

eXpeditionary HF (X_{HF}™)

Patent Pending
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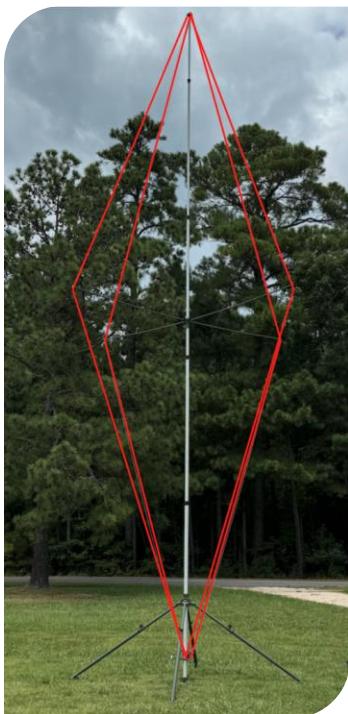
The Revolutionary HF Antenna
Vertical Diamond



Expeditionary Antennas with... Large Antenna Performance

- + **Significantly smaller and more user-friendly than other HF antennas**
 - Small footprint is a fraction of other antennas
 - Packs into three cases, transportable as checked luggage
 - Simple setup in 30 minutes or less with just 1 or 2 people

- + **Global communications range across the entire HF band for transmit and receive**
- + **Wideband:** 3-30 MHz instantaneous bandwidth
- + **Unprecedented performance across the entire HF frequency band:**
 - Consistent VSWR
 - Consistent Gain
 - Consistent Radiation Patterns

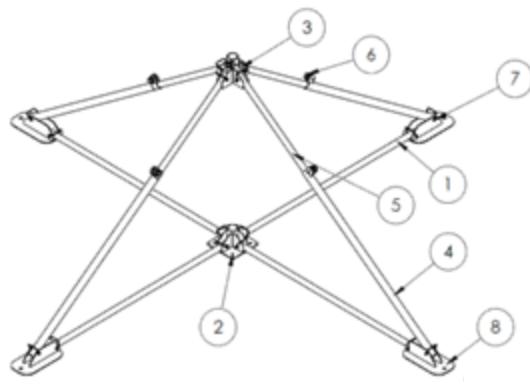


X_{HF} Telescoping Mast
with Vertical Antenna

Three X_{HF} System Components

(shown below and to the left)

- 1 Quick Setup Quad-leg Base**
- 2 Telescoping Mast**
- 3 Antenna Elements**
 - XHF-1000 (Vertical)
 - XHF-2000 (Horizontal)



X_{HF} Quick Setup Quad-leg Base



X_{HF} Transport Case –
all three are the same size

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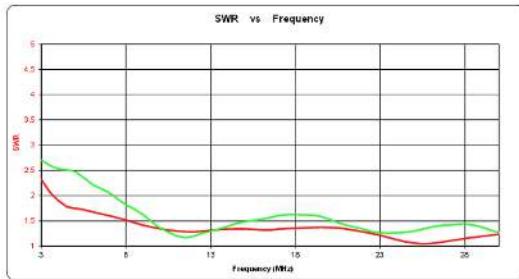


The Revolutionary HF Antenna **Vertical Diamond**

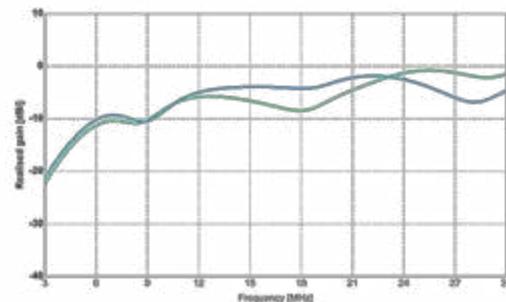


Expeditionary HF – Delivers reliable, unprecedented HF capability at transmit powers of over 1 kW

Consistent VSWR and gain across frequencies and takeoff angles providing exceptional user flexibility and performance



X_HF Vertical Diamond Antenna – VSWR versus Frequency – Modeled (Green), Measured (Red)

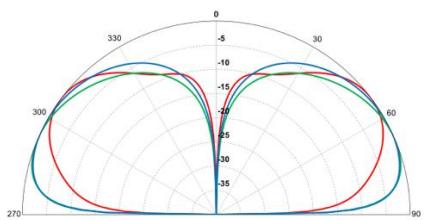


X_HF Vertical Diamond – Gain versus Frequency – Takeoff Angle = 20 Deg (Blue), 45 Deg (Green)

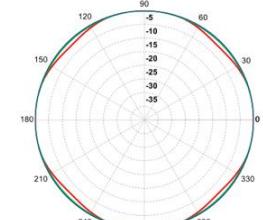
Frequency = 3 MHz Frequency = 15 MHz Frequency = 30 MHz

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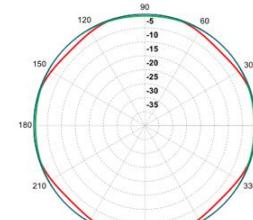
Frequency = 3 MHz Frequency = 15 MHz Frequency = 30 MHz



X_HF Vertical Diamond – Elevation Plot



X_HF Vertical Diamond – Azimuth Plot – Takeoff Angle = 20 Deg



X_HF Vertical Diamond – Azimuth Plot – Takeoff Angle = 45 Deg

True Wideband HF... Instantaneous Full HF Bandwidth supports advanced waveforms and enables wideband operations – *no external tuner required!*

**Optimized for Long-Range Communications...
while still providing excellent short and medium range performance**

Contact Sabre Systems for more information...

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