MICROPHONES

Group Research. Prepare a presentation on the items listed in your group’s description. Every person needs to research and present something. Use PowerPoint or another iPad presenting app.

Row 1

 *Directional Characteristic*

 Define and demonstrate:

 Polar pattern

 Polar response graph

 On-axis

 Off-axis

 Polar shapes of microphone patterns

 Sensitivity patterns

 Omnidirectional

 Bidirectional

 Unidirectional

 Cardioid

 Supercardioid

 Hypercardioid

 Ultracardioid

 Subcardioid

Row 2

 *Operating Principle*

Define transducer

 Define and demonstrate:

 Main types of transducers in microphones

 How the moving-coil mic operates

 How the ribbon mic operates

 How the condenser mic operates

 Phantom Power

 Electret condenser mic

Row 3

Compare moving-coil, ribbon, and condenser mics

 What is each type best used for?

Give examples of each, including brand names, models and pictures of mics

 How are pickup patterns shaped in the construction of microphones?

 Demonstrate the proximity effect

 How do you compensate for it?

 How do you use it for your advantage?

*Response Characteristic*

 Define and Demonstrate a Frequency Response Curve

 What is transient response?

Row 4

*Output Characteristic*

 Define and Demonstrate:

 Equivalent Noise Rating/Self-Noise

 Microphone Sensitivity

 Maximum SPL Rating

 Impedance

 Stereo Mic Techniques

 X-Y

 Spaced Omni Pair

 Crossed Bidirectional Blumlein

 MS

 ORTF

 Multichannel Mic Techniques

 Downmixing

 LRFB

 VSA Tree