Recording a Podcast at Fox.Build

Introduction Welcome to the Fox.Build media center. This document is the second in a series that explains the process of making a podcast audio recording. This class configures the system in a simple-to-use way yet is able to create high-quality recordings. The first part of this series provides an overview of the what's and why's of podcasting look at these slides. This is a living document that will be updated as the class is perfected.

Hardware Setup

We use a Behringer Xenyx 1202 Mixer with USB. It is wired for two Microphones and a phone.

Configured for Optimal Recording Quality

How To Configure Mixer

It is to your benefit to make as clean of a recording as possible. Your goal is to eliminate ambient noise, hiss, pops, plosives, and other annoying sounds. Although much can be done to clean up the sound post-processing, it's hard, painful, and never as good as an original quality recording.

The above diagram contains the optimal settings for a podcast. All levels are in decibels (dB) unless mentioned otherwise.
● The microphones go into Mic 1 and 2
● The phone jack in Mic 4 (for interviews over the phone) There should be an XLR to 3.5mm jack
● Adjust the gain on each mic to keep out room noise away. Set to 0 dB
● Adjust the Mic EQ high level up a bit for a crisp sound. Set to +7 dB
● Adjust Mic level to +8 dB
● Main mix controls all levels at once. Set to -7 dB
● Phones/ Control Room volume controls the level you will hear in the headsets. Adjust to your comfort level.
● When recording press the "to Main Mix" button to "Up". Press "Down" for playback.

Leave all the other microphone levels to 0dB and unused channels Level turn all the way down to -∞

Recording With Audacity

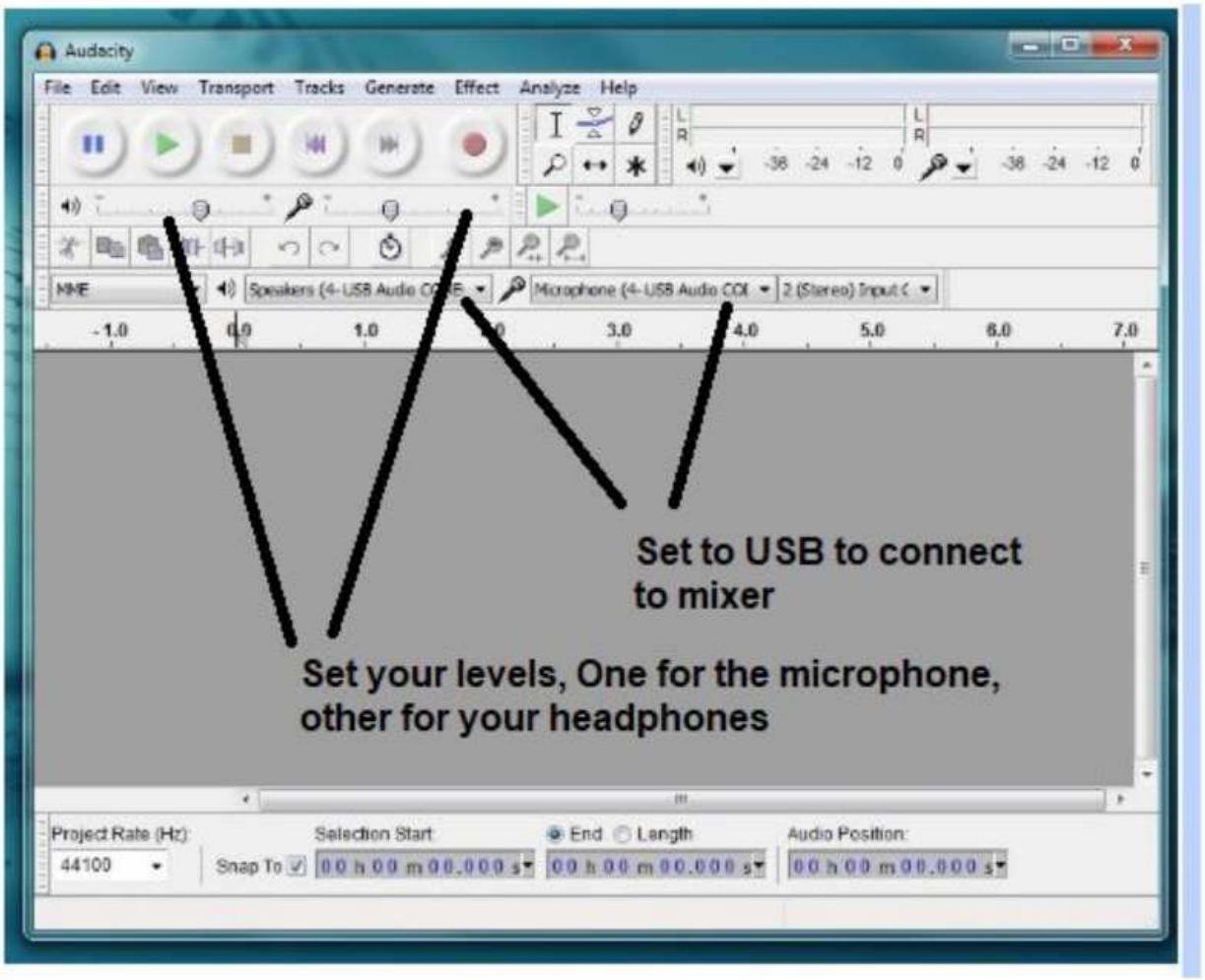
Audacity is my favorite audio editor and it's free. https://www.audacityteam.org/download/ Audacity provides a wealth of features, too many to cover in this guide. Look online and in YouTube for skills training e.g., https://www.youtube.com/watch?v=aCisC3sHneM

Here are a few features commonly used when podcasting: :
● Editing: clip, copy, and delete an audio track
● Split and join tracks
● Add and mix tracks
● Shift tracks
● Envelope tracks (great for mixing voice and music)
● Reduce noise, compress and amplify a track

These are just a few of the features. Others will be covered in a later guide. You don't have to use audacity. Other recording tools can be used, this is just the author's favorite.

How To Set Up Audacity

First, make sure you plug your PC into the mixer using the USB. Set the microphone and speakers to 3-USB Audio Codec This is the Behringer mixer driver. Hit the record button and make a recording. Look at the levels and adjust as recommended below. PRO TIP: Don't let the audio signal go into the red It saturates the the audio and distorts the sound. That's NOT a good thing!



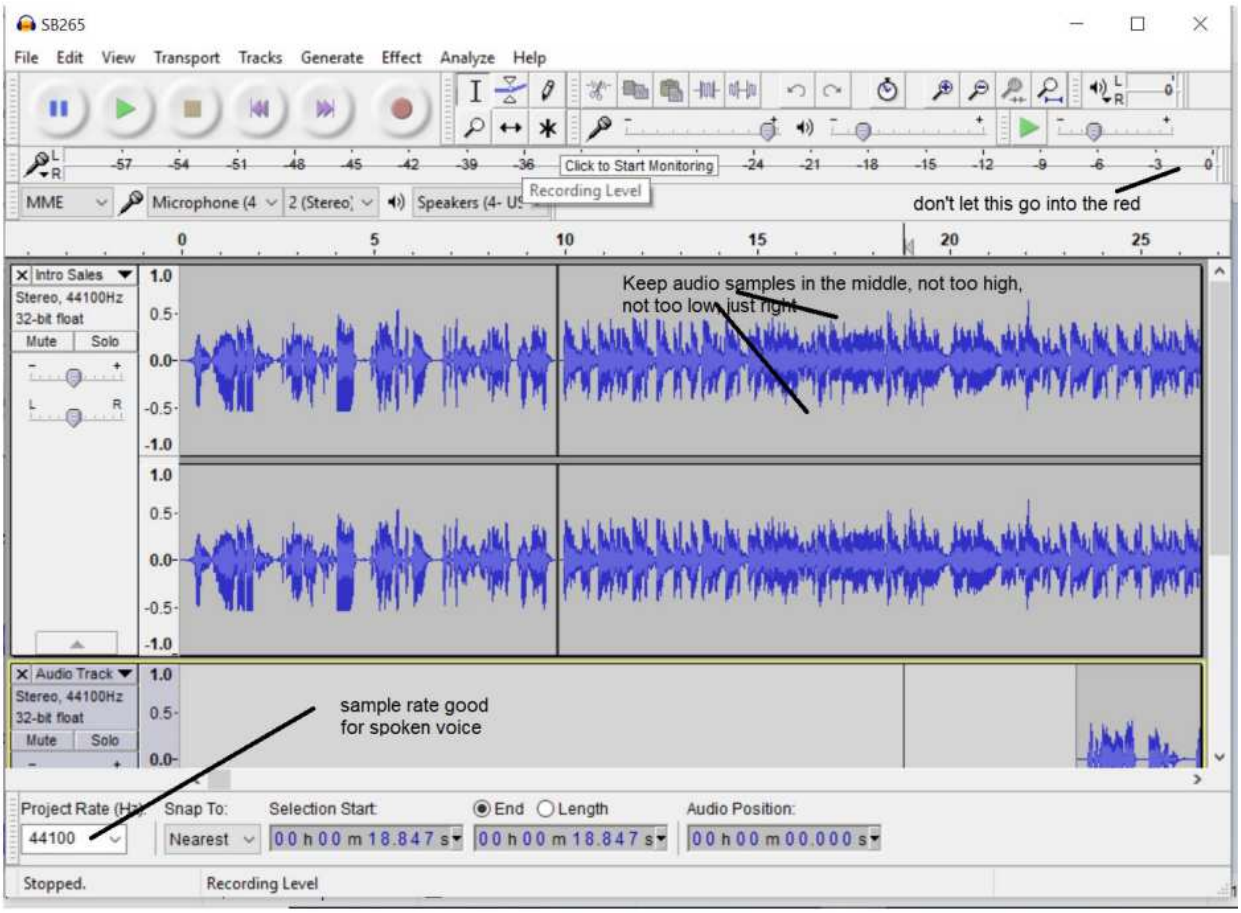
Levels:

- Set the Monitoring level of the microphone at 90%
- Set the Speaker lever to a comfortable listening level
- Set the Projected Rate at 44100 KHZ

Adjust Mixer

When recording a conversation, use the following process to tune the mixing.

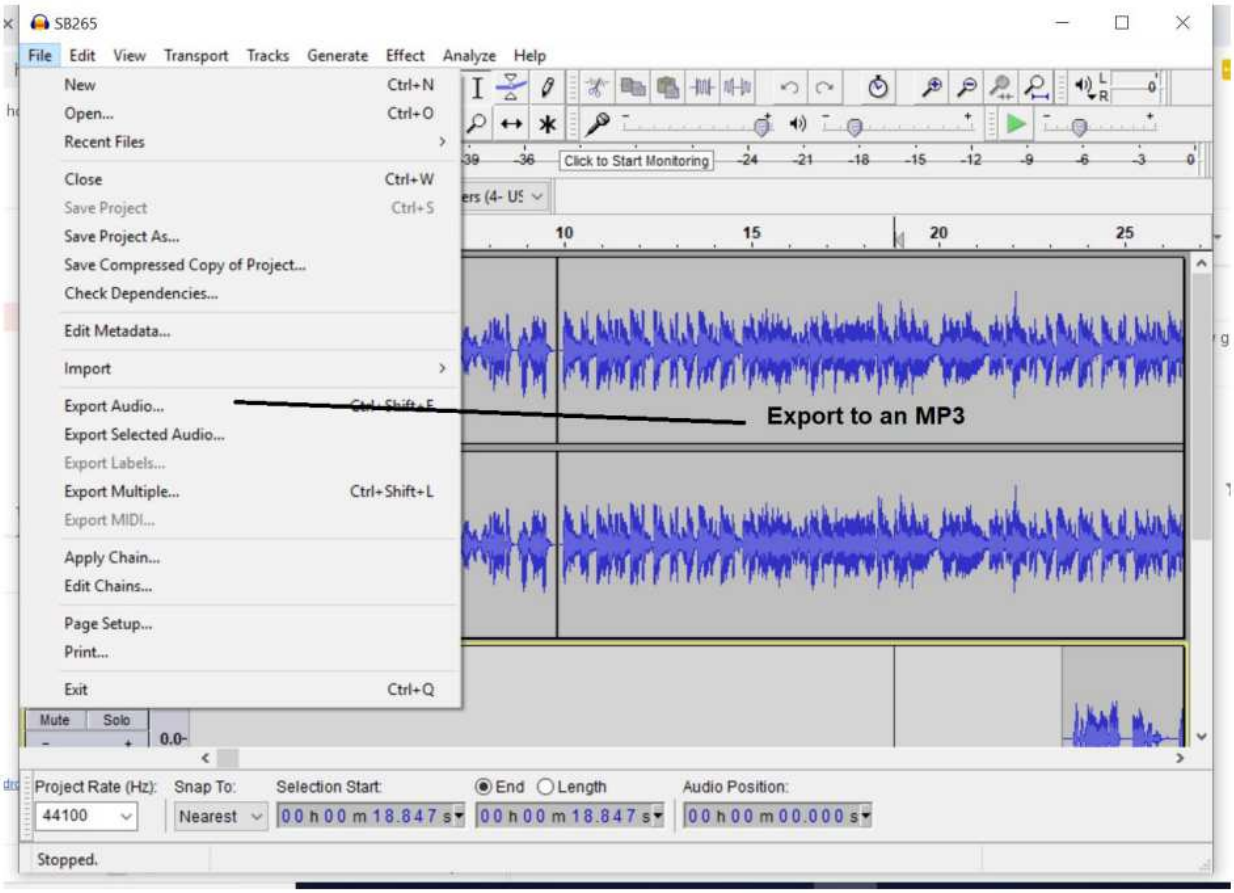
1. Start Audacity and press record
2. Start with you the interviewer,
    a. set the level of the Microphone
    b. set the distance of the Microphone
    c. adjust the main mix to -7 dB
3. Adjust the interviewee level so it equals your voice 5. Adjust the Main Mix making sure no one person peaks



PRO TIP: if you're not recording a phone conversation, music and sounds can be played from your phone during the recording. Mixing music can be done on a separate track.

Exporting Audio

When you save your project it will create a .aup file and a directory of little files. Collectively these files are your recording. The next task is to export the audio into a .mp3 file that can be listened to on most audio players.



Click File-> Export Audio

Set the Settings:
- I set the Bit Rate mode to Constant
- Quality to 128kbs (You can use 80 kbs for audio podcasts)
- I record in joint stereo but mono is OK for spoken interviews

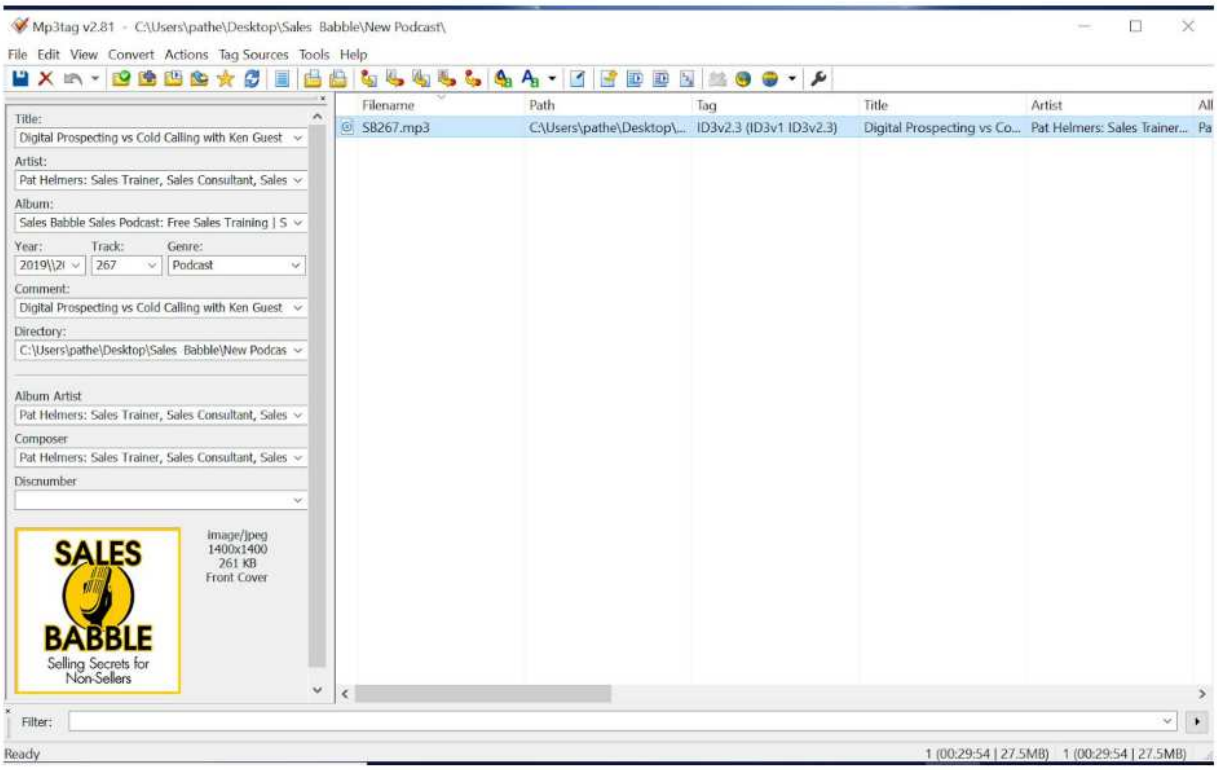
Fill out the tags with the title, album, artist, year, and episode. You will be asked where to save the file. I make copies of the file both on my local disk and as a backup. Errors happen, it's not an if, it's a when. Backup!

MP3 Tagging

Streaming services and podcast player apps require tagging to categorize and optimize the listening experience. Information collected includes:

- Title - episode title
- Album - podcast name
- Year
- Track
- Genre - podcast
- Album art - your artwork

One free tagging software is **mp3tag**. Install the software, right-click on your mp3 file and the dropdown list should recommend mp3tag. Click on it, click on the file name, and fill out the tags. Here's an example:



Pro Tip: Artwork must be in the JPEG or PNG file formats and in the RGB color space with a minimum size of 1400 x 1400 pixels and a maximum size of 3000 x 3000 pixels at 72 DPI.

Recording Checklist

It's easy to forget all of this when getting ready to record. Cockpit errors ruin a moment that can't be easily repeated. Walk through the following list prior to each interview.

1. Email interviewee "Interview Guide" (Pat's example here)
2. Shut the door and place the sign "On Air"
3. Turn off phones and noise makers
4. Notepad and pen ready for notes
5. Have Bio and questions readily accessible
6. Check the wiring:
    - ○ Headphones plugged in
    - ○ Microphones plugged in
    - ○ Turn up the Control Room Gain and speak into microphones
    - ○ Plug the mixer into the USB of the PC
7. Adjust Audacity (see above)
8. If calling a guest, plug in your phone using XLR to 3.5 mm
    - ○ TIP: if making a Skype call "Echo/ Sound Test Service"
9. Audacity - Edit>> Preferences
    - ○ Playback Speakers 4-USB
    - ○ Recording Microphone 4-USB 10. PC - Hardware and Sound >> Sounds >> Manage audio devices
    - ○ Playback Tab - Speakers Conexant SmartAudio HD
    - ○ Recording Tab - Microphone 4-USB
11. Check the microphone in the cage
12. Adjust the microphone position
13. Check levels for all parties - microphones and calls
14. You are ready to start a call:
    - ● Have Skype front screen
    - ● Call interviewee
    - ● Talk and adjust the headset volume on the mixer
    - ● Start Audacity
    - ● Check quality
    - ● Check interviewees if they have completed the todo list
    - ● Warn the interviewee you will soon start recording
    - ● Start interview