

# Using Digital Learning Technologies in Junior Cycle Music

## Guide to Microphones

**DYNAMIC Microphone:** Versatile and will take wear and tear



- Not particularly sensitive which makes them perfect for loud sources e.g. snare drums and guitar amps
- They are cardioid meaning the mic picks up sound in the direction it is being pointed and cancels out any sound coming from behind it
- Can use dynamic mic on almost everything but be aware the sound will not be as accurate or 'pretty' as a condenser mic. Suitable for classroom or home recordings

**CONDENSER Microphones:** Powerful, more balanced, accurate and 'sweeter' sounding



Diaphragm

- More sensitive, which makes them perfect for softer and brighter sounds. Condensers give extra 'air' to what they pick up, making them sound less muffled than a dynamic
- They have switches that change their patterns. Cardioid (see Dynamic Microphone). Bidirectional, which picks up sound from the front AND back, while cancelling out sounds on the sides. Omnidirectional which picks up sound from all over, cancelling nothing



Pencil

- Two types: **Diaphragm** for full-bodied instruments and **pencil** for brighter instruments
- **Note:** they need 48V of power, Phantom Power, to work so make sure your interface has this option. Suitable for classroom or home recordings

**RIBBON Microphone:** Most sensitive so meant to be used on softer sounds, like voice or strings



- Fragile and can be expensive
- They are bidirectional so better used in a dry room that is well treated (with baffles/foam) to lower the amount of room sound that is captured

**EXTERNAL Microphones:** plug directly into your phone / device for better audio quality



e.g. Rode VideoMic ME (iOS and Android)

- Plug direct or via a TRRS audio jack  
*Note: This avoids the need to use an interface and DAW technology*
- Open the camera and the audio will be captured directly or use the app specific to the external mic you are using
- The audio will export to an uncompressed lossless format (See *Guide to Audio File Formats*)

### TS Audio Jack



3.5mm/6.35mm connector is used for connecting an instrument to an amplifier, pedalboard, audio interface, mixer, or DI box. It captures an unbalanced mono sound

### TRS Audio Jack



3.5mm/6.35mm connector is used for earphones, connecting to a mixer/ audio interface or computer. It has three conductors capturing a balanced mono or unbalanced stereo sound

### TRRS Audio Jack



3.5mm connector is used for earphones with a built-in microphone or connecting to an external recording device. It has four conductors capturing a balanced mono or unbalanced stereo sound