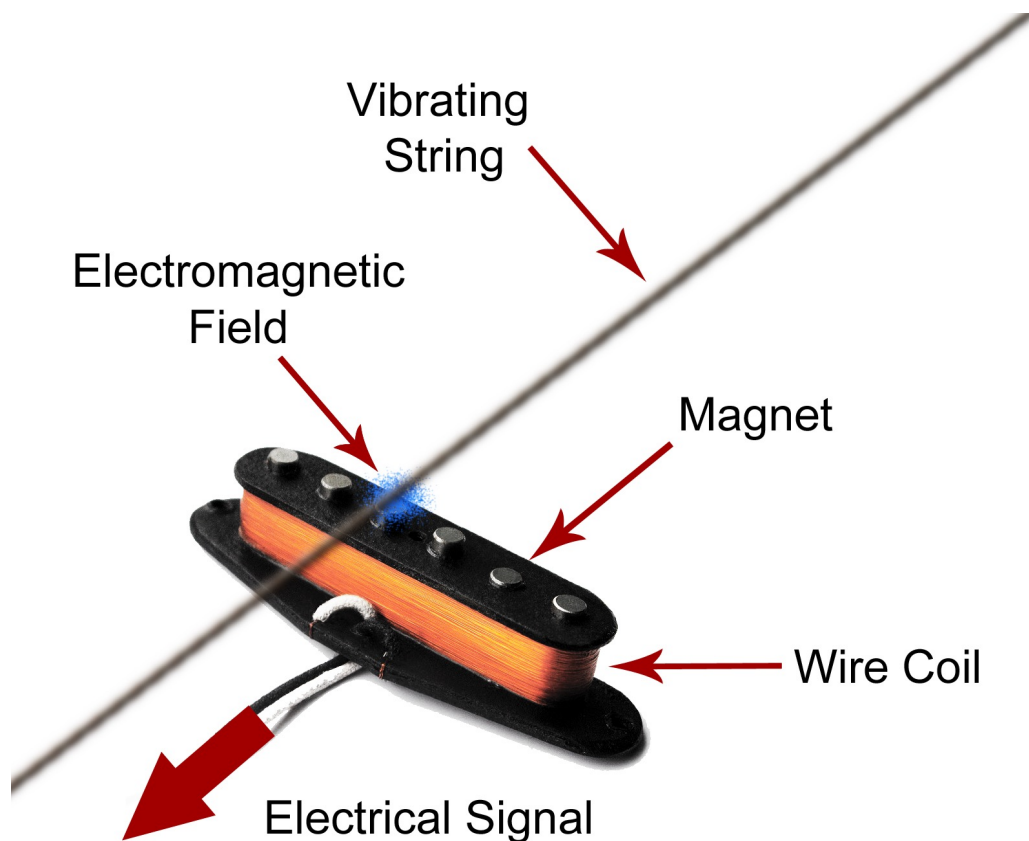


## Handout 2 - How the Guitar Pickup Works

Thanks to the electromagnetic pickup, the guitar was transformed. Once a relatively quiet instrument most often used for “background” rhythmic accompaniment, once plugged in and amplified it was capable of playing lead parts and carrying the melodic content of a song. As electric guitar technology progressed throughout the middle of the 20<sup>th</sup> century, the sonic possibilities of the instrument only increased.



In an electromagnetic pickup, a magnetic field is produced around the instrument's strings. When a string is played, its vibrations disrupt the magnetic field and create an electrical signal. This signal is then transferred through a coil of wire wrapped around the electromagnets on the inside of the pickup and sent from the guitar's output jack through a cable and into an amplifier. The amplifier increases, or **amplifies**, the signal and carries it to a speaker, where it is converted from electrical energy back into motion energy, which our ears process as the sound of the instrument.