MASTERING PROCESSES

AoS 1: MASTERING

What is Mastering?

- The **final** process of preparing a track for release once the mixing process has been completed

- The processes used will depend on how the tracks are intended to be listened to

- Because it occurs after the mix has taken place and has been bounced down, things like balance and creative effects cannot be altered

- Remastering is a process used on older mixes to prepare them for playback on newer equipment or to help the mix to conform to modern stylistic conventions

Mastering Processes

- Noise Reduction
  - Reduces hiss
- Stereo-Width
  - Adjusts the perceived stereo field
- Reverb
  - Helps with blend
- EQ
  - Slight adjustments to particular frequencies
- Compression
  - Increases perceived loudness
- Limiting
  - Prevents distortion

- Noise reduction would be used to reduce hiss on the track (often used for analogue recordings pre-2000)

- Adjusting the stereo width would be useful for tracks that had extreme/polarised panning (i.e. tracks from the 60s)
  - These tracks would often be re-released in mono

- Reverb would be used to tie elements of the mix together or even add a sense of stereo width where it was lacking

- EQ used in the 70s tended to be warmer with less content in the upper mids and highs
- EQ used in the 80s tended to have more focus on the upper mid and high frequencies
- Modern masters tend to have less focus on the mids and more on the lows and highs
- High pass filters with a cut off around > 35Hz will often be used to remove rumble
- High shelf boosts would also be used to add brightness

- Compression would be used to decrease the dynamic range and increase the average volume/perceived loudness of the track

- Limiting would be used to prevent distortion and peaking (usually used at the end of the signal chain to prevent clipping and increase the average volume)

- When mastering a full album it would be good practice to ensure the average volume of the tracks are all similar
- Adding fade ins and outs to the top and tail of the track also help to avoid clicks and harsh cut offs

Loudness Wars

- When using analogue technology (tape and vinyl) a loud track helps mask the noise that is inherent to those formats

- Loud music is also popular for playback on small speakers

- Streaming services have adopted loudness normalisation
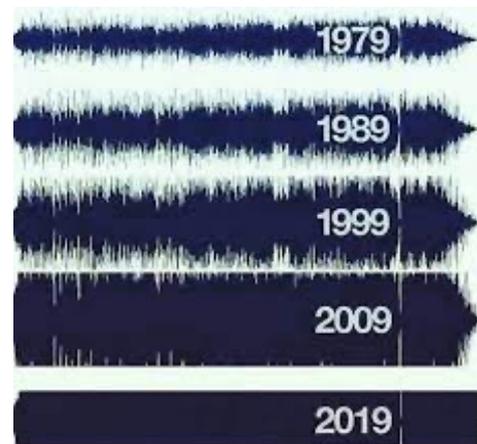
This increase in perceived volume over the years has led to this trend called the 'loudness wars'
- Over the past 20 years, it has become more common to create a loud master with a narrow dynamic range
- Can become tiring to the ear and therefore musical interest needs to be created via other production methods such as changes in instrumentation, creative effects and filtering

Devices like phones and tablets benefit from louder masters

Loudness normalisation analyses the average volume of a song and applies an offset so that constantly changing the volume the compensate for louder/quieter mixes is not necessary