Socorro Amateur Radio Association

SARA News www.socorroara.org October 2019

Meetings

The minutes for meetings are at https://www.socorroara.org/minutes/

The October meeting will be at the County Emergency Management Conference Room at 198 Neel Avenue on Oct. 9, 2019.

SARA Repeater

SARA supports a VHF repeater located on Socorro Peak immediately west of Socorro. The repeater is "open". The autopatch is currently inoperative.

146.68 (-)
100 or 123 Hz required
123 Hz on output

SARA also supports a UHF D-STAR module 'B' operating at 444.500 MHz + 5.000
Registration instructions are at www.socorroara.org/sara/repeaters/D_STAR_Gateway.pdf

Club Officers

President: Jim Lommen KC7QY
Vice President: Brad Smith KD5JNI
Secretary: Ray Calkins, N0RBT
Treasurer: Henry Newton, KC5WYA
Past President: Prescott Grey W1PCG
ARES DEC /Director: Al Braun AC5BX
Newsletter Editor: Anneliese Bowman AD6UY
Suggestions or submissions: ad6uy@inorbit.com

Coming events

SARA TARA Hamfest
Oct 19 8 am – 2 pm
New Mexico Firefighter Academy
https://goo.gl/maps/BB7UZGsFzsYyAsnh8
https://www.socorroara.org/socorro-hamfest-2019/

Socorro Lions Club Gun Craft Collectible Show
Oct 26 9 am – 5 pm, Oct 27 10 am – 4 pm
Kelly Hall Socorro County Fairgrounds
http://www.socorrolionsclub.org/

President's Corner
Jim Lommen, KC7QY

We've just passed the autumnal equinox, days are cooling off (somewhat) and HF activity is picking up. Currently there are several DXpeditions on the air plus the WWV centennial special event stations from Ft Collins, CO. They must have worked out some pretty significant filters to be able to operate up close the WWV transmitter site.
Fall is also hamfest time. Duke City Hamfest was held last week. There were three tracks of seminars going on almost continuously. SARA was well represented with Bill Heller, Ray, Henry, and Bear all taking some time relieving me at the club table. As always, there was a lot of interest in our hamfest and lots of kind words about how much everybody enjoys our little 'fest.
Our hamfest is coming together; flyers are in the mail. Many thanks to Anne's perseverance in whittling the mailing list down to our 4000 limit. Thanks also to Al, Sandy, Bill and whoever else may have wandered into the Shack Saturday – all the flyers got labeled and were ready without needing to call for additional help. We have the Masonic Hall booked for the banquet with a fajitas buffet from Sophia's. The speaker is Harald Edens with information on the lightning and thunderstorm research at the Langmuir Lab. Should be an interesting talk. Final details will get covered at the October SARA meeting, Wednesday 9 October – can you believe it's October already?
Jim KC7QY

Duke City Hamfest
Jim Boswell, KA5SIW

Just a quick report on the Duke City Hamfest. I estimate there was about 50% more indoor vendors than last year. Since I was busy selling door prize tickets Saturday morning I did not get outside to check out the outdoor flea-market area. The volunteers were in short supply and we had to work 4 hours each day instead of the planned 2 hours per day. Needless to say, it takes lots of help to put on a hamfest like this.

I was able to visit with Rob Sherwood and Riley Hollingsworth. Two people I respect and are helping shape today's amateur radio. I personalty met amateurs from 7 different states. I understand there were 22 RV spots reserved in one section of the park. Many other amateur's RVs were spotted through out the RV park.

Socorro area hams spotted were Anne and Ray, Jim, Bill, Henry, and Dave. Several people and dealers expressed interest with the upcoming Socorro Hamfest. I made a point of inviting as many people to the Socorro hamfest as I could.

The VE testing went very good, there were lots of high 5's going around, one new ham tested to Extra! Sure neat to watch the enthusiasm of these new amateurs. It was also neat to watch the Boy Scouts working on their amateur radio merit badges.

I wish to thank all the people that worked to host this event. I plan to help out again next year.

Why all the excitement over the NanoVNA
Bill Heller, KG5NGN

The Ham community is generally familiar with many kinds of test equipment such as the VOM and the more modern DMM used to measure DC voltage and current as well as low frequency AC in power supplies as well as resistance. Another common device common in a ham shack is the SWR meter which uses your transmitter to supply a signal to the antenna and displays the ratio of the magnitude of the signa going to the antenna and the portion of that signal reflected back into the transmitter as an indicator of the antenna quality. More advanced devices in some shacks is the antenna analyzer which has a tunable RF source combined with a detector similar to a SWR meter and so allows one to measure the frequency response of the antenna over a range of frequencies. A test instrument that gives even more information is the vector network analyzer (VNA) which until recently been totally out of the price range of the majority of hams costing > $40,000 new an around $5000 used displays both the magnitude and phase of the signals going to and from the

antenna most VNAs have 2 ports so in addition to antennas they can be used to measure coax cable parameters such as loss, impedance, and electrical length. They can also be used to adjust filters and even active devices such as RF amplifiers.
The recent availability of the low cost Chinese Vector Network Analyzer has created a major stir in the amateur radio community. Hams now have for the first time a piece of hand held test equipment that allows the measurement of not only the amplitude but the phase response of electronic circuits. Where the familiar antenna analyzer gives the user the standing wave ratio at a settable frequency to check antenna resonate frequency. The NanoVNA plots the complete complex impedance from 50KHz to 900MHz of both single port devices such as an antenna but also dual port devices such as a bandpass filter. All at the amazing low price of $50. I have included a photo of this device which shows a typical scan with the results displayed both as a smith chart showing how the complex impedance varies with frequency and return loss as separate traces on the 2.8 inch color display.