

Computer Music Techniques  
Lab 1.3

Auxiliaries and Submixing on the TASCAM mixer

INTRODUCTION

1. A mixer's value and usefulness can be determined by its flexibility. The more flexible a mixer, the greater its value to you. To understand the full capabilities of the M-312B, it is important to realize that this mixer contains multiple sub-mix systems. These sub-mix systems are designed to adapt to many mixing situations.

The easiest way to learn to use the Tascam M-312B is to examine the controls on a single input. The M-312B has 16 inputs which can be routed to any number of places. A brief aside: the signal enters the mixer from the rear panel, passes through the equalization (if on), through auxiliaries, and finally to mixer outputs as desired.

Starting at the bottom of any input and working our way upward notice the following knobs and/or faders:

VOLUME FADER: input volume

OVERLOAD INDICATOR: LED lights if excessive signal levels are present at input. Reduce input signal if this lights.

PFL (PRE-FADER LISTEN) SWITCH: access input signal before volume fader. Signal is sent to solo buss. Solo buss volume is adjusted by red knob (marked solo) above L-R faders.

CHANNEL ON BUTTON

PAN: left/right balance.

CHANNEL ASSIGN: L+R, 1-4. Directs signal to outputs.

EFFECT SEND CONTROL: NOT BEING CURRENTLY USED.

AUX 1/2 and 3/4 KNOBS: These knobs provide access to two auxiliary submixers. This permits you to send the signal entering any input to auxiliary outputs 1 and 2, 3 and 4. Aux 1 and 2 are connected to the Orban spring reverberation unit. Auxiliary 3/4 outputs are "normalised" to the SDE-L and SDE-R (Roland SDE-330) inputs. The knobs labelled AUX control the strength of the signal sent to Orban and the SDE-330. Using the patch bay outputs you can redirect the aux outputs to other places too.

Because the Orban and the SDE-330 have stereo inputs, think of aux 1/3 as left inputs, and aux 2/4 as right inputs. Then use the aux volume knobs to direct a signal to either (or both) SDE inputs.

When the aux controls are in the center position no signal is directed out of the auxiliary. When the aux control is turned to the left of center, it increases the gain before pre-fader. Thus, in this case, the fader has no impact on the gain being sent to the reverb units. When the aux control is turned to the right of center, it increases the gain to the SDE post-fader. In this case, the fader affects the gain directed to the

SDE. This is the one case where the input signal fader controls auxiliary output.

In addition to auxiliary gain controls on each mixer channel, each auxiliary has a master control which is located near the center of the mixer. This way you can control the overall gain being sent to the reverb units with one knob.

Sound is routed from the reverb units back into the mixer through the RETURN knobs (blue) positioned to the left of the master auxiliary controls. The return signal is automatically routed to the outputs of the mixer as indicated by the buttons to the below the knobs.

EQUALIZER: control of high, midrange and low frequencies. High frequency knob boosts/cuts output at 10kHz. Outer collar of mid and low knobs control center frequency. This is the area you wish to adjust. The inner controls increase or decrease in the chosen frequency. Because EQ introduces some noise into the sound: The best equalization is none at all.

LINE: access line or mic signal at input.

TRIM: Reduce the level of input signal. Use this if the overload LED lights.

PAD: Introduces a 30db pad when using extremely high signals at input.

## OVERVIEW

Any input signal can be sent to the SDE-330 via auxiliaries, normally as left and right signals. Thus, a signal can be sent to left SDE-330 by turning up aux 3 volume and turning off aux 4 volume. SDE-330 output returns to the mixer via the effect return 2 located on the right side of the mixer (blue knobs) Here you control return level and pan as each return signal enters the left and right mixer outputs.

## OBJECTIVES:

Learn to use the ORBAN Reverb and SDE-330 in conjunction with the auxiliaries on the Mixer.

1. Use Logic Audio to record approximately 60 seconds of sound.
2. Orchestrate the example using several different sounds on the S80 and the Proteus. Take time to mix instruments carefully. Double instruments on the same track, and carefully adjust volumes using faders on Logic AND on the mixer. Don't proceed until you feel comfortable with the mix.
3. Now add the ORBAN and the SDE-330 to the mix using auxiliaries selectively. Effects don't have to be used on all inputs. Adjust the amount of signal being sent carefully. Write down what you do and explain why you added an effect to a certain sound.
4. Adjust equalization on the mixer if needed. Be sure to do this while listening to the entire mix. Describe the process, taking notes as you go.

## RESULTS:

Turn in a report which describes the process of adding effects and equalization to the mix. Include a step-by-step process of trial and error. Use your recorded composition as examples. Be specific! Explain which effects didn't work, and why. Summarize your personal philosophy about the use of effects and equalization. Describe situations where it is most effective and explain its impact on a musical setting. These issues should be part of class discussion on Monday. Have fun!

END OF LAB 1.3

