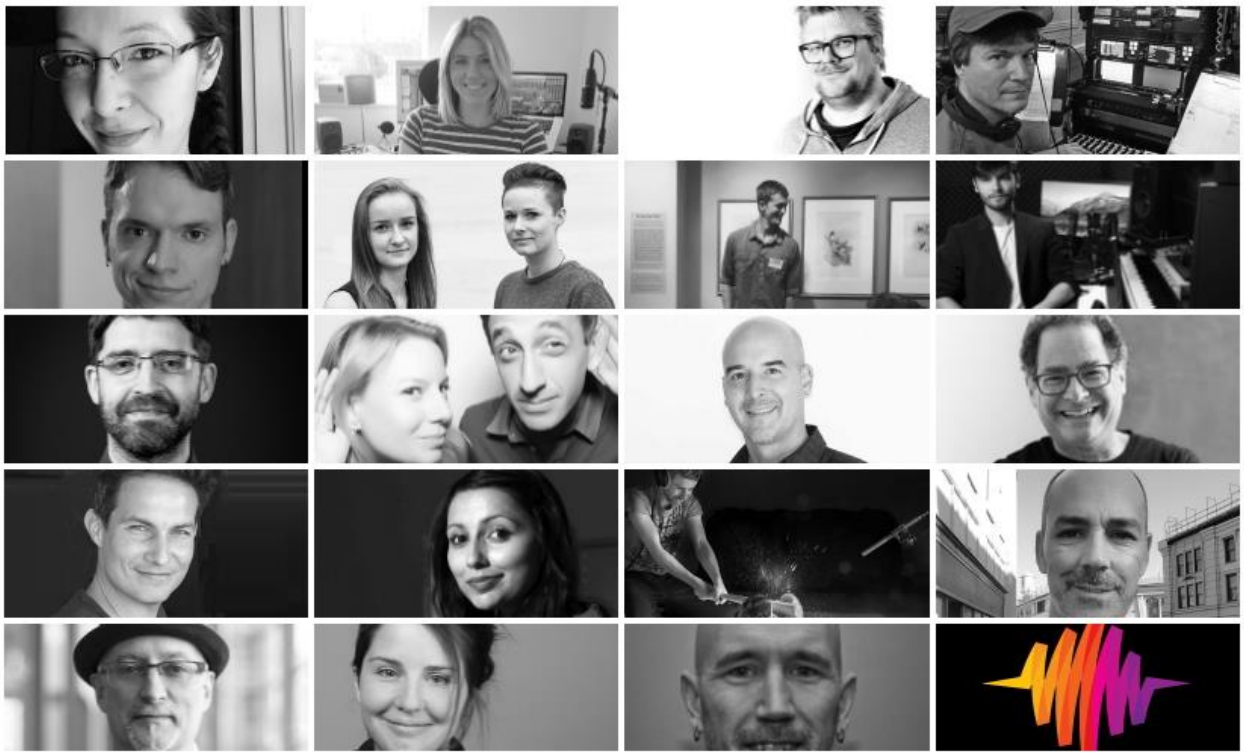

The Sound Success Guide

- insights from 20+ audio industry experts on how to get started and succeed in 18 different types of audio jobs

(to help you grow – or kickstart – your sound business, branch out, learn new skills, and give you multiple revenue streams that'll protect you from the ups and downs of the audio industry)

The guide covers the following audio job types:

ADR Recording • Advertising Sound • Animation Sound • Audio Branding • Audio Programming • Documentary Sound • Field Recording • Film Sound • Foley • Game Audio • Music Editing • Production Sound • Sound Editing • Sound for VR/AR/MR • Teaching Sound • Television Sound • Trailer Audio • UI/UX Sound Design

– with contributions from

Adam Croft • Anna Woźniewicz • Anne-Sophie Mongeau • Chris Pinkston • Emma Butt • Helena McGill • Henry Daw • Irin Strauss • James David Redding III • Jeff Shiffman • Karél Psota • Kate Finan • Lucy J Mitchell • Nia Hansen • Peter Albrechtsen • Peter D. Lago • Ronnie van der Veer • Steve Keller • Steven Saltzman • Thomas Rex Beverly

Created and compiled by Asbjoern Andersen & Jennifer Walden, with layout and editing by Adriane Kuzminski. Released by A Sound Effect

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Introduction:

Welcome to the Sound Success Guide! We created it to help you grow – or kickstart – your sound business, branch out, learn new skills, and give you multiple revenue streams that'll protect you from the ups and downs of the audio industry.

To do that, we reached out to 20 leading audio industry talents working in 18 different types of audio jobs, to hear what it takes to get started and succeed in the fields that they're experts in.

And thankfully, they generously shared their insights, tips, shortcuts and lessons learned from years of working – and making it - in the industry. And, as a bonus, we've included 45+ additional resources for succeeding in sound at the end of the guide.

A big thanks to everyone who contributed to making this guide happen, and to you for reading it! Please dig in – we hope it proves an inspiring read.

- Asbjoern Andersen
Founder of A Sound Effect

PS: This version of the Sound Success Guide is the 1st edition, published in October 2019 - but it's a living document, and we're continuously updating it with new interviews and resources as they become available. To ensure you've got the latest version, you can visit this link.

Please share this guide!

You're more than welcome to share this guide with your friends, fellow students, teachers, colleagues, subscribers and anyone else you think would benefit from it. It must remain free, though, and resale and repackaging is not permitted. Please ensure you only share the complete, unedited guide.

Chapter 1: How to Succeed in Sound Design for Film, Documentaries & Trailers – with Nia Hansen, Peter Albrechtsen & Karél Psota

SOUND DESIGN: FILM – INSIGHTS FROM NIA HANSEN:

About Nia Hansen:

Nia Hansen has been at Skywalker Sound since 2009, first interning with Director of Sound Design Randy Thom and then apprenticing with Gary Rydstrom on several films that cemented her understanding of sound design as a storytelling element. Nia has worked on Disney and Pixar animations, as well as VFX-heavy sci-fi and fantasy blockbusters including many films in the Marvel Cinematic Universe. She enjoys the creative challenge of designing unique technological and otherworldly sounds.

Website: https://www.skysound.com/people/nia-hansen/
IMDb: Nia Hansen

• What working in sound design for film entails:

The sound designer's main roles are to create new sounds for the film and to guide the editorial process to support the client's vision and storytelling. This involves recording new source materials, designing unique sounds (from recordings, library materials, layering, and plug-ins), and cutting sound effects in the areas of the film that need design attention. The designer may also — through guiding the sound effects editors and Foley team — ensure that the sound is supporting the story, hitting the right emotions, and forming a coherent tone or palette. They may also meet with clients (sometimes composer as well) for spotting and review sessions to make sure the design is fulfilling the clients' vision and aiding the storytelling.

While sound design often shines in the creation of sounds for nonexistent events —mythic creatures, aliens, technology, magic and superpowers — it's equally important in subtler contexts where sonic symbolism, subtext, and emotion plays a huge story role. Design can come into play in the choice of ambiences, the styling of a door creak, or the placement of a sonic motif. While much of this comes simply through good sound editing, the designer can take a big picture perspective on the message of the film and guide the rest of the team to achieve it.

• What it takes in terms of skills and gear:

The sound designer needs strong editorial skills and proficiency with a DAW (Pro Tools is the film industry standard). Software plug-ins are very useful, but designers vary in how much processing they like to do. Plug-ins aren't necessary to get started but will definitely be needed somewhere down the line!

Sound recording ability and equipment is a huge plus — at the very least a recorder and good microphone.

Mixing is a very useful skill, whether in Pro Tools or on a console. The sound designer is often responsible for delivering design ideas or entire scenes for review before the film has been mixed, so an ability to present nicely balanced material is a plus.

• How to learn it:

There are some audio post-production technical schools that have courses in film sound or sound design, but the very best way to learn is to find an internship or apprenticeship with an established sound designer and start learning from their process while experimenting and practicing on one's own.

Sound recording and mastering is often a large part of this entry-level position, and will hone one's ear to quality as well as technique and use of plug-ins.

The very best way to learn is to find an internship or apprenticeship with an established sound designer and start learning from their process while experimenting and practicing on one's own.

Sound effects editing is the next stepping stone to a sound designer position. In addition to improving Pro Tools skills and teamwork, it will teach taste, style, organization, and story awareness.

• How to find work:

Jobs in film sound design are project-based and generally come through an existing relationship with sound supervisors and/or filmmakers and studios. At a post production facility, the management may be seeking out films and matching them with a designer.

• Essential advice for working and making it in sound design for film:

The industry is driven heavily by reputation and many jobs will come from someone recommending you to someone else. It's important to not only put in your best effort and continue improving your craft, but to also be easy to get along with and a fun asset to your crew. Network whenever you can; always be open to learning; ask questions —especially if you're unsure about something! And keep an eye out for opportunities.

More practically, I think the best way to start tuning your ear and improving your skills is to get a recorder and microphone and begin collecting sounds, listening to the world creatively, and mastering and manipulating what you gather. If you can't find opportunities to cut and design sound, find a video online and redo the sound for practice. Volunteering on student films or indie projects can be another way to network and build experience if apprenticeships seem elusive.

• Further reading and resources:

It's well worth exploring sites like this one (A Sound Effect) that feature interviews with sound designers in film, TV, and video games, as well as blogs that focus on field recording. Some examples include: Soundworks Collection, InDepth Sound Design, Designing Sound, and the Tonebenders podcast. Listening to and analyzing films with great sound is hugely beneficial. If unsure where to start, check out the MPSE Golden Reel Award nominees of current and previous years.

SOUND DESIGN: DOCUMENTARIES – INSIGHTS FROM PETER ALBRECHTSEN:

About Peter Albrechtsen:

Peter Albrechtsen is a sound designer, mixer, and music supervisor working on both feature films and documentaries. Recent credits include festival favorites Generation Wealth, The Distant Barking of Dogs, Blind Spot, Godless and sound effects recording for Christopher Nolan's Dunkirk. He's also a member of the Academy of Motion Picture Arts and Sciences. When not in the studio, Peter is writing about music and movies and lecturing about sound design around the world, most recently at Sheffield Doc/Fest and at the Berlinale Talents in Beirut.

Website: www.offscreen.dk
IMDb: www.imdb.com/name/nm1022700/

• **What working in sound design for documentaries entails:**

When you're the sound designer on a documentary I think you're in many ways the ears of the director. You're creating the sonic world of the film and making sure that the sound of the film is supporting the story, supporting the characters, telling the story in the best possible way, no matter if it's a very realistic, journalistic documentary or a much more abstract, subjective doc. Sound is incredibly important no matter what.

To me, it's mandatory to be part of the process very early so that the sound can be an integral part of the film and the storytelling. Being part of the process early also means that you have time to do research and record sounds for the film. In this way, you can also make sure that the sound is recorded properly during the shoot. It's very rare that the sound designer is an actual part of the shoot, but it's great to be in touch with the director during that process to make sure that the material is recorded as good as possible. ADR isn't something you usually do on a doc — one of the few things that is actually different to working on fiction films — so getting good recordings from the shoot is invaluable.

• **What it takes in terms of skills and gear:**

> *I want to highlight the small handy recorders on the market which are quite cheap and which make wonderful recordings. Those have been a revolution in the documentary world because you can suddenly get good sound in a very affordable way.*

In the film post-production world, Pro Tools is pretty much the thing everybody is using. It's quite amazing that I can do the sound editing for a film in my studio in Copenhagen and then travel halfway around the world and just attach a hard drive to a computer and then I'm instantly up and running and ready to mix. That flexibility is just awesome.

On top of that, I want to highlight the small handy recorders on the market which are quite cheap and which make wonderful recordings. Those have been a revolution in the documentary world because you can suddenly get good sound in a very affordable way.

But of course, the most important gear is your ears. Take care of those. Remember to listen. Always. Listen to the world, listen to the film, listen to your collaborators. The better a listener you are, the better a sound designer you will be.

• How to learn it:

You learn all the time. I've been doing sound for movies for 20 years and I still learn all the time. But for getting some basic skills it's about just playing around — work on some small films, do some jobs as an assistant, become an intern, go to film school, record sounds, and listen again and again to all your favorite films. There are so many ways of learning this. And the great thing about sound is that you can keep on finding new sounds, finding new ways of telling stories with sound. It's an adventure!

• How to find work:

There's not an easy answer to this question. A lot of TV stations do documentaries and you can get some nice basic skills by working there. But otherwise, I would recommend getting hold of some upcoming filmmakers and get connected that way. Filmmaking is about collaboration and finding some great collaborators is key to getting to do interesting work. Several of the directors I work with now I've worked with for many, many years — we started out doing no budget movies and now we're doing Dolby Atmos projects. But we still have a lot of fun. Never forget to have fun.

• Essential advice for working and making it in sound design for documentaries:

Find your own voice and personality. What do you like? Which movies do you like? Which stories would you like to tell? What sounds do you love? I think it's important to stay true to yourself.

You should only do this if you really like it. Working in film sound means lots of long hours of hard work, tough deadlines and crazy, unpredictable schedules. But it's also a lot of fun. You're constantly inspired in new ways by new projects. You get to work with lots of amazing people and tell a lot of inspiring and maybe even important stories. As a wise man once said, "This sure beats having a real job."

> *You get to work with lots of amazing people and tell a lot of inspiring and maybe even important stories.*

• Further reading and resources:

There's not that much written about that subject, I'm afraid. Most of the writings are focused on sound in fiction films. Google will bring you some nice articles, though. I wish someone would write a really great book on sound for documentaries.

TRAILER SOUND DESIGN – INSIGHTS FROM KARÉL PSOTA:

About Karél Psota:

Karél Psota is a sound designer, composer, and mixer. His music was used in the theatrical trailers for *DC Shazam*, *LEGO 2* and *Jumanji: Welcome to the Jungle*.

His sounds were used in *Avengers: Infinity War*, *Justice League*, *Spider-Man Homecoming*, and more. He also produced the AVA – INSTINCT Trailer Sound Effects Library.

Website: www.karelpsota.com

• **What working in trailer sound design entails:**

In my experience, we mostly design abstract sounds to help editors and composers. Think about Whooshes, Whoosh-Hits, Booms, Pings, and Power Downs. They all have to: emphasize transitions and impacts, enhance production value, wow the audience, and create a memorable signature for the campaign.

I rarely see the picture or talk with the editors. Trailer music supervisors request custom samples packs, and months later I get a quote request for the few samples that made it through all the focus groups.

On the other hand, some trailer sound design companies focus on “audio finishing.” They mix the whole trailer and design some of the sounds in-house. The pressure is really high since the director and the “suits” are all there. That’s not the case for me.

• **What it takes in terms of skills and gear:**

> *The more I advance, the more I realize how little gear is needed. Cultivating taste and seeing the big picture is the key.*

Skill-wise, you will need a sharp ear. Being able to spot a problem really fast is valuable for mixing. I do a lot of exercises. They are very frustrating and would drive most people insane.

A lot of EQ matching, and chord and melody dictations. I also remake famous songs. Anything cool I hear, I’ll sit down and remake it.

There’s maybe a 20% success rate, but the sheer fact of focusing on layers, compression, reverbs, etc… it keeps my ears in shape.

Gear-wise, the setup is pretty standard — if not sub-standard compared to my peers:

• Recording: Zoom H5.
• Raw Processing: Reaper, iZotope RX, Soundminer V4.5 Pro.

• Production, Mixing, Mastering: Ableton Live 9, Xfer Serum, Waves Sound Design Suite.
• Monitoring: Apollo Twin, ADAM A7X, Auratone, Audeze LCD-X.

The more I advance, the more I realize how little gear is needed. Cultivating taste and seeing the big picture is the key.

• How to learn it:

As I say to my students: "remakes, remakes, remakes." You've got do your homework first.
Study the greats and bridge the gap between your ideas and your speakers. After that, you're welcome to experiment and do weird unique stuff.

For the existing music producers and sound designers that are looking to transition into that field, I made a course with Evenant. It goes from recording to mixing to licensing your own sounds for trailers.

It's over 4 hours of video where I break down my most licensed sounds. I also improvise sounds from scratch so you get to see my thought process and mistakes. There are a lot of secret tricks and mix tips. Note that the entry level is higher than most courses — a basic knowledge of your DAW, EQ, and compression are required.

> *Study the greats and bridge the gap between your ideas and your speakers. After that, you're welcome to experiment and do weird unique stuff.*

• How to find work:

Well, there are many options, but I'll share the two methods that worked for me:

• Public Release – selling your own trailer sounds to the general market through a website. It can be your own or a third-party. Third parties obviously take a cut, but they reach more people.

On AVA – INSTINCT, I teamed up with a childhood friend. He did all the web design, ads, visuals, and marketing. I did all the sounds, demos, Kontakt scripting, and UI design. It was a great combo!

• Industry Release – licensing your sounds privately to studios that are working on trailers. You can do that on your own (company required) or use a publisher (no company required). Publishers usually take 50% but have a larger reach.

I created a company 4 years ago. It allowed me to deal directly with Sony, Universal, Warner Bros, Disney, Paramount, and others. When an editor uses my sounds in a trailer cut, the studio then has to license the sound from me. I get to negotiate the price, so the sky is the limit.

I also have some sounds with trailer publishers. They allow me to tap into markets that I know nothing about, like TV show licensing for example.

By the way, both methods are equally lucrative, "Public" being more stable, "Industry" being more like a roller-coaster with 6 months delays.

• Essential advice for working and making it in trailer sound design:

I think it all starts by being very curious and having a taste for high production value.

The following tips really helped me get my stuff together:

1) *Understanding function.* Why was that sound used there? Did they change anything around it to make it pop out? Does it serve multiple purposes (creating sonic depth, emphasizing a title card, ending a musical passage, contrasting with the previous narrow stereo field, etc…)

2) *Be organized!* Learn how to name files properly and consistently. Batch edit samples to save time. Select only the best samples so you don't waste your time browsing later on.

3) *Tunnel vision is the enemy.* Work fast and efficiently. If you're spending more than 5 min on a sound, you're probably doing it wrong. Save multiple versions. V02 might be better than V17. Take frequent breaks. Listen to multiple references. Try to maintain a flow state.

4) *Provide value to your friends and clients.* Don't write a novel in your emails. Don't waste their time by sending un-mixed samples. Surprise them with free material from time to time. Make it look sexy — visuals matter. A bit of artwork goes a long way!

5) *Have high standards.* Compare your work to the best sounding trailers. Even if you're only 60% there, that's probably better than if you hadn't compared it at all.

6) *Be useful first, original second.* Remember that you are providing tools to enhance the narrative. Try to think about what storytellers need. It doesn't always have to be an incredibly unique sound like the SW II Asteroid Bomb. 99% of the sounds you hear are generic.

7) *Less is more.* "Perfection is achieved, not when there is nothing more to add, but when there is nothing left to take away." -Antoine de Saint-Exupery. It's also easier to mix for you… and for the dubbing mixer.

8) *Don't narrow your field of study.* Film, orchestration, physics, acoustics, dubstep, psychology, psychoacoustics, even Photoshop concepts can be directly applied to trailer sound design.

9) *The answers are often in front of you.* Synth presets can teach you so much if you take the time to reverse engineer them. You can also hear each layer in a hit with a bit of ear training. Not sure which limiter is the most transparent? Download demos and try them all… or maybe play around with the release knob you never touched. You would be surprised how little people do all that.

10) *Give Back.* You can charge a fortune to corporations… and help out kids for free. You're not devaluing yourself. Also, what's a better business card than an excellent free sound design pack with your name on it?

• **Further reading and resources:**

It's a rather hidden industry. There are almost no resources on trailer sound design. Since trailers are ads, nobody gets to see our credits. We also don't get a Blu-ray featurette on how an elephant was recorded to make a spaceship reactor.

However, I've been seeing more and more interest. Maybe people are finally noticing the sounds… or how lucrative it can be?

These few articles were quite influential in my process:

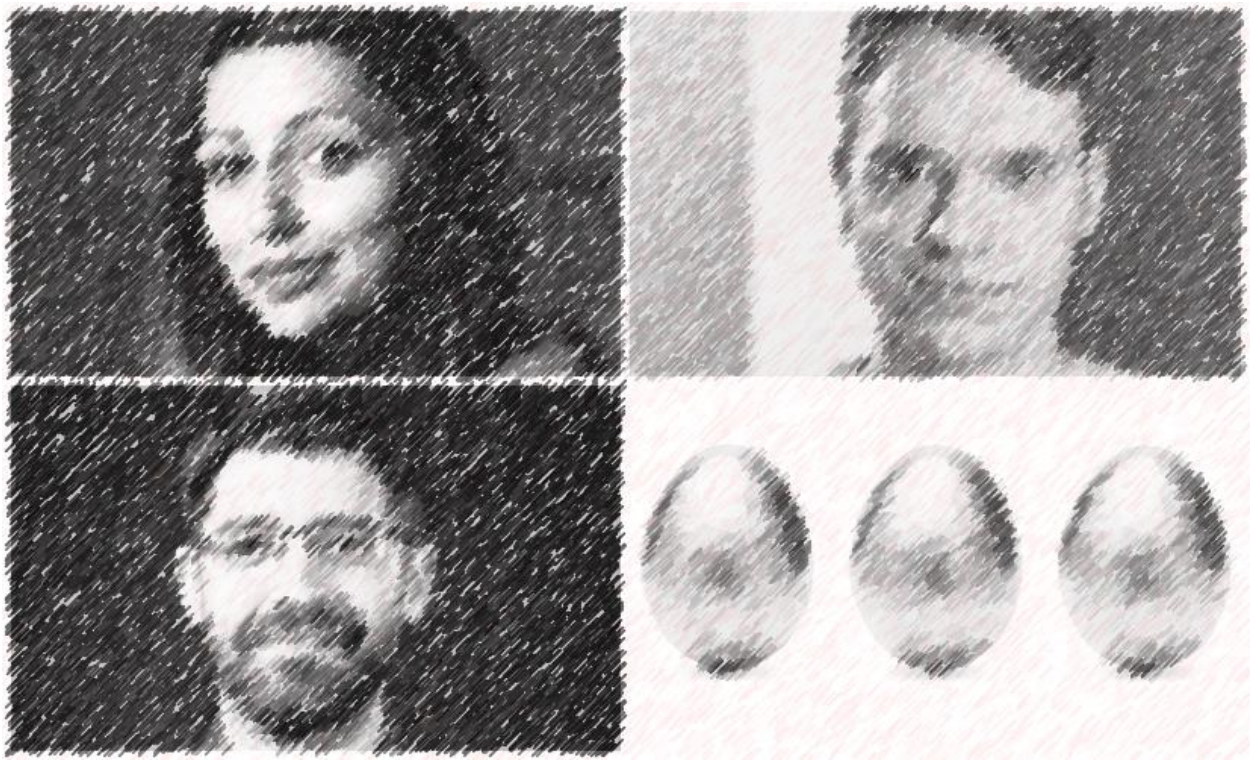
• Mick Gordon – DOOM Behind The Music (GDC Talk)
16 pedals side-chained to each other, guitars morphed with chainsaws… you get the idea.

• Charles Deenen – 100 Whooshes in 2 minutes
The mastermind behind Source Sound Inc (Battlefront II Trailers). Very advanced article that gave birth to the Melted Sound – Whoosh Engine.

• Boom Library – Tutorials
One of the top trailer sound design companies. Very nice tutorials where you get to see what they layer, what reverb they use and how they master. I remember learning about the Altiverb – Vigeland preset from them.

I also made a few videos on my YouTube channel, but if you want to dive in completely, the Evenant course is the sum of my knowledge. Although I show everything I used and offer the stems, I also made it fun and inspiring so you can do your own thing… and maybe stop using my racks, haha (I see you, students!!!).

Check out my Free Fireworks Pack. I processed it to sound like massive trailer hits. I also left the raw so you can practice yourself!



Chapter 2: How to Succeed in UI/UX Sound Design, ADR Recording & Audio Programming – with Henry Daw, Emma Butt & Adam Croft

UX/UI SOUND DESIGN – INSIGHTS FROM HENRY DAW:

About Henry Daw:

Henry Daw is a London-based sound designer and audio branding consultant. He's created sounds for billions of devices worldwide, including the most recent versions of the infamous Nokia Tune and the Microsoft Lumia Default ringtone. Henry worked for 13 years as an in-house sound designer for Nokia and Microsoft before setting up his own company Oblique Sound in 2015.

Website: www.obliquesound.com
Twitter: @obliquesound

• **What working in UX/UI sound design entails:**

UX/UI sound design is highly focused and detailed sound design, a crucial part of the user experience for the technology of today — think of advanced wearables, smart home devices, medical devices, or mobiles and tablets.

If we break it down, UI sound design can be defined as audio feedback within a digital user interface. When we talk about UX/UI sound design, we're simply talking about UI sound design as part of a product user experience. UI sound design isn't a standalone entity; it's a vital part of the user experience and should undergo the same level of focus and scrutiny as any other product design element (for example: UI, Interaction, or Motion Design).

• **What it takes in terms of skills and gear:**

Creating UI sounds is a very specialist expertise. It involves designing user feedback sound to the finest detail. It takes a very meticulous mind-set and it's absolutely crucial that you don't over design, considering the function and user at all times. In most cases you will need to go as minimal as you can, only drawing as much attention to the sound as is needed. This is actually a lot more challenging than you might think.

In terms of gear, apart from a good DAW setup you're likely to need some suitable devices to test your sounds on. UI sounds are commonly for small speakers, so you can't just produce sounds using your headphones or large monitor speakers and hope for the best.

> *In most cases you will need to go as minimal as you can, only drawing as much attention to the sound as is needed. This is actually a lot more challenging than you might think.*

The sounds would need to work optimally with a lot less bandwidth. If it's not possible to test on the actual device they are intended for, then laptop speakers are usually a good first test, followed by a variety of mobile speakers.

• How to learn it:

Through experience you will learn what type of sounds and tonalities work well as a UI sound, considering the small speaker context especially. As a creative and sound designer, there will always be a desire to learn, so even after you've been in the industry as long as I have, it's important to continually look for new tools, seek new source material, or master a new technique. On the other hand, when you discover sounds and techniques that work really well, don't be afraid to keep re-using them. In most cases, UI sounds simply need to do their job and blend beautifully into the UX, so it's wrong to think you need to continually make big and unique statements with UI sounds.

Good learning can also come from simply listening out for good and bad examples of UI sound. For example, are the sounds you hear demanding the appropriate amount of attention? Can the sounds be designed differently/more effectively? I find myself doing this almost daily, living in the cauldron of noise that is London.

• How to find work:

The larger tech companies may advertise for jobs that demand expertise in this area, even though the job title might be called something else (i.e. Interaction Sound Designer, UX Sound Designer, or Product Sound Designer). It's worth keeping a look out, using the resources on this website as a starting point.

At the other end of the scale, it might be worth networking in the tech start-up community. The smaller companies will often have a need for UI sound design, although you may have to convince them to invest.

• Essential advice for working and making it in UX/UI sound design:

As with every facet of sound design work, it's important to build up a portfolio and highlight your skills. In this case you need to showcase the meticulous touch required to create product UI sounds. If you have a gaming background, then you can highlight some UI work there, but be careful not to present over-the-top or 'showy' sounds. In most cases this is the antithesis of what UX/UI sound design should be.

Besides this, I'd say it's important to have a genuine passion for great design. World-class design can come down to the finest details, embodying a sophisticated, refined, and modern approach — three principles that should be firmly etched into the work of a UX/UI sound designer. In these technology- saturated days,

> *In these technology-saturated days, great design goes far beyond how something looks. It should stand for how we interact with a product, and how it makes us feel. Expertly crafted sound design can play a massive role in these factors, enhancing the user experience and improving the usability.*

great design goes far beyond with a product, and how it makes us feel. Expertly crafted sound design can play a massive role in these factors, enhancing the user experience and improving the usability. If you feel passionately about this, it should come through in your work.

• **Further reading and resources:**

The existing reading material on UX/UI sound design is fairly scarce. However, one author to look out for is Amber Case. Her first book 'Calm Technology' highlights good practice for UI sound design and notifications in general. Case has recently published her follow-up book, 'Designing With Sound', in collaboration with Aaron Day. The book focuses on how products and services can improve their sound. It comes at a very relevant time and I expect it to further elevate our industry. I'd also recommend looking for online articles, which highlight existing case studies or cover the field as a whole. One example is an article I wrote for the awwwards.com website, 'Being Smart with Sound'. Another useful resource is my keynote talk from The Next Web 2017 conference, 'The Small Sounds That Make a Big Difference'. In the talk I highlight principles for successful UI sound design, as well as make the point that the field of UX/UI Sound Design is relatively new. Hopefully there will be a few people here who can help it grow!

ADR RECORDIST – INSIGHTS FROM EMMA BUTT:

About Emma Butt:

Emma Butt is a Freelance Dubbing Mixer, ADR Recordist and Sound Editor with over 11 years of experience in post production sound. She's done everything from sound editing and mixing documentaries and entertainment shows, commercials, short films and animations to ADR recording for dramas and feature films. She's also a mentor with the Media Trust, helping to support the next generation of filmmakers and creative talent and she's on the council of Association of Motion Picture Sound Engineers.

Website: www.emmabuttsound.co.uk

• What working as an ADR recordist entails:

An ADR recordist is there to look after the technical side of recording the lines. We need to make sure that the boom mic is placed at the correct distance from the actor so the takes don't sound like voice over but also don't pick up too much "room" sound, and that the clip mic (lav mic) is placed correctly on the actor so we can hear the lines clearly but don't pick up any cloth rustle from his or her clothes. We also handle playing back the takes and "selling" the lines to the client.

Once a take has been recorded that the director, actor, and dialogue supervisor are happy with — depending on if you are working on a one person or two person setup, the ADR recordist will have to quickly edit and fit the take, roughly EQ the line to so that it matches the previous and following lines of on-set dialogue and add a small amount of reverb to help the line sit in. We then play this all back with the guide tracks provided and hope that the line not only syncs up well but that the actor's tone, pitch and performance match what was done on the day on-set.

It is not the recordist place to make comments about performance but we do need to speak up if the actor is not giving enough projection, or if more movement needs to be put into the line, or if the speed of the line isn't quite right.

• What it takes in terms of skills and gear:

Gear-wise, having the correct mics and a good-sized room are the most important things from an ADR recordist perspective. Ideally, before a session we will always ask what mics were used on the day on-set and try to use the same ones so that the recordings have a better chance of matching. Generally the mics requested are the Sennheiser MKH 50 boom or their 416 Boom, the Sanken COS-11 mic or the DPA 4060. If the ADR is more like voiceover then generally a Neumann U87 is requested.

Whether you are using an open plan room to record — where everyone (director, recordist, actor and dialogue supervisor) are in the same space, or a separate booth and control room, the room needs to have a high ceiling and be a decent size. If the room is too small or the ceiling too low, not enough air will circulate around the mic and so the takes will be harder to match. If it's an open plan room it needs to be quiet; you don't want to have the sound of the air con, projector or any equipment being picked up on the mic.

You must know your shortcuts and be able to work quick and efficiently. A client will not have the patience to sit and wait around any longer than 5 minutes for you to fit, EQ and add reverb to a take for playback.

Skill-wise, good knowledge of Pro Tools is key (or whatever software the studio you are using currently has). You must know your shortcuts and be able to work quick and efficiently. A client will not have the patience to sit and wait around any longer than 5 minutes for you to fit, EQ and add reverb to a take for playback. In fact, 5 minutes is probably too generous a number.

You also need to know how to use programs like Ediprompt, Colin Broad system, Source Connect, Skype and the basics of an ISDN box as these are all things that might be required for a session.

Personality is a big thing in our job. If you are recording ADR for a long project and could be working with the director and dialogue supervisor for a week, they want someone that they can feel relaxed and comfortable around. ADR can be a really stressful experience for an actor too, and it's our job to create a comfortable and relaxed space they can walk into and feel at ease.

• **How to learn it:**

Realistically this isn't something you can learn at home yourself. ADR needs to be learned from hands-on practice and someone training you. I had a more experienced engineer sit behind me for all of my first few sessions in case anything might go wrong. When you introduce added complications, like ISDN or Source Connect, into a session chances are the first time you use it something will go wrong and only through having the practical experience will you learn how to troubleshoot issues that might arise.

• **How to find work:**

If you have no experience as an ADR recordist already then it's possible you won't get hired short term for a job as it is a specialized skill that is completely different to voice over recording.

Post houses which offer ADR services are the best place to start looking when trying to get a job. Make sure to sit and learn from any of the engineers who currently record ADR there and if a project comes in that might have a low budget or even be a student short film, ask to take it on with the more experienced engineer present. Doing smaller projects first with someone else present will help build your confidence as an ADR mixer while also helping to improve your skills and speed.

• **Essential advice for working and making it as an ADR recordist:**

Get to know the software! Ediprompt is commonly used as a cueing system in most studios and you can download a free trial version for 3 days from their site. I would encourage anyone starting out to do this and learn the software inside out. They have brilliant YouTube videos explaining how it all works and talks you through the process step by step.

Research studios near you that record ADR and ask to speak to one of the engineers to see if you can sit in on a session. A lot of ADR projects are NDA'd so sitting in sometimes just isn't possible for practical reasons, but projects do arise that might be independent films with no NDA's and they would be the best to learn on. Research and learn about the different mics used on-set. Get to know a reverb plug-in really well so that if you are on an ADR session you can quickly pull up a reverb you know will work within a scene.

As an ADR recordist you are constantly working with new and different people from one day to the next, and you need to be comfortable chatting to a complete stranger within a few minutes of them walking through the door.

If you hate networking, go out and network. This seems like odd advice, but remember, as an ADR recordist you are constantly working with new and different people from one day to the next, and you need to be comfortable chatting to a complete stranger within a few minutes of them walking through the door.

If you get a job as an ADR recordist in-house in a post facility get to know your room. If I get the opportunity before starting to work in a new room I will set up the mics and record myself in different places within the room at different projection levels and listen back to the recordings to see where the mics get the best sound and if any particular spots pick up some odd frequencies or hums.

• **Further reading and resources:**

Tonebenders have a great podcast episode with Patrick Christensen and Chris Navarro who are two amazing ADR mixers for the States that I'd highly recommend and talks through the process of how they record. Here it is.

Chris Roberts also wrote a brilliant series of articles on ADR from different perspectives which is on the Resurface website and gives you an insight into the actor, dialogue supervisor and ADR mixer's perspectives during a session.

AUDIO PROGRAMMING – INSIGHTS FROM ADAM CROFT:

About Adam Croft:

Adam Croft is a zealous audio and software professional out of Seattle, WA. He's helped bring ideas to life with PopCap Games, 343 Industries, Turn 10 Studios, and Bungie.

Adam could be described as a BBQ snob and commits to making ridiculous ideas a reality. You can find his rants, books, courses, and software products at adamtcroft.com

• **What working in audio programming entails:**

Audio Programming — which is not necessarily game audio programming — is, in my opinion, ridiculously broad in scope.

Here's a small subset of things you can learn to do:

• Make simple stand-alone applications, like a file converter, or a "media" player
• Make your own cross-platform audio apps
• Make a DAW plug-in
• Write custom utilities that extend your favorite software (Reaper scripting, for example) or help your team
• Write frameworks that ease the use of existing audio APIs
• Make or modify web and mobile apps using Web Audio or other, native APIs
• Make programmed music, or use programming tools as instruments
• Program artistic and creative projects with UE4, or other game/audio engines
• Write your own, or modify and customize existing audio engines to create entirely new systems (like, obstruction and occlusion or spatialization)

You are only truly limited by your own imagination with what you can do.

Regarding jobs, an extremely large number of audio programming jobs posted on job boards require C++ programming and Digital Signal Processing experience. This is because anything utilizing heavy DSP, multi-threading, mixing, etc. usually requires low-level programming expertise.

> *The reward for those willing to do work on their own to learn, or go through school, can be extremely high.*

That means that the barrier of entry for a traditional job is extremely high compared to something like, say, web development. There is no such thing as an "audio programming bootcamp" where you can go learn the skills in a few weeks or months and get a six-figure job. But the reward for those willing to do work on their own to learn, or go through school, can be extremely high.

The job market for game audio programmers, for example, is currently inverse that of sound designers. There are more positions available than there are qualified people. While that may sound enticing — also realize that there's a reason for that — the road isn't exactly easy for most.

• What it takes in terms of skills and gear:

The required "gear" depends entirely on what you're intending to do. If you're working with a game engine, you're going to need a Windows-based computer powerful enough to run the game engine. If you're looking to build cross-platform applications, you're either going to need a machine to test each platform, or something powerful enough to run a virtual machine setup. Thankfully, audio programming doesn't require nearly the amount of gear sound design can rack up. So, go grab that mouse and keyboard that doesn't give you carpal tunnel!

> *Learning how to interact with things like WASAPI, XAudio2, PortAudio, or even just JUCE are going to put you in the position to be qualified for hire very quickly.*

The required skill set is variable as well. If you're only intending to do audio on the web or via web-based mobile apps, you might never need to learn C++ programming. But just because you would only be working with things like Web Audio and JavaScript, I wouldn't say you're not an "audio programmer." It would mean, however, that you're not qualified to apply for most "audio programmer" job listings.

Traditionally speaking, you need to learn C++ and start utilizing audio-based tool sets to get an understanding of how audio works at lower levels of programming. Learning how to interact with things like WASAPI, XAudio2, PortAudio, or even just JUCE are going to put you in the position to be qualified for hire very quickly. In fact, as of this writing, most job applications I've looked at reference multiple years of C++ programming and knowledge of a framework like JUCE as a requirement.

• How to learn it:

There are numerous areas you can invest your time in that will pay off with good results. Learning C++ programming is a good idea, as is Digital Signal Processing. How you go about learning these things is a completely different subject.

You can get a degree in computer science to learn programming skills, and it would be a great thing to have on your resume. However, numerous Bachelor's-level CS programs don't have a C++ component. Electrical Engineering is a great degree that will usually teach you signal processing — but this can lack any interaction with programming. Another degree to look into is Music Technology — but again there's no clear "standard" curriculum for this, and it is a less useful degree for fallback opportunities.

There are a few "game audio programming" courses and degrees opening, notably at Digipen. But many true "audio programmers" that I know have a computer science background and explored the audio topics they were interested in largely on their own.

There are a number of fantastic books available – the *Game Audio Programming* series by Guy Somberg has a large number of contributions from industry veterans. Will Pirkle's programming books are where I started plucking away at the topic.

> *You need to decide what you're interested in and combine multiple areas of knowledge.*

There are also several other great resources online including Stanford's Center for Computer Research in Music and Acoustics, Kadenze.com, and the Audio Developer's Conference (which posts its talks free on YouTube). There's even a free online DSP book at dspguide.com if you can get through it!

I find that the biggest hurdle most people encounter is they want one definitive course or book — maybe two resources at max where they can learn everything. That doesn't really exist. Instead you need to decide what you're interested in and combine multiple areas of knowledge.

To me, that is one of the most fun parts about programming audio-related projects. There are so many different applications of audio within programming, that it's kind of hard to even have it all covered in one book or course!

• **How to find work:**

All sorts of jobs seem to be available — and this is one of the most frustrating topics to me when it comes to individuals who work in games who want to do "audio programming."

Game audio programmers usually work on game engines — whether a proprietary sound engine, modifying and customizing middleware, or even a stock engine's audio system. There are audio programmers who create each of these audio engines — there are a handful of individuals who work on UE4's audio system, for example.

But, there are also teams who make Adobe Audition and Pro Tools. There are people who work on OS-level audio systems. There are people who make plug-ins and desktop applications. There are people who work on audio for the web and work mostly in JavaScript. There are people who work on spatialization algorithms at big VR companies. There are people who even make interactive art installations that incorporate interactive audio!

> *I've found that, much like audio in general, the more interesting and awesome projects you do, the more you attract eyeballs, and attract people who want to work with you.*

I'm sure I'm not even covering most of the opportunities that have to do with programming and audio. Not all of them are just working on a game engine. Nothing against those who do work on game engines — I envy their level of knowledge!

Regarding where to find these jobs, I've found listings in the usual job boards (i.e., LinkedIn). Also, it seems to pay off to create your own projects, share them online, and maybe even have a public project or two in GitHub. I've found that, much like audio in general, the more interesting and awesome projects you do, the more you attract eyeballs, and attract people who want to work with you.

• **Essential advice for working and making it in audio programming:**

Just get started. Like anything else. There are many reasons why audio programming seems to have more jobs available than employees available — one of the reasons being it isn't easy for someone to learn this engineering from scratch on their own.

The discipline also seems to sit in an interesting middle ground where developers who have solid educational backgrounds in computer science can get paid more if they do something other than audio. But there's plenty of opportunity. You just need to decide what you want to do at first, start, and keep going.

• **Further reading and resources:**

• *Game Audio Programming* series (currently 2 books) by Guy Somberg
• *DSP Guide* by Steven W. Smith Ph.D.
• The many courses at Kadenze.com
• The website for Stanford's CCRMA group and Julius O. Smith's page
• Will Pirkle's Designing Audio Effect Plug-ins and Designing Software Synthesizer Plug-Ins books
• The many YouTube videos on frameworks like JUCE, SDL2, OpenFrameworks, Cinder, the new UE4 audio engine, and the Audio Developer's Conference
• You can also get a 12-page resource guide if you sign up for the email list on my website: adamtcroft.com.

I would be remiss if I didn't mention the guidance of Aaron McLeran at Epic and Nick Bygrave of 343 Industries as well. They have turned me and a number of others onto many of these resources initially. In no way have I come across all this on my own.

Chapter 3: How to Succeed in Sound Editing, Sound for Advertising & Production Sound – with Lucy J Mitchell, Chris Pinkston & Irin Strauss

SOUND EDITING – INSIGHTS FROM LUCY J MITCHELL:

About Lucy J Mitchell:

Named one of Broadcast Magazine's "Top 30 under 30" in 2013's Broadcast Hotshots feature, Lucy J Mitchell is a freelance sound editor for TV, film, and computer games, handling all aspects of sound editorial (voiceovers, dialogue, sound effects, ADR and Foley editing). Her credits include *EastEnders*, *Top Gear*, David Attenborough's *Rise of the Vertebrates*, *You, Me & Him*, and computer game *Guitar Hero Live*. She is currently building a fully soundproofed studio in her garden for VO, ADR, and Foley recording and is setting up her new business LJ Studios — a full-service audio post facility with eight freelance audio and music specialists on-board.

Website: www.LucyJSound.com

• **What working in sound editing entails:**

As a freelancer, my job is two-fold — the actual sound editing side, and the "running a business as a freelancer" side.

"Sound Editor" is a term that covers a variety of jobs. This can be just dialogue or effects editing, Foley or ADR editing, voiceover recording, or, for factual television, full tracklaying, which is doing everything: music, dialogue, and effects.

For music, the picture editor will have cut the tracks up, to work with the visuals or to use more interesting parts of the song or whatever. But their edits aren't always hugely accurate and you need to move stuff around to beat-match and make it all in time!

Trying to explain what dialogue editing entails would take a whole other article, but to summarize, you need to smooth over dialogue cuts made by the editor when mixing takes, or cutting down lines, etc. This is more difficult when using different clips with varying background sounds and noise floors. Your aim is to make the mixer's life as easy as possible, so chose the best sounding microphones rather than leaving eight of them on the timeline for the mixer to trawl through. Remove clicks, lips smacks, rogue breaths and random noises. If required, perform some noise reduction on especially noisy/buzzy/hummy tracks. (Check with the mixer if they would rather do this themselves or not.)

> *Your aim is to make the mixer's life as easy as possible, so chose the best sounding microphones rather than leaving eight of them on the timeline for the mixer to trawl through.*

Lay these all up in a clear way for the mixer to be able to do their job easily. If different clips need different treatment or EQ, put them on different tracks, and have them on neighboring tracks if possible so the mixer doesn't need to spend time finding out which fader they need.

Sound effects editing is what it says on the tin. Sometimes it is purely "say what you see" spot effects for things that happen on-screen that need to be heard, like doors opening for example. Atmosphere effects need to be added to act as a bed for everything, like distant traffic, spring birds, country wind, etc. The atmospheres make everything cohesive. Then there are more individual background effects to set the scene. In an office for example, you might add phones, a printer, typing on a computer, outside traffic, etc. Then there are other sounds needed for creative effect, like whooshes, low bass hits, etc., the sorts of sounds you'd hear in a cinema trailer.

• **What it takes in terms of skills and gear:**

Gear-wise, you need a DAW you are familiar with (or feel is important to learn). Whether that be Avid Pro Tools, Logic, Adobe Audition, or whatever your preference, you will need to purchase some sort of software. Then all you really need is a computer that meets the software's minimum tech spec requirements and either headphones or speakers.

Skills-wise, you need to know how to use the software, and have a good ear. And as a freelancer, you need to be good at dealing with clients as you are essentially running a business and have to do everything yourself. Organization is also key.

• **How to learn it:**

There are lots of college and university courses these days that are very good, and also specific to audio, not just "media studies." However, this is not essential. I didn't have any relevant training before my first job as a runner. I studied classical music and musicology at university. If you can't do a tech degree, don't be worried about the competition. I was the only one of my peers who did not have one and I seem to have done alright!

There are lots of books you can read — Dialogue Editing for Motion Pictures by John Purcell is great. There are online tutorials for pretty much anything on YouTube.

> *There are lots of college and university courses these days that are very good, and also specific to audio, not just "media studies." However, this is not essential.*

But I would say even if you have the degree, read the books, and watch the videos, there is nothing better than watching someone actually do the job in the real world — whether that be work experience, an internship, or making tea at a company and watching someone on your lunch break. You could know Pro Tools inside out but not know how to lay up a dialogue session for a mixer. I am a huge advocate for this type of learning.

• **How to find work:**

Freelance work is hard to find. People don't usually advertise a freelance opening. If you want a full-time job, there seem to be lots of Game Audio opportunities all the time. But for film and television, even for large post houses, I don't think I've ever seen a job posting for a sound editor. Only runners. I hate the phrase "it's not what you know, it's who you know." You, of course, need to be good at your job. However, there is a lot to say in this industry for networking and getting yourself out there. In this line of work, bookings will come through recommendations, or having met you and remembering you.

I personally would not recommend starting out as a freelancer as you will be competing against a lot of experienced editors with long IMDb listings. I have a solid and varied CV and still am not the go-to person for lots of dramas and films like I'd like to be. My CV has got me meetings with people. Meeting them is what makes them remember me.

> *In this line of work, bookings will come through recommendations, or having met you and remembering you.*

• **Essential advice for working and making it in sound editing:**

I would recommend starting as a runner or assistant (or editor if you're lucky) in-house somewhere to build up your professional CV and learn as much as you can from both your superiors and peers. The experience you gain in work ethic and team working is also invaluable. Then make the leap to freelancing a few years down the line if that is your desire. That will put you in a much better position to do so. I don't have a showreel, and don't know many people at my level who do.

Always be willing to learn. This is an ever-changing industry with technology and also people's wants and needs, and you need to stay on top of that.

Be persistent. People in our industry tend to genuinely be passionate about what they do, so prove that you are too. People like enthusiasm. If someone doesn't reply to your email, chase them! Sometimes people just forget to reply!

• **Further reading and resources:**

I already mentioned the book on dialogue editing. I read *Audio Post Production* for Television and Film by Hilary Wyatt and Tim Amyes, and Pro Tools 101 from the Cengage Learning course when I first started out and found them very useful, as someone who had zero audio knowledge!

Nowadays, I tend to read a lot of audio blogs. If any of you already follow me on Twitter you will know that I share a huge amount of content from various blogs (including A Sound Effect!) as I sometimes find reading a whole book tough going, and articles are easier to digest for me personally. The ones I like that are more techy and useful for learning about the job are Pro-Tools Expert, Pro Audio Files, Pro Sound Effects, and Mix Online, and of course it's good to read up on general audio stuff in *Resolution Magazine*, *Sound on Sound*, and *Audio Media International* to name a few! There are so many!

SOUND DESIGN: ADVERTISING – INSIGHTS FROM CHRIS PINKSTON:

About Chris Pinkston:

Chris Pinkston is an award-winning mixer/ lead sound designer at 740 Sound in Los Angeles, CA. He's earned Telly, Aegis and Silver Microphone awards for his sound work on commercials for top brands such as Levis, Hewlett Packard, America West Airlines, and the Oakland Raiders.

Website: www.740sound.com/staff/2017/5/25/chris-pinkston
LinkedIn: www.linkedin.com/in/chris-pinkston-30b8ba6/

• What working in sound design for advertising entails:

Being a sound designer/mixer in the ad business is very similar these days to longer-form industries. In fact, more often than not, we're doing long-form projects, augmented reality, video games, and virtual reality projects in addition to documentaries and animated short films/TV shows.

However, the main difference for commercials specifically is there are usually several shorter versions of the same commercial that need to be created. Also, advertising sound post houses are generally not union based. Projects can last weeks and months or they may last an hour or two. We do mix ads for cinema on occasion, but usually we are mixing in the broadcast or digital spectrum. Like any short-form subject, advertising is often about selling concepts rather than complete story acts. The commercials I work on are usually packed with great talent on the production, editorial and agency side, so usually I'll get very cinematically-driven projects to design sound for. I'm always fascinated when talking with other filmmakers about how they were able to pull off some of the amazing visual ideas that they do in such little time. I love the advertising world because people are usually friendly and well-versed in the audio language. Clients are usually very excited to be a part of the sound process so that makes it all the more rewarding.

• What it takes in terms of skills and gear:

We expect the same level of skillset and experience as in any other post production audio business. We all use Pro Tools, but we also use other software to help out with sounds that Pro Tools can't make. On the technical side, having a strong knowledge of Pro Tools and basic machine room skills is a must.

As mixers, about half the time we'll be recording the actor's voices in our booth or

remotely. We're often mixing in music from composer and knowing how to mix that in with dialogue and sound effects is essential.

We're often mixing in music from composers and knowing how to mix that in with dialogue and sound effects is essential.

Having great people skills is also a big plus.

On the creative side, studying how film editorial and story devices work is very important. I'd recommend watching a lot of movies/TV shows/commercials and reading about how the sound/picture editors created those sounds. There are many devices that are commonly used today (i.e., French New Wave) that weren't being used 20 years ago. With that in mind, it's also good to study film history and see how those concepts worked.

Creating sound for advertising can be either entry-level or an advanced career. I and many of my colleagues have worked in a variety of avenues in the audio business and most mixers have many years of experience. When I started in the business in the late 1990s, it was important to know about timecode, video machines frame rates, laybacks and the recording process. Those skills still apply today, regardless of technology changes.

• **How to learn it:**

There are many avenues in learning the job. I started in film school, which I highly recommend. In film school, you get to be a part of every side of the project, so you can understand what those skills are when becoming a sound editor. I think learning how films are edited and created are essential for a career in audio.

I think learning how films are edited and created are essential for a career in audio.

We also get interns that are still in college and wanting to explore the audio business as a career. On the mixing side, some are lucky enough to start as mix assistants and on the editing side, many start as Foley editors, dialogue editors, radio technicians, sound librarians, music studio assistants, projectionists, radio engineers, or editorial assistants and work their way to becoming sound effects editors or mixers.

• **How to find work:**

There are a variety of post production houses in Los Angeles/NYC as well as in some other US cities.

• **Essential advice for working and making it in audio for advertising:**

I'd recommend anyone wanting to succeed in audio for advertising to have some projects under their belt. Films, TV episodic/reality and animation skills all apply. Try to find a post production house that you like and try to find a way to go to work for them :)

• **Further reading and resources:**

I'd say all of the articles on A Sound Effect would be a great resource for the aspiring audio editor/mixer. There are a number of sound design books that are great supplements to going to film school.

PRODUCTION SOUND – INSIGHTS FROM IRIN STRAUSS:

About Irin Strauss:

Irin Strauss is a veteran freelance production sound mixer with 28 years of experience.

He has worked on both coasts but primarily resides in New York.

Projects include, Welcome to the Dollhouse, Manny and Lo, Blues Clues, Sesame Street, Tangerine and Madam Secretary. He currently lives in Westchester, New York.

Website: www.soundmindpictures.com

• What working in production sound entails:

You need a thorough knowledge of the principals and applications of audio recording plus the tools needed to provide exceptional sound quality to production for each job.

• What it takes in terms of skills and gear:

While it is relatively easy to learn the basics of production sound through books and various tutorials you can find online, or even in class, the best way to get a working knowledge is experience and that means working on film and video projects. Also, being a good listener, being able to discern what is good clean sound and knowing the limitations in each location what can be achieved.

People skills are also a plus. “It takes a village” is a good catch phrase to make a project come together. Even with sound, you may need to call on different departments to aid you in achieving your goal and knowing the proper channels to go through (etiquette) to do so.

As you progress in your profession in production sound you may need to buy equipment pending on the role you take in the department. A sound mixer will need a good recorder, a variety of microphones, boom poles, monitoring devices, possibly a sound cart, and a wireless system. The boom operator may want to buy their own pole, a set of headphones, a box to put their boom pole in on set, and basic utility tools to make quick fixes if they should arrive. The sound utility will want to carry a pouch with wireless accessories, spare batteries, scissors, tape, and maybe headphones as well though the mixer should have enough to go around.

• How to learn it:

There are several approaches to learning the job like those mentioned above. In my opinion, finding a mentor to help you along is the ideal way to segue into the field. If you want to be a sound mixer, my advice is to learn the basics of boom operating. The boom operator may get into certain situations on-set that may require the expertise of someone who's been in similar positions. The knowledge is invaluable and will facilitate a smooth workflow, solving problems as they arise.

To be a good boom operator takes on-set experience and lots of it. It takes time, patience, and a lot of ego shredding.

> *In my opinion, finding a mentor to help you along is the ideal way to segue into the field.*

Shadowing a sound mixer as they work is a great way to learn mixing. Ask a lot of questions, and learn why certain mics are used in different situations, or when to mix boom, wires, or both, and how to plant microphones, and so on.

There are also film schools that offer courses in production sound and theory. It is a good way to establish a foothold by working on student projects which is one way of getting off to a good start.

• **How to find work:**

Once you've become an established boom operator or sound mixer it becomes easier, not to say that it is easy at all to land a long-term job. The best way to do that is to start off doing short term jobs until a long-term job offer comes along. Some people prefer one over the other. But most of the time it's through references from your contacts.

Also, you can seek them out by researching what's out there through your local mayor's office, or website that lists available jobs, like Staff Me Up, Media Match, or Mandy. Make calls to other sound people and let them know you're available or if they know of jobs coming up. After a while you may want to join the union and through them you may be able to find work.

• **Essential advice for working and making it in production sound:**

It's becoming increasingly difficult to find work since the market is getting saturated with sound mixers and there are a limited amount of jobs. So my advice to anyone getting into the field is to expect a few lean years starting out and don't give up. Your passion for your profession and positivity will be your selling point as like-minded people will want to work with you. Love what you do. Keep learning as much as you can about your craft.

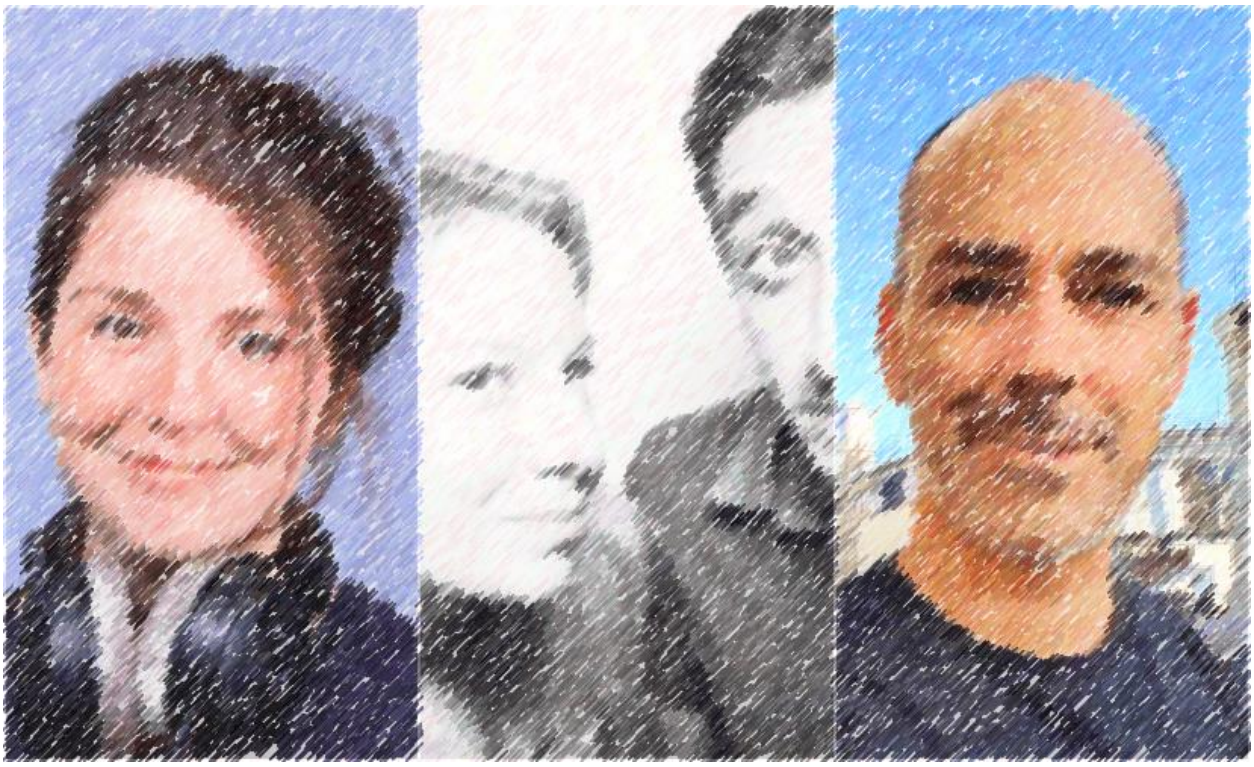
Get in touch with working professionals and colleagues and ask for their advice. I'm sure they would be happy to talk to you. Keep learning and work hard and soon you will be an asset to any sound crew. I guarantee you will be sought after and before you know it able to pick and choose your jobs.

> *Expect a few lean years starting out and don't give up. Your passion for your profession and positivity will be your selling point as like-minded people will want to work with you.*

• **Further reading and resources:**

I've written a few articles that get into more of the specifics of production sound mixing and the role played on-set along with the relationship formed with producers and directors on some links in my website www.soundmindpictures.com

I can also recommend some books to read like Jay Rose's *Producing Great Sound for Film and Video*. And Ric Viers's *The Location Sound Bible*.



Chapter 4: How to Succeed in Sound Design for Games, Animation & Television – with Anne-Sophie Mongeau, Jeff Shiffman, Kate Finan & Peter D. Lago

SOUND DESIGN: GAMES – INSIGHTS FROM ANNE-SOPHIE MONGEAU:

About Anne-Sophie Mongeau:

Anne-Sophie Mongeau has been working in game audio since 2012, designing and integrating sound for independent and AAA titles, including Shadow of the Tomb Raider.

She's focused on improving the immersive experience in interactive media and developing techniques to craft unique and characterful soundscapes, through both experimental field recording techniques as well as the creative and technical implementation of ideas.

Website: annesoaudio.com

• What working on game sound design entails:

Being a game sound designer implies having both a creative mind as well as a technical one. The sound designer's role is to start from a vision or a concept and bring that to reality, and that means being able to think about what best serves the game and enhances the player experience aesthetically. You must know how to make it happen in terms of recording and designing, and finally how to integrate the work in a logical way so that it plays as envisioned, with the tools at your disposal.

It also entails working with a team. Whether it is the audio team or the rest of the game development team, a sound designer will collaborate with many people throughout the process of bringing this vision to reality. So the role of a game sound designer is a very social one as well.

Finally, it asks for a lot of dedication. The games industry is wide and the business models and work ethics are many, but chances are good that a sound designer and the rest of the development team will face long development time and/or tight deadlines and/or cancelled projects and/or working extended hours. That being said, it can be highly rewarding to see this immersive, emotionally engaging environment come to life, and to see a reality emerge from what was once only a concept after putting so much of yourself in it.

• What it takes in terms of skills and gear:

The skills and gear required to be a game sound designer can vary widely. At the very least you would need means to record (whether it's the entire Sennheiser mic collection or a simple portable recorder), to design (a DAW), and to listen (a decent pair of speakers or headphones). The whole audio chain should ensure professional quality, so a decent sound card should also be considered.

In terms of skills, the important thing is to know how to operate and take care of your physical audio equipment. You should also understand digital audio — knowledge of sound recording theory and DSP is essential in order to consistently obtain good quality results. Music theory knowledge is not essential but is certainly a plus in a context where you may need to collaborate closely with composers, integrate their work into the game or even be asked to contribute to the music composition yourself.

• How to learn it:

There are many ways to go about learning how to design sounds for videogames. Nowadays a lot of good courses exist, both in Universities and private schools, but it is possible to learn it yourself if you are a disciplined self-learner; there are plenty of tutorials and learning resources online.

The main challenge about learning this type of work is that it is highly varied and requires a broad skillset. So your best chance is if you have prior knowledge in at least one of the things involved in the job (either sound recording, sound designing, having a musical background, some programming experience, etc.). Then the specific skills you need to learn to work in games, which have to do with interactivity and integration tools, will come with experience, which means finding projects to work on is key. You can either pair up with game dev students or small independent projects looking for help with their sound, or if that's not available, make it up!

Nowadays a lot of good courses exist, both in universities and private schools, but it is possible to learn it yourself if you are a disciplined self-learner; there are plenty of tutorials and learning resources online.

All the tools you need to learn and teach yourself can be found online and used for free as long as it is not for commercial purposes. For instance, download Wwise or FMOD and design and implement all the sounds needed for a hypothetical game (take inspiration from your favorite game if you need to), and test how the interactive features and sounds hold up. You can even implement them all the way to a game engine if you have the programming skills or if you learn them! (Unity3D and Unreal Engine are free for students).

You could also simply test the quality of your sound design by taking gameplay videos of existing games and re-doing all the sound design from scratch according to your own vision. In summary, there is nothing like practice and experience when it comes to learning the craft of interactive media, where the very nature of the work means you can't control everything. So the best way to develop skills is to become more and more familiar with unpredictability and what to do about it.

• How to find work:

People looking for game sound designers are game studios. So an aspiring sound designer should look for opportunities as an in-house sound designer in a game development studio, whether as a contractual hire or permanent. Many studios also offer internship for beginners. So mainly you need to keep an eye out for job postings. One could also look for audio post production studios which sometimes work as game audio outsourcers and may be looking to expand their team. And finally, a game sound designer can offer their services as a freelancer and work for smaller studios or projects that don't have an in-house or full-time audio team.

• Essential advice for working and making it in game sound design:

One thing that holds the game audio industry together is its tight community. Despite being international, it is relatively small and close-knit, which means joining the relevant social media groups and pages, attending events and conferences and being overall socially active is one good way to get to know this community and the lovely people in it. Make friends!

After that, it is about standing out. This industry is also very competitive — a lot of highly talented people for few seats at the table. So one should be proactive, find their strengths and use them to stand out from the crowd.

Once you have that, simply be ready to grab the opportunities when they come, whether it is a sound design pitch, an interview, a job offer, a casual meeting, or anything else that may be helpful in reaching your goal; it has to be taken seriously.

> *Be ready to grab the opportunities when they come, whether it is a sound design pitch, an interview, a job offer, a casual meeting, or anything else that may be helpful in reaching your goal; it has to be taken seriously.*

Finally, and most important of all, is have fun! The fun factor will show not only in the quality of your work, but also in how you present yourself and interact with others. The amount of fun you have doing the work is certainly a determining factor in getting a job in game audio!

• **Further reading and resources:**

Some classic readings include the practical tips and tricks offered by Ric Viers (The Sound Effects Bible), Vanessa Theme Ament (The Foley Grail) and Andy Farnell (Designing Sound); the history of game sound knowledge offered by Karen Collins (Beep movie, Game Sound: An Introduction to the History, Theory, and Practice of Video Game Music and Sound Design); and the programming lessons by Guy Somberg (Game Audio Programming). The industry and its technology being fast evolving, many new knowledge-packed books are published every year, so keep an eye out for the latest ones!

Online resources are many, from the Audiokinetic online tutorial series and blog, to community-oriented websites such as the A Sound Effect blog and The Sound Architect, to various podcasts and the making-of videos of SoundWorks Collection. There is plenty of hours of fun to spend on the Internet learning about game sound. I'll even add here that you can visit my own blog for posts about sound designing and recording tips, tricks, artsy ideas and more! :)

SOUND DESIGN: ANIMATION – INSIGHTS FROM JEFF SHIFFMAN & KATE FINAN:

About Jeff Shiffman and Kate Finan:

After years of working together as sound designers and supervising sound editors at different studios in Los Angeles, including Warner Bros. Studios, Jeff Shiffman and Kate Finan joined forces to create their own animation sound studio, Boom Box Post, in 2014. The talent-driven boutique environment allows everyone there to focus on creativity.

Website: www.BoomBoxPost.com

• What working in sound design for animation entails:

Jeff Shiffman (JS): By nature, animation is a blank slate. With that, our work tends to be highly inventive, creatively engaging and extremely challenging. Of course all projects are different, but without the constraints of a physical film shoot, incredible worlds can be built entirely from scratch. It's our job to realize these worlds with sound from the ground up regardless of scale. Recording or synthesizing new material is part of our daily routine at Boom Box Post, all while under the normal time constraints of a television production schedule.

• What it takes in terms of skills and gear:

Kate Finan (KF): The gear involved is fairly standard to the industry in general. You will need a computer (an Apple is best because that is the industry standard for television and film), a Pro Tools rig (HD if you're working in 5.1), and a sound effects library. It would be an added bonus to have a simple recording setup — a microphone or a stereo pair of mics, mic stand, wind screen, and possibly a mobile recorder — so that you have the ability to record your own sounds as a starting point for design. Additional gear that would be helpful would be plug-ins for sound manipulation and possibly a few software synths like those available to be used with an iPad.

• How to learn it:

JS: Ten years ago I would have said to get a copy of Pro Tools, grab some clips from the internet and start practicing. And that's still good advice today. However, in the last decade I've seen a wealth of amazing Post Production Sound degree programs materialize. If you have the resources, a great program (be it 1 year or 4) can build solid fundamentals.

However, once you graduate from a sound program, your education isn't complete. It is essential that you get some real-world experience.

This could be a one-on-one apprenticeship or internship at a post production sound facility. Here at Boom Box Post, we have an extremely structured, hands-on internship program that in its essence serves as a graduate degree in post sound. There are countless lessons to learn by watching professionals in a real-world work environment and plenty of companies like ours that offer the opportunity. It's also a great resume booster and a chance to get your foot in the door!

> *Once you graduate from a sound program, your education isn't complete. It is essential that you get some real-world experience.*

• **How to find work:**

KF: Like much of the post-production sound industry, sound effects editorial (the official title for sound design in television and film) is often project-based. That means that these are not often staff jobs within a particular company. Instead, you would be hired as a freelance editor for the duration of a project by the supervising sound editor or the studio.

Since these are not staff positions, they are seldomly advertised in the traditional way. Instead, it's best to search for studios in your area that work on animation or ask around about which supervising sound editors are involved in those projects. Then, reach out and offer your services with a short message about why you're interested and attach your resume. Ask to meet in person so that you can introduce yourself. Most studios are continuously looking to widen their pool of talent. That way, when the right project comes along, they will hopefully reach out. Because you're relying on being remembered at a later date, it's always best to try to meet face-to-face at least once after expressing your interest via email. That really increases your chances of making a solid and lasting impression.

JS: In terms of getting hired, I recommend creating a simple portfolio webpage to display your talent to potential employers. These can be anything you find on the internet, strip the sound from and replace with your own. Pick clips that differ from one another content-wise to show off your diversity. And keep them short! An amazing 30-second clip is plenty for me to have an idea of your talent. Include the link to this page in your resume and link to it at the bottom of any networking introduction emails.

> *Because you're relying on being remembered at a later date, it's always best to try to meet face-to-face at least once after expressing your interest via email.*

• **Essential advice for working and making it in sound design for animation:**

JS: Your best bet is to keep your supervisor happy. Make life easy for them and you'll be brought back again and again. Most early jobs will be freelance and likely not in-house. If you can work from home and self manage, you're golden. This means always finishing your work on time. Throw in highly organized work executed creatively and it's a no brainer for us to keep on hiring you.

• **Further reading and resources:**

KF: Our blog! The Boom Box Post blog is updated weekly with posts about our creative processes, career advice, gear reviews, and more. We're open and honest about our creative endeavors as sound designers for animation. And, if you have a specific topic you wish we would address, we're always happy to take blog suggestions via the comments section or our contact page.

SOUND DESIGN: TV – INSIGHTS FROM PETER D. LAGO, MPSE:

About Peter D. Lago:

Over his career, Emmy-nominated/MPSE Award-winning sound effects editor/designer Peter D. Lago has developed a strong reputation for delivering high quality, well-detailed and expressive tracks in a timely and efficient manner.

His credits include: *The 100, Star Trek: Discovery, Fear the Walking Dead, Arrow, The Shannara Chronicles*, and *Sushi Girl*. Peter works out of the Warner Bros. Studio lot where he's recently wrapped up Season 1 of DC's new series *TITANS*, a gritty, live action take on the *Teen Titans* franchise.

Website: www.lagosounds.com

• What working in sound design for TV entails:

I always compare the business of television sound design to the newspaper business. You've got a hot story to write and it needs to get to press by midnight in order to make the morning edition. The writing needs to be sharp, compelling, expressive, grammatically correct, and pack a knockout punch. In essence, Pulitzer Prize worthy, but you've only got a day to write it and it better be good… so get to work!

I exaggerate a bit, but not by much. The pacing of TV editorial is much more frantic than that of a feature film, but the demand for an expressive and detailed soundscape remains the same. With that said, I feel a television sound editor must first and foremost possess the ability to cut and design quickly but deeply, efficiently but detailed, effectively and expressively, and finish each episode with a knockout punch. Getting to that point in one's career is the true challenge.

Oftentimes, post audio crews for television are small. On most of the shows I've been part of over the last five years, I've been the sole sound designer / sound effects editor. That's not always the case, of course, but a strong sound designer must be ready to handle everything sound effects related (backgrounds, hard effects, sound design, and Foley editorial) for each episode they work on. Most often, the team is mixing an episode a week, which means you've gotta be good and you've gotta be fast.

• What it takes in terms of skills and gear:

Having to prepare and deliver powerful and richly-designed material on a weekly basis is a tall order, and with time not on your side, it is extremely important that a sound designer exercise good time-management, communication with his or her supervisors and mixers, and of course, a profound-enough knowledge of Pro Tools.

Pro Tools is still king when it comes to audio post production editorial and mixing, so knowing how to make magic using that software is key. Shortcuts are essential. Dig into plug-ins. If your system has the bare minimum, that's fine. Learn the hell out of what you've got. And experiment too. Mess with signal flow. Route this into that. Overload an Aux track with everything and see what you get. Reverse, pan, compress, delay, dopple, ping-pong, etc. Go nuts, but figure it out.

> *It is extremely important that a sound designer exercise good time-management, communication with his or her supervisors and mixers, and of course, a profound-enough knowledge of Pro Tools.*

Native Instrument's Kontakt is great to learn and apply towards your workflow. I've only scratched the surface when it comes to figuring out all it can do, but it totally comes in handy.

Having a mixer/control surface is very important. I have an Avid Artist Mix and I love it.

Lastly, but certainly not least, a strong sound designer needs to embrace all the wonderful sound libraries that are literally a few clicks away. Whenever I start a new project, I talk with the post supervisor on the show and/or read as many of the show's scripts that I can. I make sound notes as I go, then I hit the internet and load up on new material to start the season with.

• How to learn it:

Going to audio/film school is a great way to get formal training in sound. In a school setting, the student will get technical training on electronics, signal flow (super important), music history, gear and gear history, analog vs. digital realms, software and plug-ins, as well as studio maintenance, session prep, and hands-on experience with consoles and recording. School helps arm the future sound designer with a resume and some know-how. Paradoxically though, the best way to learn the job is to be on the job, and getting the job is apparently the next question.

• How to find work:

My best advice is to get any job you can and learn as much from the experience. If you're a student, ask for help landing an internship.

I started out as an intern at Monkeyland Audio in Glendale, where I spent 10 years working in many aspects of the business: Intern/runner, assistant, ADR recordist/assistant, ADR mixer, Foley mixer, Foley artist, sound effects editor, sound designer, and eventually, supervising sound editor. I worked on everything from commercials, short films, student projects, web series, episodic and reality television, independent films, and direct-to-video and DVD films. I made tons of mistakes starting out, but having the opportunity to wear many hats gave me the chance to figure out how to be an efficient and effective editor, while figuring out how to create a strong and impactful workflow for myself.

> *I made tons of mistakes starting out, but having the opportunity to wear many hats gave me the chance to figure out how to be an efficient and effective editor, while figuring out how to create a strong and impactful workflow for myself.*

I needed those 10 years at Monkeyland to prepare me for the hectic television schedule I work over at Warner Bros., and even then, I've learned so much more in the last few years about building and creating new material, razor-sharpening my skillset, and learning to build that "Pulitzer Prize-worthy" punch.

• Essential advice for working and making it in sound design for TV:

My first bit of advice for pursuing a career in sound design is to get that first job (anywhere you can) and make it count. As I mentioned above, getting your foot in the door of a boutique post facility is ideal because you'd probably have exposure to all kinds of audio jobs, and that's invaluable. You'd also probably get to work with other sound peers who have a wealth of knowledge to share.

A great sound designer will do great work regardless of whether they're working in television or in features, or whether the budget is massive or meager. It is more important for the sound designer to have a passion for storytelling, as well as for crafting a compelling soundscape.

Building your arsenal of design techniques (while sharpening your workflow efficiencies) takes time, and ironically, time is a luxury when cutting in television. But with practice and patience, you will grow in your storytelling journey and develop your "Pulitzer-powered" (or in our case, Emmy or Golden Reel-powered) punch.

• Further reading and resources:

Specifically for television, I don't have anything to recommend but we do live in an extraordinary digital age. There's so much online! I'd say watch as much as you can on YouTube to start with. Also bookmark Soundworks Collection, Randi Altman's Post Perspective, Los Angeles Post Production Group, The Editors' Lounge, and Designing Sound.

Besides hosting the Golden Reel Awards, the Motion Picture Sound Editors hosts a number of informative and entertaining sound events throughout the year that are members-only. It's a great way to mingle and meet new sonic friends. If you haven't joined, I'd suggest looking into the requirements and see if you qualify. International members are welcome!

Chapter 5: How to Succeed in Audio Branding, Music Editing & Sound for VR/AR/MR – with Steve Keller, Steven Saltzman, Helena McGill & Anna Woźniewicz

AUDIO BRANDING – INSIGHTS FROM STEVE KELLER:

About Steve Keller:

Steve Keller is Sonic Strategy Director for Pandora Media, where he blends art and science into award-winning audio strategies and creative content for a variety of global agencies and brands.

With a degree in psychology and over 30 years of experience in the music and advertising industries, Steve's work explores the ways music and sound affect consumer perception and behavior. Recent experiments have examined the relationship between sound and taste, the existence of audio archetypes, and how bias impacts the aesthetic judgements of advertising professionals. Hear more in his TEDx Talk here.

He is the 2017 recipient of the iHeartMedia Scholarship for Leadership in Audio Innovation and is currently completing an Executive MBA through the Berlin School of Creative Leadership, focused on how brands can more effectively measure and predict returns on audio investments.

Website: www.pandoraforbrands.com/studio-resonate

• **What working in audio branding entails:**
On the one hand, audio branding is simply the use of music and/or sound to communicate brand attributes, meaning, and purpose in a way that enhances brand recall and linkage. This can certainly be accomplished through the simple pairing of an audio stimulus with other brand identifiers. It's a tactical use of sound to drive recognition.

On the other hand, audio branding is also the use of sound to align brand intent with consumer perception in a way that produces measurable results. Framed this way, audio branding is a strategic process that goes beyond a tactical execution. It's a design approach that helps brands make better choices about the sounds they associate with their brand.

I'm more interested in the later approach. I'm fond of saying, "Audio branding doesn't start with your ears. It starts with what's between them." I want to explore the intersection of behavioral economics, consumer insights, psychoacoustics and psychophysics.

I want to understand how music and sound shape our perception and behavior, and how a strategic approach to audio in a brand context can produce a tangible return on investment.

> *Audio branding doesn't start with your ears. It starts with what's between them*

• What it takes in terms of skills and gear:

Audio branding is, in practice, a type of alchemy: a blend of science and art. To be an audio alchemist, you need an understanding of consumer psychology, statistics, testing methodologies, behavioral economics, design thinking, music science, and psychophysics. It also helps to have experience with composition, sound design, audio production, music rights (particularly copyrights), and leading creative teams.

Finally, as you're often collaborating with brand marketing and advertising teams, it's important to understand how these businesses approach strategy and creativity.

Obviously, it's difficult to find all these things in one individual, which is why it's important to surround yourself with a team that can offer a degree of specialty in all these areas. Learn what you do best and then seek out others to compliment your abilities.

When it comes to the "art," you obviously need the capability to create the audio assets. Audio software to record and edit is important, as well as a good microphone and signal processing gear (like preamps and compressors). Most composers or sound designers have these tools at their disposal.

At the end of the day, when it comes to great audio branding, great production isn't a differentiator. That's simply a given. The audio branding agencies and consultancies that set themselves apart do it through their approach to design, research, and producing a measurable ROI for their clients.

• How to learn it:

Picking up on the previous question about the gear needed for audio branding, I'd suggest that your most valuable piece of "gear" is your brain. Before you can start to connect the sonic dots, you have to find them. We know that sound doesn't happen in a vacuum. Neither does audio branding. Read everything you can, reach out to other audio branding practitioners and learn from therm. Look for case studies and academic research that can inform your decision-making process. Join a professional organization where you can trade insights and stories. Consider expanding your knowledge across other disciplines.

• How to find work:

Audio branding has matured quite a bit in the last 15 – 20 years. There are some very good audio agencies now around the world. Reach out to them about potential job opportunities or, if you're a student, internships.

If you're a composer/designer interested in the field, put together a reel and target companies in the audio branding space. Make sure your reel showcases your ability to think about music and sound from a design perspective.

If you're a strategist or a researcher, see if there are agencies or consultancies that are interested in developing audio branding services.

Make sure your reel showcases your ability to think about music and sound from a design perspective.

Of course, you can also try to create your own company. With the rise of voice interactivity, there's a renewed interest in audio branding. The good news: this interest is opening up more conversations with

brands about the strategic use of sound and music in branding and marketing. The bad news: there's more competition in the field.

• **Essential advice for working and making it in audio branding:**

I think it helps to have a certain amount of patience and perseverance. Look for the parts of our discipline that need to be challenged. How can you add to the body of knowledge? What new research methodologies or tools could be developed?

• **Further reading and resources:**

If you're building a library, here are a few titles from my shelf that I think should be on yours:

• Allan, David. 2015. This Note's For You: In Search of Music Marketing Excellence. Business Expert Press.

• Banaji, Mahzarin R., and Anthony G. Greenwald. 2013. Blindspot: Hidden Biases of Good People. Delacorte Press.

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• Gabrielsson, Alf, and Roy Bradbury. 2011. Strong Experiences with Music. Oxford University Press.

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MUSIC EDITING – INSIGHTS FROM STEVEN SALTZMAN:

About Steven Saltzman:

Music editor and composer Steven Saltzman has over twenty years of music editing experience. He's earned a Golden Reel Award and four nominations. Recent works include: *Mary* (2019), *Donnybrook* (2018), and *The Revenant*.

Steven recently published a book on music editing called Music Editing for Film and Television, The Art and The Process, and teaches music editing and lectures at various institutions and venues around the world.

He is a new member of the Academy of Motion Picture Arts and Sciences, serves on the Board of Directors for Entertainment Industry Professionals Mentoring Alliance (EIPMA), a past board member of the Motion Picture Sound Editors, (MPSE) and currently member of the Motion Picture Editors Guild, an Associate Member of The Guild Of Music Supervisors and the Society of Composers and Lyricists.

Website: www.saltzmanmusic.com

• **What working in music editing for film and television entails:**

Our job description encompasses working with the multi-faceted concerns of all music in a TV show or film. While any one project may not require all areas of a music editor's expertise, our job and involvement can include any one or more of the following:

• Creating music spotting notes; a detailed representation of each score cue and source music in a project. Usually this includes a description of the scene where music will go with a time code start, end and length. This document is a guide for the director, editor, music supervisor and composer going forward through the post production and composition process.

• Creating a temporary music score by digitally editing pre-existing movie music as a primary resource.

• Prepping and managing all the music including the placement and editing of songs and source material for a temporary mix. This will then allow the movie to be played for an audience with music prior to the composer being hired or if the composer has not completed the score.

• Once a composer is hired, the music editor works closely with the composer's team to help present music demos or mock-ups for the director's and/or producer's approval.

• Once the score is approved for recording or production, the music editor helps set up the Pro Tools sessions and clicks for the musicians and recording sessions.

• Upon the completion of the score, each cue is properly stemmed upon guidance from the music editor and then they prepare the score and all the songs and source materials for the mix on the dub stage.

• The music editor is on the dub stage as the music representative for both score and songs. The composer does not usually attend the dub mix.

• After the dub and the print master is made, the music editor compiles the preliminary music cue sheet to then be sent to the legal department for preparation as the final cue sheet. This document then gets distributed to all the respecting PROs for royalty income distribution.

• Our work is not just technical as we often travel a thin line helping to manage and 'protect' the egos, desires, whims, and creative decision for better or worse, among the many parties in a project. These can include the director, composer, producers, music supervisor, songwriters, picture editor, mixers, assistant picture editors, and anybody else!

• **What it takes in terms of skills and gear:**

Almost exclusively, Pro Tools is the DAW of choice for music production, recording, music editing and mixing. One must be nearly an expert at using and problem solving with Pro Tools.

• **How to learn it:**

Many music editors come to this profession through other related career paths such as composing, being a musician, sound effects editor, picture editor, or mixer, etc.
While I do teach a course in music editing, there are also some universities and post production audio trade schools that have courses on the subject. Usually one learns music editing by following or being mentored by an experienced music editor. There are some unofficial assistant / internship avenues as well.

• **How to find work:**

Working as a music editor is usually a freelance career where we are constantly networking and building contacts to help guide our career moving from one job to the next.
There are however some post production audio facilities that have a small staff of sound editors and mixers where music becomes an element that needs to be managed along with the other sound materials. In these cases, there may be a sound editor that becomes a music editor by the nature of handling the music as well and perhaps the mixing… all done by one or two people.

• **Essential advice for working and making it in music editing:**

I would suggest that one educate themselves with all the details of this work by reading about it, meeting and talking with music editors, and visiting as many mixes and dubs to observe how the variety of sounds get mixed.

> *Once you feel like this work may be a match for you, your temperament, and skill level, jump in with both feet and don't give up!*

Once you feel like this work may be a match for you, your temperament, and skill level, jump in with both feet and don't give up!

• **Further reading and resources:**

One of the best avenues is to meet and talk with anybody and everybody in post-production. People usually love to talk about their work and experiences… if they have time to talk. Again, reading about this work and getting out there and finding out what it really is like is critical.

If interested in my book, please follow the link here – and for a 20% discount use this code: FLR40

SOUND DESIGN: VR/AR/MR – INSIGHTS FROM HELENA MCGILL & ANNA WOŹNIEWICZ:

About Helena McGill and Anna Woźniewicz:

Helena McGill and Anna Woźniewicz are the co-founders at Noctvrnal, an audio post production studio based in Los Angeles that specializes in interactive audio for XR, location-based experiences, and installations.

Noctvrnal is bringing immersive sound design to the forefront of virtual and augmented reality by pushing the boundaries of current techniques and harnessing psychoacoustic research to create a powerful listening experience. The team is passionate about creating new worlds through sound, and their work has been featured at MIT, Yale, USC, and VRLA.

Website: www.noctvrnal.com
Twitter: @Noctvrnal_VR

• What working in VR/AR/MR sound design entails:

Creating a mix for AR/VR starts with the same theoretical concepts and techniques as traditional sound design, but then they're taken a step further. You still need to understand how sound affects people's emotions and where to use certain sound effects for maximum emphasis in a story and be able to execute those concepts technically.

Then, there's just the added step of either spatializing the mix into a 360-degree space, or bringing your sounds into a game engine, etc. The foundation is the same, but in order to extend the basics to AR/VR projects, you'll need a knowledge of a lot more plug-ins and software, plus psychoacoustic concepts that are unique to a 360-degree context.

• What it takes in terms of skills and gear:

Skills: You need to understand the basics of sound design — editing dialogue, sound effects, backgrounds, plus re-recording mixing and when and where to use which plug-ins. You should also be well-versed in location recording, as it gives you context for the work you're doing in post. You should also be familiar with game engines like Unity and Unreal Engine, plus middleware like Wwise and FMOD.

Additional spatial SDKs include Google Resonance and the Oculus Spatializer. It also helps to have some basic coding knowledge.

Gear: You'll need a DAW (Pro Tools, Reaper, etc.) to create sound effects for object-based mixes, or to create full ambisonic mixes for 360 video content. A sound library is also helpful, that way you have somewhere to pull sound effects from to mix and match and create your own, unique soundscapes.

• **How to learn it:**

• Get on-set, work on low-budget projects.
• Take unpaid work until you feel confident in your abilities.
• Watch YouTube tutorials.
• Join the FB360 Spatial Workstation Facebook group.
• Practice by doing — play around with different ambisonic microphones, plug-ins, and SDKs.

• **How to find work:**

Short term/contract work is available but is currently harder to find. Team up with a developer and start playing around with spatial tools; network and connect with XR content creators. There are always projects in need of audio, but the budget is often a limiting factor.

As the industry reorganizes itself as we head into 2020, stay on top of current trends in tech and entertainment; the future of audio is immersive and interactive.

• **Essential advice for working and making it in VR/AR/MR sound design:**

Stay on top of new software and workflows — there are constantly new microphones or ambisonic plug-ins or SDKs being released. Be aware of what's out there and take time to experiment and get to know the main ones, so that you can recognize each one's strengths and weaknesses and make sure you're using the best tools for that specific project.

> *Be aware of what's out there and take time to experiment and get to know the main ones, so that you can recognize each one's strengths and weaknesses and make sure you're using the best tools for that specific project.*

Reach out to 360 production companies or groups that are just starting to expand into VR content.

Half our job has been educating on not only what spatial audio is, but what it can bring to a production

• **Further reading and resources:**

Designing 3D audio combines a heavy scientific focus with room for creative experimentation. Brush up on basic psychoacoustic concepts: how humans hear and perceive certain auditory events. This has been helpful in designing a mix that influences the listener to engage with the full 360-degree space.

The Spatial Audio Facebook group has also been an invaluable asset; updates to software and proprietary plugins are announced, and the community is very open to new research and real-time troubleshooting.

Chapter 6: How to Succeed in Field Recording, Foley & Teaching Sound – with Thomas Rex Beverly, Ronnie van der Veer & James David Redding III

FIELD RECORDING – INSIGHTS FROM THOMAS REX BEVERLY:

About Thomas Rex Beverly:

Thomas Rex Beverly is a field recordist and composer who explores our evolving planet. His mission is to preserve endangered environments through sound in order to raise awareness and inspire people to protect unique acoustic ecosystems. Gordon Hempton's concept of "one square inch of silence" and unpolluted soundscapes drives his work. Unfortunately, these pristine places are rapidly diminishing throughout the world. Thomas unites his love of field recording, composition and acoustic ecology in two ways: he conserves natural places of solitude in sound libraries, and he incorporates field recordings and weather data into his music compositions. His compositions use real time weather data, multimedia music technology and composed electroacoustic music utilizing Max/MSP computer coding language, live instruments and electronics. Thomas's art is a blend of conservation and music. Through his art, Thomas works to preserve threatened natural soundscapes for future generations.

Website: thomasrexbeverly.com

• **What working in field recording entails:**

A love of exploring, child-like wonder at the discovery of new sounds, and an endless supply of patience.

• **What it takes in terms of skills and gear:**

When planning a big recording trip I first do extensive research and location scouting. This involves many hours on Google Maps, Google Earth, and Flight Radar 24 in order to identify typical noise pollution sources such as roads, railroads, air traffic, and generators. Then, I call local guides and rangers to learn about additional sounds I might not notice on maps like construction or logging.

After this research phase, I make a detailed plan of what to pack on my trip. This takes the form of lengthy checklists that vary depending on the type of environment I'll be visiting. I like to have full redundancy in the signal chain. This means duplicates of microphones, cables, recorders, batteries, SD cards, headphones, and hard drives. Things fail all the time in the field and it pays to have as much redundancy as you can afford. In the beginning, I had zero redundancy but I've gradually built a kit that includes replacement parts for every section of my signal chain.

Upon arrival, I have a general idea of the sounds that I would like to get from the environment — certain types of ambiences or a specific species of animal I am hunting with my MKH 8040s. I'll hike out to into the wilderness and look for ideal recording spots. I test out many different locations and perspectives in an area to find the best sounding spot to my ears.

When recording, I prefer to listen over headphones, but that isn't always an option if there is dangerous wildlife around. In those situations, I leave the mics out unattended for hours at a time or for 12+ hours overnight.

During recording, insane amounts of patience is needed in order to be a successful. As a field recordist, you'll spend time waiting for planes to fly by or waiting for the right weather conditions. When I first started field recording, I found it hard to sit still for even two or three minutes and listen. Over time I learned how to meditate while I record in order to hear the different voices in an ecosystem. For example, I do an exercise where I focus on sounds at 5 feet, then 500 feet, then 5 miles. This meditation radically changes my perspective as I'm sitting and waiting for interesting things to happen. After each session, I'll have a ton of material, but will often have to throw out 50-90% because of noise pollution, bad weather conditions, or any number of other reasons.

> *When I first started field recording, I found it hard to sit still for even two or three minutes and listen. Over time I learned how to meditate while I record in order to hear the different voices in an ecosystem.*

My main recorder is a Sound Devices 702. My rig is a combination of low-noise pre-amps on the Sound Devices and low self-noise microphones. Mics with a similar self-noise rating are needed for very quiet nature ambiences.

I'm a big fan of Sennheiser's MKH series microphones. I have two sets, an MKH 8040 pair that I use in ORTF and an MKH 50/MKH 30 combination that I use in Mid/Side configuration. Those both have about the same self-noise rating, which is 12 dBA of self-noise.

Different mics are better for different situations. For example, the Sennheiser MKH 50 and 30 are better for windier sessions. The MHK 8040s are more sensitive to bass, so they are not as great in the wind, but are fantastic for the rippling bass of thunder.

I also have DPA 4060s, little lav mics that I'll hook up in various situations. They are a little noisy for quiet environments but are great for rain or wind or even for sticking in all sorts of small crevices where a full-size mic wouldn't fit.

I have a Sony D100, which is a little handheld recorder I keep with me all the time. For variety, I also have an assortment of hydrophones and homemade contact mics to experiment with for fun adventures with non-traditional microphones.

• **How to learn it:**

I studied music composition as an undergrad before going on to grad school for audio engineering, music technology, and composing. Grad school is where I learned the fundamental skills I would later use in the field. It is incredibly helpful to have some experience with audio engineering if you want to become a field recordist.

In addition, there's a great field recording community online, and there are quite a few Facebook groups to join. Moreover, there is Paul Virostek's blog 'Creative Field Recording'. His e-books are a wonderful place to start. There's a lot of crossover between location sound recording and field recording, so the Location Sound Podcast is also a good resource.

Paul Virostek's e-books will fill the gaps in your knowledge and help you avoid rookie mistakes as you begin field recording.

As for gear, all the choices can be very overwhelming when starting out and the barrier of entry can be expensive. Paul Virostek's e-books will fill the gaps in your knowledge and help you avoid rookie mistakes as you begin field recording.

You don't want to make unnecessary investments in gear that you may not need.

• **How to find work:**

The rise of websites like A Sound Effect has made it easier for field recordists to create a first sound library. It used to be more difficult to create sound libraries because you had to build your own website and figure out how to send several gigabytes halfway around the world or physically ship hard drives or CDs to customers. Fortunately, A Sound Effect helped to lower the barrier of entry for people who have a lot of expertise in recording, game audio, or film sound, but not much web development and e-sales experience. Now expert recordists can create a niche library and put it up for licensing on A Sound Effect. It's a surprisingly big barrier to build your own website and do your own digital distribution. Until you have a large catalog of sound libraries, I think it makes a lot more sense to release libraries on A Sound Effect.

In general, when trying to find new ideas for sound libraries, you can look at the current offerings in order to see what is missing, or you can do a fresh take on a classic. It's always a fun challenge to come up with an idea that has never been done before!

While some may find social media groups helpful, I tend to think large social media groups can be a bit overwhelming. When I'm looking to network, I prefer to look up people in my geographic area and invite them to have coffee. I don't go into these meetings with an agenda, but I try to share my passion for recording and learn all I can from the conversation. You never know when building a relationship might eventually turn into paid work.

• **Essential advice for working and making it in field recording:**

Recording sounds makes me more grounded in the present moment. The first time I carried a microphone, I was in awe of all the sounds in my environment that I didn't normally pay attention to. Field recording is an amazing way to experience the world.

That said, field recording is a lot of trial and error. You're going to fail a lot. You'll break equipment. You'll encounter unexpected weather. Surveying propeller airplanes will circle you for hours. Nevertheless, you'll have joyful recording experiences. It's important to remember that oftentimes the fun is in the failure.

When you are first starting out, it is important to record whatever you can, even if it's only with a handheld recorder. Just get out into the world and hit record.

Field recording is like any skilled art form. The more you record, the more you will improve. When I started my career and as a composer, I needed to write countless compositions in order to hone my craft. The same goes for writing, photography, or field recording — experience is gained through practice.

When you are first starting out, it is important to record whatever you can, even if it's only with a handheld recorder. Just get out into the world and hit record. Don't get paralyzed by decisions about gear. Don't let not having the "right" gear be an excuse to not get out and record. There are lots of things you can record in everyday life. There are all sorts of free spaces you can get access to in order to build your recording skills.

Remember to try to think of field recordings as art, rather than as commodities. Being a field recordist is like being an audio photographer. Field recordings are just as artistically valuable as photographs, sculptures, paintings, or any traditional art form. Before you begin recording, get into the headspace of wanting to create art with your field recordings because it will help you find interesting sounds to explore. Once you've recorded an interesting sound, tell the story behind the recording. For instance, start a blog or a YouTube channel to share the fun and experience of the story of recording it. If you can tell an exciting and intriguing story about your recording, then you can help people feel like they are part of the recording experience.

• **Further reading and resources:**

1. Paul Virostek's field recording eBooks: I read these books when starting out and highly recommend the whole series.
2. Field Recording Buyers Guide
3. George Vlad's field recording blog: George goes on epic expeditions throughout many countries in Europe and Africa.
4. My own Field Recording Blog: Also, my list of Field Recording Tips
5. Andy Martin's work on The Northwest Soundscapes Project
6. Book – The Great Animal Orchestra by Bernie Krause
7. Book – One Square Inch of Silence by Gordon Hempton
8. Book – The Earth is a Solar Powered Jukebox by Gordon Hempton
9. Book – The Hidden Life of Trees by Peter Wohlleben. It's a fantastic book on how forest ecosystems work. You'll never look at a forest the same way after reading this book.
10. Book – The Obstacle is the Way by Ryan Holiday. This is a modern take on Stoic philosophy and it provides a helpful way to avoid frustration when recording. I pull this book out when airplanes are ruining my nature recordings.
11. Book – Bird by Bird by Anne Lamott. If you are ever stuck creatively. This is a fantastic and hilarious book to help get you out of a creative rut.
12. The work of Tim Prebble at HissAndaRoar
13. Lang Elliott – Music of Nature
14. Wild Ambience
15. Tonebenders Podcast
16. Location Sound Podcast

FOLEY – INSIGHTS FROM RONNIE VAN DER VEER:

About Ronnie van der Veer:

Ronnie van der Veer is a Dutch Foley artist who previously worked on films like The Lobster, November, and the film Girl, which was recently nominated for a Golden Globe. He mainly works from his own Foley studio just outside Amsterdam (The Netherlands) from where he worked on more than 100 movies and TV shows.

Website: ronnievanderveer.nl
IMDb: Ronnie van der Veer

• What working in Foley entails:

As a Foley artist, I have to make sure that all the sounds that are hard to import from a sound effect library will be recorded in the Foley studio. A big part is footsteps because with footsteps there are so many aspects like: surface, shoes, emotional state of the character, and perspective that I take into account when performing them. But you cannot get the same realism and variety with sound effects. Other sounds are cloth movement and Foley effects. The last category could be anything from basic stuff like sitting on a chair or putting a cup on a table to robot movements, alien tentacles, or whatever crazy sounds the scene might ask for.

> *In my studio, we work in the 'French way' of Foley recording, which means that besides the dry signal we also record the reverb of the room with separate microphones.*

With my Foley, I try to match the sound of the production sound as much as possible so the Foley blends in nicely. In my studio, we work in the 'French way' of Foley recording, which means that besides the dry signal we also record the reverb of the room with separate microphones. That way the Foley doesn't sound like a dry, isolated sound but the sounds are realistic and placed into the space. My colleague (the Foley mixer) will create perspective by changing the mix of all the different microphones in the room. Of course, you could do that afterwards in the mix with EQ, volume, and reverb, but this sounds much more realistic. We can change the acoustics of the studio to make it more or less reverberant to match the location the scene takes place in, which makes it very flexible.

I work on both films and TV shows so budget and time might vary per production. You just cannot spend as much time on a 45-minute episode as you would do on half a movie, so I always try to keep priorities in that case. It's important to know how much screen time I have to do in an hour. I have to keep in mind what are the most important sounds in a scene. Which sounds are missing? What can be done with sound effects? And how can I improve the scene with my Foley? The last one is the most fun because it's great when you notice that you can create more suspense in a scene with the Foley, or make a joke funnier with just the right sound.

• **What it takes in terms of skills and gear:**

In terms of skills, I would say you have to definitely be creative because you have to come up with a lot of solutions for making all the sounds, and you cannot always use the real object. If you get a request to make the sound of a cow giving birth you have to be creative, haha! I always picture the sound in my head and try to recreate that.

A good sense of rhythm is important too. If you are a musician or dancer that definitely helps. And you have to be able to 'see sync' too.

You have to be motivated, because it takes lots of practice to become good. I've been doing it for 10 years and still am constantly improving my performance and sound.

A good sense of rhythm is important too. If you are a musician or dancer that definitely helps. And you have to be able to 'see sync' too.

In terms of gear, I would say you at least need a good microphone and a DAW like Pro Tools to record the sounds and a room with decent acoustics. And of course lots of props. I like working in my own studio with my own props because when I need to make a certain sound I know that in a certain box there will be exactly that object that makes the sound I want and I know the sounds of all the surfaces and shoes very well.

• **How to learn it:**

It takes a lot of practice so even if you are a student or just graduated you can work on no budget or low budget short movies to gain experience. When I had just graduated, I worked on a very bad low budget feature and probably my Foley was equally bad at that time, but I learned a lot from creating all those sounds, listening back to them and deciding what could be better.

If you could watch a Foley artist work or be Foley assistant to a good Foley artist that would be very useful too. You can watch someone work who already figured out what works and doesn't work.

• **How to find work:**

In my case, I started doing work as a freelance Foley artist for a sound studio in their own studio. That gave me experience and made me improve my technique. Some people might start as an assistant or intern and try to climb up from there.

• **Essential advice for working and making it in Foley:**

I've already mentioned some advice, but I'll add that you need to train your ears as well. Find nice (second hand) shoes, try different props, find scenes from movies with Foley that you like and try to recreate it.

Another tip I once heard was to walk down a busy street and just walk behind people and try to exactly match the rhythm of their footsteps. I might advise not to mimic one person too long cause they might call the police, but it could be good exercise.

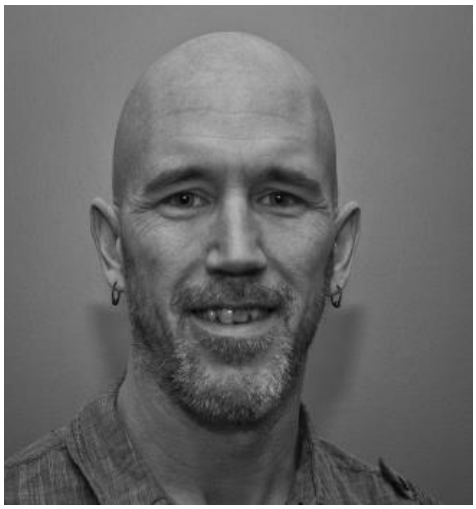
You can find rhythm and nice sounds in everyday life and that can be an inspiration to the sounds you make as a Foley artist.

You can find rhythm and nice sounds in everyday life and that can be an inspiration to the sounds you make as a Foley artist.

• **Further reading and resources:**

I found The Foley Grail by Vanessa Theme Ament, a very helpful book about Foley. There is also a documentary called Actors of Sound which follows some of the biggest Foley artists in the industry. Also remember that Google is your friend — just Google 'Foley artist interview' and try to find articles about Foley and watch all the videos on YouTube that you can find that show Foley artists at work.

TEACHING SOUND – INSIGHTS FROM JAMES DAVID REDDING III:



About James David Redding III:

James David Redding III has worked in audio post-production for 19+ years, starting his career straight out of Ithaca College at Sync Sound, Inc / Digital Cinema, LLC in New York City, where he was on staff for 13 years before going freelance. Working on a vast array of projects from television series (*The Americans, Unbreakable Kimmy Schmidt*), to film (*Carol, Brigsby Bear, Time Out of Mind*), to documentaries (*No End in Sight, $ellebrity, The Uncondemned*), he has participated in many aspects of audio post-production — ADR recordist, Foley recordist, sound effects editor, sound supervisor, re-recording mixer, and sound designer.

IMDb: James David Redding III
Facebook: JDR3productions

• What teaching sound courses entails:
To teach a course on sound you should have a good understanding of all aspects of sound, not just what you are teaching. I teach post production mixing for film and television at New York University, but because I have a strong understanding in other aspects of the sound world (sound recording, music recording and industry, and even the physics of sound) I feel I am better equipped to help my students relate my subject to something they might already have a grasp of. It also allows me to help them gain a deeper understanding of practices and theories and why/how/when they are used.

• What it takes in terms of skills and gear:

When teaching audio classes, you should have a high level of competence in the area/subject you are teaching. Your skill set should be towards the highest it can be, though there is always room to grow. I find knowing many ways to approach the subject to be helpful since you can then help students that are having trouble grasping certain concepts.

> *To teach a course on sound you should have a good understanding of all aspects of sound, not just what you are teaching.*

As for gear, hopefully the institution that you are working for already has most of the gear that you need to teach. I do have my own personal studio that I can mix surround projects in, but it is set up for just that, not for teaching. I work in two rooms at NYU. A classroom setting that has multiple workstations with Pro Tools installed so that the students and I can work together and they can follow along as we go through settings and common practices. The other room is a surround mixing theater with Pro Tools and a D-Command control surface. In this room the students can have practice

mixing projects and get used to a more professional studio setup. I do make recommendations on software and hardware for upgrades and such, but in the end, all of the equipment is owned by NYU.

• How to learn it:

For me, it's really a lot of learning by doing. Sometimes I will sit in on a colleague's class so that I can get a better grasp on how to manage a classroom and keep the class flowing. I find it's not much different than mixing with a client in the room — controlling the pace and making sure we don't get sidetracked. Teaching sound is a different type of subject. I don't think you could find a course on how to teach it. If you know audio, and you like talking to others about audio, then teaching might come naturally to you.

• How to find work:

Look to local universities or colleges that have similar offerings of classes. You could either offer to help expand an existing program, fill up the roster of teachers, or offer a whole new type of course (though that would be much more challenging to get off the ground). If you are looking for a bigger life change, you can look at any institution that currently has a curriculum similar to that which you wish to teach, no matter the locale.

Schools are not that much different than any other business and will list openings and opportunities just like anywhere else in the workforce. I started by guest lecturing for a friend's class at NYU. When the opportunity came up that they were looking for a new adjunct professor for their mixing class, my friend let me know and I pursued the opportunity, just like any other job.

> *Schools are not that much different than any other business and will list openings and opportunities just like anywhere else in the workforce.*

• Essential advice for working and making it in teaching courses on sound:

Just like anything else, know what you know, know what you don't know, and be prepared. Students are trusting that you have a higher knowledge of the subject and they want to learn.

Also, try to remember what it was like when you were a student, sympathize with them and try to understand what they could be going through while trying to learn. By doing this, you might find a different way to get them to understand the subject and watching it "click" is such a great feeling.

• Further reading and resources:

I haven't found any yet (though honestly I haven't been looking either). What I have found is that talking to fellow teachers in the program is very beneficial. Most of the teachers have been teaching for a while and, being teachers, do not mind sharing what they have learned.

More sound community tools

Find Audio Pros for your projects here

Get a free showcase listing on Soundlister

See the latest audio events around the world

Find game audio community groups worldwide

Search for blog posts

Search for sound effects

Further reading on how to succeed in sound

Succeed in sound:

- How to Set (and Get) the Right Price for Your Audio Work
- 10 Essential Tips for Game Audio Freelancers
- How to be a successful sound designer – with Scott Gershin
- 5 Useful Tips for Upcoming Sound Designers and Sound Editors
- Sound Opinions: How to get game audio pricing right
- Building a successful audio post studio – with Kate Finan and Jeff Shiffman
- Rebuilding your studio: Goals, tips and lessons learned
- Creating audio for games – with Martin Stig Andersen
- A life in sound: How to foster creativity and protect yourself from burning out – with Chance Thomas
- Tips and thoughts on running your own audio post production house – with William McGuigan
- Why teaming up is a winning strategy in game audio
- 7 Sound Alternatives to Working For Free
- Audio Outsourcing Success: Essential Tips, Thoughts and Working Practices from Adele Cutting

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The sound success series:

- How to Succeed in UI/UX Sound Design, ADR Recording, & Audio Programming
- How to Succeed in Sound Design for Film, Documentaries, and Trailers
- How to Succeed in Sound Design for Games, Animation, and Television
- How to Succeed in Field Recording, Foley, and Teaching Sound
- How to Succeed in Audio Branding, Music Editing, and Sound for VR
- How to Succeed in Sound Editing, Sound for Advertising, and Production Sound

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Breaking into audio – guides and resources:

- The ‘Quit Aspiring’ book – by Adam Croft
- 4 Effective Ways to Break into Game Audio
- Tips for Creating a Perfect Resume for Audio Industry Jobs
- Yet Another Game Audio Hiring Article – by Ariel Gross
- 5 Tips for Getting a Job in the Audio Industry
- Applying for a job in game audio – by Matthew Florianz
- Freelance Game Audio: Getting Started and finding work – by Ashton Morris
- How to get started (and make it) in game audio – 10+ fundamental questions answered by Akash Thakkar
- Courses: How to network and get paid for your work in the game industry – by Akash Thakkar
- How to Craft a Perfect Cover Letter for Audio Industry Jobs

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Finding those audio jobs:

- Get the weekly Audio Jobs newsletter
- Join the Audio Jobs Facebook group

Showcasing your work:

- Get a free profile on Soundlister
- Upload your demos to Soundcloud
- Upload your demos to ReelCrafter

Networking:

- Find game audio community groups around the world
- Find interesting audio events around the world
- Find other audio pros around the world

Coping with a layoff - and how to bounce back:

- How to Survive a Game Audio Layoff – insights from Damian Kastbauer
- How to prepare for – and power through – a layoff in the game audio industry, with Brian Schmidt
- What it's like to be laid off from your video game studio
- What To Do Before and After Being Laid Off
- Facebook Group: Survival Skills for Creatives

Education and knowledge:

- Get an audio mentor at the Audio Mentoring Project
- How To Learn Game Audio Online – A talk with Game Audio Educator Leonard Paul
- Read the 100s of sound stories and guides on the A Sound Effect blog (search for stories here)
- Browse Industry Data: Game Music and Sound Design Salary Survey Results
- Browse 100+ Sound Design Guides
- Get tips and ideas for making your own sound effects
- Discover 1000s of sound libraries from the independent sound community
- Take online courses in Wwise, FMOD Studio, Unity, Pure Data & Unreal at the School of Video Game Audio

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Getting into independent sound effects:

- DIY SFX libraries - Your guide to your first sound effects library
- Sound effects survey results: Here are 90+ ideas for new SFX libraries

- How to create an indie sound bundle
- The quick-start guide to adding sound FX library metadata

Additional field recording reads & resources:

- 5 Useful Tips for Creative Urban Field Recording
- Field Recording and Immersive Installations – a Q&A with Julian Konczak
- Video: Sound Fields – Adventures in contemporary field recording
- Lessons learned from 20+ years in sound: Jeremy Peirson on field recording
- Video: How to edit and process field recordings entirely in REAPER
- The field recording group on Facebook
- Find field recordists from all over the world on Soundlister (and get listed as a field recordist yourself)

Additional sound teaching resources:

- The Teaching Sound For Screen Facebook group
- The Audio Educators Facebook group
- 5 Tips For Teaching Music Production
- Sound Design for Media: Introducing Students to Sound
- How To Teach Sound – The Guardian
- The Science of Sound
- Investigating Sound
- For job opportunities, keep your eyes peeled on the Soundlister Audio Jobs overview

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Additional Foley reads & resources:

- Heikki Kossi on the art and craft of Foley sound
- Video: Meet the Foley team at Skywalker Sound
- Video: How movie sound effects are made – with Foley artist Marko Costanzo
- Video: Inside the Pinewood Foley Studio
- The Foley Artist group on Facebook
- Find Foley Artists from all over the world on Soundlister (and get listed as a Foley Artist yourself)