



## 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 February 2013 Edition

The **February, 2013 SBMS meeting** will have a talk by a local sales rep from Rohde and Schwarz. This should be educational for us. What the industry creates for test equipment is usually the most important parameters for measurement. Just that insight will be valuable to us.

**"A brief history of Spectrum Analyzers and the technologies that drove the changes. From Analog swept instruments to Real Time measurements."**

**Jim Lukes, Application Engineer**

**Rohde & Schwarz, Inc.**

**7700 Irvine Center Dr. Ste 100**

**Irvine, CA 92618**

For evermore, the newsletter is no longer available in print form. If you hear of someone who did not get the word and are members, please send them to our website to contact the Newsletter Editor. (All they have to remember are the words SBMS and Editor.)

### Activities of the San Bernardino Microwave Society As Summarized at the Meeting of 3 January 2013 in Corona

- **Beacons**

- **The 24 GHz Beacon (to go on some southern California mountain)**
  - Mel soldered up a synthesizer from Tony and also will donate a 2 watt 24 GHz amplifier but wants someone else to take it from there.
  - Doug Millar and Dave Glawson volunteered to take it from there.
  - Mel will find a weatherproof box for it

- Dick Bremer will provide the antenna (one of Dan Welch's)
- Dennis Kidder offered to fund the power supply modules.
- The leading contender for location is Johnstone Peak (north of Covina, Glendora)
- **The 10 GHz Standard Beacon (This beacon is to be designed so that it can be duplicated easily using standard parts available.) One of the uses for it will be on the OVRO mount.**
  - There was a discussion on the various dishes available to us for the OVRO mount:
    - Chuck's 10 foot (in a van somewhere) Unknown surface quality
    - 21 foot mesh antenna (Dennis's Inyokern) 5.7GHz or lower
    - Another 10 foot dish (Dennis's Inyokern) OK up to 10 GHz
  - Brian led a discussion on the purpose of the OVRO pedestal project:
    - An unpublished goal is to right away establish interest so OVRO doesn't look for another user.
    - First real goal: members drive there and sit in the trailer to do EME
    - Secondary goal: automated beacon for the moon
    - Third goal: remote EME
  - Doug will organize a work party for spring
  - Dave Glawson has a 40 watt 10 GHz TWT (and supplies)

## Interesting Proposal At the January Meeting

- Tony Long was our speaker but earlier in the meeting he proposed that we consider moving away from Corona. His reasons are as follows:
  - Too far east for most members
  - Distance is the main excuse for new members not joining us
  - American Legion Hall is not a very attractive place to meet compared to an auditorium of an aerospace company or university
  - He offered as examples: Near Field Systems, SpaceX as examples
  - He proposed we send out a survey to confirm the value of this suggestion and to perhaps pick up some suggestions for a place
  - Slightly off point was a suggestion that the tech talk is first followed by an open ended use of facilities at the host site. This would be to accommodate back-east online folks
- Highlights of the discussion in response to Tony's proposal are as follows
  - Alternate or a subgroup meetings were suggested where the serious members would attend all, and the rest would choose to go based on location as well as subject
  - Dave's Lab was suggested as a meeting place, but he has to do some home work on its availability

- Every other meeting at Dave's Lab was suggested
- Random places to meet was suggested
- Doug would like the survey (mentioned above by Tony) to focus on whether there be two places or just one.
- There were several motions, but later withdrawn for further discussion of this very important matter.

## **A Less Controversial Proposal**

- A discussion was started by Walter Clark who brought to the attention of the group the great need for a better audio to support the ATV network and that improving it is a matter of buying Gary a several hundred dollar microphone.
  - Gary pointed out that such an improvement would probably mean more wires and more work on his part.
  - Brian asked Dennis and Gary to get together on some suggested hardware we could consider buying for Gary's use.

## **What the Members Are Working On**

- Dick Bremer  
put his 10GHz rig back together and cleaning out his garage
- Ed Munn  
has heard that four more Endwave transceivers on 24 GHz are available and presumably is interested in buying one
- Courtney  
had a question on L-band beacon availability
- Larry Johnston  
still incredulous about how cheap stuff can get, reported that Amazon Dot Com is practically giving away 2 meter transceivers
- Jason  
was able to get a Qualcomm board working as a receiver with an evening's work.
- Mel Swanberg  
worked on the synthesizer for the 24 GHz beacon and worked on Cactus a bit. His interest at the present is 2.4 and 5.8 GHz digital point to point radios.
- Dan Welch  
has orders for 22 10 GHz antennas. There's more machine shop work for him on the Fox 1 Satellite in January and February
- Bill McNally N6MN  
is acquiring his own 10 GHz rig with help from Dennis and Doug and was able to talk his wife into turning a bedroom into a radio shack
- Dave Clawson  
has been an SWL on 10 GHz and feels very strongly that there's plenty of interesting things going on without leaving home and not just WSPR, but CW as well.

- Jeff Fort  
has done some mechanical work on his 10 GHz rig and fixed an intermittent problem on his 1296 rig.
- Tony  
wanted to second Dave's idea of doing normal ham radio at 10 GHz from home and used the phrase Omni-Night for a weekly checking in at the microwave bands.
- Doug  
is working on an amplifier to go from 30 mW to 1 watt at 3.456 GHz

## Members and Guests Watching Live On the ATV Network

- Manning the TV broadcast equipment at our meeting:
  - Gary Heston who owns the gear and operates the TV equipment
  - Tom Board was on the north camera and Ed on the south camera
- Don Hill reported the following by the end of the meeting there were 20 people on-line

AF6EP  
KE6BXT  
KE6ZC  
N5BF  
N8DEZ  
N8KH  
NO2G  
W6DQ  
WA6EJO  
WA6SVT

**As the number of viewers increases  
this list will be dropped. It is here now  
to remind SBMS of the value Gary,  
Tom, Ed, and Don add to the society. It  
is our most important outreach.**

plus an additional 13 guests

Don Hill reminded me to remind everyone that ATVers can't hear a thing without that mike and that a repeat of the question can be used instead of passing the mike.

## Tech Talk

Tony Long brought in his 7point something GHz FM radar and talked to some power point slides on Greg Charvat's Coffee Can RADAR

The slides are on the website:

[http://www.ham-radio.com/sbms/presentations/KC6QHP/SBMS\\_Small\\_FMCW\\_Radars.pdf](http://www.ham-radio.com/sbms/presentations/KC6QHP/SBMS_Small_FMCW_Radars.pdf)

He is thinking about making the radar available as a kit to go as a shield board for an Arduino.

If you have interesting microwave stories or ads that are of local interest, contact the co-editors of the newsletter

Walter Clark (714) 882-9647 [walterclark@roadrunner.com](mailto:walterclark@roadrunner.com)

Rein Smit [rein0zn@ix.netcom.com](mailto:rein0zn@ix.netcom.com)

---

**Scheduling:**

**February 7 SBMS meeting** Rhode & Schwarz- new technology

**March 7 SBMS meeting –nomination of officers-** Maker Faire San Mateo has some 100 k people attend this show and tell on homemade projects. Come listen to Dennis W6DQ talk about what goes on there.

**April 4 SBMS meeting- election of officers-**Near field antenna range with Dan Slater.

**May 2 SBMS meeting-**ruggedizing your gear by Mel WA6JBD

**June 6 SBMS meeting-** show and tell on the 1 to 5 GHz bands. What does the equipment look like and what can you do on these bands.

**July 4 SBMS meeting-**Beginner microwave talk for other clubs. Dennis, W6DQ will show us how to do such a talk.

**August 1 SBMS meeting-** contest preparation

**Wants and Gots for sale.**

**For Sale:** 30w 1296 MHz PA kit \$50 + \$5 for US shipping Chris Shoaff, N9RIN [cshoaff@yahoo.com](mailto:cshoaff@yahoo.com)

**For Sale:** 10 GHz slotted waveguide antennas \$55 kit, \$80 assembled plus shipping Dan W6DFW [W6DFW@apex-scientific.com](mailto:W6DFW@apex-scientific.com)

**NEED-** HP 8694 8-12 GHz sweeper plug-in for 8690 main frame Chuck WA6EXV 760-382-0709

**Want-** an X-band plug-in for HP8620 sweeper. Bill WA6QYR [bburns@mediacombb.net](mailto:bburns@mediacombb.net)

**For Sale-** Pre-estate sale- Ask Bill what you are looking for and he may have it for a good price. Bill WA6QYR [bburns@mediacombb.net](mailto:bburns@mediacombb.net)

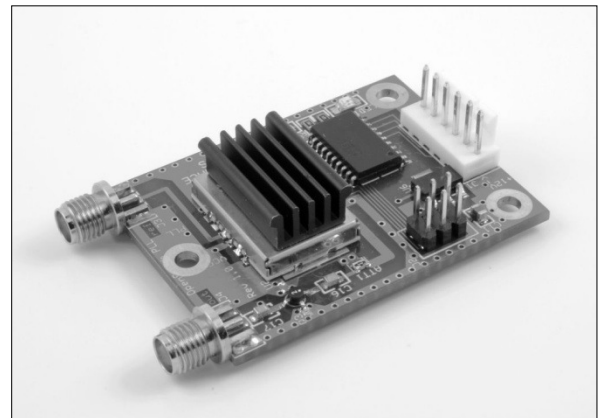
**60 degrees North Electronics Company.** I am starting up a kit making service for assembling certain kits made by Down east Microwave. For those that do not want to make their own kits or maybe it's gotten too difficult, or just don't have the time or want assembled kit faster than DEMI can supply it. This one-man business so I will only be able to build a limited number per month. My price is the same as offered by DEMI assembled, plus shipping which should be medium-size flat-rate priority mail in the US. I am expecting to be able to deliver within 30 days of receipt of paid order. I am not carrying any inventory so this allows shipping time to obtain kits and any other materials, and time to test the finished product plus ship to the customer. At this time I am limiting this to the VHF/UHF 25w Transceiver kits. In a couple months I hope to add three amplifier kits from Communications Concepts, Inc. If there is a something special you want assembled contact me. My professional credentials are at: <http://www.k17uw.com/60NE.htm> Ed Cole



Introducing the **OpenSynth** line of frequency synthesizer kits. Available in standard frequencies of 2556, 2952, 2160, 1152, 3312, 3006 MHz, also available from 400 MHz to 3500 MHz.

- ⤴ Low phase noise
- ⤴ Buffered output
- ⤴ Ultra low noise voltage regulators
- ⤴ Open Source code and design, made to be modified
- ⤴ 2" x 1.5", 12V @ 140 mA typical

**Available at** <http://reactancelabs.com>





Taking orders for end of 2013... 10 GHz  
slotted waveguide antennas \$55 kit, \$80  
assembled plus shipping Dan W6DFW  
[W6DFW@apex-scientific.com](mailto:W6DFW@apex-scientific.com)

If you are a member you  
can have a picture ad here  
yourself. For the time  
being this service is free.

New Feature....

## Mystery Microwave Gismo of the Month



If you think you know what it  
is or want to discuss it, go to  
SBMS Reflector...

([sbms@ham-radio.com](mailto:sbms@ham-radio.com))

The correct answer will not  
be posted here. (It's not that I  
don't want you to know. It's  
that I don't know.)

**The prize?**

Glory; the respect of the rest of the club for how smart you are. (That's all we got to offer.)

## Information About SBMS

The San Bernardino Microwave Society is a technical amateur radio club affiliated with the ARRL having a membership of over 90 amateurs. The focus of the club is microwave activities in the Southern California. Our sister club is San Diego Microwave Group (SDMG). At least one meeting a year are joint meetings. SBMS dues are \$15 per year, which includes a badge and that's about it. The dues are more in the way of a donation to pay for outreach things such as video portals, a bank account, and rent for the building. When to pay is not a matter of remembering. We will contact you by email. Dues can be handed to the treasurer at the meeting, or mailed to the address of the treasurer listed in the banner below.

Meetings are first Thursday of the month, American Legion Hall, Corona. For car pooling from North Orange County call Walter Clark @ 714 882-9647

### SBMS Group Email *The Reflector*

The most active method of information exchange is our group email called the SBMS Reflector. To subscribe fill out the form at the website: <http://lists.altadena.net/mailman/listinfo/sbms> (If you are getting email on the SBMS Reflector now, and you want to write your own message, pull up a recently received message, click on "Reply to List." Don't forget to change the subject line and delete all previous messages as appropriate.)

### The SBMS Website and Newsletter

The SBMS Reflector is ephemeral. There's no record kept. If you have material you would like made a permanent part of the SBMS website or the newsletter, copy to, or originate to:

**Walter Clark** mailto:[walterClark@roadrunner.com](mailto:walterClark@roadrunner.com) or

**Rein Smit** mailto:[rein0zn@ix.netcom.com](mailto:rein0zn@ix.netcom.com)

The newsletter is generated about the 20<sup>th</sup> of the month and broadcast as eMail the weekend prior to each meeting. SBMS Newsletter material can be copied as long as SBMS is identified as source.

## SBMS As A 501c Corporation

### President Chris Shoaff, N9RIN

2911 Calle Heraldo San Clemente CA 92673 phone: 949-388-3121 mailto:[cshoaff@yahoo.com](mailto:cshoaff@yahoo.com)

### Vice President Brian Thorson, AF6NA

7467 Country Fair Dr. Corona CA 92880 phone: 909-226-2015 mailto:[brian.thorson@sce.com](mailto:brian.thorson@sce.com)

### Recording Sec Walter Clark

824 Valley View Fullerton CA 92835 phone: 714-882-9647 mailto:[walterclark@roadrunner.com](mailto:walterclark@roadrunner.com)

### Corresponding Sec Jeff Fort, KN6VR

10245 White Road Phelan CA 92371 phone: 909-994-2232 mailto:[jnjfort@Verizon.net](mailto:jnjfort@Verizon.net)

**Treasurer Dick Bremer, WB6DNX**

1664 Holly St. Brea CA 92821-5948 phone: 714-529-2800 mailto:rabremer@sbcglobal.net

**Newsletter Editor Walter Clark**

824 Valley View Fullerton CA 92835 phone: 714-882-9647 mailto:[walterclark@roadrunner.com](mailto:walterclark@roadrunner.com)

**ARRL Interface Frank Kelly, WB6CWN**

PO Box 1246, Thousand Oaks, CA 91358 phone: 805 558-6199 mailto:wb6cwn@gmail

**W6IFE License Trustee Ed Munn, W6OYJ** (call sign for club beacons)

6255 Radcliffe Dr. San Diego, CA 92122 phone: 858-453-4563 mailto:remunn@earthlink.net.

**Lab manager Dave Glawson, WA6CGR**

1644 N. Wilmington Blvd Wilmington, CA 90744 310-977-0916 mailto:wa6cgr@ham-radio.com

**SBMS Website Editor Rein Smit W6SZ**

8333 Pumalo Alta Loma, CA 91701 mailto:[rein0zn@ix.netcom.com](mailto:rein0zn@ix.netcom.com)

**Webmaster Dave Glawson, WA6CGR**

1644 N. Wilmington Blvd Wilmington, CA 90744 310-977-0916 mailto:wa6cgr@ham-radio.com