

# VOICE RECORDINGS WITH AUDACITY

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Learn some new skills, get your work onto the internet and help with our crowdsourced audio editions.

## WHY DO THIS?

- Help Linux Voice reach a bigger audience.
- Learn one of the basic audio applications for Linux.
- Take the first step into the world of podcasting.

When we released our first two issues under the Creative Commons CC BY-SA licences, we wanted to include audio versions of as much content as we could. Not only, we thought, would this help people who often don't have the time to sit down and read, it would help all sorts of other people who may find reading difficult. With the help of the Linux Voice community, we were able to pool

around five hours of various recordings for each issue and make them available for free.

We need as much help as possible for issue three onwards, so we thought we'd cover the brief details of how you can make these recordings yourself, and if you enjoy the process and wanted to help, you can help us with our future recordings. Keep an eye on [LinuxVoice.com](http://LinuxVoice.com) for details.

## Step by step: Record with Audacity

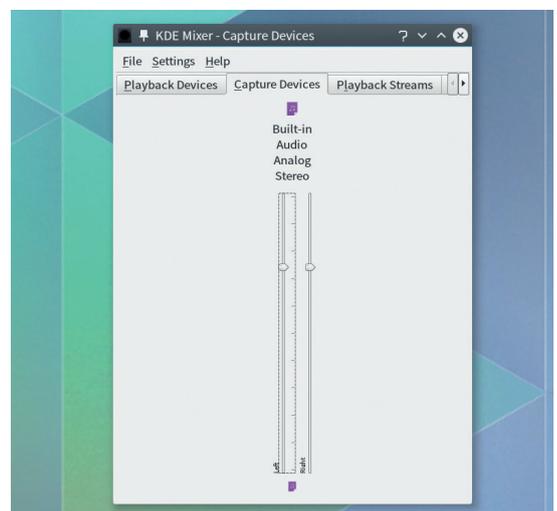
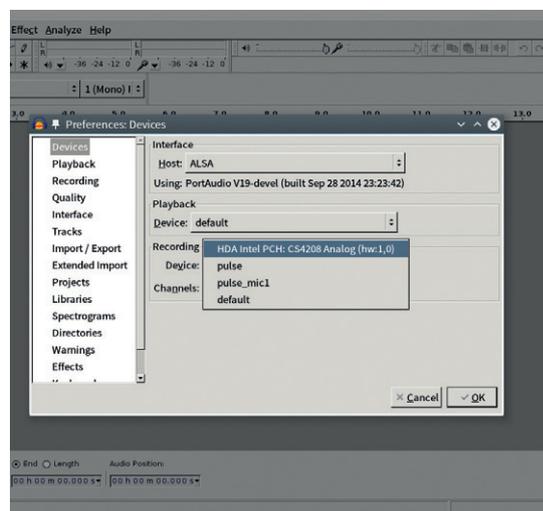
### 1 Install and configure Audacity

The best tool for recording and editing audio is *Audacity*. It's part of every distribution's package repertoire, it's relatively simple to use and provides all the functionality you need to make even complex audio recordings. Making any kind of recording is better with an external microphone, but it's not unfeasible with whatever's built into your system (we've had a few good recordings made with a laptop's internal mic).

More than choice of microphone, it's more important that your recording environment is as quiet and as dead as possible. By 'dead' we mean that sound is dampened by carpet or curtains, rather than bouncing off flagstone flooring and tiling. It also helps if your computer is quiet. With all that set, open up *Audacity* and make sure your microphone is the configured input for any recording. If you're running *PulseAudio*, it's better to select the device name rather than choose one of *PulseAudio*'s inputs.

### 2 Get the right level

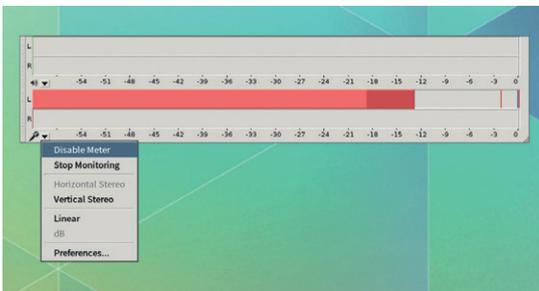
After reducing the amount of background noise, the next most important thing to get right is the input level of your recording, and your desktop audio mixer input should be ramped up. But this really means how loud you should speak and how close the microphone you should be, rather than dealing with amplification before a recording is made (which is what you might adjust if you're running a mic through a mixer). This is important because every recording has a noise floor – the level at which noise is introduced from both the environment and from the recording hardware itself, and this noise floor is the same regardless of how loud your recording is. This means that if your recording is too quiet and you boost the recording to make it louder, you'll also boost the level of the noise floor. If a recording is louder to begin with, the proportional boost to noise is smaller, making a better quality recording.



### 3 Monitoring your input signal

You can monitor the input level within *Audacity* by selecting Start Monitoring from the small drop-down menu next to the microphone icon near the bar graph in the main window. When enabled, a red bar will start bouncing across the widget. If you prefer vertical bars rather than horizontal, you can drag and re-size the whole widget out of *Audacity's* main window. You'll probably see only a single bar when there's space for two and that's because microphone inputs, including those on your computer, are nearly all mono, as opposed to stereo.

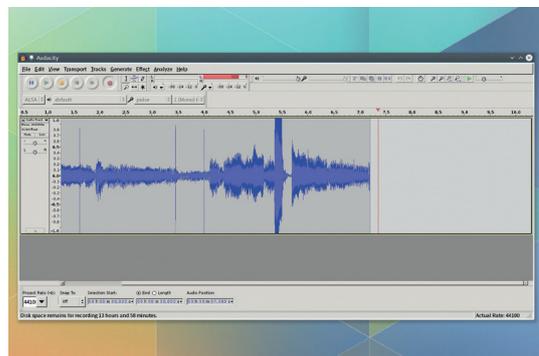
We make our recordings in mono too, as they take half the space and processing, but they can still be used to create stereo files if necessary. Make sure that your speaking voice/recording uses the full range of the monitoring bar without hitting the maximum, which for historical reasons is labelled 0(dB). Too loud a signal is worse than too quiet a signal, because it adds ear-crunching distortion.



### 4 Your first recording

If everything looks good, make sure you've got a glass of water at hand and press R on the keyboard or the red button in the toolbar to start the recording. The input monitor will still bounce and a waveform showing the amplitude of your recording over time will be drawn to the right of the audio track. Glancing at this is a good way of checking everything is going OK and you should now try narrating an article.

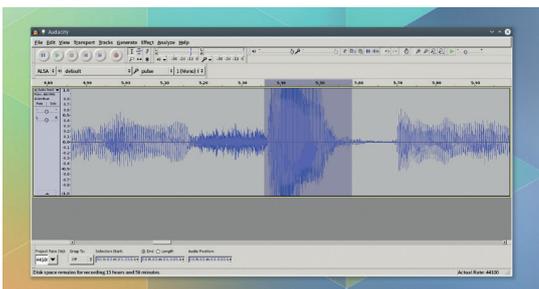
It will typically take a few tries to get something right, and also to find a pace that works for you. You'll likely start quicker and slow down as you get more used to the process. But remember you can always go back and edit what you've already recorded, or start again if you mess up too badly, so don't worry about small glitches or mistakes as you go along. A four page tutorial typically takes us around 15–20 minutes, depending on your reading speed.



### 5 Edit the audio

If you've made any mistakes, you can easily edit them out. The key to this is listening to the playback and seeing which bumps in the waveform correspond to the bits you want to cut. Selecting these areas and using the Edit menu or the usual shortcuts will remove them, merging the two sides of the recording bordering on your selection. You can also copy and paste areas from other parts of the recording, which is useful if you want re-record bits you've messed up at the end. Pasted audio will not overwrite audio by default, but be inserted at the cursor.

The only other processing that might be useful is to normalise the recording. This will make sure the waveform fills all the available headroom without changing the dynamics of the recording itself. To do this, select the entire recording and choose 'Normalise' from the 'Effects' menu. You can leave the settings in the window that appears at their default values.



### 6 Export the audio

When you're happy with the recording, it's time to share it. For issue 2, we've asked for files to be provided in the FLAC format, where possible. This is not just because FLAC is the lossless equivalent of gzip for audio, but because it doesn't process the audio in any way. This is so we can encode the files using our own scripts to ensure that all files are processed in the same way. If space or bandwidth is an issue, it's no problem providing files as MP3, OGG or even Opus either, if that's going to make it easier to put on our server. You can't use *Audacity's* 'Save' dialog to create the audio file; instead you have to use 'Export Audio' from the File menu. Use the drop-down menu beneath the file list to choose FLAC, and you don't need to adjust any other options. You'll also be asked to enter some metadata for the recording, but we'll replace this with our own scripts. All that's then left is to save the file and send us the link! Thanks! 📧

