



eXpeditionary HF (X_{HF}^{TM})

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*

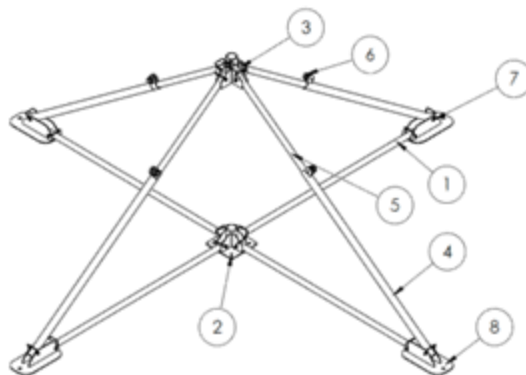
+ *Unprecedented performance across the entire HF frequency band:*

- Consistent VSWR
- Consistent Gain
- Consistent Radiation Patterns

Three X_{HF} System Components

(shown below and to the left)

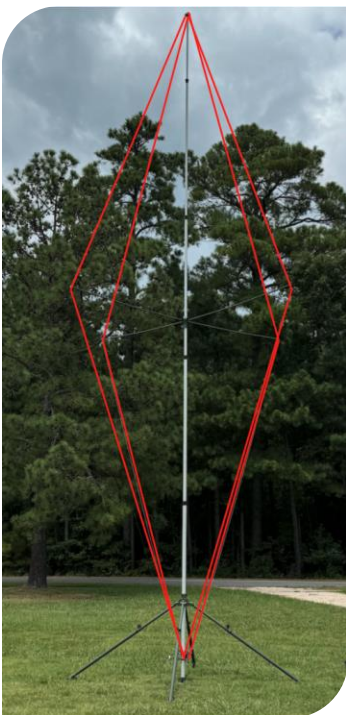
- 1 Quick Setup Quad-leg Base**
- 2 Telescoping Mast**
- 3 Antenna Elements**
 - XHF-1000 (Vertical)
 - XHF-2000 (Horizontal)



X_{HF} Quick Setup Quad-leg Base



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



X_{HF} Telescoping Mast
with Vertical Antenna

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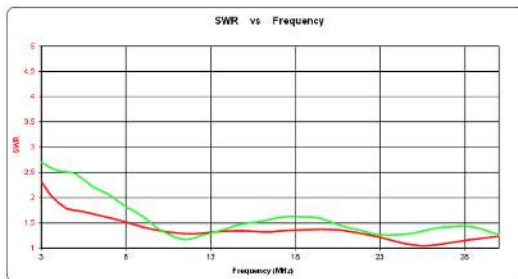


The Revolutionary HF Antenna **Vertical Diamond**

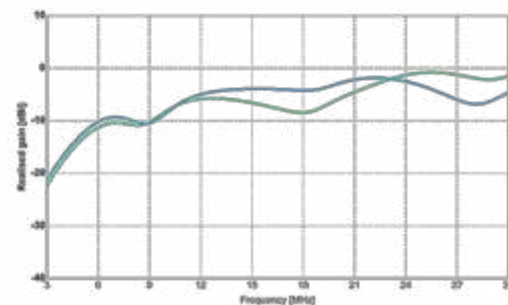


Expeditionary HF – Delivers reliable, unprecedented HF capability at transmit powers of over 1 kW

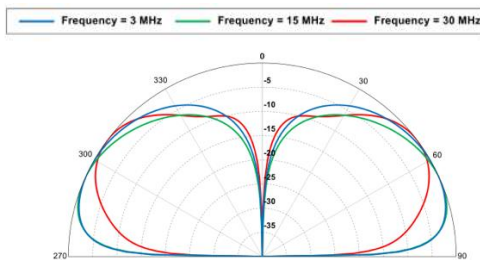
Consistent VSWR and gain across frequencies and takeoff angles providing exceptional user flexibility and performance



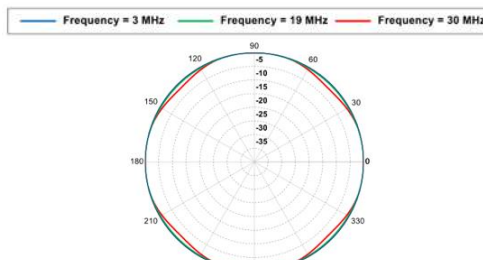
X_{HF} Vertical Diamond Antenna – VSWR versus Frequency – Modeled (Green), Measured (Red)



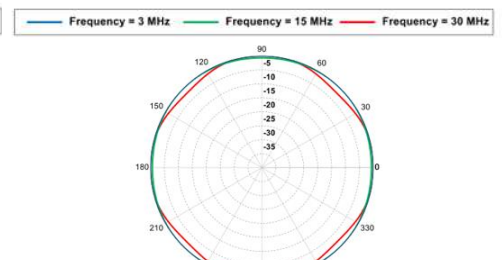
X_{HF} Vertical Diamond – Gain versus Frequency - Takeoff Angle = 20 Deg (Blue), 45 Deg (Green)



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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