



## SAN BERNARDINO MICROWAVE SOCIETY, Incorporated

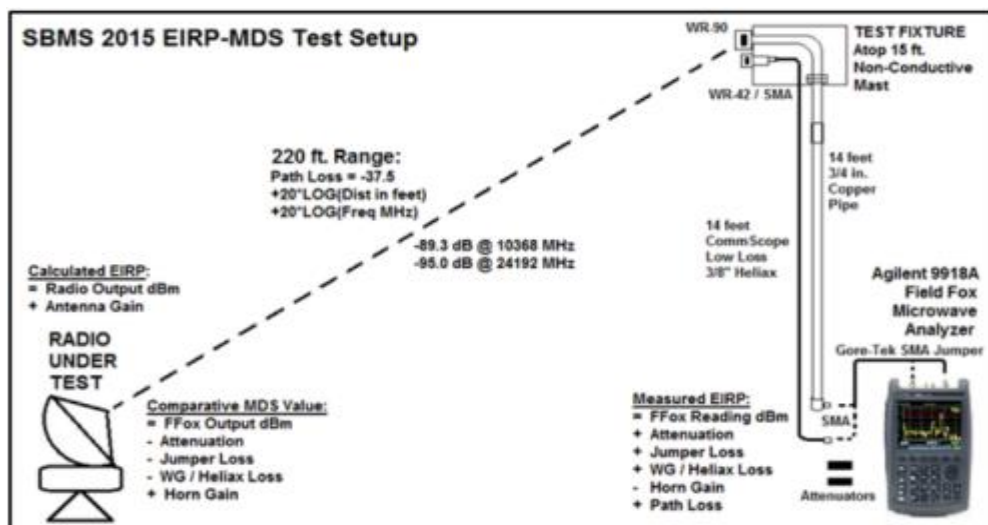
FOUNDED IN 1955

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

# November 2015 Newsletter on the Activities of the San Bernardino Microwave Society

Walter Clark, Editor

## November 5th Tech Talk



## NEXT GENERATION SBMS MICROWAVE TUNE-UP SYSTEM

The next generation microwave tune up system needs to last SBMS a decade or so, and there is an experienced and highly qualified design team in place to make it happen. The design constraints and criteria are more operational than technical. There are also proposed improvements to the legacy (old) system that can be implemented. At the November 5th SBMS meeting, Brian, AF6NA will review the system that served SBMS for the last 15 years and present some of the important design constraints and opportunities facing the team in the next few months. There will be opportunity for input from those in attendance.

## **Come and join SBMS at the Meeting on Thursday November 5th**

If you can't make it: watch online through Gary Heston's mobile video facility W6KVC by way of the internet out of England: [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 September SBMS Meeting** (that would be of interest to the general ham radio community)

### **Business Meeting**

Presiding: Chris Schoaff N9RIN

(17 in attendance... 18 last month)

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

Mike Collis, WA6SVT Crestline (On the board of Amateur Television Network)

Roland, Hoffman KC6JPG Rancho Cucamonga "live" (Also active on ATN)

### **Old Business**

- None

### **New Business**

- None

### **ATV and Internet Check-ins**

- By way of Cathedral City, live on TV Earl Haltman KJ6DQR
- By way of internet in the BATC TV Chatroom: Kenneth Hendrickson, N8KH

**The remainder of the meeting was devoted to Microwave Update 2015 (MUD) preparations led by MUD chair Pat Coker N6RMJ.**

Courtney Duncan (N5BF), Recording Secretary
---

# MUD Picture Gallery

## From Wayne Yoshida

2015 Microwave Update Recap

<https://www.linkedin.com/pulse/2015-microwave-update-recap-wayne-yoshida?articleId=6062734604580765696#comments-6062734604580765696&trk=prof-post>

(just click on the links)



**From Michelle W5NYV** (she, who knows the power of the dark side)  
the meeting rooms and people shots:

<https://www.flickr.com/photos/w5nyv/sets/72157657755991263>

Ed Munn wins award:

<https://www.flickr.com/photos/w5nyv/sets/72157660096592195>



## What Our Members Are Working On

### **Doug Millar K6JEY**

has a new 500 W 1296 amplifier.

He showed various features on Brian's FieldFox to the camera including various brightness settings such as night vision. This expertise is because Doug just stole one for himself. (A negotiation for a price that is worth an article by itself.)

Doug had student guests over for the 10 GHz contest. He worked them all and gave them QSL cards for a QSO count of five.

### **Dave Laag W6DL: Marino Valley**

made lots of QSOs in the 10 GHz contest.

Dave ended an argument with an announcement that dry plywood at 9.6 GHz is 1 dB per 3/8 inch and 20 dB wet. Loss at 47 GHz is 8 dB per 3/8 inch.

### **Marty Woll N6VI (Chatsworth)**

worked only the Sunday of the September 10 GHz and Up contest weekend.

He worked us all who were on and had fun.

Marty brought in "Amateur Radio Parity Act" support petition letters for California Senators Boxer and Feinstein. These were signed at the meeting but those of you who weren't at the meeting and would like to participate can go to

<http://www.arrl.org/current-legislation>.

### **Bill Locke N6WL (Baker CA)**

has been doing UHF and VHF at this point but is working on a 10 GHz transceiver.

He's collecting parts: antenna, waveguide, feed horn, GPS disciplined oscillator.

Is only missing a few items such as a waveguide switch.

### **Chris Shoaff N9RIN (San Clemente)**

announced JPL Open House October 10-11, 2015.

### **Brian Thorson AF6NA (Corona)**

made about 16000 points in the 10 GHz and up contest.

### **Jim Blum KK6MXP: Ontario**

did both weekends of the 10 GHz contest; the second roving with WA6JBD.

He's very proud of the way his rig is easy to setup in a short amount of time.

**Courtney Duncan N5BF: La Canada**

had 193 QSOs and > 40K points in the 10 GHz contest, counting both weekends.

**Walter Clark: Fullerton**

showed a 2.4 GHz XBee telemetry transmitter for a model airplane and a GPS receiver (1.5 GHz). He showed how much simpler the digital version of the RF link is hardware-wise compared to the analog setup.

Walter now hosts the technical adjunct discussion group of the Fullerton Radio Club, having taken over from Dennis Kidder, W6DQ. (The guys are leaning to drink wine.) They talk about radio mostly, but also other topics of science and engineering. Members like to show off their rigs so Dick Palmer WB6JDH came over to Walt's house and put up a G5RV dipole antenna using the slingshot over a tree method. The coax emerges from living room where they meet.

**Ed Munn W6OYJ: San Diego**

reported on activity in the 10 GHz contest. First weekend he operated only Saturday from San Miguel with access provided by Greg K6QPV at 760 feet above sea level near the border. Even closer, was at Mt. Otay, Saturday of the second weekend which is on the edge of coverage to Baja.

He made a few contacts up the coast past Santa Barbara and the central valley. On the final day went to Soledad (with N6IZW and K6VCR) two miles from his house and did well from there.

**Pat Coker N6RMJ: Lake Los Angeles**

did well the first weekend of the 10 GHz contest then put a lot of effort into second weekend and doubled what he had done the first weekend.

His final score is around 59,000 with lots of QSOs made from 22 (twenty two) roving stops over the two weekends.

Pat made a 280 mile WSJT contact under conditions where he could not copy CW. WSJT worked the first time.

**Mike Collis WA6SVT: (Crestline)**

doing wideband microwave between Potosi and Jones peaks and other paths and a link back to his house on 5 GHz. He was with Kevin Jacobson AD7OI the day before the contest and they decided to try ATV microwave. He got to Snow Peak at 183 miles with a Yagi including sound picture and color, and other mountains.

**Tom Board WB6HYH: (Rancho Cucamonga)**

has a 2.4 G transmitter working great; now trying to get the antenna to work.

**Don Hill KE6BXT: (Mission Viejo)**

attended last month's ARRL convention in Torrance and showed off his MEMS equipment on a 49 mile shot to Pleasant's Peak.

**Roland Hoffman KC6JPG: (Rancho Cucamonga)**

two weeks ago got antenna connected to amplifier and exciter of ATV rig but could not get into the repeater due to eucalyptus trees in the way. But he is on the air on ATV on 0.434 GHz

**Gary Heston W6KVC (Running Springs)**

plans to attend the January Quartzfest sponsored by the ARRL at Quartzite. Quartzfest features tech talks and radio activities. Participants camp out for a week. Will be doing ATV of the tech talks there just like the monthly coverage here.

At 7:35 Gary's ATV transmissions of the SBMS Meeting ended due to the financial nature of MUD preparations to follow.

Courtney Duncan (N5BF), Recording Secretary

**Extended Activity Report from Doug Millar**

The JEY group (students) was on 1296MHz EME on local Oct 30 for the ARRL contest. We had a number of folks helping- among them Rein W6SZ, John KJ6HZ, Paul, and Bill N6MN. Rein used a dongle receiver off of a splitter from the preamp to monitor the band. It worked extremely well and picked up most of the CW and JT signals. We used about 250 watts. We made 10 contacts and could have made more if we were willing to stay up past 2am. (We weren't,) Conditions were excellent and the moon was in the clear and bright. We will be on for the DUBUS events next spring.

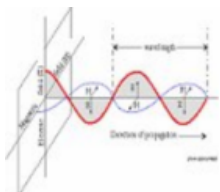
Myself and Bill, N6MN are working on 13cm EME stations and are closing in on the final wiring. On the air, we think by the end of the year. The design should be able to be portable.

I recently got a HP N9912A Fieldfox, with six of the key add ons. It is quite a machine and very handy. As Rein observed, it can replace a whole workbench of gear. The tracking generator oscillator can be unlocked and used as a precision signal source over its entire range. Of course they do have a new 50GHz model with the same features, in case your rich aunt died.

73, Doug K6JEY

## Upcoming Events

- Nov 28 - 29: ARRL 50-1296 MHz EME Contest second weekend
- Starting now: First Call for Papers and Presentations for **VHF Super Conference**  
April 15-17, 2016, near Washington, DC.



### VHF Super Conference

Sponsored by Southeastern VHF Society, North East Weak Signal Group and the Mt. Airy VHF Radio Club. Hosted by the Grid Pirates Contest Group and Directive Systems and Engineering

Details for submission will be on the website: <http://vhfsuperconference.com/>

Looking for presentations or papers on VHF, UHF, microwaves, and higher; all aspects welcome - operating, contesting, home-brewing, software, EME, surplus, antennas, test equipment, amplifiers, SDR, 47 GHz super-regen, whatever.

This is the first call, so you have time to think about it, heat up your soldering iron if needed, take pictures, and win the January contest... N2CEI and W1GHZ will be coordinating the Proceedings.

**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)

## Spectrum Defense Update (Marty Woll N6VI)

Barely a week after addressing the audience at Microwave Update 2015, ARRL's Chief Technology Officer Brennan Price N4QX and his staff were off to Geneva, Switzerland for the World Radio Conference, where spectrum allocation decisions for the entire planet are made. They will be there for over five weeks, working to defend Amateur Radio interests – particularly in the microwave bands - and to advocate for some additional space in the 5 MHz band. This is the capstone of years of effort they have put into preparatory meetings and negotiations with U.S. government and industry representatives, our ITU Region 2 partners and International Amateur Radio Union representatives around the world.

This important work is just one part of ARRL's advocacy efforts on behalf of Amateur Radio. Please support the League with your continued membership.

# No Tech Talk Last Month

(The whole evening was devoted to organizing of the MUD conference.)

## Gary Heston's ATV Mobile Studio W6KVC

Not only can you watch our meetings live (well delayed by 240 milliseconds). You can chat with 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.

**This is how to 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 then 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.

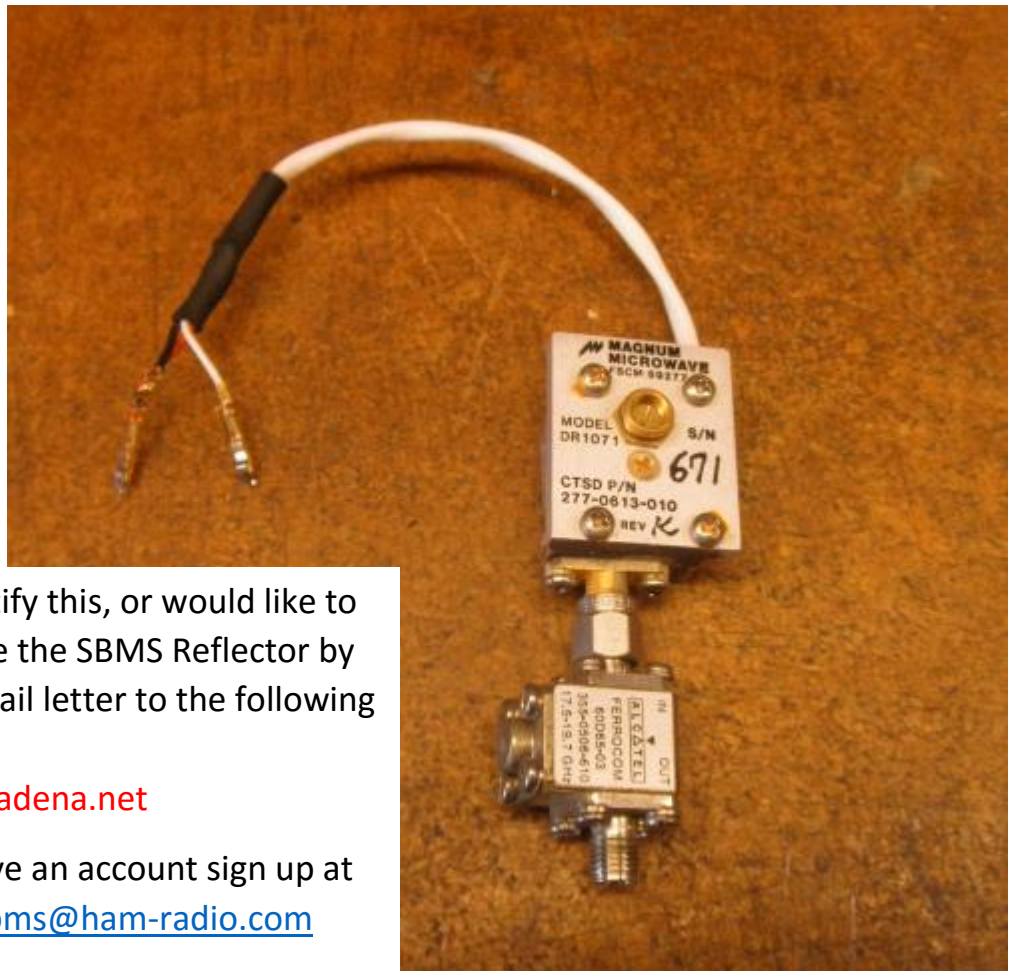
W6ATN is the club call sign for six ATV repeaters that are a part of the Amateur Television Network in Southern California. (ATN-CA)

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





## Microwave Mystery Gizmo of the Month



If you can identify this, or would like to discuss this, use the SBMS Reflector by sending an e-mail letter to the following address:

[SBMS@lists.altadena.net](mailto:SBMS@lists.altadena.net)

If you don't have an account sign up at this website: [sbms@ham-radio.com](mailto:sbms@ham-radio.com)

## **Needs, Wants and For Sale** (Updated 2 November 2015)

- **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

- TVRO dishes 10 ft, 6 ft, and 5 ft ← **free**
  - Long lengths of heavy tower guywire with insulators ← **free**
  - Lengths of aluminum tubing, ½ inch to 3 inch diameters ← **free**
  - Earth screws for anchors of guy wires ← **free**
  - 1296 antenna 8 bays of 3 element Yagis \$10
  - Pickup bed trailer with camper shell- licensed. \$250
- **For Sale from Doug Millar (drzarkof56@yahoo.com):**
    - 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)

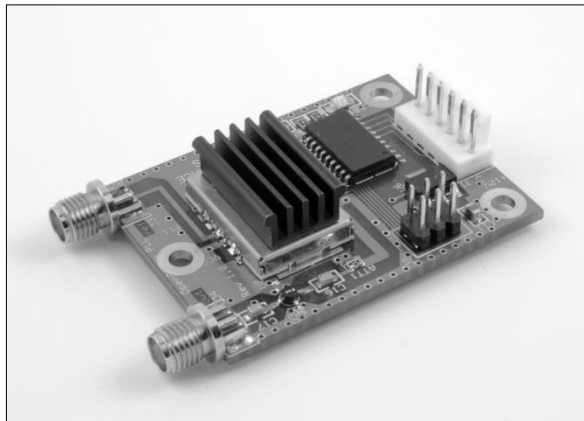
## REACTANCE LABS



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>



If you are a member you can have a picture ad here yourself.  
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**

**San Bernardino Microwave Society**

417 South Associated Road #146

Brea, CA 92821

# Contact San Bernardino Microwave Society (SBMS)

**President Chris Shoaff, N9RIN**

2911 Calle Heraldo San Clemente CA 92673 phone: 949-370-6249  
email: [cshoaff@yahoo.com](mailto:cshoaff@yahoo.com)

**Vice President: Brian Thorson AF6NA**

7467 Country Fair Dr Corona, CA 92880 phone: 909-226-2015  
email: [brianaf6na@gmail.com](mailto:brianaf6na@gmail.com)

**Recording Secretary Courtney Duncan N5BF**

4402 Rockmere Way  
La Canada, CA 91011 phone: 818.957.8455  
email: [courtney.duncan.n5bf@gmail.com](mailto:courtney.duncan.n5bf@gmail.com)

**Corresponding Sec Jeff Fort, KN6VR**

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

**Treasurer Dick Bremer, WB6DNX**

1664 Holly St. Brea CA 92821-5948 phone: 714-529-2800  
email: [rabremer@sbcglobal.net](mailto:rabremer@sbcglobal.net)

**Newsletter Editor Walter Clark**

824 Valley View Fullerton CA 92835 phone: 714-882-9647  
email: [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](mailto:wb6cwn@gmail.com)  
**W6IFE License Trustee Ed Munn, W6OYJ** (call sign for club beacons)  
6255 Radcliffe Dr. San Diego, CA 92122 phone: 858-453-4563  
email: [remunn@earthlink.net](mailto:remunn@earthlink.net).

**Lab manager Dave Glawson, WA6CGR**

1644 N. Wilmington Blvd Wilmington, CA 90744 310-977-0916  
email: [wa6cgr@ham-radio.com](mailto:wa6cgr@ham-radio.com)

**SBMS Website Editor Rein Smit W6SZ**

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

**Webmaster Dave Glawson, WA6CGR**

1644 N. Wilmington Blvd Wilmington, CA 90744 310-977-0916  
email: [wa6cgr@ham-radio.com](mailto:wa6cgr@ham-radio.com)