



# SWOT BULLETIN

THE OFFICIAL NEWSLETTER OF THE  
SIDEWINDERS-ON-TWO RADIO CLUB



PROMOTING SSB, CW & DIGITAL OPERATIONS ON 144MHz AND UP

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**BULLETIN # 286**

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## S.W.O.T. GENERAL INFORMATION

- Send renewals and new applications for membership to Howard Hallman WD5DJT (See address above). Please make all checks payable to SIDEWINDERS ON TWO. Include your SWOT # for your renewals.
- Send your SWOT "Members Worked" from your log to, SWOT Awards manager, Wade Massey, 1016 Weiss Ave, Princeton TX., 75407 \$1.00 fee for certificate and your certificate number would be appreciated, also SASE.
- E-Mail all articles and reports to the Editors' Web addresses listed above or you can mail them to KA5DWI, 6516 Simmons Rd, NRH, TX 76180-4243.
- **MERCHANDISE:**  
Decals and listings available for \$1.00 each for shipping and handling from the Secretary/Treasurer.  
SWOT PATCHES ARE AVAILABLE AT PRICE OF \$4.00 EACH + \$.50 FOR MAILING  
Badges are available from "The Sign Man", Rick Pourciau NV5A, <http://www.thesignman.com/menu.html>

## In this issue:

- The Chairman's Corner Page 2
- From the Editor's Desk Page 2
- 2 Meter SSB Christmas Wish List Page 3
- 2002 Leonids Meteor Shower Page 3
- The World of Digital Communications on VHF - Part 3 Page 7
- 1<sup>st</sup> Annual Mid Winter All Digital VHF Digital Mode Roundup Page 8
- Weak Signal Technical Tip – Transco Coaxial Switches Page 9
- On the World Wide Web Page 9
- DX Reports November 16- December 15 Page 10
- What to Expect December 16–January 15 Page 10
- Lunar, Solar and Astronomical Page 11
- Event and Contest Calendar Page 11
- SWOT Net Announcements and Reports Page 11
- Membership Application and Renewal Page 12
- SWOT Net Listings Page 12

## The Chairman's Corner

By John Petersen, KM5ES

Well the end of another year is fast approaching and we stop and look back at some of the achievements gained by SWOT this year. In June of this year we had our annual meeting at HamCom in Dallas, Texas. We voted on increasing the dues of SWOT to \$12.00 a year to offset our cost on postage and of making the monthly newsletter available to the membership. We also decided to incorporate a website for SWOT which was funded by donations given by the membership. We have gained a new outlet for outreaching to our membership and also letting people know what SWOT is all about.

This year our newsletter was bragged upon in QST, as an informative newsletter. Art Jackson, KA5DWI has done a wonderful job of bringing the newsletter back to being a great asset for SWOT.

Since August 11, 2002 our website has had almost 4000 visitors. The availability of our newsletters online, a message board for members is among just a few of the new things available to our members.

The future of SWOT depends on its membership and their input. We plan to implement the awards program shortly to cover all of its aspects both county and worked membership wise. Also in the works is a program which will allow members to work for goals and different awards in working nets. I have been in contact with Paul KA6CHJ about what the West Coast Stations are doing in this aspect and incorporating it into SWOT.

As far as our board members being commended, Larry W6OMF has been on top of the NorCal SWOT Chapter, with several outings this year and events. Don NL7CO put together our first contest sponsored by SWOT in January 2002.

I am very proud of what we have accomplished this past year and I hope that more is in the offering for SWOT and its membership.

I hope that everyone has a very Merry Christmas and a prosperous New Year in 2003. May SWOT continue to grow.

73

John R. Petersen  
SWOT Chairman #3331

## From the Editor's Desk

By Art Jackson, KA5DWI

### **A Goal Fulfilled .....**

Well it sure is nice to accomplish something. This past month I put a number of interruptions aside, plus a minor medical scare. I managed to finally erect that darn tower. Being on an extended vacation, I had set a goal to get this task done. Oh no!! I guess I will have to go back to work.

Living in a suburban neighborhood, it is best to keep things low key. I wish it could be 100 feet tall, but I am happy with 35 feet. There are still some trees around it a bit taller. It helps hide it, plus it keeps the odds lower for it to be the neighborhood lightning rod. I do not like heights (even the roof!) and it is nice to be able to tilt it over and work on it within the confines of the backyard.

I now have single 10, 6, 2 Meter and 70 Centimeter Yagis now on one tower. I replaced or cleaned up and re-routed all the feedlines. For 2 Meters, I have my KLM-16LBX back up after a seven plus year hiatus. It performs as well as it did before. Sure there are better antennas now on the market, but that KLM still is a good one.

At one time I had 5 different rigid or telescopic masts holding up 8 various antennas. None of them looked good, plus a little too much nitwit engineering was involved. It was a testament to my philosophy that you do not have to make a dent in the National Deficit to have fun on the bands. As ugly and inefficient as it was, for 12 years off and on I managed 186 new grids on 6 Meters, 29 on 2, plus 13 on 70 CM (442, 180, 41 total respectively). It's all organized now and the neighborhood property values have now increased. Hope the thing produces some results.

Tis' the season, so this bulletin's stocking will not be overly full. I thought I would write about how well we all did in the June VHF Contest, but I only found two members in the "Leaders" section. So this month we have meteor and digital information.

Now that the year is over, let us know what you all accomplished (or lack thereof). Tell us about QSO's, grids, openings and firsts. The SWOT membership would like to know you are around and making noise. The bulletin should be about you.

Thanks again for all your contributions to the bulletin. I wish all of you very a happy Holiday season and a prosperous, Es and Tropo filled New Years.

73's Art Jackson KA5DWI #2497

## 2 Meter SSB Christmas Wish List

By Jim Kennedy, W5SSG

Well Ham radio buddies, I hope you have made a good list for old St Nick to fill for you.

If you could have just one thing and price was not an issue what would it be?

An Amp ..  
or a new radio....  
or maybe a new 90-Foot tilt-over Rohn 45 tower.

I'm thinking of maybe a new antenna, a M2-18XXX, but then I would need a new tower.

I know.... maybe that elusive QSL card that would give your VUCC.

I had John, NE0P tell me he would like another meteor shower like the Leonids of 2001.

How about a ICOM 756 Pro with 2 Meters on it! Wow that would be nice.

Oh, wouldn't be nice to pass the code, and maybe upgrade to extra!

I know each one of you would like to get something nice. I hope St Nick brings you everything you want.

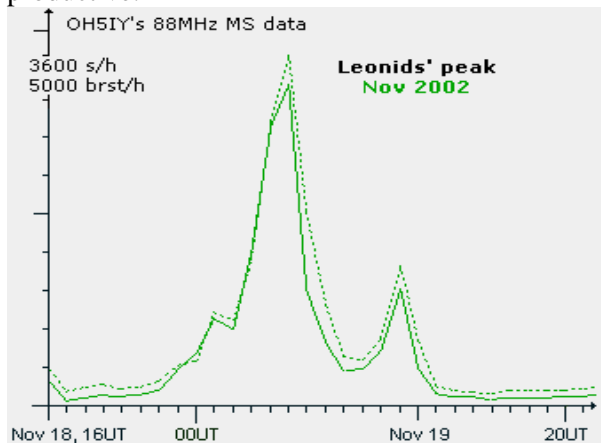
How about someone just being nice you to and saying merry Christmas!

73's Jim W5SSG  
SWOT # 3380

## The 2002 Leonids Meteor Shower

By Art Jackson, KA5DWI

Well, the much anticipated Great Meteor Storm of 2002 turned out being a little bit of a disappointment. Maybe it was the timing of this event that made it not so productive.



The chart displays meteor scatter results in Finland. The first peak occurred while it *was not* visible in the USA. The second peak was, but it was still very early in the morning hours (4:00a.m. CST).

Although not as good as the last one, it still produced some good results. It was still the best shower of the year.

## Some Ho Hum Reports.....

### **From the Editor:**

I could describe it as disappointing, but not a total loss. I got thrown off the couch in the shack at around 2:15AM local. The first station I worked was the last station I worked last year (K9MRI EN70). Activity came in spurts. Just like short E openings. All the signals were north, northeast and east of me. I totally missed any westward paths.

6 & 2 Meters were always out of sync. I did get two new grids on 2 Meters (now at 180).

Since the weather was better, I got to go out and look at it this time. At 5:30a.m, the meteors were right overhead and to the east slightly. Very few long trails. To me they were coming in at a steep angle. Very few flew across. Here in well lit DFW, TX, I saw about one every 10 seconds.

To me everything shut down about 7 AM. As far as I'm concerned, the experts missed. Still it was fun. Hope you all did well.

73' s Art

### **From John, KM5ES:**

I was really surprised the rocks were not as good as expected here during the shower. I didn't get home from work 'til around 7am but last Leonids last year the shower went 'til around 11am. Again I missed the peak, but I really don't think this one was as good as last year

John KM5ES

### **From Joe, K1JT:**

I knew I wasn't going to have much time to spend on the Leonids.

Returned home from a public appearance at New York's Hayden Planetarium slightly after midnight EST, set the alarm for 0410 EST (0910 UTC), and went straight to bed. (It helps a great deal to have an extremely understanding spouse!)

No, the event was not about the Leonids, it was about the Museum's terrific new exhibition on Albert Einstein.  
See: <http://www.amnh.org/programs/hayden/index.html#einstein>

About five minutes later, or so it seemed, alarm went off and I groped my way to the shack. Found 144.200 a zoo, as expected.

Plenty of burns, and good signals from stations south and west of me, more or less wherever I pointed the antenna. Had the impression that a single yagi with 30-50 degree horizontal beamwidth -- or perhaps a stacked pair of those -- might have been better for this than my rather sharp 4 x 2M9 array. Had a couple of SSB QSOs on 144.200, adding to the seething mess there; and then QSYed down 10 kHz and called a few CQs. Worked several more stations there. Checked Ping Jockey Central for stations from needed grids or in the 1300-1500 mile range; ran a couple of quick skeds and easy completions using FSK441. PJC was incredibly busy: no sooner I clicked "Go" to post a message, and already ten messages were there following mine! Hooked up with KA9UVY on PJC and agreed to run a sked on 222 MHz. Completed easily there in 15 minutes using 15-second sequences -- finishing up with a one-minute burn in which we each had a couple of nearly solid transmissions and switched to SSB to exchange 73s and thanks by voice. Probably should have tried 432 with someone, but instead checked 6 meters. Many good signals there, but I didn't transmit. Went back to 2 meters and worked a few more on 2-meter SSB. Headed back to bed at 1050 UTC for another two hours sleep, since I had a full day ahead.

In the 1.7 hours I was on, the Leonids seemed good but hardly "once in a lifetime exceptional". Not as good as last year, but part of the difference may be that last year it fell on a weekend, which helped a lot. (Last year, too, six meters opened for F2 DX as soon as the sun came up -- I spent most of the day working 6m DX including states #49 and 50 and a number of new DXCC entities, returning to 2 meters from time to time to work a few more SSB randoms on good Leonids burns.)

See you in the Meteor Scatter contest in December!  
-- 73, Joe, K1JT

**From Larry N0MST:**

You didn't miss a thing.  
I was up all night, worked 16 with no new grids. Here in my part of the world, the BIG GUNS were out, at least 5 within 25 miles of me. Stations you never hear until the band is going to be open.  
Talk about a mess....Oh well, it's like that every time.

John, KM5ES came on about the time I got off, and I went to the Truck Stop to deliver an antenna to a driver.

He called about 7:15am, so off I go for. Finally home about 12:30pm, then I;  
crrrrraaaaaassssssshhhhhhheeeeeeeedddddddddd.  
This old man just found out he can't do the 36-hour deal like he once did !!!!!!!!!!!!!!! I think I'll live?

Hope all had fun with the shower, but I think the shower I took when I got up was the best deal.

73's n0mst Larry ...--

**From Lee, N5TIF:**

Hi All,  
Well, the Leonids was a bust for me got to worked only 5 grids and I had them all. I had gotten up around 2:45 local time at that time I was not feeling well but I hung in there. The most consistent call I heard was K9MRI every one of us should have worked him. But around 4:30 I was so sick that I went back to bed and I guess that I did not miss much after that.

I think all the predictions were way off all pings that I heard were very short. Those with JT44 and others should have made out a little better like to see how you guys made out. I guess I could wait another 98 years for the next big one.

LEE KEMP N5TIF 73

**From Jason, KG4BMH:**

This shower was lacking after the 2001 shower. I heard a lot of bursts, but they were a lot shorter in duration than last years thus making QSO's a little more difficult.

My first QSO was with K2SMN FN20 around 2:00 central and my last was VE2SMG FN35 around 6:00 central {As I had to leave for work}.

I only worked two new squares this shower {FN35 and FN07} this brings me to around 140 if confirmed. In fact these were the only two stations that I heard that I hadn't worked before. It was good to hear so many familiar callsigns during those burns! I wasn't able to work any new states. as I had no prearranged skeds.

I hope everyone enjoyed this shower as much as I did, see ya during the Geminids!

TNX es 73 Everyone  
DE KG4BMH EM76 Jason Wilborn.

**From John, NE0P:**

Maybe we won't have to wait 98 years. They were wrong on this year's "Storm." Maybe they will be wrong on next years lack of a storm also, and we will see one.

For the record, I worked 1 new grid (EN92) on 2 and 2 new grids on 6. Burns much better on 6 Meters, as would be expected, but there were some very nice burns on 2. Heard some long pings as late as 9 AM, when K4QI and K4ZOO were coming in here on SSB.

73s John NEOP

### Successes with some effort...

#### From John, W5UWB:

Limited success during the Leonids because I concentrated on 222 FSK441/SSB at very long ranges.

But, here is the compilation for what it worth:

0547utc 19 Nov	KB8U	222.057 EN71	Not complete FSK441
0710utc 19 Nov	K0VSV	144.148 EN41	Complete FSK441
0736utc 19 Nov	K3TV	144.105 FN20	Nothing heard FSK441
0800utc 19 Nov	K6IBY	222.057 DM13	Not complete FSK441
0830utc 19 Nov	N6RMJ	222.057 DM14	Not complete FSK441
0955utc 19 Nov	KB9WZJ	144.215 EM69	Complete SSB
1000utc 19 Nov	VE3AX	222.057 FN02	Nothing heard SSB
1056utc 19 Nov	N6RMJ	222.057 DM14	Complete FSK441
1444utc 19 Nov	AE0G	144.111 EN10	Complete FSK441

Will be trying this Friday PM late/ Saturday early w/FSK441 and some SSB randoms on both 144 and 222. Skeds on 222 only.

Rigs: 144 1.5kw, 17el at 50' agl  
222 1.5kw, 17el at 55' agl

73 and happy holidays to you and yours.  
John W5UWB

### More Positive Reports!!!!

#### From John, K0PW:

Well, I managed to survive another Leonids, even have some fun doing so. The last-in-my-lifetime storm never seemed to materialize here. Everyone I worked, I felt I could have worked during the normal summer meteor conditions we have all come to enjoy.

Well, perhaps one exception was my contact with N1RWY, whose amp died early into the night and had to complete with only 33 watts on 2M. That was the longest hour I can recall in quite some time.

I was proud of Ping Jockey for staying up under intense loading. At times, there was so much activity, a line I typed was already off the screen by the time it got posted. From my observations, that caused moments of confusion during the peak use hours and made pick-up skeds difficult to arrange at times.

Murphy did not take the night off. At approximately 0800z, towards the end of a sked with Joe, N1MNU, my cable ISP winked off line. A quick call to their support line confirmed that they decided to take the local node down for maintenance. No prior notification, no nothing. I was in quite a panic. I maintain a dial-up account for

emergencies, but had not needed it in a year and a half, so the phone numbers were no longer viable. Without internet access, I could not go to their Web site to get the new numbers and their voice phone number was of no use at 0800z. After unsuccessfully trying to sign up for half a dozen dial-up ISPs, like ATT, Sprint, NetZero, Yahoo, Earthlink, etc, again at 0830z, I was in a state of high agitation. Luckily, KA0RYT, my good neighbor to the east was on and I called him. Ron was able to access my dial-up ISP company's Web site and pass along the new phone number, enabling me to get back on-line. The whole wringing process took an hour and a half.

Meanwhile, "Rome was burning". I never regained my composure after that, having been up already for almost 24 hours

I want to thank all of you who were able to run with me, both those who I completed with and those I did not. The HSMS sub-band was crawling with skeds in progress. I had moments of incredible QRM from stations who were not only 800 miles away, but 3-5 Khz away to boot. I think we all stepped on a few toes as well as having ours stepped on and I was proud of everyone, who in the sleep-deprived states and anxious to complete atmosphere, managed for the most part to keep their cool.

All-in-all, I managed about 10 completions, 5 of which were new FSK441 grids and 2 were 2M "New-new" grids. With the same band conditions, but less hectic operating conditions, I felt I could have doubled those amounts. I look forward to reading about the experiences the rest of you all had. Feed them in...

Now, as we start the "big MS slide" downward, so typical of the winter months, I look forward to the brief respite of the Geminids in December, as well as the occasional pick-up sked on the weekend mornings.

73, John, K0PW

#### From Tip WA5UFH:

The meteor shower was fun. I started off with a list of 10 pre-arranged skeds. I am convinced, at least for me, that having the pre-arranged schedules benefited me. It certainly gave me a chance to look at what I needed and then set up prearranged start times and frequencies. Where I made my mistake was trying to work other contacts between the prearranged list. It cramped me for time and I actually had to cancel one scheduled contact in order to complete a long one I made off the Ping Jockey. So you live, learn and try to improve your techniques for the next major event.

Listed below are my results. (not bad for me...)

I completed 8 contacts all FSK441 - (5) 144Mhz and (3) 50Mhz (16 failed attempts however I was pushing the distance barriers)

Worked 5 new grids - (3) 144Mhz (2) 50Mhz

Worked 4 New States - (2) 144Mhz (2) 50Mhz

Worked 7 New Initials (4) 144Mhz (3) 50Mhz

My best 6 Meter DX was 1294 miles or 2082 km (WF4R)

My best 2 Meter DX was 1436 miles or 2310 km (K3TV)

I had BC's from WA3DRC 1450 Miles (Did not complete) BC's from K2TXB 1454 miles (Did not complete)

This was my first Leonids Meteor Shower to work. I missed the one last year but after hearing all the results from last years event, I was a little disappointed with my results. I hope others share their experiences.

I thought the cooperation and operating procedures were for the most part outstanding. The one thing I see we could have all benefited from is the proper use of the calling frequency. QSO's should not be made on .140 & .270. We didn't as a group make good use of the <U> UP# <D> # procedures for calling CQ, especially on six meters. Several times I wanted to call CQ on 50.270 only to find it busy with contacts and single tones. HiHi

Randy Tipton (Tip)  
WA5UFH EL19pa

### **Once a Boy Scout .... From Don, NL7CO:**

Due to a USAF postponement of a project demonstration in Florida, I found myself unexpectedly at home for both the November Sweepstakes and the projected Leonids "storm". Fortunately, I have a boss who realized that I needed a break and let me take some vacation so I could play. The Sweepstakes, a local club event, went well but is beyond the scope of this organization. The Leonids on the other hand ...

Due to some problems with the club HF radio, my entire station ended up at the sweepstakes field site and had to be reassembled hurriedly Monday afternoon in preparation for the big "storm". The station was finally re-assembled just after dark and final checks were run on the equipment. As I was adjusting the power down to the 20 watts required for the TE Systems amplifier, the SWR display on the 746 is going wild. Time to bring out the antenna analyzer and the old Bird wattmeter. To say that an SWR of 6.5:1 is slightly awry is like saying that Osama is not exactly a supporter of the USA.

Not a problem, the antennas are on a hazer and I'll just lower it and look at all of the parts and quickly fix it. Fortunately, I literally have a spare for everything except the amplifier and I should be back on the air shortly.

"Hello, Mister Murphy, welcome to my ham shack. Would you please assist me in lowering my antenna?"  
Yep, it's stuck and it's dark out.

Not a problem, grab the climbing belt, put it on, and start up the tower.

This is dumb you say? Well I agree and fortunately I come to my senses before climbing higher than two rungs.

A quick call on the local repeater and an e-mail on the VHF reflector that says I'm out of it, good luck to all, and I'm off to clean up some of the paperwork that has been gathering in the shack and is in need of filing. The second item that I pick up is some of the photos from my last grid-pedition to DM85, DM86, DM95 and 96. The famous "eradicating my cattle" incident. Ahh, fine memories of a fun portable operation.

### *PORTABLE OPERATION? .....*

Hey, I can still do this - I have all of the needed equipment except the heavy-duty power cables running from the battery for the TE Systems amplifier. Hmmm, the 746 uses the same power cord as the 706 in the truck and that will give me 100 watts. Quickly gathering the 2M9SSB, 50' of 9913 super-flex, and the mast assembly for the trailer hitch, I start driving out one of my favorite sites in EM05, a relatively rare grid. Not only is this site easy to get to, its within 50 miles of the home QTH so all of those new grids will count. Pulling into a pasture entrance that I had used before, I quickly set up and got ready for the big "storm".

The lack of a true storm has been commented on by many others in numerous other places, so I won't add to the noise. But I will tell you that I worked 24 stations in 17 grids, two of which were new, while watching the occasional meteor fall out of the sky.

All in all, I had a good time and am very happy that I have a rover station to use when the home station doesn't want to play. Hope the rest of you had as much fun.

### Results:

First non-local contact was at 0906z

0906z	VE3TFU	EN92	
0907z	N2UIO	FN13	
0918z	VE3AX	FN02	
1010z	W3ZZ	FM19	Gene only got a partial on me
1023z	K4TO	EM77	May have been answering someone else

1027z	WO4DX	EM74	New Grid
1028z	WA3ST		Bad call - not on QRZ.com
1033z	KB9NKM	EN70	
1046z	K9MRI	EN70	
1047z	WB9UWA	EN50	
1052z	VE3EU	EN93	New Grid
1100z	KF8DX	EN72	
1101z	N9LR	EN50	
1102z	N8IR	EN81	
1026z	K9KJM	EN64	

I also worked 11 "locals" (EM04, EM12, EM13, EM15, EM25, EM26, EM27) on non-MS, but EM05 was new for them so I included them in my original count.

Until Next Time  
Don, NL7CO

### The 144 MHz Propagation Logger:

6:08 K2SMN FN20 59MS de KU4WW EM54wq, .200  
6:11 k2smn fn20 into em31 for couple minutes solid, big burn/maybe multiple burns dek5mq  
6:11 It's building.....AK3E FM29 59MS de KU4WW EM54wq .205  
6:24 kg4bmh heard in em31 on a nice burn. no qso de k5mq  
6:34 Heard W3ZZ de KU4WW EM54wq .200  
7:12 Heard W3ZZ FM19 working W5LUA EM13 de KU4WW EM54wq, .200  
7:21 ve3tfu en92 144.2 de k5mq em31  
7:23 NOKQY AND KOMQS HEARD IN EM84 KE8FD  
7:25 W3ZZ FM19 59MS on long burn de KU4WW EM54wq, .200  
7:35 WORKED KOGU DN70 KE8FD EM84  
7:46 ve3krp & k0awu in one burn ve3dss fno3 on 200  
7:50 VE3DSS .200 gud burn k5sw em25 ok  
7:52 VE4AMU (EN19) > K2SMN (FN20) - neat!  
7:52 k2smn fn20 de ve4amu en19 @ 0747 ms  
7:55 VE3KRP (EN58) > K2SMN (FN20) - neat, too!  
7:56 hrd VE3TMU @ 0750 de N6CL EM26  
8:25 ve3ax and k9mri worked w5mrb em35  
8:29 WORKED NOKQY DM98 KE8FD EM84  
8:30 W0EKZ EM17 WORKED KE8FD EM84  
8:32 EN70 into DL98 xe2or hear 59 ssb 144.200  
8:38 k9mi on dl98 strong signal  
8:41 Hearing VE3AX FNO? de KU4WW EM54wq, .200  
8:50 Hearing W0VB de W0JGB em 28  
8:52 AJ4F...el29 de K5mv..em20  
8:52 K8MD EN82 worked, also heard K3DSS several times NOVSB DM79  
8:54 144.200 NW5E EL98 >> EN91 de WA8RJJF  
8:56 N6CL EM26 WORKED KE8FD EM84  
8:58 ke8fd em84 k9mri en70 ve3ax fn02 144.2 worked on one burn de k5mq em31  
9:06 rrr - sounds good - good rocks now de KM0t  
9:07 hrd w5lua k5jl k5qe on 1 burn ve3dss  
9:12 Heard K5JL on a good burn de W0JGB em28 W0JGB  
9:15 KA5DWI, N6CL, K5TTT, WW2R, W5LUA, WB5AFY all wkd one burn de VE3AX/fn02  
9:20 ve2smg fn35 just work ke8fd em84 and wo4dx em74  
9:39 WORKED W3UUM EL29 KE8FD EM84  
9:40 WORKED K5VH AND W3X0 EM00 KE8FD  
9:57 de ng4c hrd cm87 into fm16 on 144.205  
9:58 w5uwb el17 on 144.215 de kb9wzj em69xs  
10:17 WA2FGK 135 RRR de W3X0/5  
10:17 Way to go W3X0/5 EM00 into W0VB EN34 you make it easy.  
10:21 w0vb en34 .215 kc0hfl em 17  
10:24 k4mq em31 tnx n4ofa em86 20w  
10:27 Now hearing N6EQ southern CA NOVSB DM79 CO  
10:32 K5VH EM00 .200 NOVSB DM79 CO  
10:36 Lots of activity to the west now NOVSB DM79 CO

10:42 HRD W6SZ IN CA DE K8MD EN82  
10:45 W6OAL DM79 > VE3KRP EN58  
11:08 w4hp de ve2bkl tnx also a new one #102  
11:09 KA0PQW EN33 .200 NOVSB DM79 CO  
11:15 K7ICW de W0VB heard you on .200 abt 1300 mles  
11:23 worked NOVSB DM79 de W0VB EN34 sigs 59 abt 725 miles  
11:23 W0VB EN34 S9+10 .200 NOVSB DM79 CO(199.222.81.198)  
11:25 VE5LY,VA6DX>CM98 de W6KRBX  
11:42 Heard K7ICW 55 off the back of the antenna NOVSB DM79 CO  
12:10 K6AAW into DO33. Much easier this year Larry. TNX de VA6DX  
12:14 w8mil its wlgud el87 tks for ms qso!!  
12:15 W8MIL you were loud in EM70 too de AC4TO  
12:33 cm98>do33 long MS burn, KI7WB CM98  
12:36 ve3dss de ac3a/0 heard you portable with 5 el yagi mounted on car em28  
12:48 VE3JXX, K9MRI, W9V? in on .200 NOVSB DM79 CO  
12:52 Just worked WB9Z EN60,VE3AX FN02 and K3KYR FN24 on same burn 144.200 de AC4TO EM70  
13:09 n0vsv on 144.190 S7 and 983 miles de kb9wzj em69xs  
13:10 K8NWD, K9MRI, KB9WZJ worked on another long burn NOVSB DM79 CO  
13:43 de K7ICW(DM26)--Just wkd KOMQS(EN31) SSB 144.200 5x5  
13:57 Wrked VE3AX FN02 & VE3DSS FN03.200 random,1357 K9MRI .215,still going k5sw em25 ok  
13:58 ke8fd em 84 .200 5/9 kc0hfl em 17  
14:09 K4TO EM77 .200 NOVSB DM79 CO  
14:54 K4QI .200 long burn k5sw em25 ok  
14:55 Just heard K4QI on .200 de NE0P EM04  
14:55 K4QI Fm06 144.2 and other K4's N0PB EM39 MO  
15:00 K4AR, W4ZPG, N4XD and missed others on one rock. N0PB EM39 MO  
15:02 wa3eoq fm09 w5mrb em35  
15:03 K4AR em76 & k4zoo fmo8 on lng burn-trying 222 .100 then , nil hrd k5sw em25 ok  
19:05 God I miss the excitement - KK4TE em50

## The World of Digital Communications on VHF – Part 2 of 3

By John Petersen KM5ES

When High Speed CW (HSCW) came out, there was an influx of new operators on meteor scatter. A lot of new operators meant new grids, but again the short fall using CW hampered them.

Just a couple of years ago, Joe Taylor K1JT (a Nobel Prize winner) started from scratch to come out with a program that offers 2 new modes FSK441 and JT44. Joe started on a program that would be able to copy characters and numbers sent without any CW involved.

He introduced in Late July of 2000 with WSJT or Weak Signal by K1JT. The program was and still is free to the public. This program went thru several beta stages and several others and I were the Beta testers. It was amazing how well this program copied signals you couldn't even hear with your own ears in a millisecond MS ping.

Soon their was around 30 to 40 people testing the new mode on 2 Meters it didn't take long for us to work everyone that had the program. Joe was kept improving



it, usually monthly adding new features for this mode called FSK441.

Scheduling a QSO (Sked) consisted of getting on 2 different pages on the Internet. MS ROCKS LIVE or THE PING JOCKEY PAGE. The interest in the FSK441 mode was growing fast. Soon there were over 100, then 200, then 300 registered operators. Little holes in my grid maps started finally filling in. By November of 2001, I had broken 150 grids total on 2 Meters with about 40 of them new ones via meteor scatter. What was so amazing about this mode was the fact that you didn't need a meteor shower to do this. It was a every morning or evening thing. The showers enhanced it, but one was not needed.

Also what was so amazing was that in a single meteor ping you could exchange both calls and signal reports and Rogers.

I have in just goofing around had a total conversations with stations over 1000 miles away using WSJT (FSK441) on a daily basis. Not just sending call signs, but HOWS THE WX THERE and getting reply of COLD, CLOUDY 28 DEGREES for example with Dave N8OC and others.

Working water grids on regular SSB was a farce from Oklahoma unless you had a Es opening while someone was out in their boat. W1LP, Clint is the skipper on a tanker which goes from New England to the Gulf of Mexico, then down thru the Panama Canal and out to California. Cliff is also active in using WSJT and when HSCW was the rave he also used it. He has worked stations across the US using meteor scatter and high speed digital communications giving out water grids all along the coast lines of the USA and out in the Gulf of Mexico.

Next month we talk about JT44 and JT44 EME and what all it takes to run this new wonderful digital mode.

73 John Petersen KM5ES

Part 3 in next month's issue.

## **The First Annual Mid-Winter VHF All Digital Mode Roundup**

**WHEN:** FEBRUARY 8th 18:00 UTC TILL 23:59 UTC  
FEBRUARY 9th, 2003

**WHERE:** 50MHZ AND UP AS HIGH AS YOU WANT TO GO  
**WHY:** JUST FOR THE FUN OF IT, AND TO MAKE A LOT OF DIGITAL NOISE.

THIS SHOULD BE A GREAT OPPORTUNITY FOR ALL YOU DIGITAL HAMS TO GET OUT THERE AND MELT THE SNOW

OFF OF THOSE ANTENNAS, AND MAKE SOME CONTACTS WITH WHATEVER DIGITAL MODE YOU WANT.

TURN IT INTO FRIENDLY COMPETITION IF YOU LIKE, OR JUST TAKE THE OPPORTUNITY TO TRY OUT SOME NEW DIGITAL MODE, OR JUST SHARPEN UP YOUR SKILLS SOME.

RULES OF ENGAGEMENT:

1) TWO POWER CATEGORIES, LOW POWER 100 WATTS AND UNDER, HIGH POWER OVER 100 WATTS.

2) MAKE AS MANY CONTACTS AS YOU CAN, USING ANY AND ALL DIGITAL MODES YOU HAVE IN YOUR ARSENAL OF SOFTWARE, ON SSB AND OR FM. DON' T FORGET, CW IS THE OLDEST DIGITAL MODE, SO THAT COUNTS TOO!

3) WORK A STATION ONCE ON EACH DIGITAL MODE/BAND/SSB AND OR FM.

4) EXCHANGE GRID SQUARE(RAGCHEW IF YOU LIKE)

5) SCORE: COUNT TWO POINTS FOR EACH COMPLETE CONTACT.

MULTIPLIERS: EACH NEW GRID WORKED ON EACH BAND AND MODE, AND EACH DIGITAL MODE USED.

FINAL SCORE: TOTAL QSO POINTS TIMES TOTAL MULTIPLIERS

LOG ENTRIES:

YOU CAN EITHER SEND YOUR LOGS BY SNAIL MAIL TO MY ADDRESS BELOW OR TO MY E-MAIL ADDRESS AS A .TXT FILE.

E-MAIL <[gwgab@juno.com](mailto:gwgab@juno.com)>

----- OR-----

DIGITAL ROUNDUP

GENE GABRY

115 S. EMERALD AV.

MUNDELEIN, IL. 60060

PLEASE HAVE LOGS TO ME NO LATER THAN MARCH 22ND, 2003. ALL THOSE WHO SEND IN LOGS WILL BE ELIGIBLE FOR A DRAWING FOR A REGISTERED COPY OF MIXW OR GIFT CERTIFICATE TO AES. THERE WILL ALSO BE CERTIFICATES FOR THE WINNERS OF EACH POWER CATEGORY.

PREFERRED LOG FORMAT:

	STATION	RPT		DIGI
DATE/TIME	WORKED	GRID	SENT	MODE BAND FM/SSB

PLEASE ALSO SEND A SUMMARY SHEET INCLUDING: YOUR NAME AND ADDRESS, PHONE NUMBER AND E-MAIL ADDRESS. YOUR CALL, GRID SQUARE, QSO' S AND QSO POINTS PER BAND, MULTIPLIERS, AND FINAL SCORE.

I HOPE TO SEE MANY SIGNALS COME ACROSS MY SCREEN THE WEEKEND OF FEBRUARY 8TH AND 9TH, 2003.

IF ALL GOES WELL AND INTEREST IS HIGH, THERE JUST COULD BE A MID SUMMER ROUNDUP IN THE PLANS LATER.

73' S DON, KB9UMT EN50DP PEORIA, IL.

73' S GENE, N9TF EN52XG MUNDELEIN, IL

[http://groups.yahoo.com/group/PSK\\_VHF\\_UHF\\_HAMRADIO](http://groups.yahoo.com/group/PSK_VHF_UHF_HAMRADIO)



## **Weak Signal Technical Tip -**

By Larry Hogue, W6OMF

### **Transco Coaxial Switches From the Product Data Sheet...**

The Type-Y was designed by Transco to meet the requirement for a small, lightweight coaxial switch having good R.F. characteristics over a broad band-width (0 to 11 GHz) with 1,000,000 cycle reliability. Type-YA, YB, and YC are the same basic design as Type-y: Type YA and YB are 115 Vac and Type YC-YC has indicator circuits.

The two independently operating solenoids allow make-before-break or break-before-make operation. R.F. positions can be both on or both off simultaneously. Solenoids can be supplied normally open or normally closed so FAIL-SAFE operation is easily provided by solenoid selection. Except for the Type-YA, switches may be stacked (placed one on top of the other using the same mounting screws) for multi-pole operation.

#### Specifications:

500 watts@ 1 GHz 10 KW peak  
Temp. -54 degree C to 85 degree  
vibration: 20g's to 500 cps  
operating time: 10 milliseconds nominal  
Life: 1,000,000 operations minimum  
weight 6 oz. max. SPDT  
Solenoid Power 7 W. Nominal  
Actuator voltage: 28, 120 VDC, 115 VAC  
RF connector: Type-N, This is the description of the 11100... (28 V with N connectors and both positions are unenergized open)  
Mil Spec. MIL-E-5372, Mil-T-5422

Loss <.2db to 2 GHz (.05 db typical)  
Isolation 50db @ 1 GHz 55 db typical  
11 GHz max rated frequency  
18-13 VDC Latch  
1-10 VDC drop out  
100-120 ohms coil resistance

#### Additional information

Plagiarized from SWOT newsletter 2/7/84 (with permission)  
Relay Care and Maintenance by Kent Britain, WA5VJB

When you acquire your Transco, first check for proper solenoid action. Next check resistance when the contacts are closed from the "IN" to the Number "1" out and the "IN" to the Number "2" out position

The exotic alloy used on the contacts tarnishes easily and a relay that's been sitting around for several months or years can show 50 to 100 ohms of contact resistance. Cycle the solenoid several dozen times until the contact resistance consistently drops to less than 1 ohm. In stubborn cases remove the connectors with a thin 7/16" or 11 mm wrench. Now burnish the connector contact with a fine wire brush or card board, reassemble, and retest. If you have an "Energize to Open" solenoid you must energize/retract the solenoid while re-assembling or you will entrap the contacts.

Also on older relays it's not uncommon to have some of the plating flaking off of the connectors. As long as the flaking is on the outside and not the inside, performance is not impaired.

An excellent find are the versions which have additional contacts actuated by the solenoid. Use this type for your preamp, wiring the amplifier antenna relay thru the external contacts of the preamp relay. This way you cannot switch the power amp to the antenna until the preamp solenoid is fully retracted.

Another suggestion is to power the relay from a poorly regulated supply. (voltage doublers from 12VAC work nicely) The supply will give you 28-30 VDC no load to latch up quickly, then drop to 15-25 volts to hold in the solenoid. At a constant 28 VDC the coils dissipate 8 to 9 watts and get HOT!!!!

73 Larry, W6OMF

## **On the World Wide Web**

A few sites Weak Signal operators may be interested in. Send in your favorite sites and they will be listed here.

### **From Larry, W6OMF:**

Need Coax or have questions

<http://www.belden.com/>

<http://www.belden.com/>

<http://www.qsl.net/kc6uut/coax.html>

<http://www.timesmicrowave.com/>

<http://www.timesmicrowave.com/cgi-bin/calculate>

[http://www.econ2way.com/catalog/public/recommended\\_cable.htm](http://www.econ2way.com/catalog/public/recommended_cable.htm)

### **From Joe, K1JT:**

Version 3.0

A new major release of WSJT, Version 3.0, is now available for free download. Instructions for upgrading and for complete installations can be found at <http://pulsar.princeton.edu/~joe/K1JT>.

What's new in Version 3.0?

1. The "User's Guide and Reference Manual" has grown to 51 well-illustrated pages. The new manual includes four major new sections which together cover:
  - a) the EME Echo mode, including the "Measure" sub-mode and the "EME Calc" utility for estimating the strength of your echoes from the moon;
  - b) the nature of the various astronomical calculations done within WSJT, and a summary of their accuracies;
  - c) several pages describing availability of Fortran source code for the DSP algorithms in WSJT, as well as a suite of test programs for generating simulated data and testing the FSK441 and JT44 encoding and decoding algorithms;
  - d) a short essay on possible future developments for WSJT.
2. The astronomical calculations in WSJT have been overhauled and thoroughly checked. In practice the differences from V2.9 will seem minor, but as described in the new manual's Appendix B, the accuracies of computed positions for the sun and moon, and for the EME Doppler shift, are now well documented. Computed positions are accurate to within about 0.04 degrees, and Doppler is better than 1 Hz at 144 MHz. Exactly what is meant by the displayed data is now described in the manual, as well.
3. A new feature has been added on the Help menu. It pops up a screen summarizing the standard message exchanges used for minimal QSOs using FSK441 and JT44. No more excuses for not being sure about which message you should send next!
4. The Measure mode can now be left running indefinitely, with its output written to a file. A few individuals have been wanting to use the program for radio astronomy purposes, and the new version provides a minimal facility for doing this.
5. The display screen for the EME Calc utility has been cleaned and tightened up.
6. A few other small niceties, all minor in scope.

As usual, all suggestions and bug reports will be welcome.

-- 73, Joe, K1JT

## **DX Reports November 16 - December 15**

By Art Jackson KA5DWI

Each month we will attempt to let you all know what has been going on 2 Meters and give you an idea what you can expect in the next month.

Please Mail or email your DX reports to me and we will get them in the newsletter.

### **DX Reports**

All dates are based on UTC.

#### **Meteors:**

Early reports indicate the Geminids favored more 6-Meter activity.

#### **Aurora:**

11/20-22, 26-27 and 12/04: Light activity reported from the Central US.

#### **E Propagation:**

No openings, but very short 6-Meter distances were reported on 12/09.

#### **Tropo:**

##### **Better month for minor openings.**

11/19: Enhanced signals AL, TN, & KY, then TN and N.FL

11/20: Enhanced signals E OK to AL, N.AR to LA

11/21: C.MO to N.AL & MN

11/22: CT to WV

11/24: EM09 KS beacon heard in C.CO and C.MO

11/25: N.GA to S.FL

11/29: Trans Gulf, FL to S.TX

11/30: C.IN to N.GA, C.MO to WI, Great Lakes enhancement

12/04: Gulf States enhancement

12/08: Gulf States enhancement

12/08: W.WY to C.CO

12/09: C.IN to W.TN

12/10: C.MO to W.KS, C.CO to C. & W.WY

12/13: E. TN to N.IN, TN to N.FL

12/15: C.MO & S.FL to E.TN

*Sources: DX World 144 Propagation Logger and SWOT Group Page*

## **What to expect December 16-January 15:**

**The Holidays will always produce a surprise opening. Nature's Xmas Gift .**

#### **Meteors:**

**Make the most of this period. It slows down till April.**

**1. The Ursids** on 12/22 is an excellent East/West shower if it produces any meteors. From 0600-1400 local it is at its best, but is efficient all day.

**2. The Quadrantids** on 01/03 is another very good North/South path shower. This is one of few good daytime showers. The best times are 0400-0700 and 1200-1500 *Local Time* for N/S paths. NE/SW paths at 1100-1600 and NW/SE paths at 0300-0700 Local.

### **Aurora:**

Not a good month, but a couple of minor occurrences were still there. Solar wind in early December was high for several days. Look around 12/26-28 and 01/10-06 for possibilities.

The potential source of CME's are coronal holes and an active developing sunspot. Be sure to monitor *Spaceweather.Com* for possible events.

### **Tropo:**

As I have mentioned, an El Nino year is not good for Tropo. A highly active jet stream is not conducive to its development. I thought that the system might be weakening in November. Wrong, it has reared up in December.

The Gulf States normally will be the focal points for future opportunities. Events prior to frontal passage and cool dry weather systems changing to warm ones are the points to look for. You need these systems to not move along. An active mid-latitude jet stream does not help. All tropo conditions result from an upper air high-pressure system capping the release of heat from the surface.

### **E-Layer Propagation:**

We are now in the middle of the Winter "E" season. So far this Fall, 6 Meters has been good. Anything can happen. Keep an eye for "short skip" activity beginning on 10 and 6 Meters.

### **Moon:**

Good days: 12/24-12/28

Bad days: 01/01-02 (Watch Bowl games!)

Based on low sky noise and path loss readings (DEGR) less than 3dB. Bad days are those with a 10db plus reading.

## **Lunar, Solar and Astronomical Events**

**Lunar:** Perigee – 12/29, Apogee – 01/10

Full Moon – 12/19, New Moon – 01/02

**Solar:** Overhead 12/16: - 23.3°S, 01/15: - 21.8°S

Winter Solstice 12/22 0115 UTC

**USAF Predicted Solar Flux Average:**

12/16-01/15: 163 (Up Slightly)

### **Meteors:**

All Showers: 12/16-01/15, 21 Active, 10 Peak  
01/01-01/15, 19 Active, 8 Peak

Minor Showers:

Ursids peak 12/22 1900 UTC

Major Showers:

Quadrantids peak 01/03 2300 UTC

More meteor info at:

<http://comets.amsmeteors.org/meteors/calendar.html>

## **Event & Contest Calender 2003**

January	18-20	ARRL VHF Sweepstakes
June	14-16	ARRL VHF QSO Party
July	19-20	CQ WW VHF Contest
August	2-3	ARRL UHF Contest
September	13-15	ARRL VHF QSO Party

## **SWOT Net Announcements**

The Southwest Oklahoma SWOT Net's NCS, Jim Kennedy has a new call, W5SSG.

The Central Louisiana SWOT Net's NCS, K5MQ Dave Teague now is running a kilowatt amplifier.

## **SWOT Net Reports**

Here are the net reports for October and November. The first figure listed for each date is the number of check-ins and the second is the number of grids.

### **Northern California (Sunday):**

#### **Month of November**

11/03/02...73 11/10/02...74

11/17/02...77 11/24/02...84

116 stations

### **Central Louisiana (Tuesday)**

11/19/02...4/4 11/26/02...1/1

12/03/02...7/7 12/10/02... 8/7

### **Northern Missouri (Monday)**

11/04/02...22/10 11/11/02...21/10

11/18/02...17/12 11/25/02...27/13

### **North Texas (Wednesday)**

11/20/02...35/17 11/27/02...17/12

12/04/02...29/14 12/11/02...No Net

### **SW Oklahoma (Thursday)**

11/14/02...3/2 11/21/02...5/2

11/28/02...No Net 12/05/02...4/1

12/12/02...3/3

### **East Texas (Saturday)**

11/16/02...16/7 11/23/02...17/8

11/30/02...15/7 12/07/02 12/7

12/14/02...14/6

## SIDEWINDERS ON TWO” ENROLLMENT OR RENEWAL FORM

NOTE: Though your membership and number are good for life you must renew annually to receive the newsletter and stay on the active list..

Enclosed find check/MO. to: New member---\$12.00\_\_\_\_\_ Renewal----\$12.00\_\_\_\_\_

Howard Hallman WD5DJT, Sec.Treas.

3230 Springfield Lancaster, TX 75134-1214

**New Member.** I have worked the following members:

Call: \_\_\_\_\_SWOT No.\_\_\_\_\_ Call: \_\_\_\_\_SWOT No. \_\_\_\_\_

Renewing: My SWOT No. is \_\_\_\_\_

Name: \_\_\_\_\_ Call \_\_\_\_\_ Grid Square \_\_\_\_\_

Street address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

Telephone Nos. \_\_\_\_\_ E-mail \_\_\_\_\_

## SWOT NETS

Day	Local Time	Area	Net	Frequency	Net Control Station
SUN	8:30A	TUCSON AZ	ARIZONA	144.250	N7SQN AL
SUN	8:00P	VACAVILLE CA	NORTHERN CALIFORNIA	144.250	W6OMF LARRY
SUN	9:30P	HOLLAND MI	MI SWAM	144.155	K8NFT
MON	7:30P	ALBUQUERQUE	NEW MEXICO	144.200	N5XZM BOBBY
MON	8:00P	COLORADO	ROCKY MT. VHF +	144.220	N0VSB W6OAL N0POH
MON	8:00P	N. CENTRAL MO.	N. CENTRAL MO.	144.250	N0PB PHIL KB0PE DAVE
MON	8:00P	SANDUSKY	E. MICHIGAN VHF	144.250	W8IDT BART
TUE	8:00P	CA.NO CTYS	NORCAL	144.250	KF6BXH BILL
TUE	8:00P	EM31 LA.	CENTRAL LOUISIANA	144.250	K5MQ DAVE
WED	8:00P	IA-MO-IL	TRI STATE	144.250	WZ9D N9CXO
WED	9:00P	NO TEXAS	NORTH TEXAS	144.250	W5FKN BOB
THU	8:00P	CA SO CTYS	NORCAL	144.250	KA6CHJ PAUL
THU	7:30P	LAWTON OK	SOUTHWEST OKLAHOMA	144.250	W5SSG JIM
THU	9:00P	TENNESSE	UPPER CUMBERLAND	144.225	N2BR BOBBY
SAT	7:00A	EAST TEXAS	PINEYWOODS	144.250	K5LOW DON