

MUSTC 122 / Hands-on Assignment #1: Signal Flow

Objective: The goal of this assignment is to better acquaint you with signal flow in the recording console. The assignment will be performed on the Mackie 32-8 recording console; however, the techniques you exercise will translate to almost any console.

Overview: Using the cart in room 806, you will route a microphone to track 1 of the Alesis HD24 hard disk recorder. First, you will set up the console in split configuration, and then, you will accomplish the same goal with an in-line configuration.

Due date: MW Sections – February 22nd / TTh Section – February 18th

What you will hand in: A 1-2 page summary of what you accomplished and **what you learned**. Also, if you have extra time tell me what you discovered about the console beyond what I required. The summary must be submitted online via Ohsi.

Step 1: This exercise will be performed in **groups of four**. The first thing you need to do is form a team to work with.

Step 2: Book an available 2 hours in room 806 with the **Studio E** cart. Booking is done on the SCC Studios website: <http://success.shoreline.edu/scstudio>. Choose one person from your team to fill out the form with their account, and have them put the remaining three names in the 'comments' field.

Step 3: Show up for your session. Missing a session is a big deal, and will result in a drop in your grade for the assignment. You must check in with the studio supervisor on duty before beginning your session. They will take your student ID as collateral. You will also need to check out a SM58 microphone and a mic cable.

Step 4: Roll the cart to a good spot and plug in the long extension cord. First, turn on the power strip, if it is not on already. Second, turn on the speakers. The speakers must be turned on last.

Step 5: Make sure the console is zeroed (all buttons in the up position, all the faders down, all knobs in default position).

Step 6: With this step, the SPLIT portion of the exercise begins.

1. Plug a microphone into the microphone input of channel 17.
2. Make sure the channel 17 mic/line switch is in the mic position. This switch is hidden by cables.
3. Make sure the channel 17 Flip switch is in the mic/line position.
4. Set the channel 17 fader to unity.
5. Press the channel 17 bus 1-2 assign switch next to the fader. Bus 1 is normalled to track 1 on the tape machine, which is where we want to go.
6. Set the channel 17 pan to hard left, as to only send to bus 1 and not 2.
7. In the master section, set the bus 1 fader to unity.
8. Press "All Input" on the Alesis HD24 recorder. This puts all the tracks in input mode.

9. While talking into the microphone, raise the trim level on channel 17 until the meter on track 1 of the tape machine is showing a good level (about 3/4 of the way up). You have now completed the channel path, now for the monitor path...
10. The output of Track 1 is normalled to channel 1 on the console, so that is where we'll set up our monitor path. On channel 1 set the Flip switch to tape. This makes the tape return for channel 1 the source of channel 1.
11. Raise the channel 1 fader and assign the output of the channel to L/R Mix.
12. In the master section, set the master L/R Mix fader to unity. Also, confirm that the control room level in the master section is up about a third of the way. The control room level is the level of the speakers. Also, make sure the L/R Mix button is selected in the monitor section, next to the control room level knob.
13. Talk into the mic again. Are you hearing yourself over the speakers? If so, you did it, you've completed the monitor path! If not, retrace your steps, follow the signal flow through each gain stage and review the block diagram. Also, looking at the manual won't hurt. It is in the studio office.

Step 7: And now, you'll accomplish the same thing, but with an in-line configuration.

1. Plug a microphone into the microphone input of channel 1.
2. Make sure the channel 1 mic/line switch is in the mic position.
3. Make sure the channel 1 Flip switch is in the mic/line position.
4. Set the channel 1 fader to unity.
5. Press the channel 1 bus 1-2 assign switch next to the fader. Bus 1 is normalled to track 1 on the tape machine, which is where we want to go.
6. Set the channel 1 pan to hard left, as to only send to bus 1 and not 2.
7. In the master section, set the bus 1 fader to unity.
8. Press "All Input" on the Alesis HD24 recorder.
9. While talking into the microphone, raise the trim level on channel 1 until the meter on track 1 of the tape machine is showing a good level (about 3/4 of the way up). You have now completed the channel path, now for the monitor path...
10. The output of Track 1 is normalled to channel 1 on the console, so that is where we'll set up our monitor path. We are already using the big fader on channel 1 for our channel path, so we must use Mix B on channel 1 for the monitor path. In the Mix B section on channel 1 make sure the Source switch is in the up position, which is labeled Flip Switch. This makes the source of Mix B whatever is NOT selected by the Flip switch. In this case, mic/line is selected at the Flip switch, so tape return 1 will go to Mix B.
11. Turn up the Mix B level on channel 1 about half way.
12. In the Mix B section of the master section set the Mix B master level to unity. Also, press the 'assign to L/R Mix' button in the Mix B section. This sends whatever is on Mix B to the L/R Mix.
13. Make sure the master fader is set to unity and the control room level is up. Also, make sure the L/R Mix button is selected in the monitor section, next to the control room level knob.
14. Talk into the mic, you should be hearing yourself. Congrats! Again, if you have trouble try to narrow down where the problem is.

Step 8: If you have extra time, experiment with the other busses, using more than one bus at a time and more than one mic at a time. Explore the console, and let me know what you figure out.

Step 9: Turn off the speakers first! Then turn off the power strip, zero the console, and return the cart to the corner and place the sheet over it. You're done with you session. Go home and write the paper.