Microphones by Type

Dynamic

*Handle loud sounds but have poor high-frequency response*

- **Small diaphragm**
  - Shure SM57: drums or guitar amplifiers in the studio or close wind instruments, common for snare drum
  - Shure SM58: "live on stage" vocal sound
  - Sennheiser MD-421 II: drums, guitar amplifiers, close wind instruments, common for toms

- **Large diaphragm**
  - AKG D-112: bass drum, bass guitar amplifier, or warm sound on other bass instruments

Condenser

*Good high-frequency response but require phantom power and can be damaged by loud sounds*

- **Small diaphragm**
  - AKG C451 B: crisp highs, common for cymbals and acoustic guitar
  - Neumann KM184: warmer than the AKGs, common for piano and acoustic guitar

- **Large diaphragm**
  - AKG C414: full and bright, switchable pattern, matched pair of C414 XL II mics have boosted highs for vocal presence, common for vocals and strings
  - Neumann TLM193: warmer than AKG, common for vocals

Special types

- Røde NT4: two small condensers fixed at 90° angle for X-Y stereo recording
- Audio Technica 815ST: shotgun for narrow focus, plus bidirectional element for mid-side stereo recording
- Crown PZM-30D: ambient sound or blending groups; omnidirectional; bass response increases with the size of the surface it sits on

Direct box (DI): not a mic, but converts instruments with 1/4” output (e.g., electric guitars) to be used like mic-level signals

All microphones are cardioid unless otherwise indicated.