Digital Music 101
45th CALLERLAB Convention
Albuquerque New Mexico
March 26 – 28 2018

Managing Your Digital Music
By Rick Manning

Working with Digital Music

A. **Introduction**

   After helping several callers in my local association with setting up SqView and their music, I realized that maybe my other colleagues might be having the same problems with downloading and managing their music files. Problems like "where the heck did the download go; how do I strip off the 5 second lead at the beginning or end of the music; or maybe why are some of the music files louder than others; and lastly where can I keep the originals separate from the "doctored" files."

   I will explain things like directory structures, downloading your files, how to unzip (unpack) or extract your files, naming conversion, volume equalizing and finally storing these files, in this section.

   I am making an assumption that most of you have some general knowledge with computer terms like "Windows Explorer" and "Click", "Move", "Copy" and "Paste" and that you are a little computer savoy with general computer terminology.

   Hopefully this session will help you become knowledgeable and efficient at managing your music in the Windows environment (MAC is very similar).

   Last but not least, for the callers that would like to record some of their old vinyl's that are no longer available or have not been turned into mp3's by any record producer yet; I have included a section on how to record into mp3's using Audacity.

B. **Directory Structures**

   Some of you may already know about "directory structures" and might want to skip on to the next section called "downloading music files". For those that are new to computers and directory structures, I will explain in as simple as terms as I can.

   a. **Root directory (c:\)**

   Think of the "root directory" as the file cabinet but this file cabinet has a lot more drawers than 4 or 5.

   b. **Sub-directories (c:\temp-audio; patter; music, singers etc.)**

   Think of these as the "file drawers", each one for a specific purpose, program, or storage location.

   c. **Temp directories vs. storage directories (c:\temp or c:\temp-audio; c:\my music\patter or c:\my music\singers)**

   "Temp directories" are used to hold your files while you extract or massage/manage the music for your use.

   "Storage directories" are the final location where your program will look when you want to use a patter or singer MP3.

   Here is what a directory structure might look like in Windows Explorer:
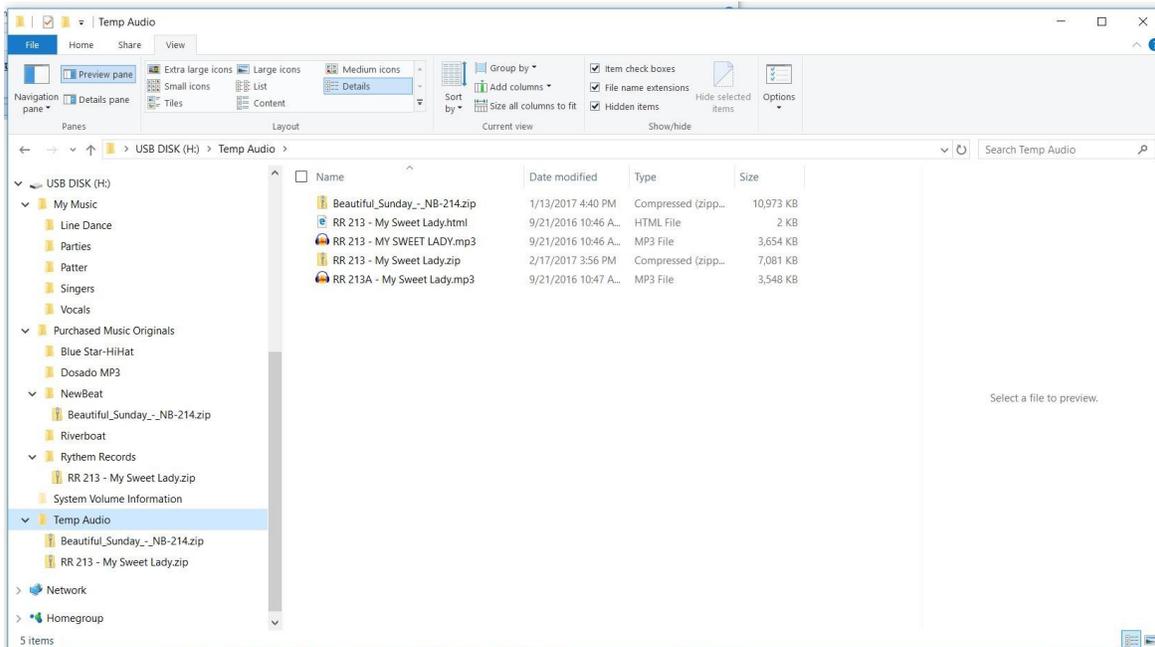
Directory structure is on the left side of the picture.

C. Purchasing you music

Most all music producers are using "PayPal" for "your and their convenience". Be very **watchful** after the purchase, you may be able to download right after the transaction is complete while others may send you an email message letting you know that your music is ready for download. "**READ" your website screens carefully.** Thankfully, I had this experience already. I closed out the purchase, printed my receipt from the screen and left the site. No message was sent letting me know that my downloads were ready. I went back to the site and low and behold, there they were ready for down load.

D. Downloading music files

Here is where the "rubber meets the road' so to speak. When you purchase your music from "Do-sa-do", "Music for Callers", or one of the many music producer websites: where do they go and how do I find them and what the heck do they look like? Well, by default, Windows will use the directory called "downloads." However, for music it might use a directory called "music" for the download. You need to be observant when the downloading process begins, so you can see which directory it goes to. Sometimes this is not necessarily true if you are using a directory of your own; such as what I recommend next. I recommend that you create a "c:\temp-audio" directory for the download. Also use this as your "work" directory for the tasks you want to perform on your music files.

a. Music Download directory

As mentioned above, this directory might be the "primary directory" that your files could be downloaded to and saved. I want to point out that this directory is also used by "iTunes", "Real Player", and "Amazon MP3", etc. for downloads. You can use this as your default download, but I suggest that you move the MP3's to a "working temp directory" to make any changes on them.

b. Temp storage directory

Again, this is the suggested working directory. Any name you want to give it but I really suggest "c:\temp-audio". "It is only logical", says Mr. Spock.

c. Permanent storage directory (backups, originals and final cuts)

These directories are where you will keep your original files, your finished copies and the backup copies of your music. You will want to keep a copy of the original downloaded (purchase) copy on a "backup storage device" like a "thumb" or "flash drive" or maybe even another laptop as backup devise to your main laptop for calling. Keeping a copy on the primary laptop is alright too, IF you need to make new changes from the original MP3 download.

I highly recommend that you keep your "hoedowns/patter" music separate from you singing calls and any other music like "line dance" or "party music" in their own directories. I worked on a friends' computer who had their singers, patter, vocals, and line dance music ALL in the same directory. They could not figure out "why" all four types of music appeared in one section in SqView and were all mixed up........

d. **Getting the Download**

Make your selections from which ever source you like to purchase the music and download the MP3's to the directory of your choice or to the "c:\Temp-Audio" directory. Copy the MP3 you just downloaded from the Download directory and put the copies in the "Purchased Music" directory. These are now your original MP3's. Keep them safe; back them up to a thumb drive or another storage device.

Now if you have not downloaded them directly to the "Temp Audio" directory, do so now and we can unzip them in that working directory.

E. **Zip files**

Your music files will be in a compressed file format called "Zip". Their names might look like these two examples; *Beautiful_Sunday_-_NB-214.zip* or *RR 213 - My Sweet Lady.zip.* The files will look like a yellow file folder with a zipper on it and will have between 2 and 5 files in them. The files might be VOCAL, Instrumental, Harmony, High, Low, etc. and the HTM, PDF, or Word lyrics file.
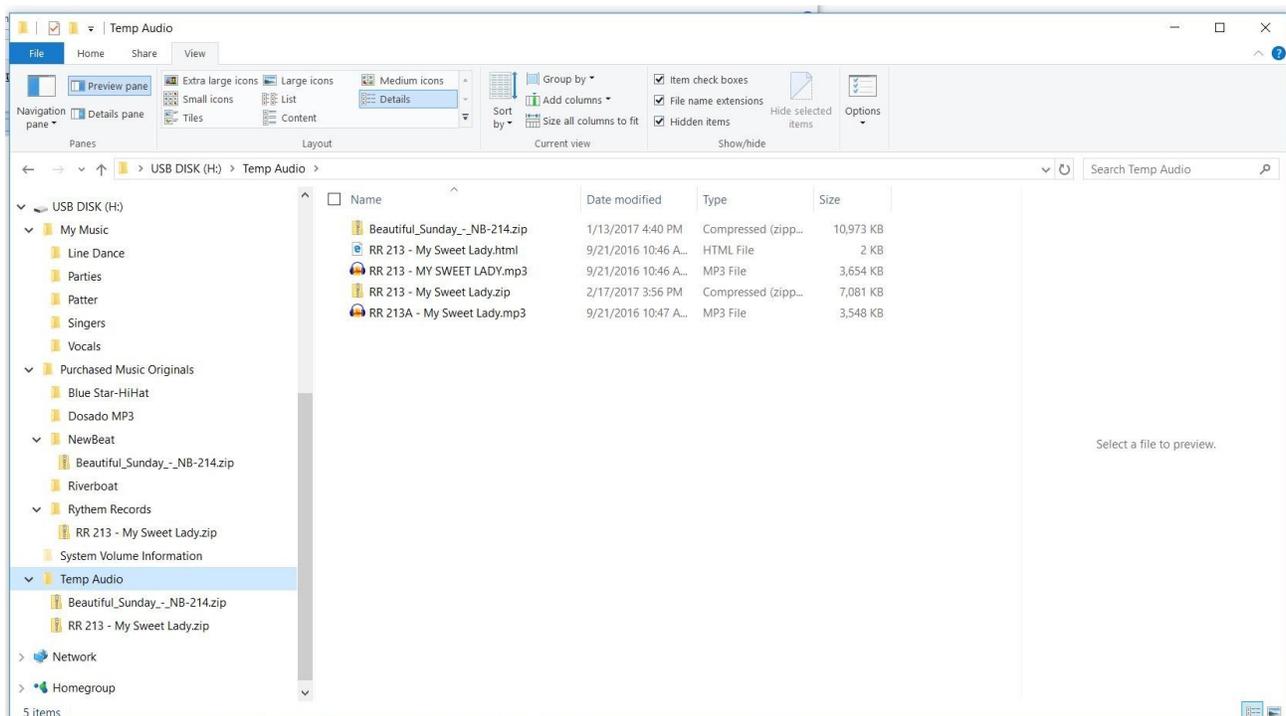
Example of Zip files in directory (center of screen shot)

a. **Extraction of files**

Remember that folder I mentioned above that was yellow and had what looked like a zipper on it? Yes that's the one. Now use "File Explorer" in Windows to extract the files. Select the music MP3 file. Up at the very top of File Explorer you should see "compressed folder tools" in pink, and the directory name. Just below that you should see "extract". Click there. A little bit to the right and below extract you should see "extract all". In the "extract window", delete everything after the last backslash (\). If you do not do this, a new directory will be created in the "Temp Audio" directory and put your files in there.

F. **Massaging/Managing the files (getting them ready to use)**

One of the first things I like to do is make sure that the "naming convention" matches the "naming convention" of the program I am using, in this case SqView. I use the "Label – Title" naming convention. There is a sweet little FREE piece of software out there called "NameConverter". It is very simple to use.

a. **NameConverter program**

This program swaps the label and the title back and forth for you. IF you have some files that are already suited to your naming convention then skip this section. PLEASE NOTE, if you have several MP3's in the same working directory, some with label before the title or have title before label, move the ones that are already correctly named, suiting your naming convention, to another temp directory, otherwise all you are going to do is keep "flip flopping" the names back and forth!!! Now use NameConverter to convert the remaining files.

NameConverter can be downloaded from the SqView website.
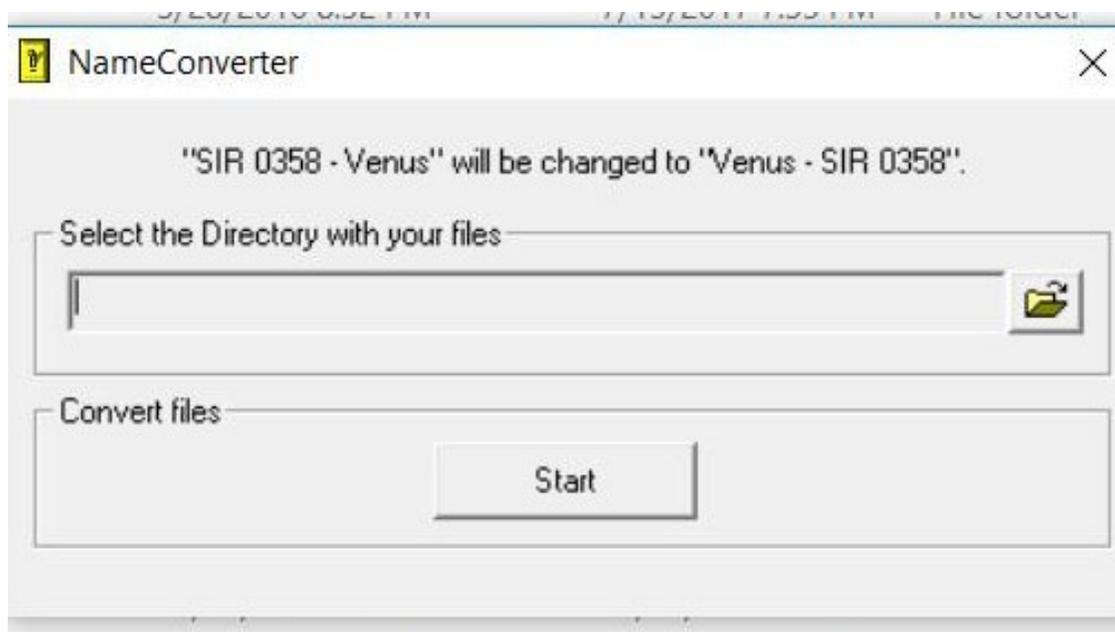
This is what it will look like when opened

The directory you select will be your Temp Audio directory. Use the little "open file" icon at the right.

b. **MP3Gain**

Have you ever wished that you did not have to constantly turn the volume up or down after pressing play, even though they are commercially produce MP3's? Well, MP3Gain can equalize the volume on the files for you. And, IT'S FREE ALSO!!! Do a google search for MP3Gain to download this program. When you extract this program it will create its own directory off of "c:\" (The Root).
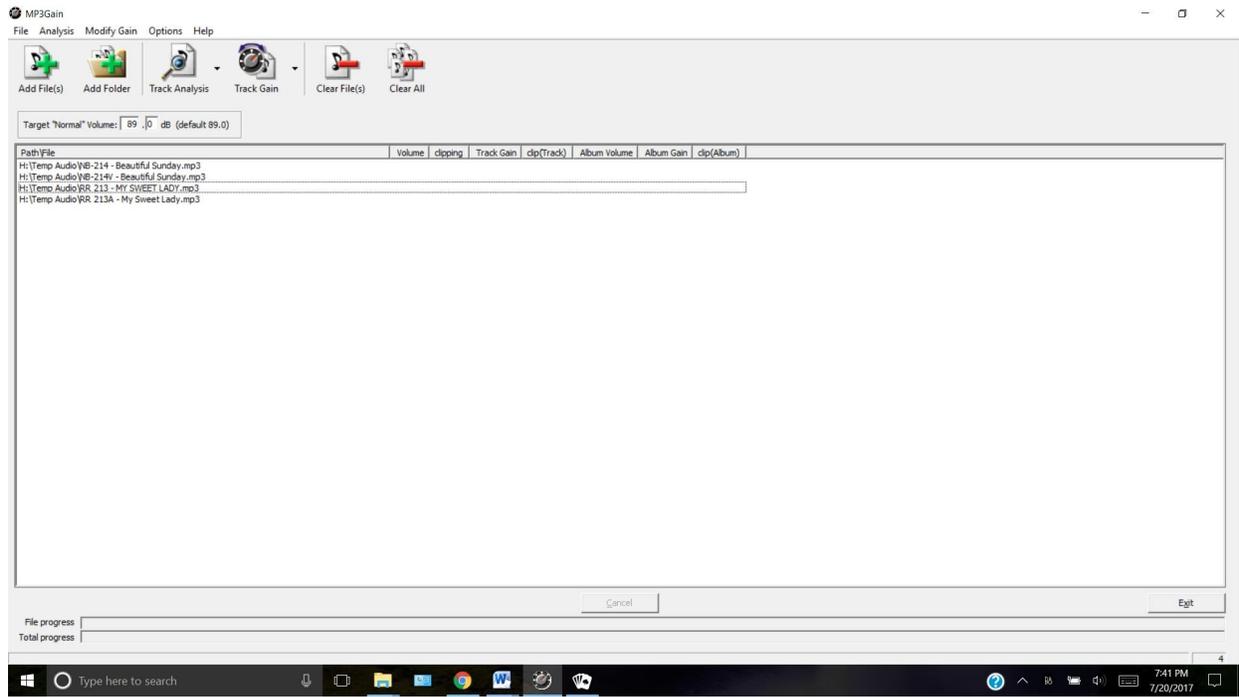
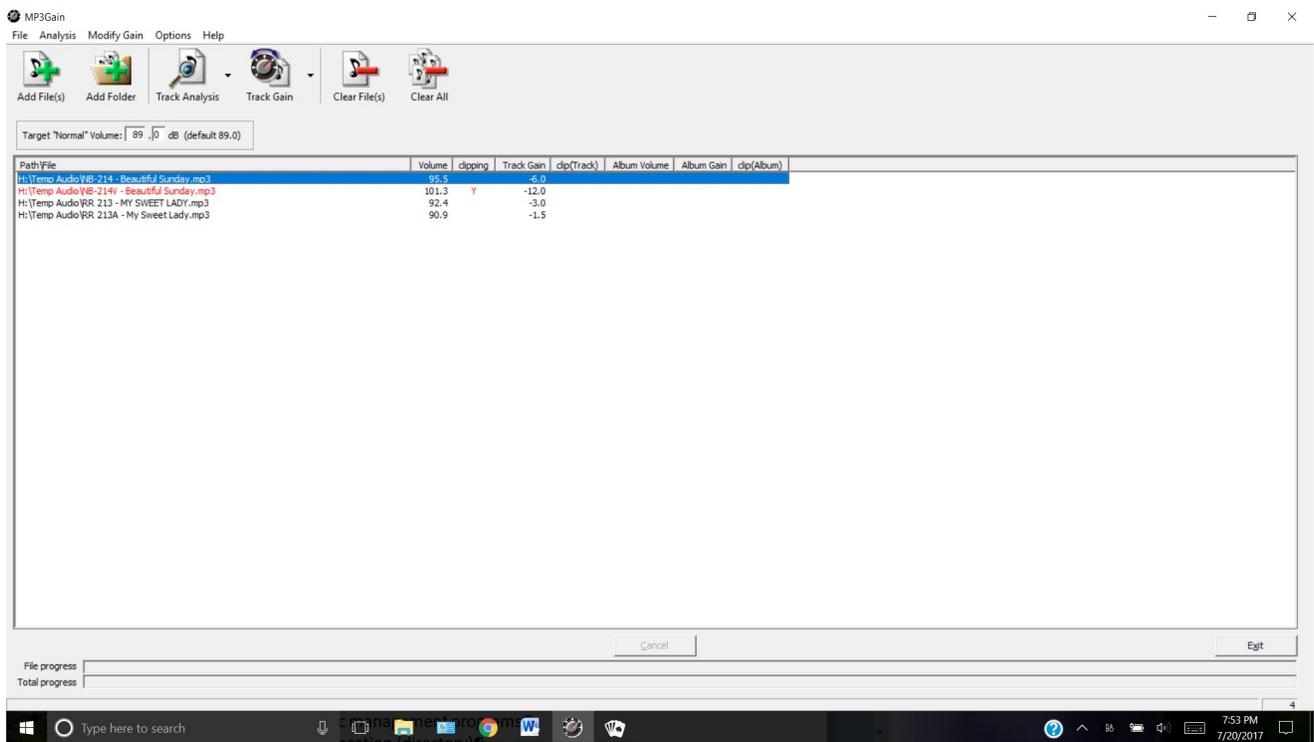Run the program and you will see the screen below.
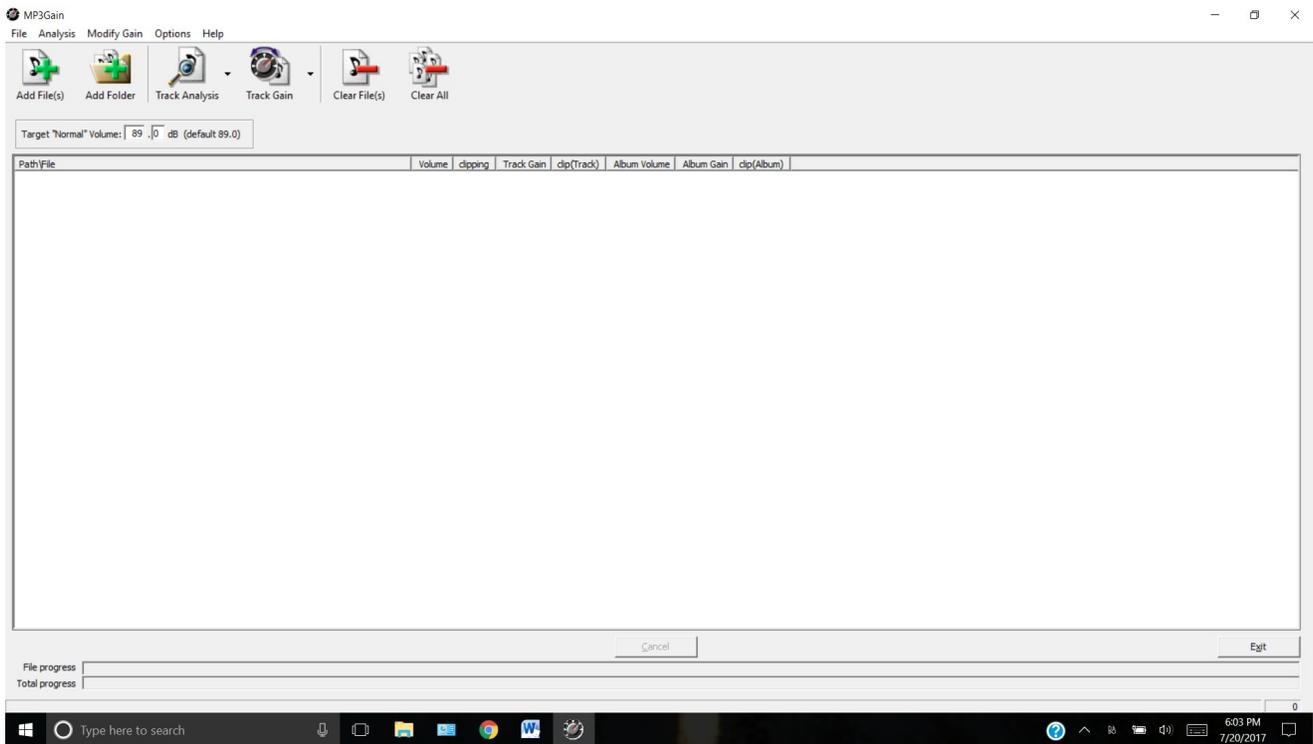
Main MP3Gain screen

There are three simple steps to do this process, "Add Folder" (Temp Audio), "Track Analysis" and "Track Gain".
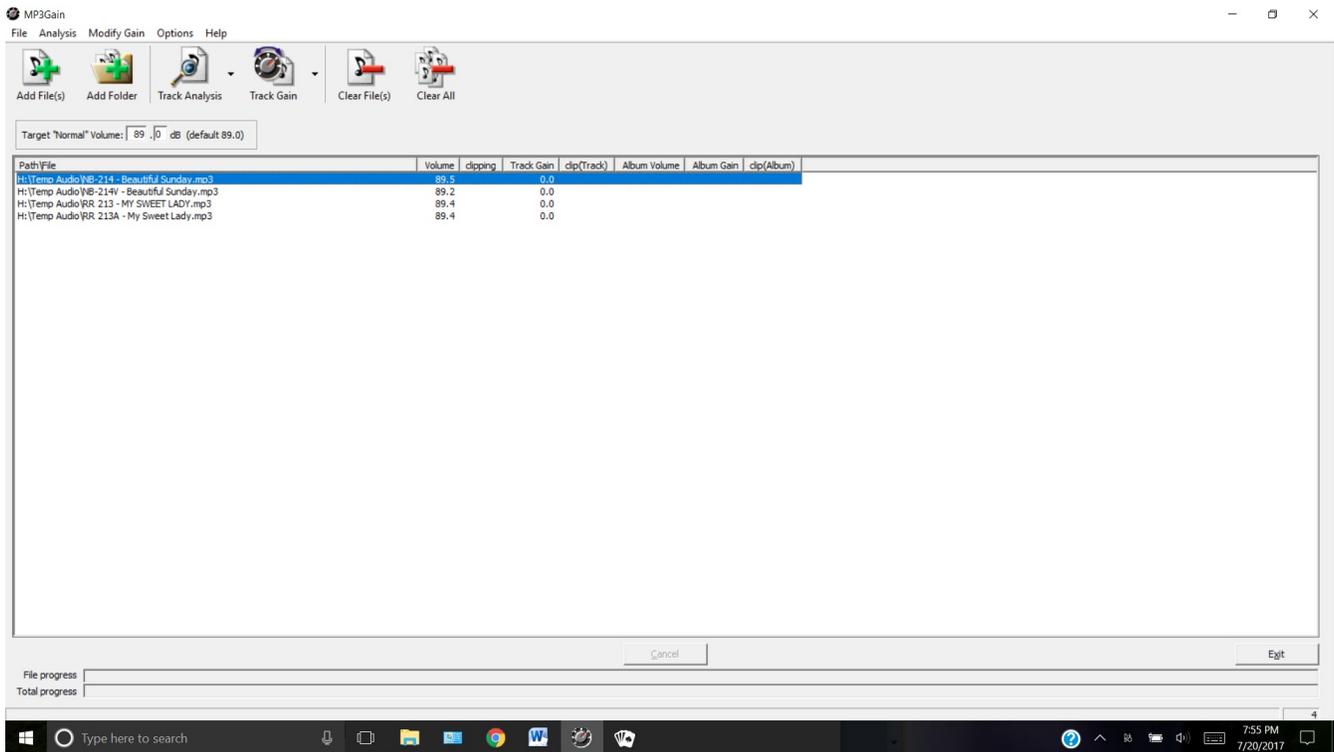
When you "click Add Folder", (it's the quickest way to get all the files at once) be sure you select the "Temp Audio directory" where you have your working files. Then click "Track Analysis" and let that process finish, then "Click Track Gain". Each one should take only a few seconds depending on the amount of files it has to work on.

MP3Gain

File Analysis Modify Gain Options Help

Add File(s)   Add Folder   Track Analysis   Track Gain   Clear File(s)   Clear All

Target "Normal" Volume: 89 . 0 dB (default 89.0)

Path\File	Volume	clipping	Track Gain	clip(Track)	Album Volume	Album Gain	clip(Album)
H:\Temp Audio\NB-214 - Beautiful Sunday.mp3							
H:\Temp Audio\NB-214V - Beautiful Sunday.mp3							
H:\Temp Audio\RR 213 - MY SWEET LADY.mp3							
H:\Temp Audio\RR 213A - My Sweet Lady.mp3							

Cancel   Exit

File progress
Total progress

Type here to search

7:41 PM
7/20/2017

Add Files view

MP3Gain

File Analysis Modify Gain Options Help

Add File(s)   Add Folder   Track Analysis   Track Gain   Clear File(s)   Clear All

Target "Normal" Volume: 89 . 0 dB (default 89.0)

Path\File	Volume	clipping	Track Gain	clip(Track)	Album Volume	Album Gain	clip(Album)
H:\Temp Audio\NB-214 - Beautiful Sunday.mp3	95.5		-6.0				
H:\Temp Audio\NB-214V - Beautiful Sunday.mp3	101.3	Y	-12.0				
H:\Temp Audio\RR 213 - MY SWEET LADY.mp3	92.4		-3.0				
H:\Temp Audio\RR 213A - My Sweet Lady.mp3	90.9		-1.5				

Cancel   Exit

File progress
Total progress

Type here to search

7:53 PM
7/20/2017

Track Analysis view

Track Gain view

Notice the difference in the "Track Analysis" volume and the "Track Gain" volume. All the files have approximately the same volume.

You can run this application/program to any directories you already have music on/in. It works on MP3, M4P, WAV, and WMA files.

c. **Cropping with Audacity or Goldwave**
Have you ever hit play, then waited and waited and waited for the music to start? Same here….. Well, "Audacity" and "Goldwave" are two programs that will help you remove that long leader or trailer (the white noise at the beginning and end of music files). "Goldwave" used to be a freeware program but now you need to buy a copy for $45.00. They do have an evaluation copy but it has a short evaluation period. I will not review "Goldwave" but the process is the same for it and Audacity. I would like to make a note here that any music program that comes with your computer will allow you to crop music, some better than others. Use what is available or download something that works and is free.

"Audacity" is a shareware program. You can just download it or make a donation. (Read the opening page of the website for details.)

Download and unzip "Audacity". It will create its own directory and place "an icon" on your desktop during install.

Open Audacity.

Open only one file at a time doing this process. "Click File", "Click Open"; choose the "Temp Audio directory"; then choose one of the file.

Then "Click View", "Click Zoom Normal" and your file should look similar to this:
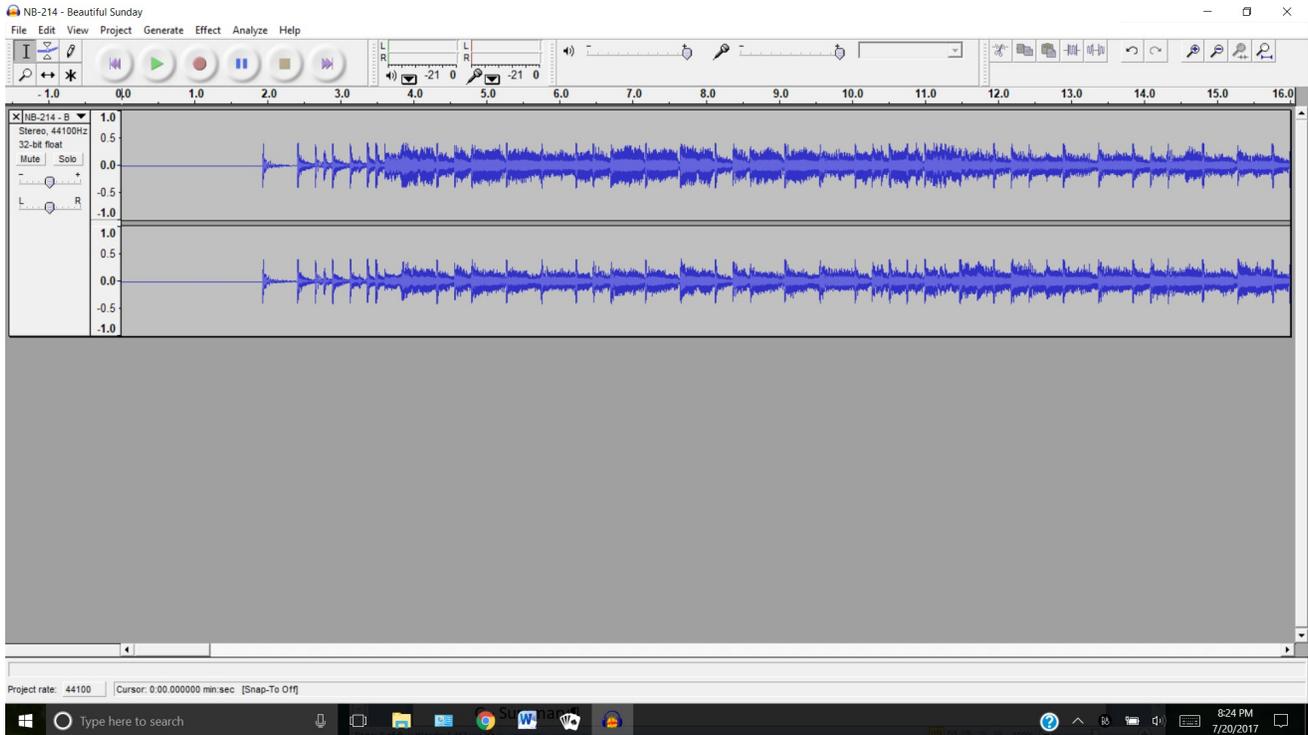

See the straight line at the beginning of the file? That is what we will "trim off". Take your "mouse pointer" and place it at the 1.5 mark and "click" anywhere in the gray area. Now, "hold down the shift key and press the home key". Your screen **should** look like this:
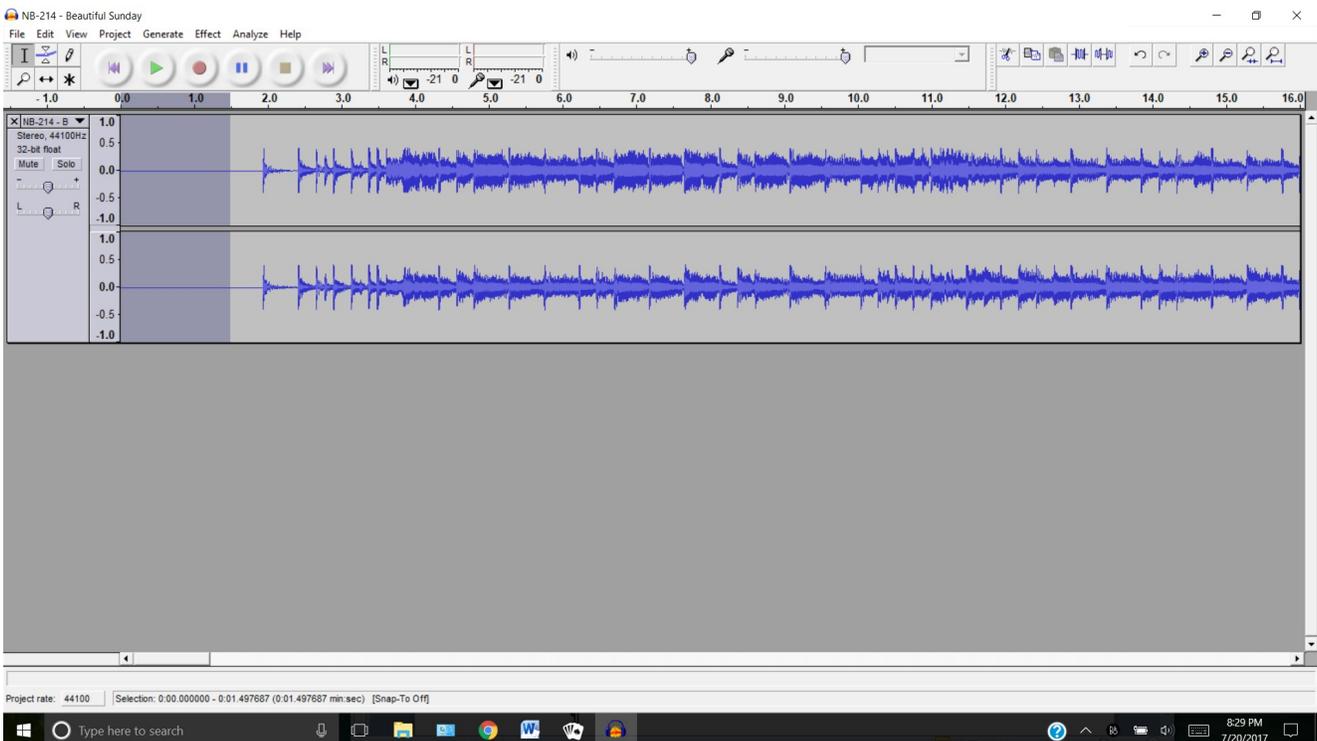
Now press the "delete" key on the keyboard. The leader is now gone.

Now press the button on Audacity that looks like the "Fast Forward" key (Dbl arrow and bar). See the trailer at the end of the file? "Click" in the gray area somewhere after the fade out. "Hold down the shift key and hit the "END" key" on the keyboard and your screen **should** look like this:
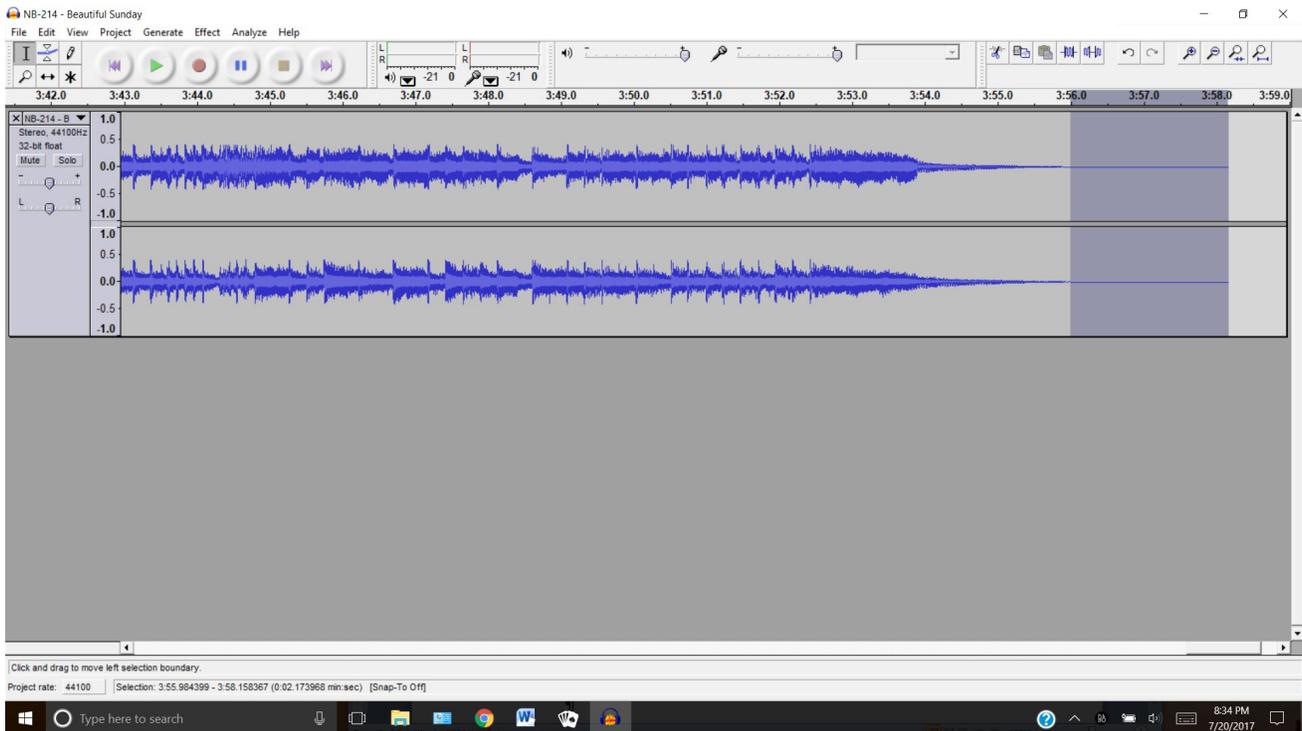
Now, press the "delete" key on the keyboard. The trailer is now gone.

Now, save the file. "Click File", "Click Save Other", "Click Export as MP3", "Select the Temp Audio directory", and over write that file. Now, close Audacity to clear the file from memory. Reopen Audacity and do the next file and so on. Again, you need to do each file/MP3 separately.

NOTE: Audacity needs a Program called "Lame MP3" which is a standalone program. You must have "Lame MP3" in the Audacity directory or in its own directory. Audacity uses this program/DLL file to convert and or save to the MP3 format. This Application/Program is also a Shareware FREE program. (**Look for the one for windows called "Lame for Audacity"**)

G. Final placement of your MP3s

a. SqView

If your music files are under the "c:\SqView\MP3\" directory be sure that you're Singers, Patter/Hoedowns, and Vocals are in separate directories. Move *NOT* copy; the Instrumental, High, Low, and Harmony files into the "Singers" directory. Move *NOT* copy; the HTM, PDF, or Word Lyrics files into the "Text" of "Lyrics" directory. If the download had a "HTM" and a "PDF", move just the "HTM" file. HTM reads better than the PDF. Lastly, move *NOT* copy; the "Vocal file" into the "Vocal directory".

b. **Other music management programs**

"SqView" is not the only Music Management Software. There are "DiditalMusicMagician", "Ceder Square Dance System", and "SQMP3Gold" programs. Each of these packages does the same purpose as SqView, some more than others. Make sure that you move your music to the directories they use or that the pointers in the setup of these programs point to your own locations, ie: "c:\my music\patter".

c. **Your own Location (directories)**

If you use your own directory structure to save your files, I recommend that their names make sense to you and you can find and recognize them every time you need them. Obscure names are hard to remember and may not make sense later on. I use the structure above in the example called "My Music". "It is only logical", says Spock!

H. **Recording Vinyl's with Audacity**

a. **Vinyl record cleaning**

If you do a Google search of "How to clean vinyl records", you will get a good dozen hits on the subject. You will get everything from simple "soapy water" to the use of "wood glue" for deep cleaning of the vinyl grooves. I use the simple soapy water on a good clean damp cloth just to wash away any oily film. Use a small shammy towel/cloth to dry with, then finally using an anti-static brush to wipe any last minute dust or fibers that may be left behind. Do these processes to all your vinyl "before" you start the recording process and set them aside.

b. **Turntable connections**

Very simply, any turntable that will connect to a stereo system and has a USB connection will work. "Quality equals Price", anything from simple $99.00 units to hi-quality professional types that cost close to $3k are available. My ION (Turn Table) unit works just fine for me.

Take the USB connection and plug it into the USB port on the computer or laptop you are using for your recording. Plug in the power and you are connected.

There are some "Preferences" you need to make the first time hook-up, after that the setting will be saved and not change.

i. **Preferences**

Unless you are a professional recording artist and want to make a living doing recordings, there are only four (4) preferences that you need to set. They are "Devices, Recording, Libraries, and Directories". Leave the rest as default

1 Devices - Make sure that your "***Playback*** " is set to your computers speakers, and that "***Recording"*** is set for Microphone – USB Audio and "***Channels"*** is set to Stereo. (see insert below)
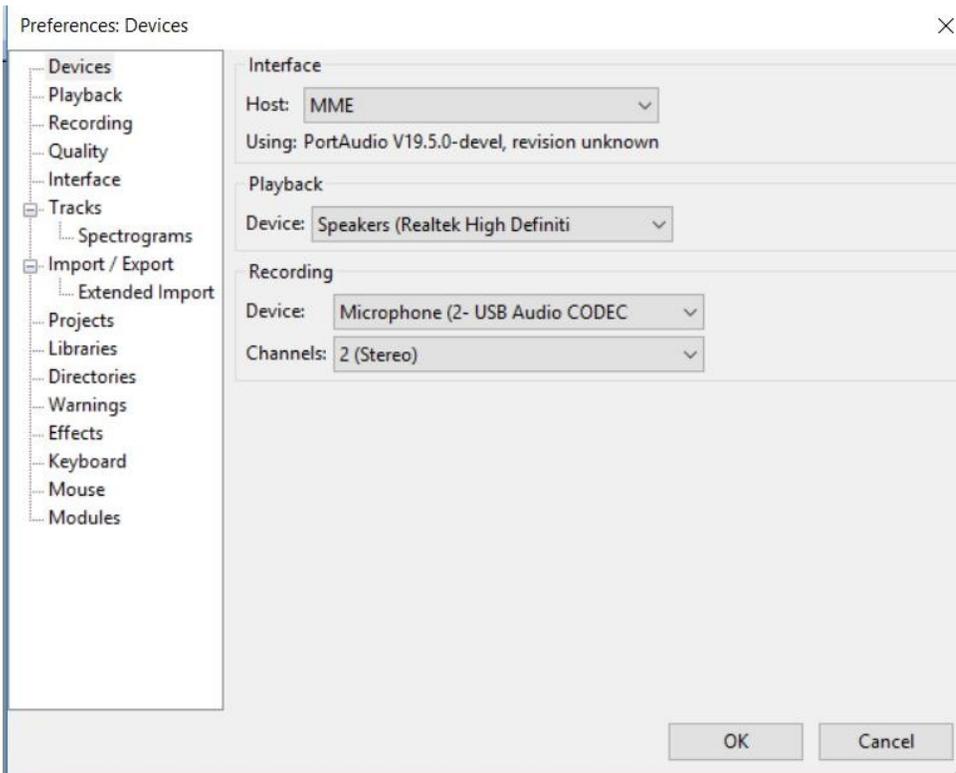
2 Recording – Make sure all the boxes are checked there. "Playthrough Overdub" is a default check, so keep it. Check "Software Playthrough", you want to monitor your recording. Sound activated recording – starts recording when record button is pressed. Naming newly recorded – Adds date, time, track and a name you give the file similar to the leader file to M4p's from iTunes. (See Below)
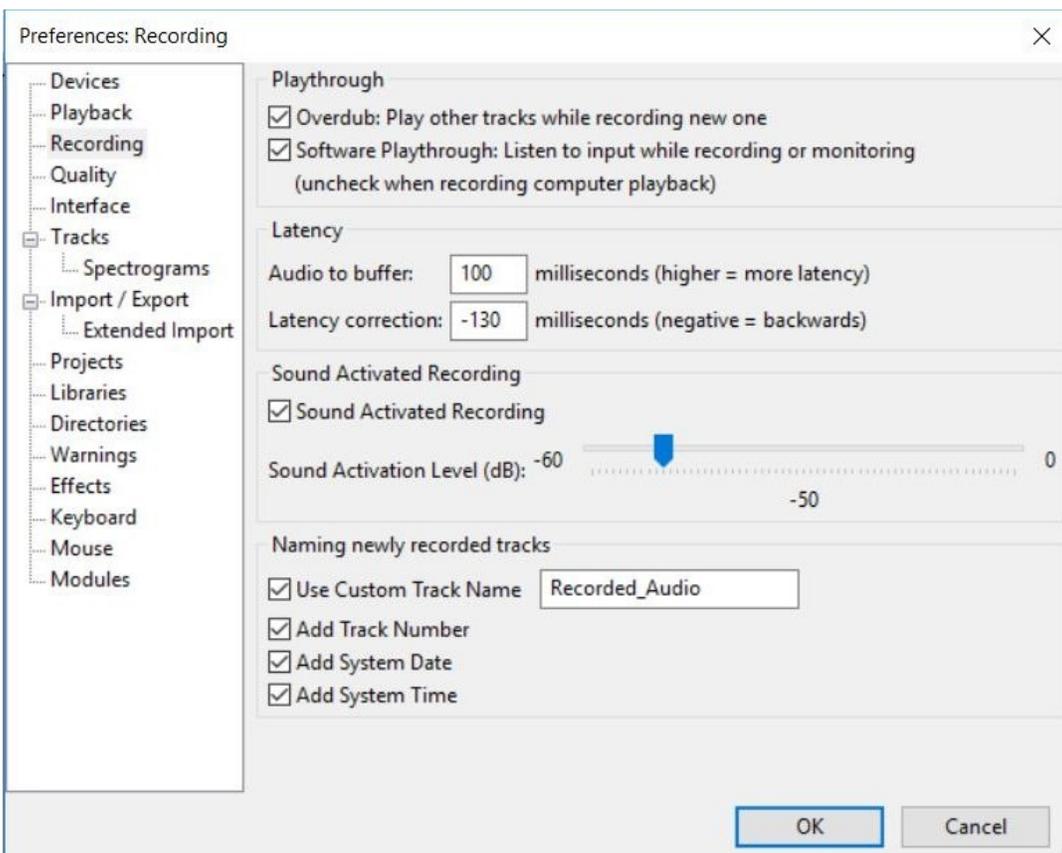
3 If you want to save your recorded music as an mp3 after all your work, you must have "LAME MP3" converter program installed on your computer. Use the "locate button" to start the process. Click the Browse button, then use the "where is" (kind of like Windows File Manager) to locate the Lame mp3 directory and select the "dll" files and click "OK". (See Below)
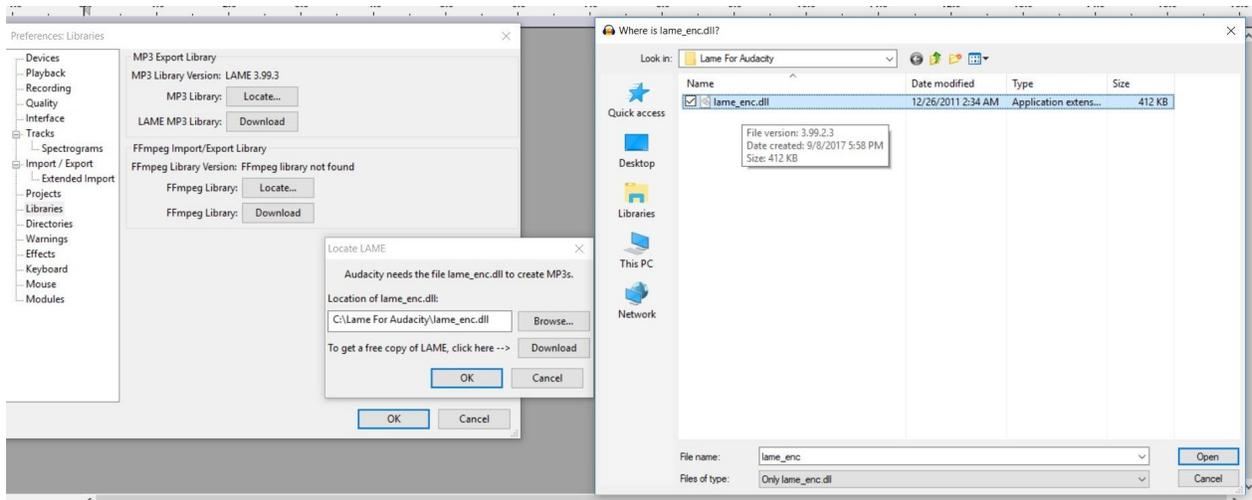
4 Directories – "Temporary files" directory should be set to the directory that you will save the final wave or Mp3 form after you are finished recording.
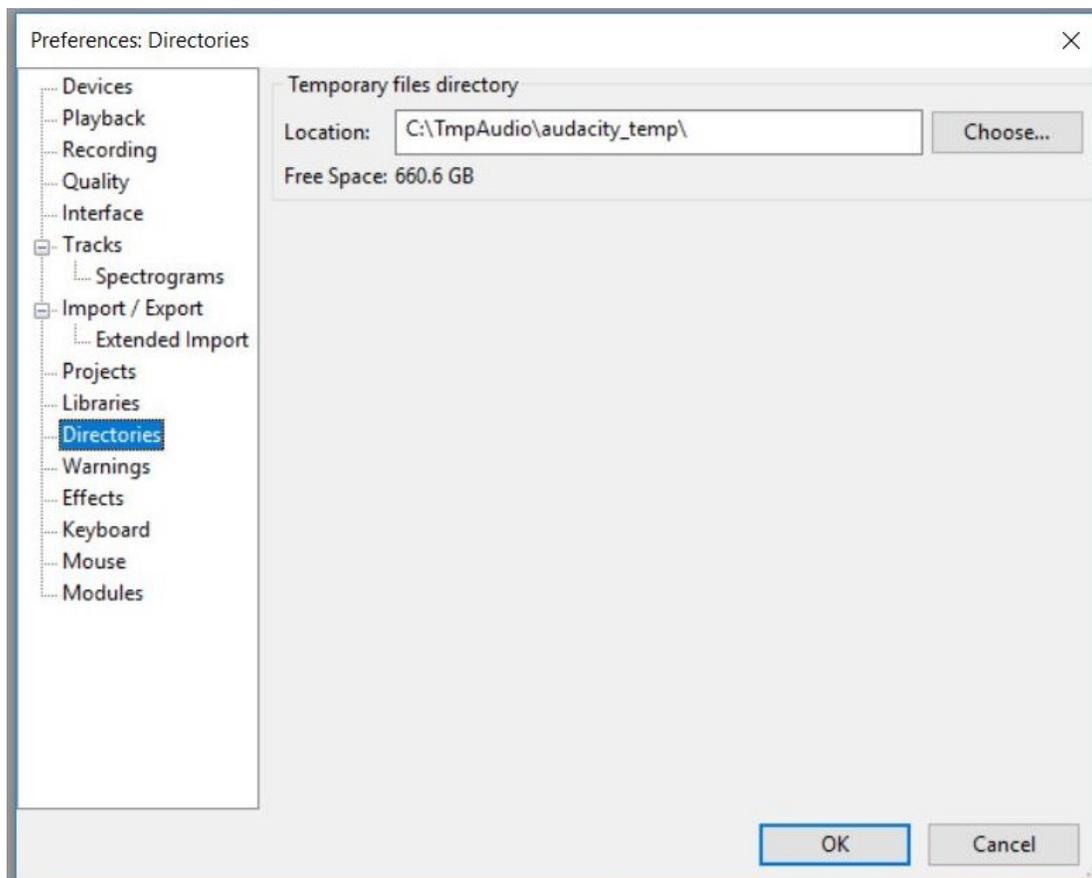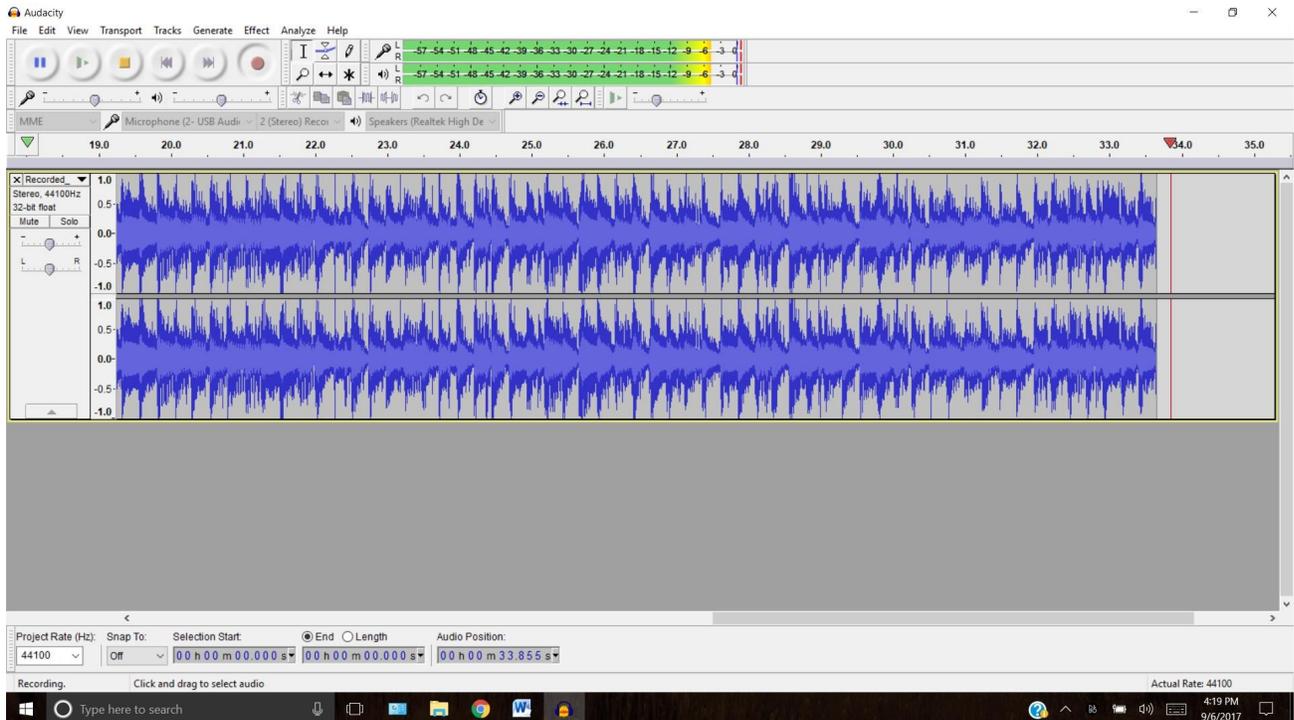
c. Recording

Do one final wipe of the vinyl to remove any dust that may have collected while you were setting up your equipment for recording.

Place your record on the turntable, make sure that "45rpm" is selected, place you needle/stylist on the record.

Audacity should already be open and on screen.

Place one hand on the play/pause button on the turntable and the "mouse pointer" over the "record button" on Audacity. Click both together and start your recording. (See Below)

After the record has played thru, stop both the recording and the turntable. Save the file using File, Export Audio. **NOTE:** You should save the recording as a WAV format. It holds more of the music encoded information than an MP3. You will want to clean this file up before saving the finished final product. Make a copy of the file and transfer it to a safe place. **This is your original!**

d. Basic File Cleaning

You may want to get rid of the "leader" and "trailer" like we did in the MP3 section above before saving, you can do that. If you heard any "popping", "clicking" and/or "scratching" from the recording process, you can now clean that off by first clicking **Edit** on the menu bar, scroll down to **Select**, Click **All**. Next click **Effect** on the menu bar, scroll down to "Click Removal". You will want to select "sensitivity" here so a few "tries" (previews) are required, then click **OK**. (See Top of next page)
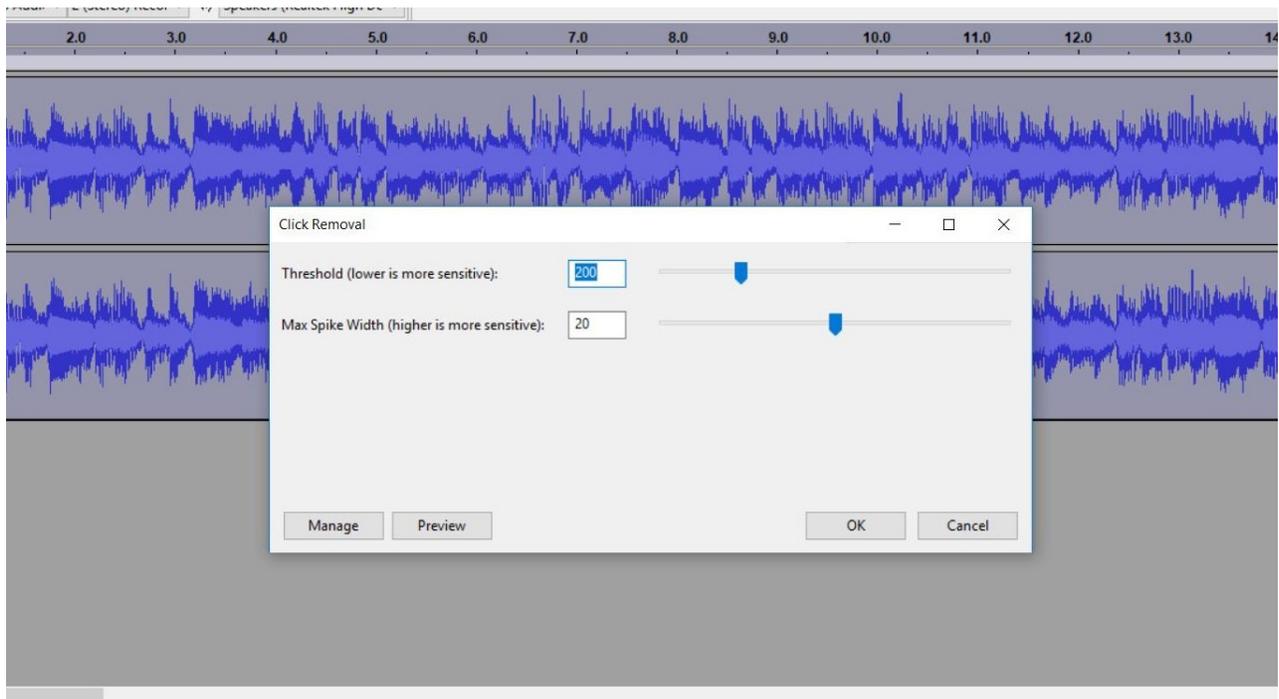
There are a few other items on the "Effects Menu" list that you may want to try; they are "Noise Reduction", "High Pass Filter", "Low Pass Filter", and "Vocal Removal". Perform these actions on each file until you become familiarized with what they do and how they act. Some of these option can be done in batch or "Chains" processing in Audacity.

e. **Saving and Converting**
Here is where you will choose "**File**", "**Export Audio**", change the "Save as type" to MP3. Give it the label and title of the record and click "**Save**". It will be saved in your working directory, ready for you to move to storage for use; follow the steps recommended in the above about placing them in your backup storage or into your patter or singing call music directories.
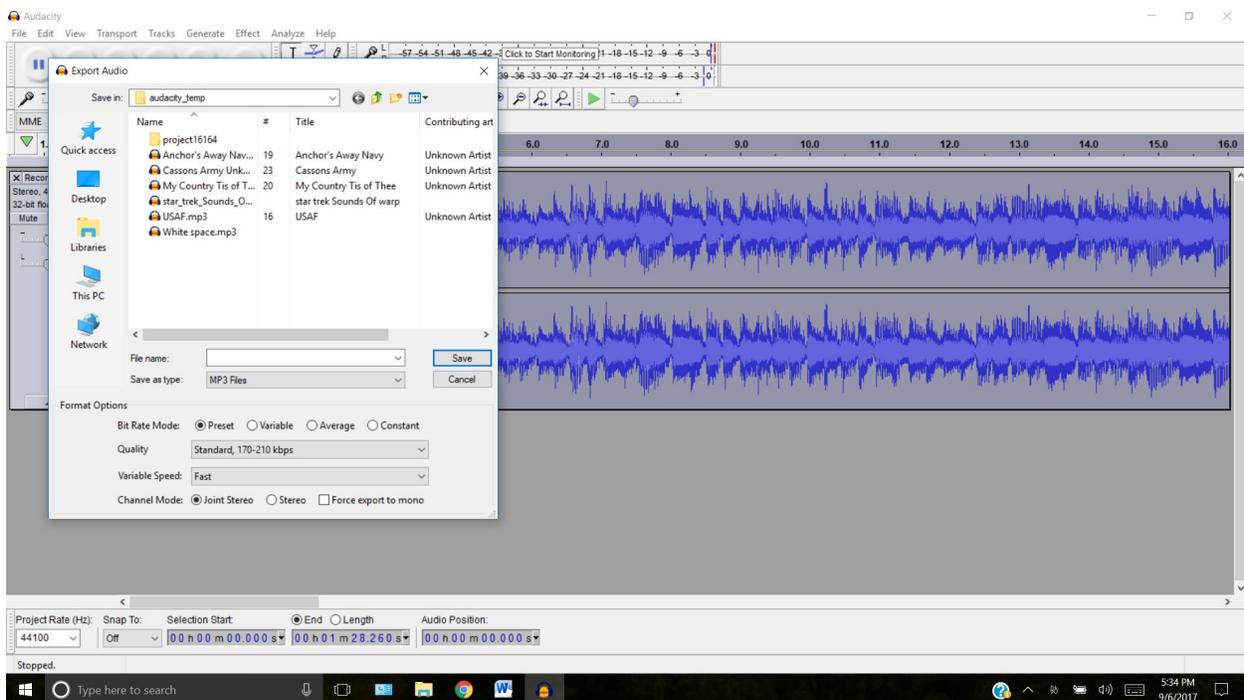
The only drawback to recording vinyl is you can only do one record to re-record at a time and it is a long drawn out process.

I. **Summary**

Well, that's it! Now, your music is ready to use. I hope that this Session has helped the novice as well as the more advanced computer user. We have demonstrated some of the applications that can make your life easier when working with your music files, and converting vinyl into MP3 using Audacity.

Best of luck to you in figuring this all out!