Welcome to AntennaSelect™ Volume 53– December 2020

Welcome to Volume 53 of our Newsletter, AntennaSelect™. Every two months we will be giving you an "under the radome" look at antenna and RF Technology. If there are subjects you would like to see covered, please let us know what you would like to see by emailing us at: info@micronetixx.com

In this issue:

Holiday Operations

MICRONETIXX COMMUNICATIONS

For the holidays we will be shut just before Chrstmas on Thursday afternoon the 24th, and Christmas day , Friday the 25th. The week after we will close late in the afternoon on Thursday. December 31, and be closed all day the 1st on Friday.

A few of the elves out may take a little extra time to enjoy the wintertime wonder of central Maine.

We will be back on Monday the 4th doing what we do best. Manufacturing the best RF and Broadcast Systems out there.

Merry Christmas and Happy Holidays from all of us!!

TV Over - Air Reception: Part 6; VHF High Band

MICRONETIXX COMMUNICATIONS

It has been more than 20 years ago when the first ATSC high band TV broadcasts hit the air. Before that time, NTSC High Band, for the most part, worked very well. Many of the NTSC high band stations had an ERP of 316 kW (25 dBk). With a 1000 foot tower this usually yielded a good signal 60 miles or more out.

When the ATSC table of allocations was laid out the maximum ERP of some stations dropped down to 9 kW or less. The theory was with the superior noise immunity of digital, much less ERP would be needed. This sounded good on paper.

Over time the way consumers received OTA changed. Roof top antennas vanished due to new homeowners association restrictions. Others had began to drop elements or become rusty, greatly dropping their signal gathering ability. New indoor “DTV” antennas were marketed as the cure for TV reception worries. In reality many of them had very little gain at UHF and 10 dB or so of loss at high band TV.

Back in the day when NTSC high band stations were being designed, the go-to system was a 12 bay batwing antenna, driven with a 35 kW transmitter. That combination made the maximum power of 316 kW. The main lobe of the antenna was tilted just below the horizon to cover as much fringe area as possible. Close-in locations got more than enough signal.

In the next issue of AntennaSelect™, we will take a detailed look at what happened and how to make it work much better in the new world of ATSC 3.0. Stay tuned, the numbers will impress you.

FM Antenna – An Outrigged Pipe

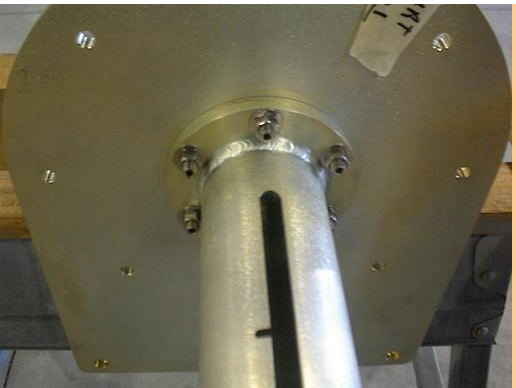
On all of our FM Antennas we indicate that a 3 inch mounting pole should be used. Why? First we tune these antennas using a 3 inch support pipe. Secondly the 3” galvanized pipe components are available all over the country and are not prohibitively expensive. And lastly, when your tower structure consulting engineer runs the mechanical numbers, it usually passes by a wde margin..

Some months ago we did a two-bay FM antenna for a rooftop installation. The final build was to use a 20 foot section of 3” pipe. This placed the bottom bay about 14 feet above the roof top…Perfect for ensuring excellent propagation.

For mounting FM antennas on larger-faced towers the 3” pipe components do an excellent job of supporting the antenna and keeping a sufficient distance from the tower face, minimizing pattern distortion and also minimizing de-tuning effects of the antenna.

A 3” pipe is not a cure-all for every type of installation. When the time comes for your new FM antenna, our engineering team will be glad to help you find an optimal solution. Please ask us...we have many decades of making FM work very well☺.

Be on the lookout for the next volume of AntennaSelect coming out in February



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