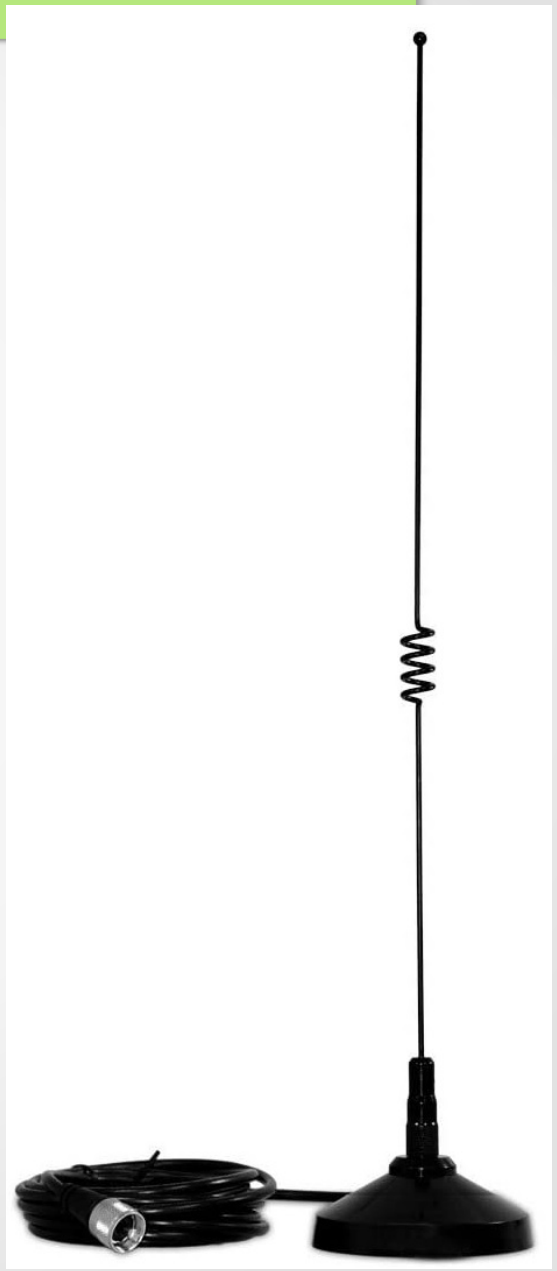
Beginner's Corner: Simple Antennas

- Simplest **VHF/UHF Antenna**
- TRAM 1185 mag mount dual band vhf/uhf quarter wave vertical $25
- https://www.amazon.com/gp/product/B0045EQUBK
- Gets you DUAL BAND. Add cable to allow placement higher in house



Longer Cable...

- “barrel” double-female SO-239 connector to allow you to extend length $7/two
- https://www.amazon.com/Ancable-Coaxial-Adaptor-Connector-Coupler/dp/B01N9N2C3Q

Add a bit of RG8x coax

- 20 feet extension
- https://www.amazon.com/CablesOnline-PL259-Antenna-Cable-R-U020/dp/B010GKZ5QW
- (You can easily find 50- and 100-foot lengths.)

Provide a steel “ground plane”

- Steel file cabinet in your attic?
- Large cookie sheet?
- Section of galvanized steel roofing?
- Old Microwave?
- Anything large and steel so the magnet will grasp
- Should be a FINE VHF/UHF antenna!

Local Homebrew SlimJim VHF

- Mono-VHF Band but CHEAP “SlimJim”
- Made from 1x2 wood + house wire….can’t get much cheaper!
- But requires help to tune (antenna analyzer)
- Bottom-fed, requires no metal sheet (keep AWAY from metal) – easily hung in attic
- See our 2016 Document – built by many Tech classes since then: https://qsl.net/kx4z/TwoMeterHomeMadeSlimJim.pdf

Simple HF antennas

- **So many easy options**-- difficult to pick!
- Everything is easier if you have any kind of **antenna tuner**
- Manual or Automatic – either works!
- MFJ-939 200W auto intellituner is a great choice $169

WIRE!

- *"As much wire, as high as possible in the CLEAR, and then match to it"* said a wise elderly RF engineer
- Vertical / Horizontal / Sloping / L shaped / TeePee ("inverted Vee") – doesn't really matter.
- Fancy insulators or pieces of plastic conduit with holes drilled – doesn't matter
- Cut it in the middle, cut it 1/3 from one end, doesn't matter, use "window line" to connect it to the output of the tuner
- Window line needs to stay 3" away from METAL

Hide the wire?

- Wire can be any size. From #12 or #14 house wire from Home depot
- To #24 almost invisible wire. Black usually hides better.
- You can run it inside a tree, amongst the branches or trunk (very minimal loss of signals)
- If your roof is asphalt shingles, you can lay it on your roof
- You can hide it in a vine
- Try to keep it at least 10 feet of the ground if you can.

Window-line balanced transmission feed

- 300 ohm is smaller than 450 ohm works about as good and easier to hide.
- About $0.50/foot. https://thewireman.com/product/18-awg-300ohm-stranded-window-line/

Alternate: Multi-band End-Fed

- 49:1 Balun – can “sometimes” get away without a tuner.
- Feed with RG8X coax instead of window line
- $79
- MFJ 1982

- We build the same type 49:1 balun from an $8 toroid and some wire. FT-240-43 for hundreds of watts; FT-140-40 for 50 watts. Cheap project.
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- Run the wire any ol' way you want – just get it at least 10 feet up as soon as possible. You don't have to use their wire, you can use tiny wire if you like.
- Vertical, sloping, horizontal, inverted vee – just get it in the clear and 10 feet or more up.