MANGROVE MOUNTAIN COMPUTER CLUB

Vinyl to CD

Checklist of what you need to have:

- **Computer Soundcard with a line-in** socket (blue colour). Most computers already have a this. If not, if not you can purchase a internal soundcard for about $55.00
- A **cassette player** or record **turntable**. As long as they have a line-out socket or a headphone jack, that is fine.
- A stereo connector **cable** to connect from the line-in (computer sound card) to the cassette player or turntable output**.** For most turntables, this will typically be **2 x RCA stereo to 2.5mm lead or USB**.
- **Software** to record the audio to the hard drive. **Audacity**, it is free and works for both Mac and PC's (Windows 98 to Windows Vista) and there is a Linux version as well. You can [download the latest Audacity software here](#).

Note: Some older stand-alone turntables may produce a lower level output **signal** that may require you to connect the audio lead to a pre-amp.

Where to buy a new turntable:

One place is [Deals Direct](#) - Australia. They feature a Lenoxx Turntable (33, 45, and 78) with Built-In Amplifier and AM/FM Radio for $60.00. Temporarily out of stock, but they say 'Coming Soon'.

The MMCC USB one was purchased from ALDI for $79. The RCA one was purchased previously from Dick Smith for $98.

Recording with Audacity

The Audacity program allows you to either: 1) record live audio through a microphone or mixer, or 2) digitize recordings from cassette tapes, vinyl records, or mini-discs. You can use Audacity to record via the computer's sound card, microphone input or line input.

Testing all is ready with a simple sound test

Now set the turntable or stereo to produce some audio sound, and see if you can hear the sound coming out of the computer speakers. If you can, then you are ready to go!

Note: if you have no sound in the computer speakers, make sure that the line-in control is not set to 'mute'.

You made need t djust the sound level to prevent audio 'clipping' (too loud).

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Creating your Audacity Audio Recording

Start your chosen audio source playing (LP, Radio or Tape), and click the red '**record**' button on the Audacity toolbar. You will see the Audio Track display moving along the time line display as the sound is recorded.

You can either record the entire side of tape or LP record as a single file, or record individual tracks as separate files. It is often easier to record the entire side, clean it up using further Audacity options, and then save the individual tracks. You can see where the audio tracks start and end by the visual evidence of silence between your recorded audio tracks.

When the recording is complete (or where you would like it to end), click the '**stop**' button on the Audacity toolbar. Now you can save your audio recording project by choosing the Audacity menu option **File** > **Save Project As** and give your audio project a file name. This provides a 'master' copy in case you mess up the editing and have to start again!

Clean up your recorded Audio tracks

Now you have the opportunity to clean up your recorded audio project - if you so desire. For LP records (or noisy tapes) that have aged, this is worthwhile, as it will improve the resulting sound quality. After this event you will then be ready to burn the result to a CD disk:

- Using your mouse, drag to select a small amount of 'silence' from the beginning or end of the recording over the audio parts you want to keep, and choose the Audacity menu option **Effect** > **Noise Removal**. Then click the '**Get Noise Profile**' button.
- Now use the Audacity file menu **Edit** > **Select** > **All**, then choose the menu option **Effect** > **Noise Removal** again. Click the '**Remove Noise**' button. This option will remove any tape hiss or LP noise that was recorded with the audio track. This noise removal process can take several minutes, so give it time. The best setting for the 'Less' and 'More' settings is normally the default middle option. For a really 'noisy' audio source, you may want to try moving this slide bar to about 3/4 to the right = 'More'.
- In addition, especially if there is a scratch on the record, you may need to also run **Effect** > **Click Removal.**
- Select the entire file (Audacity menu option **Edit** > **Select** > **All**) and then choose the Audacity menu option **Effect** > **Normalize**.
- Choose the Audacity menu option **File** > **Save** to save your clean recording.

Audacity can also to change the final speed or pitch of your project, plus a lot of other **Effects**.

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Saving your individual tracks as WAV files

Now you separate the tracks into individual files. This is quite easy to do.

Open the recording that you have just made (it may already be open) and use the Audacity **View** > **Zoom In** and **View** > **Zoom Out** menu options to see two or three of the recorded tracks at a time. Drag your mouse over any audio track to select it, and choose the Audacity menu option **Edit** > **Copy**.

Now choose the Audacity menu option **File** > **New** to open a new Audacity window, and choose the menu option **Edit** > **Paste**. This creates a new audio track with the audio selection you just copied.

If you find you have a small amount of another track (or too much silence) at the beginning or end of the track you copied, you can drag the mouse over the part you want removed and then press the Delete key to remove just that part.

When your audio track is ready, choose the Audacity menu option **File** > **Export As WAV** to save this track as a WAV file. This WAV format is commonly used for creating an audio CD because it is 'lossless'. You may now close the new Audacity window (the single track we just saved), and repeat this process for any other tracks that you want to save.

Saving your recording as an MP3

To do create MP3 recordings, Audacity requires the LAME MP3 encoder - this enables Audacity to export MP3 files. Please download the required Windows [Audacity MP3 Encoder](#) here. After you have downloaded the MP3 Encoder, follow these steps:

- When you have finished downloading the ZIP folder, unzip it and save the file **lame_enc.dll** that it contains to anywhere on your computer
- When you use Audacity the first time with the 'Export as MP3' command, Audacity will ask you where lame_enc.dll is saved. Point to the location that you saved **lame_enc.dll** file in.

Come CD players and most DVD players now play MP3s, just burn them to a CD to a CD or DVD as **Data.**

Write your final Audio Project to a CD disk

Finally you may create your new audio CD. Using your supplied CD-burning software program (Nero, Roxio, iTunes, Windows Media Player, etc) to select those previous individual tracks you recorded with Audacity and record the tracks to a CD in CDA format.

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