Music Technology Workshop

School of **Computing & Digital Technologies**

tees.ac.uk/computing

Welcome to Teesside University

Aims of today:

- Experience University activities
- Learn about music technology
- Try to enhance your GCSE studies

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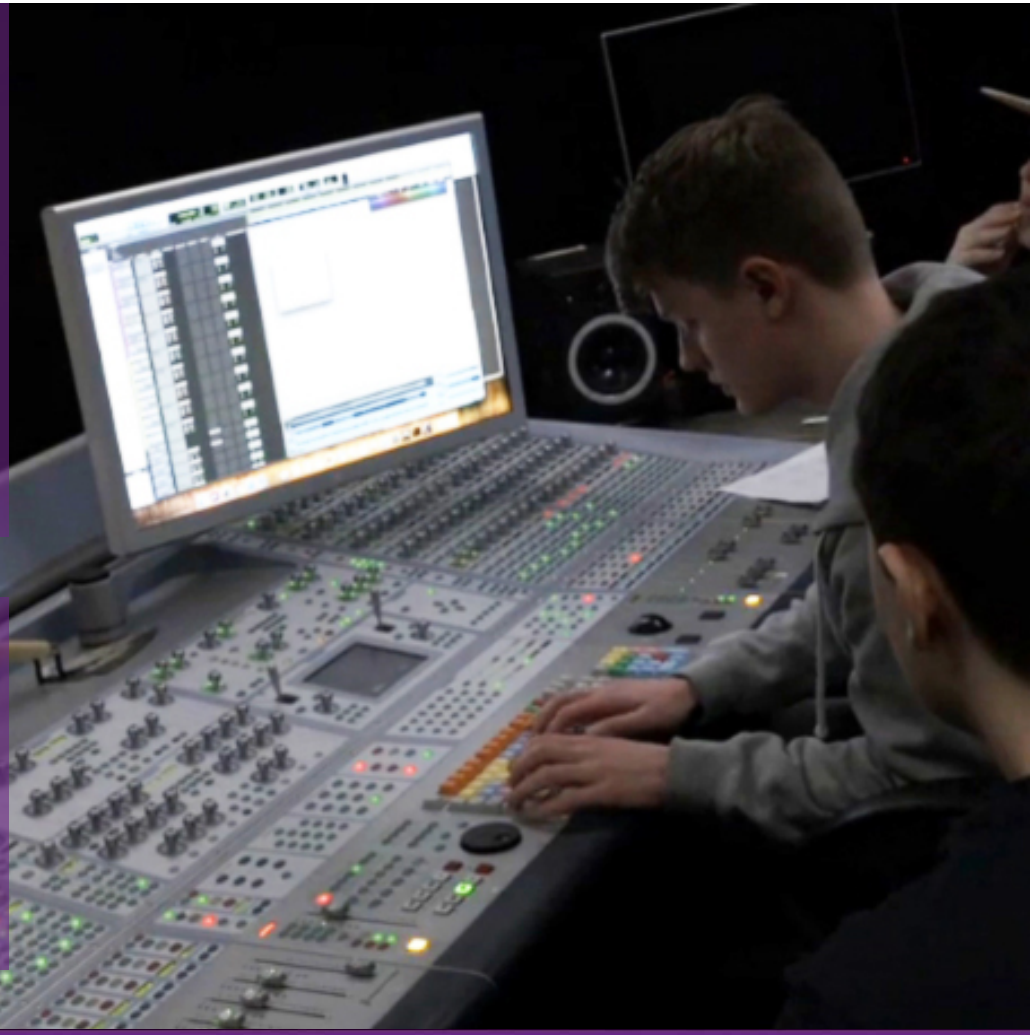
Two Options Today:

1. **Studio Recording Session**
   - Multitrack recording of band
   - Audio editing
   - Basic mixing



2. Composing with Technology

- Explore sound creation
- Use software instruments
- Compose ‘leitmotifs’

Studio Recording Session

Three stages to production:

1. Pre-production

Research, planning and preparation.

2. Production

Complete all sound recordings of instruments/voices etc.

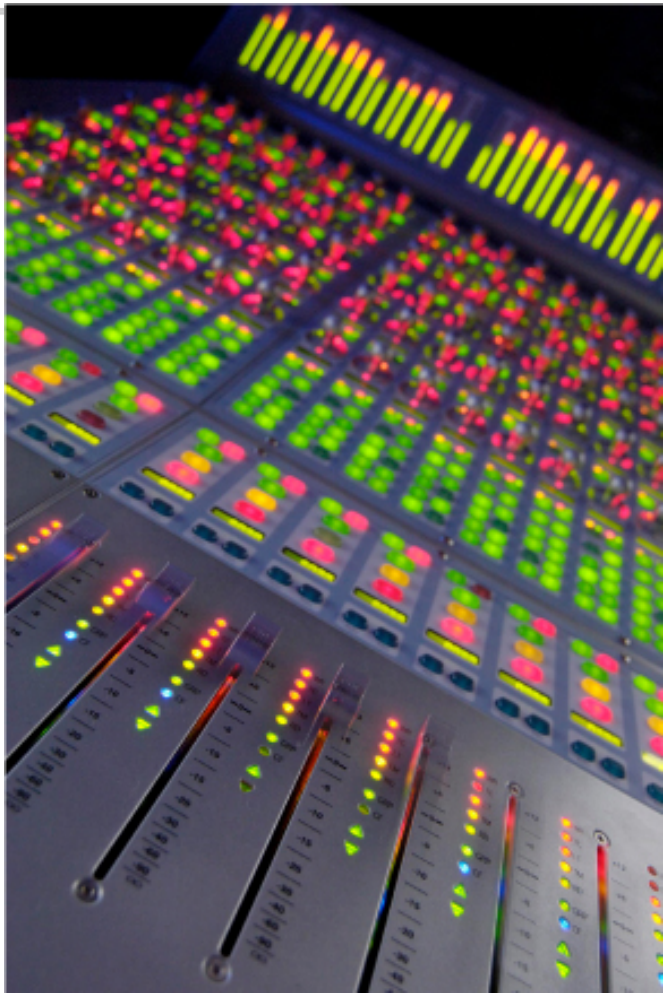
Live or ‘overdubbed’ or mixture of both.

3. Post-production

Undertake audio editing (cut/splice/comp performances).

Mix all instruments/voices together

Master the final mix.



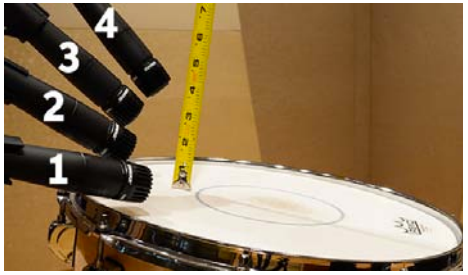
Close Miking Drums

Popular positions and mics

Kick Drum

Audix D6, AKG D112, Shure beta52a

Snare Drum



Audix Si5, Shure SM57

Overheads

Rack/Floor Toms

Audix D2/4, Shure SM57, e604

Hi-Hats

AKG C415, Rode NT5

Close Miking Guitar Cabs

Popular positions and mics

Bass Cab

AKG D112, e602, MD421, AT4033

Guitar Cab

Shure SM57, e606, MD421

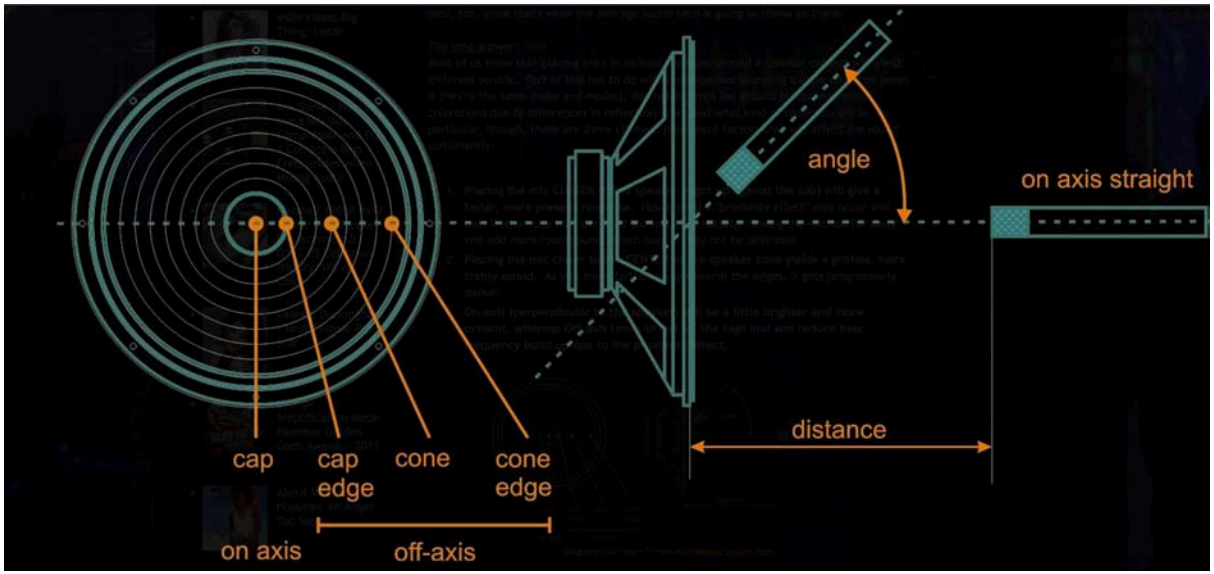
Direct Injection Box

A DI box converts a line/inst signal to a mic signal (changes impedance).

Often used as well as miking the cab.

Close Miking Guitar Cabs

Popular positions and mics



Miking a Guitar Cabinet

Common positions or combinations include:

- center close to the dust cap Edge which gives you the most high and low frequencies
- center off axis, with the mic tilted 45 degrees or so, which gives you a darker sound
- outer Edge off axis with the mic close to the edge of the cone (not the surround), which gives a more even Compressed sound balancing highs and lows
- distant center position, one or two feet in front of the speaker. This works well with more sensitive mics.

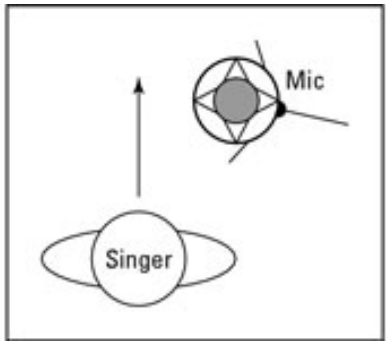
How well this works depends on the mic. They have different characteristic pickup polar patterns as well as sensitivities.
The positions listed above are good starting points. Fine tuning can improve the performance.

Close Miking Vocals

Popular positions and mics

Shure SM58, Shure SM57, AKG C414, U87

Pop-shield used to prevent ‘plosives’
(P and B the worst)



Basic Guide to Mixing

Mixing a recording is about trying to blend and create space for all the sounds within the available sound space.

Mixing Tools

Equalisation (EQ)
- Cut or boost frequencies
- Shape the sound in size

Compression/Limiting
- more consistent levels

Effects (FX)
- alter the space
- Create interest
- Reverb, Delay, Chorus,
- Flanging, Phasing

Hi

Pitch (frequency)

Low

left — Panorama (pan) — right

Online Resources

Miking Drums

https://blog.audio-technica.com/5-quick-tips-miking-kick-drum/
https://www.soundonsound.com/techniques/recording-drums

Guitar Cab Miking

https://www.youtube.com/watch?v=gQX71Ycrg28

https://www.soundonsound.com/techniques/better-bass

https://www.soundonsound.com/techniques/guitar-amp-recording

Recording Vocals

https://www.soundonsound.com/techniques/vocal-recording-production-masterclass

General

http://www.mxlmics.com/support/recording-basics.php

http://cdn.shure.com/publication/upload/837/microphone_techniques_for_recording_english.pdf

Online Resources

Mixing Guides
http://downloads.izotope.com/guides/iZotope-Mixing-Guide-Principles-Tips-Techniques.pdf

https://www.soundonsound.com/techniques/mixing-essentials

Gibson, D. (1997) The Art of Mixing [online].
https://www.youtube.com/watch?v=TEjOdqZFvhY

Soundcraft® Guide to Mixing App
https://www.lightsoundjournal.com/2011/12/15/soundcraft-the-soundcraft-guide-to-mixing-app/

Thank you

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