



**SAN BERNARDINO MICROWAVE SOCIETY, Incorporated**

FOUNDED IN 1955

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

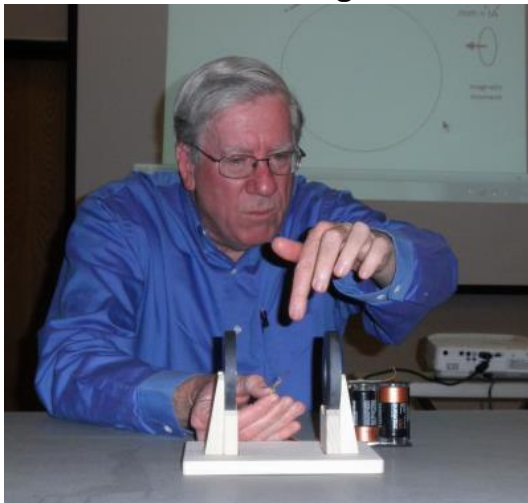
# **April 2015 Newsletter on the Activities of the San Bernardino Microwave Society**

**Walter Clark, Editor**

**Tech Talk for the April 2<sup>nd</sup> Meeting:**

## **Walt Clark: XBee WiFi Modules and an Introduction to Spread Spectrum**

**These \$40 modules are used in pairs to be a radio link version of a USB cable. They use a secure protocol like that used in your router and other WiFi products, but are able to be integrated into electronic projects built by tinkerers.**



Of most interest to the Maker Community is that they can be interfaced with as few as 3 wires to each of two microcontrollers for two-way communications of up to a mile. This talk, however, won't involve XBee's use with microcontrollers. It has to do with using XBees by themselves using their own AtoD and DtoA functions.

There will also be a brief discussion on how spread spectrum is used for low bandwidth communications.

**If you can't make it: watch online: [http://www.batc.tv/ch\\_live.php?ch=2&id=139](http://www.batc.tv/ch_live.php?ch=2&id=139)**

# **Activities at the February Meeting of the SBMS**

**(that would be of interest to the general ham radio community)**

**Presiding: President Chris Shoaff (N9RIN)**

**(19 in attendance... 15 last month)**

## **Guests or Members Not Seen In a Long Time**

Bill Locke N6WL (Baker CA)

## **Old Business**

The Old Business discussion was entirely on the July 2015 tune-up party.

- Ed Munn reported that Kerry Banke made diagrams of the tune-up party equipment and that these diagrams were handed off to Mel Swanberg at this meeting. The new setup is all contained in one box that runs from 12 VDC. The system will be used in San Diego in June and then somehow gotten to SBMS in July.
- Brian Thorson had arranged with Gordon West who lives in Costa Mesa for SBMS to get the \$30 local Costa Mesa rate for renting the park. (\$110 last year.) Thanks to Gordo for doing the legwork with City Hall. The SBMS tune-up will be the last Thursday in July. Dick Bremer will send a check to one of Gordon's assistants and SBMS will receive the permit in the mail.

## **New Business**

- 2 GHz and Up Contest:
  - Chris Shoaff received an e-mail from Ward Silver, N0AX, wanting information for the SBMS 2 GHz and Up Contest. He wants to know if the dates and website information are correct so they can be published in QST.
- Officer Nominations.
  - Marty Woll, N6VI, volunteered to be Treasurer if Dick Bremer wanted to step down. All other sitting officers agreed to continue serving. There were no other nominations. Nominations will remain open until the April meeting when the vote will be taken.
- Meeting Internet Feed
  - Chris Shoaff had tried watching last month's meeting via the internet and wondered if we could have more back and forth if someone on site monitored the chat room. Chris was monitoring the chat room at

that moment and reported several people signed in as ‘guest.’ He suggested that they use either a nick name or their callsign to identify themselves.

- Microwave Update 2015
- Pat Coker announced that the website was up. Rein Smit said there were still some issues and it was not quite ready to take reservations or other official action. The e-mail reflector announcement will be up shortly.
- It was reported that Michelle Thompson W5NYV had set up a Facebook account for MUD information. She also suggests that there may be interest in Boy Scout and Girl Scout merit badge sessions at the meeting where a project could be built. Trainer certification and logistics for such a session were discussed.
- Chris said we need help with vendors and family activities. Doug Millar pointed out several opportunities in Old Town near the conference venue.
- Pat Coker said the Call for Papers was open now and that Wayne Yoshida, KH6WZ, would be sending the announcement to all the magazines shortly. When we see it we are encouraged to post the information to any other connections, lists, etc. we may have. The procedure for papers is on the website.
- The possibility of club or vendor hosted hospitality suites was discussed.
- Servicing and fulfilling registrations in a timely manner will be important. Registration by e-mail or ground mail will be accepted. Courtney Duncan, Jim Blum, Dick Bremer, and Phyllis Kolbly are the registration committee.

Courtney Duncan (N5BF), Recording Secretary
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# What Our Members Are Working On

## **John, KJ6HZ:**

was very glad to be there at the first meeting in years. He has not been able to attend much lately because of work.

He reported that the W1MBA list announced a 10 GHz EME effort towards end of month: 250 W from 2.4 m dish. Many of us should be able to hear this from out 10 GHz stations. He will post (has posted) date/time/frequency information to the SBMS reflector.

## **Dick Bremer WB6DNX (Brea)**

continued cleaning junk out of garage as per the orders of his wife.

## **Wayne Overbeck N6NB (Tustin)**

has been operating fixed in the Central Valley during the January VHF contest and worked the group of six rovers led by Marty Woll several at several locations, even as far down as DM04. Suggested for those only on 10 GHz, that they should experience the others, 5.7, 3.4, 2.4, they are all fun, and different. Most activity in February was fixing what had gotten broken on that outing.

## **Walter Clark (Fullerton)**

has over the last month been using 2.4 GHz WiFi telemetry with model airplanes sending back G loads (most fun) and motor RPM.

## **Courtney Duncan N5BF (Eagle Rock)**

His only microwave activity was checking into K6TSK's Friday 1296.1 MHz net.

## **Dave Laag, W6DL (Moreno Valley)**

as been working on improving his antennas.

## **Pat Coker N6RMJ (Lake Los Angeles)**

has been spending all his free time on MUD preparation.

## **Doug Millar K6JEY (Long Beach)**

has been promoting PI day 3/15/15 and playing with his 10 MHz TCXO from China research. Look for GPS frequency source on e-bay. And use the SBMS reflector to contact Doug for more information. Ge showed the 9870A 10 GHz input frequency converter and a spectrum analyzer which uses a DRO at 9.8 GHz.

## **Rein Smit W6SZ (Alta Loma)**

tried to participate in NASA moon bounce experiment at 2.045 GHz without success. His converter doesn't go that low. He was also putting up a 270 foot loop about 15 feet high in the trees for HF work. He did a little on 8 GHz and worked on the MUD website.

**Brian Thorsen AF6NA**

has been working on roof mounted 10 GHz system (based on the N6VI concept) and having fun working on a 10 GHz antenna project for another member.

**Bill McNally N6MN (Seal Beach)**

is continuing to work Az/El rotator project and a 4 foot dish for 10 GHz

**Mel Swanberg WA6JBD (Upland)**

has been spending all his free time on MUD preparation.

**Marty Woll N6VI (Chatsworth)**

has been getting ready for his March meeting talk at SBMS. His microwave activity consisted of not touching equipment he used in January so it would continue to work for the May event.

**Jim Blum KK6MXP Corona**

is getting interested in Amateur TV and had attended the ATN meeting in Glendora.

**Ed Munn W6OYJ (San Diego) Reporting on the Activities of the San Diego Group (They normally meet 3<sup>rd</sup> Monday at Kerry Banke's house.)**

(I missed his input. Sorry. —ed)



Activity Notes taken by Courtney Duncan (N5BF)
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# **Official MUD Announcement (Wayne Yoshida KH6WZ)**

Microwave Update (MUD), the paramount international conference on Amateur Radio experimentation above 1,000MHz, will take place on Thursday, October 15 to Sunday, October 18, 2015 at the Crowne Plaza San Diego.

MUD 2015 will include technical programs, a banquet and the opportunity to network with fellow microwave ham radio enthusiasts from around the world. This year's event is sponsored jointly by the San Bernardino Microwave Society (SBMS) and the Microwave Group of San Diego (MGSD).

Special hotel rates are available to MUD 2015 attendees. Be sure to mention the Microwave Update 2015 when making hotel reservations.

## ***Papers and Presentations***

MUD is a great opportunity to share your ideas by presenting and writing papers. If you are interested in writing and/or presenting a topic for the 2015 MUD, send an e-mail message to [mud2015-presentations@ham-radio.com](mailto:mud2015-presentations@ham-radio.com) with an abstract or a general idea. This will help the conference planning and scheduling team organize the event.

- Presentation and paper guidelines are posted at . . .  
[http://www.ham-radio.com/sbms/mud2015/mud2015\\_call\\_for\\_Papers.pdf](http://www.ham-radio.com/sbms/mud2015/mud2015_call_for_Papers.pdf)
- The deadline for proceedings submissions is September 1 and deadline for presentations is September 25.
- For more information and the latest updates on MUD 2015, go to:  
<http://www.ham-radio.com/sbms/mud2015/>

## ***Hotel Information***

The hotel is taking reservations now, so take advantage of the discount rate.

Crowne Plaza San Diego  
2270 Hotel Circle North  
San Diego, CA 92108 USA  
Phone: +1-888-233-9527

See Wayne's post at: <http://wayne-yoshida-kh6wz.com/2015/03/18/technical-conference-alert-amateur-radio-microwave-update-2015/>

## ***Microwave Update 2015: Call for Presentations and Papers***

The Microwave Update 2015 program committee is calling for presentations and papers on the technical and operational aspects of amateur radio microwave communications.

Presentations selected for the program may be given in person (preferable) or, if necessary, by proxy. Papers will be published in the conference proceedings (print and CD). The conference will be held on October 16-17-18, 2015, in San Diego, CA.

The deadline for proceedings paper submissions for is September 1. [The deadline for the presentation version of selected papers is September 25.] For those presenting at the conference, we encourage you to include a proceedings paper submission that is text-based and that expands on the outline slides in your presentation. The published proceedings have a wider distribution than just among the conference attendees, so complete and detailed papers will be most valuable to the readers, and introductory or overview papers will be welcomed.

Detailed formatting information for authors appears in the **Guidelines for Papers and Presentations** below. Please e-mail your papers and direct any questions or comments regarding the conference technical program to: [mud2015-presentations@ham-radio.com](mailto:mud2015-presentations@ham-radio.com) Suggested topics - examples:

- Antenna and dish feed design and construction
- Antenna modeling and testing methods
- Attracting “new blood” to the microwave bands
- Beacon design, construction and operation
- Best operating practices
- Broadband & mesh networks
- Commercial and surplus microwave components – adapting and using them
- Demonstration projects for Maker Faires, schools, non-microwave Hams
- Designing for mobile and portable microwave operation
- Effectiveness of various digital weak-signal modes at microwave frequencies
- EME station design and operation

- Homebrew construction methods and tips
- Microwave-band repeaters – voice, video, data
- Propagation characteristics and paths
- Use of test equipment to test, optimize and troubleshoot equipment
- Weatherproofing and or ruggedizing outdoor fixed and portable installations

## **Guidelines for Papers**

The preferred format for papers is MS Word with a 1-inch margin at the bottom and 3/4-inch margins on the top and sides. Text may be in one or two columns per page. Preferred fonts are Arial and Times New Roman. Please do not use unusual or custom fonts. PDF documents will be accepted, but the publisher will not be able to clean them up or correct any errors noticed.

Content must not require any third-party permissions. Photos, drawings and diagrams may be included, either embedded in the text or appended to it. If you can't include or scan your images, you may send prints that will be scanned prior to publishing. Photos and drawings should be no larger than three or four inches on a side. Detailed schematics may be full-page. The publisher will not re-draw any diagrams or drawings, so take care to make the originals as neat and legible as possible.

## **Guidelines for Presentations**

Each presentation will occupy a time slot of 45 to 50 minutes, including questions. We anticipate a single track, so attendees will not have to miss any talks they want to hear. That means talks must end on time to allow the following presenter to set up. A stand / hand microphone and public-address system will be available for those presenters who need it.

The presentation room will be equipped with a projector, a screen and a video cable allowing the use of either the house computer or the presenter's laptop with a standard VGA video output port from the front table. For people whose newer laptops only have an HDMI video port, we will have adapters. If you plan to use an overhead projector, slide projector or some other means of display, you must provide it yourself

Presenters are welcome to bring handouts for attendees and are encouraged to provide an accompanying paper for inclusion in the published Proceedings.



## Upcoming Events (Identified by Marty Woll N6VI)

- May 2-3: SBMS 2 GHz & Up Contest
- May 16-17: Maker Faire, San Mateo CA
- June 13-14: ARRL June VHF Contest –all microwave bands
- June 27 – 28: ARRL Field Day (Demonstrate microwaves to the visiting public)
- Aug. 1-2: ARRL UHF Contest – includes all microwave bands
- August 15-16: ARRL 10 GHz & Up Contest – 1<sup>st</sup> weekend
- Sept. 11-13: ARRL Southwestern Division Convention, Torrance CA (can you offer a microwave program?)
- Sept. 5 - 6: ARRL EME Contest – 2.3 GHz & Up
- Sept. 12-13: ARRL September VHF Contest – includes all microwave bands
- September 19-20: ARRL 10 GHz & Up Contest – 2<sup>nd</sup> weekend
- Oct. 31 - Nov. 1: ARRL EME Contest – 2.3 GHz & Up
- Nov. 28 - 29: ARRL EME Contest – 50 through 1296 MHz – 1st weekend



- <http://www.ham-radio.com/sbms/mud2015/>

**Anyone, (not just SBMS members) . . . if you know of any future 1 GHz and above amateur radio event, please send date and description to the editor:**  
**[walterclark@roadrunner.com](mailto:walterclark@roadrunner.com)**

# Last Month's Tech Talk: Marty Woll N6VI

"Use 'Em or Lose 'Em - Risks and Opportunities on our Microwave Bands"

- Current status of regulatory proposals that could affect Amateur microwave allocations
- Using contests to promote the higher bands to new participants and welcoming applications other than weak-signal and ATV

## Gary Heston's ATV Mobile Studio

Not only can you watch our meetings live (well delayed by 240 milliseconds) You chat to other viewers about what you are watching (or anything else.) Enter the chat room by clicking on the white space on the right of the website described below.

**Just as a reminder, this is how you watch SBMS meetings from home:**

[http://www.batc.tv/ch\\_live.php?ch=2&id=139](http://www.batc.tv/ch_live.php?ch=2&id=139)

Better yet memorize the following

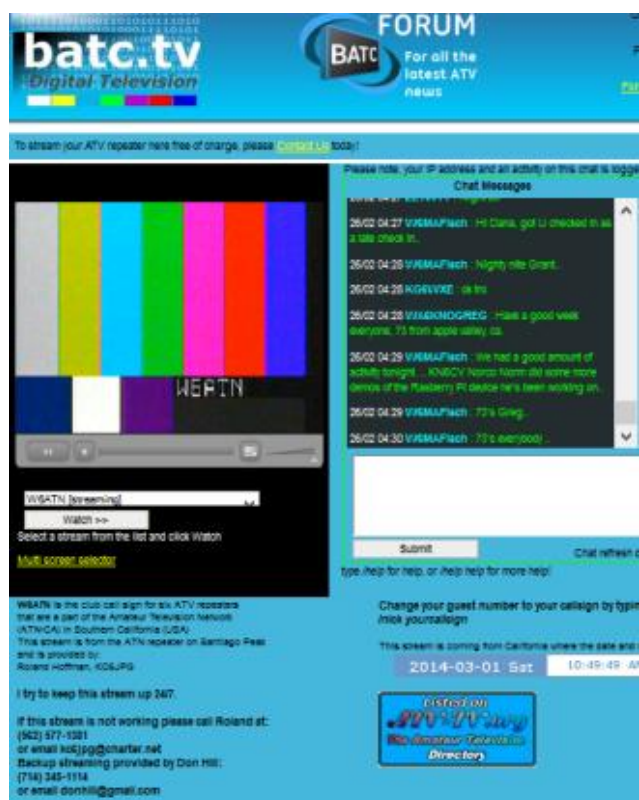
Keywords: BATC TV

and use Google

The TV part is easy to remember. Think of the BATC as batch without the h. It's a British website (that's the B) Once you are there, and logged in, on the right choose "Repeaters" and then on the left, you have to pick a stream. The stream to choose is: **W6ATN**.

Memorize W6ATN as ATN in California. W6ATN is the club call sign for six ATV repeaters that are a part of the Amateur Television Network in Southern California. (ATN-CA)

Gary Heston's mobile studio beams its signal to the ATN repeater on Santiago Peak which is provided by: Roland Hoffman, KC6JPG



## Checking in Those Watching on Gary W6KVC's ATV.

- Don, KE6BXT, Mission Viejo.
- Reported from the chat room: AD0CX, K4QF, K6PFL, KE6BXT, KF6PGT, KJ6HZ, N8KH, N9RIN, W4ZST, W6IEE, W6QIW, W6TE, WA6EJO, WA6SVT, WA8RJF,

# Microwave Mystery Gizmo of the Month



If you would like to say a few words about this gizmo, use the SBMS Reflector by sending a letter to the following email address:

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

If you don't have an account, sign up at this website:

<https://lists.altadena.net/mailman/listinfo/sbms>

Or write to those who manage the list at: [Sbms@lists.altadena.net](mailto:Sbms@lists.altadena.net)

## Needs, Wants and For Sale (Updated 28 March)

- **For Sale from Bill Burns:** Bill will only rarely come to the meetings, so if you want any of this, please contact him by phone or email.

phone: 760-375-8566 email: [bburns@mediacombb.net](mailto:bburns@mediacombb.net)

His address is: 247 Rebel Road Ridgecrest CA 93555

- Radio Shack disk cone antenna 50MHz-1200 MHz \$20
- TVRO dishes 10 ft, 6 ft, and 5 ft free
- 6 ft and 4 ft 19 inch racks free
- Leader LBO514A 15 MHz Dual trace oscilloscope \$75
- HP 5381A 80 MHz counter \$10
- 8 watt 5 GHz TWT's with power supplies \$50 each
- copper wire enamel coated #14 many feet coils \$10 each (coils are like a foot in diameter and maybe a dozen turns or so...30 or 40 ft long wire)
- **For Sale from Doug Millar (drzarkof56@yahoo.com):**
  - a Rohde and Schwarz 309 10-18GHz Signal Generator in perfect shape. It is digitally synthesized and has a pull out instruction card. It has internal modulation and will also sweep. Will accept \$900.
  - I also have an HP432 power meter, cable and head (478) in working order for \$100



# Member Ads

## Sixty North Electronics

### Kits Made by member KL7UW

Let Ed Cole assemble your Down East Microwave kit. For kits in stock, he can deliver an assembled unit to your custom design preferences within 30-days of a paid order. **His prices are the same as you pay DEMI for an assembled transverter, but much quicker delivery time. And comes with 90-day written warrantee on labor (guaranteed to work)!**

Shipping for a transverter is typically that of medium-size flat-rate Priority Mail anywhere in the USA.

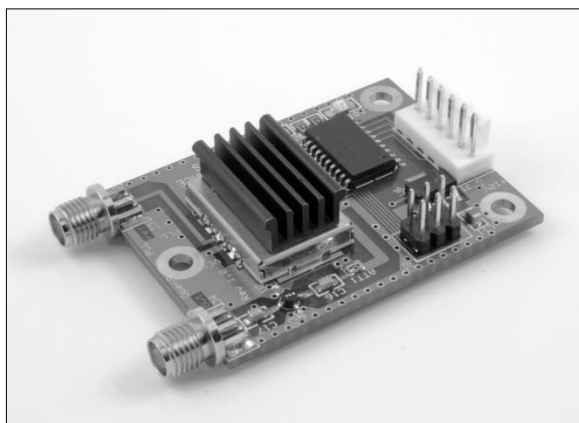
For examples of his work click on... <http://www.kl7uw.com/kits.htm>  
Contact him at [kl7uw@acsalaska.net](mailto:kl7uw@acsalaska.net)



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For the time being this service is free.  
eMail editor at: [WalterClark@roadrunner.com](mailto:WalterClark@roadrunner.com)



## 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. The Corresponding Secretary will contact you by email and will then hound you like your own personal PBS telethon. 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, 7:00 PM at the American Legion Hall, Corona. For carpooling from North Orange County call Walter Clark @ 714 882-9647

### ***The Reflector (SBMS Group Email)***

The most active method of information exchange is our group email called the SBMS Reflector. You don't need to be an SBMS member to participate. 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 text as appropriate.)

### **The SBMS Website and Newsletter**

The SBMS Reflector is ephemeral. There's no record kept. The Newsletter has a slightly longer life. It is sent to members and past issues are recorded in the website. It's URL is: <http://www.ham-radio.com/sbms/> You don't have to memorize that or write it down, just enter SBMS into any internet search engine.

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

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

The newsletter is created about the middle of the month and broadcast as a link inside an eMail letter to the members. This is mailed to you on the weekend prior to each meeting. SBMS Newsletter and website material can be copied as long as SBMS is identified as source.

### **Official Address**

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