Effects (Delay) - Knowledge Organiser

GLOSSARY	
Delay Time	The time between each repeat (measured in ms)
Feedback	Part of the delayed signal is fed back into the delay input, creating the repeats - The higher the feedback, the greater the number of repeats
Pan	Changes the stereo position of the delayed signal
Filter/EQ	Changes the frequency content of the delayed signal
Delay Time	The time between each repeat (measured in ms)
Pan	Changes the stereo position of the delayed signal
Rate	The speed at which the modulation takes place (measured in Hz or a synced note value)
Depth	The range of values for the delay time - The greater the depth, the greater the range of values

TYPES OF DELAY

Analogue Delay		**Digital Delay**		
Tape Delay	**Bucket Brigade Delay**	**Mono Delay**	**Stereo (Ping Pong) Delay**	**Multi-tap Delay**
Created by recording the original sound onto **magnetic tape** and then playing it back	Created by storing the signal in a series of **capacitors** for a set time before sending it to the next capacitor	The original sound would be stored **digitally** in memory	Allows for the delayed signal to be **panned** either in relation to **itself** or to the **original signal**	Allows **several** delay times be used in one effect

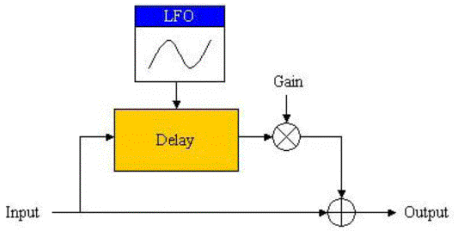
ADVANTAGES OF DIGITAL DELAY

- Easier to automate/control with MIDI
- Possible to sync delay to global tempo
- Accurate control of delay time (in ms)
- Can store, share and downloads pre-sets
- No maintenance

MODULATED DELAY

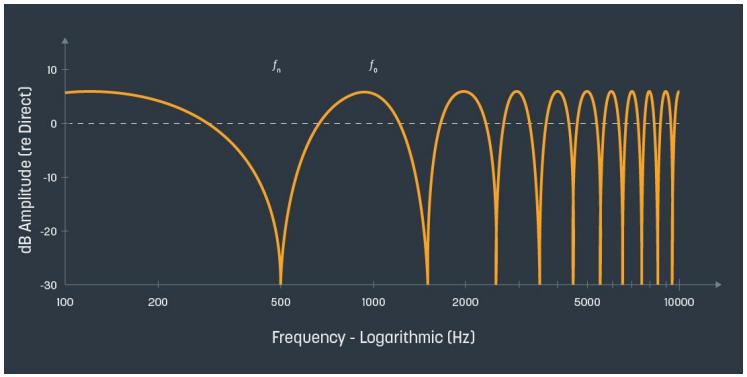
Modulated delay effects are produced by the modulation of the **delay time**

An **LFO** is used to control how much the **wet (delayed)** signal is delayed by over time (in %)



Chorus	Flanger	Phaser
Delays a copy of the initial signal and plays the delayed version **alongside** it	The high feedback generates a **sweeping**, **pitched** sound **synced** to the LFO	Like flanger but subtler and can sound like chorus with subtle settings

COMB FILTERING



Occurs when a delayed version of a signal **combines** with the direct sound, resulting in **destructive interference**

Results in a **thin sound** where a reduction in volume is particularly audible in the **low/low-mid** frequency range