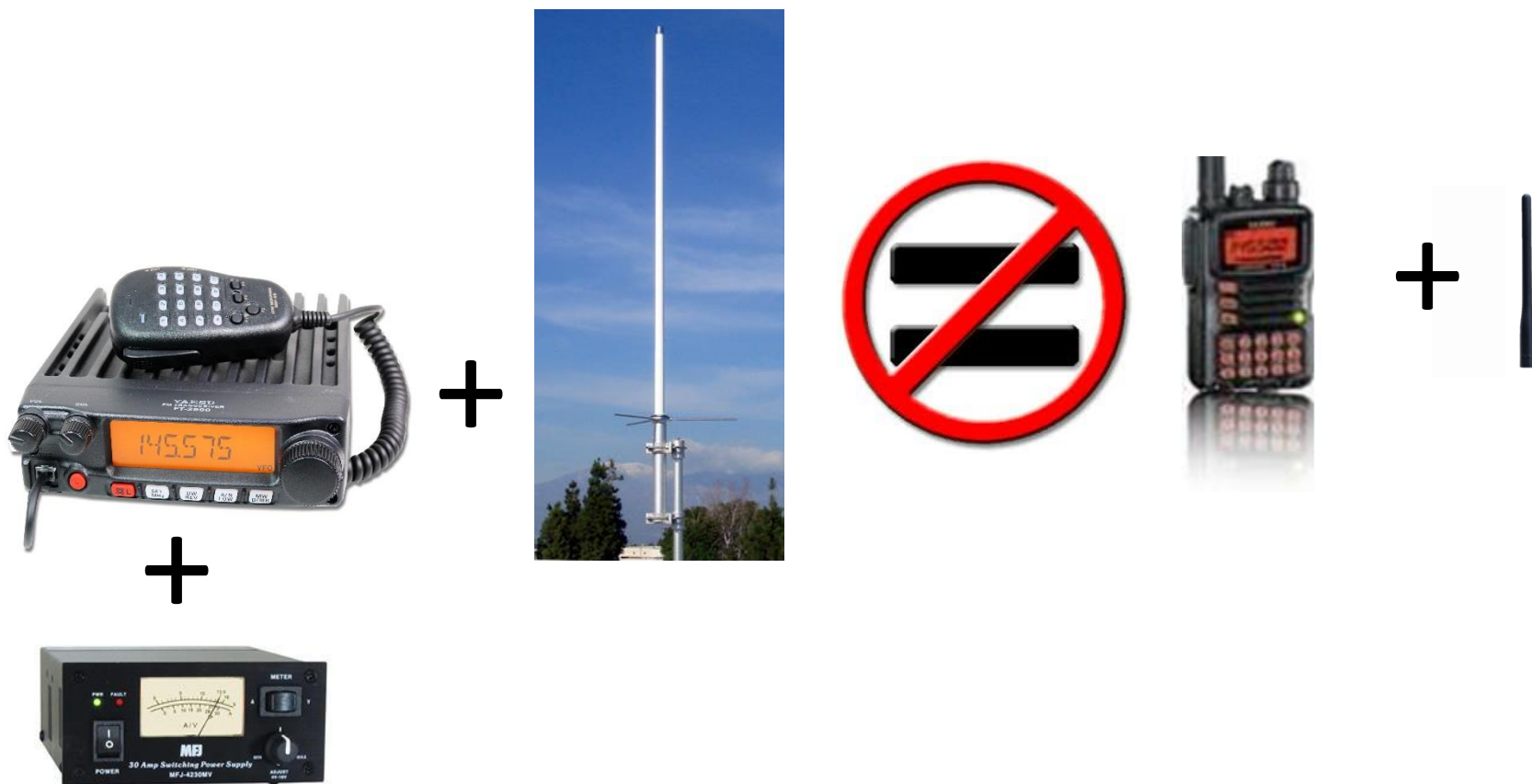


# Why an HT should not be your first radio





# Why your first radio should NOT be an HT

- We want you to have a positive experience when you first get on the air so that you keep doing it
- Imagine if you set up your HT and can bring up the repeater and you can hear people talking on it
- But no matter what you do, no one answers you or everyone tells you your signal is poor
- How long would you keep trying?



# Why your first radio should NOT be an HT

- Although you can bring up the repeater and you can hear people talking, you may not be getting enough signal to the repeater for it to repeat your voice transmissions
- This is disappointing, frustrating and demoralizing
- Why is this happening?
  - HT does not have enough transmit power
  - HT has a very poor antenna (short duckie antennas are really dummy loads)
  - Hand held antenna is too low





# Why your first radio should NOT be an HT

- The fastest answer is replace the factory antenna with one that is 19" long



- A better answer is to:

- Use your HT with a mobile or base antenna placed as high as you can and in a location that has line-of-sight to the repeater you want to use

- You can use an adapter to connect the coax from this antenna to your HT
- This may give you good service as long as you are line-of-sight to the repeater





# Why your first radio should NOT be an HT

- The best answer is to:
  - Use a mobile\* transceiver either in your house or car
    - Transmit power is now 25W or more
  - Use a base or mobile antenna placed as high as you can get it
    - Antenna has some gain, is outside and is placed higher so it gets closer to being line-of-sight

\*All VHF/UHF radios today are called “mobile” because they operate from 12 VDC and are small enough to mount in your car. For use in your house you add a 12V power supply

# HT Antennas



Short "Duckie" antennas are very bad performers  
The distance they can cover is short



Baofeng radios need  
an antenna with a  
male SMA



Use an adapter if you have  
an antenna with a female  
SMA

Get a replacement that is a  $\frac{1}{4}$   
wavelength (19" on 2m)



This adapter will let you connect to  
a mobile or base antenna that uses  
PL-259s



# Base Operation

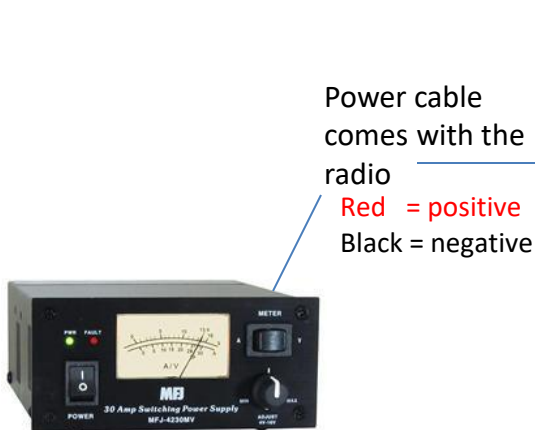
- For base operation, you need:
  - A 2m FM “mobile” radio, at least 25Watts output
  - A 12V  $\geq$  10A power supply
  - Low loss coax
  - An outside antenna & mount

Comet  
Diamond  
Cushcraft  
MFJ  
Homebrew



Mount to a pipe, fascia, roof truss, ...

The antenna can be inside the attic or house



Astron  
MFJ  
Samlex

Power cable comes with the radio  
Red = positive  
Black = negative



Icom  
Kenwood  
Yaesu  
Alinco  
TYT?



Coax  
RG-213  
RG-8  
RG-8x

# Mobile Operation

- For mobile operation, you need:
  - A 2m FM “mobile” radio,  
at least 25Watts output
  - Mobile antenna
  - Antenna mount



Car battery provides the power

Power cable comes with the radio  
Red = positive  
Black = negative



Icom  
Kenwood  
Yaesu  
Alinco  
TYT?

Coax comes with the mount

Comet  
Diamond  
Cushcraft  
MFJ



Means to mount antenna to car – magnetic mounts are popular