**EAMT 205/3 tutorials - /s/ editing exercise**

**Microphone recording and patching in Studio RF-301**

Begin by turning on the power switch underneath the mixer table. All the devices in the studio should now have power.

The studio 1 microphone should be plugged into Channel 1 of the mixer. If it isn't, connect the XLR cable from the microphone to the Channel 1 XLR input.

You must now assign Channel 1 to an output bus. With the Channel 1 fader still down (along with all the other faders), press down the '1-2' button immediately next to the Channel 1 fader (all the other buttons should be up). This assigns the channel (and hence the microphone input) to output bus 1-2. Also insure that Channel 1's mic-line switch is set to mic.

With the Channel 1 fader still down, raise output bus faders 1 & 2 (in the lower right section of the mixer, before the Left/Right Mix fader) to Unity gain ('U' in the middle of the gray area). Make sure the buttons above the output bus faders (Solo, Mono L-R, L—Mix—R) are all in the up position.

Also ensure that the Studio and Control Room knobs above the level meters are at ∞ (off, or completely left). This is to prevent the sound of the microphone from being heard in the speakers while you are recording. Move the knobs back up when you want to listen to the recording afterwards.

Now slowly bring the Channel 1 fader up as one of your team speaks into the microphone. You should see the level meters for output bus 1 and/or 2 begin to climb. You have a number of options for obtaining a good input level from the microphone. Aim for an average of 0 dB, with occasional peaks in the +4 to +7 dB range. NEVER cause the red OL (overload) next to the pan pot on the channel 1 strip to come on, as this indicates distortion. If your level is too low (or too hot), adjust the trim pot at the very top of the channel 1 strip, in conjunction with the level fader itself.

Set the pan pot (the lowest one, immediately above the level fader) to center. Do not use EQ (the 'EQ in' button in the middle of the strip should be in the up position). You should now be ready to patch the signal output of the mixer to the two recorders.

Connect output buses 1 & 2 of the mixer (A 1-2 on the patchbay) to the DAT inputs (B 1-2 on the patchbay). This will send the microphone signal to the DAT; check the signal flow by putting in a formatted DAT tape, letting it play for about 30 seconds before pressing stop, then pressing the Record button only (NOT the Play button as well for the moment). After verifying that the machine's switches are set to ANALOG UNBAL INPUT, STANDARD, [N/A], CAL, 44.1kHz, you should see the DAT level meters moving horizontally, indicating the signal input. Adjust the DAT's analog input pots and try to match the DAT levels to those seen on the mixer's level meters (e.g., 0 dB = about 0 dB on the DAT, etc.)

Now connect a duplicate signal of output bus 1 & 2 to the analog tape recorder. Outputs A 9-10 of the patchbay contain the same signal as A 1-2, so connect A 9-10 to B 3-4 (the inputs of the BR-20 tape recorder).

Ensure that the input level pots for both channels of the tape recorder (below the VU meters) are above minimum, and that both REC buttons (next to the VU meters) are in the down position with their LEDs flashing. Again, match the levels of this tape recorder with those coming from the mixer as closely as possible by adjusting the input pots.

Before actually recording, try to make the room as quiet as possible. Turn the two air switches off (for the duration of the recordings only), turn the computer off if necessary, and eliminate as many other unwanted noises as possible. Press the record and play buttons of both the DAT and the analog tape recorder, let the tapes roll for a few seconds, then make the desired sounds into the microphone.

To play back your recordings, connect the output of the DAT machine (C 1-2 on the patchbay) to channels 3 & 4 on the mixer (D 3-4 on the patchbay). Assign these channels to the left/right mix (by pressing down the L/R Mix button on faders 3 &4). The left/right mix is normalized to the speakers, so you should hear your DAT recording on playback once you raise faders 3 & 4.

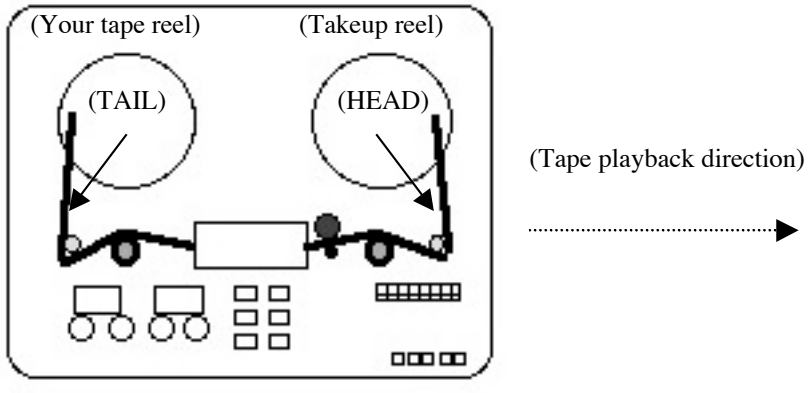
Follow a similar procedure for the analog recording: connect the BR-20's outputs (patchbay C 3-4) to channels 5 & 6 on the mixer (patchbay D 5-6). Assign these channels to the left/right mix (by pressing down the L/R Mix button on faders 5 &6). Make sure the 'Repro' buttons are down on both BR-20 channels. You should again hear your analog recording on playback once you raise faders 5 & 6. Repeat all of the above steps for subsequent sounds.

To record the microphone input directly onto hard disc via SoundEdit 16, connect output buses 1 & 2 of the mixer (A 1-2 on the patchbay) to the computer input (B 5-6 on the patchbay) and follow the setup and recording instructions for SoundEdit found in the following sections.

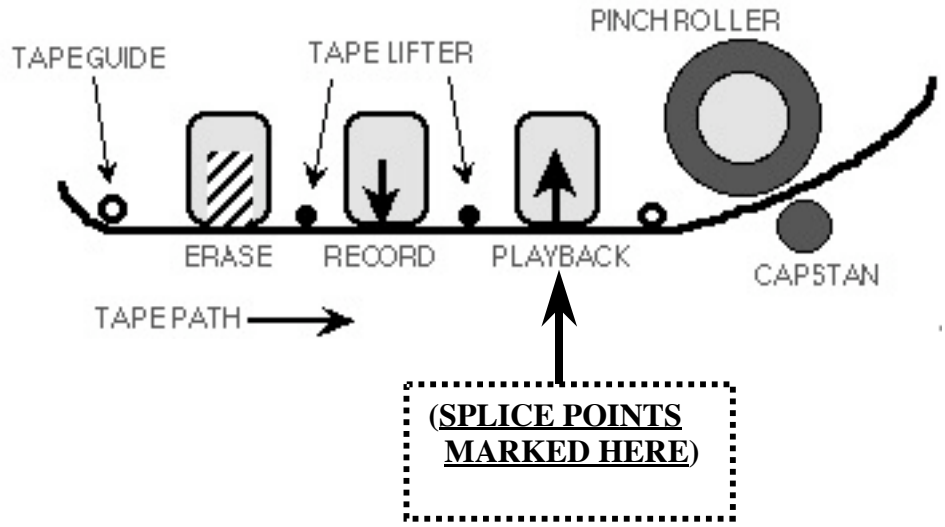
**/s/ splicing exercise**

After following the preceding instructions, record your own voice reciting a sentence of speech that contains at least 5 /s/ sounds. Once this has been done, proceed as follows:

1. Thread the analog tape on which your /s/ phrase will be recorded onto the BR-20:

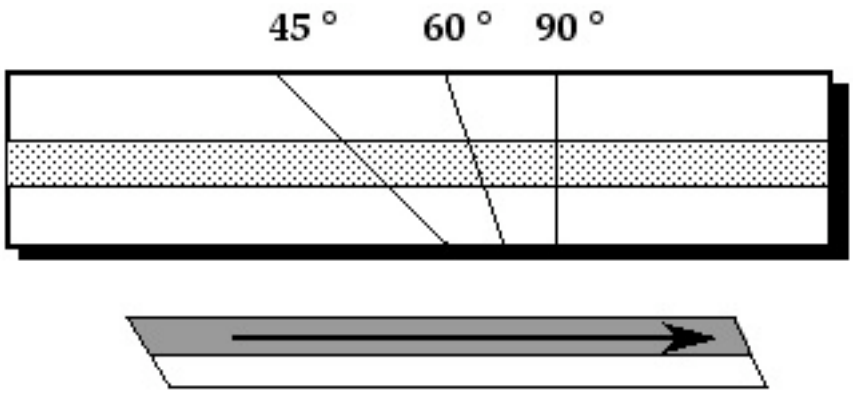



2. Remember how the heads of the tape recorder work (see image below). The idea is to mark various parts of the tape (the start and end of all the different /s/ sounds) at the precise point they cross the *playback* head, and then to make cuts at those spots:




3. Check that the BR-20's 'Repro' buttons are lit and patch it into the mixer to be able to hear the tape playback. At the HEAD of the tape, find the very start of the first word in your sentence. Stop the tape immediately. Enter 'Edit' mode (by pressing the Edit button to the left of the tape transport). Holding both reels, gently 'rock' the tape over the heads. When you find the exact point where the sound begins, hold both reels steady with the fingers of one hand, and using a soft pencil (NOT a marker, crayon, pen, etc.) mark a small dot (•) or vertical line (|) at the exact center of the playback head.

4. Cut the tape using the 60˚ angle on the splicing block:




5. Splice a 1 ft. length of leader tape at the beginning. This will indicate the beginning of your exercise on the reel. Thread the tape again and check that the sentence begins immediately after the leader tape. Let the tape play until the end of your sentence, then follow the same procedure as above, stopping the tape, locating the end dot or line marking, loosening the reels, and making the end cut on the splicing block. This time splice a 1 ft. length of leader tape after the end cut, which will separate the sentence from the collected /s/ sounds at the end. Re-thread the tape, check that the transition is correct, then continue.

6. In order to correctly remove the /s/ sounds from your phrase, you will have to learn to distinguish between 'unvoiced' consonant sounds and 'voiced' vowel, diphthong or consonant sounds as they pass over the playback head in 'Edit" mode. The 'unvoiced' sounds—including the /s/ you are trying to remove—have a noise-like (e.g. wind, ocean waves, hissing) quality, whereas the 'voiced' sounds surrounding it are more akin to buzzing or note-like timbres. Tuning your ear to the differences between these two types of vocal utterance is the key to marking the exact beginnings and ends of the /s/ sounds in your phrase.

   Similarly, find the very end of the /s/ sound. Mark the tape with a dot or line as before. Then slowly rewind the tape and find the exact start of the /s/ sound again by locating the first dot or line you marked. Carefully loosen the tape (by rotating the HEAD or take-up reel clockwise and the TAIL reel counter-clockwise) and place the tape in the splicing block ready to be cut. (Never handle the emulsion side or the part of the tape that touches the recorder's heads.) Before cutting, mark a small arrow (←) showing the direction of the tape.

7. For each /s/ sound, follow the same procedure, marking the beginning and the end after rocking the tape reels, and an arrow indicating tape direction before making the two cuts. Remove each /s/ as you cut it out and place it on a section of the tabletop (it will be a very short length of tape). Then splice in a length of leader tape corresponding to each removed /s/, in order to maintain the rhythmic cadence of the original phrase.

8. Once you have removed, collected and replaced all of the /s/ sounds (5 or more), splice them together after the 1 ft. length of leader tape at the end of the /s/-less phrase, either back-to-back or with leader spaces in between each one.