

Workshop Overview

Live Online Workshop: How To Set Up Your Home Recording Studio

By Robert Moutrey at CreateMyVoiceReel.com and Haley McGee

Part 1 - INTRO

Part 2 - WORKSHOP

- The Basics
- The Home Recording Environment (Acoustics)
- The Home Recording Furniture (Comfort)
- Essential Equipment & Software for Voice Actors
- Remote Recording - What to expect
- Exporting Audio

Part 3 - LIVE Q&A

End

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Recording Environment & Furniture Checklist

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Environment		
	Isolation	Risk: External noise i.e: Building work, neighbours, bin collection, traffic, music outside your home... Mitigating Action: Close windows, doors, curtains, hide under duvet/build a couch fort.
	Attenuation	Risk: Managing echo from hard surfaces (walls and floors) and large spaces Mitigating Action: Use the smallest room or a closet you can squeeze inside, it should have carpet, curtains, soft furnishings like pillows.
	Reflection	Risk: Managing reflection of your voice from behind microphone Mitigating Action: Surround microphone with pillows, a duvet or reflection filter made of foam
Furniture		
	Chair	Make sure you're comfortable and can easily reach the mic
	Table Top	If your mic will be placed on a hard surface, like a desk, cover the desk with a blanket or mattress protector to deaden sound and prevent bangs
	Squeak Check	Ensure your desk and chair don't squeak!
	Cables	Keep a tidy workstation so that electrical cables don't interfere with the microphone, make noise when you move, and so you don't trip!
	Script	Have the script printed or on an ipad. Attach/place it so that it's secure and you can read it easily
	Computer	Your computer can overheat and the microphone will pick up the noise of the cooling fan. Keep your computer away from the microphone, outside your reflection filter
	Writing Tools	Have a notepad and pencil available to take notes, keep track of slates if applicable and mark up your script
	Phone on Airplane-mode	The signal can interfere with your microphone and ruin a take. Once you've connected with the other people on your remote recording, put your phone on Airplane-mode
	Water	Try to avoid dairy 24hrs before your recording, and have lots of water available to avoid your mouth going dry. Warm water is very soothing

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Recording Equipment Checklist

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Computer Sound Preferences		
	Check Computer Input	Ensure your mic is plugged in, and that your computer is recognising your microphone and the level is set to 50%.
	Check Computer Output	Ensure your headphones are plugged in and your computer is recognising your headphones.
DAW (Digital Audio Workspace) Preferences (Garageband)		
	Open a new Audio track	
	Check Input Device/Source	Ensure your DAW is using your chosen microphone.
	Check Output Device/Source	Ensure your DAW is using your headphones.
	Recording Quality	Ensure the project is set to record at high quality (24bit, 48khz) and in .wav format.
	Set up DAW	Turn off metronome and 'count in'
	Set Input level / Soundcheck	Ensure the input setting of your microphone is not 'peaking'/'clipping'.
	Record	Remember to hit 'R' to record before your session begins!
Source-Connect Preferences		
	Audio Quality	Select 'Best / 256kbps / Mono'
	Check Input Device/Source	Ensure Source-Connect is using your chosen microphone.
	Check Output Device/Source	Ensure Source-Connect is using your headphones.

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Equipment Recommendations

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To set up a home recording studio, you'll need a few pieces of Equipment:

- A microphone and stand
- A pair of headphones
- A pop shield
- A reflection filter (which you can buy or create your own)

We also recommend making sure you have a way to read scripts while recording as you cannot read off your laptop. A printer with lots of ink and paper is a useful item to have, or an iPad with a stand.

Below we have outlined three tiers of pricing for recording equipment, all of which will give you professional-level recordings. We have no affiliation with any of the brands mentioned below, but we have tried and tested them and know they work well.

Please note, these are the prices in the UK as of April 20, 2023. They may have changed or may be different depending on your location.

If you can't afford to buy equipment outright, you can also consider renting it. Companies like Fat Llama offer rental services for recording equipment, and you can also search for "microphone rental" on Google to find other rental options near you.

Microphone & Mic Stand Recommendations

Option 1 - £



Brand - BlueMic

Product - Yeti

Link - [HERE](#)

Price - c. £120

Description - The Blue Yeti is an exceptionally powerful tool for its price range. It is super sturdy and produces a very warm, clear sound. Being a USB microphone makes it very user friendly. The mic comes in its own Mic Stand, so you don't need to buy one. Very simple to use. Just plug it in. No driver needed. No hidden costs.

*Important, the side of the microphone with the mute button on is the front. Also, don't speak into the top of the microphone, speak into the side of it. There's a knob at the back of the mic, twist it until it's set on the upside down love heart.

Option 2 - ££



Brand - Rode

Product - NT1-A

Link - [HERE](#)

Price - c. £145

Description - The Rode NT1-A comes with XLR cable, shockmount and pop filter. It sounds great. Not quite as robust as the SM7B (next page). But it is a nice, warm microphone capable of multiple uses for the voice.

Warning. This microphone requires extra equipment to function: a Sound Card and a Mic Stand. We've made appropriate recommendations in the table below:

Sound Card	Mic Stand
	
£99.99	£125
Scarlett Solo 3rd Gen	Rode PSA1+
XLR to USB Interface	Professional Mic Boom arm

The total cost for this mic set up is £369.99

Option 3 - £££



Brand - Shure

Product - SM7B

Link - [HERE](#)

Price - c. £439

Description - This is a wonderful sounding microphone for the price point. It is a very adaptable and sturdy microphone that will last you a long time and cover every possible eventuality. You will have no issues when it comes to dealing with engineers in studios with this microphone.

Warning. This microphone requires extra equipment to function: a Mic Pre-Amp, X2 XLR Cables, Sound Card, Mic Stand. We've made appropriate recommendations in the table below:

Mic Pre-Amp	X2 XLR Cables	Sound Card	Mic Stand
			
£175	£19.45 + £26.45	£99.99	£125
Cloudlifter	WBC	Scarlett Solo 3rd Gen	Rode PSA1+
Boosts the signal of the microphone	0.5 Metre - Quad Balanced & 3 metre - Quad Balanced cable	XLR to USB Interface	Professional Mic Boom arm

The total cost for this professional mic set up is £884.89.

Headphone Recommendations

Please note: you need headphones – not a headset that includes headphones and a mic!

Option 1 - £



Brand - Apple

Product - EarPods with 3.5mm Headphone Plug (wired)

Link - [HERE](#)

Price - c. £19.00

Connection - 3.5mm Headphone Plug

Description - It is essential that you DO NOT record with Apple Airpods. They sound terrible, there's latency and it gets confusing with inputs and outputs when it comes to recording. We don't actually care whether they're Apple or not, just make sure they have a wire and they don't have a microphone on them.

Option 2 - ££



Brand - Audio Technica

Product - ATH-M30X

Link - [HERE](#)

Price - c. £64

Connection - jack plug (3.5 mm)

Description - Super durable, comfortable and reliable headphones, adaptable for most environments. Great in terms of noise isolation and sound leakage, so you don't get noise from the headphones going into your microphone.

Option 3 - £££



Brand - Beyerdynamic

Product - DT 770 Pro 250 ohms (closed)

Link - [HERE](#)

Price - c. £139

Connection - jack plug (3.5 mm) & 1/4" adapter (6.35 mm)

Description - The Beyerdynamic DT 770 Pros are wonderful headphones. They are super comfortable with crystal-clear sound. The absolute best sound quality.

Other equipment recommendations

The equipment recommended below is not essential, but it can help the quality of your recording. We've recommended only one retail option at reasonable quality, but you can also make these yourself. We've suggested how you might attempt to build these yourself cost effectively below.

Pop Shield/filter

A pop shield or pop filter attached to your microphone stand and curves round so that the fabric of the windshield is roughly 1 inch away from the microphone. The windshield protects the microphone from loud bursts of breath produced when you say the letters 'b', 'c', 'f', 'p', 's' and 't'. Hard consonant sounds that don't sound very nice on a microphone.



	Option 1 Recommended	Option 2 Haley's	Option 3 - For the Blue Yeti, Haley also uses this
Brand	Shure	InnoGear	MXOQJE
Product	Shure PS-6 Pop Shield	Microphone Pop Filter	Pop Filter Compatible With Blue Yeti
Link	HERE	HERE	HERE
Price	c. £42.00	c. £6.00	c. £3.79

Pop Shield - DIY version

Easy work around, a thin sock or pair of tights wrapped around a wire coat hanger.

Here's a wonderful little how-to video for this budget-friendly option: https://www.youtube.com/watch?v=Ve_iBdF9mF0



Reflection Filter

Brand - Marantz

Product - Sound Shield Reflection Filter

Link - [HERE](#)

Price - c. £109

Description - The reflection filter goes behind the microphone and reduces the amount of space behind it and any empty space and/or hard surface, thereby reducing the amount of unwanted noise in your recording. We wouldn't go for anything bigger than this because you're going to want to make sure there's a place for your script and easy access to your laptop/computer.



Vocal Booth - DIY version

You can use anything soft behind the microphone to create your own reflection filter i.e. pillows, foam, duvets etc. Below are images of Haley's old set up and current set up to inspire you. She used this [foam](#) and secured it to both the cardboard box and wooden cupboard with a hot glue gun.



Recording Equipment Cost Summary

					----- OPTIONAL -----	
	Microphone	Headphones	DAW	Popshield	Reflection Filter	Total
£	Yeti	Apple	Garageband	DIY	DIY	£139
	£120	£19	Free with Mac	Free	Free	
££	NT1-A	DT 240 PRO	Garageband	DIY	DIY	£428.99
	369.99	£59	Free with Mac	Free	Free	
£££	SM7B	DT 770 Pro	Logic Pro	Shure PS-6	Marantz	£1348.89
	£884.89	£139	£174	£42	£109	

Mix and match microphone and headphones all you want within your budget. Apple headphones will require a 1/4" adapter (6.35 mm) to work with the NT1-A and SM7B set up. You could go for the Yeti microphone and DT headphones (either the 240 or 770). Or you could go with the NT1-A and the Apple headphones (not ideal, but it will work). Or you could go for the SM7B mic and the DT 240 headphones. Just because you go for the Semi or pro mic and headphones, doesn't mean you have to get Logic either. The NT1-A comes with a pop-shield.

Backup Recording

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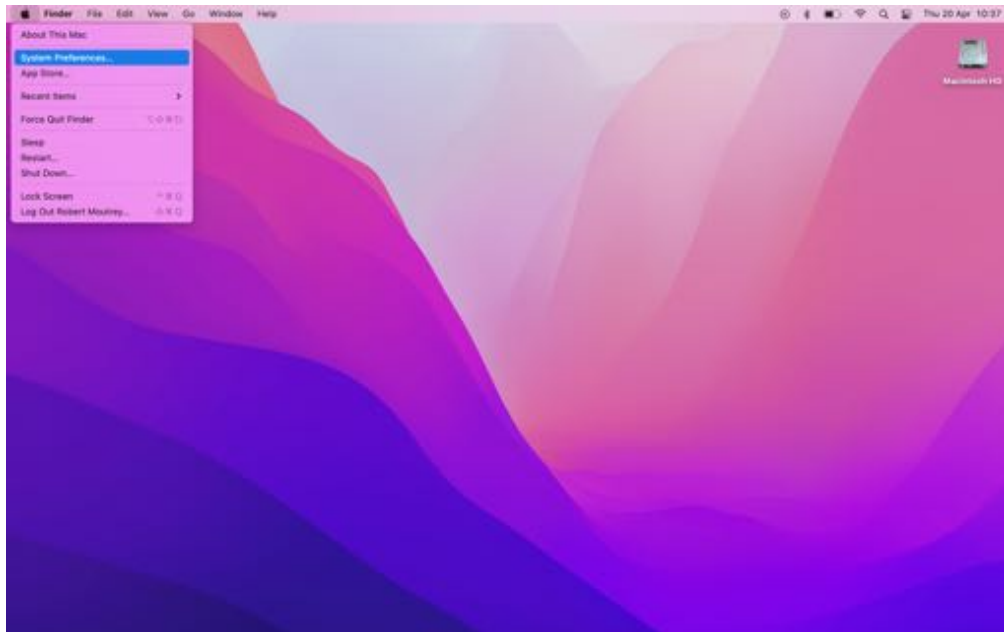
By Robert Moutrey at CreateMyVoiceReel.com and Haley McGee

No matter what kind of remote recording you are doing, you must always, always record a version on your own computer. This practice is not only good, but it is also crucial for ensuring that your work is not compromised in the event of unforeseen circumstances, internet glitches, lost files etc, etc.

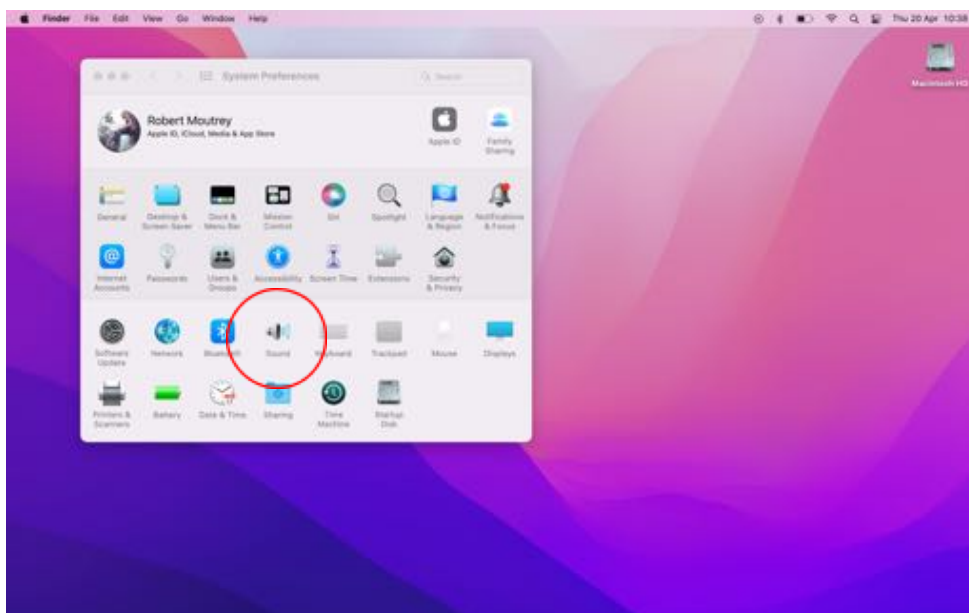
How to Create a Backup Recording Using Garageband

Part 1 - Ensure your Microphone and Headphones are connected

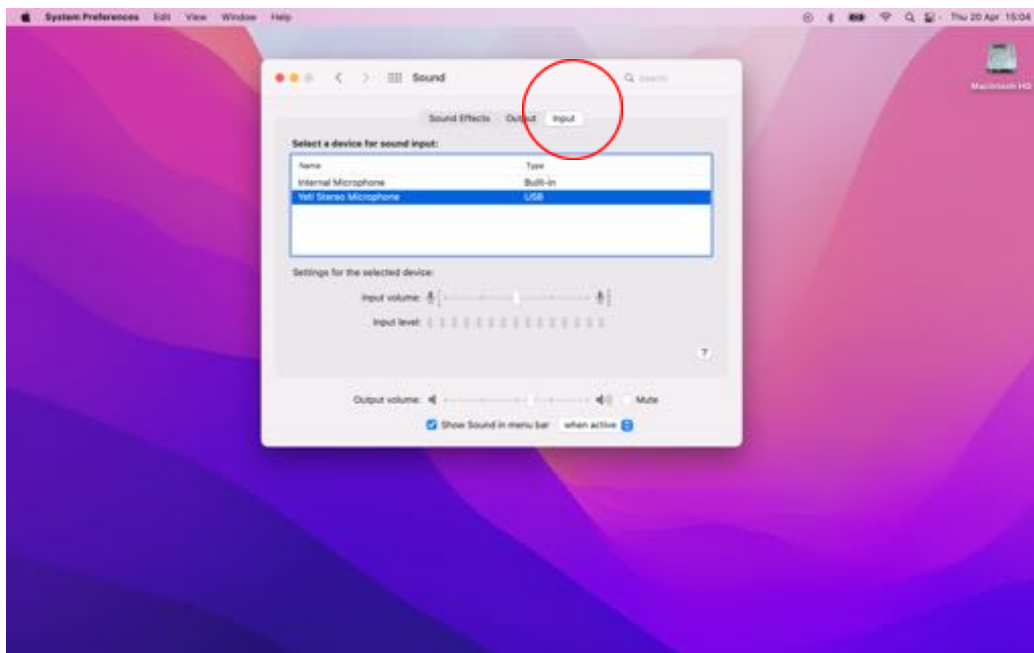
Open System Preferences



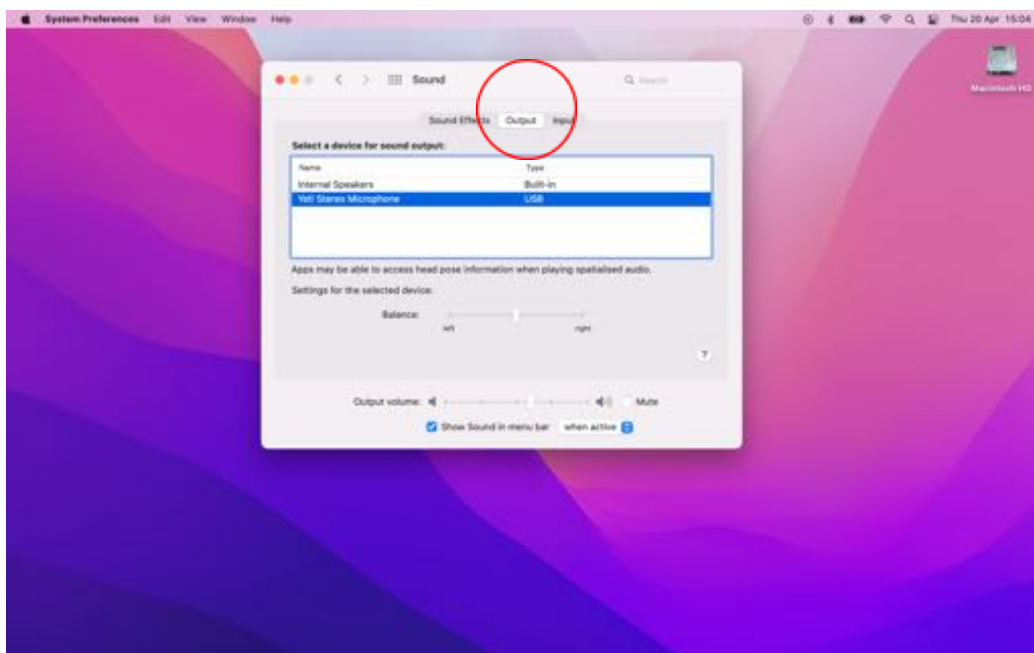
Open Sound Panel



Check the input matches your headphones

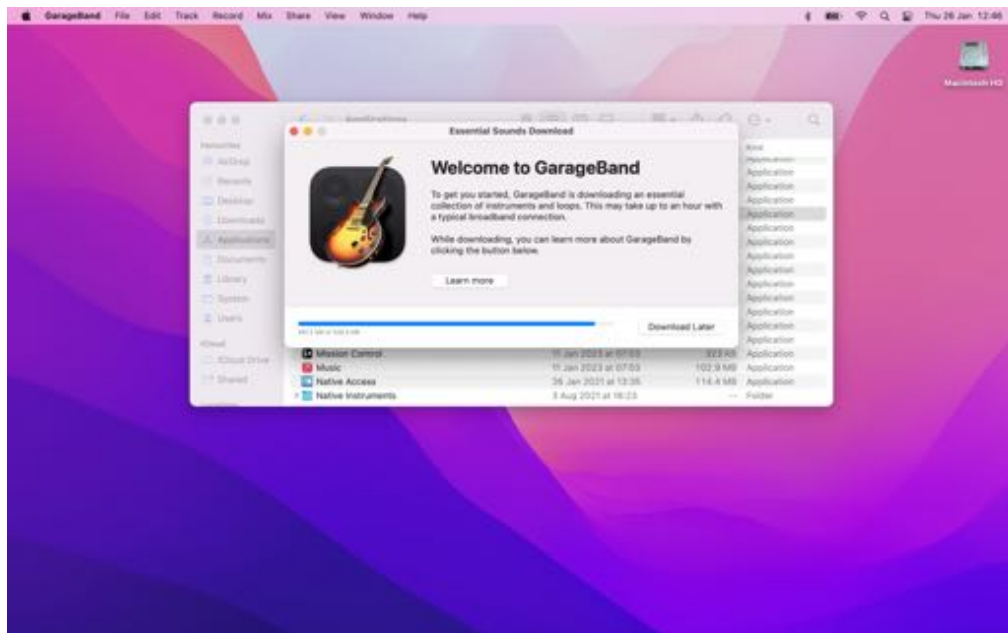


Check Output matches your headphones

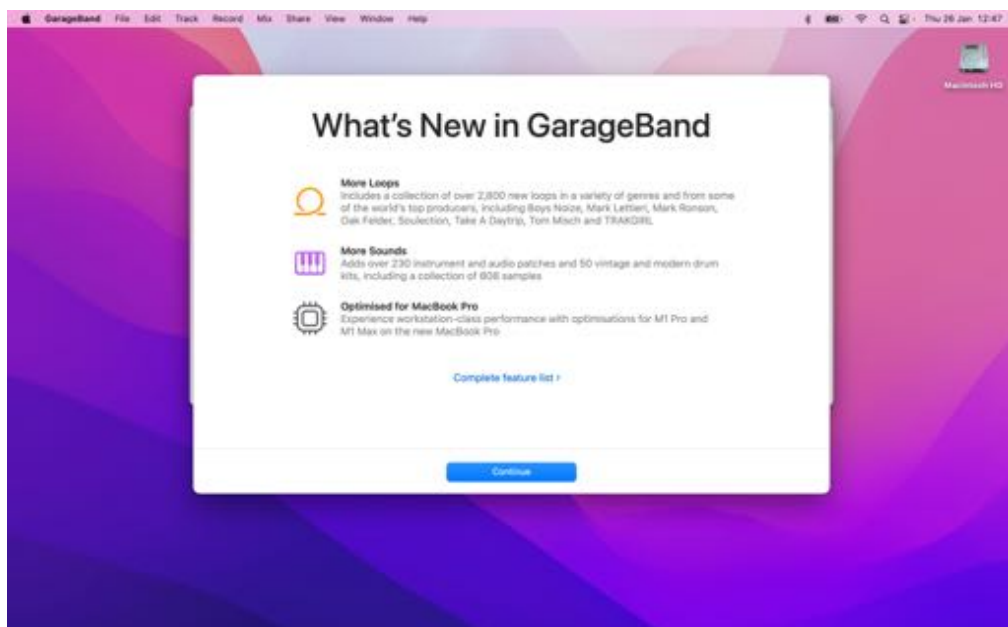


Part 2 - Opening Garageband

Locate the Garageband app in your Applications folder.

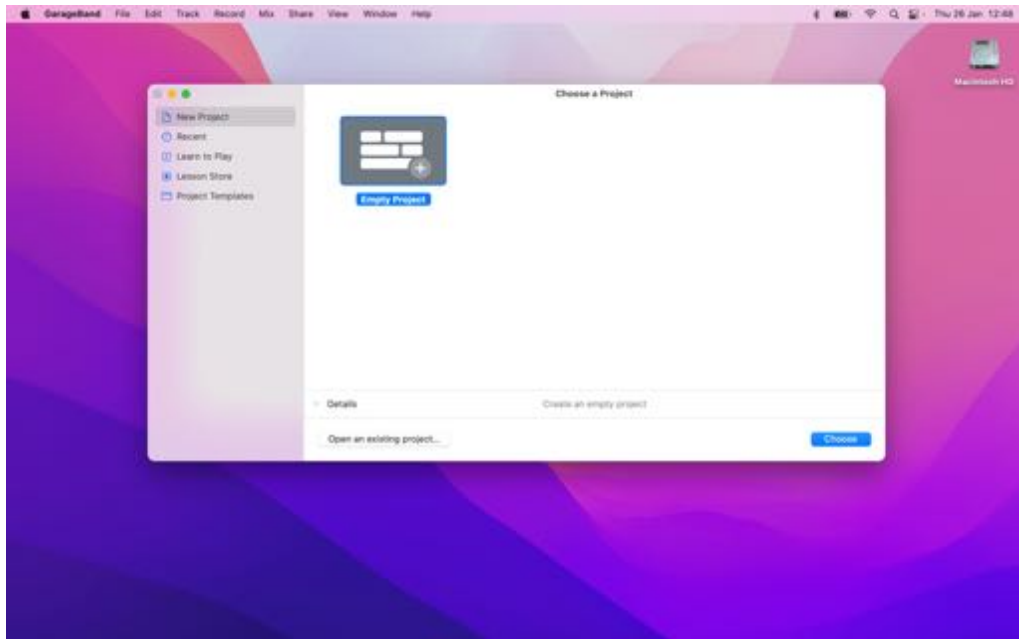


If you have opened Garageband for the first time you will be presented with the option to download digital musical instruments. This might be useful to you further down the line for creative purposes, but if creating music isn't for you, you don't need to do this now.



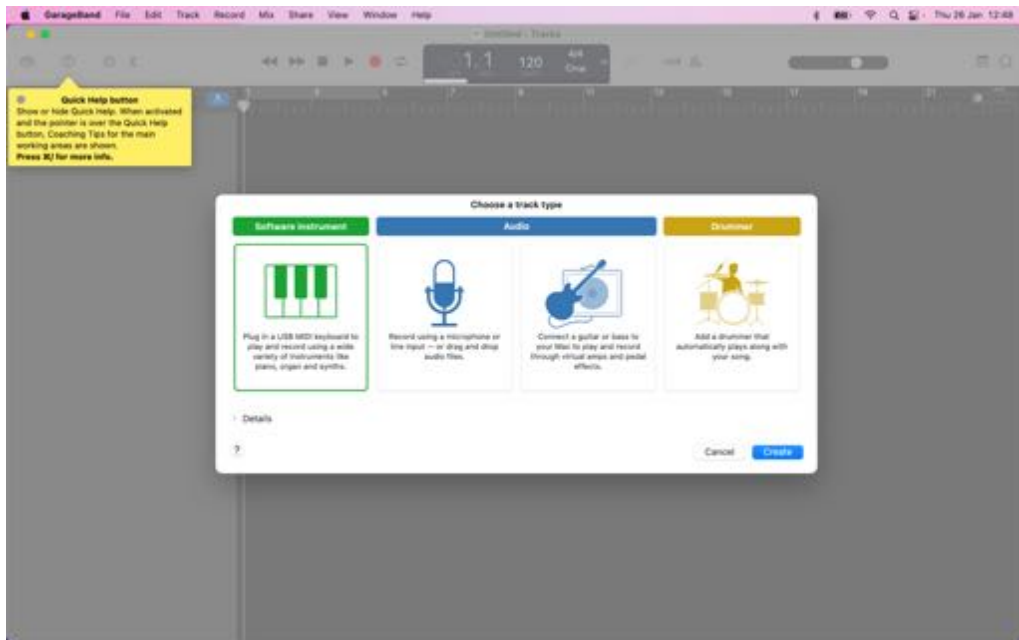
Click continue on this page.

You should be presented with the opportunity to create an 'Empty Project'. Make sure it is selected and hit the 'Choose' button in the bottom right corner.

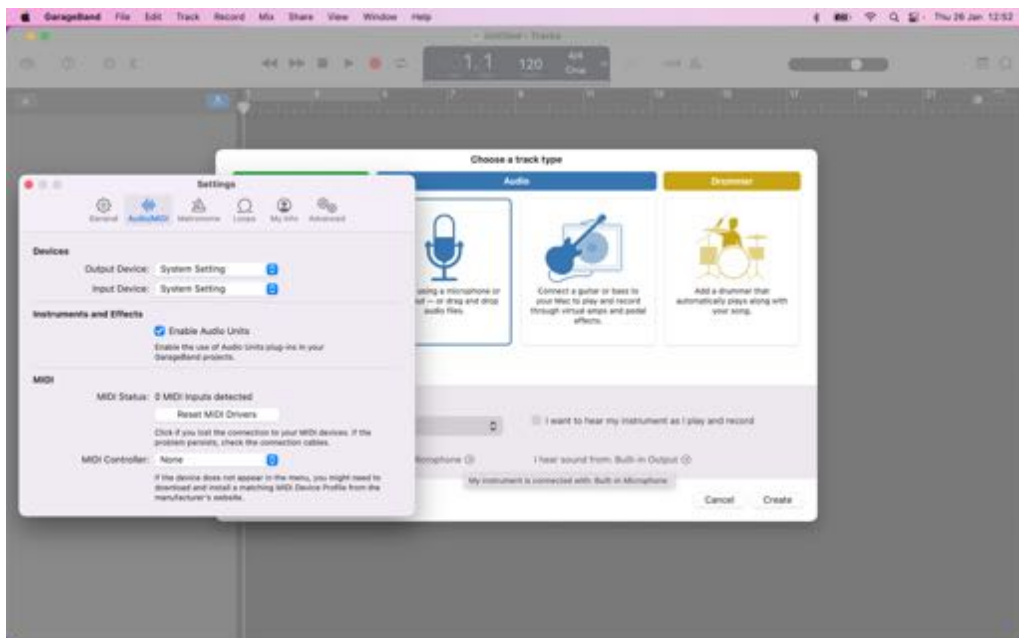


Part 3 - Selecting Your Input and Output

You should be presented with this window. Click the blue microphone.

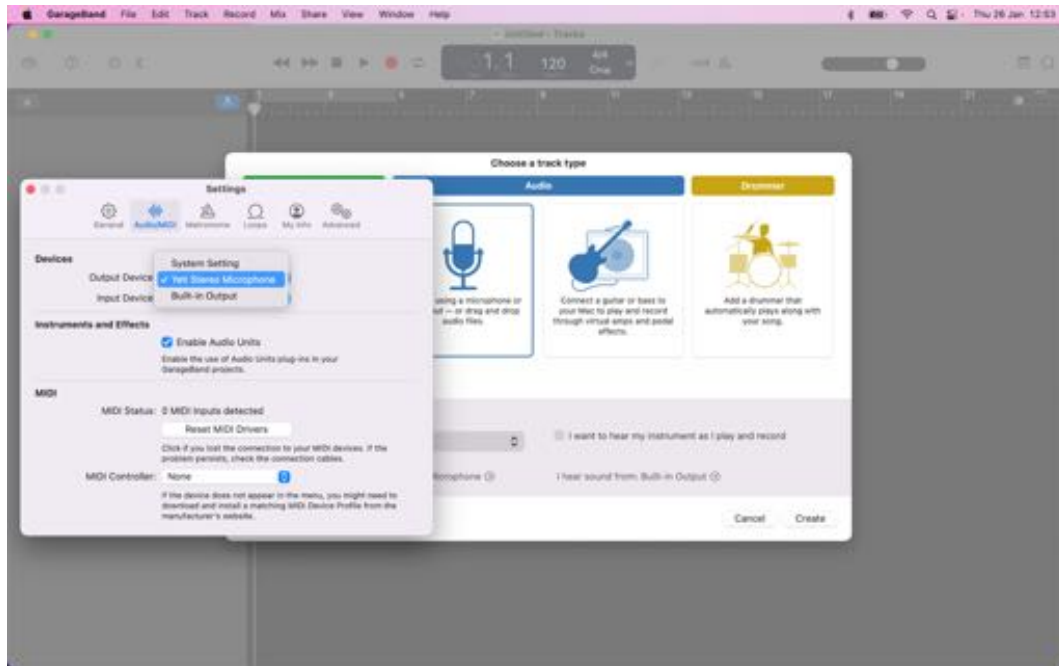


When the blue microphone is selected, a dropdown menu should appear.

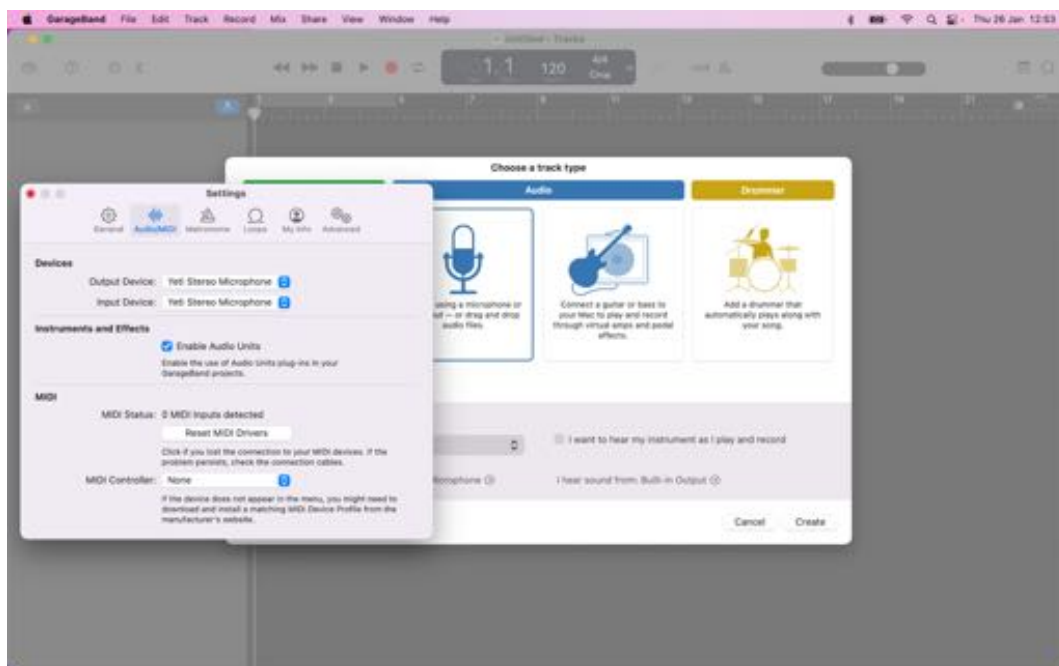


Where it says 'My Instrument is connected with: Built-in Microphone', click the little arrow next to it and a new window should pop up. We need to change the 'input' and 'output' device of your laptop to match the microphone and headphones that you're using.

For the purposes of this document, we're using Yeti microphone and headphones (plugged into the Yeti). So we need to change the 'Output' to 'Yeti' and the 'Input' to Yeti.

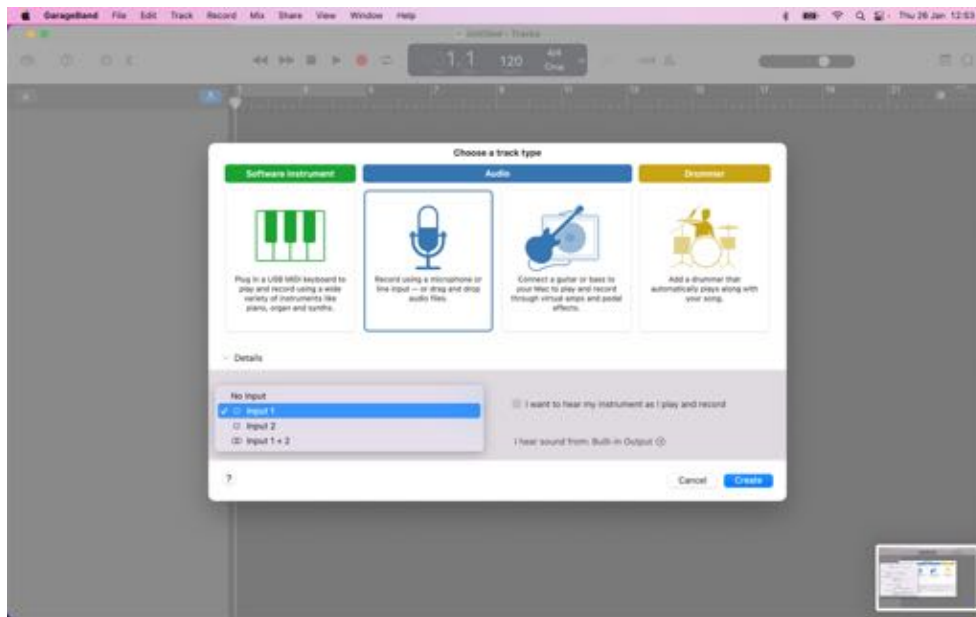


Once you've changed both settings it should look like this:

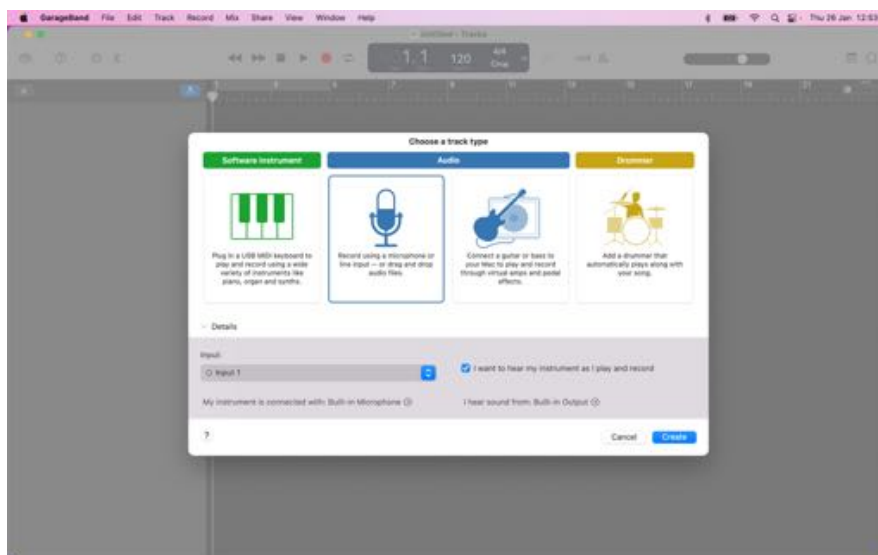


You can also plug your headphones into your laptop if you want. In which case you would need to select your 'Input' as 'Yeti' and your 'Output' as 'Built-In-Output'. If you're using another set up (NT1-A or SM7B), you will want to select the device you're using for your microphone and headphones. Close this window by clicking the red cross in the top left once you have selected your microphone and headphones.

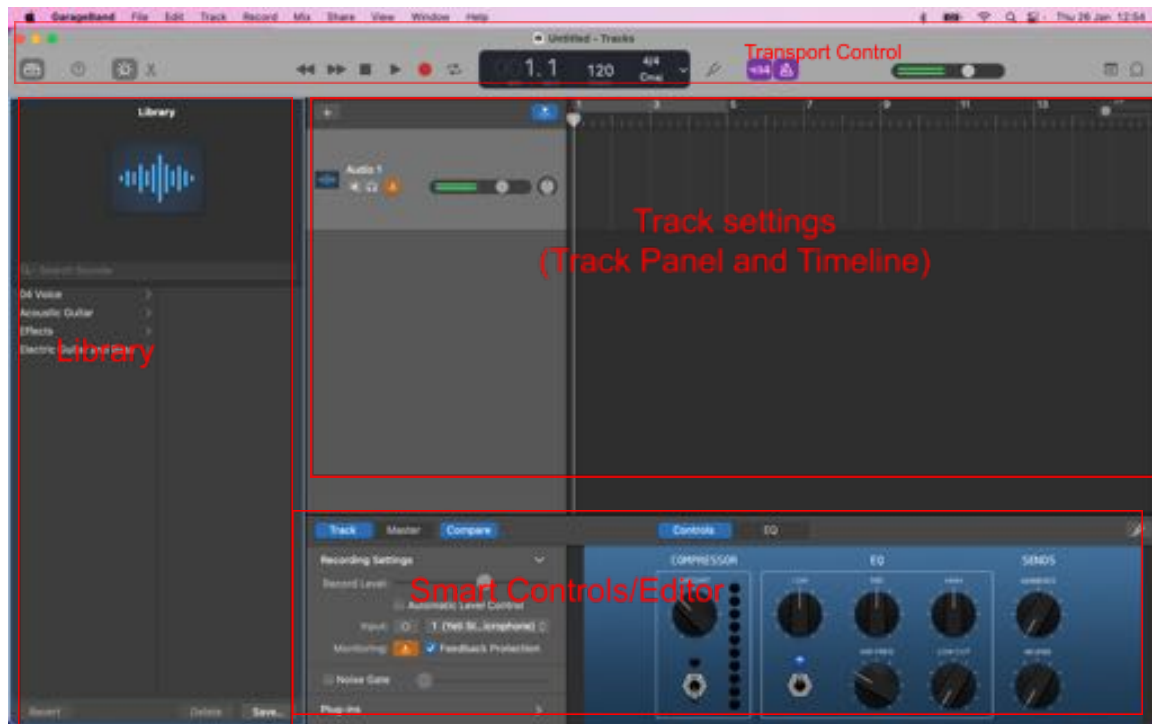
Now, where it says 'Input', make sure 'Input 1' is selected.



Click the little box where it says 'I want to hear my instrument as I play and record'. Then click 'create'.



You should be presented with the following screen:



Transport Controls - this area controls the setting of the project.

Content Library - this is a library of musical instruments. You can close this if you like.

Track Settings (Track Panel and Timeline)- this is where we control the settings of each track. A 'track' is essentially the place where your recording will be made and stored. You can have multiple tracks.

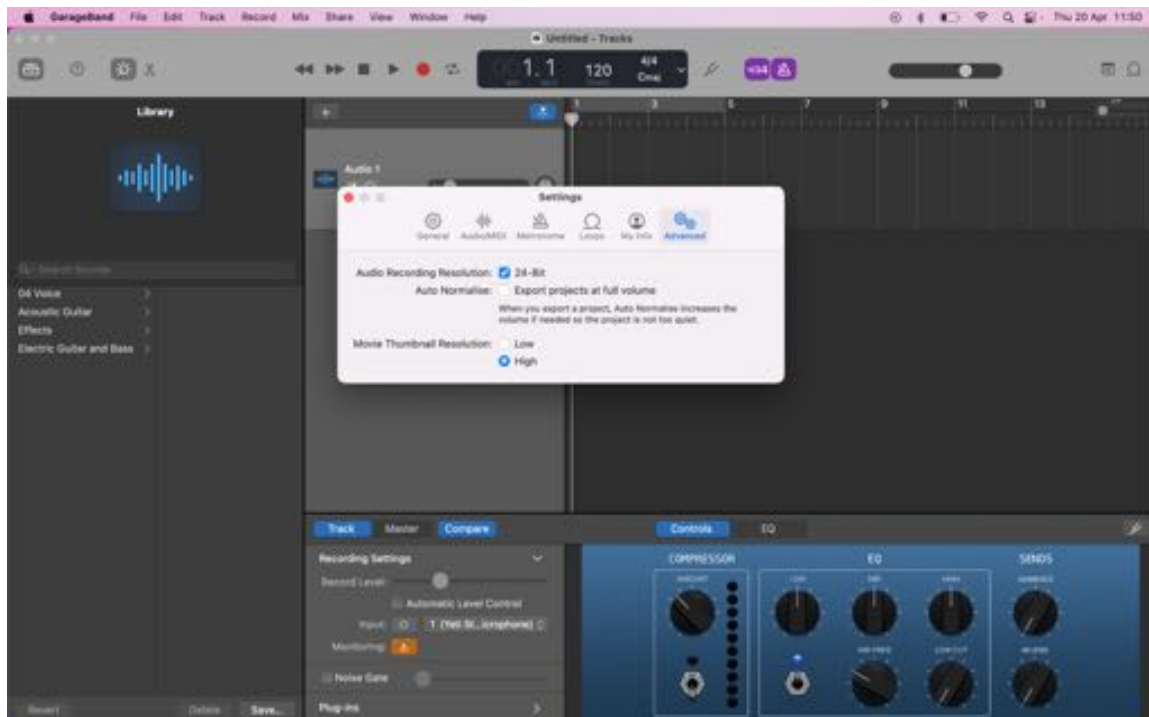
Smart Controls/Editor - this is where we control the settings of each track.

Part 4 - Setting Up Your DAW (Digital Audio Workstation) & Sound Check

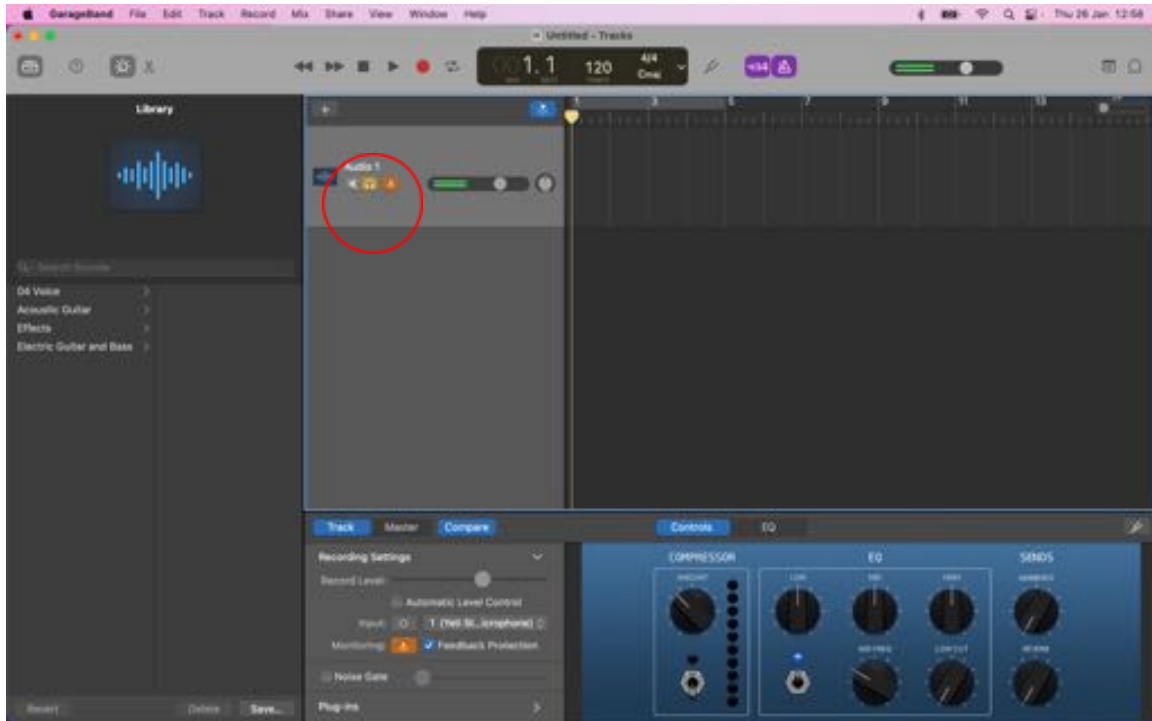
Open up Garageband Settings



Click 'Advanced' and make sure Audio Recording Resolution is set to 24-bit and uncheck Auto Normalise.



On the track, underneath where it says 'Audio 1' we need to click the headphones button so that it turns yellow. This means you will be able to hear yourself and get a good level. *You should switch it off when you're in Source-Connect (HANDOUT: 07 - SourceConnect Instructions).*



You might be presented with the following screen (next image):



If your headphones are plugged in and selected, click 'monitor on'.

Look towards the Smart Controls panel at the bottom of the page. If 'Automatic Level Control' is selected, turn it off. It's OK if 'Feedback Protection' is selected.



Now it's time to **SOUND CHECK**. Look at the level monitor on the track and talk into the microphone. You want to talk very close to the microphone i.e. between 3cm to 10cm away.

When you talk at normal volume, you want the level monitor to sit comfortably in the yellow. You don't want it showing any signs of red as it will be too loud and distort. Orange is ok, but should only show in loud moments. If it's just showing green and no yellow, the level is too low. (Tip. Listen to audio/big production podcast to match your level)



There are three ways to control the level of your microphone:

1. Laptop System preferences (Part 1). If you're using a Yeti, go to the **Apple Menu**<System Settings<Sound<Input selection<Select Yeti<make sure the 'Input volume' slide is set to 50%.
2. Your microphone/external soundcard. If you're using a Yeti, there is a 'gain' knob on the back of the microphone, turn it to the middle (Yeti's are quite 'hot' and don't need much gain, you may also want to turn it down to between 50% and 30%).
3. Within GarageBand/your DAW. In GarageBand, move the slider labelled 'Record Level' in the Recording Settings panel up and down. If you've followed step 1 and 2 and the level monitor is still in the orange and red area, you need to turn the 'Record Level' down until it is not orange and red every time you speak. It is imperative that your recording never dips into the red area. Any recording that does so is unusable.

There are so many combinations of microphone and soundcard combinations it's impossible to provide information for every individual set up. However, if you've purchased any of the equipment we have recommended and you're struggling with this set up, please email hello@createmyvoicereel.com and we'll be happy to advise.

Once you've completed and are happy with your sound check, in the Transport Control Bar at the top of the page, turn off the metronome setting marked 'click' or hit 'K' on your computer keyboard to turn it off. Also, turn off the 'Count In' setting off or hit Control 'K' on your computer keyboard to turn it off.



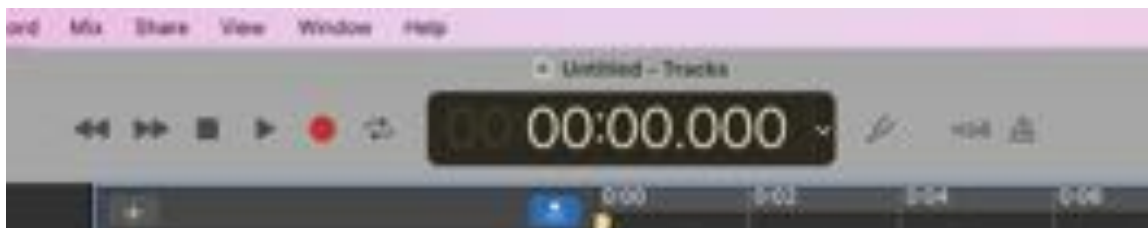
Finally, in the LCD display in the Transport Control Bar, click the little downwards chevron until a drop down appears.



In the drop down menu, select the 'Time' option.



Your LCD display in the Transport Control bar should now look like this:



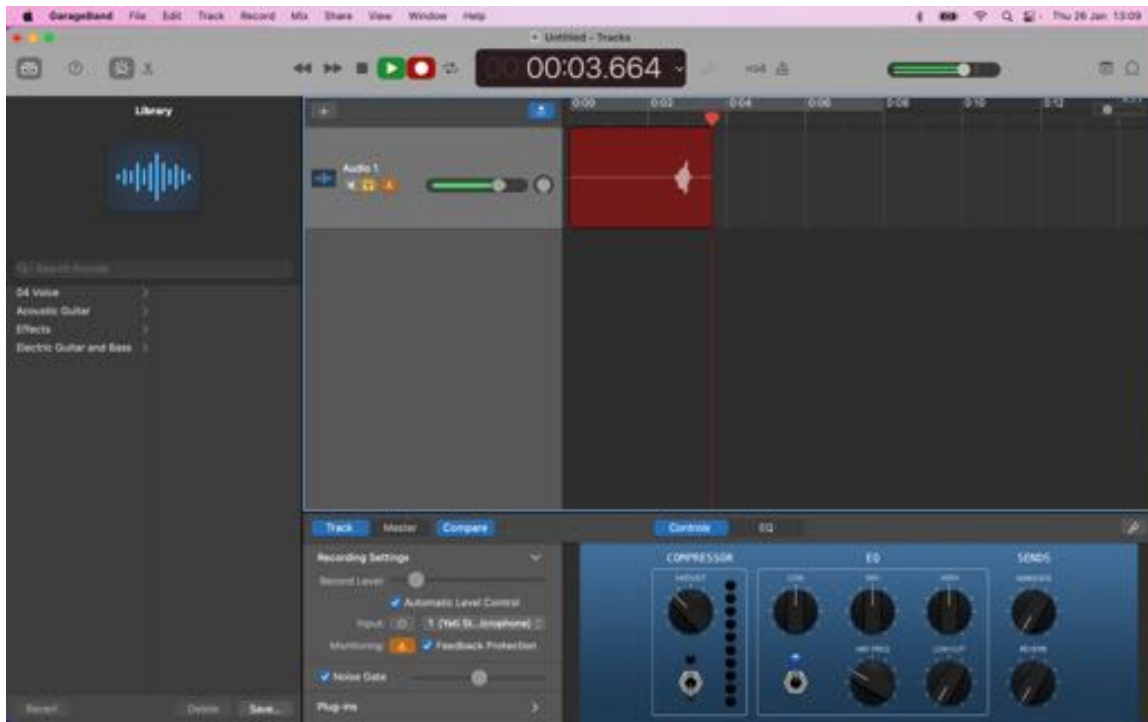
Part 5 - Recording

To record, hit the letter 'R' on your computer keyboard.

To stop recording, hit the spacebar.

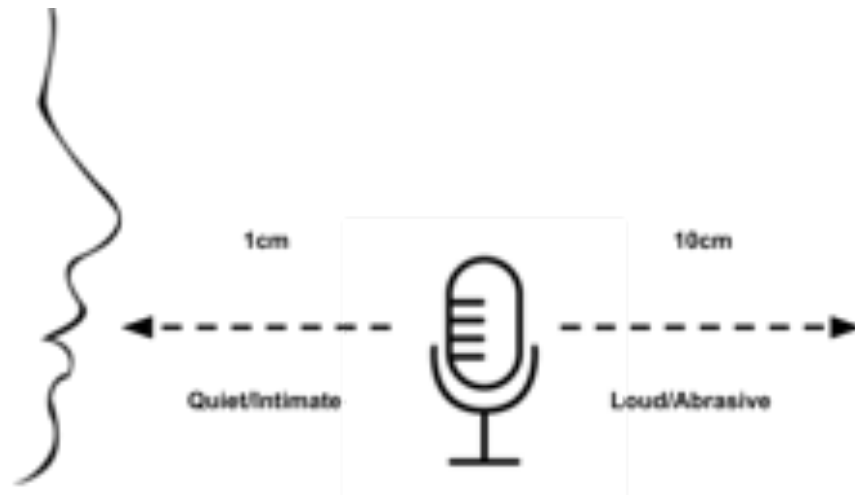
To listen and play, hit the spacebar.

To delete, hit delete.



Part 6 - Microphone Technique

Try to work with the microphone whilst you record. For louder/higher energy pieces, move back slightly from the microphone or it will peak/distort more frequently. For quiet, more intimate recording of lower energy pieces, move the microphone closer to your mouth for better audio.



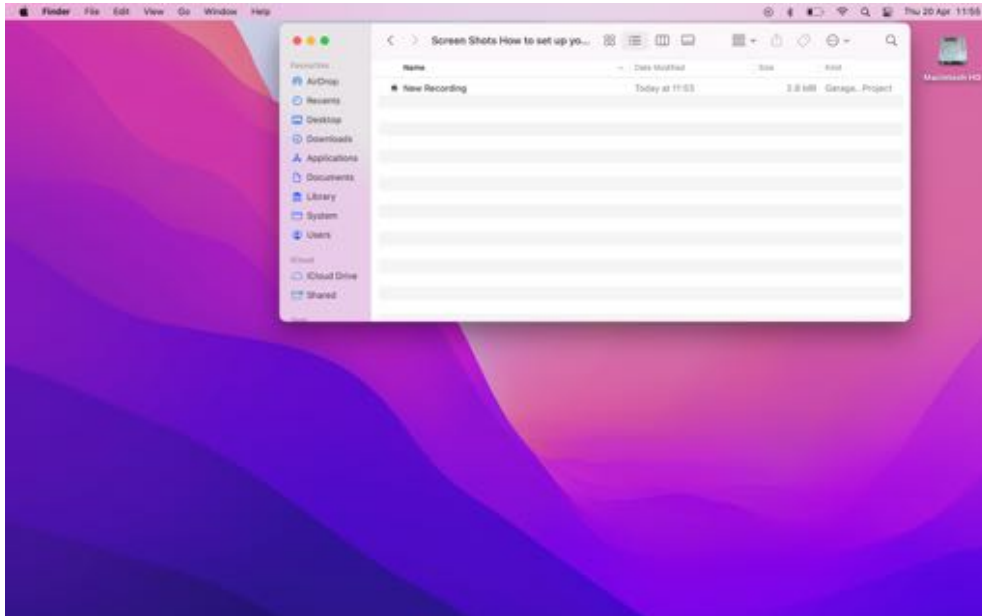
Part 7 - SAVE!

After every recording - **press 'Command S'**. You don't want to record the perfect take and not have a copy saved! Save it somewhere on your computer so that you will be able to remember how to find it!

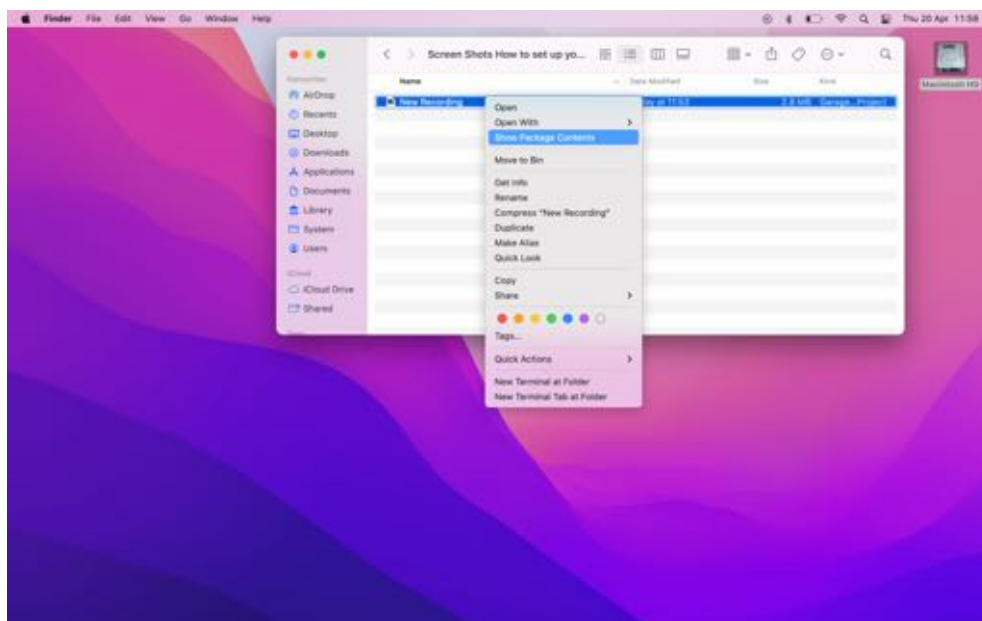
It's worth saying that you should keep your backups organised. It is crucial to ensure that your work is not compromised in case of any issues that may arise due to internet connectivity problems. Label your backup recordings with relevant details such as date, time, and purpose, and store them in a well-organised manner. This can make it easier to locate the required recording in case of any issues, and it can save you valuable time and effort in the long run. Regularly review and test your backup recordings to ensure that they are working as expected.

Part 8 - Exporting

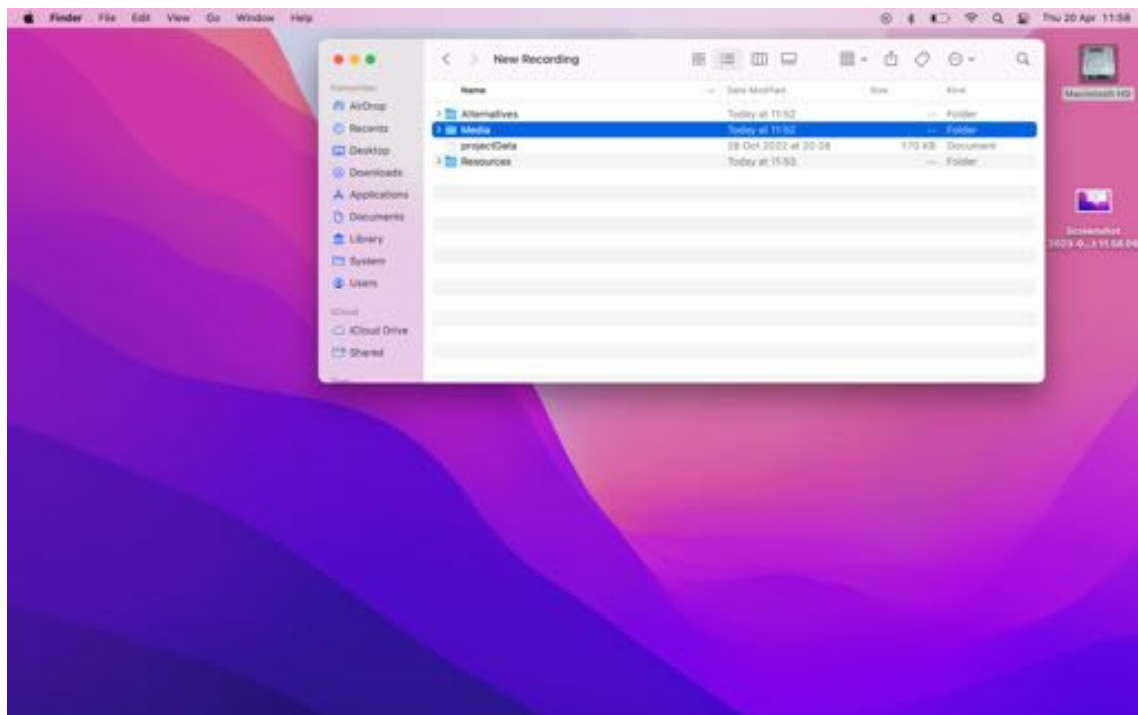
Once the project is saved, close Garageband. Find the Garageband project file, it should look like this:



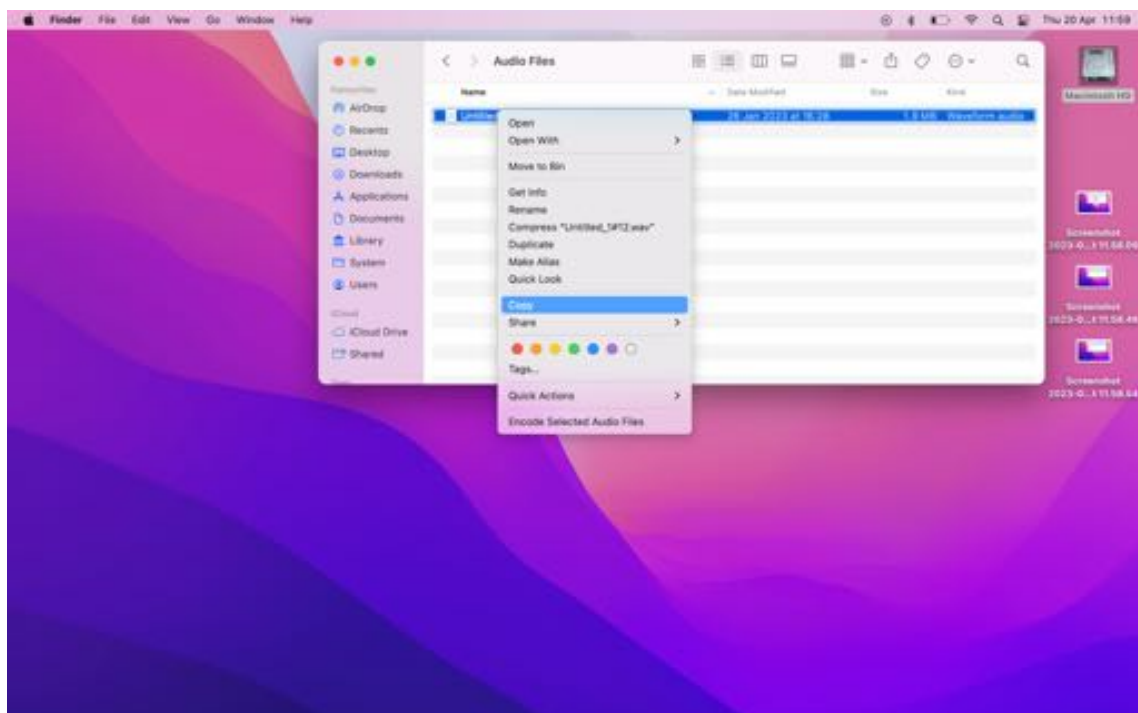
Right click the project file and click 'Show Package Contents'



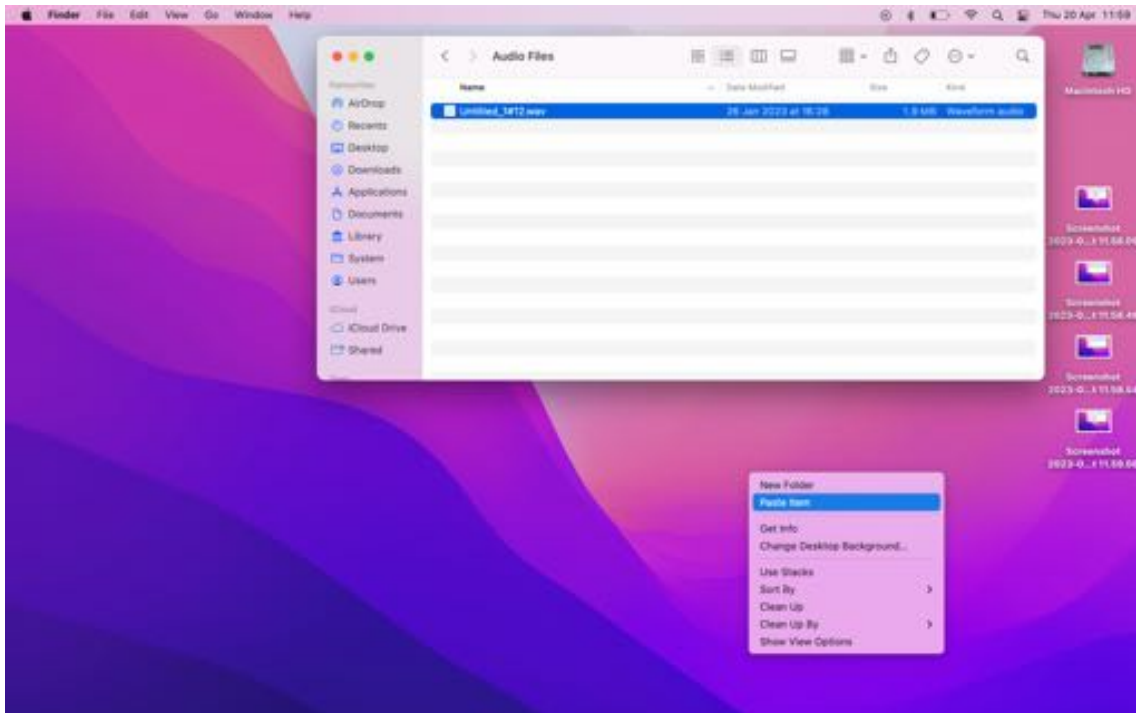
You'll be presented with the following screen. Open the folder named 'Media'



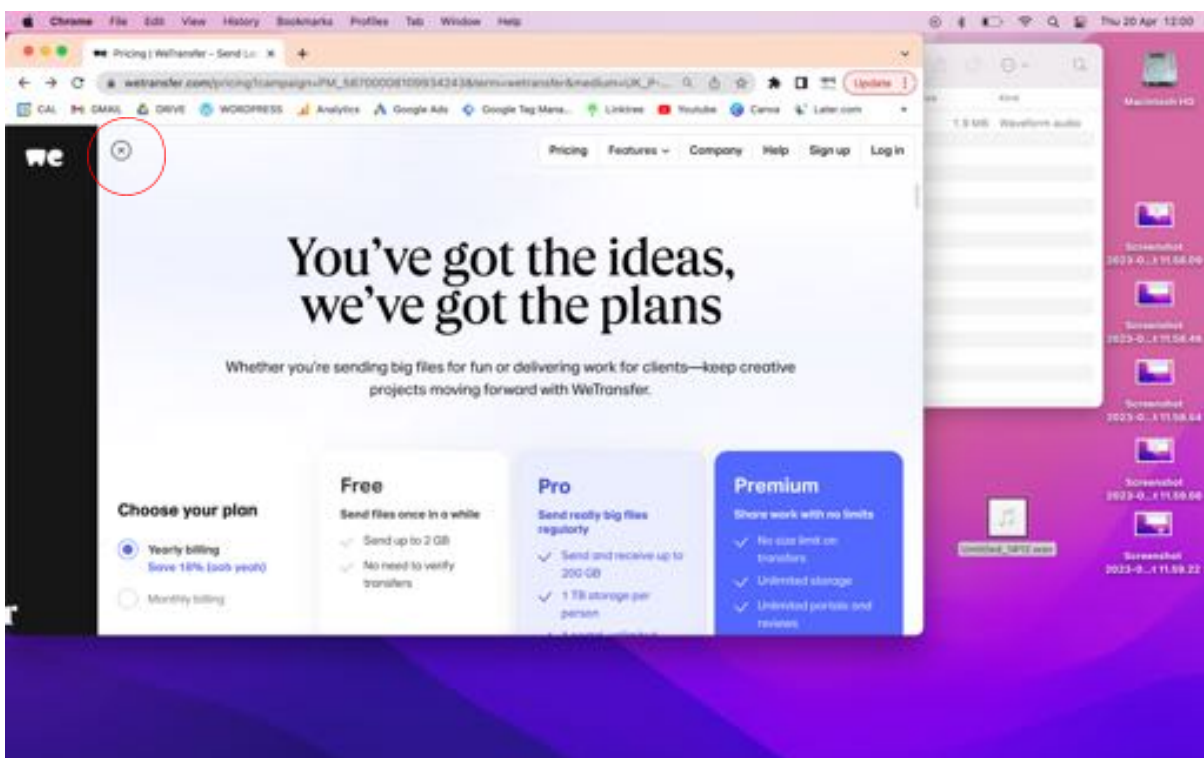
It will open yet another folder named 'Audio Files', open that and you will find the audio you just recorded. Right click and select 'Copy'.



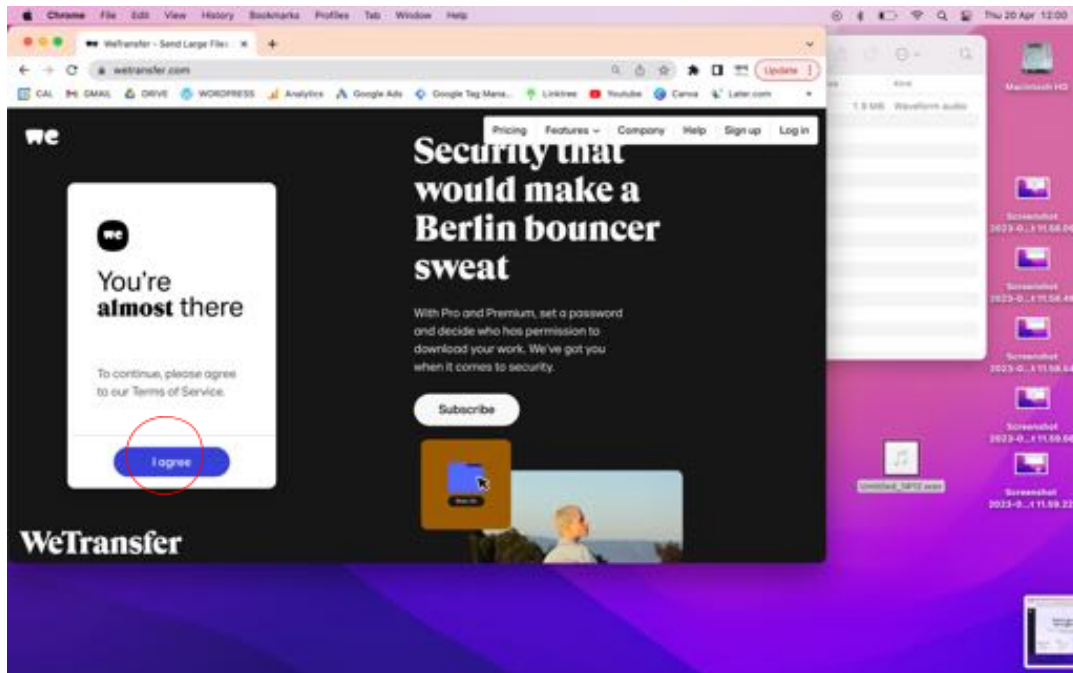
On your desktop, paste the audio file by right clicking and selecting 'Paste'



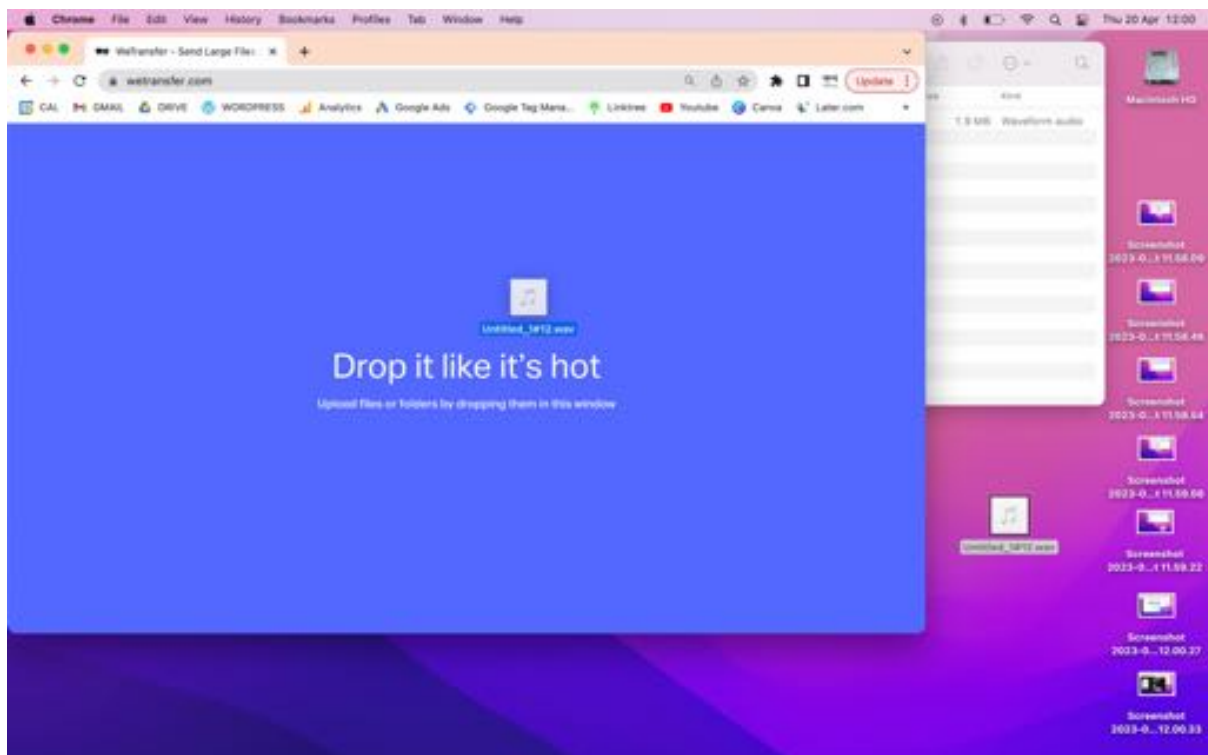
Open WeTransfer.com in Google, hit the 'x' in the top left corner to close the paid service.



Agree to the terms of service.



Drag and drop the audio into Wetransfer and add the details of the recipient. And follow the We-Transfer prompts to send your audio files off!



Source-Connect

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Before you begin, ensure you have the most up-to-date Google Chrome. Click the link below to check:

<https://support.google.com/chrome/answer/95414/update-google-chrome-computer?co=GENIE.Platform%3DDesktop&hl=en>

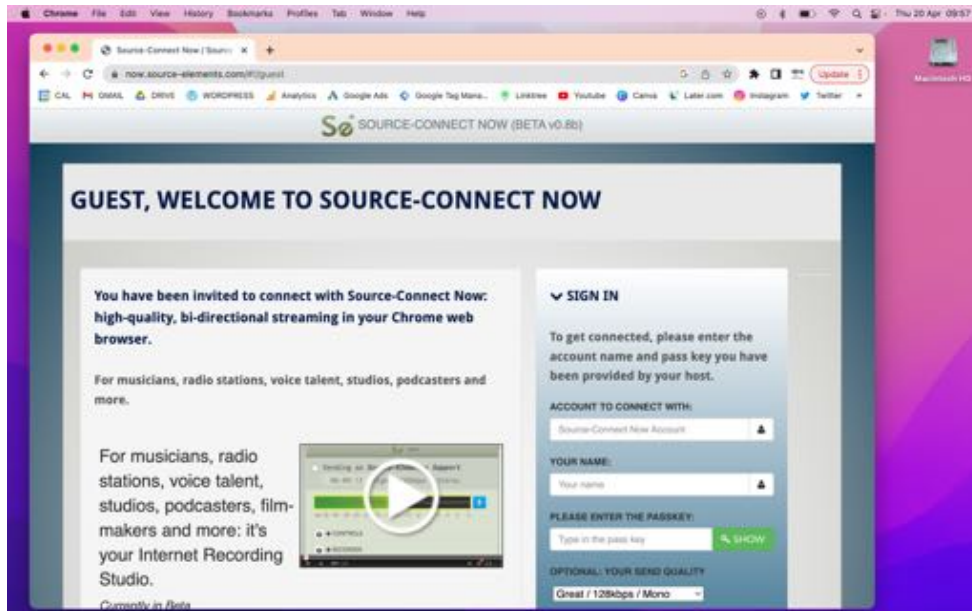
In 2023, the most commonly used software for remote recordings is Source-Connect. In most cases, you'll be sent a link by the producer or audio engineer who will be running your session. They may also include a passkey for you to enter. Here's an example of the kind of link you'll be receiving:

<https://now.source-elements.com/#!/quest>

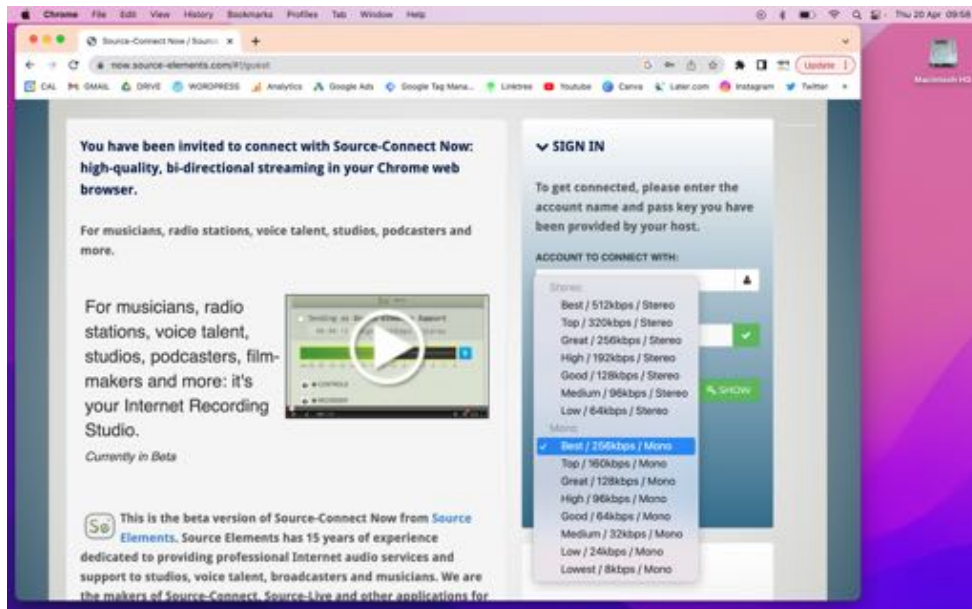
How to work Source-Connect

Part 1 - Signing in

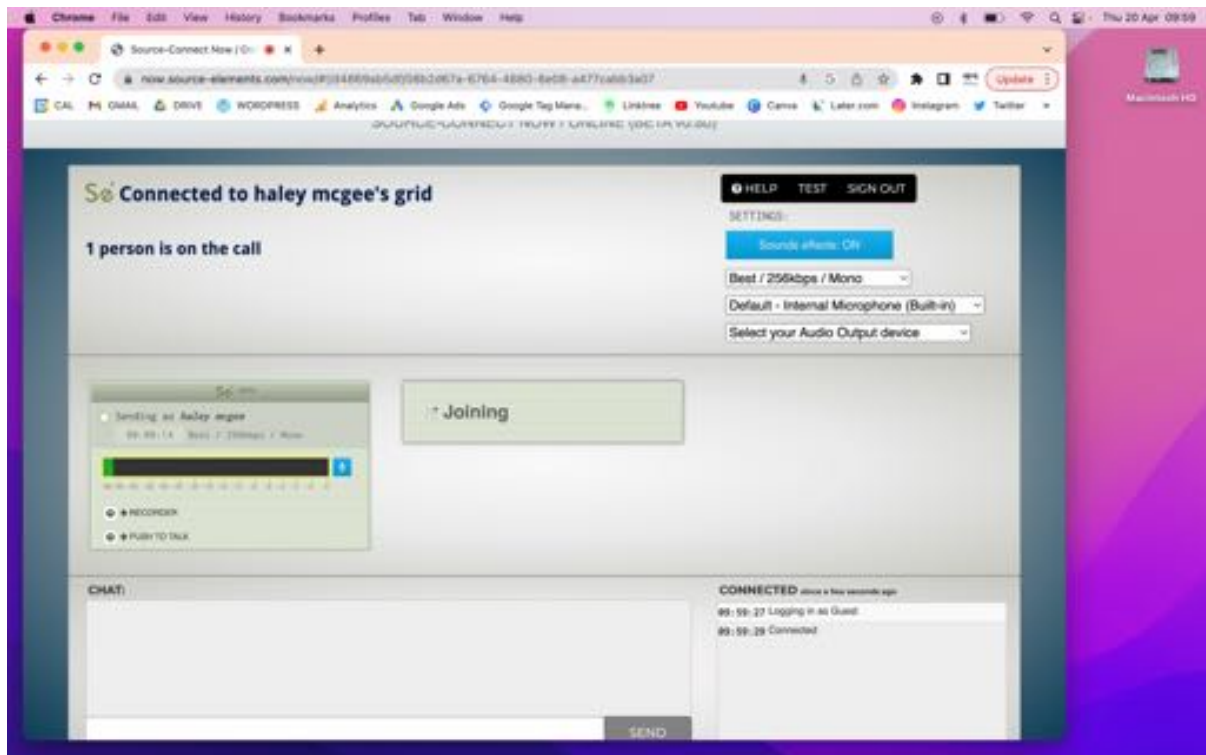
Once you have hit the link above, you'll be directed to the guest login:



The studio should have sent you login details, fill in the sections un 'Sign in'. Before signing in, ensure you select 'Best / 256kbps / Mono' or whatever setting the studio requests (always assume 'best') and then click 'Connect'.



You should be directed to the following screen:



Ensure your microphone and headphones are selected in the options on the top right.

Enjoy your recording session! Don't forget to hit record on GarageBand to record a backup of the session to send to the audio engineer or producer who has run the session.

When you're done you can simply close the tab Source-Connect is open in. Save your GarageBand file, export it as a .wav and send it off via WeTransfer (refer to Handout 06 for a refresher!).

Now, open the curtains and have a cup of tea.