

County Hunter News OnLine

October 2023
Volume 19 Issue 10

Welcome to the On-Line County Hunter News, a monthly publication for those interested in ham radio county hunting, with an orientation toward CW operation. We also cover some park chasing activities these days. Contributions of articles, stories, letters, and pictures to the editor are welcomed, and may be included in future issues at the editor's discretion.

The County Hunter News will provide you with interesting, thought provoking articles, articles of county hunting history, or about county hunters or events, ham radio or electronics history, general ham radio interest, and provide news of upcoming operating events.

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CW County Hunter Frequencies are 14.0565, 10.124.5, and 7056.5, with activity occasionally on 3556.5 KHz. Also, there is SSB activity now occasionally on 7188 KHz. The CW folks are now pioneering 17M operation on 18.0915. (21.0565, 24.9155, and 28.0565). Look around 18136 or for occasional 17M SSB runs usually after the run on 20M SSB . (21.336 and 28.336)

You can see live spots of county hunter activity at ch.W6RK.com

For information on county hunting, check out the following resources:

The USACA award is sponsored by CQ Magazine. Rules and information are here:

<http://countyhunter.com/cq.htm>

For general information FAQ on County Hunting, check out:

<http://countyhunter.com/whatis.htm>

MARAC sponsors an award program for many other county hunting awards. You can

find information on these awards and the rules at:

<http://marac.org/awards.pdf>

There is a lot more information at www.countyhunter.com . Please check it out.

Back issues of the County Hunter News are available at www.CHNewsonline.com

De N4CD, Bob Voss, Editor (email: telegraphy@verizon.net)

Notes from the Editor

N4CD Rumblings

1) Sunspots – We got them. Seriously! Some days great with 17, 15 and above active. Many days not – with only FT-8 working well. Lots of DX from fixed stations, especially FT-8 being worked world wide, on upper bands. In generally good up to 15m and sometimes good on 12 and 10m depending upon the sunspot numbers and solar disturbances. Most of time 10M SSB not there. 20M been lagging but 15 and 10m rated 'good' most days but not many spots for 10M. SFI now over 100 and sometimes higher. Sunspot numbers in the 60-100 range most days. Unfortunately lots of flares and disturbances. 20M often not great mid day but 17 and up good if mobile far enough away.

The hopes for great 10M propagation aren't realized yet. While the band is rated 'good' for propagation, not much is happening other than FT-8 there, with worldwide DX being worked. The sunspot numbers are now under 100 most days during summer. Lots of flare activities with some 'X' type flares wiping out HF for a few hours and making it 'fair' for much of the days. 15M offers worldwide DX on FT-8. DX is being worked on 6M FT-8. East and west coasts enjoying 10M, especially in contests.

The increased solar activity is bringing more CMEs and solar storms than in past cycles I believe.

2) QSO Parties - A whole lot of reports on QSO parties this month. Hope you joined in!

3) HAMFEST Attendance records for 2023.

Huntsville Hamfest	5642
Orlando Hamcation	21300
Dayton Hamvention	33861
Tokyo, Japan Ham Fair	25000
Friedrichshafen, Germany	11000

Hope you managed to get to one of the 'big ones' this year. Dozens of smaller hamfests, DX conventions, too....where you can mobile your way there and back giving out tons of contacts.

Mobile in 1953 - W4YDY

After the article last month about going mobile in 1953 – well, we hit the jackpot, readers! W4YDY sent along a link to his first mobile installation in 1953! He was in high school at the time. From his website:

May, 1953 - Morrow 3 band converter. My first mobile was a Morrow 3BR-1 80-20-10 meter converter that was connected to the BC radio. My Harvey Wells TBS-50D transmitter was installed in the trunk. Had to crawl part way in the trunk to peak the grid and load and dip the final before heading out! High Voltage DC power was supplied by a dynamotor connected to the battery that was a positive ground in a 1947 Plymouth 4 door sedan. Found out about that positive ground the hard way when I turned on the Harvey Wells filaments the first time! SMOKE!!







The Harvey Wells was used in the car and the house so it was "portable". Operation was crystal controlled only on 3.865 MHz. The antenna for 75 meters only was a homemade coil and an 8-foot whip. Installed the rig in a 1949 Plymouth a couple of months later. When you keyed the mike, you thought the dynamotor would almost stall the car! You could hear the car ammeter click when it monetarily pegged.

November 20, 1959 - Received new Collins KWM-2 transceiver (serial # 149).

1959 Pontiac with KWM-2 installed .December, 1959 - Collins mobile mount and Collins power supply for the KWM-2 installed in 1959 Pontiac. At last no more dynamotors! Used the Collins solid state power supply. The antennas were 5 single band whips with quick disconnects and can be seen faintly in the center of the trunk lid. This installation was removed when the car was sold in April 1965. The next HF mobile was installed September 2002. They sure got smaller and it's a good thing because of the small cars!



1971 - I went mobile again, but on 2 meters only. A Regency HR-10 was installed in a 1969 VW with a DB Products 3/8 antenna mounted on the front right hood. Later model 2 meter rigs were installed in a 1977 Plymouth with the same antenna installed on the left rear trunk. In 1980, installed the 2 meters in a 1970 VW

1988 - Bought a 1983 Ford Escort and installed the 2 meter radio with the DB Products antenna on the right side of the hood. A few years later, installed same in 1989 Ford Escort. Installed a Kenwood TM-V7A 2/440 transceiver in a new 1998 Ford Escort Wagon.

Back on HF mobile 37 years later

Hustler antenna on car September 2, 2002 - Finished installation of new mobile rig in a 1998 Ford Escort Wagon. Made contacts with CA fixed station and WA mobile on 20 meters. Car shown with 20 meter resonator on left antenna and right antenna is for 2 Meters and 440 MHz. Kept this antenna for a month and changed to a Tarheel Screwdriver. Back on HF mobile after 37 years.



September 3, 2002 - Had contacts on County Hunters Net on 20 meters with Australia and several states. VK4AAR ran me in Pitt County for my first county run from the mobile. Also some contacts on the 40 meter CHN.

Interior view of car with Icom IC-706MKIIG all band transceiver to right of steering wheel and Kenwood TM-V7A 2/440 transceiver behind the steering wheel.



October 10, 2002 - Installed new Tarheel Screwdriver Model 200 mobile antenna for HF. It was really BIG on my little car!! Changed to a 3 foot version on October 30 although the 4 foot version of Screwdriver worked great. The bottom mount is bolted to the car chassis.

October 30, 2002 - Went over to the Tarheel Screwdriver factory and had it shorten from a 4 foot model to the 3 foot Model 100. Antenna mount is a foot higher and closer to the body of the car therefore the top of the antenna is the same height. I think it looks much better now on the small car. Great bunch of fellows at Tarheel Screwdriver and it's an outstanding antenna. On the 2 hour trip back home, made 67 contacts to 25 states and Germany on the County Hunter's Net on 20 meters

January 27, 2010 - Installed new Model 75A Tar Heel Screwdriver mobile antenna for 80 through 10 meters. Wanted to get back on 75 meter mobile. Have a 6 foot whip that came with it but also use a 56 inch whip. Also have an 11 inch whip that is on the car most of the time so I can drive in the garage without damage when the antenna is at minimum height. The 11 inch whip will tune from 40 to 10 meters. First contacts were made on 75 meters with very good signal reports. Next day, worked NY, FL, IN, IL, MI and NE with 59 reports on 40 meters. Also worked CA and WA on 20 with good reports. It works!

A big advantage of the 75A is the speed of changing bands. Most of the screwdriver antennas take about a minute to go from minimum height to maximum height. The Model 75A will do it in about 30 seconds. Going from the minimum height to 20 meters takes only about 5 seconds. Changing from 20 to 40 meters only takes 7 seconds. 12 seconds from minimum height to 40 meters! 75 meters is about 20 seconds from 40 meters. It uses the same motor as the larger Model 100 and Model 200 antennas that have a much longer coil to move. I have been very happy with this antenna and the results.



August 12, 2016 - Removed radios and antennas from 1998 Ford Escort Wagon. The car was over 18 years old with over 127,000 miles and several problems that required parts that were no longer made. Another car replaced it on August 15, 2016. Mobile radios may be added in the future but the installation will be a much bigger problem with all the electronics on the newer cars. The Model 75A (my favorite Tarheel antenna) cannot be mounted properly but a Little Tarheel II will work if the HF radio is installed.

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Source: <https://www.qsl.net/w4ydy/w4ydmobile.html>

de N4CD

Should you get the urge to go mobile 1953 style, you can easily buy a Harvey Wells TBS-50 transmitter, Gonset mobile converter and Carter 6v dynamotor on Ebay for under \$200. At a hamfest you might get them all for \$80 as no one needs the Gonset converter (likely \$10) or dynamotor (\$10), and only a few boatanchor collectors want the Harvey Wells transmitter without the external power A/C power supply.

Kansas QSO Party

Wow. Mobiles were out and running, as well as Rovers and portable stations in the counties. All 105 counties were scheduled to be on the air. Looks like top folks managed to work 102 counties, missing three. May have had to be on both SSB and CW to catch them all, but I think all were on CW if you had the luck to find and work them.

OM2VL fixed DX 274 CW 140 SSB 102 counties

Last year during the KS QP we had reparation works on the QTH. I started the QP some hours later and I was so tired and at midnight I went home. This year the situation was the same. KS QP weekend =- so many works on the QTH in and outside (where was 35C).The plan was made min 2-2-2 QSO for my SQP Challenge

I start at 16:00Z on 15m with BIG signals - usually only 1 call. Thanks to all stations who were also here and gave me so many multipliers. On 20m big QRM from EU stations, so weak KS stations and I can break the USA wall very hard.

At midnight I was very tired and sleepy, but I stayed till the morning and made 275 QSO!Of course I went back to the QTH on Sunday also and finished the QP with my best KSQP result!

The situation was the same as the day before: 20m very hard work and 15m every QSO so easy with big signals. I checked 10m so many times, but nothing was heard. What a surprise when at 18:54Z I checked W0E who was very strong and we made QSO. I tried CQ and till 19:27Z 7 QSO in my LOG. It's a pity that other stations don't try 10m at that time....

Thanks a lot for the excellent activity! It is unbelievable that I missed only 3 counties: Barton, Graham and Hodgeman.

1x1 station: I worked 55, missed only N0F and W0T. W0T I heard and called several times on 20m but it seems he had RX problems. Big USA pileup and he made 1 QSO/10 minutes.

Most QSOs:

- K0I 42/12
- K0A 36/17
- N0R 29/22
- N0Q 28/19
- K0S 24/13
- W0A 21/10
- N0U 20/18
- N0T 15/11
- K0B 15/10
- W0O 15/8
- K0O 15/7
- N0I 14/12
- W0W 14/10
- N0K 10/8
- W0P 9/7
- N0S 6/5
- K5ZZR 4/4

Resident:

- (7): N0A
- (5): K0C, K0P, K0R, N0J
- (4): KS0KS, N0N, W0I, W0K

Bob! Thanks for organizing FB QP as usually! And thanks again for the all QSO's!

73, Laci

N0R (N5NA) Mobile CW LP 1238 cw

Thanks to everyone who gave me a call this past weekend. Some of the pileups were amazing! Just wish I were better at picking up callers. It's really difficult when everyone is the same strength, zero beat, and similar length calls!

I missed the 2022 KSQP. I was planning to come to KS but when the price of diesel got so high I opted to stay home. This year diesel was a bit less and I didn't want to miss two years in a row!

I detoured through AR to visit relatives and then headed to Joplin to swing through the Joplin hamfest Friday afternoon.

Got a bit of a late start Saturday morning with some computer problems compliments of Google maps. Long story but got it sorted out.

I tried to get on 15m from most of the counties. Had some strong signals on both days but not many callers even after spotting myself. 15m was better on Saturday than Sunday but still had some QSOs on Sunday. I tried 10m once but no QSOs.

Equipment: Elecraft K3, Scorpion SA-680 antenna, Dell D630 running CQ/X.

As always, a BIG thanks to my wife, K5AKS, for driving!

Below are a few statistics from CQ/X.

73. Alan N5NA / N0R

Thanks to the following stations for contributing more than half the QSOs:
N5RZ(57), OM2VL(29), W5LXS(29), N6MU(28), W9DC(24), K0XF(23), VE5KS(22),
K2DFC(22), VE3YT(20), N8II(20), K9CW(20), K7SV(19), WA0MHJ(18),
W8BZY(17), K7REL(16), NS2N(14), N6GP(14), DL3GA(13), W7GF(12), W4NZ(12),
N9NM(12), NO5W(11), KM4CH(11), AF5J(11), W4SIG(11), WA8ZBT(11),
W9QL(10), K4YT(10), K7AZT(10), N9HDE(9), K5TIA(9), K7SS(9), K5KG(9),
K2HT(8), N7LFX(8), N2CU(8), AA0AW(8), K3TW(8), KA7ICF(8), NX3A(8),
WD5CSK(8)

K0I/R (KI0I) Rover 1044 CW 368 SSB

Rover this year , I got a late start after going to the Joplin MO hamfest. With some pc startup trouble it was 1941z for first qso.

The bands played fairly well most of the time and really good in bursts. I hoped for more action on 80m Saturday nite ,but I guess the noise was keeping folks on 40 and 20.

I chose to modify my sked by running 4 counties at my second sit as I wouldn't have much time left for the third spot. I don't like doing 4 at a time as it's such a long exchange and some ops don't get all the counties on CW and it's a mouth full on fone. regardless, I only dropped one county , BOURBON at the end but there was coverage by others I know.

Many big signals and heavy pileups at times made a thrilling run again this year. We have to love what we do to endure the pressure of what seems like 100 stations calling at once , we appreciate you guys` patience and courtesy as the foxes weed through the hoards of hounds .

It's always nice to get through a mobile/rover run with no major blowups , my only loss was a milk crate I used to place my hamsticks (20 and 15m) on the mag mount atop my truck. I drove off and left it on the side of a gravel road at the ANDERSON/FRANKLIN county line.

I didn't miss it til I stopped again at COFFEY/OSAGE . HIHI Oh well , I hope some one puts it to good use !

The radio , laptop and antennas all played well , except a few accidental touches of the laptop power button stopped things dead . luckily restart was fast and the ops in QSO at the time hadn't left me .

Thank you all for the following as I changed locations as a ROVER.

Not as many DX this time as past years , but band condx determines that.

The radio this time an Icom 7300 wired to a HP Probook pc and no paddle for cw. power from a pair of 150 amp hour SLA batteries fed thru a N8XJK booster. This runs 100w all weekend no prob. Antennas - A TARHEEL 100HP with a solid 4` mast and a homemade TOPHAT as described on the K0BG website ,very good info there on everything mobile. On a triple magnet mount on top of the crew cab pickup was two hamsticks , 20 and 15m fine tuned to the 034 of each band. It all worked FB!

Of course we can't thank Bob W0BH enough for the excellent job and the hours he puts in to make the KSQP come together and run like a well oiled machine .

73 all I hope to be a part again next year.

Oh yeah , winning a dual band handheld at the Joplin hamfest was icing the the cake of a great weekend !!!

Mark KI0I aka K0I/r

W0P/R (KK6MC) Rover 721 cw 309 ssb

After not being able to work the KSQP for several years, it was good to be back in the saddle for this one. The new mobile and rove structure is a good move as well. Kudos to W0BH and I hope that other QSO parties pick up the idea.

I love mobiling/roving in the midwest. Roads are nicely laid out in a grid, usually there is a road on the county line that provides good access; and operating spots with low noise are easy to find. Plus there aren't many lookie-loos. I did end up across the road from a manure/used stable bedding dumping and storage lot. There was a semi load full by very 5 minutes or so. It was huge!

I operated mostly CW on 40M, 20M AND 15M, with some 20M SSB QSOs. I prefer CW in these contests, but if the QSO Parties are to survive they need to be inclusive, and there was no shortage of takers for SSB QSOs on 20M. Lets hope that they catch the QSO Party fever.

I had an antenna issue early on, which I sort of resolved, but a heavy rain put me off line for a bit. I also had keyer issues, which I think was due to a poor USB cable and, while one can operate CW in contests without a paddle, it helps to have one along. Don't ask.

Conditions were good most of the weekend and I seldom had significant periods where nobody came back to my CQs. 15M was open, but there wasn't much activity there. When I got on and called CQ, I would work 8 or 10 stations right away, and then nothing. I suspect that I was working those with multiple band frequency displays.

My route was a bit convoluted with longer distances between stops than optimum, but it did help to get all the counties on the air on SSB in addition to CW. I mostly hit locations on schedule.

Thanks to N5RZ, VE5KS, N6MU, K9CW, W9DC VE3YT, KA9VVQ, AB7BB, WA2MCR, K7SV K2DFC who followed me around during the whole contest and each were worked 10 or more times!

I also operated FT8 and FT4 for the digital category under the separate call KK6MC/r, as suggested. I will submit summary separately.

N0I/R Rover (WY7AA) 668 SSB

The plan for 2023 was to operate mobile for the first time. However that changed about 10 minutes into the contest when I found that my 20m Hamstick had crazy SWR and was pulling my radio down to 50w or less. Fortunately I had my telescoping whip and Wolf River Coil with me, and I switched to county line Rover. Good conditions this year.

W0W/R (NR0P) 700 SSB

had no comments

KK5ZR Rover 218 SSB

I'm going to hire myself out to the Kansas farmers as a rain maker since the only times (2) I've participated in the KSQP it has rained on me. I wonder what I should charge. When I started the contest my laptop froze up when I turned it on which took about an hour to figure out if I only held the start button down for about 20 seconds the problem would go away.

Then the rain came and contacts came at a premium, so I simply drove about 40 miles and blue skies appeared again. Then my new logging program needed the internet to load again after I turned it off to save the battery. I thought all I needed was installed in my computer, but I had to drive 60 miles round trip to load it again. I was really po-ed but I could only blame myself. Hi More problems due to my unfamiliarity with the new program. Again my fault... Thanks to all my contacts for being super nice and patient with me. The last 2 hours on Sunday was terrific for me and made it all worth it... Next year I'll bring my goulashes and swim suit....

K0W (K0AP) fixed KS - 339 CW 367 ssb

My 13th year QRV as K0W in the KSQP. Thank you all who called me. Big Thanks to Bob W0BH for another well-organized KSQP.

73 Dragan K0W, K0AP

NS2N -- fixed NY 276 cw 54 ssb 81 counties worked

Missed gobs of time Saturday with equipment and health issues. A contest that keeps you busy, even if condx were poor (Sunday)

Thanks KS

DL3DXX fixed DL - 70 CW 29 counties worked

Was out of town on Saturday to join a ham meeting at DP9A meeting long time friends. Came home too late to stay the night at the radio.

So attended the Sunday part for 6 hours.

20m was terrible with most KS stations not even heard or ESP.

15m was wide open with huge signals but I understand that KS station decided rather to stay on 20 or 40m with more callers from US.

10m was closed to US so I was surprised that I suddenly heard and worked W0E at 18:50 after my sunset. Little later heard K0R calling CQ on ten but he did not hear me.

10m was open only for a few minutes.

Watching skimmer did the trick being there at the right time.

N6MU fixed CA 322 CW

The CW sweep was doable this year with a little propagation help. I missed PRA/BRO/ATC/DON. Couldn't hear K0S in PRA Saturday. Nor could I hear W0O Sunday for his last three of BRO/ATC/DON. Guess it wasn't meant to be.

All 1x1 Qs except for two with KS0KS. 15 was great Saturday but dead Sunday.

Thanks to the eight active mobiles for a super effort! Just wish I could have heard you all the time, hi.

Kudos to W0BH for managing one of the best QPs around! 73...

NU0Q as N0U 1317 cw 0 SSB 0 digi

We missed last year due to car trouble, so we got a newer car this year. Turns out, it has

less RF noise. And I found a way to ground the mag-mounts to the car frame. I had a Little Tarheel on 20 meters and a Little Tarheel II with the larger whip on 40m and 80m. With two antennas, I could switch bands quickly. With these improvements, I managed to achieve my best score ever in the Kansas QSO Party. I used an ICOM IC-7100 running about 70 watts. The logging program was CQ/X by NO5W. Thanks again to Chuck for the free logging software.

We planned to start our route in Franklin County, which was strategically selected so that we could share a slab of BBQ ribs Friday night at Guy and Mae's Tavern. Since Karen, my wife and driver, doesn't like to drive at night, we wanted to end Saturday on the west side of Kansas to prolong the sunset. Since we wanted to drive back to Iowa on Sunday evening, we planned the end of our route in the northeast corner of the state. We missed the turn to go to Wabaunsee County, but we had extra time on Saturday, so we detoured to pick up Trego, Gove, and Logan. We also had time on Sunday to get to Nemaha. So, we ran 29 counties total. Thank you to Karen, who drove 500 miles on Saturday and 300 miles on Sunday!

The pile-ups were wonderfully brutal. I want to thank all the callers who made this so fun. A few times, I just sat back and laughed, thinking that it was impossible to pick any calls out of the mess. But each time, I refocused and tried my best to get everyone in the log. I know a lot of callers gave up. It's interesting that the same folks seemed to break through the pile each time. A few were successful with brute force (power, antenna, or maybe lucky propagation?), but most of the successful callers were not the strongest stations, but were skillful in the timing of their call and especially their choice of transmit frequency offset. After I worked all the stations that were slightly off frequency, I was left with an almost solid tone of callers all on the exact same frequency, and that was challenging to deal with.

There were some counties where 20 meters was so busy that I never had time to go to 40 meters. But a few times, I ran out of callers on both bands. At one point on Saturday, I tried to go to 15 meters, but couldn't get the antenna to tune. As it turns out, I was tuning the wrong antenna. No wonder I couldn't hear the noise increase as I got close to resonance! We had to pull off the road for me to figure this out. And then I had to retune both antennas. So, we lost some time, and I never did get on 15 meters. I did try 80 meters late on Saturday, but the sun was still up, so there wasn't much activity yet. Two people managed to find me before I went back to 40 meters. Sitting in the hotel parking lot after supper, I looked for Hawaii and was barely able to work them through the local S9 noise.

As usual, I had computer problems. For some reason, the USB connection from the

computer to the IC-7100 USB port kept dropping out. The disconnection each time was brief, but it locked up the logging program, essentially requiring a reboot every time I changed bands. After lunch on Saturday, I switched to the older approach of using the remote jack on the IC-7100 with a West Mountain Radio RIGTalk interface, and everything worked after that.

Final QSO count: 1317. (1137 on 20m, 178 on 40m, 2 on 80m.) Most frequently worked: N5RZ(46), VE3YT(26), N6MU(25), W5LXS(24), VE5KS(23), W9DC(22), K9CW(22), OM2VL(19), K4YT(18), NS2N(17), SP5SA(17), N8II(16), AF5J(16). Got 47 states (missed AK, RI, WY) and 5 provinces (NB, ON, MB, SK, BC). Most QSOs in a county on Saturday: Clay(61), Sheridan(56), Ottawa(52), Pottawatomie(51). Most QSOs in a county on Sunday: Smith(70), Norton(68), Phillips(61), Republic(58).

Thanks to W0BH for organizing. Thanks to the other mobiles, rovers, and other Kansas stations that make it worthwhile for so many others to spend their weekend giving us contacts. And many thanks to all the callers from outside Kansas who kept me busy.

K7SV - fixed VA 250 CW 68 SSB 90 counties worked

As always, fun chasing the mobiles around the state. nice to work a handful of great friends in KS! Got bored with finding the couple of mobiles still active Sunday, so quit early. Many thanks to Bob W0BH for such great organization once again. And thanks to all the ops who made it such a fun event, especially the mobiles!

N0B (NJ0P) One County Portable - Doniphan 77 cw 336 ssb

no comments

K7SV - fixed VA 250 CW 68 SSB 90 counties worked

As always, fun chasing the mobiles around the state. nice to work a handful of great friends in KS! Got bored with finding the couple of mobiles still active Sunday, so quit early. Many thanks to Bob W0BH for such great organization once again. And thanks to all the ops who made it such a fun event, especially the mobiles!

K8II - fixed WV 35 SSB 29 counties

no comments

N5RZ - fixed 520 CW 102 counties worked

Great activity. Did CW only -- S&P only. Missed 3 counties: PAW, PRA and SMN. Thought I heard PAW, but must have missed it. Should have stayed in the chair for those two hours I took off. Thanks to Bob, the mobiles, and all the KS stations for putting on a great party. And thanks for the QSOs.

N0J (opr N0JK) portable 600 CW 28 SSB QSO

I operated fixed portable at the Douglas - Jefferson county line. Mostly CW with my old TS-850, paper log and hand key. Brief SSB Sunday with FT-710. Antenna MFJ long whip on magnet mount with wires attached to top resonate on 40 and 80M, with antenna tuner. It worked well on 15 - 40M. I worked OM2VL on 15/20/40M, two KH6's and PJ2ND on 15 Meters. 15M was better Saturday than Sunday. I could only get 10 watts out on 80. The last hour of the contest Saturday evening was like magic on 80M CW. Many of the KS 1X1 calls popped up and nice to work them.

NØQ mobile (Operator(s): K7TQ WAØWWW) 1294 CW QSO

First of all, a big THANK YOU to W0BH, Bob, for all the work he puts into making the KSQP one of the best QSO Parties. Jay, WA0WWW, and I, K7TQ, travel a long way from our homes in Spokane, WA and Moscow, ID to participate and we have a great time.

For us the best parts are 1) counties are squares of about 30 miles on a side making for just the right amount of time in each one before the next one comes along, 2) propagation in KS is much different than we are used to in the Pacific Northwest, 3) the terrain is flat which allows our 100 Watts to get out unimpeded by mountains, and 4) having an assigned frequency eliminates frequency fights.

We started on a county line and had three other ones planned. We got ahead of our schedule, so we were able to squeeze in nine other county line operations. We ended on an unplanned county line. Great fun to watch the rate meter go sky high when on a county line.

Our most frequent customer was N6MU, John in CA, with 30 Qs in all 25 of our

counties. He was our first contact on Saturday morning and our fourth one on Sunday morning. Close behind John were N5RZ, Gator in TX, and VE3YT, Vic in ON with 28 Qs each. Others with 20 or more Qs were OM2VL, K2DFC, N8II, K7SV, K9CW, and W9DC. A total of 24 folks worked us 10 or more times.

We found 15 m to be great to EU with OM2VL, DL3DXX, and DK2CF making it into the log. Both K2DFC, Fred in NJ, and W1END, Eldon in NH, contacted us ten times on 15 m. Others have commented that 15 m was better on Saturday. We had 168 Qs on Saturday and 80 on Sunday. With half the number of available operating hours on Sunday, it looks like we found the two days to be about equal.

The mobile was a 2002 Ford Ranger with a KX2 and a KXPA at 100 W to a Scorpion 680 antenna mounted in the center of the truck's bed. Logging was done with a 14" screen HP laptop running N1MM+.

Jay and I thank everyone who worked us and those who tried, but we didn't get you in the log.

N0I rover (WY7AA) 688 SSB QSO

The plan for 2023 was to operate mobile for the first time. However that changed about 10 minutes into the contest when I found that my 20m Hamstick had crazy SWR and was pulling my radio down to 50w or less. Fortunately I had my telescoping whip and Wolf River Coil with me, and I switched to county line Rover. Good conditions this year.

N8II -fixed - WV 269 CW 109 SSB 95 counties worked

After working the KQP the first 2 hours I was "not feeling the joy" of the long hours yet to come although I have to admit the pace was picking up a bit right before 16Z. I decided to give OHQP a try and 40M was excellent for mid day. For a while I tried jumping back and forth from 20/15 and KQP with slow paced OHQP on 40. At 1945Z the OH pace picked up enough that I did little searching on 20 after that. I worked the KQP ops that I heard on 40 and 80 through the evening. Throw in a few HI Q's as well as 15 and 10M was wide open to HI as well.

I was pleased to work 58 CW Q's on 15M mostly on Saturday. W0E was my lone 10M CW QSO, some Es on 10/15 for sure. Saturday conditions were also excellent to KS on

20 all day well into the evening and signals on 40 and even 80 were very good in the evening/night. I worked every station I heard on 80 pretty easily and most easily on 40. Sunday condx were more what I expected on 20 with high absorption starting about 1515Z and never getting much better.

I figured I had better dupe stations worked Saturday for the Sunday only award, but it looks like that was a waste of time per 3830 reports so far. FYI, KS ops please set your parameters to allow dupes for those working towards the Sunday award. N3FJP defaults to logging no dupes, but I believe that parameter can be changed.

The pace Sunday was fairly slow as usual and SSB activity plummeted on 20 as conditions to more distant areas worsened. Catching all possible fixed ops again and chasing the mobiles kept it interesting enough to push on. 15M was very marginal to KS with all of my QSO's between 1500 and 1736Z.

Many thanks to the 8 active mobiles/rovers who make the KQP interesting for those long hours. I miss Butch, WY0A/K0O and those many SSB Q's/counties. Many thanks to the army of in state and out of state rovers/mobiles (K0S, W0O, K0A, W0Q, N0R, W0W, K0I) and sorry for not so many Q's on Saturday. You all did an excellent job!

Thanks especially to Bob, W0BH for handing out the 4 different calls and spending many hour organizing, scoring, and sending out awards. I hope to be around next year for more fun.

Thanks for the Q's and 73, Jeff

Ohio QSO Party

K8MR mobile 1102 CW 42 SSB QSO

Another fine ride around Ohio. This was our second best OhQP score, only behind 2020 when folks were stuck at home with covid restrictions, and when August had five weekends keeping Kansas away from us.

Conditions were quite good, 15 meters being useful, 20 being somewhat short, and 40 staying short for nearly the entire contest. Over the first five hours I had more QSOs on 15 and 20 combined than on 40, though 40 became quite good later. I tried CQing on 10 meters a few times, but nothing heard.

A few real time changes to the planned route. A posted detour in Stark took us far out of the way, when we probably could have found a much shorter unposted route on local streets. And we missed an exit in Fairfield, leading us to encounter an unexpected "Welcome to Franklin County" sign. So we ended up skipping Highland county and did get to our overnight destination right on time.

Florida was by far the most worked state outside Ohio, 141 QSOs vs. 64 for Michigan, the second place state. W5TM wins the most QSOs award with 35, followed by AD8J and N4OX with 34.

Sunday was a beautiful bike riding day, with my driver K3LA and I getting out for fifty miles around Columbus, mostly on the Alum Creek Trail, plus a connector through downtown Columbus for a few miles on the Olentangy Trail.

Thanks to all who chased us around the Buckeye State!

73 - Jim K8MR

K8O (W8CAR) Rover 431 CW 15 SSB

Missing my operating bud ,K8NZ, but he had other commitments. Everything worked well. Having a full size vertical to set up in the truck bed made 20 more usable. No real detours this year. Great wx, lots of Qs and seeing the beauty of Ohio all made it worthwhile. Made a few in motion Qs on SSB and recorded them. What a PITA to enter afterword, but they were all mults!

73 Dan W8CAR operating K8O rover

OM2VL - fixed - DX 98 CW 17 SSB QSO 45 counties worked

Thanks for the QSOs! I was so busy with KS stations, so I missed so many from Ohio.

Most QSOs:

K8MR 32/18
K8O 3/3

(5): KW8N
(4): K1LT/8, K8T, WB8JUI

73, Laci - Thanks for the QSOs! I was so busy with KS stations, so I missed so many from Ohio.

N8II - fixed - WV 140 CW 122 SSB 61 counties worked

I was trying to work both KSQP and OQP Saturday. The way it looks, I could have eased off the OH accelerator and hit KSQP harder. Mid afternoon most OH ops seemed to be on 20 including the mobiles and there was only scatter prop from here. The loudest OH op on 20 CW peaking S7 never heard me. Kudos to Bob, KW8N who has apparently low noise and a contesters ear for hearing me on 20 SSB among other callers and also hearing me on 15 CW for my only OH Q there. We made 6 QSO's, the highest for a fixed station. Congrats on the amazing score Bob! I knew I was missing some Q's mid afternoon Saturday working HI and KS, but guessing not a huge number. Starting 1945Z I decided I had better make KS a low priority as I had heard K7SV working OH and knew he was capable of a big score. So, I kept operating until the bitter end with a couple of short evening breaks besides 2 meal breaks. 10AM (KS start) until midnight makes for a long day!

After midnight I found a few HI stations before heading off to bed.

I have to congratulate all 3 mobiles for excellent operating. Many thanks to Dan, W8CAR operating K8O, Don, K8MFO (heard from beginning until near the end) and especially Jim, K8MR who gave me the most Q's/mults and even moved for a few SSB mults. Thanks also to K8RYU/R. My only mobile complaint is somewhat abandoning 40 for 20 when 20 was more active.

In general the level of operating was far superior to an average QP, great job OH ops! As usual with 40 becoming the new 75M because of high solar activity, the 75M phone activity was disappointing. I hit a sweet spot in activity on 3825 and ran about 10 stations or score would have even been worse. 40M activity definitely favored SSB. By the time conditions were at their best on 40 after 21Z, most of what was available was already in my log. Around 23Z, 40 phone activity dropped significantly. I was happy with my QSO totals on 160 and 80 CW and 40 phone.

Many thanks for the calls and QSO's, and to the long duration mobiles. I is hard to quit when they are still around.

73, Jeff

Some History of Ham Radio “Digital”

In the beginning.....there was Morse Code over telegraph lines. When 'radio' was invented and became a useful 'tool', Morse Code was the only way to communicate. That lasted up to about 1922, roughly 20 years later, when AM broadcast was created.

The 1900s to 1920 was the era of spark transmission. Tubes became available after WW1 – great progress happened during the war in tube technology, including some 'RF power tubes' of 10w and 50w (expensive!). Spark was outlawed totally by 1928, but most hams had already gone to tube transmission by the 30s. Xtal control became popular in the 1930s as well as stable VFOs. Before that, it was just power oscillators. Hams could get on AM. Over the air was CW and AM. Digital of any type would not be available to hams till the 1950s!

So what is 'digital'. I'll start by saying it is something that cannot be decoded by most people by 'ear'. So when do we start with 'digital communications? Way back when over 'telegraph' systems.

From the web:

Teleprinters, sometimes referred to as teletypes based on the dominance of the Teletype Corporation in their heyday, are devices that send or receive written transmissions over a wire or over radios. Those have evolved over time to include text and images. And while it may seem as though their development corresponds to the telegraph, that's true only so far as discoveries in electromagnetism led to the ability to send tones or pulses over wires once there was a constant current.

That story of the teletype evolved through a number of people in the 1800s. The modern telegraph was invented in 1835 and taken to market a few years later. Soon after that, we

were sending written messages encoded and typed on what we called a teletype machine, or teletypewriter if you will. Those were initially invented by a German inventor, Friedrich König in 1837, the same year Cooke and Wheatstone got their patent on telgraphy in England, and a few years before they patented automatic printing.

König figured out how to send messages over about 130 miles. But he used a wire per letter of the alphabet and Samuel Morse used a single wire and encoded messages with the Morse code he developed.

Alexander Bain developed a printing telegraph that used electromagnets that turned clockworks. But keep in mind that these were still considered precision electronics at the time and human labor to encode, signal, receive, and decode communications were still cheaper. Therefore, the Morse telegraph service that went operational in 1846 became the standard.

Meanwhile Royal Earl House built a device that used piano keyboards to send letters, which had a shift register to change characters being sent. The far end printed the message. Thus predating the modern typewriter, developed in 1878, by decades. Yet, while humans were cheaper, machines were less prone to error, unless of course they broke down. They also did not work well over marginal lines, and much of the telegraph lines were marginal at the start, strung on trees, 12 foot high posts, etc.

Then David Edward Hughes developed the first commercial teletype machine known as the Model 11 in 1855 to 1856. A few small telegraph companies then emerged to market the innovation, including Western Union Telegraph company.

Picking up where Morse left off, Émile Baudot developed a code that consisted of five units, that became popular in France and spread to England in 1897 before spreading to the US. That's when Donald Murray added punching data into paper tape for transmissions and incremented the Baudot encoding scheme to add control characters like carriage returns and line feeds. And some of the Baudot codes and Murray codes are still in use.

The ideas continued to evolve. In 1902, Charles Krum invented something he called the teletypewriter, picking up on the work started by Frank Pearne and funded by Joy Morton of the Morton Salt company. He filed a patent for his work. He and Morton then formed a new company called the Morkrum Printing Telegraph. Edward Kleinschmidt had filed a similar patent in 1916 so they merged the two companies into the Morkrump-Kleinschmidt Company in 1925 but to more easily market their innovation changed the name to the Teletype Corporation in 1928, then selling to the American Telegraph and

Telephone Company, or AT&T, for \$30M. And so salt was lucrative, but investing salt money netted a pretty darn good return as well.

Teletype Corporation produced a number of models over the next few decades. The Model 15 through 35 saw an increase in the speed messages could be sent and improved encoding techniques. As the typewriter became a standard, the 8.5 by 11 inch came as a means of being most easily compatible for those typewriters. The A standard was developed so A0 is a square meter, A1 is half that, A2, half that, and so on, with A4 becoming a standard paper size in Europe. But teletypes often had continual feeds and so while they had the same width in many cases, paper moved from a small paper tape to a longer roll of paper cut the same size as letter paper.

Decades after Krum was out of the company, the US Naval Observatory built what they called a Krum TTY to transmit data over radio, naming their device after him. Now, messages could be sent over a telegraph wire and wirelessly.

That was 1922.

Source: <https://thehistoryofcomputing.net/the-teletype-and-tty>

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What was needed to send signals over the radio was a 'terminal unit'. At one end, you'd encode the Baudot coded teletype output with two states. Could be audio tones, or frequency shift. Since SSB had not been invented yet, you couldn't send it over HF radio as audio tones (which convert it to frequency shift). You had to change the frequency of the RF, usually 850 Hz in the early days. SSB didn't appear till the mid 1950s, and 1960s for most hams.

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When a key of the teleprinter keyboard is pressed, a 5-bit character is generated. The teleprinter converts it to serial format and transmits a sequence of a start bit (a logical 0 or space), then one after the other the 5 data bits, finishing with a stop bit (a logical 1 or mark, lasting 1, 1.5 or 2 bits). When a sequence of start bit, 5 data bits and stop bit arrives at the input of the teleprinter, it is converted to a 5-bit word and passed to the printer or VDU.

The 5 data bits allow for only 32 different codes, which cannot accommodate the 26 letters, 10 figures, space, a few punctuation marks and the required control codes, such as carriage return, new line, bell, etc. To overcome this limitation, the teleprinter has two states, the unshifted or letters state and the shifted or numbers or figures state. The change from one state to the other takes place when the special control codes LETTERS and FIGURES are sent from the keyboard or received from the line. In the letters state the teleprinter prints the letters and space while in the shifted state it prints the numerals and punctuation marks. Teleprinters for languages using other alphabets also use an additional third shift state, in which they print letters in the alternative alphabet.

The modem is sometimes called the terminal unit and is an electronic device which is connected between the teleprinter and the radio transceiver. The transmitting part of the modem converts the digital signal transmitted by the teleprinter or tape reader to one or the other of a pair of audio frequency tones, traditionally 2295/2125 Hz over landlines. Or VHF AM or 1950s RTTY.

One of the tones corresponds to the mark condition and the other to the space condition. These audio tones, then, modulate an SSB transmitter to produce the final audio-frequency shift keying (AFSK) radio frequency signal. Some transmitters are capable of direct frequency-shift keying (FSK) as they can directly accept the digital signal and change their transmitting frequency according to the mark or space input state. In this case the transmitting part of the modem is bypassed.

On reception, the FSK signal is converted to the original tones by mixing the FSK signal with a local oscillator called the BFO or beat frequency oscillator. These tones are fed to the demodulator part of the modem, which processes them through a series of filters and detectors to recreate the original digital signal. The FSK signals are audible on a communications radio receiver equipped with a BFO, and have a distinctive "beedle-eeedle-eeedle-eee" sound, usually starting and ending on one of the two tones ("idle on mark").

Today, both functions can be performed with modern computers equipped with digital signal processors or sound cards. The sound card performs the functions of the modem and the CPU performs the processing of the digital bits. This approach is very common in amateur radio, using specialized computer programs like fldigi, MMTTY or MixW.

Before the computer mass storage era, most RTTY stations stored text on paper tape

using paper tape punchers and readers. The operator would type the message on the TTY keyboard and punch the code onto the tape. The tape could then be transmitted at a steady, high rate, without typing errors.

After World War II, amateur radio operators in the U.S. started to receive obsolete but usable Teletype Model 26 equipment from commercial operators with the understanding that this equipment would not be used for or returned to commercial service. "The Amateur Radioteletype and VHF Society" was founded in 1946 in Woodside, NY. This organization soon changed its name to "The VHF Teletype Society" and started US amateur radio operations on 2 meters using audio frequency shift keying (AFSK). The first two-way amateur radio teletype contact (QSO) of record took place in May 1946 between Dave Winters, W2AUF, Brooklyn, NY, and W2BFD, John Evans Williams, Woodside Long Island, NY.[21] On the west coast, amateur RTTY also started on 2 meters. Operation on 80 meters, 40 meters and the other High Frequency (HF) amateur radio bands was initially accomplished using make and break keying since frequency shift keying (FSK) was not yet authorized.

In early 1949, the first American transcontinental two-way RTTY contact was accomplished on 11 meters using AFSK between Tom McMullen (W1QVF) operating at W1AW and Johnny Agalsoff, W6PSW. The stations effected partial contact on January 30, 1949, and repeated more successfully on January 31. On February 1, 1949, the stations exchanged solid print congratulatory message traffic and rag-chewed. Earlier, on January 23, 1949, William T. Knott, W2QGH, Larchmont, NY, had been able to make rough copy of W6PSW's test transmissions.

While contacts could be accomplished, it was quickly realized that FSK was technically superior to make and break keying. Due to the efforts of Merrill Swan, W6AEE, of "The RTTY Society of Southern California" publisher of RTTY and Wayne Green, W2NSD, of CQ Magazine, amateur radio operators successfully petitioned the U.S. Federal Communications Commission (FCC) to amend Part 12 of the Regulations, which was effective on February 20, 1953. The amended Regulations permitted FSK in the non-voice parts of the 80, 40, and 20 meter bands and also specified the use of single channel 60 words-per-minute five unit code corresponding to ITA2. A shift of 850 ± 50 Hz was specified. Amateur radio operators also had to identify their station callsign at the beginning and the end of each transmission and at ten-minute intervals using International Morse code.

Use of this wide shift proved to be a problem for amateur radio operations. Commercial operators had already discovered that narrow shift worked best on the HF bands. After investigation and a petition to the FCC, Part 12 was amended, in March 1956, to allow

amateur radio operators to use any shift that was 900 Hz or less.

The FCC Notice of Proposed Rule Making (NPRM) that resulted in the authorization of FSK in the amateur high frequency (HF) bands responded to petitions by the American Radio Relay League (ARRL), the National Amateur Radio Council, and a Mr. Robert Weinstein. The NPRM specifically states this, and this information may be found in its entirety in the December 1951 issue of QST Magazine.

The first RTTY Contest was held by the RTTY Society of Southern California from October 31 to November 1, 1953

Amateur radio operators used various equipment designs to get on the air using RTTY in the 1950s and 1960s. Amateurs used their existing receivers for RTTY operation but needed to add a terminal unit, sometimes called a demodulator, to convert the received audio signals to DC signals for the teleprinter.

Most of the terminal unit equipment used for receiving RTTY signals was home built, using designs published in amateur radio publications. The Twin City, W2JAV and W2PAT designs were examples of typical terminal units that were used into the middle 1960s. The late 1960s and early 1970s saw the emergence of terminal units designed by W6FFC, such as the TT/L, ST-3, ST-5, and ST-6. These designs were first published in RTTY Journal starting in September 1967 and ending in 1970.

Amateur radio operators needed to modify their transmitters to allow for HF RTTY operation. This was accomplished by adding a frequency shift keyer that used a diode to switch a capacitor in and out of the circuit, shifting the transmitter's frequency in synchronism with the teleprinter signal changing from mark to space to mark. A very stable transmitter was required for RTTY. The typical frequency multiplication type transmitter that was popular in the 1950s and 1960s would be relatively stable on 80 meters but become progressively less stable on 40 meters, 20 meters, and 15 meters. By the middle 1960s, transmitter designs were updated, mixing a crystal-controlled high frequency oscillator with a variable low frequency oscillator, resulting in better frequency stability across all amateur radio HF bands.

By the early 1970s, amateur radio RTTY had spread around the world and it was finally possible to work more than 100 countries via RTTY.

On January 7, 1972, the FCC amended Part 97 to allow faster RTTY speeds. Four standard RTTY speeds were authorized, namely, 60 words per minute (WPM) (45 baud), 67 WPM (50 baud), 75 WPM (56.25 baud), and 100 WPM (75 baud). Many amateur

radio operators had equipment that was capable of being upgraded to 75 and 100 words per minute by changing teleprinter gears. While there was an initial interest in 100 WPM operation, many amateur radio operators moved back to 60 WPM. Some of the reasons for the failure of 100 WPM HF RTTY included poor operation of improperly maintained mechanical teleprinters, narrow bandwidth terminal units, continued use of 170 Hz shift at 100 WPM, and excessive error rates due to multipath distortion and the nature of ionospheric propagation.

The FCC approved the use of ASCII by amateur radio stations on March 17, 1980 with speeds up to 300 baud from 3.5 MHz to 21.25 MHz and 1200 baud between 28 MHz and 225 MHz. Speeds up to 19.2 kilobaud was authorized on amateur frequencies above 420 MHz.

The requirement for amateur radio operators in the U.S. to identify their station callsign at the beginning and the end of each digital transmission, and at ten-minute intervals using International Morse code, was finally lifted by the FCC on June 15, 1983.

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RTTY was the first mode authorized for ham radio use – the first 'digital'.

The disadvantage of RTTY include no error correction. Your copy may be garbled under poor propagation conditions. It also has a 100% duty cycle when transmitting. If you're mobile, you'd best cut back on power output as mobile rigs aren't designed for high duty cycle modes.

There are several RTTY contests a year that bring out lots of activity and folks still work on DXCC using RTTY. County Hunters often use it as one of 'five modes' for that award.

Before we go on to other modes, we need to discuss amTOR

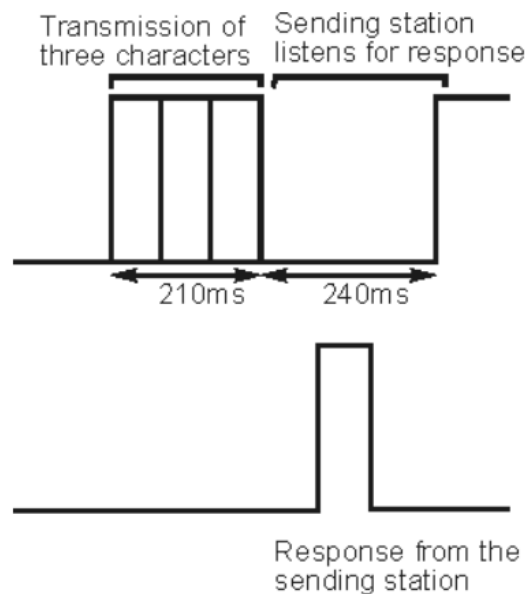
An overview, summary or tutorial about the basics of **AmTOR, Amateur Telex Over Radio** a form of digimode used on the HF amateur bands.

AmTOR may be considered as the next development from RTTY. AmTOR was introduced to overcome the problems with RTTY. As a result of its performance, it has become popular on the HF bands because it gives more reliable communication, especially when interference is present. It achieves this by using a coding system that allows errors to be detected and corrected.

While AmTOR has many advantages it does have some drawbacks. One is that the system frequently changes from transmit to receive and back again. This can be a disadvantage when using a transceiver that uses changeover relays as they are continuously changing position, but for those sets using electronic switching, it is not a problem. However to balance this AmTOR can produce very good copy even when signal levels are such that they can barely be heard by ear.

The AmTOR system uses the same basic five-bit code as RTTY, but sent at a data rate of 100 baud. A total of seven bits are sent. The additional two bits are used to ensure that the transmitted data pattern always contains four mark bits and three space bits. From a knowledge of this expected pattern the receiver is able to detect an error and action can be taken to correct it.

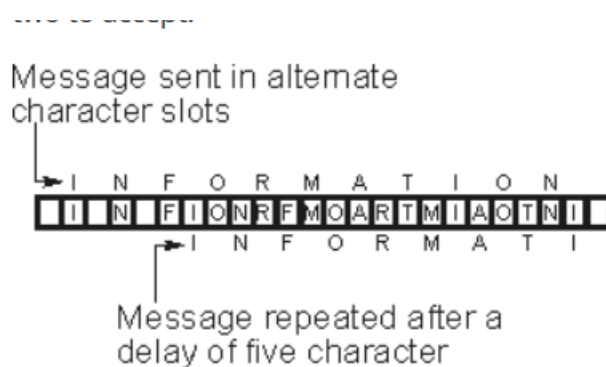
In operation the transmitter sends out three characters. The receiver checks them to ensure they are correct. If they are, then an acknowledgement is sent back to indicate this. Then the next block of three characters can be sent out. If they have not been received correctly then this is indicated and the block is re-sent



A block takes a total of 450 milliseconds (450ms) to send. Each character takes 70ms, giving a total of 210ms for the transmission. Then there is a window of 240ms for an acknowledgement to be received. This amount of time is allowed to take account of the

delays that occur.

The method of sending where such an automatic request for repeat (ARQ) is used is called Mode A. However, it can only operate if contact has been established with a particular station. A general transmission such as a news bulletin or an amateur radio operator wanting a contact cannot work in this mode. Here a second mode called Mode B is used, where each character is sent twice. Initially the first character is sent once and then the repeat message is sent five characters behind the first one. The time interval between the two signals reduces the possibility of interference causing problems. Sending the data twice also gives the receiver two attempts at capturing each character. Also, because seven bits of data are sent instead of the five used for the character code itself, error detection is still possible, allowing the receiving equipment to decide which character of the two to accept.



In view of the error correction capabilities of AmTOR, it is ideal as a data mode for use on the HF amateur bands where interference levels are high and there is no guarantee that any data sent will be successfully received.

Like RTTY the data rate is around five or six characters a second, dependent upon the level of interference, and as a result many people use this mode for chatting. There is also a certain amount of DX to be contacted, and indeed many people look for new countries and rare stations in the same way as they do on Morse and SSB, enabling this mode to cover a variety of interests.

Summary of AmTOR characteristics

Some of the highlight characteristics and parameters for AmTOR are summarized in the table below.

AmTOR Summary

Parameter Details

Symbol rate 100 baud

Typing speed 66 wpm

Bandwidth 400 Hz

ITU description 400HF1B

source: https://www.electronics-notes.com/articles/ham_radio/digimodes/amtora.php

Hawaii QSO Party

You need to read up on the rules ahead of time to know the multipliers

On the island of Hawaii - you have 4 - HIL, VOL, KOH, KON

On the island of Molokai - you have MOL and KAL

In Honolulu County you have FOR, LRN WHN PRL

Kauai is KAU

Lanai is LNI

Maui is MAU

KH6LC - Hawaii - 1201 cw 1245 ssb

We decided to operate both CW and SSB and really enjoyed ourselves...We had Trevor KH6IM from Captain Cook join our all Big Island crew for the first time and was a great addition to the team...We operated a total of 19 hours with breaks for meals and

sleep...Thank you for your contacts along with your patience with repeats and fills...We hope you enjoyed the 2023 Hawaii QSO Party as much as we did...And yes, at 48 hours it's much too long for the level of participation.

73 and Aloha
Lloyd, Roby, Trevor, Ken
KH6LC NH6V KH6IM N6KB
www.KH6LC.com

N6RO - fixed CA (or KO6M N6RO WU6P) 46 CW 32 ss 20 digi

Aloha.

The N6RO HI-QSO-PARTY operator team this year is Ken/N6RO, David/KO6M and Nian/WU6P, with support team members Bob/K3EST, David/WD6T, Chris/N6WM. We have a good start, made Qs on 15m/20m/40m in the first hour, which is one of few hours we have double digits hourly QSO rate. Rates dramatically goes down from 2nd hour.

The other highlight hour is 19Z Saturday, the 10m is wide open and people is on, and that brings the hourly rate back to 2 digits.

The bands are open to Hawaii, no major propagation or QRM/QRN issues. On high bands, KW feels like an overkill. We can hear most of HI stations very well, and worked all the stations we can hear.

CW made most of the Qs, followed by SSB, and with FT8 the 3rd, followed by RTTY.

It is a fun event, slow pace. Some of the HI stations (KH6AQ, KH6LC, KH6TU etc.) stay there CQing for a long time, so casual participates from out of state can easily work a few Qs.

For an out-state station seriously chasing HI QSO Party, however, it is a different story. We just do not have enough HI station on air to support the full contest period. Not many new callsigns show up on CW or SSB. While for Digital modes, there is a WW Digi contest on going in parallel, there is still not many HI stations on. We also wish to see more HI M/M big guns on air, like KH6LC did.

For contest organizer, please consider a team member comments, "I'd like to see this

contest pruned down to 30 hrs. That allows more low band time on second night, and take Sunday off'

We end up made 98 QSOs, cover all 3 modes, 80m to 10m. Tried 160m but no success. We worked HIL, HON, KAU, KOH, MAU, PRL, VOL and WHN, plus FT8 may give us extra mults.

Thanks for all the stations out there putting out signals, and thanks for your effort working us. Keep Contesting.

AH6KO - fixed - Hawaii 1536 CW 0 SSB 0 digi

Each contact was a happy event -- thanks to all. The EU stations came out in large numbers again, great opening on 20m Friday night. Also very good 10m opening early Saturday morning, and a more modest one on Sunday morning. A short Xray flare mid-day Saturday made things even more interesting.

AH7RF activated the rare KOH and KON mults on CW -- thanks Heather! Still, I only managed 7 HI mults. I agree with N6RO team comment about shortening HQP. 24 hours would work fine ... rockin' around the clock once would suffice.

Thanks Alan AD6E/KH6TU for making HQP happen. All the best to our friends on Maui.

73~ Stan AH6KO
Keaau HI on the Big Island

KH6CC fixed Hawaii County (Big Island) (Ops KB6EGA KH6BMM KH6ZM KH9AB NH7D WH6AW) 200 CW 13 SSB 0 digi

KH6TU (opr AD6E) - Fixed Maui - 659 335 303

Nice 20 opening to EU Friday night.

Having the WW Digi run in parallel with compatible exchange works very well. Sunday morning 15 phone was flat lined, but calling CQ brought out many LOUD

callers.

(note - he made 350 Q on 10M!)

KH6AQ - fixed - Hawaii county 1050 CW 0 SSB 0 digi

Being on the state end of a QSO party is certainly a lot of fun! If I'd known the 'test would start so hard and fast I'd have warmed up for half an hour on Morse Runner. I am just amazed at the level of interest mainland ops have for the Hawaii QSO Party. Thanks everyone!

The goal was 1000+ CW Qs while working around my normal sleep hours. Operating for two hours Friday night (KH6-time) placed 188 Qs in the log. Saturday morning started at 6 a.m. with the next 14 hours providing 500 more Qs for a total of 700. That left 300 for Sunday and therein lies a challenge. The Fri/Sat rate averaged around 40 yet by Sunday had slowed to 23. By 0000 Z Sunday things were proceeding at a crawl with the elusive 1000 Q goal looking to be just out of reach, once again. Doubling down, and with the pace picking up after the SST 'test ended, the 1000 Q goal was met with an hour to spare. What a relief. Working towards a numerical goal certainly adds another exciting dimension to Radiosport. Nearly two years of contesting mania (over 40 significant CW contest efforts), along with ~20k Morse Runner Qs, has alleviated much of the stress, making CW contesting a rather pleasant, relaxing and rewarding endeavor.

Propagation was fine with all bands, 40-10 meters, performing well. Europe was good for many a mult. Asia, not so much. Calling CQ towards Asia yielded not one mult. Sending ST? or STATE? to elicit an op's state was met by crickets so I tried QTH? and that was the charm. 49 states were worked. SD where were you? Things got pretty buggy Sunday afternoon and it's always a treat copying the wonderful variety of old-timey fists.

Notes to self for next year:

Do a half hour Morse Runner warmup.

Work as many as you can on Fri/Sat 'cuz things slow way down by Sunday.

KH6CJJ - fixed - Maui 369 cw 342 ssb 0 digi

Great band conditions and lots of activity! Thanks for all the Qs. Aloha, Kent

AH7RF - fixed - Hawaii County - Big Island - rover 97 cw 0 SSB 0 digi

Hello from Big Island!

Limited operating time, because I'm recovering from being sick. Operating from either KOH or KON districts, because Lloyd KH6LC had a great idea for me to be a rover!

I operated about 5 hours from various beach parks, and 3 hours (sporadically) from home. I used my KX2 and an endfed. Quite a nice relaxing way to spend a weekend, to sit under trees, on a beach, with a radio in my lap. I opted to be at the parks either early in the morning, when it was cool, or in the early evening before they closed (grayline!)

When I was in the KON district, I was operating from Kiholo Reserve State Park (K-6420). I had most of my contacts there, and the highlight was working my friend Dan WB5YUZ in Texas - we've been trying to make a contact for a while now!

When I was in the KOH district, I was either operating from home (endfed near the house, kind of suboptimal location, inverter noise), or from Hapuna Beach (K-6403), or from Pu'ukohola Heiau (K-8055). The highlight from KOH was working Germany for the first time, thanks DL3DXX!

I tried to work many of the Hawaii stations twice (each district), but it wasn't always possible (maybe if I operated at different times). I also would run near a Hawaii station, hoping that if I didn't get spotted, maybe someone would notice me on their waterfall and work me. I think this worked!

I wasn't sure how to enter the score, so I just combined the 2 scores from N1MM for each district.

I had a lot of fun! I worked a number of new states, and a new country. I worked many friends from CW Academy, the CWTs, SOTAs and POTAs, and lots of my friends from Hawaii and around the world. Thanks very much for the contacts!

Aloha and 72

Heather
AH7RF

K7SS - fixed - WA 20 CW 22 SSB 0 digi

Another fun session of the HQP !
Thanks for the Qs.

Hawaii and Kansas... might have worn out a rotor...but its just a button to change from E to W.

Always get warm feelings hearing and working KH6 .. and sending good thoughts to you, Hawaii.

Aloha
Danny K7SS

K4BAI fixed GA - 11 CW 7 SSB

Thanks for all QSOs. Highest bands more active than in recent years. Surprised not to hear any Hawaii activity on 20M SSB and 40M CW. Thanks for all qSOs. 73, John, K4BAI

- - -
note de N4CD

Many west coast stations worked 30-30 contacts, but back east it was just a handful on contacts for most – catching the loud super stations. Lots of 3 and 4 contacts reported – enough for the State QSO annual scoreboard. You need at least two contacts to get credit for 'participating' and reporting on 3830 site.

Held same weekend as KS QP and OH QP.

- - - -

KH6WI

After action report from the Hawaii QSO Party at Ahupua'a O Kahana State Park, K-2209.

I got delayed getting to the park and had 90 minutes to setup my campsite, get the

BuddiHEX up, put up the 40m dipole, and be ready to go for the 6pm HST start time. I was ready to go with only 10 minutes to spare. This is when the anxiety went into overdrive.



Buddi-hex Portable Hex-Beam

I settled on starting at 5w and I would re-evaluate 30 minutes later. If I was really struggling, I could switch to 100w. If I had I started at 100w, I would not have been able to switch to QRP later. Well, my nerves were calmed when my first CQ call was answered by four stations. I had 20 contacts in the log in the first 30 minutes. At that point, I knew that I was going to stay QRP the rest of the weekend.

I ended up operating 6 hours Friday (6pm-12am HST), 16 hours on Saturday (6am-10pm), and 12 hours on Sunday (6am-6pm) for a total of 34 hours out of the possible 48. This resulted in well over 1100 QSOs. I manually removed about 100 duplicates due to people repeatedly restarting QSOs which brought me down to 996. OTA allows you to work a station on the same band/mode combo every new UTC day but the QSO party only allows once during the entire contest. I was strict about logging QSOs.

Because I was operating for the QSO party, I only logged an FT8 QSO after an RR73 or 73. On SSB I only logged after the proper QSO party information exchange was completed.

Let me reiterate. 900+ QSOs from Hawaii in a single weekend using only 5 watts. Friday night saw the best QSO rates. Mid-day Saturday was quite a bit slower but it picked up again as 20m opened in the evening. Sunday was noticeably slower, but it might just have felt that way because I was tired, my back was hurting from sitting on a camp chair for 30+ hours, and I was getting dehydrated baking in the sun. I was thinking about packing up early so I wouldn't have to tear everything down in the dark, but then the QSOs started rolling in again so I stayed on until the end.

I wanted to run more SSB, but I was calling CQ endlessly with very few responses. Had I been able to spot myself, I would have had more success. I tried parking next to other Hawaii stations hoping that people would see me, but it only worked for a little while. Throughout the weekend, I had several stations come up on frequency and start calling CQ right on top of me. They couldn't hear me, but they also didn't even bother asking if the frequency was in use, they just started calling CQ. Ended up running FT8 most of the weekend due to the low success rate on SSB.

At one point during the weekend, someone was pushing so much power that I was decoding them at +22 from over 3,500 miles away. I was also decoding their splatter at three other places on the waterfall.

Let's look at some numbers:

946 QSOs

295 Maidenhead Grid Squares

48 States + DC, where were you ND and WY?

3 Canadian Provinces

34 DX Entities

Bands Worked

20M: 429

15M: 346
10M: 145
40m : 75
Shortest QSO: 6 miles
Average QSO: 3,760 miles
Longest QSO: 12,880 miles long path to South Africa

I'm not sure what I will be doing next year for the Hawaii QSO party. I definitely do not want to spend 34 hours in a camp chair roasting in the sun again. I may operate the USS Missouri Museum ship or potentially operate with a group at one of the contest super-stations.

73 and Aloha de KH6WI — at Ahupua'a O Kahana State Park.

Digital Ham Radio - Packet Radio

Next step on the ham radio 'digital' history ladder is packet radio. Like RTTY, still around today.

Introduction

Packet radio uses a packet switching protocol as opposed to circuit switching or message switching protocols to transmit digital data via a radio communication link.

Packet has three great advantages over other digital modes: transparency, error correction, and automatic control.

The operation of a packet station is transparent to the end user; connect to the other station, type in your message, and it is sent automatically.

The terminal Node Controller (TNC) automatically divides the message into packets, keys the transmitter, and then sends the packets.

While receiving packets, the TNC automatically decodes, checks for errors, and displays the received messages.

Packet radio provides error free communications because of built-in error detection schemes.

If a packet is received, it is checked for errors and will be displayed only if it is correct.

- - - -

Some of the details.....

The AX.25 (Amateur X.25) protocol was derived from the X.25 data link layer protocol and adapted for amateur radio use. Every AX.25 packet includes the sender's amateur radio callsign, which satisfies the US FCC requirements for amateur radio station identification. AX.25 allows other stations to automatically repeat packets to extend the range of transmissions. It is possible for any packet station to act as a digipeater, linking distant stations with each other through ad hoc networks. This makes packet radio especially useful for emergency communications.

Some mobile packet radio stations transmit their location periodically using the Automatic Packet Reporting System (APRS). If the APRS packet is received by an "igate" station, position reports and other messages can be routed to an internet server, and made accessible on a public web page. This allows amateur radio operators to track the locations of vehicles, hikers, high-altitude balloons, etc., along with telemetry and other messages around the world.

Some packet radio implementations also use dedicated point-to-point links such as TARPEN. In cases such as this, new protocols have emerged such as Improved Layer 2 Protocol (IL2P) supporting forward error correction for noisy and weak signal links.

Aloha Net and Military History

Since radio circuits inherently possess a broadcast network topology (i.e., many or all nodes are connected to the network simultaneously), one of the first technical challenges faced in the implementation of packet radio networks was a means to control access to a shared communication channel to avoid collisions of signals. Professor Norman Abramson of the University of Hawaii led development of a packet radio network known as ALOHAnet and performed a number of experiments beginning in the 1970s to develop methods to arbitrate access to a shared radio channel by network nodes. This system operated on UHF frequencies at 9,600 baud. From this work the Aloha multiple

access protocol was derived. Subsequent enhancements in channel access techniques made by Leonard Kleinrock et al. in 1975 would lead Robert Metcalfe to use carrier-sense multiple access (CSMA) protocols in the design of the now commonplace Ethernet local area network (LAN) technology.

Over 1973–76, DARPA created a packet radio network called PRNET in the San Francisco Bay area and conducted a series of experiments with SRI to verify the use of ARPANET (a precursor to the Internet) communications protocols (later known as IP) over packet radio links between mobile and fixed network nodes. . These experiments were generally considered to be successful, and also marked the first demonstration of Internetworking, as in these experiments data was routed between the ARPANET, PRNET, and SATNET (a satellite packet radio network) networks. Throughout the 1970s and 1980s, DARPA operated a number of terrestrial and satellite packet radio networks connected to the ARPANET at various military and government installations.

Amateur Radio Packet

Amateur radio operators began experimenting with packet radio in 1978, when—after obtaining authorization from the Canadian government—Robert Rouleau, VE2PY; Bram Frank, VE2BFH; Norm Pearl, VE2BQS; and Jacques Orsali, VE2EHP[2] of the Montreal Amateur Radio Club Montreal, Quebec, began experimenting with transmitting ASCII encoded data over VHF amateur radio frequencies using homebuilt equipment. In 1980, Doug Lockhart VE7APU, and the Vancouver Area Digital Communications Group (VADCG) in Vancouver, British Columbia began producing standardized equipment (Terminal Node Controllers) in quantity for use in amateur packet radio networks.

Not long after this activity began in Canada, amateurs in the US became interested in packet radio. In 1980, the United States Federal Communications Commission (FCC) granted authorization for United States amateurs to transmit ASCII codes via amateur radio. Repeaters may be designed for amateur packet radio, these are dubbed "digipeaters". The first known amateur packet radio activity in the US occurred in San Francisco during December 1980, when a packet repeater was put into operation on 2 meters by Hank Magnuski KA6M, and the Pacific Packet Radio Society (PPRS). In keeping with the dominance of DARPA and ARPANET at the time, the nascent amateur packet radio network was dubbed the AMPRNet in DARPA style.[Magnuski obtained IP address allocations in the 44.0.0.0/8 network for amateur radio use worldwide.

Many groups of amateur radio operators interested in packet radio soon formed throughout the country including the Pacific Packet Radio Society (PPRS) in California,

the Tucson Amateur Packet Radio Corporation (TAPR) in Arizona and the Amateur Radio Research and Development Corporation (AMRAD) in Washington, D.C.

By 1983, TAPR was offering the first TNC available in kit form. Packet radio started becoming more and more popular across North America and by 1984 the first packet-based bulletin board systems began to appear. Packet radio proved its value for emergency operations following the crash of an Aeromexico airliner in a neighborhood in Cerritos, California, in August, 1986. Volunteers linked several key sites to pass text traffic via packet radio which kept voice frequencies clear.

Packet radio can be differentiated from other digital radio switching schemes by the following attributes:

- Transmitted data is broken into packets, each of which contains a destination (and typically the source) address

- A transmitted message may be broken into a sequence of packets before transmission, which are then re-assembled into the original message upon reception

- Packets for multiple destinations can be transmitted on the same radio link in an asynchronous fashion

- A packet may be addressed to all possible recipients rather than a specific one (broadcast)

- A packet may be stored and subsequently forwarded towards its destination by a network node

This is very similar to how packets of data are transferred between nodes on the Internet.

One of the first challenges faced by amateurs implementing packet radio is that almost all amateur radio equipment (and most surplus commercial/military equipment) has historically been designed to transmit voice, not data. Like any other digital communications system that uses analog media, packet radio systems require a modem. Since the radio equipment to be used with the modem was intended for voice, early amateur packet systems used AFSK modems that followed telephone standards (notably the Bell 202 standard).

A basic packet radio station consists of a computer or dumb terminal, a modem, and a transceiver with an antenna. Traditionally, the computer and modem are combined in one unit, the terminal node controller (TNC), with a dumb terminal (or terminal emulator) used to input and display data. Increasingly, personal computers are taking over the functions of the TNC, with the modem either a standalone unit or implemented entirely in software. Alternatively, multiple manufacturers (including Kenwood and

Alinco) now market handheld or mobile radios with built-in TNCs, allowing connection directly to the serial port of a computer or terminal with no other equipment required. The computer is responsible for managing network connections, formatting data as AX.25 packets, and controlling the radio channel. Frequently it provides other functionality as well, such as a simple bulletin board system to accept messages while the operator is away.

The first amateur packet radio stations were constructed using surplus Bell 202 1,200 bit/s modems, and despite its low data rate, Bell 202 modulation has remained the standard for VHF operation in most areas. More recently, 9,600 bit/s has become a popular, although more technically demanding, alternative. At HF frequencies, Bell 103 modulation is used, at a rate of 300 bit/s.

Due to historical reasons, all commonly used modulations are based on an idea of minimal modification to the radio itself, usually just connecting the computer's audio output directly to the transmitter's microphone input and receiver's audio output directly to the computer's microphone input. Upon adding a turn the transmitter on output signal ("PTT") for transmitter control, one has made a radio modem. Due to this simplicity, and just having suitable microchips at hand, the Bell 202 modulation became standard way to send the packet radio data over the radio as two distinct tones. The tones are 1,200 Hz for Mark and 2,200 Hz for space (1,000 Hz shift). In the case of Bell 103 modulation, a 200 Hz shift is used. The data is differentially encoded with a NRZI pattern, where a data zero bit is encoded by a change in tones and a data one bit is encoded by no change in tones.

1,200 bit/s AFSK node controllers on 2 meters (144–148 MHz) are the most commonly found packet radio. For 1,200/2,400 bit/s UHF/VHF packet radio, amateurs use commonly available narrow band FM voice radios. For HF packet, 300 bit/s data is used over single sideband (SSB) modulation. For high speed packet (9,600 bit/s upwards), special radios or modified FM radios must be used.

Today, many local emergency groups have packet capabilities, and email/bulletin board gateways on HF are still around. As far as having QSOs by packet – nope. Some POTA folks use it to spot themselves when no cell service is around, but a gateway station will relay the message. A few mobiles in state QSO parties use APRS so folks can follow them around the counties they run, if within a digipeater range on VHF.

This was a precursor of things to come!

Packet saw its heyday in the 1990s, and saw a general decline in popularity in North

America as Internet access became widespread. As of 2010, anecdotal evidence suggests there is something of a resurgence in interest in packet worldwide, and development on packet software and networks appears to be increasing.

As a result, you can probably still find used packet equipment at very good prices. Some new radios are now sold equipped with APRS. (APRS is a subset of AX.25 protocol).

More info here if you want to dig in to it

<https://choisser.com/packet/>

Continued in next part....

Colorado QSO Party

I think 2 mobiles were out in the contest – which collided on CW with the CW Open. There were 3 four hour sessions of the CWT – and two collided with the CO QSO Party. Hundreds participated in the CW Open. Didn't help that a CME hit Earth and the upper bands didn't cooperate.

W0ZA mobile 212 CW QSO

Interesting conditions while mobile. 40 in the morning closed down earlier than expected. 20 was the good, nothing on 15 meters. Activated 11 counties, 320 miles, mixed results on every county. Lot of activity on certain counties, slow on others. Once we got to Yuma, Colorado we headed east into Beautiful Nebraska for the weekend. Thanks for all the qso's and putting up with Colorado's bumpy roads while sending CW!

NN0G fixed Gunnison CO 83 CW 225 SSB QSO

Only operated 5 hours due to some power issues. While the FT-710 is a fine rig for quick POTA activations on fully charged Lithium Battery, it tends to shutdown once the

house batteries dropped below 12V. Plans are in place to get a radio with better low voltage tolerances.

Had a pretty good run during the 2100 hour, with about 100.

Then camping mode kicked in.

FT-710, POTA Hex, 80 EFHW.

73.

Dana

N7NM - fixed WA 32 CW 27 SSB 12 CW counties worked 17 counties on SSB .

Usually have a good prop pipeline into CO from WA but not so much today. Thanks for the Q's,

73, Doug N7NM

OM2VL Fixed DX 28 CW 12 SSB 21 CW counties 12 on SSB

no comments

NS2N - fixed NY 21 CW 20 SSB QSO 12 counties on CW 13 on SSB

conflict with CWOPS (CW Open Contest)

K4BAI - fixed - GA 23 CW 10 SSB 12/8 counties worked cw/ssb

Not a lot of time available for this one due to the CWOpen. Worked a number of CO stations in CW Open, but none of them seemed to be in the COQP also, with the exception of W7RF who gave me his #1 in CWOpen session #1. Activity was about what has been the case in past years. Thanks for all QSOs and especially the two mobiles I worked. No CO activity heard on 15M. I think the band was too long when it was open. Only one station heard on 80M and that was Dan, W7RF, who sounded pretty

lonely calling CQ over and over. Happy Labor Day to all. 73, John, K4BAI.

W1AW Turns 85

ARRL Bulletin

The Hiram Percy Maxim Memorial Station (W1AW) turns 85 today! (September 2)

W1AW was dedicated on September 2, 1938, in Newington, Connecticut, where ARRL HQ currently stands. Today also marks Hiram Percy Maxim's 154th birthday!

Since it was established, W1AW has consistently been on the air and is known worldwide for its bulletin transmissions, on-air Morse code practice sessions, and visitor operating studios!



W1AW Memorial Station

If you visit ARRL HQ, you can often be a guest operator at the station.

CW Open Contest

There were three 4 hour contest periods. It's a very popular contest among CW ops.

This contest open to all – exchange was serial number and your name. A few results to show you what can be done in 4 hours of contesting (and why CO QSO party CW stations were often buried in the QRM).

cw open 1200-1559z session

N2IC - 522 QSO
AA3B 487
N5ZO 485
K4BAI - 289

CW open session 2000Z-2359Z

K3WW 553 QSO
N1LN 300
K5PI 417

There were over 100 reports on the 3830 contest reflector. You had to go above 14050 to find a somewhat empty frequency.

There are 240 minutes in 4 hours – top operators were making more than 2 QSOs per minute average over the entire four contest period.

Ham Radio Digital – PSK

PSK31 is a digital mode used on the amateur radio bands. It derives its name from the fact that it uses phase shift keying, PSK rather than frequency shift keying, and it transmits data at a rate of 31 baud.

PSK31 is aimed at providing a greater level of performance for keyboard-to-keyboard, conversational-style data communications than is available with other data modes. This makes it a particularly attractive form of communications for radio amateurs.

The aim is to provide an efficient yet straightforward system which does not use the complicated ARQ processes, and with only enough error correction to match the typical error rates that are encountered.

Also, by using phase shift keying and a low data rate, it is possible to narrow the bandwidth, which considerably reduces the effects of interference and noise. Bandwidths of 31Hz can be used, making this an extremely narrow-band mode, and one capable of operating under severe conditions.

PSK31 basics

PSK31 is widely used, particularly on the HF amateur radio bands where its up to date features enable it to offer advantages over modes such as RTTY. It incorporates error correction techniques along with the use of a full ASCII and ANSI character set which enables it to fit in with modern day computer and telecommunications technology.

PSK31 uses a form of modulation known as phase shift keying, PSK. This is rather different to the frequency shift keying that is used for modes such as RTTY. PSK involves reversing the polarity, or phase, of the signal (180° phase shifts). They are generated and detected in the audio sections of the SSB transceiver being used.

There are various forms of PSK and the form of PSK described is actually known as binary phase shift keying, BPSK and it is more efficient than either frequency shift keying, which has a greater bandwidth, or on/off keying which does not use the power as efficiently.

PSK31 uses a novel form of data encoding. When sending asynchronous ASCII data, systems use a fixed number of data bits as well as start and stop bits. However, when sending a long run of data it is possible for the receiver to lose synchronization.

Additionally, improvements in speed can be gained from adopting variable-length codes with those codes that are used most often being the shortest. This is used to good advantage in Morse where the character 'e' (which is the most common in English) is a single dot. By analyzing the occurrence of different ASCII characters a code called Varicode was devised. The shortest code, '00', was allocated to the space between two words.

It is possible to add error correction to the system. However, to achieve this it is necessary to use a form of keying called quadrature phase shift keying, QPSK.

Instead of two phase states 180° from one another, QPSK uses four phase states, each 90° from one another. However, in operation on the bands it has been found that error correction with the use of QPSK only sometimes gives improvements over ordinary

BPSK. Accordingly it is possible to use either system, dependent upon the conditions.

To enable radio amateurs to be able to keep to band plans and also to have contacts with other PSK31 users, certain frequencies tend to be used. The frequencies detailed in the table of HF band frequencies give the frequency of the transceiver readout that should be used to provide the required signal frequency.

PSK 31 HF Frequencies

Amateur Band	Upper Sideband Dial Frequency
160 meters	1838.150 kHz
80 meters	3580.150 kHz
40 meters	7040 kHz
30 meters	10142.150 kHz
20 meters	14070.150 kHz
17 meters	18100.150 kHz
15 meters	21080.150 kHz
12 meters	24920.150 kHz
10 meters	28120.150 kHz

Abbreviations used on PSK31 - Many of the abbreviations and terminology used in PSK31 have been adopted from those used for Morse contacts.

For many people who have used Morse before, these terms will not be new, but for those who have come straight to PSK31 they may be new.

Summary of PSK31 characteristics

Some of the highlight characteristics and parameters for PSK31 are summarized in the table below.

PSK31 Summary

Parameter	Details
Symbol rate	21.25 baud
Typing speed	~35 wpm
Bandwidth	60 Hz
ITU description	60H0J2B

Software Defined Radio

Software-defined radio (SDR) is a radio communication system where components that conventionally have been implemented in analog hardware (e.g. mixers, filters, amplifiers, modulators/demodulators, detectors, etc.) are instead implemented by means of software on a personal computer or embedded system. While the concept of SDR is not new, the rapidly evolving capabilities of digital electronics render practical many processes which were once only theoretically possible.

A basic SDR system may consist of a personal computer equipped with a sound card, or other analog-to-digital converter, preceded by some form of RF front end. Significant amounts of signal processing are handed over to the general-purpose processor, rather than being done in special-purpose hardware (electronic circuits). Such a design produces a radio which can receive and transmit widely different radio protocols (sometimes referred to as waveforms) based solely on the software used.

Software radios have significant utility for the military and cell phone services, both of which must serve a wide variety of changing radio protocols in real time. In the long term, software-defined radios are expected by proponents like the Wireless Innovation Forum to become the dominant technology in radio communications. SDRs, along with software defined antennas are the enablers of cognitive radio.

Superheterodyne receivers use a VFO (variable-frequency oscillator), mixer, and filter to tune the desired signal to a common IF (intermediate frequency) or baseband. Typically in SDR, this signal is then sampled by the analog-to-digital converter. However, in some applications it is not necessary to tune the signal to an intermediate frequency and the radio frequency signal is directly sampled by the analog-to-digital converter (after amplification).

Real analog-to-digital converters lack the dynamic range to pick up sub-microvolt, nanowatt-power radio signals produced by an antenna. Therefore, a low-noise amplifier must precede the conversion step and this device introduces its own problems. For example, if spurious signals are present (which is typical), these compete with the desired signals within the amplifier's dynamic range. They may introduce distortion in the desired signals, or may block them completely. The standard solution is to put band-pass filters between the antenna and the amplifier, but these reduce the radio's flexibility.

Real software radios often have two or three analog channel filters with different bandwidths that are switched in and out.

The flexibility of SDR allows for dynamic spectrum usage, alleviating the need to statically assign the scarce spectral resources to a single fixed service.

The history of SDR goes back to 1970, and then used by the military on special projects for the next 30 years. Cell companies picked it up – and made transition from one technology to another much easier. Just change the programming!

A typical amateur software radio uses a direct conversion receiver. Unlike direct conversion receivers of the more distant past, the mixer technologies used are based on the quadrature sampling detector and the quadrature sampling exciter.

The receiver performance of this line of SDRs is directly related to the dynamic range of the analog-to-digital converters (ADCs) utilized. Radio frequency signals are down converted to the audio frequency band, which is sampled by a high performance audio frequency ADC. First generation SDRs used a 44 kHz PC sound card to provide ADC functionality. The newer software defined radios use embedded high performance ADCs that provide higher dynamic range and are more resistant to noise and RF interference.

A fast PC performs the digital signal processing (DSP) operations using software specific for the radio hardware.

The SDR software performs all of the demodulation, filtering (both radio frequency and audio frequency), and signal enhancement (equalization and binaural presentation). Uses include every common amateur modulation: morse code, single-sideband modulation, frequency modulation, amplitude modulation, and a variety of digital modes such as radioteletype, slow-scan television, and packet radio. Amateurs also experiment with new modulation methods: for instance, the DREAM open-source project decodes the COFDM technique used by Digital Radio Mondiale.

There is a broad range of hardware solutions for radio amateurs and home use. There are professional-grade transceiver solutions, e.g. the Zeus ZS-1] or FlexRadio, home-brew solutions, e.g. PicAStar transceiver, the SoftRock SDR kit, and starter or professional receiver solutions, e.g. the FiFi SDR for shortwave, or the Quadrus coherent multi-channel SDR receiver for short wave or VHF/UHF in direct digital mode of operation. Now, multiple suppliers sell modules or complete radios for ham use.

Wouldn't surprise me if all ham radios go SDR by 2030.

Today, you can buy an Elecraft K-4- all SDR – or top end Yaesu rigs that have good front end bandpass filters for each ham band. The Icom IC-7300 is SDR architecture. More to come.

Inexpensive SDR Radio



What you can buy for \$289 dollars, shipping included.

- - - - -

Q900 is an ultra portable full frequency full mode SDR radio. Its receiving frequency is 300kHz-1.6GHz, and the amateur transmitting band covers 160m~70cm. All amateur segments are locked at the factory. If you need an experimental test, open it in the setting menu on the premise of complying with local regulations.

Q900 operation modes include FT8, SSB, CW, AM, FM, RTTY and DMR. It includes all the advanced functions and features of all radio stations.

Q900 is designed with three power supply modes, including built-in battery, USB port power supply and DC port power supply. The power supply voltage range is 5VDC~32VDC. At the same time, all power ports support anti-reverse connection protection.

The display adopts high-resolution LCD with adjustable backlight brightness, which can be clearly displayed outdoors. The panel adopts full keyboard design to facilitate various operations. The keyboard backlight is adjustable, which can operate the radio station in dark environment.

QRadioBLE mobile app can remotely control the radio station, making the radio station operation more convenient and fast. It has built-in Bluetooth module, USB cable, integrated sound card and serial port. One USB cable can control the radio station.

The Q900 has many advanced functions that are only available in large base stations. The machine has dual VFO mode, different frequency working function, IF offset adjustment, receiving frequency fine adjustment, IF noise suppression, AGC speed selection, RF gain adjustment, squelch control, pre-attenuator, AM broadcast reception, built-in telegraph automatic key, automatic key point ratio adjustment, built-in CTCSS analog sub tone, automatic shutdown function (APO), transmission timeout function (TOT), connection with computer, computer-aided control function, and copy function, etc.

In addition, the Q900 has a wide range of options.

Features:

1. Real time spectrum
2. Waterfall map
3. Doppler frequency tracking
4. Software Defined Radio (SDR) technology is adopted, and the full frequency band supports FT8, SSB, CW, RTTY, am and FM

5. Dual frequency conversion circuit structure
6. IF width and IF displacement hardware and software can be modified to provide strong if interference suppression
7. DSP digital noise reduction
8. Built-in (6~160m) high-speed automatic antenna tuner
9. Built-in electronic key controller, all parameters can be set flexibly
10. Built-in sound card with IQ and audio output
11. Internal 4.9ah battery
12. USB typec3.1 interface for power supply and connection to the computer
13. High precision TXCO $\pm 0.5\text{ppm}$ (-10°C to 60°C)
14. Ultra wide working voltage range: 5VDC ~ 32vdc, partial voltage emission is limited
15. Anti reverse connection protection of power supply
16. Built in GPS/compass, GSM and electronic compass (acceleration and angle sensor) (optional)
17. GPS timing (Optional. GPS module is required)
18. UTC clock can be set
19. Voltage display
20. Ultra light weight: $\leq 2\text{kg}$
21. Bluetooth wireless remote control

Standard Package Included:

- 1 x Q900 Main Unit
- 1 x Power Cable
- 1 x USB Cable
- 1 x Handheld Mic
- 1 x Carry Case

There's even a YouTube review of it it here <https://youtu.be/bT8n38mDIVk?si=D7-mi9vD3Qx8rnsT>

20W radio – covers 160-10m, 6m, 2m, 432 MHz. AM, FM, SSB, Digital. Internal battery or external supply. Comes with antenna tuner, CW keyer, etc.

What it doesn't have – tuning knob!

There are dozens of other modules, 'dongles' to connect to computers, etc. You can buy

modules and assemble your own if you are computer literate, know where to find the download programs to get them to work, etc.

- - -

There are half a dozen QRP SDR versions for sale for about \$120, too. Some work well, some work for a while then die, some never seem to work all the way.

—

The popular Xiegu G90 20W radio is popular and goes for a bit over \$400. Thousands sold and most folks happy with it – other than tiny screen that takes good eyes to see.

Tennessee QSO Party

This contest held on the Sunday of Labor Day Weekend. Only one mobile out and he was very busy. It's not possible to determine who worked how many counties as it went by 'band multipliers' ie, you total up the mults on each band and report on that. If you had 25 on 20m, 25 on 40m, and 15 on 80m, that would be 65 'band multipliers' for your score. Not much happening on the upper bands compared to 40 and 20m, but a few dozen on 15 and just a handful on 10M it seems.

It appears four mobiles were out.

AD4EB mobile 1370 CW QSO

It was another terrific TN QSO Party again this year, all three of us (Don, Melody, and Jim) had a great time. Everything went off without a hitch. We drove thru 25 counties over the 376 mile route. This was our 11th time operating mobile in the TNQP, and we ended up with our highest score ever. Our previous high score was 675K in 2020. Participation was down a little from the last few years with 260 unique calls. The best band was 40m, where signals were strong all day. We were moved to 10m by OM2VL and ended up working him twice, as well as K4XU and K3IE.

As usual, Melody did a great job driving and keeping us in sync with our estimated county line crossing times, right to the minute for many counties.

All the equipment worked flawlessly, and we were actively running the entire day except to switch operators once.

The top 15 operators based on the number of QSOs were:

OM2VL (40)
N8II (38)
NW0M (32)
W1TO (32)
WB9HFK (29)
WN4AFP (29)
K4XU (27)
WF7T (25)
AF5J (24)
K9CW (24)
WA5SOG (24)
AA3R (23)
KA6BIM (23)
NS2N (23)
W5TM (18)

A huge congratulations to OM2VL for taking the top position, amazing performance Laci! Well done too Jeff N8II, you were super loud and your "II" suffix was easy to pick out of the pileups. The other DX station worked were HA8IB (9), DL3IAC (9), SP5SA (4), LA8OM (3), F8PDR (2), G3YYD (1), F5NKX (1).

The pileups seemed tougher to manage this year. There were so many loud stations calling us on our CQ frequency that it made it very hard for us to pick out any calls, and then we often got stomped on sending our exchange. Also, not having many other mobile stations may have made our pileups even larger when we hit new counties. But every pileup sure was a blast for us.

Thanks to everyone that worked us in the contest, and thanks to the TCG for making this another great TNQP in the books. And most of all, thanks to Melody for driving us all over Tennessee. Don and I really appreciate you.

73 - Jim AD4EB, Don N4ZZ, and Melody KI4HVY

K4BAI - fixed - GA 93 CW 65 SSB

Just about 200 miles south of the TN border is too close for bands above 40M and don't have an antenna for 160M right now. So, bands were limited, but tried to work all the TN stations I could find on 40 and 80 meters CW and SSB. Thanks for all QSOs, especially the mobiles. Mobiles must have been having good luck on 20M as I didn't find them too often on 40 and 80. Only QSO on 20M was bonus station K4TCG. Heard a few others on 20 who couldn't hear me calling them. Happy Labor Day. 73, John, K4BAI.

K4XU - fixed OR 138 CW

NS2N - fixed NY 88 CW 37 SSB

pretty busy with band mults
good running

KA6BIM - fixed - OR 112 CW 21 SSB

Another fun contest with a good amount of activity. Bands were better than day before. I found a few new counties that I needed. A couple of rovers kept it interesting, but need more to cover the whole state. TN stations: please remember that 40 meters doesn't open to West Coast until about 0100, so please still work us on 15 and 20, especially since multipliers count on each band! Thanks for the qso's Dave ka6bim

N8II- Fixed - WV 125 CW 53 sssb QSO

The result is okay, but the effort was an effort. My run QSO's were definitely down from what I expected. The first 2-1/2 hour were "tweener" hours with 20 open only at best from Nashville/Chattanooga and farther west. Absorption was high on 40 and signals were weak or in the noise with a few louder ones. I had about 77 Q's at 21Z and 99 at 2230Z, pretty slow. Activity was just not that high from TN.

Without the great effort from Don and Jim operating AD4EB/M, I would have a much lower score and probably would have quit. I did stop early at 0212Z after working them in Marshall on 80 for my last QSO. I worked them on 80/40/20 from Hardin County and

think there could have been a few more triples, but think they were too busy on 40/80 to try 20 after that. Despite only a few loud signals on 20 from 19Z onward, they were always loud on 20 as they traversed western TN. Eastern TN would have been tough. Many thanks! I only heard AC6ZM/M twice on 40M. K4TCG in Hamilton was worked on 160-20M bands for 5 Q's and Kirk, K4RO on 160-20M CW.

I did a little advanced planning, checked the rules, but didn't use spotting as much as I should have. I was feeling fairly tired after the first 3 hours and even more so at 0015Z when I took a short break after which 80M was much better. As usual 75M phone was vastly underutilized. By about 01Z, I heard no one there and had no answers to CQ's. My last 75M SSB QSO was at 0050Z. Running on SSB and CW was slow to worthless most of the time, more so than the past few years. Next year I may pull back on the throttle.

Thanks for the Q's and 73, Jeff

K1GU mobile QRP - 322 CW

Four counties within about a half hour from home.

Two separate trips, daylight 20 + 15, nighttime 40.

Home for dinner in between.

About equal operating and deadhead driving time.

Antenna went intermittent late causing K3 to fold-back power to near zero. Sorry about that. Ruined some nice runs.

K5CM mobile 113

I was on a mini vacation in Banner Elk, NC. Only had time for a short operation as mobile in Eastern TN.

73, Connie / K5CM

AC6ZM multi op mobile (ops AC6ZM KV4XY WW4WT) 402 cw 88 SSB

Had a great time on the way down and a good run at the Soddy Daisy Station. Thanks to Mark (K0EJ) & Ted (W4NZ) for hosting the bonus station and letting the mobile team log a few QSOs for the bonus station.

PACTOR – Yet Another Mode

This mode is an evolution of both AMTOR and packet radio. The name a combination of these two technologies' names. PACTOR uses a combination of simple FSK modulation, and the ARQ protocol for robust error detection and data throughput. Generational improvements to PACTOR include PACTOR II, PACTOR III, and PACTOR IV which are capable of higher speed transmission. PACTOR is most commonly used on 1-30 MHz frequencies.

PACTOR was developed in order to improve the reception of digital data when the received signal was weak or noisy.[It combines the bandwidth efficiency of packet radio with the error-correction (CRC) and automatic repeat request (ARQ) of AMTOR. Amateur radio operators were instrumental in developing and implementing these digital modes.

PACTOR utilizes very rapid time-division duplexing, giving PACTOR communications its characteristic cricket-like chirping sound when listened through a single-sideband receiver

Depending on the version of PACTOR protocol used and the radio-frequency conditions, PACTOR transmission speeds range from 20 to 5200 bits per second (bit/s; net rate) or 9000 bit/s gross rate utilizing speed 10 (32-QAM)

PACTOR I is 340HJ2D or 440HJ2D (at a symbol rate up to 200 symbols per second)

Only PACTOR 1 is available to ham radio use. PACTOR II to IV - higher speeds - are proprietary and only for sale for commercial or military users.

PACTOR operates at two different speeds according to the conditions. Under normal conditions the system operates at 100 baud, and swaps to 200 baud if a good link is established. In the slow speed each packet of data is 14 bytes long. This takes a total of 1.12 seconds to send, and leaving a gap for an acknowledgment of 320 ms, this makes the whole sequence 1.44 seconds long. In the fast mode at 200 baud, each packet is 28 bytes long.

When a link is to be established the transmitting station sends data at 100 baud. This

initial packet contains the callsign of the amateur radio station being called. This is repeated at 200 baud. If the receiving station only receives the data sent at 100 baud, one type of acknowledgment is sent and communication is established at this speed. If the data sent at 200 baud is received correctly then another acknowledgment is sent, and the contact proceeds at 200 baud. Once established the PACTOR contact then continues in the same way as a normal AMTOR contact.

PACTOR uses 500-600 Hz of bandwidth.

Mobile Activity in September

At the beginning of the month, NF0N was out in NE running counties.

The CO QSO Party and CW Open held first weekend on Sat. – Labor Day weekend.

Next day was TN and OH QSO Party with good activity.

Then activity was nil till KB6UF headed out.

KB6UF headed out on big trip to west – AR MO IANE SD WY MT ID

K8ZZ headed out – going east – WI MI IN - then MD later in month PA WV OH

W4SIG ran around in WA, ID, UT.

AI5P ran two parks in AR

N9JF ran parks in IL.

Mid month there was the TX, IA, NH, WA, and NJ QSP Parties - hundreds of counties up for grabs and a dozen mobiles.

After putting out lots of MT, KB6UF headed east to ND for much of that state. Then SD

– after 8 days on the road needed a break – trip will resume soon.

KE4UP out and about in WA back on the Road.

Digital Modes - Conclusion

Finally to the most popular modes in Year 2023. It all started out in 2000 when K1JT saw the need for a better weak signal technology.

WSJT

WSJT, invented by K1JT is a weak signal digital mode developed for amateur radio applications like meteor scatter, EME and HF long haul (using FT8) communications. WSJT was originally developed by K1JT around 2000 / 2001 but now the software is open source and its development is continuing under the management of a small team of radio amateurs.

WSJT was developed for 2 meter and 6 meter meteor scatter but now its use has spread far more widely and its low signal properties have been used to good advantage. The mode is very versatile in terms of its performance and it can decode steady state signals as well as short bursts from short lived meteor trails.

WSJT is a computer program that provides all the following modes when connected to your ham radio via either a USB port (new radios) or an interface device which uses your PC sound card, audio and tx audio isolation, etc. New radios like the mobile IC-7100 and the IC-7300 and up home stations are all set with USB ports.

There are a number of optimized variants available to ham radio operators depending upon frequency!

FSK441: FSK441 was the first version of WSJT to be developed and it was introduced in 2001. The aim of FSK441 was to replace the very high speed Morse that was a feature of meteor scatter operation. The high speed Morse was needed because of

the short duration of the meteor trails that would support communication. Accordingly FSK441 used high speed data transfers as well. Obviously high speed is comparable to that of the Morse data.

FSK441 uses frequency shift keying of four tones at a rate equivalent to 441 baud.

JT6M: JT6M is a form of WSJT that is optimized for 6 meter operation - hence the 6M part of the name.

JT65: The JT65 form of WSJT is aimed at very low signal communications for applications like EME or long distance troposcatter. The modulation format used is MSK and there is a total of 65 tones (hence the name) and it uses forward error correction, FEC. This provides a particularly resilient form of communication which can be provide reliable communication even when it is well below the noise level.

JT4: JT4 is a WSJT mode that was designed specifically for EME or “moon-bounce” transmission. JT4 uses 4-tone FSK, and this enables it to accommodate both a sync bit and a data bit in each symbol. The keying rate is 4.375 baud, and a number of different levels of tone spacing are available.

FT8: Although many of the variants of WSJT, one variant that has been very rapidly taken up for HF communications is FT8. It gains its name from the fact that it was developed by Steven Franke, K9AN, and Joe Taylor, K1JT and the fact that uses 8FSK modulation. FT8 is described as an excellent digital mode for HF DXing and for situations like multi-hop Es on 6 meters, where deep fading may make fast and reliable completion of contacts a necessity.

Some of the key features of FT8 include: T/R sequence length: 15 s, Message length: 75 bits + 12-bit CRC, FEC code: LDPC(174,87), Modulation: 8-FSK, keying rate = tone spacing = 6.25 Hz, Waveform: Continuous phase, constant envelope, Occupied bandwidth: 50 Hz, Synchronization: three 7x7 Costas arrays (start, middle, end of Tx), Transmission duration: $79 \times 1920/12000 = 12.64$ s, Decoding threshold: -20 dB or possibly -24dB, Auto-sequencing after manual start of contact.

Over one third of all contacts logged with ARRL Logbook of the World are now digital!

If you have a computer either at home or mobile, you simply download WSJT to it, connect your computer to the radio (new ones use a USB port), set up some parameters, and you are set for digital FT-8. Well, there are a few glitches in there. Turn off the compressor, turn the power level down a bit as this is a 50% duty cycle, figure out the

'waterfall display', and you are getting set for FT-8. Lots of information on the web, ARRL books, etc.

FT-4

In 2019, Taylor, et al., introduced FT4, an experimental protocol which is similar to FT8 but has a shorter T/R sequence length for faster contest exchanges. FT4 accomplishes this increase in speed by using Gaussian frequency-shift keying and using 90 Hz of bandwidth

source: https://www.electronics-notes.com/articles/ham_radio/digimodes/what-is-wsjt-weak-signal-digital-mode.php

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There are also other programs for digital modes including Fldigi . That program will do PSK31, PSK63, , RTTY, THROB, and a bunch of other modes.

Some of the interface devices for radios without a USB port are the Signal-link, and those from West Mountain and MFJ. New radios like the IC-7100 are 'ready to go'.

Now that we've gone through the various digital modes.....we can't forget the MARAC digital awards. There are two and so far, no one has succeeded in getting either one!

MARAC Digital Awards

The USA – Digital Award has been around for several years now and basically requires that you log a contact with all 3077 counties using any of many digital Modes. Even though CW is technically a digital mode, CW is specifically excluded from this award so as to not conflict with the existing USA – CW Award.

Checking the MARAC Database, 7 people are at the 2000 level toward the award, with WQ7A, N1API, N6PDB, K8QWY, AA8R, W5YDY, , I think N6PDB has over 2500 worked. 22 folks have reached the 1000 level. (Part of this activity is the County Hunter Challenge Award – where you work counties on SSB, CW, digital on each and every ham band).

The Five Mode Award was approved by the MARAC Board at its annual meeting in July 2011. It basically requires that you make 5 contacts with each of the 3077 counties using any mode from an approved list of 33 modes. This list includes both analog modes like SSB and FM as well as many digital modes like PSK, RTTY, HELL, etc. It also includes CW!

If someone has finished USACA (SSB or CW) they are at least 20% of the way toward finishing the Five Mode Award since the award does not specify a start date. Also, to make this award a little easier to attain, if at least one end of any contact is mobile, operators on both ends get to count the counties on both ends of the QSO. Again, for complete rules, go to (www.marac.org). If you've worked all counties on SSB and also on CW, you are 40% of the way done!

There are also awards for transmitting from all counties in a state. Since people felt that working all 3077 with 5 modes is so difficult, these state awards were provided to prevent people from getting discouraged while working toward the WBOW.

- - -

Matt, W0NAC wrote some information pages here on the digital awards and getting your station set up to run digital. . You might wish to check them out.

<http://www.marac.org/chdownloads/digital/DIGHAPP01.pdf>

As far as I can tell, there are no levels for Five Mode, but you can complete each state and be listed on the MARAC database.

You can count all your SSB contacts for this award going way back to your license date, unlike the USACA SSB award which has a start date.

Alabama QSO Party

AA4GU mobile 111 CW QSO

KX3 at 5W to Par End-Fedz 40/20/10.

Well, I suppose my operation doesn't fit any category, as my rig was not capable of operation while mobile, but Mobile Solo is closest, so here it is. Maybe it should be five separate single op entries?

Anyway, I operated like I did in SC, NC, and GA QSO parties: drive to a spot and deploy my wire on a 40' Spiderbeam mast, operate, break it down, drive to next spot, etc.

A little disappointed in the turnout, but still fun. Could have been condx or my antenna, as I had very few RBN hits.

Operated from:

CHMB
LEE
MACO
ELMO
TPOO

AA4TI - fixed FL 19 CW 9 counties

Seems like Alabama threw a party and nobody came to it. Participation was way down this year. Early results on 3830 seem to bear this out.

K4ZGB mobile 84 cw

no comments

Biden Increases Gas/Diesel Prices

why your gas is up 10% in just weeks.

“Biden Administration to Bar Drilling on Millions of Acres in Alaska. The administration will cancel oil and gas leases in the Arctic National Wildlife Refuge

Yet the decision carries some political risk, because oil prices are on the rise and Republicans are accusing Mr. Biden of harming the country’s energy independence

The Arctic National Wildlife Refuge was opened to drilling under President Donald J. Trump, It also sits atop an estimated 11 billion barrels of oil and, for years, the fossil fuel industry, members of the Alaskan congressional delegation and state leaders have lobbied for drilling.

The Alaska development corporation denounced the Biden administration for canceling its leases and said it would take the Interior Department to court.

Source: <https://www.nytimes.com/2023/09/06/climate/biden-drilling-alaska-wildlife-refuge.html>

Meanwhile, the Saudis, Iranians and Russians are laughing with glee as they reduce oil output and ratchet up prices? Why pump more oil when you can sell less for higher prices per barrel, stoke inflation in the USA, and create financial stress for Americans with 10%/yr increases in gas prices, home heating oil, food prices, transportation prices, etc.

On the Road with N4CD

It had been a while since the last mobile trip, so I decided on a one day trip for the TX QSO Party. Some counties southwest of FT Worth were not going to be run by any other mobile, so I elected to head that way.

So early Saturday morning headed out the 2 hours or so to Dinosaur Valley State Park in Somervell County. 110 miles. It's one of the smaller counties in TX at 188 sq miles. Only other county that is smaller in TX is – Rockwall with 149 SQ miles. (County

Hunting trivia – the smallest county by area in the US is Kalawao, HI at 12 square miles. Several others including Manhattan NY and others are just 20 Square Miles or a few dozen sq miles). There's only 9,200 people there in Somervell as of 2020 census but it's growing quickly as highway access to the FT Worth Metro area improves.

Named for the Secretary of War of the Republic of Texas, it goes back to 1846 when the first trading post was founded there. Originally part of Hood, it was broken off later. Native Americans have been roaming this territory for ages.

More than 100 million years ago dinosaurs roamed the area that is now Somervell County. The local efforts to protect and preserve tracks imbedded along the river resulted in the foundation of Dinosaur Valley State Park, a 1,523-acre facility formally dedicated in 1970. You can see the tracks in the shallow river water if you visit. With drought conditions, some of the tracks are fully exposed.

I could do a double – give out park contacts and TX QSP Party contacts as the same time. Got there just before the 9 AM start time for the TQP and proceeded to put Qs in the log for 30 minutes, then time to head out. Cloudy day headed there – was 70F.

However, if you want to rack up a high score in any QSO Party, you try to run county lines. Some do triples and quads – there are some in TX where you can run 4 counties at once out west in panhandle. Unless you stop in the middle of the road – hard to do but the TX rules on this say as long as you can 'see' the county line you are good. Don't really agree with that but that's the rule allowing 3 and 4 ways in TX.

What the rule says: “The station located at the county line does not need to be on the line but must have visual contact with a county line marker. This provides operation from a safe location in case the county line is on a bridge or other hazardous location.”

Thus, you can even run 'wet lines' in the TX QP. Safely parked in one county. Duh!

After the run there, headed south to Bosque County. 1000 square miles and 18,000 people, with history going back to 1826 for first settlements along the Bosque River. First, ran Somervell/Bosque on 40m then proceeded to Hamilton/Bosque line for 20M run. Not much happening on 40M as propagation was poor and K=3. Mainly a few TX stations and nearby states of LA and AR on 40M. Tried 15m once. Weak EU stations with a contest going on there but no luck getting through. Caught 2 Washington state Salmon Run contacts on 15m. They were weak on 20M – normally they are good signals. Not today. The K index was 3 and DL3DXX and OM2VL were just a whisper on 20M most of Saturday. Light rain all the way through Bosque TX.

Probably the only place in all of Texas that it was raining! Rained all the way through Bosque for 40 miles.

Looked at map and decided not to head further south after Hamilton. Not enough time to get down to Lampasas (55 miles) and then east to the interstate 100 miles and then 230 miles to home. So backtracked and headed to northeast to get some other counties like Johnson, Hill, Ellis then run the Dallas/Collin line near home. Not out to run up big score. Several big time mobiles with drivers were hitting 20+ counties in two days – K5CM, AD4EB, W5CT, etc. . I'd just add to the overall fun and give out some counties. Rested up on Sunday – no activity.

Caught a few IA stations, but confused the heck out of them when I gave my county (required) after they gave me theirs. Didn't register that other QP's were going on I guess even though I signed "N4CD/M" when I called. Caught one NH station for their QP and two in NJ for that QP. Worked a few in WA for their Salmon Run. Same deal each time – almost none wanted to listen for my county(ies). Most of the time, I didn't do much tuning – just ran the county , quick scan to see if I could get another couple contacts, then leave. All CW,

Half the trip driving, half the time sitting making contacts. Did grab two corn dogs for lunch and slice of pizza. Not too many Subways or even Sonics or DQ's out that way. The convenience stores had Mexican food during the week but not on weekends. (probably mainly serve workers then during the week). Not to worry – stopped for good dinner on way home.

323 CW contacts - 260 miles. Worked a lot of county hunters – AB7NK, K7REL, NS2N, N4RS, K5WAF, KE3VV, K4YFH, K4YT, W4YDY, WA3QNT, SP5SA, KM4FO, DL3DXX, N8II, and a bunch of others. Thanks for the Qs.

Texas State QSO Party

There are 254 counties in TX. More than any other state. Looks like over 159 of them made it on the air this year. Big gaps missing in south TX and southwest TX. It takes a long time to run the southwest/west counties in TX – giant distances and no way to quickly run 'county lines'. The most 'counties per mile driven ' can be had in east TX.

Top out of state reporting on 3830 scores had just over 159 worked.

K5CCW mobile 321 SSB

Use go box with 7100, N1MM, and DX Commander antenna on the three county line of Denton, Collin, and Grayson. All battery power

W5CT mobile multi - op (K5PI W5MJ W9MC) 1992 CW 30 ssb

This was the 10th multi-op mobile entry for W5MJ and me. Thanks again to Mike W9MC for an excellent job behind the wheel!

We got a pretty late start getting Madison's 2021 Chevy Traverse ready this year and so had some mighty hot work days in the couple weeks leading up the event. We decided to try the Hi-Q 3-80 that Madison picked up at Belton this year and it was a champ! It was our 40M antenna. We use Madison's trusty Tarheel 100A as the other antenna, and it also worked very well on 15, 20, and 80. We have two TS-480HX (200W) rigs, but decided to run them at 100W this year to take it a little easier on the alternator. We brought along a 100Ah LiPO4 battery (thanks K5TR) as a backup but used it mostly to power the two laptops.

Activity seemed down a bit this year but built as the weekend wore on. Conditions were significantly better on Sunday with some very nice pileups. It was GREAT to have 15M this year. We were on 15 from all but 8 of our counties. CW always seems like a better mode for mobile but we do try SSB for county mults on 40 and to squeeze out a few more Qs from the larger counties.

Inter-station interference was not a big issue this year. The 40M transmitter could always be heard on 20, but by running higher in the band on 40 and lower on 20, it was not too bad.

We always seem to have RFI trouble of one sort or another, but Madison's back seat 40M rig had very little this year! My front seat setup got me locked up quite a few times. Sorry if I disappeared in mid-QSO. We've gotten away from using paddles (hard to use on bumpy roads), but I sure wished I had them if only to send a "TU" now and then!

Our new route was fun and our new Navigation system worked well. We got some tips from AD4EB (thanks Jim!) and decided to use a Garmin dash GPS along with the

Garmin BaseCamp software to set up our route. The only snag was when we "missed" our waypoints. The tolerance seemed pretty tight so if, for example, the waypoint marker had been dropped on the access road and we were on the freeway the GPS would tell us to make U-turns! We quickly found the "skip waypoint" button and went on our merry way. Unfortunately, we missed Tyler county (sorry, HA9RE). It was on a county line stop that didn't get marked on our backup paper directions. For backup navigation, we ran our old friend Microsoft Streets and Trips on one computer and it was handy a number of times, especially on Sunday when we went back through the same counties a couple times.

Thanks for all the Qs and for your patience. Sometimes we encounter local noise or go down a hill that causes QSB. And sometimes, it's just danged hard to type while bouncing down the road!

See you next year!

K5Y multi-op fixed Brazoria (ops K5AW KJ5Y W5GMD W5HWZ) 411 CW 438 SSB

Eric (KJ0D new call is W0EAS) as always was in BEAST mode. He made most of our contacts. And got K5Y set up for us to use.

Static crashes tore up 20 and 40 on day 1... you had to be 20 over 9 or better to talk to us. We gave for a while until the storms died down. Day 2 we were unmanned for an hour.

K5EC mobile 1038 cw 233 ssb

no comments

N5NA Mobile 1531 cw 13 ssb

Thanks to everyone for all the QSOs! And thanks for my wife, K5AKS, for driving and to Magnus for being a very good boy in the back seat both days.

Equipment: Elecraft K3, Scorpion SA680 antenna, Ford F250 antenna support, Dell Latitude D630 running CQ/X de NO5W.

Thanks to the following stations for contributing more than half the QSOs: N5RZ(43), DL3DXX(39), WA6KHK(32), OM2VL(29), WA2VYA(24), VE5KS(24), W9DC(24), W5TM(23), N5TJ(23), N8II(22), KA6BIM(22), KN7Y(21), W5LXS(21), K9CW(20), N6TQ(20), N5JJ(19), K4YT(19), W7GF(18), NF5T(18), K8OOK(17), DL3GA(16), K7REL(15), WB5BKL(15), K2TNO(14), K4AMC(14), NS2N(14), N4RKK(14), WB9HFK(14), DL5AN(13), HA8IB(13), N5MI(12), AB7RW(12), W2LC(12), K3TW(12), W8PI(12), WA5SOG(11), K9OM(11), N4TB(11), WA3QNT(10), N5EKO(9), ON4AAC(9), KA0REN(9), NM2A(9), AA5KC(9), F8PDR(9), W0VX(8)

AD4EB mobile 2918 CW QSO

Another enjoyable TXQP for the AD4EB team. The CW pileups were exciting for Jim, and the Texas scenery was spectacular for Melody. Here are the stations that worked us 40 or more times: DL3DXX (73)- Congratulations Dietmar! KA6BIM (72) N5RZ (60) OM2VL (59) NK4O (54) NS2N (54) AC6ZM (47) N5TJ (46) K9CW (45) W5TM (44) KN7Y (41) WA6KHK (40) 73 - Jim - AD4EB and Melody - KI4HVY

KI5MM mobile 479 SSB

Solo this year so only worked stops. Did not work full day Saturday. Thanks for the Q,s.

WB0TEV Mobile 299 SSB

900 miles of Texas highways, \$200 in gasoline, 46 counties and loads of fun and adventure.

In years past, I've done a solo SSB effort and taken top honors for TXM PHO several times. Last year, I laid the mic aside and took my good friend and skilled CW op K5PS for a ride across Texas in a TXM CWO effort, albeit for less than the full 18 hours.

This year the plan was a full on 18 hour effort across 46 counties with the two of us taking turns on the radio. Scott would do CW only as K5PS and I would do SSB only as WB0TEV, albeit with priority given to K5PS. I would do all the driving, Scott would run the logging computer.

I don't think either of us took 1st place this year. If you are going to beat super mobile ops like AD4EB on CW you need to not have to share the radio with an SSB op and

indeed set up for SO2R. AD4EB AVERAGED 2.7 QSO's/minute over the entire 18 hours! He's a machine!

Nonetheless we had a blast, and I don't think anybody activated more counties this year than we did. Scott managed to secure the 1000 point bonus from each of our 46 counties, while I managed to do so from 35 on SSB.

Hopefully Scott will get a chance to do his own writeup, but as he is busy getting ready for family coming to visit later this week, his report may be delayed.

The original plan was to again drive my antenna festooned 1986 Pontiac Parisienne as we did last year. Unfortunately, or fortunately as the case may be, the Thursday before the contest the old girl suddenly developed major electrical issues and died in my driveway. Better then and there than 150 miles from home in the middle of Texas nowhere on a Saturday afternoon. I think either a fusible link from the main + cable from the battery blew or perhaps the ground cable from the battery went out. In any case, I didn't really have time to troubleshoot it or get it in and out of the shop, so I moved radio gear to my 2008 Chevy Tahoe that I'd used along with Scott in the 2021 Oklahoma QSO party.

While I can use the long Hustler vertical on the fender of the Pontiac, on the Tahoe I have to use a short Hustler vertical with a mag mount on the roof, which isn't as efficient and has an even narrower bandwidth. Since I was planning on doing both SSB and CW on this trip I was going to have to use an antenna tuner anyway. Electrically short antennas have a pretty narrow bandwidth (unless they are just excessively lossy) so I couldn't get an acceptable VSWR in both the CW and SSB segments simultaneously. By setting the resonant points on the 40, 20 and 15m elements in the digi band between CW and SSB I was able to fairly easily get a good match to the radio using the MFJ-949D tuner. A motor driven screw-driver type antenna would be another solution, but not one I have in my current arsenal.

Unlike the Pontiac setup, I found that 15m in the Tahoe got so much RFI into the CAT cable going to the FT757GXII radio that it would scramble its poor brains requiring a reset which involves fumbling around on the back of the radio to push in a couple of buttons to reset the memories and microprocessor. I had a ferrite on the laptop end of that cable, but apparently need to choke the daylights out of it on the radio end too. I have ground straps made of salvaged coax shield running from the radio, tuner, and laptop to a single point ground by the gas pedal as well. Running out of time, I opted to just forgo 15m and stick with 20 and 40.

Saturday morning we started at the 3 county intersection of Hunt, Fannin and Delta counties about 25 miles from Greenville, Texas the home QTH for both Scott and I. We started out with me on SSB on 20m. Often when entering a new county, I would operate SSB just long enough to work get the 5 QSOs necessary to secure the 1000 point bonus for activating that county (or work the pile down if there was one) then give it over to K5PS who would close N1MM+ and relaunch it using a separate desktop icon that would bring up his database and log. We had budgeted 25 minutes at that corner and after he worked down a CW pile we still had time to turn me loose on 40m SSB for a bit where I worked my good friend and old college room mate KK5MR up in Grayson county along with the sorely missed W0BH up in KS who for many years came down to Texas to run the panhandle counties.

Then it was time to motor on down the road headed eastward gobbling up the counties and often popping in and out of the northern most tier of counties just long enough to activate them (e.g. Lamar, Red River, Bowie).

Unfortunately when we got to Gregg county, Murphy paid a visit. The radio got quiet and the VSWR started jumping all over the place. We pulled over to troubleshoot and the trouble *SEEMED* to be in the wafer switch in the tuner. At that point I decided to just bypass the tuner, but that meant I had to readjust the lengths of the antenna stingers to get them naturally resonant in the CW portion of the band, thus seemingly putting an end to my SSB efforts for the rest of the contest.

After losing about 30 minutes and falling behind our time line by about the same we got back on the road. There would be no SSB from Gregg, Harrison or Rusk counties. Somewhere about half past RUSK it finally dawned on me that the flakiness in the tuner's antenna switch was likely only in the COAX 2 positions that we had been using. If I moved the antenna coax to COAX 1 and used that input I might avoid the problem and sure enough when we tried it that worked (or at least it would for a while). So we stopped and I readjusted the antenna lengths back to where they originally had been and we were off again.

However, we were still behind schedule. When we got to Panola county I got back on SSB, K5PS spotted me and I called desperately on 20m SSB hoping especially for KK7AC as I knew he need Panola for his county hunting totals. Alas, the QSO's just were not forthcoming around 2230Z and I gave up after getting only 3 QSO and gave the radio back to K5PS.

In an attempt to make up for lost time I didn't do any SSB from Shelby, Sabine, San Augustine or Nacogdoches counties. Some of these only took just a few minutes to

drive across or in and out of, so rather than spend the full 16 minutes I had budgeted in such cases, as soon as Scott made enough QSOs to get the bonus we just kept on moving down the road rather than stopping. Using that strategy we eventually made up for lost time and got back on our time line. Trimming some time off of our allotted pit stop time in Lufkin (Angelina county) also helped.

As we approached the Angelina/Trinity county line after the gas/potty stop in Lufkin I felt we had enough time margin to let me do a quick county line run on SSB. If you are going to pack as many counties in as we did you generally have to keep moving and not stop on county lines or you run out of time before you run through the counties. The exception is at the very beginning and end of the day or if/when you get sufficiently ahead of your time line that you can stop for a bit.

Fortunately prop had improved and I had a frantic pile going on 14236 in short order. One thing that threw us was N5MLP. He reported his state as GA, but we had previously logged him as being in CO. We asked him and he replied that he was using various remote stations and that's why he gave different state reports just hours apart! That was certainly a new wrinkle.

The drive through Cherokee county was a slog. At 48 minutes or so, it took the longest to get through.

When we got to the Anderson/Henderson county line I judged that we could afford to do a quick SSB county line run which would allow me to knock off two counties quickly, especially since the drive time through the corner of Henderson would only take about 5 minutes and I wanted Scott to have a chance to bank that early if he could, even though we would have a second pass through Henderson on Sunday.

A great pileup ensued before we switched to CW and motored across Henderson and into Smith county. Despite the short time, K5PS managed to get >5 QSOs in before we crossed into Smith.

Saturday night in the closing minutes we approached the county line of our last two counties, Wood and Rains in the small town of Alba. Scott knocked out Wood and then we crossed just barely into Rains where he worked enough to get the bonus for it too. Then with 17 minutes to go I positioned us on the county line, got on 20 SSB and quickly worked 9 QSOs from each county including OM2VL who is one of the more prolific European contestants in state QSO parties. Its always good to hear Laci booming in from Slovakia.

There were still 12 minutes left in the contest so gave in back to K5PS to work some more CW from Rains county as we motored up US69 to get back home to Greenville for the night.

Sunday morning I again picked up K5PS and we headed for our start point of Collin/Rockwall. At 1400Z I started off on 40 SSB and after a few QSOs there went to 20m SSB. After working a few more and banking the bonus the radio went to K5PS to work the county line for a bit before we motored down in Rockwall on the way to Dallas county. I tried 20m SSB from Dallas but struck out. I did manage a county line run from Ellis/Johnson from a liquor store parking lot. Did a brief run while rolling through McLennan, had to skip Hill, but managed 6 quick QSOs from Fall and later a county line run from Limestone/Robertson which was made possible by the short path we had through both of those counties (11 and 9 miles respectively) which made the 32 minutes budgeted for them more than enough to let us stop and park for a bit.

The next 4 counties (Leon, Freestone, Navarro and a 2nd visit to Henderson), were long drives relatively speaking, so there was time for me to get on SSB and still give K5PS time to hit both 20 and 40, although for what ever reason I never got on from Freestone as we zipped up I-45. Maybe I was focused on driving and making up some time.

When we got to the last county line we did much the same as we did at the end of Saturday. K5PS knocked out Kaufman county in the 3 miles we spent cutting across its SE corner in Mabank Texas, then crossed just a bit into Van Zandt county so he could score that one. With about 20 minutes left in the contest I got on the county line, found what sounded like a quiet spot on 14256 (per my advertisement on my qrz.com page I tried to gravitate towards freqs that ended in 6) had myself spotted and called,and called.... and a called.

Crickets.

QSY'ed to 14296, had Scott re-spot me and this time a pile thankfully ensued. Many of those who had worked me from multiple counties got their last QSO's with WB0TEV. There was still 15 minutes left so gave the radio back to K5PS and he worked CW as we drove north further into Van Zandt until the contest ended. An hour later we were back home, road weary but gratified.

Thanks for the SSB QSOs with WB0TEV and CW QSOs with K5PS. I managed to activate 35 counties, while Scott activated all 46. See you next year in some form and possibly in the OKQP in March. Now, I need to go have a talk with the Pontiac.... And thank the Tahoe for pinch hitting this year.

73, Victor (WB0TEV)

K5CM mobile 1041 cw 73 SSB

Saturday only. Got started late. Left a little early. Thanks to all the stations that followed us around.

73, Connie / K5CM

K5PS mobile 984 CW

Scott rode with me (WB0TEV), I did SSB only as WB0TEV, Scott (K5PS) did CW only. You can read a little more about the trip by looking at the WB0TEV comments.

73,
Victor WB0TEV for Scott K5PS

DL3DXX 350 CW 157 COUNTIES WORKED

Wow, what an activity! TQP kept me busy!

Like last year I decided to concentrate in TQP and skip the other parties. In the stage of rising sun activity with solar disturbances, the northern propagation paths are often limited, so I did not hear much from Washington nor Iowa.

Texas 40m activity was down compared to last year. Heard Europeans with Aurora sound. 20m was very busy but signals were weak most of the time. 15m was the best band with loud signals and long open up to midnight. 10m had a short opening on Saturday around 15z for just 2 QSOs, nothing on Sunday.

With all the electronic resources - DX cluster, skimmer, reverse beacon network, APRS information from several mobiles - two computer screens were not enough to track all of this information.

Mobile activity was fabulous and made the party a total success however with a little glitch: In the middle of the QP I found out that I gave the wrong exchange DX instead

DL. What now? I decided to go on with it for the Saturday part not to confuse stations worked a second time. In the Sunday part the correct exchange was sent. I apologize for this mistake.

Congrats to all stations and organizers of the party, especially to the mobiles AD4EB, K5EC, K5PS, N5NA, W5CT just to name a few.
73 de Dietmar DL3DXX

KA6BIM - fixed - OR 299 CW 59 SSB 139 counties worked

Great contest! Good conditions. Lots of activity the whole contest. I kept very busy chasing the rovers and looking for home and portable stations. I found 9 new counties and 3 previously unconfirmed ones. Now I have 28 still to go. Thank you to the rovers for an excellent job in covering the state. Thanks everyone for all the qso's

Dave Ka6bim

WA6KHK -fixed - CA 217 cw 129 ssb 159 counties

All the rovers were active. Even saw openings on 10 and 160 but no Q's there. 14,000 bonus points. I could have done a better job at tracking the rovers. I guess it cost me. Nice job Dave! Great contest for county hunters. I don't need them as I have worked all the U S counties twice (all QSL'ed the first time!). As usual, the most entertaining state QSO party (next to CA of course! hihi). See you all next month!

OM2VL - fixed - DX 256 cw 42 ssb 140 counties worked

During the weekend we had so many work on the QTH and finished it after 17Z.

5 QSO party during same time is so hard and I decided prefer WA QP (as last some years)and made some QSOs in other QPs for my US County Award 2nd time.

I start hunting WA stations, but band was full of TX stations and I need so many counties for my US County Award 2nd time, so I made also TX QSOs. The activity of TX mobiles was excellent so I focused also for TX stations.

Because of my late start unfortunately I missed many counties.

20m: low signals with BIG pileups, but mobiles did excellent job. Sometimes it took so long, but I made 90% of stations who I called.

15m: the signals was FB and I made all stations who I heard - usually 1-2 calls. 10m: band was open, but unfortunately not many TX was here

I hope next year I can do full effort in the TX QP!

Thanks for the QSOs!

Most QSOs:

AD4EB 61/34

W5CT 39/22

N5NA 29/21

K5PS 21/20

K5CM 18/10

KI5MM 12/11

K5EC 12/8

WB0TEV 11/11

K5ZZR 5/5

N4CD 4/4

N5KW 3/3

(4): K5Y, N5RZ

73, Laci

N5RZ - fixed TX - 1206 CW 149 counties worked

Always fun. Thanks to the mobiles for hitting the road. 40M was good all day, and backscatter was good on 20M and 15M so was able to snag many Q's with them. Bands were in great shape Sunday. 10M was wide open with huge signals, but not many takers. 160M and 80M were very noisy Saturday night.

Missed SDak and MS stateside. Canadians worked: VO1 VE2 VE3 VE4 VE5 VE7
149 Texas Counties, and 25 DXCC.

The Salmon Run, and IA NJ NH ME QSO parties contributed many QSOs.

Thanks to all for the QSOs.

73, Gator

N8II fixed WV 212 CW 97 SSB 140 counties worked

I had some trouble keeping focus on Saturday, could not find as much 20M CW mobile activity as I knew was there. 15 meters was open most of the day time to TX, disappointing activity, especially on SSB. 20M signals went fairly weak from 16-20Z Saturday, some drop out Sunday as well. Running on 20M SSB was mostly not that productive, hard to find a clear frequency at times among all of the QP's, POTA, and Rt. 66 activity. I think 77 Q's on 20 SSB is one of my lowest ever totals. When 20 was open well in the evening, not much was there from TX. Briefly Sunday AM, 10M was wide open to most of TX, I ran 3 new counties on 10 SSB.

5 QP's including TX are about 3 to 4 too many! It would be much better to move to 2nd weekend of September. Also, why not make it easier and credit 100 bonus points for each mobile worked in a new county vs. 500 for 5? I missed another 500 points by one county with 2 mobiles.

The mobile activity was its usual decent for the TXQP. Thanks for those 15M Q's from those who ventured there. Many thanks to all who put in those long miles some driving a long distance like AD4EB just to get to the TX border. By the numbers, QSO's/counties worked: AD4EB 30/25, W5CT 26/23, N5NA 22/17, KI5MM 12/12, K5PS 14/14, WB0TEV 9/9, K5CM 28/9, K5EC 8/8, N4CD 5/5, K5ZZR 3.

It looks like 4th place is the highest I will place, not bad for 100W only. Thanks for all of the QSO's, much more interesting than the SR with only 39 counties. Both last too long to suit me. Thanks for the QSO's.

73, Jeff N8II

VE5KS - fixed Saskatchewan 183 CW 79 SSB 124 counties worked

Big thanks to all the mobiles without you it would not have been as much fun.

Special thanks to AD4EB (23 counties), N5NA (21 counties), W5CT (21 counties), K5EC (13 counties) K5PS (13 counties), WB0TEV (9 counties), N4CD (7 counties) and K5CM (5 counties).

I am looking forward to next year.

73's

John

VE5KS

Iowa State QSO Party

There are 99 counties in IA

KK6MC - mobile 272 CW 90 SSB QSO

It was a fun contest. I put in a laid back effort, getting started late and ending an hour earlier. There was enough activity to keep things interesting and really no lulls in activity. 15M was open, but there weren't many stations on 15M for IAQP.

Iowa backroad detours did slow me down a bit though and county lines did not seem as well marked on the county roads as in other states. If I had done more prep,, that would not have been a problem.

Kudos to the organizers, if I am in the midwest in the future when this is run I definitely will participate again.

WI0WA/R (N0AC op) 836 CW

My 1st thanks goes to my wife, Donna, for putting up with my radio hobby, providing a nice picnic lunch at the Grundy County Lake in Dike and joining me for a BBQ dinner in Luther.

The 2nd thanks goes to all those that got on the air to contact the stations in the Iowa QSO Party. It wouldn't be fun without you.

The 3rd thanks goes to the Story County ARC for sponsoring the contest.

My friend W0BNW said "It's just for fun". And that is why I went out to activate 15 different Iowa counties. The day started out very foggy and after it lifted we were greeted by a gorgeous day. I planned five stops at county lines. At stop #2 (about noon to 1pm) it seemed like we were having some sort of solar disturbance. At the 3rd stop rates pick up but soon plummeted for the rest of the day.

After stop #5 and arriving home I reconfigured my portable antenna in my driveway for 80m planning on running out the clock. After a few CQs the radio went dead never to recover. Bad smells from the rig filled the truck cab. Obviously I went QRT.

We had about 4 hours of radio time and 8 hours of driving/dinning time. Iowa is beautiful this time of the year,

Bill, N0AC and Donna, XYL

N0HR portable 328 CW

Great time operating from POTA K-9317/K-0270 in Boone county. A few storms passed through, but 20m was working well.

FT-891 @ 60W
17 ft whip on WRC tripod for 20m
EFHW for 40m & 15m

KE0TT QRP Portable 85 CW

K3/10 at 5 watts to an inv vee fan dipole up 26' at the vee. A 66' and a 130' dipole in the fan. 300 ohm TV feedline and a Matchbox tuner. Thanks for the fun! Made a few more Q's than last year. 3 DX Q's, and 6 Iowa multi's this time. Estimated score.... C U next time, 73, Dan ke0tt

KA6BIM - fixed OR 43 cw 10 ssb 30 counties

Another fun contest, with fair conditions. I found 2 of the Counties I need. Thanks for

the QSO's Dave ka6bim

N8II fixed WV 29 cw 13 SSB 28 counties

5 QP's in 1 weekend is way too many! Not your fault IA, you have had this weekend for a while. There was more activity than last year, always a positive. I think I worked most all of the portables. I missed N0AC/R on at least one of his quad county stops, thanks for the many mults! Thanks also to Duffy, KK6MC/R who I worked at 2 stops.

I would have to think that at some time 15 was wide open to IA, nada on activity heard. This party needs more activity from home stations; there are several really big contest stations in IA, none active. Thanks for the QSO's. I am sure I missed some while chasing stations in the other QP's.

73, Jeff

K4BAI fixed GA 23 CW 21 SSB

Good activity on 20 and 40M. Assume we had no propagation from GA to IA on 15 and 10M. We did have propagation on 80M near the end, but no IA stations heard on that band. Thanks for all QSOs. 73, John, K4BAI

New Jersey QSO Party

There are 21 counties in NJ. Think about 14 made it on – that's what most reported – 13 or 14 max Qs.

Top station out of state seems to have worked 14 counties. In state folks worked 19 counties, likely on 80m. This is often a 'local' contest more than one to get all counties on 20 and 15M. Naturally bands congested with 4 other QP's going on at same time!

Seldom does a mobile venture out in NJ. Not fun trying to drive around the state there and often county lines not marked or possible to stop at.

K4BAI Fixed GA 44 9 19 mults

Pretty good activity this year. Heard no NJ stations on 15M due to skip being too long. Did manage one on 10 CW. Thanks for all QSOs. 73, John, K4BAI

KR2Q fixed NJ 529 CW

Had zero intention of doing much at all on Saturday morning. OH well...got sucked in. LOL thanks for the call (almost all were running)

KA6BIM - fixed OR 43 CW 6 SSB 14 mults

Glad to work as many NJ stations as I did. Thanks for the contacts.

Dave ka6bim

New Hampshire State QSO Party

There are 10 counties in NH.

This is often a 'neglected' QP by local ops. They all show up in the New England QP by the dozens, and often a mobile or two. Most reporting on 3830 scores had a handful of QSOs, some only 1 or 2.

N8II fixed WV 5 CW 4 SSB 4

The "Rodney Dangerfield" of QP's, no respect unfortunately. I could have CQ'ed away on Sunday and added some QSO's or looked on 40, but was busy enough with TX and

WA and weary enough at times to overlook NH. My last QSO was 0039Z Saturday evening.

I heard K1RX running EU on Sunday, saw him spotted on 20, but gone before I got there. Thanks to the few who answered my CQ's for NH and NJ at same time. There were 3-4 ops actually running stations at a decent pace. More activity would certainly help. There is no shortage of big stations that for the NEQP that remain silent for this one. A move to the weekend before would also help.

73, Jeff

Washington Salmon Run

There are 39 counties in WA – good for the Salmon Run. Likely most (or all) were on the air.

K7TQ mobile 797 CW QSO

N7WA and I had a great time putting 20 WA counties on the air. After a quick start on Saturday, we had to solve a burnt electrical smell and loss of communication between N1MM and the radio. Once we got around that, we were again off and operating. Many familiar calls and several constant companions. Full story and pictures from along our route are at <https://sites.google.com/site/randyk7tq/home/2023-salmon-run>

Mike, N7WA, and I will meet near the center of Washington on Friday evening and on Saturday, September 16 and Sunday, September 17 (UTC), we will activate all 20 of the Washington counties east of the Cascade Crest. We'll use my call of K7TQ. My truck has a Scorpion 680 screwdriver antenna so we will be able to be on 80, 40, 20, 15, and 10 m. We will be CW only on 20, 40, 15, and maybe 10 m frequencies ending between 038 and 039, such as 21.0384 MHz. Watch the RBN for K7TQ/county, or some combination of that, because we will add our current county to our CQs. You can work us each time we change counties or bands. Our sunset will be around 0210 UTC so after that we will be more on the lower bands.

80 m: Based on success in previous Salmon Runs, we will be on 80 m, ~3.535 MHz, for the first five minutes in each county, including ALL the daylight hours. We should be able to work stations in WA, ID, OR, BC, and perhaps a bit farther away.

We may also self-spot when we have cell phone service. We'll be happy if you spot us, too.

On September 16 and 17, Mike, N7WA, and I again put all 20 of the Washington state counties east of the Cascade Crest on the air. We started on the Grant/Adams county line and went counterclockwise to Whitman then a short distance to my home in Moscow, ID. Sunday we finished up the remaining counties with a start on the Pend Oreille/Spokane county line, Lincoln county which takes a LONG time to get through, Ferry county where you are hemmed in by tall mountains, and back to Moses Lake in Grant county.

We made 797 Qs with 72 mults for a claimed score of 172,152, the most Mike and I have made operating either together or individually. For the first time in several years, 10 meters was open long enough to yield 22 Qs. 80 m for five minutes in each county was good for 102 Qs with the usual suspects of N7EPD with 17 Qs; W7G with 11 Qs; W6OAT with 8 Qs; and W9P with 7 Qs.

Our most frequent customer was N7IR, Gary, in AZ. He made 46 Qs with us in all 20 of our counties, the only person to do so. Additionally, Gary worked Jay, WA0WWW, and me in all twenty of our counties in 2022 and Mike and me in all 16 of our counties in 2020. Thanks for all those Qs, Gary. Others with 10 or more counties were W6OAT in Kittitas county, WA; N7EPD in Pierce county, WA; K9CW in IL; K2DFC in NJ; K0TRL in KS; and W7G in Garfield county, WA. In total 275 different calls made it into our log.

Saturday morning on the ADA/GRAN county line started out great for Mike with 44 Qs in 31 minutes. Soon thereafter, that greatness went sour. We lost communication between N1MM and the KX2 accompanied by a burnt electrical smell. After a half hour trouble shooting and problem solving, Mike found a way to work around the problem and we were back in business, but with all manual KX2 and N1MM settings. That put us 30 to 40 minutes behind schedule which we finally made up by passing on lunch in KITTS county and entering YAK on schedule.

When there was cell phone coverage, we were able to self-spot which was a boon to our rate. I wasn't real excited about self-spotting, but after seeing what it does to the rate, it

is hard to resist using it.

One of the things I enjoy while operating mobile in QSO parties is watching the scenery. Most notable this time was hops in Yakima county. Hops are vine-like and grow commercially on tall trellises. There was a mix of harvested fields with bare trellises and ones being harvested. We even followed a truck loaded with hops for a short time complete with the unmistakable aroma of hops.

The rig was a KX2 and KXPA at 50 to 80 watts depending on how much we were willing to fiddle with the KX2's drive setting. The antenna was a Scorpion 680 mounted in the center of my Ford Ranger's bed. We logged with N1MM+.

We had a great time and thank everyone who worked us and those who tried, too.



Pend Orielle/Spokane County Line

N7PP multi op WA (ops K7BTW K7EDX K7VAP N9ADG) 689 CW 1223 ssb
(556 QSO on 10m SSB!)

A wonderful contest with outstanding band conditions. 10m was just incredible. It is great to have the higher bands open again. It was really fun.

Thanks to everyone who helped organize this contest and to all who got on the air and contributed to making this such a success.

A big shout out to k7edx and k7vap who came down here to Thurston County and to n9adg who oped on CW via remote from his qth in Kirkland. Val and Adam did the ssb, while Brian and I did the cw.

With only 1-1/2 hours left, we finally snagged KLI for the 39th county. It was a mad scramble to get the DB18 from 10m where Adam was working SSB down to 40 to get the KLI before he was gone. I didn't think that SteppIR was ever going to get to 40. I'm sure it was the shouting and language that caused the controller to move at a snails pace.

I'm already looking forward to next year's SR.

73, Dick, k7btw

K4BAI - fixed GA 83 cw 34 ssb Mults 26

80 through 10M somewhat open to WA, but many signals were whisper weak. Higher bands, 15 and 10, better than 20, 40, and 80. Didn't stay up late enough to work many on 80. QRT Sat night at 0300Z. Thanks for all QSOs and particularly the mobiles/portables/rovers. 73, John, K4BAI

OM2VL fixed DX 78 cw 9 ssb Mults27

During the weekend we had so many work on the QTH and finished it after 17Z.

5 QSO party during same time is so hard and I decided prefer WA QP (as last some years)and made some QSOs in other QPs for my US County Award 2nd time.

Because of my late start I missed some counties. On 15m the signals was so good and I made all stations who I heard. On 10m both days I heard 10+ stations, but it seems all are beaming not to Europe, because no any one back to my call.

Thanks for the QSOs!

K7TQ/M 15/10
NU7J/M 4/2

73, Laci

WS7L - county expedition - PAC WA 321 cw 134 SSB

Sadly, I came 1 county short of a sweep because I think I was the only PAC station active! Oh well. I scored a bit short of last year's effort, probably due to fewer hours in the chair.

73 & thanks for the Q's
Carl WS7L

Maine State QSO Party

Held the last weekend in September. Some activity although more shows up in the New England QP each year. Seems most activity on SSB this year.

The Maine QSO Party allowed you to work 'anyone' for contact credit in the QP. Makes scores for out of state folks meaningless as no idea of how many ME QSOs anyone had!

From the 3830 contest reflector:

K1ESE fixed ME - 223 CW

Thanks to Paul W1IMD for the use of the great station.

Limited time and CW only. Most of the activity seemed to be SSB.

Thanks to the organizers and those who called me.

73,

K1ESE John

W1DED - fixed - Aroostook ME 1356 SSB QSO

no comments

KN7Y - fixed AZ "89" CW 9 SSB QSO

Also enjoyed the diversity of the ME QP and being able to work other states / DX / Canadian Prov as it opened the playing field a great deal and made this QP quite fun.

The CQ WW RTTY Contest sort of compressed the CW activity on 40 meters to a very narrow band width just above 7.025 MHz, but I found it made 40 relatively easy to find ops. No criticism for the RTTY contest - I know a good number of RTTY contesting enthusiasts - just a casual observation.

K4BAI - fixed - GA

It would be nice if more Maine stations participated. Nevertheless, I am glad there was some contest other than the RTTY WW contest that I could participate in this weekend
Thanks for all QSOs. 73, John, K4BAI

Awards Issued

Ran All State Awards:

WY0A RAS NV, He received #38
WY0A RAS OR, He received #31
WY0A RAS WA, He received #35
WY0A RAS AK, He received #27
WY0A ID #39
WY0A UT #33
WY0A CO #34

KB6UF RAS ID, He received #38
KB6UF RAS NE, He received #31
KB6UF RAS WY, He received #30

W4SIG KY #27
W4SIG MO #29

Roadrunner Awards:

KB6UF 2150, He received #2
KB6UF 2175, He received #2
K4YT 525, He received #38
K8ZZ 1775, He received #3

Single Band Award:

KB6UF Completed 40 meters. He received #7
K5GE completed 20 meters and received #37

Polaris Award:

K7REL L Completed 250 counties and received #488

Master Gold Award:

AB7RW Attained MG on 20 September 2023. He received #78

Upcoming Events for County Hunters

Would you believe QSO Party season is nearly OVER. Over. Done with. One more

month with a full range of QP's from east coast to west coast with several hundred counties up for grabs. Hope you snag a lot of counties in them or managed to get out and put out your state/nearby state. It will be a while before we have loads of QSO Parties in 2024 after this month. Make the most of it.

During October, there will be a solar eclipse view-able from much of TX and other states. There's even a QSO Party event set up for it:

Oct 14 1200z to 14 2200

1.8-28,50

Solar Eclipse QSO Party CW Ph Dig

RS(T), 6-char grid

hamsci.org/seqp-rules

((Partial eclipse begins ~1500 UTC in Oregon ends ~1840 UTC in Texas)

Next April – another eclipse and another QSO Party for it.

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The snow is already flying at the higher elevations. Trail Ridge Parkway had a foot and other passes in CO got a foot or more of snow. Snow happening in MT, ID and soon across much of the northern tier. The long northern mobile trips are likely due for a pause there for 'winter'.

There are still 'hot streaks' up north with 80s up to OH, PA, WI in mid Sept - – but the pattern will shift and it will be 'winter' before you know it. It's already 'fall' by the calendar. (You wouldn't know it in Dallas with mid 90s temps the last week of September running 10 degrees above normals for this time of year.).

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Oct 7 1600z to 8 2200z

1.8-28

California QSO Party CW Ph

Serial, CA county or SPC

www.cqp.org/Rules.htm

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Oct 14 1500z to 15 0500z

1.8-28

Arizona QSO Party CW Ph

RS(T), AZ county or SPC

www.azqp.org

Oct 14 1600z to 15 2200

No WARC

Pennsylvania QSO Party CW Ph

Serial, PA county or ARRL/RAC section

paqso.org

Oct 14 1800z to 15 1800

1.8-28, 50,144

South Dakota QSO Party CW Ph Dig

RS(T), SD county or SPC

www.sdqsoparty.com

Oct 14 0300z to 15 2100

1.8-28, VHF/UHF

Nevada QSO Party CW Ph Dig

RS(T), NV county or ARRL/RAC section

nvqso.com

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Oct 21 1400z to 22 0200

No WARC

New York QSO Party CW Ph Dig

RS(T), NY county or SPC

www.nyqp.org

Oct 21 0001z tp 22 2359z

28

10-10 Int'l Fall Contest, CW CW

Name, mbr or "0," SPC

www.ten-ten.org

Oct 22 1700z to 23 0100

1.8-28, 50,144

Illinois QSO Party CW Ph Dig

RS(T), IL county or SPC

w9awe.org/ilqp

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As usual, lots of smaller contests – DX and otherwise, listed at

<http://www.arrl.org/files/file/Contest%20Corral/2023/October%202023%20Corral.pdf>

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Meanwhile, it's contest time in going into November. Big ones coming up this month including the following.

Octo28 0000z to 29 2359

1.8-28 CQ World Wide DX Contest, SSB Ph
RS, CQ zone

www.cqww.com

Nov 4 2100z to 6 0300z

1.8-28

ARRL Sweepstakes Contest, CW

Serial, precedence, your call, check, ARRL/RAC Section

Nov 18 2100z to 20 0300z

1.8-28

ARRL Sweepstakes Contest, SSB

Serial, precedence, your call, check, ARRL/RAC Section

Nov 25 0000z to 26 2359z

1.8-28

CQ Worldwide DX Contest, CW

RST, CQ zone www.cqww.com

Other smaller events listed on the ARRL Contest Corral each month. There are hundreds of parks a month 'on the air' and all of them are in counties.

That's all folks ! 73 de N4CD