

NM SECTION



Serving Ham Radio Operators throughout New Mexico

Volume II - Issue II

Section Manager's Note

Ed James, KA8JMW - ARRL NM Section Manager

Carol N5ZYP and I along with a handful of fellow NM Hams made the 1,500 mile round trip trek to 20th annual QuartzFest last month.

Quartzfest is a weeklong gathering like no other in the world. It brings together "hands-on," live demos and innovation in mobile antenna systems, mobile ham shacks, recreational vehicles, portable and mobile EMCOMM systems, off-the-grid living, alternative energy and radio education. For a taste of what you missed checkout the YouTube video at:



<https://www.youtube.com/watch?v=lpqQXtNErPM&feature=youtu.be>

Do you have a stack of QST magazines sitting in corner at home? Are you perplexed with what to do with your old copies of QST? They are way too nice to throw in the bin. Recycle them to recruit new hams, just cover up the old mailing label with a new one with the contact information for you club. Then just like Johnny Appleseed, drop them off at the Doctors office, business, community center, library or anywhere else that has a waiting room.

While February is the shortest month, this issue does not reflect that quality. We have so many excellent contributions this month, I hope you enjoy the stories and information as much as I did.

Upcoming Events

New Mexico Techfest;
Saturday February 25;
Albuquerque

<http://www.rmham.org/wordpress/new-mexico-techfest>

**Bataan Death March
special event station**

Sunday March 19th
<http://www.n5bl.org/bataan/>

New Mexico QSO Party;
Saturday April 8

<http://www.newmexicoqsoparty.org/wp/>

**Mesilla Valley Radio
Club 2017 Bean Feed**

Saturday May 6
Las Cruces
<http://www.n5bl.org/beanfeed/beanfeed.htm>

**Central States VHF Society
Conference; July 27-30;**
Albuquerque

<http://2017.csvhfs.org/>

**ABQ Duke City Hamfest; August
11-13; Albuquerque**

<https://dukecityhamfest.org/>

**Rocky Mountain Division
Convention; May 26-28; Cody,
Wyoming**

<http://www.wyominghamcon.org/>

Technological Evolution of Ham Radio

Judy WB5LYJ

For most Hams, there was a time when all radios contained vacuum tubes, weighed over 40 pounds, and were power hogs. With the advent of the computers, solid state technology has brought amazing advances to amateur radio that were never dreamed of. One of technologies these is SDR, or software-defined radios. SDR is defined by sdr-radio.com as "a radio communication system where components that have been typically implemented in hardware, and are instead implemented by means of software on a personal computer or embedded system." The SDR does not replace the receiver or transmitter, but does in fact function as a replacement for conventional devices such as filters, amplifiers, mixers, etc. The SDR can even emulate the front display of the receiver or transceiver, with digital signal processing that is either preprogrammed or user programmable for unique applications. Also, the SDR can function simultaneously as a spectrum analyzer displaying various frequencies and modes over a user selected bandwidth. Many Hams have even placed their SDR receivers on the internet; enter "w7rna.dyndns-remote.com:18901" for a real-time demonstration of a 40, 60, and 80 meters HF receiver. Possibilities for amateur radio applications of SDR technology are endless.

The versatility of SDR allows the operator to receive/transmit many different digital modes of communications as well as the legacy voice and CW modes of operation. After the radio samples the incoming RF, and after it has been converted down to baseband, the results are sent to the SDR for digital conversion, demodulation and format the operator can understand. The reverse process occurs for transmitting. Some of the more common digital modes are Multi-Frequency Shift Keying (MFSK), Phase Shift Keying (PSK), and Radio Teletype (RTTY).

Powerful, feature rich, intuitive, and low cost if not free software packages are available to hams and Short-Wave Listeners (SWLs). The software is being continually developed with new features added on a regular basis. Some is developed by fellow Hams, and other options are commercially available. For example, National Instruments (NI) offers SDR and LabVIEW communications design software to prototype wireless communications systems. SDRuno, HDSDR, SDR#, and SDR Console are a few of the more common software packages available to the ham via the internet.

Not only is SDR technology very versatile, but compared to conventional radio technology it's quite inexpensive. Searching the internet, I found several antenna analyzer kit designs using SDR technology for less than \$50. In addition, there is a wide range of SDR hardware on the market including RTL-SDR dongles and specialized kits providing a wide-range of diagnostic capabilities. There is no limit to what the SDR can do, and Hams all around the world are busy exploring this technology while having a blast.

Ham Population Report

	Novice	Tech	General	Advanced	Extra	Total
NM	47	3,591	1,385	364	1,249	6,636
USA	9,832	372,326	172,692	44,595	143,480	742,924



2016 National Parks ON THE AIR
www.arrl.org/NPOTA

Final Point totals for the National Parks on the Air event are shown below. Totals are for confirmed contacts only in ARRL's Logbook of the World.

Top Activator Award:

Jim Frazier KC5RUO wins the individual award for the most NPS sites activated

The Los Alamos Amateur Radio Club W5PDO wins the club award for the most NPS site activations

Activated All New Mexico NPS Units Award:

Mike Walsh KE5AKL was the first to activate all 18 NPOTA units in New Mexico and wins the individual award.

Activator Leader Board

Call Sign	Score
KC5RUO	50
W5IL	41
AI5P	33
NM5AE	26
K6TAA	22
NM5RC	22
KE5AKL	20
W5PDO	16
K8TE	15
WB2RIS	12
N5FO	11
AE5VM	10
K1RAX	7
WD6DCD	6
KF5THB	5
NM5DX/M	4
WB7EGF	4
AI6KK	3

Continued...

Call Sign	Score
KM5XK	3
N2IC	3
AL7L/5	2
K5GLT	2
K5TA	2
N2GJ	2
NM5HD	2
WA6BJH	2
WK5T	2
AE5EB	1
KG5ANO	1
KG5CUK	1
N5T	1
N9WL	1
NM5SH	1
NM5SW	1
W4PMG	1
W5RDL	1

Net Report

To ensure inclusion in this monthly report, please forward all net reports to Don Grab K5BIS@ARRL.net and Alden Oyer AG5S@ARRL.net - thank you!

Net	Check-ins	QSTs
NM. Roadrunner Traffic Net	1135	57
NM. Breakfast Club	884	64
Caravan Club Net	94	16
SCAT Net	1001	226
Yucca Net	409	77
Four Corners Net	636	44
Rusty's Raider's Net	448	79
Valencia County ARA Net	46	24
Tri-County ARES Nets	105	13
Tri-County ARES Simplex Net	6	1
East Mountain FM Simplex Net	23	4
NM. D-Star Voice Net	63	10
144 Mhz. SSB Net	31	0
432 Mhz. SSB Net	22	0
KC5JBO Memorial Simplex Net	73	0
NM. Department of Health Net	148	3
NM. ARES/RACES Statewide Ecomm Net	13	5
Northern New Mexico Amateur Radio Net	35	3
BC ARES V/UHF	40	18

Central States VHF Conference is coming to New Mexico

The Central States VHF (CSVHF) Conference Is the preeminent VHF+ amateur radio conference in the nation. This year’s conference is being hosted by Rocky Mountain Ham Radio and will be held in Albuquerque on July 27th-30th

This year’s conference at a glance includes the following activities:

- A Thursday evening Family Activity
- Luncheon, Dinner Banquets, evening Hospitality Suites
- Technical and non-technical VHF+ presentations
- Technical VHF+ poster board presentations
- Rover row and Dish bowl
- VHF-101 and VHF-102 presentation series for aspiring and beginning VHF+ ops
- Noise Figure measurement
- VHF+ equipment swap fest
- Antenna range/shootout
- Family oriented activities
- Prizes
- VHF+ related Vendors

Keep an eye at <http://2017.csvhfs.org/> for more information as planning progresses.

Silent Key Report

We regret to report the following keys are now silent:

Rick "Bear" Giles.

KB5VIE.

Passed 2/1/17.

Age 65.

New Ham Report

Call	Name	City
KG5RMX	Michael Brown	Grants
KG5RLE	Timothy Sims	Sandia Park
KG5RMW	Mark Chavez	Albuquerque
KG5RLB	Matthew Klire	Albuquerque
KG5RLC	Andres Quan	Santa Fe
KG5RLI	Hayden Walker	White Rock
KG5RLG	Christopher Bond	White Rock
KG5RDY	Dwight Bird	Las Cruces
KG5RLN	Benedict Kelly	Roswell



Amateur Radio at New Mexico Tech

Brian N5ZGT

A couple of months ago Skyler KD0WHB, an electrical engineering freshman at New Mexico Tech in Socorro and president of Tech Amateur Radio Association (TARA), kindly sought contributions towards the purchase of a service monitor to help teach a number of his classmates and TARA members about RF testing, troubleshooting, and characterization, and use it as a resource for the future projects TARA has planned. His GoFundMe page (<https://www.gofundme.com/rf-test-equipment-for-radio-club>) has an excellent video introducing himself, TARA, and their plans. It's great to see the support he has garnered so far.

One of TARA's current projects is the construction and operation of a UHF repeater to rally their members on the air, provide teaching opportunities using their test gear, and attract other New Mexico Tech students to amateur radio

On Friday Feb 10th, members of Rocky Mountain Ham Radio (a New Mexico and Colorado based ham organization that operates a couple dozen D-STAR, DMR and analog repeaters as well as a 5-GHz IP-based amateur radio microwave backbone/network that spans from Sandia Crest all the way up to Cheyenne, Wyoming) dropped into TARA's membership meeting in Socorro to present a Yaesu VXR-5000 UHF repeater and duplexer that RMHAM has donated to TARA.

Ed James KA8JMW (ARRL New Mexico Section Manager and Vice President of Rocky Mountain Ham Radio, NM) also presented TARA's membership with an ARRL Handbook and General Class study manual.

The ambition these young hams are showing, under Skyler's leadership, is as impressive as it is rare within amateur radio, and it's a treat to have them emerging within New Mexico's repeater community.

A group picture from last night's meeting is attached.

For more information about TARA, visit <http://infohost.nmt.edu/~tara/>. For more information about Rocky Mountain Ham Radio's, visit <http://www.rmham.org/wordpress/>



New Mexico Ham Marks 80 Years as a Licensee

From the ARRL news 01/25/2017, Reprinted with Permission

"Made it! 80 Years a ham." That's how ARRL member Paul Elliott, W5DM, of Hobbs, New Mexico, recently posted his milestone on the Top Band reflector. Growing up during the Great Depression in Kingsville, Texas, Elliott got his ham ticket at age 14 as W5GGV. Now 94, Elliott eventually worked his way to the top rung – Amateur Extra – back in the day when that license offered no additional privileges, just prestige. It did later allow him to apply for a two-letter suffix call sign, and he became W5DM.

His first rig was homebrewed from Atwater Kent radio parts, with a wire to a tree for an antenna, but he remembers making his own galena crystal for a crystal set and experimenting with a Model T spark coil. He continued building his own transmitters and receivers for a couple of decades, operating CW until SSB came along. Elliott succeeded in working all states on 160 meters from a 120 x 120 foot electrically noisy city lot with "a long but low semi-inverted L," as he described it. He now has 189 DXCC entities confirmed on Top Band.

A Texas native and World War II veteran, Elliott is a graduate of the US Naval Academy and served in the Pacific. After the war, he was a Navy aviator. In the late 1940s, he began farming cotton and maize, which he continued until 1980 on 200 South Texas acres, then taking on a second job as a chemical plant engineer, before going back to school to earn a doctorate in physics from Texas A&M.

"I'm basically a peasant with a lot of education," is how he describes himself. He spent more than 20 years in academia as a professor of physics at his alma mater. In addition to Amateur Radio, Elliott enjoyed flying and was a licensed commercial pilot.

"Basically, all I'm doing today is chasing the occasional DX," Elliott told ARRL. He said he has a transceiver and a couple of wire antennas that he makes work on all bands. Elliott has 325 DXCC entities confirmed on all bands – plus a lot of memories from an earlier era of Amateur Radio. He recalled a fellow ham in Texas who had directly coupled the final tube of his transmitter, with 1,500 V dc on the plate, to his antenna. When he received a "pink slip" (advisory notice) from an FCC monitoring station in Hawaii for harmonics, his friend saw the bright side and bragged about the distance his signal had traveled.

"Age, not surprisingly, has taken its toll," Elliott said on the Top Band reflector, noting that his CW speed was now down to 20-25 WPM because of waning dexterity. "Thanks to all who have had the knowledge and the kindness to help me over the years," he said.



Paul Elliott, W5DM, holds a QSL card from his first DX contact in September 1937 on 40-meter CW.

**Ed James
KA8JMW**

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**Assistant Section
Managers**

Southern NM -
Robert Truitt
KE5OFK

Northern NM - Bill
Boedeker NM5BB

Don Grab N5BIS

**Section Youth
Coordinators**

Bob Longoria N5JH

Phil Darling KF5LEF

Sue Darling KF5LEG

**Affiliated Club
Coordinator**

Art Priebe N5ART

**Official Observer
Coordinator**

Jerry Boyd WB8WFK

**Section
Emergency
Coordinator**

Jay Miller W5WHN
acting

If you are interested in
an open leadership
position, please
contact Ed James.

Job Opening

Code 3 Service is in need of an experienced LMR radio tech in Albuquerque ASAP. It's a full time position. Requires experience in soldering, radio programming, repeater maintenance & installation, mobile installation, computer skills, antennas, use of test equipment, troubleshooting, etc. CAD/dispatch, IP networking, microwave experience a plus. Pay commensurate with experience.

www.Code3Service.com

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