

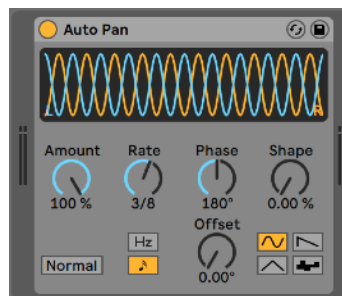
## WIDENING EFFECTS - TRAINING

### From Mono to Stereo

#### EFFECTS LIST

Stereo information is created by introducing differences in the left and right channels, which are identical for a mono signal, meaning the sound ends up dead centre with no width. Below is a list of the main effects used to turn a narrow mono signal into a wide stereo one.

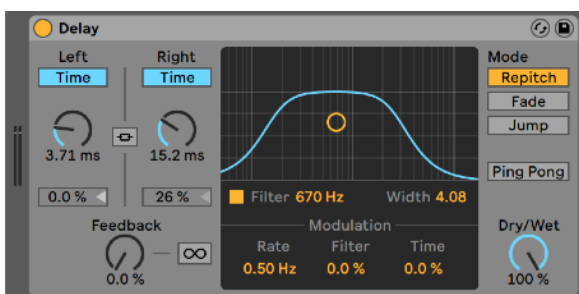
##### 1. AUTOPANNER



Panning a signal adds width by turning the level up in the left or right channel to introduce a difference in gain, which positions the sound more towards one of the speakers. An auto panner is an effect that pans the signal automatically over time, one way then the other.

**SOUND:** The character is largely unaffected but simply moves back and forth.

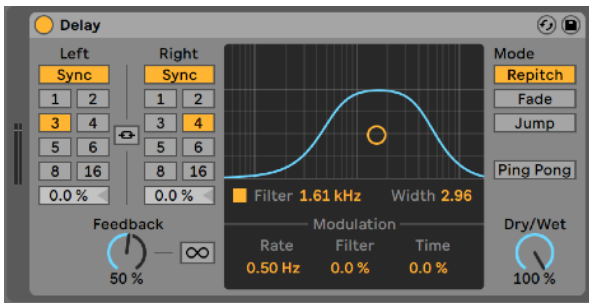
##### 2. SHORT STEREO DELAY (3-15ms, no feedback)



A delay is the most common effect for adding width, as introducing a difference in time between the left and right channels produces a lot of stereo information. A stereo delay must be used for this as **the delay needs to be different in the left and right channels**.

**SOUND:** A short (fixed) stereo delay with no feedback makes the sound very wide but basically motionless.

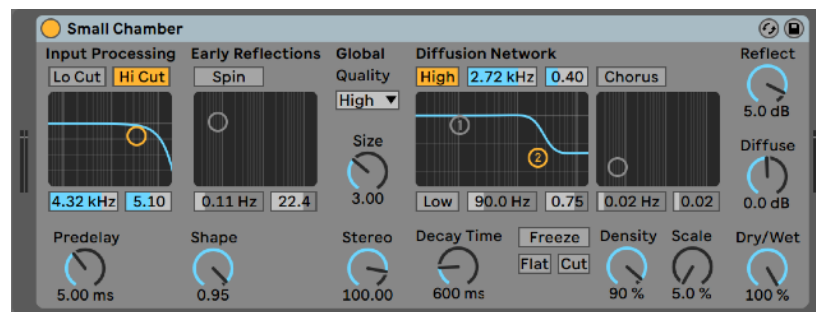
### 3. LONG & SYNCHRONISED STEREO DELAY/BEAT DELAY (sixteenth notes/semiquavers, with feedback)



A synchronised stereo delay with much longer delay times (1/16 notes or semiquavers rather than ms) and a reasonable feedback amount produces a distinctive rhythmic effect, as the signal leaves a trail of echoes that bounce left and right in the stereo field.

**SOUND:** A pretty obvious effect, with a fast repeating pattern and lots of width.

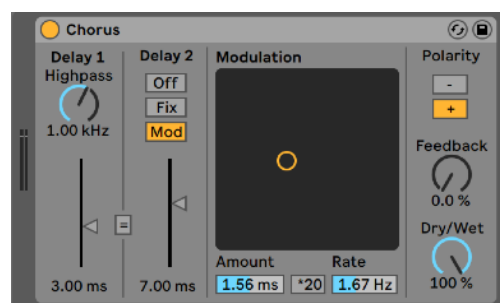
### 4. REVERB



In some ways similar to a stereo delay, as multiple delayed signals on the left and right are created in order to simulate a space and its reflected sound. The delays are very numerous though and seem as one 'cloud' of sound that fades away into the distance.

**SOUND:** Perhaps the most recognisable of the effects as it's so common. However, it's much less obvious on sounds with no transients, like pads!

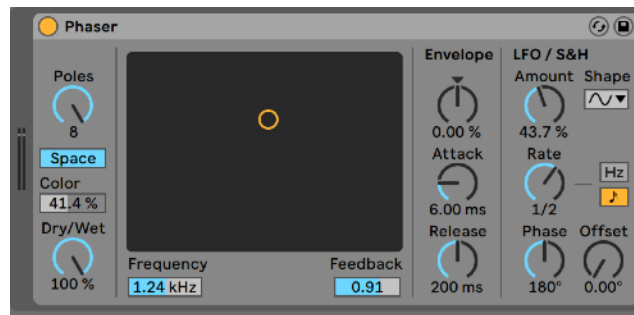
### 5. CHORUS



A chorus is the first type of modulating delay effects, which essentially use the same principles as the short delay, only modulate or change the delay time rather than keep it fixed. This has the effect of adding a lot of stereo information and so width, whilst the changing delay time makes it seem like there are more than just one signal, or a chorus of them in fact!

**SOUND:** An effect that works best on more sustained sounds. There is a fairly obvious change in character, similar to the short delay only with more movement.

## 6. PHASER



The phaser and flanger are 2 other modulating delay effects. The differences between these and a chorus are the delay times are smaller. A flanger has only a few ms as the upper limit of its range, and typically with a lot of feedback so the sound is very loud and colourful. A phaser is similar only the delay times are minuscule, as the phase of the signal is shifted. The effect is often subtler than a chorus, but can be closer to a flanger in some circumstances.

**SOUND:** Signal becomes wide with distinctive 'phasing' (cancellation of certain frequencies) and, when the feedback is high, more obvious modulating resonances can be heard.

## **EAR TRAINING EXERCISE**

Listen to the 5 supplied samples, provided in dry and wet formats, and attempt to work out which of the 6 effects from the previous list is in use (Autopanner, Short Delay, Beat Delay, Reverb, Chorus, Phaser). Also make a note of the sound you like the most, if applicable.

Print this page and write your answers. Correct answers and commentary will be supplied next week..... some samples are much harder than others, e.g. the Pad!

### **Short Bass**

Wet 1:

Wet 2:

Wet 3:

Wet 4:

Wet 5:

Wet 6:

### **Conga**

Wet 1:

Wet 2:

Wet 3:

Wet 4:

Wet 5:

Wet 6:

### **Long Bass**

Wet 1:

Wet 2:

Wet 3:

Wet 4:

Wet 5:

Wet 6:

### **Snare**

Wet 1:

Wet 2:

Wet 3:

Wet 4:

Wet 5:

Wet 6:

### **Pad**

Wet 1:

Wet 2:

Wet 3:

Wet 4:

Wet 5:

Wet 6: