



SAN BERNARDINO MICROWAVE SOCIETY, Incorporated

FOUNDED IN 1955

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

# San Bernardino Microwave Society Newsletter

*before the Meeting* Sizzler's (again... sheesh)

## Special Event for the February Meeting

Bill Burns has been offering his stuff for free since forever. Well finally it's going to be here for the meeting. More on page 2.

## Tech Talk for the February 1st Meeting . . .



Dr. Doug Millar, K6JEY, has built many Amateur microwave systems including a 150 GHz radio. A past SBMS President, Doug has taken his talk on "Sidewalk EME" all over the world. Doug tells us about his latest project:

"About a year ago I realized I had most of the parts for a 10GHz EME station except for a few really important ones. The biggest was a way to point at and track the moon electrically. It dawned on me that a Meade LX series 12" telescope mount had the load carrying ability and excellent tracking. I found an LX90 mount on EBay and in short order got a 30" Cassegrain dish and a preamp. I was well on the way to having an EME station. However putting it together took much longer. Come to the SBMS meeting on Feb1 to hear the interesting details of what it took to get it going."

As always, the best seats are at the meeting in Corona, CA. But SBMS has an online audience, as well.

## **Free Stuff**

John Kitchens is a new friend to our friend Bill Burns. John has loaded it all in his truck and will be delivering to the meeting for us free!!!

John is new to the club but he certainly will be making lots of friends fast with his delivery.

John Kitchens WA6VUA has a home station in Big Bear. He works with a couple of other volunteer groups helping get kids on the air.

## **Activities of the Christmas SBMS Meeting** (... which would be of interest to the General Ham Radio Community)

Since neither the secretary nor the newsletter editor was there at that meeting there was no one there who knows how to read or write. Maybe next month.

## **Old Business**

- none

## **New Business**

- none

## **A Special Note of Thanks for our participation in the IEEE Event**

(Sent to Rein)

Thank you all for contributing to the success of RWW2018 at the Hyatt Regency Orange County, CA. Whether you attended one or all of the technical meetings and social events, we would like to thank you for your participation and contribution to the success of the conference. Lyle Photography, the official photographer of RWW2018, has graciously documented our meeting and provided access to their photographs. Please find their RWW2018 photographs at the following link:

<http://www.lylephotos.com/f604157229>

# What Our Members Are Working On

(Remember you can watch these reports live on <http://atn-tv.org/live>)

## Activity Reports

Since neither the secretary nor the newsletter editor was there at that meeting there was no one there who knows how to read or write. Maybe next month.

## Special Note Sent in by Our Secretary Courtney Duncan (he emailed it in)

I came down with the flu Monday evening. [and will miss the January meeting] Yes, "Happy New Year." And have been laid up ever since. I feel a little better today but not good enough for a trip to Corona, unfortunately.

My own activity report is that the results from the 2017 ARRL and DUBUS EME competitions were posted in the last few days. In the DUBUS (CW only, coordination not allowed)

<http://www.marsport.org.uk/dubus/EMEContest2017results.pdf>

- N5BF was 45th place in the 1.2 G "VK3UM Memorial" section, down with other "west coast of North America" stations like WA6PY (San Diego), VA7MM (BC) and even our friend KL6M in Alaska. We all know we're on the bottom of the 23 cm EME world here, it being very Europe-Centric. Although N5BF was 45th out of 45 entries, the winner of 1.2 GHz, UA3PTW reports 89 contacts meaning at least 90 participants on the band, so I was only last place out of the half of contestants who sent in entries.
- In the ARRL  
<http://www.marsport.org.uk/dubus/EMEContest2017results.pdf>
- N5BF was 5th out of 19 in the 1.2 GHz mixed mode category, an improvement over 2016, putting up a comparable contact count with "neighbors" W6YX and WA6PY (who both went CW/SSB only) and our own VE4MA (/VE4 and /K7, all mode).
- If Larry or Brian is going to be there tonight and gets this in time to print it out, they can read it for my turn. Otherwise I'll say something about it next month.

## Events of Interest to the Microwave Ham Community

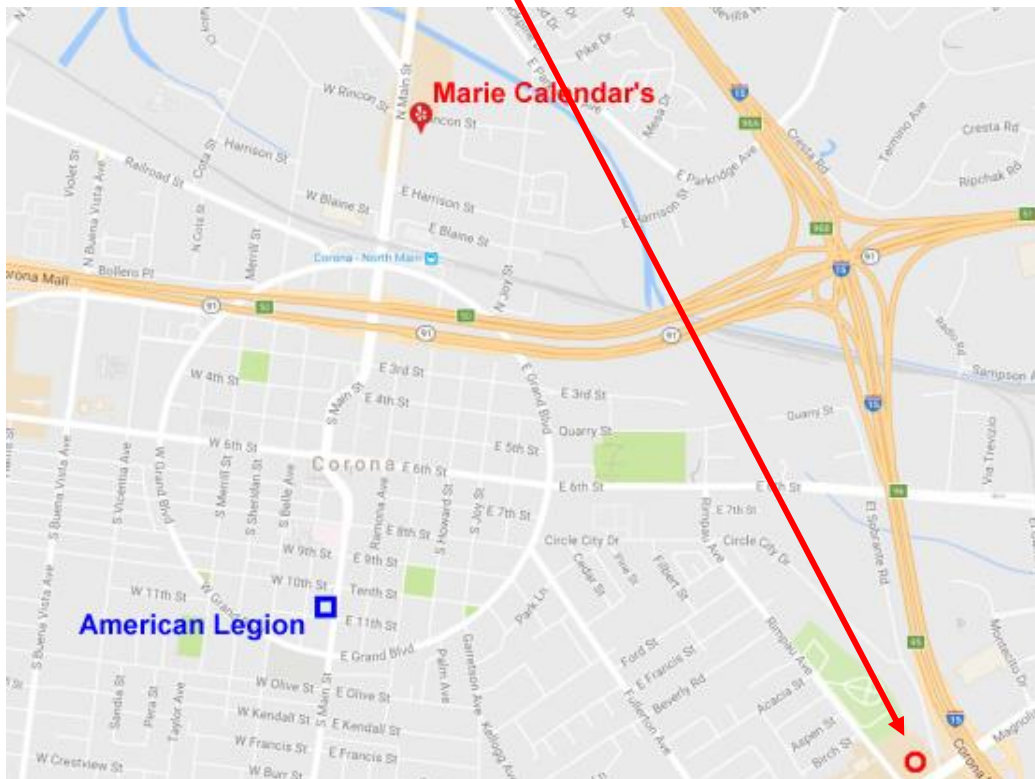
February 1	SBMS Meeting
March 1	SBMS Meeting
April 5	SBMS Meeting
May 3	SBMS Meeting
May 5 – 6	SBMS 2 GHz & Up Contest
May 5 (8am – 2pm)	CSVHF Spring Microwave Sprint (902 MHz & up)
June 7	SBMS Meeting
June 9 – 10	ARRL VHF (& Up) Contest – get on the microwave bands
June 23 – 24	ARRL Field Day – do microwave demo for your local club
July 5	SBMS Meeting
August 2	SBMS Meeting
August 4 – 5	ARRL 222 MHz & Up Contest – Theme is: distance
August 18 – 19	ARRL 10 GHz & Up Contest – 1 <sup>st</sup> weekend
September 6	SBMS Meeting
September 8	ARRL VHF (& Up) Contest – get on the microwave bands!
September 15	ARRL 10 GHz & Up Contest – 2 <sup>nd</sup> weekend
September	ARRL EME Contest – 2 GHz & Up
October 4	SBMS Meeting
October 12 – 13	Microwave Update 2018 – Fairborn, OH Holiday Inn
October ? - ?	ARRL EME Contest – 1.3 GHz & Down – 1 <sup>st</sup> weekend
November 1	SBMS Meeting
November ? - ?	ARRL EME Contest – 1.3 GHz & Down – 2nd weekend
December 6	SBMS Meeting

**If you have other events or more information on the ones listed; information that would help people decide whether to go or not, please send it to the editor at the email address below.**

## Dinner before the upcoming meeting **Sizzler:**

“Dinner-Before” is like a people capacitor in that it is a gathering place for those who are trying to beat the traffic and have a variety of distances to come from. Some arrive as early as 4:00. Magnolia exit then two right turns. (Gawd I’m tired of that place. ed)

For some reason, guys don’t like waitresses and fine dining. Marie Calendar’s is out.



# Microwave Beacons for Southern California

## Los Angeles

San Antonio Heights    2304.320 MHz    W6IFE/B    27dBm

Transmitting grid for Johnstone PK

DM14ed    -117 39 06.0    34 09 14.0 6436'

**Frazier Mtn.    10368.310MHz    N6CA/B    1.3W**

**DM04ms    -118.96948    34.7751    8027'**

**Santiago Peak    10368.330MHz    AF6HP    2W**

**DM13fr    -117.53401    33.71098    5681'**

Palos Verdes    10368.300MHz    N6CA/B    1.6W Out of Service

DM03ts    -118.37642    33.76761    1200'

## Phoenix

White Tanks    10368.375MHz    W7ATN/B    2W

1296.270MHz    W7ATN/B    10W

DM33rn    -112.56000    33.56861    3992'

## San Diego

Mt. San Miguel    10368.360MHz    K6QPV/B    1W

5760.300MHz    K6QPV/B    2W

3456.300MHz    K6QPV/B    10W

1296.300MHz    K6QPV/B    12W

DM12mq    -116.93516    32.69793    2500'

All beacons are horizontally polarized.

To update this list:

- contact Mel Swanberg or if you don't have his email,
- use the Reflector. Mel or the Newsletter Editor will see it there.

# Home to Home

## This Wednesday Evening; (don't forget)

### **Rein Smit, W6SZ (Alta Loma), Past President SBMS**

is encouraging all Southern California microwave hams to try contacting each other from their QTH the night before the SBMS meeting.

**The intent is to learn home  
to home capabilities and to  
discover tricks to use them.**

The Wednesday before the meeting: 10,368.100 MHz, CW or SSB.  
WA6JDB, N6RMJ and W6SZ will be looking/listening for your signals.



We'll be listening on 10368.100 starting at 21:00 PDT. We have been using the LARA Santiago repeater for liaison. Since that doesn't cover the high desert, we will use the LARA/Cactus repeater located on Heaps Peak, so the desert dwellers can check in,

The frequency is 448.86- PL 100.0 It will be configured in a stand alone mode so it doesn't bother anyone.

Mel - WA6JB

Pat Coker's Prodelin on  
his tower. 9 watts at 75'

"Provided a time sufficiently before or after the QSO party's time, W6SZ can position his radio before his home and can then utilize Keller Pk as a bouncing point for working points to the north."

Rein W6SZ



## 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).

**This is how to watch SBMS meetings from home:**

<http://atn-tv.org/live>

What you will see is this →

It's a British website (that's the B in batc.tv) You do not need to log in to be able to watch the video and participate in the chat. You will be automatically put into the right video channel. It is W6ATN. The "W6" for California of course and the ATN is for Amateur Television Network. W6ATN is the club call sign for eight ATV repeaters that are a part of the Amateur Television Network in Southern California. (ATN-CA)

Gary Heston's mobile studio beams a 2.4415 GHz FM video (analog) signal to the ATN repeater on Santiago Peak maintained by Mike Collis WA6SVT. (Gary monitors the signal from the repeater on 5 GHz.) From Santiago Peak on 5 GHz Roland Hoffman KC6JPG puts it on the internet by way of the website BATC.TV described above.



The ATN network linking is all done using FM microwave links on 2.4 GHz and 5 GHz bands. All ATN repeaters in Arizona, California and Nevada now have DVB-T (Digital Video Broadcast-Terrestrial) on 434 MHz input. Analog on 434 still works as well as the FM standard on 2,441.5 MHz. The DVB-T is the European standard for over the air TV. The T part, "terrestrial" is a format that is better with multipath. The only difference (which the US based) ATN has done to that standard is use 2 MHz B/W to fit within the 433-435 space between the weak signal and satellite sub bands.

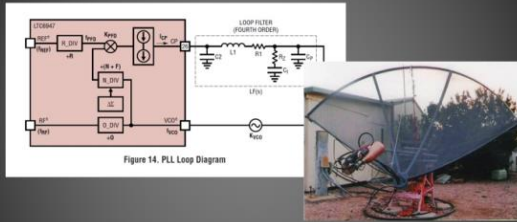
- Gary transmits analog first.
- Snow Peak is the first digital station.
- There is a 2-3 second delay to digital users.
- There are also nodes on Mt. Potosi and Mt. Lemmon.
- Note: some meetings are recorded for archive.

When Roland Hoffman is substituting for Gary Heston, he streams to the internet directly by way of a mobile hotspot to a cell phone tower, thereby eliminating two lower bandwidth RF paths (SBMS to Santiago and Santiago to Roland's QTH).



# The January Meeting Tech Talk:

## AMATEUR MICROWAVE IN 2018

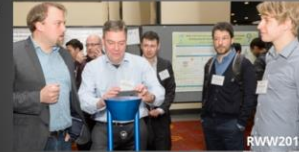


Opportunities / Challenges / Contests

Brian Thorson – AF6NA

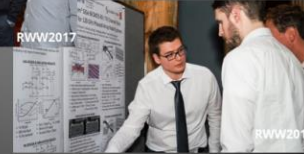
## IEEE Radio and Wireless Week 2018

- Showcase Amateur Microwave to Wireless Industry Professionals



Promote SBMS

- K6JEY, WA6CGR
- W6SZ, W5NYV
- AF6NA



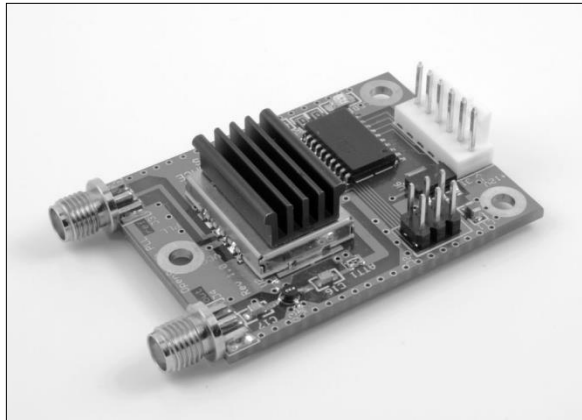
## Needs, Wants and For Sale



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 the editor at: WalterClark at 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).***

### Official Address

**San Bernardino Microwave Society**  
417 South Associated Road #146  
Brea, CA 92821

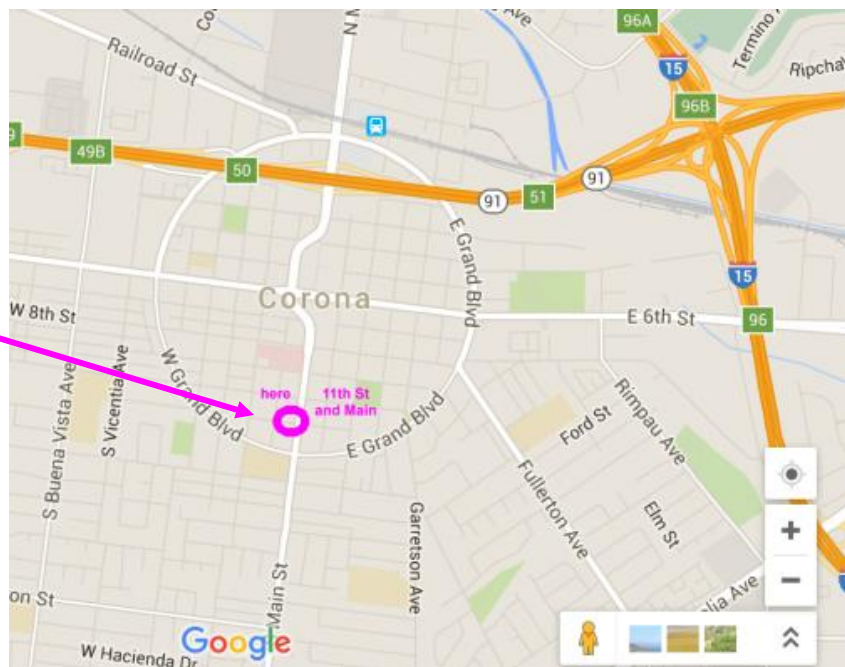
SBMS dues are \$15 per year, which includes a badge and that's about it. The dues are more in the way of a donation to pay for outreach things such as video portals, a bank account, and rent for the building. When to pay is not a matter of remembering. The Corresponding Secretary will contact you by 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**

**Google Map:  
Keywords: American  
Legion Hall, Corona**

For carpooling from North  
Orange County call Dick  
Bremer at: 714-529-2800

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://atn-tv.org/live>



# Services Sponsored by SBMS

## **The Reflector (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> After that, Send your email message to: sbms at-symbol ham-radio.com. (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.)

Responsible person for this: Dave Glawson WA6CGR wa6cgr at-symbol ham-radio.com

**Website: Rein Smit W6SZ:** rein0zn at-symbol ix.netcom.com

The URL is: <http://www.ham-radio.com/sbms/> But you don't have to memorize that or write it down, just enter SBMS into any internet search engine.

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

The newsletter is distributed by way of the SBMS Website: [www.ham-radio.com/sbms](http://www.ham-radio.com/sbms). The purpose of the SBMS Newsletter is to keep hams everywhere in the world informed on current activities of the "active" members of the San Bernardino Microwave Society. Active Members include those who:

- come to the meetings and share their progress
- use ATV to report in and describe their projects
- send by email words and pictures of progress to the above

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  - come to the meetings and share their progress
  - use ATV to report in and describe their projects
  - send by email words and pictures of progress to: walterclark at-symbol roadrunner.com
- Time sensitive questions, reports or just plain bragging is for the SBMS Reflector. Send your email message to: sbms at-symbol ham-radio.com. To sign up go to:  
<http://lists.altadena.net/mailman/listinfo/sbms>

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