

## Seth Mulliken's helpful handout for the Sound Studios

You should bring headphones with you. They should have a 1/4" connector on the end of them (your walkman is an 1/8" connector. You need a bigger one. You can buy a connector at Radio Shack to turn a 1/8" to a 1/4" connector).

1. Go to DVEC (in the basement of Annenberg Hall), get the "Tupperware" container for one of the studios by handing them your ID. Make sure it has a key and 4 patch cables.
2. In the studio, pay attention to the power-up procedure on the wall: it should be the mixer first, then any "analog" gear (the CD, tape player, or VCR), the computer, and finally the monitor amp (the switch is either directly above or below the patch bay).
3. Start by playing whatever type of media you want to use (CD, tape, VHS tape, or the Mic). Look at the patch bay. It is your "Map" to the studio. Find the CD Left and CD Right on the top left side of the patch bay. Read right below it. It says "mix 1" and "mix 2." This means the CD is coming into the 1 and 2 slider/channels on the board. Push up these sliders to the "unity" position (3/4 of the way up). On each channel, the "L-R" button (at the bottom of each slider/channel) should be pressed down. This will move signal from the slider/channel to the main mix.
4. On the mixer, the "CTL Room Source" knob (located on the right side of the mixer) should be up. This is the volume for the room. The "Main Mix" button, below the knob, should be pressed down.
5. On the mixer, trim knobs (white knobs at the top of the channel) should be all the way to the left—Trim should be for using an audio cassette or the microphone. You may turn these up later.
6. Go to the "Main Mix" slider on the far right side of the mixer. This is your "Master Slider". Bring it up to "unity" (3/4 of the way up). You should be able to hear through the speakers now.

## **PRO TOOLS**

7. Open Pro Tools using the icon on the desktop of the computer.
8. Once Pro Tools is open, Go to the "File" menu, and choose "new session." This will open a new window. First, you record all your work on the "record disk." Choose it by using the pull-down menu in the upper right corner of the window.
9. In the center of the window, you can title your session. Name it something you can find later.
10. Now, set the session parameters. Use audio file type "AIFF", bit depth "16", sample rate "44.1", I/O settings "last used", check the box that says "Enforce MAC/PC compatibility", then hit the "save."
11. Protools will open. There are three main windows in Pro Tools. , the "edit" window is the white window.
12. The "transport" window is the control panel. It is gray and thin. If this is not open, then go to the "windows" menu at the top. Choose "show transport."
13. The "Mix" window is gray. You can move between the "Mix" and "edit" using the "window" menu.
14. Under the "file" menu chose "new track." A window will open, and you can create 1 mono audio track. You can create more than 1 track if you need to. Then, you need to "Record enable" the track—on edit window, near the track you have created, you will see four buttons, arranged in a square. Click the one that has "rec" on it, and it will turn white. You have now "record enabled" the track.
15. Now, you need to use some of the patch cables to patch from the mixer into Pro Tools. On the bottom row of the patch bay will see four pairs of left/right outs (this is found in the upper left side of the lower patch bay). You can choose any pair of these (they are all exactly the same signal) and use a cable between these and the "PT 1" and "PT 2" ins on bottom right-hand side.
16. In the "mix" window, look at your levels. YOU WANT TO HAVE A LOT OF GREEN AND A LITTLE YELLOW FOR GOOD LEVELS.
17. If you have low levels in Pro Tools, use the mixer trim knobs on those channels. If you are using an audio cassette, a home-burned CD, or the mic, you will need to use the trim knobs to get a good level. Remember, you are looking at the level in Pro Tools, not the levels on the mixer.
18. If the level peaks in Pro Tools, it shows up as a red light above the level indicator. If this happens, lower your levels and click the red light to turn it off.
19. To start recording (once you have set a level) go to the "transport" window (gray rectangle) and hit the circle button (rec). It will flash red. Then hit the "play" button, and you're recording. You will see the pink bar going across your track, and your waveform will appear.

20. Immediately de-“record enable” the track after recording.
21. To hear out of Pro Tools you will need to do one of two things: either de-patch your cables from the left/right out to PT 1 and PT, then re-patch from PT1 OUT and PT2 OUT to any two mix inputs on the mixer (along the top patch bay, the bottom row on the left side). OR, you can use headphones with a 1/4” plug. Plug them into the headphone input on the blue box.
22. If you are creating more than two tracks, you will need to check your inputs. Go to the “mix” window. You will see sliders for every track you have created. In the middle of the slider, you will see a button that reads “MIC/LINE 1” or “MIC/LINE 2.” If you have created three or more tracks, the input will read “Analog 3” (or 4, 5, 6...depending on how many you create). Change the input back to “MIC/LINE 1.”
23. Now, start to layer 3 or 4 tracks of audio. Use the mixers to balance your levels. You will also want to edit your audio, cutting and copying pieces until you have a whole work. These are your editing commands:
  - a. Shuffle-- snaps regions into at the end of other regions.
  - b. Slip--allows free and complete movement of regions.
  - c. Hand—selects and moves entire regions.
  - d. “Waveform” icon—This is your cursor. Use it to select, copy, and cut a portion of a region.
  - e. Magnifying glass—This is your zoom tool. Hold down “option” and click to zoom out.
  - f. Arrow icon—This is your trim tool.
  - g. Other helpful commands: “open apple+x”=cut, “open apple+v”=paste, “open apple+c”=copy
24. Make sure you save all of this regularly.
25. Once you have completed your project, then you need to make one self-contained file out of it. Pro Tools calls this “BOUNCING TO DISK.” Pro Tools will bounce whatever track are NOT muted. Therefore, if you have track you don’t want to bounce with your project, mute it. The button for muting is next to the “rec” button on the track.

Go to the “File” menu and choose “bounce to disk.” A window will open and there will be five options for you to change. Four of them should be set from the window at the very beginning of your session. The first is “Bounce source” this should read “anlg 12s/pdiflr(st)”, The next is “File type” is should be “AIFF.” The next option is the ONE YOU NEED TO CHANGE. It is “Format.” When you look at it, it reads “multiple mono.” Click on it to change it to “mono (summed).” The next option is “Resolution,” it should read “16” The next is “Sample rate” it should be “44100 (44.1).” At the bottom of this window, there are two options: “Convert after bounce” and “convert during bounce.” It doesn’t matter what you put. Don’t check import after bounce. This brings the file back into Pro Tools. Then, click “bounce.”

Another window will open. This is asking to name you file, and where to put it. DON’T put it on your ZIP. You must bounce to the folder with your Pro Tools session. When the window opens, it is in your audio files folder in your folder, on the record disk. You will need to find this file in a moment, so name it something you can find easily in the audio files folder. Then click “save.” You will bounce in real time (i.e. if your project is one minute, it will take one minute to bounce.) If you are patched or wearing headphones, you will hear your project.

Then, close out of Pro Tools. Find the file you just bounced in your folder, and drag it to your ZIP.

If you aren’t done mixing, and you want to come back and keep working, then you don’t need to bounce. You DO need to copy your whole folder to your ZIP, then drag it back to the record disk when you return.

Congratulations! You have created a multi-layered audio file. Remember to use your Pro Tools powers for good and not evil.