



SAN BERNARDINO MICROWAVE SOCIETY, Incorporated

FOUNDED IN 1988

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

SBMS Newsletter

Dinner Before the next Meeting; Sizzler: –see map way below)

Tech Talk for the December 6th Meeting

The talk is on "Potential
WSTJ-X use on 10 GHz".

Use of the highly popular
WSJT-X digital mode has
been moving towards
higher frequencies in the
amateur frequency

spectrum. This presentation is about 3 sub modes, WSPR, FT8
and JT4. 3 Years ago, 2 SBMS members showed its use on 10
GHz. Occasionally it has been used for terrestrial 10 Ghz contacts
by some SBMS members. Practical aspects, such as, how to,
reasons to use, will be covered. Attention will be given to the use
by others at 10 GHz EME (VK7MO).



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

Jason Sogolow W6IEE, President

Guests (or Not-Seen-In-A-Long-Time)

All from Orange County:

- Kent K6WCI,
- Roger W6SQQ, (who had been part of the Long Beach Microwave Society)
- Ken W6HK and
- Dave N6TEB.

Amateur Television Network (ATN) checkins

W6KTO in Simi Valley.

Old Business

None

New Business

None

What Our Members Are Working On (Activity Reports)

Robert Carter KM6RXN (Riverside)

is working on feeds and a fold up dish for a 10 GHz system for hiking up in the mountains. Hooked the IF rig up for HF and made his first ever HF contact, with W1AW, and got a QSL card. Did not make a direct microwave contact with Brian AF6NA, but Santiago bounce is a possible path.

George Kashmar KM6UKI (Irvine)

is working with microstrip filter designs which he sent out to OSH Park for fabrication where he learned that they have different rules for FR4 material and what copper you can use. Went back to the microstrip designer program EagleCAD and tweaked it to satisfy OSH Park. Is now working on building a network analyzer out of a software defined radio on one USB stick. In addition to both transmitting and receiving, the SDR needs 150 MHz bandwidth (rather than the typical 10-15 KHz). Bought a \$20 noise source on E-Bay

Courtney Duncan N5BF (Eagle Rock)

did the W1GHZ FT-817 panadapter and the “PTT on coax” modifications. The mods work but not as well as expected. Will work on it again soon. In the EME contest last weekend CW output power was really low but still made some contacts. For panadapter software, tried using Linrad, then MAP65 but ran out of time trying to get them to work. Finally settled on SDR# waterfall for contest work and learned how to interpret what I was seeing in the spectrum. The LiveCQ website was most helpful so didn’t need to use the HB9Q logger as much. There was lots of contest activity. Computer broke right after operation ended. 10 GHz rig is still down.

Rein Smit W6SZ (Alta Loma)

did home-to-home last night and worked N6RMJ, KK6MXP, N6TEB, and W6SZ. All are welcome in the home-to-home monthly evening; more participation is needed. Rein has his radio on a cart now which allows him to go out in the street to look for better signals than are found operating from inside the garage. Reported on Frank WB6CWN’s work on a beacon. Mel WA6JBD reported that this beacon is specially designed for Potosi with an amplifier and antenna on the tower there fed by 50-60 feet of 3/8 Heliax, currently in work, and sometimes runs from Santa Ana. The Potosi installation is not yet scheduled. Rein was tuning on his software defined radio one evening a couple of weeks ago, saw something on 10.368.380, and thought it was a birdie. Mel reported that what Rein saw was WB6CWN operating the beacon from his apartment.

Mel Swanberg WA6JBD (Upland)

managed to work Pat N6RMJ home-to-home using a horn on a rotator during a rainstorm a few weeks back. Signals were S9+ over the mountains on the direct path. A good reflective path was also found.

Larry K6HLH (Lake Los Angeles)

is rebuilding his 10 GHz station. Finally gave up fooling around with an old DB6NT transverter and took Pat’s advice to buy a new one. The new G4 version is now installed and working and may go back up on the tower with the 0.5 dB noise figure LNA and 4-foot dish next weekend. Pulled a 25-watt 10 GHz TWT out of the corner of his shed. After cleaning it up he turned it on and warmed up for about a week, then turned on the high voltage: no spark, no crackles, and still working. Wants to put it on top of 60’ tower, but waterproofing the high voltage will be a problem. Dave W6DL offers a box for this.

The New Guys . . .

Dave Glenn N6TEB (Downey)

home station is 25 feet above the roof and runs 20 watts to a panel antenna. Worked Pat N6RMJ and Rein W6SZ in home-to-home last night ... once all the little hookup wires in the rig were OK.

Jim Duwaldt KJ6ZXZ (Santa Ana)

drove up from Orange this evening, having heard about SBMS at the Fullerton Amateur Radio Club a couple of weeks ago.

Roger Kepner W6SQQ (City of Orange)

is mainly an HF CW operator but does go as high as 6 meters CW on occasion. Has an ICOM 9100 to which he plans to add a 1296 module then run 100 feet of ½” Andrews Heliax to an antenna. Larry K6HLH has him excited about this idea.

Ken Bourne W6HK (also city of Orange)

is too busy on the lower ham bands and not doing much on 10 GHz at all, but looks forward to it.

(Notes above were recorded by Courtney Duncan N5BF.)

Tech Talks

Please offer Tech Talks for future meetings. Contact Mel Swanberg (email: wa6jbd (at-symbol) Verizon dot net)

Events of Interest to the Microwave Ham Community

Thank you Marty Woll N6VI

January 4	SBMS Meeting
January 19 – 21	ARRL VHF Sweepstakes
February 1	SBMS Meeting
March 1	SBMS Meeting
April 4	SBMS Meeting
May 2	SBMS Meeting
May 4	CSVHF Microwave Spring Sprint (902 MHz & Up)
May 4 – 5	SBMS 2 GHz & Up Contest
May 17 – 19	Maker Faire, San Mateo, CA
June 6	SBMS Meeting
June 8 – 10	ARRL June VHF Contest
July 4 (?)	SBMS Meeting
July (date TBD)	SBMS Microwave Tune-up
August 1	SBMS Meeting
August 3 – 4	ARRL 222 MHz & Up Distance Contest
August 17 – 18	ARRL 10 GHz & Up Contest – Part 1
September 5	SBMS Meeting
September 14 – 16	ARRL September VHF Contest

September 21 – 22	ARRL 10 GHz & Up Contest – Part 2
September 29 – 30	ARRL EME Contest, 2.3 GHz & Up
October 3	SBMS Meeting
October (date TBD)	Maker Faire, San Diego, CA
October (date TBD)	Microwave Update, Dallas, TX
October 27 – 28	ARRL EME Contest, 50 to 1296 MHz. Part 1
November 7	SBMS Meeting
November 24 – 25	ARRL EME Contest, 50 to 1296 MHz. Part 2
December 5	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.**

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.)

Beacon News as of 26 November:

No permanent changes at this time. Santiago is down at the moment, it probably just needs to be functioned back on. The 2 GHz beacon at San Antonio Heights is off for construction, but can be turned on by request at any time. It's getting installed in a rack mount enclosure as time permits.

--Mel

To update this list, contact Mel Swanberg (email: wa6jbd (at-symbol) Verizon dot net)

Last Month Tech Talk:

Ed Murashie WX6DX. Geostationary Operational
Environmental Satellite

(For a download of this talk, go to the website :

<http://www.ham-radio.com/sbms/> and do a search on "Ed Murashie")

Home to Home This Wednesday Evening

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.



**Wednesday before the meeting:
10,368.100 MHz, SSB, CW and Digital
available.**

WA6JDB, N6RMJ and W6SZ will be looking/listening for your signals. For liaison, we will use the LARA/Cactus repeater located on Heaps Peak, so desert dwellers can check in.

[We'll be listening to cactus starting at around 20:00 PDT and going until the last person gives up.](#)

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

Mel - WA6JB

"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:

<https://batc.org.uk/live/w6atn> That should take you directly to the camera at the SBMS meeting. (batc.tv is British website, W6ATN is the local callsign.)

← What you will see is this

You do not need to log in to be able to watch the video and participate in the chat. In case you are not 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.

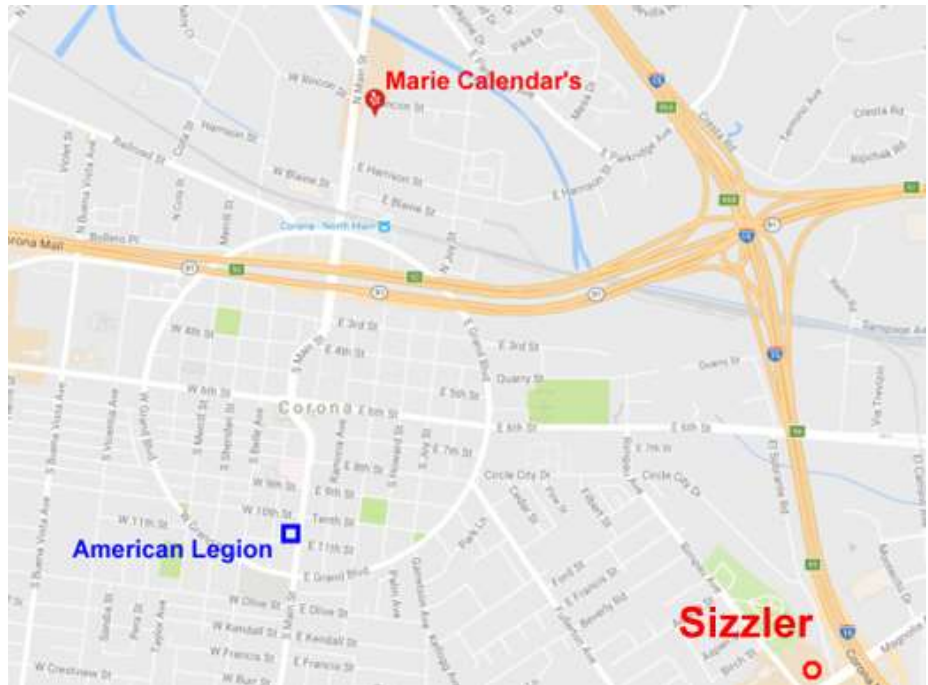
- Gary transmits analog first.
- Snow Peak is the first digital station.
- There is a 2-3 second delay to digital users.
- There are also nodes on Mt. Potosi and Mt. Lemmon.
- Note: some meetings are recorded for archive.

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).

Dinner before each 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. (I’m Sooo tired of that place. ed)

For those who prefer attractive waitresses and fine dining, Marie Calendar’s is available.



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

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.

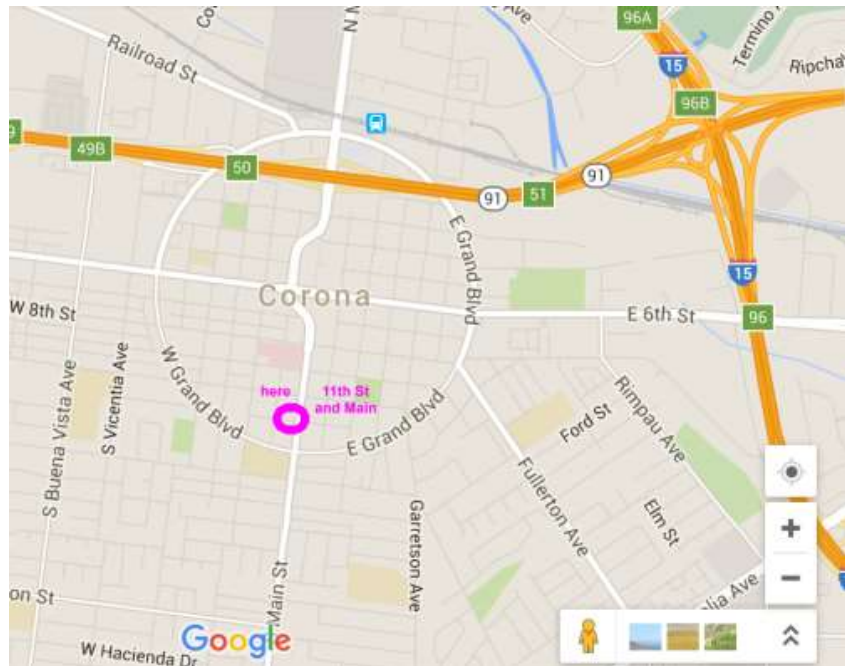
**Meetings are first
Thursday of the
month, 7:00 PM**

**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> (More details on that above.)



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.

The newsletter is distributed by way of a reminder on the reflector to visit a particular URL within the SBMS

Website: 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: 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:

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