

# An Introduction of how to use Audacity

## Getting Started

The software is open source and so free and easy to use. Download and install a copy of the software from <http://www.audacityteam.org/download/> . If you are using a Coventry University PC on campus install the software via AppsAnywhere.

At this early stage of recording we still only have use a couple of these features such as *Record, Pause, Stop, Play, Back Skip* and *Forward Skip* that are standard on most audio hardware and applications.

The Cursor **I** is a very useful tool that can be used to select a certain position in a recording or selecting a sample of the recording to be edited. We'll look at this in more detail shortly. The only other features that are important at this stage are the input and output devices. If you click the drop down arrows on each you'll see a list of options, we need to select the input hardware we'll be using for vocal recording (normally a microphone) and the output hardware you'll be using (normally speakers or headphones).

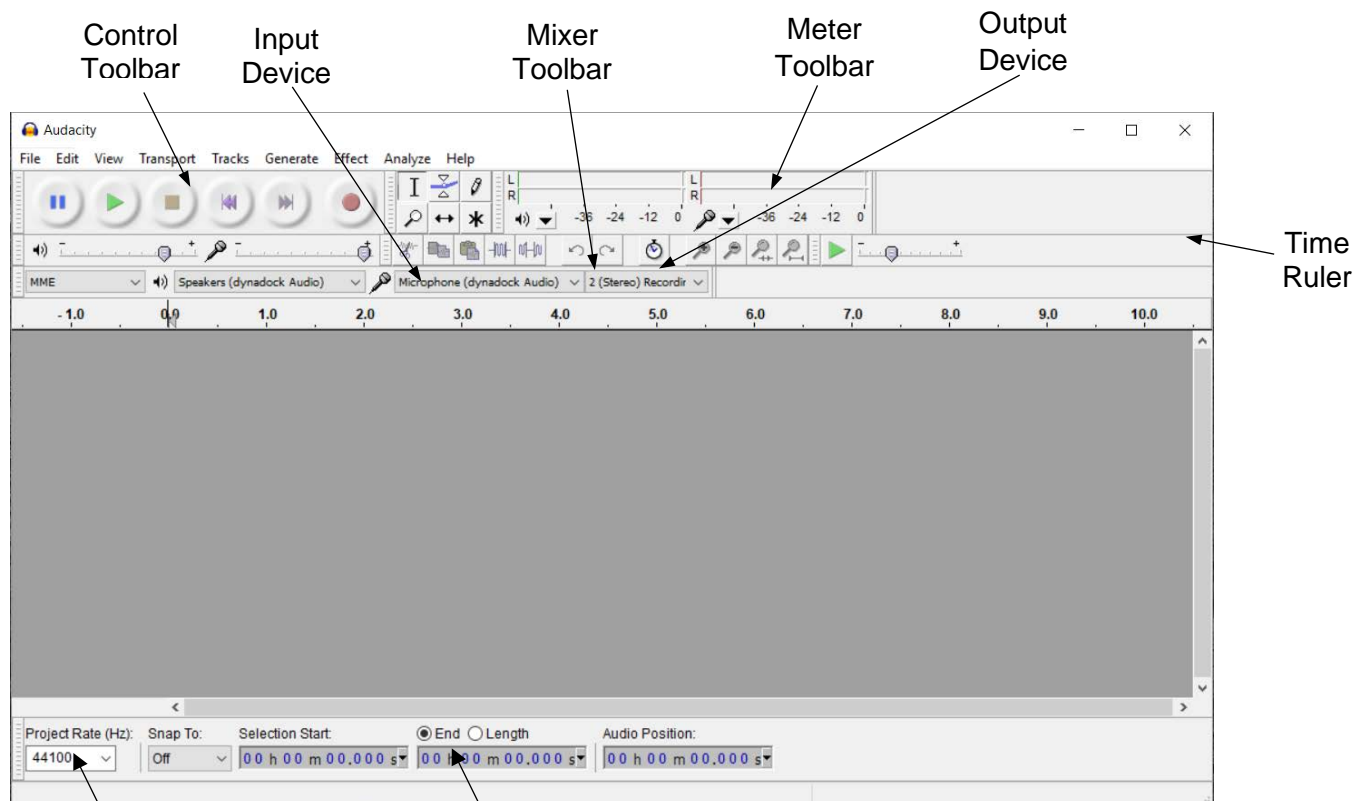


Fig 2

Sample Rate

Timer Positions

## Considering Recording Conditions

When making a recording you need to remember the microphone will pick up most of the sound made around it during that time. Here are some tips to consider:

1. Background noise, the recording will pick up other sounds made in the room including other people talking, machine noise and telephone rings. To avoid this it is best to record in a quiet and secluded room if possible.
2. Microphone position, the microphone doesn't have to be close to your mouth, as it tends to pick up unwanted noises like inhaling and exhaling, plus the recording tends to be loud if the microphone is too close. As a general rule position the microphone about two outspread hands distance away from your mouth. Keeping the microphone at a constant distance from your mouth because varying the distance changes the volume of the recording. This can be helped by the use of a headphones with a microphone.
3. Try to do all the recording on the same computer as different machines have different ambient sounds which will vary throughout the recording if not done on the same machine.

## Starting Recording

Before you start recording just do are a few last minute checks:

- (i) Check your microphone is plugged in.
- (ii) Check that the input is set to microphone.
- (iii) Check the sample rate is set as the recommended rate of 44100Hz.

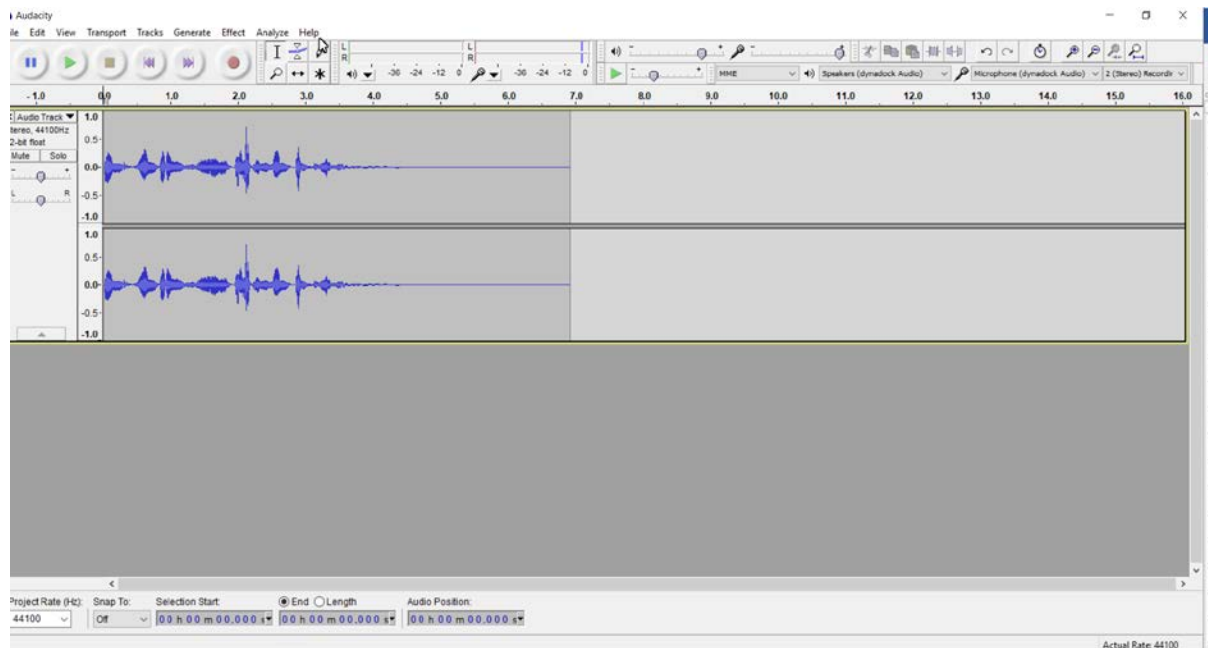


Fig 3

Then press record and start speaking. As you talk, you will know the program is working because a soundwave trace of you voice is produced. You may also notice the meter toolbar will move to the sound of your voice, and finally the Timer Positions at the bottom of the screen will be counting. When you press *Stop* an Audio Track summary will appear at the left hand side of the sound wave.

At this stage it's a good idea to listen to your recording. If you think it is too loud, you can adjust the recording volume level by moving the tab on the microphone section of the Mixer

Toolbar (Fig 4). It's a good idea to adjust this until it's at a level normally peaking in the yellow zone.



Fig 4

## What if I make a mistake when recording?

When making a recording it can be frustrating if you say the wrong thing or make a mistake, especially if you are making a long recording however you do not necessarily need to start again. To correct the recording follow the instructions below:

1. If you have made an error stop talking and remain silent for about 3 seconds.
2. This produces a flat-line in the sound track that can be used to identify the mistake later.
3. If you require time to compose yourself after the mistake then press the *Pause* button to temporarily stop the recording. Then when you are ready to continue press the *Pause* button again to start a new recording.
4. Then continue by repeating the section leading up to the mistake and carrying on with the correct dialogue.

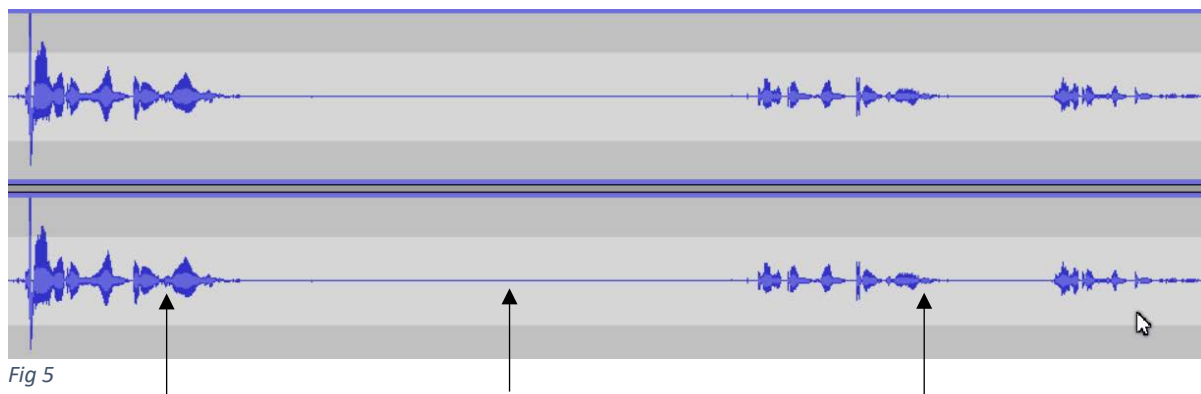


Fig 5

Section with the mistake

Silent for 3 seconds and maybe pause

Continue with the correct dialogue

To remove the mistake, on completion of the recording, once you've pressed *Stop*. Listen to the section in which you made the mistake to decide what needs to be removed. Once you've decide what needs to be removed from the recording, using the cursor **I** highlight the section as seen in Fig 6. This is done by left clicking the mouse at the start of the section, then, whilst holding down the left mouse button move the cursor along the require section.

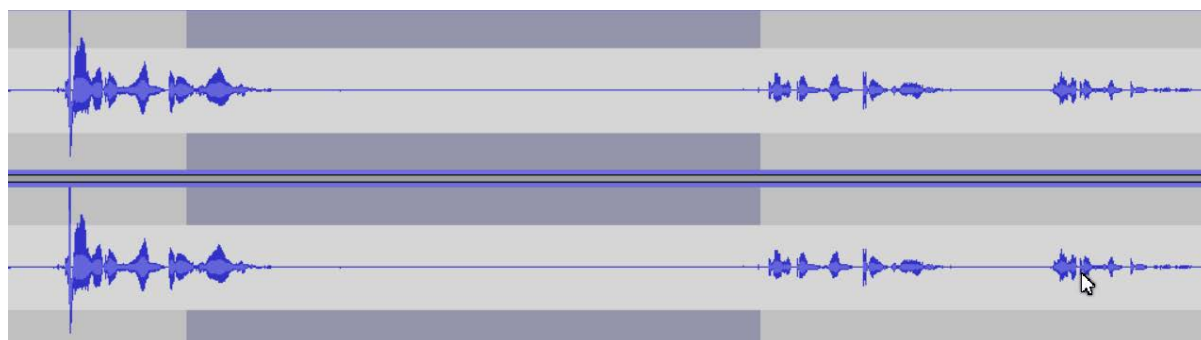


Fig 6

Then to remove this section of the recording press the *Delete* key on the keyboard and the sound wave will realign itself as shown in Fig 7, shortening the length of the recording by the amount of time removed.

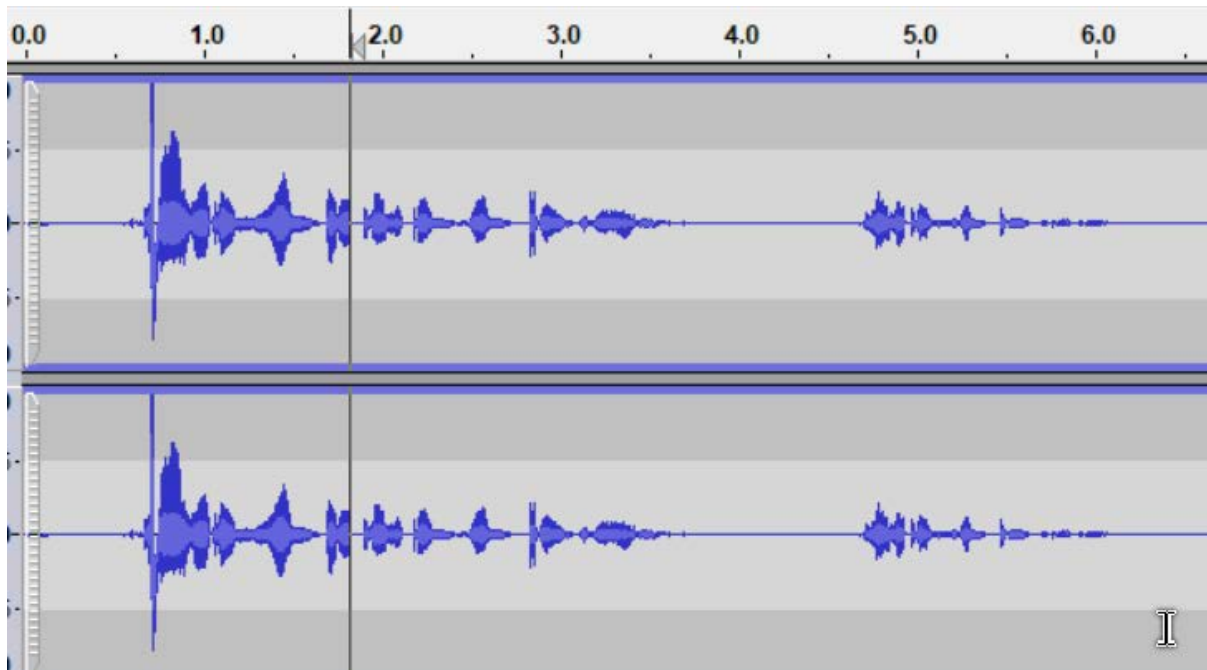


Fig 7

## What if I want to add some more dialogue to my recording?

If you've made a recording, but once you've listened to it feel you've missed something out, and would like to add extra dialogue, follow these steps:

1. To record the extra dialogue place the cursor at the end of the audio track, and press record to record the extra dialogue, which will appear as a second audio track. As shown in Fig 8

Place cursor at end  
of audio recording

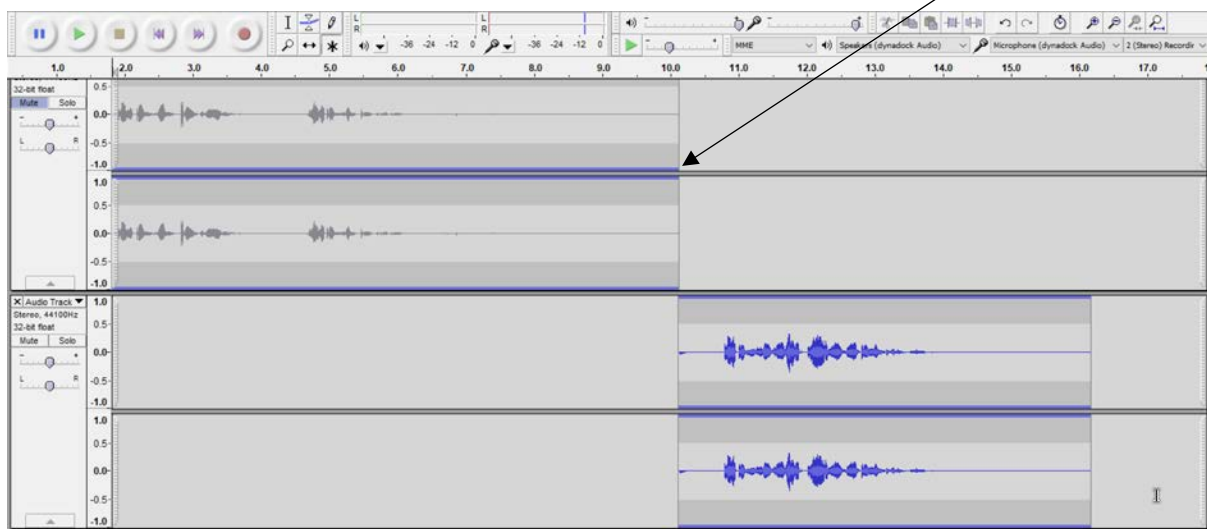


Fig 8

2. To position the new dialogue in the correct position in the audio recording, place the cursor where the new dialogue will start, then highlight the audio track from that position to the end (to the right), as demonstrated in Fig 9.

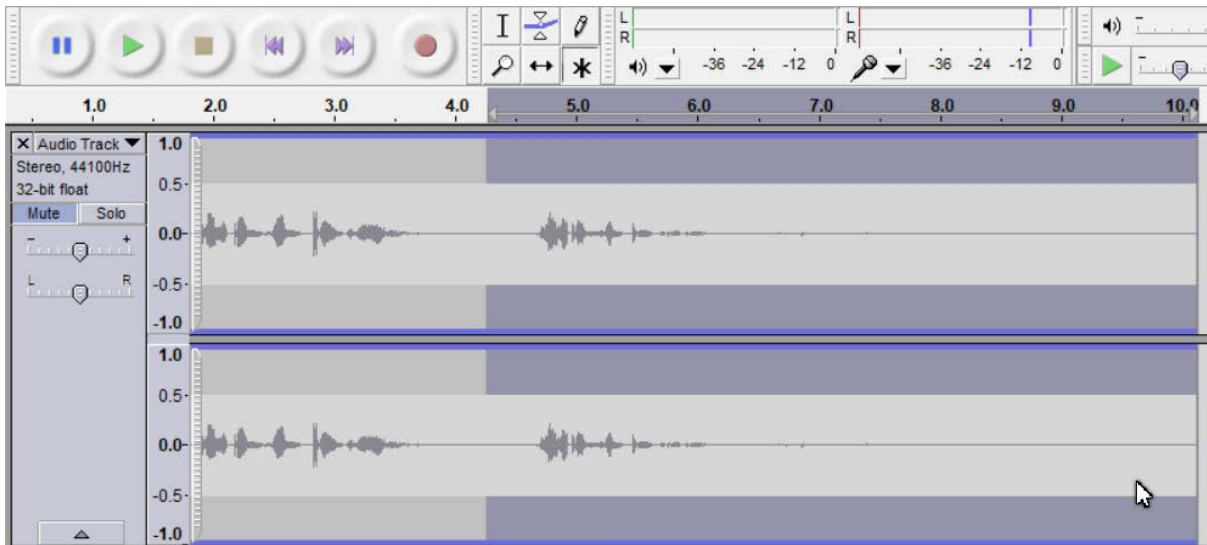


Fig 9

3. Then go to the Edit Menu on the menu bar and select the *Duplicate* option. This will drop a copy of the highlighted section of the audio track into a new audio track. Delete the highlighted section from the top track by pressing the delete key and the screen shown in Fig 10.



Fig 10

4. Create a new track as shown above and move this up to become the second track with the Audio Track drop down. To order the dialogue correctly use the *Time Shift* tool found in the Control Toolbar. To move the audio tracks into the correct position the mouse cursor over the audio track and shift them left or right as required to achieve a seamless transition. This will appear in a staircase structure as shown in Fig 11.

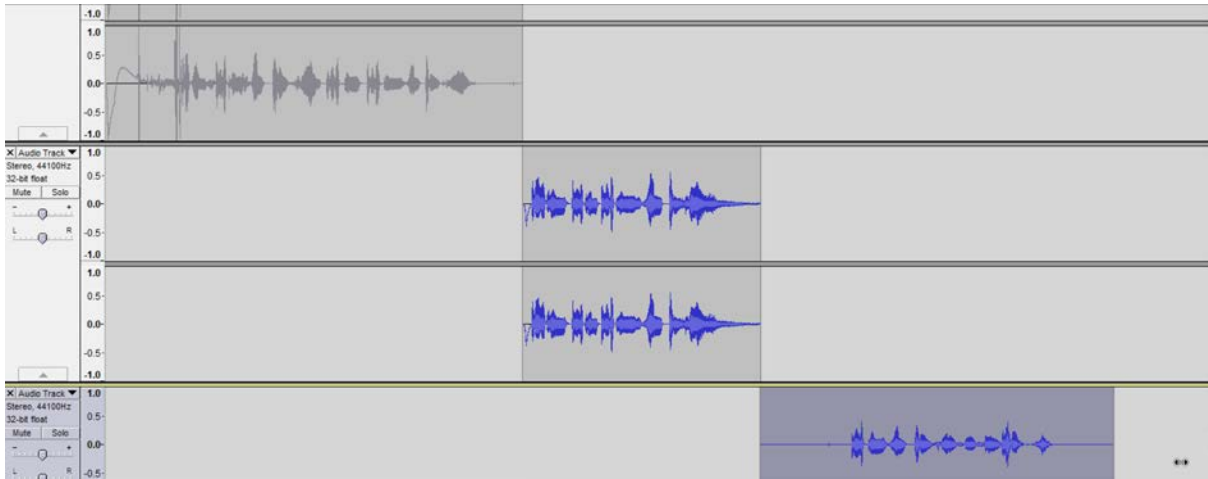


Fig 11

If you carry out this process when the recording is converted to MP3 the message shown in Fig 12 will appear. This simply means if you were to open the file again using Audacity it will appear as one continuous audio track, instead of the split structure seen in Fig 11.

## Personalising your recording

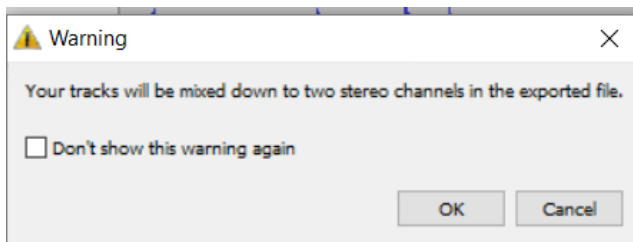


Fig 12

Once you've completed your recording and are happy with how it sounds, you can now personalise it, this means giving it a title and putting your name on it. This is done by going to the Project menu on the Menu bar and selecting *Edit ID3 Tags*, which brings up the box shown in Fig 13.

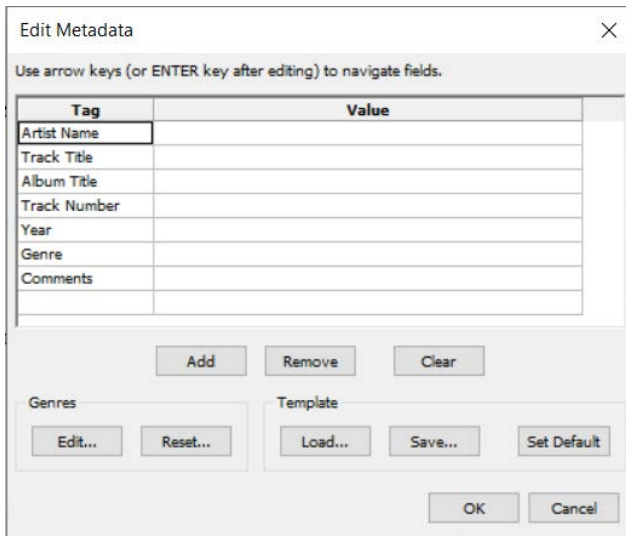


Fig 13

This allows you to add a *Title* to your recording, this could be the main theme of the Feedback or a Student Name. The *Artist* name which is you as you recorded it. An *Album* name, this could be the name of a series of Audio Feedback items. If your recording is one of a series of Audio feedback items its position in the order can be put in the Track Number. The year it was produced can be put in the Year box. For the *Genre* this can be selected from a large list, as Audio Feedback tends to be a *vocal* recording this can be the genre selected. Finally if you wish you can add further comments. Finish and save the information by pressing ok.

## Saving Your Recording

You can save your feedback by going to the File Menu and selecting *Save Project As...* This option saves the recording as an 'Audacity Project' which is a format called .aup. The format

can then be listened to again but only on Audacity software. Unfortunately this format cannot be played on typical digital audio devices. Therefore the file should be converted into an mp3 format, which is much more accessible on all hardware, which can be done by selecting the *Export As mp3* option on the File Menu.

Unfortunately Audacity doesn't have the built in ability to do this, to achieve this there is an add-on called *lame\_enc.dll*. This has be downloaded from the internet and is also free. The easiest way to find this is to go use any internet search engine, type in the name of the file as printed above and more often than not the first item to appear on the list is website to download it.

Once you have found a source download the file. Follow the instructions supplied with it. Once the file is on your computer your recording can be converted to an mp3 format in the following steps:

1. On the File Menu select *Export as mp3*.
2. A save window will open, which requires you to name your recording file and select where you would like to save it to on your computer. Then select ok.
3. The first time this process is carried out a message will appear asking you to locate the *lame\_enc.dll* file, select yes and then use the browser to find the file you downloaded earlier.

**This step of the process only has to be carried out once when the *lame\_enc.dll* file is first used, from then on Audacity will convert to mp3 without any more requests.**

## Considering File Size

When recording Audio Feedback considering the file size is very important, because at the end of the project the file will be made available on the internet via moodle, and when getting files from the internet the larger they are the longer they take to download. Therefore they want to be made as small as possible. To achieve this with a sound file there are three variables that can be altered:

1. The sample rate, this is a measure of how many times a second the computer makes a recording of your voice. Audacity has default settings between 11025Hz and 96000Hz. Hertz (Hz) is a frequency measure of per second. Therefore, lower frequency means fewer recordings per second. Lower frequency also means lower quality.

2. Sample Format, this is measured in *bits*. It simply means how many bits of computer

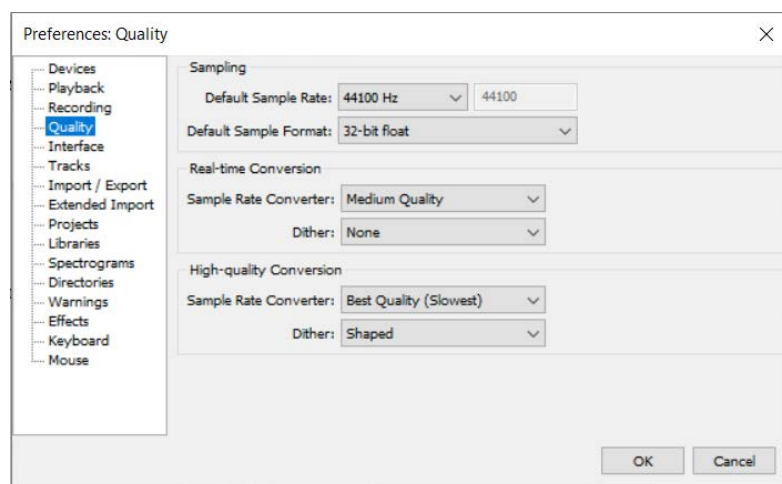


Fig 15

memory space the recording uses for each second of recording. Therefore once again the lower the number the lower the quality.

Both of these setting can be altered in the Edit Menu in the *Preferences* section. This opens a window called Audacity Preferences, once in this window select the Quality Tab as shown in Fig 15.

The two variables discussed above can be changed in the top two drop down boxes. The

recommended settings are shown i.e. Sample Rate of 44100Hz and a Format of 16- bit. These are also the settings used by the BBC to produce their Podcasts and CDs.

3. The final variable that can be altered is changing the Bit-rate of the mp3 created. An mp3 is a computer sound file and the Bit-rate is how many bits, or how much of that file is played back to you in one second.

This can be altered in the when you select export audio from the file menu. Select MP3 in the *Save as type* drop down, then click on the *Options* button and from here you can select bit rate, shown is Fig 16.

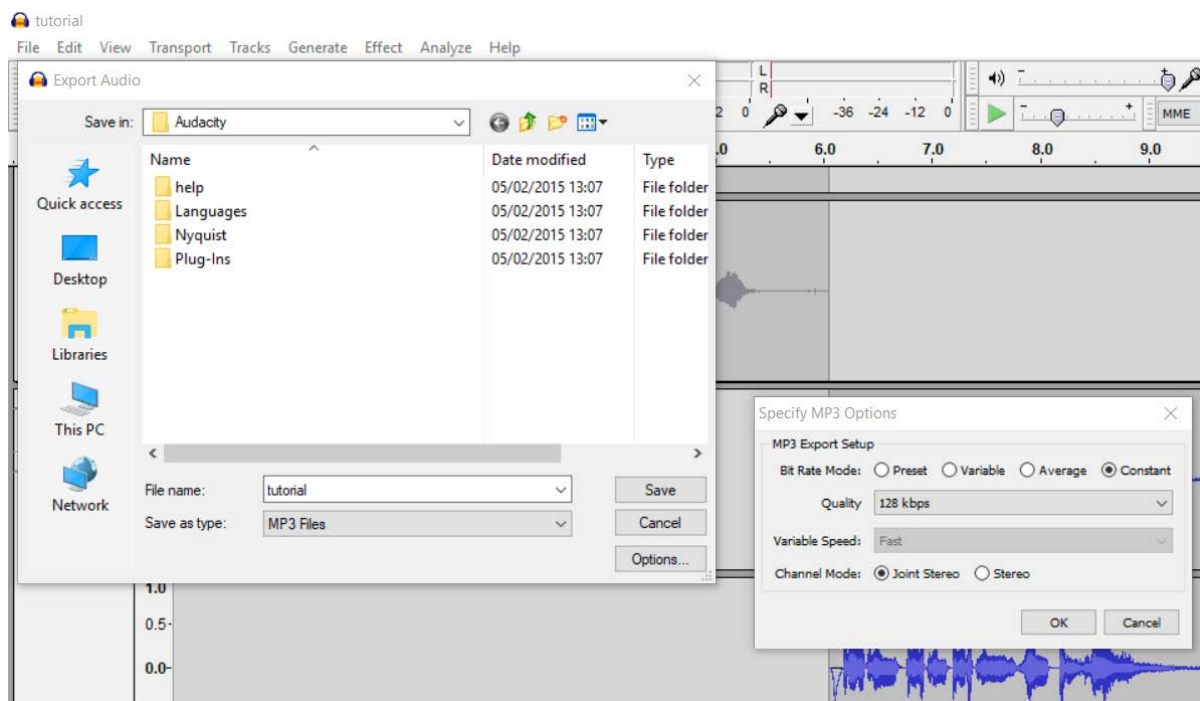


Fig 16

Audacity has a default setting of 128 this is a typical rate for an mp3 file, however this quality is only required for music files. For a voice recording it can be much lower, and if the Bit-rate is much lower it decreases the file size dramatically.