



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

Tech Talk for the April 7th Meeting

Our April speaker . . .



Thursday SBMS will be introduced to an aggressive new 10 GHz EME project that is coming together nicely in San Diego.

Robson (Rob) Pereira, KK6IOZ is an electrical engineer at Qualcomm and has been active recently with the San Diego Microwave Group. He is assembling a 10-foot parabolic antenna on the roof of Qualcomm. His system design and plans will be presented at the meeting.

He came to visit Brian Thorson in Corona to get some 10 GHz waveguide Brian had. Rob and Brian had a great talk about microwaves and Amateur radio. Rob's knowledge of microwave and communications was quite evident and his talk promises to be engaging and informative for those in attendance and online. **Come and join SBMS at the Meeting at the American Legion Hall, Corona: 11th and Main (See map below.)**

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>

Activities at the January 2016 Meeting of the SBMS

(that would be of interest to the General Ham Radio Community)

Presiding: Chris Shoaff AF6NA

(24 in attendance... 18 last month)

Guests Or Members Not Seen In a Long Time

none

ATV and Video Checkins

Internet Chatroom

KB6BZZ, KE6BXT

W6QIW – was successful on 44 GHz to 47 GHz for FM/CW

N8KH built a loop feed - has high noise level

KF6PGT finished repairs on 1.2 GHz, hopes to be on WSPR soon.

ATN

none

METS

none

Old Business

- Mel WA6JBD gave a report on the 2304 beacon project for Doug K6JEY. Doug had bought a 2304 MHz transverter kit and an ID controller. It is now programmed to W6IFE with the grid square for Johnstone Peak which is the intended destination. Doug is now working on packaging to make the installation acceptable for a radio site. He also has an antenna and 30-40 feet of 7/8" coax.
- Brian AF6NA will report on the Santiago Beacon during tonight's Tech Talk.
- Dave W6DL has been traveling for a month and will be working on the badge machine project this month.

New Business

- Ed has been trustee of the license for the last ten years and hasn't had to do much in that time. We have 90 days between now and the 5/6/16 expiration date to change Trustees if the club desires. To establish a Trustee we have to have the approval of at least one licensed member of the club plus ability to be responsible for the call. Ed is willing to stay on or to retire but either way the call sign needs to be renewed. After discussion Dave Laag W6DL volunteered to take over W6IFE and assume the duties of SBMS Trustee and pay any fees involved. President Chris Shoaf N9RIN officially nominated Dave Laag W6DL to be Trustee of W6IFE.
- Chris N9RIN opened nominations for club officers to be voted at the April meeting. Nominations will remain open until voting occurs at the April 2016 meeting.

-
- Chris Schoaff N9RIN President, needs to step down;
 - Brian Thorson AF6NA Vice President, willing to continue;
 - Courtney Duncan N5BF Recording Secretary, willing to continue;
 - Dick Bremer WB6DNX Treasurer, willing to continue;
 - Walter Clark Newsletter Editor, willing to continue;
 - Jeff Fort KN6VR Corresponding Secretary, willing to continue;
 - and
 - Ed Munn W6OYJ Trustee of W6IFE who will be replaced by Dave Laag W6DL as discussed above.
 - Rein Smit W6SZ accepted a nomination to be President.

Can someone tell me how to get rid of these gah damn lines. I can't delete them and they tend to multiply. Send helpful message to editor: walterClark@roadrunner.com

Tommy Thompson and the Club Callsign

When Ed Munn W6OYJ was discussing his role as the current Trustee for

the SBMS club callsign: W6IFE, he related this interesting brief story about Tommy Thompson. The club call used to be his. Tommy grew up in this valley (Corona) and was first licensed at age 16, and became a Navy radioman in WWII. At the end of the war he moved to Washington, DC and joined a scientific group that was doing a radar guided missile in secret locations (weather bureau buildings). The group later moved to Norco, CA to the buildings that had been the tuberculosis sanitarium out by the lake. Radar was very secret at the time. He and a partner formed the San Bernardino Microwave Society in 1955 when he lived just to the northeast of here. He was among the first hams in the country active at the end of WWII. A heavy smoker, Tommy died in 1970s after which the club used the vanity callsign system to change the club call sign to W6IFE.

Sizzler's More or Less?

For those that are kind of tired of Sizzler, you can join the North Orange County gang at Costañeda's about 100 yards down the hill on El Sobrante from Sizzler's. (That's the street on the east side of Sizzler.)

Google Map this:
1340 El Sobrante Corona

This is what it looks like at 6:00 on Wednesdays and they are so happy for customers, they are fine on us rearranging the furniture to put us all on the same table.

It's a cross between a sit down restaurant and a fast food. Like Chipotle's.

At about 6:30 we will wonder up to join the Sizzler group before heading on over to the meeting.



Upcoming Events

- April 11: 144 MHz Sprint
For more information on these Sprints:
<https://sites.google.com/site/springvhfupsprints/home/2016-information>
- April 14-17, 2016, VHF Super Conference near Washington, DC.
- April 19 222 MHz Sprint
- April 27 432 MHz Sprint
- May 7 Microwave Sprint CSVHF Microwave Spring Sprint (902 & Up)
- April 30, May 1 SBMS 2 GHz & Up Contest
- May 20 – 22 Maker Faire – San Mateo

For VHF-UHF-Microwave and Weak Signal Enthusiasts (See more on the next page)

The First Ever, VHF SUPER Conference will be held at the Holiday Inn Washington-Dulles International Airport, Sterling, VA, April 14-17, 2016.

If there ever was One VHF Conference to go to –This Is IT!

The Southeastern VHF Society (SVHFS), North East Weak Signal Group (NEWS) and Mt. Airy VHF Radio Club (Pack Rats) have come together.

Yet More On the . . .

VHFsuperConference

Thursday, April 14: 10am-6pm Guided Bus Tour (3 hrs) of Washington DC, and afternoon stop at Smithsonian Area Museums 7pm-Hospitality Suite & Swap

Friday, April 15: 8am-5pm Presentations, Vendors, Lunch with Speaker, Auctions 9am-4pm Washington DC Bus Transportation to Smithsonian/US Capitol/National Mall/Botanic Gardens area 7pm-Hospitality

Saturday April 16 8am-5pm Presentations, Vendors, Lunch with Speaker, Auctions 7pm-Banquet

Sunday, April 17 8am-11am Swap & Vendors

<http://vhfsuperconference.com/>

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:

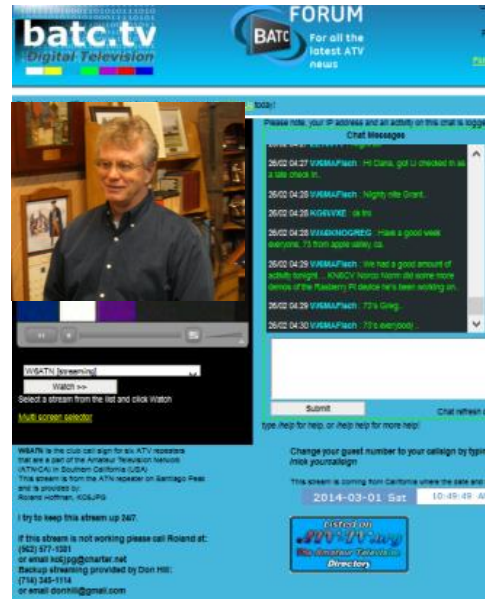
<http://atn-tv.org/live>

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 chate. On the right choose "Repeaters" and then on the left, you have to pick a stream. The stream to choose is: **W6ATN**. This should be easy to memorize: W6 for California, then ATN as in 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 its signal to the ATN repeater on Santiago Peak maintained by Mike Collis WA6SVT. From there Roland Hoffman, KC6JPG puts it on the internet by way of BATC.TV described above.



When Roland Hoffman is substituting for Gary Heston at the SBMS meeting, 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).

What Our Members Are Working On

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

- **Courtney Duncan N5BF (La Canada)**
has been too busy at work to do anything, including many Saturdays, so all current plans are delayed by one month.
- **Larry K6HLH (Lake Los Angeles)**
is working on his 10 GHz station, remounting the dish on cross boom with elevation so it can be tilted up and down. Also worked on and repaired his 1296 MHz rig. Acquired a new 10 GHz transverter board from W1GHZ to see if he can build it and get it to work. Last board had 50-60 dB loss through the mixer. Registered for April VHF conference in Washington DC. About 120 have signed up.
- **Rein Smit W6SZ (Alta Loma)**
was with Doug Monday and did testing on his new 60 Watt 2304 EME system, a serious effort with the new dish.
- **Brian Thorson AF6NA (Corona)**
prepared for the talk.
- **Chris Shoaff N9RIN (San Clemente)**
went to the W6TRW swap meet last month. No other activity.
- **Walter Clark (Fullerton)**
provided the answer to the mystery gizmo of the month. It was a microwave diode developed in 1941. (Holy Crap, I thought it was modern.) the 1N or 2N means the number of junctions, not the number of leads. One end of some 1N23s have a variable tension on the tiny cat whisker. (Point junction diodes are old as radio itself. The diodes that are new are diffused junction types.)

Walter is Vice President of Fullerton Radio Club and spent the last month building up the membership. And he will be their next speaker. It will be a talk on his collection of part 15 radio gear and how to use the C-Band LNB for monitoring radar off of airliners.



Jeff Fort AF6EP (Phelan) (next to Walt above, and that's Eric on the right) has been doing too much traveling.

- **Bill Locke N6WL (Baker CA)**
has been active on VHF and UHF, not microwave. Still working on his 10 GHz rig.
- **Jason Sogolow WB6IEE (Burbank)**
took a day off to go see the tax man and also came to this meeting. Working HF these days and getting rid of junk from swap meetd. Has a microwave oven that is taking out WiFi, and is going to take it to work to see what it's doing.
- **Dave Laag W6DL (Marino Valley)**
has been watching for very cheap Ku-Band LNBS on E-Bay. Wonders if anyone has documented which ones are best out of the box at 10.386, noise figure. Has seen some specs. but no actual data.
- **Bremer WB6DNX (Brea)**
went to the local swap meet last month and bartered for a "new" UHF antenna that turned out to have a 26:1 SWR. On investigation, one fine wire was found touching the center conductor. Picked off and the VSWR improved to 2:1 or less for 440-480.
- **Ed Munn W6OYJ (San Diego)**
had visitors for the last two months. Eric and Catalina and their new baby girl, Ed and Marsha's only grandchild. They were here and very active for the two months then returned to Chile.
- **Mel Swanberg WA6JBD (Upland)**
worked on the 2304 MHz beacon project with Doug K6JEY, as reported under old business. Sent his network analyzer to Victorville where a guy fixes them.



Courtney Duncan (N5BF), Recording Secretary

Microwave Mystery Gismo of the Month

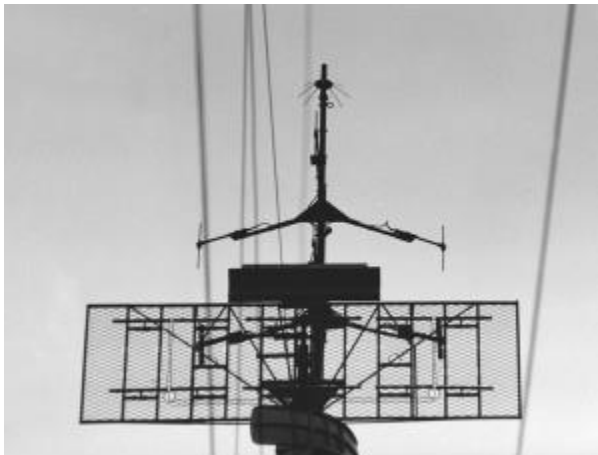


If you can identify why, or would like to discuss this, use the SBMS Reflector by sending an e-mail letter to . . . SBMS@lists.altadena.net

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

Hints:

Here's the antenna it was connected to:

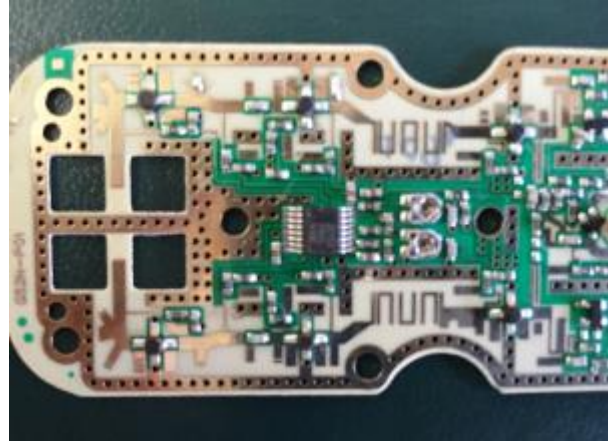


<http://www.history.navy.mil/research/library/online-reading-room/title-list-alphabetically/u/operational-characteristics-of-radar-classified-by-tactical-application.html>

Tech Talk Last Month

Our March speaker was Brian Thorson AF6NA with some help from Larry Johnston K6HLH. The talk was about Snow-Flaking.

Converting commercial microwave equipment for Amateur use often requires modification, and that can sometimes be as simple as re-tuning a microstrip circuit board. This is a technique of adding capacitive and inductive components to existing microwave transmission lines.



Needs, Wants and For Sale (Updated 4 April 2016)

- **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

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

Member Ads

This from Bill Burns:



For Sale Dish Trailer

Pick up bed trailer with elevation over azimuth positioner driving a 4 foot dish with a 10 GHz WA6EXV style water pipe feed. See pictures. Trailer is licensed and has lights and a 2 inch ball hitch. Positioner is manual hand driven in both axis. There are bolt fixtures to lock down the dish during travel. Runs good on the highway. Has been used on mountain top rover operations. All for \$450. Bill WA6QYR bburns@mediacombb.net or 760-375-8566.

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.

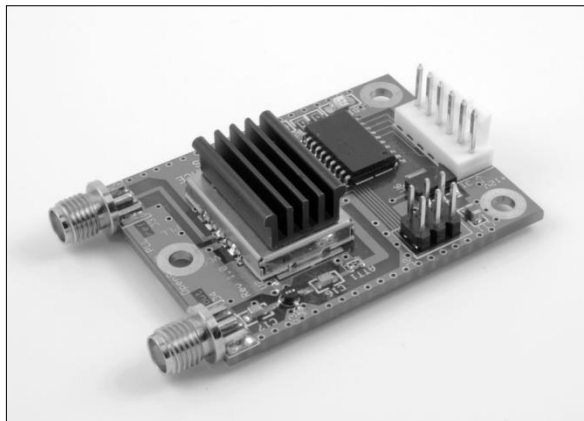
For examples of his work click on... <http://www.kl7uw.com/kits.htm>
Contact him at kl7uw@acsalaska.net



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@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

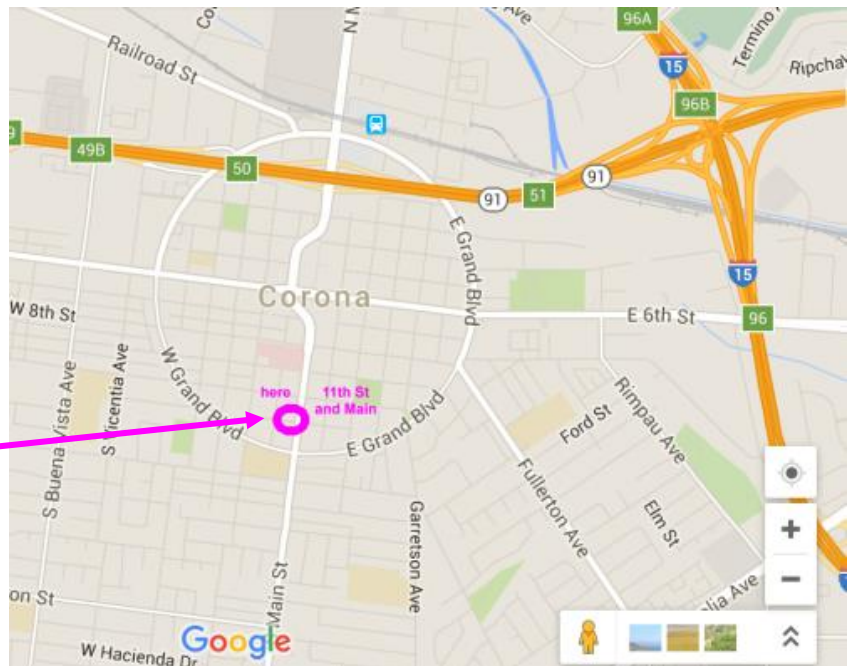
417 South Associated Road #146

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.

Map →

**Meetings are first
Thursday of the
month, 7:00 PM at
the American
Legion Hall,
Corona.**



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

Services Sponsored by SBMS

Group Email; the Reflector: Dave Glawson WA6CGR wa6cgr@ham-radio.com

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@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.)

Website: Rein Smit W6SZ: rein0zn@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@roadrunner.com

The newsletter is distributed by way of 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@roadrunner.com

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email: wa6cgr@ham-radio.com

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