

Podcasting Workshop

Space Brains Film Festival 2023

Equipment

Minimal:

- Mobile phone
- Lapel mic
- Mic splitter (for multiple input)

More:

- Computer / laptop
- Mixer
- Desk mic

Most:

- Mixer
- Desk mic

Gotchas:

- Mic for phone: 3.5mm jacks come in 2 flavours:
 - 2 ring: suitable for dedicated mic inputs (your phone does NOT have one of these, but your laptop might)
 - 3 ring: suitable for combination headphone/mic input (your phone has this one and so might your laptop). This is the one you want for phone recording.
- Mobile phone recording:
 - Turn on flight mode so you don't get phone calls or notifications during recording.
 - If you are recording multiple people on multiple phones ensure you have the same audio settings on all phones.
 - Use a sequence of two or three sharp claps picked up by all mics to make synchronisation easier.
 - Use a mic joiner / y cable to put 2 (or more) mics into 1 input. Like: <https://www.amazon.com.au/Splitter-Mic-Microphone-Y-Splitter-Y-connector/dp/B01BNGAHCA>
- Condenser or Dynamic mic?
 - Condenser mic requires "phantom power" to operate. It will have a "cardioid" pattern which means it is most sensitive in a limited shape in front of the mic. It is good for picking up speech. Recommended for podcasting.
 - Dynamic mic has a wide range of frequency and doesn't require power. It is more sensitive and good for singing or use in a tightly controlled sound booth environment.
- Plugging in to your computer

- Your computer has moving parts like fans, maybe hard drive and various other sources of electronic interference that might come through as static. Turn your computer mic gain down to avoid picking that up. Use a USB mic to plug directly into your computer as they have less interference.
- If you don't have a USB because you want to plug multiple mics into the one computer, use a mixer. Like:
https://www.amazon.com.au/s?k=podcast+mixer&crd=3110H9UEZOVBP&sprefix=podcast+mix%2Caps%2C385&ref=nb_sb_noss_1

Software

Minimal

- Record and edit directly on your phone

More

- Audacity - Recommended: <https://www.audacityteam.org/download/>
- Reaper
- Garageband
- Adobe Audition

Graphics

Your podcast cover image and episode images (if they are different) should be square and at least 1,400 x 1,400 pixels in size. The Canva podcast template is 3,000 x 3,000. But remember it will display mostly on mobile devices at about the size of your thumbnail.

Online

- Picmonkey.com - great for photo manipulation, compositing, big library of stock photos and templates
- Canva.com - great for layout, templates, AI images

Adobe

- Photoshop
- Illustrator

Freelance

- Fivver.com
- 99 designs
- Artstation.com

Hosting

Podcasts will need to be hosted on a server online so it can be downloaded and played. Podcast hosts just store and serve the file, you will need to also publish your podcast (aka stream or RSS) to a listing or discovery service.

Discovery

Your listeners will visit a discovery app to find your podcast and subscribe to it. Eg: Apple play, Spotify, Google, Stitcher etc...

Your podcast host should have means to publish to those services. In addition to “automatic” ways of doing it, you will have an RSS feed link you can post to services or listeners can add the link directly to their player app.

An RSS looks like a web address: <https://pinecast.com/feed/spacebrains>

The Levelator

When you have multiple voices talking in a podcast, often they are at different volumes. When you have multiple tracks to work with, you can adjust each track to have a similar volume and then mix them. But, if you have all voices on the one track, it can be very challenging and time consuming. This is where you use The Levelator software which will automatically correct your sound levels. The Levelator is a bit old and has not been updated in a while, but you can get it for windows and mac (if you search hard).

https://download.cnet.com/The-Levelator/3000-2170_4-197650.html

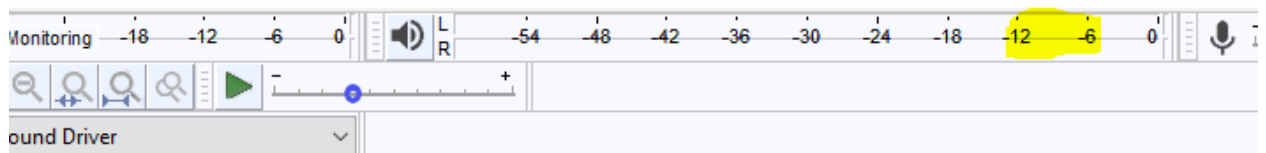
To use it, just run the levelator and then drag your audio file onto the levelator. That's it.

Audacity Editing

Much of your editing will be done in Audacity. It is a free, well used and well documented audio editing tool.

Basic tools:

- Noise reduction: Before you start speaking, be sure to record a couple of seconds of room noise (ie you are just quiet and you let the mic pick up background hum/noise).
Then:
 - Select a portion of “silence” ie: the room noise you recorded.
 - Select: effects -> noise reduction. Click “get noise profile”
 - Select the whole track and click effects-> noise reduction and apply
- Equalisation: This is not about making your volumes the same, it is about changing the relative mix of frequencies in your recording. Most condenser mics pick up “mid tones” most strongly (the human voice is mostly mid tone). So you might want to adjust high and low frequency to make your voice sound “better”
 - Select your whole track
 - Click: effects -> equalisation.
 - From the drop down of presets, choose “bass boost” then OK
 - Click on equalisation again, but now choose “treble boost” and OK
- Normalisation: You want your voice to fall mostly in the -12 to -6 volume range according to the digital level meter.



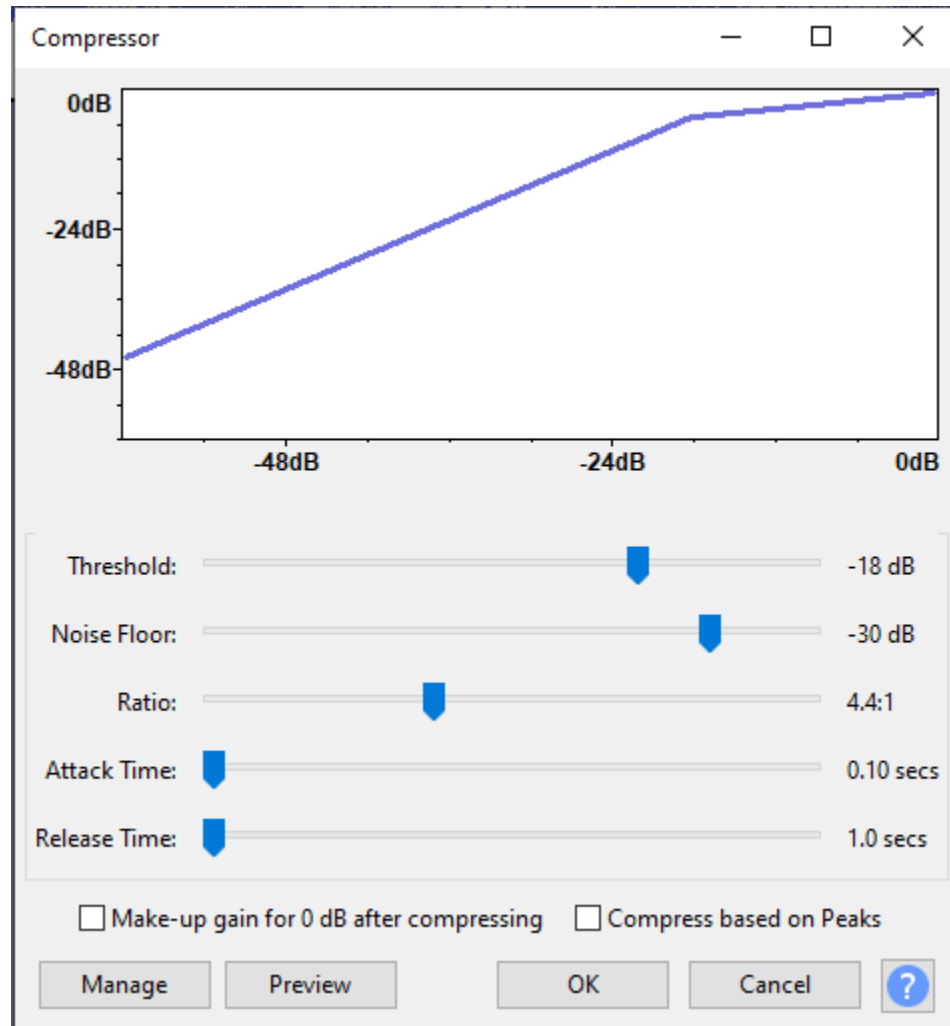
To do this you will use the normalise feature:

- Select your whole track
- Click effects -> normalisation
- Enter a value between -6 and -1 then OK

This will conform your audio to have a maximum peak volume. This means if you have a very loud sound, it will cause everything else to be quiet. If this is the case (someone shouted,

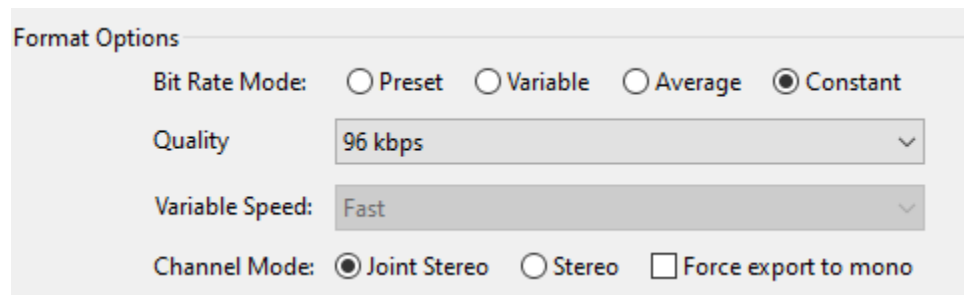
clapped or laughed loudly) then you may need to use “compression” to make loud sounds softer and soft sounds louder. The Levelator (see above) is much better at doing this and you should use it if you have this problem.

- Compression: Compression is a bit of a dark art and can be tricky to get working well.
 - Select your whole track, or the portion that contains the loud sound, if it is contained
 - Click on effects -> compressor...



- Sound between Threshold and Noise Floor will be unaffected.
- Sound above the Threshold level will be reduced by the ratio amount. EG: each 1 dB louder the original is, the output will be 1/ratio louder (rather than 1 louder)
- Sound below the Noise Floor will be boosted to the noise floor.
- The rate at which the compression is applied is the Attack Time. IE: in the above image, sounds that increase in volume less then 0.1 seconds will not be affected, longer sounds will be attenuated after 0.1 seconds.
- Release time indicates how long after a noise peak the ratio will continue to be applied.

- You pretty much just have to “suck it and see” until you find the right settings for the sorts of audio you record.
- Gap killing and um removal:
 - Gaps of silence longer than 1 second are an eternity in the world of audio. Cut gaps down to 1 second or less. Listen back to check how natural it sounds.
 - You will say “um” and stutter a lot more than you realise. You will come to recognise what an um looks like. Cut most of them out because they make you sound uncertain. But be careful about trying to cut all of them out; you may lose the natural sound if you do.
 - Mouth clicks: Often after an um, or a silence you will click your tongue or suck your lips. Cut these as while some people love the ARMR effect, most people do not like hearing you click and suck.
- Exporting: Your Audacity project is not an audio file, it is a special project format for Audacity. To get a file you can upload as a podcast, you must export.
 - Either select all your audio tracks or make sure you select none.
 - Click file -> export -> export as MP3...



- Select Constant Bit Rate Mode, 96kbps and Joint Stereo as per the image above.
- Save it with a good descriptive name. EG Space Brains - 100 - The Fly.mp3

Music and Other Audio

You may want to include music or other audio in your podcast. Be aware that copyright and licencing is a thing and you will be removed from the air if you include unlicensed music or audio clips. I'm not a lawyer and don't know the finer details of “fair use” or public domain. So, to avoid problems use existing audio available for public use.

- Danosongs.com (<https://danosongs.com/>) has a great blurb at the top about places to get music and Dan himself provides a large catalog of great music that can be used for non-commercial purposes, which may include your podcast. He used to provide a commercial licence, but now recommends: <https://www.premiumbeat.com/>
- Check out <https://blog.podcast.co/create/royalty-free-music-for-podcasts>
- Perform and record your own original work.