Assignment 02 - Advanced Edit & Mix

Due Mar. 2nd at the beginning of class.

---

1. Session Prep

Rename session folder and save as (/ 1)
- Double click on the .zip file to expand the archive
- Rename the folder that appears to reflect your information
  - Don't forget to change your class section from "SectionLetter" to either "A" or "B"
- Navigate inside the folder and open the .ptx file
- Immediately choose *File > Save As…* in Pro Tools
- In the Save dialogue that appears, rename the session to reflect your information
  - Don't forget to change your class section from "SectionLetter" to either "A" or "B"
- Save the .ptx file inside the main session folder. Note that Pro Tools will default to this location automatically, so you don't need to navigate to the folder manually. Just rename the file and hit save.
- We have now created a new version of the session file for you to work from, while preserving the original. This saving of versions is good practice when doing revisions to your work, as it creates checkpoints in the production process that you can always return to if need be.

---

2. Session Organization

You'll notice that the audio clips for each take are named TK01, TK02, etc. To make it easier to jump quickly between takes, place a memory location at the start of each clip, named the same as its corresponding clip (i.e. TK01, TK02, etc.) **(/.5)**

*****Note that TK03, TK06, and TK09 have been intentionally omitted, as they are not part of the edit**

Place one more marker, after the audio clips, entitled "**///// FINAL EDIT**". This is where you will assemble your composite of takes, according to the marked score. **(/.5)**

You'll notice the audio clips have been coloured already, but the tracks themselves are not. Colour the tracks as per the following convention: **(/.5)**

MainL, MainR = Bright Red
Flute, Clarinet, Bassoon, Horn and Oboe = Light Blue

Create the following groups: **(/.5)**

'Mains' - including MainL and MainR
'Spots' - including Flute, Clarinet, Bassoon, Horn and Oboe

3. Balance and Pan

Create a musical blend of the tracks by choosing an appropriate volume and stereo location for each of them in the mix.

To start, pan the main mics as follows: **(/.5)**

MainL = 100% left
MainR = 100% right

Set the volume of MainL and MainR to 0dB. **(/.5)**

Now that we have a good overall picture of the ensemble we can use the spots to fill in where needed.

Panning the Spots

When you are listening to just the main system, you should be able to identify from left to right where individual instruments sound like they are coming from. This should reflect pretty accurately how the ensemble was setup for the session. We want to pan each instrument's spot mic so that it matches the stereo image of the main system.

- Listening to only the main system, choose an instrument from the ensemble and focus on just that instrument's sound
- When you have determined its stereo location, pan its corresponding spot mic to match this location
  - To check your imaging, turn up your spot mic track (you might have to turn off its group to move it independently), solo it and listen. Where does it sound like it is coming from?
  - Now, mute this track and listen to just the mains again
  - Does the instrument appear to be coming from the same place in both cases?
    - If not, adjust the panning of the spot mic and check again until it does
- Repeat this process for each spot mic in the session. If you find it difficult to identify a point source for an instrument in the main system, make your best estimate of where it would be located based on the ensemble's setup (setup photo included with assignment files) **(/1)**

Static Balance

Once you have panned all of the spot mics to match the stereo imaging of the main system, we can balance their relative volumes in the mix.

- Start with all of the spot mic's faders all of the way down, and listen to just the main system.
  - You can use the "Spots" group to turn them all down at once
  - Slowly add spot mics to the mix to create a realistic, musical balance where all instruments are well-represented
  - Note that the main system should be responsible for most of the sound, and the spot mics will typically be considerably (10-20dB) lower in volume. That being said, trust your ears!

4. EQ

Let's clean up the spots by adding EQ.

Insert an EQ3-7 Band plugin on each spot track. At the very least, add a HPF to clean up the low end at a frequency which doesn't interfere with the instrument's range. **(/ 2)**

Optionally, make use of some of the other bands to shape the sound. If you think an instrument sounds spectrally deficient in the mains, you can augment its timbre by EQ'ing it's spot mic.

5. Edits

Using the marked score that you were provided, create your Final Edit using a composite of TK01-10. The score will tell you exactly where to switch between material, and which takes to use.

Note: For this assignment, it is important that you edit exactly where the score tells you (not a note or two before/after). These decisions were made thoughtfully and as the editor (not the producer) you must try to follow your instructions as closely as possible. In a professional situation, sometimes an editor may need to 'tweak' an edit point slightly to make it work (a revision which would have to be cleared with the producer), but in this case you should have no issues editing as per the score.

This style of editing is often referred to as 'Source-Destination'. We are compiling the best parts of the session from multiple sources (the takes) into a single destination (the final edit). There are a number of workflows you could use to compile your edit. Here is the one I suggest:

- Start off by copying TK02, and pasting it at your Final Edit marker. Our edit starts with this take, and since it is complete we can use it as our 'base take', replacing sections where needed with 'insert edits' using shuffle mode.
- Listen to the copy of TK02 (the final edit), and drop a marker when the edit point happens in the score (for the first edit, this would be on the first beat of bar 7. Call this marker 'IN'.
- Continue playing from this marker until where the next edit happens. Drop a marker at the edit point. Call this marker 'OUT'.
- Fine tune both of these markers so that they are just before the transient of the next note.
- Now, locate the source audio for this edit. In this case, it will be TK04.
- Listen to TK04, and follow the same procedure of dropping markers for IN and OUT. Refine these markers as before, so that they are just before their relative transients.
- Using the Memory Locations window, select the IN marker in the Source (in this case, TK04), hold shift, and click on the OUT marker which follows it.
- Copy the selection (*command + C*)
- Now, using the using the Memory Locations window, select the IN marker in the Destination (your final edit), hold shift, and click on the OUT marker which follows it.
- Switch to **SHUFFLE** mode
- Paste your selection (*command + V*)
- Switch back to **SLIP** mode
- Refine the first edit if need be (the IN edit), and add a cross-fade
- Move to the next edit (the OUT edit). Refine if need be and add a cross-fade.

- Delete your markers by option-clicking on them OR by dragging them above or below the markers ruler

Repeat this procedure for all of the edits: Listen to the Destination for the edit point, mark it. Listen to the Source, mark it. Select the source. Copy. Select the Destination. Shuffle. Paste. Slip. Refine. Delete markers. Repeat. **(/ 10) *1 mark per edit***

Don't forget - If you need to adjust the volume of two clips relative to each other to make an edit sound more believable, try using clip gain. Sometimes +/- 1dB makes a world of difference.

****See the document entitled 'Pro Tools: Automation and Additional Features' for further details on using clip gain.*

Important: For this workflow to be effective it is very important that you finalize each edit as you go. When refining the edits, do not drag the **outgoing** audio forward or backward in the timeline or it will alter the edits you have already done. You can *trim* the outgoing audio, just don't shift it in time. On the other hand, you can *drag* OR *trim* the **incoming** audio because you are going to refine what comes later anyways. As always, the more accurately you place your markers before copying/pasting, the less refining you will need to do afterwards.

---

6. Top & Tail

Now that the editing is over with, let's clean up the beginning and end of the recording.

Fade In (/2)
- Create a 250ms fade in that ends just before the start of music.
  - Switch to the Edit window
  - Trim the start of audio to 250ms before music starts
  - Create a 250ms fade in using the Smart tool
  - Make the shape of the fade 'Standard' / 'Equal Power'

Fade Out (/2)
- Create a longer (~4s) fade out at the end of the piece, starting just after music ends
  - Trim the end of audio to 5s after the end of the last note (turn up your headphones so you can really hear it)
  - Using the Smart tool, create a fade out that starts 1s after music ends and is approximately 4s long
  - Double click the fade with the grabber tool to open the fade editor
  - Choose 'Equal Power' for the Slope and 'S-Curve' for the Out Shape

---

7. Sends & Reverb

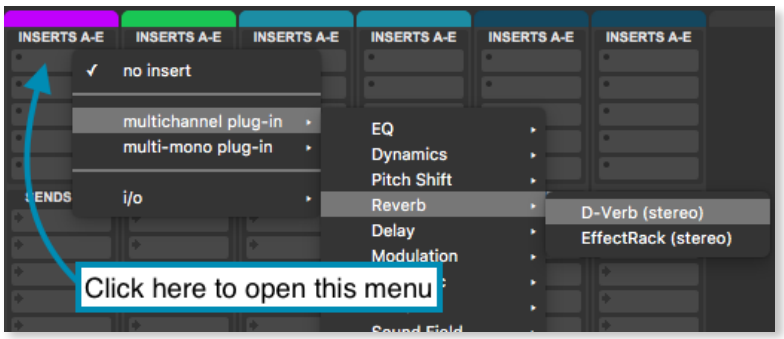
Now that you have a great sounding edit, let's add some reverb. You are all well versed in reverb now, so we will dig a little deeper than last time.

Create 2 Reverb Tracks

Create 2 Stereo Aux Inputs *(shift + command + N)* **(/ 1)**. Name one “Room” and one “Hall” **(/ 1)**, colour them both bright pink **(/ .5)**, and solo-safe them both (by *command* clicking on their solo buttons). **(/ .5)**

Insert a D-Verb plugin on each of these tracks. **(/ 1)**

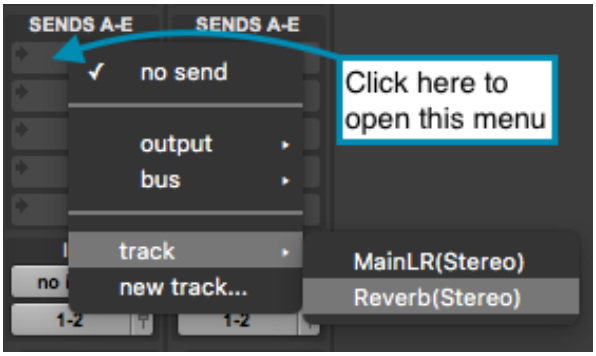
- On each Reverb track, click on any of the Insert slots (the horizontal bars underneath the INSERT A-E heading of the channel strip)
- From the dropdown menu, choose m*ultichannel plug-in > Reverb > D-Verb (stereo)*
- The D-Verb plugin window will open providing you with many options for manipulating the reverb settings.
  - Stick to the ‘room’ algorithms for both reverbs and tweak the parameters so that the ‘Room’ reverb track sounds like a small space and the ‘Hall’ reverb track sounds like a more traditional hall, with a pronounced reverb tail. Tweak the other settings of each reverb to suit your needs. **(/ 1)**



Create Reverb Sends for each Reverb Track (/ 1)

Remember that sends allow us to send a copy of the signal from a given channel to another location in the Pro Tools mixer. This send is in parallel to the main output path.

- In the mix window, select the MainL and MainR tracks
- Holding s*hift +* option, click on the slot for Send A on one of those channels.
- From the dropdown menu, choose *Track > Hall (Stereo)*
  - You should now have created a send path called ‘Hall’ on your MainLR track
  - As with previous assignments, this path or ‘Bus’ carries a copy of the signal from the send to the Reverb channel’s input
  - You control the amount of signal being sent with the send’s fader
- Repeat this procedure, creating a send assignment to the ‘Room’ Reverb on the Flute, Clarinet, Bassoon, Horn and Oboe tracks. You can use Send A again for this purpose since we didn’t use Send A for the spot mics yet.



Expand your Sends (/1)

By default, Pro Tools displays sends in "**Assignment View**" showing just the name of the bus that each send is feeding. Let's change this to "**Expanded View**" to make things more convenient.

- In the top Pro Tools menu, click *View > Expanded Sends > Send A* (assuming you used the first Send slot when creating your sends)
- This should expand the send and show you a little fader that you can use to control how much of that track's signal is sent to Reverb.
- If you chose to use more than one send (i.e. Send A for Hall and Send B for Room, then expand them both)

Enable 'Follow Main Pan' on all sends (/1)

Click on one of your send assignments to open its full-size fader. Click on the button labelled FMP. Now your reverb send for that track will pan to the reverb bus according to the position of the main pan pot. Make sure this is enabled for each individual send. When FMP is on, the pan pots on the sends become greyed out.

Add Some Reverb (/1)

Now that we have set up the routing for our Reverb sends, add some reverb to the Mains and spots to add some depth and dimension to the recording.

- To add reverb, turn up the send faders
  - Try adding too much, too little and then find a happy medium
  - Try to use the 'Room' reverb to add support and body to the spots
  - Try to use the 'Hall' reverb to add some space and depth to the mix

---

8. Mix Bus

We are going to create one more bus, which everything in our session will pass through. This bus will function just like it would on an analog mixer, allowing us to process everything at once and control the volume of our overall mix with one fader.

Create a Mix Bus:

Create a Stereo Aux Input *(shift + command + N)* **(/ .5)**. Name it "MixBus" **(/ .5)**, colour it bright green **(/ .5)**, and solo-safe it (by *command* clicking on its solo button). **(/ .5)** This track should be placed at the far right of the mixer. **(/ .5)**
Route the main outputs of your Mains, spots and your reverb tracks to the MixBus track **(/ .5)**

- Select all tracks except the MixBus by clicking/shift-clicking on their names
- Hold *shift + option* and click on one of the Output slots on any of the tracks you have selected
  - Remember: by holding *shift + option* we tell Pro Tools to perform the following operation on **all selected tracks** - a big time saver!
- From the dropdown menu, choose *Track > MixBus(Stereo)*

- Now all audio in your session should eventually funnel through the mix bus! To confirm this, play back the session and mute the MixBus track. You should hear silence. If not, check your routing!

---

9. Volume Automation

For all of the previous assignments, we have created a 'static mix' where I asked you to pick the best *average* volume for the spots. This time I want you to automate the volume for the 5 spot mic tracks across the piece to achieve a good balance throughout. **(/5)**

To automate a track's volume, set its automation mode to 'write', 'touch' or 'latch' and adjust its fader position in time while playing back the track. You can update this automation data by switching to 'touch' mode and making changes in real time as needed. When you are finished writing automation, set the automation mode to 'read'. Repeat for each spot mic track.

You can also adjust volume automation with the mouse by switching the track view selector to 'volume' (instead of 'waveform') and adjusting the automation line using the smart tool.

****See the document entitled 'Pro Tools: Automation and Additional Features' for further details on using automation.*

---

10. Print and Export your mix

Now it's time to commit your brilliant work to a stereo mix, and export it so that we can use it somewhere outside of Pro Tools.

Create a Mix Audio track

- Create 'one' new 'Stereo', 'Audio Track' in 'samples'. **(/.5)**
- Name this track "MixAudio" **(/.5)** and colour it bright red. **(/.5)** Move it to the far right of your mixer **(/.5)**
- Set this track's input to 'no input'
- On your 'MixBus' track, create a send that routes a parallel copy of the audio to this new 'MixAudio' track **(/1)**
- Set this send to be 'Pre-Fader' by clicking the button marked 'PRE' **(/.5)**
- Set this send to unity gain (0dB) **(/.5)**

By routing our MixBus to our MixAudio track in this way, we allow ourselves some flexibility in monitoring. When your working on your mix, you can mute the MixAudio track and monitor through the MixBus. When it's time to print your mix, you can mute the MixBus track (audio will still pass through the send since it is set to Pre-Fader) and listen through the MixAudio track to confirm that your mix sounds the way you want it to. Make sure to pick one or the other though, and mute the one you are not listening to currently.

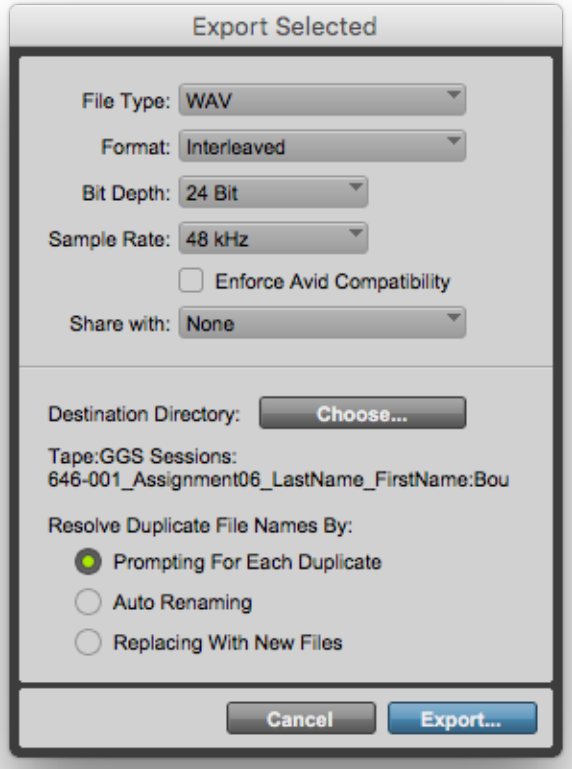
Record Your Mix (/1)

- Select your final edit in the timeline (make sure to select exactly from the beginning to the end).
- Record enable your MixAudio track.
- Press record! (3 on the number pad)
  - When your mix is printed, Pro Tools will stop recording because you have reached the end of your selection
- Rename your printed mix by double clicking on the audio file in the edit window.
- Name the file according to the following convention: **(/1)**
  - 646-007_SectionLetter_Assignment02_LastName_FirstName_FinalMix

Export Your Mix (/1)

Almost done! It's helpful to print your mix in place in this way so that a copy of it stays in the session alongside the edit. However, we should also export a copy in case we want to listen to it outside of Pro Tools.

- Highlight your mix audio file in the edit window by clicking on it once with the grabber tool, or by double clicking with the selector tool.
- Press *shift + command + K* to 'export clips as files…'
  - Make sure *only* your mix is selected!
- The following dialogue will appear >>>>>>>>>>>>



- Match the settings shown for File Type, Format, Bit Depth and Sample Rate
- Click 'Choose…' to select a destination directory (the place where we will export this files to)
- Navigate to the 'Bounced Files' folder within your Assignment 02 session folder
- Click Export!

Review & Submit

That's it! Triple check your work and review the Assignment 06 Checklist PDF to ensure that you have covered all of the mark-worthy details.

Bring your completed Assignment to class on Mar. 2nd. You will submit the entire Pro Tools session folder, containing all relevant files.

(/45)