



SAN BERNARDINO MICROWAVE SOCIETY, Incorporated

FOUNDED IN 1955

A NON-PROFIT AMATEUR TECHNICAL ORGANIZATION DEDICATED
TO THE ADVANCEMENT OF COMMUNICATIONS ABOVE 1000 MC.

W6IFE Newsletter March 2006 Edition

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At the **2 March 2006** meeting, Tech talk on 325 GHz SIS receivers and mmwave reception techniques. The SBMS meets at the American Legion Hall 1024 Main Street (south of the 91 freeway) in Corona, CA at 1900 hours local time on the first Thursday of each month. Check out the SBMS web site at <http://www.ham-radio.com/sbms/>.

Hi Everyone, It looks like the **pre-meeting dinner spot for this month is the Sizzler**. Sizzler
1461 Rimpau Ave Corona CA 92879 (951) 272-8255 Chris, N9RIN

There is a lot to discuss at the meeting. There is club officer nominations, the winter social, does the club need insurance and the usual regular topics. See you at the meeting, Chris n9rin

Last meeting- Welcome to new members Thomas Curlee WB6UZZ of Fullerton and Fred Bongard W6JLL of Torrance. We had visitor Dick Norton ARRL SW Div director to talk about Mexican license problems. Carl Gardenias WU6D the Orange Section Manager was present. Several folks talked about their power amplifiers. Chris N9RIN talked about his Infineon PTF1012 device amp with 4w in and 30w out on 1296 MHz. And one with a PTF1012 that does 9w in and 130 w out put. Wayne had a 10 GHz amp that had 2 w output. John KJ6HZ talked about the GS15B Russian tubes. 30 people present.



Chris, N9RIN 130w 1296 MHz amp.

The FCC has renewed the FCC License for the SBMS Club Station, W6IFE. The paper copy arrived today in the mail. The new expiration date is May 6, 2016.

73s from Ed Munn, W6OYJ, License Trustee 858-453-4563 remunn@earthlink.net

Owens Valley Radio Observatory Project

ON 4 February 2006... Well, guys ... news to report! First, the 10 Gig and 1296 transverters work flawlessly! Great echoes off the Moon. (Thanks Chuck and Bill!) Second, Doug's a grandpa, and is now on his way BACK to LA, leaving the rest of us here to suffer through ... Number three: high winds! We've had to stow the dish and hope that the wind dies down. If it does, we'll be back on the air.

So far, we have managed to work eighteen stations on 1296 SSB in about three hours on the air.

Sooooo, we standby. Probably go have an early dinner and make offerings to the W gods ...

Wish us luck! 73, The SBMS / OVRO / W6IFE gang

-rich KG6JKJ

-chuck WA6EXV

-dennis WA6NIA

-jeff KN6VR

- and doug out there, somewhere K6JEY

Looks like the winds have died down -- for now. We've got the go-ahead to restart the antenna. We'll keep the status updated. Thanks and 73! -dennis WA6NIA Gang,

Well, the winds DID finally die down. We fired the antenna back up and lo and behold, everything worked (once we figured out the auto notch filter was enabled on the 746Pro ... sheesh!). We were receiving good echoes on 1296 as well as 10 GHz. Chuck finally got the opportunity to start the Moon mapping project and we began this task. The returns were weak.. But considering we are running 2 Watts out, we were quite surprised in the results. It looks like the next time we come up here (soon, we hope) we will be able to start making 10 GHz QSOs!!! We are leaving the transverters in place on the antenna, for now. All we will need do is show up and plug in the IF radios. It is late, we are tired, and we still have to pack up to head home in the morning.

The JA-window appeared totally silent on 1296 for the remainder of the contest. Don't quite understand that. We listened across the band, heard no one. Good echoes of our sig, tho.

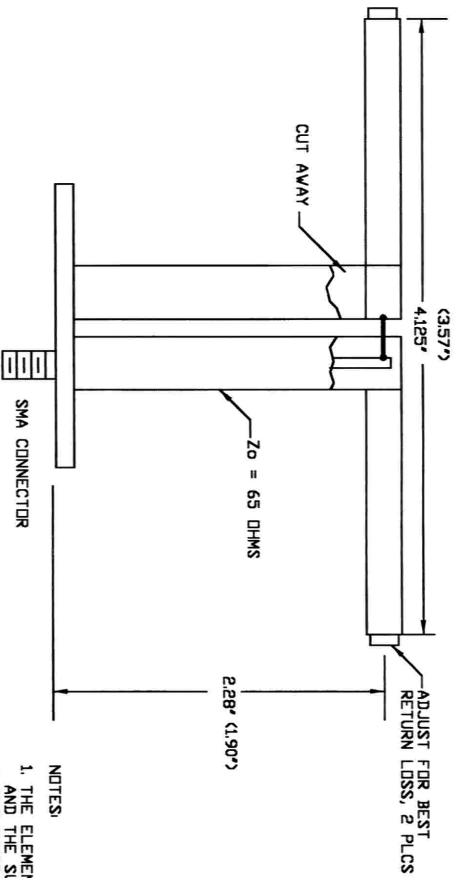
Bottom line is that we now have a solid working system and will be back on the air in the near future. We will keep you posted! 73, W6IFE QRT



upon Chuck, WA6EXV drawing.

Dick, K6HIJ built this feed for OVRO based

REVISIONS			
ZONE	REV	DESCRIPTION	DATE
	1	MODIFY ELEMENT DIMENTIONS	01-16-06



- NOTES:
1. THE ELEMENTS ARE 0.25 HOBBY BRASS AND THE SUPPORTS ARE 0.375 HOBBY BRASS.
 2. THE INNER CONDUCTOR IS 0.116" ROD.
 3. THE BASE MOUNTING PLATE IS 2"x2"x0.0625" BRASS PLATE.
 4. THE SUPPORT RODS ARE SPACED 1/2" C-C.
 5. VALUES IN () ARE FOR THE 1550MHz FEED.
 6. RETURN LOSS MEASURED: -21.5dB (110dB) VSWR)

DVRD/SBMS EME PROJECT		1296MHz/1550MHz FEED ELEMENT	
Chuck Swedblom, WA6EXV		P.O. BOX 605	
Ridgecrest, CA 93556-0605			
SIZE	FSOM NO.	DWG NO.	REV
A			1
SCALE: 1:1		DATE: 01-16-06	SHEET 1 of 1
E-Mail chuckswede@juno.com			

“Wants and Gots for sale”

For Sale. AN/USM-37D measuring/SWR set \$500 Complete with copy of manual; HP-8684B Sig Gen 5.4 thru 12.5 GHz \$350; HP-415B Standing Wave Indicator \$25; HP-X532A Freq Meter \$50; HP-X382 Variable Attenuator \$50; HP-752D Directional Coupler 40db direct. \$50; 4 Advanced Receiver Research 10 GHz T/Rs Various config WIDE BAND with manuals, mic and power cords Offer.

I'm looking for a DEMI 222 transverter.

Plus shipping cost. Thanks for looking, Tim PIRKLN5KI <timn5ki@bellsouth.net>

For Sale- WR42 UG-595 flanges available. Silver-plated brass flanges ready for your waveguide projects for K-band. \$5.00 each plus postage. John, N6AX <n6ax@speakeasy.net>

For Sale wr-90 relays 28v coil beefy size \$5-0 each |Wayne KH6WZ w310-252-7727 H 714-846-1230 E KH6WZ@arrl.net.

Want wr-22 flanges or waveguide assemblies Bob WA6VHS 310-748-1123 rhkendall@earthlink.net

Want wr-22 flanges john n6ax 714-993-0435.

Scheduling.

April- Network Analysis theory and clinic. We need to ask Mel and have him bring his nice analyzer

May-Basics of noise figure measurement and measurement clinic. Dick K6HIJ. Tech talk on noise figure and noise temperature.

June- 24 GHz rig progress. Members share their 24 GHz rigs and I've a tech talk on details of construction and challenges.

July- Directional coupler design and use.

How about a field trip to Cal Tech to their receiver lab? We have been invited. Tune up party

Aug. Get ready session for 10GHz and up contest

Activity reported at the 2 February meeting—Chris, N9RIN had some amplifiers to show and tell; Bill, WA6QYR mucho tambaja en clase el espanol; Dick, WB6DNX cleaned garage from the piles of stuff at meeting; John, N6AX is back building 24 GHz Pcomm stuff; Ed, W6OYJ upgrading the documentation on the Pcomms; Kerry N6IZW converted another Pcomm to verify the documentation; Jeff, KN6VR doing 1296 MHz stuff; Dennis, WA6NIA reported the upcoming weekend at OVRO. Jerry, N7EME JME Engineering donated at 11152 MHz LO to OVRO, Mel WA6JBD donated a 10,224 LO to the project; John WA6BFH is retuning an amp for 10 GHz; Wayne KH6WZ worked on 24 GHz amps; bob WA6VHS worked on his 10 GHz radio and 24 GHz radio; Dick, K6HIJ built a 1296 antenna for OVRO; Juno KG6MOS worked on his Pcomm; Larry, K6HLH did some 1296 work and had contacts on 10 GHz, building a septum kit feed for 1296, building a basic stamp for an eme tracker; Stuart K6YAZ did some 1296 work; and from the ATV link Art KC6UQH did some work on the Santiago beacon, K6JUV built an 10 GHz antenna, N6IEQ reported 1296 activity.

Email stuff-

Subject: [VHF] M² Annual gathering...2006 <http://www.m2inc.com/openhouse2a.html>

You've saved your money, practice your bartering, refreshed your memory from those exceptional DX contact stories, and now it's time to bring them to the annual M2 BBQ, SWAP, and Grip and Grin gathering...

Basic are: 1 April 2006, 0730 to 1300 or so, 4402 N Selland Ave, Fresno, CA

The site above will give you a few of last years pictures and a more detailed sequence of events... So grab your billfold, the gear you want to swap, and a couple good stories to tell all and we'll see you on April Fools day... 73 Larry/Sue

SAN BERNARDINO MICROWAVE SOCIETY (SBMS) 2006 2GHz and up CLUB CONTEST

This years dates and rules can be found at the following link both in PDF and txt formats

http://www.ham-radio.com/sbms/club_test/2ghz_up_test.html

San Bernardino Microwave Society 2GHz and Up Contest for 2006

In the spirit of stimulating more activity in the microwave bands, the San Bernardino Microwave Society (SBMS) members came up with the 2GHz and Up Contest.

The contest period is April 29 to April 30, and runs for 24 hours.

This contest should encourage activity and level some of the microwave contest playing field. The contest would involve activity from 2GHz and up, and center around club activity. Members tally up their scores and add them up with other members' scores to make up a Club Score. The final score is then submitted in one of three categories based on club size.

For the purposes of this contest, you can make up a club of two and call yourselves whatever you like. (However, we don't encourage names that may not appear in print). This is not meant to break up a large club into 25 small clubs, for example, but rather to give isolated stations, roving groups and others a chance to win in a special category.

For instance, several SBMS members have extensive roving stations on multiple bands. Should they enter as a separate club or should they be a part of SBMS? We felt that ordinarily if you are a member of an established club you should enter under that club name. However, if you are not a current member of a club, either join one or start your own. Minimum club size is two members/operators with separate stations. The contest rules appear below. This is still a very new event and we look forward to your comments to improve it.

Go to the SBMS Web site for more details:

http://www.ham-radio.com/sbms/club_contest/2GHz_Up_test_2006.pdf

Send entries no later than 30 days after the contest to be considered.

Send contest logs via snail-mail to SBMS Contest Committee, Pat Coker, N6RMJ, 40916 179th Street, Lancaster CA 93535, USA

Scores will be posted on the SBMS web page. Winners in each of the club categories (Small, Medium, Large) will receive a certificate, suitable for framing.

2006 2GHz and Up World Wide Club Contest

Sponsored by the San Bernardino Microwave Society

1. Object

Worldwide club groups of amateurs work as many amateur stations in as many different locations as possible in the world on bands from 2GHz through Light.

2. Date and Contest Period

The 2006 dates for the 2GHz and Up Contest are **April 29 to April 30,**. Operations take place for 24 hours total on the contest weekend. The weekend begins at 6AM local Saturday though 12 Midnight local Sunday. Listening times count as operating time. Times off must be clearly indicated in the log.

3. Club Entry Categories

Clubs will be divided into three categories by number of active members:

Small = 2-10

Medium = 11-50

Large = 51 and more

4. Exchange

Six-character Maidenhead Locator (see April 1994 *QST*, p 86 or www.arrl.org/locate/gridinfo.html). Signal report is optional.

5. Miscellaneous

Scheduling contacts is both permissible and encouraged. Stations are encouraged to operate from more than a single location. For purposes of the contest, a change of location is defined as a move of at least 16 km (10 miles). A station may be worked again on each band for additional credit by either end of the contact after moving to a new location.

Contacts may not be duplicated on the second day (that is at least one end of the QSO must be from a different location). Contacts must be made over a minimum distance of 1 km.

A transmitter used to contact one or more stations may not be used subsequently under any other call during the contest period. The intent of this rule is to prohibit “manufactured” contacts.

6. Scoring

Distance points: The distance in km between stations for each successfully completed QSO. One point per kilometer (e.g., 10km is 10 points).

QSO points: Count 100 QSO points for each unique call sign worked per band. Portable indicators added to a call sign are not considered as making the call sign unique.

In making the distance calculations, a string (or ruler) and map may be used. However, calculations by computer program are preferred. Several such programs are available, including a BASIC program listing in *The ARRL World Grid Locator Atlas*. For purposes of making calculations, stations are defined as being located in the center of the six-character locator sub-square (most computer programs make this assumption).

7. Multipliers are based on power output

- 1mW to 500mW: 3x
- 501mW to 5W: 2x
- 5.1W and up: 1x

Once you designate your power class, you cannot change it to get larger multipliers. For example, if you start the contest with a 5W rig, and the amplifier breaks, making your power output 2mW, you must calculate your score with a 1x multiplier, not a 3x multiplier.

You can have a different power level for each band.

Log page example from K6ODV: K6ODV is part of a club called The SC6MS, which consists of K6ODV and N6RMJ. At the end of the event, K6ODV and N6RMJ send in both logs with a summary sheet, simply combining the total score from both operators to Enter their club score.

K6ODV Log – SBMS 2GHz and Up Contest							
Call	Grid Square REC	Grid Square SENT	Unique Call/Band 100pts ea	Band GHz	Distance Points (km)	Power Multiplier	QSO Points
N6XQ	DM04MS	DM05DR	1	2	126	1	126
N6XQ	DM04MS	DM05DR	1	3	126	2	252
N6XQ	DM04MS	DM05DR	1	5	126	1	126
WA6CGR	DM05FO	DM05DR	1	2	21	1	21
Totals			400				525

Total score is 400 + 525 = 925

Explanation:

K6ODV uses 20W to work N6XQ on 2GHz, 126km distance (20W = x1) = 126 points

K6ODV uses 5W to work N6XQ on 3GHz, 126km distance (5W = x2) = 252 points

K6ODV uses 5.1W to work N6XQ on 5GHz, 126km distance (5W = x1) = 126 points

K6ODV's 2GHz amplifier blows up, and the rig puts out 2mW, but he makes a QSO with WA6CGR anyway, at a distance of 21km. Note the multiplier still reflects the use of high power – the 2GHz category he chose to enter at the beginning of the contest (20W x1) = 21 points.

There are a total of 4 unique calls, at 100 points each for a total of 400 points
Total Unique Calls per band (400) + Total QSO Points (525) = 925 total score for K6ODV.

Add all club members' total scores to come up with the Total Club Score. All scores are to be submitted to the SBMS Contest Committee as a club total. No individual scores will be accepted for this competition.

Send entries no later than 30 days after the contest to be considered.

Send contest logs via snail-mail to SBMS Contest Committee, Pat Coker, N6RMJ, 40916
179th Street, Lancaster CA 93535, USA

Scores will be posted on the SBMS web page at <http://www.ham-radio.com/sbms/>
Winners in each of the club categories (Small, Medium, Large) will receive a certificate, suitable for framing.



Chris, N9RIN talking about his amplifier.



John, WA6BFH had an a microwave thing that he was looking for information about. He was hoping that it could be moved to 10 GHz.



Wayne, KH6WZ with his 2w 10 GHz amp at the February 06 meeting.

The **San Bernardino Microwave Society** is a technical amateur radio club affiliated with the ARRL having a membership of over 90 amateurs from Hawaii and Alaska to the east coast and beyond. Dues are \$15 per year, which includes a badge and monthly newsletter. Your mail label indicates your call followed by when your dues are due. Dues can be sent to the treasurer as listed under the banner on the front page. If you have material you would like in the newsletter please send it to Bill WA6QYR at 247 Rebel Road Ridgecrest, CA 93555, bburns@ridgecrest.ca.us, or phone 760-375-8566. The

newsletter is generated about the 15th of the month and put into the mail at least the week prior to the meeting. This is your newsletter. SBMS Newsletter material can be copied as long as SBMS is identified as source.

San Bernardino Microwave Society newsletter
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