MICRONETIXX Technologies

Selected Antenna Projects

Here is a 10 Bay SFN-2030 low RFR UHF slot antenna. This antenna produces a cardioid azimuth pattern, is circularly-polarized and has an input rating of 10 kW average. Peak ERP available from this antenna is 220 kW. The antenna is center-fed with a 3-1/8” EIA input connection.

Final test of a 4-bay channel 3 (60 to 66 MHz) batwing antenna. The antenna was supplied with a 12 foot bury section, and forms the bottom half of a stacked batwing array 126 feet (38 Meters) long.

This is the first low RFR batwing antenna in the world. It uses scaled elements and special-spacing to lower RFR, increase aperture efficiency and reduce the physical length of the antenna by about 10 feet.

Above is an 8-Bay Channel 9, (186–192 MHz), side-mounted slot antenna. This center-fed antenna produces a wide cardioid azimuth pattern. The input power rating of the antenna is 25 kW average, which will produce a maximum ERP of 350 kW. The antenna is 48 feet, (14.6 meters), long.

The antenna uses our SFNStar™ Antenna Technology. This reduces the radiation at high depression angles by up to 25 dB as compared to similar sized standard antennas. In addition to the much lower RFR signature, the elevation gain of this antenna is about 15% higher than a standard antenna. This is due to its increased aperture efficiency, as the unwanted radiated signal power usually present in the axial lobes of a standard antenna has been re-directed back into the main beam.

This is a photo of a 6-bay, top-mounted TPV VHF Pylon antenna taken while the antenna was being built. It's an omni-directional antenna with 3 slots per level, operating on channel 13 (210 to 216 MHz).

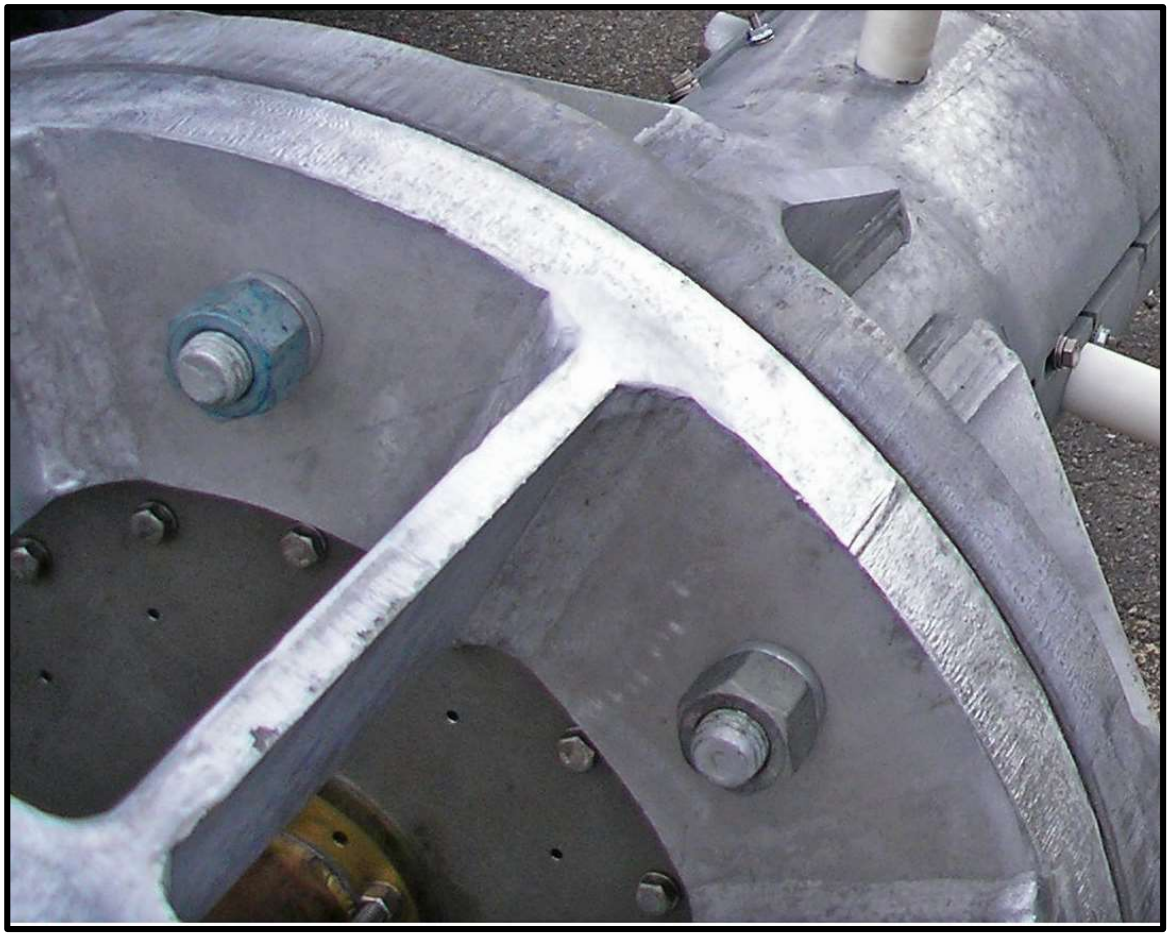
Above each slot specialized stainless steel elements can be seen. These precisely-tuned DC-Grounded elements launch a quadrature field for radiation of a rotationally-polarized system of transmitted fields, for (Elliptical or Circular Polarization. The white Teflon standoffs support the radome system.

These antennas are popular for VHF high-Band (Band III) operation due to the excellent frequency response and extremely low group delay, which is essential for ultra-low bit error rate ATSC 3.0 digital TV transmission.

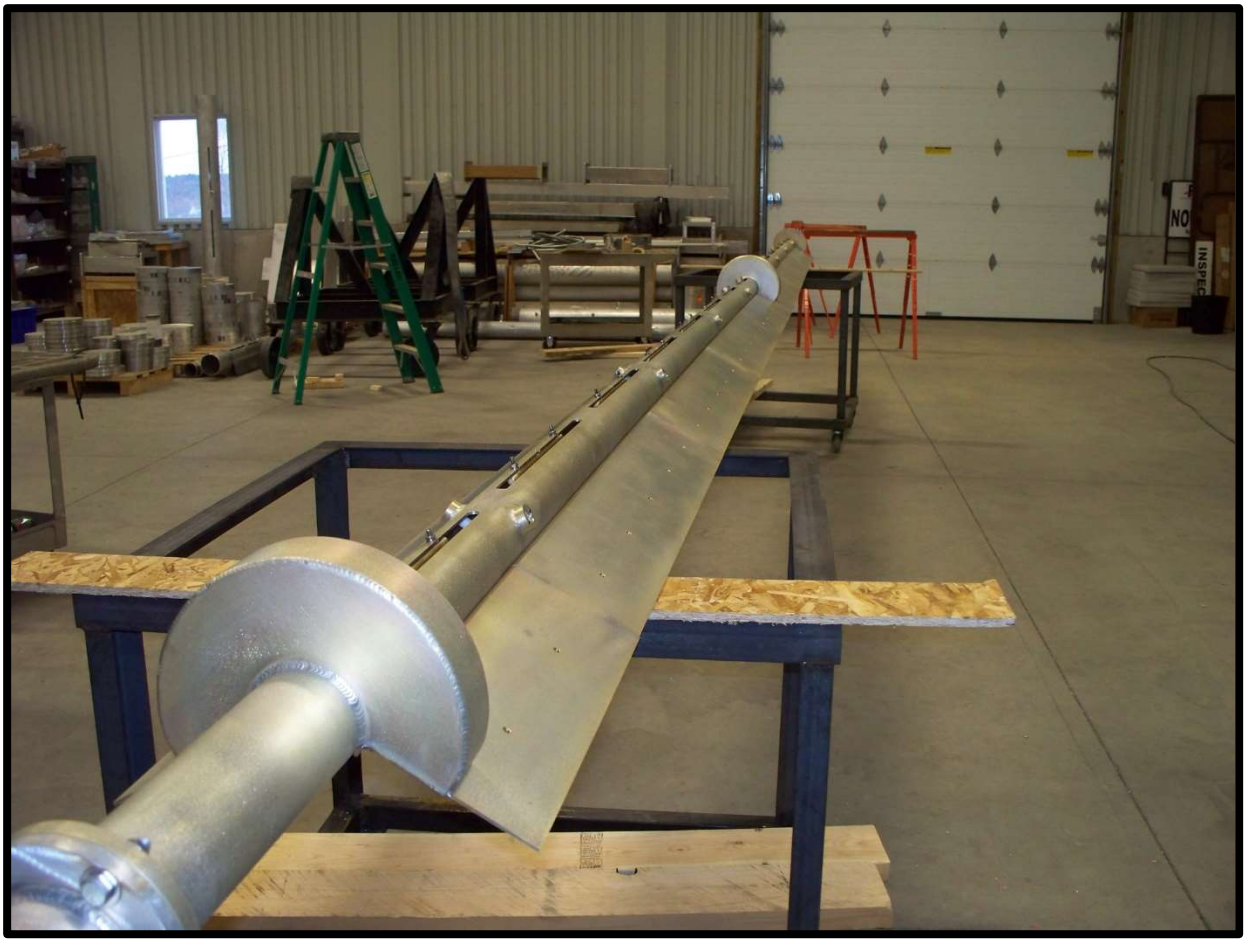
The TPV series of antennas are also available in low-RFR versions – the TPV-SFN. These antennas have a much lower RFR foot print than standard antennas.

Here is a 14 Bay SFN-2030 antenna that's mounted to the pylon of the previous antenna. The center-fed antenna is just 60 feet above the ground. With an analog peak ERP of 316 kW a standard antenna would have produced extremely high RFR levels on the ground. This antenna uses our SFNStar™ low RFR Technology.

This antenna has an input power rating of 10 kW average power and can produce a maximum DTV ERP of 300 kW



The above photo shows a portion of the wedding cake along with the top antenna pylon. A wedding cake assembly allows the stacking of two antennas, and a bottom access area for connection to the transmission line. A part of the EIA input flange is visible in the lower left hand corner of the picture. The antenna pylon above is bolted to the top of the wedding cake. Here, the radome system has not been installed yet.



This is the bottom half of a 32 Bay slot antenna being manufactured. The wings running axially along the antenna shape the azimuth pattern. In this case the pattern is a wide cardioid. This antenna is a CS-2030 series, with an input power rating of 10 kW average. The antenna can produce a maximum ERP of 600 kW.

When fully assembled this antenna will be 68 feet (20.72 meters) long and protected by a white radome system. This antenna was built to withstand 130 a basic 130 M.P.H. (209 kph) wind speed.

Illustrated below is the finished antenna with radome and input power-division center-fed tee installed.

On the image above, a top-mounted channel 8 antenna is being loaded onto a truck for delivery. This is a special 3-bay, low RFR model with elliptical polarization. The antenna will be mounted in a high environment at 10,800 feet above sea level. The radome system is pressurized.

Not shown in the picture is the bury section of the antenna. This antenna is replacing an old channel 5 batwing that had a bury socket. A wedding cake assembly on the top of the bury section allows the transmission line to connect at the bottom of the antenna.

Shown above is Micronetixx Communications' High-Power FM Transmitter Diplexer

Antenna Product Lines

- UHF (Band IV) Side Mount Slot Antennas
- UHF (Band IV) Top Mount Slot Antennas
- UHF (Band IV) low RFR Side Mount Antennas
- UHF (Band IV) low RFR Top Mount Antennas
- VHF (Band III) Side Mount Slot Antennas
- VHF (Band III) Top Mount Slot Antennas
- VHF (Band III) low RFR Side Mount Antennas
- VHF (Band III) low RFR Top Mount Antennas
- VHF (Band I, III) Batwing Style Antennas
- VHF (Band I, III) low RFR Batwing Style Antennas
- FM Broadcast Antennas & Diplexers, Combiners & Filters

For More Information, please contact us at:

Phone: (207) 786-2000
Fax: (207) 786-7444
Web: http://www.micronetixx.com/ANTENNAS/index.htm
Email: mailto:info@micronetixx.com

MICRONETIXX Technologies

Lewiston, Maine USA