

# TACTICAL RADIO OPERATIONS

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WL4B

# Building a Pack Radio

- What is a pack radio









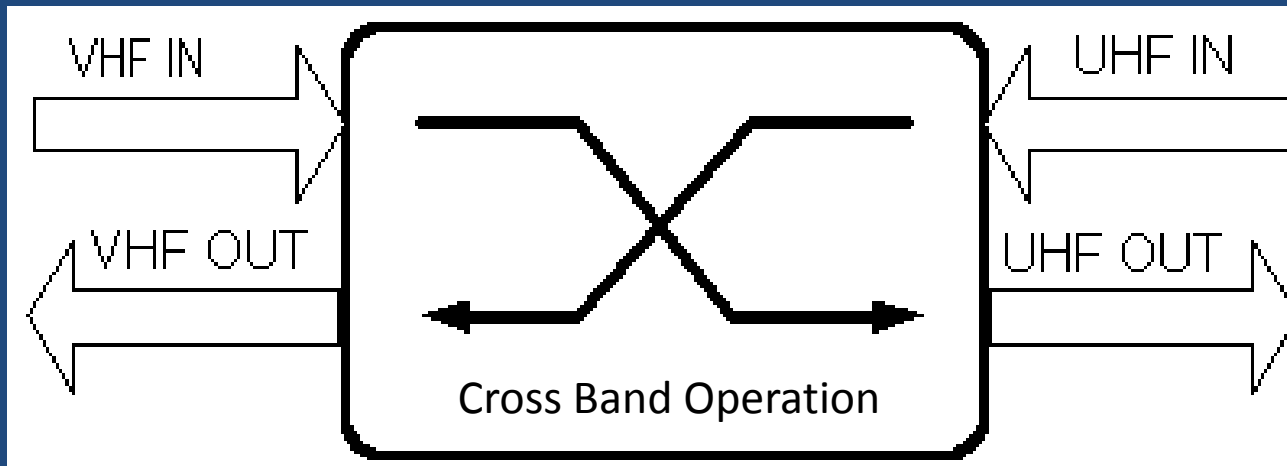


# Building a Pack Radio

- Radio type
- Antenna
- Coax length
- Battery size & type
- Ventilation
- Secure wired connections
- Radio operating instructions
- Channel chart
- Additional space in the bag
- How can you use a pack radio



# Cross-Band Radio



What is Cross Band?

Why use Cross Band?

# Cross-Band Setup

- Who do you need to be able talk to
- What type communications net
- Must use separate bands
- Never link 2 repeaters
- VHF versus UHF
- Make sure freqs are cleared to use

# Cross-Band Setup

- Use different input freqs on multiple CBR's
- Use tones to prevent triggering
- Set radio output power
- 90-5-5
- Keep it simple

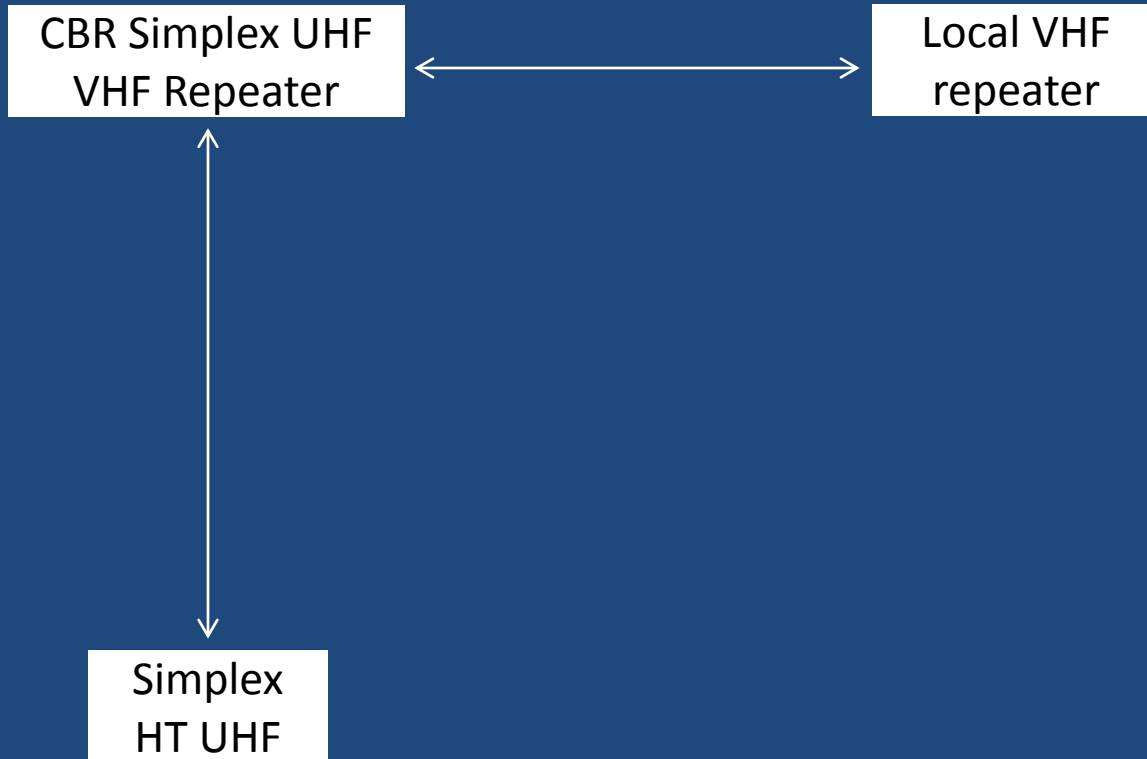
# Cross-Band Operation

- The more system pieces the more delay
- Make sure Net is clear before Tx
- Push and wait 2 seconds to talk
- Repeater hang time

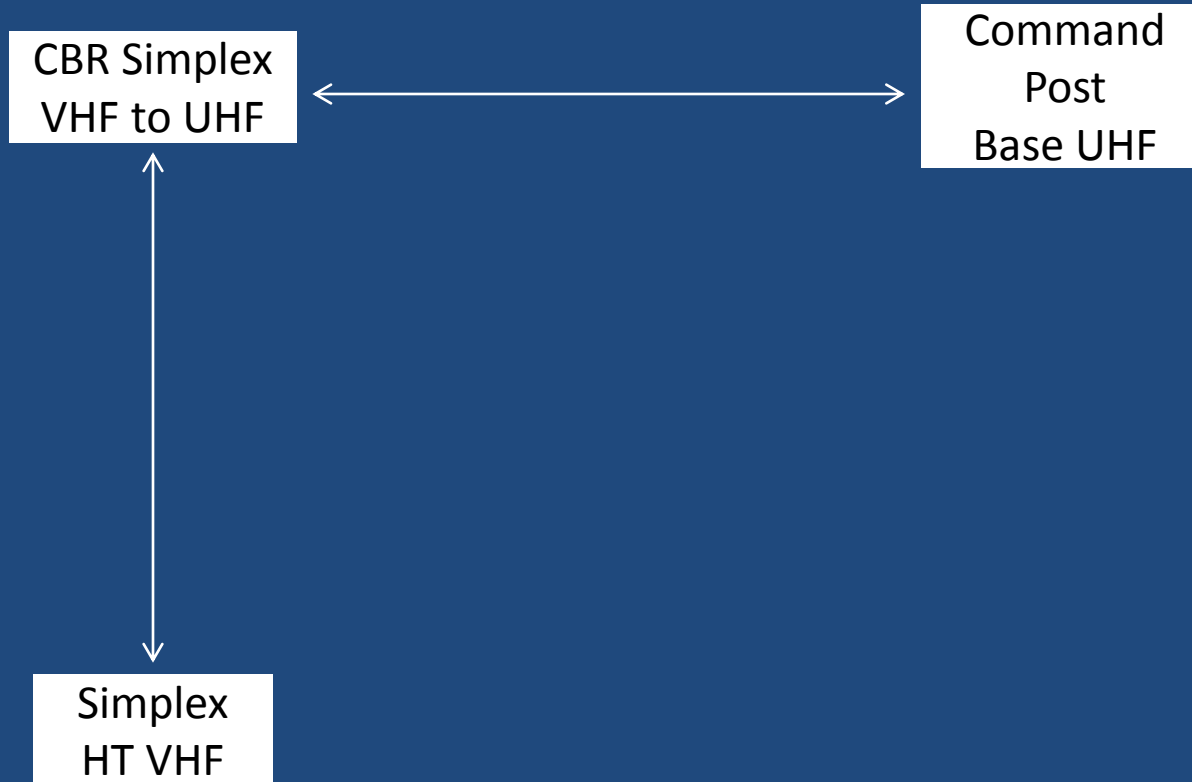
# Cross-Band Operation

- Continuous duty
- Watch for overheating
- HT usage
- Legal issues
- TEST-TEST-TEST before you need it

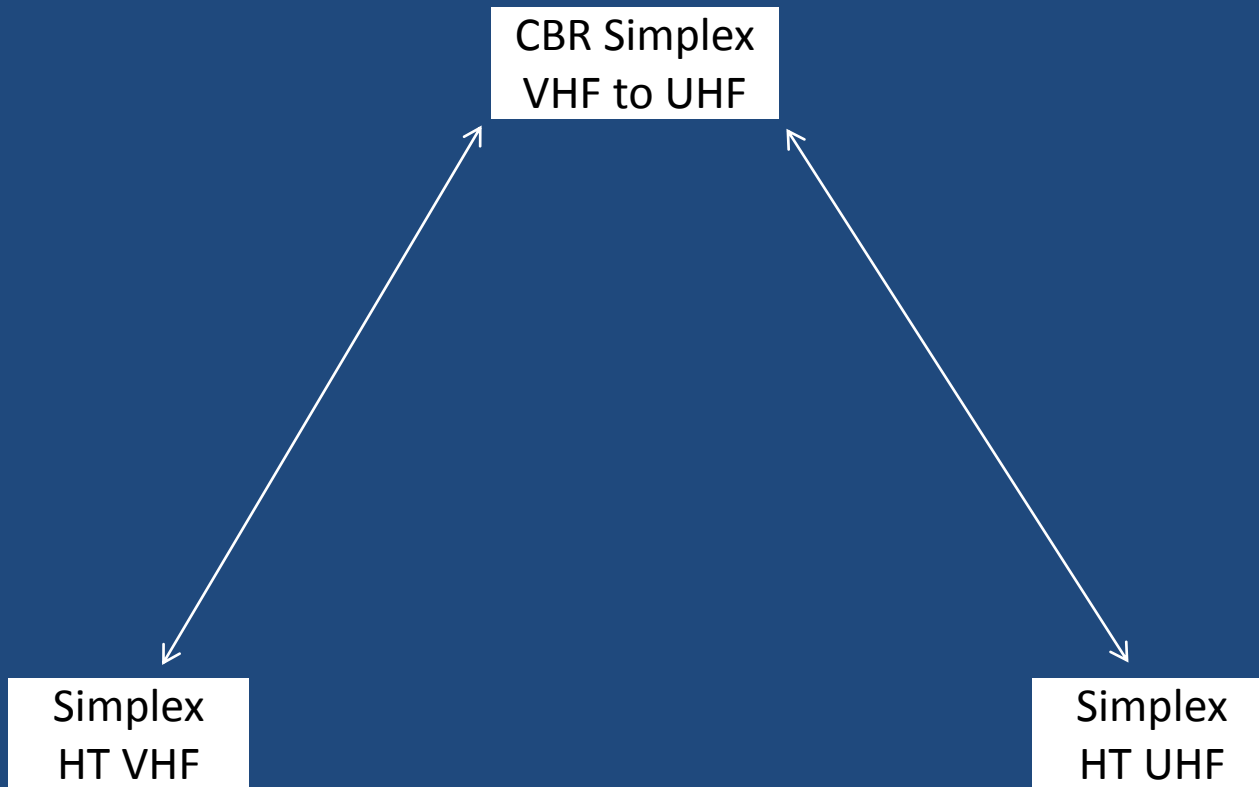
## Linking to a local repeater



## Linking to a Fixed Base

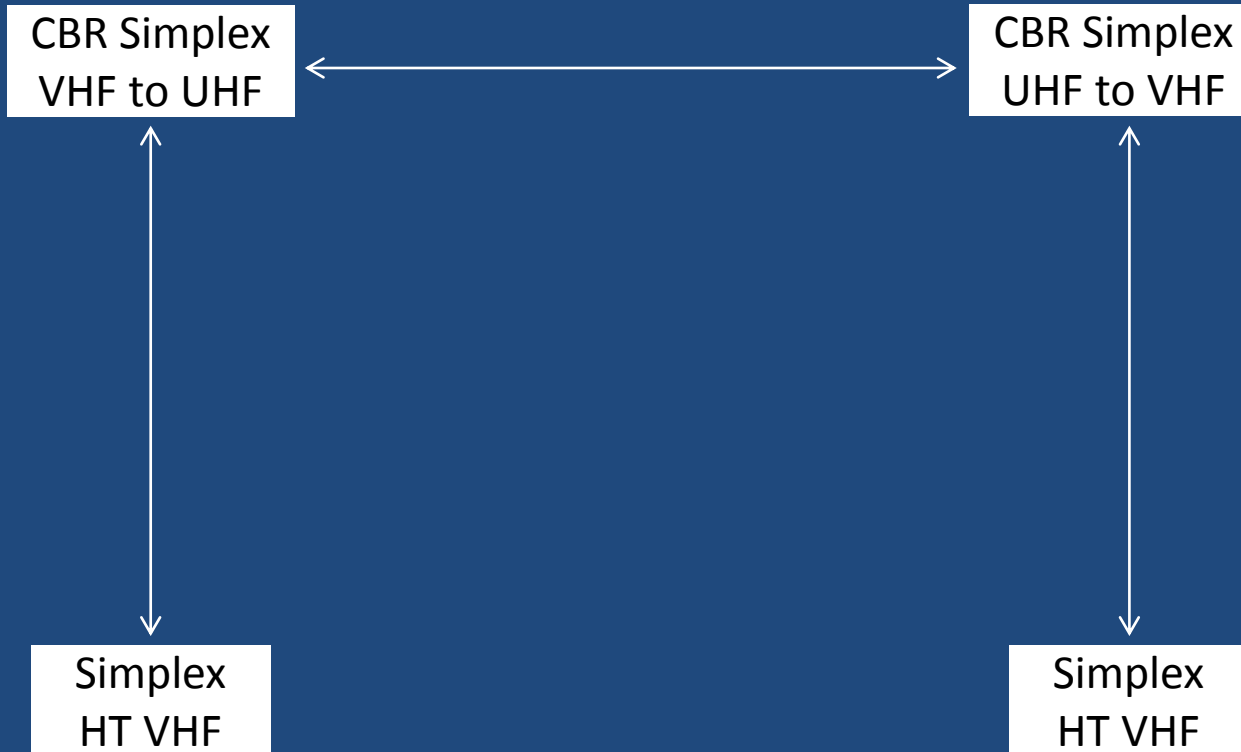


Linking 2 locations such as 2  
search teams with 1 CBR

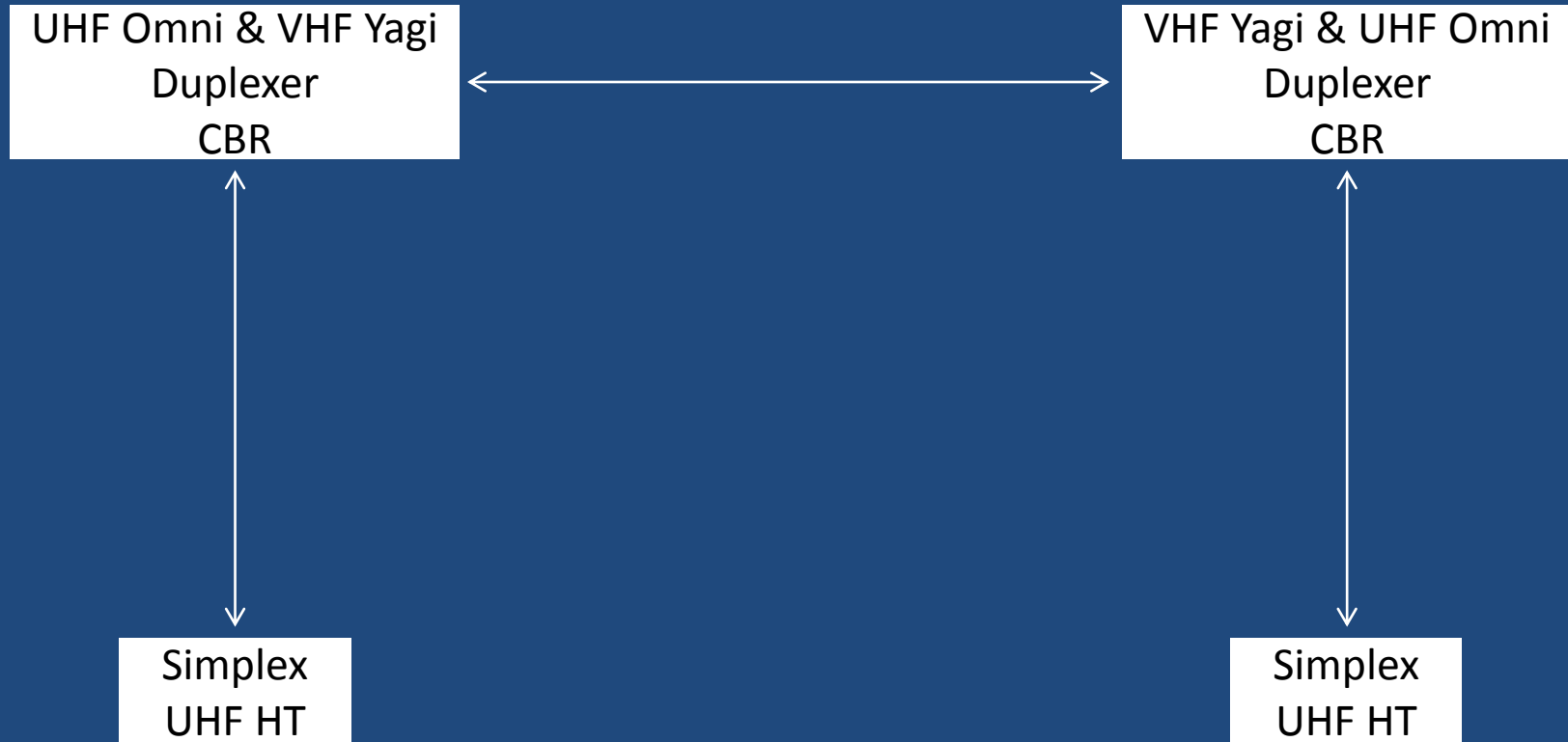




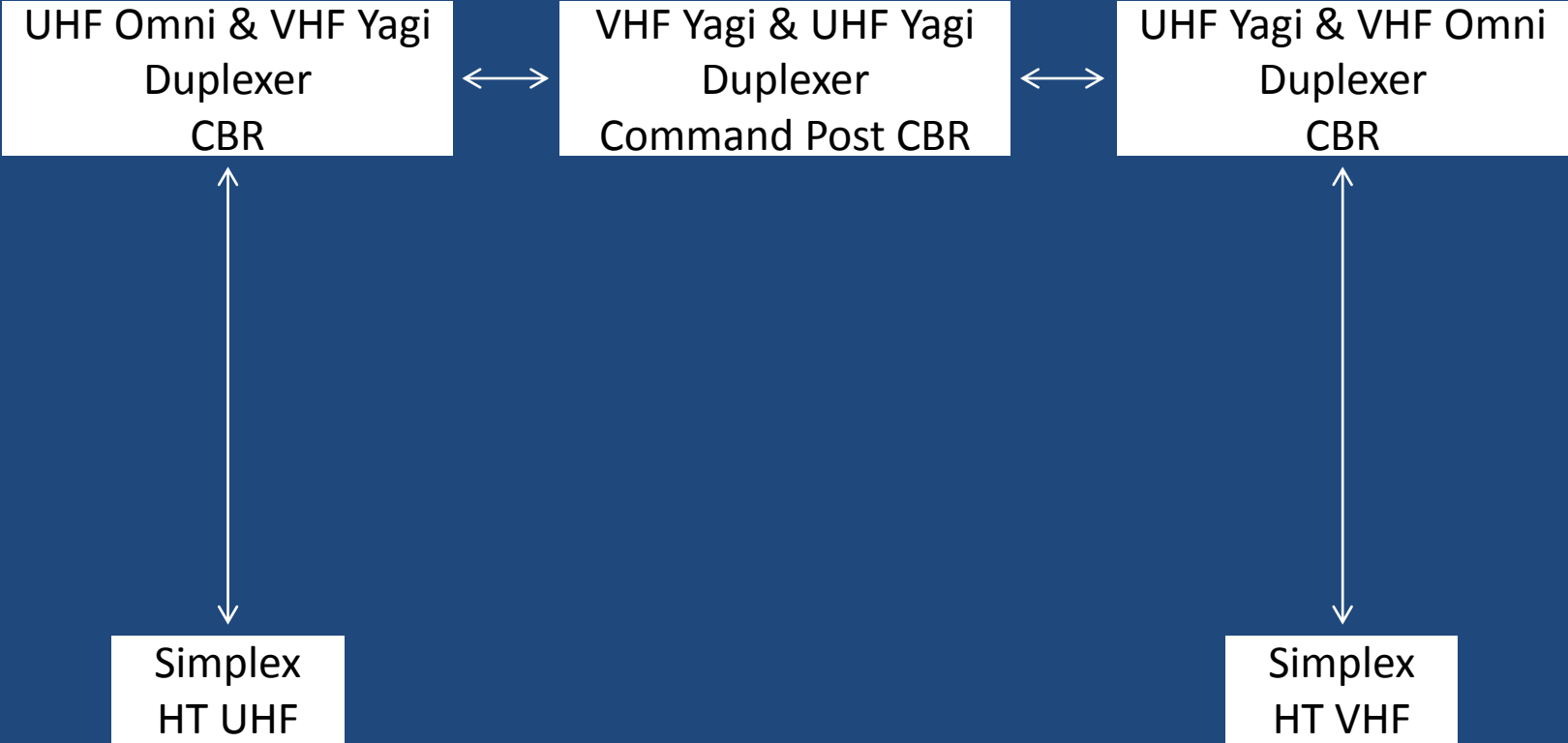
Linking 2 locations with 2 CBR's and  
a single dual-band antenna on each



Linking 2 locations over longer distances with 2 antennas and a duplexer on each CBR



Linking 2 locations to a command post with 2 antennas and a duplexer on each CBR  
Requires 2 VHF & 2 UHF Freqs



Linking 2 locations to a command post with 2 antennas and a duplexer on each CBR  
Requires 2 VHF & 2 UHF Freqs

UHF Omni & VHF Yagi  
Duplexer  
CBR

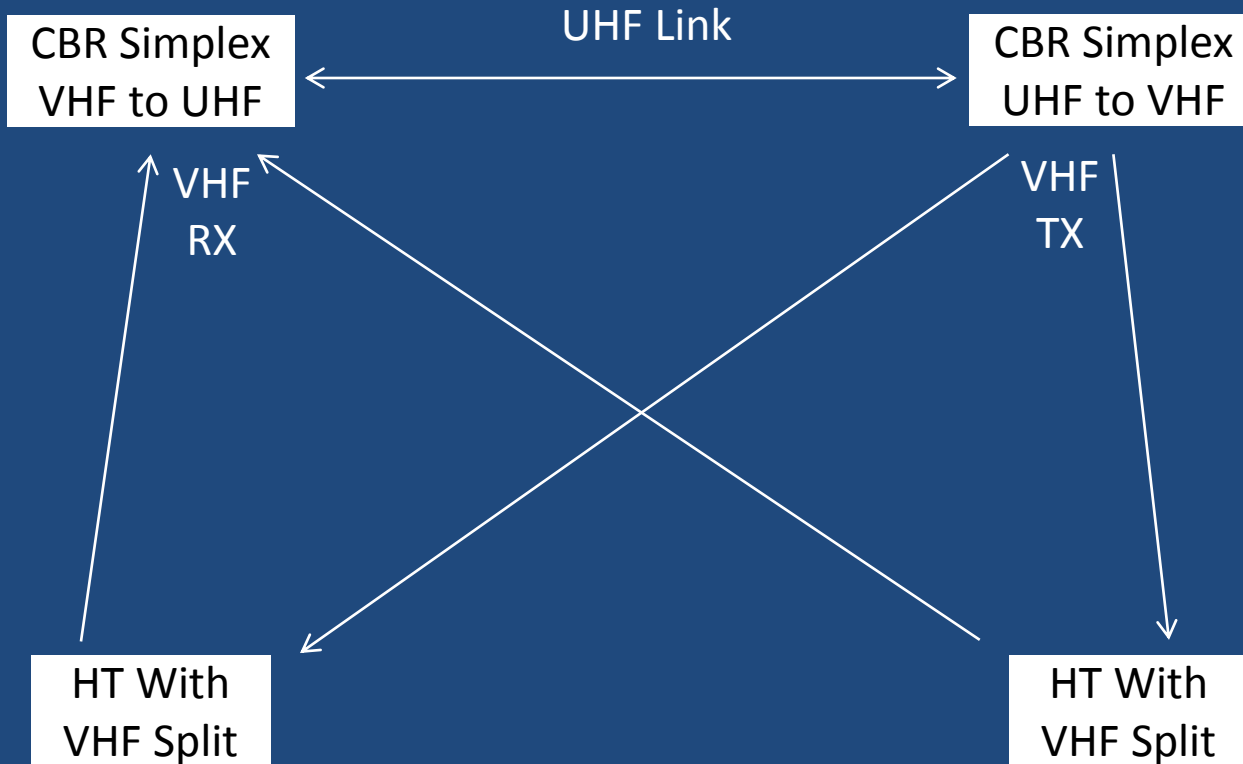
VHF Yagi & UHF Yagi  
Duplexer  
Command Post CBR

UHF Yagi & VHF Omni  
Duplexer  
CBR

Simplex  
HT UHF

Simplex  
HT VHF

Using 2 CBR's to create a repeater



# TEST

1. List one value of using Cross Band?
2. Should you use CTCSS on a cross band system?  
Why?
3. Why do you need to wait after you press the PTT, before you talk?
4. Can cross band be used back to back to extend simplex range?