



SAN BERNARDINO MICROWAVE SOCIETY, Incorporated

FOUNDED IN 1955

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

July 2014 Newsletter on the Activities of the San Bernardino Microwave Society

Walter Clark, Editor

Tech Talk for the August 7th Meeting
“Contest Planning” getting ready for the August - 10 GHz
and Up Contest

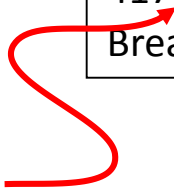
Future Talks:

- September - Dennis, W5DQ
- Courtney, N5BF has a "Mars to Earth" X-Banding presentation he may do for us in October. This is tentative.

Official Address

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

note



Activities at the July Meeting of the SBMS

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

Presiding: Chris Shoaff (19 in attendance... 17 last month)

Guests:

- **Bill Preston, KZ3G, Fullerton**
 - **Bill is president of Fullerton Amateur Radio Club and a good friend of all the Fullerton area SBMS members.**
- **Jim Blum, KK6MXP, Ontario**
- **Edgar Shupe, KK6NTZ, El Cerrito (by Temescal Canyon)**

Old Business (notes taken by Courtney Duncan)

- **Dick Bremer led a discussion about the Heaps Peak Beacon.**
 - He talked to Chuck Swedblom on the phone. Rack space at the site is available. Chuck wants three feet, which seems like a lot. (Not clear if this includes the old translator.)
 - The consensus was that we just want the beacon restored.
 - In examining the equipment, most of the drivers are burned up. Looking for new equipment for 1.2, 2.3, and 10 GHz.
 - Shoaff is working on a design to have a PA with +10dBm in and 1.5W to 2W out on 1296MHz.
 - Kidder and Coker suggested using SBMS beacon money (Auxiliary Fund) to reimburse Chuck for whatever he needs to buy for this.
 - Swanberg has a box of 2 GHz 15 W amplifiers, and will throw one into the project.

New Business (notes taken by Courtney Duncan)

- **Dennis Kidder announced that after the Tuneup 7/19/14, all are invited to W6DQ QTH (1497 Marelen Dr., Fullerton, CA, 92835, DM13av) for the Post Tuneup BBQ, starting about 1.**

Upcoming Events Identified by Readers

July 24-26: Central States VHF Conference in Austin, TX (Marty Woll, N6VI)

August 2-3: ARRL UHF Contest (Marty Woll, N6VI)

August 16-17: ARRL 10 GHz & Up Contest (first of two weekend events)
(Marty Woll, N6VI)

September 12-14: ARRL Southwestern Division Convention, San Diego
(Marty Woll, N6VI)

September 20-21: ARRL 10 GHz & Up Contest (the 2nd weekend)
(Marty Woll, N6VI)

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

10 Gig Home to Home (night before the meeting)

Rein Smit reports:

WA6CGR (Dave Glawson) and W6SZ (Rein) had a QSO at 21:00 PST July 2nd. Signals were up and down and no other signals were detected.

Fairview Park Tune-up Event Pictures



Brian Thorson
Ed Munn
and RMJ



Frank AG6QV
with his son
Benjamin KK6EMG.



These photos by Dan k6nkc



Kerry Banke N6IZW up from San Diego to evaluate our gear.



Ed Munn W6OYJ, Brian Thorson AF6NA and Kerry Banke N6IZW setting up the source tower.

No photos were submitted
from the San Diego Tune Up.

Dennis's After The Tune-Up Party



Here's our host on the right Dennis Kidder W6DQ with his solar powered Arduino controlled something or other. (He's not sure himself.) Behind him is Dave Glawson WA6CGR with a dream box; something he invented in junior high but never got around to building because the parts weren't invented yet. It is a communicator, computer, audio entertainment center. It even does a light show.



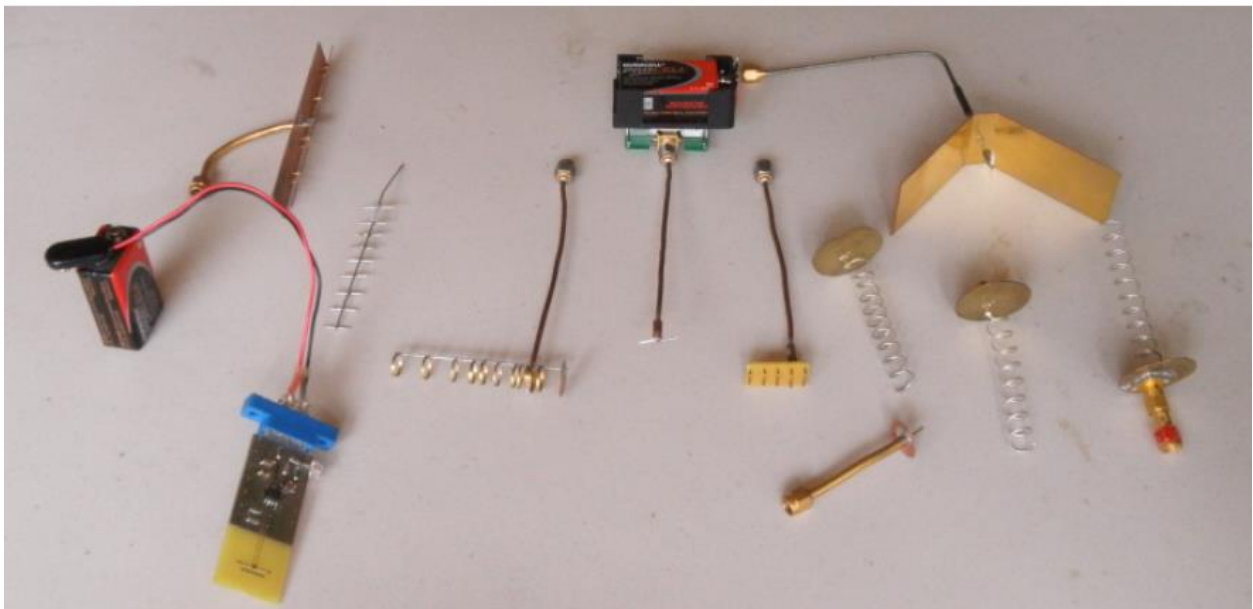
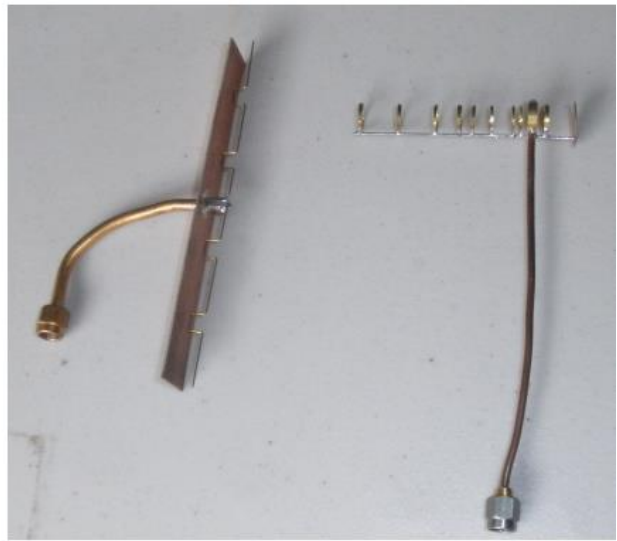
In the back is Bill Preston, president of the Fullerton Ham Radio Club and good friend of SBMS. Bill is just back from an around the world adventure as a radioman on a freighter.

Here's Jason Sogolo W6IEE giving an electronic reason to Bill for yet another beer...



Doug Millar K6JEY seems impressed by a Taiwan made full featured desktop computer Dave Glawson brought. Dave's not sure what he will do with it, but it was so cheap, impressing Doug with it might be worth the full cost of the thing.

Steve Noll brought to Dennis's his working scale models of famous amateur antennas.



The detector is the 9V battery powered thing on the left. The source (which can work any of these antennae is the 9V powered DRO motion sensor in the middle. We all had a good time playing with them. (The helicals were the clear winner, even though the detector was linear.) The FSM (field strength meter he's holding is for quantitative measures. The detector on the left below just indicates power with LED brightness. This is all part of a talk on the physics of microwaves he gives on occasion.

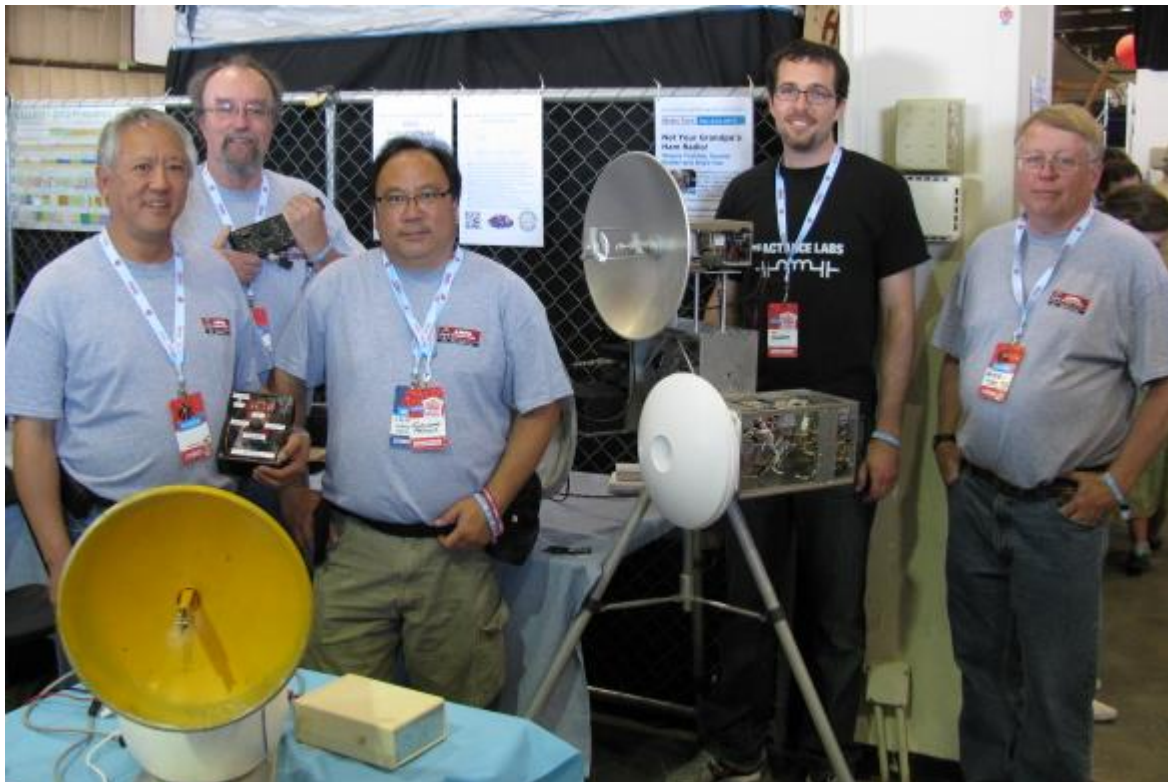
Steve was inspired by Doug Millar's talk on test equipment and upgraded his own workbench. He has a 10 Gig sideband rig and working on a version of Dave Glawson's "White Box" radio. <http://www.ham-radio.com/wa6cgr/X-Band.pdf> Other projects include 2.4 GHz ATV. A few weeks ago, Steve worked a duct to Hawaii from his house 500' above the ocean surface. (Nice house; I've seen it. —ed)



Wayne Yoshida KH6WZ was at Dennis's "after Tune-up Party" too. Here he is next to one of Dennis's Collins transmitters. Wayne is long standing SBMS member but can't make the meetings because of his work. He's a tech writer for Agility Fuel Systems. Wayne has a 10Gig rig he shows off at the fairs and he's working on the GPS part of an APRS high altitude balloon borne 2 meter beacon. You may have seen his column in CQ magazine.

His other hobby is race cars. He is putting together a 1965 Daytona Coupe Racing car replica.

Here he is with his buddies at one of the many Maker Fairs he attends. That's



Wayne Yee W6BY on the far left, Dennis Kidder W6DQ, Wayne Yoshida KH6WZ, Tony Long KC6QHP and Mike Lavelle K6ML

Here's Wayne Yoshida's website: <http://wayne-yoshida-kh6wz.com/>

What Our Members Are Working On (Notes taken by Courtney Duncan)

- **Dick Bremer WB6DNX Brea.**
 - passed around a Wouxun KG-UV8D dual band handheld and manual.
- **Pat Coker N6RMJ Lake Los Angeles.**
 - was active with the 2 GHz and Up event in May and the ARRL VHF Contest in June.
- **Dennis Kidder W6DQ Fullerton / Inyokern.**
 - Helped dismantle a 250 KW Voice of America shortwave transmitter in Delano, CA and ship it to a museum in New York.
- **Bill Preston KZ3G Fullerton**
 - had been to sea as a radio operator on a Car Carrier with a stop in Singapore.
 - He was involved in the Fullerton club "Antennas in the Park" event in mid May at Tri City Park in Placentia.
- **Marty Woll N6VI Chatsworth**
 - announced that SBMS was the top club in the 2 Gig and Up contest in May and three of the four top individual scores were here at the meeting. (There were others who participated from around the country.)
 - Marty will be on an "HT to Microwaves" panel at the ARRL Centennial Convention in Hartford, CT July 17-20, 2014.
 - He will talk to the ARRL international affairs officer about possible microwave inputs to the next World Radio Conference in Geneva in 2015.
 - There was no FCC action on the Mimosa (10 GHz) proposal.
- **Miguel Ramirez W6YLZ Winnetka**
 - has been doing roving in recent operating events.
 - And will be on Frazier for the UHF Contest in August.
- **Wayne Overbeck, N6NB Tustin**
 - pointed out that the recent 2 Gig and Up contest in May was the first in which individual entries were included in the rules in addition to club entries. He was glad that Marty N6VI, was the winning individual with over 12,000 points. (He said Marty might have done better if he hadn't had to share his favorite Frazier spot with a crane doing microwave dish work there that weekend.)

- Wayne said the June VHF Contest went well but complained that are no large group roving efforts any more.
- **Jim Blum KK6MXP Ontario**
 - wanted to get into ham radio all his life and finally was licensed last month. He had built radios with his brother as a teenager. Now figuring out how to program a radio. Listened to the recent contests on the Cactus coordination frequency and was fascinated.
- **Mike Collis WA6SVT Crestline** (long time member, away for many years)
 - is building a radio site southeast of Barstow at 6300 feet.
 - Mike along with Kevin Jacobson AD7OI (10 GHz contester) in conjunction with the Arizona Amateur Television Network W7ATN are building a beacon for the White Mountains in Arizona.
- **Jeff Fort KN6VR Phelan**
 - shared a newspaper clipping about the 100th anniversary of the church where Dick Kolbly (former SBMS officer) and his family were active for many years.
- **Mel Swanberg WA6JBD Upland**
 - worked on his 2 GHz narrowband FM project with some progress.
 - He is rebuilding his home station to be able to hear in the presence of 7 cell sites on a church 500 feet away.
- **Rein Smit W6SZ Alta Loma**
 - is testing software to display pictures from radios.
 - He is also adding a way to adjust the frequency.
- **Frank Kromann AG6QV Trabuco Canyon**
 - was on trip to Denmark last month for the 50th birthday of a fellow EMER. Got on 2 meter EME with 4 KW and generated a pileup with their Danish callsign.
 - Brought microwaves to the Mission Viejo Club Field Day. Could hear Frazier but no QSO. Working on airplane scatter plans using "airscout" software.
- **Edgar Shupe KK6NTZ El Cerrito**
 - just licensed this week - everything is theory for now. Building a shed for storage and ham radio.
- **Courtney Duncan N5BF La Canada (grid square: DM04vf.)**
 - is doing 400+ watt tests on 1296 EME; has not yielded a contact so far.
 - He has read up on the various techniques and issues of EME on 1296 including W7PUA, K1JT, libration, Faraday rotation, and so forth.
 - He determined that the EME2 bandwidth was set wrong for 23 cm expected libration - will try again.

- Courtney's next hardware project is to install the Khune Electronics EME preamp on the mast with appropriate T/R switching with the M² 23 cm 35 element yagi which will be pointed slightly up (no elevation control yet) to give more time for tests on the moon.
- **Brian Thorson AF6NA East Vale**
 - participated in 2 GHz and up tests in Long Beach with Rein.
 - His 10 GHz radio broke but Rein made some contacts with it anyway. It was the sequencer. Had spare parts. Was back on the air the following Sunday.
 - He is now working on the Dick Kolbly Memorial Radio.
- **Chris Shoaff N9RIN San Clemente**
 - tuned up his 10 GHz rig and checked receiver. Heard Santiago beacon.
 - He participated in 2 Gig and Up contest.
 - And he's working on a driver for his 1296 30 W amplifier and looking for some of the parts.

San Diego Microwave Group (as reported by Ed Munn W6OYJ)

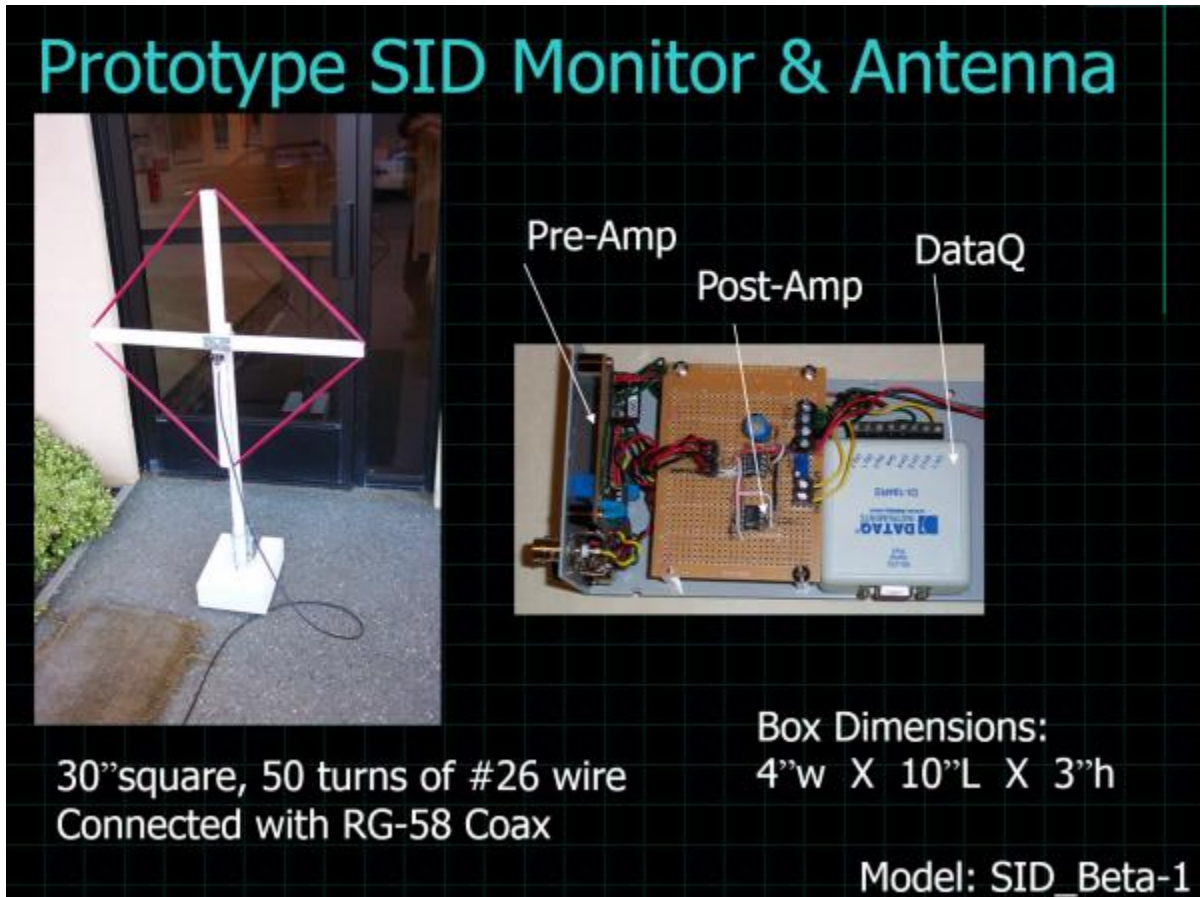
- Kerry Banke N6IZW continues to work on design and tests of a satellite ground station for the amateur radio TV station on the International Space Station.
- Ed has successfully recovered from back surgery.
- The San Diego Group normally meet 3rd Monday at Kerry Banke's home.

Microwave Mystery Device of the Month



Space Weather Monitor

(by monitoring SID: Sudden Ionosphere Disturbance)

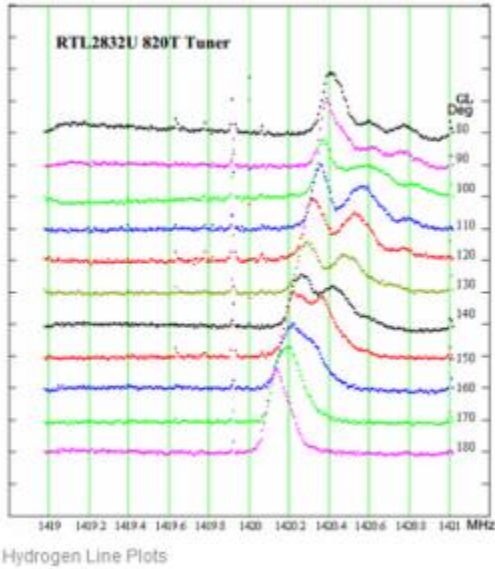


http://solar-center.stanford.edu/SID/docs/SID_Intro.ppt

And here's ***SuperSID***

http://backyardastronomer.com/sid/SuperSIDManual_v1.pdf

Low Cost Hydrogen Line Radio Telescope using four RTL-SDR dongles



<http://www.rtl-sdr.com/low-cost-hydrogen-line-telescope-using-rtl-sdr/>

Or how about 24 dongles . . .



Tech Talk (Last Month)



To get Brian's slide show go to the SBMS website and do a search on "Thorson"

Or go directly to:

http://www.ham-radio.com/sbms/presentations/AF6NA/practical_sun_vs_sky.pdf

Brian Thorson, AF6NA, presented several slides of information on health effects due to radio frequency exposure. Government and official organizations worldwide all maintain that any health effects from exposure to non-ionizing radio frequency energy under currently regulated exposure limits are not statistically significant. Marty Noll N6VI pointed out that the ARRL has a standing committee on RF exposure.

The main presentation however was "Sun vs. Sky De-Mystified" which detailed and compared sun noise versus sky noise measurements Brian has taken with his 10 GHz system in order to verify and understand its receive performance.

Gary Heston's ATV Mobile Studio

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

Just as a reminder, this is how you watch SBMS meetings from home:
http://www.batc.tv/ch_live.php?ch=2&id=139

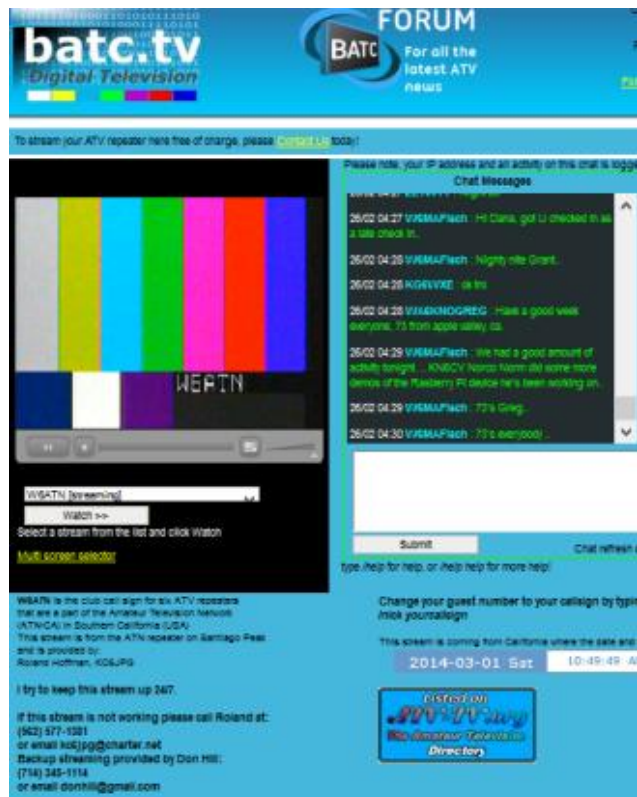
Better yet memorize the following
Keywords: BATC TV
and use Google

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, 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



- The newsletter is to keep member informed on current activities of the “active” members; the members that come to the meetings or use ATV to report in.
- The website is for articles and all activities of the past.
- But questions or even bragging is for the SBMS Reflector. Send your email message to: sbms@ham-radio.com. More than 80 people will see your question or your bragging. (To sign up go to: <http://lists.altadena.net/mailman/listinfo/sbms>.)

Needs, Wants and For Sale

- **For Sale from Chris Shoaff:** N9RIN cshoaff@yahoo.com
 - 30w 1296 MHz PA kit \$50 + \$5 for US shipping
- **For Sale from Bill Burns:** Bill will only rarely come to the meetings, so if you want any of this, please contact him by email at . . . bburns@mediacombb.net)
His address is: 247 Rebel Road Ridgecrest CA 93555 and phone: 760-375-8566
 - 8 watt 5 GHz TWT's with power supplies \$50 each
 - copper wire enamel coated #14 many feet coils \$10 each
 - Bencher BY1 Iambic paddle key \$90
- **For Sale from Doug Millar:**
 - a Rohde and Schwarz 309 10-18GHz Signal Generator in perfect shape. It is digitally synthesized and has a pull out instruction card. It has internal modulation and will also sweep. Will accept \$900.
 - I also have an 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

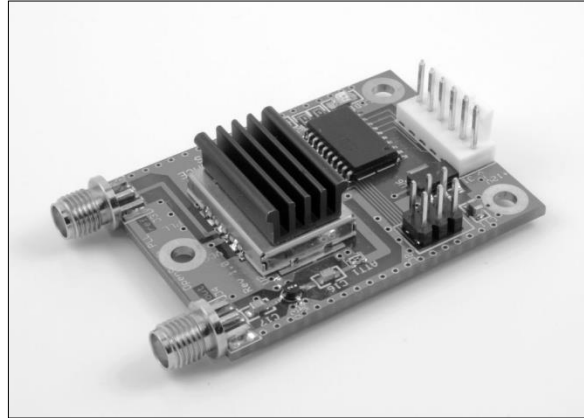
Member Ads Continued



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- ⤴ 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

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

Website: Rein Smit: 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.

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