



# FOX HUNTING

JOSHUA CARMACK (N4JHC)

- WHAT IS FOX HUNTING?
- WHY DO WE FOX HUNT?
- HOW DO WE FOX HUNT?
- DEMONSTRATIONS

# WHAT IS FOX HUNTING?

TRANSMITTER HUNTING  
T-HUNTING  
DIRECTION FINDING

# WHAT IS FOX HUNTING?

TRANSMITTER HUNTING  
T-HUNTING  
DIRECTION FINDING

GEOCACHING  
RADIO HIDE AND SEEK

# WHAT IS FOX HUNTING?

1. SOMEONE HIDES (FOX)
2. FOXES TRANSMIT
3. EVERYONE FINDS IT

# WHAT IS FOX HUNTING?

- WITHIN KINGSPORT CITY LIMITS
  - WIDER FOX HUNTS SOON
- PUBLICLY ACCESSIBLE PROPERTY
- COORDINATION ON 146.970
- CHECK-INS AT 2:45
- 3:00 PM TRANSMITTERS START
- HINTS ARE GIVEN
- WRAP UP BY 5:00 PM
- WINNER HIDES NEXT TIME

# WHAT ARE THE FOXES?

TRANSMITTER  
(USUALLY PROGRAMMABLE)

# WHAT ARE THE FOXES?

TRANSMITTER  
(USUALLY PROGRAMMABLE)

PERSON

# BYONICS FOXES



Baofeng  
5W - 1W  
\$63



MicroFox PicCon  
700mW (0.7W)  
\$126



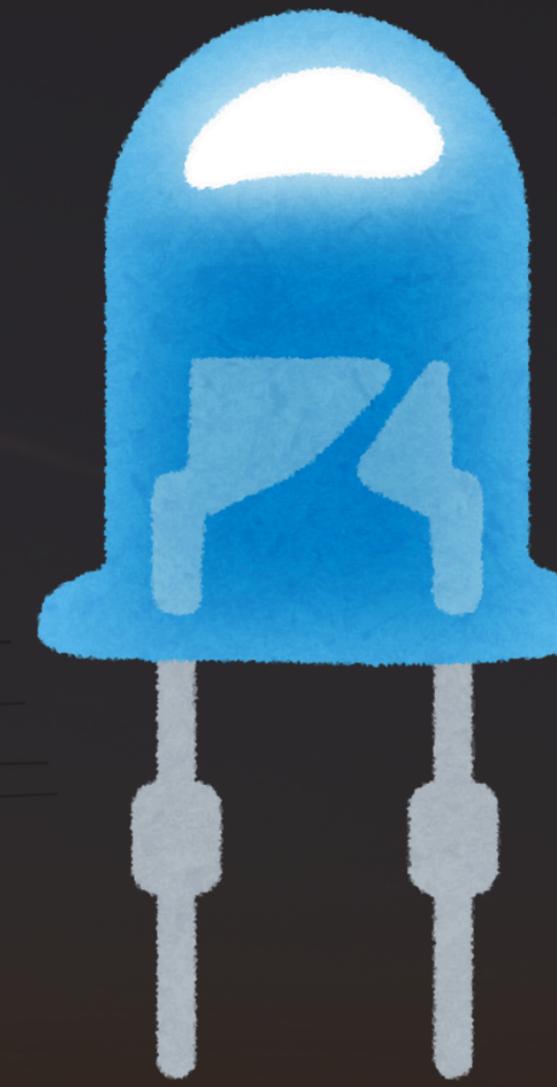
MicroFox 15S  
15mW (0.015W)  
\$130

# BYONICS FOXES



MicroFox 50  
50mW - 0.05mW  
(0.05W - 0.00005W)  
\$130

# POWER

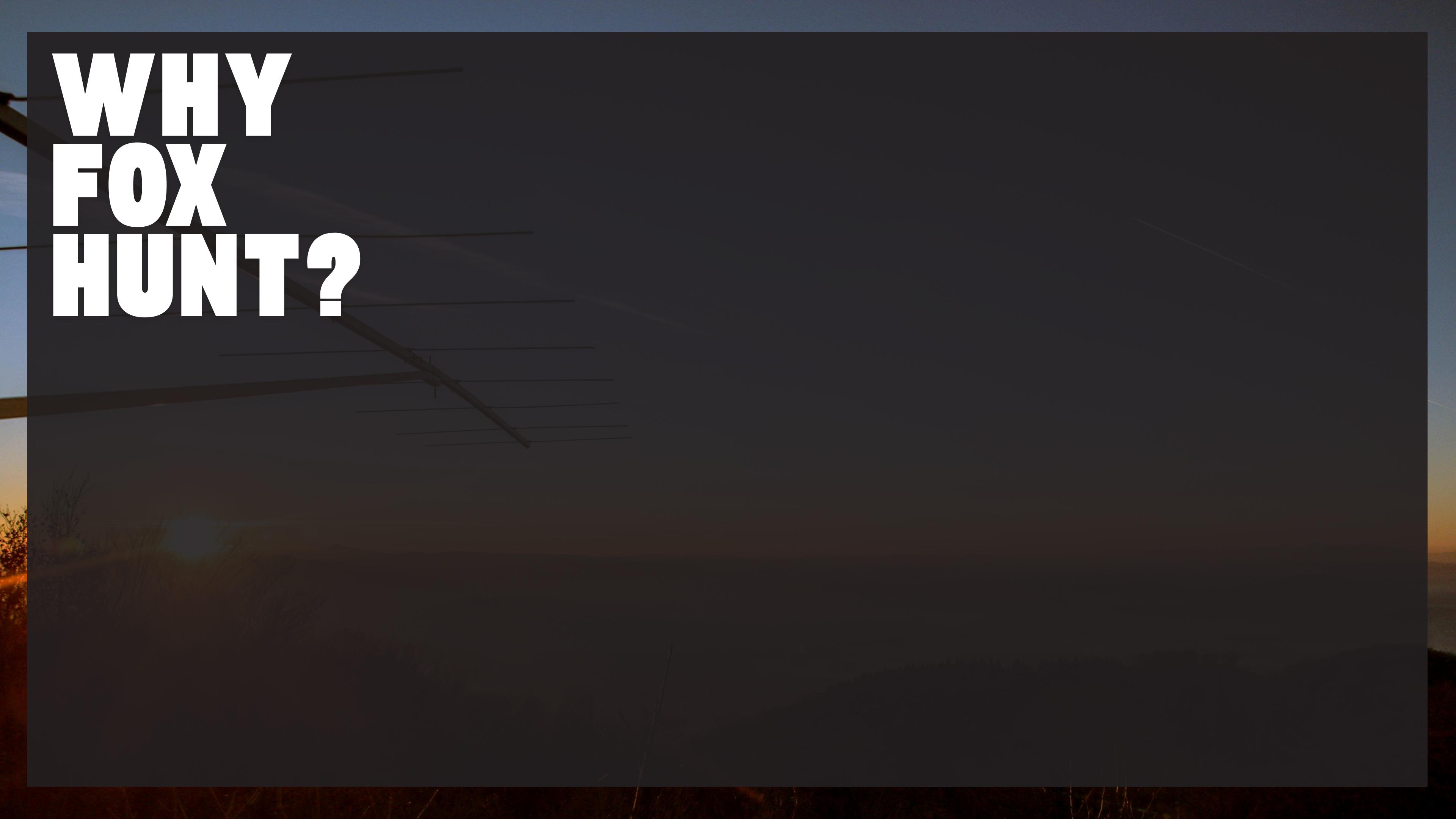


LED Light  
40mW

# BYONICS FOXES

30 SECOND TRANSMIT  
10 SECOND CW ID  
30 SECOND PAUSE

# WHY FOX HUNT?



# WHY FOX HUNT?

# BEAT NEIL



# WHY FOX HUNT?

- DIRECTION FINDING
  - LOST PERSON
  - INTERFERENCE
- COMMUNITY OUTREACH
- FUN
- EASY TO PARTICIPATE

# HOW DO WE FOX HUNT?

- 2M RADIO
- ANTENNA
  - OMNIDIRECTIONAL
  - YAGI
  - LOOP
- ATTENUATORS
- HARMONICS
- MAP

# 2M RADIO



Baofeng



Yaesu FT3D



Yaesu FTM400

# 2M RADIO

## S-Meter



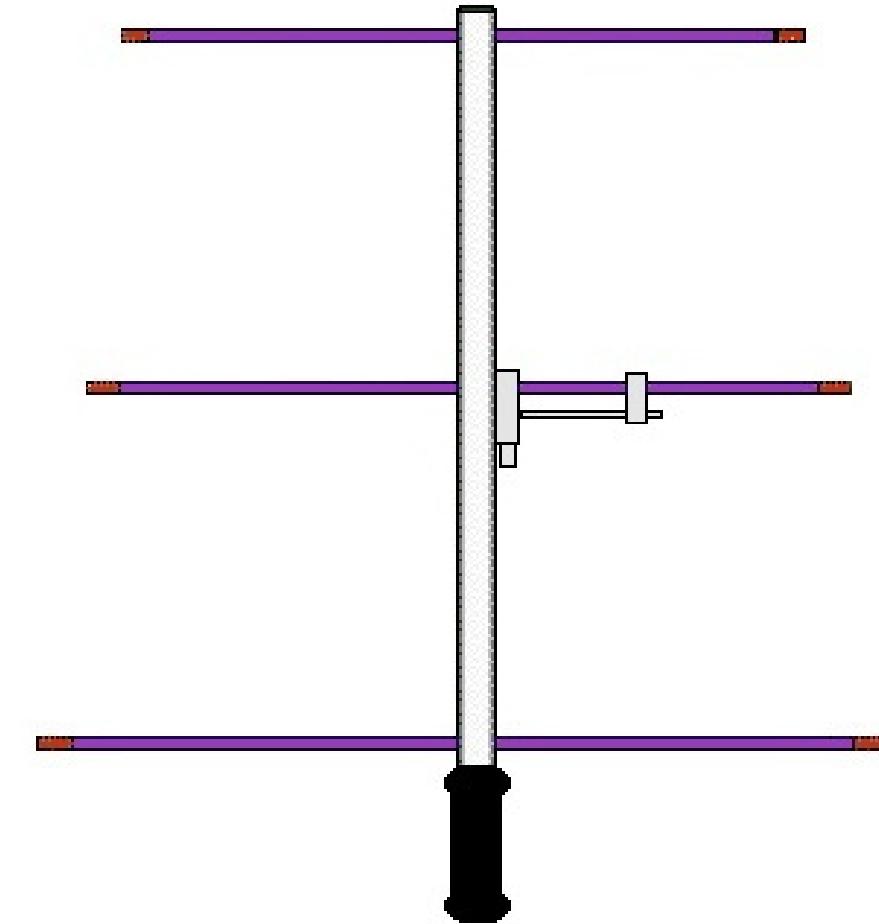
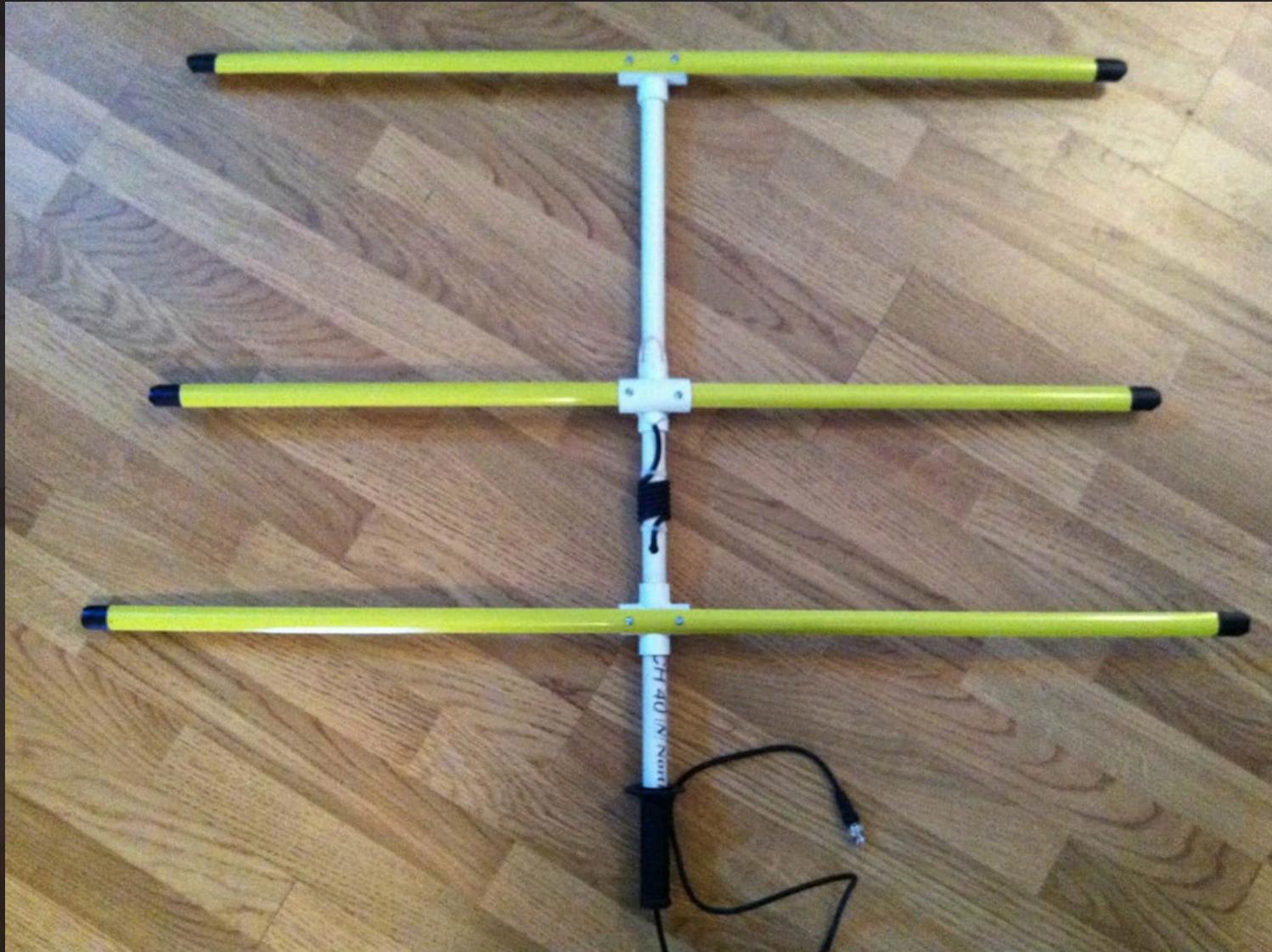
# ANTENNA - OMNI



# ANTENNA - OMNI

- USE YOUR BODY AS A REFLECTOR/SHIELD
- USE NO ANTENNA

# ANTENNA - YAGI

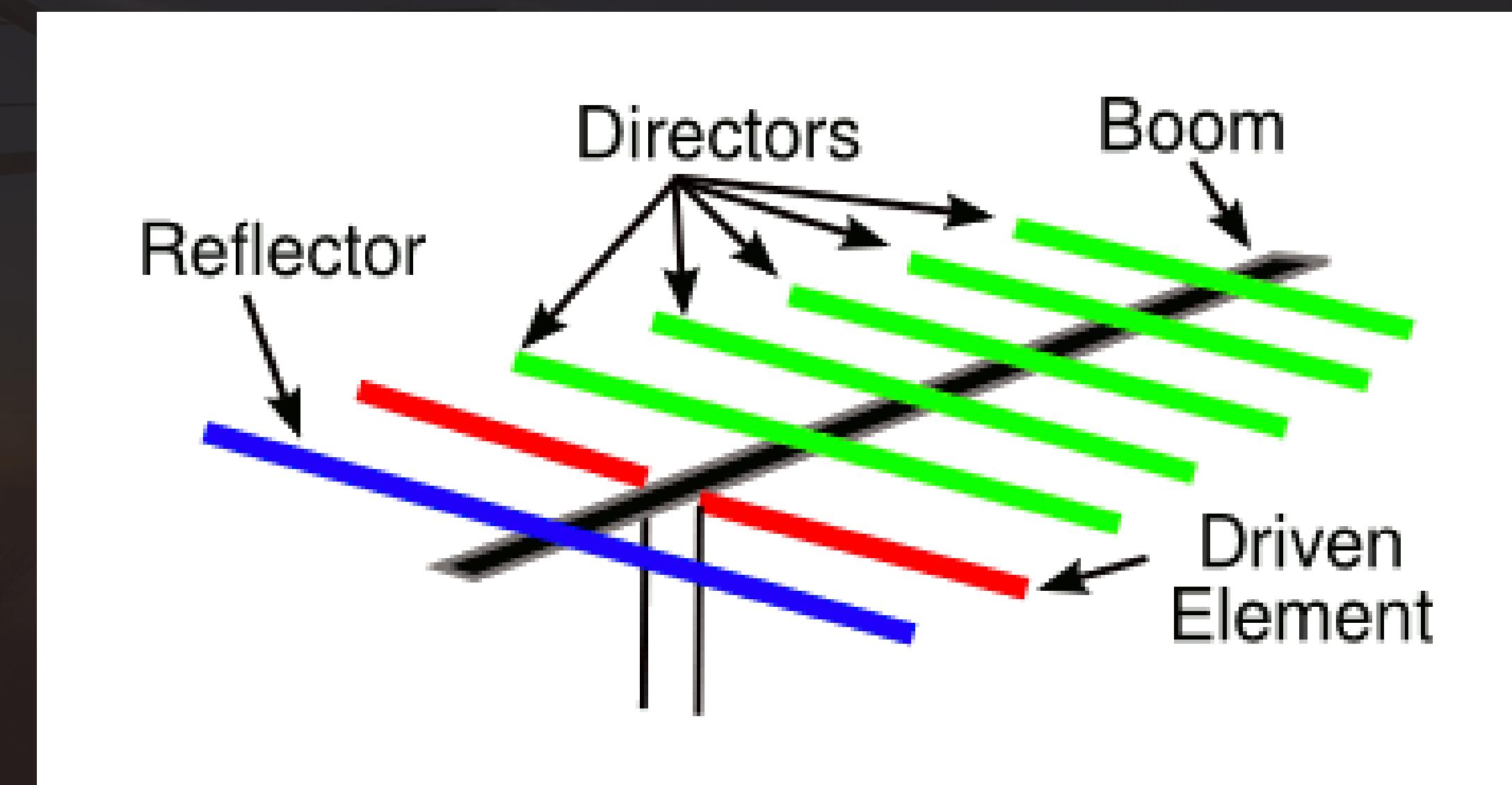


Tape Measure Yagi  
KB9VBR  
[w4trc.org/fox-hunting](http://w4trc.org/fox-hunting)

Arrow Antennas  
Yagi

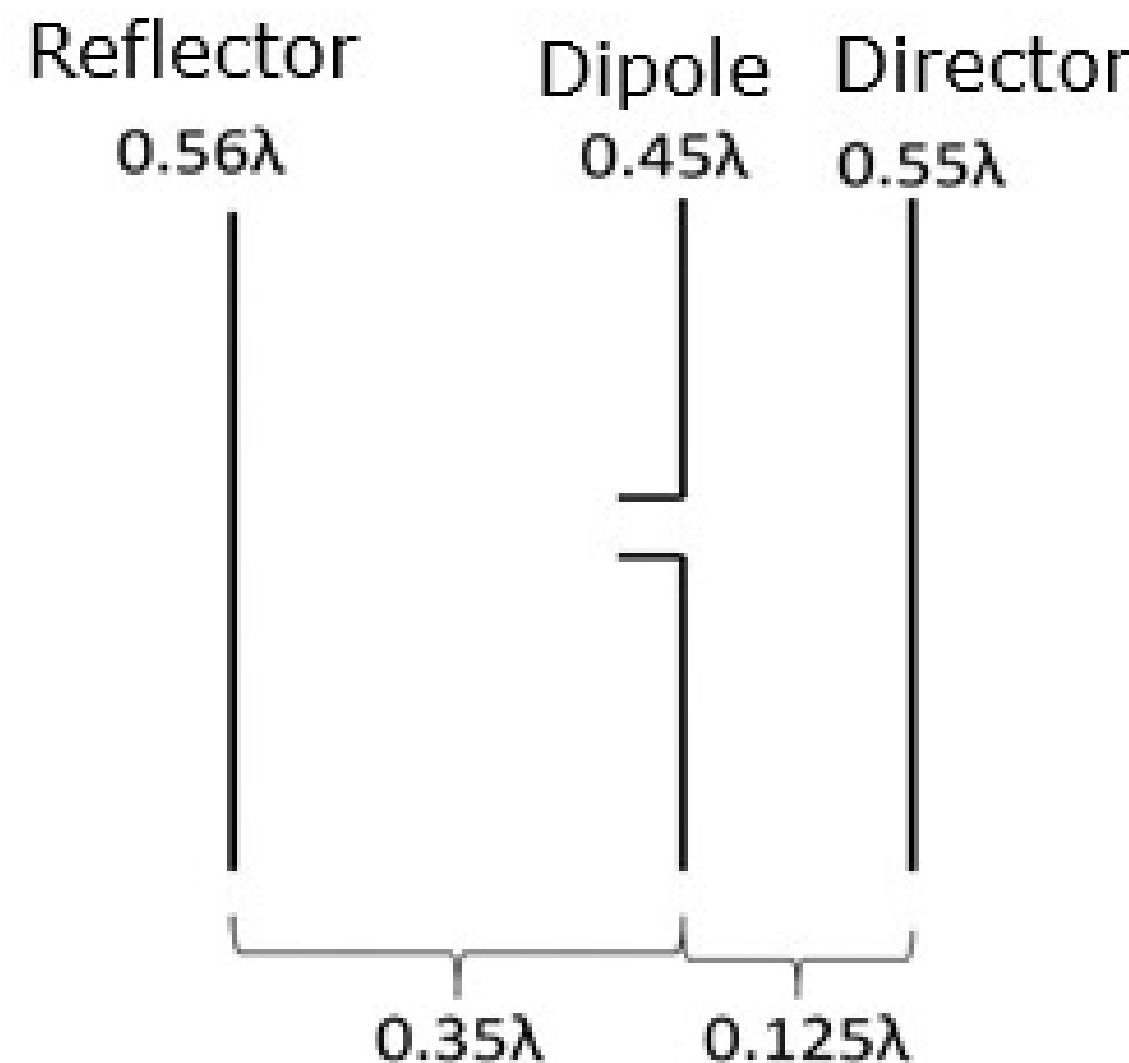
# ANTENNA - YAGI

Yagi-Uda Antenna



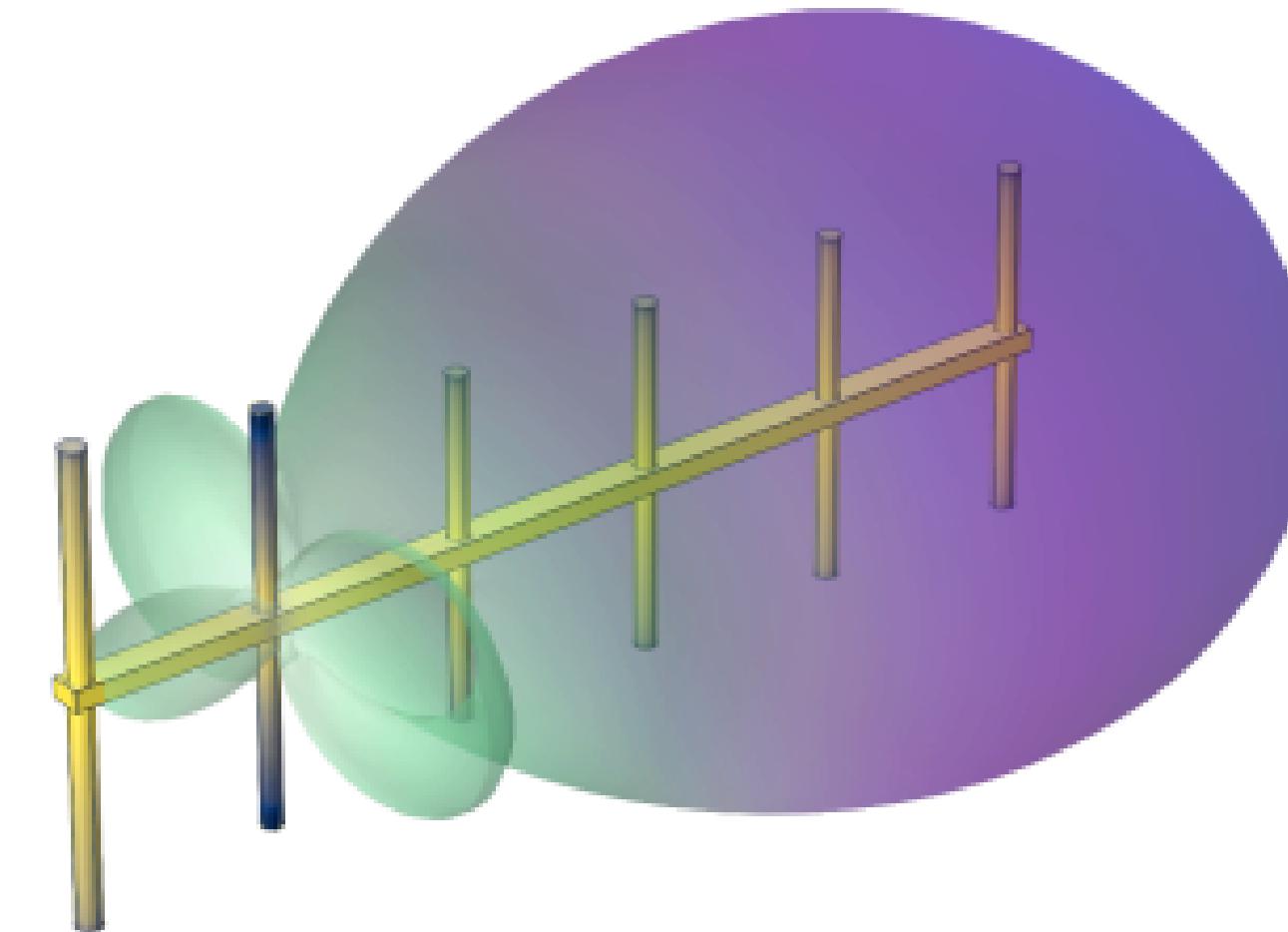
# ANTENNA - YAGI

Yagi-Uda Antenna



# ANTENNA - YAGI

Yagi-Uda Antenna



# ANTENNA - YAGI

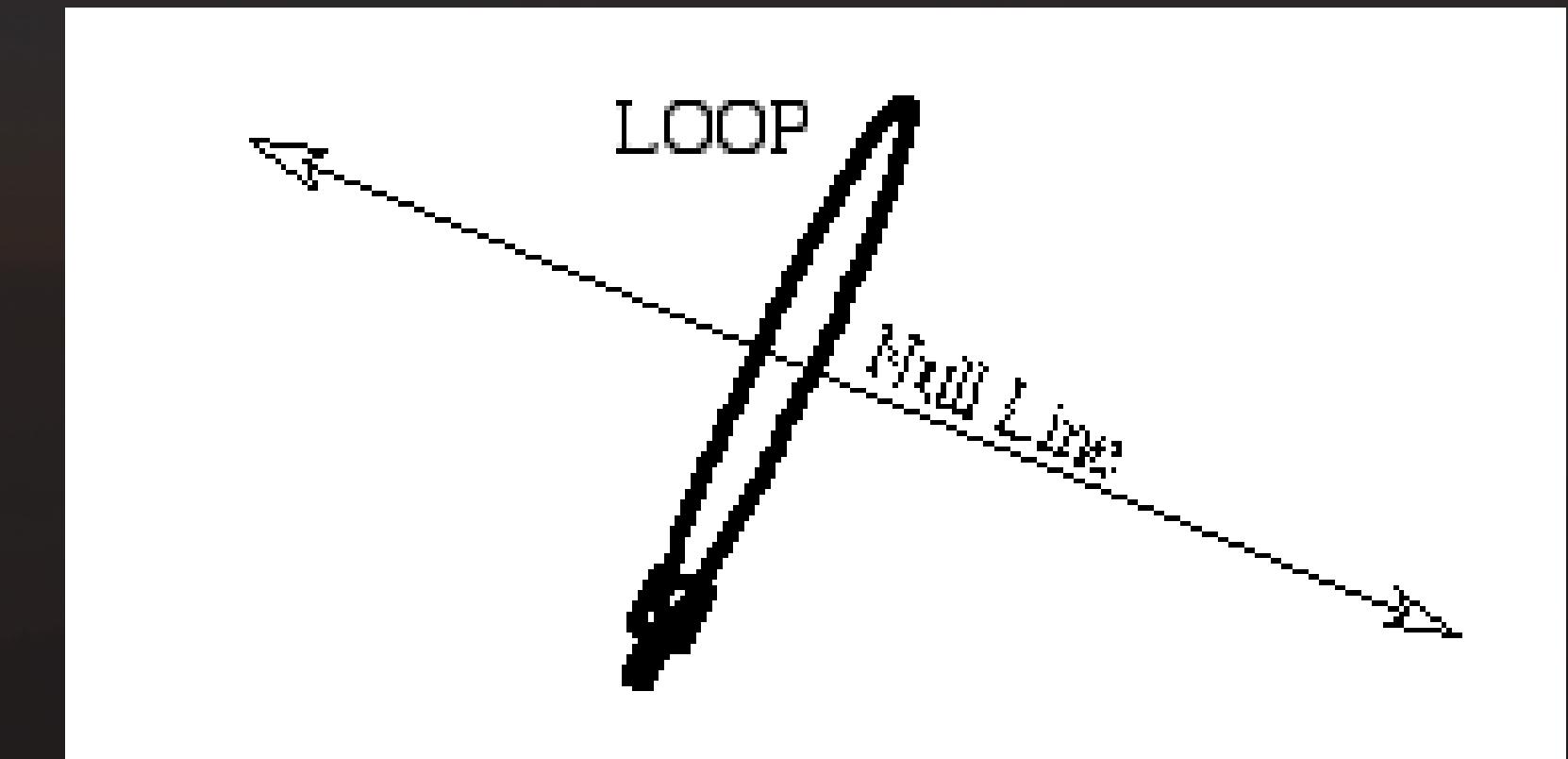


# ANTENNA - LOOP

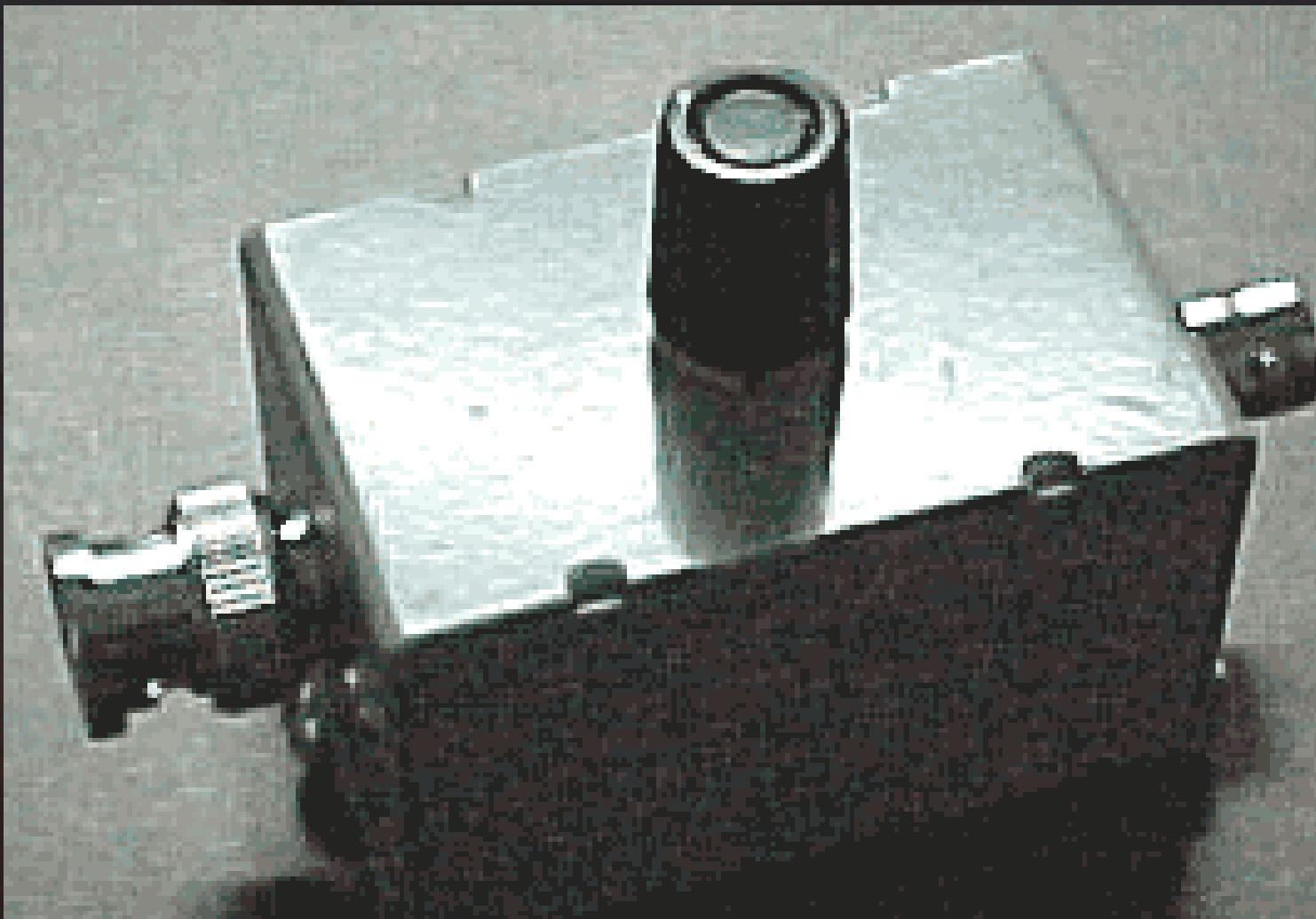


Arrow Antennas  
\$79

- RX ONLY
- USES THE NULL



# ATTENUATORS

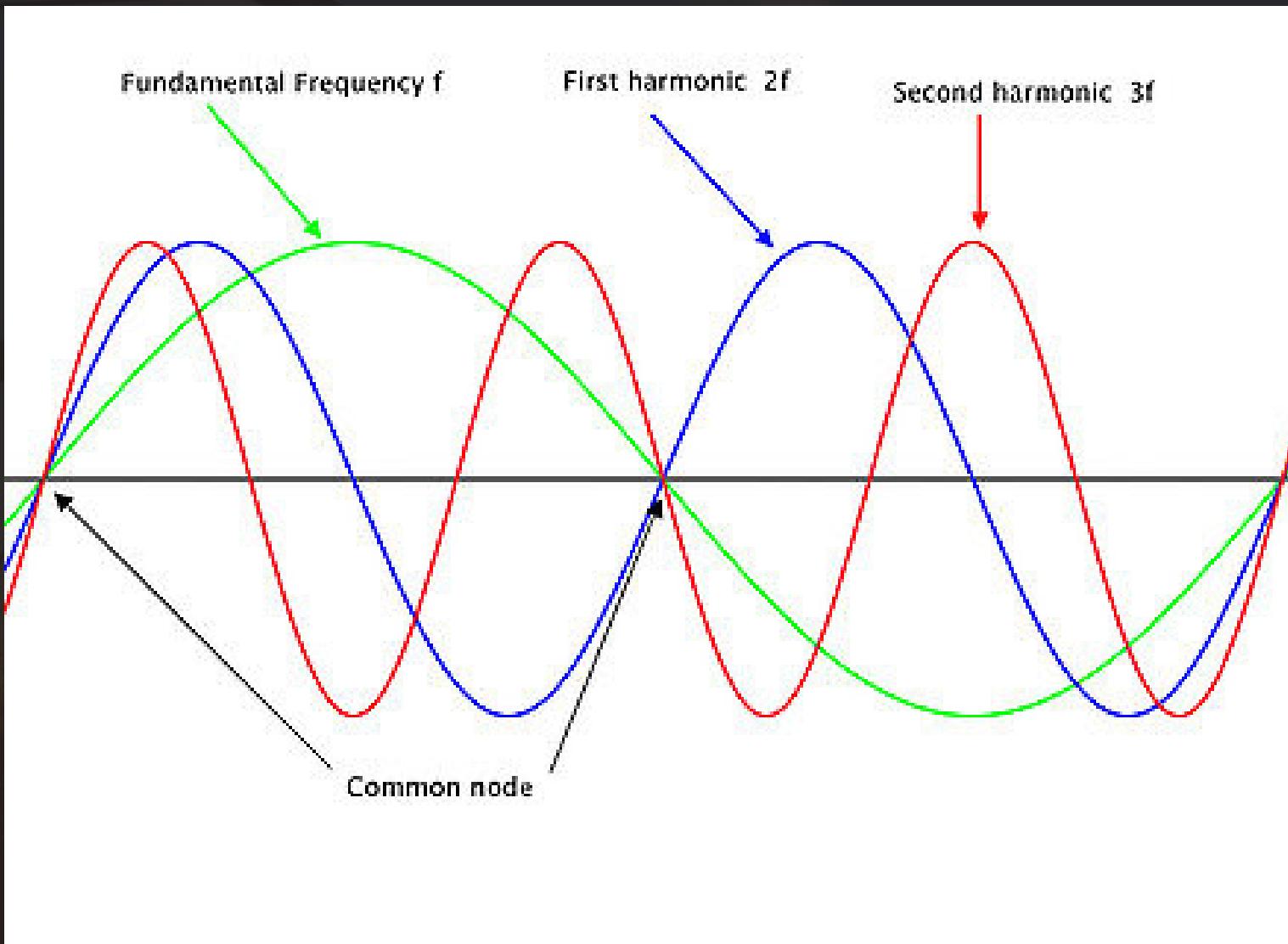


Arrow Antennas  
\$60



RA-1728A Step Attenuator  
\$56

# HARMONICS



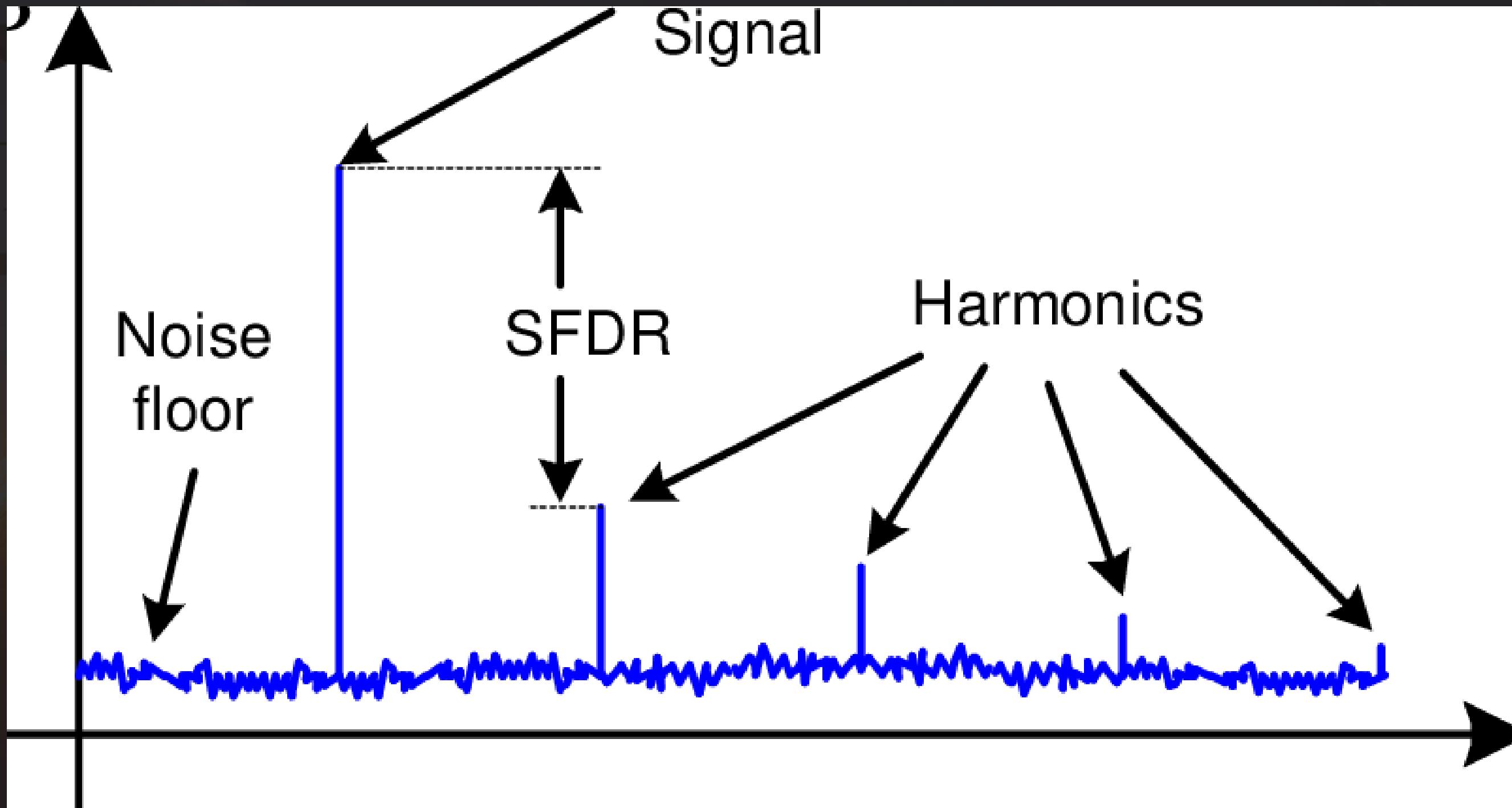
FREQUENCY THAT IS A  
MULTIPLE OF THE FIRST ONE

$$f = 100\text{MHz}$$

$$2f = 200\text{MHz}$$

$$3f = 300\text{MHz}$$

# HARMONICS



# HARMONICS

FOX 1: 146.535 MHZ

3RD HARMONIC: 439.605 MHZ

FOX 2: 146.595 MHZ

3RD HARMONIC: 439.785 MHZ

FOX 3: 147.465 MHZ

3RD HARMONIC: 442.395 MHZ

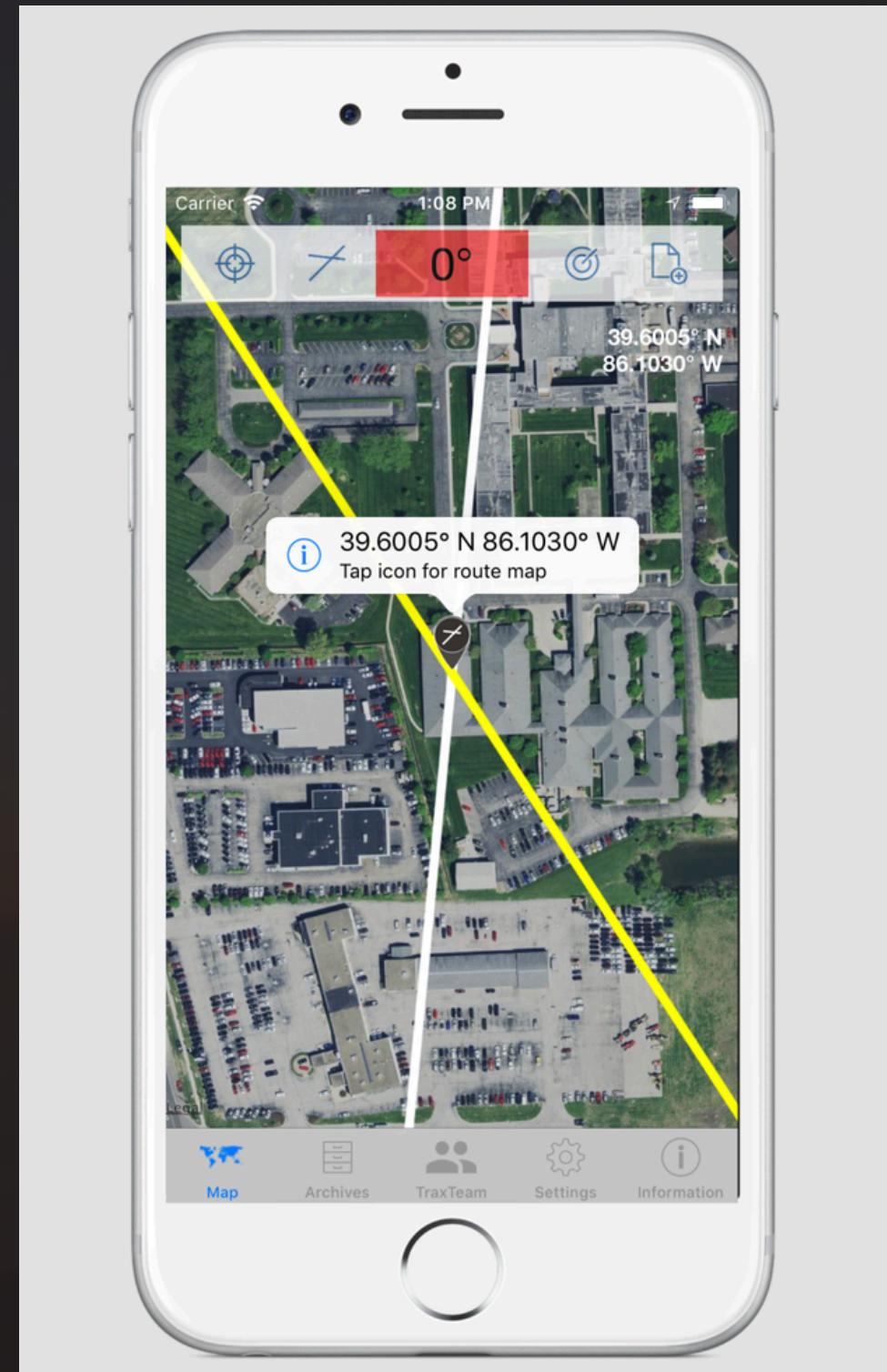
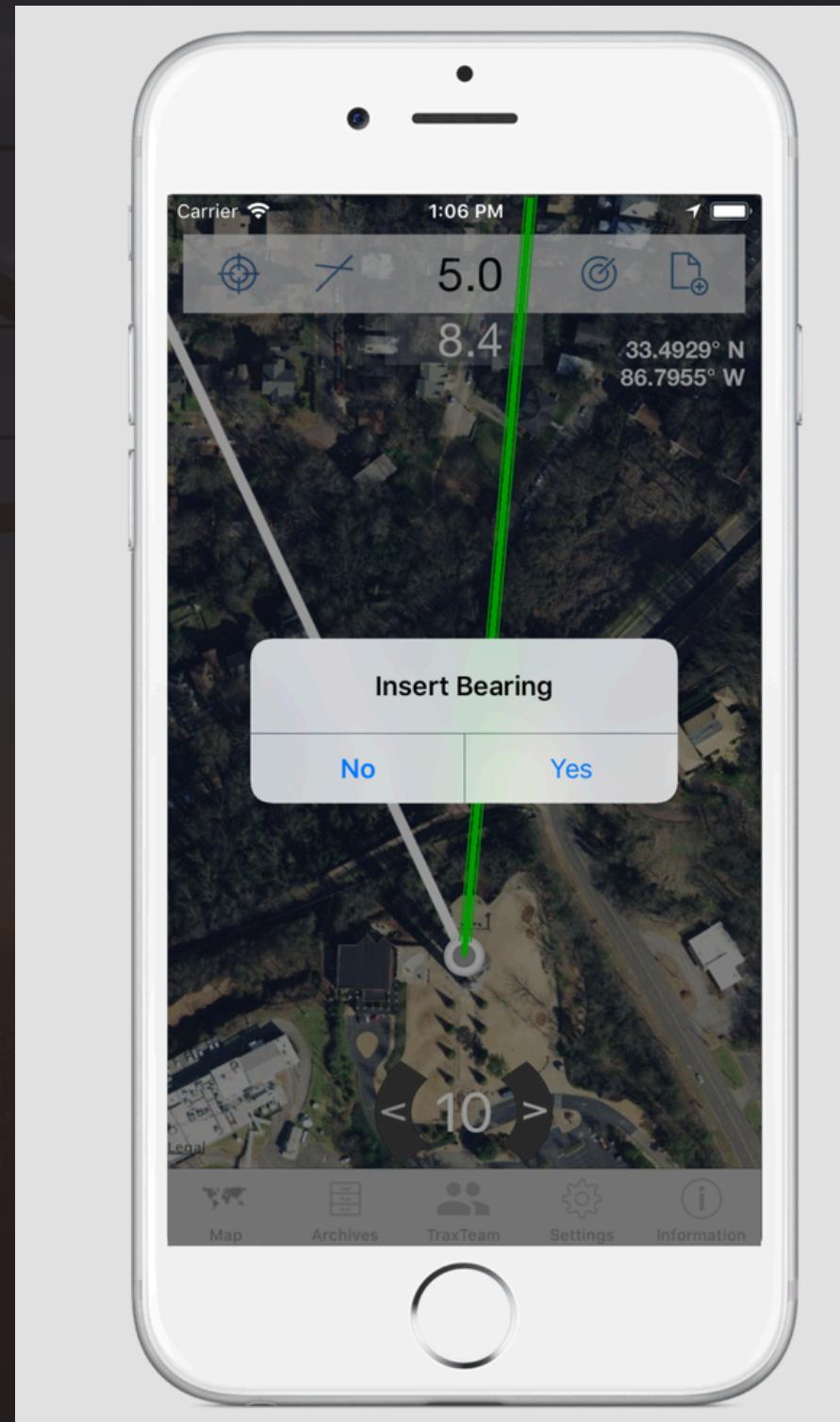
FOX 4: 147.585

3RD HARMONIC: 442.755 MHZ

# MAPS

- PAPER MAPS
- GOOGLE/APPLE MAPS
- GAIA GPS

# MAPS - SIGTRAX



# THINGS TO CONSIDER

- 2M PROPAGATION
- REFLECTIONS
- ALTITUDE DIFFERENCES