



# PEAKS & NULLS



MORRIS RADIO CLUB

Volume XIII, Issue I

January 12, 2023

## WE'RE OLDER THAN WE THOUGHT

The first record that we have for a club meeting was on February 23, 1949. We know that they said it was a reactivation of the Morris Radio Club but, we have no information on anything earlier. Last month I was updating the club information on the ARRL web site that is required every two years and I noticed that according to the ARRL we have been an affiliated club since April 8, 1931.

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## WHAT'S A VNA

Last month in the story about the Dunestar Field Day filters I included plots of the VSWR and the Transmitted signal for each band. Because there are now a lot of low cost Vector Network Analyzers (VNA), some under \$100.00 on the market for Ham use I thought a little description of what a VNA is could be useful. A simple one port VNA contains a source to generate a signal and a receiver that measures changes to this signal caused by the device-under-test (DUT). This can measure the VSWR of an antenna or other device. In comparison with a Scalar Network Analyzer that only measures the amplitude of the reflected signal a VNA also measures the phase of the returned signal so now you know how the DUT is distorting the signal. You can also do a measurement in the time domain instead of the frequency domain so you can measure the distance to a fault. In order to find the distance to a discontinuity the VNA does a sweep over a frequency range and all the resulting magnitude and phase information is stored. It then does an inverse Fast Fourier transform to convert the information to the time domain. It can pinpoint a fault with considerable accuracy.

To do the measurements that were done in the article last month you need a 2 port VNA. In this case the DUT is connected between the ports and port 1 measures the VSWR while port 2 measures the signal coming through the DUT comparing it to the signal out of port 1. The data was then displayed as two plots although it could have been combined into one plot.

The other day I did the same test as I did for the Dunestar to show a customer in Poland that he had blown up two high power 18 GHz power sensors by applying power over the sensor rating.

Keep an eye out in QST. There have been a number of reviews of simple VNA's over the past few years.



## UPCOMING MEETINGS

January 16, 2023 In Person and Virtual Regular business meeting

February 20, 2023 In Person and Virtual Regular business meeting

March 20, 2023 In Person and Virtual Regular business meeting

April 17, 2023 In Person and Virtual Regular business meeting

## 2023 DUES

### 2023 DUES

Noel NO2EL is now accepting dues payments for 2023. \$15.00 for full membership, \$10.00 for associate. If you have a PayPal account, dues can now be paid by using Pay-Pal.

## SELECTED UPCOMING CONTESTS

VHF-UHF FT8 Activity Contest	1700Z-2100Z, Jan 18
Hungarian DX Contest	1200Z, Jan 21 to 1159Z, Jan 22
ARRL January VHF Contest	1900Z, Jan 21 to 0359Z, Jan 23
Australia Day Contest	2200Z, Jan 25 to 1000Z, Jan 26
CQ 160-Meter Contest, CW	2200Z, Jan 27 to 2200Z, Jan 29
Winter Field Day	1900Z, Jan 28 to 1900Z, Jan 29
VHF-UHF FT8 Activity Contest	1700Z-2100Z, Feb 1
Vermont QSO Party	0000Z, Feb 4 to 2400Z, Feb 5
EurAsia HF Championship	0600Z-1800Z, Feb 4
Mexico RTTY International Contest	1200Z, Feb 4 to 2359Z, Feb 5
Minnesota QSO Party	1400Z-2400Z, Feb 4
VHF-UHF FT8 Activity Contest	1700Z-2100Z, Feb 8
CQ WW RTTY WPX Contest	0000Z, Feb 11 to 2359Z, Feb 12

## VE EXAMS

### Morris Plains

01/14/2023

**Sponsor:** North Jersey DX Assoc

**Date:** Jan 14 2023

**Time:** 7:00 PM (No Walk-ins / Register or Call ahead)

**Contact:** Martin J. Grozinski

(908) 672-8883

**Email:** [w2cg@yahoo.com](mailto:w2cg@yahoo.com)

**VEC:** [ARRL/VEC](#)

**Location:** Morris CTY Emer Services Training Academy

500 W Hanover Ave

Class Room 139-140

Morris Plains NJ 07960

### Newton NJ

01/20/2023

**Sponsor:** SCARC

**Date:** Jan 20 2023

**Time:** 7:00 PM (Walk-ins allowed)

**Contact:** Sid Markowitz (973) 663-0518

**Email:** [k2gg@ieee.org](mailto:k2gg@ieee.org)

**VEC:** [ARRL/VEC](#)

**Location:** Sussex County Public Safety Training

114 Morris Tpke

Newton NJ 07860-4912



## PREDICTED SUNSPOT NUMBER AND RADIO FLUX FOR FEBRUARY 2023

**\*\*\*SUNSPOT NUMBER\*\*\***

**PREDICTED HIGH LOW**

76.2 84.2 68.2

**\*\*\*10.7 RADIO FLUX\*\*\***

**PREDICTED HIGH LOW**

112.4 121.4 103.4

## DECEMBER MEETING MINUTES

There was no December meeting. A Holiday Get-Together was held in place of a meeting.

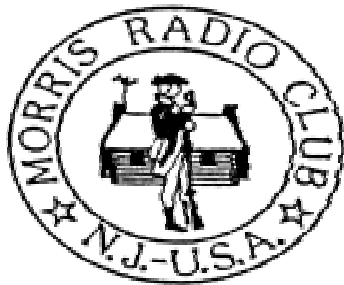


## MORRIS RADIO CLUB

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**THE MORRIS RADIO CLUB IS AN ORGANIZATION OF AMATEUR RADIO OPERATORS WHICH HAS BEEN IN EXISTENCE FOR OVER SIXTY FIVE YEARS. AS A HOBBY, AMATEUR RADIO SERVES AS A PUBLIC RESOURCE FOR COMMUNICATIONS AS WELL AS AN EDUCATIONAL EXPERIENCE.**

**ALTHOUGH MANY WHO BECOME INTERESTED IN AMATEUR RADIO ARE INVOLVED IN AN ELECTRONICS RELATED FIELD, THE HOBBY APPEALS TO A WIDE VARIETY OF INDIVIDUALS.**

**THE MEMBERSHIP OF THE MORRIS RADIO CLUB IS A DIVERSE GROUP MADE UP OF MEDICAL, BUSINESS, EDUCATION, AND LAW ENFORCEMENT PROFESSIONALS, AMONG OTHERS, WHOSE COMMON INTERESTS ARE COMMUNICATION, EDUCATION, AND PUBLIC SERVICE.**

## HAMFEST CALENDAR

### Online - LIMARC Virtual Hamfest

01/29/2023

**Location:** Online - see website for information

Registration required

Online, NY

**Website:** <http://www.limarc.org>

**Sponsor:** Long Island Mobile Amateur Radio Club