

[**Microphone Polar Patterns**](http://musictechstudent.co.uk/microphones/microphone-polar-patterns/)

The polar pattern of a microphone is the sensitivity to sound relative to the direction or angle from which the sound is captured / recorded from. There are four main types of polar pattern:

**Cardioid = Picks up most of the sound from the front axis of the microphone**

A cardioid microphone is most sensitive on the front axis It reduces unwanted ambient sound from the sides and back and is much more resistant to feedback than other polar patterns.



*Microphone Polar\_pattern\_cardioid*

**Hyper Cardioid =Is a more frontwards directional pattern with minor rear spill**

Hyper cardioid microphones offer a narrower pickup on the front axis than cardioids and a greater rejection of ambient sound from the sides. Hyper cardioids are most suitable for single sound sources that need to be picked up in loud environments.



*Microphone-Polar-Pattern Hyper-cardioid*

**Figure of 8 = Picks up sound equally from both the front and the back of the microphone**

A microphone with a figure of eight polar pattern picks up the sound evenly from the front and rear of the microphone but not the side. Microphones with a Figure of Eight polar pattern are typically Large Diaphragm Microphones.



*Microphone-Polar\_pattern\_figure\_eight*

**Omni Directional = Picks up sound equally from every direction of the microphone**

An omnidirectional microphone picks up sounds from all directions evenly and can be useful when picking up the entire room ambience / performance.



*Microphone-Polar\_pattern\_omni Directional*