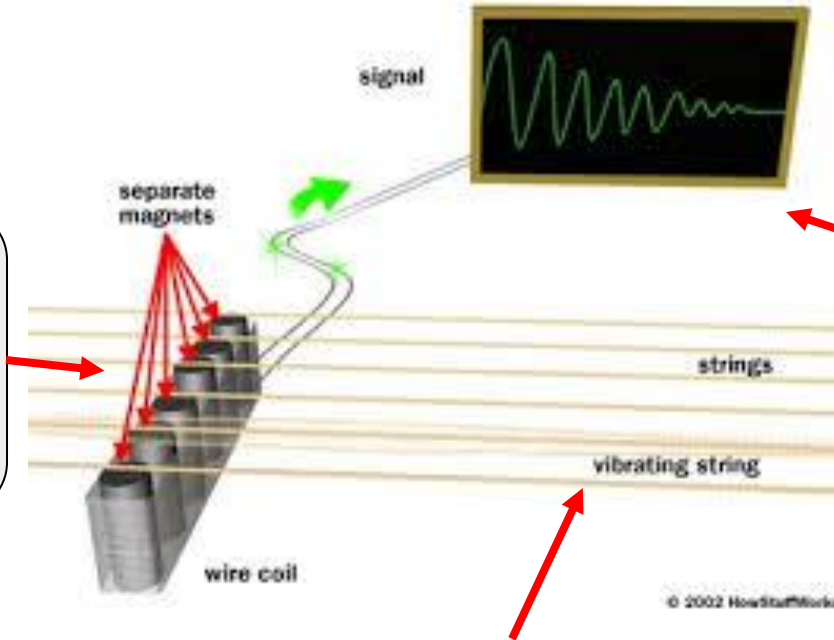


Guitar Tone Fundamentals



How Are String Vibrations Converted to a Signal?

1. The guitar's pickups produce a magnetic field.

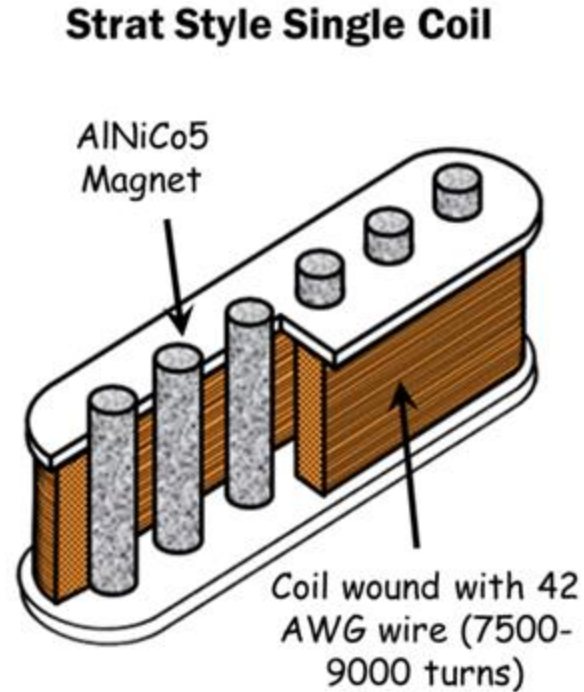


2. The vibrating string creates disturbances in the magnetic field.

3. These disturbances are converted into an electrical current.

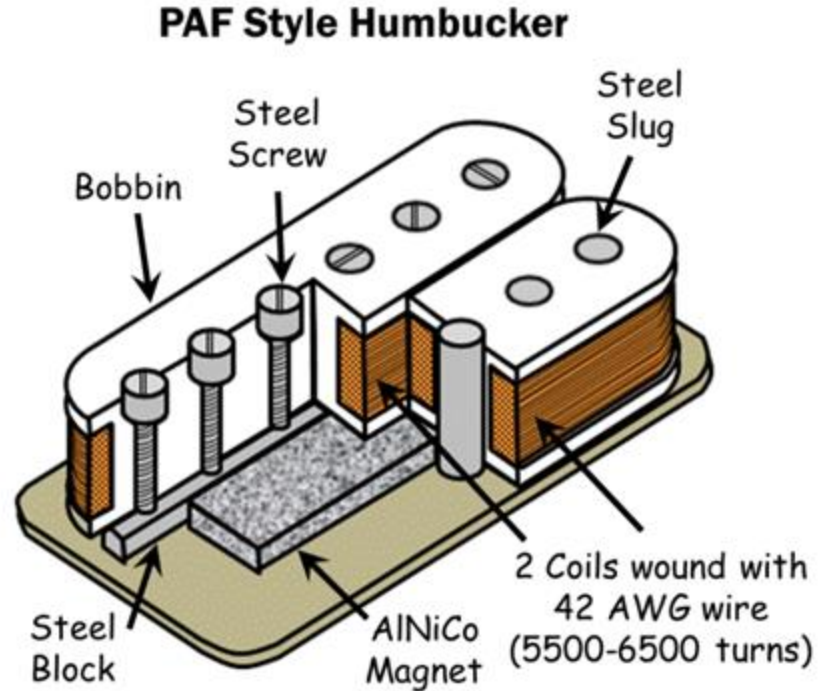
Single Coil Pickups

- Composed of a wire coil wrapped around single row of magnet poles
- Produce a slight humming sound due to picking up random magnetic or electrical signals
- More evenly reproduces all frequencies.



Humbucker Pickups

- Composed of two rows of magnetic poles with poles facing opposite directions, each wrapped in a wire coil.
- The opposing poles prevents the hum found in single coil pickups
- Humbucker pickups have a higher output and a warmer tone



Pickup Selector

- Select which pickup is being used to detect string vibrations
- Most can be used to select a single pickup or two adjacent pickups
- Pickups near the neck sound more rounded while pickups near the bridge sound brighter



Tone and Volume Knobs

- Volume knobs control the output of either one pickup or your whole guitar.
- Tone knobs set a limit on higher frequencies. The lower they are set, the lower the limit.
- Make sure to determine which tone and volume knob controls which pickup.



Orientation

- How many pickups does your guitar have? What kind are they?
- How many positions does pickup selector allow? Try them all.
- How many tone and volume knobs does your guitar have? Which pickup(s) does each control?

Quiz

- How is the vibrating string converted to an electrical signal by the pickups?
- What benefit does having two rows of magnets have in a humbucker pickup?
- Where should set the tone knobs if we want to let all of the frequencies in our electrical signal through?
- Which pickup position sounds brightest?

Clapton's "Woman" Tone

- Eric Clapton thought this tone sounded like a woman's singing voice.
- To get it, select a combination of your bridge and neck pickups.
- Roll the tone knob on the neck pickup all the way down.
- Now add distortion.



Jazz Guitar Tone

- For a warm jazz guitar tone, select your neck pickup.
- Set tone control at or below 5.
- Set the volume around 6.

