

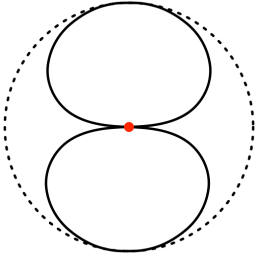
## Composition: Electronic Media I

Fall 2012

### Ribbon Mic and Contact Mics

#### 1. Ribbon Microphone – MXL-R77

- a. Generates signal using a thin ribbon, placed between the poles of a magnet.
- b. Polar pattern is bidirectional :



- c. The frequency response of this particular mic is 20Hz – 18kHz.

#### 2. Ribbon mic care and handling

- a. **DO NOT USE PHANTOM POWER (+48V) WITH THIS MICROPHONE!** This can cause permanent damage to the ribbon, rendering the mic useless.
- b. Store the mic in a vertical orientation. Otherwise, gravity will cause the ribbon to sag and lose response over time.
- c. Avoid sudden bursts of air pressure when using the ribbon mic. For example, don't blow directly onto it. When possible, use a pop filter while recording. When storing it, be sure to place the mic in the cloth bag provided with the case.

#### 3. Contact Microphones

- a. Operate on the principle of piezoelectric induction.
- b. piezoelectricity – electricity resulting from pressure.
- c. These mics do not respond to vibrations in the air, but vibrations carried by whatever surface they are in contact with (hence 'contact mic').
- d. They are often built with a means of attaching them to a surface, usually some variety of clip.
- e. Some of the contact mics in EMS do not have clips. In order to assure solid contact, and thus the best recording results, with these mics, use the following procedure:
  - i. Cover the head of the mic with a thin piece of paper or plastic. The head of the mic refers to the side opposite the transducer.
  - ii. If the surface being recorded is 'tape-friendly,' use tape to attach it firmly to the surface. Otherwise, consider using rubber bands, some variety of clip, etc.
  - iii. The less room the mic has to move, the better. Motions of the microphone itself are very audible alongside your desired signal.
  - iv. Consider also securing the wire of the mic. Motion of the wire can potentially move the transducer, and the wires themselves have a tendency to be fragile at their connection points with the mic and/or signal output.

#### 4. Contact mic care and handling

- a. Contact mics typically require +48V.
- b. The wiring on contact mics tends to be delicate. Some of the EMS mics specify to leave their cable loose, and this is recommended for all contact mics.