How to Digitize Analog Music Using Free Software

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1. Analog audio setup

To digitize analog music, you'll need to transfer the music to your computer via your computer's built-in sound card or an external audio interface. Once your device is connected, open your favorite Digital Audio Workstation (DAW) software and follow these steps:

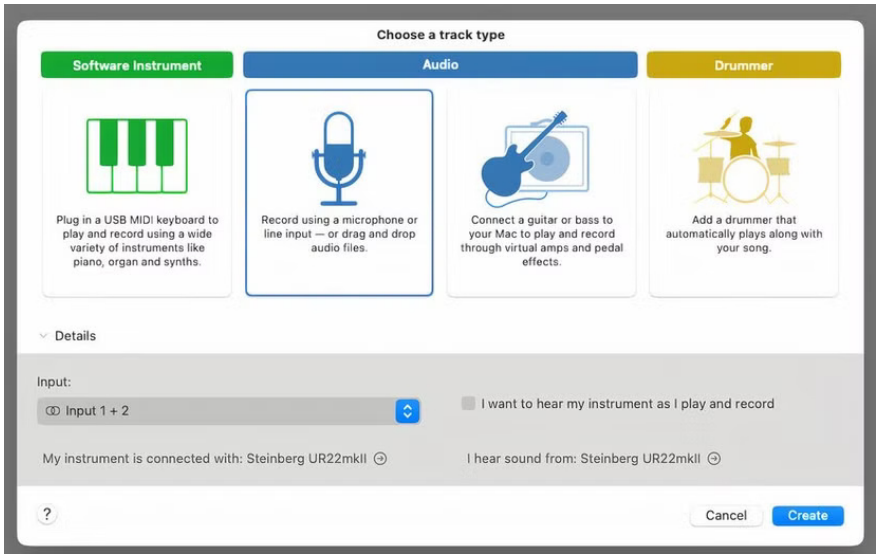
Create new project

Apple users may want to use the excellent GarageBand software available on all iOS and Mac machines – GarageBand is a great DAW for beginners. So for GarageBand, go to **New Project > Empty Project** .

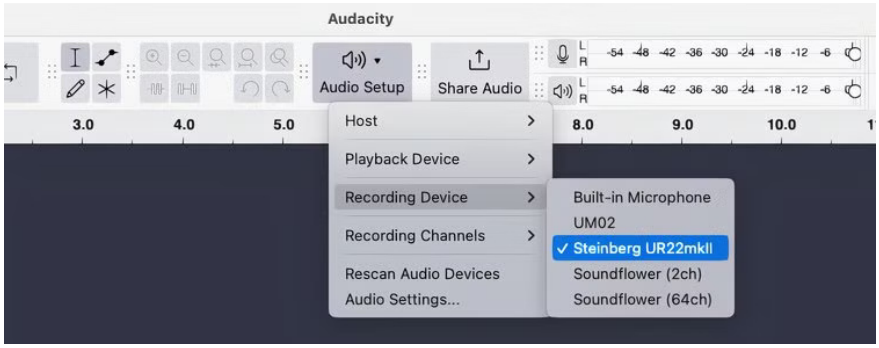
Windows and Linux users can opt for Audacity. While it may seem outdated compared to GarageBand and is limited to acoustic instruments, it is ideal for digitizing analog audio. A new project will automatically open upon launch.

Select audio input source

In GarageBand, select the audio track type for the mic or line input in the pop-up window. Next, select **Input 1 + 2** from the drop-down menu for the stereo audio track.



In Audacity, select the **Audio Setup** button on the toolbar, hover over **Recording Device** , and select your audio input source.



Add stereo audio track

For GarageBand, click **Create** in the pop-up window and the stereo track will automatically be added to the arrangement window. For Audacity, right-click anywhere in the arrangement window and select **Add Stereo Track** .

2. Record music into DAW

The recording process is the same whether you're digitizing school notes, a single track, or an entire side of a cassette tape or recording. Be sure to test each time you start a new project to increase your chances of getting it right the first time.

Check recording levels

Start playing your audio. In GarageBand, if your input source is configured correctly, the meter in the top right panel will move with the audio level. Hold the volume button to the middle of zero and make sure the meter is not "clipping."

Clipping occurs when the audio is distorted and the light turns orange as the meter approaches the right side. If this happens, reduce the recording level on the input device (recorder or audio interface) until the audio level is consistently green and yellow.

For Audacity, as your audio plays, the meter in the upper right of the window will change from green to yellow to red as the level increases. As the audio plays, adjust the volume of your input device until the meter is consistently green and yellow at minus 6dB.

Record audio

To record audio in Audacity or GarageBand, click the red **Record** button at the top of the window and start playing your audio. The recording will be visualized as two sound waves representing a stereo signal as the audio plays. When the recording is complete, click the stop button and save your project.

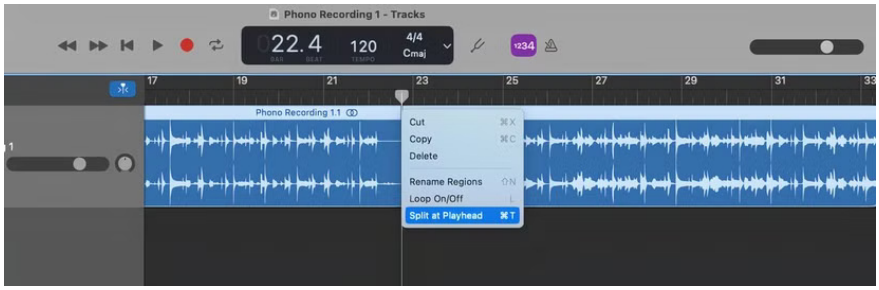
If clipping occurs, delete the audio track, lower the input level, and start again.

3. Edit music before exporting

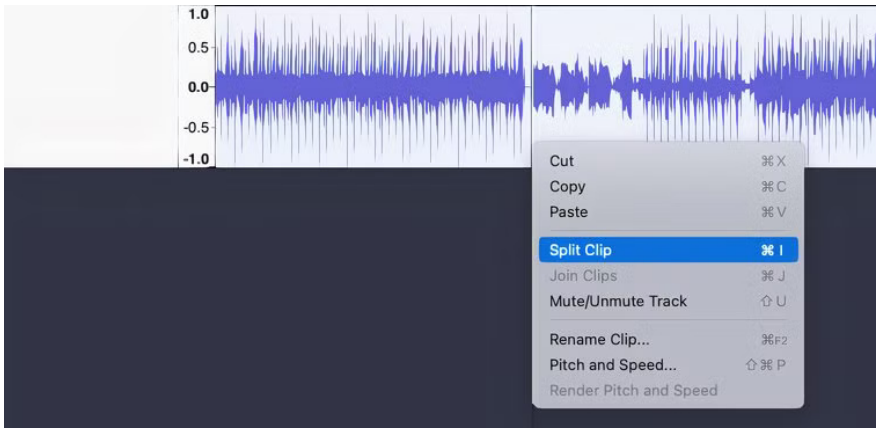
Before exporting the audio, you must split it into separate tracks and arrange each track to remove unwanted gaps at the start and end points. You can also edit the audio to improve the quality.

Split audio into tracks

In GarageBand, drag your cursor to the end of each song (the sound wave that narrows between songs), right-click, and select **Split at Playhead** .



In Audacity, click on the track to place the cursor at the split point, then right-click and select **Split Clip** .



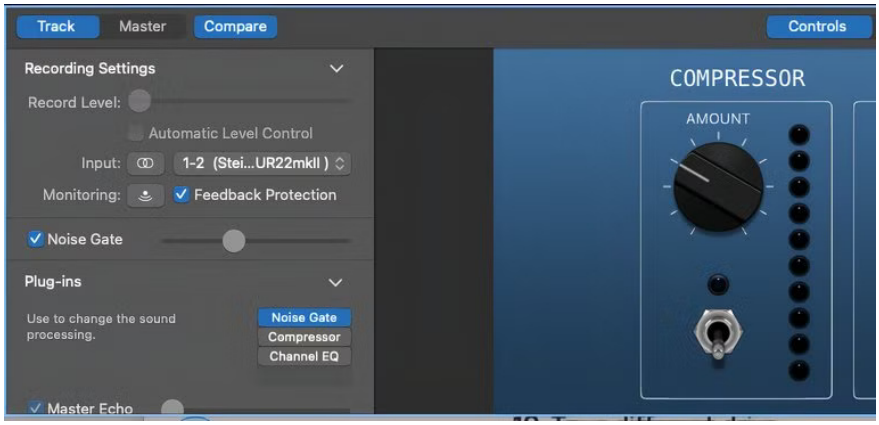
Arrange start and end points

In GarageBand, use the zoom slider in the upper right corner of the window to zoom in on the audio track between songs. You can then click and drag the start and end points to trim the tracks, leaving no gaps, eliminating noise and hiss between songs.

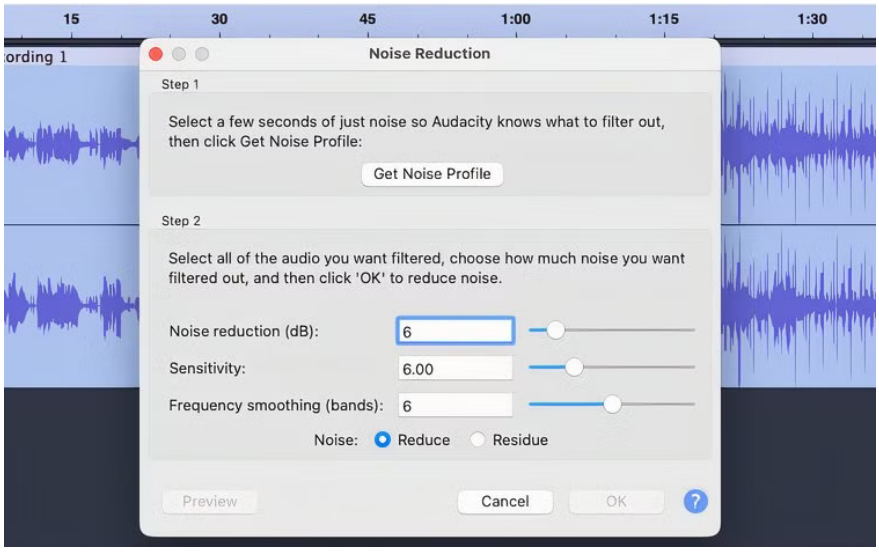
For Audacity, go to **View** in the top menu and select **Zoom > Zoom In** (or click the magnifying glass icon). Then, click and drag the start and end points of each track to trim out the parts that don't have audio.

Add noise reduction to audio

In GarageBand, press **B to open Smart Controls. Track** settings are at the bottom of the arrangement window; check the box labeled **Noise Gate** and move the slider to the right to increase noise reduction.



In Audacity, select your track, click **Effect** in the top menu, then choose **Noise Removal and Repair > Noise Reduction** . You can then experiment with the settings in the pop-up window, but use this effect sparingly.

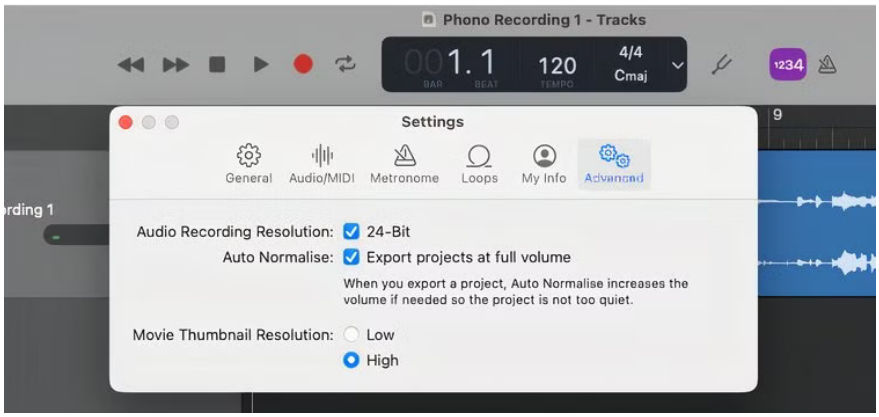


4. Export digital audio files

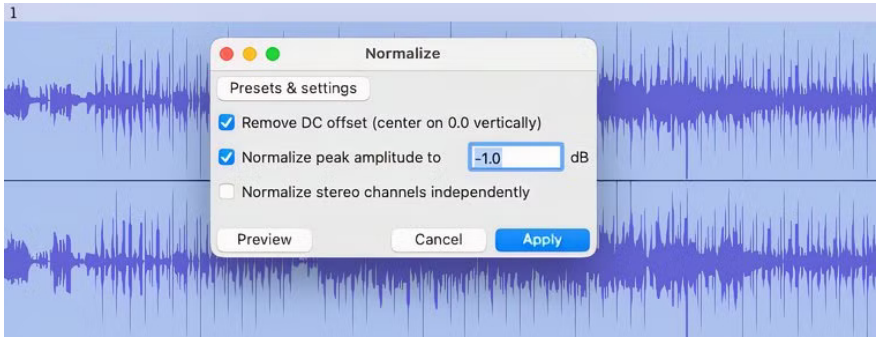
Finally, you're ready to export your audio files. Be sure to name them during the export process to avoid confusion when searching for files and organizing them into playlists.

Normalize files to maximize volume

In GarageBand, select **GarageBand > Settings** from the top menu. In the **Advanced** tab , make sure the **Auto Normalize** box is checked to export your projects at maximum volume.

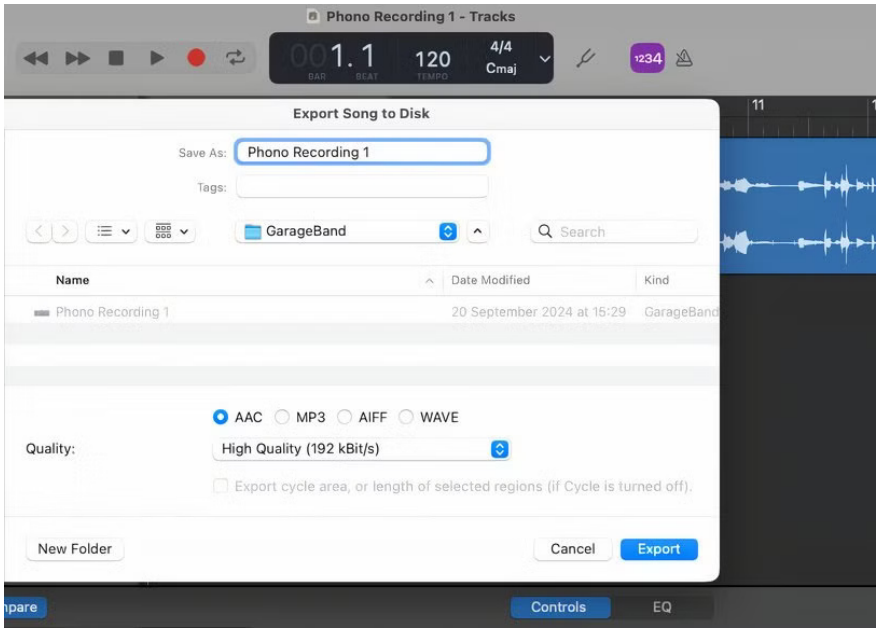


In Audacity, select your audio track, click **Effect** in the top menu, then select **Volume and Compression > Normalize** . Click **Apply** to enable this feature.

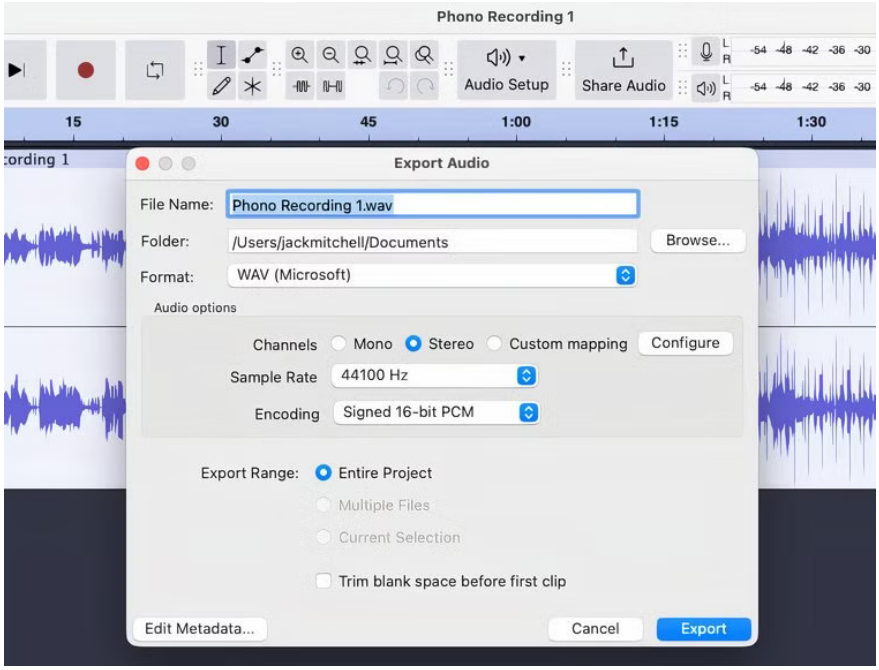


Audio output

In the top menu in GarageBand, click **Share > Export Song to Disk,** select your preferred digital format and audio quality in kBit/s in the pop-up window. Then, click **Export** to save it to the folder of your choice.



From the top menu in Audacity, click **File > Export Audio** and select **Export to Computer** . Here, you can choose to trim the space before the first clip (if you haven't already), choose your preferred sample rate and digital format, as well as the destination folder. Finally, click **Export** to save your file.



There are many reasons why you might want to digitise your analogue audio. You might have an old 4-track recording from a school band, study notes you want to preserve, rare recordings you want to back up, or tracks that can't be found on streaming services. GarageBand and Audacity are powerful free solutions that make this easy, and provide a valuable introduction to the world of digital recording that can be both fun and rewarding.