

AI STATEMENT

I confirm that I have not used any AI tools in the research and creation of this assignment. I confirm that I have not presented any AI generated materials as my own work. I confirm I have copies of my drafts, notes, and other resources I used, which I may be asked to provide in evidence.

PRODUCTION TECHNOLOGY

Annabel Millward, 2501993

ROLES – SOUND DESIGNER

The Sound Designer's job is to use technology in a creative way to make audio for moving images in a range of mediums like film, radio, TV, video games and theatre.

In Theatre-

- You make abstract sounds that make feeling or emotions and suggest time, mood and atmosphere.
- You decide how the audio will be played.
- Source and edit music, including microphones.
- Etc.

In video games, film and television-

- You record layers and produce the sound and effects for the chosen impact.
- You arrange, spot and edit audio into a delivery mechanism or video.



editors, A. (2023). *Sound designer job profile* | *Prospects.ac.uk*. [online] [www.prospects.ac.uk](https://www.prospects.ac.uk/job-profiles/sound-designer). Available at: <https://www.prospects.ac.uk/job-profiles/sound-designer>.

ROLES – SOUND OPERATORS

A sound operator or sound technician has the responsibility to set up, operate and maintaining the technical equipment that is used to record, enhance, record, mix or reproduce sound.

- You asses the acoustics of either the film or performance.
- Position, select, adjust and operate sound equipment like the microphones, booms and any other recording equipment you are using.
- Maintain, transport and carry out any technical issues during the recording.



Prospects (2019). *Sound technician, broadcasting/film/video job profile* | *Prospects.ac.uk*.
[online] Prospects.ac.uk. Available at: <https://www.prospects.ac.uk/job-profiles/sound-technician-broadcasting-film-video>.

ROLES – OPERATORS

Operator No1-

- The best ears in the room
- Gives instruction to No2 & No3
- Go-to for the designer

Operator No2-

- Normally a mic tech or effects tech
- Mic the actors
- Technical problem solver
- Labelling

Operator No3-

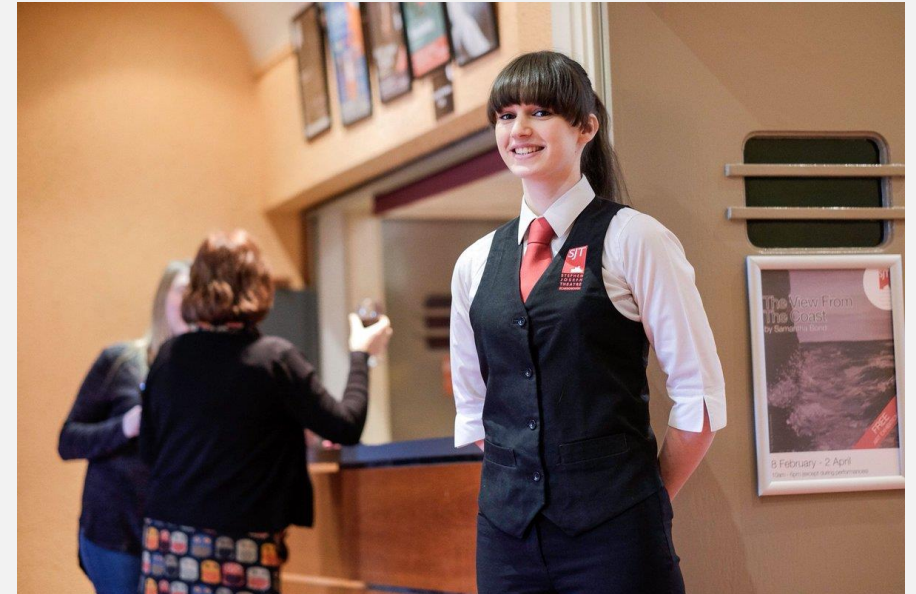
- General assistant
- Is a runner for No1 and No2
- Remains free and helps with any problems
- Normally the newest to the team

ROLES – SOUND CREW & IN HOUSE STAFF

Front of house staff-

- Welcome the audience into the building
- Sell food, drink and merchandise
- Guidance for the audience
- Scan tickets

People that you are visiting or touring are Resident staff, in house staff and local crew. They will know the house patch and kit that you are using. You **MUST** always ask the local crew to plug or unplug the venues equipment.



GET INTO THEATRE (2024). *What do Front of House staff do?* [online] Get into Theatre. Available at: <https://getintothetre.org/blog/what-do-theatre-front-of-house-staff-do/>.

ROLES – DESK MIXER

Good at-

- Being able to hear well and to be able to concentrate in a busy environment
- Understanding sound
- Know the equipment they are using
- Has attention to detail



ScreenSkills (2023). *Sound Mixer (also Known as Sound recordist) in the Film and TV Drama Industries*. [online] ScreenSkills. Available at: <https://www.screenskills.com/job-profiles/browse/film-and-tv-drama/technical/sound-mixer/>.

ROLES – MONITOR MIXER

They are at the soundboard, and they make sure the performers can hear mixes clearly through the floor or their in-ear monitors.

A bad mix will hold back a band's performance. These people are thick skinned.



Berklee (2020). *Live Sound Mix Engineer* | Berklee College of Music. [online] Berklee.edu. Available at: <https://www.berklee.edu/careers/roles/live-sound-engineer>.

ROLES – FOLEY ARTIST

They produce creative ways to use anything that can be taken to the recording studio to create the sounds we hear in movies and other medias. They can spend any where from a few days to a month devising, practicing and recording the sound effects. Foley artists have good ears and can think creatively.



Berklee (2000). *Foley Artist* | *Berklee College of Music*. [online] Berklee.edu. Available at: <https://www.berklee.edu/careers/roles/foley-artist>.

EQUIPMENT

EQUIPMENT

- Mixing desk (central)
- Laptops (input)
- Musical instruments (inputs)
- Microphones (input)
- DI boxes
- Cables
- Amplifier (output)
- Speakers (output)

MIXING DESKS – ANALOG AND DIGITAL

- Central point

It is an electronic device that combines, mixes and changes the level, dynamics and timbre level of the different audio signals. It brings together all the different instruments and parts of a sound into one track.



Analog



Digital

service, P. (2016). *What is a Mixing Desk - And Why Does My Event Need One?* [online] Pro System Services. Available at: <https://www.prosystemservices.com/news/what-is-a-mixing-desk-and-why-does-my-event-need-one/>.

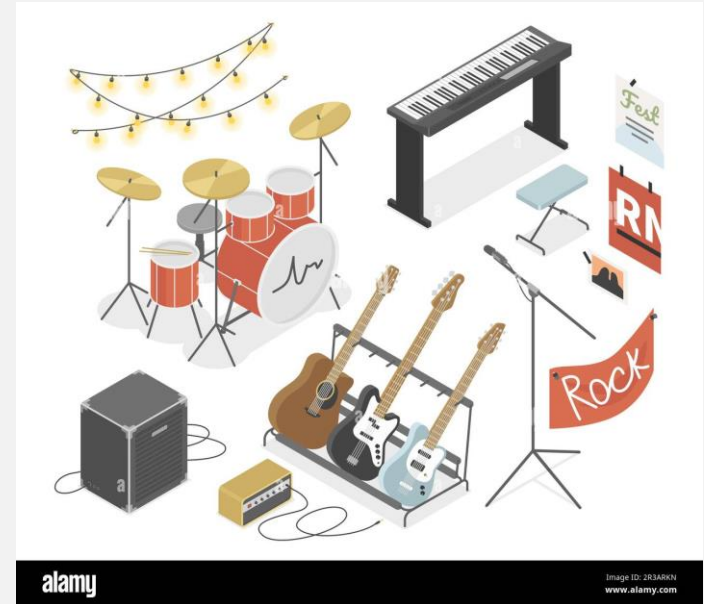
LAPTOPS / PHONES

- Computer media has become commonplace for an input for sound
- Qlab had become an industry standard for running sound effects cue
- Need a DI'd (Direct input)



MUSICAL INSTRUMENTS

- Electrical instruments need to be a DI'd
- A few will have a stereo or mono output
- Microphones
- Check with performer when plugging and unplugging



MICROPHONES

There are three main types of microphones which are –

- Dynamic microphones
- Condenser microphones
- Ribbon microphones

All require phantom power 48V

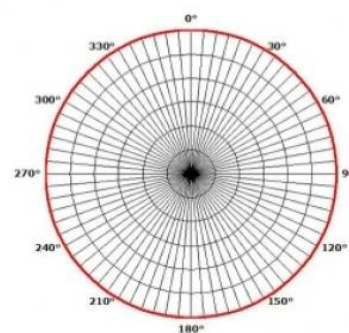
You use them for –

- Vocals
- Instrumental
- Radio

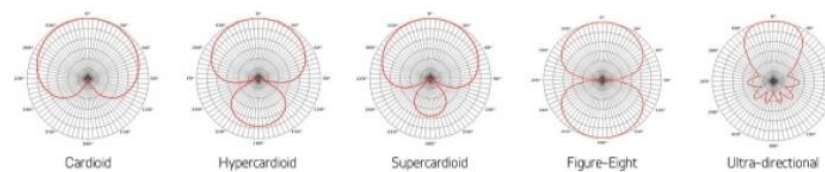
Polar patterns –

- Cardioid
- Super cardioid
- Omni directional
- Figure 8
- Shotgun

Popescu, L. (2024). *Types of Microphones: Choosing the Right Mic for Every Use*. [online] Avixa Portal. Available at: <https://www.avixa.org/pro-av-trends/articles/types-of-microphones>.

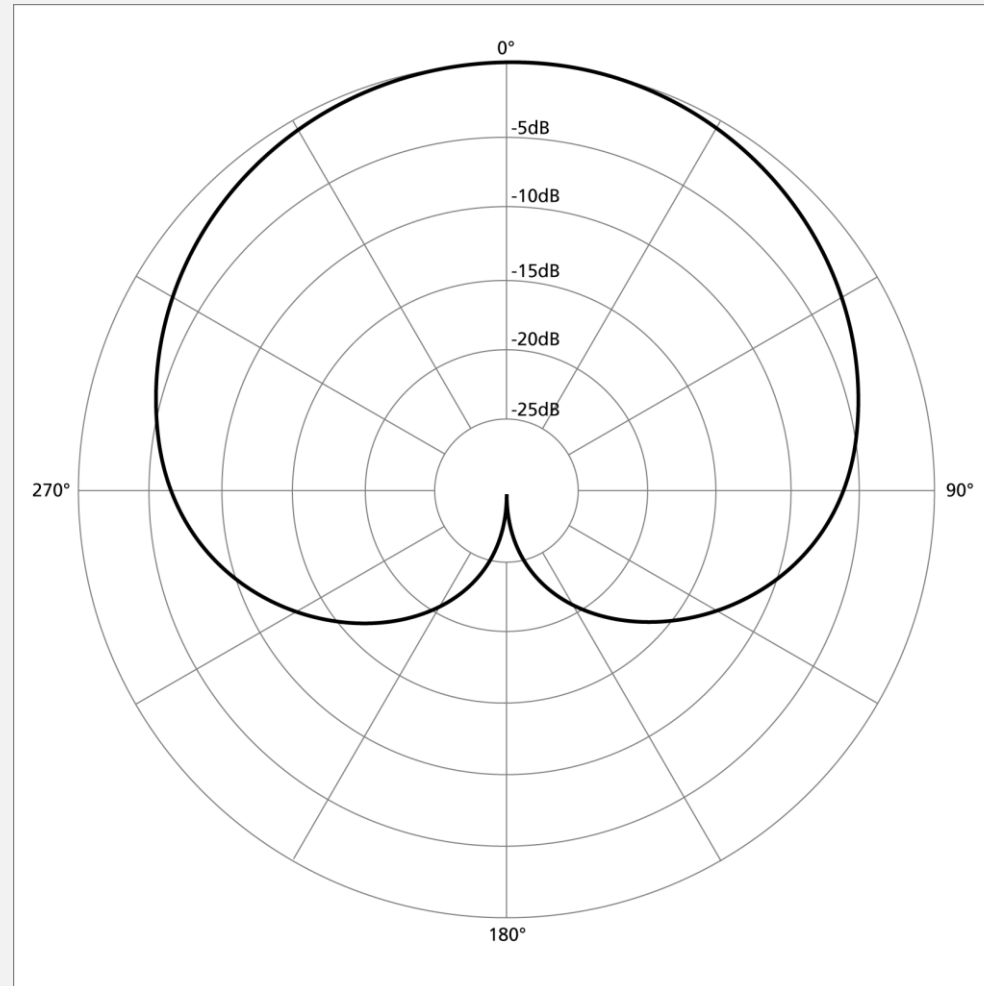


Omni-directional



POLAR PATTERN (AREA OF PICK-UP) CARDIOID

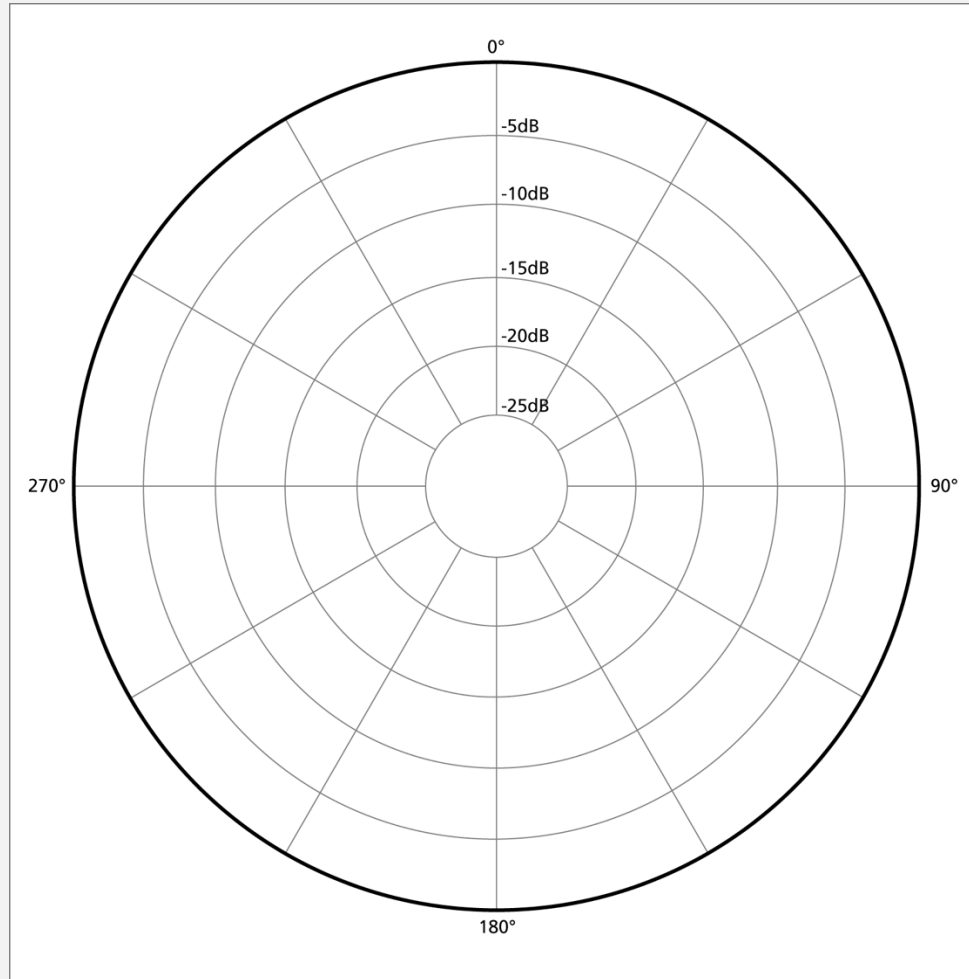
It is the most common polar pattern. It called cardioid because of its heart shape. It is widely used when there is a need to focus on one sound source and at the same time reducing pick-up from the sides and rear.



RØDE Microphone (2015). *What Are A Microphone's Polar Patterns?* [online] RØDE Microphones. Available at: <https://rode.com/en-gb/about/news-info/what-are-a-microphones-polar-patterns>.

OMNIDIRECTIONAL

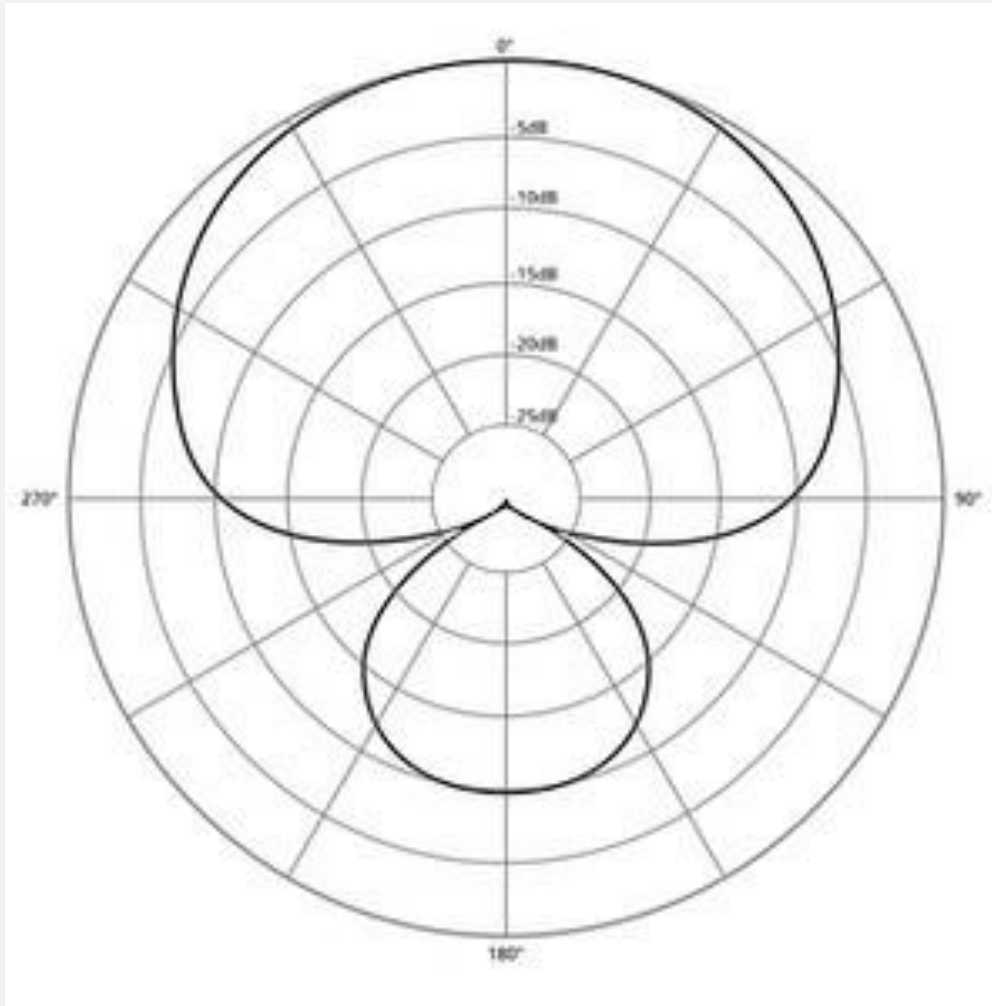
It picks up sound from all directions in a perfect sphere this gives the result of natural and realistic audio recording.



Synco Audio
(2022). *Beginner's guide to super cardioid mic.* [online] SYNCO. Available at: <https://www.syncoaudio.com/blogs/news/beginners-guide-to-super-cardioid-mic>.

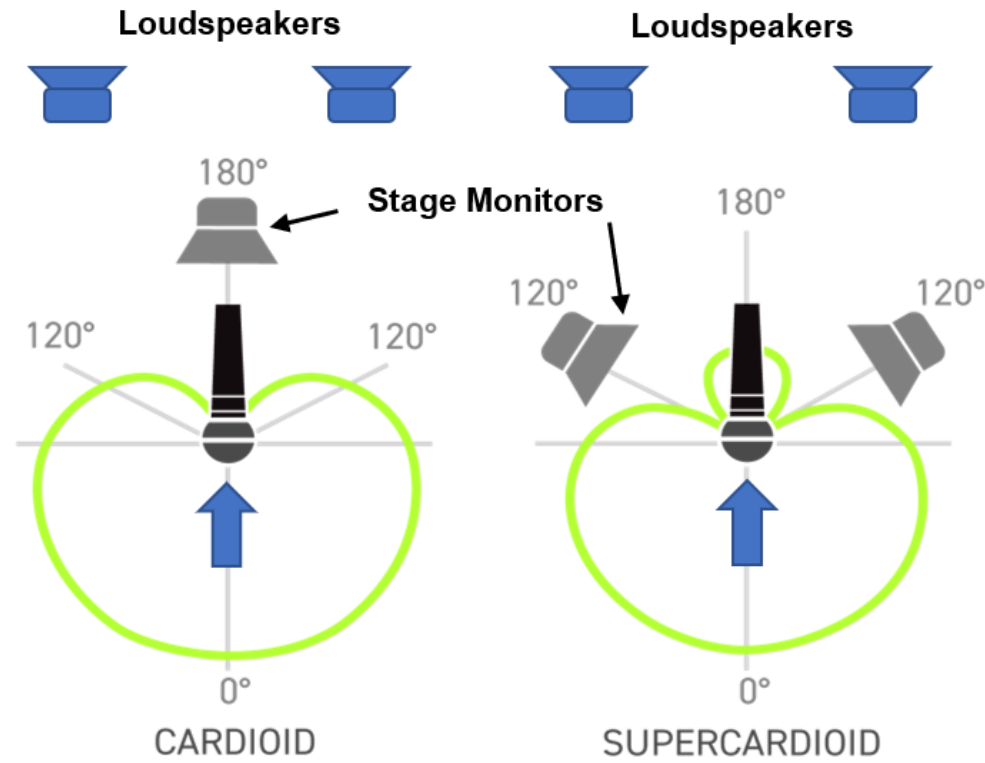
SUPER CARDIOID

Has an extremely directional polar pattern. Null points at 127 and 233 and a back lobe of sensitivity. It is most responsive to on-axis audio that the microphone points towards.



Synco Audio (2022). *Beginner's guide to super cardioid mic.* [online] SYNCO. Available at: <https://www.syncoaudio.com/blogs/news/beginners-guide-to-super-cardioid-mic>.

SPEAKER PLACEMENT



Courtesy of Shure

CABLES

Speaker cable – Balanced and unbalanced



Powercon



XLR



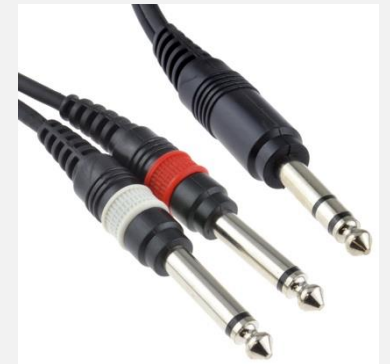
Mini jack / 1/4 inch jack



Speakon



Big jack / 3/4 inch jack



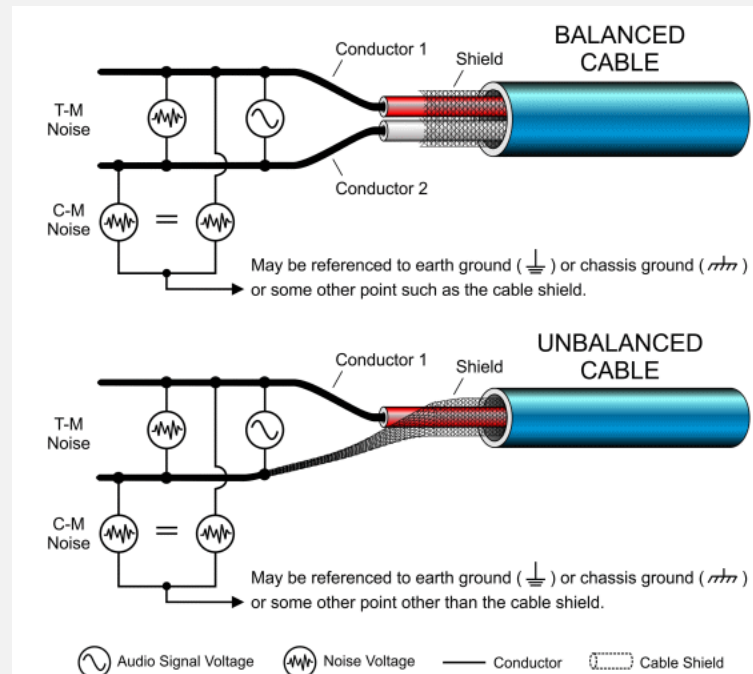
BALANCED VS UNBALANCED

Balanced Cables-

It has three conductors in the connector and three wires in the cable as well as two signal wires and a separate ground wire.

Unbalanced cable-

It has two connectors and two conductors each. They are connected by two wires inside the cable that is a signal wire and a ground wire.



Aviom (2014). *What's the Difference Between Balanced and Unbalanced?* [online] Aviom Blog. Available at: <https://www.aviom.com/blog/balanced-vs-unbalanced/>.

AMPLIFIERS

It takes a weak signal from your audio device and boosting it to a level that can operate your speakers or headphones. Its primary job is to increase the volume of the audio. It's measured in wattage.



sonos (2025). *What Is a Speaker Amplifier (And Do You Need One)?* | *Sonos Blog*. [online] Sonos.com. Available at: <https://www.sonos.com/en/blog/what-is-an-amp>.

SPEAKERS

- Active means it needs power for the internal
- Passive means its powered by a separate amplifier
- Tops, generated the HF
- Mid range, generates the mid range frequencies
- Sub, generate the LF
- They come in variety of sizes
- Line array (loudspeakers mounted in a vertical line)



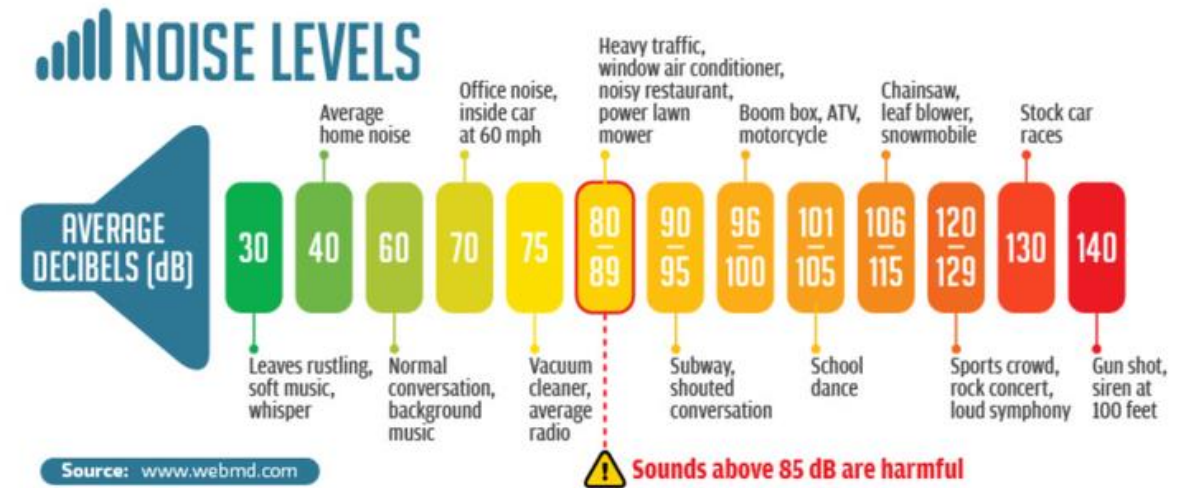
HEALTH AND SAFETY

HEALTH AND SAFETY

It very important in any work environment to have health and safety.

For sound you would keep in mind-

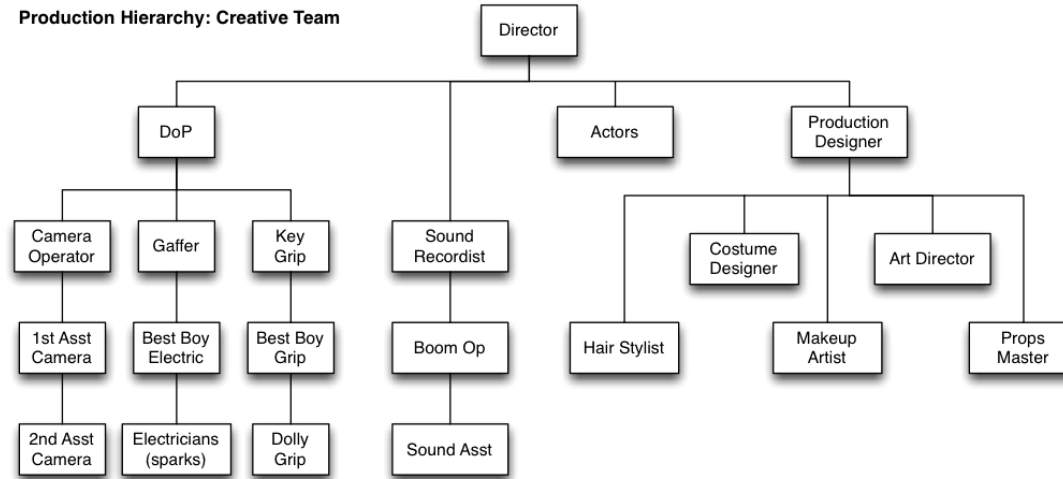
- Working at height
- Heavy lifting
- Loud noises
- Managing those around you
- Being mindful of the other departments trying to work around you



HIERARCHY

PREPRODUCTION HIERARCHY

Production Hierarchy: Creative Team



PAPERWORK

PAPERWORK

There are important bits of paperwork that needs to be done to complete the job, these include –

- Script breakdown
- Initial cues and effects on the script
- Mood boards of the vibe and look
- Cues sheets filled out with notes on the cue lines in and out or USB
- Build a show on Qlab for rehearsals
- Testing things with the SM (stage manager) and director to approve in rehearsals and makes notes
- A technical rider to be written with producer / PM / TM

Weekly World of Music, Rock and Roll
Sample Music Cue Sheet

Cue Sheet Classification: Revision	Program (series, film, etc.): Weekly World of Music
Date Prepared: 7/7/15	Program Title AKA(s): World of Music
	Episode Title: Rock and Roll
Initial Airdate: 6/18/15	Episode Title AKA(s): Rock N Roll
Category: Series	Episode Number: 103
Version: Cable	Production Number: WWM0103
Network/Source: MTV	
Program/Show Duration: 30 min. 0 sec.	Production Company: Music Music Music Productions
Total Music Duration: 5 min. 28 sec. (auto calc.)	Mailing Address: 3422 Music Place, This City, CA 31234-1768
	Cue Sheet Prepared By: Ima Worker
	Email Address: iworker@example.com

Usage Codes: BI = Background Instrumental | BV = Background Vocal | VI = Visual Instrumental | VV = Visual Vocal | MT = Main Title Theme | ET = End Title Theme | Logo

Seq. #	Cue Title (Song/Track Name)	Usage	Time In		Time Out		Duration	Role	Composer/Writer		Publisher	PRO	% Shares	
			h	m	s	h			m	s				First (and Middle) Name
1	Weekly World Opening Theme	MT	0	00	00	0	00	32	0:32	Composer Joseph B.	Jones Williams	My Publishing Co.	BMI	50.00%
												ASCAP	50.00%	
												BMI	50.00%	
												ASCAP	50.00%	
2	Weekly World Bumper	BI	0	05	25	0	05	40	0:15	Composer Joseph B.	Jones Williams	My Publishing Co.	BMI	50.00%
												ASCAP	50.00%	
												BMI	50.00%	
												ASCAP	50.00%	
3	Pop Song	VV	0	12	00	0	15	43	3:43	Composer Galen	Taylor Brown	SweetSongs USA	PRS	60.00%
												PRS	40.00%	
												BMI	100.00%	
4	Moonlight Sonata	BI	0	20	01	0	20	19	0:18	Composer Joseph B.	Beethoven Williams	joWill Music	PD	100.00%
												ASCAP	100.00%	
												ASCAP	100.00%	
5	Weekly World Closing Theme	ET	0	29	15	0	29	50	0:35	Composer Joseph B.	Jones Williams	My Publishing Co.	BMI	50.00%
												ASCAP	25.00%	
												SESAC	25.00%	
												BMI	50.00%	
												ASCAP	25.00%	
												SESAC	25.00%	
6	Music Music Productions Logo	Logo	0	29	52	0	29	57	0:05	Composer Sally	Simpson	Music Music Music Publishing	BMI	100.00%
												BMI	100.00%	

READ THROUGH AND REHEARSALS

Everyone on the team must come to the read through. This is a chance to meet everyone you will be working with and for. You start by taking notes and then talk with the team you are going to be working with. You then plan the rehearsals and stay connected with the stage manager for any runs that may happen. You also start to set up any tech in the room that may be needed and you also need to be prepared to cover any scenes and costume changes.



MICROPHONE HEADSET



An 8-way headset/ lapel system. These are the DTM 600 series wireless microphones that have twin UHF belt pack or handheld systems with up to 8 selectable frequencies and 8 channels (four systems) to be operated with a clear CH38 environment. 606-614Mhz, £776.00

<https://www.simplysoundandlighting.co.uk/products/w-audio-dtm-600-8-way-headset-lapel-system-606-0mhz-614-0mhz-v2> [Accessed 1 Feb. 2026].

Music, P. (n.d.). *Find a licence*. [online] www.prsformusic.com. Available at: <https://www.prsformusic.com/licences>.



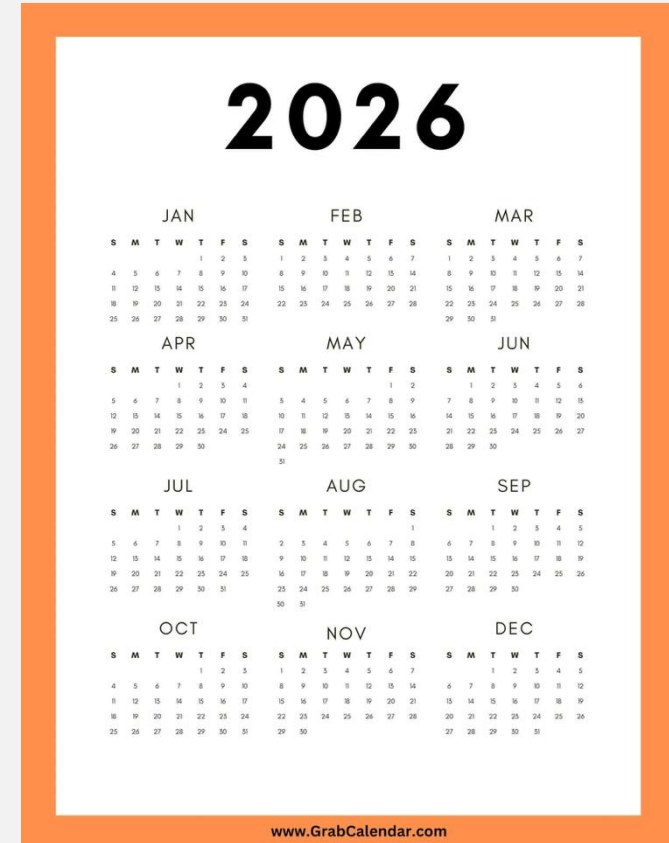
This is the Q-audio QWM1970BP-8W that is a complete 8-way wireless package designed for venues and teams. There are 4 dual true diversity receivers paired with 8 belt pack transmitters. Supplied in channel 38 with 606-614MHz. £1,099

beat, P. (n.d.). *Q-Audio QWM1970 8-Way Bodypack Wireless System with ADU*. [online] Prebeat. Available at: https://www.prebeat.co.uk/wireless-microphones/q-audio-qwm1970-8-way-bodypack-wireless-system-with-adu-bundle567?gad_source=1&gad_campaignid=19576406390&gbraid=0AAAAADtYdyDayQCNM-4xWQkcuP-1G9KJb&gclid=EA1aIQobChMI-KfL4Im5kgMVyZZQBh0HMDwjEAQYAIAABEGLEC_D_BwE.

PRODUCTION WEEK

PRODUCTION WEEK

- When rehearsals have gone well and the director is happy. You spend most of your time setting up in the theatre or checking the set up is correct.
- You must attend the run through for a chance in changes that could affect your design.
- Long hours
- Test all the equipment
- Book sound plot with the stage manager and director
- Have a working PA in your rehearsal room so you can show the director your sounds through small speakers.



TECH REHEARSAL

- Be there 1 hour earlier to start doing paperwork and copies to the stage manager.
- Check the power to everything
- Have a back up plan
- Takes as long as it takes; be prepared to be there all day.
- Be nice, happy, alert, helpful etc....



PRS LICENSE (PROFESSIONAL RENTED SECTOR)

- You can play royalty free music, but some music needs a music license.
- You need different types of licenses for different locations. For examples – Live music, Dubbing music, Playing music at work, radio, television, releasing music, film etc...
- Canteen or rest room costs 14.99 pence a day per 25 employees.



DESIGNING A SHOW

You need to –

- Mood boards
- Discussion with director after reading a script
- Play and explore
- Draw it out
- Technical rider
- Initial ideas



SOUND

SET UP

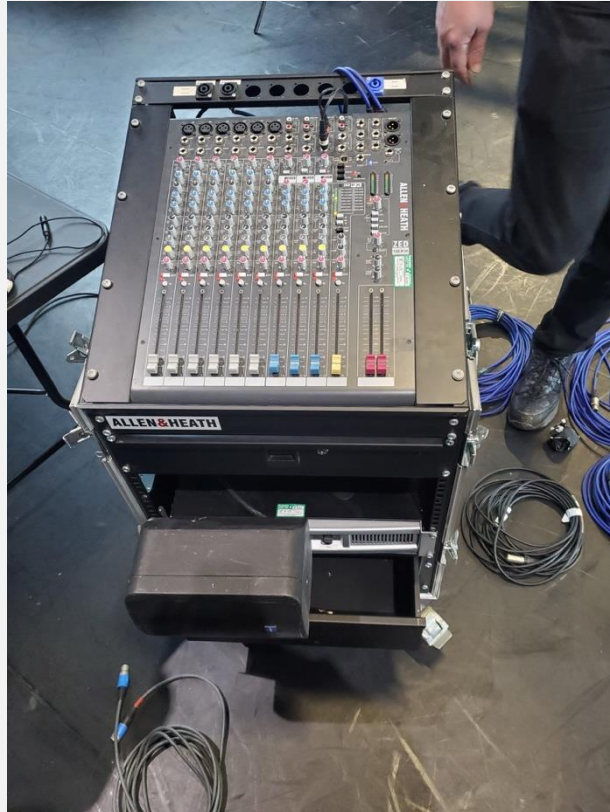


This is how a speaker should look when you finished plugging everything in. Nice and tidy with no wires where you can trip up on them or break them or rip the out of the socket.



This is the proper way to tape a wire down. You tape it down using gaffe tape and always do it as much as you can a way from where people walk.

SOUND DESKS

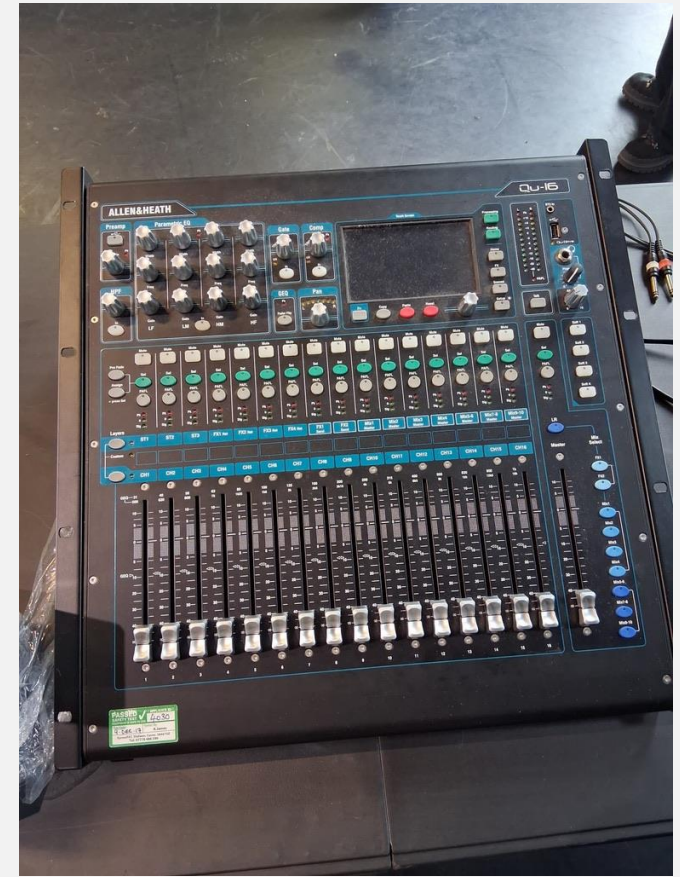


Here are two different but same sound desks. They do the same thing they are just different models.

DIGITAL SOUND DESK



This is a digital sound desk, and it does pretty much the same thing to a non – digitized sound desk. You can see the frequency graph on the screen which is very useful. In the photo to the left, you can see the speakers plugged into the main sockets on the back. You can also see where the route is connected to the desk is right (red) and left (white)



PUTTING AWAY A WIRE

When putting a wire away you never want to force the wire to wrap in the way it doesn't want to go. Instead hold the end in your left hand and wrap it round when you see it trying to curl. If it's going the other way twist the wire till it faces the right way and continue wrapping.



To fold a big wire, make a figure of eight and fold it over.

LIGHTING

DIFFERENT TYPES OF LIGHTING



These are all the different types of lights we learnt about



This is a flood light, and its beam has a soft edge and covers a large area. Its beam is 80-90 degrees and doesn't have a focus point. You can put gels into it and sometimes they have barn doors. The only way to alter the size is to move the unit.

DIFFERENT TYPES OF LIGHTING



This is a profile light its beam is either a soft or hard edge, and its angle is at 10-40 degrees. It focus point is hard or soft edges, shutters, gobo etc. You can have gels in it, shutters, iris, mask, gobo or donut. It has good optics allowing for distance use and good for shaping and focusing of objects in beam.



This is a Fresnel light its beam is soft edged only and diffused and has a beam angle of 8-60 degrees. Its focus is either a large or small beam. It can have gel frame / barn doors. Good controllable size feature.

DIFFERENT TYPES OF LIGHTING



This is a P.C. light, and its beam is soft edged only (diffused) and has a beam angle of 6-50 degrees. Its focus is a large or small beam, and it can have gel frames / barndoors. Very similar to the Fresnel but with better optics giving greater light output.

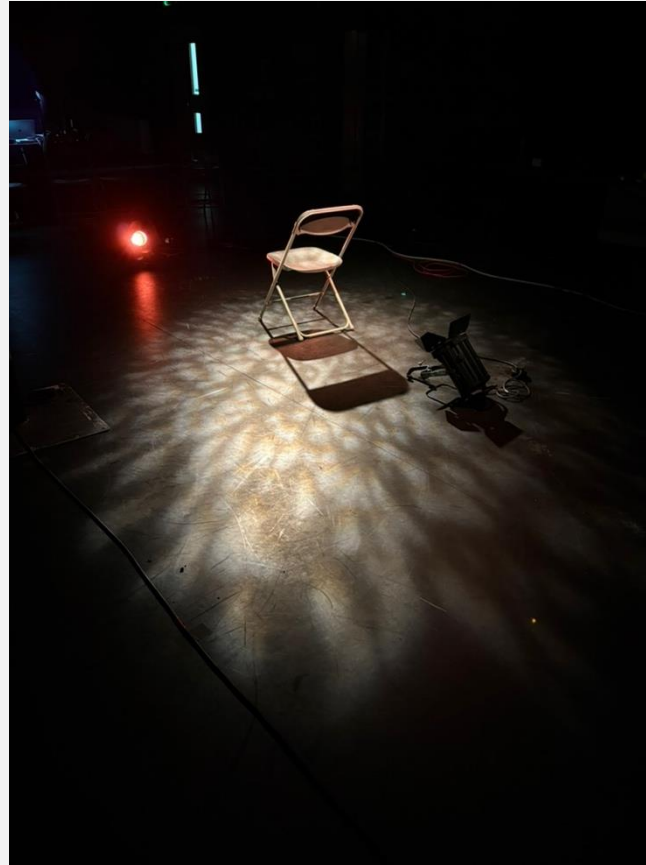
Beam
light



Par

These are a beam light and a par light they have a soft edge beam with 5–20 degree beam angle. The focus is a small bright beam, and it can have gel frames / barndoors / tophat / spill rings. It is specifically used to make an intense tight beam.

GOBO

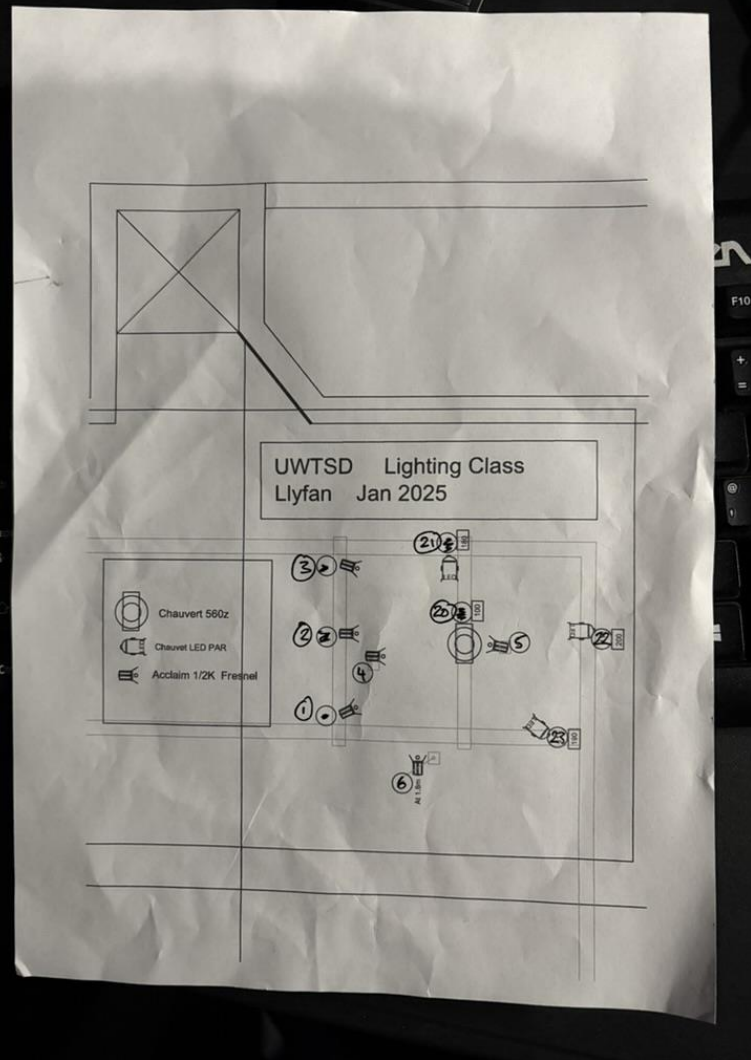


This a gobo light we had set up, and we had it facing the actor and you can see how little of the pattern you could see whereas if you went to the back and faced the audience you could see the pattern so much easier. So, when putting up a gobo you want it to face the audience and not away.



LIGHTING SHEET

This is the layout of the lights we were using and what their numbers were, so we knew which ones we were turning on.



LIGHT POSITION



LED No. 20 on



LED No.23 on

LIGHT POSITION



○ LED No. 22 on



○ LED No. 21 on

LIGHT POSITION

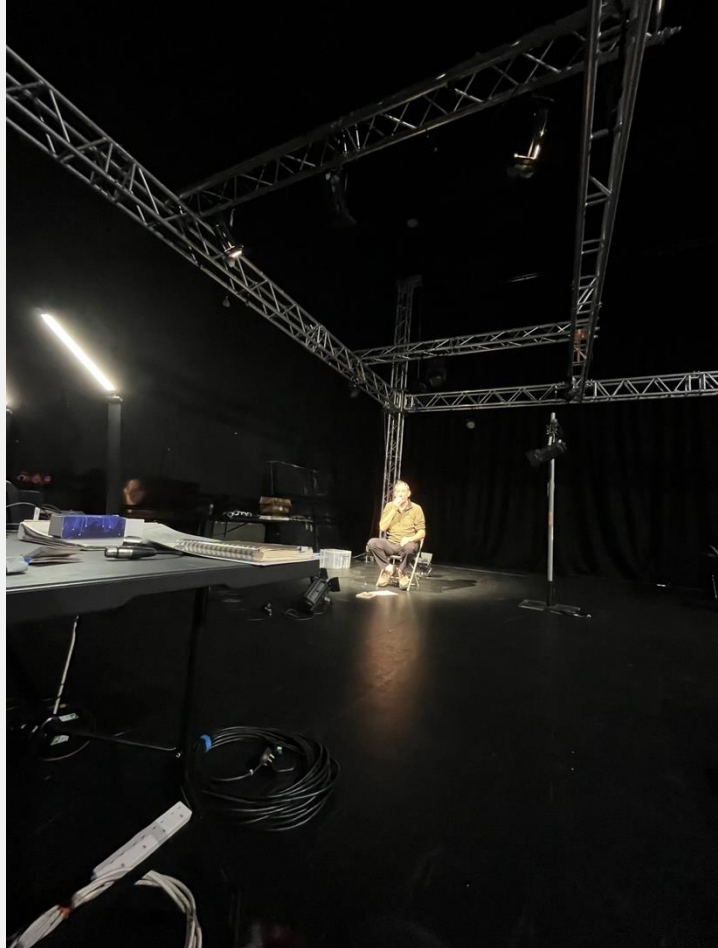


No.6 on



No.5 on

LIGHT POSITION

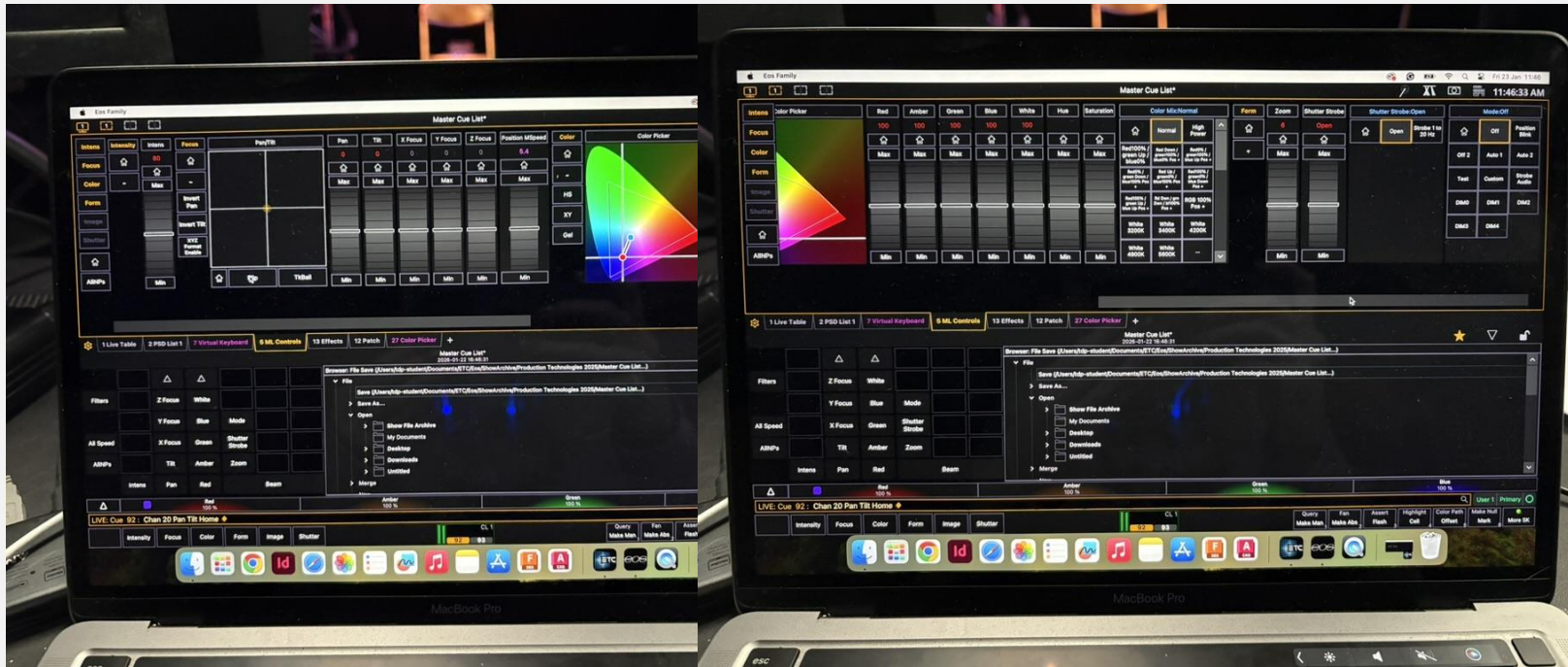


No. 3 & 1 on



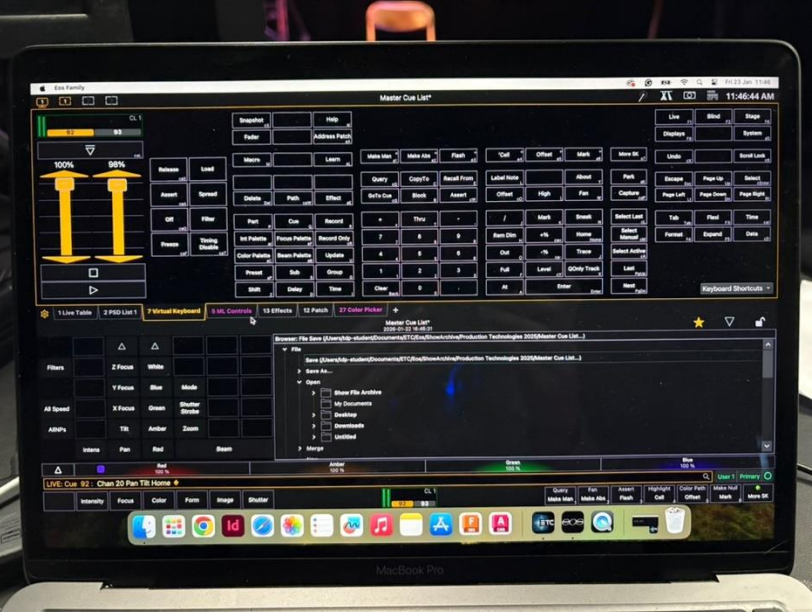
No. 2 on

DIGITAL LIGHTING DESK

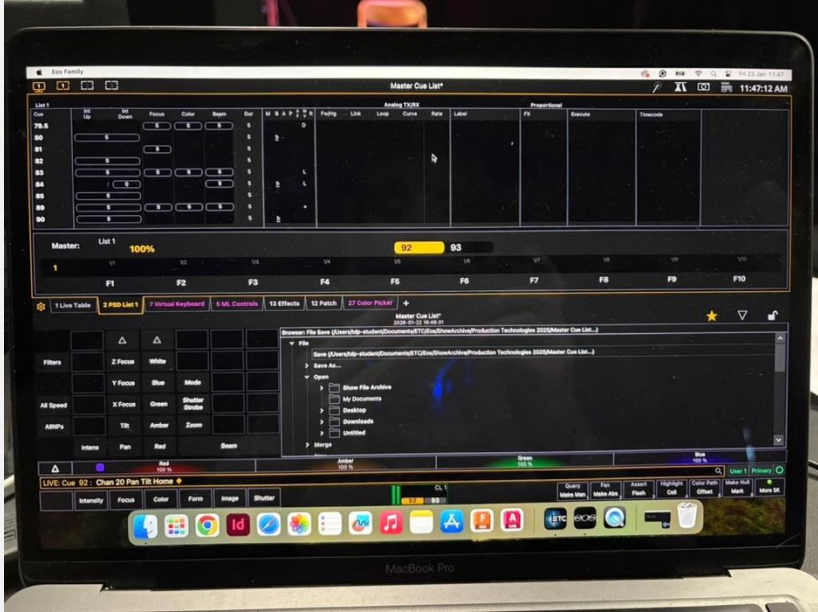


This is what the mac book looked like when we had light No.20 on.You could see all the options on what you can do like move it, strobe it, colour it and brightness.

DIGITAL LIGHTING DESK

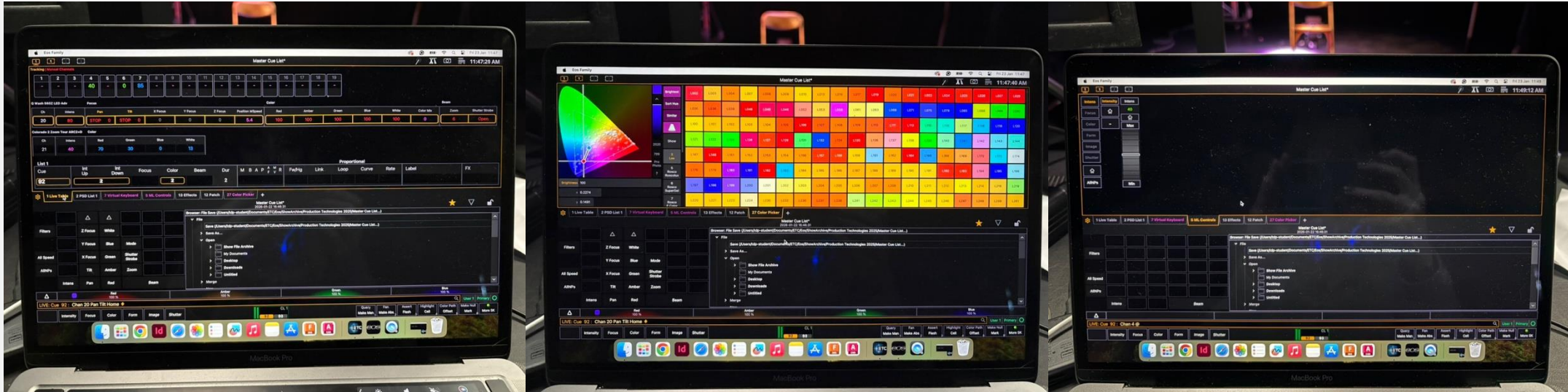


This is the visual keyboard, exactly how the physical one is just digitized.



These are how the cues looked on the mac and these are my cues from Rox's task.

DIGITAL LIGHTING DESK



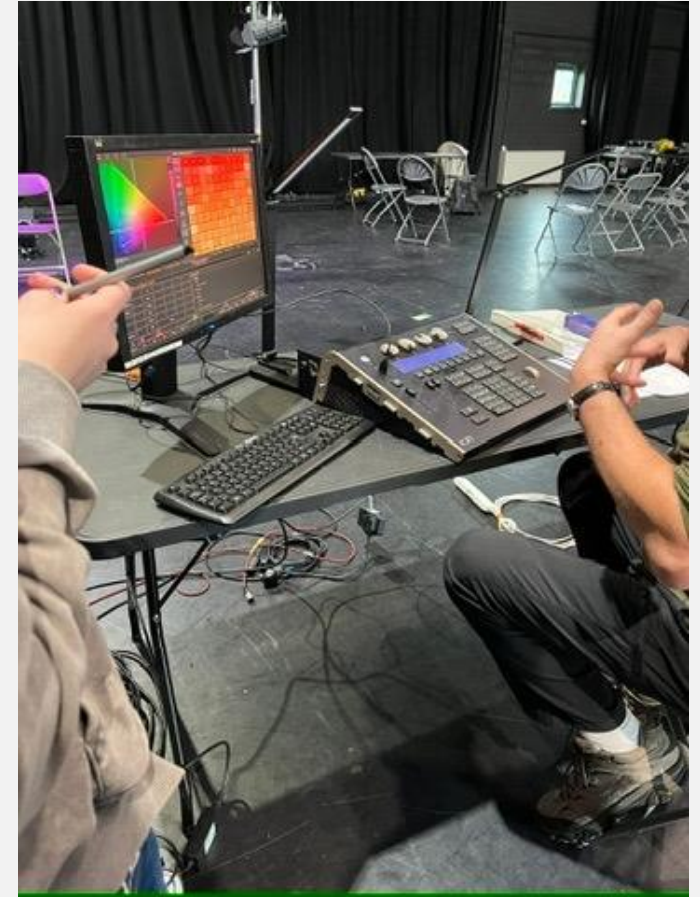
This is the live table, so you can see what it live.

This is a super easy way to colour the light as it has some premade ones and a “wheel” you can use to make your own.

This is how a Fresnel light controls looked like on the mac.

LIGHTING DESK

This is how the original lighting desk we used looked like. It had a Pc screen with a few menu's and then the lighting control desk where you type what you want and you can see it being displayed on the monitor. It much simpler compared to the one on the mac in terms in how it is laid out but the both do the same thing.



SHERLOCK HOLMES – A STUDY IN PINK

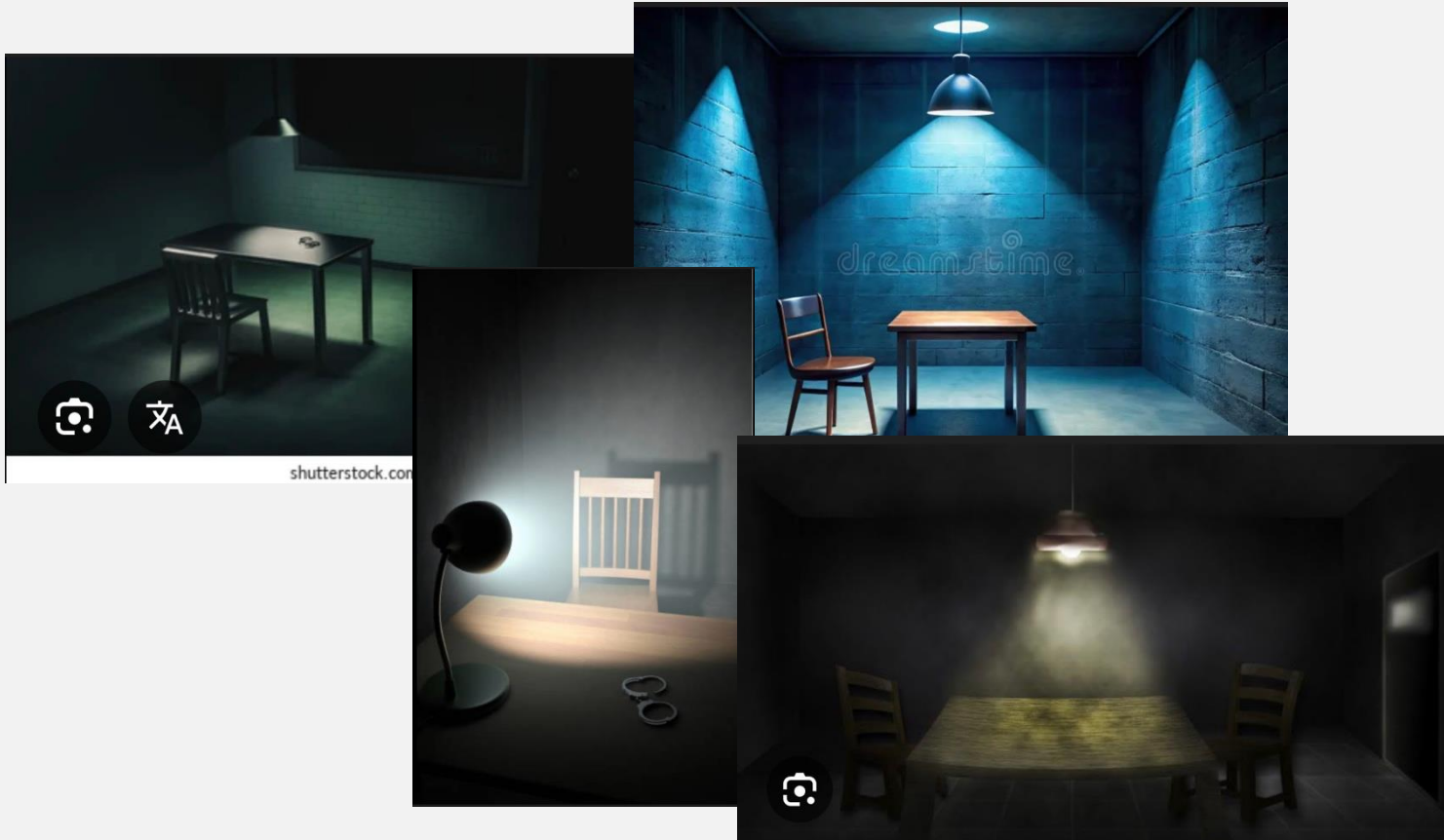
MY SCRIPT

The wedding ring, ten years old at least. The rest of her jewelry has been regularly cleaned, but not her wedding rings - state of her marriage, right there. The inside of the rings are shinier than the outside - that means they're regularly removed; the only polishing they get is when she works them off her finger. It's not for work - look at her nails, she doesn't work with her hands - so what, or rather who, does she remove her rings for? Clearly not one lover - she'd never sustain the fiction of being single over time - so more likely a string of them. Simple!

It's slightly damp - she's been in heavy rain within the last few hours. No rain anywhere in London in that time. Under her coat collar is damp too. She turned it up against the wind! She's got an umbrella in her left pocket but it's unused and dry. Not just wind, strong wind - too strong to use her umbrella. We know from her suitcase that she's staying over night so she must have come a decent distance. But she can't have travelled more than two or three hours, cos her coat hasn't dried. So where has there been heavy rain and strong wind within the radius of that travel time? Cardiff.

MINI MOOD BOARD

For my lighting I wanted it to show an investigation room whilst Sherlock is trying to figure out who the dead lady is with her pink coat.



EXPERIMENTING



I first started out by trying number 20 on at 30% power.



Then I upped number 20 up by 10% to make it 40% power and I felt that was too bright because it made Ash very bright.

EXPERIMENTING



I tried No.6 at 40% power and then I had number 5 at 70% power. I think Ash looks too bright in this photo; she looks very washed out. There is a high contrast between her clothes and skin.



I then put on No.4 light on to 40% power. It made her look flat.

EXPERIMENTING



I reduced No.4 down to 30% power which was better as it didn't make Ash look as flat.



I kept No.4 on at 30% and I put No.23 on at 30% power and turned it blue.

EXPERIMENTING



I turned off No.4 and kept No.23 on at 30% power because I wanted to see how it would look with just light coming from the back.



I kept No.23 on at 30% power and turned on No.22 at 30% and made the colour white. This made the blue light less vibrant, and it gave it a coolness vibe to it.

EXPERIMENTING



I turned off No. 23 to see what No.22 would look like on its own and I like how it lit up the back of Ash, and you couldn't see her face.

Whilst we were experimenting the original lighting desk gave up on us, so we had to switch over to a mac controlling the lighting. This was a good experience as it gave me the opportunity to use a physical and digital lighting desk.

EXPERIMENTING

I started to experiment on how I wanted it to look once I came to grip with how to use the lighting desk and lights.



No.22 on and facing the back to give Ash a silhouette. This makes it an intense vibe.



I then tried a colour like the ones on my mood board.



Then I added in light No.6 to see how it would look with the circle of colour in the back and being able to see Ash.

EXPERIMENTING



I turned No.6 off and turned on No. 1 to see how it would look with the lighting above instead to the side.



Turned of No.1 and turned on No.4 to try and get a lamp like in an interrogation room.



I turned off No.22 & 4 and turned on No.21 & 23.To get an intense and harsh lighting to try and make it intimidating.

EXPERIMENTING



I then wanted some pink lighting to match the title. I turned on No. 21 & 6 to create this image.



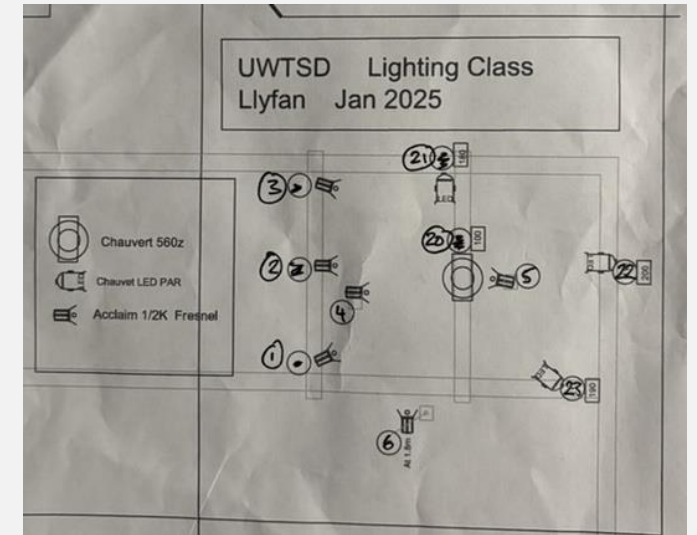
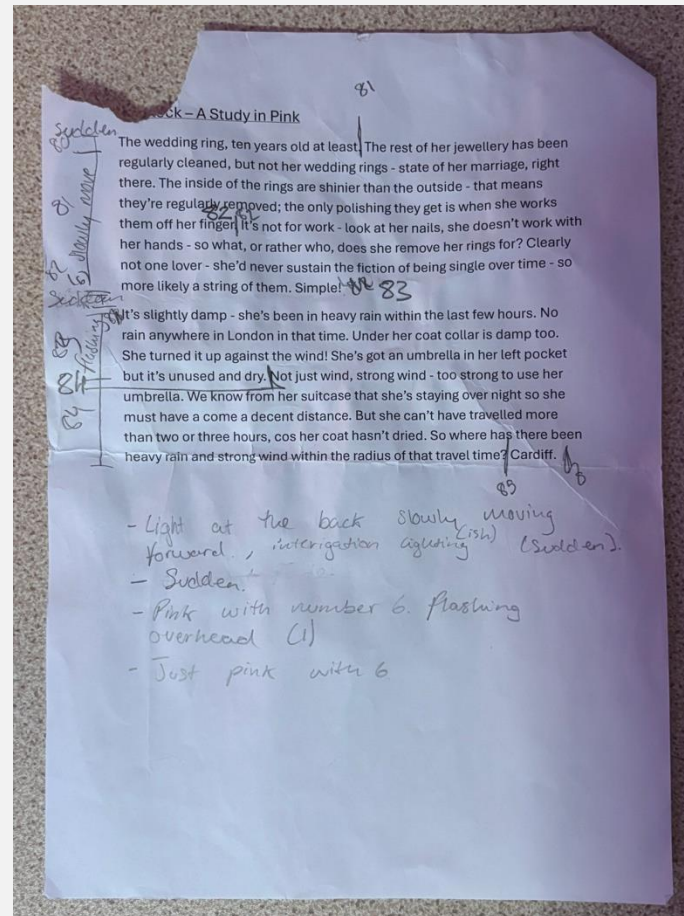
I then decided that I wanted to try and make some sort of weather vibe. To do this I used light No.22 and made it strobe for 1 second to represent lightning outside to show intense weather. I kept No.21 & 6 to keep it running smoothly and Sherlock investigating the lady in the pink coat.

CUE SHEET

This is my cue sheet that I gave to Felix to show them exactly when to change to the next cue.

My cues were-

- 80, No.20 on but facing the back with no light on
- 80.5, No.20 is on
- 81, No.20 moves forward
- 82, No.6 comes on
- 83, No.20 turns white and strobes for one second. No.6 remains on. No.21 turns on and is pink
- 84, No.20 stops strobing and turns off
- 85, No.6 off and finish with just No.21 on



FINALE OUTCOME



Cue 80



Cue 80.5



Cue 81



Cue 82

FINALE OUTCOME



Cue 83



Cue 84



Cue 85

EVALUATION

I really enjoyed messing around with the lighting and exploring ways you can show emotions through lighting and how important it is when it come to telling a story. I had problems with cue 80 and 80.5 because it would suddenly turn on and swing backwards which was no use to me as it ruined the interrogation effect I wanted to get from it. So, with Rox we produced the idea of having it start at the back with no light and the run cue 80.5 so it was a smooth transition. Next problem was when it strobed it would stay on and then start to strobe which really ruined the scene as it was the bright white light on and then off and then it would strobe. To solve this, we did something similar and made it on but with no light in cue 82 and then it would be ready to strobe in cue 83 to show the intense weather outside. What I would do differently is I would make the transition between cue 82 and 83 smoother as it looks very sudden which I kind of wanted but not that. To fix this I would have light No.21 on in the cue before so it doesn't look too random. But overall, I really enjoyed designing the lights and making a story to it. With more time I would perfect my skills.

HOW TO PUT UP AND TAKE DOWN A LIGHT

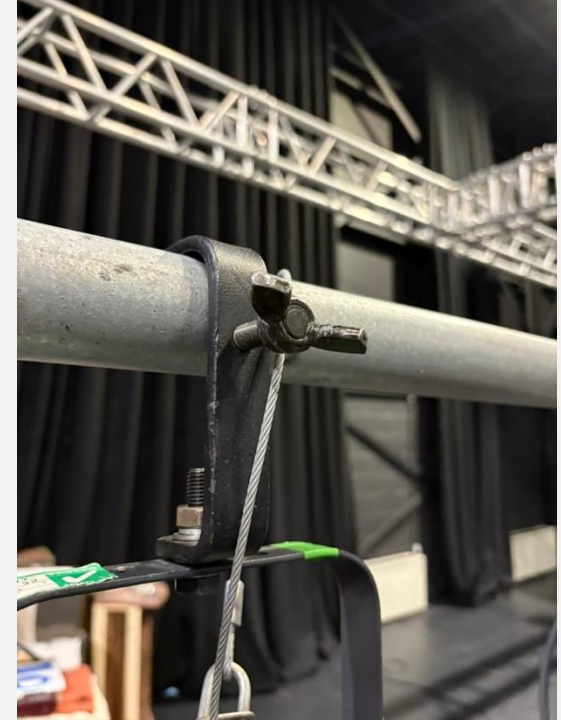
PROCESS



This is how the light should look when you put it away and when you find it.

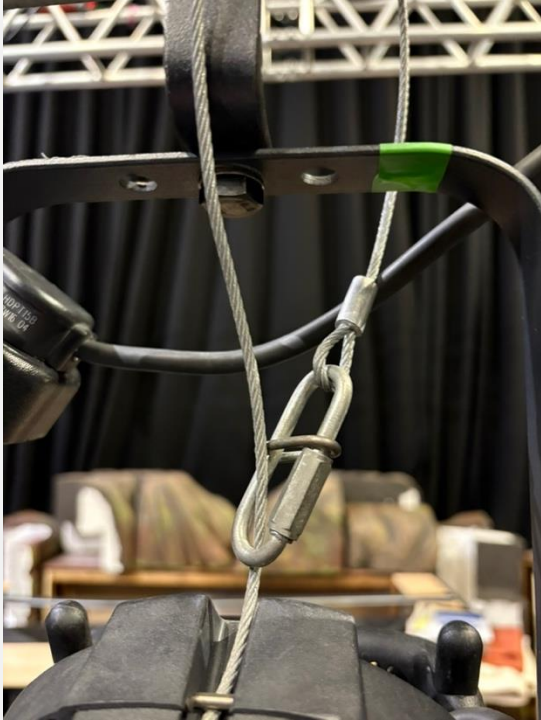


First, hang your light onto the fixture.



You then tighten the screw with only your hand as tight as you can get it. Never use a wrench unless told to.

PROCESS



Then attach the safety wire round the poll and tighten the carabiner. This is a must and a legal thing to do.



You turn the handle to adjust the light towards where you want to point it.

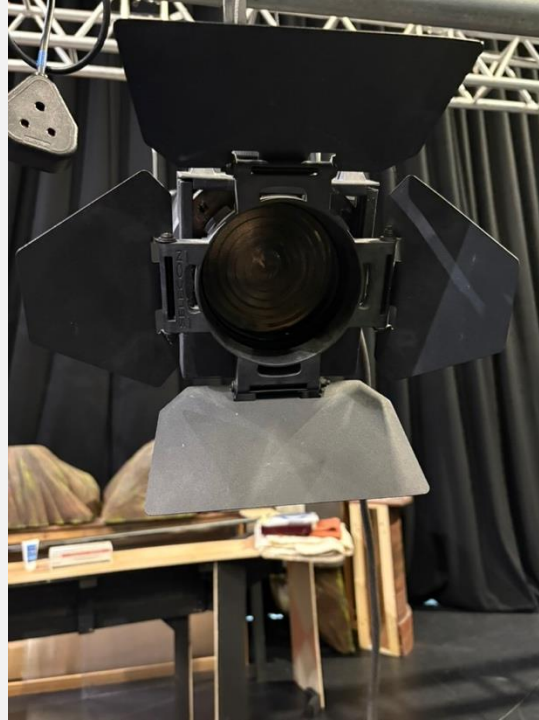


Next is the barn doors at the front of the light, if the light has barn doors.

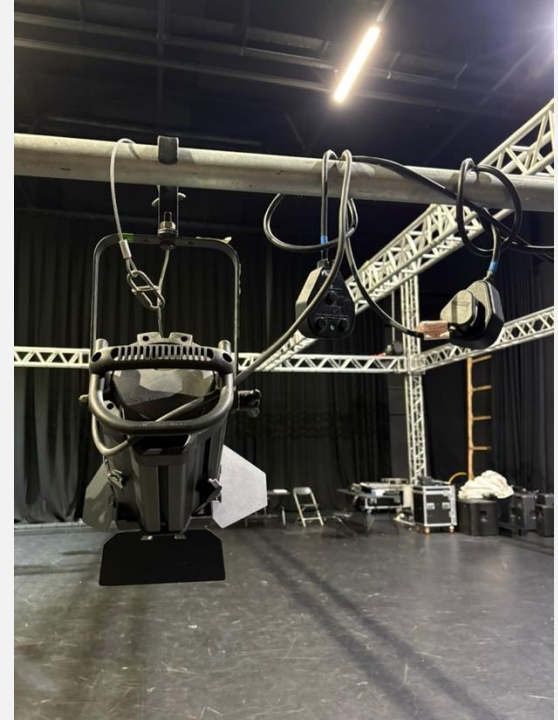
PROCESS



Open the big ones (top and bottom) first.



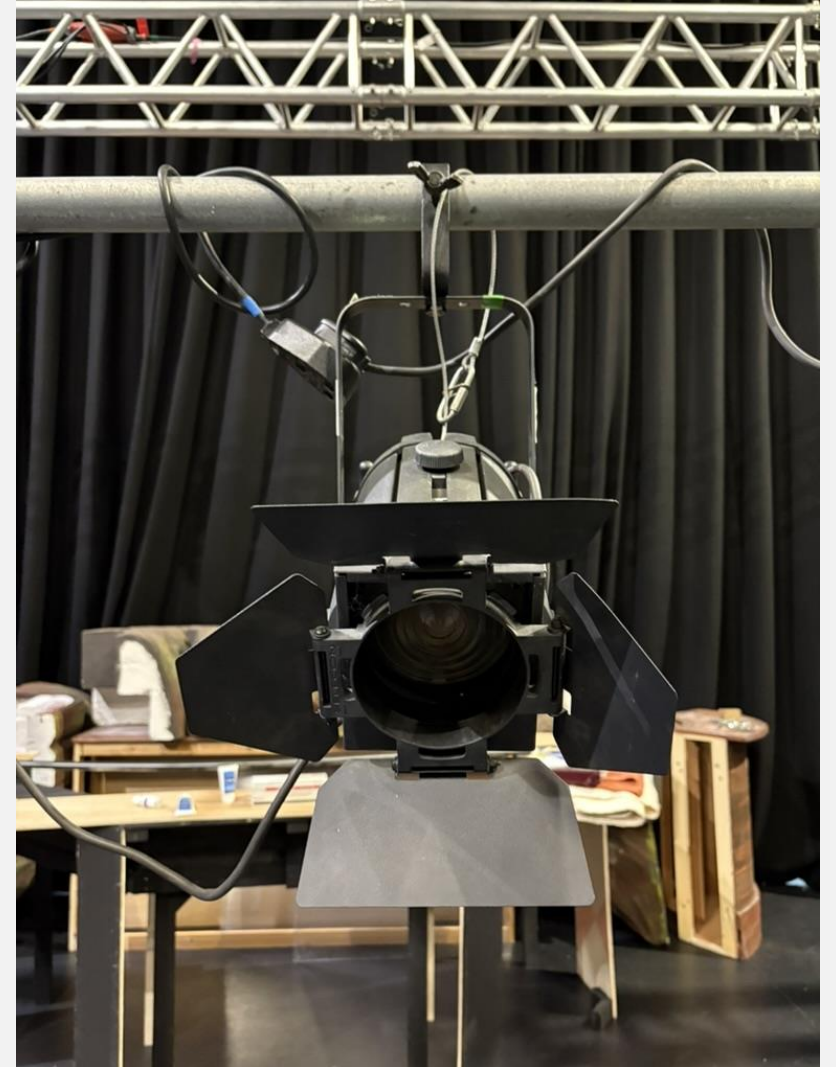
Then the small ones (left and right) second.



Finally, you wrap the wire round the pole and plug it into the socket.

ALL SET UP

This is your light all set up and ready to go to be used. To take down the light follow the steps in reverse.

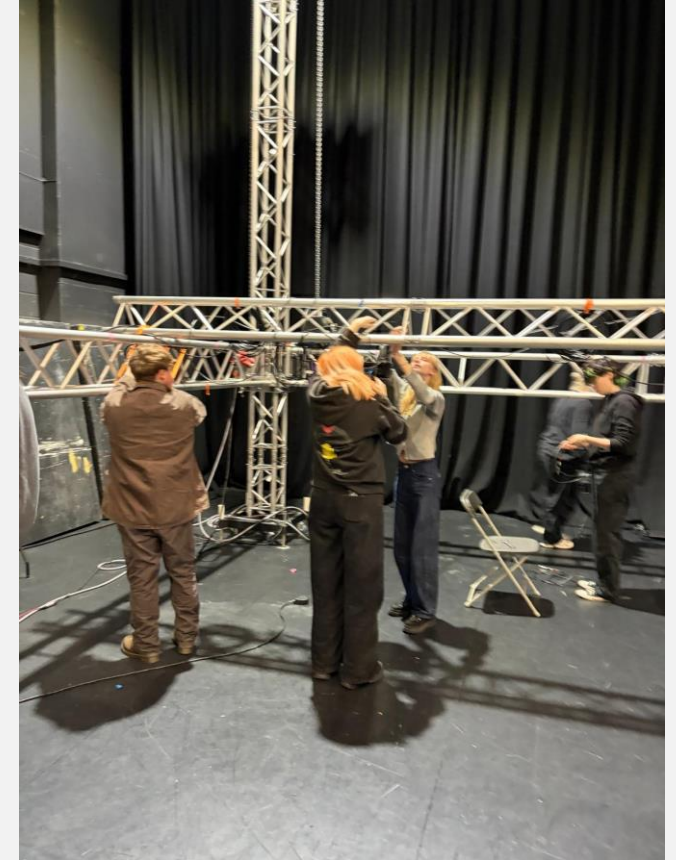


DERIGGING

DERIGGING

After we had finished our project with Rox we took down the the lighting rig set up.

- First, we tided up as much of the wires and lights that we could reach. Then we lowered the whole frame and took down the remaining lights.



DERIGGING



Then it was time to remove the frame that ran across the middle holding one of the lights. We did this by realising the lever and then unravelling it from the framework.



Then we removed the frames of from the centre and tidied up the rest of the wires and the desk.

DERIGGING



We then brought down the lights into this room to store them away.

HEMP RIGGING

Hemp rigging is the simplest and oldest form of stage rigging. When doing hemp rigging you should know the rigging system well at least know it well enough to spot any strange things happening during the operation. You should always inspect the system thoroughly at regular intervals and use the correct knots for attaching loads and tying off the pin rail. You should warn people on stage and the grid when moving a flown piece and don't forget to keep eye contact of the moving piece, you can always use a spotter



Glerum, J.O. (1997). *Stage Rigging Handbook*. Jay O. Glerum.

COUNTERWEIGHT RIGGING

This was the next best step for flying equipment for the stage. In the early stages they used a rack or arbor to stack metal weights in. The arbor was then attached to the hemp lift line and a single line was attached to an arbor. The sinking and stretching of the hemp lift line due to the humidity was still a problem. To solve this, they used wire lines made from lead. The wire guides gave the arbors some more vertical stability. After a while T-bar guide rails appeared and have become the most common form of guide system. You should safety inspect all component at regular intervals. Know the weight capacity of the system and always follow a safe practice when loading and unloading as well as operating the system.



Glerum, J.O. (1997). *Stage Rigging Handbook*. Jay O. Glerum.

MOTORIZED RIGGING

Stage rigging manufactures combine industrial-grade motors like speed reducers, breaks controls and special components. As it is suspended over people it requires an operational safety device which is not found on winches used in the industry. You should know the system and check at regular intervals for safety inspection. Always watch it when moving or have a spotter and warn people onstage that you are going to move it. Don't forget to check your cue sheet to see which piece need moving in which direction.



FOLEY ART

INTRODUCTION

For this project we were given a 6-minute silent video to make foley sounds to. We had a total of five scenes to make sounds for. The first one was someone walking on the beach. Second was someone hammering a nail. Third was eating lettuce and dipping it. Fourth was popping balloons and final one was a scooby-do running scene.

BEACH SCENE

Our ideas-

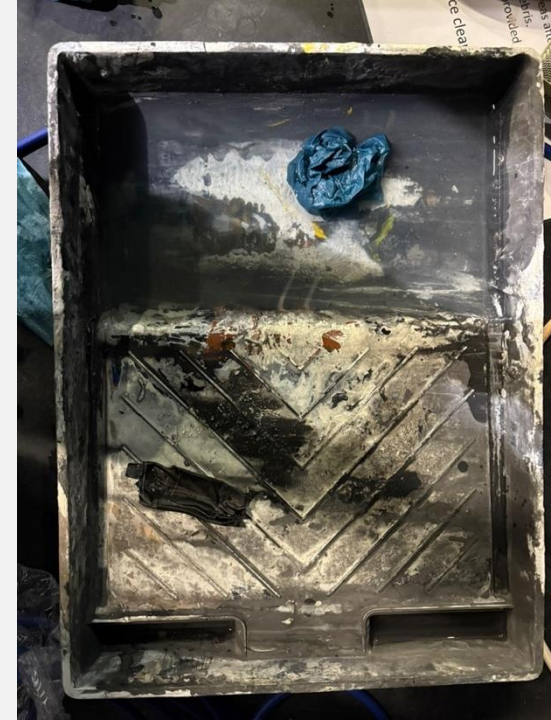
- Shaving foam and spatula
- Sause
- Hair mouse
- Rustling of tissue paper to make the sound of water

We went for the hair mouse for the feet stepping on the sand because it sounded the closest and felt the most realistic. The wet tissue and water was also the most realistic for the person walking through the water and gave that solid but fluid sound. Blowing into the microphone was perfect for the wind sounds, even Stacey thought we were playing aa soundtrack of wind.

We blew into a microphone to make wind sound effects a if we were really at the beach.



We used the hair mouse to make the sound of feet in the sand.



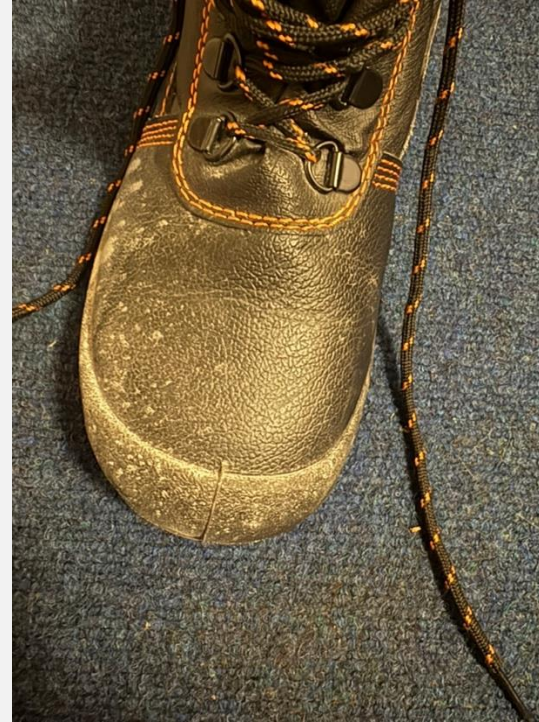
We used water and a wet tissue to make the feet in the water noises and taking of the sock.

HAMMERING A NAIL

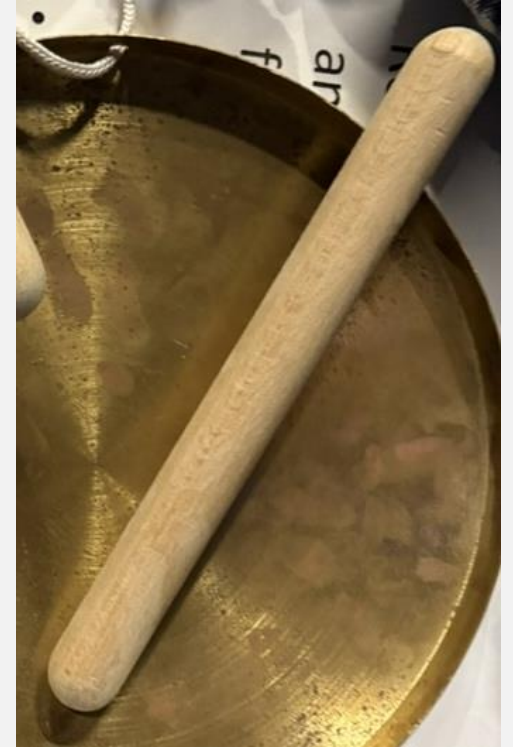
Our ideas-

- Steel toe capped shoes
- Tapping a half full plastic water bottle

We went for the steel toe capped shoes because when you hit the end of the shoes where the steel is with the wooden stick it sounds very similar to how a nail sounds being hammered through the headphones. For when the man is patting the wood we just patted the shoe.



The end of the steel cap shoe to make the wood sound.



The wooden stick we used to make the impact sound for the hammer.

EATING LETTUCE

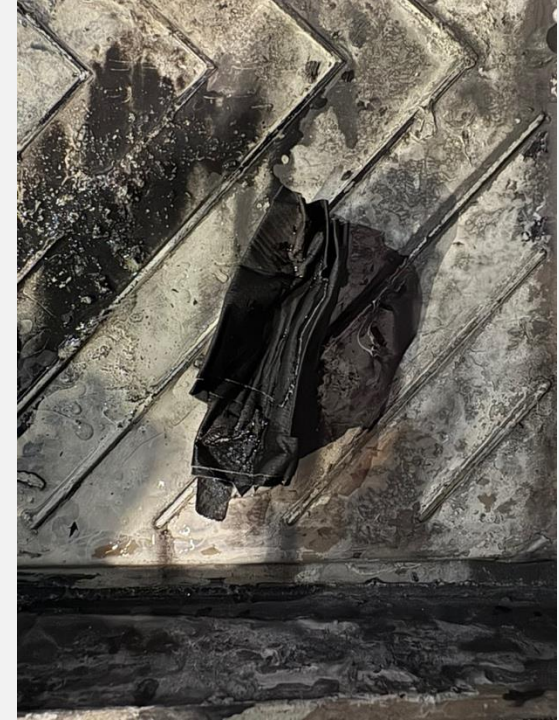
Our ideas-

- Velcro
- Wet freezer bags
- Leaf crunch with a foot
- Plastic

We went for the plastic option as we found putting the plastic slightly folded into the plastic cup it sound like someone chewing lettuce and it gave that crunch without it being too dry. We used wet gaffer tape dipped in water to make the sound effect of someone dipping lettuce into a sauce, it was the closest we could get to the noise.



The plastic cup with plastic inside to make the crunching noises.



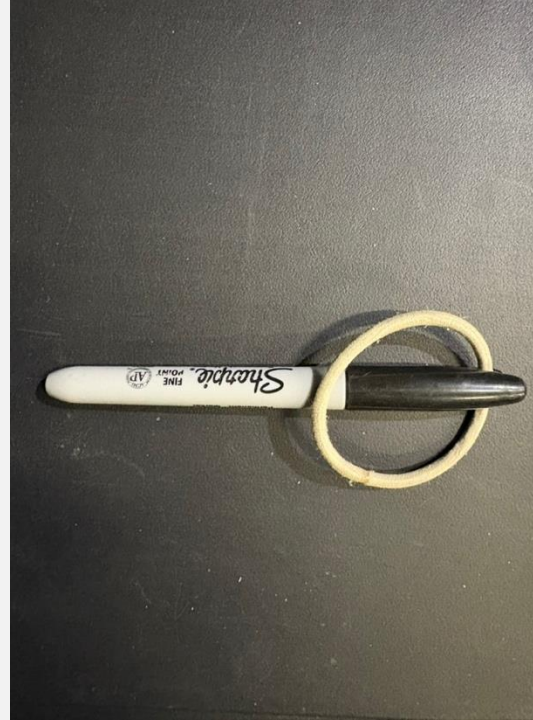
The tape used to make the dipping into the sauce noise.

BALLOON POPPING

Our ideas–

- Squeaky door
- Wet sponge against a glass
- Two pieces of wood hitting each other
- Cupboards slamming

We struggled to make the noise of a balloon popping as it was either too gentle or too solid. We ended up going with a hairband attached to a sharpie pen and hit it against the table. For when the man touches the balloons, we used a wet hand and foam to make the noise as it was almost perfect and identical to that rubber sound when you touch a balloon.



This is the sharpie with the hairband to make the balloon popping noises.



This is the foam we used to rub a wet hand against to make the noise of when the man touches the balloons.

SCOOBY-DO SCENE

Our ideas-

- A zip
- Light switch
- Metal handle (door)
- Water being poured
- Mouth?

We ended up going with the door handles on the side of the rolling cabinet because it had the perfect squeak sound when you pulled it up and when you let go of it, it slammed and sounded like a door shutting. We had the wooden stick crash into the symbol on the floor for when they all crashed into each other. Finally, we used this turning bit on the microphone to make the wheelbarrow noises.

We used the end of a microphone to make the wheelbarrow noises.



We used this symbol and wooden sticks against the floor to make the crashing sound as it didn't ring for a long time.



This is the handle on the box that we used to make the door slamming and opening sound.

CONCLUSION

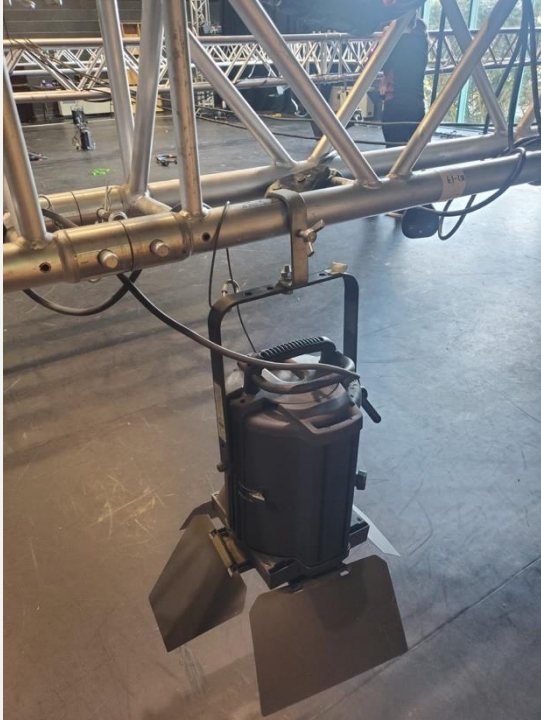
In conclusion, I really enjoyed doing this project and discovering how similar the sounds of items are to each other. I also discovered foley art is suits me well because the way I think creatively suits this project really well. Next time I would add more sound effects to the scooby-do scene to make it suit the video better as we went for the bare minimum in how many sounds we could do.

SKILLS COMPOTATION SET UP

SKILLS COMPETITION

We were invited to set up the Llwyfan for the Skill competition. We were in charge of setting up the lighting and making sure it was fit for the event.

HANGING THE LIGHTS



First, we hung up a total of 18 lights. We had big lights on the outside and small ones on the inside. We hung them up by hanging the hook onto the pole, tightened the bolt with your hand and attached the safety wire.



Next, we positioned and every lights using the handle and opened to barn doors.

WIRES



We originally, wrapped the wires around the frame. We were told this wasn't good for the wires, so we ended up running the wires along the frame back and forth the not damage the wire.

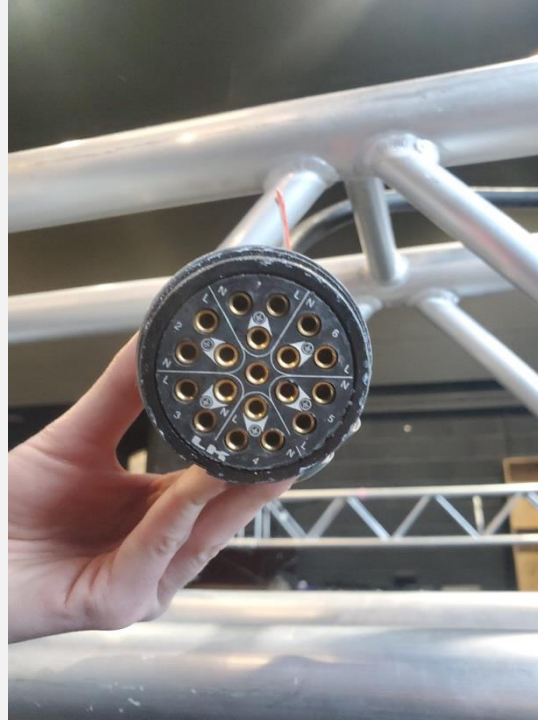


For the wires that needed to reach across we used an extension lead and had them go straight across slightly loose.

SOCAPEX 19-PIN



This is a scopex 19-pin connector it's an industry standard for power distribution.



This is a female socapex 19-pin connector.



This is a male socapex 19-pin connector.

LIGHT



This is light open, you pull open the handle to open the door, and you want to pull back all the way, so you have enough room to take the light bulb out and in.



This is a broken halogen lamp where the bulb has blown. You mustn't touch these bulbs as the oil on your skin can cause the bulb to blow.

PLUGS



This is where everything is plugged in and everything is labelled so you know which plugs belong to which.



These are more socapex 19-pin connectors leading out to the frame with all the lights on it.

EQUIPMENT



This is the lighting desk they are using for the computation.



These are the ladders we got out to align the lights up to the centre.

ALIGNING THE LIGHTING



This is how we laid it out. We measured out a 5m box with red tape and marked the centre. We then had people stand in each corner and in the centre to see where the light sits.



We would then go up the ladder and reduce the light to a spotlight and positioned the light facing towards the person in the centre and then flood it out again. Then we would move the barn doors if needed.

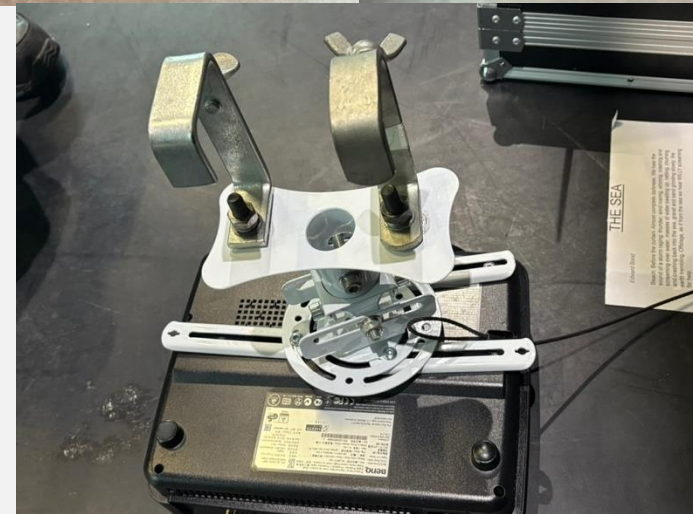
ALIGNING THE LIGHTING



For the ladder we would have someone stood at the bottom like Kate is and then move the ladder up and lock it into place so that the person could climb up it safely and adjust the light.

PROJECTOR

PROJECTOR



This is
how you
would
hang the
projector

IMMERSIVE ROOM

TECHNOLOGY

The room consists of three large video walls with a touch screen display to edit the screens as well as server stack.

In Carmarthen -

- Samsung IER/IEA LED display panels
- 76 cabinets
- 1.5mm pixel pitch
- Total dimension: Width – 18.2m and Height – 2.2m
- Total Resolution: Width – 12160px and Height – 1400px
- Sound is 7.1 Surround



TECHNOLOGY



This is the control panel for adjusting the screens brightness. The 100% power for how bright it is is only 50% brightness. Having the screen in standby is more power efficient.

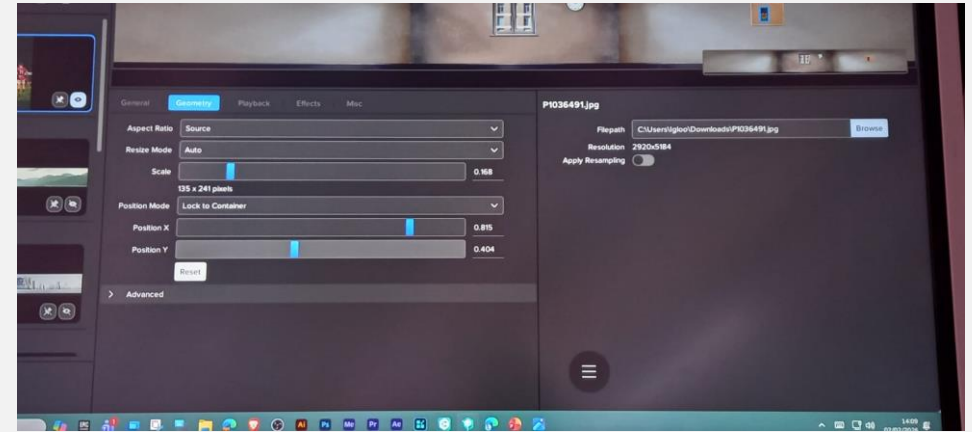
This is the server where the computer is held and it has an RTX graphic card in it to give high resolution images.



TECHNOLOGY



This is an example of how well it display thing and how it creates this environment without having to build a set.



You use a software called igloo core engine to change and adjust what is being displayed on the screens.

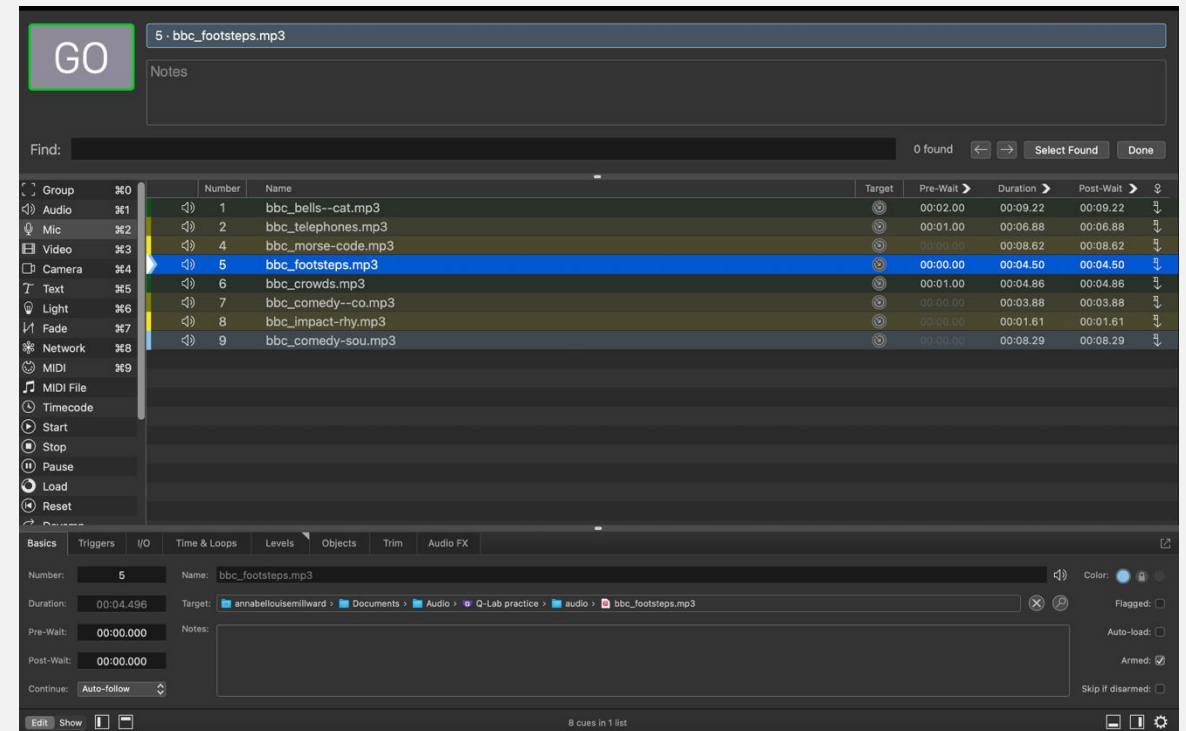
QLAB

QLAB

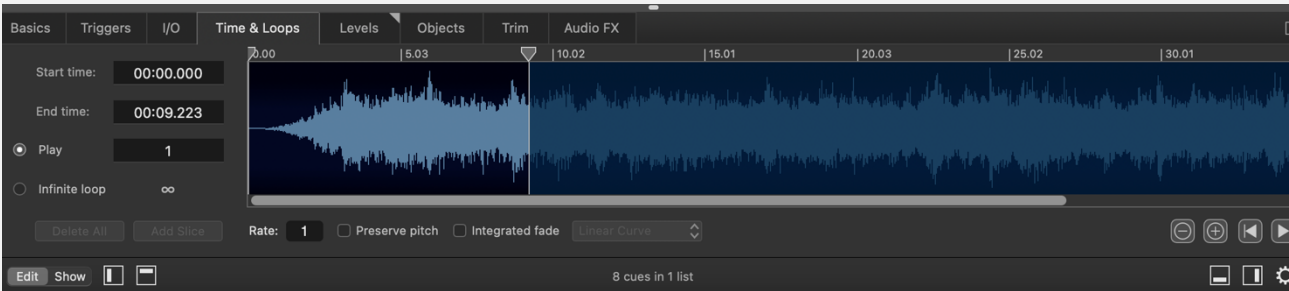
Qlab (2026). *QLab Overview*. [online]
qlab.app. Available at:
<https://qlab.app/overview/>.

Qlab is a place to build your sound, video, lighting and show control cues. You can create designs and have the flexibility to change them quickly. As well as have the ability to collaborate with other designers remotely.

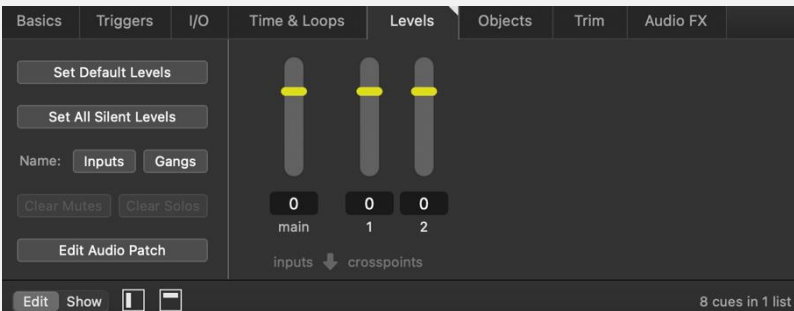
We were tasked to explore this in class. We were given a project to make a soundtrack for and extract we were given.



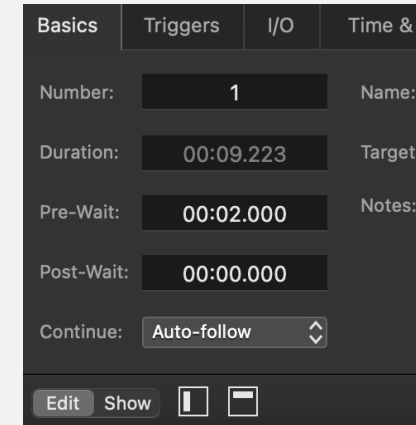
QLAB



This is where you can edit the duration of the audio or slice it up to the bit that you want. You can also loop it here



This is where you control the levels of volume.



This shows the which cue you are on (1) the duration of the audio. It also shows how long you can delay it to start and finish. This is also where you can make the audio follow one after the other or just play at the same time.

PROJECT

We were given a task to make a soundtrack with videos and photos to this extract. For my group we decided on a sort of horror vibe. We created a mind map for what we wanted the extract to feel like when we presented it to the class (at the bottom). We then investigated the actual story to find out who was Willy and why was he screaming for help. We found out that his friend Colin is drowning in the sea and no one is stepping up to help them.

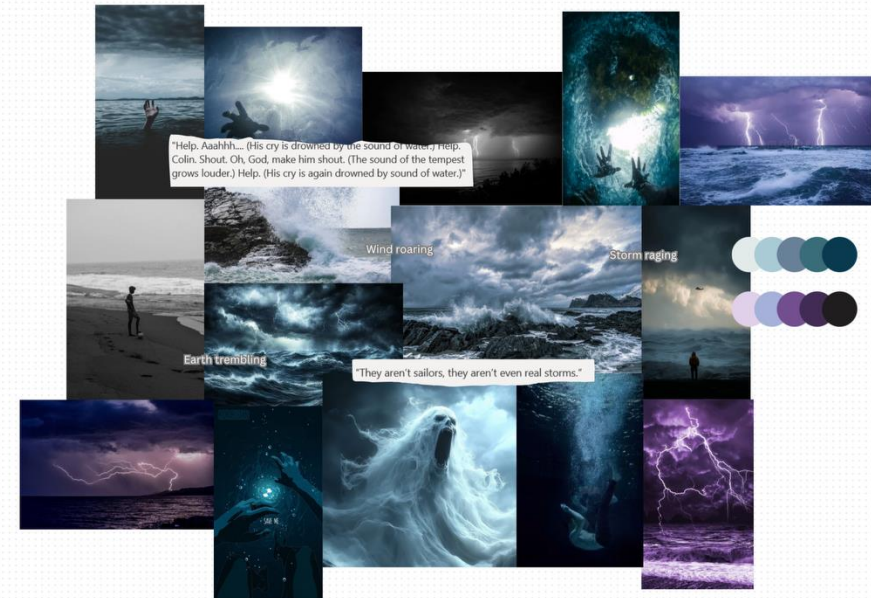
We then looked over the internet for images, videos and audio to make the scene. We found a song that would be good in the background of the sound effects, videos and images and built it from there.

In conclusion, I think the project went well as we managed to convey the feeling of suspense well with all the elements we chose. Next time, I would like to make some of the sounds our self and to try and sort out the fading of the video in time before we present to the class.

THE SEA

Edward Bond

Beach. Before the curtain. Almost complete darkness. We hear the sound of a storm raging: thunder; wind roaring, whining, crashing and screaming over water; masses of water swelling up, rattling, churning and crashing back into the sea, gravel and sand grinding slowly; the earth trembling. Offstage, as if from the sea we hear WILLY screaming for help.



LADY GAGA

MICROPHONES

Lady gaga uses a Shure BETA 54 microphone that costs \$162.00-\$411.91. It stands out as a compact powerhouse and delivering pristine sound quality while being discreet. It is a super cardioid polar pattern, and it ensures focused audio capture and minimizes ambient noise and feedback. This makes it ideal choice for live performances and studio recordings.

Some key features –

- Frequency response 20hz-20khz
- Has a sub miniature electret condenser microphone
- Fully adjustable headband for stability and comfort
- Does need phantom power
- Has a carry case

Lady Gaga uses this microphone often like at he Monster Ball, Born This Way Ball and Art rave tours.



board, E. (2026). *Shure BETA 54*. [online] Equipboard.com. Available at: <https://equipboard.com/submissions/178363> [Accessed 13 Feb. 2026].

WHO OVERSEES SOUND?

Lady Gaga brought a man named Benjamin Rice in to work on her film called *A Star Is Born* where he engineered and vocal produced the entire soundtrack. Benjamin Rice is a Producer, songwriter, vocal producer, mixer and engineer. He has Grammy winning record producer, songwriter, vocal producer, mix engineer and musician.



That's him
with Lady
Gaga

University , F. (2017). *Benjamin Rice | Hall of Fame*. [online]
Fullsail.edu. Available at: <https://www.fullsail.edu/hall-of-fame/inductees/benjamin-rice>.

MIDSOMMER MURDERS

FOLEY MIXER

Rob Price was the Foley mixer for 20 episodes (2015-2018) for *Midsommer Murders*. He is a sound designer and Foley mixer that is based in London. He is also the director of Earthsound Audio Post. He is known for the *Conclave*, *Strangers*, *Kandahar*, *Head of State*.

From: Annabel Millward (2501993) (2501993@student.uwtsd.ac.uk) ✓

To: rob@earthsoundpost.com Cc Bcc

Subject: Midsommer Murders, Foley Mixer question Importance

↶ ↷ 🗑️ | Aptos 12 ✎ 📎 📧 B I U | ☰ ☱ ☲ ☳ ☴ ☵ ☶ ☷ ...

Dear Rob,

I am a first-year student at University of Wales Trinity Saint David doing Set design and production and recently I've been doing a module on lighting and sound. One of my projects was to do Foley art and to investigate a tv series that we enjoy. Your name popped up and I was wondering if you could give me any detail in how you did it or the thought process behind it please. Thank you for your time.

Kind regards,
Annabel Millward

Sent him an email.
Haven't heard anything back yet.



IMDb (2024). *Rob Price - Sound Department, Director, Writer*. [online] IMDb. Available at: https://www.imdb.com/name/nm3948976/?ref_=ttfc_fcr_16_10#name_known_for [Accessed 13 Feb. 2026].

EVALUATION

EVALUATION

At first when we started this project, I was a bit unsure whether I would like it or not as the technology side wasn't something I had really investigated. As we got into the sound and lighting projects, I realised that I was too quick to judge and that the subject was very interesting and there was more to them than just pressing a button. The things I enjoyed most about this module would be doing foley art and making a lighting design for the Sherlock Holmes extract. I enjoyed doing Foley art because in my opinion I think it suits the way I think; having to think outside of the box and produce random objects that might suit what we are looking for. Making a lighting design and then doing it as well as exploring how to do things was very interesting because lighting tells a lot about a story / mood / character and I didn't really realise that until I did this project. The things I found hard in this project would be understanding all the terminology for all the wires and plugs etc. To improve on this, I would learn about them more and do activities that involve using them. I would have liked to have had a bit more time to explore foley art and to perfect it the scenes we had more as some of the scenes could have done with more sounds and some could do with slightly better versions. I also would have liked to have an extra lesson with Rox so that I could make the transitions between my cues much smoother as I don't like how the scene from the blue goes to the pink. Overall, I really enjoyed this module and exploring a different side to the Theatre, Tv and Film industry.

BIBLIOGRAPHY

Reference list

Aviom (2014). *What's the Difference Between Balanced and Unbalanced?* [online] Aviom Blog. Available at: <https://www.aviom.com/blog/balanced-vs-unbalanced/>.

beat, P. (n.d.). *Q-Audio QWM1970 8-Way Bodypack Wireless System with ADU*. [online] Prebeat. Available at: https://www.prebeat.co.uk/wireless-microphones/q-audio-qwm1970-8-way-bodypack-wireless-system-with-adu-bundle567?gad_source=1&gad_campaignid=19576406390&gbraid=0AAAAADtYdyDayQCNM-4xWQkcuP-1G9KJb&gclid=EAIaIQobChMI-KfL4Im5kgMVyZZQBh0HMDwjEAQYAiABEgLEC_D_BwE.

Berklee (2000). *Foley Artist* | *Berklee College of Music*. [online] Berklee.edu. Available at: <https://www.berklee.edu/careers/roles/foley-artist>.

Berklee (2020). *Live Sound Mix Engineer* | *Berklee College of Music*. [online] Berklee.edu. Available at: <https://www.berklee.edu/careers/roles/live-sound-engineer>.

board, E. (2026). *Shure BETA 54*. [online] Equipboard.com. Available at: <https://equipboard.com/submissions/178363> [Accessed 13 Feb. 2026].

editors, A. (2023). *Sound designer job profile* | *Prospects.ac.uk*. [online] www.prospects.ac.uk. Available at: <https://www.prospects.ac.uk/job-profiles/sound-designer>.

Fraser, N. (2002). *Stage lighting explained*. Marlborough: Crowood.

GET INTO THEATRE (2024). *What do Front of House staff do?* [online] Get into Theatre. Available at: <https://getintothetheatre.org/blog/what-do-theatre-front-of-house-staff-do/>.

Glerum, J.O. (1997). *Stage Rigging Handbook*. Jay O. Glerum.

IMDb (2024). *Rob Price - Sound Department, Director, Writer*. [online] IMDb. Available at: https://www.imdb.com/name/nm3948976/?ref_=ttfc_fcr_16_10#name_known_for [Accessed 13 Feb. 2026].

lighting and sound, S. (2025). *W Audio DTM 600 8 Way Headset Lapel System (606.0Mhz-614.0Mhz) V2*. [online] Simply Sound and Lighting. Available at: <https://www.simplysoundandlighting.co.uk/products/w-audio-dtm-600-8-way-headset-lapel-system-606-0mhz-614-0mhz-v2> [Accessed 1 Feb. 2026].

Music, P. (n.d.). *Find a licence*. [online] www.prsformusic.com. Available at: <https://www.prsformusic.com/licences>.

Popescu, L. (2024). *Types of Microphones: Choosing the Right Mic for Every Use*. [online] Avixa Portal. Available at: <https://www.avixa.org/pro-av-trends/articles/types-of-microphones>.

Prospects (2019). *Sound technician, broadcasting/film/video job profile* | *Prospects.ac.uk*. [online] Prospects.ac.uk. Available at: <https://www.prospects.ac.uk/job-profiles/sound-technician-broadcasting-film-video>.

Qlab (2026). *QLab Overview*. [online] qlab.app. Available at: <https://qlab.app/overview/>.

RØDE Microphone (2015). *What Are A Microphone's Polar Patterns?* [online] RØDE Microphones. Available at: <https://rode.com/en-gb/about/news-info/what-are-a-microphones-polar-patterns>.

ScreenSkills (2023). *Sound Mixer (also Known as Sound recordist) in the Film and TV Drama Industries*. [online] ScreenSkills. Available at: <https://www.screenskills.com/job-profiles/browse/film-and-tv-drama/technical/sound-mixer/>.

service, P. (2016). *What is a Mixing Desk - And Why Does My Event Need One?* [online] Pro System Services. Available at: <https://www.prosystemservices.com/news/what-is-a-mixing-desk-and-why-does-my-event-need-one/>.

sonos (2025). *What Is a Speaker Amplifier (And Do You Need One)?* | *Sonos Blog*. [online] Sonos.com. Available at: <https://www.sonos.com/en/blog/what-is-an-amp>.

Synco Audio (2022). *Beginner's guide to super cardioid mic*. [online] SYNCO. Available at: <https://www.syncoaudio.com/blogs/news/beginners-guide-to-super-cardioid-mic>.

University , F. (2017). *Benjamin Rice* | *Hall of Fame*. [online] Fullsail.edu. Available at: <https://www.fullsail.edu/hall-of-fame/inductees/benjamin-rice>.

UWTSD (2025). *Immersive Rooms* | *Swansea and Carmarthen*. [online] Digital Services | University of Wales Trinity Saint David. Available at: <https://digitalservices.uwtسد.ac.uk/dee/immersive-rooms/> [Accessed 13 Feb. 2026].