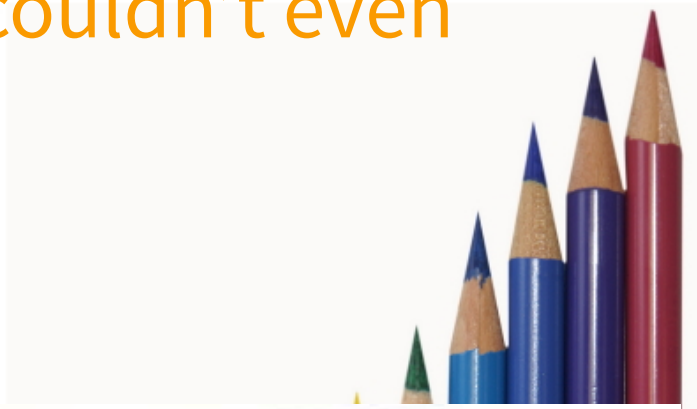
Double-Header:
Buying an inexpensive HF radio
Getting FeedLine Outta Da House!

My first radio: 1971 (no Ebay)

- Heathkit GR-64 - $45 ($361 today)
- Soldered it together (vacuum tubes)
- Ham Bands TINY on the tuning dial
- Unusable….
- (still have it!)

First REAL radio

- Heathkit HW-16 – HUGE DIAL $100 ($803 today)
- Crystal controlled transmitter (couldn’t even dial to a frequency)
- Approx 40 watts output
- CW ONLY



2nd Radio

- Soldered together SB-102 (still have it!)
- $380 – $2956 today!!!!
- Vacuum Tubes throughout (1 FET)
- SSB/CW – drifts, but you can even do digital on it...

Entry Level Radios Today

- New HF SSB/CW rigs are STABLE, POWERFUL and RELIABLE.
- Use 12V supplies that are ~$125 or less
- Entry level radios (ICOM-718) $700
- Really FINE level radios $1100 approx

Many More Offerings!

- Enormous # of 5-10 Watt radios (not recommended for beginners)
  - LARSET 5W 40m $50 (just for fun)
- 20W radios might work
  - Xiegu G90 20W, portable, includes antenna tuner $465.
  - Sbitx 20W (not recommended for beginner) $429
  -

My recommendations

- Only real experience with limited number of radios
- Used ICOM 718 in working condition ~$400 great buy!
- Used Yaesu FT-991 (cheaper than A) – GREAT radio!
- Used ICOM 7300 $800 fantastic radio

Buying USED

- Buying from local friend far safer – stand behind product, help get you going
- Hamfest – depends on integrity of seller (lots of ancient junk for sale)
- Ebay
  - Never buy “PARTS” (zero guarantee)
  - Always buy “USED” (MUST work or $$ back)
  - Always use credit card or PayPal (better)
  - NEVER buy unless IN THE USA

Buying USED

- RESEARCH the radio FIRST
- How many generations behind?
- ICOM 725- very reasonable radio, I've had several; 100W, decent but not great VFO. No longer serviced by ICOM. $250 fair – only buy if you can see OUTPUT from transmitter.
- RESEARCH the radio FIRST
- Google / Universal Radio website has all the radios and historical info
- Eham more information

People will Help You

- Lots of people will help you with an older radio for CHEAP when you're new.
- Great Example: Jim Carr helped me with an Icom 820H for a very fair price. Paid whatever he asked. WORKING RADIO.

Popular Radio: ICOM 718

- Produced since 2000; approx 150,00 units!
- Extremely popular 100W 160m-10m (HF Only) SSB/CW/AM radio.
- Limited receiver filtering
- Generally simple interface
- Icom 8-pin octal mic plug includes receiver audio
- Typical used price: $400

Popular Radio: FT-991 (non-A older)

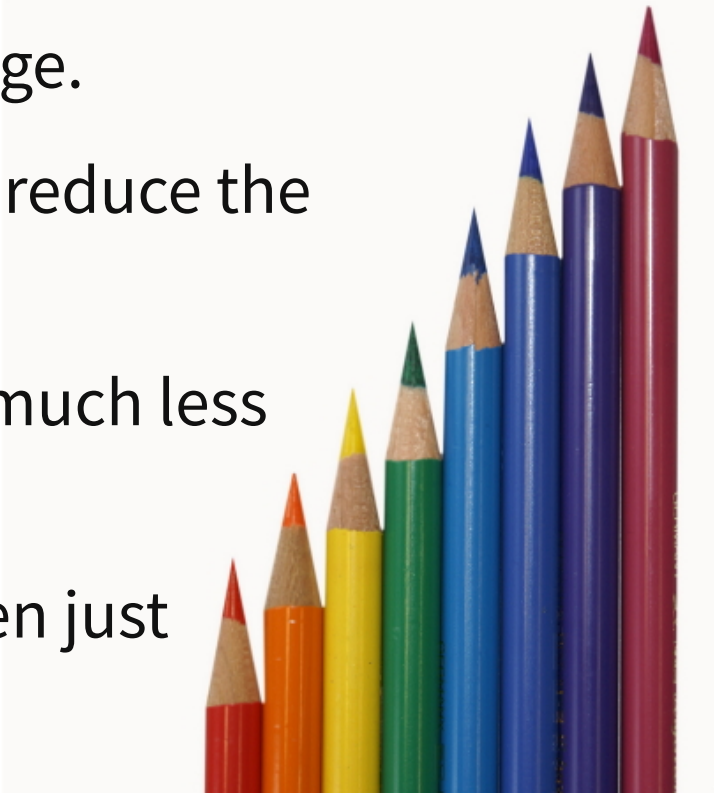
- 2015: 100W 80-10
- 50W 2m/70cm
- “**shack in a box**” all mode radio for HF/VHF/UHF
- Non-A lacks improved spectrum analyzer (not really “real-time”)
- Includes **antenna tuner**!
- Typical used price: $500-600

Kenwood TS-590S (non G) used

- 2010-2014
- 100W HF/50MHz transceiver with DSP audio
- 500Hz/2.7kHz filters
- Internal auto **antenna tuner**
- Typical used price $800
- (Consider ICOM 7300 as competitor)

12V (13.8) Power Supply

- Generally need about 25A for a 100W transceiver.
- 15A for most VHF/UHF mobile units
- MFJ, SAMLEX, Alinco, Kenwood and others have supplies. (MFJ out of business)
- Prices went up up up a couple years ago.
- Used supplies often available. Check voltage.
- Ham supplies usually include FILTERING to reduce the noise form switching systems.
- Older (heavier, $$$) analog supplies make much less noise.
- One alternative is to use a BATTERY and then just recharge it between –- works well!



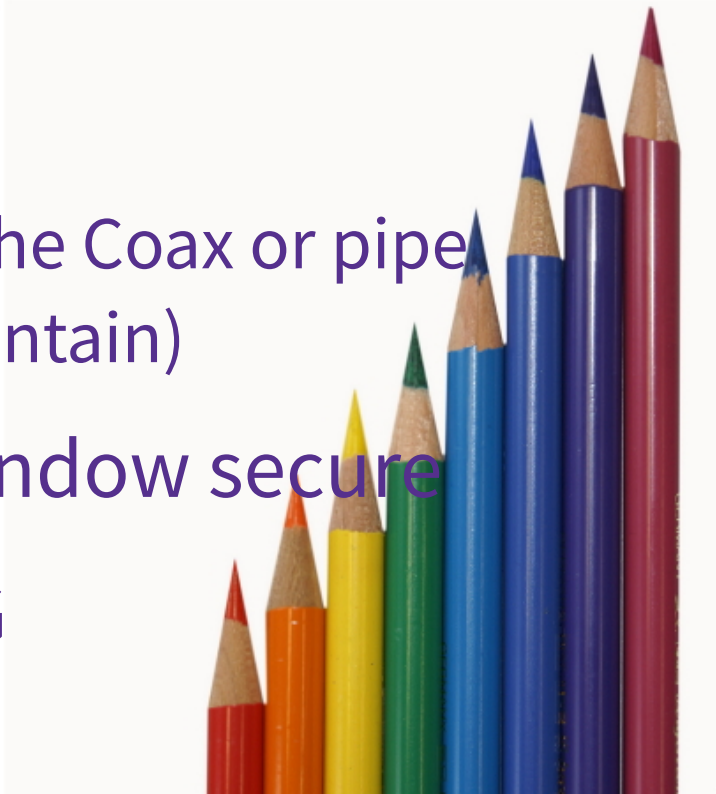
HOA and Apartment Antennas

- See comprehensive talk from 2018
- https://www.nf4rc.club/how-to-docs/antennas/658-2/

GETTING COAX OUT OF HOUSE

Popular Window Pass Thru

- All of these are quite easy
  1) 1x4” wood with 5/8” holes for bulkhead SO-239 pass thru’s (or other items)
  2) Similar with PVC instead of wood
  3) Home-made versions of same
  4) “Pool-Noodles” with slit to pass the Coax or pipe insulation (I use this in Black Mountain)
- Dowel rod or clamps to keep window secure
- MARCH LAB N LUNCH BUILDING



Site Menu

WINDOW ANT FEEDTHRU, BASIC PANEL,

13.6V ADJ, MTR,BC

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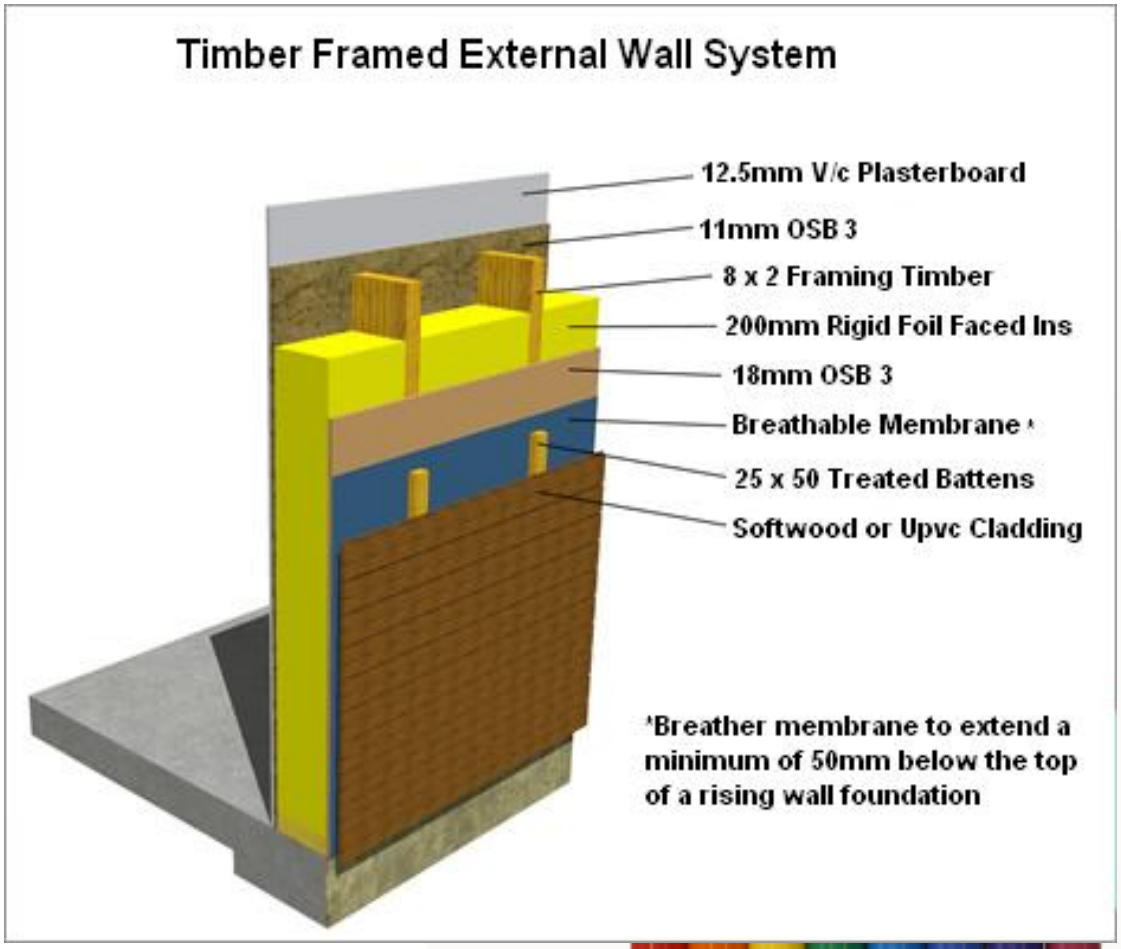
CLOSE ✕

What's in a WALL? Getting the transmission line out of the house

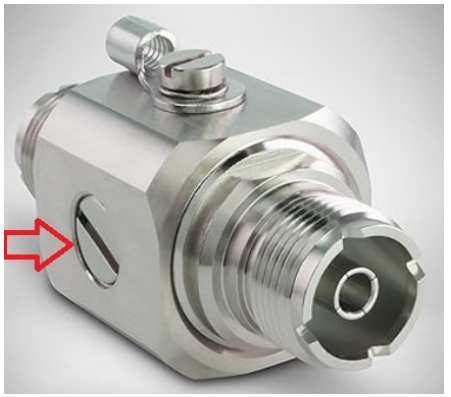
- Frame home egress is easy: drill a hole with a LONG drill bit (so the holes line up) then pass a coat hanger stiff wire and work up to trans-mission line.
- Drip loop outside!
- Caulk with waterproof caulk
- Easiest up HIGH just under the overhang (covered)



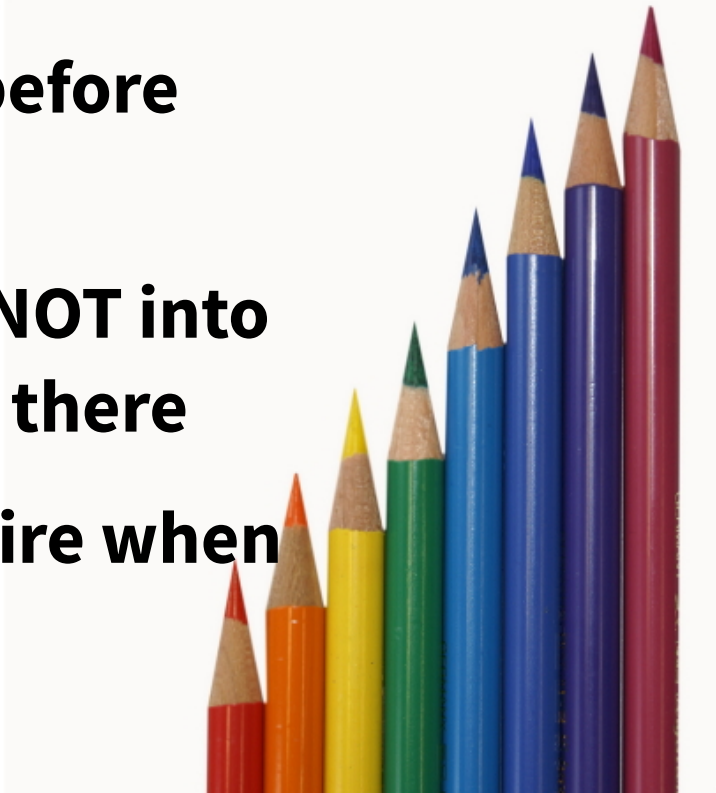
Easy Siding PassThrough

- Use only **minimal drill** to pass COAX (1/4-3/8”)
- Mount small BOX on siding (screws) with either
  1) SO239 connector (solder coax with very short leads—exact same as we did for the homebrew baluns) OR use
  2) bulkhead thru connector and put PL259 on coax to connect (preferred for VHF/UHF)
- Mount small BOX on interior wall (screws) with similar construction.
- All can be **removed and covered** easily later on
- We will build these @ LabNLunch.

Lightning Protection



- **Used to be expensive – now easy $20.**
- **All use Gas Discharge Tubes . Inexpensive models on Amazon, replaceable "buttons" of GDT ($3)**
- **Put on the outside of your house, just before entry.**
- **Drive ground rod 6 feet (home depot) (NOT into water pipe or foundation, please) right there**
- **Tap-Tap-Tap with mallet….clamp for wire when done.**
- **Connect with heavy straight wire**



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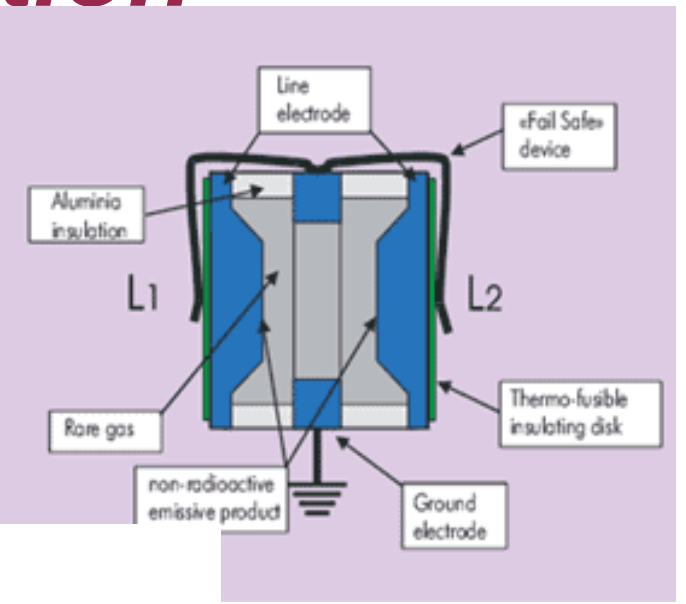

Make your own for $3.

Nice copper-coated STEEL ground rods are in abundance at home depot....
generaly use CLAMPs rather than soldered connections for grounding syste...
avoids melting of solder by lightning. Clamps are at Home Depot/Lowes,

http://www.arrl.org/files/file/QST/This%20Month%20in%20QST/June2017/Chusid-Morgan.pdf