

## Recording Basics: Microphone Choice

### Types:

#### Dynamic

- uses electromagnetic induction (wire coil and magnetic field)
- "indestructible" extremely durable
- relatively inexpensive to make
- slower response time (smoothes out transients)
- uneven frequency response

#### Ribbon

- uses electromagnetic induction (corrugated metal and magnetic field)
- extremely fragile
- expensive
- has a built in step up transformer

#### Condenser

- uses electrostatic induction (2 plates form a capacitor/condenser)
- somewhat fragile
- expensive
- quick response time and good frequency response
- has a built in impedance conversion amplifier

- ~requires phantom power (+48v) or a battery
- ~large diaphragm or small diaphragm
- ~electret condenser has a permanently charged plate

### Polar Patterns:

- Shotgun
- Cardioid
- Supercardioid
- Hypercardioid
- Figure 8
- Omnidirectional
- \*the pickup pattern is relative to frequency

### Microphone Placement:

- Where does the mic sound best?
- Where does the instrument sound best?
- Are there other mics nearby? (phase cancellation)
- Are there many reflections/Reverb? (phase cancellation)