INFORMATION SHEET FOR EQUITY MEMBERS

We're all 'socially distancing' or 'in lockdown' and as many recording studios are closed are looking for ways to keep working. One solution is to be able to record from home – to create a 'home studio'.

It is comparatively easy and cheap to set up something that will allow you to record auditions and even do podcasts, but if you're serious about working from a personal studio in the long term then this advice will help you create a really useful recording space in your own home.

There is no quick way to build a quality personal studio, it will take time, application, a little learning and a financial investment to develop a recording space that meets the technical quality demanded by production companies, producers of e-learning projects, commercials, video games, animation and audiobook publishers (all the various types of voice work that actors regularly record in professional studios). The wonderful thing about going down this route is that though you'll probably start out with something pretty straightforward, if you get the basics right, you can then improve and upgrade as time goes by. If a personal studio is something you'll use in future, then it really is worthwhile creating a good recording space and equipping it with a kit that you're absolutely confident in.

If you are constantly worrying whether the technical quality of your work is good enough, then that stops you giving your best performance. If you invest wisely, you'll gain an 'added extra' that will stand you in good stead, and perhaps open up other avenues of work for you, well into the future.

Part 1.

What constitutes a 'home studio'?

Not all 'home studios' are equal. Producers, publishers, radio stations, production houses, video companies, video game and animation producers and creators, audiobook publishers – anyone who hires professional voices has exacting standards. They also have their own reputations to consider and no matter how good you are at the creative stuff, if your recording doesn't match *their* requirements, they simply won't hire you!

Many full time voice actors have built or purchased an 'isolation booth'. There is a wide range of commercially produced isolation booths available – familiar names include 'Studio bricks', 'Kube', 'ISOvoxbooth', 'Vocal Booth', Acoustic Cabin', 'Whisper Room' and so on – prices start at around £3.000. You can also build a DIY recording booth from scratch and there are numerous guides online on how to build one. Neither of these is a quick fix however.

Commercial isolation booths are expensive – and heavy: some require a surveyor's report if installation is above ground floor level or on a wooden floor with a void (or indeed an apartment or another room) beneath – and they're not instant. Order one today and it will be at least six weeks before it's delivered, then you have to erect it and acoustically treat it; by which time, social distancing and business opening restrictions may be beginning to ease and things may be getting back to normal.

If you're looking at creating something that will enable you to work from home in the short term, let's look at some quicker and cheaper solutions – while trying to keep the quality as high as possible.

The minimum requirements

You will need a quiet, acoustically treated recording space that has some isolation from external noise (from outside the house) and noise from inside the house as well. Get the space right and you will save you (and your editor) hours of work in trying to remove noise and interference.

Location, location, location …

The first thing is to find the quietest place in your home. Not the smallest nor the easiest place to work in necessarily but the quietest. Ideally you need to use the room that is furthest away from traffic which is also well away from household noise sources: things like central heating boilers, fridges, freezers, burglar alarm panels and heating or air-conditioning units.

A basement room or cellar, or even a semi-basement often works well. Being at least partially below ground level, such areas have a large amount of natural insulation; though central heating boilers and freezers, as well as people moving around in the rooms overhead can be an issue. Under-stair spaces can work well too, though again, movement in the rest of the house may create problems. Even a walk-in wardrobe has potential as the location for a home studio. Use your imagination and you'll be surprised at the areas that suggest themselves.

The space you choose needs to be large enough to comfortably house you, your microphone and microphone stand, and a covered worktop or table for your computer

monitor, keyboard and mouse, papers, notes and all the other bits and bobs that you will need around you. You will also need either a music or copy stand of some kind if you're reading from paper, or somewhere to rest your tablet, Kindle or I-pad if you're reading digitally. Even if you normally stand to do voice work, audiobooks and other long form projects involve much longer periods in front of the mic so for comfort you will probably need space for a chair or stool as well.

The space you're working in will need some kind of acoustic treatment, so choosing a space that is small enough to enable you to achieve a good sound without spending a vast amount of money is the best bet. If you have no option but to work in a larger room then you will need to investigate ways to partition off some space using screens or some kind of room divider, so that you can reduce the size of the space you're recording in otherwise you will struggle to produce a high quality sound.

Noise

Noise is your enemy! There are four sources of noise that you will need to deal with.

1. Noises coming in from the outside world. You have no control over these.

2. Noises that happen within your home. These may be caused by other people, household appliances, and even the building itself.

3. Noises caused by your equipment – your computer, the light on your desk all create noise – inaudible normally, but in a recording environment, noticeable. Even your microphone will have some 'self-noise' – generally speaking USB mics and low end LDC mics create the most self-noise, cheaper audio interfaces are 'noisier' than more expensive models. In broad terms you get what you pay for!

4. Then there are the noises you make yourself. Clothing, jewellery, mouth noises, tongue clicks, tummy rumbles, breathing.

Noise from outside

Life goes on all around you; nowhere is silent, not even the depths of the countryside. It may be comparatively quiet in rural areas, but birdsong and the wind blowing through the trees are just as intrusive and irritating as passing traffic and barking dogs.

We become so accustomed to the noises around us every day that we become immune, but once you step in front of a microphone and start trying to record, those noises, to which you have previously been oblivious, will suddenly become noticeable and extremely irritating. Even in the quietest area of the house, there will always be periods when external noise can be heard, which is why it is so important that you listen … really listen … at different times of the day when choosing which room to record in.

Total soundproofing is nigh on impossible – so if there are particularly noisy period, you just have to work around them. Planning ahead will allow you to optimise your recording time and to take a break when the external noises are at their worst. However, there will be some noises that will prevent you from working … there's that horrible moment when you're mid recording and your neighbour suddenly decides to mow the lawn or starts a major DIY project. The council may decide to dig up the road outside your house, things do get in the way … but one advantage of working from home is that you can always work the night shift if you really need to!

Noise from inside

The second issue you have to deal with are the noises that your house makes. Every home has electrical equipment which may be running in standby, switching on and off automatically, or just simply being used. There will be a central heating boiler, a water heater, water pipes expand and contract, floorboards creaking randomly as room temperatures change; then there are radiators and thermostats switching off and on, fridges and freezers, those in sunnier climes may have air conditioning or a ventilation system. Not least of these electrical noises is the computer you're working with.

You can deal with some of these noises by just turning off the offending bits of equipment while you're recording or moving your microphone further away from whatever is causing the problem. However, it is virtually impossible to remove all noise sources. Sound will almost certainly filter through from other rooms as well … and not just from those in your *own* home, but from adjoining properties. This is especially a problem if you live in a semi-detached house or a terrace or of course, in an apartment or flat when you may have people living not only adjacent to you but also above and below. The term 'noisy neighbours' takes on a whole new meaning when you're recording!

Total soundproofing is virtually impossible to achieve in any studio. When I've worked in professional recording studios with the most fantastic isolation and room treatment, aeroplanes and heavy lorries still force recording to stop – and don't fall for the advertisements online selling 'soundproofing acoustic foam' – there is no such thing. The best you can achieve is isolation from sound and sound damping using acoustic treatment.

A bit of science

Sound waves move just as waves in water move. When a sound wave hits a hard surface some of the sound will bounce off that surface and travel back in the opposite direction.

When a sound wave meets and couples with a similar sound wave travelling in the opposite direction, this causes that particular sound frequency (wave) to have a higher peak and a deeper valley. This has the same result as turning up the volume for just that particular frequency (increasing its **'AMPLITUDE'**). In other words, the particular frequency where the waves meet and reverberate around becomes too loud when compared with the volume of the other sound waves. These coupled waves produce different types of resonance in your space; these resonating frequencies are called **'STANDING WAVES'**. When you're recording through a sensitive microphone, even though you may not hear that noise in real time when you're actually speaking, a keen ear (and an audio engineer) will be able to hear it (and indeed see it) as a distortion of your recorded sound.

Basically the limit of human hearing is between 20 Hz and 20,000 Hz (or 20 KHz), and the ideal acoustic environment for recording audio has an equal balance to all the frequencies across this entire range. Too much volume at one frequency or another is uncomfortable and even unpleasant. Too high a level in the bass or low to mid-range frequencies makes the voice sound muddy and lacking in clarity and at the other end of the spectrum, too much high frequency sound makes the voice sound too crisp and harsh.

If you're creating a recording space within a larger room either by curtaining off or using screens to make a smaller area, or if you have the option of building an isolation booth of some kind, then there is a theory that the ideal space should be of a size where one dimension is not related to, or divisible by another ... So a room that is 8ft x 9ft x 12ft would be preferable to a room that is 6ft x 8ft x 12ft. The reason given for this is this: in the first example, one of the numbers is an odd number and none is divisible by another. However, in the second set of numbers, all are divisible by two, and one is half of another number – and when it comes to sound waves, the maths makes a difference apparently.

Of course, room size may not be something you can correct - your home is already built, but don't panic. You can make any space sound better ... some may just take a bit more effort than others.

Room tone

Every room has its own sound. Your recording space, even if apparently very quiet with little extraneous noise, will have its own ambient noise - its unique 'room tone'.

Clap your hands inside your recording space and listen for any echo or reverberation. Hum up and down the scale slowly and listen to see if there is a resonance, especially on the lower notes. These reverberations are caused by sound waves bouncing off reflective surfaces.

Unfortunately, the minimalism of today's décor and interior design does not create the ideal acoustics for a recording studio, so in order to reduce the problems your recording space needs some help.

Some solutions

Damping down at least some of the reverberations in a room can often be done very simply but you can give yourself a head start by locating yourself in a soft room rather than a hard one to begin with. It is much easier to reduce reverberation in an area that is carpeted, or has at least a selection of rugs rather than a room with a floor of bare wood or tiles. A room with curtains at the windows rather than blinds and which has some soft furnishings such as squishy chairs or sofas and shelves filled with books is preferable to a room with lots of hard reflective surfaces.

Any flat, sound reflective surfaces in the room will need to be covered by something soft and absorbent when you're recording. Moving-blankets (readily available on Ebay and Amazon) are a very popular solution because of their availability and low cost. Many are made from recycled denim, which is a very good sound-damping material particularly over the lower frequencies.

Frequencies within different ranges cause different problems and require different solutions; as most home studios are not set up in absolutely perfect conditions, every recording space needs from some acoustic treatment. Others will need quite a lot of help to achieve a good sound.

Large room problems

Very large rooms can cause even greater problems, so if your only option is to work in a large room, you need to find a way to reduce the size of the space you're working in. The easiest way to do this is by partitioning off a section of the room by using a folding screen.

You can achieve better results if you're happy to try a bit of DIY. A very easy way to create a partition this is to make a sturdy frame – a little like a large old-fashioned clothes horse (either made of wood or PVC) and then to drape moving-blankets or

duvets over the frame. If you're feeling a little more adventurous, you could make a double sided frame that has chicken wire to stretched over the open areas, that can be filled in with recycled denim or mineral wool insulation (also known as rock wool), which is then draped over the top with additional moving blankets or a duvet. The density of the insulation material can be very helpful in reducing any deep booming room resonance.

Small room problems

Small spaces may have different, but equally problematical sound issues: even in a small area, you will need to soften the room as much as possible by adding a carpet or rugs, heavy curtains at the windows, book cases full of books, and a covering for tables or desks. All of these will help to reduce sound wave reflection.

Acoustic treatment

Acoustic treatment and soundproofing are two totally different things. Acoustic treatment dampens down the 'liveliness' or 'boominess' of a room by treating the sound at the specific frequencies that are causing the problem.

In addition to using what you have around the home to assist with the acoustics of your space, you may also need to invest in some '**ACOUSTIC TILES**'. Acoustic tiles are frequently mislabelled (particularly in the UK) as 'soundproofing foam' or 'soundproofing tiles'. They do not 'soundproof' so don't be misled and expect them to deal with noise coming from outside your recording space – they just can't do it.

Acoustic tiles come in different shapes and sizes – and of different quality. Egg box or zig-zag shaped tiles are the most readily available – and go for the best quality you can. Thicker denser foam, with a more defined shape is going to work much better than thin cheap foam tiles, and because they work better you're likely to need fewer of them to achieve the required effect. Buying cheap products is often a false economy.

Bass traps

Even with high quality acoustic tiles, you may still have low-end resonance in your room.

All frequencies tend to couple and link up when bouncing into corners, but the coupling of bass frequencies is a particular problem. When working in a small room there is likely to be an issue with some low-end booming resonance that needs to be dealt with.

Try talking in a low/deep tone of voice or humming. Does this produce an audible resonance? If so, you will need something to absorb this low-end sound. A full bookshelf or some hefty furniture can help a little with this problem, but you will probably need to purchase (or build) specially designed foam blocks called '**BASS TRAPS**'. These are large

blocks of either very dense foam or some other insulation material and are often triangular in shape. Bass traps are designed to be placed so that they absorb sound in corners, so you would place them where there is a right angle; for example, in corners, where the ceiling meets the walls, or the walls meet the floor. If you're looking for a quick solution, bundle some moving blankets into the corners. Failing that a rolled up duvet, or some pillow in the corners will help.

Acoustic tiles

The mid and high range frequencies that cause a tinny or harsh sound can generally be treated by using acoustic foam tiles. Acoustic tiles come in various thicknesses (from one to three inches thick) and also in various designs. They are made out of fairly dense foam and are flat on one side for sticking to the wall, and have a pattern on the other side; the pattern may be zigzags, pyramids or a kind of dimpled egg-box-shaped pattern. Using a spray-on adhesive or double sided tape, you attach them to the wall, normally at head level, where needed to help reduce the amount of bouncing around that your unruly sound waves are doing and also to absorb and dampen sound at specific frequencies.

Don't fix anything permanently until you've tested the space and recorded some tracks … you will almost certainly have to move things around to get the best possible sound.

If you have a long expanse of flat wall on either side of your recording space, then the foam tiles should be 'staggered' and if you're using zigzag design tiles, they should be alternated so that the zigzags point in opposite directions.

If you live in rented accommodation, or are working in an area of a room that is used by other people, you may want to avoid sticking bits of really rather ugly foam to the walls, so perhaps a solution would be to use tall screens with the foam tiles glued to the inside of the screen; the more decorative side of the same screens also hide your working area from the rest of your room. You can also staple audio foam to walls using a staple gun which leaves only small, easily patched holes rather than glue residue

What next?

If you don't yet have any recording software or equipment, this is when you go shopping, because before committing yourself and finalising your choice of home recording space, you need to get your equipment set up so that you can record the ambient room tone, play it back to yourself then move things around till you get a sound quality you're happy with.

Equipment.

The sky is the limit when it comes to buying for a home studio. You can spend literally thousands of pounds – but remember, buying a Steinway doesn't turn you into a concert pianist – any more than buying a Neumann mic will turn you into a great narrator!

If your recording environment is noisy or has a lot of echo or low frequency reverberation, no matter what microphone and interface you invest in, you will run into problems. Spend time on getting your recording space as good as it can be! No matter how much you spend on equipment and software, no matter how adept you are at editing and what editing tools you have, it's always better to remove problems at their source rather than trying to fix them in editing. So getting your sound quality clear and clean as it goes into the mic is the best way forward.

Computer.

You obviously need a computer with recording/editing software (also known as a DAW (digital audio workstation) installed; preferably that offers punch and roll (also known as rock and roll) recording capability.

Most computers have fans to cool the processor and other internal components. Standard hard drives also create noise as they spin to read and write data. A **SOLID STATE DRIVE (SSD)** will eliminate the hard drive sound and provides much better performance, but be warned, the fan noise will remain when the computer is working hard and will be clearly audible.

To solve the issue of noise coming from your computer and being picked up by the mic, you will need to isolate your computer. The best way to do this is to move it into a separate room, or build some type of enclosure for it (though do be careful not to make it too air-tight as it could cause your computer to become damaged due to overheating).

If this is not possible, you should move your computer as far away as possible from the microphone. You will then need an extra-long cable for your monitor and either a 'wireless' or 'Bluetooth' keyboard and mouse or a long USB cable extension.

When you need to run a long cable into your recording space, make sure that the long cable you run is the XLR from your microphone as a long USB cable can introduce distortion into the audio (the spec on USB 2.0 is that cables should be no longer than 5m – though even shorter lengths can cause problems with some microphones). Because an XLR cable is 'balanced' it will cancel noise and can be VERY long distances without any audible signal degradation.   If you record onto a laptop, you will also need to set up a remote monitor using an HDMI cable.

Using a mobile phone or even the built in voice recording software on your computer may be OK for recording a quick audition in an emergency, but not for recording work.

Most audio software has Mac and Windows compatible versions – Sound Forge Pro has a version for Mac, but is very much a reduced version and not nearly as good as the full Pro 13 version for Windows.

There are reported issues with Catalina being incompatible with some software so beware – you may have to downgrade your OS to Mojave if you use a Mac.

Software: I know lots of you will have the free software Audacity; in my opinion, there are better options, particularly for Audiobooks. Two excellent free software packages are Ocenaudio or Studio One Prime by Pre Sonus, both of which have built in punch and roll (rock and roll) recording.

There are if course other recording software options: There are the paid for versions of Studio One, Sound Forge from Magix (see note above) Adobe Audition which is a subscription based software, Pro-Tools, Reaper, Logic and no doubt many more that I have never tried.

For information, I used Audacity (for about a week – I found it unresponsive and clunky), Adobe Audition, (when you could still purchase it), Sound Forge Pro 12 (when I had a Windows machine) Pro Tools (which I hated) and Ocenaudio when I needed something quickly when I switched from a PC to a Mac for recording. I now use Studio One Artist (a steep learning curve, but well worth the effort – absolutely the best recording software I have come across). I also have iZotope RX7 Advanced for when I edit.

A microphone. The recommended type of microphone for voice work is a **LARGE DIAPHRAGM CONDENSER (LDC)** microphone. You'll also need a compatible shock mount or cradle, a mic stand and a pop screen. Check out Rode NT1 (not the NT1A) or NT2. SE has some good budget models, as do Audio Technica and AKG. As a starting point, you'll probably be looking at a price of around £250.00. A USB microphone may be OK for podcasting and auditions, but many have a lot of self-noise, and the better ones will not be a lot cheaper than a LDC mic, so what is the point in making things more difficult for yourself?

An Audio Interface: All condenser microphones require phantom power so you'll also need a suitable **AUDIO INTERFACE** that supplies phantom power **(48V POWER)** to your microphone. Check out Focusrite Scarlett models, M-Box and Audient ID models: all have the basic requirements with input for two microphones and output for headphones and speakers, which is all you'll need. The entry level models have no direct power supply, but rely on a USB power via your computer, or you can go up a

level and get a powered interface (e.g. Audient ID14 or Scarlett 6i6). A powered interface uses mains power though they still connect to your computer via a USB cable, but you're less likely to experience digital dropout and clicks if your computer is struggling.

A condenser microphone cannot work independently just by plugging it into the computer or into the mains – it requires **PHANTOM POWER (48V POWER)** which comes from the interface/pre-amp. Not all preamps provide phantom power, so check carefully before you buy. If you purchase a preamp that doesn't you'll also need to buy an interface which adds to the expense.

You don't need anything very complex: look for a single or dual channel interface with a built in pre-amp that offers enough gain (the amplification of a signal by a pre-amp is called **'GAIN'** and the amount of gain a pre-amp can provide depends on the specification of that particular piece of gear), with a clean, crisp signal and an adjustable output to your headphones.

As with microphones, you generally get what you pay for, but it really is better to spend a couple of hundred pounds on a straightforward but high quality item that is well made and has fewer options than to go for an all-singing, all-dancing model with a load of options that you really won't need.

Some interface/preamp combinations have all kinds of processing options and look more like a mixing board with all kinds of filters and EQ options. The problem is that any processing done via an interface is impossible to undo; if all those sliders, knobs and buttons are not set up perfectly, they can cause far more problems than they're worth; particularly in the hands of someone who is not quite sure of what they're doing.

You certainly don't ever need a mixer/mixing desk for audiobooks. Most publishers and production houses request audiobook files are delivered as raw, digitally unprocessed audio – and if you do have a mixer or plugins with any presets (such as gating or compression) that you use for VO work, I advise you to disable them for audiobook recording unless instructed otherwise by the publisher or producer, or with the express details provided by an audio engineer working for that publisher or producer.

Cables: You'll also need cables to link your microphone to your interface – normally XLR to XLR balanced microphone cables. An XLR fitting is a type of electrical connector used in professional audio. The connections are circular in design and most XLR cables have three pins on each end, one male and one female. These are usually supplied with the microphone.

Headphones: In order to monitor your audio, and certainly for editing, you need to hear it at a high quality and in great details, so you need headphones. You need headphones that are designed for the job, so over the ear, professional studio headphones rather than headphones that are designed for music listening, as these are 'tuned' to improve the music listening experience and thus can give you a false picture

of what you are hearing when using them for voice work. Also avoid noise cancelling headphones. If there is noise bleeding in from outside your recording space, you need to hear it!

Extension cables: If your computer or laptop are not in the same space as your microphone, you'll need USB and HDMI cables to connect everything up. USB and HDMI cables have a maximum recommended length. Using a USB cable that is longer than the recommended length – or that is plugged into a multi way hub can result in degradation of the signal. In the case of an audio interface, this could have a detrimental effect on your audio signal.

Extra essentials: You'll need a music or copy stand for your printed text, or a tablet, Kindle or I-pad for reading PDF text versions of the text. Whatever you're reading from needs to be place where you can see it clearly without having to move your head in relation to your microphone – or put any strain on your neck and vocal cords. It also needs to be within reach, so that you can scroll through without having to move too much. Note ... quiet clothing essential for this. Keep movement to a minimum!

A desk and chair - the desk needs to be covered, the chair needs to be silent – if its on castors, putting marks on the floor will help to ensure that its position and relationship to the microphone remains the same throughout the recording, day after day.

Optional extras – studio monitors (speakers).

Checking your set up

Once everything is installed and up and running, you now need to start recording and comparing how different mic positions and levels sound.

Clap and move around the space – note where there is an echo or a rumble.

Hum up and down the scale and notice where there is any distortion or reverberation, especially at lower frequencies – this will help you position your acoustic tiles so that they absorb the unwanted frequencies more effectively.

You have to be organised and logical about this, make notes, take photos, record, review. If it sounds too quiet then increase your input levels – if the audio is clipping, reduce your input levels.

More microphone tweaks: Some microphones have a built in High Pass Filter, which reduces the level of low frequency sound, usually filtering sound below 80Hz, this is very useful in helping to reduce rumble so if your mic has a HPF, then engage it. Some also have a 'Pad' which reduces the overall level of everything, normally by -10dB. This is better not engaged.

Every microphone has a sweet spot … this is the place where your voice sounds best. It seems obvious, but you also need to ensure that you're speaking into the front of the microphone and it isn't always immediately obvious; usually the right side is the side with the logo on it.

Finding the sweet spot can be a little tricky, but with practice, once you hear it, you will recognise it and should always place yourself and your mic in exactly the same relationship to each other every time you record. This is particularly important when consistency of sound is required, such as when you're recording an audiobook or other long form project when you may be recording over many days or even weeks, and each section must sound identical.

The location of yourself and your mic within your recording space makes a difference to the sound. The goal here is to achieve a recorded tone that is identical to your natural speaking tone. Play around and move to different places within your recording space and listen to the differences in the sound. Even moving your mic a few inches closer to or away from a wall will make a difference.

Avoid placing your mic in a corner so that you're facing into the corner itself, as this can cause problems with low frequencies. Experiment, play around with your space and train your ears to hear the differences.

When recording, you need to be six to eight inches away from the microphone with the centre of the mic (the diaphragm) slightly above your mouth and also slightly to the left or right of it, so that you are speaking slightly past the microphone rather than directly into it.

If you can hear lots of pops as your breath hits the microphone on hard consonants (in words like pop, put, pip and tip) then you need to work on reducing this pop as you speak and may also need to adjust your pop filter so that you can't feel any breath getting through the shield when you say these words. If you're still having popping problems, experiment by angling the bottom of the microphone slightly away from you, so that your breath is gliding over the diaphragm rather than hitting it straight on.

Your microphone is a delicate piece of equipment. Handle it with care, never blow into or tap your microphone. Clean the outside with a soft cloth from time to time. You should ideally put it away when it is not in use, or at least cover it to protect it from dust and dirt.

IMPORTANT: Always turn off the phantom power *before* disconnecting your microphone – AND reconnect your microphone before turning phantom power back on again.

Setting audio input levels

Most studios require a consistent recording which, when speaking at a conversational level, without any normalizing, levelling, EQ or compression, is around -18 to -6dB without the noise floor being higher than -60db. This is generally accepted as the minimum requirement.

Many people make the mistake of lowering the volume of their input thinking that this will keep their noise floor (ambient sound) below -60dB, or will reduce unwanted noise. This simply doesn't work. You're also reducing the level of your recorded voice below an acceptable level, and once the overall volume is increased to bring your voice to the desired degree of loudness for the end product, then the ambient sound is also increased – and will therefore be unacceptable.

When checking your levels and your room tone, you need to do it across a sample that includes speech and room tone. It is the balance between the two that is most important and this is what a client needs to hear. Simply recording 'silence' in an empty room will not give them the information they need.

File specifications

Always work in a high quality audio format such as WAV, AIFF, or OGG files. Never ever work, edit, save, open and resave MP3 files. MP3 is a lossy format in which the audio is compressed, thus every time you open, save and resave an MP3 file, it degrades, so you lose quality – only convert to MP3 format as the last thing you do, the final save before delivering the audio to the client (if MP3 is the format they request).

To save space, when uploading or archiving files, I use FLAC which is a lossless compressed format, so FLAC files take up less space than .wav files and are quicker to upload, download and send, but unlike in MP3 format. the audio in FLAC files is not degraded in any way.

Unless otherwise asked, work in mono files, they're easier to edit and manage – and are generally what is required for voice work.

Make sure you are working at the same bit rate and sample rate across all your files. Most commonly this is 16bit, 44,100Hz.

Be consistent in your file naming. Remember if you're submitting for an audition, there may be many hundred submissions, so naming your file as 'Audition' will not identify it in any useful way. You should always include your name, and the project you're auditioning for ... or whatever naming style is requested.

Read the directions and instructions. Most auditions are discarded because the person submitting didn't follow the directions or instructions.

File organisation.

You have to be really well organised with the naming and saving of your audio files, particularly when recording audiobooks. In case anything needs to be unravelled or undone, you should save each file clearly identified at every stage, so will always have multiple copies of each file and need to be able to identify each one quickly and accurately. In addition, you should also back up all your files by saving to either cloud storage or a secondary hard drive (or both) at the end of every session.

Part 2

Specifically for Audiobooks

Everything in the previous section is applicable to audiobook recording in a personal studio. In audiobook recording, there are some additional points that you should consider.

Recording audiobooks is very different from doing any other kind of voiceover or voice acting work. Audiobook narration is a challenge from a creative point of view – you're charged not only with bringing an author's vision to life, creating not only a compelling narrative voice, but also an array of unique and believable characters. It requires stamina, imagination, considerable acting skill plus the ability to make choices and to self-direct. When recording remotely, you also need some basic technical knowledge of how sound works in your recording space and a thorough understanding of your own recording set-up and software.

Normally in the uk, only a comparatively small number of audiobooks are recorded remotely, but at the current time, as social isolation is the norm and recording studios are changing how they work due to the corona virus, the demand for narrators who can deliver high quality remote audiobook recordings is growing.

Remote recording technical requirements for audiobooks.
Production houses and publishers rightly demand high technical as well as performance standards – and that means that you – and your personal studio must be able to meet their demands consistently, day in and day out. Each publisher and producer will have their own tech specs which they will share with the narrators they hire, and will normally request a raw studio sample for evaluation by their audio engineers. They will only consider adding you to their list of narrators if you can demonstrate that you're able to match their technical requirements as well as being able to deliver first class storytelling and character creation. They will usually also ask for details of the equipment and software you use.

Flying solo.

Once you get the go ahead and start recording, you're on your own – though occasionally a studio will connect with you and will direct remotely, perhaps only for the first couple of chapters, but occasionally for the whole book! This is unusual though – but 'flying solo' is not nearly as frightening as it sounds.

When you're working remotely, you don't have to complete four finished hours in a studio day as you do in a mainstream studio; you can generally set your own schedule and work flexibly, providing you can still meet any deadlines. Apart from the fact that you're pressing the 'record' button yourself, the actual process of creating the characters, choosing voices, telling the story, is not significantly different from how it works in a mainstream studio – other than the fact that you're working without anyone on the other side of the glass to proof your recording as you go. This means that you will have to do corrections and pick-ups after the audio has been proofed; but particularly if you have the right software and can master punch and roll (rock and roll as it is also known in the UK) any errors or flubs that you spot will be over recorded just as they are in a mainstream studio – though there are likely to be some things that slip through and will have to be corrected later.

Proofing and editing

When working remotely for a publisher or production house, proofing and editing are usually handled by them 'in house'.

Even when self-directing, unless you're recording for ACX or an indie like Spoken Realms or Findaway in which case you're responsible for finding your own proofer and editor to work with, then normally, the studio or publisher who hires you will proof your audio against the text, send you a correction list. Corrections are then recorded to match the original and returned to the producer/editor, for editing and mastering.

The narrator is normally only responsible for research and preparation, recording the audio and any corrections identified by the proofer. You will not normally be asked to do anything other than a 'first pass edit' – where you manually remove any repeats or retakes – largely unnecessary if your using punch recording.

If you are asked to do more, i.e., to proof your own audio, or edit in corrections, always quote accordingly and add to your standard PFH (per finished hour) rate to take this extra work into account and so that you can outsource proofing and editing to a third party rather than trying to do it all yourself.

Sorting out mistakes.

How do you sort out flubs and errors, which will always happen no matter how good a narrator you are?

When recording in a mainstream studio or with remote direction, the person you're working with will stop you whenever you make an error – and unless you're doing a free roll recording, the director will stop the recording and punch in whenever you make a mistake. You'll then hear the previous five seconds or so through your headphones and will pick up the read at the point before you made the error and recording will continue.

With the right software, you can do exactly the same thing in your own studio, using punch recording - known widely as punch and roll, but also as rock and roll in the UK.

Of course when you're working solo, unless you spot a mistake as you're recording, it won't be noticed until the audio is proofed after the entire book is recorded. If this is the case, the narrator is sent a list of corrections which they record into a separate audio file, using identical settings and matching against their original recording, which they then return to their editor to be editing into the original recording so that all errors are replaced. You will not normally be asked to edit in your corrections yourself - you should just supply a single file with all the pickups and corrections recorded to seamlessly match the original - though of course, without the error.

The capability for punch and roll recording is not an option in all recording software and though there are narrators who manage well enough without it, the ability to punch and roll will ultimately save you an enormous amount of and once you get to grips with it.

Golden rules

Always work in mono, and always record and edit in either .wav, .ogg or .aiff format. Always deliver mono files to your audiobook clients in the format they request. This is normally wave, FLAC or sometimes MP3.

Don't rely of technology to sort out noise and other recording issues – some such as clipping cause distortion – and mouth noise and breath control are much better dealt with at source rather than in post. Far better to spend time getting things right at the recording end rather than in having to paint over the cracks later.

Only convert files to MP3 format after you've done everything else – never open an MP3 file, work on it, edit and resave. The audio will be degraded and will sound dreadful.

Be realistic about the time involved. When recording in a mainstream studio with a director, the normal ratio is to allow two hours of studio time to produce each finished hour of narration. Working independently in a remote studio is almost certainly going to

take you a lot longer, especially if you're not used to working in this way. And then there is the time it takes to do pick-ups and corrections on top of that.

Keep track of all your character's voices. Copy and paste each voice to an mp3 files and save in the character's name. There may be over a hundred voices in a single audiobook, some separated by many chapters. You'll never remember them all. And what happens if the author writes a sequel?

 Don't undervalue your contribution to the product – and quote accordingly. Most studios pay higher rates for remote recording than they do for mainstream studio recording.

If every voice actor working from their personal recording studio maintains the highest possible production standards in their audiobook narration, both technically and artistically, then the current horrible situation we're all in, could potentially open up many more opportunities for us even when mainstream studios are back up and running. Just think of all those back catalogues! This situation, if we handle it right, will allow publishers and producers, authors, and indie publishers to create more audiobooks. But we have to keep the standards high. If audiobook listeners are inundated with poorly recorded audiobooks, we have lost a real opportunity.

Collectively we have the opportunity to make a fantastic first impression on the audiobook publishing world. Let's make sure we make it count!

A final thought.
Until we were hit with Covid-19 and the necessity for everyone to work 'from home' the vast majority of UK audiobooks and the many other types of VO work were recorded in professional recording studios. Will we return to that situation post-pandemic? Who knows!

Competition has always been fierce in audio. As there are more actors currently facing hardship as films, television shows and other sources of work are shelved and theatres are closed, some undoubtedly forever, actors are now looking to audio to keep them afloat. Make sure you compete on quality rather than price. Please don't be tempted to lower your rates – this makes it harder for everyone to charge a fair price to earn a living from what for many of us is a full time job.

If you've never done audio work before – you need to be aware that rejection is as much a part of this kind of work as any other kind of acting or performing. And though everyone thinks VO and Audiobook narration is something that all actors can do easily, it really isn't a natural progression.

We all have different strengths and need to acknowledge those strengths. You may be a wonderful Shakespearian actor – It doesn't mean you can switch to Sondheim. If you're an intensely physical actor, you may find a recording studio too constricting. There is no shame in this … not being a natural in front of the mic doesn't make you a worse actor than you were before.

You have only once chance to make a good first impression. Make it count.

Resources:
if you've never done VO work or audiobook recording then there are a lot of resources available and numerous audiobook related and VO related groups on Facebook and LinkedIn. The audiobook community is generally very generous – and there are lots of people out there who are willing to help and give advice, as well as organisations with advice about home studios, remote recording – with some information that is relevant to audiobook narration specifically.

As a starting point, i recommend you visit Karen Commins' Narrators' Roadmap.

https://www.narratorsroadmap.com/

I also recommend you read Paul Strikwerda's Nethervoice blogs – many of which are VO related, but all of which are relevant to running your own business, which is what we are all doing. https://www.nethervoice.com/nethervoice/

Here are a couple of creditable organisations that have relevant information about working in VO and Audiobooks. Voiceover Kickstart: http://www.voiceoverkickstart.com

Gravy for The Brain: http://www.gravyforthebrain.com

If you'd like an honest evaluation of your home studio: http://www.redbaarnsaudio.com/expertears/ or Or Bee Productive: http://www.beeproductive.co.uk

There is an excellent thread on Twitter from voice artist and sound designer, Kirsty Gillmore at the moment, with lots of advice about getting started in VO and links to other resources. https://twitter.com/soundswilde/status/1251162556099518464

The Audiobook Creative Alliance, is open to all narrators, proofers, editors and producers of audiobooks. www.audiobookcreativesalliance.org