



SAN BERNARDINO MICROWAVE SOCIETY, Incorporated

FOUNDED IN 1955

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

## SBMS Newsletter (for April 2019)

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

**Tech Talk for the April 4<sup>th</sup> meeting . . .**



### **Activities of the March 2019 SBMS Meeting** (... which would be of interest to the General Ham Radio Community)

**Mel Swanberg WA6JBD, Vice President presiding**

#### **ATN Video Coverage**

Gary W6KVC reported that the 2.4 GHz ATV receiver on Santiago died about two weeks ago due to, it is thought, a lightning strike. After that the digital receiver died. Mike WA6SVT and Gary will try to get up there Saturday. The transmitter and analog repeater receiver are still OK. Due to the ATV repeater outage, there was no video but there was audio with microphones.

## **Old Business**

Mel WA6JBC had the opportunity to buy the W6DFW CNC (computer numerical control) files for antenna designs from the estate of Dan Welch W6DFW on behalf of SBMS as discussed last month. The deal is concluded with Dan's son. Mel has a USB stick with the files and will hand it off to Steve WA6OXN Monday.

## **New Business**

- Brian AF6NA gave a presentation about our use of the park in Costa Mesa where we do the annual Tune Up in July. They don't want animals disturbed; they don't want BBQs used at all; they want clean trash cans, etc. The City of Costa Mesa charged us the full \$100 fee last year. Walter and Dick WB6DNX may know about other parks in the Brea or Fullerton area that we might use so we are thinking of moving to a non Costa Mesa park. Doug K6JEY suggests that with our budget, \$100 is well worth spending on something we do really well. Continuity of range repeatability, findability, customary calendar date, repeatable measurements, etc., might make it worth staying with Costa Mesa even with the restrictions. He also suggested that it could be expanded into a STEM (Science Technology, Engineering, and Math) activity involving, for example, a nearby high school.
- SBMS Officer Elections are next month – April. Nominations are in order.
- Jason W6IEE nominated Dick Bremer WB6DNX to continue as Treasurer – seconded by Brian AF6NA.
- Mel WA6JBD would like to step down as Vice President and nominated Robert Carter KM6RXN for Vice President as he had become very active and involved in doing microwave projects and research – seconded by Courtney N5BF.
- Doug K6JEY nominated Jason Sogolow W6IEE to continue as President.
- Brian AF6NA nominated Courtney Duncan N5BF to continue as Recording Secretary and Jeff Fort KN6VR to continue as Corresponding Secretary.
- Dave W6DL nominated Dave Laag W6DL for Trustee – seconded by Mel WA6JBD
- Mel WA6JBD reported that Walter Clark, who was absent, has indicated that he is willing to continue editing the monthly newsletter for now but wants to involve and train an apprentice so as to be able to pass off this duty in the near to medium term future. Walter does not get much feedback on the newsletter. Eric AF6EP has worked with Walter on certain technical newsletter publishing issues in the past.
- Nominations were closed.

# What Our Members Are Working On (Activity Reports)

(Notes on the Activity Reports were taken at the meeting by Courtney Duncan)

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

showed his shepherd's crook feed for a 4' round dish. He had just done the welding on it today. See picture. He claimed that if the job was done well, it would be hard to measure its return loss. Dave W6DL said that you needed to rotate the feed a little out of perfect horizontal to get the polarization correct, and that this could be done by peaking a field strength measurement.

## **Dave Laag W6DL (Marino Valley)**

is working on a 3.456300 GHz beacon project which includes a \$79 20-watt amplifier and some filters. These amplifiers were built for a digital service in Israel that was not put into operation. They are new, highly linear (Class A), and surplus. Now is the time to get them while they last on E-Bay.

## **Robert Carter KM6RXN (Riverside)**

has been working with Brian AF6NA on microwave projects such as making new feeds for dishes. Also has a shepherd's hook and by using it got 15 dB more gain. Did not hear anyone on Home-To-Home activity last night. Also has information on slot antennas from a Russian group and will put it on the reflector.

## **Dan Slater AG6HF (La Habra Heights)**

has been ordering parts for future projects.

## **Bill Lock N6WL (Baker)**

brought along a Microwaves and RF article on noise sources which concludes in the February 2019 issue and is well worth reading.

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

gave the Technical Talk

## **Helen Millar KI6LTV (Long Beach)**

said her microwave activity involved her 20-year old microwave oven which broke and so she bought a new one.

## **Larry K6HLH (Lake Los Angeles)**

is losing Pat N6RMJ, his neighbor, to Bullhead City, Arizona. Took his 10 GHz rig down from the tower and got it working again. The problem was a brand new DB6NT transverter that was always in transmit mode due to a short on the sequencer board. Now the tower is back



up and all is working. Looked at the toroids that Robert KM6RXN brought last time and found their data sheets. Some of them would make nice UNUNs, BALUNs, etc.



### **Eric Fort AF6EP (Phelan)**

has been working on getting a President 2600 IF radio working on 30 MHz. It currently needs a power chord. Is saving up for a 28 to 432 MHz transverters off e-bay, then another transverter to get from 432 to X-Band. Mel WA6JBD pointed out that you can also go direct to X-Band (10 GHz) from 28 MHz. You need to watch the aliasing filter performance as you will take a 3 dB performance hit without one. The filter can be stagger tuned.

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

measured every cable in his EME system with his new AAI N1201SA vector network analyzer, and ruled out all components except the LNA as being at fault for low receiver performance. Maybe the problem was rain related; there has been quite a bit of rain recently. Took the DEMi signal source 75 meters up the street in the truck (40 m. is the far field for this antenna at 1296 MHz) and used that to peak up the dish focus. Did find an intermittent in the receive path which is now fixed.

### **Mel Swanberg WA6JBD (Upland)**

was at the Cactus meeting this month in Arizona but did tune around looking for the X-Band beacons. He is going to start a 10.368.100 watch while he's at his home work bench. For a random QSO, call. Brian AF6NA asked what he uses for weather protection for his omni antennas. Answer: Kapton tape. Normally he one antenna encased in a PVC water pipe but it has a broken flange. The temporary omni antenna is one of those that has wings.

## **More Tech Talks, Please**

Please think about putting together a Tech Talk. Everyone would be so grateful. It doesn't have to be long or even very good. Just take pictures and put them on a flash



drive. Then put them in an order that you can narrate for us.  
Contact Mel Swanberg (email: wa6jbd (at-symbol) Verizon dot net)

## The Amateur Television Network Streaming LIVE on YouTube

Interview with Roland Hoffman - KC6JPG

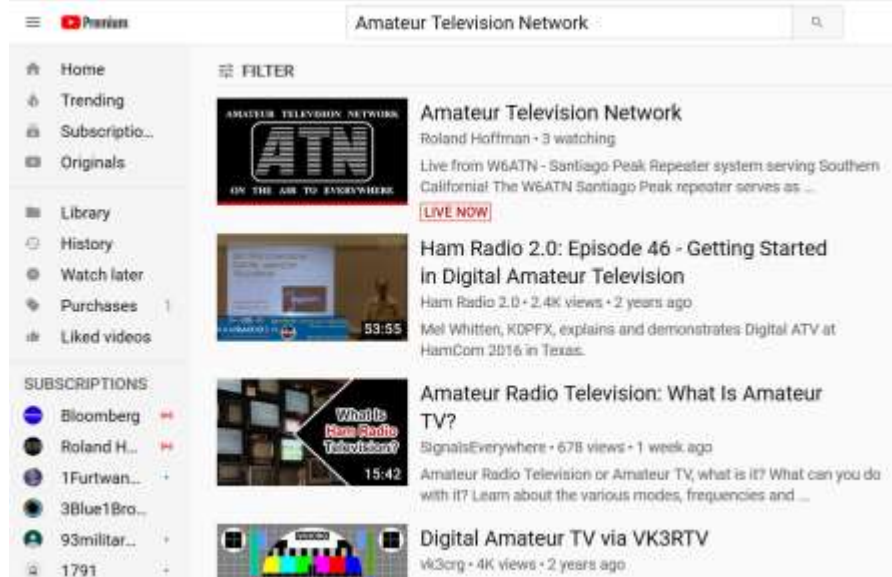
SBMS members and HAMS throughout the world should be very glad the Amateur Television Network's LIVE video stream is back. It is however under a different video streaming platform.

"We lost the video streaming service on BATC (British Amateur Television Club) as their webserver was forced to be shut down.", said Roland Hoffman, Digital Systems Director for the Amateur Television Network. "We lost our video stream on Tuesday, March 19, 2019 and it just so happens to be on the day of our weekly Net. We have received many inquiries about our loss of our video stream on BATC, especially during our Tuesday Net."

With 2 days of no live video on the internet, Roland continued to receive emails, texts, and video communications regarding the demise of the BATC system. "I had to make a quick decision to get our stream back up.", Hoffman said. On Friday, March 22nd, Roland accessed his established YouTube account and created the Amateur Television Network channel. By 16:00 UTC (9:00am Pacific Daylight Time), Roland reprogrammed his digital streaming appliance that is receiving the W6ATN Santiago Peak Repeater signal to stream into the new ATN channel on YouTube. The W6ATN Santiago Peak Repeater, along with 6 other ATV repeater systems that are linked within the network is streaming LIVE on the internet once again. ATV'ers and other HAM's throughout the world are enjoying the features on our new ATN channel on YouTube. "HAM's and visitors can chat with us. Viewers can subscribe to our channel and are able to receive notifications".

Other ATV repeater systems are also taking the leap. The WB9KMO Mesa (Arizona) repeater system, operated by Rod Fritz - WB9KMO is now streaming live on YouTube. ATN charter repeater systems and ATN chapters that are streaming their repeater's output video into YouTube will have the opportunity to be listed within the ATN's CHANNELS page.

To access our Amateur Television Network's live stream, go to YouTube (<https://www.youtube.com>), and search for Amateur Television Network.



If you go there now you will hear a low level of noise and this test pattern:



When it is the evening of the meeting and Roland has made the connection over the internet, you will see the familiar ATN logo and the words "LIVE NOW" box appearing in the description. Just click the screen and you will be watching our live feed. When you get there to watch or even if you go there now click on "Subscribe". Once the ATN channel receives over 100 subscribers, the channel will be eligible for a custom URL that will reflect the ATN system. So do that now while you are reading the newsletter. Pull up a new browser window, go to YouTube, then search for "Amateur Television Network" or even just "Roland Hoffman." When you are there, click on Subscribe. Subscribing is necessary to use the YouTube comment section as a kind of chat system.

"WOW! Having the ATN system on YouTube is truly exciting!" said Roland, "We should have streamed our system on this platform years ago. It's truly worthy of a celebration! With our video streaming system back on the air, SBMS members, ATV'ers, and visitors can be assured that the Amateur Television Network will be able to reach out to our viewers on a global scale within the most popular video social media platform on Earth.

For more information about the Amateur Television Network, you can go to their website at <https://www.atn-tv.org>

## Events of Interest to the Microwave Ham Community

Thank You Marty Woll N6VI

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	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 3 – 5	Microwave Update, Dallas, TX
October 5 – 6	Maker Faire, San Diego, CA
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.**

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## Microwave Beacons for Southern California

### Los Angeles

**Heaps Peak** (DM14kf -117° 8' 26" 34° 14' 5" 6435' altitude)  
**2304.320 MHz W6IFE/b .5W (+27dBm)**

**Frazier Mtn.** (DM04ms -118.96948 34.7751 8027' altitude)  
**10368.310 MHz N6CA/B 1.3W**

← in repair

**Santiago Peak** (DM13fr -117.53401 33.71098 5681' altitude)  
**10368.330MHz AF6HP 2W**

Palos Verdes (DM03ts -118.37642 33.76761 1200' altitude)

10368.300 MHz

N6CA/B

1.6W

← Out of

Service

## Phoenix

White Tanks (DM33rn -112.56000 33.56861 3992' altitude)

10368.375 MHz

W7ATN/B

2W

1296.270MHz

W7ATN/B

10 W

## San Diego

Mt. San Miguel (DM12mq -116.93516 32.69793 2500' altitude)

10368.360 MHz

K6QPV/B

1W

5760.300MHz

K6QPV/B

2W

3456.300MHz

K6QPV/B

10W

1296.300MHz

K6QPV/B

12W

(All beacons are horizontally polarized.)

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

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## 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 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

not need to log in to be able to watch the video and participate in the chat. In case you are not automatically put right video channel. It is W6ATN. The "W6" for California of and the ATN is for Amateur Television Network. W6ATN is the sign for eight ATV repeaters that are a part of the Amateur Network in Southern California. (ATN-CA)

Gary Heston's mobile studio beams a 2.4415 GHz FM video signal to the ATN repeater on Santiago Peak maintained by 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.



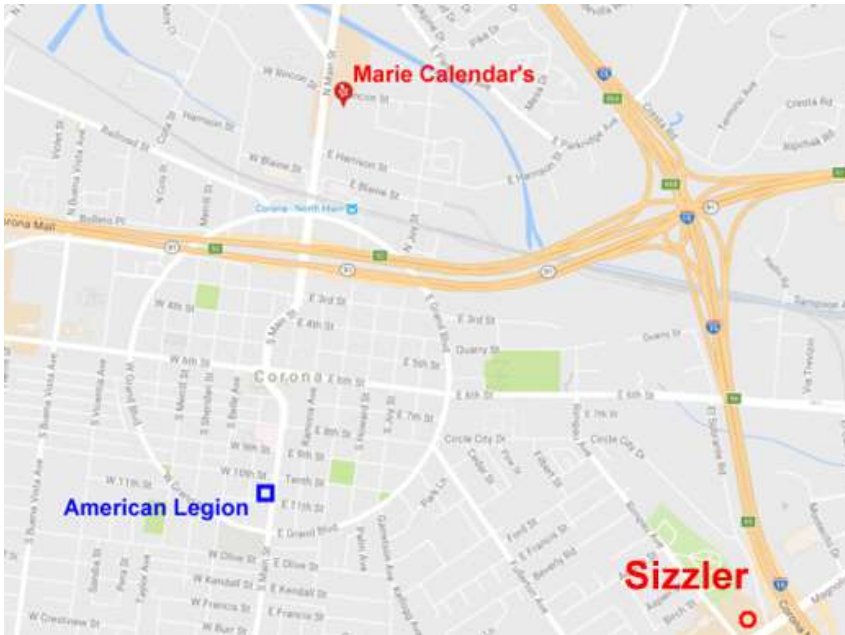
You do  
into the  
course  
club call  
Television

(analog)  
Mike

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

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](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).***

## 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.

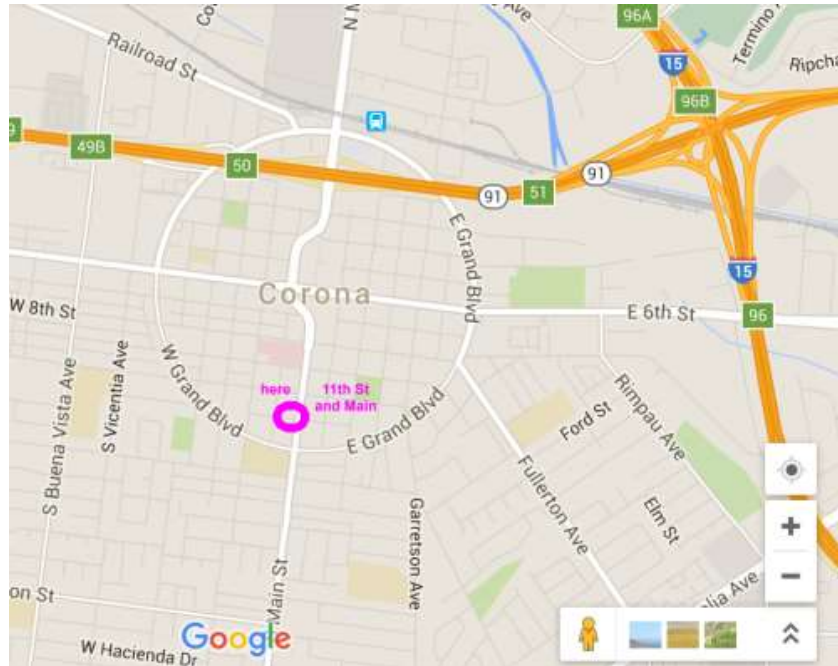
**Meetings are first  
of the month, 7:00**

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

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

If you can't make it:  
online through Gary  
mobile video facility  
way of the internet out

<http://atn-tv.org/live> (More details on that above.)



**Thursday  
PM**

**American**

Orange

watch  
Heston's  
W6KVC by  
of England:

## 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](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: 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:

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

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