



MICRONETIXX COMMUNICATIONS



- **Broadband High Power Performance**
- **Standard and Low RFR Versions Available**
- **Scaled to Channel Antennas Available**
- **Single and Stacked Antennas Available**

TLB – TMB - THB Series VHF (Bands I and III) Batwing Antennas

Micronetixx Communications builds the time tested VHF Batwing antenna (Bands I and III) in both standard and low downward radiation (low RFR) versions. There are three standard models: TLB for channel 2-3, TMB for channel 4-6, and THB for channel 7-13. The THB antenna is available in side or top mounted configurations – the TLB, and TMB models are only available in top mounted models. In addition to the standard models, the antennas can be scaled for a specific frequency of operation, or group of channels.

Improvements to Batwing Antenna Technology

For the past 50 years batwing antennas have not changed much from when they were first developed. A little known secret is that Batwing antennas are really 75 Ohm antennas needing bulky 75 Ohm line components to feed them. We have redesigned the feed system by using modern 50 Ohm feeder components and utilizing a proprietary elemental transformation system at each element. The result is an antenna that has excellent V.S.W.R and bandwidth, plus much better power handling ability than older generations of Batwing antennas.



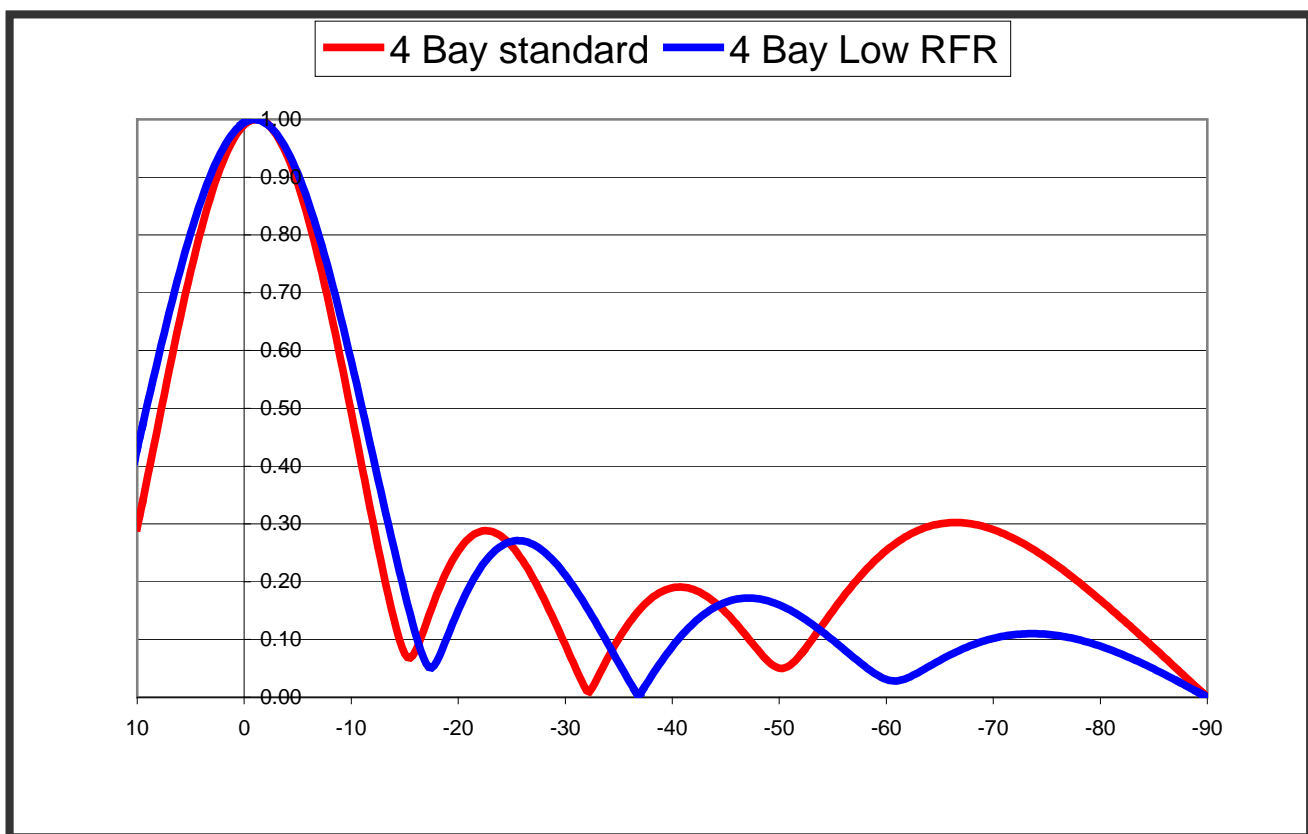
Scaled Batwing Antennas Lower Tower Loads

Depending on your channel of operation, a scaled to channel batwing solution from Micronetixx Communications can reduce the weight, height, and wind load area of a Batwing antenna by up to 15%. If your station is on channel 12, why do you need a larger antenna that is built for channel 7? By specifying the antenna to operate optimally at channel 12 you get a smaller lighter weight antenna, plus a better elevation pattern..

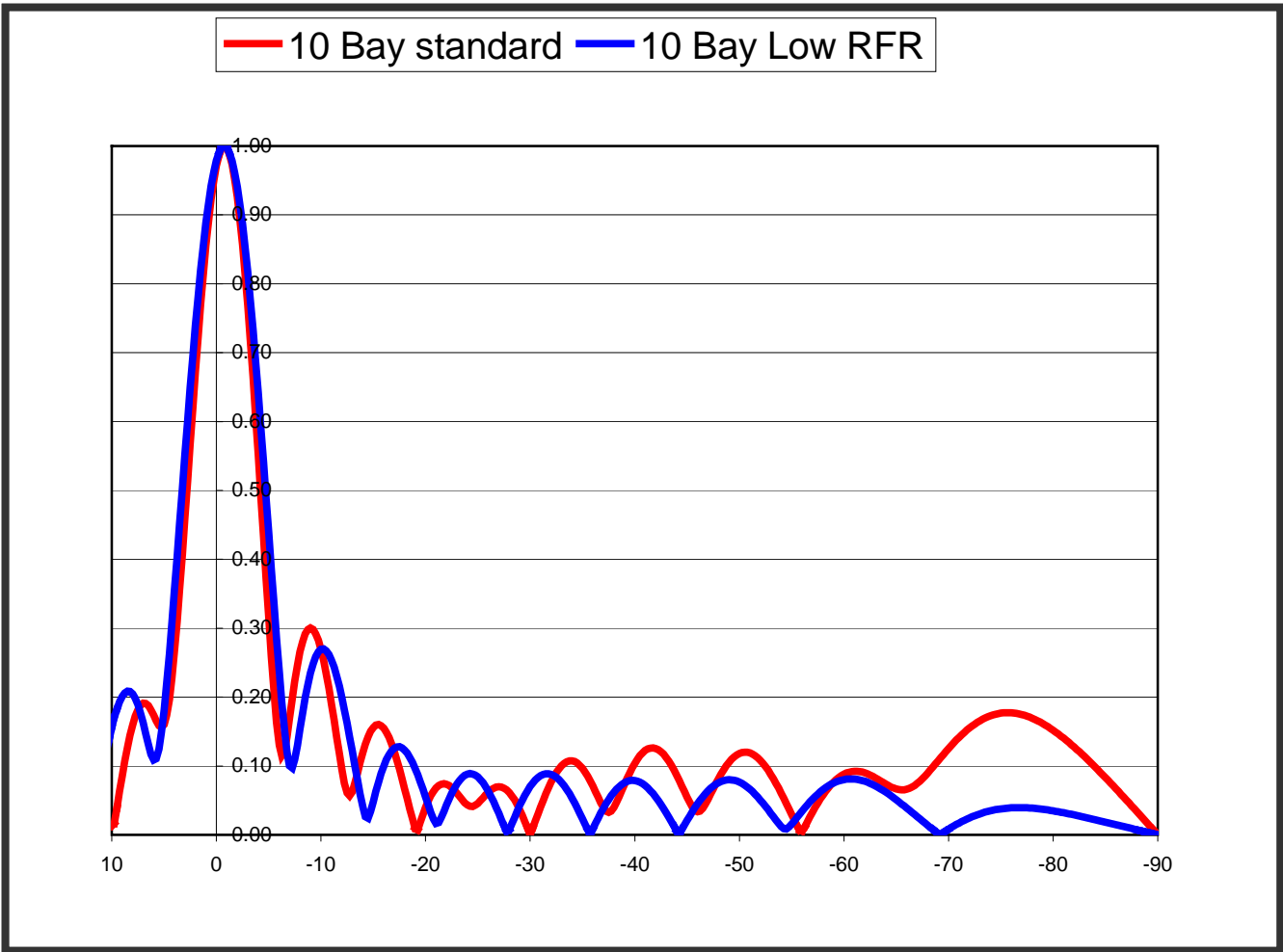
RFR a Big Problem At Your Site?

Batwing antennas can also lower RFR (or downward radiation) by applying some innovative design ideas. By optimally scaling, and spacing the batwing elements, a 9 to 15 dB reduction in radiation at high axial depression angles can be achieved. Besides the lower RFR footprint of these antennas, the vertical height of the antenna is reduced by up to 15%, with little or no change in elevation gain as compared to a standard batwing antenna design.

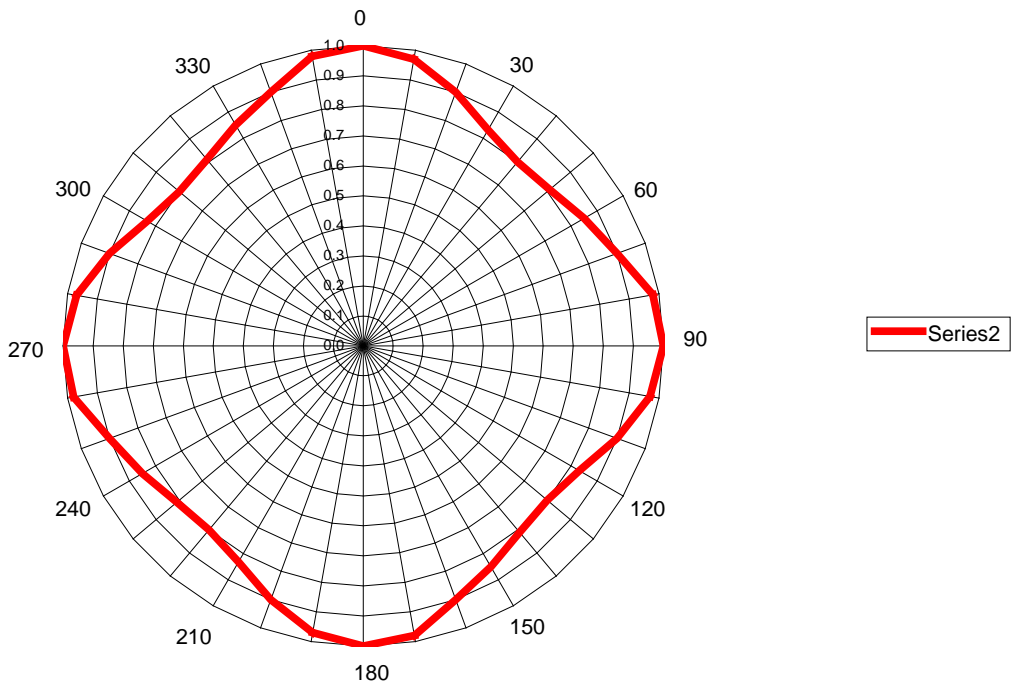
Reduced spaced antennas also have a 5 to 8 percent wider main beam, which translates into better coverage over a wider area.



Elevation Plot of 4 bay standard and low RFR Batwing antenna



Elevation Plot of a 10 bay standard and low RFR Batwing antenna



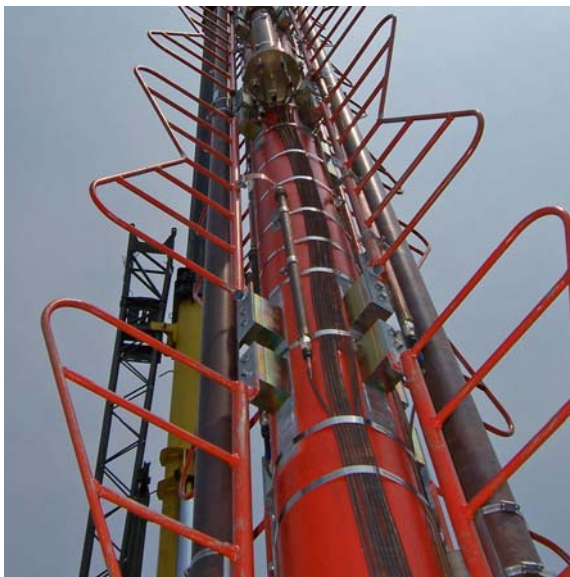
VHF Batwing Omni-directional Azimuth Pattern

Options for the VHF Batwing Antennas

Micronetixx Communications batwing antennas can be supplied with element heaters for high ice areas, or radomes to cover the feed area of each element. The antennas can be supplied for high wind zone areas up to 130 M.P.H. basic wind speed.

The feed system for the antenna can consist of a dual fed, quadrature phase system (with hybrid in the transmitter building) or the antenna can be fed with a single line and the hybrid mounted at the antenna. The top mounted versions of the antennas are available in bury or flange mounts. Stacked multi-channel versions of the antennas are available. Dual feed split arrays are also available.

| VHF Batwing Antenna Availability | | | | |
|----------------------------------|-------------------|-----------|------------|---------|
| Channel | Number of Bays | Top Mount | Side Mount | Low RFR |
| 2-3 | 2,3,4,5,6 | Yes | No | Yes |
| 4-6 | 2,3,4,5,6 | Yes | No | Yes |
| 7-13 | 2,3,4,5,6,8,10,12 | Yes | Yes | Yes |



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