



SWOT BULLETIN

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

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

VISIT US ON THE WORLD WIDE WEB AT:

The SWOT Homepage: www.swotrc.net
<http://groups.yahoo.com/group/sidewindersontwo>

Bulletin #310

Mar/Apr 2006

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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' email address listed above or you can mail them to Jim McMasters KM5PO, 2805 Shady Lane South, Arlington, Texas 76601.
- **MERCHANDISE:**
Decals and listings available for \$1.00 each for shipping and handling from the Secretary/Treasurer.
SWOT Patches are available at a price of \$4.00 Each + \$.50 for mailing
Badges are available from "The Sign Man", Rick Pourciau NV5A, <http://www.thesignman.com/menu.html>

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Chairman's Corner

From Art Jackson, KA5DWI



The Best Laid Plans of Mice and Men

I survived my first semester at the home of the Mean Green, University of North Texas. My opinion.... It is a school that you send your sons and daughters to get them out of your hair. It is not a great school to continue your education. I find them stuck to rather strange policies and principles and tend to be highly rigid and unwilling to work with you. In other words, it is their way or the highway.

I was somewhat turned off by it. I agree that a college needs to put the foot down to get these kids through school, but you also need to have some flexibility to push and motivate them through the process. I can already see it. I have a strong desire to teach, but the more I work with them, the more I see the desire to be an administrator. God help any school district when they hire me.

Anyhow, the result was that once this last semester ended, with a combination of burnout, holidays and personal

matters to be attended to, there was little if any attention given to matters of this club. I had to take care of my own situations and very little else. Sorry, but that is the way it was.

SWOT Management:

Am I concerned? A little bit but not enough to panic. As long as the officers and managers take care of business, everything is well. And they continue to do so. The only concern still rests with not securing and keeping an active Board of Directors. I admit that this is extremely difficult and mostly impossible because of the demands on time from its members. It is very hard to put us together. This is not a corporation with highly paid executives and directors. We are just a bunch of Hams that enjoy 2 Meter Sideband and the other added modes that come along with it. No one wants to nominate and vote on new ones. Very few have volunteered. Therefore, you now will be drafted!!!!

Qualification based Board of Directors:

What will it take to put together a Board of Directors? It is fairly simple answer if we can get all of you to buy in to it. If you disagree let me know your thoughts.

The qualifications for a Board member are:

1. Hold an assigned, assumed, or elected officer or manager position within SWOT or a recognized Chapter.
2. Or, the individual is the primary or shared NCS for a "SWOT" or recognized chapter Net. Nets that do not carry the SWOT or a recognized Chapter name do not qualify.
3. You have made a recognized and significant endowment of time, materi-

als and/or monetary funds to SWOT.

Qualifications 1 and 2 are automatic. You are all automatically in. You do not have to actively serve, but you are recognized and will be informed on issues as best as we can.

Qualification 3 is both on a volunteered or a drafted basis. Anyone can inform us as to what they may have done or it could be in recognition for a past contribution. It will be based on the majority consent of the executive group (Chairman, Vice Chairman, Secretary/Treasurer). The candidate can decline the nomination.

All current and future executive officers of SWOT will be nominated, elected or re-elected by the newly recognized Board of Directors as soon as it is possible.

The whole ordeal of having at least some kind of structure is important to keeping this thing alive. We have too many good people in SWOT and a fun and exiting part of this hobby to let this thing slip away. We need to stay active and involved in order to continue to promote it. Our past structure of nominations, elections, participation and management was not working very well. I hope that this can put in the process of reversing that trend.

Please let us know what you think of this plan. We are always open to ideas. We need to resolve this once and for all and move on to doing what SWOT is suppose to do, promoting 2-Meter Sideband activities and events.

The Internet and the SWOT Homepage:

We must be doing something right. I get a fairly good number of updates

from current and old members as to their current location and call plus questions about SWOT's current status. What I am concerned about is a lack of links to our site from other groups and *from our own members*.

Personal WebPages are representations and expressions of our personal interests and a display of our egos, which can be fairly large I admit. At least add our Homepage link to your web site. It would be most appreciated. That way others that visit your site can learn more about our hobby by visiting the SWOT Homepage.

Sidewindersontwo Yahoo Group Page:

We still get a good number of Hams interested about Weak Signal on the Yahoo Group site. I invite you all to join the group site as well as participate as much as you can. We have text and voice chat, plus files and photos of interest. It is an enjoyable group site.

The group has had a slow and steady growth since the Spring of 2001, but after an administration audit, I found out that a large number (40 to be exact) of group members had E mail addresses that no longer existed or were not being maintained. All messages to them were bouncing. I really feel that your participation is important and appreciated, but please maintain your Internet information current with the group page.

I deleted the following memberships to the Sidewindersontwo Yahoo group for having Email addresses that were no longer working or no longer existed:

K5LOW	KC0HFL
KC0NRO	
KC7RKR	KD5FVF
KD5HPT	

KD5JKH	KD5QWO
KD5RRJ	
KE5Q	KG4BMH
N5HHS	
N5KKM	N5TIF
N5YPP	
N5ZHU	N9CXO
W4NUL	
W5FKN	W5PJB
W6NS	
W8DQ	W9RVG
WA2WZW	
WA5DRQ	WA5JW
WB4HFR	
WB5CTS	WH6LR

and a few unidentified ones.

Some of you may currently be Yahoo group members with new Email addresses. That is okay. Only bad email addresses were deleted. Of course, all of you are invited to re-join with your new Email addresses. Be sure to identify who you are when you join the group if you are using an email address that does not contain your amateur radio callsign.

Also, remember that you can control how your receive posts on Yahoo. You can set them to Individual Emails, a Daily Digest (preferred method), special notices (Emails from Administrators only) or No Emails.

I want as much participation as you can muster on anything that is of interest to weak signal.

Late Breaking News From Art Jackson, KA5DWI

Update:
We are currently looking at what to do about the SWOT Yahoo Group page. It has been great in acquiring new members and bringing back a few old ones.

The Group Page has always been considered a direct reflection of this organization. Therefore, we have always felt that it should require some level of moderation (deletion if necessary) to posts when they do not follow what is considered to be in the best interests of the club.

Recently, an attempt (actually a request) to keep it within these interests resulted in a series of what would best be called, threatening emails. One such email, went as far to mention names of my neighbors he was going to contact in order to stir up a TVI complaint on me.

With that, our Vice Chairman (John) and I decided that it was best to look into the make up of the Group Page and the opinions from its members on how the Yahoo Group Page should be administered.

After a fair time period, we will decide on what to do with the Group page. I ask you all to participate in the Yahoo Group Poll as soon as possible to help in the final decision.

Vice Chairman's Corner

By John Petersen KM5ES

The past several months have been hectic to say the least here in EM25. Very poor band conditions on 2 meters with very little or no tropo noted. All that November and December brought to the southern plains is no rain, and a lot of fires.

December 10th thru the 18th 2005 was the North American High Speed Meteor Scatter Contest in which I

worked only on 2 meters and made 55 qso's (49 + 6) * 44 unique grids = 2420 points. I took a week off of work and bagged every 2 meter contact I could muster assisted single band, single op and low power (180 watts). It was fun while it lasted. The Geminid's were very good this year for doing meteor scatter operations. I hope that I place in the top 5 for the central time zone this contest.

Our SWOT nets from what is being reported have been somewhat better numbers of checkin's I guess due to the weather getting colder. I would like to thank all of our net controls for a bang up job in running our nets.

I believe that Art KA5DWI has a good point in naming our board of director's and their qualification's. We have tried several times on getting nominations from members with very little input. We have a good organization and I believe that SWOT can grow bigger and have a more attractive organization if we get more input from our active members.

I have been working on getting on 6 meters and built a yagi for the band, moving my radio room into what was my stepdaughters bedroom and painting cleaning and rerouting wires. I am looking forward to finally get out of the garage shack. I plan also in the near future to do some reworking on the website and making it more useful to the members. Until then I hope everyone had a very nice holiday season now it's time for us to look upon this new year with the hope of better band conditions, lots of tropo, and especially some E-skip. Take care, good dx

John Petersen KM5ES #3331
SWOT Vice Chairman

Hamcom 2006

June 9-10/Friday & Saturday

Plano Centre - Plano, TX

Plan now to stop by at the SWOT table to sign-in! It will afford you the chance to meet some new folks or put a face with a voice, plus see some of your old friends. And FYI, the WSJT users have organized a dinner on Friday night at 5:30 p.m. at the Shady

Oak Barbecue and Grill on US 75 not far from the convention center. WSJT users - please feel free to use the SWOT table as a meeting spot and SWOT members - come join in with the dinner if you would like to meet the digital crowd. Hamcom opens at 7:00 a.m. on both days and Commercial exhibitors and table-top vendors will remain open until 6:00 p.m. on Friday and Saturday. Classes will run until 9:00 p.m. both days. Get more details on Hamcom 2006 from their website <http://www.hamcom.org/>

Northern California annual M² swap meet

Fresno, California

Over 160 people attended the annual Northern California M² swap meet held April 1st. The festivities took place at the M² Antenna Factory in

Fresno, California. Food was prepared (hamburgers, hot dogs, baked beans, potato salad, chips, sodas, coffee) for 200 but turned out to be not enough!. AMSAT put on a great program attended by about 50 people. M² brought in a couple of their team to operate equipment in the factory and it was quite a show. The factory and stock room was very clean and impressive.



Sue Hogue (Larry's bride) SWOT #162, with the tray of tickets, Wyatt, of M² with the microphone in front of the crowd.

Northern California annual

M² swap meet

Food and raffle items were supplied by M² with beams from 6 thru 1.2, then HO loops for 6 thru 432. There were also great non ham items of Easter baskets, great set of cups, set of cork screws, platters.



Fantastic auction deals were observed:

- A beautiful Kenwood TM-751 with tone and CW filter, \$200
- Yaesu FT-847 with filters, \$800
- Yaesu FT-736R with 222, 1.2, Tone, and CW filter, \$1350
- FT-736R 1.2 module, \$585
- FT-736R 222 module, \$405



SWOT members in attendance:

- W6BO** Bob 3395
- WA6DAC** Dave 3450
- AC6DC** Dee 847
- W6HOC** Howard 3419
- W6IZU** Ken 3290
- W6JND** Janet 3396
- WA6KTK** Steve 3476
- N6RMJ** Pat 2827
- KA8VAO** Steve 3473
- K6SUE** Sue 162
- W6OMF** Larry 155

The *RockMobile*

Introducing Bruce Brackin, N5SIX

For all you grid hunters and DX'ers out there, here's a guy who has worked more grids while mobile in his truck (also known as the RockMobile) than many of us have from our main base station. Bruce Brackin, N5SIX, has accomplished more on 6 meters than on 2 but he runs both bands from the front seat of his vehicle while moving down the highway! To make things even more interesting, his primary mode of operation is meteor-scatter contacts using the popular WSJT software by Joe Taylor, K1JT! Bruce was just



worked 100 grids or more using meteor scatter propagation. "I've had people ask how you can do mobile WSJT. I tell them I find it much less distracting than voice.

Don't have to do much clicking on 6m (either it's there or it's not) and you just have to glance at the laptop every minute or so" says Bruce.

Bruce got into the mobiling business as a result of both work and family. As an employee of the

Department of Health there were lots of runs into Mississippi while more recently he's making trips into the Delta area. And there were the runs up into Memphis while his wife

Martha was doing 3 years as a post-Doc fellow at St Jude and many grids from family outings to visit daughters located in Kentucky as well as the Dallas-Ft. Worth area. He says there's also a number of portable contacts which were made by "sitting in an apartment parking lot on Mud Island in Memphis on Saturday and Sunday mornings".

Bruce has Degrees from Mississippi State University and the University of Oklahoma School of Public Health. He first served 20+ years with the Mississippi State Department of Health. Prior to public health Grad school, he worked for Mississippi State University as a Technician, Research Assistant and Associate Scientist. Bruce is currently the Epidemiologist with the Mississippi Agromedicine Institute at the University of Mississippi Medical Center. His ham background really started very early as a kid where he enjoyed repairing radios and TV's. Everything went on hold after discovering girls, then college, and then a family. After a scary health situation resulted in angioplasty and stints at age 47, Bruce decided to knock off the extra hours of work and take up radio again. First came boat anchors with numerous tube-type receivers and transceivers brought back to life. After a friend and Elmer suggested he get a ham license, Bruce studied up and came home with a Technician class ticket and the call KD5IUG (December 1999). "After spending many many hours... trying to get the code down, I realized and resigned myself to the fact that it was not likely to happen" states Bruce. "With my fairly profound hearing loss and severe tinnitus on top of that, I decided VHF wasn't bad and the digital modes very well suited for my situation" he says. Bruce made his



first digital contact with “Tip” (Randy Tipton, WA5UFH) in April of 2002 and says “the great advantage of

is in use on 6 meters although Bruce says he still likes the homebrew copper Squalo. On 2 Bruce uses a



pair of KB6BQ loops. The main mount is a “good old WalMart telescoping pool net handle with a dowel rod in the smallest top section to provide

WSJT modes is you don’t have to wait for tropo, E’s or F2”.

stiffness and keep the u-bolts from crushing it” says Bruce.

The mobile setup consists of an IBM Thinkpad PC laptop with an extra battery that gives about 6+ hours of use. The PC is lashed to a homebrew mobile stand to keep it within easy reach and view. A Deluo mouse style GPS and NMEA Time software keeps the timing true on the PC. A little Rascal interfaces the PC to the radio hardware which consists of an FT-100D which on 6 meters runs 6-8 watts to a TE Systems 0510G and 100-120 watts out although “I often cut it back to 75-90 watts” says Bruce. The 2 meter side runs about 6-8 watts to a small TPL brick for about 90 watts out. Preamps are used on both bands, the built in TE Systems amp unit on 6 and an ARR preamp for 2 meters. The brick amps mount on a plywood board on the inside back wall of the cab where they can be reached if necessary. The radio head is remote mounted on the hump and the main box is on the back wall with the bricks. A KB6BQ loop

The main problem encountered was the need to knock down noise sources in the truck. Bruce utilized lots of braid and bonding and better grounds. He also passes along, “if you can’t directly ground something with screw and braid, Joe, K0OG taught me an old instrumentation trick. Fold some braid into heavy duty aluminum foil and then wrap it around the item to be shielded and or grounded. Ground the braid and you are good to go”. Bruce says another problem encountered was the occasional need to pull over and stop to finish a qso before crossing over into another grid. Rules of the “roving meteor-scatter” game declare that the grid to count is the one you are in during the “RRR” (Rogers) sequence...

Bruce passes along the tip: “I think one part of WSJT that operators overlook is the use of JT65 modes for working close in grids with a mobile/rover. I handed 4 grids to AF4O on

one late afternoon run to Memphis which got him over the 100 grid mark for 2 meter VUCC. It was duck soup.”

As for the future, Bruce says he wants to continue fixing up old things and getting them to work again. His latest project was the resurrection of a Tempo/Henry 6N2 amp which took a year to complete. He also says that a mobile-to-mobile contact would be great and that he’s been bitten by the EME bug but “that may have to wait until retirement 3 or 4 years from now”. Knowing Bruce and his motivation, he will accomplish all this and more.

N5SIX six meter statistics:

GRIDS Activated =	25
GRIDS Worked =	35
STATES Worked =	18
Initials Worked =	102
DXCC Worked =	2 (US and Canada)
Grid Combinations =	100 (one or more QSO’s)
Mobile 6m MS QSO’s =	126 (78.8%)
Portable 6m MS QSO’s =	34 (21.3%)
Total Mobile/Rover 6m MS Q’s =	160

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

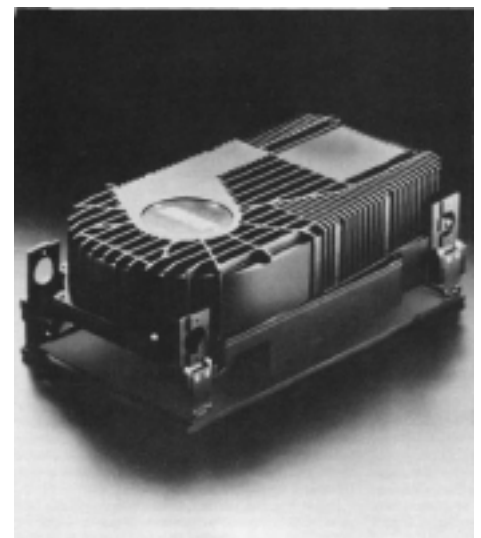
April 2006

Product Update

Single-board nuclear reactor supplies standby power for 12 years

Now available on a full-length plug-in card for IBM PC or compatible computers, the QBX-1 add-on nuclear-reactor card provides backup power for as long as 12 years. When the card senses a power failure, explosive bolts eject moderator and control rods from the reactor's interior within 20 microseconds, bringing the reactor to its fully rated output of 20 kW in less than a millisecond. Over its 12 year active life, the reactor's power decreases by 25% to 15 kW.

Integral heat fins provide convection cooling of the reactor's 500W power dissipation while the reactor remains in its standby condition. If your computer's fans can't furnish 400 cu. ft/sec of forced air for cooling, consider buying the manufacturer's heavy-water cooling jacket and stainless-steel pump module, which fit conveniently under a desk or workbench. Latches on each



Nuclear reactor supplies CPU power during power failure or other power emergencies. The reactor also glows in the dark (as will you), which makes it easy to find your computer.

side of the reactor module let you quickly exchange the radioactive core, should you need to replace it. An optional circular viewing port of lead glass lets you check the reactor's internal mechanical assemblies.

To protect users from undue radiation, each reactor includes a shielding kit comprising five self-stick lead plates and 20 radiation-monitoring film badges. The lead plates mount inside your computer's enclosure and reduce the gamma rays that cause soft errors to floppy-disk and RAM data. For further protection, consider buying the manufacturer's 200-ft extension cords for keyboards and monitors.

Because the reactor can supply more than enough power for your computer, you can sell excess power to your local utility company. An add-on phasing and metering kit (PMK-1) lets you connect your reactor to the local power grid. Each PMK-1 includes standard power-sale contracts and Rural Electrification Board rules and regulations.

Although not required in all localities, each reactor card package includes a standard 23-volume site-evacuation plan. The plan includes blank forms for you to fill in the name and address of your reactor site and then mail to the Nuclear Regulatory Commission. As an option, the manufacturer supplies the plan on 12 MS-DOS-compatible disks in Wordstar format. User-friendly templates let you type in information so that your word processor can create a complete, printed document.

Reactor prices start at \$2.3 million (1). Delivery, seven years ARO.

-Regus Patoff

*Luminescent Electronic Products Inc, Box U-235,
Trinity Site, NM 43210. INQUIRE DIRECT*

Just a reminder to all concerning our SWOT Nets during the storm season in which we are now in. It will be at the discretion of the net controls in the event of severe weather that the SWOT Nets may be cancelled for that particular evening or morning. Especially during storms with a lot of lightning activity. Do not put your self at risk and use common sense.

John Petersen KM5ES
SWOT Vice Chairman #3331
SWOT Net Manager

Event and Contest Calendar:

Apr 04 1900-2300 local ETDXA 144Mhz Sprint
Apr 12 1900-2300 local ETDXA 222Mhz Sprint
Apr 20 1900-2300 local ETDXA 432Mhz Sprint
Apr 28-29 SEVHF Society Conference, Greenville, SC
Apr 29-May 07 NAHSMS 2006 Spring Rally

May 06 0600-1300 local ETDXA Microwave Sprint
May 13-14 2300-0300z ETDXA 50Mhz Sprint
May 19-21 Dayton Hamvention

June 09-10 HamCom Plano, TX
June 10-12 ARRL VHF QSO Party
June 24-25 ARRL Field Day

July 28-29 CSVHF Conference, Bloomington, MN

Aug 05-06 ARRL UHF Contest
Aug 10-Aug 16 SWOT Hot-Rock Shootout
Aug 19-20 ARRL 10 GHz and Up Contest

Sept 09-11 ARRL September VHF QSO Party
Sept 16-17 ARRL 10 GHz and Up Contest

What to expect March - April

Meteors:

Lyrids Apr 22, 15zHR 2 days
Eta Aquariads May 4, 15 zHR, 3 days
Halleyids May 7, 25 zHR 5 days
May Arietids May 17, 15 zHR 3 days

[Full Meteors calendar](#)

Aurora:

Watch: www.spaceweather.com

Tropo:

Watch for:

1. Upper Air High Pressure systems building from Northern Mexico, the Gulf of Mexico or Southern Florida.
2. Pacific Fronts passing across the U.S. with a strong High Pressure ridge wedged between them.
**The first one produces excellent Tropo for the Southeast corner of the US. The second one produces strong North to South paths from the Central Plains to the Midwest.*

E-layer propagation:

E season begins the end of April and continues until August.
<http://gooddx.xs4all.nl/cgi-bin/gooddxvisitors> (list name="eskip-na-early")

Moon:

WSJT JT65 contacts are possible any time of the month however, see the moon-graphs on the last page of the bulletin. Minimum downgrade days are best for CW.

SWOT Net Reports

Here are the net reports for Jan-Mar 2006

Northern California W6OMF (Sunday)

Date	Check-ins/Grids
Jan Week 1	63
Jan Week 2	80
Jan Week 3	84
Jan Week 4	66
Jan Week 5	96

24 stations checked in all 5 weeks
33 checked in 4 times
21 checked in 3 times
20 checked in twice
34 checked in once
14 different grids in three states

February:

35 stations checked in all 4 weeks
27 checked in 3 times
25 checked in twice
35 checked in once
122 different stations
14 grids from CN82 to DM12

March:

37 stations checked in all 4 weeks
27 stations checked in 3 times
30 stations checked in twice
28 stations checked in once
12 grids and 122 different stations

Northeast Missouri N0PB (Monday 8pm)

Date	Check-ins/Grids/States/SWOT
01/02	28 - 17 - 6 - 7
01/09	30 - 16 - 7 - 7
01/16	30 - 14 - 6 - 9
01/23	29 - 14 - 6 - 9
01/30	28 - 15 - 7 - 6
02/06	34 - 16 - 8 - 8
02/13	31 - 17 - 7 - 7
02/20	35 - 19 - 8 - 7
02/27	33 - 19 - 8 - 9
03/06	36 - 16 - 7 - 8
03/13	31 - 19 - 7 - 7
03/20	26 - 16 - 6 - 9
03/27	28 - 14 - 7 - 9

North Texas W5FKN (Wednesday 9pm)

Date	Check-ins/Grids/SWOT/States
01/04	22 - 15 - 12 - 4
01/11	25 - 14 - 12 - 3
01/18	14 - 12 - 9 - 3
01/25	25 - 15 - 14 - 3
02/01	25 - 13 - 14 - 3
02/08	23 - 14 - 13 - 4
02/15	31 - 18 - 18 - 3
02/22	30 - 18 - 15 - 3
03/01	19 - 13 - 9
03/08	22 - 11 - 9
03/15	23 - 12 - 13
03/22	30 - 14 - 14
03/29	28 - 19 - 11

Eastern Oklahoma KM5ES and KD5ZVE

(Thursday 8pm)

Date	Check-ins/Grids/States
01/05	27 - 13 - 3 KM5ES
01/12	no net/weather
01/19	18 - 12 - 3 KD5ZVE
01/26	22 - 9 - 3 KD5ZVE
02/02	28 - 15 - 3 KM5ES
02/16	21 - 9 - 3 KD5ZVE
02/23	27 - 12 - 4 KM5ES
03/02	23 - 15 - 5 KD5ZVE
03/09	35 - 15 - 6 KM5ES
03/16	27 - 13 - 4 KM5ES
03/23	20 - 10 - 4 KD5ZVE

East Tex. Pineywood KM5PO (Saturday 7am)

Date	Check-ins/Grids/States/SWOT
01/07	19 - 09 - 3
01/14	23 - 10 - 4
01/21	18 - 08 - 3
01/28	11 - 07 - 3
02/04	13 - 08 - 3
02/11	18 - 09 - 3
02/18	17 - 09 - 3
02/25	no net/weather
03/04	20 - 09 - 4
03/11	25 - 11 - 5
03/18	16 - 09 - 3
03/25	22 - 10 - 4

Daytona Beach Florida KU4VQ (Wednesday 8pm)

Date	Check-ins/Grids/SWOT
No data available	

Southern Utah Weak Signal Net WA0YPL (Wednesday 8pm)

Date	Check-ins/Grids/SWOT
No data available	

New and renewed SWOT members from Howard Hallman, SWOT Secretary-Treasurer

NU5D	Steve	Temple, TX
W5RVB	Russel	Vernon, TX
N0XZB	Cris	Prairie Village, KS
KA0JLF	Don	Prairie Village, KS
N5POP	Martin	Baytown, TX
KB5SXV	Harold	Lampasas, TX
K6IRZ	Gary	West Point, CA

DX reports Jan - Feb 2005:

From SWOT member W5UWB/EL17ax:

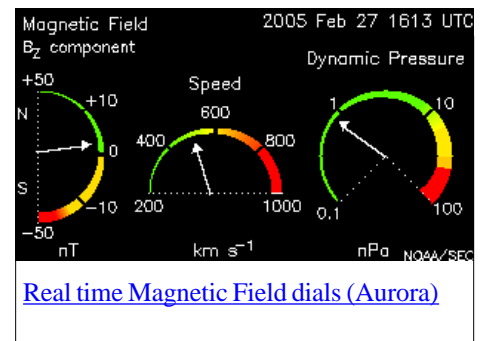
10 GHz back up and running, albiet in a mast in the garage! Soon I hope to get the XYL up the tower and remount it there.

On 222 all I can report is that I usually can hear the Dallas beacon 222.060 in the mornings about S-1 to S-2.

On 6 meters I worked YU1CF via EME using JT65B for initial # 7 on that band. I have 6el and 1KW there.

On 2 meters I worked JH0MHE via EME using JT65B on the 18th of March for initial # 204 using my single yagi.

On 6 and 2 I continue to work meteors using WSJT441 - reliable range on random meteors seems to be in the 800-900 miles range. Aktho' W0VB at 1150 miles seems to always be there. But then he runs 1kw and the same antenna as I do. (21el, 8wl by M2)



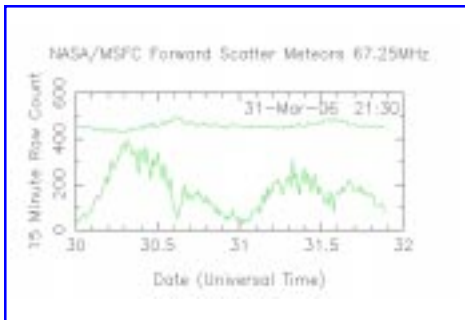
Marshall Space Flight Center meteor counts

Many of us in NA use a site to gauge how random meteors are fairing. The site located at <http://www.knology.net/~suggs/bigradar2.gif> actually belongs to and is maintained by Rob, KB5EX. Rob is with the Engineering Directorate at Marshall Space Flight Center in Huntsville AL. I've communicated with Rob several times to ask about the system. Since I see questions on PJ from time to time about it, I thought I'd paste together and pass along the info he has sent me over the last 2-3 years.

First, the effort is his and several

others and is not an official NASA function. Rob says generating the counting and plotting software was a labor of love and combined his professional work on meteors with his amateur radio hobby. As way of background you might wish to read an article on SpaceWeather.com at <http://spaceweather.com/glossary/nasameteorradar.html> about the set up. The additional info following is liberally paraphrased from Rob's mail.

The main black line is from an audio stream from one receiver using a 2 el yagi pointed to zenith. The



green line is from a second receiver on the same frequency and uses a 6 element yagi also pointed to zenith. Both the black and green lines are from 67.250 MHz, channel 4 with zero offset. The green trace passes through a high-end sound digitizer card which isn't as sensitive as the one for the black line stream. Thus the green trace is less susceptible to tropo ducting of the transmitter signal which swamps the receiver and kills the meteor counts when "the skip is good". Rob says it sees fewer meteors and therefore will show lower counts and not spike as the black line can.

The 2 recently added lines at the top show the total power in each of the receiver/antenna combinations. They found that tropo ducting would cause big carrier(s) to boom in, swamp the receiver, and cause the count to drop due to loss of sensitivity. When the received power line goes up there is a big carrier present and you can expect the count to go down. If the power line stays low, Rob says he can

believe the counts. The color coding is the same as the count lines: black for 2 element zenith pointed yagi and green for 6 element zenith pointed yagi.

To get bearings to the various transmitters, a TV antenna and a rotator was used to direction find on the tropo signals. They have 5 and sometimes 6 carriers in the 3 kHz passband and have been able to track

down the transmitters associated with each trace/ping. The good news is that the TV stations frequency control is bad enough that they don't all line up on top of each other. The

bad news is that the carriers shift around occasionally. He is still working on calibrating the whole system to account for the meteor scatter geometry (meteor trail orientation relative to the rcvr to xmtr path) and would prefer that the carriers didn't move so much but there isn't much we can do about it.

Hopefully the next time you look at <http://www.knology.net/~suggs/bigradar2.gif> you will have a better understanding of the system and its display. If any of you happen to know or run into Rob, be sure to thank him for the many that use his site.

Bruce, N5SIX

Odds & Ends

From Jim McMasters, KM5PO

Here's a couple of interesting things that have tugged at my spare time (ha ha! lately). The first is Google Earth at <http://earth.google.com/> They call this the 3D Interface to the planet and I

would say it's pretty close. It is a slick interface displaying the entire globe from satellite photographs. My boys have made it a quest to search out all the SR-71 Blackbirds all over the world and I think they've found 35... I'm going to challenge you to find really large antenna arrays. The first one to locate is the Very Large Array in New Mexico, <http://www.vla.nrao.edu/> Good Luck!



VLA, near Socorro, NM

Another large antenna to find from the space view is the Northern Cross radiotelescope in Italy, <http://www.ira.cnr.it/>



The Northern Cross radiotelescope

The last item is a new website service to aid us in tropo propagation prediction. It's getting to be the right time of year for this type propagation and I recommend checking this website out if you want to dig in deeper to understand the conditions around this thing we call tropo. I recommend the "PDF to 700mb" setting. <http://weather.uwyo.edu/upperair/sounding.html>



North American High Speed Meteor Scatter 2006 Spring Rally

Sponsor: WSJT Group groups.yahoo.com/group/wsjtgroup/ **Please read the rules carefully as changes in contest categories and awards have been made.**

Rally period: 0000 UTC April 29 to 2359 UTC May 7, 2006. The rally period has been chosen to coincide with the eta-Aquarids meteor shower. More information on this shower can be found [here](#).

QSO Procedure: QSOs can be made using any mode provided they are entirely by meteor scatter. No QSOs within own maidenhead grid square or any of the 8 adjacent grid squares. Exchange is both callsigns, 4 character maidenhead grid squares, and final 'Rogers'.

IMPORTANT: All operators are reminded that exchanging information without the use of meteor scatter *during* the QSO attempt invalidates the contact.

Bands: 50, 144, 222, and 432 MHz.

Categories: Categories are determined as follows: i) single band or multi-band, ii) high or low power (low power < 200 W for all QSOs), and iii) assisted or unassisted. Each of these categories compete against stations in their time zone. Single band operators compete with other single band entrants on the same band.

Rovers: To encourage rover activity, a separate competition category exists for rovers. Rovers do not designate high/low power or assisted/unassisted, but time zones do apply. Rover operators must submit a separate log for contacts made from their home station.

The competition categories are summarized as follows:

Multi-Band, Unassisted, High Power	50 MHz, Unassisted, High Power	144 MHz, Unassisted, High Power	Rover
Multi-Band, Unassisted, Low Power	50 MHz, Unassisted, Low Power	144 MHz, Unassisted, Low Power	
Multi-Band, Assisted, High Power	50 MHz, Assisted, High Power	144 MHz, Assisted, High Power	
Multi-Band, Assisted, Low Power	50 MHz, Assisted, Low Power	144 MHz, Assisted, Low Power	

Multi-band entries may not compete in the single band categories. Log submissions from single band stations on the 222 and 432 MHz bands are also encouraged, but there are no single band competition categories on the higher frequencies.

Operating assisted allows scheduling of QSO attempts during the rally period. Unassisted operation prohibits any scheduling or self-spotting during the rally, as well as any active or passive (i.e., read-only) use of [Pingjockey](#) or other websites. Detailed procedures for unassisted/random operation can be found [here](#). For unassisted entries, schedules made prior to the contest are allowed for QSO attempts over 1300 miles (2092 km). On 222 and 432 MHz, prearranged schedules for any distance are permitted.

Scoring: Assisted: 1 point per QSO on 50/144, 3 points on 222, 10 points on 432. Unassisted: 3 points on 50/144, 9 points on 222, 30 points on 432. Score is QSO points times number of unique grid squares worked per band. Rovers: QSO points x (Unique grid squares worked per band + Number of grids from which at least 1 QSO was completed). This is the standard rover scoring formula for VHF contests.

Assisted operators are strongly encouraged to work unassisted operators. As incentive, assisted operator entries can score unscheduled (ie. unassisted) QSOs with unassisted points. If a station has already been worked with assisted scoring, replace with appropriate unassisted points. Example: K1JT works W8WN on 144 MHz after scheduling on Pingjockey. The QSO is scored with 1 point. Later in the rally, these stations work randomly. The QSO is now scored with 3 points.

Log submission: Participants should submit: 1) A summary and 2) A rally log.

1) The summary should include: i) Your call, ii) Your time zone, iii) Single or Multi-band, iv) Assisted or Unassisted, v) High or Low power, vi) QSOs per band, and vii) Final claimed score. Please show the arithmetic you use to obtain your final score, ie. QSO points x Multipliers = Final Score.

2) For each QSO, the log must show: i) Date, ii) Time (UTC), iii) Callsign of station worked, iv) Grid, v) Band (50, 144, etc), and vi) QSO points.

Submission of the log as an Excel spreadsheet (arrange the columns as shown above) by email is **strongly encouraged**, although any convenient log submission format is acceptable. Electronic spreadsheet logs greatly reduce the chance of clerical errors that occur when the rally committee transcribes information from large logs (> 10 QSOs) into our database. OpenOffice Calc is an excellent free program that almost perfectly mimics Excel. It can be downloaded [here](#). Logs should be emailed by June 11, 2006 to Mike WB2FKO (mph@swcp.com) or regular mail at 3209 Cagua Dr NE, Albuquerque, NM 87110.

Awards: Certificates will be mailed to the following stations:

Top score: Eastern/Central time zones Top score: Mountain/Pacific time zones

In addition, the top North American scores in each of the 13 categories shown above will receive a certificate — a total of 15 certificates will be available. All scores, including the various time zone winners, will be posted on the rally website.

Rally coordinators: Joe (K1JT); Russ (K2TXB); John (N6ENU); Mike (WB2FKO)

SWOT and Selected 2-Meter Nets

Day	Local Time	Area	Net	Frequency	Net Control Station
SUN	8:00 pm	Vacaville, CA	North California	144.250	W6OMF Larry
SUN	8:30 am	Tucson, AZ	Arizona	144.250	N7SQN Al
SUN	8:30 pm	Zebulon, NC		144.220	N1GMV
SUN	9:30 pm	Holland, MI	Michagan SWAM	144.155	K8NFT
MON	7:30 pm	Albuquerque, NM	New Mexico	144.200	N5XZM Bobby
MON	8:00 pm	Colorado	Rocky Mt. VHF +	144.220	N0VSB W6OAL
MON	8:00 pm	Midwestern United States	Northeast Missouri SWOT	144.250	N0PB Phil
MON	8:00 pm	Sandusky	East Michigan VHF	144.250	W8IDT Bart
MON	9:00 pm	Tidewater, VA		144.230	
TUE	8:00 pm	California North Citys	NORCAL	144.250	KN6NG Tony
TUE	8:00 pm	Greensboro, NC		144.225	K4HC
WED	8:00 pm	Central Florida	Daytona Beach Florida SWOT	144.250	W1LVL George KI4FIA George
WED	8:00 pm	Utah, Nevada, Arizona, E. California	Southern Utah Weak Signal Net	144.250	WA0YPL Bill
WED	9:00 pm	Texas, Okla, Ark, Louisiana	North Texas SWOT	144.250	W5FKN Bob
THU	8:00 pm	California South Citys	NORCAL	144.250	KA6CHJ Paul
THU	7:30 pm	Lawton/Duncan, OK	Southwest Oklahoma SWOT	144.250	NH6CJ Mike
THU	8:00 pm	Oklahoma, Texas, Ark, Missouri	Eastern Oklahoma SWOT	144.250	KM5ES John KD5ZVE Jimmy
THU	9:00 pm	Tennessee	Upper Cumberland	144.225	N2BR Bobby
SAT	7:00 am	Texas, Okla, Ark, Louisiana	Piney Woods SWOT	144.250	KM5PO Jim

SWOT Nets in bold

Internet Links:

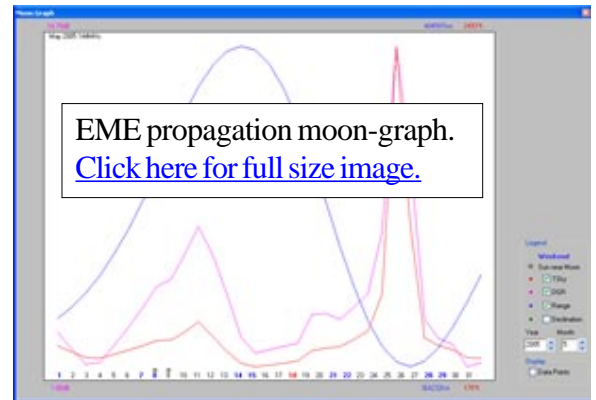
A few links that are of interest to the Weak Signal enthusiast:

WSJT Downloads (Now at version 5.9.3 - 04/01/2006)

<http://pulsar.princeton.edu/~joe/K1JT>

<http://pulsar.princeton.edu/~joe/K1JT/Download.htm>

[Lots of calculations \(from Larry/W6OMF\) Amateur Radio Propagation Studies](#)



EME propagation moon-graph.

[Click here for full size image.](#)

[Moon-graph](#) used by special permission to the Side Winders on Two Radio Club from David Anderson, GM4JJJ.

New moon = sun symbol.

Red data = Sky temperature.

Pink data = Downgrade.

Blue data = Range

Green data = Declination

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 _____

Receive Newsletter By Email: YES _____ NO _____