Yagi Antenna Building

Hosted By:
NEU Wireless
NU IEEE

Please sign in:

Welcome!

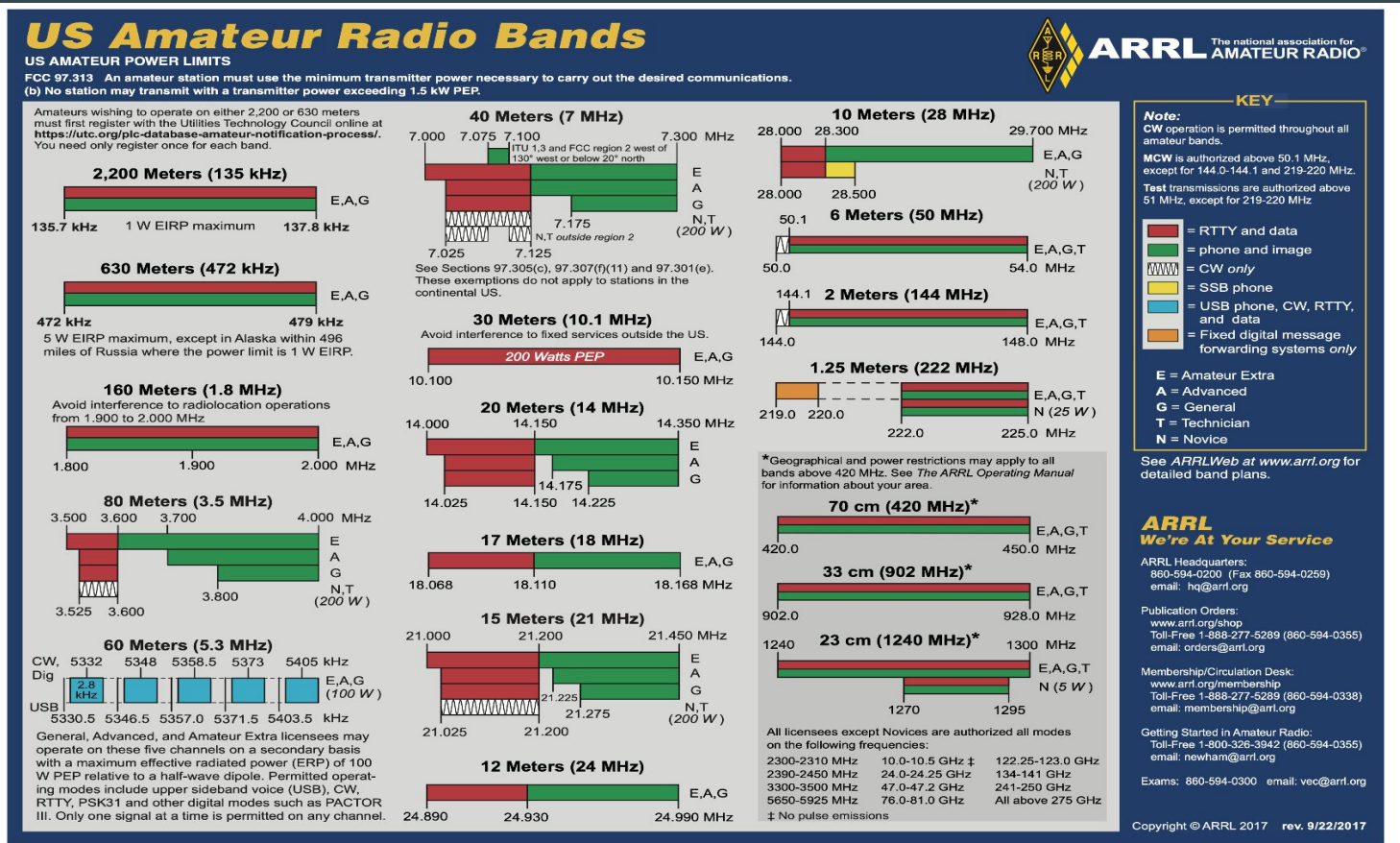
- Wireless Club Meetings 7PM Thursdays @ 503 Hayden (Free Pizza!)
- Scope of today's workshop:
  - Rapid-Fire Ham Radio Overview
  - Antennas 101
  - The Build (https://www.instructables.com/The-Tape-Measure-Antenna/)

What is HAM radio?

- A hobby and service that allows individuals to communicate using designated radio frequencies for personal, non-commercial purposes.

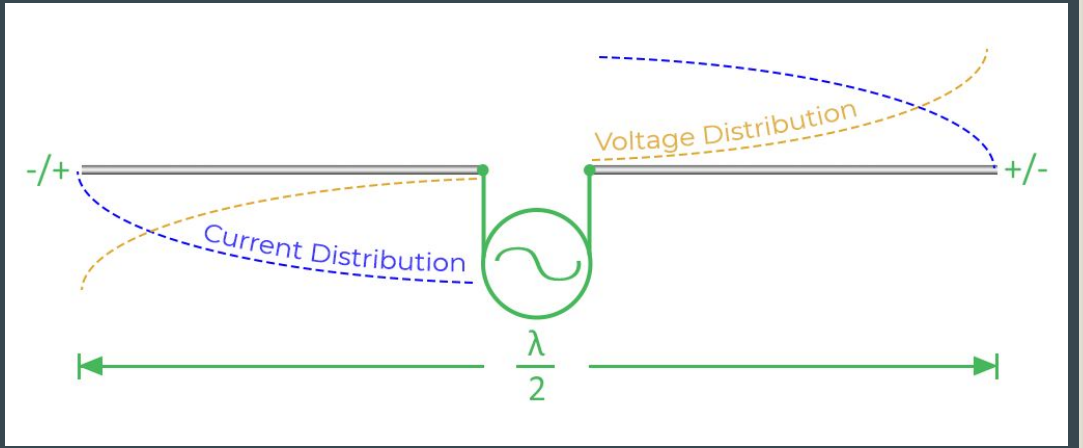
- It offers a wide range of communication modes, including voice (using various modulation types), Morse code, digital data modes, and even satellite communications. Operators can use a variety of equipment, from handheld transceivers to complex radio setups.

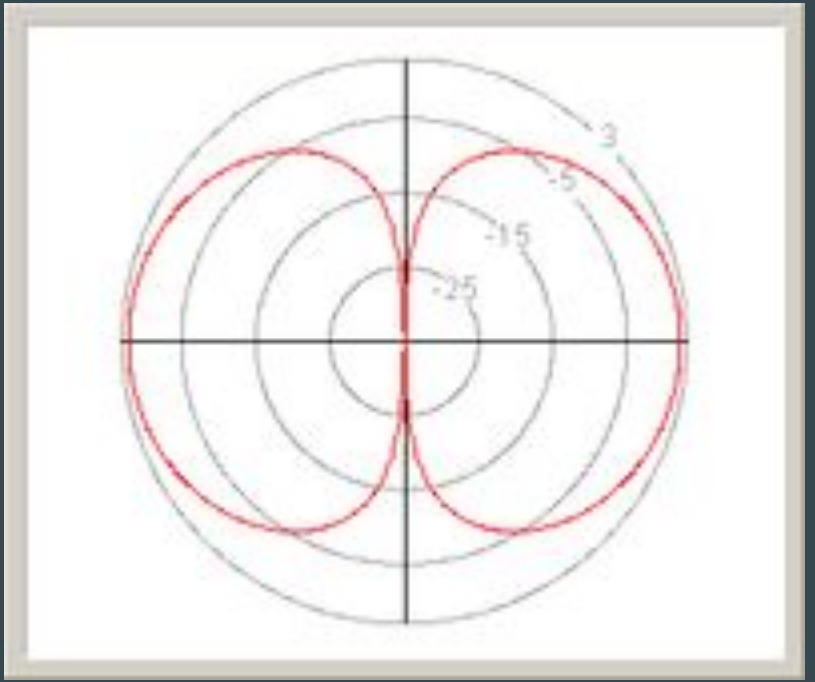
What is HAM Radio? con't



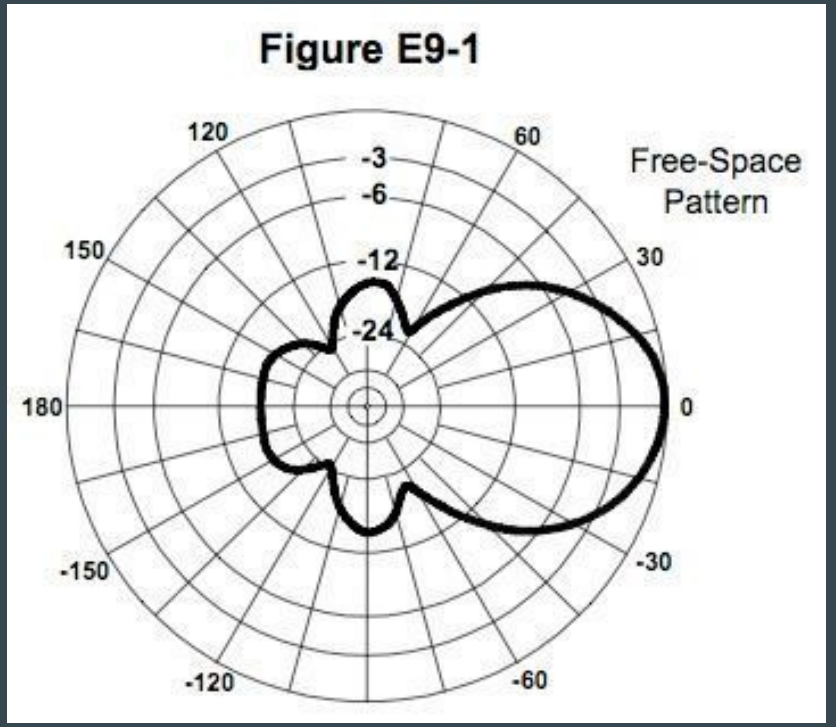
Ham Radio Application: Fox Hunting

A Dipole Antenna: The Central Element





Yagi Antenna Overview

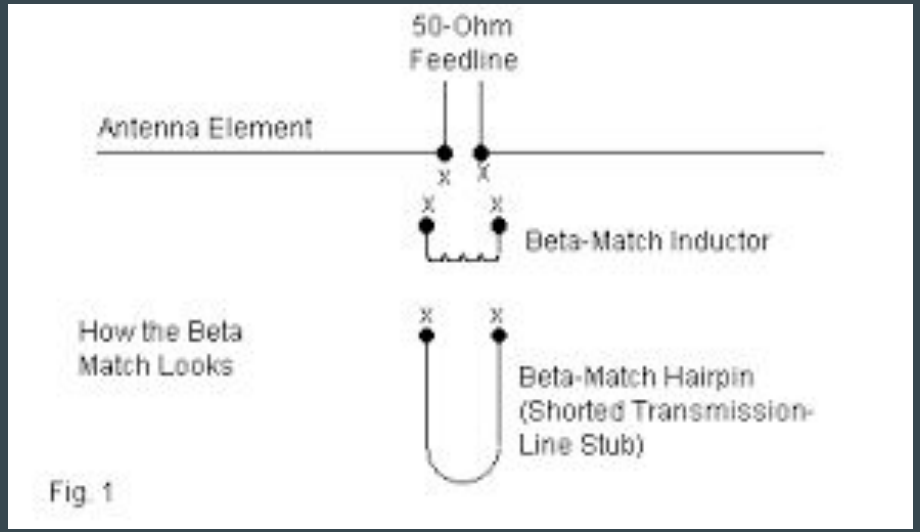


Yagi Antenna Technical Concept

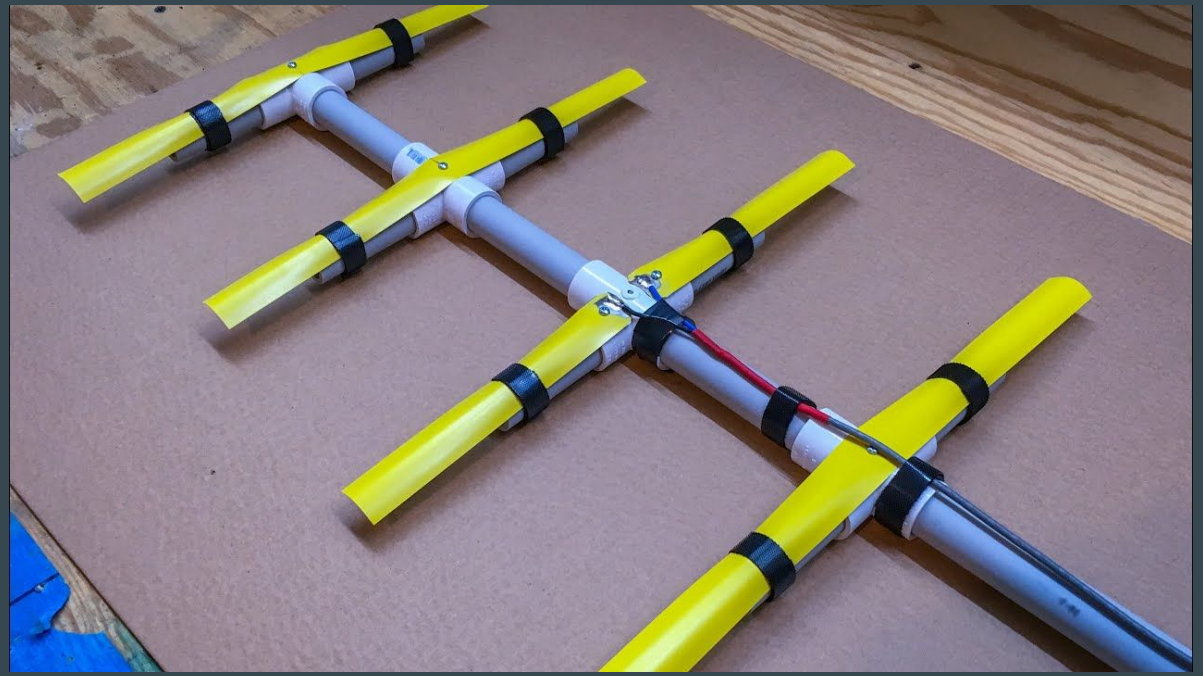
- Yagi antenna typically consists of several elements, including a driven element, reflector, and one or more directors. The driven element is the part that is connected to the transmitter or receiver, while the reflector and directors are passive elements that help direct the antenna's beam.
- Yagi antennas are commonly used in various applications, such as amateur radio, TV reception, Wi-Fi networks, and point-to-point microwave links. Their directional properties make them effective for reaching distant stations and minimizing interference from other directions, improving signal quality and range.

Matching The Dipole... Hairpin!

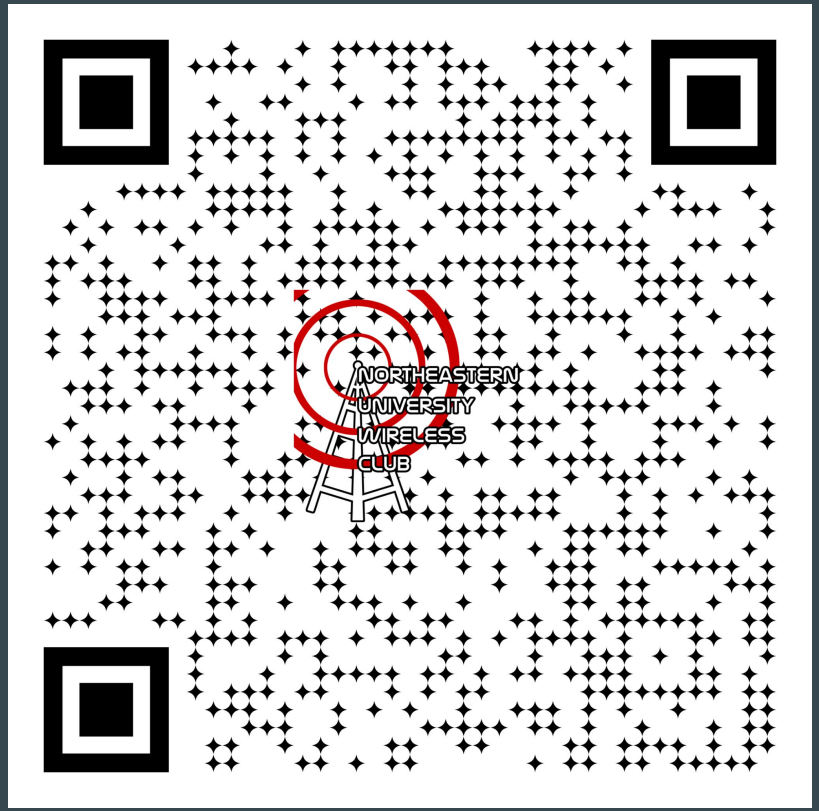
Hairpin matches are primarily used for impedance matching purposes. They help match the impedance of a transmission line or a component to the desired or required impedance level. This is crucial for maximizing power transfer and minimizing signal reflection.



Yagi + Scrappy = Tape Measure Yagi!



Tape Measure Yagi! Instructions - Scan:



instructables.com/The-Tape-Measure-Antenna

Questions?

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