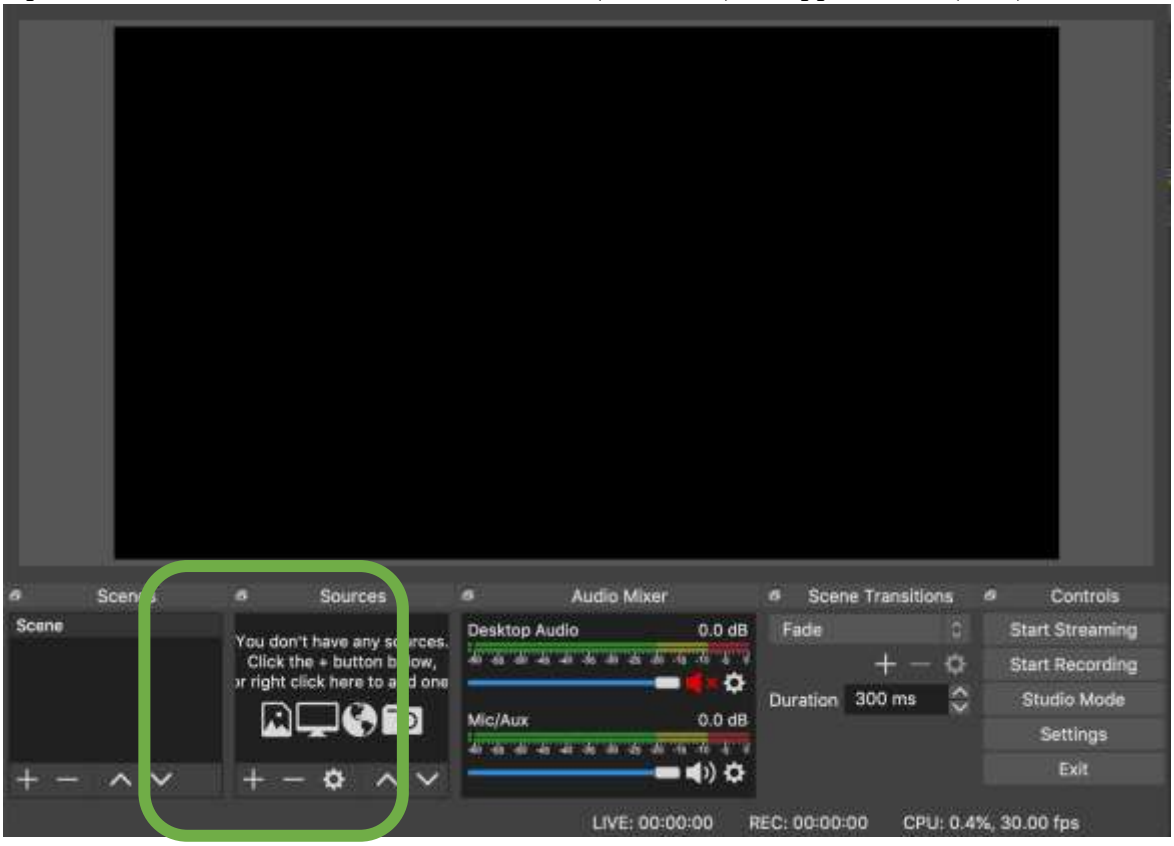
Cross-platform alternative

If you are using an earlier version of Windows, or would like to try a different program with a few more options, you can try **OBS Studio**:

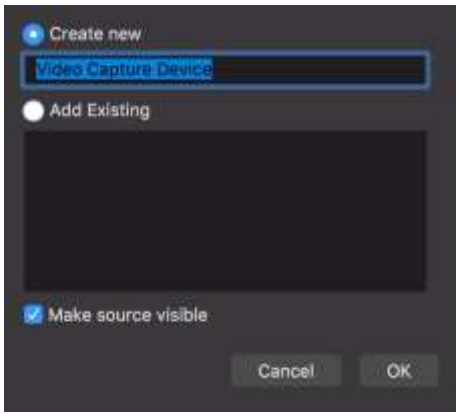
Visit **https://obsproject.com/download** to download the software suitable for your operating system, and install it to your computer.

- Open OBS Studio from either the Start Menu (Windows) or Applications (Mac).

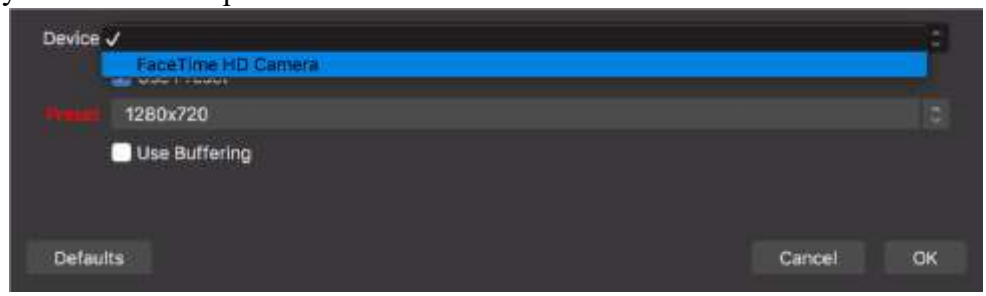


- Under the **Sources** heading at the bottom of the screen, if **Video Capture Device** is not showing, click the + button and then choose **Video Capture Device** from the list.

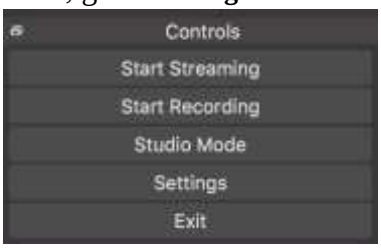
  You will need to create a New Device:



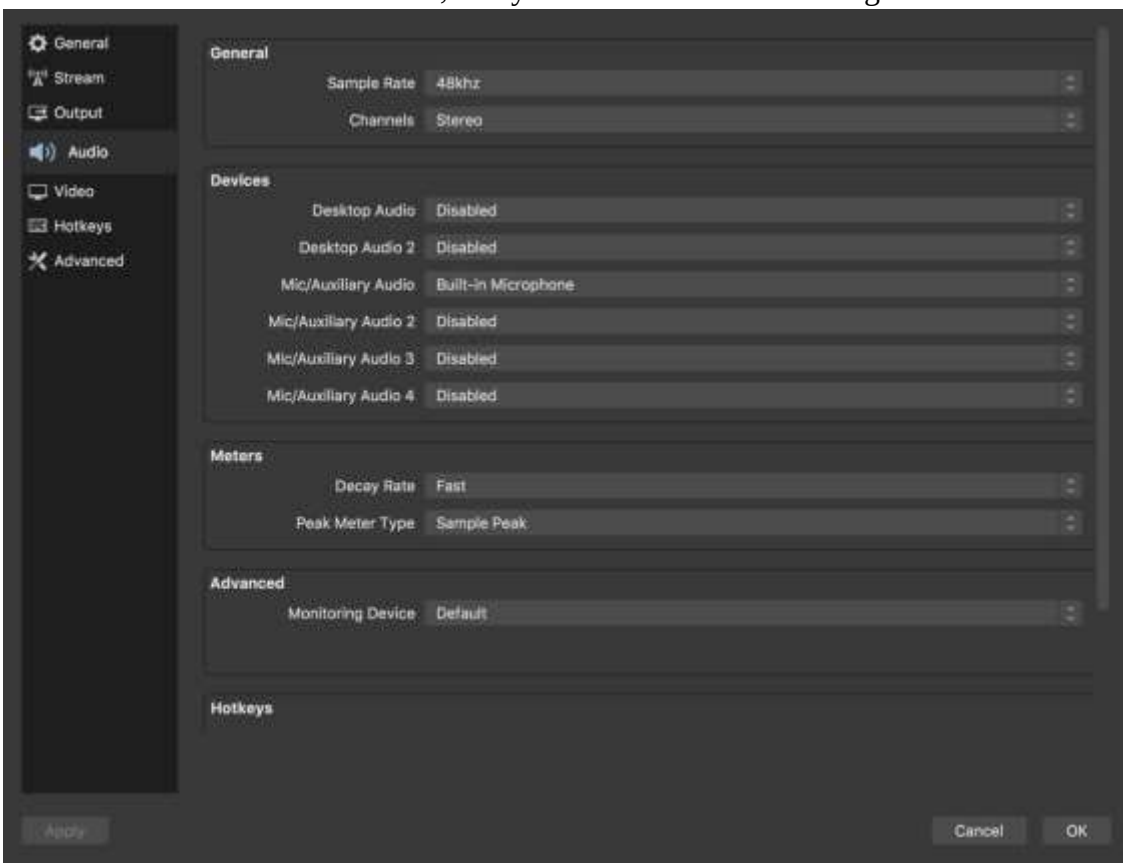
- You can either leave the label as Video Capture Device or rename it to something suitable – once you've done this press OK.
- Now you will be prompted to add your device's webcam from a dropdown menu. Once you've done this press OK.



- On a Mac this will usually appear as FaceTime HD Camera, on a Windows PC this will vary depending on your manufacturer.
- Next, go to **Settings** in the bottom-right of the screen:



- Select the **Audio** tab on the left, and you should see the following screen:



- Under **Mic/Auxiliary Audio** (the first one), select your audio input from the dropdown list, eg Built-in Microphone, then click OK:

- Ensure that **Desktop Audio** and **Desktop Audio 2** are disabled to avoid any interruptions.

You'll need to change a few settings under the Output tab as follows:

Output Mode should be set to Simple

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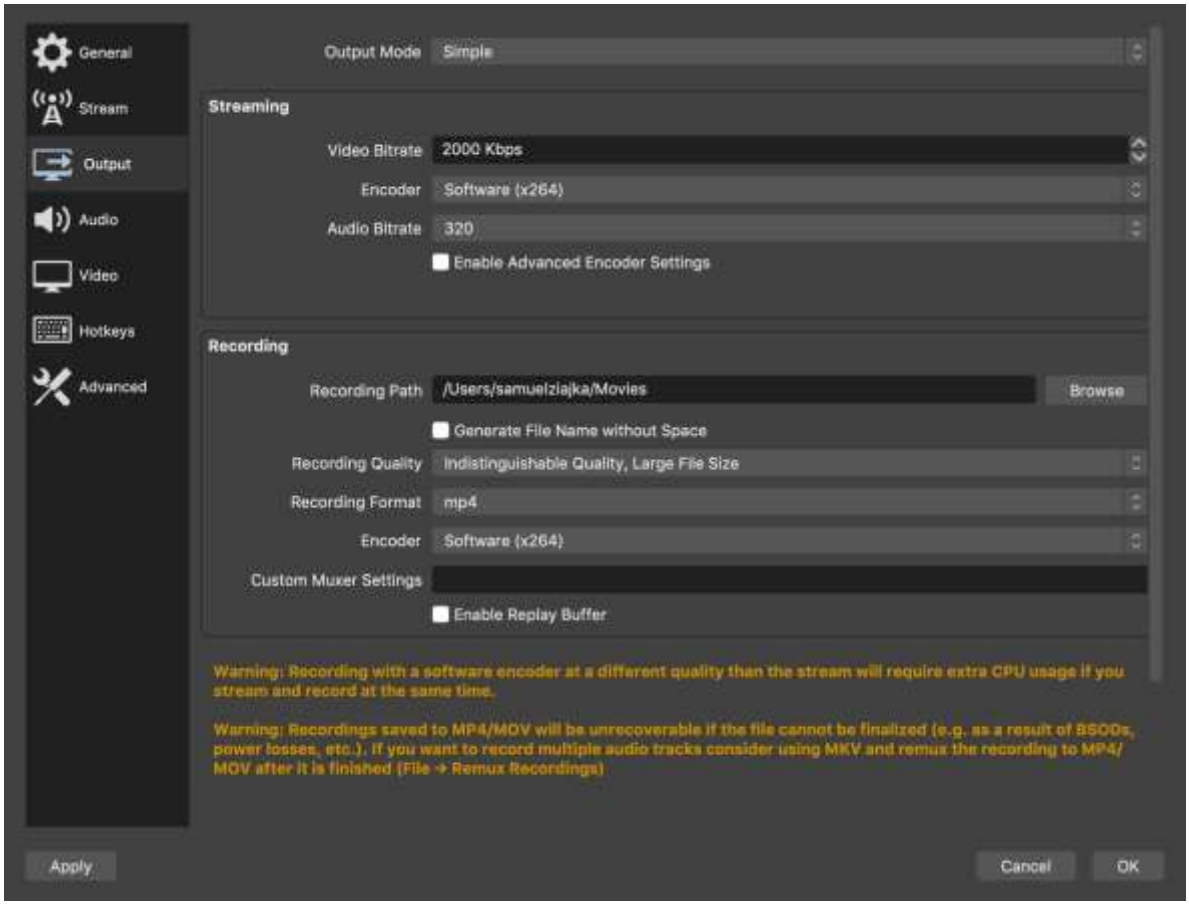
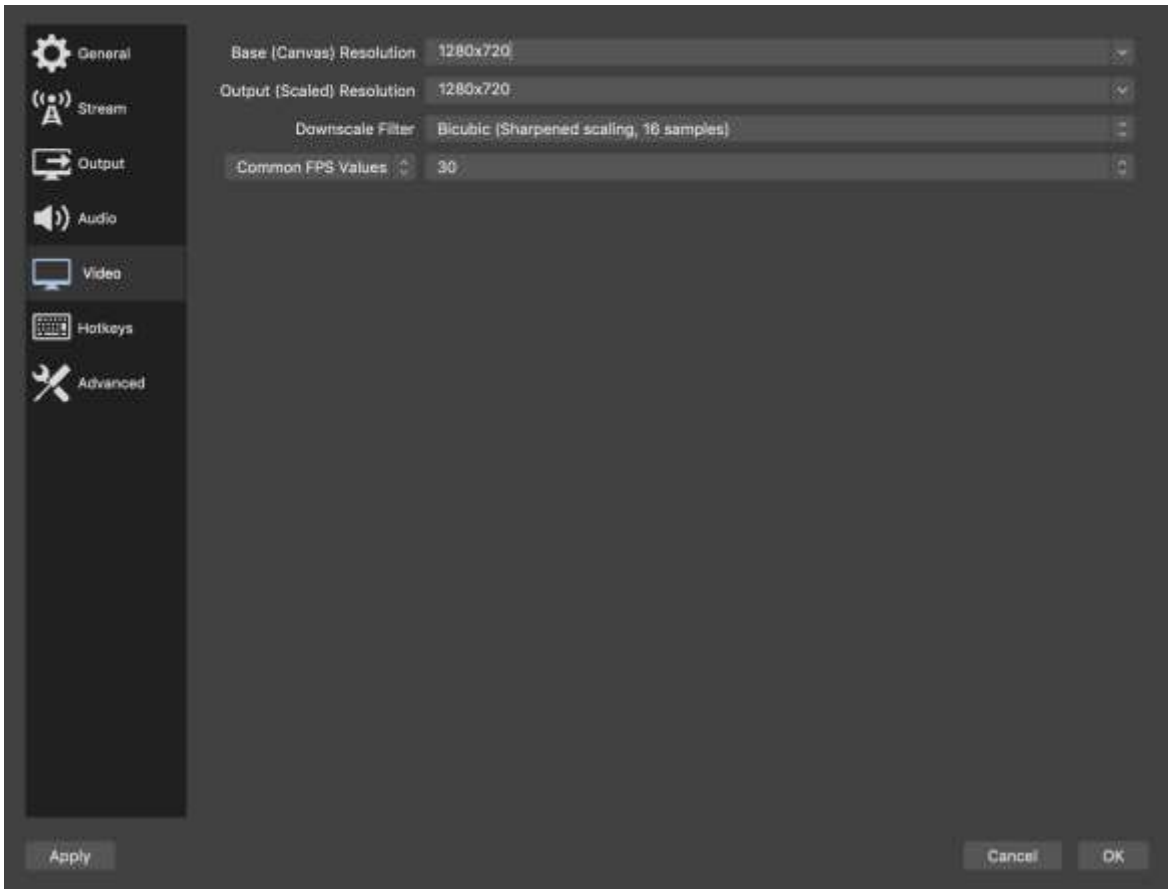
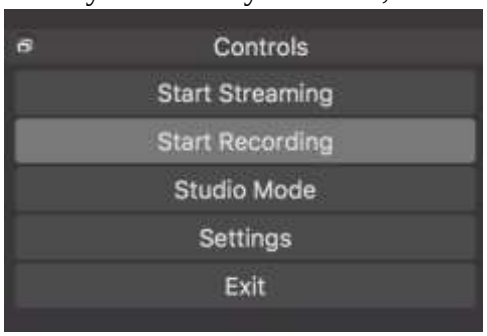
Recording Path should be set somewhere with enough storage space
Recording Quality should be set to **Indistinguishable Quality, Large File Size**
Recording Format should be set to MP4 or MOV
Encoder should be left as your system default



Finally, you'll need to adjust the Video settings:

- 

- Set the Base (Canvas) Resolution and Output (Scaled) Resolution to 1280 x 720, and the Common FPS Values to the frame rate of your camera – you may need to experiment with this.
- When you are ready to record, click **Start Recording** in the bottom right:



Backing tracks

If your assessment allows you to use a backing track, and you choose to do so, you will need to:

- source or create a backing track yourselves.
- arrange playback over decent quality speakers situated behind you.
- control playback from your performance position.
- be responsible for the balance at the microphone.

Playback

- Your playback device should be a separate device from your recording device.
- Place your playback device close to your performing position, so you can control it easily during performance.
- Place the speakers behind you – this way you will be able to hear it clearly, and it will also be picked up clearly on your recording device.
- Make test recordings so you can ensure the balance between you and your backing track is appropriate on your recording.

Dealing with long gaps

If a backing track contains gaps that are too long to learn, eg cadenzas, you might consider **editing the gap duration** such that it allows you time to pause/restart the track at musically appropriate moments.

To edit your backing track, you will need to use **audio editing software** (eg Reaper, Audacity, GarageBand, Logic, etc). Alternatively, you could upload the file to Stream and use the online editor (see our video tutorial at https://bit.ly/2RYAXiz) . If you choose to use Reaper, please see our guide in the appendix of this document.

If you are working with an accompanist who is going to record a backing track for you, **discuss your requirements** for gaps with them in advance – if you can establish exactly what you need, they may be able to record a suitable gap, thereby avoiding the need for further editing.

Wherever there are gaps in your backing track, you should **practice these sections thoroughly** so that you are able to remain in sync with your track in your performance performance. You may find you need to re-edit your backing track once you get a better
idea of how it works in practice, so do make sure you leave plenty of preparation time for getting this right.

Room setup

Find an assistant

If at all possible, enlist the help of a member of your household to help you set up and make your test recordings. This way, they can try different camera angles and placements while you perform excerpts, which can be a lot easier than trying to do it all yourself.

Choose your room

External noise

Choose a calm, quiet, and comfortable room that has the least disturbance from the outside world, eg traffic noise, neighbours, etc.

Let everyone in your household know when you are recording your performance, so they don't inadvertently disturb you.

Acoustic

Choose a room that has the most flattering acoustic – this might be one of the larger rooms in your house, particularly if the wall surfaces have soft furnishings that break up otherwise shiny, reflective, parallel surfaces.

If it feels good to play in, and does not sound too boomy or boxy, it is a good candidate.

Having said that, a bathroom might feel enjoyable to play in because it is often the most live acoustic in a home, but bathrooms tend to sound terrible on recordings.

Visual

Choose a clean, tidy room with a non-distracting background if you can, as this will help you to give your best performance.

Having said that, you are not being judged on your performance environment, so don't worry if your living room doesn't look like the Milton Court Concert Hall stage!

Lighting

Don't be backlit

Don't have a bright window or light behind you – if you do, you'll just be a dark silhouette! Shooting away from (rather than towards) bright lights will allow you to be well-lit by them, rather than being drowned out by them.

Have enough light

Cameras need more light than eyes do, so choosing a bright/well-lit room is important in helping you to be seen clearly and look good. If you have extra lights, consider using them.

Natural vs artificial light

Both can look good, just be aware that natural light can change and is of course only there during daytime!

Device placement

Audio

The first thing to consider when placing your device is its distance from the source, which will have the following effects on the audio:

	Closer	**Further away**
Perspective	More detailed, up-front sound	More natural perspective
Timbral balance	Requires critical listening and experimentation to balance parts of the instrument, eg mechanical/breath noises vs tone, bass vs treble, body vs neck, etc	More blended, balanced sound
Precise positioning	Moving mic an inch or two can make a big difference to the sound – experiment and listen carefully around the instrument to find 'sweet spots'	Ultra-precise positioning less critical as sound is more blended at a distance.
Room acoustic	Less – good for rejecting a poor acoustic	More – good when a room acoustic is flattering
External sounds (eg traffic, air conditioning)	More rejection – good if your recording environment is noisy	Less rejection – fine if your recording environment is quiet

Frequency response	More bass	Less bass

Single-device recordings

If you are making a single-device recording (eg smartphones or laptops without external mics), you will need to position it in a place that works well for both video and audio. When recording at home, the biggest challenges are likely to be unflattering acoustics and external noises, so your device placement decisions are most likely to be a **trade-off** between being close enough to reject room acoustic and outside noise, but far away enough to capture a suitable video shot.

You should experiment with placement to find a result that works to give both clear video and audio by making **test recordings** - see the section on making test recordings for more details.

As a starting point for most single-device recordings, we would therefore recommend you begin by placing your recording device:

- on a stable surface around eye-height, eg a music stand or bookshelf.
- about 2m from you.
- in portrait orientation (unless you play a wide instrument, such as a marimba).
- upside down (to expose the mic and power port).
- with your room's main light source behind the camera.

Then, make a test recording and assess the results:

- If the audio is **boomy/boxy/roomy**, try moving your device **closer**, as far as the video shot will allow.
- If the audio is **too dry**, or **sounds too close**, move the device **further away** – if this makes the video shot too distant, you can try zooming in on your device. Do be aware though, that if this zoom is 'digital zoom' rather than 'optical zoom', your picture quality may suffer.

When using a single recording device, most of your placement decisions will be to do with distance, striking a balance between room acoustic and video framing, as described above. There are some special cases worth noting though:

Acoustic piano – Acoustic pianos (both grand and upright) are complex instruments, and small placement changes can have a significant effect, especially at the close distances required by small rooms. Having a friend move their ears around while you play can help to identify 'sweet spots' as good starting points.

Digital piano – experiment with adjusting the volume of the piano's speakers well as recording device distance to ensure you are getting the best recorded results – listen for distortion, noise, and make test recordings that go from *ppp* to *fff* to make sure your complete dynamic range is being captured correctly.

Classical voice – the classical voice is a big instrument that will sound 'too close' until it has travelled through enough air to form a blended sound, so this will place a minimum distance on

your placement. Also, when singing, perform as if to an intimate concert environment, rather than projecting to the back seats of a large opera house.

Brass instruments – perform off-axis to your recording device to avoid wind blasts overpowering the mic.

Recording with external mics

If you are using external mics, this gives you the flexibility of being able to place your camera and mics independently.

Closer recording techniques may therefore become possible - take a look at the advice in the **Mic Placement** section in the **Audio Overdub Recordings** chapter.

Then, as a starting point for your recording device (or external webcam) placement, we would recommend placing your device:

- on a stable surface around eye-height, eg a music stand or bookshelf.
- about 2m from you.
- if a smartphone or tablet, oriented in either portrait or landscape, whichever looks best.
- orientated such that your device's power port is accessible.
- with your room's main light source behind the camera.

Shot composition

A plain background to your shot is best if you can achieve it, but getting your audio and lighting right is a higher priority.

Also, it is better to shoot from ahead or above than from below – a nostril shot is not normally the most flattering angle!

The main thing is that you and your playing can be seen clearly – if in doubt, aim to replicate what a judging panel would be able to see in a live performance.

Backing track playback

Place your **playback device close** to your performing position, so you can control it easily during performance.

Place the **speakers behind you** – this way you will be able to hear it clearly, and it will also be picked up clearly on your recording device.

Adjust your playback levels so that it makes a good balance with your playing on your recording device – you will need to listen for this when you make your **test recordings**, and adjust your playback volumes accordingly.

Test recordings

Recording yourself is an excellent practice tool in itself, and incorporating this into your performance preparation early on will pay dividends when it comes to your exam day, as it will allow you to be confident and calm in your technical setup, allowing you to focus fully on the music and your performance.

Before performance day, make sure you have done at least a couple of '**technical dress rehearsals**', where you record your **full length performance** exactly as you will on the day, including uploading these rehearsals to Stream (NB you should upload rehearsals to your own **Student Private** publishing policy, not to the exam submission publishing policy).

Once you have uploaded it to Stream, you can delete it from your recording device, freeing up space for you to record again.

Critical listening checklist

The key to getting the audio of any recording right is to make test recordings, listen critically to them, then to listen in the room to compare the actual sound with what you hear in your test recordings, and adjust mic/device positions accordingly.

If you have a friend who can play while you listen (or listen while you play), this can really help in setting and fine-tuning your recording mic/device positions.

A good way to listen in the room is to close one ear (it is safer to press in your 'tragus' ear flap than to directly stick your finger in your ear!) and listen with the other ear – this gives a pretty good approximation as to what a mic will pick up at that precise position.

Here is a summary of the most important aspects to listen for:

Distortion - If your recording distorts in loud passages, turn the mic gain down. If your device does not allow you to adjust mic gain, try moving further away.

Noise (hiss) - If your recording has a distracting bed of hiss, turn the mic gain up. If your device does not allow you to adjust mic gain, try moving closer.

Backing track balance - If you are too loud or too quiet compared with your backing track, turn the backing track playback level up or down respectively.

Room acoustic - If your recording sounds boomy, try:

- a different room.
- moving your recording device closer.

External noises - If your recording suffers from external noises, try:

- a different room.
- moving your recording device closer.
- recording at a different time of day.

Critical viewing checklist

Can you see yourself and your playing clearly?

As a guide, think about replicating what a judging panel would be able to see, and think about the following factors (see the previous section for further details):

- **Lighting** – be well lit and not backlit
- **Shot composition** – replicate what a live judging panel would see
- **Resolution -** should be 1280 x 720

Your Performance

Start of performance

Once you have pressed record, at the beginning of your performance announce:

- your full name
- the date and time
- the name of the assessment
- the assessment code (if given by department)

Start of each piece

At the beginning of each piece, announce the:

- title of the piece
- composer/arranger

If your assessment allows, you may also include introductions to your pieces if you would like.

End of performance

At the end of your performance, press stop on your recording device and upload it to Moodle.