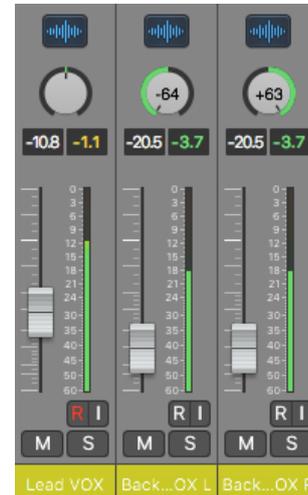




# Panning

- Refers to the **placement of sounds** in the **stereo field**
- Wide-panning was common in the 60s
  - Rhythm section would be hard panned to one side with vocals on the other
- Today, instruments such as lead vocals, drums and bass guitar are panned centrally



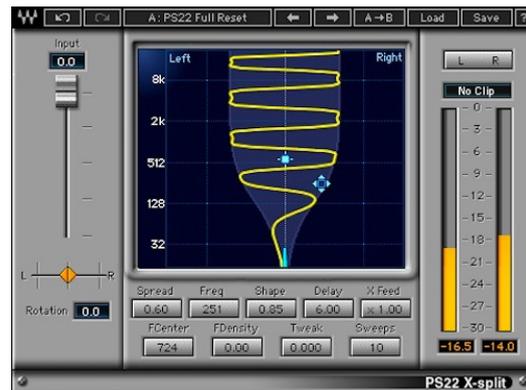
Remasters of older tracks sometimes change the panning to reflect modern stylistic conventions

Drum overheads are panned left and right

If there are two guitars in a mix, they should be panned left and right at an equal level

# Stereo Widening

- Helps to **create space** in a **busy mix** by giving **clarity to key elements**
- There are various ways to create the illusion of a wider stereo image
  - Delay
  - EQ
  - Reverb
  - Stereo Widening plug-ins
- Stereo widening doesn't have great mono compatibility



Key elements = lead vocals etc.

Delay – very short delays are perceived by the brain as alterations in the position of a signal rather than repeats

EQ – using complementary settings on left and right channels/duplicates can create a sense of stereo width

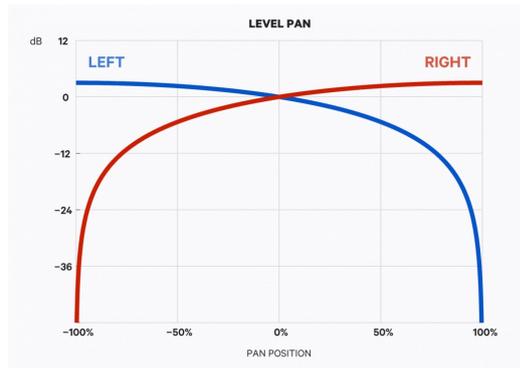
Reverb – stereo reverb can give mono tracks a sense of width

Plug-ins like 'Stereo Spread' can achieve stereo widening

Check when bouncing down a mix if you know it is being played back on a mono system

# Panning Law

- Panning law describes the relationship between a signal's perceived image position and the pan control knob
- When a signal is panned centrally, the same signal is output to both the left and right channels
- The panning law introduces a 3dB attenuation at the centre



- The usual requirement is that a signal moves smoothly across the stereo field
- If you were to pan this signal from hard left to hard right, it would sound as if there is an increase in volume as the signal approaches the centre
- In a mono scenario if both the left and right channels were summed it would result in a 6dB volume increase