County Hunter News

July 1, 2011
Volume 7, Issue 7

Welcome to the On-Line County Hunter News, a monthly publication for those interested in county hunting, with an orientation toward CW operation**.**

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.

We hope you will enjoy the County Hunter News. Feel free to forward, or provide links. Permission is given for copying or quoting in part or all provided credit is given to the CHNews and to the author of article.

CW County Hunter Nets run on 14.0565, 10.122.5, and 7056.5, with activity occasionally on 3556.5 KHz. Also, with low sunspot activity, most of the SSB activity now is on 'friendly net' 7188/7185 KHz. The cw folks are now pioneering 17M operation on 18.0915. (21.0565, 24.9155, and 28.0565 when sunspots better). Look around 18135 or 18.132.5 for occasional 17M SSB runs.

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://countyhunter.com/marac_information_package.htm

The CW net procedure is written up at:

http://www.wd3p.net/ch/netproc/netproc.htm

There is a lot more information at www.countyhunter.com . Back issues of the County Hunter News are available at www.CHNewsonline.com

De N4CD (email: telegraphy@verizon.net)

Notes from the Editor

1) June has been an up and down month for county hunting. With the summer weather more mobiles are out on trips. We'd had a lot of bad weather delaying road travel. The sun has been erratic with days of high A index and up and down sunspot counts.

There's a lot of mobile activity to summarize so here we go:

Mobile Activity in late May and June 2011

Over Memorial Day, we had quite a few trips. Conditions deteriorated horribly with major solar storms, the A index over 30 for over 24 hours, and generally rotten conditions that persisted through the week.

K5GE headed up to Branson and returned via northeast OLKA putting them out. One day he was zero copy as he got closer. Next day he was 55 copy on 20 and 17meters at 200 miles distance! Strange conditions, but at the same time, anything more than 800 miles away was in the noise.

Bob N8KIE, headed to Oregon the county hunter way via Northern Michigan, WI, NE, CO, NM, UT, NV, OR. Wow...conditions not great the first day on 20M, with not even that many 22 relays. He gave the LC WBOW to Dan, KM9X for Platinum.

Sterling, WA7JHQ, headed from NM up to the southwest corner of KS.

Jeff, W9MSE, returned from OH putting out the counties on CW on the way back.

N9JF, Jim, as usual was out running counties.

Duane, WV2B, headed to PA and ran them along the way.

Joe, N5UZW, headed on down to LA and put them out along the way.

Mike, W0MU, and the invisible buddy club ride along call NA7XX, headed up to MT.

Ray, WG6X, headed out for a few in FL

Mike, KA4RRU, ran some in VA

W8GEJ, W8FNW, W4FNW ran some in OH on several weekends.

WA5VRE ran counties in TX

Jack, N7IV, was active in ND.

W0ZQ ran a few in MN.

WA4JA was out in TN

Tom, K8YJ was running around in KY in the 'tough' counties there. Then over in WV on many days.

Dave, KW1DX ran a few in MA

WA3QNT ran a few in PA

Doug, WA4UNS, headed out to Avery, NC/Johnson, TN and put it out several times. .

Come the weekend of June 4 – and it got real busy with things to chase. KM9X/KB9MGI headed out to MO to get a LC for Platinum, while N8KIE wandered down through NE into CO to get 5 of the last 6 for MP for KM9X. Ron, KB6UF headed on down from ME to MI. Gene , K5GE was over in Brazoria and Galveston. Terry, WQ7A, headed down to OR for a nice day trip. That was 4 Mobile Diamond mobiles on the road on the same day! Better yet, Dan, KM9X ran a couple after he got his last counties for MP, and ran some on the way home- five mobiles with MP on the road at the same time!

In addition to all the mobiles, the AL QSO Party was in full swing with county hunter KN4Y putting them out along with six or more other mobiles – covered separately. At least 61 Alabama counties were on the air.

Later in the week, Ron, KB6UF, left MI and headed back to LA taking a few days and getting

home 'the county hunter way' with an extra 500 miles of driving.

Barry, N0KV, and pat, N0DXE, headed over to NE and IA, and ran a bunch there. Now up 'north' keeping cool for a month or two at the summer QTH.

Bob, K7TM was out in NV. He got the LC for WBOW for KM1C in Lander, NV. Then seen in ID for more.

Jack, N7ID, left ID and headed to MI, running them on 20M SSB. Later in the month, he headed back home to ID. Ran only on 20M.

Jim, K0ARS, was out on various trips.

Dan, KM9X, took a short trip to Spencer, IN, which was the NEXT to LC for WBOW for N3HOO. Dan is now good for the Mobile Diamond award with his new Master Platinum.

Paul, N7JPF headed over to Fallon, MT, to get the LC WBOW for WB2ABD, Paul, for Second Time CW.

Randy, AA8R, and Patti, W8TAX, headed back from IL to home.

In the WV QSO Party, W8OP was mobile along with K8RYU.

Jack W4QNW was 'on the road' again putting them out. SC, NC, VA and more.

Lloyd, NX4W, was busy on data modes in GA running them, and showed up on 40M SSB, too.

Kerry, W4SIG was out in TN and MS.

Joe, N5UZW was out a few times in AR and MS.

WA2DWP was running counties in NY.

The team of K8OOK/N8IPG was out in CT. Then back in the midwest later in the month. Lots of team counties transmitted.

Mark, W9OP, spotted out mobile.

Greg, KG5RJ, was spotted up in MO and KS.

KC7YE spotted out in WA on CW and SSB.

Jason, KG4VBK spotted out in VA.

Karl, K4YT, was seen running counties in PA and in WV on several trips.

Dan, AA0TT, spotted many days on 20M SSB.

Mike, KA4RRU spotted many days in VA.

Jim N9JF was noted on during several trips to different places.

Pete, N6HH, noted on 30CW through various counties and states.

Lowell, KB0BA, and Sandra, spotted in IN after trip there. Had some 'mobile' problems but will be back shortly.

Ed, K8ZZ, noted in MI in many counties.

Larry, W7FEN noted in some of the 'rarer' CO counties.

Paul, WB2ABD made a trip in NY – ran into antenna problems, but got them fixed.

Don, W0EAR, out mobile in MN for a few

Phil, AB7RW, headed east from WA to the convention.

The team of WY7LL/WY7ML out and about in WY and South Dakota

Jack, WD4OIN, headed to western VA to the rarer ones there, then into WV.

KB6UF ran a few in southern LA and into MS

K0FG was out in AR and MO running on both cw and SSB. Then into TN and over to SC.

AA9ZZ/WD9P took a trip in IN for some counties

Scottie, N4AAT, ran a few in SC on cw.

Don, AE3Z, ran a few in NY

Team AA9JJ/N9QPQ headed from AZ toward the convention the county hunter way – they are working on their MP counties along the way.

2) The Nets have been doing well with N5UZW and others holding down 40M SSB. Scottie is there early as soon as the Caribbean net clears the frequency (about 1300z).

On 20M, Ed, N3HOO , AB7NK, N5MLP, and others are there helping the mobiles put out counties on 20M SSB.

3) At times there seem to be a lack of spotters. Despite half a dozen working the mobiles, few seem willing to spot the mobiles. Not good!

There should be 50 or more county hunters headed to the convention, so get set for some busy county hunter frequencies. Maybe we'll need to find a second 40M SSB frequency to use at peak times?

WA4UNS gets N3HOO WBOW

The trip over to McCreary had the usual county hunter detour. I was looking for a "shorter" route rather than heading north out of Johnson City, TN on I26 to head south on I81 to Knoxville to get I75 north to KY. I went through Johnson City on US321 and paired up with US11E. When US321 and US11E split down at Greeneville, TN, I stayed on US321. I should have taken US11E. So I added about 45 minutes to the out trip... oh well... But as I settled on the C/L (notice how spacious), a thunderstorm developed with some cloud to ground lightning. The QRN was HORRIBLE. Stations that would have been 55 to 59 on a clear day were 33 and 44. I had to abort any attempt at 20M CW due to the storm. It rained the entire trip home with most of the lightning in KY and some in TN. Other than that... it was a great trip... as usual I saw more of this great country of ours. Well worth the trip!!!

Doug WA4UNS

WA4UNS McCreary KY – LC WBOW for N3HOO

AA9JJ/N9QPQ – Transmitted All Counties

The dynamic duo of Frank,, AA9JJ and Kay, N9QPQ headed off to Alaska to finish their quest to to transmit from all 3077 USA counties. They've 'been everywhere' now after hitting the last 4 in AK. Frank now has Five Stars and Master's Gold (making him good for MP), Kay has 4 stars and MG, too.

They were awarded Ran All USA Counties #12 and #13.

Alabama QSO Party

KN4Y mobile

Thanks for all the contacts in the Alabama QSO party. I was able to get credit foe MP in each county I ran. Ran 15 counties and traveled 718 miles and made 691 QSO's. 15-meters was s surprise and even made a QSO on ten, Worked 42 states and 1 Canada, must not have updated their visa. It was hot and the AC never stopped. I did not operate on 80-meters as I had forgot to adjust the antenna to the AlQP frequency, I tried but the tuner could not handle it. There were stations to be worked right up to the last minute, it is true contesters never sleep.Hi. The next mobile activity will be the County Hunters Contest. See You.

N4ZZ mobile

This was our (N4ZZ and AD4EB) 5th QSO party operating together, and the fun continued. We missed not having our trusted driver Melody KI4HVY, who unfortunately had to work the weekend. So Don and I split the driving 50/50.

We followed the same route we took last year, which took us thru 28 counties. Ended up with 140 more QSOs than last year, and an additional 5 multipliers. This year I posted our estimated county line crossing times on QRZ.com, under N4ZZ, and hope this helped some folks better track us during the contest.

We used 2 Hustler antennas on the 2000 Montana van, and had coils and top hats for 20, 40, and 80m. Only operated on 20 and 40m, and ended up with almost the exact same number of QSOs on each. Several times we were asked if we could QSY to 15m, and were sorry we could not. Did not bother putting up the 80m antenna for the last few hours, since 20m was so alive to the very end.

Propagation did not seem as good as last year, and there were some long counties where we ran out of stations to work. At times 20m would be wide open with s9+ signals, and then rather quite spells. As usual, things really picked up during the last 3-4 hours of the contest. Our best rate for an hour was 157.

Thanks to NT2A and W0BH who seemed to be lying in wait for us as soon as we entered new counties or changed bands, and also to these folks that worked us the most:

NT2A(41)

W0BH(39)
N5WR(27)
N6MU(27)
DL3DXX(26)
W3DYA(25)
N8II(24)
W0GXQ(24)
WQ5L(24)
KO1U(23)

Big thanks to KC4HW Jim and the AL Contest Group for making this all possible.
And of course thanks to all who worked us, even just once.

73 - Jim AD4EB and Don N4ZZ

W4AN – fixed – Russell AL

Well as I found out today my beams still have
some issues so was stuck working wires the whole time but not to bad
considering. I was working my Alpha Delta DX-A this morning and made a small
error and cut the wire too short , ummm, way to short for the record and that
means I am going to have to fix it somehow now so I was short my NE/SW antenna
for 20/40/80/160 so I lost out on the use of that one, but was able to move the
80m dipole around to cover down on a lot of the US. Had a few DX stations but
not as strong as normal. The little G1 Blackout we had early on also caused me
a few headaches since I wasn't hearing much of anyone at all. Also the splint
on my left hand made my logging effort a really interesting time - sorry for
those who's calls I butchered - that's what it was as I was logging I would
hit the wrong letters ;) plus this slowed me down A LOT.

K4AB – fixed – AL

What an amazing contest!

I never made it 80 meters. 20 Phone was just a bottomless pit.
The stations just kept calling and calling. I couldn't seem
to pull myself away from 100+ hours to battle the QRN on the low
bands. I tried to get the same runs on 20 CW, but the activity
just wasn't there.

I think I stayed on 14.254 from sunset until the end of the party. 20 meters was open from Maine to Florida to Washington state to Arizona to Michigan to South America. And Europe started to roll-in the last hour. Some real nice juicy DX, too. Simply amazing!

Thanks to all the stations that called-in. This is one I'll never forget!

KU8E – rover

20 meters sounded really good at the beginning from home in GA. I decided it would be fun to go rovering since I didn't get to go out with K4BAI for GQP and FQP this year. So I quickly setup the radio and computer in the car and headed across the river to Alabama (I live about 10 miles from AL). I didn't get started until almost 4 hours into the contest. Being solo I had to waste some time driving to my next operating spot when changing counties. I ended up doing 5 counties which are close to the Columbus area - Russell, Lee, Macon, Bullock and Barbour.

AD8J – rover

Drove down from Asheville, NC and operated ROVER from 4 counties. Used inverted vee antennas and an SB-220 amp. Rig, amp and computer were powered from a 3.5KW generator. This was a single operator event. I didn't even have anyone to help put up and take down antennas. It sure was hot in Alabama and I discovered they have spiders that bite and ticks! Also saw tornado damage and lots of road kill.

KC4HW – mobile with W4EIP

Friday afternoon we worked on getting an operating table made up that Arnie would be comfortable with. It had to accommodate Arnie, the laptop, a regular keyboard and mouse. Collectively we came up with a pretty good design, except with the mouse...as we found every time the blame thing kept flying off the top of the operating position while we were operating.

I had acquired a second antenna the Yaesu ATAS-100. Had just had it on a temporary coax and the antenna was fine. I changed it out for a more permanent installation. Well the new coax was problematic. Anyway, a pretty good T-storm came up, plus it was hotter than "Blue Blazes" so Saturday morning I was up early and replaced the coax on the ATAS100, but it would not move up or

down. So a quick check found that one of the DC connections was intermittent. Always something! That made it useable.

So we got loaded up because we had about 2 hour drive to get to our starting point. K0DEQ had ask if I could work him as I went throught ESCA because he need that county and one more to complete all the counties in Alabama. I agreed, so we call on the coordinate frequency at 9:59AM and he was right there and the signal was pretty good--so I thought that 40m was pretty good. Band conditions were good in the beginning, lousy in the middle and noisy at the end! There were several DX stations that hung in with us for the entire contest. Thanks!

Arnie and I got home about Midnight, about 580 miles all total Saturday. Long ride!

Everything worked fine. We used the ole 1999 Chevrolet Pickup with 275k miles and it was fine. The radio was the IC-706mkII, Hustler antenna with 20m and 40m resonators and the ATAS-100 used it on 20m PH and CW.

KY5R – mobile (SSB)

1st attempt ar this mobile QSO Party operation stuff. Seemed to have the radio and antenna sorted out. I ran 6 (six) counties - Marshall, Cullman, Winston, Marion, Franklin and Lawrence during my 12hr journey. I now know that I need another op to travel with me or some fangled device that can record QSO's while
I am driving. Also PH is a tough nut to crack on 20mtrs. I received many great signal reports but it appears the 20mtr band went into some depression 3hrs into the event which meant my 3rd county. I know how to remedy that.....Mo Power.

SO if and when I attempt this again I will have Mo Power or I will stay at the home QTH. Great to hear the activity plus had a little 15mtr activity which I thank W0BH for the tipoff. Oh also had no air conditioning due to the ole P/U status so the 12 hrs was in sauna like cndx all day 90% humidity and 95 deg temps. Hey this is fun right? Well to say the least it was a good experience and glad I could give Marshall County to some of the County Hunter crowd. TNX fer listening to my puny signal and giving me a few Q's.....Tim, Ky5R

W4NZ mobile multi-op

K4VIG and I were pleased to have Brad WF7T join us for this year's QSO party. Brad had never operated a QSO party from the mobile side before but now I think he's hooked.

Our setup consisted of two Hustler antennas mounted (one forward, one aft) on the roof of a 1994 Chevy Astro van, an Icom 756proIII and a Dell laptop running N1MM Logger software.

Our route covered 24 counties and a total of 614 miles. We had hoped to reach 28 counties but the van overheated with a half hour left and we lost another 30 minutes trying to get the 80m antenna to work. Early on, 20m was the only useful band but even so we were not able to generate the large pileups from Northeast Alabama. Things did pick up around 2000Z when 40m became productive. Both 40 and 20m remained useful right up to the end.

In our travel we had a chance to observe up close some of the devastation caused by the recent tornadoes. Our hearts go out to those who have been hit.

QSO leaders:

N8II(27)
NT2A(26)
W0BH(24)
N6MU(20)
W7FB(20)

special mention: DL3DXX with 18 QSO's

There were many stations with QSO counts in the teens. Thank you all for riding along with us. Thanks to the Alabama Contest Group for all the hard work in organizing/sponsoring this party and again allowing us to come and play in your yard.

KY4F Limestone -fixed

First, thanks for the Q's! Couldn't get
much going really. From time to time things would really heat up, then die out for long periods. Guess that's to be expected with my limited antennas. Despite all that, I did manage to improve on last years score, so absolutely no reason to complain.

KJ4FDV – Blount – fixed

Conditions especially on the high bands were excellent here! Stations from all corners of the US and even some DX rolling in on 15. Made a 20 QSO run on 15M but things kind of dried up. I threw in the towel until dark and then made some good runs on 80 and 40, 40 by far the best. Some of the biggest pileups I've ever been on the receiving end of, and they didn't take long at all to start. But they still eventually tapped out just like the high bands. In hindsight, I'd probably try SSB. I'm heavily prejudiced towards CW in contests, but the activity just didn't seem to be there. The pileups were fun while they lasted though! Thanks for all the QSOs everyone.

W3DYA (TX)

Very good contest, and 20, 15, and 10M had good signals to East Texas for a long time. Not much activity on 15 or 10M, but all signals were mostly 599 and could here a lot of non-AL stations.

I needed six counties and got five (3rd time so no big deal!) Bibb was spotted, but I couldn't hear the station. Don, N4ZZ, did a fine job although he managed to avoid Bibb hi! But he made up for it by getting to Cullman as planned!

Thanks to AD8J, KN4Y, and N4ZZ for activating those counties I really needed.

73, Norm, W3DYA

N5WR – OK

Bands seemed in good shape this year, heard mobiles loud on 20 even into the last hour of the contest. 10m and 15m were both open to AL as well, but only mobile worked on 15 was KN4Y. W4NZ and N4ZZ both always loud and easy to find. Most mobile QSOs: N4ZZ (27), W4NZ (13), KC4HW (9), KN4Y (6).

NV4B – Franklin – fixed

Thanks to all for another great AQP. It was great to meet old friends on the

air and make new ones yesterday. The great thing about QSO parties is the relaxed atmosphere. I really enjoyed the brief chats I had with several folks.

Band conditions were all over the road -- 20m started out in rare form with practically no skip zone. No doubt the strong sporadic-E on the higher bands was helping make life interesting on 20m. I started out on 20m phone at a good rate and didn't migrate higher until the opening had slacked off quite a bit and never could get a rate on 15 or 10.

Then, somebody flipped the switch around 2000Z. 20 all but died, so I spent some time on 40 before coming back and making a nice string of CW contacts on 20. After that rate dried up, I never came back to 20, which apparently, from looking at K4AB's comments on his AQP-record-setting run, was a mistake.

Like K4AB, I noticed that my phone rates were quite a bit higher than CW this year, which is normally not the case in the AQP. CW rates were still decent, but not quite what they were in years past. My best rate of the contest was on 40m phone at 2300Z.

One thing that struck me this year was the number of new hams, as indicated by callsign prefixes, who participated and did a FANTASTIC job of operating! This was extremely encouraging. At least one of the stations that was operating CW -- from a scarce state at that -- was a Technician-class operator licensed post code-test!

Thanks as always to KC4HW and the Alabama Contest Group for making the AQP a can't-miss, premier state QSO party. It never fails to amaze me how far the contest has come since I sponsored it in the late 90's, a period of AQP history best forgotten!

W0BH – KS

There were some notable mobiles missing from the fray this year, and my CW total was down almost 50 from 2010. On the bright side, both PH Qs and PH mults were up (perhaps because I had more time in between chasing mobiles).

The bands really cooperated for me from Kansas. I think a 20m path from AL to KS was possible the entire time with a brief one hour stretch in the afternoon when it went long (and I still managed an ESP Q). My last Q was with N4ZZ/m on 20m with 2 minutes to go (sorry about the dupe) with Don pounding in at s9+10.

There was a several hour stretch on Saturday afternoon when both 15 and 10 were really loud from AL. We've been so used to not having those bands, that a number of mobiles must not have had antennas ready, so I moved a number of fixed stations instead. In fact, from 1929Z to 1942Z, I put AL stations in the CW log on 10, 15, 20, and 40m! At 2221Z, I connected with NE4M on 40m SSB, and by 2224Z, we added 20SSB, 15SSB, and 10SSB as well. Really fun! I later worked NE4M on 80CW which gave us 9 total Qs and 5 bands.

Besides NE4M, three other stations - W4AN, AB9CA/4 and K4SAV were in the log on 5 bands, missing only 160m. I spent a total of about 20 minutes CQing on 160 CW, but never heard anyone. Later in the evening, 80 also got really noisy here in Kansas, so most of the late action was on 40.

Overall, I worked 64/67 counties .. missing Coffee, Crenshaw, and Talladega in mixed mode. Escambia and Tallapoosa were worked only on SSB. N4AST/m was scheduled through Talladega twice, so I must have missed him both times. Not sure if I missed KC4HW/m in Coffee or he just ran out of time at the end. I was hearing Jim really well most of the day and he ran through many counties I needed (including Geneva right at the end). N3FU/m was the only mobile scheduled through Crenshaw. I worked him in his first county (Houston), then never heard him again, so I hope nothing serious happened.

The mobiles did a terrific job as always. Here's the mobile scoreboard from Kansas:

39 N4ZZ/m - hands down, the loudest signal into Kansas award
24 W4NZ/m - easy to find
17 KC0HW/m - also very easy to find
15 KN4Y/m
12 W4AQP/m
08 AD8J/r - great rover signal (a KW will do that!)
07 KU8E/m
05 N4AST/m
04 KY5R/m - very loud SSB, but couldn't find you after 2121Z
01 N3FU/m

The fixed stations were everywhere and always!

9 NE4M
6 W4AN
5 AB9CA/4 K4ACG K4HAL K4SAV

Special mention: K4AB (4) was really, really loud.

I worked 71 unique calls and only 3 dupes this year, with 68% of my contacts coming from mobiles and one rover.

Dan, KM9X achieves Master Platinum

Dan, KM9X, has received Master Platinum Award #15. There are two parts to the Master Platinum Award – one working someone in/from each of the US counties with MG, and the second part is transmitting from 500 counties after receiving the MG award, and making at least one contact from that county with a MG holder.

The Master Platinum Award is designed to encourage mobile operation and reward those who put out the counties for every one else. Transmitting from 500 counties means you'll put out roughly 1/6th of all the US counties. No repeats are allowed in the 500 tally, either!

Dan is very busy helping running/assisting the net on 7188 (he was instrumental in the move from 7238 and the 'rotten apple problem' to the new home on 7185/7188), and makes frequent trips down to KY to run those rare counties there.

Now, for Mobile Diamond, he'll have to repeat the 500 counties all over again with even tougher requirements.

Dan posted on the K3IMC website:

a big thanks to all those that helped on the way to MP #15

"I would like to thank all the mobiles good for Master Platinum in the past 9 years, especially N4CD. I have 551 counties for MP from him alone. Also, the only reason I started logging(on the old Excel spread sheets, and still use them today as a logger backup) was that Bob explained that you can start working on Platinum from day one.. nobody knew that. A big thanks to all the net controls, N5UZW- always there to help on 40 ,as is Scottie, and Jim when I could hear him years ago on 20.. unless I am way west. And of course, N8KIE who went hundreds of miles and days out of his way to finish my last 5 for MP. No way to thank you all, except, run some more counties! "

On the Road with N4CD – I

Hamcom comes to North Texas once a year, and the second weekend in June it arrived. It's real convenient – 8 miles away. On Friday, I headed over there for the outdoor flea market early – things start at daybreak - arriving before 7am. This was typical TX weather but a bit hotter than normal with high in the upper 90s, so typically things start early. I wandered around the outdoor flea market for an hour or so, and bought a few little goodies like two grounding straps for a buck each, a book for 6 bucks, and similar. I yakked with a bunch of the locals – some of them fellow ham club members, or others who worked with me in the past.

There's no county hunter meeting at the convention, but you tend to run into a few of the local county hunters there. Over the weekend, I bumped into Charlie, W0RRY and XYL Mary, Rick, AI5P, from Albuquerque, NM, and Van, WC5D. Jim, K9JF and XYL were there – Jim represents the ARRL and there were 30-40 ARRL folks down here at the National Event. You might have even caught W1AW/5 operating from Collin County.

Charlie and Mary have bought a house now in Denton, TX. Maybe he'll be back on the air again soon.

After an hour of flea market, I headed inside at 8am for the inside flea market – a bit smaller than usual because of the convention. Many of the major vendors were there - from WB0W to about 30 tables for the ARRL, to key/paddle folks to the W5YI group. Typically the Hamcom attracts over 7000 people each year.

They have five or six simultaneous programs on Friday afternoon and Saturday similar to Dayton, but with more emphasis on emergency preparedness, storm spotting, plus a good variety of DX programs, scouting, etc.

For the DX ers, there's a big DX Dinner Bash put on by the Lone Star DX Club Saturday night.

Here is one of the unusual things you don't see at most hamfests. This is a 1910 Boy Scout handbook wireless station, consisting of a spark coil transmitter and a state of the art galena crystal receiver. It was on display a the Boy Scout booth.

Spark Gap Transmitter

Spark Era Receiver

1910 was the first year a Boy Scout Handbook was ever printed. The first Radio Merit badge was offered in 1923!

You can read the entire issue of the 1910 Boy Scout Handbook, including Chapter 4, which will tell you how to build your own state of the art wireless! Check it out at:

http://www.gutenberg.org/files/29558/29558-h/29558-h.htm

You'll see they were big into 'woodcraft' and there is the usual section on knots and camping skills. Lots more details on the set including everything you will need to whip up one of your own!

From the article, here's how ot make your receiver (check out the article for diagrams)

The tuning coil is very simple in construction. A cardboard tube, about three inches in diameter,

is mounted between two square heads. This tube is wound with No. 24 insulated copper wire and very well shellaced to avoid loosening of the wire.

Two pieces of one quarter inch square brass rod, to be fastened between the heads, are secured, and a slider, as shown in drawing, is made. The rods are fastened on the heads and the insulation in the path of the slides is then well scraped off. Binding posts are then fastened to rods and coil ends.

The detector, although the most important of the instruments, is perhaps the simplest. It is constructed of a hardwood base with a small brass plate fastened on by means of a binding post. On the other end of the base is fastened a double binding post which holds a brass spring, as in the drawing. On the end of this spring is fastened a copper point made by winding a few inches of No. 36 or 40 wire on it and allowing about three sixteenths of an inch to project. This completes the detector but, for use in this instrument, lead sulphide or Galena crystals must be secured.

The condenser is made of two pieces of tin-foil, four by ten, and three pieces of waxed paper a little larger than the foil. A piece of wire is twisted into the end of each piece of foil, and then one sheet of foil is laid on a sheet of paper. This is then covered by another sheet of paper upon which is laid the second sheet of foil. On top of this is laid the third sheet of paper and the whole is folded into a convenient bundle. The sheets of foil must be well insulated from each other and the wires must project from the condenser.

The ground connection is made by soldering a wire to a cold water pipe. In the case of a portable set the ground may be made by driving a metal rod into the ground or sinking metal netting into a body of water.

The telephone receivers cannot well be made and must therefore be bought. The type of phones used will therefore depend entirely on the builder's purse.

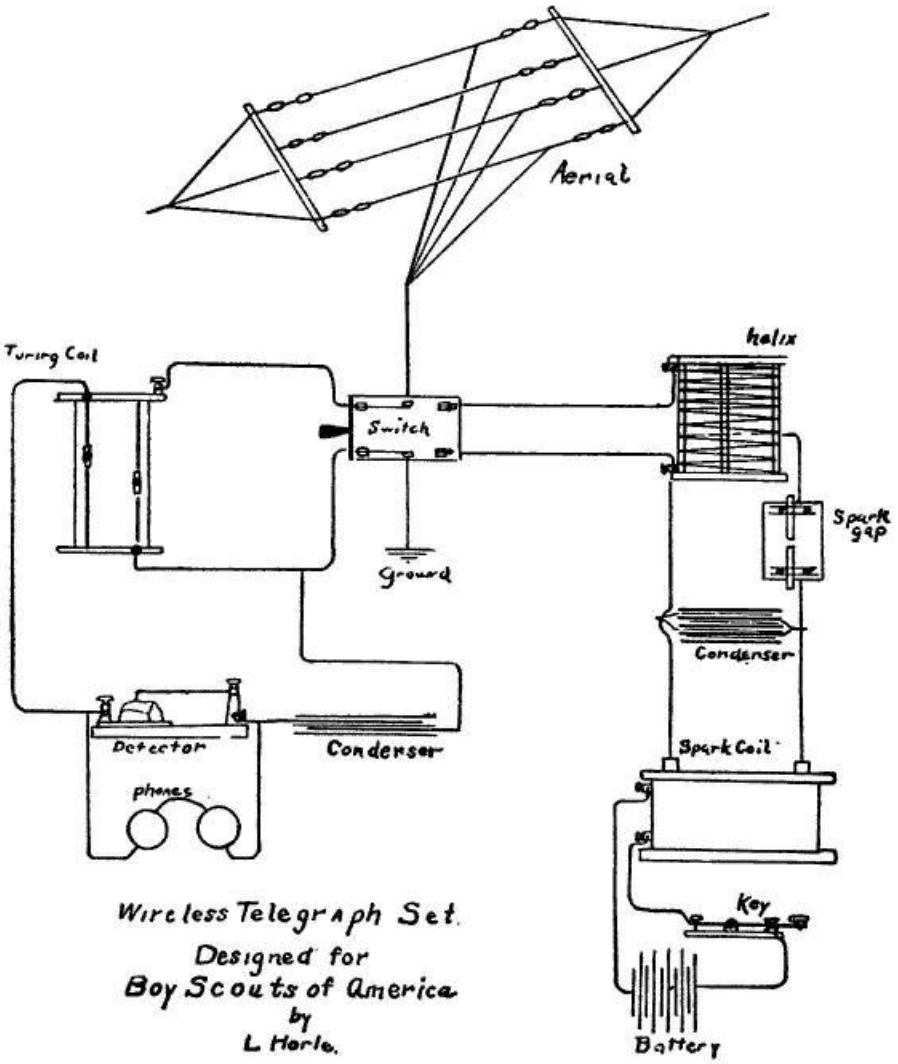
The same aerial and ground are used for sending as were used for receiving, and for the experimenter, it will be far cheaper to buy a spark coil for his sending set than to attempt to make one.

For a field set there will be very little need of a sending helix, as close tuning will be hardly possible; but for the stationary set this is very useful.

The helix is made by building a drum with square heads fastened together by six or eight uprights, arranged on the circumference of a circle. On this then are wound ten or twelve turns of No. 10 or 12, brass or copper wire. Binding posts are fastened to the ends of the wire and variable contact made on the turns by means of metal spring clips.

The spark gap is made of a hard-wood base with two uprights to which are fastened strips of brass. Under these strips are {214} placed two pieces of battery zincs so as to make the gap between their ends variable. Binding posts are fastened to the strips for contact.

The sending condenser is the same as the receiving in construction, but different in material. The dielectric is glass while the conducting surfaces are tin-foil, arranged in a pile of alternate sheets of glass and foil. The foil is shaped as in drawing and alternate sheets have their lugs projecting on opposite sides, all lugs on same side being connected together. For a one-inch coil but a few of these plates are needed, but for higher power a greater number are necessary.



With a one inch coil, you'd be happy to get five miles. Ten miles on a real good day! If you attend a national Boy Scout event, you might see 'Sparky' on display. No, they didn't fire it up for all to see work!

County Hunting/State QSO Parties

Chuck, NO5W, presented his GPS enabled logging program and talked about the Texas state QSO party. He's a tireless promoter of the TX QSO Party as well as an active mobile. Each year he operates in 3 or 4 other state QSO Parties as a mobile, and chases mobiles in the other parties, too.

Chuck, NO5W
Presents the Mobile Contesting Session

He noted that he has made upgrades to the logging program, which was primarily designed for individual QSO parties, to the 'cross country' mode which also fits with county hunting. The program for state QSO parties uses abbreviations (for the particular party) when sending the exchange.

Sterling, WA7JHQ, and Art, N4PJ, worked with him. Now, the program in the cross country mode, handles the following:

1 - It will allow 22, 229, 339, etc type signal reports. You can log 22s on SSB, or in cw, it will send what you want. In contests, everyone is 599 (usually).

2 - It will acknowledge the report you received – as the county hunters do , ie , on CW, "UR 599 599K" received report followed by R599 QRZ to acknowledge what you got

3 - It will send the entire county name – as CHN de N4CD/Collin TX

4 – you can cross state boundaries and it keeps on automatically tracking your county.

Art, N4PJ, will be using it on his cross country trip coming up.

I attended Chuck's TX QSO party session - he gave it twice, once on Friday and once on Saturday. There were 20 or so there on Saturday.

Chuck, NO5W, also sets up a big booth to promote the TX QSO party and get activity. Over 300 logs were received last year and over 80,000 contacts made, In 2010, 252 of the 254 counties were on the air, and during the 'busiest hour' there were 114 TX counties on the air at the same time!

Hamcom and Youth Activities

Everyone always notes 'we need more kids in ham radio'. The ham population is getting 'gray'. So what are folks doing about it?

Hamcom runs a day long session for scouts to get their merit badges. The local groups from around the state run programs, but every year about 100 scouts come by for the all day session which earns them the radio/electronics merit badge.

Of course, there is always VE testing for ham licenses and upgrades.

In addition, the ARRL has been holding kit building sessions at the conventions it puts on. They did it in Dayton and here at Hamcom (and likely elsewhere) .. One reason is to get kids interested in building things, whether hams or not. . Another is to get older folks back into building things and stimulate more interest in 'do it yourself' ham radio rather than 'appliance operating'. They had quite a few participating with about 10 different workstations.

One youngster, the son of a ham, got so into building his receiver (which he started on Friday) that he went home that night, stayed up to 1 am cramming for his Technician test, and came back on Saturday to both take his Tech test, and finish building the Ten-Tec receiver. The great part of the story is that he passed the Tech test, and the receiver worked fine after he built it. A double header and that kid was on Cloud Nine. So was his dad.

That's the type of things that we need to see, and the ARRL should be highly commended for the kit building promotion (along with all the other youth and school programs it has). Without new blood, ham radio will fade away. That's where part of your ARRL annual dues go, and it is well worth supporting.

You could build one of two kits – a code practice oscillator, or a Ten Tec regenerative receiver. The first took maybe 2 hours if you were a total newbie starting out, while the receiver would take about 3 hours or so. They had some total newbies who had never handled a soldering iron or attempted to build a kit were working on them. The ARRL had set ups with tools, Weller soldering stations, and two or three folks at all times to assist if needed. Most chose to build the more complicated receiver with more parts. More later.

What N4CD brought home

After another couple hours double checking things inside, I made a quick sweep of the flea market outside (97 deg and baking sun) and then headed home with a few goodies. I bought a 4 inch mobile speaker ($1) , two Radio Shack amplified speakers ($5) , another brand new ARRL Digital Handbook(The guy won it as a door prize) in a box of stuff for $5, and some 22uF 350V electrolytic caps. Nothing big and nothing heavy.

There were the usual Hallicrafters and Collins rigs for sale, some military gear, tower and antenna parts, misc parts, test equipment, antenna analyzers, wattmeters, SWR meters, HF transceivers, power amps, VHF/UHF handhelds, surplus commercial equipment,and the usual hamfest assortment of things. Nothing unusual noted.

Then I drove the 8 miles home late in the afternoon and turned on the radio to chase KB6UF in a few more counties for Mobile Diamond. Dang, I missed about 15 in IL he ran during the hamfest, but that's the way the cookie crumbled. I had fun at the hamfest and it didn't take a whole lot of gas to get there.

Building a Ten Tec Receiver

By now, you should know that N4CD has been collecting some tube type regenerative receivers lately if you regularly read the newsletter. So, I was tempted to build the little solid state receiver in the kit building area of the convention. Heck....often you kick yourself for not doing things you like later, rather than not doing them and wish you had done something. So I forked over $45 for the kit, which with ARRL includes two batteries, a pair of headphones, the needed knobs, 40 feet of antenna wire (and TX state tax). I'd join in on the fun of building a solid state regen.

Here's the blurb from the Ten-Tec Web site on the kit:

Model 1054 4 band regenerative shortwave receiver kit. Here it is: PROOF that the classic “first receiver” project need not be more expensive today than our favorite 1950’s kits. In fact, this great little receiver beats the pants off those 3-tube radios with the big plug-in coils. Excellent for clubs, classes and family activities.

Band coverage: 49 meter SWL band, 40 meter ham band, 31 meter SWL band, plus 12-15 MHz tuning for daytime shortwave listening, 20 meter ham band and all those other shortwave sounds. You can enjoy the basic kit just by hooking up 9 to 12 volts DC, setting up a modest wire antenna (10 feet or more of hookup wire) and plugging in your own stereo headphones

(1/8” plug). Features convenient push- button band switching, on-off switch, “on” LED, tuning, volume, and regeneration control. Case, knobs, and speaker not included. Building skill level: Beginner. No previous kit building experience needed. Must be able to solder, read instructions, and use small hand tools. $39

Specifications:

4 band segments: 5.9-6.4 (49 meters shortwave), 6.9-7.4 MHz (40 meters ham radio), 8.5-10.2 (30 meters ham radio, 31 meters shortwave, WWV@10 MHz), 11.5-16.5 MHz (21 and 19 meters shortwave, 20 meters ham radio).

Requires 2x 9 volt batteries for power

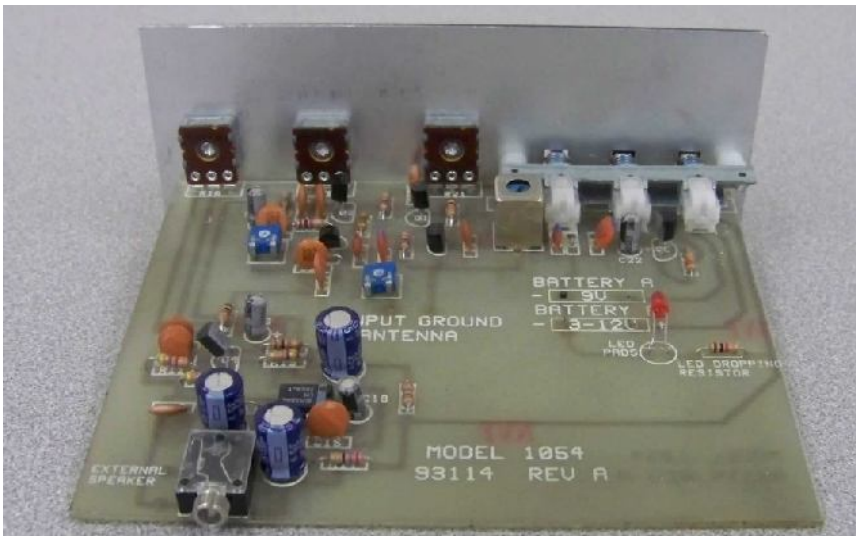
Regenerative design, RF amp, detector/oscillator, audio preamp, IC audio amp.

Push button bandswitching

Audio output for headphones or speaker

- - - -

Wow..those parts these days are getting smaller and smaller and those color bands on those small resistors are getting harder and harder to read. They had a nice magnifying glass which helped a bit, and also a digital VOM, which I used to check every resistor since the ole eyeballs seem to be getting a bit hard in distinguishing some colors. No sense in making “misteaks. “



Ten Tec Receiver Assembled

It took about 3 hours to put all the parts in and solder them. A few others finished in 2 hours. The Weller soldering station (temperature controlled soldering iron) worked great. I need to get one of those (About $100). There's about 50 parts in the kit including one IC. No coils or toroids to wind. About 1/3rd the way through, you test the audio section, which you build first. Then the next 'smoke test' occurs when everything is finished. Wow...I hooked up the batteries, and it 'squealed' immediately. Success. I turned down the regen control, and the ARRL guy quickly checked it on all 4 bands with a signal generator to make sure it was working and to tweak the only coil in it for the right range. You have two internal pots to set and you are done. Ten Tec sells the kit for $39 on their website, but it does not include batteries, headset, or antenna wire.

Ten Tec Front Panel

Building the kit

Bob WB1CGM – from ARRL HQ
checking out construction in the kit building area

Wow...must be karma. Did you see the July issue of QST? Big article about the ARRL Kit building program, with a lot on this particular receiver. Check it out! Page 61.

Sunspot Update

Some unusual solar readings, including fading sunspots and weakening magnetic activity near the poles, could be indications that our sun is preparing to be less active in the coming years.

The results of three separate studies seem to show that even as the current sunspot cycle swells toward the solar maximum, the sun could be heading into a more-dormant period, with activity during the next 11-year sunspot cycle greatly reduced or even eliminated.

Currently, the sun is in the midst of the period designated as Cycle 24 and is ramping up toward the cycle's period of maximum activity. However, the recent findings indicate that the activity in the next 11-year solar cycle, Cycle 25, could be greatly reduced. In fact, some scientists are questioning whether this drop in activity could lead to a second Maunder Minimum, which was a 70-year period from 1645 to 1715 when the sun showed virtually no sunspots.

…

"We expected to see the start of the zonal flow for Cycle 25 by now, but we see no sign of it," Hill said. "This indicates that the start of Cycle 25 may be delayed to 2021 or 2022, or may not happen at all."

…

If the models prove accurate and the trends continue, the implications could be far-reaching.

“If we are right, this could be the last solar maximum we’ll see for a few decades,” Hill said. “That would affect everything from space exploration to Earth’s climate.”

MAJOR DROP IN SOLAR ACTIVITY PREDICTED

A missing jet stream, fading spots, and slower activity near the poles say that our Sun is heading for a rest period even as it is acting up for the first time in years, according to scientists at the National Solar Observatory (NSO) and the Air Force Research Laboratory (AFRL).

As the current sunspot cycle, Cycle 24, begins to ramp up toward maximum, independent studies of the solar interior, visible surface, and the corona indicate that the next 11-year solar sunspot cycle, Cycle 25, will be greatly reduced or may not happen at all.

The results were announced at the annual meeting of the Solar Physics Division of the American Astronomical Society, which is being held this week at New Mexico State University in Las Cruces:

http://astronomy.nmsu.edu/SPD2011/

“This is highly unusual and unexpected,” Dr. Frank Hill, associate director of the NSO’s Solar Synoptic Network, said of the results. “But the fact that three completely different views of the Sun point in the same direction is a powerful indicator that the sunspot cycle may be going into hibernation.”

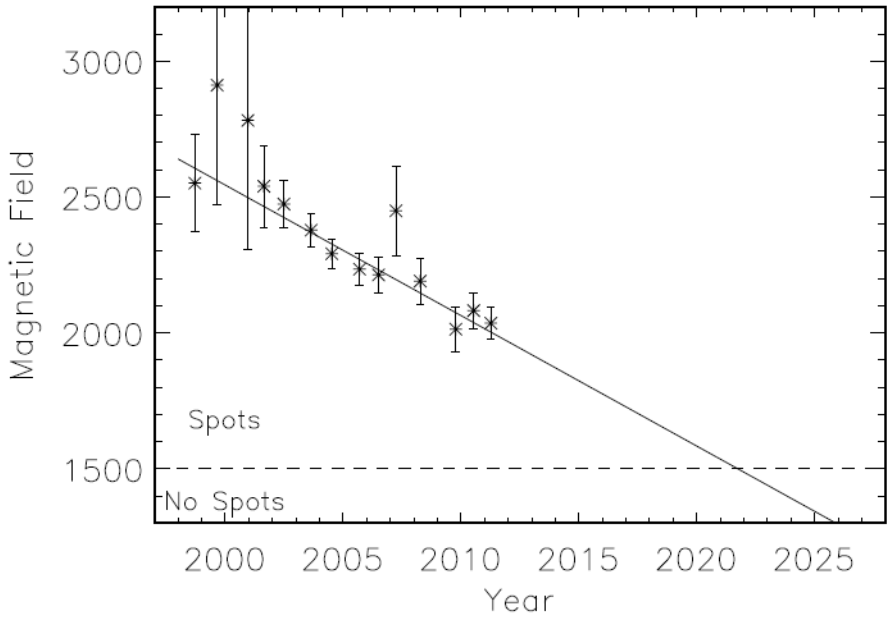
Spot numbers and other solar activity rise and fall about every 11 years, which is half of the Sun’s 22-year magnetic interval since the Sun’s magnetic poles reverse with each cycle. An immediate question is whether this slowdown presages a second Maunder Minimum, a 70-year period with virtually no sunspots during 1645-1715.

Hill is the lead author on one of three papers on these results being presented this week. Using data from the Global Oscillation Network Group (GONG) of six observing stations around the world, the team translates surface pulsations caused by sound reverberating through the Sun into models of the internal structure. One of their discoveries is an east-west zonal wind flow inside the Sun, called the torsional oscillation, which starts at mid-latitudes and migrates towards the equator. The latitude of this wind stream matches the new spot formation in each cycle, and successfully predicted the late onset of the current Cycle 24.

“We expected to see the start of the zonal flow for Cycle 25 by now,” Hill explained, “but we see no sign of it. This indicates that the start of Cycle 25 may be delayed to 2021 or 2022, or may not happen at all.”

In the second paper, Matt Penn and William Livingston see a long-term weakening trend in the strength of sunspots, and predict that by Cycle 25 magnetic fields erupting on the Sun will be so weak that few if any sunspots will be formed. Spots are formed when intense magnetic flux

tubes erupt from the interior and keep cooled gas from circulating back to the interior. For typical sunspots this magnetism has a strength of 2,500 to 3,500 gauss (Earth's magnetic field is less than 1 gauss at the surface); the field must reach at least 1,500 gauss to form a dark spot.



Using more than 13 years of sunspot data collected at the McMath-Pierce Telescope at Kitt Peak in Arizona, Penn and Livingston observed that the average field strength declined about 50 gauss per year during Cycle 23 and now in Cycle 24. They also observed that spot temperatures have risen exactly as expected for such changes in the magnetic field. If the trend continues, the field strength will drop below the 1,500 gauss threshold and spots will largely disappear as the magnetic field is no longer strong enough to overcome convective forces on the solar surface.

Moving outward, Richard Altrock, manager of the Air Force's coronal research program at NSO's Sunspot, NM, facilities has observed a slowing of the "rush to the poles," the rapid poleward march of magnetic activity observed in the Sun's faint corona. Altrock used four decades of observations with NSO's 40-cm (16-inch) coronagraphic telescope at Sunspot.

"A key thing to understand is that those wonderful, delicate coronal features are actually powerful, robust magnetic structures rooted in the interior of the Sun," Altrock explained. "Changes we see in the corona reflect changes deep inside the Sun."

Altrock used a photometer to map iron heated to 2 million degrees C (3.6 million F). Stripped of half of its electrons, it is easily concentrated by magnetism rising from the Sun. In a well-known pattern, new solar activity emerges first at about 70 degrees latitude at the start of a

cycle, then towards the equator as the cycle ages. At the same time, the new magnetic fields push remnants of the older cycle as far as 85 degrees poleward.

“In cycles 21 through 23, solar maximum occurred when this rush appeared at an average latitude of 76 degrees,” Altrock said. “Cycle 24 started out late and slow and may not be strong enough to create a rush to the poles, indicating we’ll see a very weak solar maximum in 2013, if at all. If the rush to the poles fails to complete, this creates a tremendous dilemma for the theorists, as it would mean that Cycle 23’s magnetic field will not completely disappear from the polar regions (the rush to the poles accomplishes this feat). No one knows what the Sun will do in that case.”

All three of these lines of research to point to the familiar sunspot cycle shutting down for a while.

“If we are right,” Hill concluded, “this could be the last solar maximum we’ll see for a few decades. That would affect everything from space exploration to Earth’s climate.”

Paul, N7JPF Gets LC WBOW for WB2ABD On CW!

June 15 was a really fun day for me, getting to finally give out a last county for WBOW. I have given out next-to-last a few times and looked forward to the day when I might be in the right spot at the right moment. Living way out west presents this opportunity occasionally. You need to understand that I am a real rookie at CW, but honing the skills daily.

My first attempt at CW mobile (straight key) was in Oct. 2010 giving out Klickitat, WA for Pete, N4AKP. I was really nervous! Since that time, I have started working on the coordination skills of the paddle and comfortably sitting at my operating desk at home, never thinking that I would attempt it in the front seat of my car! When I posted my June, 2011 trip, Bob, K7TM, encouraged me to try to give out a few counties in Montana, especially the ones he needed for LC-CW. With his encouragement and patience, I was able to get the old paddle and keyer hooked up in the van and ready for the trip.

After working Bob CW in four counties, and with my confidence growing, I called Paul, WB2ABD while I was still in the mid-west. I introduced myself to him on the phone, never having worked him before. His first comment was that of surprise, thinking that I was only a SSB operator. We made a sked for my return trip, and thankfully the conditions were favorable on June 15. If they hadn’t been good, Terry, WQ7A, was going to be the backup plan for when he went out for the national in Duluth.

Fallon County, MT is 1620 sq. miles, much larger than the state of Rhode Island. It has a total population of only 2890 people. The largest city is Baker; population, 1741. It has only one other “town”, Plevna. Needless to say, the county is very sparsely populated and probably rarely visited. I think their major crop is sage.

Leaving I-94 and driving south to Fallon County isn’t difficult, but it is one of those counties you drive to, not through. Darlene and I drove about 10 minutes into the county from Wibaux before finding a nice hilltop and unpaved country road where I could park and point to the east. I clipped a 3” piece of wire onto my 20m hamstick, and, as prearranged with Paul, started looking for a free frequency around 14.050. After a few calls he found me at 14.052 and the contact was made at 1641z. I was thrilled, probably as much as he was. He has waited so long to finish up, and I was able to do it on my first trip with the keyer!

When I was finally able to find a location where I had cell coverage, I called and visited with him on the telephone, telling him I was going to go back and get a picture of the county line.

A special thanks to Terry, WQ7A for encouraging me to get on CW so I will be able to get to USACA sooner, (I hope), and to Bob, K7TM for really helping me to get that keyer off my desk and into the car, and to Paul, WB2ABD for slowing down enough for me to get a good contact with him. He was able to understand what I was sending even with my sticky left paddle, and his antenna pointed the wrong direction! We both had a good laugh about that. Thanks Paul, for the honor of being last.

I feel more confident each day with my new CW skills and hope I will be able to help others in

the future. I have a whole new appreciation for the CW-mobile operators. You guys are fantastic!

Working on Master Platinum/Mobile Diamond

As you work your way up the county hunting award ladder, you find that the top awards become more challenging. For example, to get to Master Platinum, you have to work someone with Masters Gold in all counties, or work someone with MG from a county to get credit for it. In addition, you have to transmit from 500 different counties and work a Master Gold holder.

For those just starting out, they think those are easy challenges. At the beginning, there weren't that many MG holders to work. As more and more county hunters received the MG award, it gets easier as the likelihood of someone being around to give you the county or transmit credit increases greatly. Still, many will find that they go through some counties and there may be no one around with MG to give the credit for the county. So it goes.

The transmit credits for Mobile Diamond are even tougher. Part of the reason for that is that people got frustrated by single band mobiles who would only operate on one band, either 20 or 40M SSB. That mean that folks not within skip range would have no chance for a contact. If the mobile stated on 20M, anyone closer than 600 miles, unless they had a super station, were unlikely to make a successful QSO. For 40M only mobiles, if you were more than 500 miles away, once again, the probability of a successful QSO would approach zero. The rules for Mobile Diamond require that you make at least 3 contacts on 2 different bands to get credit for the county.

Dan, KM9X, who just received his Master Platinum, commented on this on the K3IMC forum:

“Checked the awards list this morning and I see 49 Master Gold holders now, so looks like a bunch working on MP now! Good to see. Guess I didn't keep up with who had got the MG lately. SO Mobile Diamond is ahead, my not be able to get it before I croak, but will work on it.

I am having some trouble running the 500 required counties on two bands and a MP holder. I missed about 10 in one day, because I got one, two on a band, couldn't drum up the needed THREE contacts, or no MP. I missed a couple counties Monday when I went to KY. I think I might have 16 ran counties so far and missed more than that.

I think to run those counties for Mobile Diamond, I can't run before about 9:30 am because 20 m isn't open yet and can't get the other band in. And after about noon, no one is on 40m and

both bands go to crap.. EQUALS... A CHALLENGE! whoever thought this thing up was working overtime!

Dan KM9X “

Bob, N8KIE, also working on his Mobile Diamond, commented:

“In the trip west, got a MP in each but missed Xmit (credit) in about 40 of them”

Bob was planning on using 17M, which works well from out west, but his antenna system developed problems and his dashboard lights lit up, so his 17M operation did not happen. Gene, K5GE, has also used 17M SSB successfully when 40m has gone 'dead' in the middle of the day.

If you use CW, you have the option of 30M, which opens in between 40M and 20M, so you can start a bit earlier and hopefully get your 3 contacts per band. Ron, KB6UF, has also successfully used 75/80M early in the mornings or late in the evenings to get his required number of QSOs. In the past year since MD began, using mostly CW, N4CD has hit over 525 different counties and fortunately managed the needed band contacts in over 500 of them now. Joe, N5UZW or Scottie, N4AAT, is usually around on 40M SSB as long as the band is working. (it's been horrible in June, though).

Now, just a reminder – everyone can be logging contacts for the Master Platinum Award. Due to the way the rules were written, if you work a MG holder after the start date in 2003, it will count toward your MP award. MARAC Logger will automatically and correctly log it. There are a few folks out there who have finished working all the counties for MP, and now they need to finish the transmit part (which cannot be started until the mobile has earned MG) to finish up MP.

AMECO

The ancient History

Back in the 1950s, AMECO – American Electronics Company offered just a handful of

products. It had a tube Code Practice Oscillator, a 15W input novice type transmitter, the AC-1, Low Pass and High Pass filters for TVI control, and of course, the famous code and theory books that many new hams studied from.

If you want to see one of their typical ads in the 50s , check out

http://www.n4mw.com/amecoad.pdf
This is the famous AC-1 transmitter. There is a 'cult' about this unit – with likely at least 100 fanatics collecting and restoring them. They sell for well over $100 on Ebay, with rusty klunkers going for that much as well.

http://www.qsl.net/wb1gfh/ameco.html

How crazy are people about this unit? Here's a pic from a recent Ebay action. An original, in the box unit, never built – hold your hat – sold for $587!

Ameco made two transmiters – one of HF and one for VHF.

Ameco TX – 86 80-10 transmitter

It needs an external power supply – runs a single tube –90W input with 'high level modulation – not plate modulation. The output tube was a 6146B.

Ameco TX-62

Covered 50-51 and 144-148 with 75W input. Required crystal or external VFO. The power supply was built in.

Ad for it at:

http://www.n4mw.com/TX62.pdf

This is the matching VFO – it also had a calibrated scale for 220 MHz operation as well. The output was 24-26 MHz. It had a built in power supply.

CN50 CN 144 CN 220 converters

The Ameco converters used the 'new' Nuvistor tubes. These were very small tubes about 3/4 inch high designed for UHF use – they were the most sensitive tubes of the day.

Here is the one receiver that Ameco sold – the R5 (and a later version R5-A)

This covered 3 through 54 MHz. You could run it off batteries as it was solid state.

Nuvistor HF Pre-AMP Model PCL (1968)
There were later versions as well

TX-62

They also made a 6M filter they called the “Maverick” - 5 section bandpass filter which would handle 400w. The filter division of Ameco wound up with Aerotron in NC. (Aerotron makes two way radio equipment).

http://www.amecocorp.com/

OCM-2K CPO

HP-75T High Pass Filter

PT-3 Transceiver Pre-amp

Low Pass Filter

Tuneable Pre-Amp/Active Antenna

1500W Dummy Load

Code Courses

Sunspots II

"Historically, the solar minimum is defined by sunspot number," says space weather scientist Bruce Tsurutani at NASA's Jet Propulsion Laboratory in Pasadena, Calif., who is first author on the paper. "Based on that, 2008 was identified as the period of solar minimum. But the

geomagnetic effects on Earth reached their minimum quite some time later, in 2009. So we decided to look at what caused the geomagnetic minimum."

Geomagnetic effects basically amount to any magnetic changes on Earth due to the sun, and they're measured by magnetometer readings on the surface of the Earth. Such effects are usually harmless, with the only obvious sign of their presence being the appearance of auroras near the poles. However, in extreme cases, they can cause power grid failures on Earth or induce dangerous currents in long pipelines, so it is valuable to know how the geomagnetic effects vary with the sun.

Three things help determine how much energy from the sun is transferred to Earth's magnetosphere from the solar wind: the speed of the solar wind, the strength of the magnetic field outside Earth's bounds (known as the interplanetary magnetic field) and which direction it is pointing, since a large southward component is necessary to connect successfully to Earth's magnetosphere and transfer energy. The team -- which also included Walter Gonzalez and Ezequiel Echer of the Brazilian National Institute for Space Research in São José dos Campos, Brazil -- examined each component in turn.

First, the researchers noted that in 2008 and 2009, the interplanetary magnetic field was the lowest it had been in the history of the space age. This was an obvious contribution to the geomagnetic minimum. But since the geomagnetic effects didn't drop in 2008, it could not be the only factor.

To examine the speed of the solar wind, they turned to NASA's Advanced Composition Explorer (ACE), which is in interplanetary space outside the Earth's magnetosphere, approximately 1 million miles toward the sun. The ACE data showed that the speed of the solar wind stayed high during the sunspot minimum. Only later did it begin a steady decline, correlating to the timing of the decline in geomagnetic effects.

The next step was to understand what caused this decrease. The team found a culprit in something called coronal holes. Coronal holes are darker, colder areas within the sun's outer atmosphere. Fast solar wind shoots out the center of coronal holes at speeds up to 500 miles per second, but wind flowing out of the sides slows down as it expands into space.

"Usually, at solar minimum, the coronal holes are at the sun's poles," says Giuliana de Toma, a solar scientist at the National Center for Atmospheric Research whose research on this topic helped provide insight for this paper. "Therefore, Earth receives wind from only the edges of these holes, and it's not very fast. But in 2007 and 2008, the coronal holes were not confined to the poles as normal."

Those coronal holes lingered at low latitudes to the end of 2008. Consequently, the center of the holes stayed firmly pointed towards Earth, sending fast solar wind in Earth's direction. Only as they finally appeared closer to the poles in 2009 did the speed of the solar wind at Earth

begin to slow down. And, of course, the geomagnetic effects and sightings of the aurora along with it.

Coronal holes seem to be responsible for minimizing the southward direction of the interplanetary magnetic field as well. The solar wind's magnetic fields oscillate on the journey from the sun to Earth. These fluctuations are known as Alfvén waves. The wind coming out of the centers of the coronal holes has large fluctuations, meaning that the southward magnetic component – like that in all the directions -- is fairly large. The wind that comes from the edges, however, has smaller fluctuations, and comparably smaller southward components. So, once again, coronal holes at lower latitudes would have a better chance of connecting with Earth's magnetosphere and causing geomagnetic effects, while mid-latitude holes would be less effective.

Working together, these three factors -- low interplanetary magnetic field strength, combined with slower solar wind speed and smaller magnetic fluctuations due to coronal hole placement -- create the perfect environment for a geomagnetic minimum.

Knowing what situations cause and suppress intense geomagnetic activity on Earth is a step toward better predicting when such events might happen. To do so well, Tsurutani points out, requires focusing on the tight connection between such effects and the complex physics of the sun. "It's important to understand all of these features better," he says. "To understand what causes low interplanetary magnetic fields and what causes coronal holes in general. This is all part of the solar cycle. And all part of what causes effects on Earth."

http://www.jpl.nasa.gov/news/news.cfm?release=2011-181

West Virginia QSO Party

Things started out slowly but there were some fixed stations to give out counties. One was in Wyoming, WV, a tough one to get (KT8N). There were a few mobiles out including K8RYU and W8OP. If you've ever been to WV, you know it is tough to operate mobile there and hit a lot of counties while making contacts. The hills and twisting roads are a challenge and you are often in valleys making it tough to work stations well (if at all!). However, I heard a lot of folks chasing mobiles and fixed stations, so it should have filled in some of the needed counties and of course, things for prefixes, call combos and everything else.

from 3830 reflector:

N8II -f ixed WV 126 cw and 607 SSB QSOs

I just returned back from Asheville, NC vacationing, a 400+ mile drive Friday and was still feeling tired Saturday. The XYL pressured me into visiting with her relatives from out of town, so those factors together with heavy thunderstorm QRN provided me with an excuse to not push thru the full 10 hours. I was off from before 21Z until 0115Z.

While running on 20, a ham from Weaverville, NC called in where we had stopped for breakfast the day before, small world! 20 phone was pretty intense with rates above 170 per hour at times thanks to many casual ops and good sporadic E.

At 16Z not much Es was happening, but by 17Z stations from OH, southern VA, NC, and the other side of WV were loud on 20. Then a little later there was an excellent opening to the northeast with many W1 and W2 QSO's and even a few from PA and DE only 140 miles away! I tried 10M once with only 3 Q's in the afternoon, but two were from OH including W8TM who seemed to be everywhere (just worked him on 40 CW). I think we worked 5 or 6 times, tnx QSO's! His claimed score is great with 69 Q's and a whopping 35 counties!

I did a poor job of chasing the mobiles, just too busy on 20 phone, but did check 40 CW a couple of times and came up empty. The noise was something to behold on 20 thru 80 at night, pretty much a steady S7 on 20 with crashes louder, very fatiguing if you were to try and run the weak ones. 10 was open to AZ, NV, and CA on double hop Es at 0130Z, but the volume was low.

Thanks to K8RYU/M for 4 counties, last year it was 9 Q's. It's nice to have QP regulars W0BH and K4BAI supporting our QSO party, the out of state HP race is too close to call. Whoever was operating W8WVA was doing a fine job on CW providing a lot of bonus points.

I sent out a post to clarify some of the rules per contest manager Jeff, KZ8E which has not shown up yet.

S
It is fun to be on the in state side once a year, lots of callers enhanced by good condx and WV being a rare state for WAS. Except for the QRN issues, this

is an excellent time of the year for a state QP. The weekend was picked to celebrate WV (statehood) day, June 20, 1863. Thanks for all of the calls and hope to be back next year with lower QRN levels.

73, Jeff

WF7T fixed TN

"Made a couple hours to play in this QSO Party. Wished I could have made more time. Had fun following the mobiles: Great job! K8RYU (5), W8OP (3). W8WVA on 4 different band/modes."

W0BH fixed KS

Conditions were good on 20m for me, with 40m and later 80m very noisy. K8RYU/m was really loud on 20 CW and SSB and was easy to find for our 14 Qs and 12 counties. I didn't catch up to W8OP/m until late for 2 Qs on 40m CW although I heard other stations working him. Thanks to both mobiles for being out there and keeping things interesting.

KN4Y – fixed FL

The CW activity was slow with only a few fixed stations and two mobiles. I am sure not all the CW operators have left West Virginia. Band conditions were good, participation was not.

On the Road with N4CD II

There was a weekend where I could zip up to Crawford AR to visit a friend, so I loaded up the car in the 100 deg Dallas temps and headed out on Friday. It's about five hours up the road. I checked the needs but there weren't many listed for OK. It's boring going the same way each time, so I decided to do some 'alternate routing'. After getting up to OK, the route went across on small two lane Highway 43 which heads over to some less run counties.

Along the way, you hit Pushmataha, then over to Latimer and Leflore. It's not much longer, but it is mostly 2 lane roads with a few winding sections. It was good to see some 'hills' after being in flat, flat Dallas. 40M propagation just sort of died. It looks like we are in the summer

doldrums and few stations were worked on 40M SSB. 20M worked well, and at times 17M yielded 15 contacts. 30M provided half a dozen contacts or more. There was little DX coming in.

There were half a dozen mobiles out on Friday and Saturday. Greg, NM2L headed up to PA with only a 30M antenna. You can guess who was frequently on 30M when I went there, and the band was decent most of the weekend – hi hi. Gene, NT2A put out a few on CW. Jack, N7ID was headed west from MI. I was trying to work him in all the ones he hit for the Mobile Diamond award. I arrived up in Crawford, AR early afternoon.

On Saturday, I headed back home the county hunter way (an extra 30% more in miles). Instead of heading Southwest – well, I headed straight east to 4 of the 5 I needed for MD in AR. It was over to Logan, Yell, Perry then south to Garland. Wow – suddenly the skies opened and for the next 70 miles it was downpours, lightning and tremendous rain static on the radio. The temp dropped in the 70s which felt nice. There hasn't been any rain in Dallas in a month and everything is bone dry, so that was a welcome change despite rotten driving conditions. Recently it hasn't dropped to below 82 in the mornings, either!

Fortunately there were breaks allowing me to run the county, but 40M was not good. Alan, VK4AAR was in on 40M early, then on 20M a bit later in the day. I didn't work more than 2 or 3 stations at most in most counties on 40M SSB. I think there was a lack of spotters, too.

There was an All Asian DX contest with dozens of JA stations, one sitting right near the 20M CW frequency, and he was in all day weakly. With good fortune, I hit a few 'LC's for the folks along the way. I did manage to get credit for MD in the four I needed – only a few MP holders were around, but Dan, KM9X, Scottie, N4AAT, Terry, WQ7A and Gene, K5GE showed up at times. Later, W6TMD was running out in CA – headed to a LC WBOW for MG (Mono, CA) for Randy, AA8R. Jack, N7ID was on as well later on Saturday when I could work him.

Perry and Garland are right through the hills of AR, and the corresponding twisty roads. Route 10 out of Ft. Smith (Sebastian County) is not bad, but once you head south on route 7, it is up and over the ridges several times. After Garland, I took the 'county hunter' way instead of the interstate and went west through Montgomery, Howard, and Sevier, then into OK for McCurtain and Choctaw. It seems someone always needs some of those. It was a hot day, and as I hit TX, the outside temp was over 100 with lots of sun. As I pulled in he driveway it was 104 F. Now to do some simple logging of the MD counties and start working on the route for the trip to the convention. Time to buy those tires for the car and get the oil changed to be ready.

It was a short trip – 700 miles total, but a nice change from sitting at home with the high noise level from all the power lines humming away keeping all the air conditions working in the 100

degree temps. Soon it will be convention time and a big trip though hundreds of new counties! They'll be at least 20 mobiles on the road at the same time. The CH nets will be humming with activity!

Super Computer News

Japan creates world's fastest supercomputer which is as quick as one MILLION desktop PCs

- **New machine is three times faster than China's former record holder**

A Japanese supercomputer has snatched the title of the world's fastest machine, ending China's brief reign at the top after six months.

The K supercomputer, built by the Fujitsu Company, is as fast as one million desktop computers connected together.

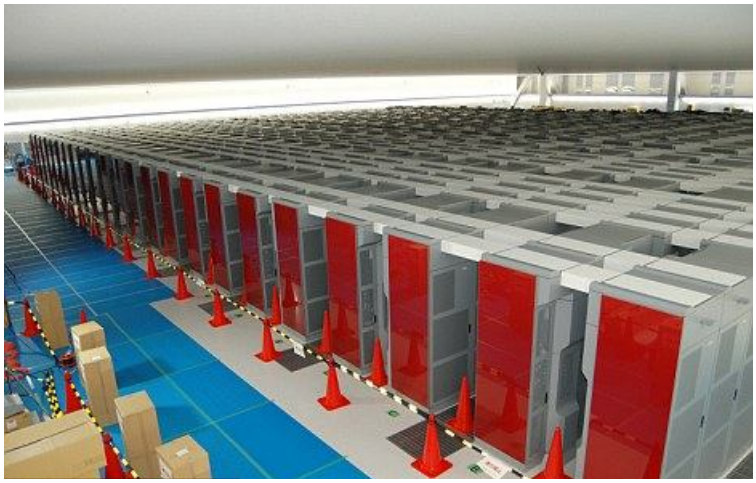
It has more than three times the power than the previous title-holder and is capable of performing eight quadrillion calculations each second.

A quadrillion is one followed by 15 zeroes and in computer jargon the speed is known as 8.2 petaflops. The previous fastest machine was the Chinese computer Tianhe-1A, which was clocked at 2.507 petaflops and highlighted the emergence of China's growing technological and economic power. The Tianhe- 1A machine was the first time China had topped the speed list, wrestling the title from the U.S. who had four of the top ten supercomputers.

Experts said the development of the K machine, which is faster than five of its closest competitors combined, marks a giant leap forward in technology. 'It's a very impressive machine - it's a lot more powerful than the other computers,' said Professor Jack Dongarra, who releases a six-monthly list of the world's top supercomputers.

The speed rankings are based by running a standard mathematical equation. The bragging rights for Japan's K computer, which has cost $1.2bn to develop, marks a return to the top for the first time in seven years

Developed at RIKEN Advanced Institute for Computational Science in Kobe, Japan, the giant computer is housed in a climate-controlled, warehouse-like structure. It consists of 672 cabinets filled with circuit boards containing almost 70,000 processors. A family computer or laptop uses a single processor. The K supercomputer uses enough energy to power 10,000 homes and although its creators claim the machine is energy efficient, its running costs are put at £6m a year. (10 million dollars)



'Use of the K computer is expected to have a groundbreaking impact in fields ranging from global climate research, meteorology, disaster prevention, and medicine, thereby contributing to the creation of a prosperous and secure society,' a spokesman for the RIKEN institute said.

Fujitsu and RIKEN chiefs say the project had overcome difficulties posed by the March 11 earthquake and tsunami that devastated the country's northeast Tohoku region.

There are five U.S. supercomputers in the top-10 rankings, including the third-ranked Jaguar system at Oak Ridge National Laboratory in Oak Ridge, Tennessee.

Others in the top ten include two machines from China, two from Japan and one from France.

Read more: http://www.dailymail.co.uk/sciencetech/article-2005920/Japan-creates-worlds-fastest-supercomputer-fast-MILLION-desktop-PCs.html#ixzz1Puu2WMKo

Near GPS Disaster Averted

A major calamity to GPS users was narrowly averted as a large scale field test showed that a planned deployment of tens of thousands of LightSquared broadband transceivers would have virtually destroyed the use of GPS throughout the country.

Folks are always trying to find new ways to skirt the FCC rules, and LightSquared was once company that was hoping to cash in on using spectrum assigned for one purpose for another unintended purpose. They were hoping to use satellite spectrum for terrestrial use.

LightSquared traces its roots back to 1988 and was known as American Mobile Satellite Corporation and later as Mobile Satellite Ventures after a merger between Motient Corporation

and TMI Communications. It was most recently known as Skyterra, a company that provided comprehensive mobile satellite communications services. The company has operated in the North American market with two geostationary satellites since 1995. MSAT-2 is licensed in the United States and was launched in 1995. MSAT-1 is licensed in Canada and was launched in 1996.

LightSquared was granted the first license to deploy and provide terrestrial service in the L-Band spectrum in November 2004. They thought they could easily 'co-exist' with the GPS service right adjacent to their spectrum. (1.5-1.6 GHz).

However, In a January 12, 2011 letter to the FCC, National Telecommunications and Information Administration (NTIA) chief Lawrence Strickling said that LightSquared's hybrid mobile broadband services raise "significant interference concerns. Grant of the LightSquared waiver would create a new interference environment and it is incumbent on the FCC to deal with the resulting interference issues before any interference occurs. Several federal agencies with vital concerns about this spectrum band, including the Departments of Defense, Transportation and Homeland Security, have informed NTIA that they believe the FCC should defer action on the LightSquared waiver until these interference concerns are satisfactorily addressed."

On February 17, 2011 the Deputy Secretary of Defense Bill Lynn, along with the head of the USAF Space Command, Gen. William Shelton, expressed concerns about potential GPS interference from the LightSquared network.

On April 5, 2011, with respect to concerns raised by the U.S. GPS Industry Council and NTIA about LightSquared’s MSS/ATC operations, the FCC states that LightSquared cannot commence offering a commercial terrestrial service until the FCC concludes that the harmful interference concerns have been resolved. The FCC notes that LightSquared’s operations have been anticipated for at least 8 years.

GPS receivers have relatively sensitive "front ends" because of the extremely weak signal strength (typically −160 to −150 dBW at ground level), generally have little filtering to further reduce the signal loss, and are subject to interference from high power signals in the L band, something made worse when an active antenna system containing a preamp is added to the system. When MSS/ATC (Mobile Satellite Service/Ancillary Terrestrial Component) operation was first proposed, the number of ATC transmitters was thought to be small, because it was part of an integrated system with the satellite.

The initial modification order to allow terrestrial-only devices onto LightSquared's network was filed on November 19, 2010, with comments due on December 2, 2010, and reply comments due on December 9, 2010. This time frame has the US Thanksgiving holiday squarely in the middle of it, and allowed little official time for correspondence (six business

days between filing and comments due, five business days between comments due and reply comments due). Several corporations and industry organizations feel that this is a major modification to LightSquared's MSS/ATC license, and wanted a 30-day comment period. An FCC spokesman said, "The FCC waiver approval granted to LightSquared was based on the merits of its proposal, following a process that included ample opportunity for comment." Yep, the LightSqured folks tried to slip one through quickly. Unfortunately, their technology wasn't there, and they didn't expect 50 million GPS users to complain about throwing out all their GPS equipment and buying $500 new ones with super front end filters in them.

With the possibility of tens of thousands of base stations that transmit in the satellite-to-earth part of the L-band MSS spectrum closest to the GPS spectrum, the high power signals (typically −70 dBm) will interfere with far weaker GPS signals from space. The GPS receivers specs never intended to deal with this situation, so they will have problems. However, FCC Chairman Julius Genachowski stated on May 31, 2011 that "it should be no surprise to anyone involved in the LightSquared matter that the company was planning for some time to deploy a major terrestrial network in the spectrum adjacent to GPS," and that "all interested parties had ample time to comment in advance of these orders (granting the request to increase the power level of the base stations to the exact level the GPS industry is now criticizing). Indeed, the Harbinger/Skyterra license-transfer proceeding was pending at the Commission for nearly a year."

LightSquared's intended radio signals would be one billion or more times more powerful than GPS signals as received on earth,potentially causing severe interference and rendering useless millions of GPS receivers—including those used by US Federal and Local Government agencies, first responders, airlines, agriculture, and everyday consumers in their cars and on hand-held devices.

If the modification is approved, "widespread, severe GPS jamming will occur," insists the Garmin International GPS maker on the basis of its experimental tests. In the company's tryouts, "two common state-of-the-art Garmin GPS receivers experienced significant jamming within a radius of several miles from a simulated LightSquared transmitter."

The Save Our GPS Coalition is backed by Caterpillar, Deere Company, and UPS. It also protests the way the waiver was issued. "The usual FCC process is to conduct extensive testing followed by approvals," the group's literature says. "For LightSquared, the process was approve first, then test."

The problem is that LightSquared's original frequency is right next to that used by GPS. That was OK when it was only used for satellite-to-earth communications which are, by necessity, very low power, but when the FCC changed the licence to allow LightSquared to build a

national mobile network in the band alarm bells began to ring.

One generally talks about radio transmissions being square - starting at full power and remaining at that point for the width of the signal before dropping to nothing - but in reality they are bell-shaped with full power only be achieved at the centre point and the tails of the bell extending into the neighbouring bands. A great deal of work is put into making signals square, and they are much squarer than they used to be, but neighbouring spectrum users still have to watch each other's toes.

LightSquared thought it could create a signal that was square enough to avoid leaking significantly into the neighbouring band, despite the comparative weakness of the GPS broadcast. That has obviously proved impossible, so LightSquared has little alternative but to shift bands and is lucky to have another place to call home.

In an article in the Wall Street Journal in June, 2011, the results of a test in New Mexico was made public. It wasn't good news for LightSquared.

“Wireless broadband startup LightSquared and a GPS industry group will tell federal regulators in a report due Wednesday that recent joint tests of the company's network showed widespread interference with GPS receivers.

While LightSquared and the GPS industry agree that the tests showed interference, the two sides will disagree on whether the problem can be solved with filters or other technical fixes, according to several people with knowledge of the pending report.

"Where government and private GPS Users and LightSquared will disagree is on the potential for a technical solution," said Jim Kirkland, vice president and general counsel of Trimble Navigation Limited, a GPS technology company.

The Federal Communications Commission will have to referee the growing disagreement between LightSquared and GPS makers and users, including the Defense Department and Federal Aviation Administration, which is planning to upgrade the U.S.'s existing air traffic control system to one that relies on GPS technologies.

The growing evidence that LightSquared's network could knock out GPS receivers, and the disagreement over whether the problems can be fixed are a problem for the wireless startup, which has been mostly funded by hedge fund Harbinger Capital Partners. The company has signed deals to offer wholesale wireless Internet service to companies including Leap Wireless International Inc. and Best Buy Co. But LightSquared can't actually offer service until it gets sign-off from the FCC.

Already, some companies are asking the FCC to conduct more tests. General Motors Co. subsidiary OnStar asked the FCC Tuesday to require additional interference testing and evidence of proven strategies to solve the problem before allowing LightSquared to turn on its proposed network. During recent tests in New Mexico, LightSquared's network knocked out OnStar signals.

OnStar said Tuesday that its receivers would experience a significant drop in signal strength within a quarter mile of LightSquared's proposed 40,000 towers. "These harms are not

hypothetical or speculative, but rather real and substantial," OnStar told the FCC in the letter.

Farm equipment maker Deere & Co. also reported interference during testing, saying the LightSquared signal disrupted its GPS systems more than 20 miles away. Last week, new government tests requested by the Defense Department and Federal Aviation Administration showed similar interference problems.

In January, the FCC gave LightSquared approval to build a new wireless broadband network on frequencies that were previously used mostly for satellite service. FCC Chairman Julius Genachowski has supported LightSquared's effort as part of the agency's broader effort to improve Americans' access to high-speed Internet service.

LightSquared executives say they can use filters on their own equipment to solve some of the interference problems. Some GPS users could also install filters to help solve the problem, although some companies may balk at having to pay for installing such equipment, which is still being tested.

LightSquared officials also say they could fix some of these problems by using just a portion of their frequencies, which are further away from the GPS signals. If the company did that, however, it might limit the amount of wireless broadband service it could sell.

"To the extent that the GPS manufacturers are saying that there's no possible way that this can be fixed, they're wrong," said Jeffrey Carlisle, LightSquared's executive vice president of regulatory affairs and public policy, adding that test results so far showed there was less interference from the LightSquared frequencies that are furthest away from GPS signals. "We believe this points the way to mitigation solutions that will work for the GPS manufacturers and for us to move forward with our network."

LightSquared's national rollout has shifted frequencies to avoid interfering with GPS kit, taking early advantage of a deal with Inmarsat for 10MHz of bandwidth further down the dial. The wannabe operator, which aspires to cover the USA in an LTE network for wholesale leasing, has also offered to cut its permitted transmission power in half, back to what was permitted before the FCC started mucking about with the licenses. That should avoid interfering with GPS, but it will also make building the network a good deal more complicated.

LightSquared doesn't even have access to the frequency in which it now plans to deploy a national network - that spectrum is owned by Immarsat who had agreed that LightSquared could use it in a few years for increasing capacity.

LightSquared admits it will now have to "accelerate the schedule... to begin using the frequencies", while the band in which it originally intended to launch will sit fallow until needed, and even then it will be at much-reduced power.

Even there, there is some possibility of disruption of GPS signals within a certain distance of the land based (40,000 or more of them) transmitters. So if your GPS stops working in some areas, or sends you on wild goose chases, you might be getting screwed by LightSquared and their network operating in places where it should never be.

Global Energy Use

NOT since 1973 has world energy use increased by as much, in percentage terms, as it did in 2010. According to BP's annual Statistical Review of World Energy, published today, 2010's energy consumption was up by 5.6% on the year before. In part this is thanks to recovery from the economic crisis; in part it is down to the longer-term shift in economic activity towards emerging economies, which are less efficient in their energy use.

Robust growth was seen in all regions and in almost all types of energy use: the world consumed more of every main fuel bar one than it had in any previous year. Consumption of oil, which accounts for 34% of the world's primary energy by BP's calculations, rose by 3.1%. **Coal, at 30% the number two fuel, was up by 7.6%, growing faster than at any time since 2003.** Consumption of gas, which contributes 24%, was up by 7.4%, the biggest annual growth since 1984.

Other renewables grew impressively too, thanks to countries all round the world continuing to pile on new wind capacity. That said, non-hydro renewables still check in at only 1.3% of global energy consumption—1.8% if you include biofuels.

Of all the fuels, only nuclear had seen better years; 2% growth over 2009 still left it a little below its levels in 2005 and 2006. Ten years ago nuclear and hydro were pretty evenly pegged as energy providers; last year hydro provided 20% more electricity. After the disaster at Fukushima, with its attendant closure of a lot of Japanese and German nuclear capacity, nuclear will undoubtedly fall further behind still.

There are other shifts to note. Oil's share of primary energy has declined every year over the past decade, while coal's share of the total has increased by four percentage points since 2000. The main reason for this is China. **In 2000, China consumed 11% of the world's energy; in 2010 it consumed 20.3% of a significantly bigger pie, making it the biggest energy consumer on the planet for the first time in BP's books** .

A burning desire for coal

Most of China's growth came from burning more coal: in 2000 China accounted for just under a third of world coal use; in 2010 a staggering 48.2%. Repeat that sort of expansion on a smaller scale for a number of other countries and you see why coal is going up in the global mix. You also see why the world's energy-related carbon-dioxide emissions have grown even faster than its energy use—by 5.8% last year, on BP's figures. That is the fastest growth since

1969.

The shift in production from developed to emerging economies doesn't just decrease global energy efficiency; it also increases emissions for any given amount of energy use. The less energy-efficient economies also tend to be the heaviest coal users. Mr Rühl points to the intractability this adds to the problem of emissions; even if emerging economies are reducing their carbon intensity (the amount of carbon emitted per unit of output), global carbon intensity can continue to rise if production shifts to those emerging economies fast enough. Hence record growth in emissions despite modest but real commitments to emissions control in both emerging and developed economies.

That more energy is being used than ever before is a welcome sign of economic growth after a sharp downturn. That it is being used less efficiently than before, and producing record levels of carbon dioxide, is harder to welcome.

- - – – –

Hello Al Gore! Paging Al Gore. The Chinese and Indians don't give a dang about global warming. They'll burn every ton of coal there is, building hundreds of power plants a year, just to give their folks electricity. Al Gore is telling you that American and certain states taking a pee on a forest fire is going to put it out. Sorry. You can strangle the US economy through carbon regulation, and it won't make any difference in world CO2 output. Every ton of coal we don't burn here will be shipped to China for them to burn. Every barrel of oil we add taxes too will be sucked up by the Chinese and Indians and burned there happily. China now sells more cars per year than the US does. They all need oil.

However, carbon taxes are great ways for the socialists to control every facet of the economy, rake in trillions in carbon taxes and then redistribute them to their favorite 3rd world dictators, phony 'greenie' industries, scam carbon credit deals, crooked tycoons and all their their Swiss bank accounts and magnificent houses.

Sunspots III

Solar Physicist Dr. C. de Jager predicts Grand Solar Minimum will last until 2100

Dr. Cornelis de Jager is a renowned Netherlands solar physicist, past General Secretary of the

International Astronomical Union, and author of several peer-reviewed studies examining the solar influence upon climate. In response to the recent press release of three US studies indicating the Sun is entering a period of exceptionally low activity, Dr. de Jager references his publications of 2010 and prior indicating that this Grand Solar Minimum will be similar to the Maunder Minimum which caused the Little Ice Age, and prediction that this "deep minimum" will last until approximately the year 2100.

"The new episode is a deep minimum. It will look similar to the Maunder Minimum, which lasted from 1620 to 1720...This new Grand Minimum will last until approximately 2100."

A lecture by Dr. de Jager at UCAR shows that solar activity during the 20th century was at the highest levels of the past 900 years: and shows solar UV activity was at the highest levels of the past 400 years in the latter portion of the 20th century: (UV is the most energetic portion of the solar spectrum, and varies much more than the Total Solar Irradiance (TSI). The IPCC and computer models only consider changes in TSI, ignoring the much more significant changes in UV) and shows the amplication of solar variation via the cosmic ray theory of Svensmark et al: leading to two possible mechanisms accounting for amplified solar effects upon the climate, neither of which is considered by the IPCC.

Source: http://hockeyschtick.blogspot.com/2011/06/solar-physicist-dr-c-de-jager-predicts.html

Awards

USACA #1216	Jim, K9JF	May 31, 2011
USACA #1217	Chuck, AA0LV	June 6, 2011
Second Time #404	Ed, N3HOO	June 15, 2011
Second Time #405	Dennis, N6PDB	June 19, 2011
Second Time CW #26	Paul, WB2ABD	June 15. 2011
Fourth Time #152	Bob, N8KIE	June 4, 2011
Ran All USA #12	AA9JJ, Frank	June 3, 2011
Ran All USA #13	N9QPQ, Kay	June 3, 2011
Master Gold #48	Randy, AA8R	June 18, 2011
Master Platinum #15	KM9X, Dan	June 5, 2011
1x3 Call Combo #8	Roy, N9QS	June 17, 2011

Events for County Hunters

National Convention.....

MARAC US Counties QSO Party July 20, 1200Z

2011 U. S. Counties Qso Party

1200Z July 30, 2011 to 0600Z July 31, 2011

1200Z July 31, 2011 to 2359Z July 31, 2011

U.S. Counties QSO Party Rules
Sponsored by Mobile Amateur Radio Awards Club

Objective: To establish radio contact with as many U.S. Counties as possible

Contest Period: Annually held during the last full weekend in July. Contest runs in two periods, from 1200Z Saturday morning to 0600Z Sunday morning, and begins again at 1200Z and ends at 2359Z Sunday.

Contest Exchange:
USA stations send RS(T), State and County name. Abbreviations are acceptable in CW mode. A list of suggested abbreviations can be found at the following URL's: Credit to Larry, W0QE for formatting, and sharing for use

http://www.bnk.com/w0qe/CountyAbbrev-V3-4col.pdf
http://www.bnk.com/w0qe/CountyAbbrev-V3-4col.doc

All other stations send RS(T) and "DX".

Categories:

Single Operator- One individual performs all radio operating, and logging functions.

A. CW only-Only qso's made using CW (morse code) qualify for contest credit. If qso's are made using another mode, one may submit those qso's as a checklog without changing categories.

B. Phone only-Only qso's made using voice modes qualify for contest credit. If qso's are made using another mode, they may be submitted as a checklog without changing categories

C. Mixed mode-Qso's made using voice and CW qualify for contest scoring.

CI.

Multi Operator- More than one individual performs any or all radio operating, or logging functions. Only one transmitted signal on the air at any one time.
A. CW only
B. Phone only
C. Mixed mode

Mobile- A station which is either in motion, or capable of being in motion. This includes transmitter, receiver, power source, antenna(s), and logging equipment. Mobile entrants shall be Single Operator only. Drivers O.K. See Miscellaneous, Item C for details

A. CW only
B. Phone only
C. Mixed mode
D. Multi Op Mobile (Must use one callsign for duration of contest)

Mixed Category-A single operator may choose to operate the contest both from one fixed or portable location, as well as a mobile. To qualify for this category, a minimum of 100 qso's must be made from the fixed or portable location, as well as a minimum of five additional counties must be activated as a mobile station. The county operated in as a fixed or portable may not be run as a mobile as well. See definition of mobile in the mobile category description.

A. CW only
B. Phone only
C. Mixed mode

Outside U.S.
A. CW only
B. Phone only
C. Mixed mode

Bands: 160, 80, 40, 20, 15, 10, 6, and 2m are used in this contest. Phone qso's only in the Phone sub bands, CW qso's only in the CW sub bands. No cross mode, cross band, repeater, or satellite qso's permitted.

Suggested Freq's- CW 50khz up from bottom of band
Phone 1850, 3850, 7250, 14270, 21400, 28400, 50135, 146530

Mobile windows: 5 khz down from suggested freq. Please, if you are a fixed station, keep these freqs clear for mobile operations.

Scoring:

U.S. Stations-
Fixed- 1 point for U.S. Fixed, 2 Points for outside U.S., and 15 points for U.S. Mobile. While participation is encouraged for those outside of the U.S., please note, since the objective of the contest is to work as many U.S. counties as possible during the contest weekend, it is not in the spirit of the contest for a U.S. Fixed stations to "run dx".

Mobile- 1 point for U.S. Fixed, 5 points for Outside U.S., and 15 points for qso with another U.S. Mobile

Dx stations- 1 point for U.S. fixed stations, and 15 points for each qso with a U.S. mobile.

Mixed Category-Add the qso point total as a fixed station to the qso point total as a mobile station, and multiply by the sum of multipliers worked as a fixed and mobile. Example: Fixed score: 1000 qso points and 250 multipliers. Mobile score 200 qso points and 50 multipliers. Mixed score is 1200 qso points X 300 multipliers for a total score of 360,000 contest points.

Multipliers:

U. S. Counties worked, per mode. A CW only, or Phone only station has a maximum of 3077 mults. A mixed mode station, has a maximum of 6154 mults.

Miscellaneous:

A. There is no digital communications in this contest. Acceptable modes are CW and Phone only.

B. Self spotting as a fixed station is not allowed. Self spotting as a mobile is permitted.

C. Drivers for mobile stations are permitted, provided they do not assist with in any way with the contest on air operations. This includes, but is not limited to operating, logging, spotting, and antenna changes.

County Line operations: As defined by MARAC, a stationary mobile may operate from one county line, and contacts with that mobile shall count as two qso's, and 2 counties worked. Some part of the vehicle must be in both counties for the duration of the qso. The mobile may also log two qso's for contest scoring.

D. County Line operations: As defined by MARAC, a stationary mobile may operate from one county line, and contacts with that mobile shall count as two qso's, and 2 counties worked. Some part of the vehicle must be in both counties for the duration of the qso. The mobile may also log two qso's for contest scoring.

E. Independent city-A station which operates from any of the independent cities, as defined in the MARAC awards rules, must choose, and use only one county for use in the contest exchange, for the duration of the contest.

F. This contest, unless otherwise stated above, shall follow the ARRL General Rules for Contests.

Awards:

Plaques to be awarded to top scoring entrant in each Category, .
Certificates will be awarded to category runner up, as well as top scores from each U.S. State, Canadian Province, and DXCC Entity.
Participation certificates will be awarded to those who submit logs containing 100 qso's or more. Any one entrant may win only one contest award in any given year.
Additional awards may be available at the discretion of the Contest coordinator, or the MARAC Board of Directors.